Sony Digital Cinema 4K

Redefining the cinema experience

Sony launches next generation 4K projector

Super high quality, low cost SRX-R515 4K projection system is ideal for any small and mid sized auditorium

Sony Digital Cinema has unveiled the SRX-R515 new generation low cost 4K projection system designed for use in small or medium sized screen theatres.

Customers who have already experienced the projector said they were impressed by the true-4K picture quality and user-friendly features. Oliver Pasch, Head of Sony Digital Cinema in Europe, says: "When we first previewed the SRX-R515, both I and those who saw it were amazed by the quality. Quite simply, they were the highest quality images I have ever seen on a cinema screen."

The SRX-R515, which has a smaller body than the SRX-R320, is fully DCI compliant and boasts design features that make it more cost effective and simple-to-use. These include a lower cost of ownership light source system that allows easy and safe lamp replacement, a reusable air filter, a single 15inch touch control panel and Android tablet and iPad support for remote operations.

The light technology incorporates six high pressure mercury lamps for high brightness and improved durability. The system keeps operating even if one lamp fails, making show interruptions due to standard single light source projector failures a thing of the past.

Offering true 4K quality from the integrated media block to the lens, the projection system features an improved SXRD optical engine, never before seen contrast ratio of 5000:1, 15,000 lumens brightness, easy-on-the-eye dual lens Sony 3D and high frame rate capabilities up to 60 frames per second as a standard feature. The system also features high-speed content ingest/transfer and high capacity storage.

David McIntosh, Senior VP, Sony Digital Cinema, says: "We designed the SRX-R515



"Imagine a projector with everything you would expect a digital cinema projector to have if released in 2012, with the experience of more than five years in the market – that's the SRX-R515"

Oliver Pasch, Sony Digital Cinema

in close consultation with the industry and believe it offers the best feature-set for independent exhibitors of any projector on the market. Above all, we have designed the new projector to be affordable, user-friendly and with a low cost of ownership, while offering fantastic picture quality for 2D and 3D content. And when you invest in a Sony Digital Cinema 4K projection system, you get more than a projector, you get a full solution."

Sony offers exhibitors a fully supported partnership in their move to digital cinema 4K, with tailored financing options, managed integration and access to Sony Digital Entertainment content, alongside the best 4K technology on the market.

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Set-to-screer Sony 4k workflow

Hollywood starts to shoot with F65





Amsterdam investment

Art house cinema makes smooth upgrade to Sony 4K





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Finance for independent theatres

Smaller exhibitors are as much in need of the benefits of digital cinema technology as the large circuits. They often do not have the cash in hand and support to move as quickly as they would like. But with financial support from Hollywood studios due to run out by March 2013, Sony has stepped in with a fantastic lower cost VPF operating lease program. As Gary Johns Senior Vice President at Sony Electronics has noted, the digital conversion is happening at full force, and the industry wants the change to be as

smooth as possible. "Flexible purchasing programs and Virtual Print Fee offerings with lower up-front costs and added value beyond the ordinary are helping to ease the shift," Johns says.

Macau Tower upgrades auditorium to Sony 4K

Macau Tower, the international business and entertainment centre on China's Macau peninsula, has

upgraded its auditorium using Sony's 4K Digital Cinema technology with 3D silver screen.

For the Macau Tower Digital Cinema, Sony has provided an end-to-end service, from site measurement and design through to installation, commissioning and testing. The installation in November last year was given just 10 days to complete, but was finished in eight days, despite the challenge of lifting the 6m long 3D silver screen package to the theatre on the fourth floor of the tower via the escalator.

Speaking at the launch of the upgraded theatre, Rutger Verschure, COO of the hospitality division of Shun Tak Holdings, which manages the Tower, described how his company's team of technical experts sent him "a seven page report with reasons why we should go with Sony, and it wasn't the price!"

Before showing the movie Avatar in 3D, Verschure said, "today we will enjoy the reasons why – Sony's 4K technology which is the latest technology available, with 4K having four times sharper resolution than the 2K technology."

Procinal in Colombia invests in Sony VPF

Colombian cinema group Cinemas Procinal has signed a letter of intent naming Sony as its integrator of choice to start Virtual Print Fee (VPF) negotiations with major Hollywood studios,. Sony will also be supplying 4K Digital Cinema projection systems for Procinal's cinemas in the capital Bogota and other cities in Colombia.

The VPF deal is a way for exhibitors to have their conversion to digital cinema subsidised by the six main Hollywood studios – Warner Bros., Paramount, Disney, Sony Pictures, 20th Century Fox and Universal Pictures.



Cineteatro Macau

Cineteatro Macau, run by Macau's Diocesan Centre, has converted its three auditorium to digital with 3D, choosing Sony's 4K Digital Cinema system.

The Cineteatro, in the heart of Macau city, has unusual church roots and it differentiates itself from other cinemas in the province with film selection criteria, which mean it will never show a movie with what it considers to be unnecessary sex or violence.

The movies shown in the Cineteatro Macau are all first-run movies from international film distributors in neighbouring Hong Kong.

"We decided to use the Sony SRX-R320 because we have had confidence in Sony product since we started using the Sony Broadcasting video production equipment back in 1985," says Francisco Lio, deputy director at the Cineteatro.

Since October last year all three auditoriums have been equipped with the Sony 3D digital projection system, together with a Dolby 7.1 digital sound system.

UPCOMING SONY PICTURES RELEASES IN **4K** AND **3D**

Men In Black 3 in 3D	May 2012
The Amazing Spider-Man 3D	July 2012
Total Recall	August 2012
Premium Rush	August 2012
Skyfall	November 2012



Manor make-over

Embarking on 90th year anniversary, Pittsburgh theatre upgrades to digital

The Manor Theatre in Pittsburgh has been given a make-over at the same time as upgrading to digital technology. "It all started with the necessity to look at digital conversion," says the Manor's owner Rick Stern, who manages the theatre with his daughter Alexa. "We realized that if we were going to make that commitment, we wanted to take it a step further and secure the theatre's future for the next ten years."

By mid May the Manor's four screens are all scheduled to be upgraded to 4K, with one of them capable of 3D. "If you want to make sure you'll be in business in the next ten years and compete with other theatres, you need to convert to digital," says Stern. "In the long run it will be great for the theatre, the presentations will be great quality."

There will also be a raft of other changes at the 90-year old cinema, which is a landmark building for the local community.

The cinema, originally built in the 1920s was given its last revamp by Stern in 1992, with a smaller amount of updating seven years ago. "It had been 20 years and time for a change," he says.

The 2012 incarnation of the theatre will have a new bar and a new concession stand. Stern is also looking at serving tapas style food in addition to the traditional popcorn offering.

The lobby will be refurbished and the plan is to



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install new navy blue leather seats in the auditoriums. The new digital equipment will be housed discreetly upstairs.

Before deciding to install 4K, Stern looked at the option of 2K in some detail. He was concerned that 2K would soon be overtaken. There was also the math when considering the ten year lease program. "You would have to spend extra to have 2K projectors that were capable of being upgraded...It didn't work for me," says Stern.

Stern believes that it's good timing to convert in 2012, with film companies and distributors offering incentives. The Sony lease program made good economic sense and the cutting-edge 4K technology was a better guarantee for the future.

"If you want to make sure you'll be in business in the next ten years and compete with other theatres, you need to convert to digital" **Rick Stern,** Manor

Easy Sony 4K install for Red Wing

Family-run cinema in Minnesota invests in latest technology

Red Wing Cinema 8, located near the Mississippi River in Red Wing, Minnesota has installed Sony 4K Digital Cinema projection systems in all eight of its auditoriums.

Since the cinema owner Chris Brown and his wife Amber took over the theatre in 2010, they have made management changes, spruced the theatre up and are bringing in the latest technology.

While they'll be sad to see the demise of film prints, Brown sees the advantages of digital. "I think in the long run there are so many positives – the presentation quality is beautiful and the experience for customers was our number one consideration, the possibilities with alternative content are really interesting and digital is an easier process for owners."

Choosing which 4K system to go with was also a carefully researched decision. The Sony lease program was "a huge consideration and it made the deal," says Brown. "My wife and I looked at several other programs, with advice from our money guys, and this was definitely the best fit." He also feels that the timing was right; waiting much longer might see the end of some of the better deals that are in the market at the moment.

The installation is due to be completed by the end of April. "It's been a great experience with Sony," says Brown, "they make it so easy."



"It's been a great experience with Sony, they make it so easy" Chris Brown, Cinema 8

Sony Digital Cinema[®] 4K

Signage enhances theatre experience

National Amusements caters to customers with dynamic digital signage

National Amusements Theatres has chosen Sony Digital Cinema Solutions to provide digital signage for its concession stands, providing easier, more cost-effective management of theatre signage while delivering a more enjoyable customer experience.

National Amusements will deploy a full service digital signage solution from Sony, comprised of displays, players, hardware and software. Sony will also install, maintain and service the systems. Initially the new signage technology will be rolled out at 14 of National Amusements' 33 locations in the United States.

"National Amusements is committed to providing moviegoers with the ultimate entertainment experience and that starts from the moment you arrive at our theatres. Updating our concession areas with Sony's digital signage gives us new flexibility in catering to our customers," said Steve Horton, Vice President, US Operations, National Amusements.

"Sony digital signage solutions are an integral part of the modern theatre, and with National Amusements introducing Sony displays, customers will enjoy changing promotions and more flexible concession options, while National Amusements benefits from ease-ofadministration," said Gary Johns, Senior Vice President at Sony Electronics.





Sony teams up with distributor More2Screen to offer more alternative content to cinemas worldwide

Leading alternative content distributor More2Screen has teamed up with Sony to bring a top stage production from New York to cinema audiences worldwide. In March, Stephen Sondheim's Company was shown in 158 cinemas across the UK and Ireland, plus additional sites in Malta, the Netherlands and Spain. The show was followed by a live Q&A with producer Ellen Krass.

Sondheim's Company, staged by the New York Philharmonic to critical acclaim, was recorded live from the Avery Fisher Hall at New York's Lincoln Center in 2011. The high definition and surround sound screening marked the first time that the production has been shown outside of the US. The cinema distribution roll-out continues with screenings planned in Australia, New Zealand, Germany and South Africa.

Dave Cowlishaw, Head of European Business Development, Digital Cinema, Sony Europe, says the partnership with More2Screen has allowed Sony to complement its choice of sports and music-based alternative content with a range of plays and operas and arts based content. "Expanding the choice of alternative content that can now be made available to our cinema partners allows them to maximize this lucrative new revenue stream and introduce a new demographic in to their cinemas," Cowlishaw says.

The live Q&A for Sondheim's Company is the latest of 22 live broadcasts that More2Screen has co-ordinated. It has also distributed more than 100 different recorded productions, including 3D content.

Christine Costello, Managing Director of More2Screen says that demand for alternative content has been steadily increasing, with the variety of content and genres expanding. "Alternative content is now forecast to be 3 per cent of global box office in 2015, from its current one to two per cent, so doubling in revenue over the next four years," says Costello.

The demand is as much from independents as cinema chains. "Financially, alternative content revenues can quickly become a much higher percentage of box office for individual independent cinemas than for chains, particularly where their local catchment area offers older baby boomer cultured audiences." "Alternative content is now forecast to be 3 per cent of global box office in 2015" Christine Costello, More2Screen

Complete 4K workflow

Sony's end-to-end 4K cinema solution takes off with Will Smith's After Earth

The first major motion picture shot with Sony's F65 camera demonstrates the creative potential of the complete 4K cinema workflow from the shoot through to the final projection in theatres.

Sony is the only company able to offer a complete end-to-end 4K cinema workflow solution, allowing audiences to appreciate a director's original vision at the highest possible quality.

Shooting with Sony's ground-breaking F65 CineAlta digital production camera produces the wonderfully rich and detailed 4K digital images, which feed seamlessly into the 4K post production workflow, and on to a 4K master file that can be shown in the highest 4K resolution on a Sony 4K Digital Cinema projection system. The quality of the original is maintained through to the final showing.

The latest film from the production company Overbrook Entertainment and acclaimed director M. Night Shyamalan, After Earth, scheduled for release next year by Sony Pictures Entertainment's Columbia Pictures, is the first major motion picture to be shot using Sony's F65 camera.

The science fiction epic, starring Will Smith (Men In Black 3), will be shown in cinemas worldwide, benefiting hugely from the fantastic 4K imagery of the F65. The movie also marks the moment that the industry first takes a major project from start to finish with Sony's game-changing 4K technology.



After Earth Director Shyamalan commented, "I couldn't be any happier with the F65, which is amazing since I'm a 'film guy' and I thought I'd die a 'film guy.' It's a digital media that's warm and has humanity in it, which is obviously the most important thing to me."

"The F65 is like a great leap forward," said Director of Photography, Peter Suschitzky. "As soon as I did testing of the F65, I was immensely impressed by the amount of detail it captures, by its incredible flexibility, from low lights to high lights, and its great contrast range. It really is a camera for the future and I'm going to use it again on a number of films."

In January 2012, Sony began worldwide deliveries of the F65 camera to meet the incredibly high demand, and several other high-profile productions are also planned to be shot with the F65.

"This movie is the perfect first project for the F65," says Alec Shapiro, Senior Vice President at Sony Electronics. "The combination of an innovative moviemaker and a script with incredibly high production values will test the limits of this camera and its powerful feature set."

"I couldn't be any happier with the F65" M. Night Shyamalan, After Earth

Sony leads development of High Frame Rate technology

With world-renown directors such as Peter Jackson (The Hobbit) shooting at 48 frames per second (fps), the ability of Sony SXRD projectors to display movies at a High Frame Rate (HFR) is another great reason to invest in the market-leading technology.

Although 24 fps has long been the industry standard for showing movies, HFR helps deliver a smoother image, particularly for fast moving scenes and 3D.

All Sony SXRD projection systems can handle a large range of frame rates, from the current 24 fps to 48 fps, 60 fps or more.

The HFR software plug-in for Sony SXRD projectors enables cinema owners to switch between frame rates easily and simply, with no additional investment in hardware or servers.

Oliver Pasch, Head of Sony D-Cinema in Europe, says: "HFR

offers directors and cinema owners more creative potential to make and show movies. On the technical side, HFR can also try and tackle the problems associated with competitors systems in 3D. Projectors that use triple-flash technology create more flicker effects because the left and right eye images are alternated up to 144 times a second. While Sony's superb 4K images have enough capacity to display two 2K images simultaneously, allowing the left and right eye images to be shown at the same time. This creates a more natural viewing experience."

Sony is leading the development of HFR technology, making it as simple as possible for cinema owners to embrace new standards as they develop and deliver a smoother viewing experience for their customers.



Amsterdam art house cinema utilizes Sony's 4K bridge program to install latest technology

"The audience receives an optimal cinematic experience"

Wouter Timmermans, Uitkijk The oldest cinema in the Netherlands, the Uitkijk (Lookout) cinema in Amsterdam, has changed its 35mm projector for a Sony 4K Digital Cinema projection system.

As well as being the oldest cinema in the city, it is also the smallest, with just one screen and 86 seats.

The cinema is housed in a building in the city's historic canal district, once a warehouse. It was originally built in 1912 for a small elite and then in 1929 was renamed as the Lookout and opened to the public by the city's Film Society, with renowned Dutch film-maker Joris Ivens as one of the founders.

The Lookout upgraded to a Sony 4K Digital Cinema projection system in March, with Sony installing the equipment on the third floor of the theatre building. While most presentations now use the new system, it has reserved the 35mm projector for film screenings.

"Going digital was a must, because the 35mm system is disappearing and we had to keep up with our competitors," explains the theatre's Chairman Wouter Timmermans.

The cinema looked initially at a 2K system, but was

worried about the quality. "The benefit of 4K over 2K is enormous, quality-wise and investment-wise," says Timmermans. "It's better quality and a good long term investment, it's simple."

Sony's 4K bridge program gave the theatre a straightforward plan to acquire the technology for the cinema's single screen.

The Lookout's regular presentations are mainly European art house films selected for its audiences of movie enthusiasts; there are also regular festivals such as for French or Italian film.

There is also special programming on Friday late night with 80s and 90s screenings such as Die Hard, Back to the Future, Alien and From Dusk till Dawn. "We are still hoping we can show a few 80s and 90s classics in upgraded 4K, like Ghostbusters," says Timmermans.

The new technology has been an improvement for both the cinema and for the audience. "For the cinema, the digital technology makes it easier to programme from a good back catalogue network and it also delivers optimal quality projection," explains Timmermans. For moviegoers, "the audience receives an optimal cinematic experience".

Huge multiplex upgrades with Sony 4K

Vue Entertainment installs 23 Sony 4K projectors in UK multiplex

"Having this full suite of 4K projectors allows us to showcase the very best possible cinematic experience" Tim Richards, Vue Sony Digital Cinema has announced the installation of 23 Sony 4K cinema projectors in the newly converted Vue Birmingham Star City multiplex, making it the largest installation of Sony Digital Cinema 4K cinema projectors in the world.

Cinema-goers at Birmingham's new multiplex cinema will be able to experience exceptional picture quality from every seat in the cinema. Transforming the film experience, Sony Digital Cinema 4K technology gives the consumer an immersive, engaging visual experience you simply can't get at home.

Tim Richards, CEO, Vue Entertainment, said:

"Early last year we signed an agreement with Sony to install Sony 4K Digital Cinema Projection Systems across our portfolio and we have been delighted with the results. As a result of this success, we decided to install the new Vue Birmingham Star City cinema with 23 Sony 4K projectors and one Barco projector, all connected to a Sony Theatre Management System. Having this full suite of 4K projectors allows us to showcase the very best possible cinematic big screen experience to our valued customers."

Vue's state-of-the-art circuit has 68 cinemas and 657 screens covering the UK and Ireland.



VPF aims at independent theatres

Lower cost VPF deal makes it easy to convert to digital

"The Sony lower cost VPF operating lease program is designed to reduce the up-front cost of converting to digital for smaller exhibitors" Tim Smith, Sony Digital Cinema Independent theatres are also taking advantage of VPF financing now with the lower upfront cost structure offered by Sony.

"The Sony lower cost VPF operating lease program is designed to reduce the up-front cost of converting to digital for smaller exhibitors," says Tim Smith, Vice President of business development, planning and operations at Sony Digital Cinema. "We are offering funding that involves a lower down-payment. It has reduced by two-thirds the amount of up-front capital that they have to bring to the table."

VPF deals backed by the Hollywood studios offer subsidized ways for first-run theatres to convert from film to digital projection, with a major proportion of the cost being financed by the studios and Sony. But all VPF deals are time limited and an installation offered under this deal must be completed before the end of March 2013.

With over 12,000 Sony 4K Digital Cinema projection systems already installed worldwide, the Sony lower cost VPF operating lease is the most efficient way to invest in the best 4K Digital Cinema projection solutions on the market.

"There are several advantages for exhibitors," Smith continues. "There are no balance sheet implications for the operating lease. You pay sales tax only on the capital contribution, not the value of the entire system. The operating lease allows you to easily replace the equipment down the road for a technology refresh. Sony assumes the entire risk of the system recoupment and is paid by the film distributors.. The only obligation is to pay for the installation and the up-front capital cost."

Several Sony customers that are currently leveraging the VPF program include Lincoln Square Cinemas in Bellevue, WA, Alamo Drafthouse in Texas, and Paragon Entertainment in Miami and three other locations.

Sony is offering similar low cost financing deals to exhibitors outside the US, depending on the local market. Any theatre interested should contact their local Sony rep.

Combating the pirates

Sony provides back-up for PirateEye™ automated piracy detection solution

Sony is providing the installation and maintenance support for PirateEye's piracy detection solution that automatically detects anyone using a camcorder or cellphone to pirate a film in an auditorium.

The PirateEye technology was developed with funding from Motion Picture Laboratories, Inc. (MovieLabs), a non-profit research organization funded by the major Hollywood studios. In 2010, FPSI, Inc. acquired the existing PirateEye technology including the engineering team that was responsible for developing the current PirateEye solution.

Under the terms of the deal with Sony, the system's installation and maintenance in North America will be looked after by Sony.

Brian Dunn, Chief Executive Officer, PirateEye, says piracy is a worldwide problem that costs the industry 100s of millions of dollars a year. "Every film is pirated within four days of its release, so it is a huge problem for the studios. They have about 10 per cent shrinkage on ticket sales because of internet piracy," Dunn says. "If you think that a film earns 50 per cent of its box office in the first ten days, it can lose \$30-40 million in this time if it is pirated."

The proprietary, patent-protected PirateEye solution automatically scans an audience looking for a camera lens. If one is detected, the precise location of the device is communicated to the cinema owner and/or security staff on duty, who can take action as necessary. The whole system is controlled remotely by PirateEye in California.

As the system is automated, it means costs are dramatically reduced.



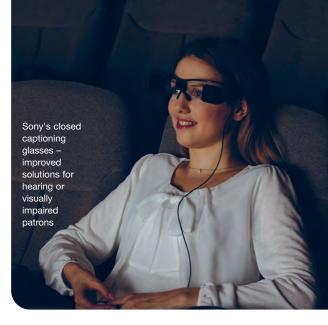
Regal deploys revolutionary glasses

Regal Cinemas first with new captioning glasses for customers with hearing and visual impairments

"We're giving hearing or visually impaired customers a more convenient and natural way to enjoy the movies" Amy Miles, Regal Regal Cinemas has chosen Sony's Entertainment Access Glasses with audio for all its theatre locations across the US, providing an unsurpassed theatre experience and more flexible options for hearing or visually impaired theatre patrons.

The Sony technology consists of specially designed eyewear and a receiver allowing hearing impaired customers to view closed caption text on the lenses of glasses for both 2D and 3D movies. For visually impaired customers, Sony's Entertainment Access Glasses, paired with headphones, provides descriptive audio tracks. The technology will be rolled out at Regal theatres through 2012.

"Regal strives to provide the best experience for all moviegoers," said Amy Miles, Chief Executive



Officer, Regal Entertainment Group. "By incorporating this technology into the Regal theatre experience, we're giving hearing or visually impaired customers a more convenient and natural way to enjoy the movies. We've worked closely with Sony for the last year testing the technology with audiences and the feedback has been phenomenal."

The glasses offer up to six different language versions, giving the maximum possible flexibility. In addition, the system allows the connection of third-party headphones to the glasses' receiver box.

Sony Digital Cinema[®] 4K

For more on Sony Digital Cinema 4K

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Giornate Professionali Estive, Riccione	Jun 25-27
Congrès de la FNCF, Deauville	Oct 1-4
ShowEast, Miami	Nov 5-8
Giornate Professional, Sorrento	Nov 28-Dec 1
IDIFF, Paris	Jan 22-23

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