



mo-sys

VISION IN MOTION

VIRTUAL PRODUCTION &
IMAGE ROBOTIC SOLUTIONS

www.mo-sys.com

Where to find us

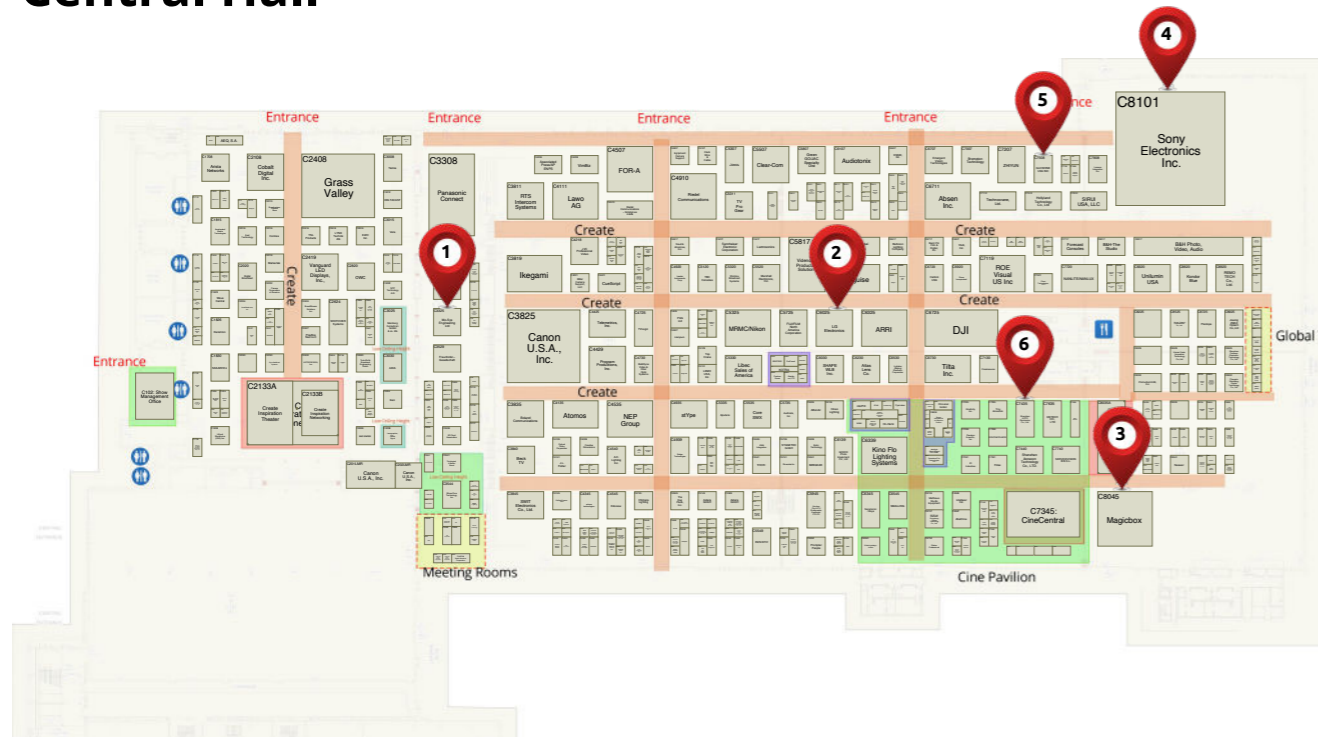


Central Hall

C3325

Be the star of the show and take part in our revolutionary audience led, interactive LED Virtual Production. Promising visitors a unique souvenir, an innovative demo will be delivered by Mo-Sys Academy graduates, Hyper Rabbit Media. From a small garage in LA, Hyper has pioneered VP streaming and amassing an incredible 15 billion views. This feature is set to utilise Mo-Sys' Cinematic XR Focus together with the all new StarTracker Max. We are also showcasing the impressive G30 gyro stabilised remote head alongside the L40 which offers rapid precision movement of payloads up to 40kg (88lbs). We will also show the e-Crane, designed specifically for use in virtual studios, it offers unparalleled accuracy and is considered the best solution on the market for use with close-up AR graphics, such as analysis tables in sports broadcasts. This will be coupled with the B20, our popular 2-axis 'tech-less' remote head and affordable workhorse well suited to long-term TV studio applications. Finally, we will show TimeCam together with the RED V-Raptor 8K for worldwide remote production with zero delay.

Central Hall



Central Hall

C6025

Mo-Sys is proud of its deep collaboration with LG. Join us in the XR Zone virtual beer garden where for the first time we will be showing a complete end-to-end broadcast workflow with BMR. BMR features multi-camera switching, set extensions, data-fed graphics and simple to use custom control interfaces. In addition, we will be showing the robotic MoRail in action together with StarTracker PTZ, a formidable combination which delivers creative PTZ movement with tracked graphics in a cost-effective package.



Central Hall

C8045

Mo-Sys is revved up to be supporting Magicbox who are set to have a major presence with Gen 2, the world's first 'semi-trailer' mobile virtual production studio in the Central Hall. The Magicbox team will unveil their second-generation mobile LED virtual studio, designed specifically for the motion picture and video production industry. The system will utilise Mo-Sys' VP Pro alongside StarTracker, our successful camera tracking system.



Central Hall

C8101

Sony will utilise two Mo-Sys StarTrackers as they highlight practical workflow solutions and demonstrate the latest LED technology for professional content creators of all levels.



Central Hall

C7508

Gloshine will showcase their very latest LED panels for Virtual Production. The VP demo will be powered by Mo-Sys StarTracker alongside our dedicated LED content server solution, VP Pro XR.



Central Hall

C7435

NAB represents one of AOTO's biggest shows, attracting major TV and Broadcasting clients from around the world. Mo-Sys StarTracker and VP Pro XR LED content server solution will power an impressive VP zone featuring a curved LED wall alongside an XR Meta Box with floor and set extensions.

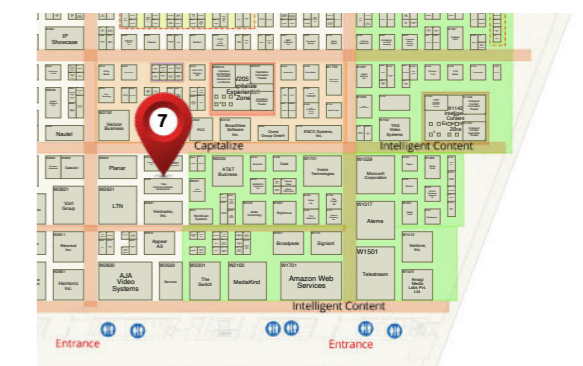


West Hall

W2429

Mo-Sys is showcasing a worldwide remote production solution together with TATA communications, and NetInsight. The solution enables a camera operator to control a box lens mounted to the Mo-Sys U50 remotely over a global distance through fibre with accurate timing and video delivery.

West Hall

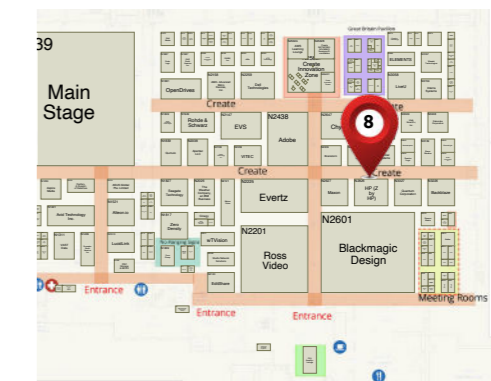


North Hall

N2826

Mo-Sys StarTracker and VP Pro will feature alongside two unmissable panel events. The first 'Closing the Virtual Production Knowledge Gap' will focus on education and intuitive user interfaces. While the second, titled 'Novel Virtual Production Technologies' will take a deep dive into solving common problems of today, and tomorrow

North Hall



mo-sys VP Pro XR

Mo-Sys VP Pro XR is a pre-configured, multi-node nDisplay XR server system, designed specifically for final pixel XR shooting for cinematic projects

Dedicated XR server - Purpose-built for Cinematic XR on-set real-time production. A feature rich virtual production tool set designed for your cinematic productions.

Designed by Cinematic Innovators for XR Creatives - Our patented film and broadcast innovations are backed by 25 years of on-set experience, enabling us to create tuned virtual production solutions knowing the workflows and tool sets required.

Imaging quality - Mo-Sys Cinematic XR Initiative addresses the needs of Cinematographers. VP Pro XR focuses on pixel fidelity and composite image quality within LED volumes and XR Studios.

Non-Destructive Compositing -

The new VP Pro XR compositor workflow preserves photo-realistic fidelity and colour grade, thereby delivering cinematic image quality to every pixel. Our cinematic solutions are the answer to your real life production workflow requirements.

Precision set extensions - VP Pro XR offers rapid mesh mapping with precision set extensions, tracking, and colour matching, delivering seamless extended studio sets.

Minimal XR delay - VP Pro XR offers a 9 frame system delay, compared to the industry standard of between 11 and 16 frames. Reduced delay enables a more accurate perspective view of virtual graphics and faster camera movement.

Unique cinematic features -

Cinematic XR Focus is the first of our unique patent-pending cinematic technology features to be included with VP Pro XR. Cinematic XR Focus enables seamless focus pulls between real and virtual elements in an LED or XR volume.

Dual use: LED or green screen - Whether your studio is transitioning from green screen to an LED volume, or because you use both types of screen technology, VP Pro XR can be used with any screen technology.

Software only or complete system - Choose between a complete Mo-Sys VP Pro XR server system or source your own PC hardware to match the unlimited node VP Pro XR software licence.

Highly Scalable - VP Pro XR supports any size LED volumes, with no additional licence cost - Simply add sufficient PC hardware to address the total pixel count.

Zero cost software expansion - No additional VP Pro XR licence is required when you expand your LED volume or change your LED tiles for a finer pixel pitch version. All you need is additional PC hardware.



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mo-sys bMR



Mo-Sys bMR is for sports, news or current affairs broadcasters who want to deploy an Unreal-based graphics solution for driving LED virtual studios with integrated 2D/3D on-air graphics under MOS/NRCS control

bMR has been designed to address multiple deployment scenarios

New studio build - where both on-air graphics system and LED virtual studio are installed at the same time. Upgrade transition plan - where either the on-air graphics system or the LED content server are installed first, and used with the existing on-air graphics system or green screen studio until these are upgraded.

bMR LED content server system

bMR can drive any size/shape/pixel pitch LED virtual studio (equipped with sufficient render nodes).

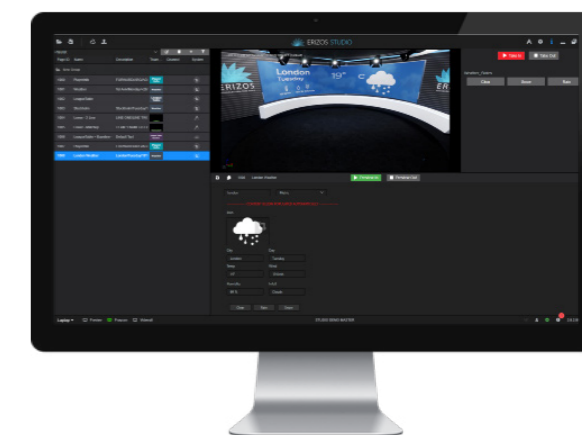


Absolute control

The system uses a browser-based media hub to manage graphics assets, offering streamlined control of multiple graphic elements on a single production, as well as multi-studio capability. bMR offers users the ability to create simple custom interfaces for populating graphic templates, attaching real-time data sources to graphic templates, or for manual control of graphic elements.

Create expansive virtual studios

Set extensions with simultaneous AR with the lowest available delay between the virtual environment and the camera position.



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Mo-Sys delivers turnkey LED virtual studio for World Cup broadcast

Mo-Sys Engineering successfully delivered a major LED Virtual Production studio for PLAZAMEDIA ahead of its prestigious World Cup broadcast.

Following experimentation to find the optimum technical solution and a successful proof-of-concept, leading content solutions provider and sports TV producer PLAZAMEDIA enlisted Mo-Sys to deliver its innovative LED Studio. This complete turnkey solution incorporates real studio elements with optional XR ability. Mo-Sys provided technical guidance from concept to delivery, virtual production training, and project management of the installation within the impressive 690 square meter studio at PLAZAMEDIA's headquarters in the AGROB Medienpark near Munich, Germany.

As the exclusive German rightsholder, world leading telecommunications giant Deutsche Telekom will be the first to utilize the groundbreaking Mo-Sys powered studio, from where

all 64 World Cup 2022 matches will be broadcast via MagentaTV across 29 production days. After the World Cup, the studio will be re-opened as a full Virtual Production XR LED Volume.

PLAZAMEDIA's Director of Productions & Customer Relations, Hansjorg Baumgartner, explains: "We have worked with Mo-Sys on several VP projects and that experience gave us confidence to entrust their team to deliver this state-of-the-art XR studio. Mo-Sys' new and innovative camera switching technology for LED VP which maintains render power across multiple cameras without increasing the XR engine count, together with their knowledge, technical support, guidance, and ability to bring in key partners has been invaluable to our success here."

The LED studio uses four cameras, each of which has a Mo-Sys StarTracker to generate the 6-axis camera and lens tracking data that drives the perspective view of the virtual set. The tracked cameras work in conjunction with Mo-Sys' combined LED content server and on-air

graphics system bMR (Broadcast Mixed Reality), which delivers the virtual set content from the graphics engine. The bMR system also solves the problem when switching between full resolution tracked cameras shooting a virtual set displayed on an LED wall, where the camera outputs switch faster than the LED wall can update with the correct camera background. Mo-Sys bMR orchestrates the switch to ensure only the correct camera perspective view is visible.

Mo-Sys CEO, Michael Geissler adds: "The entire team at Mo-Sys is incredibly proud to have played such a significant role in the delivery of this incredible XR studio project. We would like to thank PLAZAMEDIA for their trust in us and we look forward to further strengthening our relationship."

Mo-Sys worked in collaboration with PLAZAMEDIA's in-house technical and graphics teams as part of their project management, which ensured the complex studio build was delivered on schedule. Mo-Sys was responsible for all virtual production technologies,

which included the 120sqm LED wall from Spanish manufacturer, Alfalite. Its impressive Modularpix Pro ORIM 1.9mm pixel pitch panels were specified for the 33m x 3.5m U-shaped LED volume, which is driven by a total of eleven render nodes.

PLAZAMEDIA is at the very forefront of broadcaster's adopting LED virtual studios. World Cup fans are set to be truly immersed in the action from Europe's most advanced XR studio thanks to the company's commitment to raising production values and improving the viewer experience. Through its use of bleeding-edge Mo-Sys technology, the studio will seamlessly combine the presenters and foreground studio features with augmented reality (AR) virtual set extensions and tracked graphics to deliver a unique 360-degree experience.

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Complete LED Virtual Studio Packages



Take your production to the next level with an LED Virtual Studio from Mo-Sys. Complete system integration from concept to delivery, with on-site project management.

LED virtual production experience you can trust

With 25 years experience, Mo-Sys is uniquely positioned to offer complete LED Virtual Studio Systems. Our turnkey solutions include proof of concept, consultancy, on-site project management, installation & commissioning, product training and premium support.

25

YEARS EXPERIENCE

Broadcast, Cinematic, Corporate & Education Systems

Whether you are building a news room studio, shooting blockbuster movies or educating the next generation of content creators, Mo-Sys' turnkey LED Virtual Studio Systems are tailored to meet and exceed your expectations.



TAKE YOUR PRODUCTION TO THE NEXT LEVEL

Mo-Sys recently delivered a major LED Virtual Studio for the live broadcast of 64 FIFA World Cup games over 29 consecutive production days. Our skilled team are uniquely positioned to guide you from concept to delivery, with on-site project management.

Training & guidance to support your team

Virtual Production Training from Mo-Sys Academy provides a unique, hands-on opportunity to build confidence and learn about Virtual Production. Our Academy Technicians work on projects for the likes of Netflix, ITV and BBC. They will support you through small group activities designed to transfer knowledge and give your team practical virtual production experience.

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StarTracker Max

StarTracker Max features miniaturized hardware & leverages an improved algorithm to produce Mo-Sys' most accurate Virtual Production camera tracking solution to-date.

Utilizing its unrivalled knowledge of Virtual Production, Mo-Sys has developed the next generation of camera tracking.



StarTracker Max delivers even greater tracking accuracy coupled with new, unique capabilities.

Mo-Sys invented 'simple-to-use' marker-based optical camera tracking for Virtual Production. The resulting product, StarTracker, became the world's best-selling absolute tracking solution for broadcast and cinematic. StarTracker Max features redesigned and miniaturised hardware with flexible mounting options and which leverages Mo-Sys improved algorithm to produce Mo-Sys' most accurate tracking solution to date.

StarTracker Max auto alignment technology simplifies set-up and ensures ultra-precise studio calibration. Once set-up, StarTracker Max is fully autonomous with no need for costly, time-consuming daily re-calibration. With rapid star map discovery, a new user-friendly interface (iOS and Android) and simple D-Tap power inlet, StarTracker Max sets a new standard for set-and-forget professional tracking.



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Next generation high-resolution tracking

StarTracker Max auto alignment technology

Set-and-forget professional tracking



mo-sys MoRail

- Suitable for regular studios or virtual studios with tracked graphics, MoRail enables creative moves using PTZ / ENG cameras in a cost-effective, high-performance package. The perspective change achieved dramatically improves on the existing static only movement of PTZ cameras, immersing viewers into the studio without the cost and complication of track-based dolly systems.
- A cost-effective motorized camera rail designed for popular pan-tilt-zoom (PTZ) / ENG cameras weighing up to 15kg, MoRail transforms regular static shots into repeatable creative shots with controlled parallax movement. With MoRail, producers can achieve accurate movements during a show without the need to invest in expensive and complex robotics systems.
- Controlled movement for creative shots. MoRail delivers a simple yet elegant solution that has the power to transform regular newsroom shots with programmable and live controlled movement. A powerful Mo-Sys controller is used to set rail height and camera position in addition to pan, tilt, zoom, focus and iris.
- A new life for PTZ cameras. MoRail gives the PTZ a new creative life by transforming the usefulness of this popular camera format. Production teams can now program accurate and repeatable PTZ movement to traverse, loop and orbit presenters to achieve beautifully smooth and immersive parallax movement.
- Flexible design and quick set up. MoRail is available in 3m lengths, either straight or with a 30-degree curve (4m fixed radius). Up to two lengths can be joined together offering production teams maximum creative freedom. Motorized, height adjustable legs ensure fast studio set up, moving the camera plane quickly between 1025 – 1725mm.

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Cinematic XR Focus

REAL WORLD

VIRTUAL WORLD

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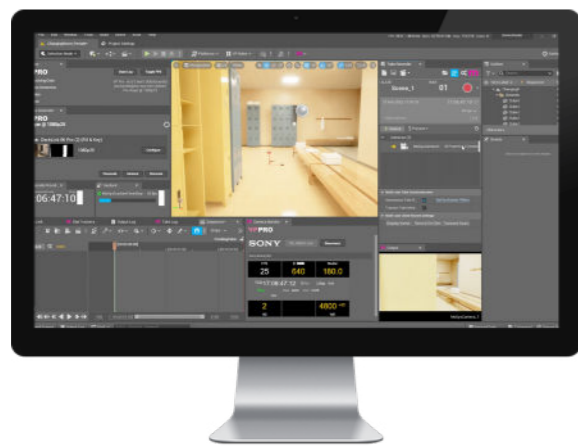
An inset image with a red border showing a pair of hands adjusting a camera lens. The lens has a yellow scale and a red focus ring, illustrating the manual control of focus.

A Unique feature of Mo-Sys VP Pro XR, Cinematic XR Focus allows the focus puller to rack focus from real-world foreground objects to virtual assets placed deep within the virtual scene.

It transforms an already impressive LED Wall to a window into the 3D virtual world, enabling storytellers to explore environments and immerse viewers like never before.

mo-sys VP Pro VFX

Mo-Sys VP Pro VFX is perfect for live-action filming in immersive digital worlds to all levels of the film industry, streamlining previz, on-set and post-production pipelines for visual effects.



Mo-Sys VP Pro VFX captures live tracking data from all Mo-Sys robotic and tracking hardware such as StarTracker and RoboJib. VP Pro has a clever set of tools that simplify and enhance virtual production workflows, making it simpler to achieve the virtual production illusion you're after.

Mo-Sys VP Pro VFX is a versatile virtual production solution that is utilised by a growing pool of filmmakers, high-end broadcasters, and live event media companies.

Mo-Sys VP Pro VFX is a real-time compositor, synchroniser, keyer, and recorder (for video and tracking data), that uses real-time camera and lens tracking data to create all types of virtual production content.



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mo-sys Hybrid Virtual Production Workflow



Mo-Sys founder Michael Geissler on the cost-effective efficiencies in Hybrid Virtual Production for small to medium budget projects, and corporate content producers under increasing pressure to create more-for-less.

Here's the thing – many people mistakenly use virtual production as a synonym for LED wall filming. In reality, virtual production can cover everything from LED walls to green screen, blue screen, AR and much more.

So, when talking about virtual production, there is a misconception that its rise in popularity will mean that LED walls are going to take over from green screen production. They believe that huge LED volumes will be required to film what they need, when in fact, if you mix smaller LED walls with green screen, then you don't need a huge volume to shoot big projects at all. With Mo-Sys' Hybrid Virtual Production workflow, it can all be achieved within a relatively small space, without splashing out on big expensive volumes. Virtual production for small and mid-range

budgets has been somewhat neglected in all the LED Virtual Production hype, yet these are the types of projects that would benefit the most from what it has to offer by increasing production value within the same budget. Virtual Production thrives on constraints. The moment you're limited by budget or location, VP kicks in – and that's where it gets highly efficient. It is a powerful tool which can enable production in seemingly far away and exotic locations, which the budget wouldn't have stretched to.

For example, when filming with LED volumes, you need to bring set builders in to create a seamless join between the real-world studio and virtual scene displayed on the LED wall, and you can't have natural shadows. That means your digital advantage of switching from one scene to the next for super fast production is gone. You have to build the floor for every different scene, which complicates things and is the opposite of what people expect with LED wall filming, which has a reputation for being more efficient.

This is why a lot of LED wall demos are actually done with sand as you can pour it out and move it quickly for easy set building. But we can't just keep filming on beaches and deserts or far away planets... When people look back on work filmed in virtual production, I'll bet they'll know it was shot between 2021-2022 just by noting the sand used for the floor!

With green screen, on the other hand, you can film the floor as it'll be replaced later with the scene you want, along with the shadows cast, making it look more realistic.

Looking at the advantages and disadvantages of both styles of filming, it would make sense to use each for its benefits. That's why we developed a Hybrid Virtual Production workflow which combines the two – filming on green screen for wide shots where you'll need to film the floor, and then switching to LED volumes in the same studio for mid and close-up shots.

“Be one of the first to master this technology and help lead the way for a future of magical filmmaking”

MICHAEL GEISSLER, MO-SYS

LED walls work really well for this, particularly if your actor is wearing glasses or something reflective, which in green screen causes a green colour spill, (this can be removed by experienced DOPs). Green spill is much more forgiving in wide shots where you're further away from the actors. In LED, it just reflects the scene spill around them which is more realistic.



So your actors are shooting on green screen, and once they move over to the LED wall in the same studio, someone can prepare the green screen and its foreground props for the next scene. It all just creates further efficiency on set and throughout production.

All these misconceptions and misunderstandings mean that there is some further education needed within this space. And that's not surprising seeing as this is a fairly new way of filming. Not only that, it's a completely new workflow, which through preparation and pre-production, drastically reduces post production and filming time.

To recalibrate how people work, there is some training required around the foundation of virtual production – from LED walls to green screen, lens distortion and colouration to synchronisation.

That's why we built the Mo-Sys Academy which exists to transfer knowledge and build confidence in small groups. After two weeks of practical hands-on learning, you can reach technician level.

There is currently a knowledge gap in the industry between the experts in virtual production and the majority of filmmakers and producers who will be using it to create bigger and better work. But there is a hunger for it, and people are starting to get curious.



Be one of the first to master this technology and help lead the way for a future of magical filmmaking.

Create more, do it fast and for less with Mo-Sys' Hybrid Virtual Production workflow.

LEARN MORE



Virtual Production Training

Mo-Sys' Academy was established in 2021 with the clear aim of filling the growing skills gap around Virtual Production. As the Academy reaches its second anniversary, hundreds of industry professionals have upskilled to meet growing demand and stay ahead in their field. And Mo-Sys' VP knowledge has been shared with universities and teaching staff, who have left empowered to produce the Virtual Production Technicians of tomorrow.

Led by Juliette Thymi and Dominic Smith, Senior VP Technicians and experienced Virtual Production Producers who continue to work on projects for Netflix, ITV and BBC. Mo-Sys' Academy aims to build students confidence and provide valuable hands-on practical experience, priding itself on a friendly, collaborative learning environment for all skill levels.

Students of the inaugural Virtual Production Practical Summer School, an intensive six-week course, quickly went on to win multiple awards at the University of Greenwich' BAFTA styled film and television GRAFTAs for their short film, Balance.

The Academy was also the first of its kind to partner with universities, helping them to develop in-house Virtual Production curriculums and opening the doors to lecturers who attended the successful 'Teach the Teacher' program.

Speaking of his time at the Academy, Nicholas Glean, Senior Lecturer in Video and New Media at the University of Sunderland added "This two-week course was brilliant! From the first day to the last it was packed with information and fantastic knowledge delivered by welcoming and friendly tutors in Juliette and Dominic. This was supported by experts who came into our sessions and helped us reach another level of understanding. I cannot recommend this course enough."

As demand grew, Mo-Sys expanded the Academy and now runs courses from its Los Angeles base, which itself was established to provide a unique VP testing facility for cinematographers and where content producers can de-risk and refine their virtual production concepts, allowing them to experiment with new techniques and workflows.

To celebrate the Academy reaching its 2nd birthday, Mo-Sys is today announcing several new course dates in addition to a limited special offer. For each StarTracker ordered from 8th March and shipped before 28th April 2023, Mo-Sys will provide 1x FREE place on a 5-day Technician course (UK or USA), to be taken during 2023.

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mo-sys

Gyro Stabilized Heavy-Duty Remote Head

G30

Designed for Large Camera/Lens Packages

- 30kg Payload
- Built-in axis encoders
- High torque output
- Assisted Balancing

The next generation in gyro-stabilized remote heads, the heavy duty G30 delivers precision in movement and superior image stabilization

The **G30** unique design has been refined using extensive real-world experience resulting in a stabilized head that has the performance of much more expensive systems, but with the usability and ease of setup of much simpler gimbal devices.

Auto inertia measurement on startup the G30 automatically measures and calibrates for the mass of the camera package. This significantly reduces the time required to tune each camera package.

Console pre-set buttons and tuning pre-sets conveniently selectable from buttons on the console. Ensures that when a previously tuned camera package is re-mounted to a G30, that the tuning is easily accessible and loaded immediately.

The **G30's** unique oversized frame geometry provides easy access to all the camera connections and accessories, making camera loading fast and simple. Its shorter and stiffer frame delivers better extended crane performance, ensuring the smoothest looking images. The unique frame geometry combined with a re-ordered axis priority (pan, roll, tilt) means that even when the mounted camera is pointing directly down, there is no gimbal lock and all 3 axis of movement and stability are active.

LEARN MORE





e-Crane

Designed specifically for virtual studio use

Intuitive single operator control

Built-in axis encoders



Sports broadcast analysis table

While other smaller cranes are designed to be lightweight, portable and with a fast set-up in mind, the main quality of the e-Crane is sturdiness which is achieved through its strong, rigid aluminium arm

Working with virtual studios has different requirements when it comes to cranes.

Rigidity is vital because any elasticity in the arm is enough to create a visible difference between the movement of the real and the virtual world, creating a “floating” effect. Its sturdy build makes the e-Crane the best solution on the market for close-up augmented graphics, seen in applications such as touch analysis tables in sports broadcasting.



Free movements

With absolute encoding technology, the e-Crane always knows its location. It remembers its position, even when it is switched off and back on again. There is no need for re-calibration and constant re-homing. In addition to pan and tilt axis of head and crane, the e-Crane can be used in conjunction with StarTracker and moved freely around in the studio. Or it can be placed on a rail and a laser range finder for position data.

Payload	20kg (44 lbs)
Jib Pan/Tilt Speed	30 degrees/sec
Head Pan/Tilt Speed	180 degrees/sec
Pan Range	+/-720 degrees
Tilt Range	45 degrees (depending on mounting restriction)
Maximum system ethernet length	100m (328 ft) (operating distance)
Maximum operating distance	20km (12.4 mi) with fiber optics
Pan/Tilt control options	Joystick
VR encoder resolution	> 2 million counts per revolution
Power	15-32V (24V nom) 6A (nom) 20A peak
Mains with PSU	110V-200V
Temp range	-20 degrees to +45 degrees
Length	2.5m (8.6 ft)
Column height	0.5m-2m (1.6 ft-6.4 ft)

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Remote Head

B20 head integrated with a Stanton JimmyJib. An exciting and sensible pairing for our reliable B20 broadcast head.



mo-sys

B20

20 kg payload

Built-in axis encoders

120° / sec pan & tilt speed

mo-sys B20



The B20 is our popular 2-axis 'tech-less' remote head and affordable workhorse which is well suited to long-term TV studio applications

TV Console for independent multi head control

The B20 was specially designed to be used on virtual sets, and is particularly suited to long-term installations in TV studios. This robotic camera head is light and affordable, yet still has the same strong gears and fast response as our other heads.

With its full virtual interface and built-in encoders, the B20 provides precise tracking data for augmented graphics or virtual backgrounds in green screen surroundings. The broadcast head interfaces seamlessly to other Mo-Sys devices and, in conjunction with e-Crane and lens encoding, forming the perfect kit for captivating tracking shots with virtual sets.



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Remote head

High payload tech-less remote head with zero backlash.

Designed for precision moves with the heaviest camera systems

L40



Industry Standard

The most popular heavy duty remote head for high end Hollywood feature films.

Tech-less

Can be set up and used by a camera operator rather than a remote head specialist.

3 Axis Remote Head

Pan & Tilt axis as standard, Roll axis as an optional module that can be added on set.

Single Sided 'L shape' Design

Easier access, and easier loading and unloading of camera rigs.

LEARN MORE



- Zero Backlash
- Backpan
- High Speed Precision
- No need for sliprings

The L40 remote head sits between a standard 2-axis medium payload remote head, and a 3-axis gyro-stabilized head, and offers superior strength and rigidity which is achieved through capacity and simple 'tech-less' operation.

Industry Standard – the most popular heavy duty remote head for high end Hollywood feature films.

Tech-less – can be set up and used by a camera operator rather than a remote head specialist.

3 Axis Remote Head – Pan & Tilt axis as standard, Roll axis as an optional module that can be added on set.

Single Sided 'L shape' Design – easier access, and easier loading and unloading of camera rigs.

High Payload – 40kg / 88lbs payload and 18kg / 40lbs weight.

Incredibly Powerful Motors – 100Nm rated, equivalent to holding 20lbs at the end of a 1m pole, and therefore can hold a camera even out of balance.

Zero Backlash – uses cycloidal gears, not affected by changes in temperature, no adjustment required under different loads, and most importantly no juddering under heavy loads.

High Speed Precision Movement – pan 180 degrees/second, zero delay, even with the largest payloads.

Backpan Option – automatically keeps camera face parallel to a scene when jib or crane moves through an arc.

Cable Hole Through Drive Motor – no slip rings required, no specialist cables required.



mo-sys U50

Mo-Sys hits an ace with the U50 at The Players Championship, Florida

Mo-Sys' U50 heavy-duty remote head was designed specifically for the heaviest box lenses which are routinely deployed at major sports events and other long-range productions.

Similarly to other Mo-Sys robotics, the U50 can be operated with a variety of input devices such as pan-bars or joysticks. The button-console interface provides controls for pan and tilt velocity adjustment, input smoothing and direction together with user defined position limits, feathering and axes zeroing.

Together with its uncomplicated 'tech-less' operation, the U50 was the ideal choice for Robovision Inc who recently put its dual tilt motors and lag-free, rapid 180°/sec movement through its paces at The Players Golf Championship 2023 in Florida.

Positioned on a small island near the 17th - one of the most famous (and difficult!) holes in golf, the U50 was controlled with precision by an on-site remote operator.

This dramatically reduced the camera footprint and enabled the team to discreetly capture amazing shots without distracting the PGA's finest, while also improving the working environment for the camera operator who would otherwise spend long days hidden out of sight, without breaks or creature comforts.

Florian Gallier, Mo-Sys Strategic Partnerships Manager explains: "Robovision Inc has developed numerous custom camera solutions for high-profile broadcasts. They are pioneers of remote production workflows with a track record of delivering next-level technical performance. It has been wonderful to collaborate with them to utilise Mo-Sys' remote production technology at this prestigious event." Florian continues: "Remote production is growing in popularity. It can be used to maximise the productivity of camera operators, improve their safety and comfort, and as in this case, it enabled a camera operator to control the equipment over fibre from another location."

Joe Ferlic, Veteran NBC Sports Camera Operator added: "I felt very comfortable doing what I needed to do."

Richard Glandorf, Robovision Director of Field Operations: "The Mo-sys U50 performed beyond our expectations, we were very pleased to see the operator use his existing skills and translate them with ease to the remote system. I find the U50 to be a very useful tool for sports broadcasting and has great potential for advanced technologies including tracking and AI systems."



Remote Head

Remote Production
Sport Broadcast | Long-range Events
Outside Broadcast | Rental

mo-sys

U50

- Choice of input devices
- Tech-less operation
- Delay-free control
- Zero backlash

○ 50kg Payload

○ Reduced FootPrint

○ Precision Control

○ Rapid Movement



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