

PROFILE

NAME: Astral Projekt
LOCATION: Sydney, Australia
FOUNDED: 2013
WEBSITE: astralprojekt.com

CHALLENGE

Artist Joe Crossley of Astral Projekt was tasked with creating an immersive projection experience in the middle of the desert. Projecting onto a 360-degree plywood screen, Crossley and his team were up against limited setup time in harsh desert conditions.

SOLUTION

Epson's robust and reliable laser projectors — and ultra short-throw lenses — created a powerful, vibrant edge-blended projection, with limited heat emission, a critical success factor for the team's custom-built, dust-resistant enclosures.

Mapping the Moment

Media artist Joe Crossley uses Epson laser projectors to create massive, collaborative real-time artwork

"I was in Geneva and saw some kids projection mapping a brick wall," recalls media artist Joe Crossley. "They were making the bricks move out of the wall and it blew my mind."

"I started looking at all sorts of things and re-imagining what they could be. I realized that instead of having to augment, paint or otherwise change a surface, I could walk up with my computer and projector and make something look completely different."

That incident was a career-changer for Crossley, who has since gained a worldwide reputation for his projection and lighting projects. Leveraging high-output projectors, Crossley and his team strive to do things that haven't been done before. From plants to buildings, and mountains to rocks, through projection mapping Crossley transforms surfaces and environments into infinite possibilities.

"With projection mapping, the space becomes a wide canvas where you can really push what the audience can experience," explains Ramzi Shakra, product manager for large-venue projectors at Epson.

"We love working with artists like Joe. As the largest projector manufacturer in the world, we're obsessed with image quality, but it's hard to know all of what our products can do, or what they can become, until artists take them and push them to their limits."



A Worldwide Audience

Crossley has an interesting background. He grew up in Wales playing rugby and classical cello, then studied marine biology at the University of York. He next turned to event production for an extreme sports media company. Moving to Australia in 2013, he partnered with the Sydney-based production company Finely Tuned, specializing in large-scale public artworks, some commercial, others installed without compensation.

He is known mainly for collaborative work, often creating an electronic canvas for other artists. "I want to see artwork that allows everyone to be involved," he explains. "I want to help people become creators, building moments or situations where they can express themselves."

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—ARTIST JOE CROSSLEY

For example, in 2014 and 2015, he and his team projected the work of over 100 artists onto the exterior of the Great Hall at the University of Sydney, each night of Australia's annual Reconciliation Week. "Our idea was to give indigenous artists a way to map their work on a giant building, without stepping outside of their artistic direction," he says. Over 30,000 people attended each year.

In 2015, his *Transcendence* used ten 10,000 and 11,000-lumen Epson projectors to map images and colors onto a massive bamboo structure set up in Sydney's Martin Place, a pedestrian mall, at the annual Vivid Festival. Nearly a quarter million people saw it. "We had never used Epson before, but as soon as we set up the projectors, we realized they were really great for projection mapping," Crossley recalls.

"We were getting a vivacious, extravagant color from these projectors, and that was great because we are always looking for contrast and the ability to explode colors onto a surface."

"Epson's introduction of laser projectors shifted our focus. Now, instead of one-off projection mapping, we could create entire environments that could run continuously for thousands of hours."

—JOE CROSSLEY

In 2016, his *True Life* at Vivid used Epson projectors to map videos of microscopic ocean life onto a large-scale replica of a salt crystal. "This was an installation trying to bridge the gap between science and art, engaging people to think of the sea and the need for its conservation."

At the Ibiza Light Festival in 2017, Crossley used Epson laser projectors in two major projects. For *The Great Emptiness*, the team mapped an audio/video narrative on the Ibiza old town walls; for *Time and Space* they mapped a spectrograph of a song by the English techno band Orbital onto a sculpture consisting of multiple stone columns.

"Epson's introduction of laser projectors shifted our focus," Crossley says. "Now, instead of one-off projection mapping, we could create entire environments that could run continuously for thousands of hours."

In 2018, the organizers of a desert festival asked Crossley and his new company, Astral Projekt, to create a projection experience for



the base of an art structure at the center of the festival. The team built a 360-degree theater out of plywood, open to the sky and with a floor of desert sand, into which Astral Projekt installed six 15,000-lumen Epson Pro L1755UNL laser projectors with ELPLX02 ultra short-throw lenses.

An Enormous 360-degree Screen

The nine-day art festival held annually in the Black Rock Desert was first held in San Francisco in 1986, and has since grown from a few hundred attendees to over 70,000 in recent years.

Much of the artwork shown at the festival is participatory in some way with the audience interacting on various levels with small to large-scale pieces. Most of it is temporary, meant to entertain, enlighten, and perhaps awe attendees, but only for a week.

"The festival is about the immediacy of creation," Crossley explains. "It's not given to you. Everyone has to take part, but its energy fosters some really interesting work."

For 2018, organizers of the festival invited Crossley to explore the year's theme and his vision was to express humankind's feelings about artificial intelligence. Into an enormous gear-shaped theater at the base of the center art structure, Astral Projekt installed the six Epson Pro L projectors in a central hub, projecting onto a 360-degree plywood screen about six feet above the ground, 13 feet tall and 196 feet in circumference.

Crossley invited 30 artists he knew from around the world to submit 360-degree videos, each to be no more than ten minutes long. The results, played Sunday through Saturday night at the festival, were spectacular.

A Challenging Desert Environment

Nearly everyone who has attended a festival in the desert talks about the dust. Attendees are warned to bring goggles and masks, and it's rare that the week goes by without at least one dust storm.

“Working in the desert with projectors is inherently terrible,” Crossley says. “The dust is like talcum powder, but made up of salt and gypsum. So, our first question was, could we do it?”

The fabrication team, led by videographer Sean Behm, built a custom enclosure for each projector attached to a central blower drawing air through HEPA filters. It created a positive pressure environment for each projector, so that if there were any gaps or imperfections, filtered air would leak out of the enclosure, rather than letting dust in.

To create the image size they needed, the team fitted each of the six 15,000-lumen Pro L projectors with an Epson ELPLX02 ultra short-throw lens. This lens is most often used to create seven or eight-foot wide images from just a few feet away, but here they would create six edge-blended images, each about 32.5 feet wide.

Although the theater was meticulously planned, “our first priority on arriving at the festival was just to survive,” Crossley recalls. “Speed is the order of the day because you get dehydrated quickly,



and you get tired.” Their first night in the desert they set up the air filtration system, lifted the projectors into position, and started to align them.

Epson’s laser technology, Crossley says, was crucial to the success of the event. “With laser, there is so much less heat than with lamp-based projection, and that meant we didn’t have to pump so much air into the projection enclosures.”

New Visions

Shakra says he was thrilled to see what Crossley and his team were able to do in the harsh desert conditions. “We’ve made a lot of incremental improvements with our laser projectors—they’re smaller, lighter, quieter, and more power efficient than ever before—but the point is the show, and the question is, can the technology disappear so the audience can lose itself in the vision of the artist? Yes, it can, and I was enthralled by the imagery.”

Crossley, too, was pleased and impressed. “I’ve taken Epson projectors around the world. You put them in flight cases, pull them out, turn them on, and they’re stable in all sorts of environments. That to me is the acid test. I always take it with a pinch of salt when people say their projectors are hardy or reliable. I expect some sort of hiccup or glitch, but with Epson, I have not had one issue.”

With this challenge behind him, Crossley is looking forward to new projects made possible by Epson technology.

“The main thing with the laser is its low power, high light output. We can plug a 15,000-lumen projector into a standard, 120-volt wall socket. That’s a bit of a revelation, you know.

“Then with the X02 lens we don’t have to rig from far away. Now we’re going to be able to attach the projectors to the outside of the buildings we’re mapping onto, even create permanent installations where we can remake the surface of the structure whenever we wish. That’s never been seen before. Epson’s 4K Enhancement mode is important, too, because now you can walk right up to the image and it still looks great.

“Working with Epson as an artist has been a great experience, because Epson is disrupting this AV space. Artists like me can create bright, luminous environments without having to spend tens of thousands of dollars, install specific power systems or giant media systems.

“We can take our artwork anywhere on our laptops, plug our projectors into the wall and map onto entire buildings. Working with Epson technology is fantastic.”

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