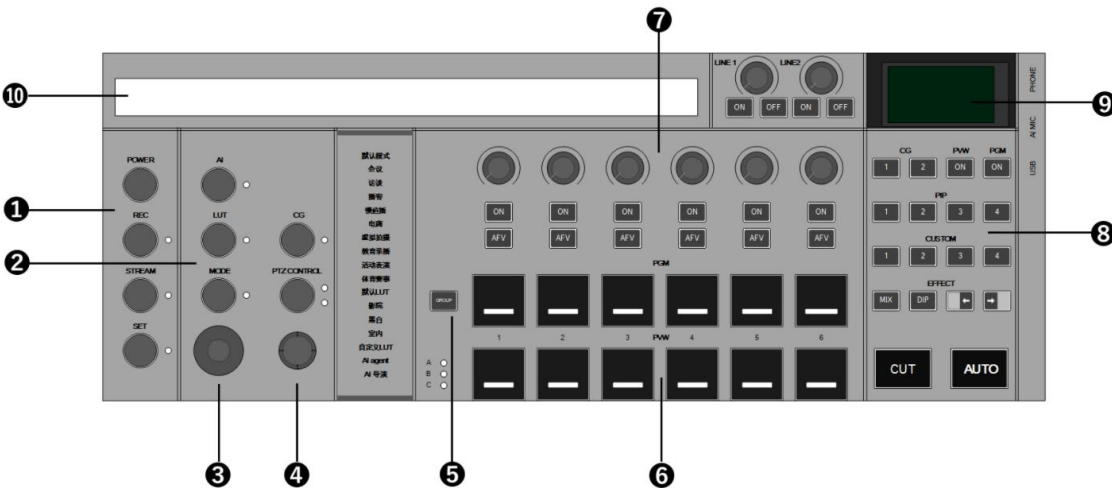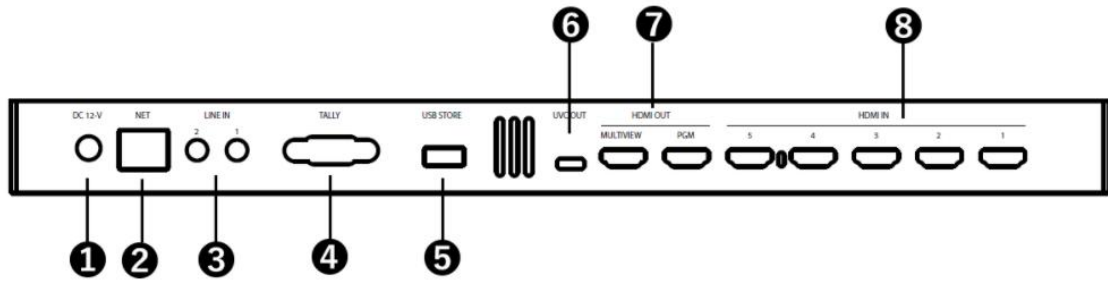# Pixel;Gate Switcher User Manual

Overview

PIXEL;GATE is a powerful and easy-to-use video production tool designed for users who require flexibility and mobility. Whether you are part of a professional team or an individual creator, this device enables you to effortlessly perform high-quality video switching and live streaming, enhancing both production efficiency and quality.

The following chapters will guide you through the various functional modules of the PIXEL;GATE switcher and provide detailed instructions on the related software operations.
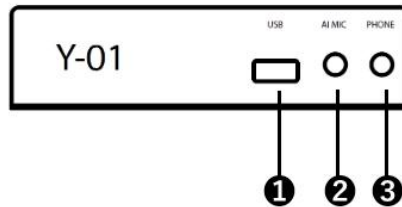
Switcher Interface Overview：

❶ Core Function Button Area
❷ Mode Selector Buttons
❸ Multi Function Knobs
❹ 3D Joystick
❺ Group Switching (GROUP)

❻ PVW、PGM Channel Buttons
❼ Audio Adjustment Controls
❽ Function Control Buttons
❾ Status Display Panel
❿ Touchscreen Display

❶ DC Power Input ❺ USB STORAGE Port
❷ RJ45 Network Port ❻ UVC OUT Output
❸ LINE IN Input ❼ HDMI Output
❹ TALLY Output ❽ HDMI Inputs * 5

❶ USB Port
❷ AI MIC/MIC Input
❸ Monitor Audio Phone Port

Quick Start

Connect To Power

Before using the device, connect the power adapter to a main power source. Make sure to select the appropriate power plug attachment that matches the standard socket in your region.
After connecting, tighten the locking ring on the power plug to prevent accidental disconnection.
Once securely connected, press the **POWER** button on the switcher panel to turn on the device.
Press **POWER** button 5 seconds to turn off the device.

Using the Touch Screen Display

After the switcher system powers on successfully, the touchscreen display will show a startup prompt. Once the system enters the main interface, the default **multiview** monitoring layout will be displayed.

You can navigate between **Multiview Monitoring, Multiview Settings**, and **System Settings** directly via the touchscreen.

Connecting Input Video Sources

Connect HDMI cameras or other HDMI video sources to the corresponding HDMI IN (1–5) ports. The format of the connected HDMI input signal will be automatically converted to match the current system output format. You can change the system output mode under Settings > Output.

Note:

- All HDMI inputs (1–5) support embedded audio.
- HDMI 1 supports up to 3840×2160 @60p, and is backward compatible with 1080p.
- HDMI 2–5 support up to 3840×2160 @30p, and are also backward compatible with 1080p.

Connecting Output Video Sources

The HDMI outputs provide two independent signal outputs:
PGM (Program Output) delivers the final mixed output signal for live production.
Multiview displays the multichannel preview layout.
You can customize the multiview output style through the Multiview Settings interface on the touchscreen display.

Note:
The Multiview output does not carry audio.

Connecting Audio Input and Output Signals

The system provides two 3.5mm Line IN audio input ports and one 3.5mm MIC IN port.
You can connect audio sources to the appropriate input based on the type of signal. The input levels can be adjusted in real time using the control knobs and buttons on the switcher panel.
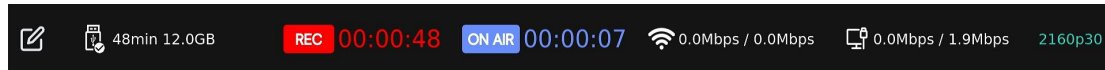The Phone Monitoring port on the right side of the switcher allows you to monitor both the PGM audio output and individual channel input audio.

Connecting USB Storage Device

The system supports USB storage devices via a standard Type-A port.

These devices can be used to record the PGM output or individual input channels separately.

The USB storage connection port is shown below:

Note:

The USB storage device must be formatted in NTFS&EXFAT(AppleIOS) to ensure proper recognition by the switcher.

Once the device is successfully recognized, the available recording duration will be displayed.

Please connect the USB storage device to the USB STORAGE port on the rear panel.

Connecting to the Network

The system supports both RJ45 Ethernet and Wi-Fi connections:

To use a wired connection, plug the Ethernet cable into the RJ45 port on the rear panel. Then go to Settings (**SET**) > Basic Settings > Network to manage the connection. DHCP is enabled by default.

For Wi-Fi, access the Wi-Fi settings via the touchscreen and select the desired wireless network.

Switching Channels Using Channel Buttons

The switcher supports 18 channels for PGM (Program) and **PVW** (Preview) switching.

In different operational modes, the system allows channel-to-channel mapping. These mappings can be customized under **SET** > Button Assignment.

The **CUT** button provides a direct cut transition, while the AUTO button enables transitions with effects.

Streaming and Recording

The switcher supports multi-address streaming using the RTMP   protocol.

To stream:

Go to **SET** > **Stream Settings** to enter your streaming addresses.

After configuration, press the **STREAM** button on the panel to start streaming.

To record:

Insert a USB flash drive into the USB STORAGE port.

Press the RECORD button on the switcher panel to start recording.

Connecting to Keyboard and Mouse

- The Pixel;Gate switcher supports connection to a USB keyboard for text input, such as entering stream URLs and other information.
- It also supports USB mouse input, allowing users to switch signal sources and navigate system settings menus.

Core Functional Area Overview：
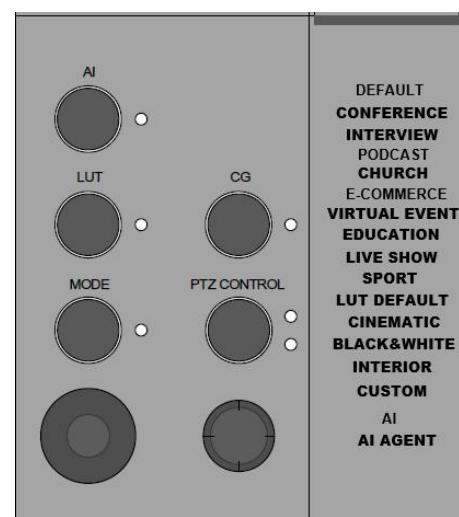
Power, Streaming, and Recording Controls

- **POWER** button controls system startup and shutdown.
  After connecting the adapter, press **POWER** to boot the device. The **POWER** indicator light will illuminate when powered on.
  To shut down, press and hold **POWER** for 3 seconds.
- **REC** button starts the recording function.
  The indicator will turn red to show that recording is active. Please insert a USB storage device before recording.
- **STREAM** button starts live streaming.
  Streaming URLs must be configured under Settings > Streaming.
- **SET** button opens the system settings menu.
  Pressing **SET** again returns you quickly to the Multiview main screen.

MODE / LUT / AI / PTZ Control Area

This area allows you to control the function of the 3D joystick and rotary knobs.

- **MODE, LUT, AI, CG, PTZ CONTROL** buttons activate different control modes:
- **MODE** provides 10 preset modes. Rotate the knob to select a mode and press to confirm. Some modes require software reboot.
- When pressing **MODE**, the touchscreen will display a pop-up preview window showing layout or function hints for the selected mode.
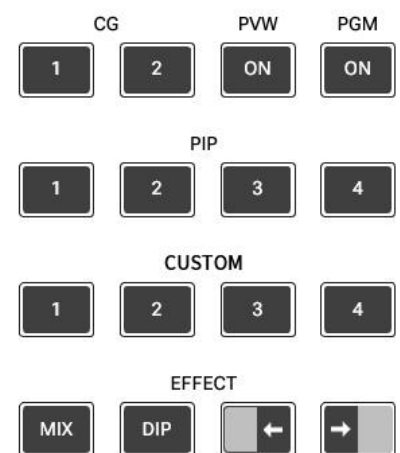
- **LUT** offers 5 default color filters. The **CUSTOM** slot allows you to import your own LUT (.PNG or .CUBE format).
- **CG** lets you toggle between **CGLIST** 1 and **CGLIST** 2. After adding subtitles in the CG tab, use the knob to preview or control playback.
- **PTZ CONTROL** mode enables joystick control of PTZ camera pan/tilt and knob control of zoom functions.
- AI mode includes two AI functions:
- **AI AGENT**: an advanced AI assistant that offers smart tracking & auto-framing, voice transcription, and script generation.
- LED Indicators show the currently active mode.

Channel Switching & GROUP Buttons

- **GROUP** button toggles between 3 signal groups (A, B, C), enabling switching across up to 18 signal sources.
  The LEDs labeled A, B, and C indicate the currently selected group.
- **PVW / PGM** (1–6) buttons switch assigned signals to Preview (PVW or Program (PGM) output.
  The binding of these 1–6 buttons varies by mode. You can customize them via SET > Custom Buttons.
    - **CUT** performs instant switching with no transition.
    - **AUTO** applies a transition effect.

You can configure the EFFECT type (e.g., fade, page turn, slide) and transition duration (default 1 sec) under SET > Effects.

Audio Control Knobs

- Each 1–6 audio knob adjusts the corresponding channel's volume.
  Turning fully left mutes the channel; fully right sets it to max volume.
- **AFV** (Audio Follow Video): when enabled, the audio will follow the video output in **PGM**.
- **ON**: enables Direct Audio Pass-through—the channel's audio always contributes to the **PGM** mix.

Function Buttons

- **CG 1 & CG 2**: Select **CGLIST** 1 or **CGLIST** 2.
- PVW-ON sends selected CG titles to Preview (green indicator on).
- PGM-ON sends them to Program Output (red indicator on).
- PIP (Picture-in-Picture): Provides 4 preset video window templates.
  Pressing the corresponding channel loads the window layout into PVW.
  You can customize the function (e.g., apply to PGM) via SET > Custom Buttons.

- **CUSTOM**: Fully customizable button.
  Functions can be set in SET > Custom Buttons, and saved per mode.
- **EFFECT**: Offers 4 real-time transition effects.
  Active effects are highlighted, and used with the AUTO key for stylized transitions.

Status Display Screen

- Displays:
- Current system time
- Streaming status
- Recording status & duration
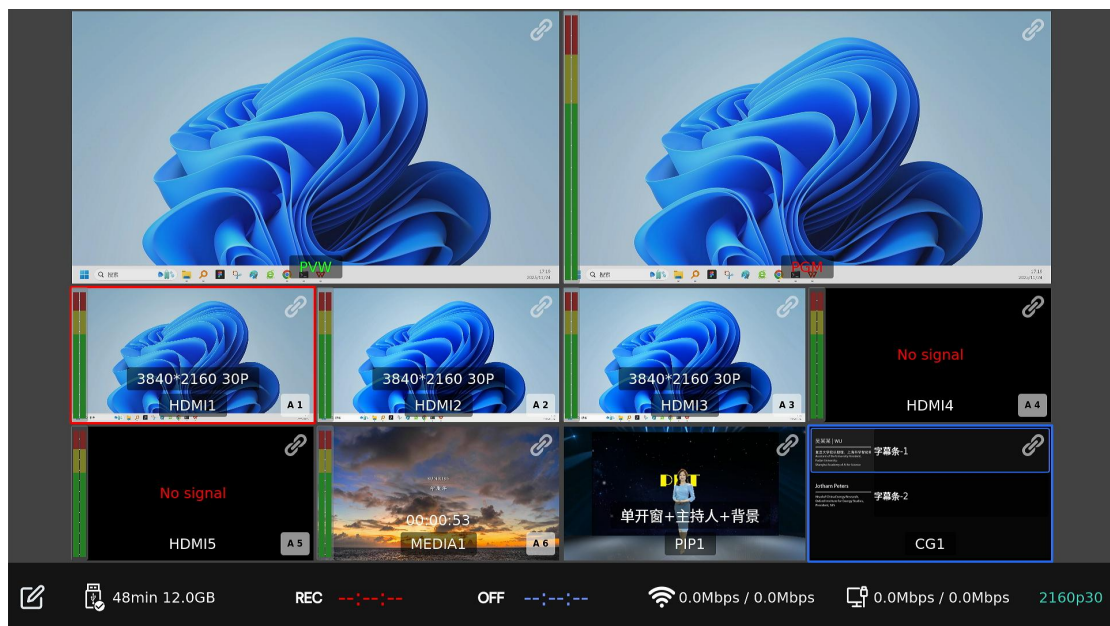- Network connection status
- USB storage status

Touchscreen Display

Connected via built-in Type-C port, the LCD screen supports touch interaction.
It allows real-time signal previews, multiview monitoring, and system configuration.

Multiview Function

Tap the **Multiview Settings** icon at the bottom-left corner of the screen to enter the **Multiview Layout Configuration** interface.
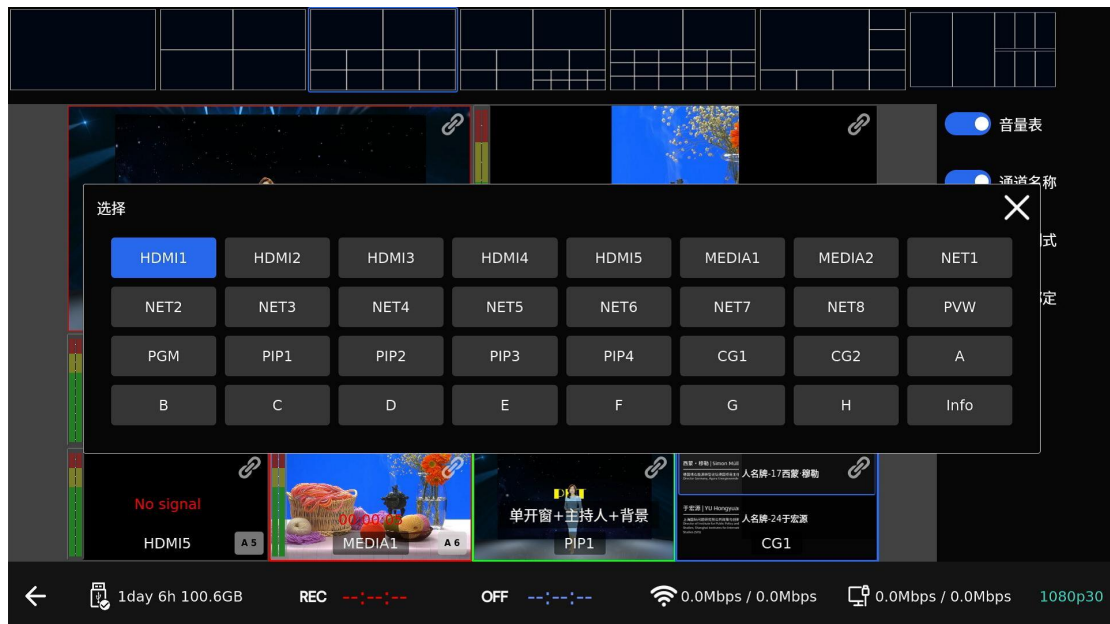
Multiview Settings

- Tap the Multiview Layout icon at the top of the screen to quickly switch between different layout modes, such as PGM Full Screen, 4-Window, Standard Grid, and more.

- Click on any window in the layout to bring up the signal binding selector. Each window supports custom signal assignment.

- **Audio Meters**: You can choose to show or hide audio meters. When enabled, each channel's audio levels are displayed in real time.
- **Channel Names**: Shows the current source assigned to each channel (e.g., HDMI1, NET1, MEDIA1, PIP1). Channel names can be edited under SET > Input Settings.
- **Signal Resolution & Frame Rate**: Displays the real-time resolution and frame rate of each input. Supports both HDMI and NET inputs.
- **Button Binding Display**: This feature indicates the current binding between signal sources

and the physical buttons on the switcher panel, helping operators quickly identify control mappings.
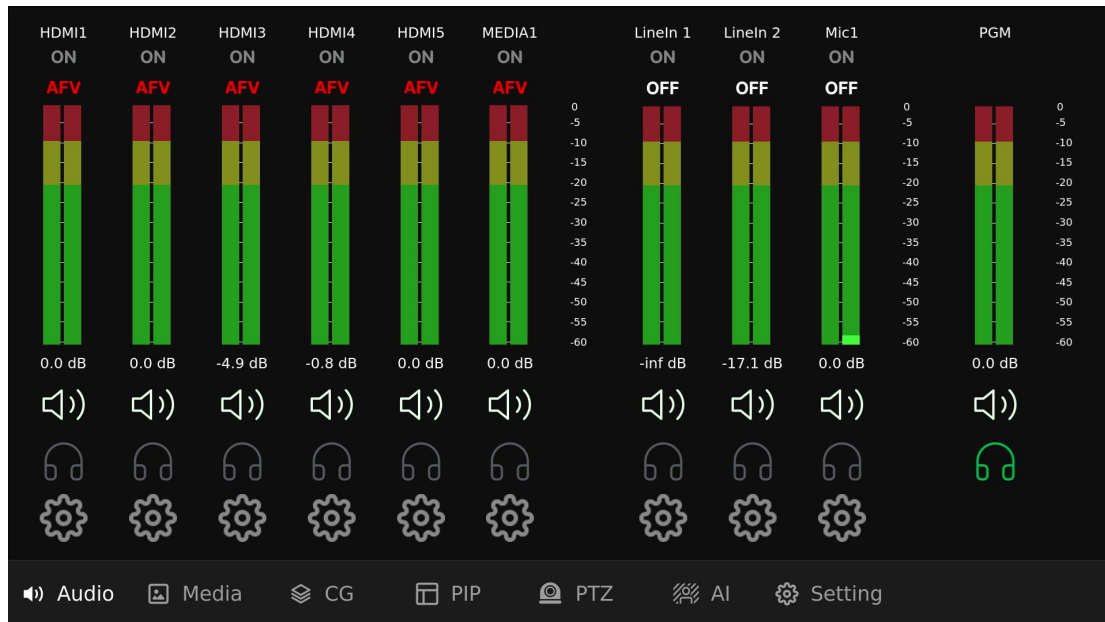
- **Back**: Tap to return to the main Multiview Monitoring screen.
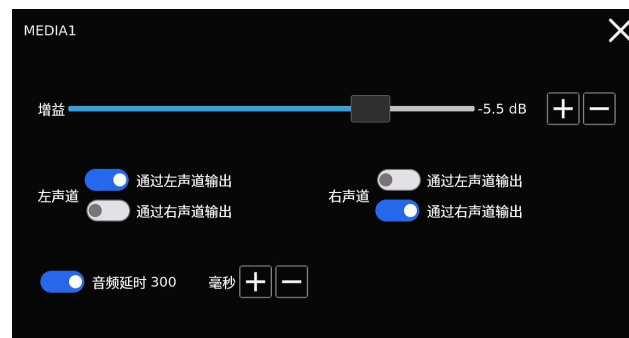
Status Information Displayed on Screen

- **Recording Status**: When recording is active, a timecode will appear showing the duration of the ongoing recording.
- **USB Storage Icon**: Indicates the status of connected USB storage devices. Once detected, the system will show the available recording time and remaining capacity.
  During recording, if available space falls below 5GB, the system will display a warning to replace the storage device.
- **Streaming Duration**: Displays the live duration once RTMP streaming is successfully initiated.
- **Network Speed Monitor**: After connecting to Wi-Fi or Ethernet, the current upload and download speeds will be shown in real time.

Audio Mixer

The audio mixer provides independent audio monitoring and related configuration options:
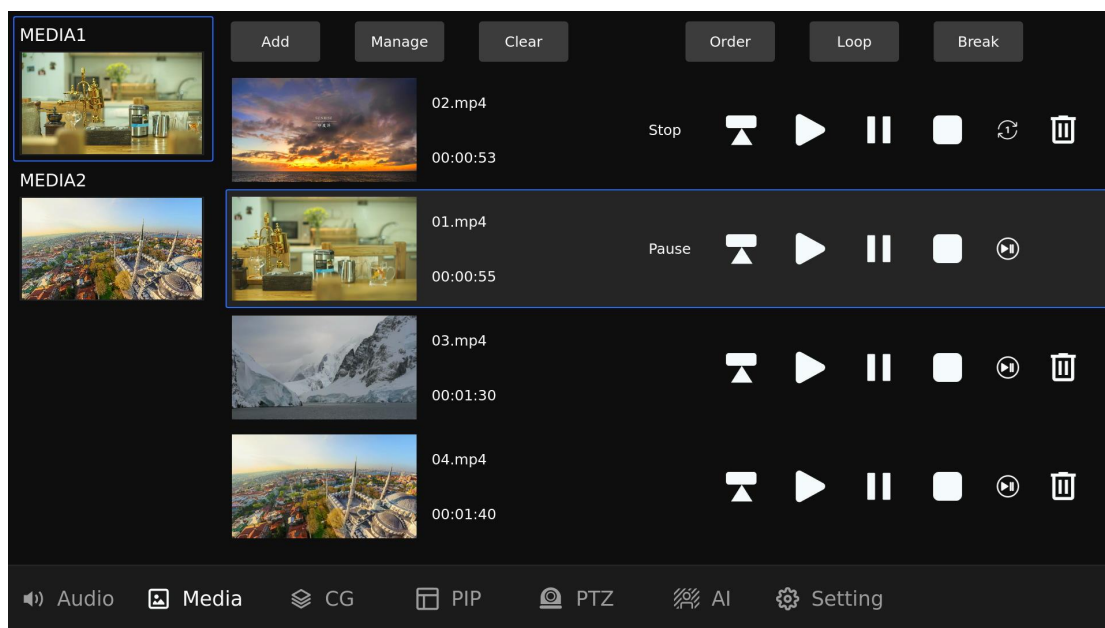
- **Channel Name Display**: Shows the name of the current audio channel.
- AFV (Audio Follow Video): When enabled, the audio will switch in sync with the video source selected in PGM. This can also be controlled using the corresponding buttons on the switcher panel.
- **ON (Audio Pass-Through)**: When enabled, this channel will always be included in the PGM audio mix regardless of switching.
- 0 dB Level Display: Indicates the current audio gain level.
  When the audio level shows –∞ dB, it means the channel is muted.
  The rotary knobs on the switcher panel can be used to adjust this level.
- **Channel Mute Switch**: You can forcefully mute the channel by tapping the icon to toggle mute mode.
- **Monitor Switch**: By default, the monitoring channel is set to PGM.
  Tap the headphone icon below any individual channel to monitor its input audio separately.
- **LINE IN 1, LINE IN 2**, and **MIC 3** correspond to the 3.5mm input ports located on the rear panel of the switcher.

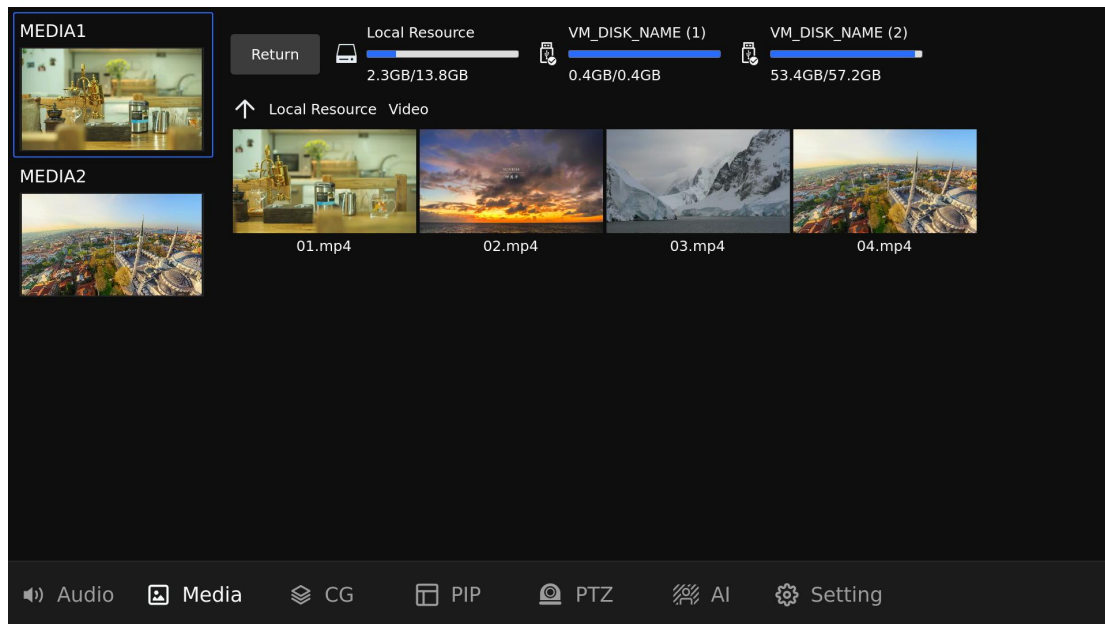# MEDIA Function

Media File Options

- The switcher supports simultaneous playback of 2 media files.
  Tap the corresponding icon to switch between different media file lists.

Media File List

- Supports importing multiple files at once.
  Tap "Add Media" to enter the media import interface.
- Media files can be added from a USB storage device, and supported formats include:
- **Video**: MP4, MOV, AVI
- **Images**: PNG, JPG, BMP
- **Audio**: MP3, WAV
- After selecting the desired files, tap "Add" to import them into the media list.
  Tap "Back" to return to the main media list screen.

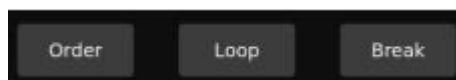Imported files from USB storage will be saved locally on the switcher.

Playback Controls

- **Cue to First Frame**: When the media is not playing, tapping this button will CUE the clip to the first frame. When this clip is switched to PGM, playback starts automatically.
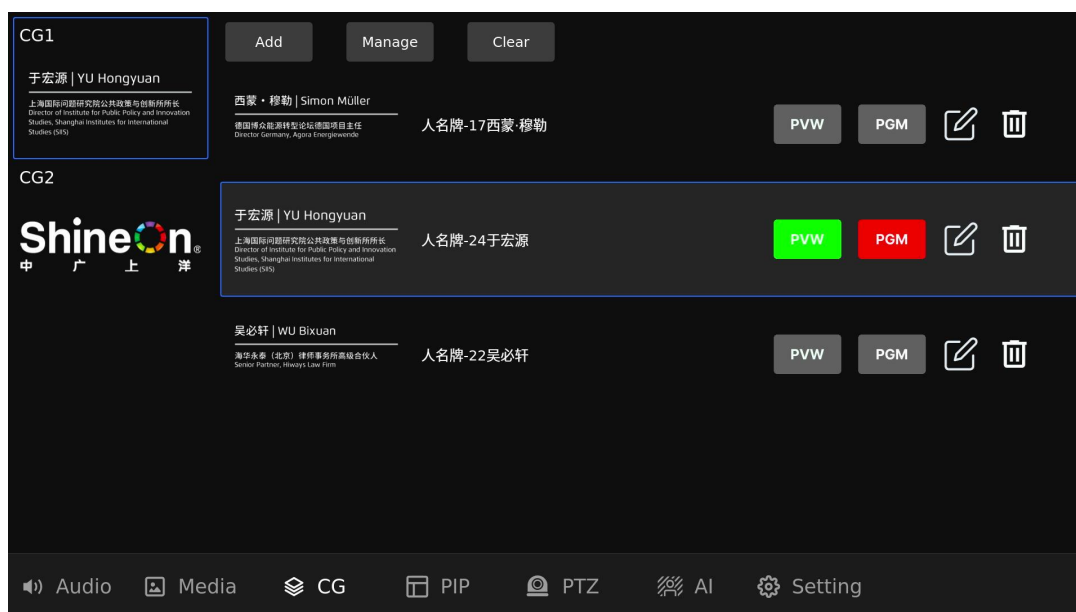
Playback Modes

- **Playlist Loop**: After the current file finishes, the next file in the list will automatically play.

- **Single Clip Loop**: The current file will repeat continuously after it finishes.

- **Freeze on Last Frame(Break)**: The video will pause at the final frame after playback.

Tap the top control buttons to switch between these three playback modes.

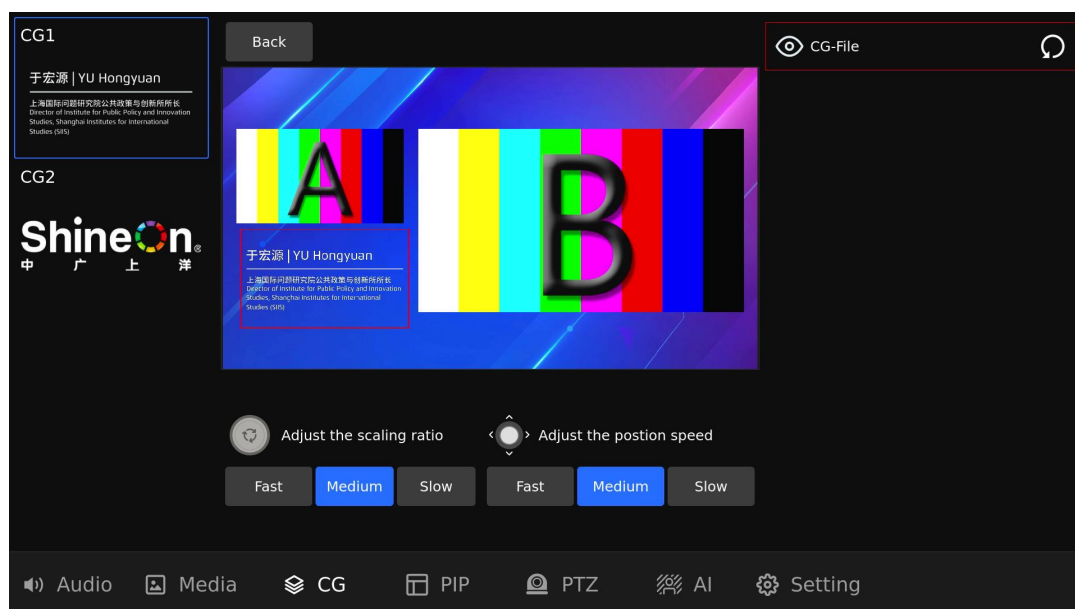# CG (Graphics Overlays) Function

Two CG List

- CG mode supports two independent subtitle/graphics lists, corresponding to CG1 and CG2 on the left panel. Press the silicon button on the top right of two CG list to switch between them.
- To active the CG control Mode, press the CG button on the keyboard. Then you can select the cg item in the cg list through turning the knob, then press silicon button PVW and PGM to control their activation status.
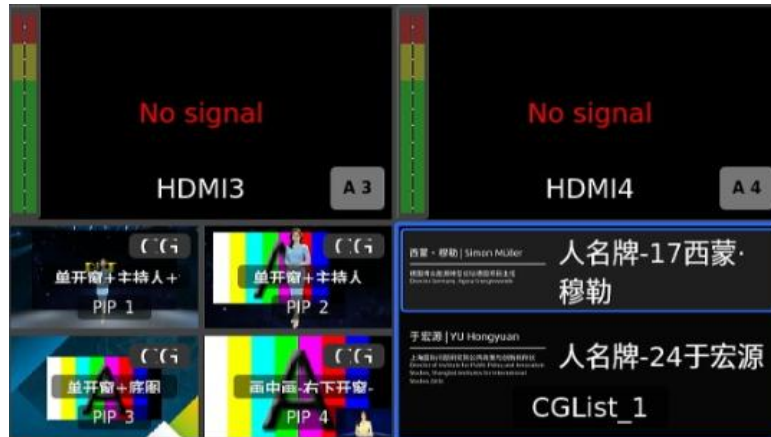
Supported CG File Type

- Tap the "Add Media" button to add CG items into the **CGLIST**.
- **Supported file format**: .PNG images
- **Maximum resolution**: 3840 × 1020

CG Item Playback Controls

- **PVW Button**: Sends the selected CG overlay to the Preview (PVW) output.
- **PGM Button**: Sends the selected CG overlay to the Program (PGM) output.
- Multiple **CG overlays** can be played out simultaneously.
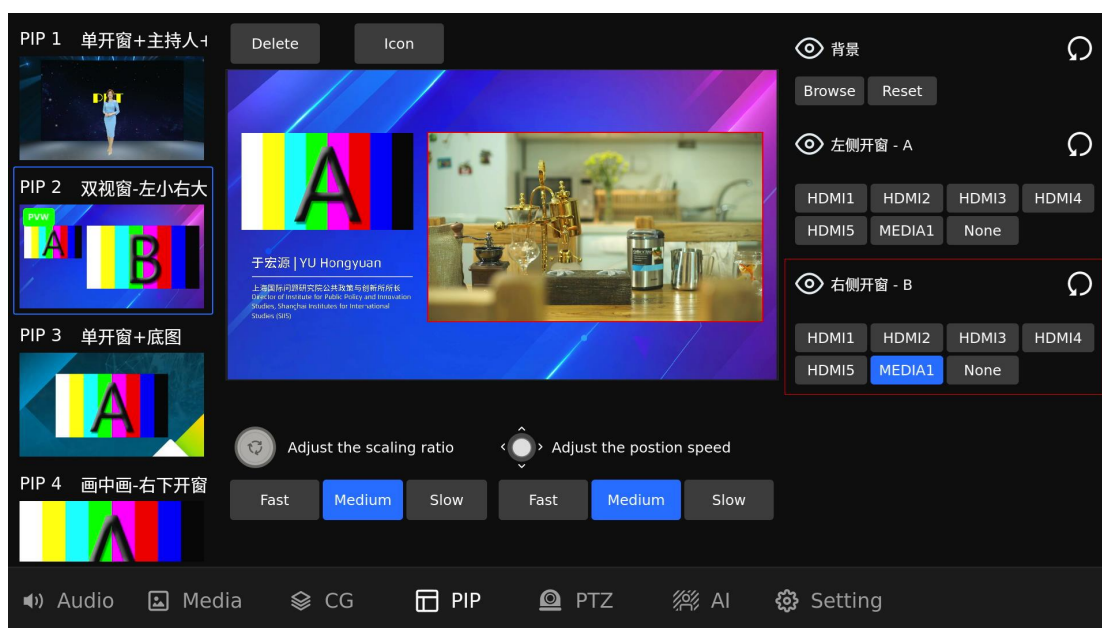

CG Editing Function

- Tap the Edit button of a CG item to open the CG editing page.
- When in the CG editing page, the 3D joystick and rotary knob on the control panel become active:
- Rotate the knob left/right to adjust the scale of the CG template.
- Use the joystick to adjust the position of the CG overlay on the screen.
- Tap the Back button to return to the **CGLIST** operation interface.

Playout and Monitoring

- Once the **CGLIST** items are prepared, you can play them out using the CG shortcut buttons on the right side of the switcher control panel.
- The multiview preview window can also display **CGLIST** 1–2 windows for real-time CG control and monitoring. Multiple CG items can be displayed simultaneously.
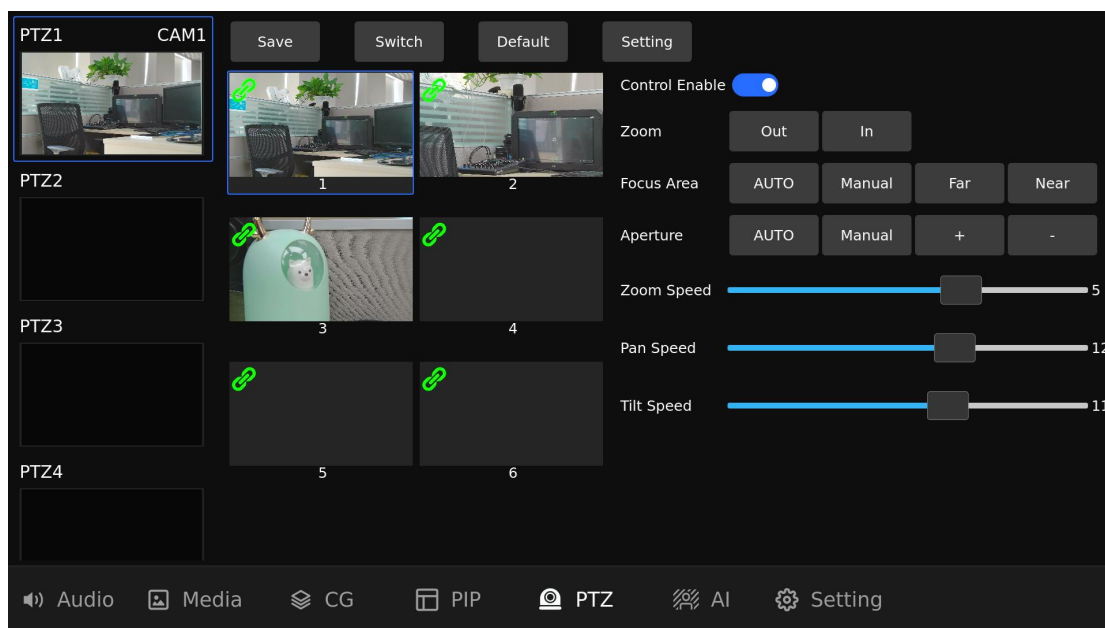
PIP (Picture in Picture) Function

- The PIP feature provides 4 independent window templates (PIP1–PIP4).

  Each PIP window can load a different graphic or video overlay template.

  Tap the corresponding PIP1–PIP4 button on the left to select and switch the active PIP template in real time.

- To add a template, tap the "+" icon, select the desired graphic/video template, then tap Add Template to load it into the selected PIP window.

- Once loaded, you can monitor the PIP template output status in the PVW (Preview) window.

- To edit elements within a PIP template:

  Tap the item in the right-hand object list to select it (for example, select the left-side PIP window to activate it).

- Use the 3D joystick and rotary knob on the control panel to adjust the size and position of the selected object.

- **Binding a Signal Source**:

  Tap the channel signal source icon in the object list to bind that input signal to the selected PIP window.

  You can also add image or video files as overlay material by selecting Choose File.

- **Update Icon**:

  Tapping this will refresh the thumbnail preview of the selected PIP window with the current live signal from the bound source, making it easier for the operator to identify templates.

- **Delete Button**:

  Removes the currently active PIP template from the selected window.

PTZ Camera

PTZ Camera Control

The PTZ function supports up to 4 independent PTZ cameras, allowing remote control via the physical 3D joystick and rotary knob on the switcher panel.

Configuration

- Tap the Search button to automatically scan and list all controllable camera IP addresses within the local network.
  (Cameras must support the VISCA over IP network control protocol.)
- Tap the desired IP address to select the camera.
- Link Channel: Assign the camera to the corresponding video input channel.
  For example, if the PTZ camera is connected through HDMI 1, link it to that channel.

Save Presets

- Tap Position 1–6 to choose a preset slot.
- Adjust the camera to the desired position, then tap Save to store it to the selected slot.
- Preset positions can be renamed or modified as needed.

Recall Presets

- Select the desired position slot, then tap Recall to instantly move the camera to the saved position.

Default Position

- Tap **Default** to reset the camera to its initial default position.

Enable Control

- Turns on PTZ control for the configured camera parameters.

Zoom Control

- Tap **+ / –** on the touchscreen to control zoom in/out.

Focus Control

- **AUTO**: Automatic focus mode
- **Far / Near**: Manual focus control

Speed Settings

- Adjust **Zoom Speed**, **Pan Speed**, and **Tilt Speed** for the current camera.

Advanced PTZ Mode Binding

- The advanced PTZ function supports 8 preset positions labeled A–G.
  Each preset can be bound to a different PTZ camera, allowing quick switching between multiple cameras with individual preset positions.
- Tap the Bind button in the top-left corner of a preset slot, select the PTZ camera to bind, and confirm.
- AI Voice Commands can be used to control PTZ camera presets and perform position switching.

AI Voice Command

智能像机	开关控制		通道切换		云台控制
	指令			描述	
语音控制	开始录制			PGM录制	
	停止录制			PGM停止录制	
	开始推流			PGM推流	
	停止推流			PGM停止推流	

调音台　素材　CG　开窗　云台　AI　扩展功能　设置

Voice Control Activation

Press the **AI button** on the switcher control panel to activate AI functionality. Once enabled, voice control can be used to operate the switcher via spoken commands.
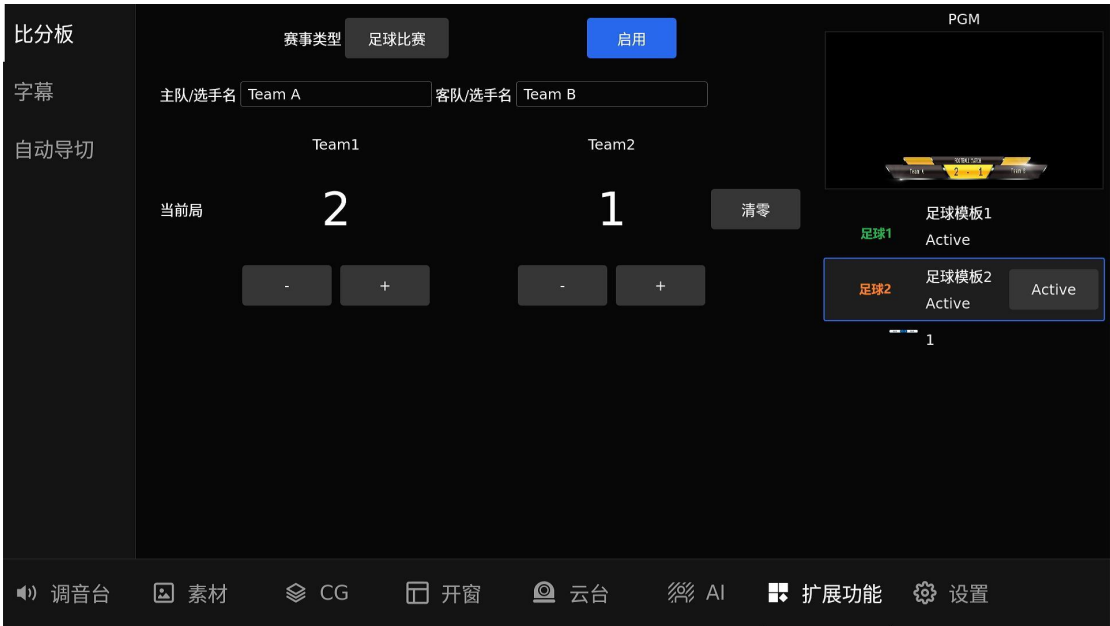
Microphone Setup

To use voice control, connect a microphone to the **AI MIC input port** on the right side of the switcher. In the audio mixer interface, test the AIMIC input to ensure audio is being received properly. Once verified, voice control features can be enabled.

Supported Voice Commands

- **Recording & Streaming Control**: Use voice commands to start or stop recording and live streaming.
- **Channel Switching**: Switch between PVW and PGM sources using voice commands.
- **PTZ Camera Control**: Control pan, tilt, zoom, and other movements of PTZ cameras through AI voice commands.
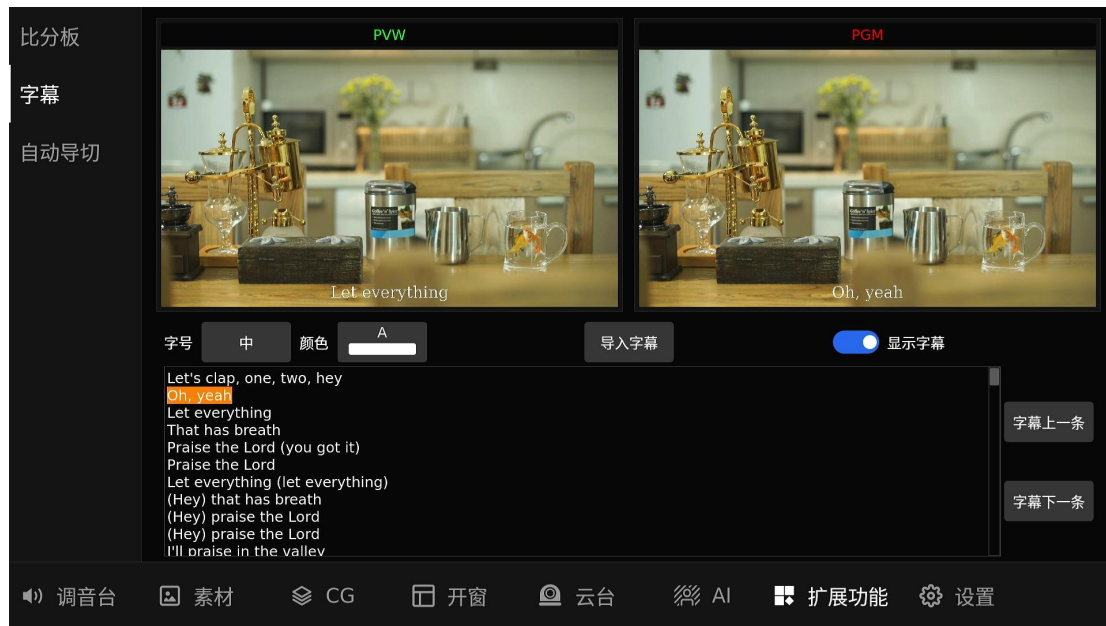
Advance Functions

Scoreboards

Scoreboard Interface

The scoreboard interface provides real-time sports scoring overlays for live event streaming. It supports scoreboard templates for various sports, including **basketball, football (soccer), table tennis, and tennis**.

- **Match Type**: Click the dropdown to switch between different sport modes.
- **+ / – Buttons**: Click the **"+"** button to increase the score in real time. Click **"Reset"** to set both teams' scores back to 0.
- **Template Selection**: Click the icon on the right to select a scoreboard template.
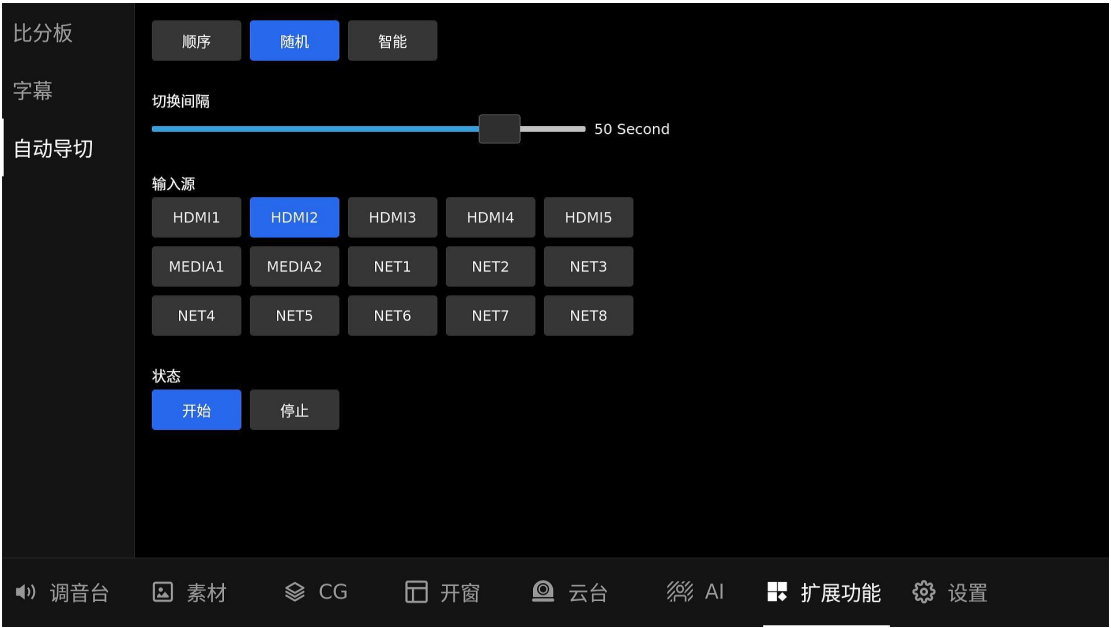
Subtitles

- Supports importing .txt text files, such as for real-time lyrics display.
  After selecting and importing the desired file, open the lyric document within the system.
- **Font Size**: Choose between Large, Medium, or Small subtitle text.
- **Color**: Three color options available.
- **Display Subtitles**: Toggle to enable or disable subtitle display.
- Use the Previous and Next subtitle controls to manage which line of subtitles is shown in the PVW and PGM signals.
- In Custom Buttons, you can assign a dedicated button for toggling subtitles on/off, allowing convenient control from physical keys.
- In lyric documents, use the Enter/Return key to break lines between lyric segments.

Auto Switching

Auto switching allows selected input sources to switch automatically based on different modes.
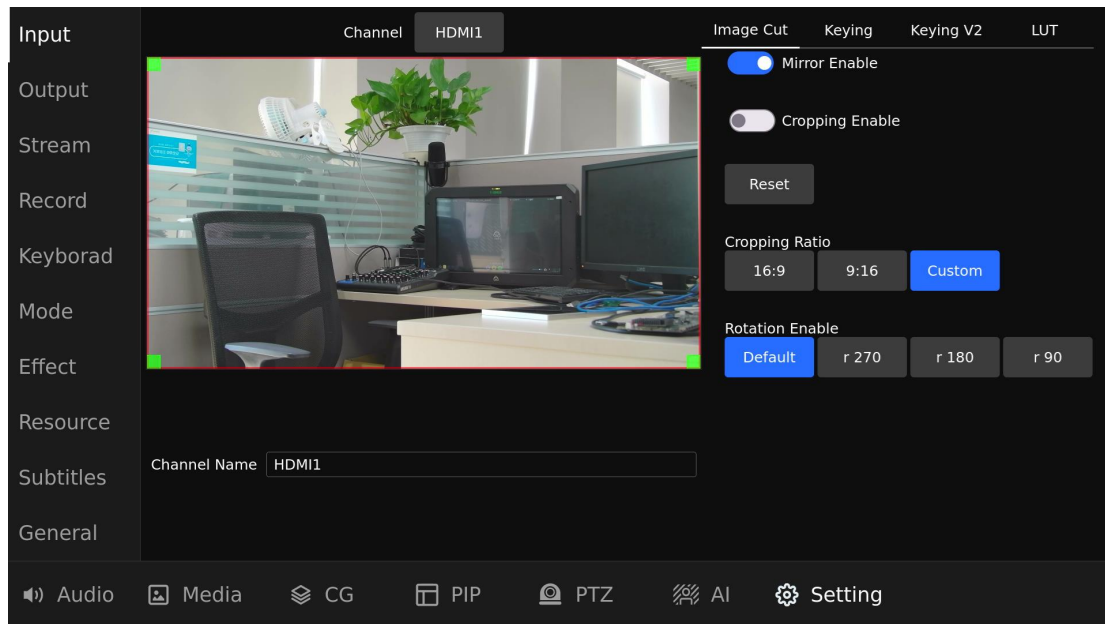

- **Sequential**: Switches between selected input sources in a fixed order, with each cut occurring at the defined time interval.
- **Random**: Randomly switches between the selected input sources.
- **Smart**: Uses AI to analyze video content and intelligently switch to the most appropriate input based on detected activity.
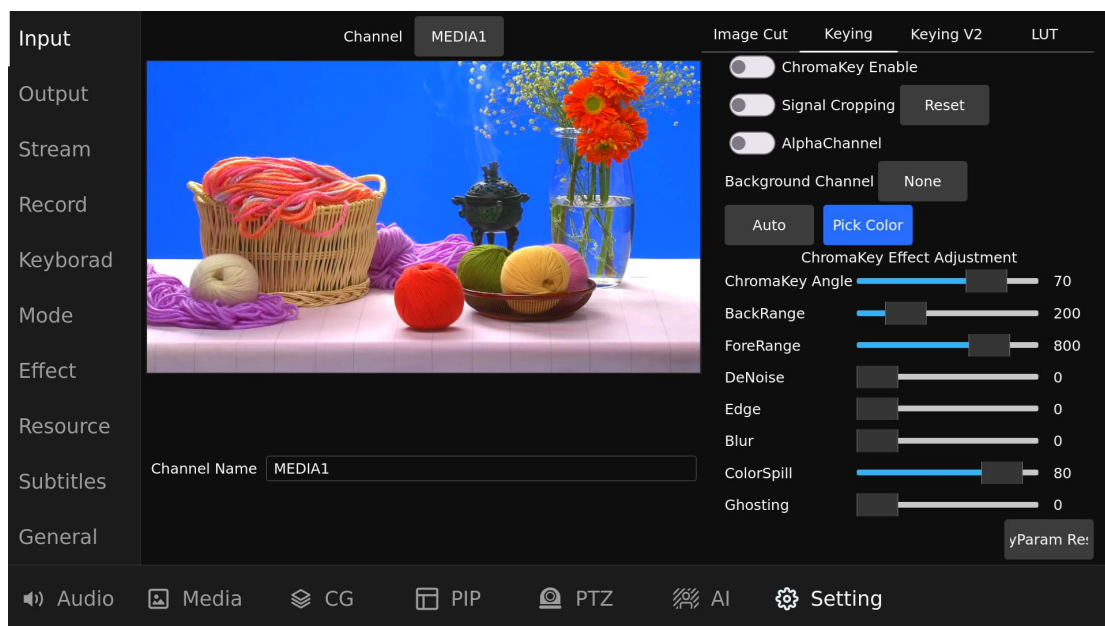- **Switching Interval**: Set the time interval between each source switch.

Once settings are configured, click **Start** to activate the auto switching function.

GENERAL SETTING

Press the **SET** button in the lower-left corner of the control panel to enter the **General Settings** menu. This menu contains overall configuration options for the switcher, organized into the following sections:
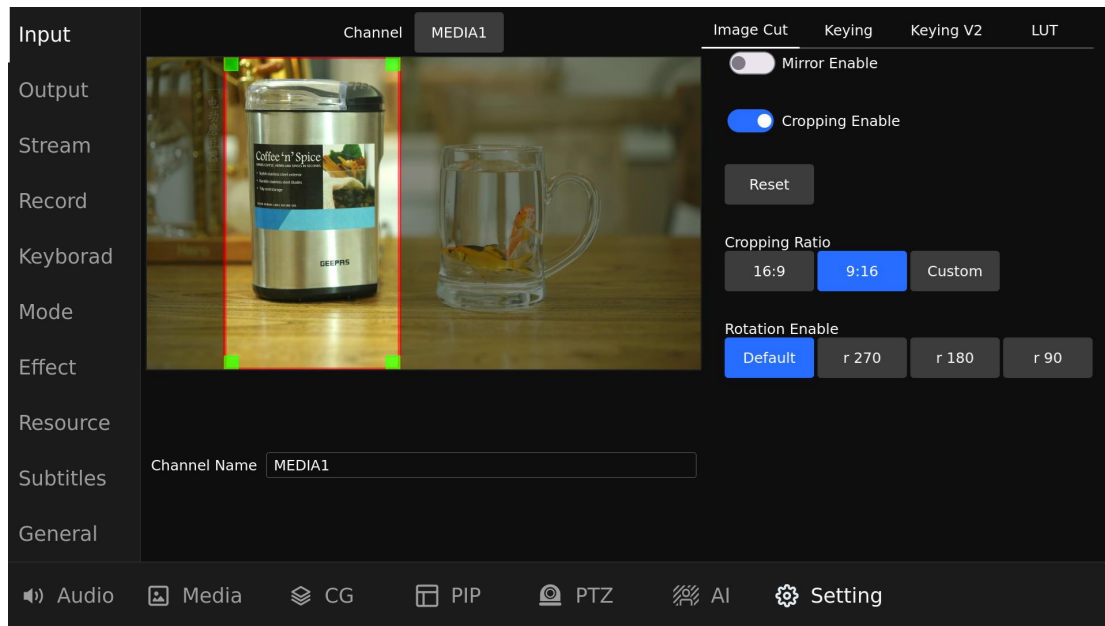
Input Settings – Chroma Key

- **Channel Selection**: Choose the channel to apply chroma key. The monitoring window displays both the before and after keying preview in real time.
- **Channel Name**: Allows renaming of the channel.
- **URL Address**: For network stream inputs, enter the pull-stream URL here. Supported protocols: RTMP, RTSP, UDP, SRT, HTTP.
- Chroma Key On/Off: Enables or disables chroma key processing for the selected input.
- Signal Crop: Allows real-time cropping of the input. Once enabled, use the red frame on the left to adjust the crop area.
- Reset: Restores crop to its original position.
- Background Channel: Selects the background source for the keyed video. Background sources can be HDMI inputs, MEDIA channels, etc.

- Auto Key: Automatically applies default chroma key settings to the current signal.
- Color Picker: Selects the key color by sampling a point directly from the preview screen.
- Foreground / Background / Edge / Spill Suppression: Fine-tune chroma key parameters.
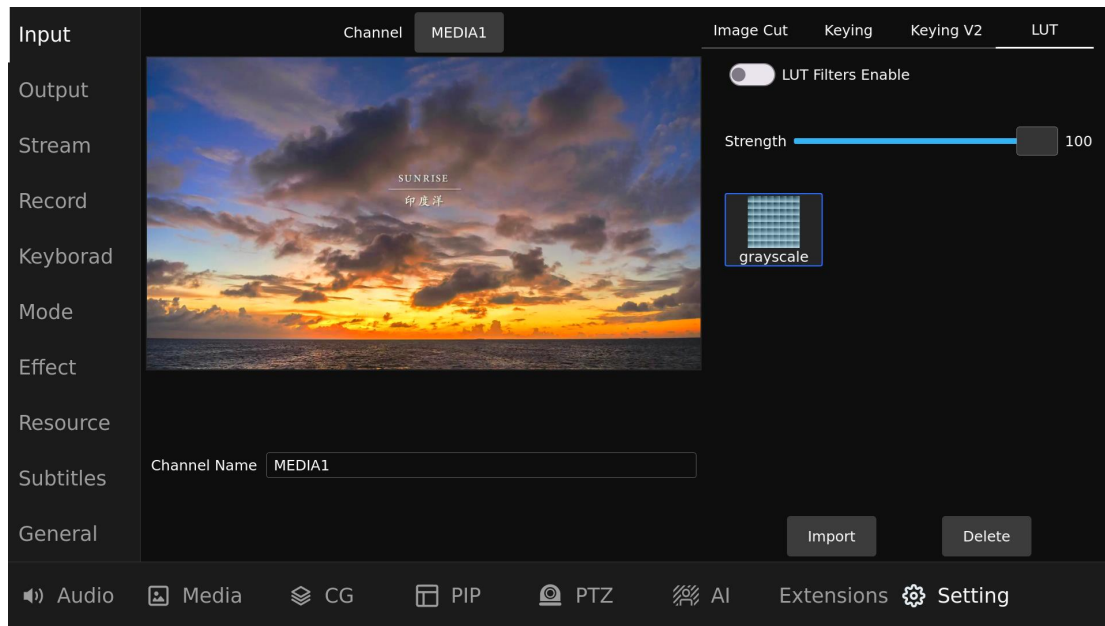
Channel Crop

Channel Crop supports real-time cropping of the video signal source.

- Mirroring: Flips the selected channel horizontally.
- Enable Crop: Activates the crop function.
- Reset: Restores crop position to the default.
- Crop Aspect Ratio: Choose 16:9 or 9:16 for locked proportions, or Custom for free cropping.
- Rotation: Rotates the signal—useful for switching between portrait and landscape. Options: 90° CW, 90° CCW, 180°.
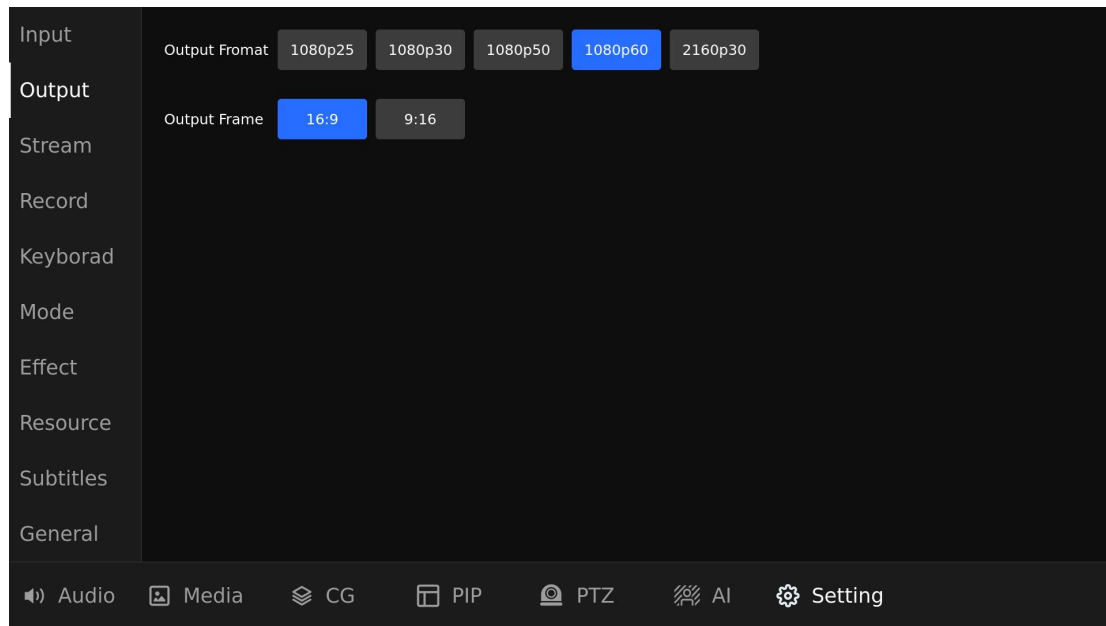
LUT Settings

- Real-time LUT filter effects with built-in presets: CINEMATIC, BLACK & WHITE, INTERIOR, and Custom.
- Tap + to load LUT files (.PNG or .CUBE) from USB storage.
- **Range**: Adjust the strength of LUT application with the range slider.

PGM Output LUT Settings

- Press the **LUT button** on the control panel, then use the **knob** to cycle through available LUT options: **Cinematic**, **Black & White**, **Indoor**, and **Custom**.
- To use a **Custom LUT**, first upload your LUT file. Once added, the **Custom** button will light up and can be activated.

Output Settings

- **Output Format**: Changing output format will prompt a software restart. Input signals will be automatically converted to match.
- **Output Orientation**: Switch between landscape and portrait output. Changing requires a restart.
- **Switching Mode**:
  - **Simple Mode**: No PVW preview—selecting a channel cuts directly to PGM.
  - **Studio Mode**: PVW + PGM workflow with preview and transition effects.

NDI Settings

In the **Multiview layout settings** interface, bind a window to an NDI channel. Then go to **<Input Settings> → <Select Channel>**, and choose **NDI** to enter the NDI configuration screen.
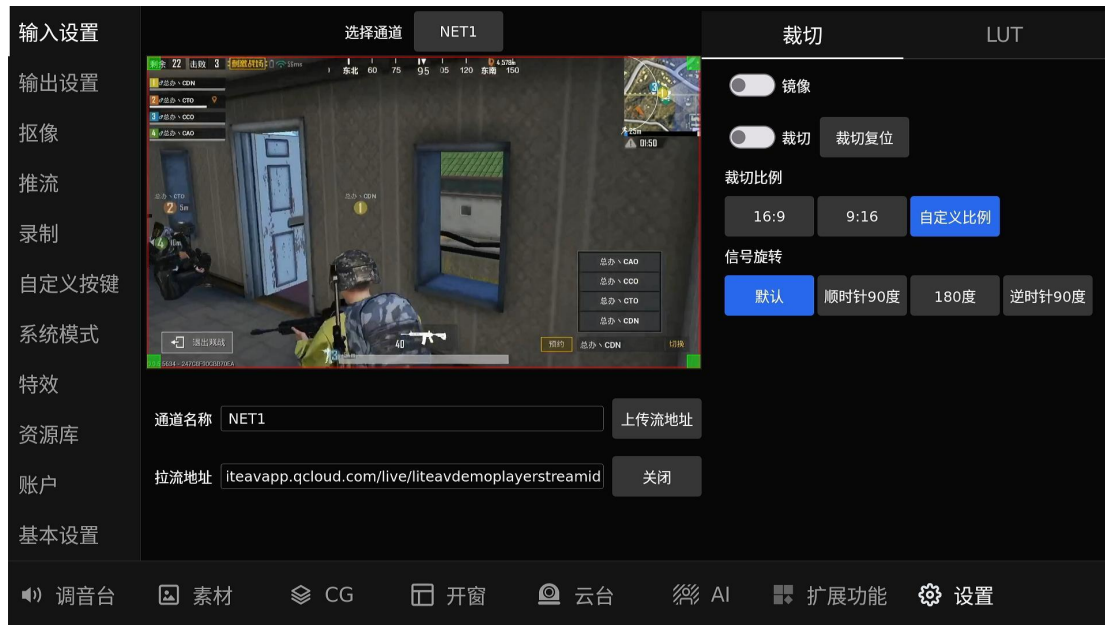

Click the **NDI Settings** button. In the pop-up dialog box, select the desired **NDI source**, then click **Open** to start pulling the NDI stream.

NET Settings

In the **Multiview layout settings** interface, bind a window to a **NET channel**. Then go to **<Select Channel>** and choose the **NET channel** to enter the network stream configuration screen.

Click **Upload Stream URL** to display a **local network QR code** (for QR code usage details, see the *Streaming Settings* section).
Enter the stream pull URL, then click **Open** to start pulling the network stream.

Streaming Settings

- **Bitrate**: High, Medium, Low, or Custom. When streaming to multiple addresses, all use the same bitrate.
- **Resolution**: 1920×1080 or 1280×720.
- **Stream Delay**: Buffers the PGM signal for a set delay before streaming—used for content safety.
- **Streaming Servers 1–4**: Supports up to 4 simultaneous RTMP destinations.
- **QR Code Entry**: Scan from a device on the same network to input streaming URLs easily.

Channel URL Update: Enter/paste an RTMP address in the channel URL field, then click Submit.

Recording Settings

- **WAV File Recording**

  Enable this option to generate a separate audio file in **WAV format**.

- **Recording Bitrate**

  Preset options include **8 Mbps**, **4 Mbps**, and **2 Mbps**. You can also manually enter a **custom bitrate**.

- **Recording Channels**

  The system supports **multi-channel recording**. Select the desired channels to record them simultaneously to the connected **USB storage device**.

Recording and streaming parameters **cannot be changed during an active session**. Please **stop recording or streaming** before making any adjustments.

Custom Buttons

- **Channel Binding**: Tap 1–6 to bind a channel to a panel button.
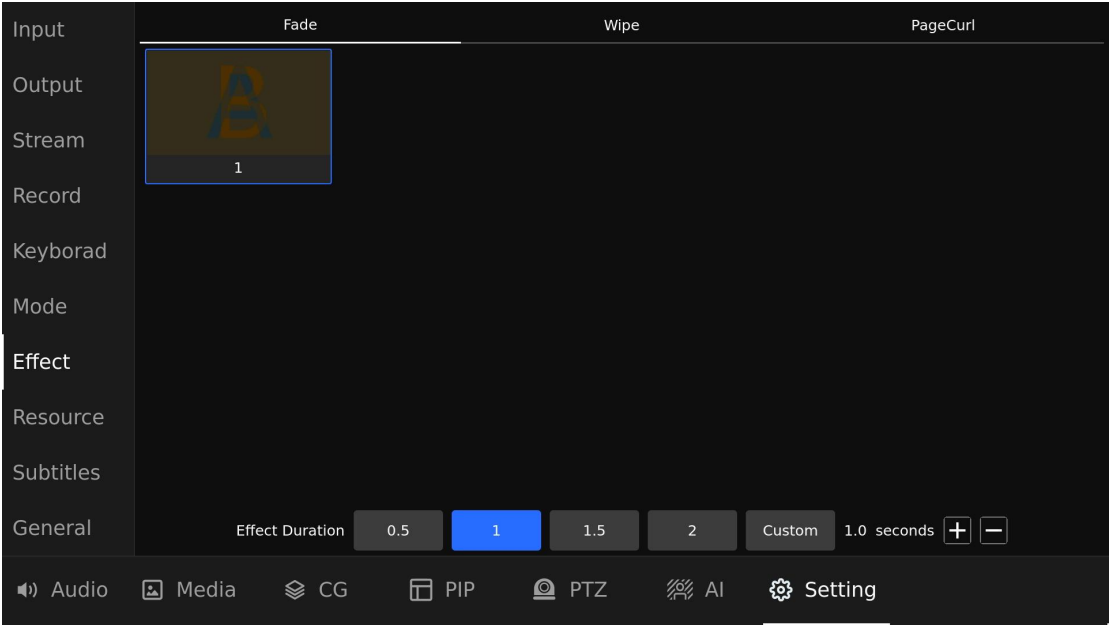

Groups A/B/C: Bind channels within specific groups for quick switching.

Custom Key Binding：The **CUSTOM 1–4** keys on the right side of the switcher can be assigned to user-defined functions.

To bind a function, **select the desired feature** in the settings menu, then **press the corresponding key** on the switcher to complete the binding.
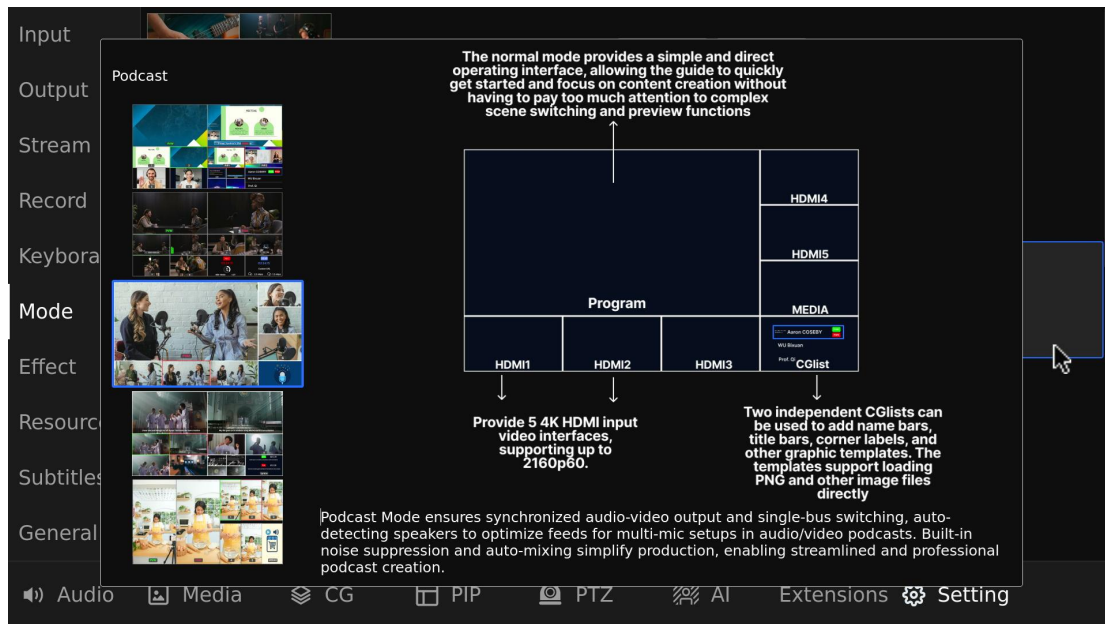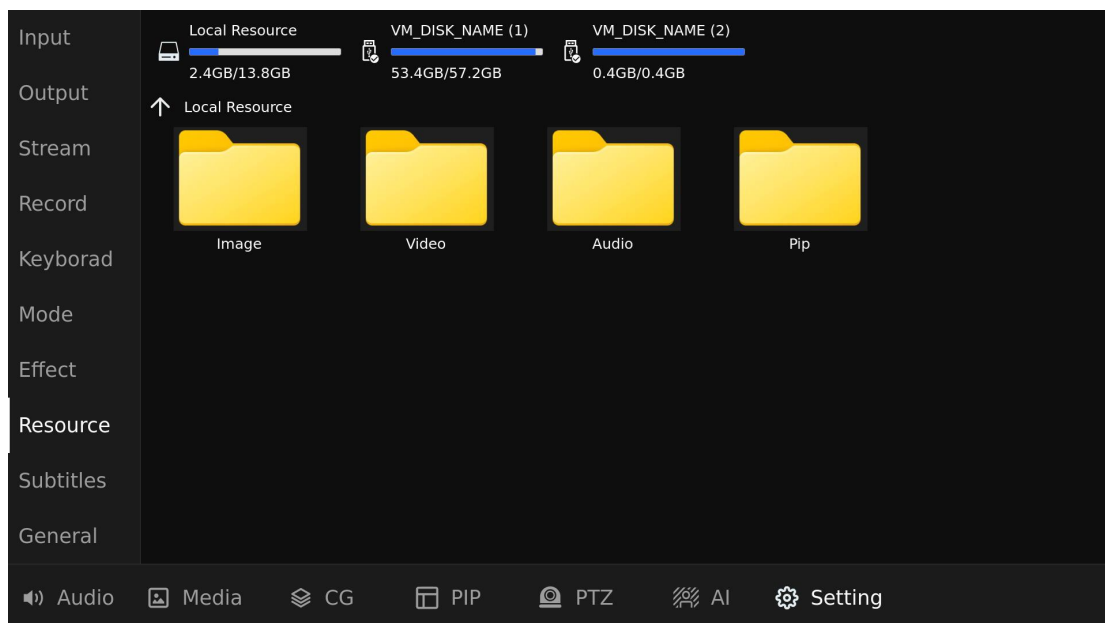
Transition Effects

- Multiple transition effects available for AUTO switching.
- Transition Duration: Presets of 0.5, 1, 1.5, 2 seconds, or custom.

Mode-Selection

- Displays the currently active system mode.
- Modes can be updated from the official project files after device binding.
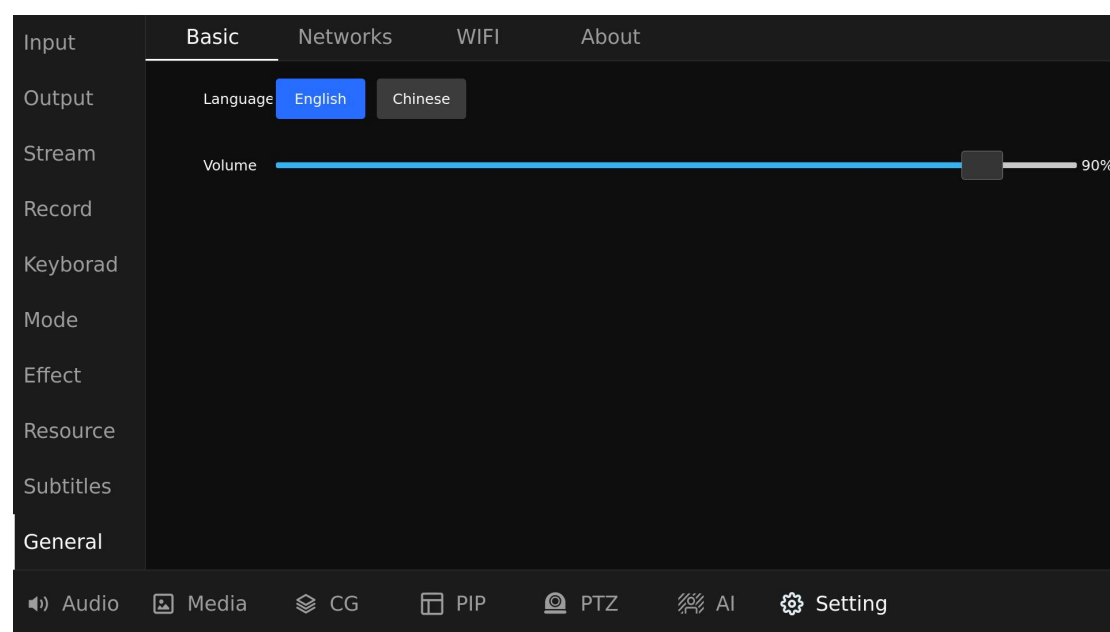- Tap Fetch Update to update project configurations.

Resources Library

The **Media Library** allows users to browse all media files stored locally on the switcher.
Click the **Local Library** tab or the connected **USB drive directory** at the top to view the contents of all folders.

- Click the delete icon next to a file to **remove the selected media item**.
- If you import a file with the **same name as an existing one**, the system will prompt you to confirm whether to **overwrite the original**.
- Ensure that **at least 1GB of free storage** is available in the local media library. To maintain smooth system operation, please **regularly clear unused media files** from the local library.

Basic Settings

Language: Switch between Chinese and English (requires restart).

Network: Default is DHCP. For static IP, tap **Edit** and manually enter IP, subnet mask, and gateway.

In the pop-up dialog box, select **Manual**, then use the touchscreen to enter the **IP address**, **subnet mask**, and **gateway**.
Once all fields are filled, click **Confirm** to apply the settings.

Wi-Fi: Tap Connect, enter the password, and join a wireless network.

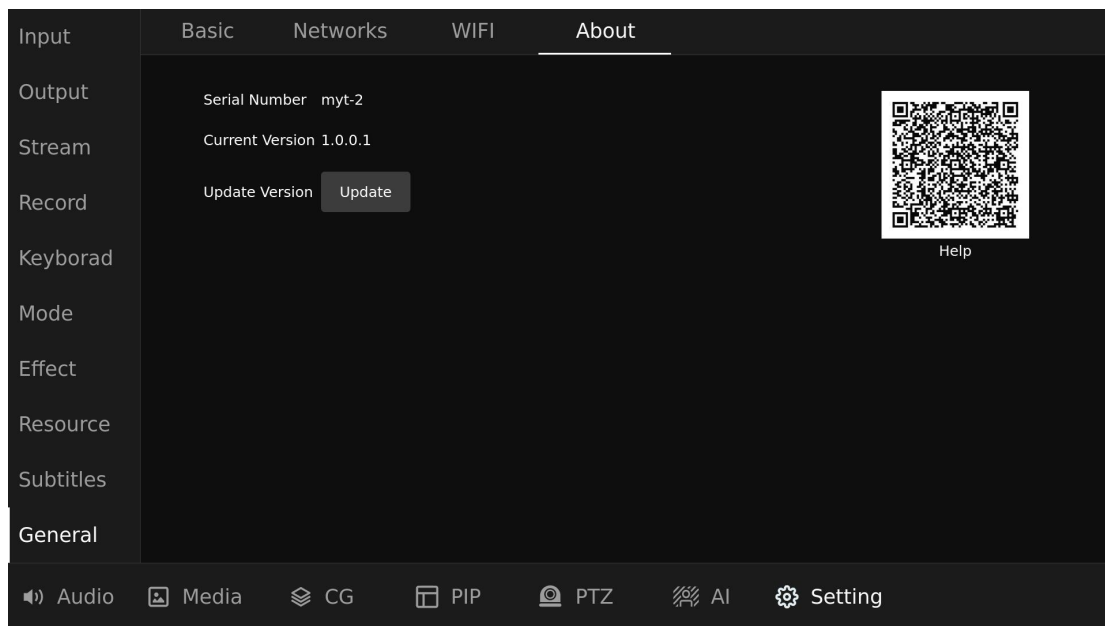**About**: With internet access, tap **Check for Updates** to see if a new version is available. Tap Upgrade to install.

Note: Keep the device powered on and connected to the internet during software upgrades. Do not turn off the switcher while updating.
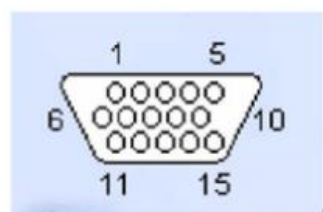
TALLY Interface Definition

The TALLY interface provides a total of **10 channels** of **5V high-level output** for **PVW + PGM**, which can be used to connect to third-party TALLY devices.

The relationship between the TALLY signals and the HDMI inputs, as well as the **DB15 interface pin definitions**, are as follows:

	PGM	PVW
HDMI1	PIN1	PIN6
HDMI2	PIN2	PIN7
HDMI3	PIN3	PIN8
HDMI4	PIN4	PIN9
HDMI5	PIN5	PIN10
	PIN14为接地	

DB15 针脚定义

Troubleshooting

No Signal Display After Connecting HDMI

- If there is no display after connecting a PC output to the switcher:
- Check the PC's display settings to ensure the second display device (the switcher) is properly detected.
- Choose **Duplicate** or **Extend** mode depending on your needs.
  (The PC defaults to Duplicate mode the first time it connects to the switcher.)
- In Duplicate mode, confirm that the monitor recognized as the switcher is set to a **resolution of 1920×1080** and a **refresh rate of 50Hz** for HD usage.

Note:

- Both desktop resolution and active signal resolution should match: **1920×1080 @ 50Hz**.
- If 4K resolution is required, set the resolution to **3840×2160** with a **refresh rate of 30Hz**.

LINE IN Audio Connection Issues

- The **LINE IN** ports on the rear panel are **line-level** audio inputs, suitable for connecting outputs from a mixer, PC line out, or other line-level devices.
- Do **not** connect microphones directly to LINE IN.
- When connecting to a mixer, it is recommended to use a **dual 6.5mm TRS to 3.5mm** cable, with the mixer output set to **STEREO OUT**.

TALLY Interface Output Issues

1. If abnormal TALLY signals occur when connecting to a third-party TALLY system:
2. Use a ultimeter to measure the output voltage from the switcher's TALLY port.
3. Set the multimeter to the **20V DC range**.
4. Insert the positive and negative probes into the corresponding rear-panel output pins.
5. Switch **HDMI 1** to **PGM**, then place the multimeter probes on **PIN 1** and **PIN 14** of the TALLY DB15 connector.
6. If the multimeter reads **±5V** (reversed probes may show +5V or -5V), the TALLY output for HDMI 1 is working correctly.
7. Repeat this process for **HDMI 2–HDMI 5**.

Note: If PVW and PGM are set to the same HDMI source, only the **PGM** signal level will be output.