LIVECAST STATION

operation manual

KD-LC-8N

CATALOGUE

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五、Beijing kind Network Technology Co. LTD 33

一、Notes on the use of live broadcasting machine

• Before use, please read this manual carefully and keep it properly ;
• Please follow the warning marks and instructions on the product;
• Before cleaning the machine, please unplug the power first. Do not use alcohol, thinner, insecticide or other volatile solvents, because doing so will deform the shell or damage the surface;
• The operating system is Windows 10 X64;
• Disk C is the system disk, disk D and disk E is the data disk, and disk F is the system backup disk. Do not delete files in the disk;
• If the system fails, use the system backup file (on disk F). GHO file) can be restored;
• To maximize system performance, set high performance in system power options;
• Do not use this product near water;
• Do not place the product in unstable places, such as wheelbarrow, stand, etc., to avoid falling and causing serious damage to the product。
• The holes on the outside, back and bottom of this product are for heat dissipation. Do not cover or plug these holes to avoid overheating. Avoid placing products on beds, sofas, blankets and other surface tired objects, so as not to plug the opening. Do not place this product near fire, heating furnace or hot air outlet compound. Do not place this product in a closed space unless a proper vent is available;
• For the power supply used in this product, please follow the mark on the power converter;
• When using the extension cable, please confirm that the total power/total amperage used shall not exceed the total amperage of the extension cable load;
• Do not insert anything into the body opening to cause short circuit. Do not splash any liquid on the product
• Do not disassemble and repair without authorization。

• If any of the following situations occur, please unplug this product and consult a qualified technician;

①The power cord or plug is damaged or peeled;

②There is liquid leaking into the product;

③If this product has been rained on or splashed with water;

④Damage caused by computer system viruses and malware is not covered;

• Packing the equipment in the original packing box or similar packing box during transportation can reduce the strong vibration of the equipment;

Product and service disclaimer

The information provided in this manual is intended as a guide only. All along, KIND strives to provide correct, complete and appropriate information. However, KIND cannot exclude that some information in this manual may be incorrect or incomplete and that this manual may contain typos, omissions or incorrect information. KIND recommends that you double-check the accuracy of the information in this document, and KIND is not liable for any omissions or errors. Or any subsequent loss or damage resulting from the information provided in the contents of this Manual, further information regarding the contents of this Manual or the products may be obtained by contacting local offices or KIND Headquarters。

For your safety, please do not expose the equipment to rain or moisture. In case of failure, please do not remove the casing. For after-sales matters, contact the manufacturer to ask professional engineers for maintenance

When recording or streaming important data, be sure to pre-check the device connection or perform a streaming test first to ensure that the system is functioning properly to avoid data loss.

According to copyright law, recorded video or audio may not be used for purposes other than personal enjoyment without the permission of the copyright owner. Note that for live performances, shows, and exhibitions, even your personal entertainment may be limited。

二、Product characteristics

Product specification

Model	KD-LC-8N
Power supply	INPUT:AC110V-240V,50-60Hz,5A; OUTPUT:12V 25A
Operating temperature	0-40℃
dimension	（L*W*H）425mm*340mm*120mm
weight	5kg
Video input	3G-SDI×4,HDMI×1,NDI×6,Stream×6
Video output	PGM: HDMI×1,NDI×1;PVW:HDMI×1
Audio input	Stereo (L,R) IN RCA×5,MIC XLR×5
Audio output	Stereo (L,R) OUT RCA×1,Balanced XLR OUT×2,MonitorΦ3.5×1,Playback monitorΦ3.5×1,The director calls MICΦ3.5×2
Other interface	USB2.0×2,USB3.0×1USB3.1×2,RJ451000M×1 ,Typc-c×1
Hybrid switching	SDI×4,HDMI×1,NDI×6,Stream×6,DDR×2,DVE×8
Mixer table	Digital mixer×5,Analog mixer×5,Audio hardware delay device×2
record	Mpeg,MP4,AVI,WMV
Live broadcast	HTTP;RTMP
Delay broadcast	Audio and Video hardware delay broadcasting system; (Non – Standard)

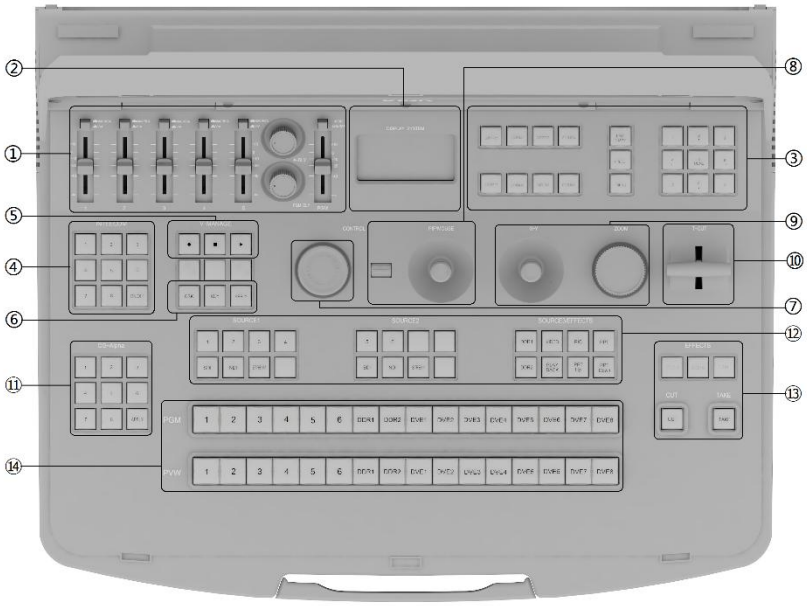
subtitle	CG-Alpha DVE,Video playback,Virtual matting system
configuration	Intel i9CPU 9900,RAM 16G,1TB M.2,4GGPU
system	Windows 10

• Video processing：SDI+NDI+STREMA+DDR Local file，Hybrid switching station；
• Audio processing: digital console + analog console + audio hardware delay device;
• Recording: HD Video MPEG2-HL+MP4+ Built-in hardware recording unit (backup)；
• Live broadcast: HTTP, RTMP；
• Support wireless NDI XH, Stream；
• TALLY360°；
• Alpha online packaging system, virtual video system, audio and video editing system、
• 64-bit kernel, 4K encoding；
• Applications: studio, educational recording, media broadcast, live broadcast of various conferences and activities；
• Size: 425mm*340mm*120mm, weight: about 5kg；

1.2 System diagram

三、Live broadcast machine back interface and control board

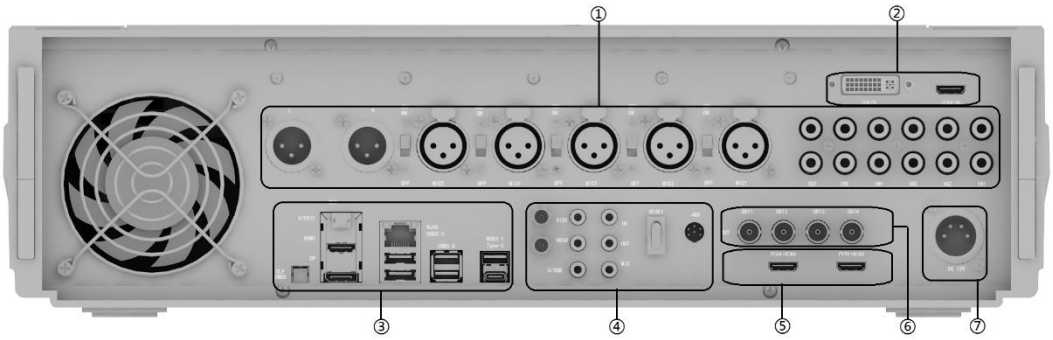
(1)Introduction to the control panel of the broadcast machine



①Mixer, audio delay device, digital/analog audio switching keys
②Audio display
③8. Station channel address, preset bit call, speed adjustment
④Broadcasting call switching station (need to be run with subsystem)
⑤Record, stop, live button
⑥Subtitles, video, shortcut keys
⑦Effect regulator
⑧No mouse combination control key
⑨PTZ controller
⑩The T-putter
⑪Subtitles selection shortcut key
⑫Eight channel signal source collection shortcut key

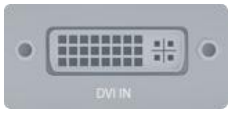
⑬Multi-mode switch key
⑭PGM/PVW video switching station

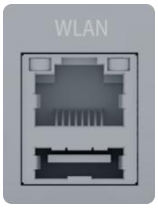
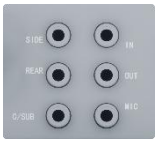
(2)Introduction to the interface on the back of the broadcast machine

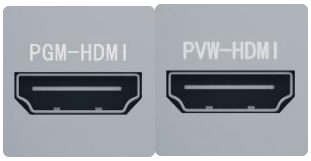


①Audio stereo, MIC input, output;
②DVI/HDMI signal source input;
③SPDIF: Optical fiber outlet、DP/HDMI Video output interface、RJ45Network port USB3.1 interface、USB2.0 interface、USB3.0 interface、TYPE-C interface;
④WI-FI antenna、C/BUS interface、REAR interface、SIDE interface、LINE IN/LINE OUT/MIC interface、RESET Power switch、485 Control interface;
⑤PVW output: HDMI;PGM output：HDMI;
⑥SDI Video capture input;
⑦DC interface

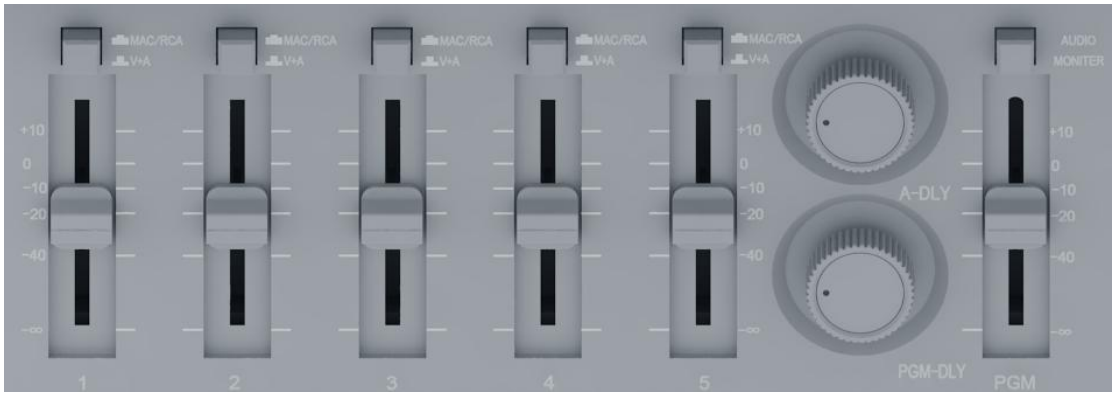
(3)This section describes the interfaces on the back

Interface	Description
	XLR balanced analog audio output interface
	1~5 audio input XLR balanced analog audio input interface and each channel with 48V phantom power switch (support for professional microphone power supply)
	1~5 Audio input RCA stereo analog audio input (left/right channel) OUT audio output RCA stereo analog audio output interface
	You can input DVI signal sources, such as 1080i5 and p50
	You can input HDMI signal sources, such as 1080i50 and p50
	The optical fiber output is used to transmit audio signals to devices such as sound cards in the form of optical signals HDMI video output interface, can be connected with the display Display Port Video output port that connects to the

	display
	The network port can access the network for software parameter debugging, live broadcast, and stream pushing USB3.1 supports 10GB/s data transmission speed
	USB port can be connected to the storage device to perform video file storage
	USB Type-c port supports image and audio transmission in addition to the transmission speed of 10G/S USB3.0 supports data transmission speed of 5GB/S
	Wi-Fi interface, can be inserted into the antenna to enhance the signal search range
	C/BUS refers to the middle channel and bass channel of a 5.1 or 7.1 multi-channel speaker The REAR is 5.1 or 7.1 channels. The rear surrounds the left and right channels LINE IN/LINE OUT/MIC indicates audio source input, audio source output, and microphone output
	Power switch: Turn on or off the power

	485 Control port: Uses RS485 control signals and supports PELCO-D and VISCV control protocols
	SDI1-4 video input ports supporting 1080i50 video source input
	HDMI video output port supports signal specifications 1080i50 video source output
	DC power port: Connect the 12V to 10A/150W adapter power cable to the DC power port

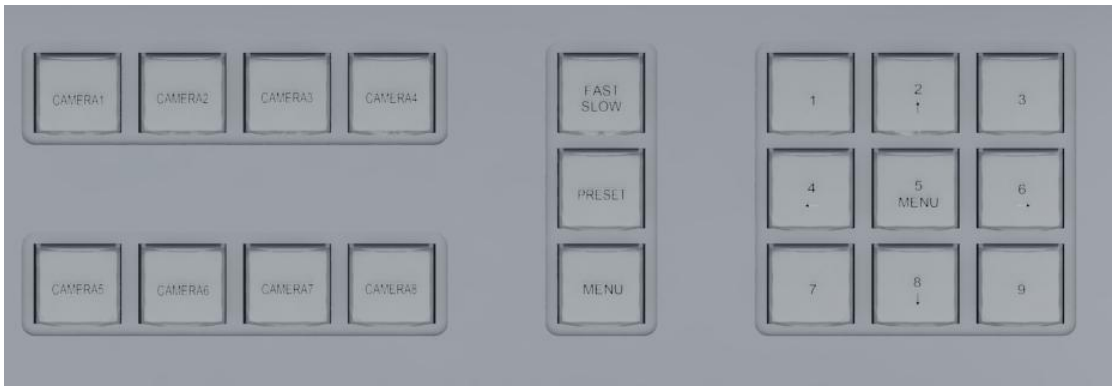
(4)This section describes the functions of the control panel



Audio gain adjustment of channels 1-5, corresponding to 1-5 audio input channels on the backplane, MAC/V+A digital/analog audio

switching keys, audio delay, and PGM audio gain adjustment. PGM Mute with one key。

Audio display: display left and right channels, delay time



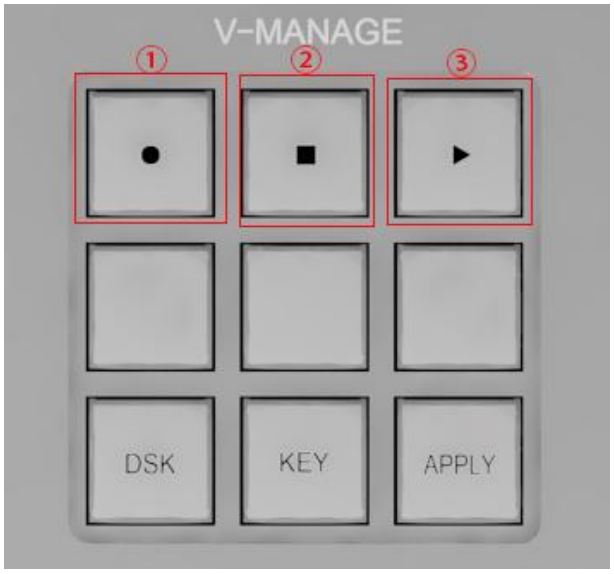
CAMERA1-8: 8 Address of the station channel. You can switch between different stations by pressing the button；

FAST/SLOW：Control the camera speed, indicator light on for fast, light off for slow；

PRESET：Set PRESET bit confirmation key, select any key 1 to 9, and press Preset key (the indicator blinks once). The setting is successful. 9 groups of preset bits can be selected；

MENU：Press the camera MENU key to start the MENU adjustment mode and the 2/4/5/6/8 button lights up. 2/4/6/8 represents the top, left, right and bottom of the selection key. Press 5 (MENU) once to open the camera menu

Note: The preset bit and camera menu functions cannot be used at the same time。



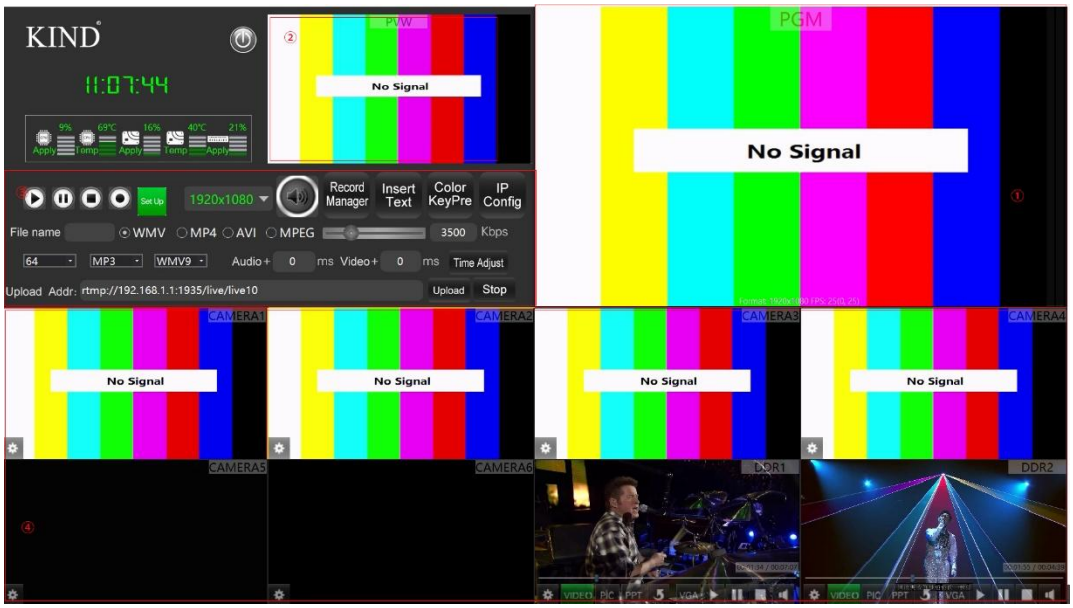
The first set of keys is the recording key video recording, the indicator light is recording; The second set of keys is to stop recording, the indicator light is to stop recording; The third set of keys is live/stop live broadcasting. If the indicator is on, it means live broadcasting; if the indicator is off, it means stop live broadcasting.

The DSK key is the subtitle shortcut key, and the subtitle menu will be opened quickly. The indicator light will be on and successfully opened, and the subtitle menu will appear on the screen for the user to choose.

The KEY Key is the shortcut key for image picking, and the image picking menu will be opened quickly. The indicator light will be on, and the menu will appear on the screen for the user to choose. The indicator light will be off and the subtitle function will be turned off.

四、Introduction to the operation and use of live broadcast software

1. Software main interface



The main interface of the software consists of PGM, PVW, video broadcast control panel and 8-way signal source preview window.

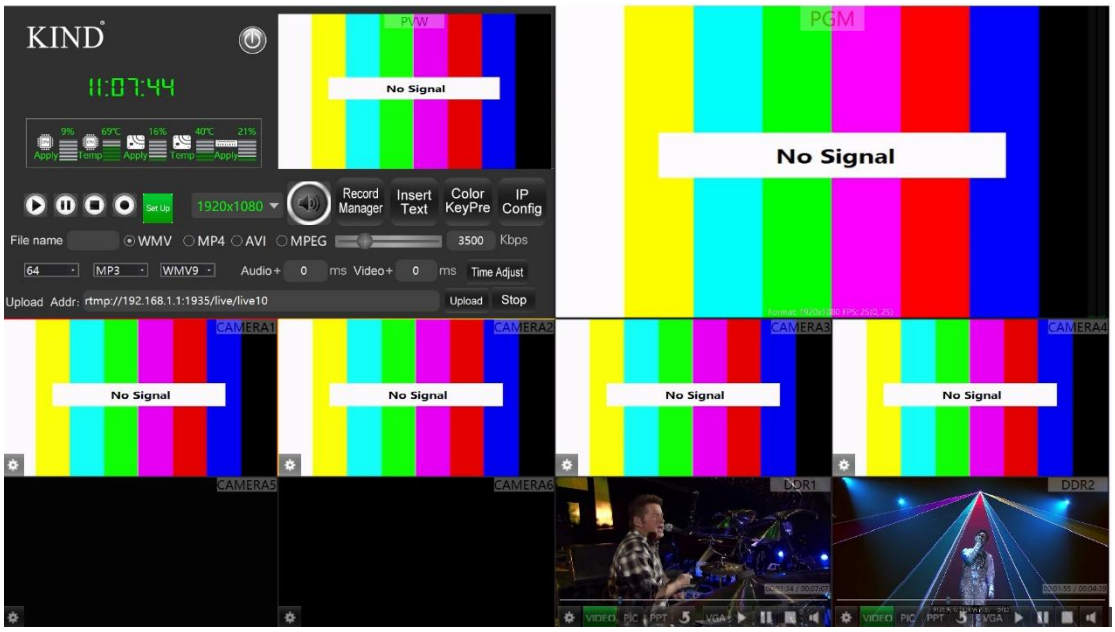
①PGM window: Main output screen;

②PVW window: Preview window to preview the next set of screens;

③Video live broadcast control panel: For the main output screen to broadcast, pause, stop, record, volume, resolution and other buttons, you can quickly debug;

④8-way signal pre-monitoring window: Observe the stability of all signals;

2. Record

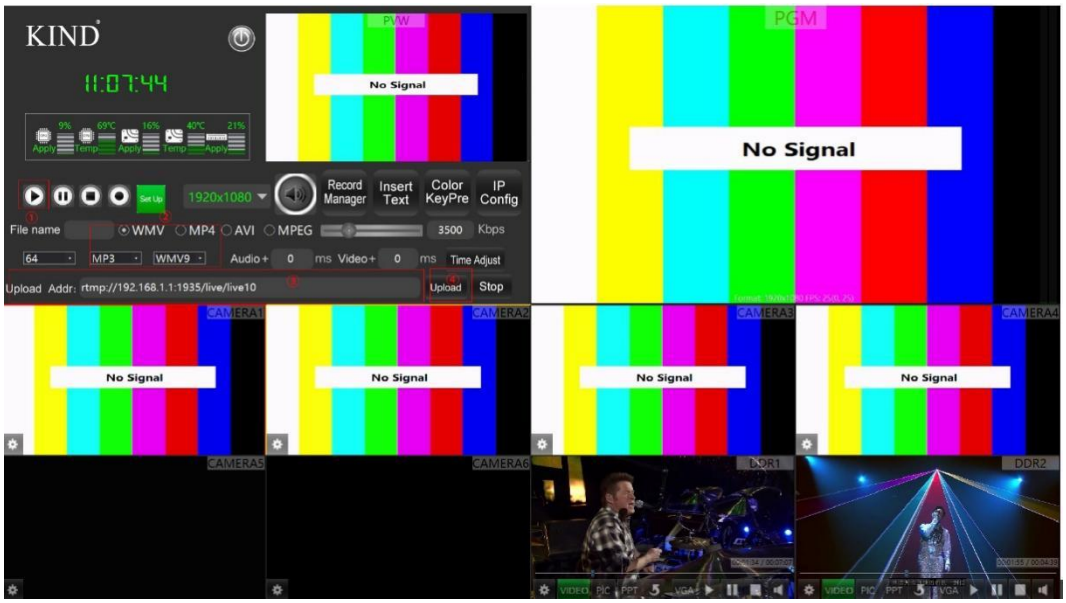


(The four function buttons are live broadcast, pause, stop live broadcast and video and record respectively. The live broadcast software can select video recording by selecting WMV, MP4, AVI and MPEG, or record and stop on the live broadcast machine

Hardware shortcut keys to record live. (Device Console hardware shortcuts)

Note: WMV MP4 and AVI recording resolution and bitstream of the three formats are equivalent to PGM live broadcast Settings, while MPEG recording can be independently set through the second level setting interface of video management to record the bitstream, up to 50MB recording.

3. Live broadcast



①Open the live streaming service button first as shown in the picture above;

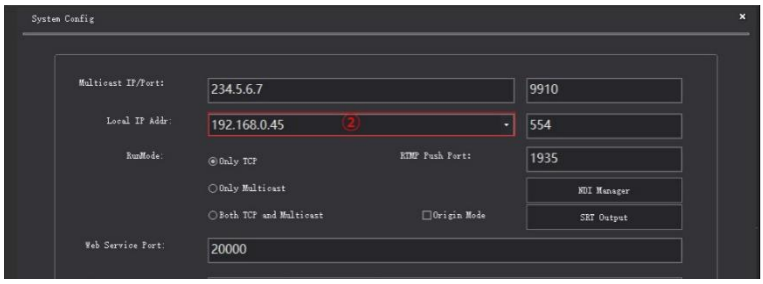
②Choose the right video and audio;

③Fill in the correct pusher address (do not add more symbols or Spaces to prevent pusher failure);

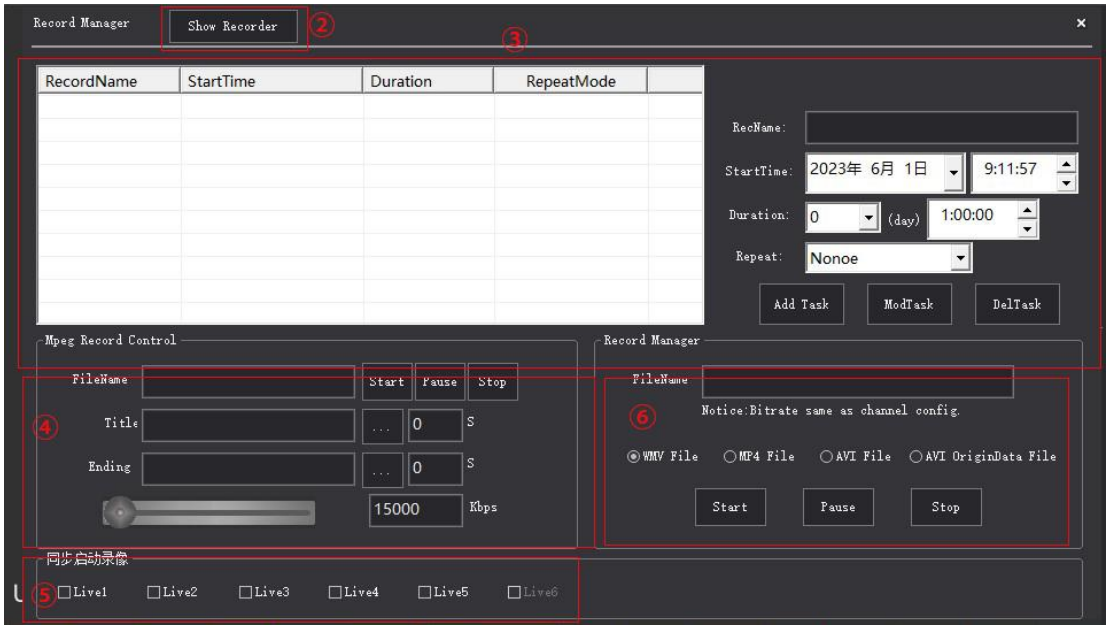
④Click the "Publish" button, and the button to be published will turn green to complete the live broadcast;

Note: To watch LAN live broadcast, you need to click the WMV mode and click the "Live broadcast" button, and then any client computer in the LAN can visit HTTP:// IP address of the livestreaming machine :20000 through a browser.

If the broadcast fails, first determine whether the IP address of the local machine is the same as the IP address in the software system. If it is different, click the drop-down arrow here, select the IP address, and then try to republish. The specific steps are shown in the figure below



4. Video management



Video management function: manage recorded video, timing recording, MPEG recording and library management;

①The video management page is displayed:

②Click to view the management interface, display the video storage location;

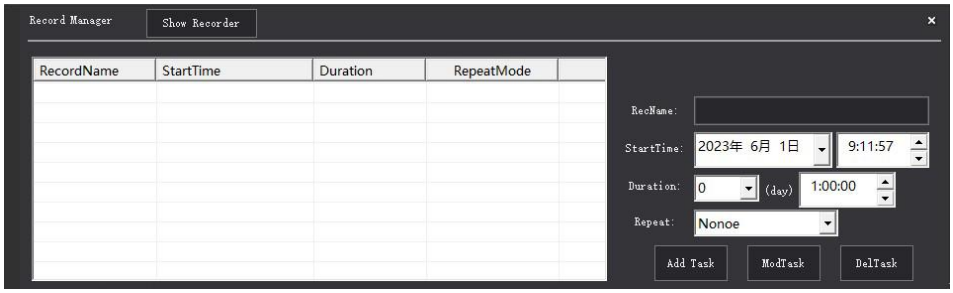
③The automatic recording function allows you to add, modify, and delete tasks to implement scheduled recording。

④You can directly set the Mpeg recording here, add the beginning and end of the film,

⑤Add this option to record each preview window at the same time;

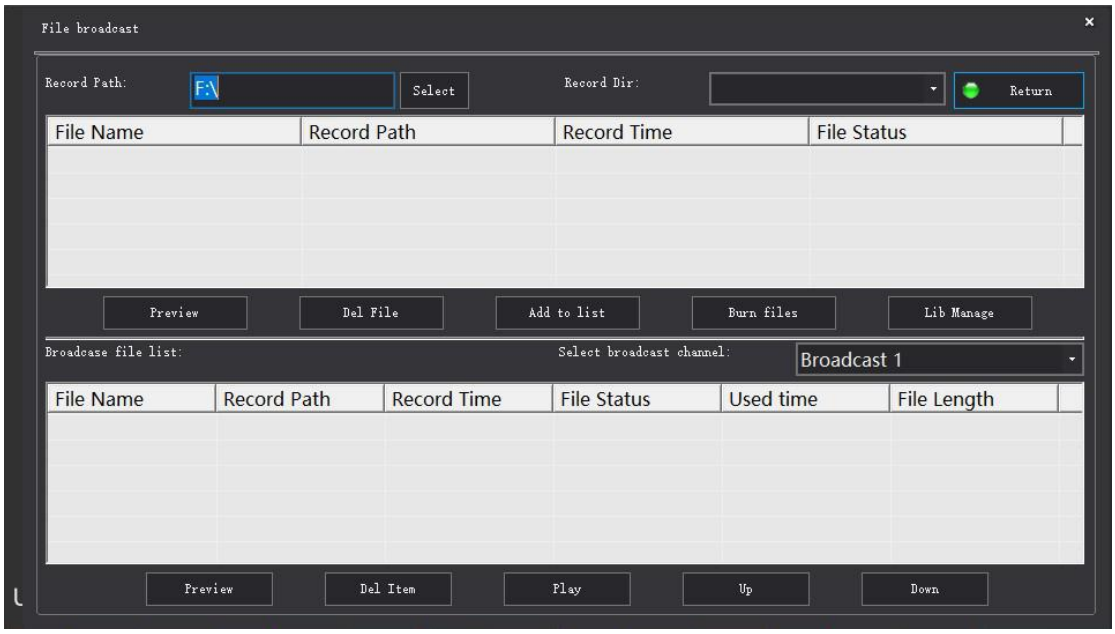
⑥You can choose to record in multi-clock format;

MPEG recording allows you to add a header and an end to this interface. Pictures and videos are formatted as JPG and MPG resolution 1080P for timed recording as shown below:

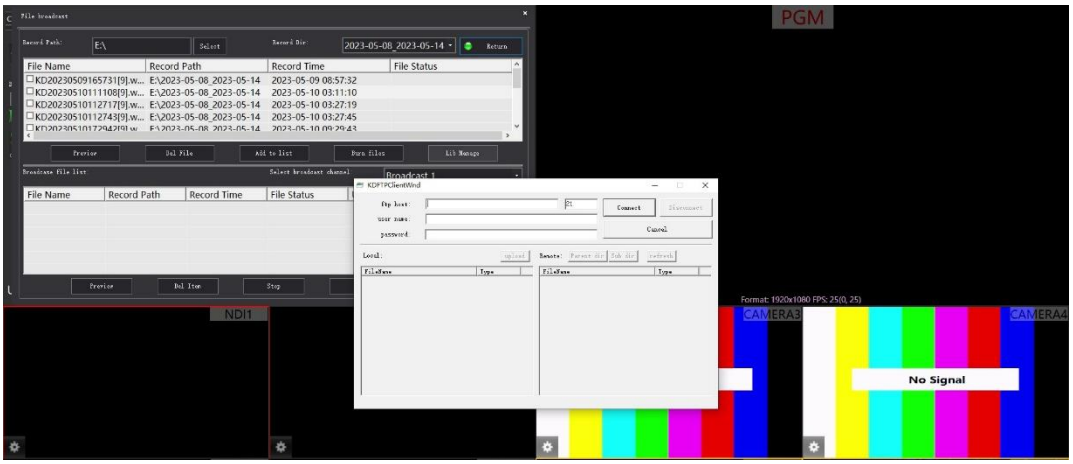


Set the recording name and start time to add a task. When the task name appears in the list, the scheduled recording function is enabled

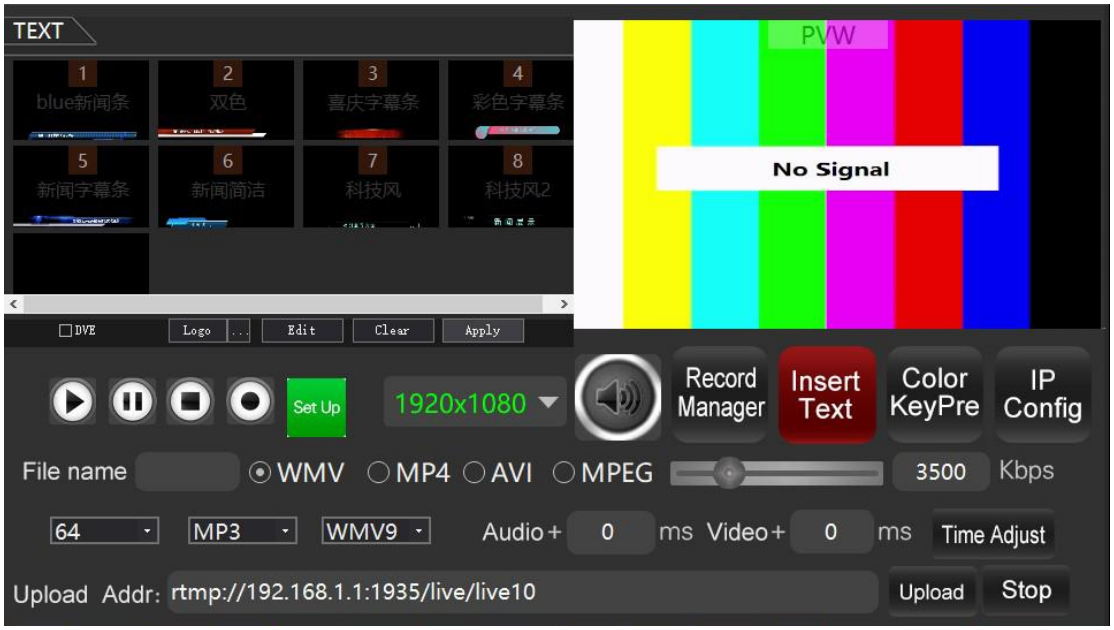
View the video below:



This interface allows you to view the recorded files in the current directory and transfer files through FTP upload server through library management:

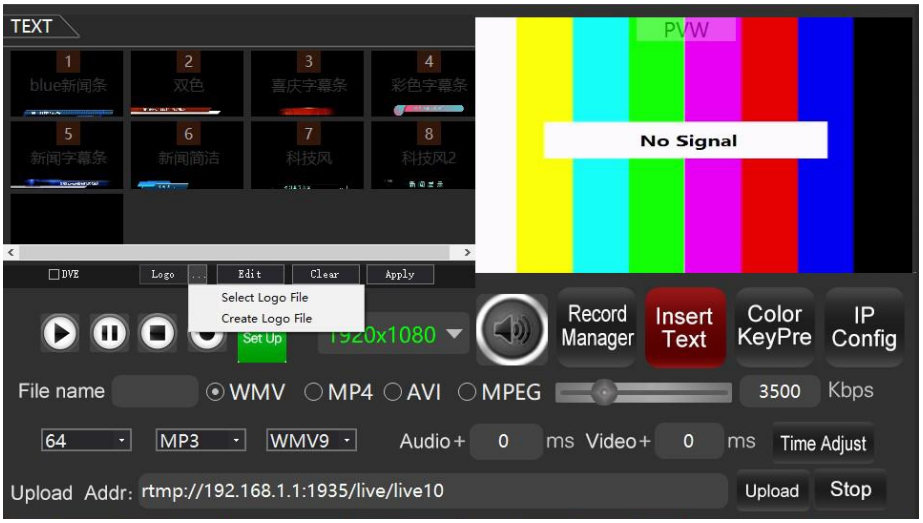


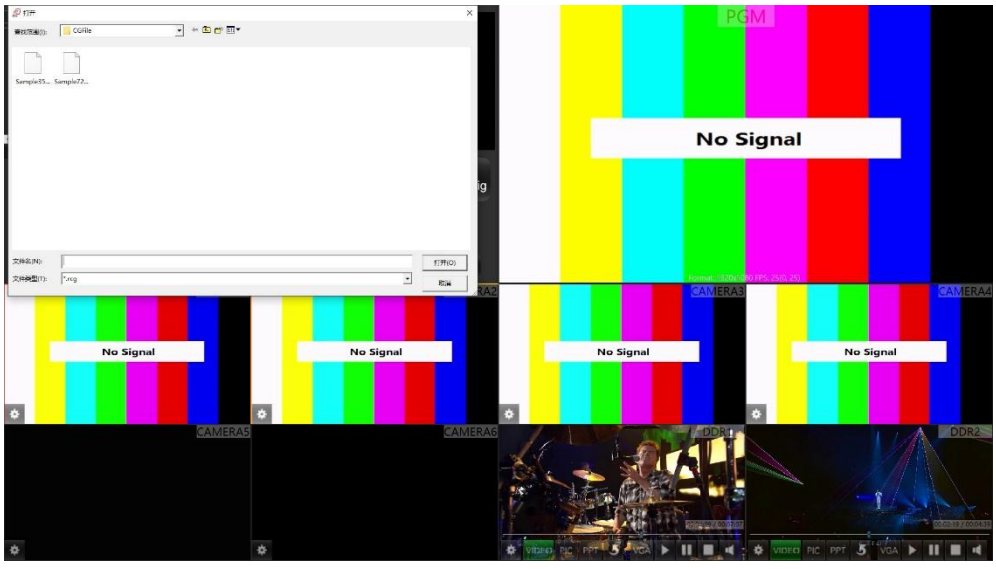
5. On-line packaging



The online packaging function includes the platform function and the Alpha channel special effect subtitle function, which can be used in double-layer superposition.

Click the edit button next to the platform logo as shown below to add the platform logo and create the platform logo function in the video;





This mode is mainly used to create the position of the platform logo. The operation of the editing interface is shown in the following figure

①Conservation engineering area

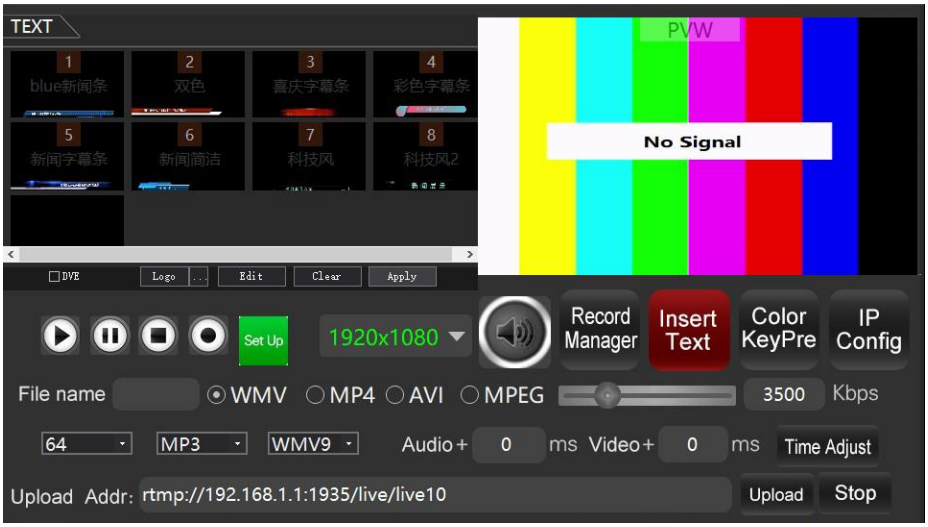
②This mode is mainly used to import text, pictures, and clocks

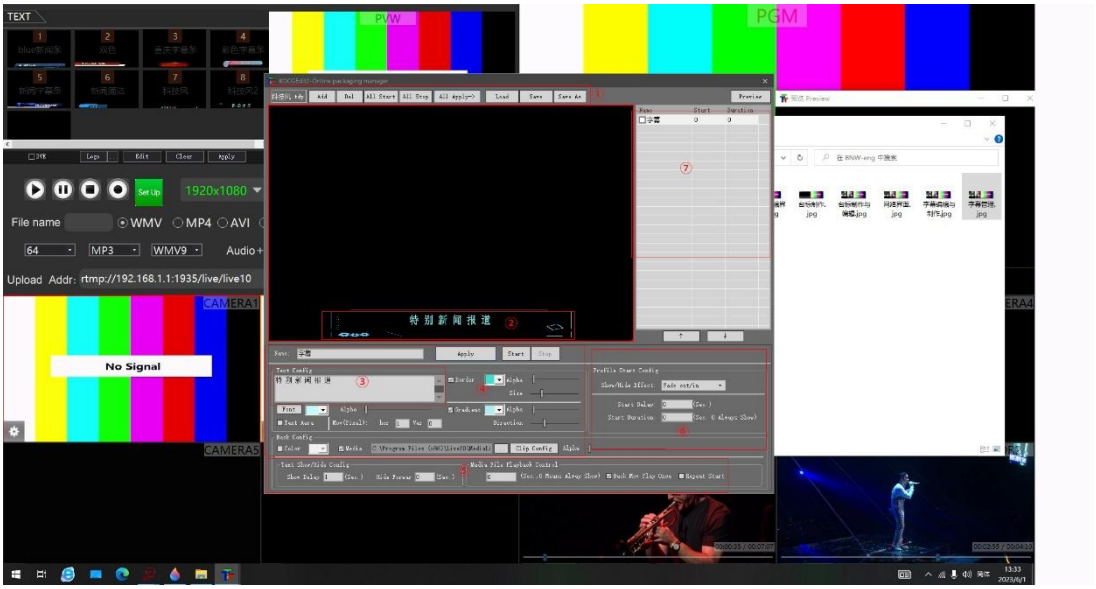
③Analog subtitles preview the location of the player

④Each imported material can be modified through the parameter area, mainly used for material in the window to move floating effect;

⑤Used in the logo class subtitle editing area;

Select the corresponding Alpha subtitle and click the Edit button to enter the current special effects subtitle editing template as shown below


TEXT
1 blue新闻条
2 双色
3 喜庆字幕条
4 彩色字幕条
5 新闻字幕条
6 新闻简洁
7 科技风
8 科技风2
PVW
No Signal
DVE
Logo
Edit
Clear
Apply
Set Up
1920x1080
Record Manager
Insert Text
Color KeyPre
IP Config
File name
WMV
MP4
AVI
MPEG
3500
Kbps
64
MP3
WMV9
Audio+
0
ms
Video+
0
ms
Time Adjust
Upload Addr:
rtmp://192.168.1.1:1935/live/live10
Upload
Stop


TEXT
PVW
PGM
Set Up
1920x1080
File name
WMV
MP4
AVI
Upload Addr:
rtmp://192.168.1.1:1935/live/live10
CAMERA1
No Signal
CAMERA5
特别新闻报道

①Through the toolbar, you can import and add the ALPHA channel special effects video material on the local system, save the project and application effects operation;

②Import the material file;

③Filling in the text in the panel will be displayed at position 2;

④Subtitle text properties edit panel;

⑤Text and animation appear sequence and loop play property setting;

⑥The transition effect of subtitles;

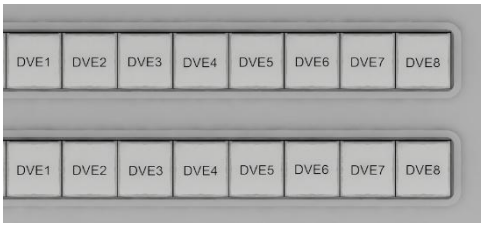
⑦Multiple map layer subtitles list display;

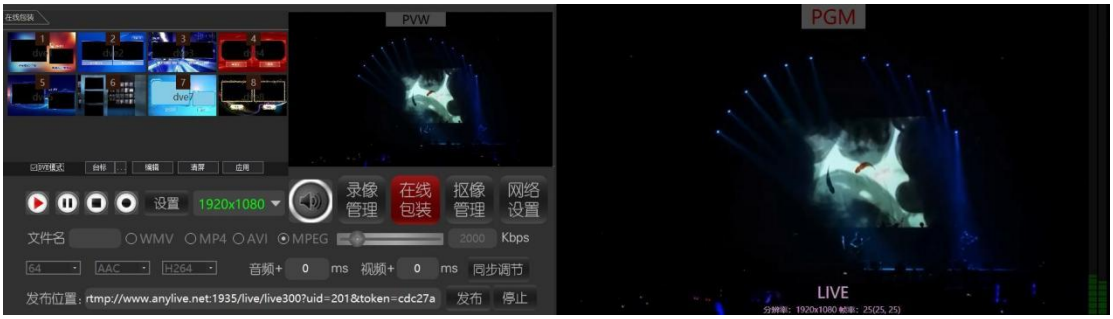
Edit the saved special effects captions

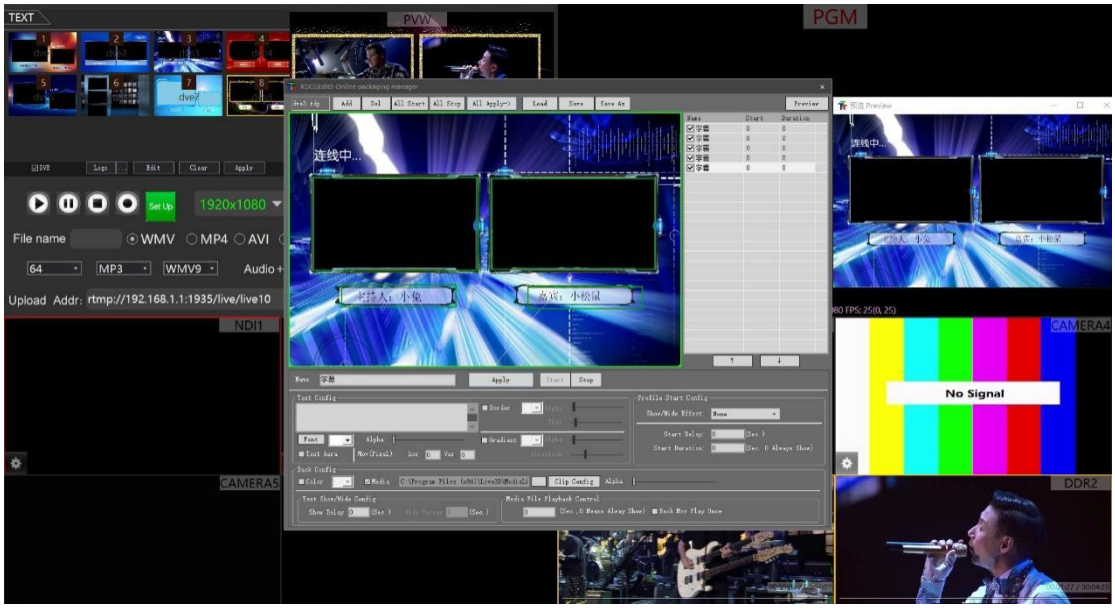
application effect as shown below:

The hardware shortcut key on the control panel can be used to APPLY the effect to the PGM window more quickly. Click the corresponding serial number to generate preview and then click Apply to apply to the PGM, as shown below:

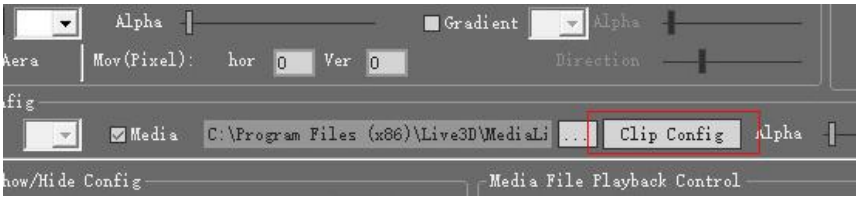
The DVE effect on the livestreaming machine can also be edited via the DVE mode of Alpha subtitles







DVE editing only requires defining the channel selection on the media source of the corresponding dialog window, as shown below



Note: T-pusher does not execute the switching logic in DVE editing state. In subtitle editing preview state, it executes and undo the subtitle effect on PGM. Exiting the subtitle editing state is the transition logic of PVW and PGM.

6. Image management

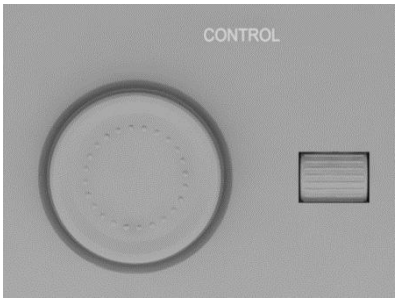
Click the photo picking button to enter the photo picking mode, as shown in the following figure: (Note that the PVW pre-monitoring signal of the 2D photo picking machine position is enabled for the photo picking operation only when it is cut into the environment with green cloth)

After the software enters the image picking interface, click the green background in the PVW small window for one-key image picking by default. As shown in the above figure, the darker the background color, the cleaner the image effect will be. If the effect is not ideal, the edge control bar will fine-tune the effect (Note: If it is still not ideal, please check whether the green or blue background cloth is the scratch green or scratch blue, or whether the background light is qualified. The more pure the scratch blue background is, the cleaner the noise is.)

Background video or pictures can be superimposed through the background wall definition after one key is selected successfully, and DDR contents on channel 7 or channel 8 can usually be set. In addition, the operation of picture-in-picture can be performed by adding a large screen or TV wall. The size of picture-in-picture and the audio of background content can also be adjusted, as shown in the following figure

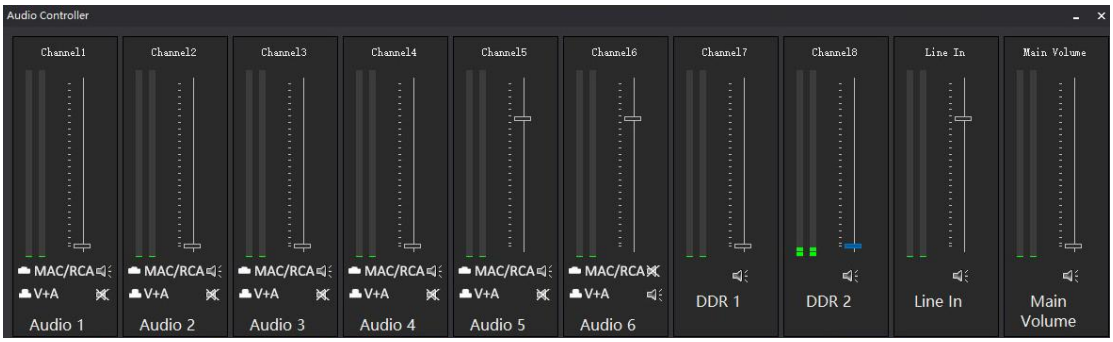
①.Size control: Control background, large screen, TV wall size;
②. ③④ You can select the contents of channel 1-8 for setting;
③. ⑤⑥ can be added to a single video;

When the knob encoder on the console of the broadcasting machine enters the image picking mode, edge control can be adjusted as shown below:



Inside the advanced Settings, you can accurately repair the image picking function.

7. Software mixer.



Click the horn button on the software to pop up the eight-channel audio controller. This function is mainly used for the adjustment of NDI and STREAM audio of each signal source channel. The MIC and stereo audio are subject to the equipment mixer.

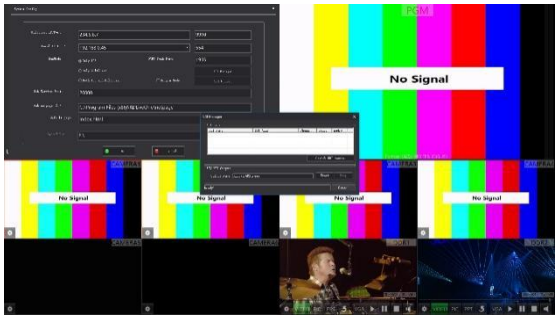
8. DDR

The DDR window of the software is mainly used to add local pictures, videos, and PPT as signal sources to switch the broadcast.
Recommended formats of live broadcast images are JPG and BMP.
Resolution: 1080P
Video format support: MP4 resolution: 1080P 720P code stream size: within 5MB
The PPT function system can be enabled by installing office 2013
Double-click the VGA button to enter the push-pull mode Settings

9. Signal source setup

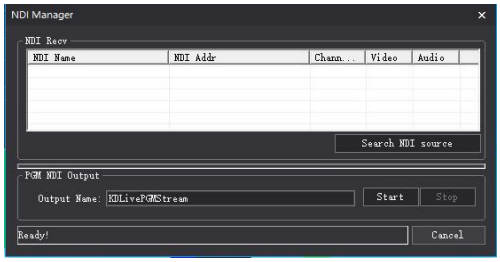
The above figure shows the eight-channel signal preview interface.
Camera signal, NDI and STREAM can be reused from Camera1-4

Using NDI and stream for Camera Raw 5 to 6, DDR1 to 2 are independent footage Windows
Take camera1 as an example, select NDI and click Set button to enter the NDI function setting interface as shown in the following figure:

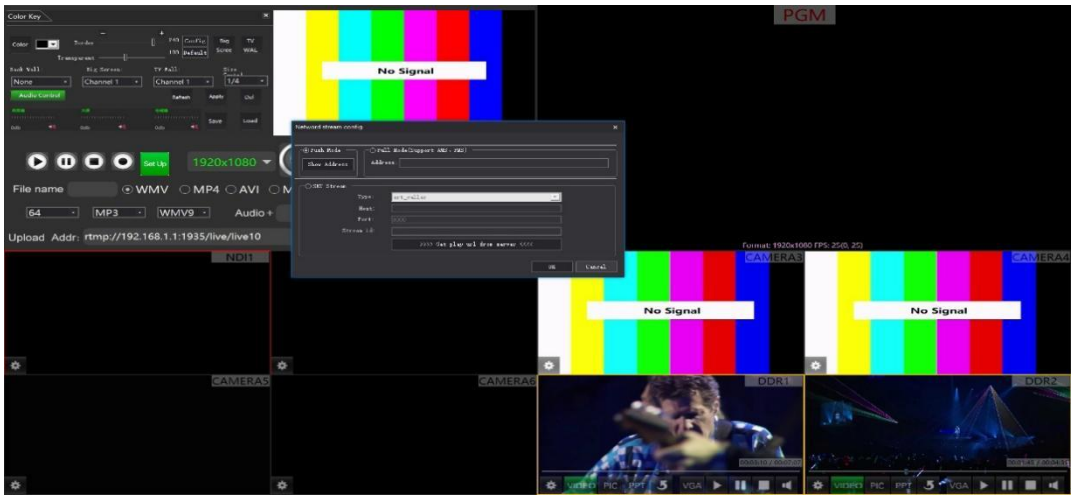


Search for the NDI signal source in the LAN and configure the corresponding channel address. The current channel is channel 1, so select Channel 1.

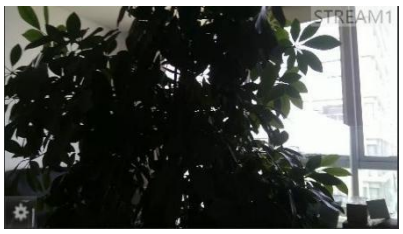
The NDI signal can be generated as shown below:



Select the "Set" button in the stream state to pop up the "Push and pull" stream setting window as shown
below



In push mode, a mobile phone or any device with the push function can be used to push the stream in the LAN. According to the push address in the push mode, the push stream can be sent to the device as a signal source to switch the broadcast. The following picture shows the mobile phone after pushing the stream



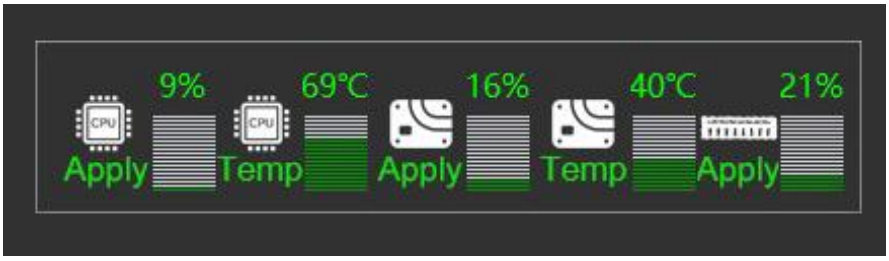
The pull mode means that the system can link the RTMP of a third party in the live broadcast to the software as a signal source for broadcasting switchover. The method of using this mode is to fill the address of the third party in the address bar of the pull mode (unencrypted RTMP link). Note: If the pull-down screen does not display successfully, the RTMP address may be too complex, so it is necessary to add a space URL to the address suffix。

In Stream mode, the caller and listener modes of SRT are also supported, as shown in the following figure：

10. Synchronous correction of sound and picture

This function is mainly used to correct the problem of asynchronization of sound and picture in the process of live broadcasting, and corresponding delay time can be manually added for intervention (normally, live broadcast sound and picture are synchronized, and this function is mainly used for emergency applications. It is suggested to check the service forwarding platform to find out the problem after the live broadcasting activity is over).

11. Resource monitor



This function is used to monitor the hardware load of the software under various conditions of recording live broadcast.

五、Beijing kind Network Technology Co. LTD

Address: 16C, Unit 1, Building C, Yingdu PLAZA, No. 48, Zhichun Road, Haidian District, Beijing,China.

Official website:WWW.KINDLIVECAST.COM

Zip Code: 100086

Phone: +86 010-58732646