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## AVMATRIX PVS0403U

# AVMATRIX PVS0403U Multi-Format Video Mixer Switcher

## USER INSTRUCTION MANUAL

### 1. Introduction

This manual provides detailed instructions for the setup, operation, and maintenance of your AVMATRIX PVS0403U Multi-Format Video Mixer Switcher. The PVS0403U is an integrated solution for live video production, featuring a 10.1-inch IPS FHD display, multiple video inputs, and advanced switching capabilities. Please read this manual thoroughly before using the device to ensure proper functionality and to maximize your experience.



Figure 1: AVMATRIX PVS0403U Multi-Format Video Mixer Switcher.

## 2. Package Contents

Verify that all items are present in the package:

- PVS0403U Video Switcher Unit
- Power Supply (12V 2A)
- USB Cable (Type A-C)
- Tally Connector (DB-15)



Figure 2: Front view of the PVS0403U packaging.

### 3. Device Overview

The PVS0403U integrates a control panel, a 10.1-inch display, and various input/output ports for comprehensive video switching and live production.

#### 3.1 Front Panel and Display

The front panel features dedicated buttons for input selection, transition effects, keying, and audio control. The integrated 10.1-inch IPS FHD display provides real-time monitoring of all input channels, program (PGM) output, and preview (PVW) output.



## FUNCTION

- ▶ 10.1 inch FHD IPS LCD monitor
- ▶ 2×HDMI & 2×3G-SDI inputs, support auto-detected
- ▶ 2×HDMI PGM output, 1×HDMI multiview out, 1×USB type-C output
- ▶ All outputs are configurable and assignable
- ▶ USB for capturing and streaming on PC
- ▶ Upstream key: Luma key, Chroma key, PIP×2/ POP
- ▶ Downstream key and LOGO overlay
- ▶ T-bar/ Auto/ Cut transitions; various effects: WIPE(11×2 patterns) / MIX/ DIP
- ▶ Audio mixer: 2×SDI, 2×HDMI embedded audio and 2×MIC/line In; audio delay available
- ▶ Media library: 39 default patterns, 16 imported images, 16 captured images, 2 color generators
- ▶ LAN port for PC software remote control
- ▶ FTB/ MUTE/ STILL/ GPIO for tally

Figure 3: The 10.1-inch IPS FHD display for real-time monitoring.

### 3.2 Rear Panel Connections

The rear panel houses all necessary input and output ports for connecting cameras, computers, and external monitors.



Figure 4: Rear panel connections of the PVS0403U.

Figure 5: Detailed diagram of the PVS0403U interface ports.

The available ports include:

- 2x SDI Inputs
- 2x HDMI Inputs
- 2x MIC IN (Audio Inputs)
- 2x HDMI PGM Output
- 1x HDMI Multiview Output
- 1x USB Type-C Output (for PC capture/streaming)
- LAN Port (for PC remote control)
- Tally Port (DB-15)
- DC-12V Power Input

## 4. Setup

### 4.1 Power Connection

1. Connect the provided 12V 2A power adapter to the DC-12V input port on the rear panel.
2. Plug the power adapter into a suitable electrical outlet.
3. Press the power button to turn on the device. The integrated screen will display the boot sequence.

### 4.2 Video Input Connections

Connect your video sources (cameras, computers, gaming consoles) to the appropriate input ports:

- For SDI sources, use the **2x SDI IN** ports.
- For HDMI sources, use the **2x HDMI IN** ports.

### 4.3 Video Output Connections

Connect external monitors or recording devices to the output ports:

- For program output, use the **2x HDMI PGM Output** ports.
- For multiview monitoring on an external display, use the **1x HDMI Multiview Output** port.
- For streaming or capturing to a PC, connect the **USB Type-C Output** to your computer using the provided USB cable.

### 4.4 Audio Connections

Connect external microphones or audio mixers to the **2x MIC IN** ports for additional audio sources.

### 4.5 PC Remote Control Connection

To control the switcher remotely from a PC, connect an Ethernet cable from the **LAN** port on the PVS0403U to your computer or network.

## 5. Operating Instructions

### 5.1 Basic Switching

The PVS0403U allows seamless switching between four input sources. The integrated 10.1-inch display shows all four inputs, the preview (PVW) feed, and the program (PGM) feed simultaneously.

1. **Input Selection:** Press the corresponding input buttons (1, 2, 3, 4) on the program (PGM) row to send that input directly to the program output. Press buttons on the preview (PVW) row to select the next source for preview.
2. **Transitions:** Use the T-bar fader or the **AUTO** button for smooth transitions between PVW and PGM. The **CUT** button provides an instant switch.

Your browser does not support the video tag.

Video 1: Demonstration of basic switching and transition effects on the PVS0403U.

### 5.2 Transition Effects

The switcher offers various transition effects to enhance your live production:

- **WIPE:** A transition where one image replaces another by wiping across the screen.
- **MIX:** A dissolve transition where one image fades out as another fades in.
- **DIP:** A transition that dips to a solid color before transitioning to the next source.

Select the desired transition effect using the dedicated buttons and adjust speed if applicable.



Figure 6: Overview of transition effects and other advanced features.

### 5.3 Keying (Chroma Key & Luma Key)

The PVS0403U supports both Chroma Key and Luma Key for creating virtual sets or overlaying graphics.

- **Chroma Key:** Used to remove a specific color (e.g., green screen) from a video source, allowing another video or image to show through.
- **Luma Key:** Used to key out areas based on brightness levels.

Activate these features using the **CHROMA** and **LUMA** buttons and adjust parameters as needed for optimal results.



Figure 7: Visual representation of keying and other overlay functions.

### 5.4 Picture-in-Picture (PIP) / Picture-by-Picture (POP)

The switcher supports PIP and POP functions, allowing you to display multiple video sources simultaneously on the program output. You can adjust the size and position of the sub-screens.

- **PIP:** Displays one video source as a smaller inset window over another main video source.
- **POP:** Displays two or more video sources side-by-side.

### 5.5 Logo Overlay

You can add a custom logo to your program output. Logos can be imported from a USB flash drive in PNG, JPG, or GIF format. The size and position of the logo are adjustable.

### 5.6 Audio Mixing

The PVS0403U includes an audio mixer for managing embedded audio from HDMI and SDI inputs, as well as external microphone inputs. Adjust audio levels for each source independently.

## 5.7 Media Management

The device has a built-in media library with 39 default patterns and supports importing up to 16 images from a USB flash drive. These can be used as backgrounds or overlays.

## 5.8 PC Remote Control

All settings and functions of the PVS0403U can be controlled remotely using PC-based control software. Connect your PC via the LAN port and install the appropriate software (available from the AVMATRIX website) for comprehensive control.

## 5.9 USB-C Output for Streaming/Capture

Connect the USB Type-C output to a PC to use the PVS0403U as a webcam source for live streaming platforms (e.g., OBS, PotPlayer, Zoom, Twitch, YouTube) or for video capture. The USB output carries both video and audio.

## 6. Maintenance

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### 6.1 Cleaning

Regularly clean the device with a soft, dry cloth. Avoid using liquid cleaners or solvents, as these may damage the surface or internal components. Ensure the device is powered off and unplugged before cleaning.

### 6.2 Firmware Updates

Periodically check the official AVMATRIX website for firmware updates. Firmware updates can improve performance, add new features, or resolve known issues. Follow the instructions provided with the firmware update package carefully. Typically, firmware updates are performed via the USB port or LAN connection.

## 7. Troubleshooting

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This section addresses common issues you might encounter with the PVS0403U.

- **No Video Input Signal:**

- Ensure video sources are powered on and connected securely to the correct SDI or HDMI input ports.
- Verify that the input resolution and frame rate are supported by the PVS0403U (refer to Specifications).
- Check the input selection on the switcher.

- **No Video Output on External Monitor:**

- Confirm the external monitor is powered on and connected to an HDMI PGM or Multiview output.
- Check the monitor's input selection.
- Ensure the output resolution is compatible with your monitor.

- **No Audio:**

- Check audio levels in the audio mixer section of the switcher.
- Verify that audio is embedded in your HDMI/SDI sources or that external microphones are properly connected and powered.
- Ensure the output device (monitor, speaker) has its volume turned up.

- **PC Not Recognizing USB-C Output:**

- Ensure the USB Type-C cable is securely connected to both the switcher and the PC.
- Try a different USB port on your PC.
- Restart the PC and the PVS0403U.
- Check device manager on your PC for driver issues.

- **PC Remote Control Not Working:**

- Verify the LAN cable connection.
- Ensure the PC control software is correctly installed and configured.
- Check network settings on both the PC and the switcher.

If you encounter issues not covered here, please refer to the official AVMATRIX support resources.

## 8. Specifications

Below are the technical specifications for the AVMATRIX PVS0403U:

Feature	Detail
Video Inputs	2x SDI, 2x HDMI
Video Outputs	2x HDMI PGM, 1x HDMI Multiview, 1x USB Type-C
Audio Inputs	2x MIC IN
Display	10.1-inch IPS FHD
Control	Front Panel Buttons, T-bar, LAN (PC Remote)
Transition Effects	WIPE (11x2 patterns), MIX, DIP
Keying	Chroma Key, Luma Key
Overlay Functions	PIP/POP, Logo Overlay
USB Capture	USB Type-C 2.0 for PC streaming/capture (UVC/UAC)
Power Supply	DC 12V, 2A
Dimensions (LWD)	261.4 x 193.9 x 58 mm
Weight	1673.5 g (approx. 3.69 lbs)
Operating Temperature	-20°C to 60°C
Storage Temperature	-30°C to 70°C

Figure 8: Comprehensive technical specifications table.

## 9. Warranty and Support

AVMATRIX products are designed for reliability and performance. For warranty information, please refer to the warranty card included with your product or visit the official AVMATRIX website. For technical support, troubleshooting assistance, or service inquiries, please contact AVMATRIX customer support through their official

channels.

**Online Resources:** For the latest drivers, software, and additional documentation, please visit the AVMATRIX official website.

## Related Documents - PVS0403U

 <b>PVS0613</b> PORTABLE 6 CHANNEL MULTI-FORMAT VIDEO SWITCHER	<p><a href="#"><u>AVMATRIX PVS0613 Portable 6-Channel Multi-Format Video Switcher User Manual</u></a></p> <p>This manual provides comprehensive information on the AVMATRIX PVS0613, a portable 6-channel multi-format video switcher. It covers safety precautions, interfaces, specifications, front panel controls, operation instructions, and menu settings for video switching, audio mixing, and transition effects.</p>
 <b>PVS0615</b> Portable all in one Multi-format Video Switcher	<p><a href="#"><u>AVMATRIX PVS0615 Portable Multi-format Video Switcher User Manual</u></a></p> <p>User manual for the AVMATRIX PVS0615, a portable all-in-one 6-channel multi-format video switcher with a 15.6" LCD display. Learn about its features, connections, operation, and settings.</p>
 <b>PVS0615</b> Portable all in one Multi-format Video Switcher	<p><a href="#"><u>AVMATRIX PVS0615 Portable Multi-format Video Switcher User Manual</u></a></p> <p>User manual for the AVMATRIX PVS0615, a portable all-in-one 6-channel multi-format video switcher. Learn about its features, connections, control panel, operation instructions, and specifications.</p>
 <b>PVS0615</b> Portable all in one Multi-format Video Switcher	<p><a href="#"><u>AVMATRIX PVS0615 Portable Multi-format Video Switcher User Manual</u></a></p> <p>User manual for the AVMATRIX PVS0615, a portable all-in-one 6-channel multi-format video switcher with a 15.6-inch LCD display. Covers features, connections, specifications, control panel operation, transitions, and recording.</p>
 <b>VS0601U</b> MINI 6 CHANNEL MULTI-FORMAT STREAMING VIDEO SWITCHER	<p><a href="#"><u>AVMATRIX VS0601U Mini 6-Channel Multi-Format Streaming Video Switcher Manual</u></a></p> <p>Comprehensive guide to the AVMATRIX VS0601U, a compact 6-channel SDI/HDMI multi-format video switcher for live streaming, audio mixing, and transitions. Features include USB3.0 live streaming, multiple outputs, and versatile input support.</p>



**HVS0402U**  
MICRO 4 CHANNEL HDMI LIVE STREAM  
MULTI-FORMAT VIDEO SWITCHER

## [AVMATRIX HVS0402U User Manual: 4-Channel HDMI Live Stream Video Switcher](#)

This user manual provides comprehensive instructions and specifications for the AVMATRIX HVS0402U, a 4-channel HDMI multi-format video switcher designed for live streaming and video production. Learn about its features, interfaces, operation, and system settings.