



Users' Manual

SWITCHER

Model: HDS7106

VER 1.0



SDI

HDMI

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1. Overview

1.1 Introduction

DeviceWell HD Video Switcher HDS7106 adopts portable integrated design, metal shell, small size and light weight, standard size: 255mm*160mm*60mm, which can be used for video special effects switching in small outdoor scenes. The device integrates common components such as multiview processor, special effects generator, audio processor, and control keyboard.

The HDS7106 supports 4 channels of broadcast SDI and 2 channels of HDMI for a total of six video signals. The external preview signal can be output synchronously. The HDS7106 supports SDI embedded audio + external analog audio. After mixing, it can be embedded in the output SDI signal or output from the analog port. The resolution of all input signals is automatically adapted, and the output signal resolution can be selected as required, which is quite flexible. For the video switching needs of broadcast TV, outdoor sports events, school courseware production, etc., the functions of HDS7106 can be fully satisfied.



2. Functional characteristics

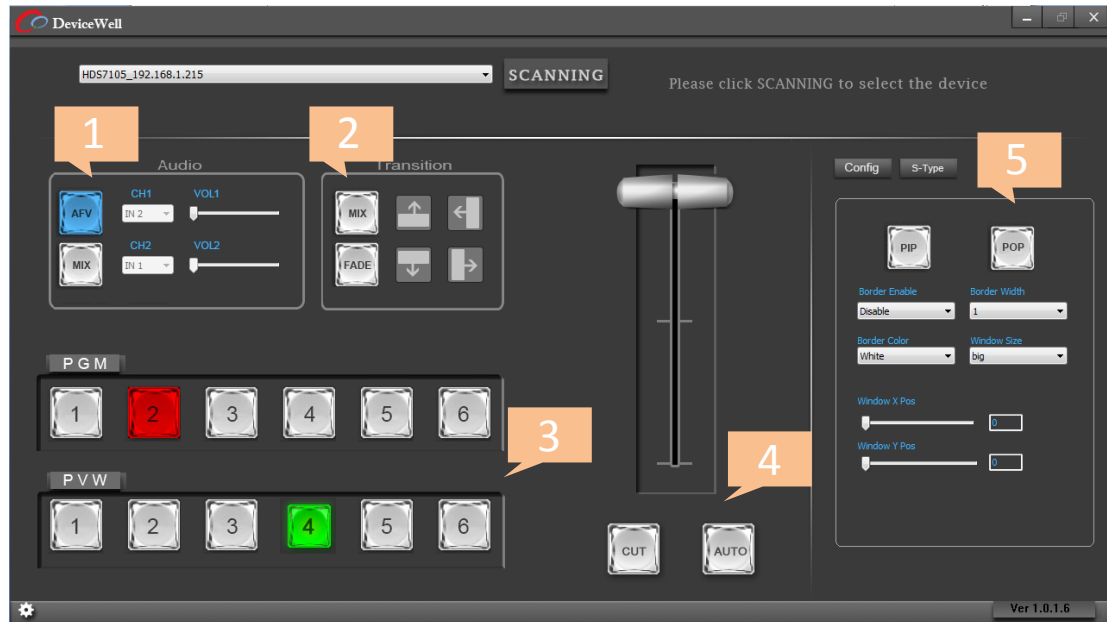
The DeviceWell HDS7106 6-channel HD video switcher is a multi-function switcher that requires no special knowledge and can be used for video switching and audio mixing with simple operation. This unit can be used in radio and television, live broadcast and various activities.



- ◆ Portable integrated design
- ◆ Advanced black metal body, high strength and light weight
- ◆ Integrated control keyboard
- ◆ Supports up to 4 SDI and 2 HDMI inputs
- ◆ 3.5mm analog audio input and output
- ◆ 1-channel lotus seat audio input and output
- ◆ Support PIP/POPscreen windowing function
- ◆ Audio support follow and mix assignment mode
- ◆ Support 1 channel SDI output custom PGM/PVW
- ◆ PGM output: 2-CH SDI and 1-channel HDMI
- ◆ Multiview output: 1 CH HDMI and 1 CH SDI
- ◆ Support special effects switching such as MIX / FADE
- ◆ Support CUT hard support for AUTO effect switching
- ◆ Support Tally / network remote control
- ◆ Built-in chassis temperature detection and fan intelligent control system
- ◆ Support software online upgrade

3. Software panel partition introduction

After opening the software, you can see the entire layout of the button panel, as shown below.



NO.	Name	Description
1	Audio Control	Mainly for Audio Follow and mix settings.
2	Transition Effect Control	Select transition effects
3	PVW& PGM Select	Live broadcast and preview selection
4	T-Bar	Manual control of transitions
5	PVW& PGM Select	Live broadcast and preview selection

4. Software operation instructions

4.1 Audio Control Area

- How to use the audio follow mode:



- 1、 Press the AFV (Follow) button on the operation panel, the AFV button will light blue at this time, indicating that the audio follow mode is turned on.



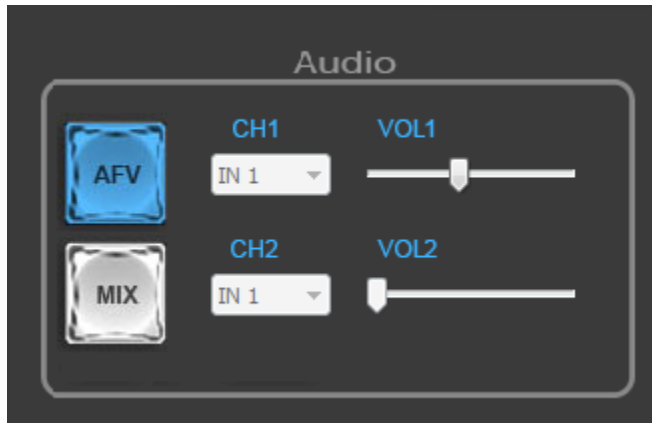
- 2、 The channels of the audio follow mode are IN1-SDI1, IN2-SDI2, IN3-SDI3, IN4-SDI4, IN5-HDMI5, and IN6-HDMI6.

When the signal source of the PGM 1 channel is pressed (the button displays red), CH1 also corresponds to the IN1 signal source (indicating that the current sound is from the IN1-SDI1 channel). As shown below



3、 If you need to adjust the audio output volume, you can adjust the audio volume by adjusting the VOL1 volume progress bar on the right side. The more you slide to the right, the louder the volume. As shown below

Note: CH2 and VOL2 are not operational at this time.



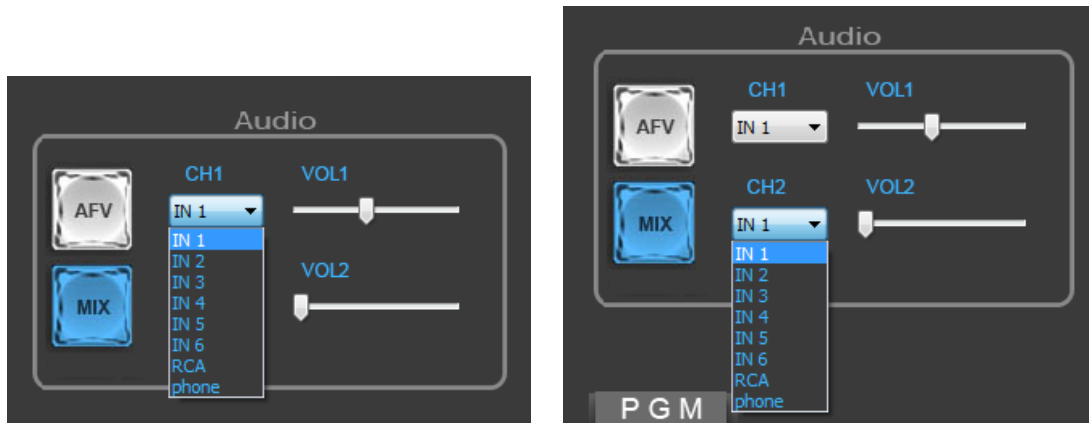
● How to use the mix assignment:



1、 Press the MIX button on the operation panel. The MIX button will light blue at this time, indicating that the audio mix mode is turned on. As shown below



2、 At this time, you can arbitrarily assign two channels of audio for mixing operation through the CH1 and CH2 buttons (you can do a pull-down selection). The channels assigned by the mix are IN1-SDI1, IN2-SDI2, IN3-SDI3, IN4-SDI4, IN5-HDMI5, IN6-HDMI6, XLR_IN, RCA_IN. Under the mix assignment mode, there are two additional audio add-on functions. Audio interface such as RCA. As shown below



3.5mm Audio Interface



RCA Audio Interface

3、 If you need to adjust the audio output volume, you can adjust the audio volume by adjusting the VOL1 and VOL2 volume progress bars on the right side. The more you slide to the right, the louder the volume. As shown below



4.2 Transition Effect Control Area

There are 3 transition modes:

MIX transitions, FADE, and Wipes, where the Wipes include: up, down, left, and right.


In the six transition modes, one transition mode can be arbitrarily selected for transition switching. As shown below

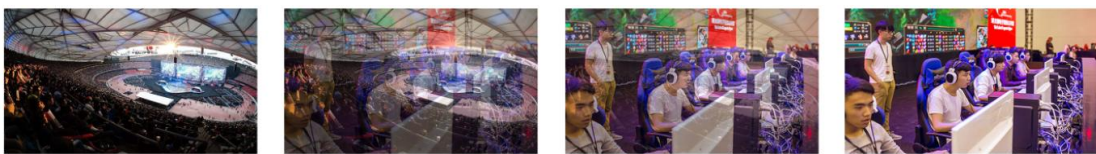


- **MIX Transition**

The MIX effect is a transition effect. After setting the transition, the original live screen will be lightened at the main output and then know that the transition to the new live screen is complete.



Click on the effect control area  (press the blue light afterwards), and then click or use the fader or AUTO to switch. The effect is as follows.




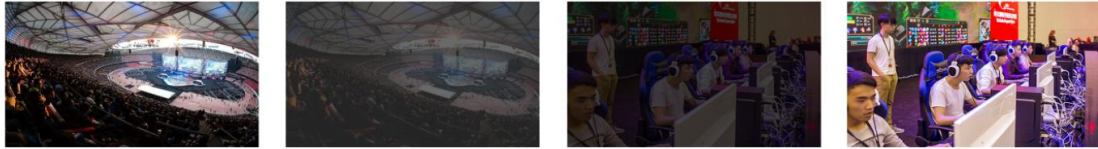
A  B

MIX transition effect, superimposed and superimposed B picture in A picture until the transition to the end, the picture is completely replaced with B picture

- **FADE Transition**



Click on the effect control area  (press the blue light afterwards), and then click or use the fader or AUTO to switch, under the effect diagram.



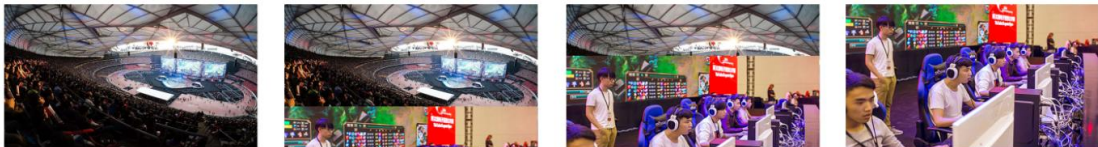
FADE in and out, and A gradually darkens until it is completely black, and then gradually changes from black to B.

● Four special effects wipe transitions

There are 4 types of wipe transition modes: up/down/left/right.



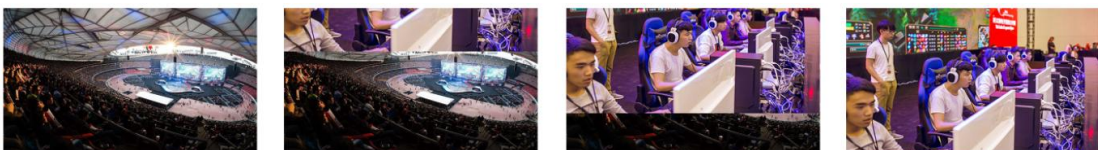
Up transition: Click on the effect control area (press the blue light afterwards), and then click or use the T-bar or AUTO to switch. The effect is as follows.



Up transition effect, the A picture is unchanged, and the B picture is gradually drawn in the upward direction until the picture completely becomes B.



Down transition: Click on the effect control area (press the blue light afterwards), and then click or use the T-bar or AUTO to switch. The effect is as follows.



Downward transition effect, the A picture is unchanged, and the B picture is gradually drawn in the downward direction until the picture completely becomes B.



Left Transition: Click on the effect control area (press the blue light), then click or use the T-Bar or AUTO to switch. The effect is as follows.



Left transition effect, the A picture is unchanged, and the B picture is gradually drawn in the left direction until the picture completely becomes B.



Right transition: Click on the effect control area (press the blue light), then click or use the fader or AUTO to switch. The effect is as follows.



Right transition effect, the A picture is unchanged, and the B picture is gradually drawn in the right direction until the picture completely becomes B.

4.3 PGM & PVW Selection

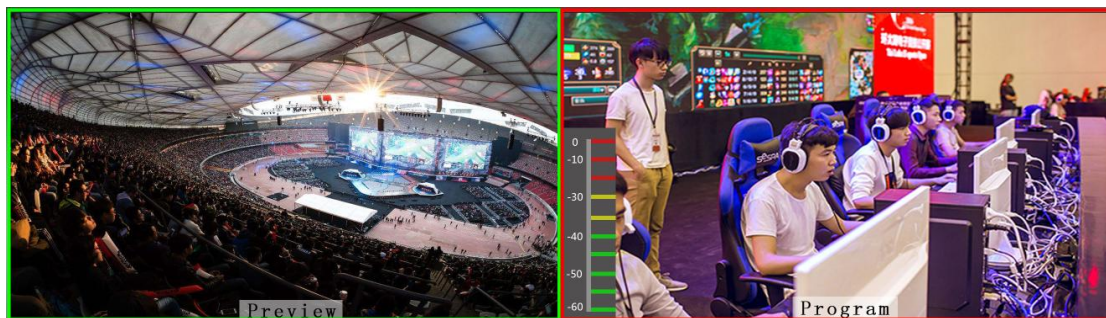
You can switch between the 1-6 channel screens by switching the PGM and PVW of the deck in the software, as shown in the figure below.



- Multiview output window introduction



PVW and PGM are the preview and live output respectively, as shown below.



PVW

PGM

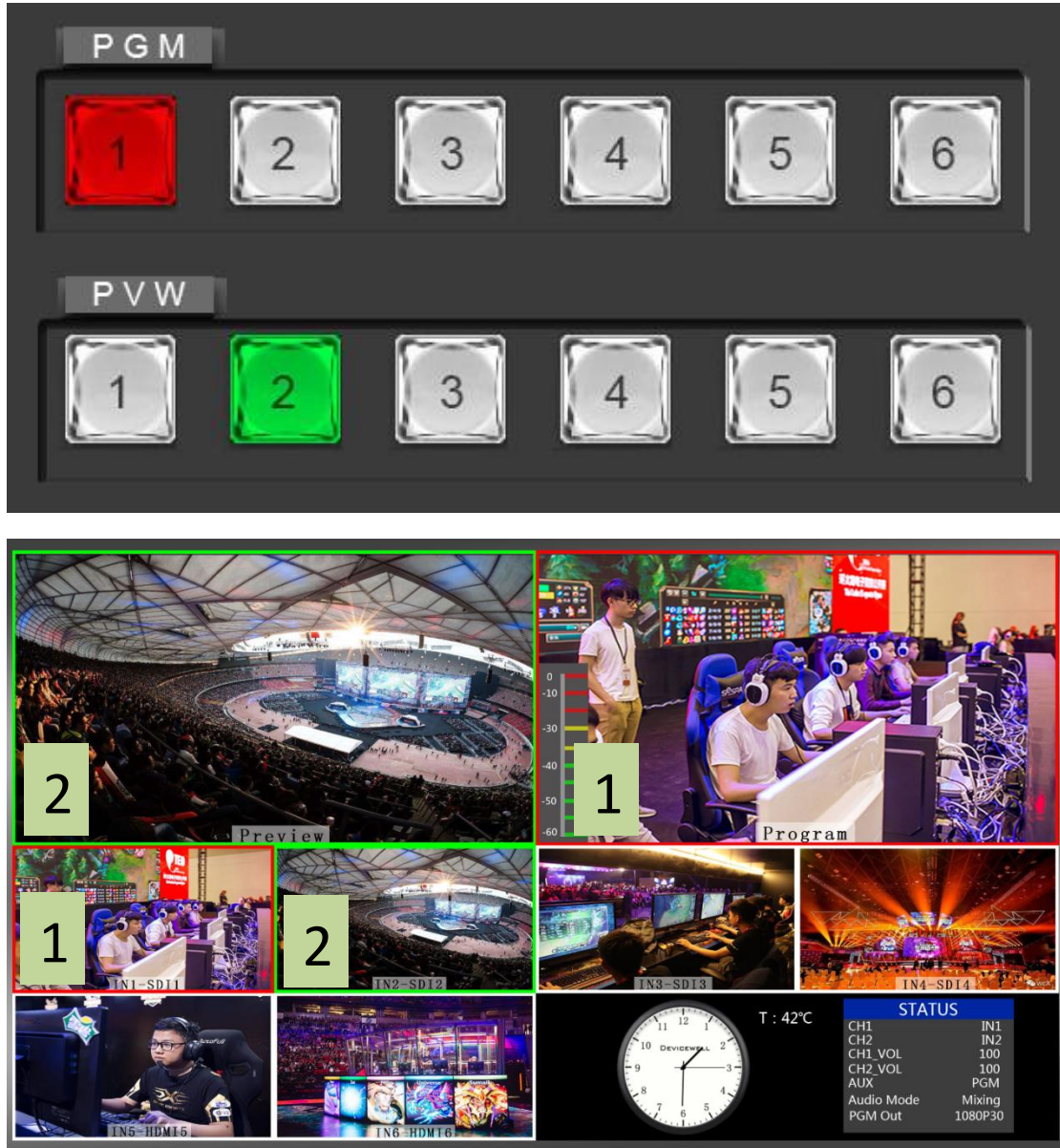
There are 6 windows below which correspond to input source monitoring, corresponding to buttons 1 – 6 on the control panel of the switcher.



- PGM & PVW Output Signal

When the switcher software control panel is opened, 1 (PGM) and 2 (PVW) in the button panel will light red and green respectively, and the live and preview signals in the output multi-screen monitor are 1 (PGM).) and 2 (PVW), the signal sources are SDI IN1 and SDI IN2, respectively.

The effect chart is as follows



- PGM & PVW Source Switching

If you want to switch between PGM and PVW source in Multiview

Suppose you want to convert live signal source 1 (PGM) and preview source 2 (PVW) into 2 (PGM) and 1 (PVW) in multiple pictures, just press 2 (PGM) and 1 in the button panel (PVW), then use the T-bar to switch. The live PGM signal source 1-6 can be arbitrarily switched with the preview PVW signal source.

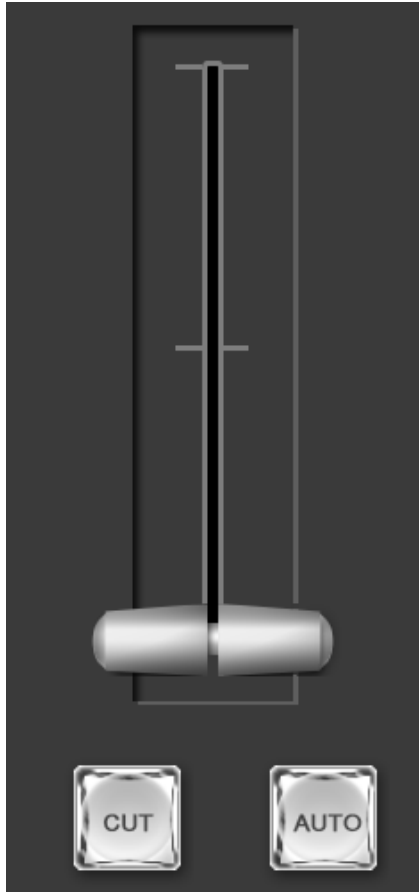
The effect chart is as follows:



You can also switch between the PGM1-6 signal and the PVW1-6 signal in the button panel.

4.4 Switching table putter

Open the software control panel to see the AUTO, CUT and putter sections in the middle. This section controls the switcher's transition operation. The effect is as follows.



When operating the software control panel's audio control area, transition control area, and PGM and PVW control areas, you need to switch by pressing the AUTO/CUT/Pusher.

When the AUTO or CUT button is pressed after confirmation, the button will display a red light, indicating that the switch is complete.

4.5 Integrated Control Area

In the software control panel, you can also use the PIP picture-in-picture and POP picture-out functions. The picture is displayed as shown below.



- PIP picture-in-picture special effects operation

Press the PIP button in the software control panel, the button will display a blue light, indicating that the picture-in-picture function is enabled. At this time, you can make a drop-down selection in the border switch, border width, border color and display screen size, as shown below.



- POP picture painting special effects operation

Under the PIP button in the software control panel, the button will display a blue light, which means that the picture-in-picture function is enabled. At this time, you can make a drop-down selection in the border switch, border width, border color and display screen size, as shown in the figure below.



- Output resolution adjustment

When the S-Type button is selected, the resolution of the output screen can be adjusted, as shown in the figure below.

