Advanced Video Compositing without Green Screen for High-quality Live Streaming

J-Stream Inc.

Installation: September 2024
Location: Kanto Region, Japan

The Challenge

Deliver live streaming services that combine high production quality with cost efficiency.

The Solution

Panasonic's Video Mixer was introduced for precise AI-powered compositing without a green screen.

"Keying performance is so precise that we only prepare one light as a precaution. A single camera operator can manage the entire setup and takedown."

Mr. Yamato Ikeda
Leader, Production Team 2
Live Production Division, Platform Headquarters
J-Stream Inc.

Note: Job title and affiliation are as of April 2025.

Background

Differentiation as a Video Production and Streaming Expert

J-Stream Inc. provides live streaming services for corporate presentations and entertainment events. As more companies began to handle their own live broadcasts, J-Stream sought ways to differentiate itself from competitors by upgrading its production systems. The key benefit of Video Mixer—its ability to perform subject keying without a green screen—aligned perfectly with these goals, leading to its adoption by the company for live streaming applications.

Why Panasonic's Video Mixer?

AI Keying Delivers Professional Results Without a Green Screen

Mr. Ikeda of J-Stream explained: "The deciding factor was the exceptional performance of AI keying, a core feature of Video Mixer. Previously, we used chroma keying in our streams to enhance visual quality, but with traditional green screens, it's hard to achieve a clean composite if the lighting isn't perfectly balanced. AI keying uses artificial intelligence to cleanly separate the subject from the background, enabling studio-grade compositing without the hassle of setting up a green screen. After testing it during our free trial and then talking to the developers about technical matters, we were convinced that this was the right solution for us."

Recognized Leader in Video Production and Streaming

Established in 1997, J-Stream has built a comprehensive portfolio of services focused on video production and live streaming, as well as distribution platform development, and website creation and management. Its one-stop video solutions support a wide range of clients, from general businesses to media companies.
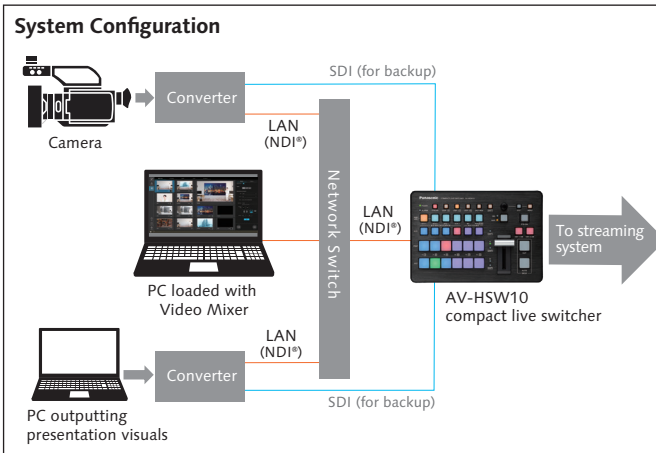
- Head Office: 6F, Shiba 256 Square Building, 2-5-6 Shiba, Minato-ku, Tokyo
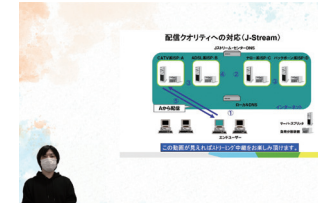- URL: https://www.stream.co.jp/
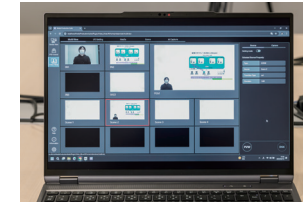
Video Mixer

▲ Video Mixer installed on a laptop PC receives feeds from one camera and presentation visuals from another PC.

System Configuration

Camera — Converter — SDI (for backup) — LAN (NDI®) — Network Switch

PC loaded with Video Mixer — LAN (NDI®) — Network Switch — LAN (NDI®) — AV-HSW10 compact live switcher — To streaming system

PC outputting presentation visuals — Converter — LAN (NDI®) — Network Switch — SDI (for backup)

▲ Scene created with AI keying, with seamless background compositing achieved on location in a conference room.

▲ Using Video Mixer to adjust subject's size and superimpose presentation visuals.

▲ Video Mixer's Multi View interface for one-touch switching between input sources and scenes.

▲ Using the AV-HSW10 switcher to manage transitions between scenes and other video sources.

Benefits

Simplified Workflows, Reduced Manpower, and Increased Production Quality

For live streaming, J-Stream connects a single camera and presentation video to a laptop PC running Video Mixer. AI keying is used to create the scene, and the output is sent to the AV-HSW10 compact live switcher for switching between sources other than scenes created with Video Mixer. The system primarily uses NDI® for connectivity, with SDI redundancy achieved with converters.

Mr. Ikeda explained: "We mainly use Video Mixer for simple streaming setups, such as a single person giving a presentation with slides. In these cases, AI keying is extremely effective. With just a quick background capture in the software, we can cleanly separate the presenter for compositing with a different background. It's so simple and versatile. We also use Video Mixer to overlay slides, add lower thirds, and perform various other composites seamlessly.

Another key benefit is that no green screen is required. Previously, we had to use multiple lights, even for a single presenter, to achieve accurate results with green-screen chroma keying. And we needed a lot of other equipment, including green fabric backdrops, support poles, etc., which required extra personnel.

But Video Mixer does not require a green screen for composite backgrounds.

And keying performance is so precise that we only prepare one light as a precaution. A single camera operator can manage the entire setup and takedown, so deployment is faster, and less equipment and personnel are needed, making this a very cost-effective solution that we can confidently recommend to clients.

Moreover, while hardware switchers with robust compositing features tend to be large and cumbersome, Video Mixer offers similar functionality on a single laptop. Since we often travel to remote locations for live production, the compact configuration is a huge advantage.

Recently, we used Video Mixer to live-stream a web seminar hosted by a pharmaceutical company. It was the first time we used Video Mixer instead of a hardware switcher in a live setting. We had some initial concerns, but after internal testing and thanks to strong support from Panasonic, we were able to execute the stream smoothly and successfully."

In the Customer's Own Words

Scalable Solution for Simple, High-impact Streaming

"Video Mixer has allowed us to significantly reduce our staffing and hardware requirements for live streaming. For simple events with a single presenter and camera, we can now deliver rich, professional visuals on a leaner budget. Moving forward, we aim to offer this streaming solution to a wide range of clients."

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Installed equipment	• Media Production Suite Video Mixer Software Key **AW-SF400 x 1** • Compact Live Switcher **AV-HSW10 x 1**

*NDI® is a video connectivity technology and is registered as a trademark by Vizrt NDI AB in the United States and other countries.