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New Studio Brings the Technology Behind *The Mandalorian* to Austin

Co-Production House brings science to the set

BY RICHARD WHITTAKER, MARCH 5, 2021, SCREENS

Six months ago, Justin Kirchhoff was in the same situation as every other filmmaker, struggling to put some work together in the middle of the pandemic. Now he and co-founders Kristina Smith and Keller Davis are opening Co-Production House, a truly state-of-the-art soundstage in Austin, powered by the same technology that made *The Mandalorian* possible.

It's called Volume, and it's quickly become a gamechanger for filmmaking. At its simplest level, it's the evolution of old movie backdrops – but instead of giant sheets of painted canvas, it's the kind of LED screens used for electronic billboard displays. Combined with Unreal Engine (the same 3D graphics software used on films like *Rogue One: A Star Wars Story*, and games *Batman: Arkham Asylum* and *Final Fantasy VII Remake*), it creates immersive backgrounds rendered in real time. Not only that, but the LEDs also replace traditional stage lighting. Filmmakers can create immersive backgrounds, and also program the color, temperature, brightness, and direction of the light. That's how Industrial Light & Magic could create a convincing double sunset over the Dune Sea, and now the same technology will be available in Austin.

It's been a sprint to get the first commercial Volume stage in Texas ready for its March 20 opening, as the team only got the keys to the South Congress location in January. "The secret," Kirchhoff said, "is you work your ass off."

The team had been planning to open a studio well before the pandemic, and before the Disney+ series made Volume the hot new tool for filmmakers. The original idea was just to share some office space: Kirchhoff and Smith realized that his company (Digital Shakedown) and her firm (Imagine You Media) were working together so much that they should look at renting a shared facility. They checked out the newly completed spaces at the Collective on South Congress, and their shared office idea became a plan for a coworking space aimed directly at media professionals – with a little something extra. Kirchhoff said, "We shoot a lot of interviews, I do a lot of commercial and broadcast shoots, so we'd benefit from having a studio as well."

That's when they made a critical decision: At the end of 2019, they decided to take some time off, and then the pandemic hit. They had nothing but time on their hands, so they took a trip to Colorado, looked over the business plan, and started brainstorming how to truly distinguish their facility in the Austin market. That's when Kirchhoff started reading articles about Volume and *The Mandalorian*, "and I was like, 'OK, how did they do it, and how do we do it?'"

What he found was that it was going to take more than placing an order. Volume is a term, not a product, originally coined by James Cameron and Robert Zemeckis for the motion capture spaces used for *Avatar* and *The Polar Express*. With the new LED-powered iteration, each soundstage is basically bespoke. Kirchoff said, "I've been studying, and studying, and studying everything about LED volumes, processors, and Unreal Engine, and how all those things work together." Plus there was a lot of research into pixel pitch – relating to the size of pixels, and the distance between them, "in order for the camera to not discern the individual pixels."

Now Co-Production is ready to open phase 1 on March 20, with a 2,500-sq.-ft. studio with a 20-ft.-by-10-ft. LED wall furnished by Ilumin, as well as the coworking space they always planned. Phase 2, planned for summer, will include a 40-ft.-by-10-ft. curved wall Volume stage with ceiling. Co-Production will be running training sessions so that filmmakers and creatives will get the most out of the tech – and there's a lot to get. When it comes to the opportunities presented by Volume, "color me impressed," said Austin Film Commission Director Brian Gannon, who said he was convinced of its potential by (like everyone else) *The Mandalorian*. "If you want a Kubrick-esque level of control, this is it."

In the short term, until the coronavirus restrictions are lifted, the soundstage is an immediate boon for Austin. Gathering rules in Texas mean it's easier to have a full crew indoors than out, so location shooting has become trickier than ever. With a Volume stage, Gannon said, "It basically allows you to send a small splinter unit out, doing the B-roll background shooting for the Unreal Engine, and bring that into the studio."

The long-term effect of the technology could be more complex, especially in Austin where location shooting is such a part of the ecosystem – and in Texas at large, where the state film commission has actively encouraged production in smaller towns through the Film Friendly Texas initiative. If it becomes cheaper and easier for films to create virtual environments, then producers looking at their bottom line will always make the budget-friendly decision. At the same time, there are already discussions in the industry about what new kinds of image licensing will be required to use a pre-rendered image on set.

For Gannon, one of the biggest bonuses is that Co-Production puts a dent into two of Austin filmmaking's biggest shortfalls: production offices and soundstages. Even before the pandemic soundstages were at a premium, and during the lockdown every square foot has a hold booking on it. The lack of studio space is "the biggest detriment we have," said Gannon, and even if Co-Production was just a regular soundstage that would help. However, with a Volume stage, "You don't need 50,000 square feet. You can build out your set digitally." Plus, much as early reports of the death of location shooting via green screens were greatly exaggerated, Gannon sees a healthy future for filming off-stage. He said, "We're a practical location destination, and I don't think that's ever going to change. There's stuff you can't emulate on a stage."

Until opening day, Kirchoff is enjoying experimenting with what his Volume stage *can* do, using free virtual environments from the Unreal marketplace. "What I like doing is going in to each of the environments, throwing the virtual camera in there, then hooking up my camera, and just practicing so I can do demos for people when they come into the studio. 'Check this out. It's ready to go.'"

Co-Production House opens March 20. More details and information at www.co-productionhouse.com.

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