

AVMATRIX HVS0402U

AVMatrix HVS0402U Micro 4-Channel HDMI Live Stream Multi-Format Video Switcher User Manual

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of the AVMatrix HVS0402U Micro 4-Channel HDMI Live Stream Multi-Format Video Switcher. This device is designed for professional video production, offering versatile input/output options and advanced features for live streaming and multi-format video switching.



Figure 1: AVMatrix HVS0402U Video Switcher

2. PRODUCT OVERVIEW

2.1 Front Panel Controls

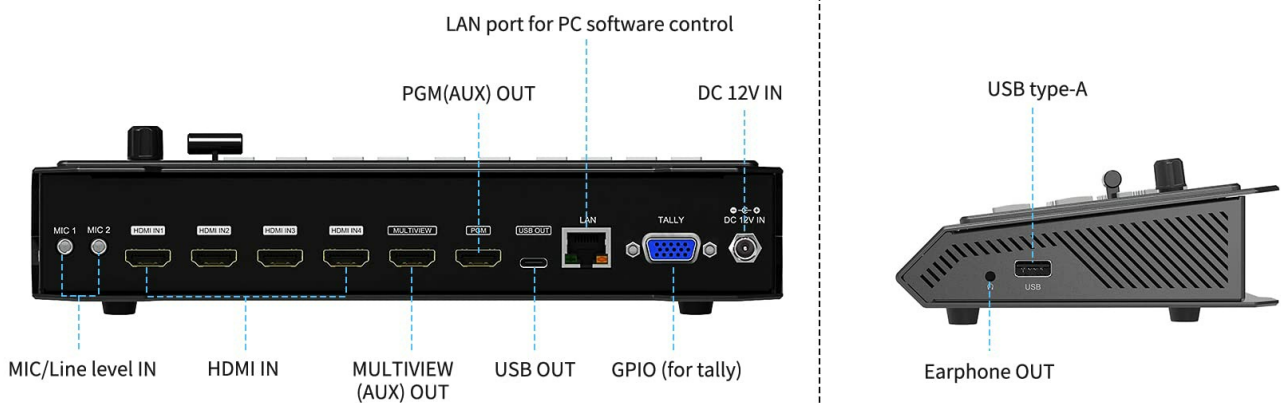
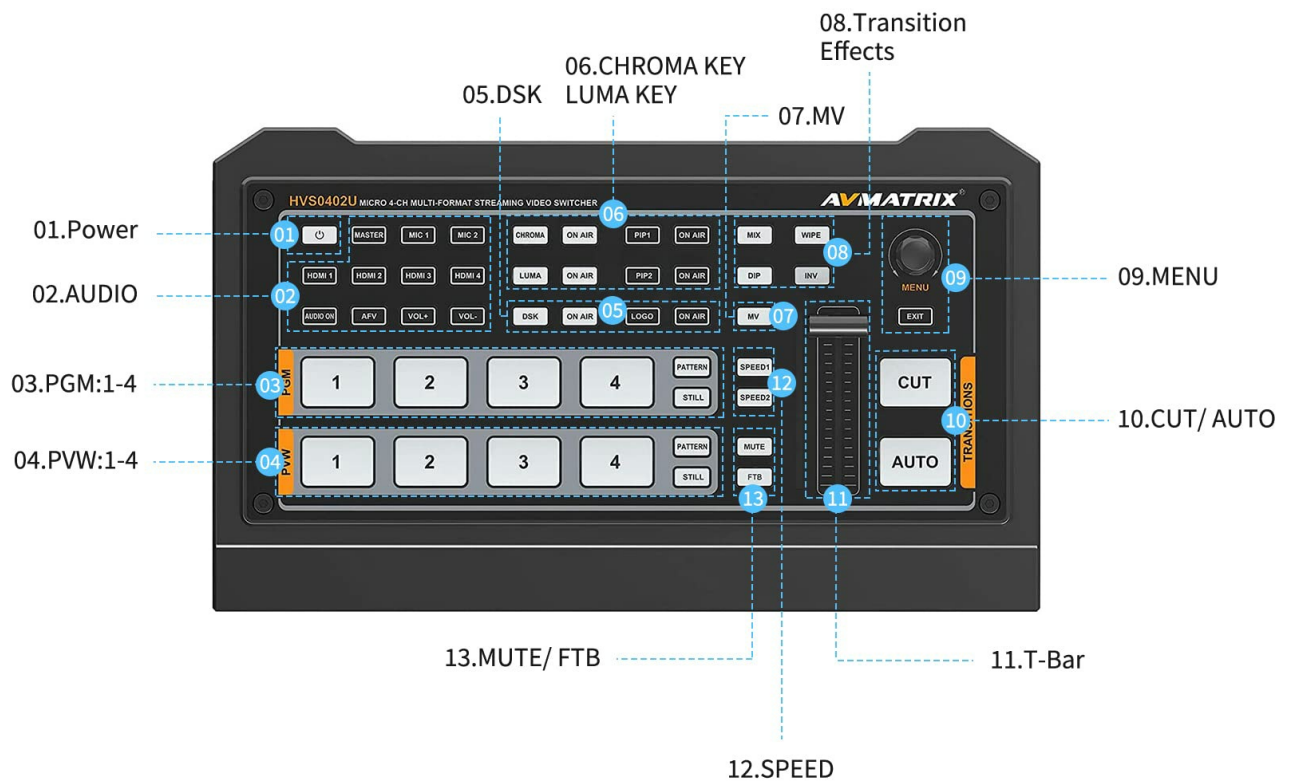


Figure 2: Front Panel Layout and Controls

1. **Power Button:** Turns the device on or off.
2. **Audio Controls:** Buttons for master audio, microphone inputs (MIC 1, MIC 2), and volume adjustment (VOL+, VOL-).
3. **PGM (Program) Selection:** Buttons 1-4 to select the output source for the program feed.
4. **PVW (Preview) Selection:** Buttons 1-4 to select the source for the preview monitor.
5. **Keying Controls:** Buttons for Chroma Key, Luma Key, DSK (Downstream Key), PIP1, PIP2, and Logo overlay. Each has an 'ON AIR' button to activate.
6. **Transition Effects:** Buttons for MIX, DIP, WIPE, INV (Invert).
7. **Multiview (MV) Button:** Activates the multiview display.
8. **Speed Controls:** SPEED1 and SPEED2 buttons to adjust transition speed.
9. **Menu/Exit:** Navigation buttons for on-screen menu.
10. **Cut/Auto Transitions:** CUT for instant transition, AUTO for programmed transition.
11. **T-Bar:** Manual control for transitions.
12. **Mute/FTB:** MUTE for audio mute, FTB (Fade to Black) for video fade.

Widely Applications



Figure 3: Rear Panel Connections

- **MIC/Line Level In:** Two 3.5mm audio input jacks for microphones or line-level audio.
- **HDMI IN 1-4:** Four HDMI inputs for video sources.
- **MULTIVIEW (AUX) OUT:** HDMI output for monitoring multiple sources.
- **PGM OUT:** HDMI output for the program feed.
- **USB OUT (Type-C):** USB-C port for capturing and streaming to a PC.
- **LAN:** RJ45 port for PC software remote control.
- **TALLY:** DE-15/DB-15 port for tally light connection.
- **DC 12V IN:** Power input for the 12V DC adapter.
- **USB (Type-A):** USB-A port for firmware updates or connecting external devices.

3. SETUP

1. **Power Connection:** Connect the provided 12V DC power adapter to the 'DC 12V IN' port on the rear panel and

plug it into a power outlet.

2. **Video Input Connection:** Connect your HDMI video sources (e.g., cameras, computers) to the 'HDMI IN 1-4' ports. The switcher auto-detects input formats (1080p, 1080i, 720p, 576i, 480p).
3. **Audio Input Connection:** If using external microphones or line-level audio, connect them to the 'MIC/Line Level In' 3.5mm jacks.
4. **Monitor Connection:** Connect a display monitor to the 'MULTIVIEW (AUX) OUT' port to view all inputs, program, and status information.
5. **Program Output Connection:** Connect your main output display or recording device to the 'PGM OUT' HDMI port.
6. **Streaming/Recording Connection:** For live streaming or recording to a PC, connect the 'USB OUT (Type-C)' port to your computer.
7. **Network Connection (Optional):** For PC software remote control, connect an Ethernet cable from your network to the 'LAN' port.
8. **Tally Connection (Optional):** If using tally lights, connect them to the 'TALLY' port.

4. OPERATING INSTRUCTIONS

4.1 Basic Switching

- Press the **Power Button** to turn on the switcher.
- To select a source for the **Program (PGM)** output, press the corresponding numbered button (1-4) in the PGM row. The button will illuminate red.
- To select a source for the **Preview (PVW)** monitor, press the corresponding numbered button (1-4) in the PVW row. The button will illuminate green.
- Use the **CUT** button for an instant, hard cut transition between PVW and PGM.
- Use the **AUTO** button for a smooth, automatic transition between PVW and PGM, using the selected transition effect and speed.
- The **T-Bar** allows for manual control of transitions. Move the T-Bar up or down to smoothly transition between the PVW and PGM sources.

4.2 Audio Mixing



User can adjust the audio delay to make the audio and video synchronization.

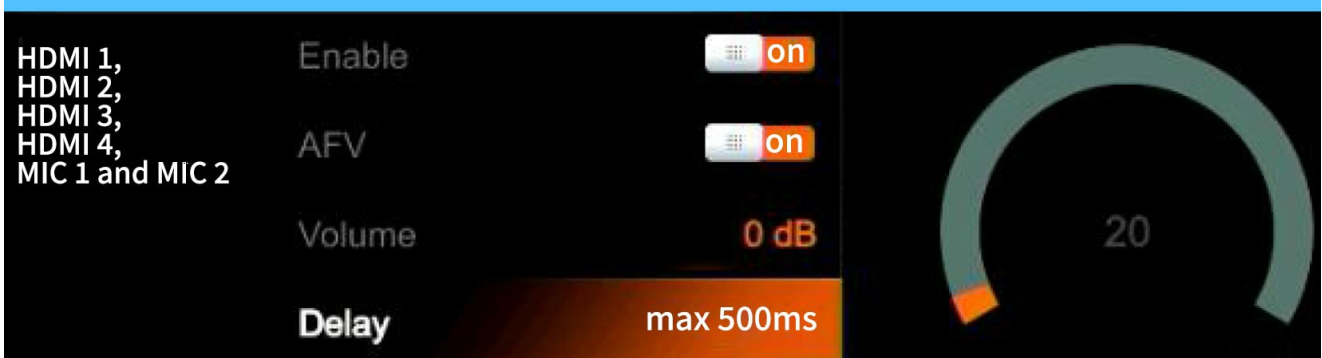


Figure 4: Multiview Display with Audio Mixer

- The switcher features an audio mixer for HDMI embedded audio and 2-channel MIC/line inputs.
- Use the **AUDIO ON** button to enable or disable audio for a specific HDMI input.
- Adjust the master audio level using the **MASTER** button and the **VOL+ / VOL-** buttons.
- Individual audio levels for HDMI inputs and MIC inputs can be adjusted via the on-screen menu, accessible by pressing the **MENU** button.
- Audio delay is available to synchronize audio with video. This can be adjusted in the menu.

4.3 Keying and Overlays

- **Chroma Key:** Use the **CHROMA** button and its 'ON AIR' button to activate green/blue screen keying. Adjust parameters via the menu.
- **Luma Key:** Use the **LUMA** button and its 'ON AIR' button for luminance-based keying.
- **DSK (Downstream Key):** Activate graphics or lower thirds using the **DSK** button and 'ON AIR'.
- **PIP (Picture-in-Picture) / POP (Picture-outside-Picture):** The switcher supports two PIP layers (PIP1, PIP2). Press the respective **PIP** button and 'ON AIR' to activate. Position and size can be adjusted in the menu.
- **Logo Overlay:** Use the **LOGO** button and 'ON AIR' to display a stored logo.

4.4 Transitions and Effects

- Select transition effects such as **MIX**, **DIP**, **WIPE**, or **INV** (Invert) using the dedicated buttons.
- Adjust the transition speed using the **SPEED1** and **SPEED2** buttons.
- The **FTB (Fade to Black)** button provides a quick fade to a black screen.

4.5 Multiview Display



User can adjust the audio delay to make the audio and video synchronization.



Figure 5: Multiview Layout Options

- The multiview output allows you to monitor all input sources, program output, preview output, and various status indicators on a single screen.
- Layouts can be configured (e.g., horizontal or vertical) through the on-screen menu.

4.6 PC Software Remote Control

- Connect the switcher to a PC via the LAN port for advanced control and configuration using dedicated software.
- This allows for detailed adjustments of settings, media library management, and remote operation.

5. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Avoid liquid cleaners or abrasive materials.
- **Storage:** Store the switcher in a cool, dry place away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Periodically check the manufacturer's website for firmware updates to ensure optimal performance and access to new features. Use the USB Type-A port for updates.

6. TROUBLESHOOTING

- **No Power:** Ensure the power adapter is securely connected to the device and a working power outlet. Check the power indicator light.
- **No Video Input:** Verify that HDMI cables are securely connected to both the source and the switcher. Confirm the input source is active and outputting a compatible video format (1080p, 1080i, 720p, 576i, 480p).
- **No Video Output:** Check HDMI connections to the monitor/recording device. Ensure the correct input is selected on the monitor.
- **No Audio:** Confirm audio is enabled for the selected input in the audio mixer settings. Check microphone connections and levels.
- **PC Software Connection Issues:** Ensure the LAN cable is properly connected and network settings are correct. Verify that the PC software is the correct version for your device.

7. SPECIFICATIONS

Feature	Specification
Model Number	HVS0402U
Video Input Sources	4 (HDMI)
Video Input Connectors	4 x HDMI female
Input Video Format	HDMI 1080p, 1080i, 720p, 576i, 480p (auto-detected)
Audio Input Format	Analog (3.5mm Mic/Line In)
Video Output Channels	2 (PGM, Multiview)
Output Audio Format	Analog
Monitor Output	1 x HDMI (Multiview)
USB Output	1 x USB Type-C (for capturing and streaming)
Other I/O	1 x DE-15/DB-15 Tally Input, 1 x RJ45 LAN, 1 x USB Type-A (firmware/service)
Processing Resolution	1080p
Graphics Memory	32 Images
Audio Mixing	2-Channel mixing
Compatible Services	Facebook Live, Livestream, Skype, Twitch, YouTube Live
Power Input	12 VDC at 2 A (12 W device input)

Operating Temperature	-4 to 140°F (-20 to 60°C)
Storage Temperature	-22 to 158°F (-30 to 70°C)
Dimensions (L x W x H)	9.63 x 5.64 x 1.75 inches (24.46 x 14.33 x 4.45 cm)
Weight	2.3 lbs (1.04 kg)

8. PRODUCT VIDEO OVERVIEW

Watch this official product video for a visual demonstration of the AVMatrix HVS0402U's features and functionality.

Video: AVMatrix HVS0402U Micro 4-Channel HDMI Live Stream Multi-Format Video Switcher demonstration.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question