

**KIND Purchasing, recording and compiling the
operation manual of the all-in-one machine**

KD-LCC900XH-16N



catalogue

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—、 Precautions for the use of live broadcasting machine

- Before use, please read this manual carefully and keep this manual properly ;
- Please observe the warning signs and instructions on the product;
- Please unplug the machine before cleaning. Do not use alcohol, thinner, insecticide or other volatile solvents, as doing so may deform the housing or damage the surface;
- The operating system is Windows 11 X64;
- Disk C is a system disk, disk D and disk E are data disks, and disk F is a 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 ensure maximum system performance, set high performance in system power options;
- Do not use this product near water;
- Do not place the product in an unstable place, such as wheelbarrow, stand, etc., to avoid falling and causing serious damage to the product.

- The opening holes on the outside, back and bottom of this product are for heat dissipation. Do not cover or plug these opening holes to avoid overheating. Avoid placing the product on objects with similar surfaces such as beds, sofas, blankets, etc., so as not to plug the opening hole. Do not place this product near fire sources, heating furnaces or hot vents. Do not place this product in a closed space unless you are sure that 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 make sure that the total power/total amperage used must not exceed the total amperage loaded by the extension cable;

- Do not insert anything into the body opening to prevent short circuit. Do not spill any liquid on this product

- Do not disassemble and repair without authorization.

- If any of the following occurs, unplug the product and consult a qualified technician;

- ①The power cord or plug is damaged or unraveled;

- ②A liquid has seeped into the product;

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

- ④Damage caused by computer system viruses and malware is not covered by the warranty;
- The equipment is packed in the original packing box or similar packing box during transportation, which can reduce the strong vibration of the equipment;

Product and Service Disclaimer

The information provided in this manual is intended as a guide only. At all times, 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 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 responsible for any omissions or errors. Or any subsequent loss or damage caused by the information provided in the contents of this Manual, further information about the contents of this manual or products can be contacted by local offices or KIND headquarters.

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

When recording or streaming important data, be sure to check the device connection beforehand, or perform a streaming test first, to ensure that the system can operate properly and 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 restricted.

二、Product features

Product specification

Model number	KD-LCC900XH-16N
Power source	INPUT:AC110V-240V, 50-60Hz, 5A ; OUTPUT:12V 25A
Operating temperature	0-40℃
dimension	(L*W*H) 425mm*340mm*120mm
weight	5kg
Video input	SDI×4, HD4K×4, NDI×16, Stream×16, SRTx16, DDRx16
Video output	DP×2, NDI×1, SRTx1; HD4K×1
Audio input	Stereo (L, R) IN RCA×5, MIC XLR×5
Audio output	Stereo (L, R) OUT RCA×1, Balanced XLR OUT×2, Monitor Φ 3.5×1, Playback monitor Φ 3.5×1, The director calls MIC Φ 3.5×2
Other interface	USB2.0×2, USB3.0×2, , RJ45×1 ,
Director	Tally MINI XLR OUTx8

communication	
Mix switching	Signal×8 , NDI×16, SRT×16, StreamX16, DDR×16,
Sound console	Digital mixer×5, Analog mixer×5, Audio hardware delay device×2
record	4K, MP4, WMV, AVI, MKV, MOV, FLV, TS
Live broadcast	HTTP;RTMP, NDI, SRT
Delay broadcast	Audio and Video hardware delay broadcasting system; (Non - Standard)
Subtitles	CG-Alpha DVE, Video playback, Virtual matting system
disposition	Intel i9CPU 12900T, DDR5 32G, 1TB SSD
System	Windows 11

Video: 4K 60FPS switching station, input signal
(12G-SDI/HD4K)+ DDR(video, pictures, PPT, video playback)
+Stream network flow (push, pull)+ NDI+SRT, mixed
switching;

Audio: digital mixer + analog mixer + audio hardware delay
device + audio synchronizer;

Recording: 4K, MP4, WMV, AVI, MKV, MOV, FLV, TS

Live streaming: http, RTMP, NDI, SRT ;

Camera PTZ control;

Lead the call and TALLY;

64-bit kernel, 4K 60fps, Alpha online packaging system,

virtual matting system, audio and video editing system;

Applications: studio, educational recording, media live, all

kinds of conferences and events live;

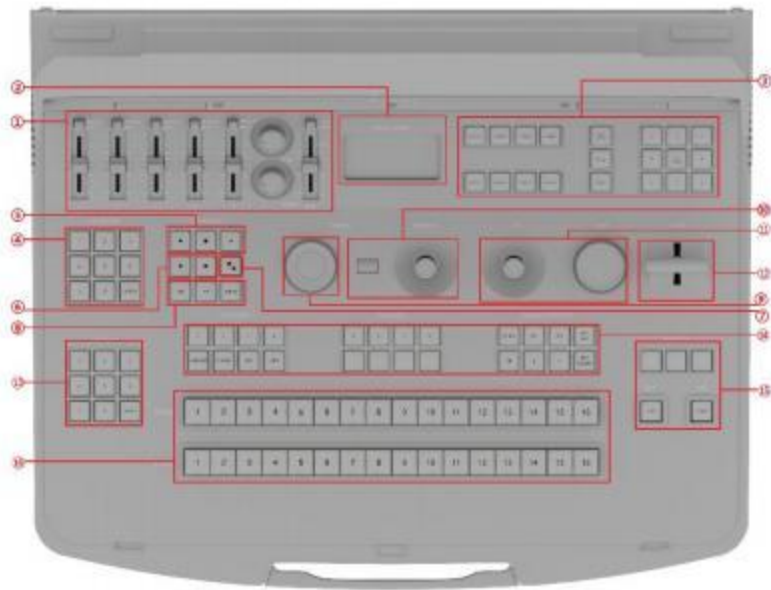
Size: 425mmx340mmx120mm ; Weight: about 5kg;

2.1System chart



三、The back interface and control panel interface of the live broadcast machine

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



①Mixing console, audio delay device, digital/analog audio switch key

②Audio display

③8 Station channel address, preset bit call, speed adjustment, camera menu

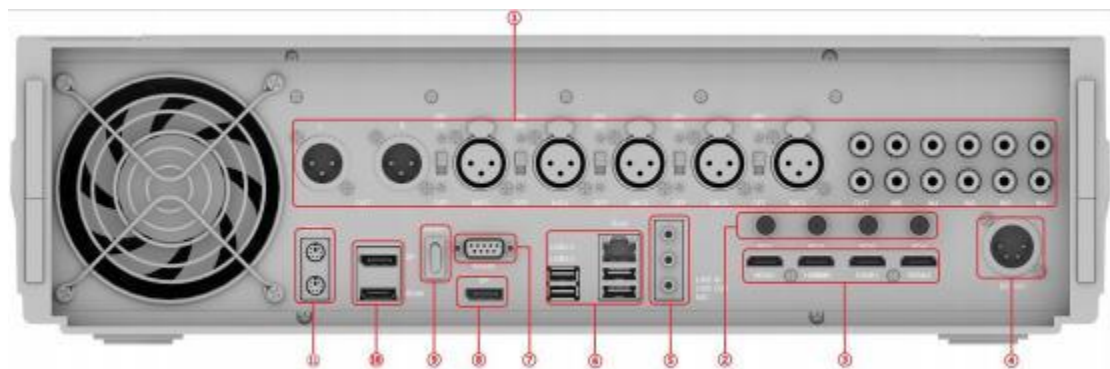
④Broadcasting call switchboard (need to be run with subsystems)

⑤Record, stop, live button

⑥Multi-way record, stop button

- ⑦NDI recording stop button
- ⑧Subtitles, matting, application shortcuts
- ⑨Effect regulator
- ⑩No mouse combination control key
- ⑩PTZ controller
- ⑩T-putter
- ④Subtitles select shortcut keys
- ④Eight-channel signal source acquisition shortcut key
and video playback key
- ⑥Multi-mode switch key
- ⑩PGM/PVW video switcher

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



- ①MIC, audio stereo input, output
- ②SDI video input
- ③HD4K video input
- ④DC interface

⑤LINE、LINE OUT、MIC

⑥RJ45Net interface、USB2.0、USB3.0

⑦RS485

⑧DPextend

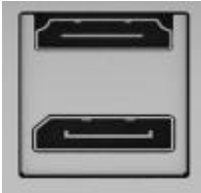
⑨RESETPower switch

⑩DP、HD4Kexportation

⑪Keyboard and mouse interface (purple is keyboard interface)

(3) This section describes the interfaces on the back

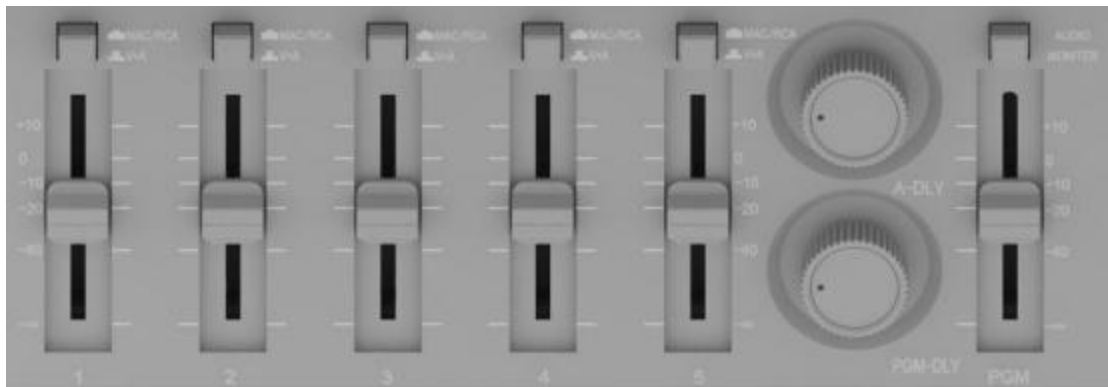
port	Instructions
	L/R Audio output XLR Balanced analog audio output interface
	1 to 5 audio input XLR balanced analog audio input interface and each with 48V phantom power switch (support for professional microphone power supply)

	1 to 5 Audio input RCA Stereo analog audio input (left/right channel) OUT Audio output RCA stereo analog audio output interface
	4 HD4K input ports, support 4K input
	HD4K video output interface, can be connected to the display
	HD4K video output interface, can be connected to the display Display Port Video output port that can be connected to the display
	The network port can access the network for software parameter debugging, live broadcast, and stream pushing USB2.0

	USB 3.0
	Keyboard and mouse interface, purple is the keyboard interface
	LINE IN/LINE OUT/MIC indicates audio source input, audio source output, and microphone output
	Power switch: Power on or off
	485 Control interface: adopts RS485 control signal and supports VISCV control protocol
	SDI1-4 video input ports support 12G-SDI 4K60, 4K30, 1080i60 1080i50 1080p60 1080p50 and other video source inputs
	HD4K video output interface supports signal specifications 4K60, 4K30, 1080i60 1080i50 1080p50 1080p60 video source output

	DC power port: Connect the provided 12V to 25A/300W adapter power cable to the DC port
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3.1This section describes the functions of the control panel



1 to 5 channel audio gain adjustment, corresponding to the backplane 1-5 audio source input, MAC/V+A analog/digital audio switch key

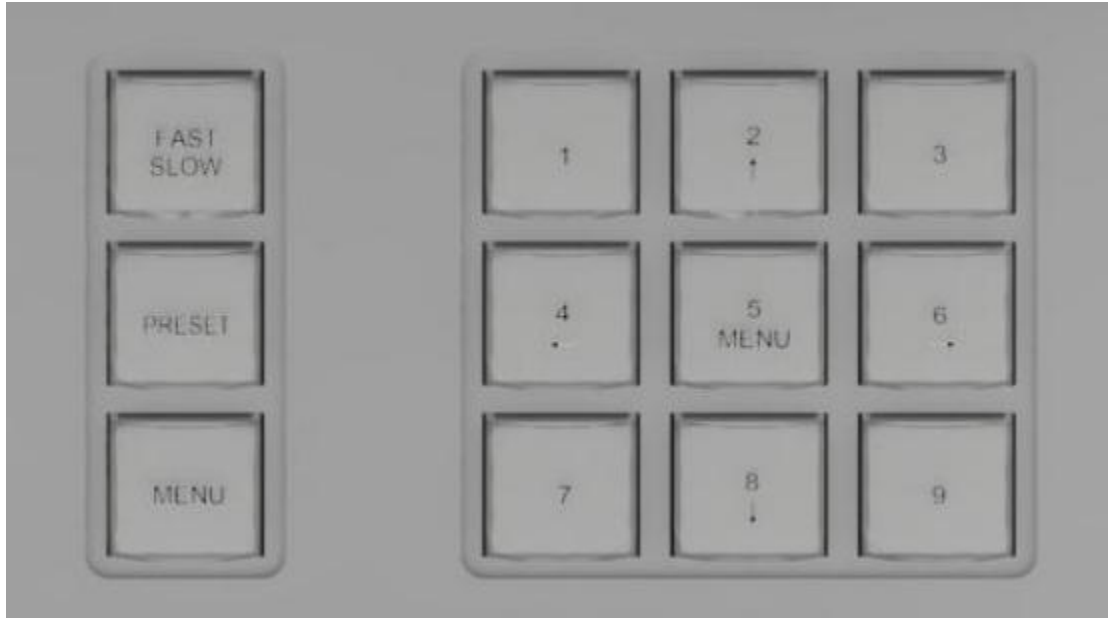
Audio delay device, PGM audio gain adjustment. PGM Mute with one click.



Audio display: display the left and right channels and NDI data, and delay the sound time



8 Camera channel address. The switch button can be used to switch between different camera positions. The key light indicates that the current camera is being controlled

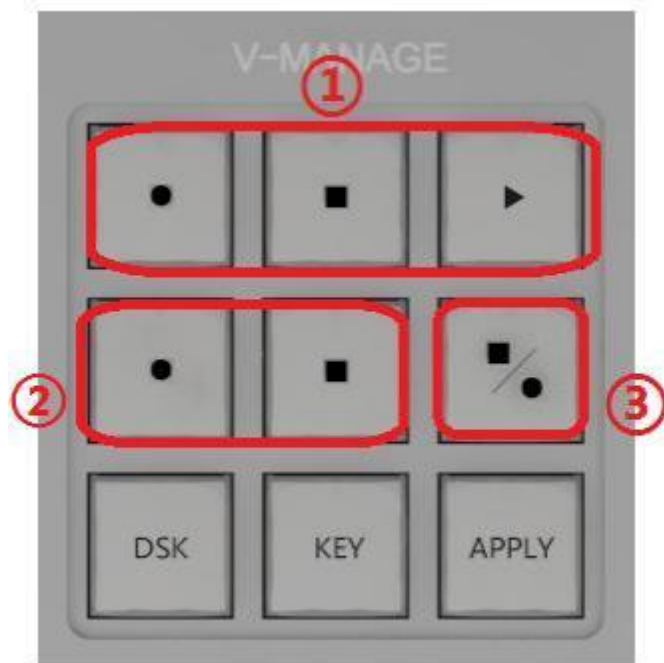


FAST/SLOW: Controls the rotation speed of the camera. When the indicator is on, the rotation speed is fast, and when the indicator is off, the rotation speed is slow

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

MENU: camera MENU key, press this key to start the MENU adjustment mode and the 2/4/5/6/8/ key lights up, 2/4/6/8 represents the four directions of the selection key, press the 5 (MENU) key once, the camera menu key opens, after the setting is complete, press the menu key once, the 2/4/5/6/8 key lights off, restore the preset bit function

Note: The preset bit and camera function menu cannot be used at the same time.



The first set of buttons are those for recording, stopping and live broadcasting. The indicator light indicates that it is recording. The recording and live

broadcasting buttons can be used at the same time or separately. The second set of keys is one-key multi-channel recording and stop recording buttons, which can record multiple pre-monitoring Windows at one time; The indicator on the key prevails.

The third set of keys is the NDI recording and Stop button (insert USB flash drive into the camera) to connect the NDI camera. If the indicator is on, it indicates that recording is taking place. If the indicator is off, recording is stopped;

DSK: subtitle shortcut key: the indicator light is on, the subtitle function is started, and it needs to be used together with other keys ;

KEY: Image picking shortcut key: indicator light, image picking function starts, need to be used with the effect regulator

APPLY: Apply key: When the subtitle function is enabled, press this key to switch between DVE and subtitle. After the photo matting function is enabled, set the scene, and press this key to directly output to the PGM screen.



Call
communication
panel: Click
OFF/ON to open
this function, a
total of eight
sets of buttons,
you can

respectively talk (optional) need to be equipped with professional call equipment

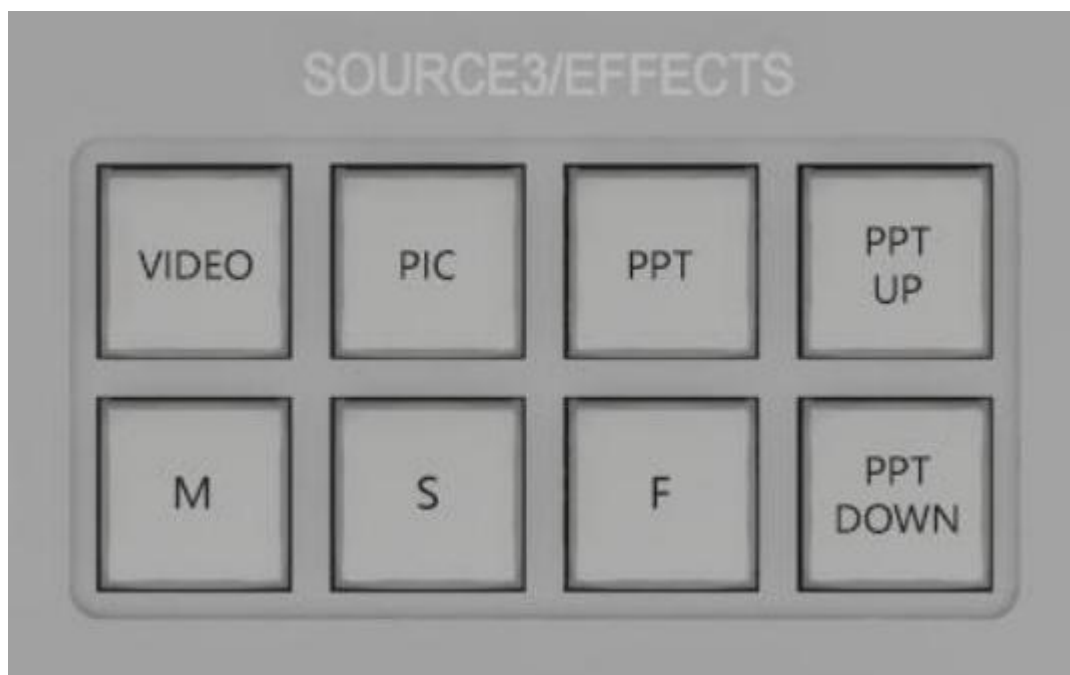


Subtitle shortcut key.

After the subtitle function is enabled, select 1-8 buttons to display various types of subtitle. Press APPLY to apply, and the selected subtitle will appear on the PGM screen



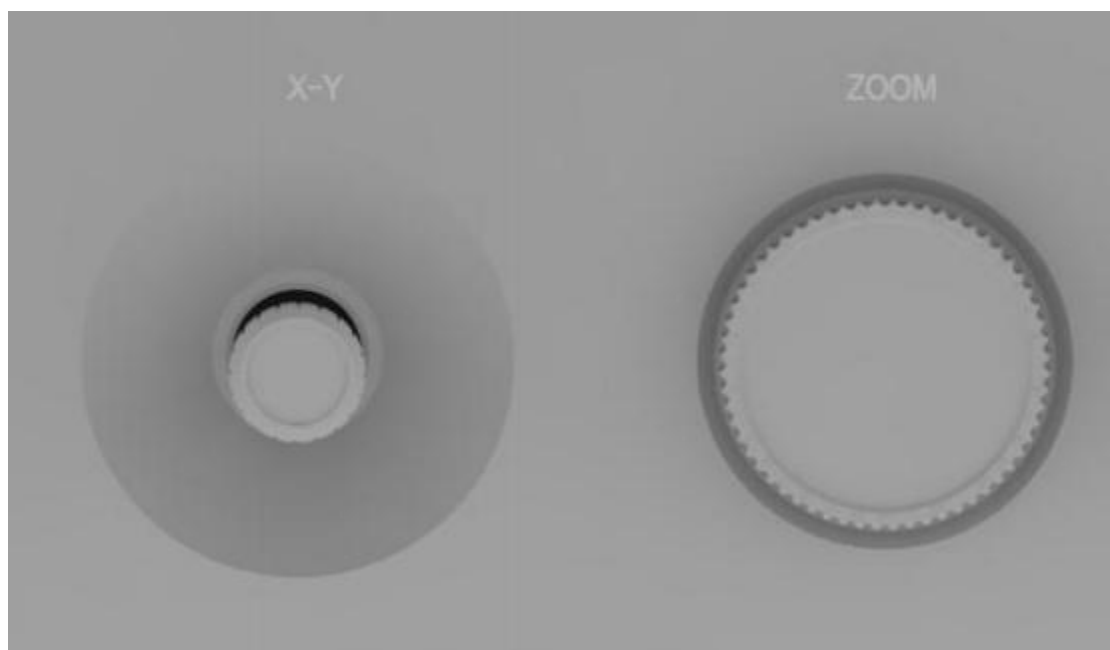
1-8 signal sources can be switched at any time, including
CAMERA, STREAM, NDI, DDR four signals



VIDEO, PIC, PPT three can be selected in DDR mode one of them to play ;

M, S, and F represent minutes, seconds, and frames respectively for playback

PPT UP and PPT DOWN are page turning functions, enabling quick page turning during PPT playback.



Camera PTZ controller: To achieve the PTZ camera position of the push-pull tilt lamp position control

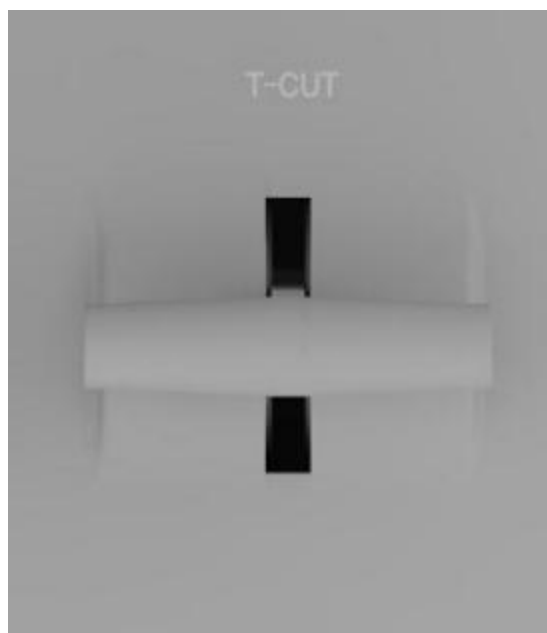
Use the ZOOM knob to control the focal length of the camera by turning it left and right



Hardware switching between PVW and PGM



The switch between Cut and TAKE buttons can switch PGM and PVW lenses, making the transition more convenient and fast



T-type push rod: The T-type push rod is a manual transfer mode to complete the switch between PGM and PVW, and the T rod is pushed to the end to indicate the completion of the transfer



The PC has 3.5 system sound output;

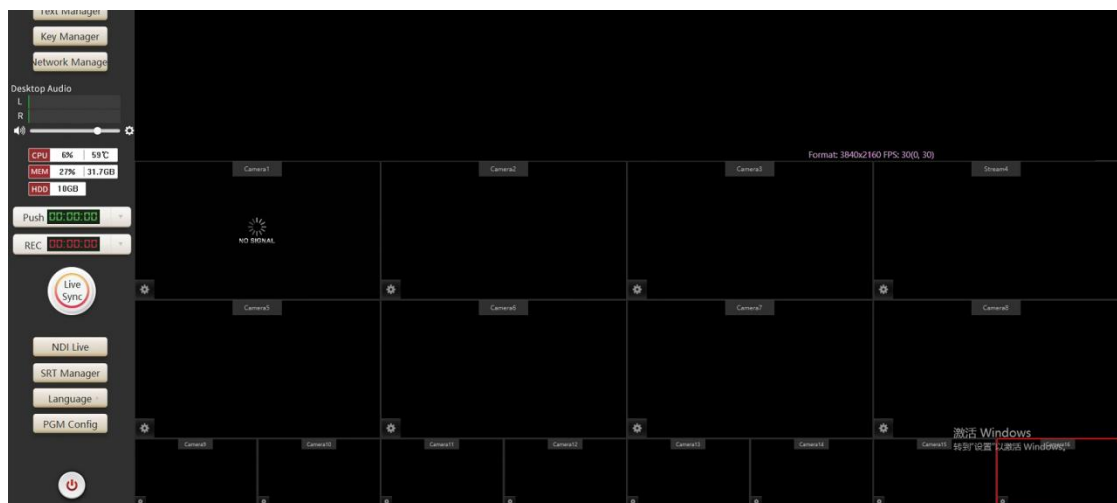
MAIN is a 3.5 listening interface;

MONI is a 3.5 call radio interface;

The MIC is a 3.5 microphone port;

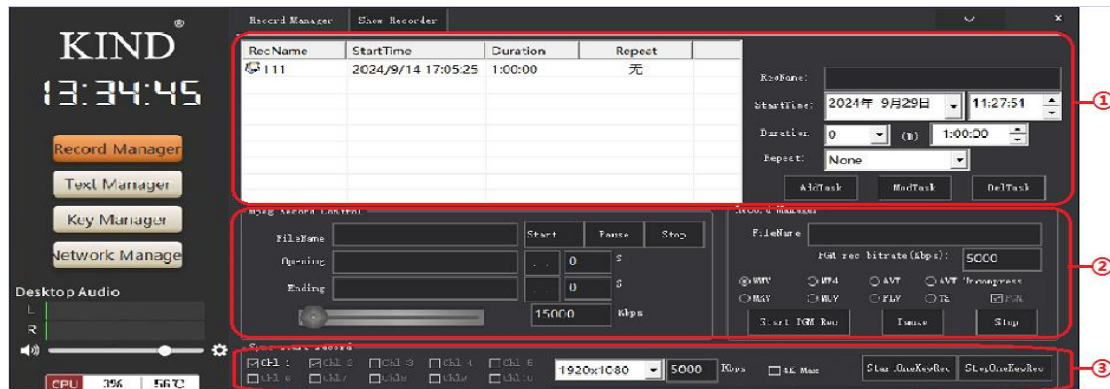
四、Operation and introduction of live broadcast software

1、Software main interface



The main interface of the software is composed of PGM window, PVW window, 16-channel signal source pre-monitoring window, video, live broadcast, push stream control panel and software mixer。

2、Video management



① Scheduled task: Set a scheduled recording task.

(1) First set the start recording time ;

(2) Set the duration;

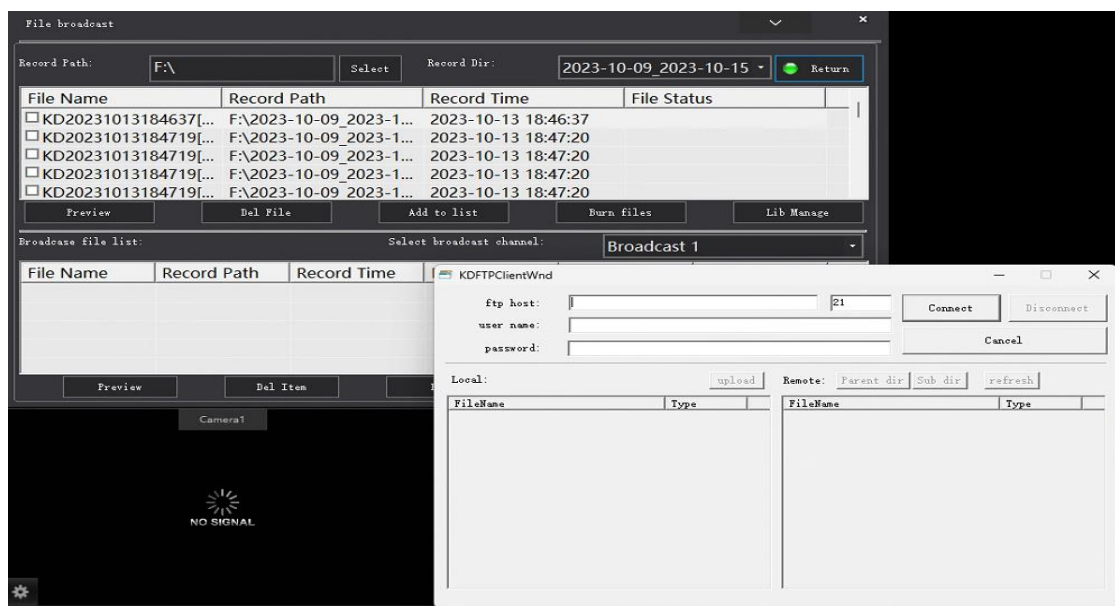
(3) Set the repetition mode, which can be divided into non-repetition, daily and weekly recording;

(4) After setting, the recorded information will be displayed in the white table ;

② Recording: The software recording format is divided into MPEG, WMV, MP4, AVI, AVI Uncompress, MKV, MOV, FLV, TS format, you can add the title and end of the film, set the stream and other functions, click to start PGM recording after the completion of the recording click stop button, the recording is complete.

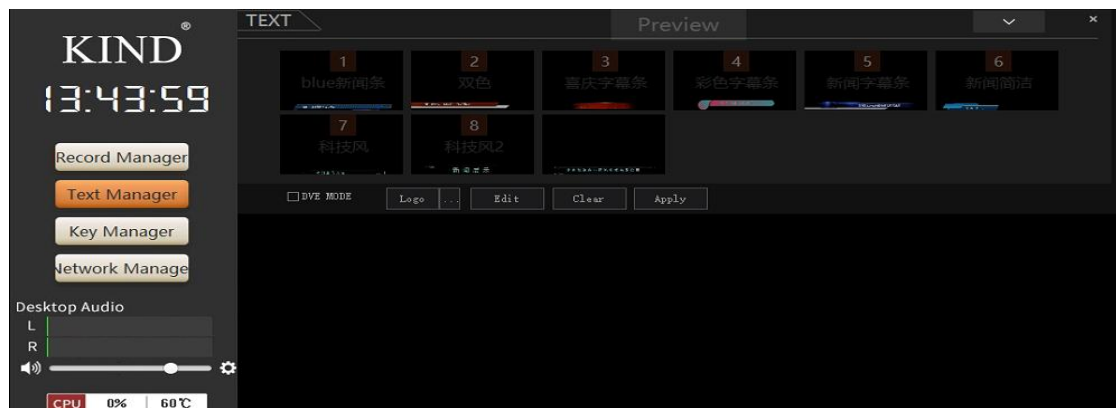
③ Synchronous recording function can record each pre-monitoring window, you can adjust the video resolution and bit rate.

After the recording is completed, click video to view, and you can view, burn, delete, preview and store the video from this position.



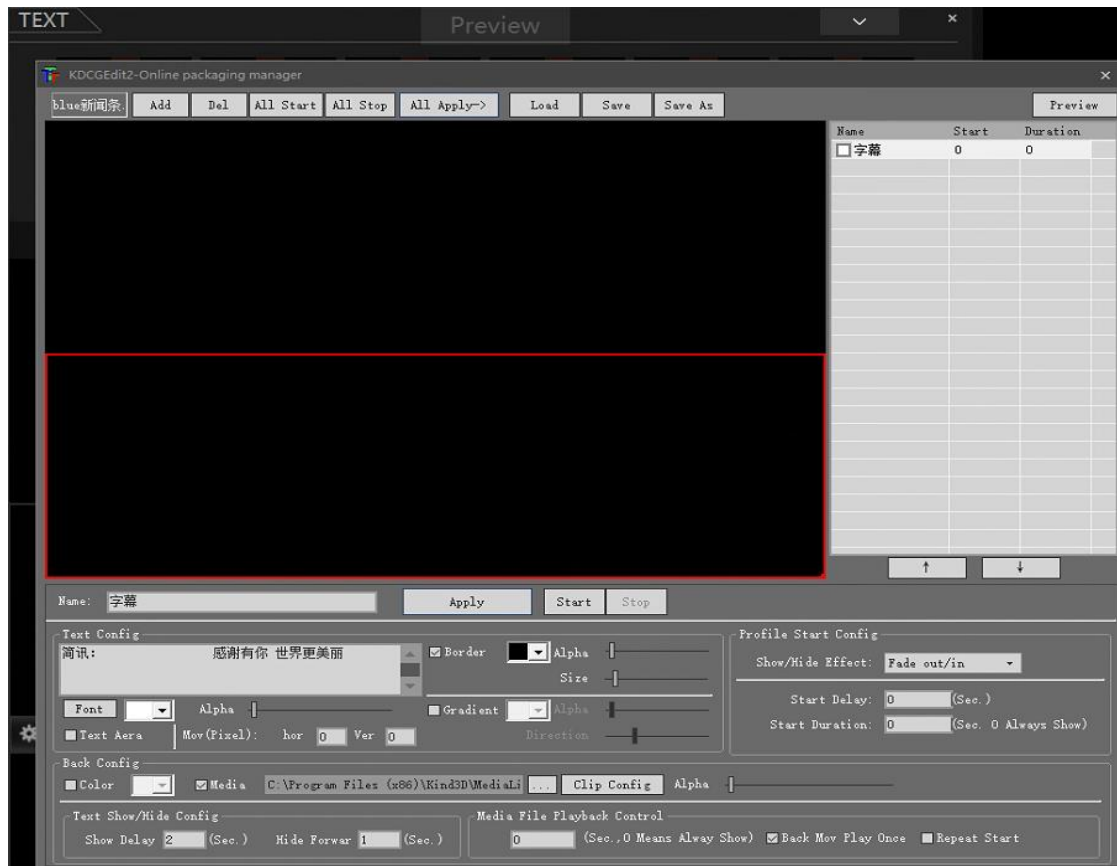
This interface function can view the recorded files in the current directory, and through the library management can be FTP upload server in the form of file transfer, as shown in the figure

3、Online packaging

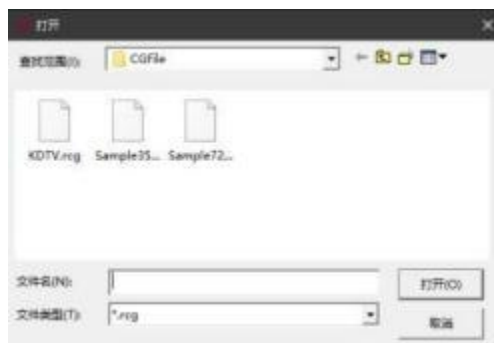


The online packaging function includes the platform function and the Alpha channel special effect captioning function, which can be used in double layer superposition.

Select any subtitle in the picture and click Edit to enter the subtitle editing mode. You can set subtitle according to your needs. Select the corresponding alpha subtitle and click the edit button to enter the current special effects subtitle editing template as shown below

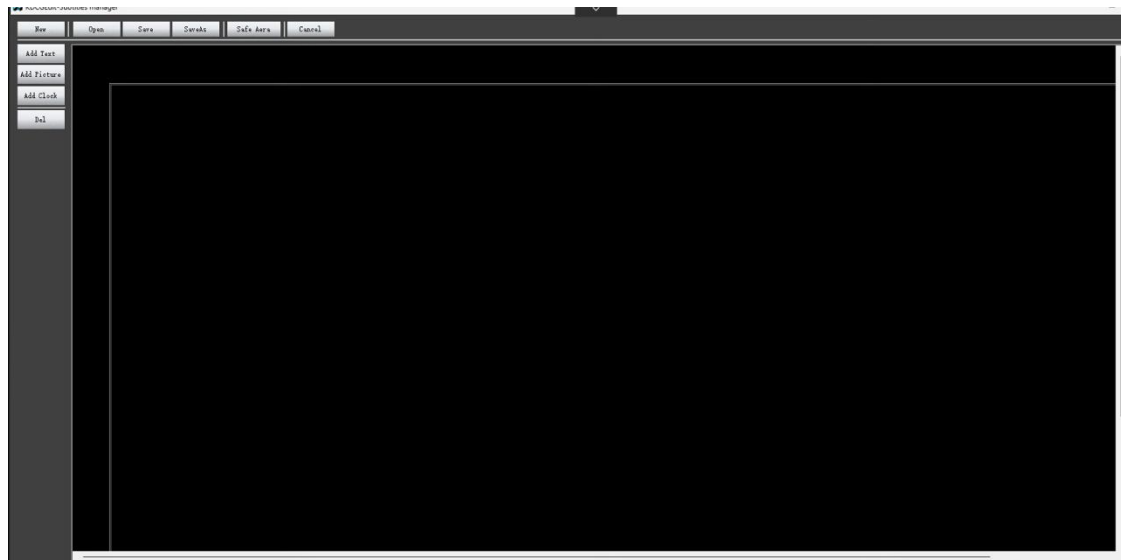


Through the hardware shortcut key on the control panel, the effect can be applied to PGM more quickly. Click the corresponding serial number to generate preview and then click APPLY to apply to PGM, as shown in the figure

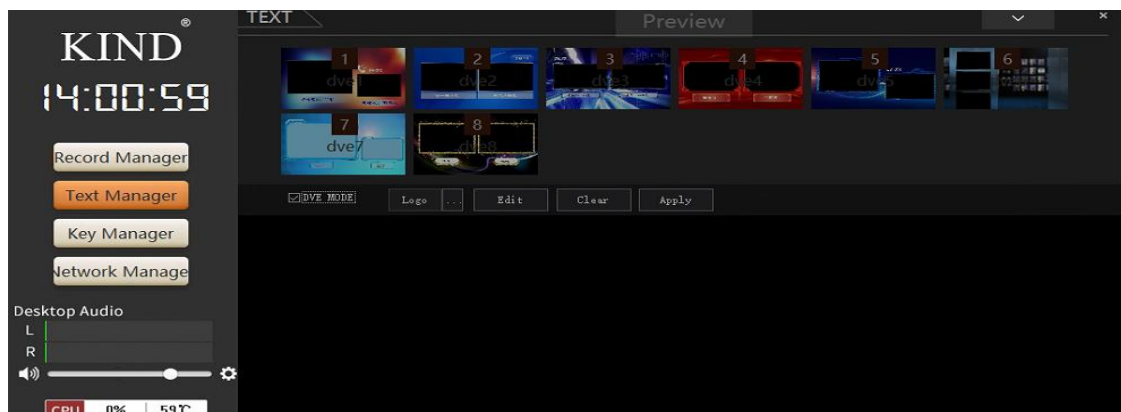


to the logo as shown below to add
go function in the video

This mode is mainly used for the creation of the platform logo
position, editing interface operation as shown in the
following figure



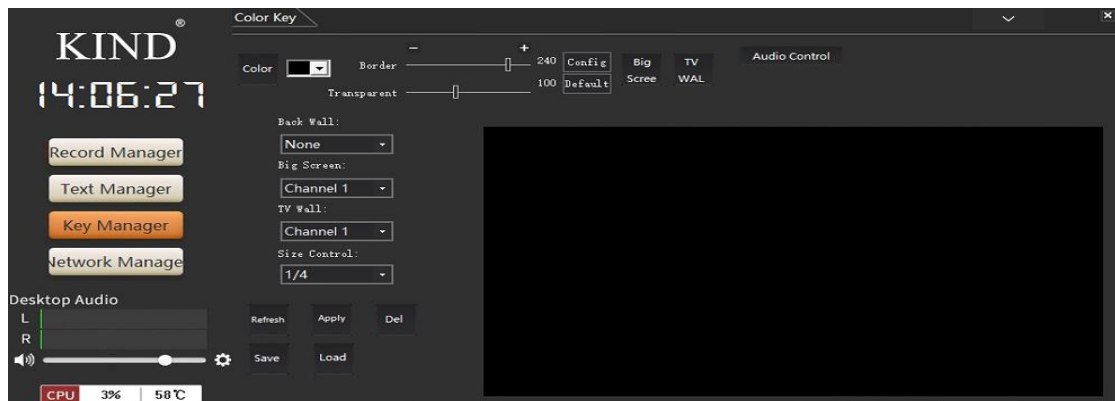
DVE MODE When a matching hook is added to the front of the DVE mode, you can implement scenarios such as video connection. Click Edit, you can set the signal source, etc., as shown below;



DVE editing only needs to define the channel selection on the media source of the corresponding dialog window, as shown below



4、Matting management

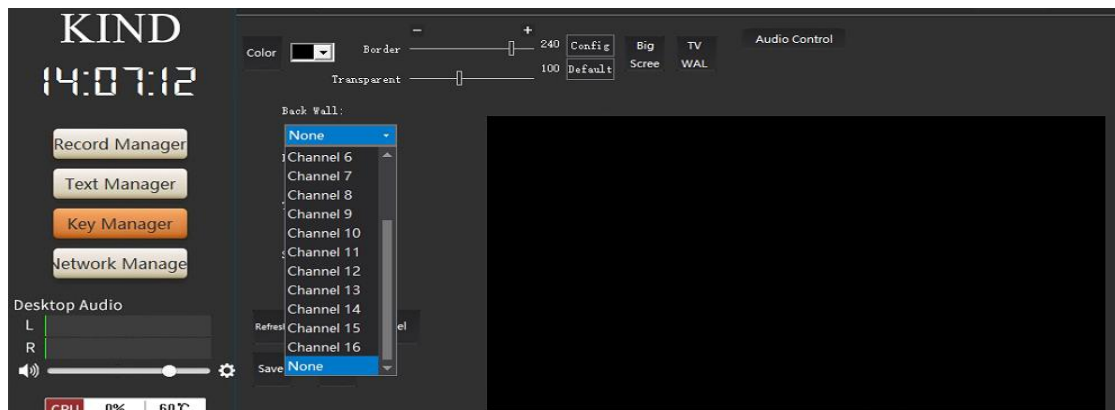


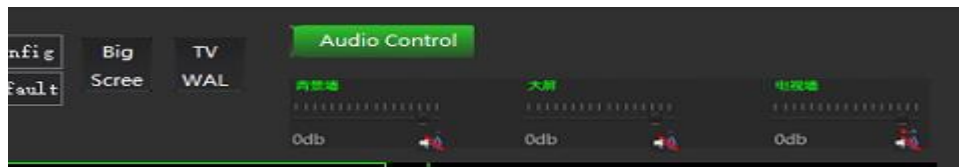
Click the photo picking button to enter the photo picking mode, as shown in the figure: (Note that the PVW pre-monitoring signal of the two-digit photo picking machine should be switched to the environment with green screen to perform the photo picking operation).

After the software enters the photo picking interface and then enters the PVW interface, click the green background in the PVW small window for one-click default photo picking. The darker the background color, the cleaner the image effect will be. If the effect is not satisfactory, fine-tune the effect through the edge control bar (Note: if it is still unsatisfactory, please check whether the green or blue background cloth is photo picking green or blue, or whether the background light is qualified). The more pure the

blue-green background, the cleaner the image, and the less noise).

After the success of one-click image selection, background video or pictures can be superimposed through the definition of Beijing wall, and picture-in-picture operation can be performed by adding a large screen or TV wall. The size of picture-in-picture and background content audio can also be adjusted, as shown in the following figure

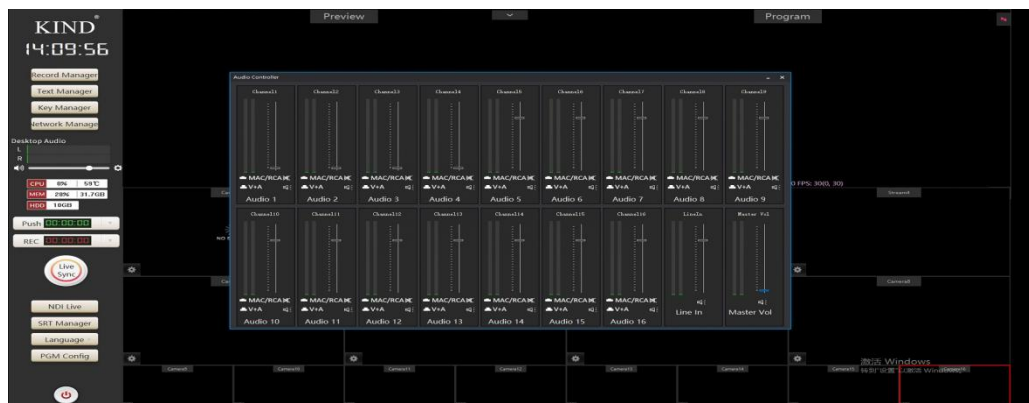


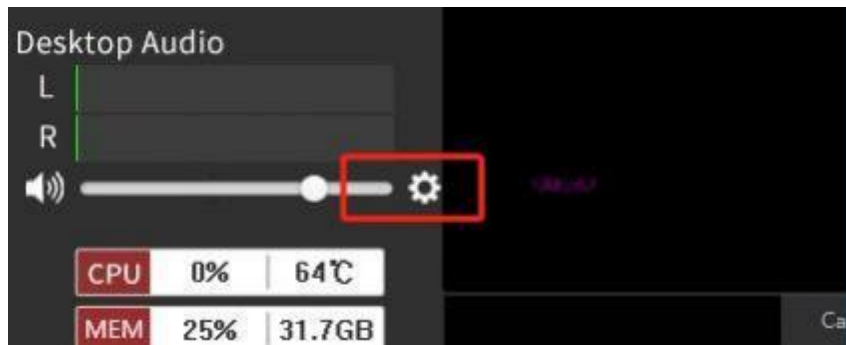


The knob encoder on the console of the broadcast machine can be enabled after entering the match-mode to adjust the edge control as shown in the following figure



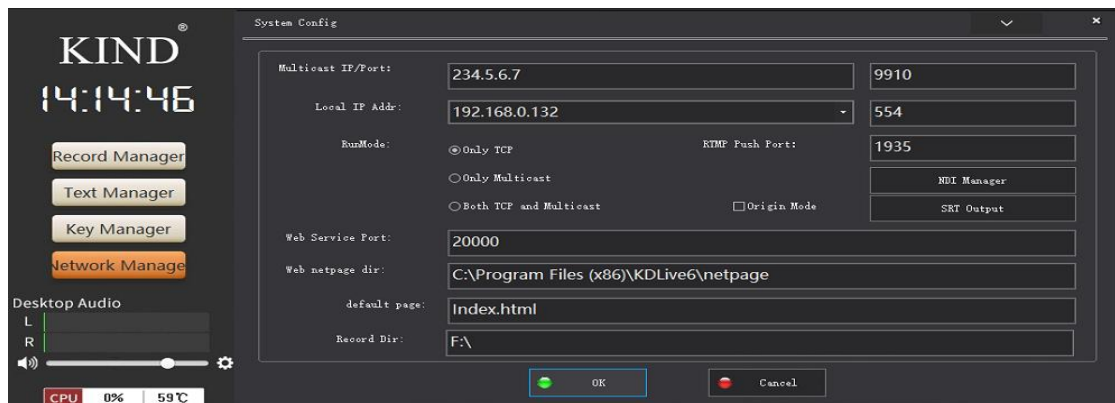
5、Software mixer





Click the set button of the software to pop up the 16-channel audio controller. This function is used for the audio adjustment of NDI and STREAM modes of each signal source channel, and the MIC and stereo audio are still subject to the equipment mixing console.

6、Network management



The network management interface can modify the IP address, NDI manager, SRT output, running mode, and recording location of the machine.

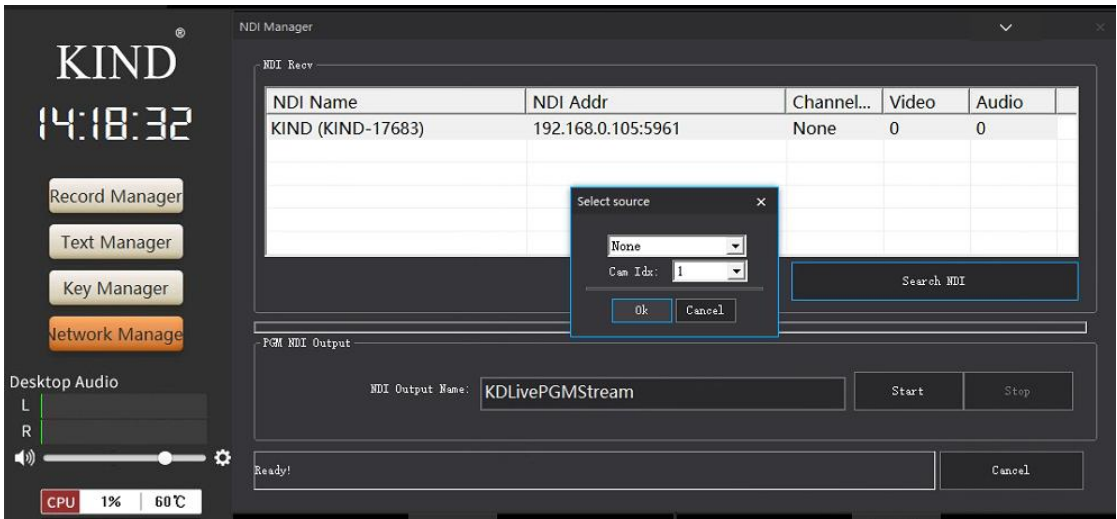
The local IP address must be the same as the local IP address. After connecting to the network, restart the software.

The recording location can be changed based on the drive letter displayed on the system disk. The factory setting is D or E disk, depending on the actual situation.

Clear stream mode: After the clear stream mode is turned on, subtitles will not appear on the screen interface of the live stream during the live broadcast.

NDI Manager: After opening the NDI device and connecting to the network, click Search NDI source, and the searched NDI

device will appear in the white interface as shown in the following figure



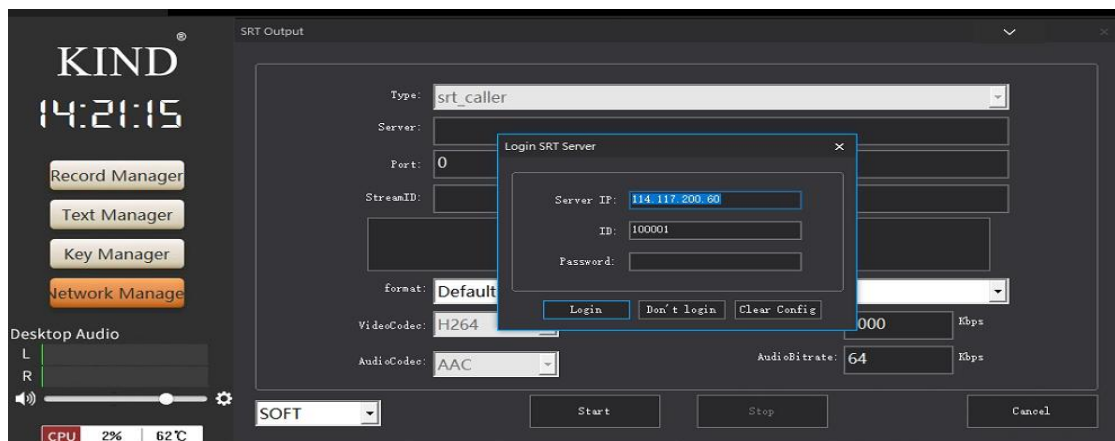
After the device is selected, the source Channel will pop up and Live Channel 1 will select the channel used. Cam serial number is the camera control address. The push, pull, roll,

pitch and other movements of the NDI camera can be controlled through the camera address button.

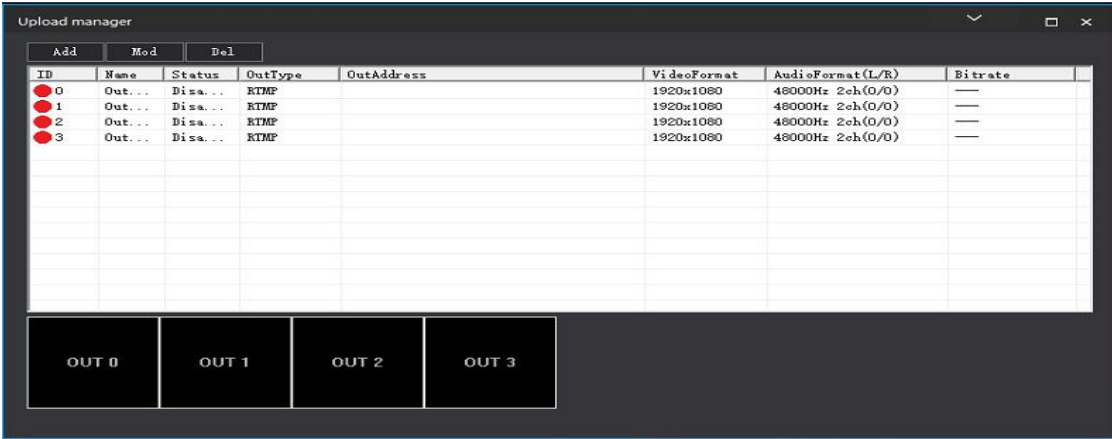
After clicking OK, the NDI video will enter the pre-monitoring window.

NDI Output: NDI signal transmission can be carried out through this function

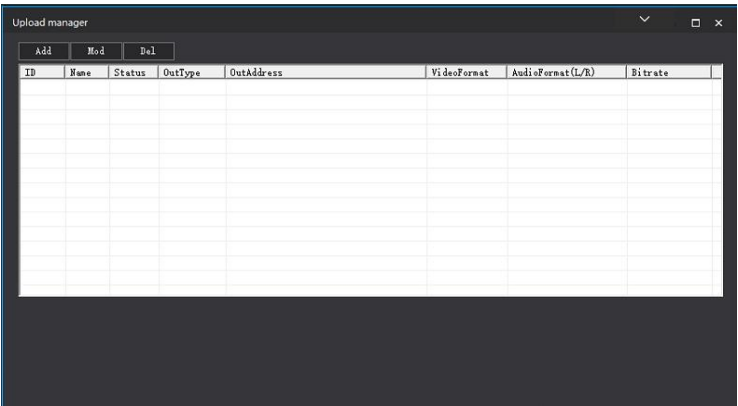
SRT output: Pull the picture captured by the camera into the software through the streaming media server for recording and broadcasting, and select the route as shown in the figure (after logging in to the server)



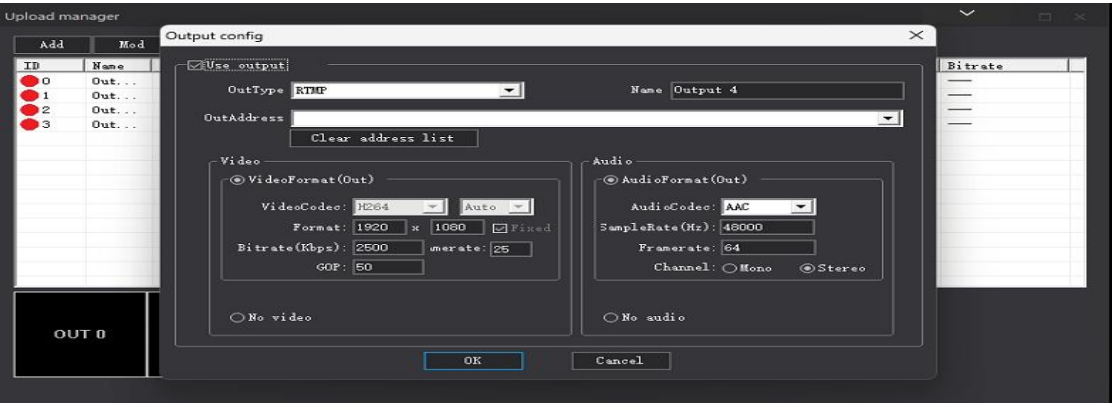
7、Push flow management



①Click the Push Stream button to open the secondary menu;



②Click Add button

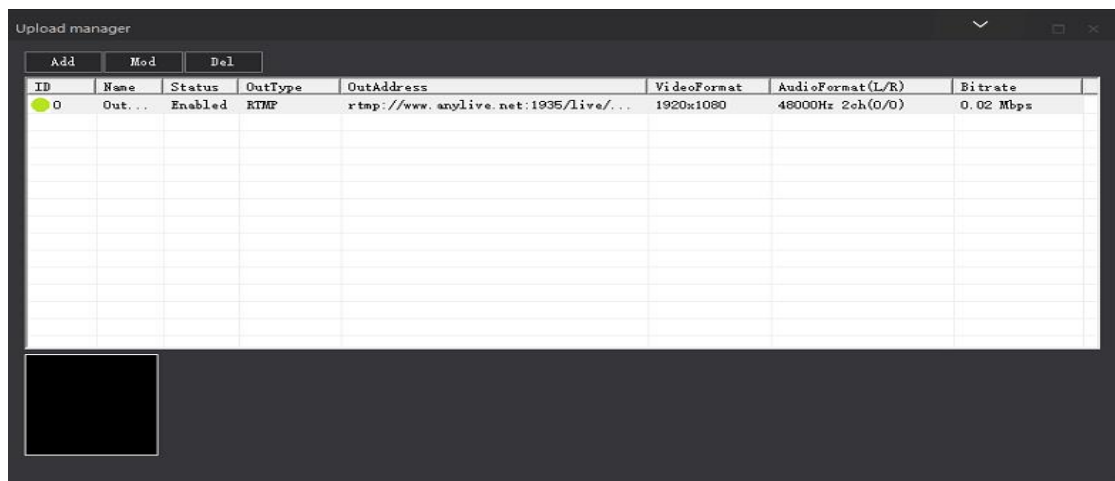


③ Click Enable output ;

Output type default Settings, add name, modify bit rate and resolution, select the correct video and audio

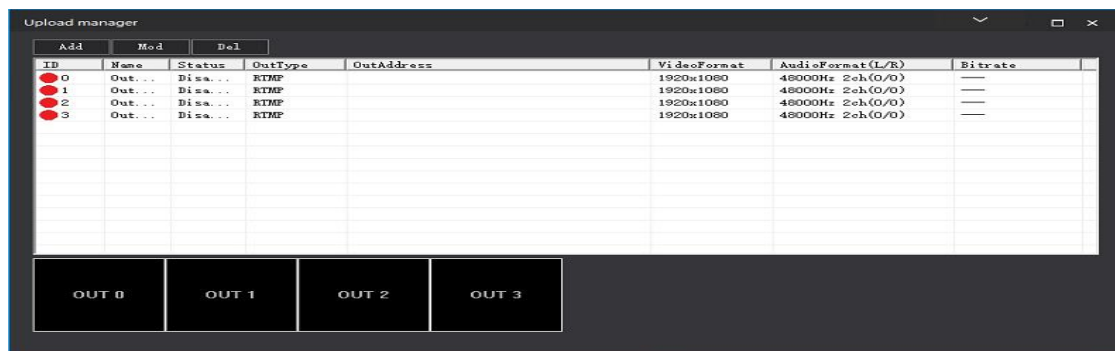
⑤ Input a valid output address (do not add more symbols or Spaces, beware of pushing the flow failure) ;

⑥ Click OK to start the streaming service, as shown in the figure



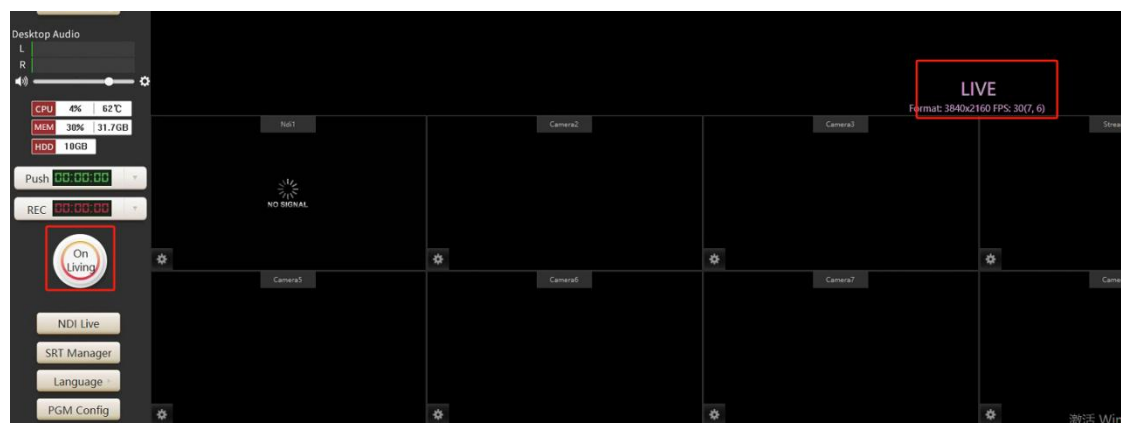
⑦Double-click the enabled push address again, remove the check before enabling output, click OK, the push function is turned off;

The push flow can push multiple platforms at once, as shown in the figure



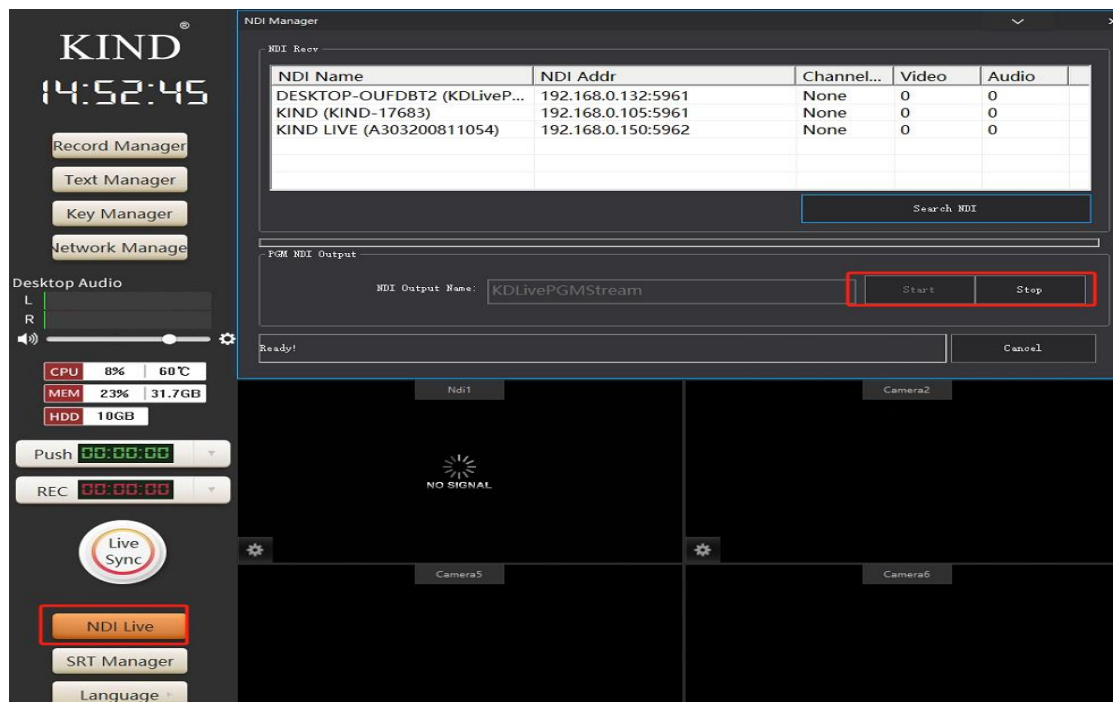
8、Live synchronization

Live broadcast synchronization: After live broadcast is enabled in the same LAN, enter `http://+IP:20000` to view live broadcast on the LAN as shown in the figure (the status of synchronous live broadcast is disabled, and the status of live broadcast is enabled)



After the LIVE broadcast is enabled, the PGM window displays Live.

9、NDI Live

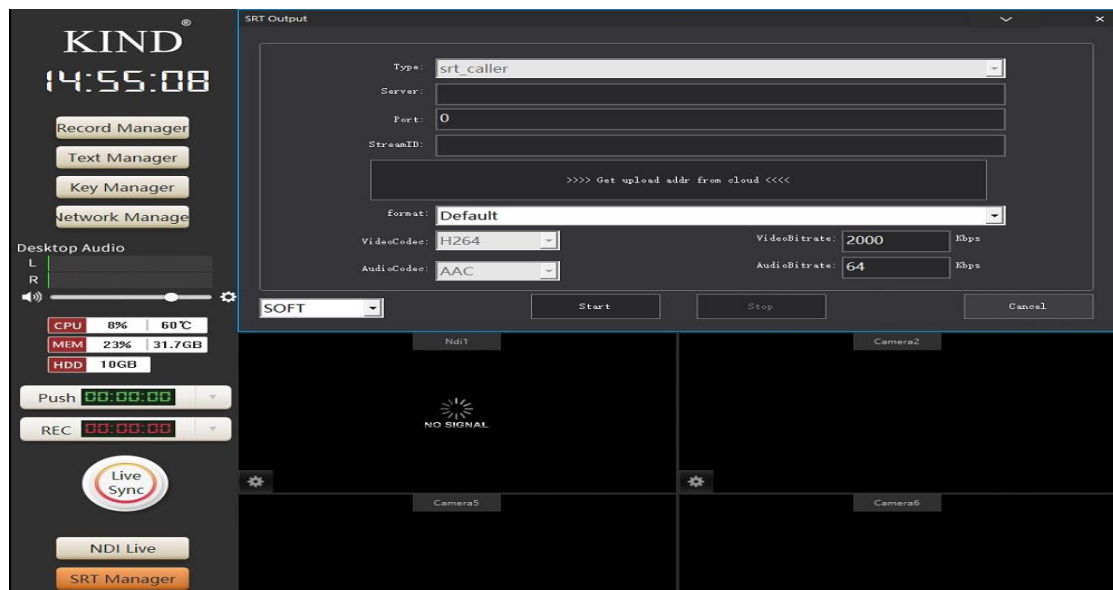


This function is a shortcut key, which is the same as the NDI output function in network Settings

After the NDI Live button is opened, the NDI signal can be transmitted normally;

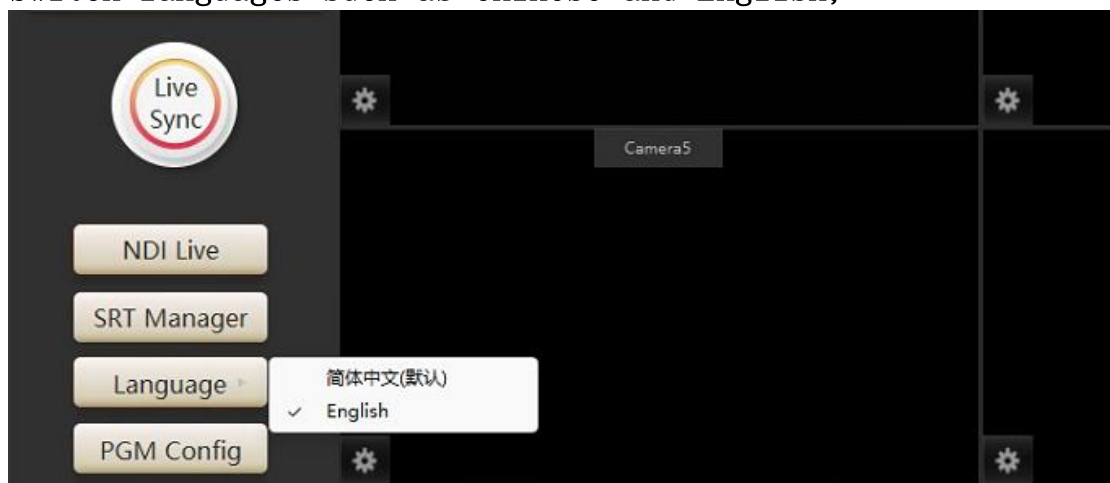
10、SRT manager

The SRT manager is consistent with the SRT output function in network Settings;



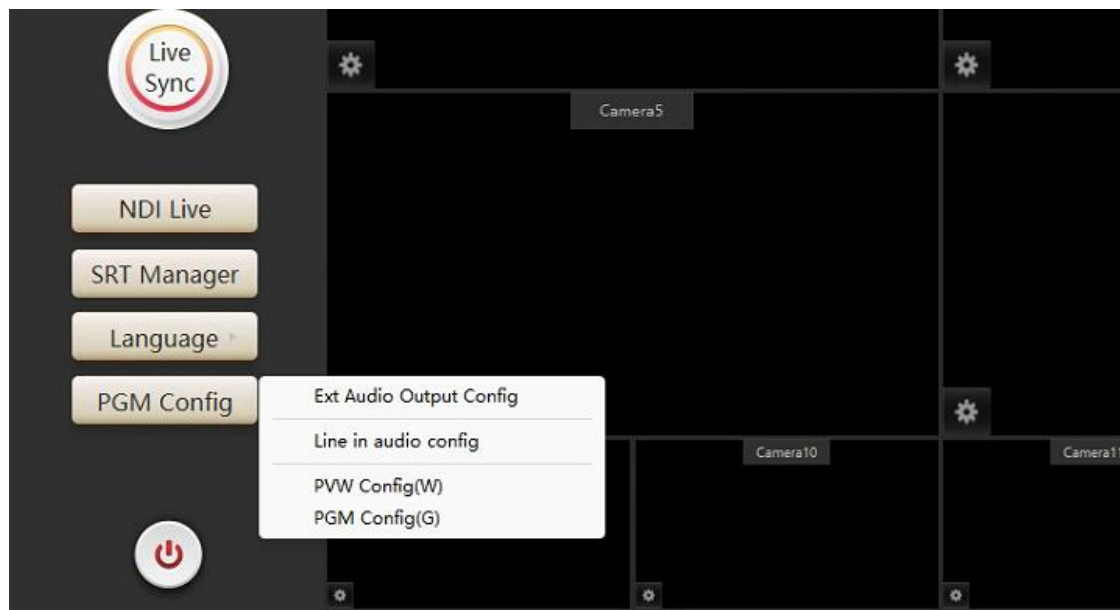
11、Language interface

Switch languages such as Chinese and English;

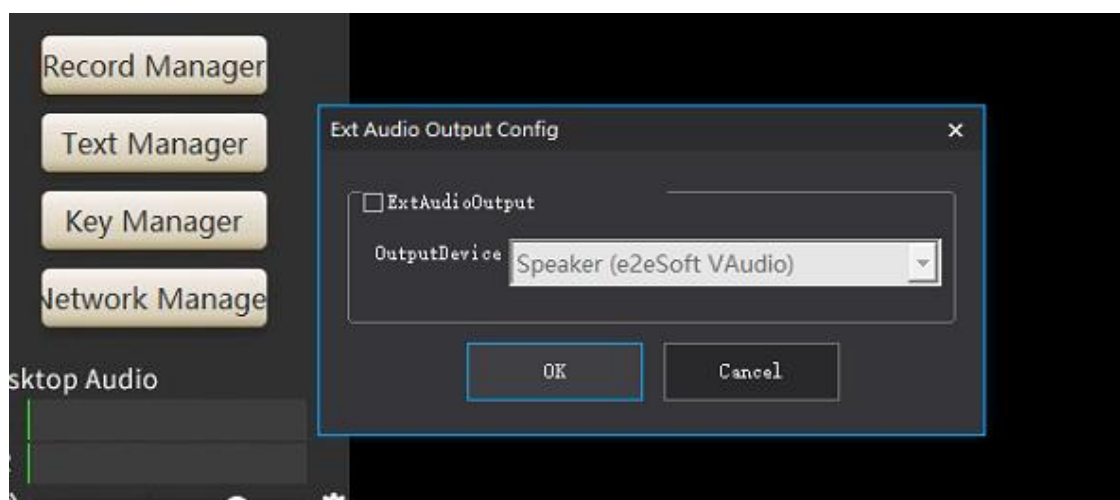


12、PGM setup

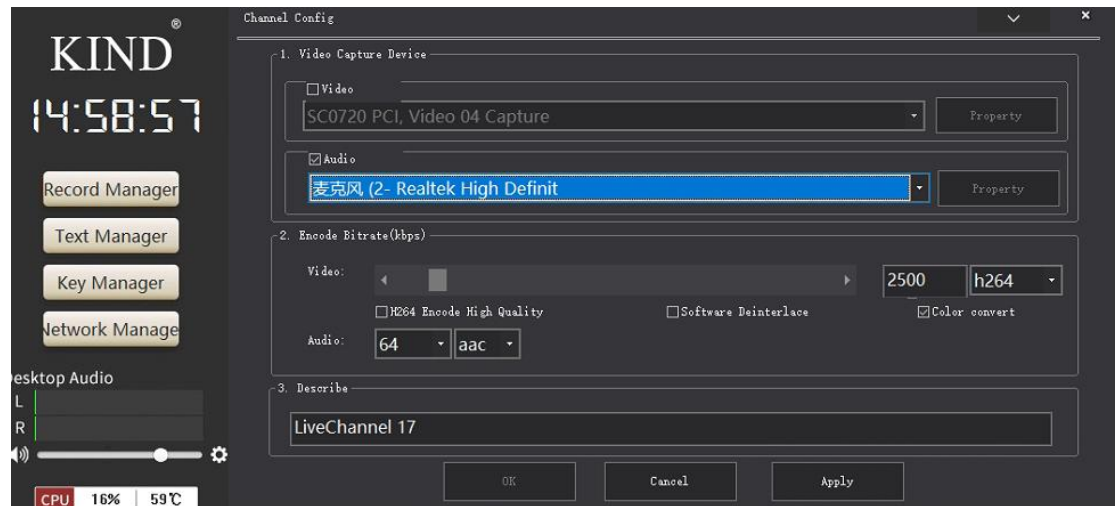
PGM is divided into 4 parts, extending the output Settings, line audio acquisition Settings, PVW and PGM Settings;



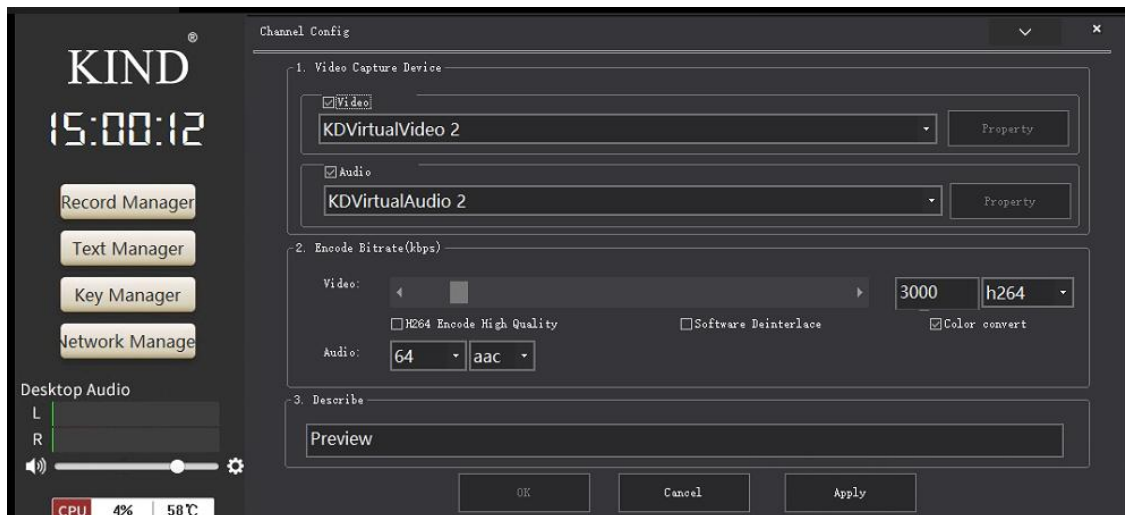
(1)Expand audio output Settings: Click the drop down menu and select Output Device (password 111111)



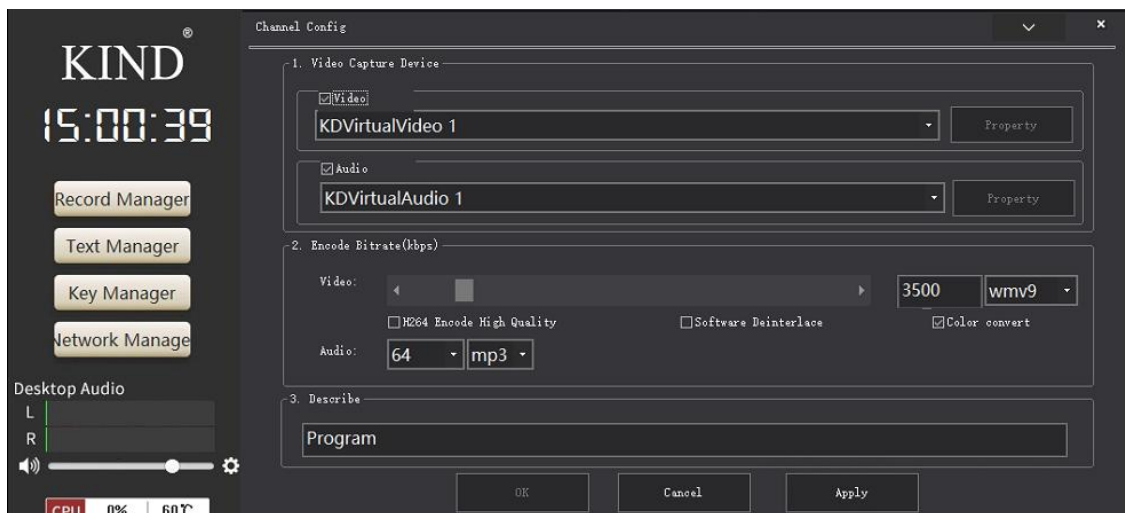
(2)Line audio capture Settings: Select a mix of microphone, hardware audio and software audio to output to the PGM (password 111111)

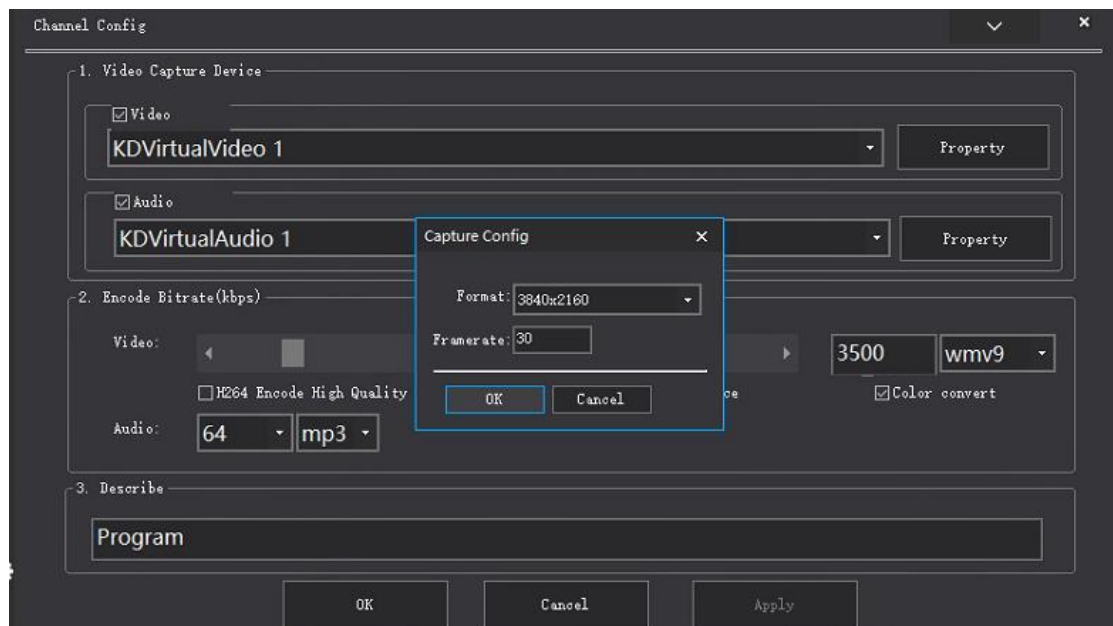


(3)PVW Settings: The video and audio Settings are selected as shown (password 111111)



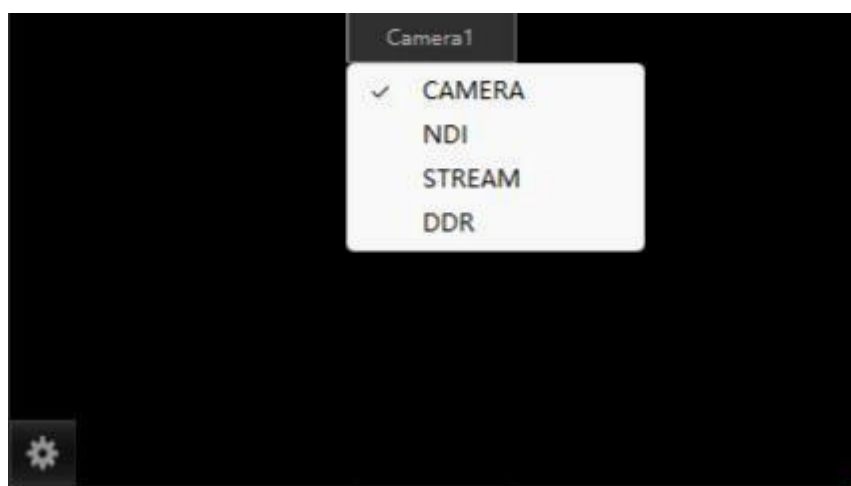
(4)PGM Settings: Video and audio selection as shown in the picture (password 111111), click Apply. Set the bit rate and resolution of the video, click video properties, set the resolution and frame rate of the video (Note: After setting the video and audio, click Apply to set the video properties)





13、Premonitor 1-16 window Settings

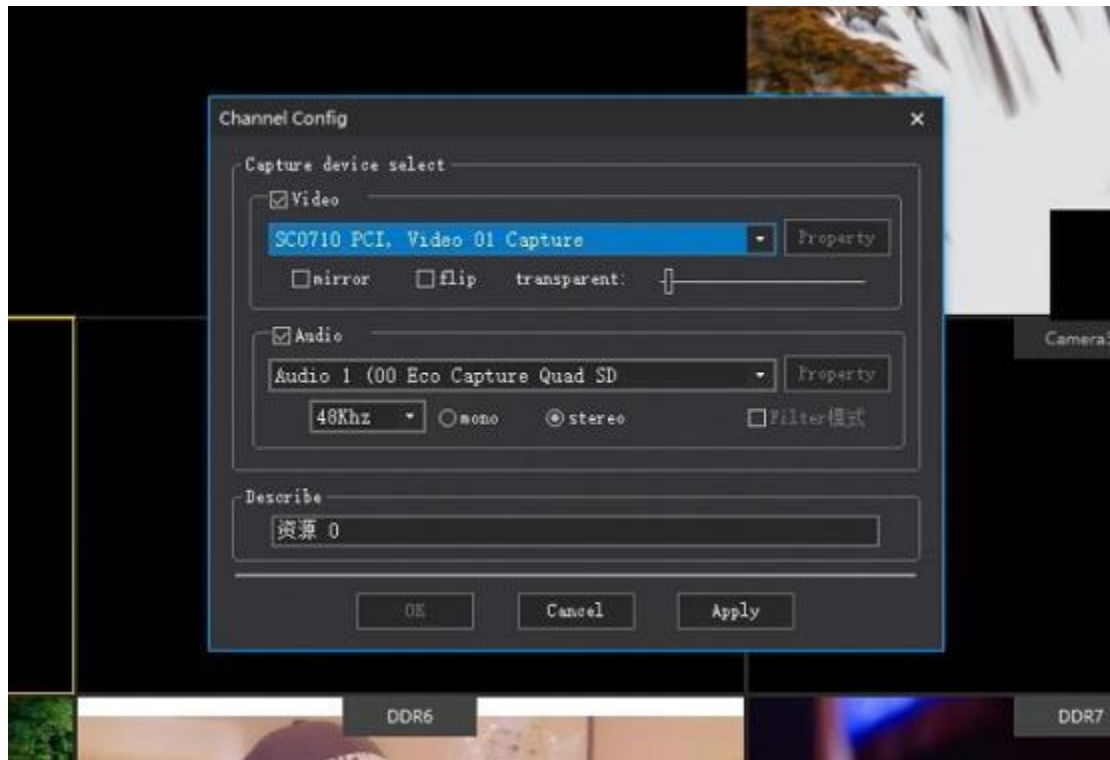
1-16 Each window adopts signal composite design, a variety of signals mixed with a channel design, there are camera, NDI, STREAM and DDR four signal sources can be switched at any time, as shown in the figure



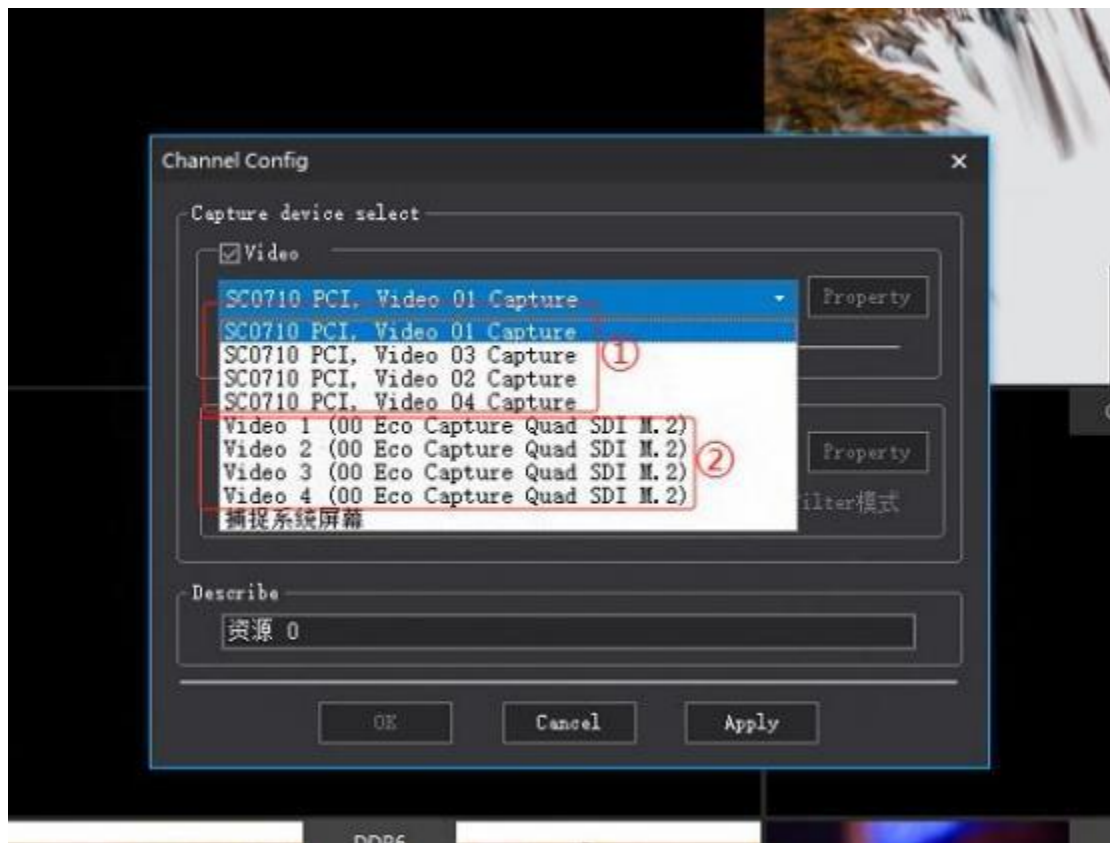
(1)、Camera: camera signal source, which can be transmitted through SDI or HD4K

Camera setting method:

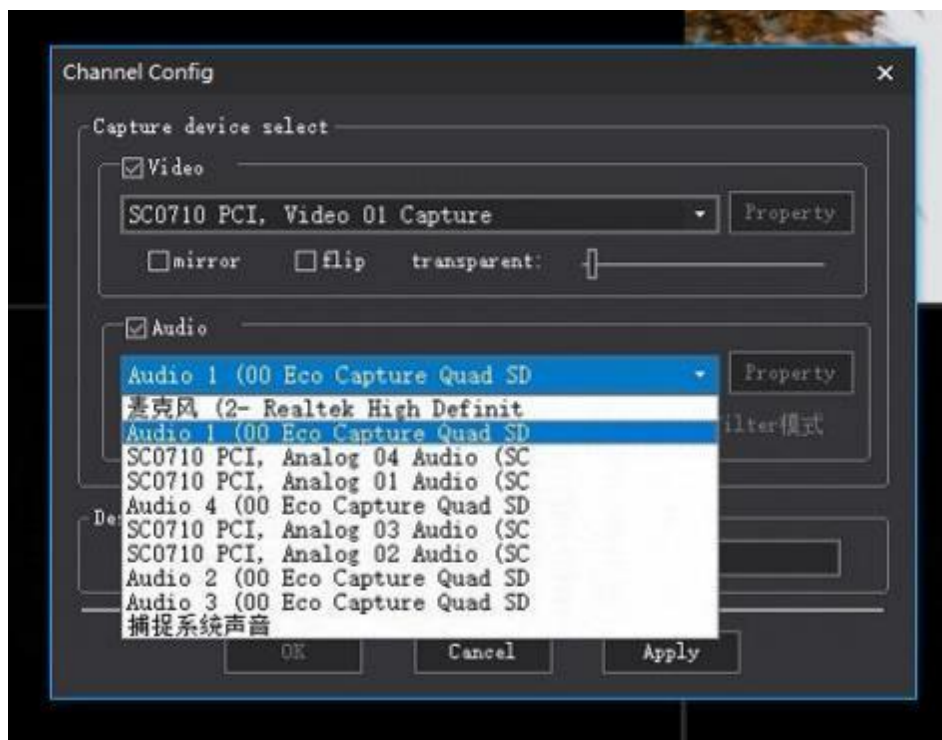
①Click the Settings button in the lower left corner of the preview window, enter the password (111111) and click OK



②Set the video signal as shown in the following figure:
PCI1-4 option is HD4K video signal, video1-4 is SDI video signal



③Set the audio as shown in the figure below, and need to be consistent with the video options as shown in the figure



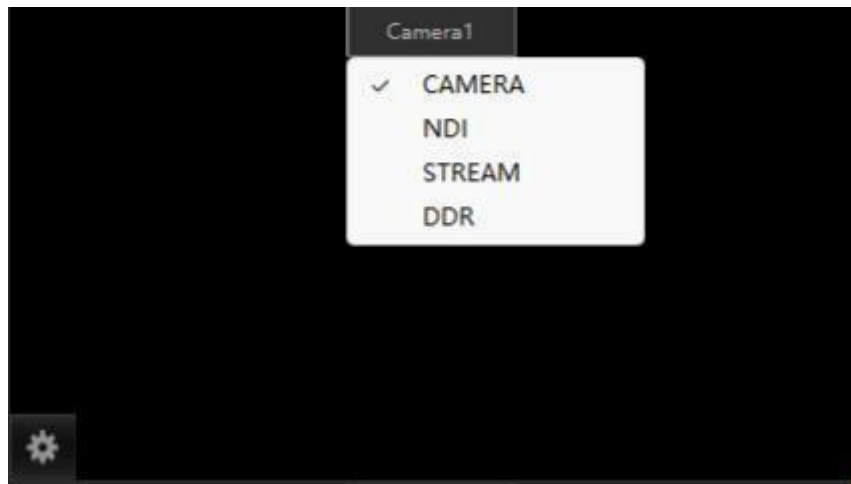
④Click Apply to set the video resolution and frame rate as shownClick Apply to set the video resolution and frame rate as shown



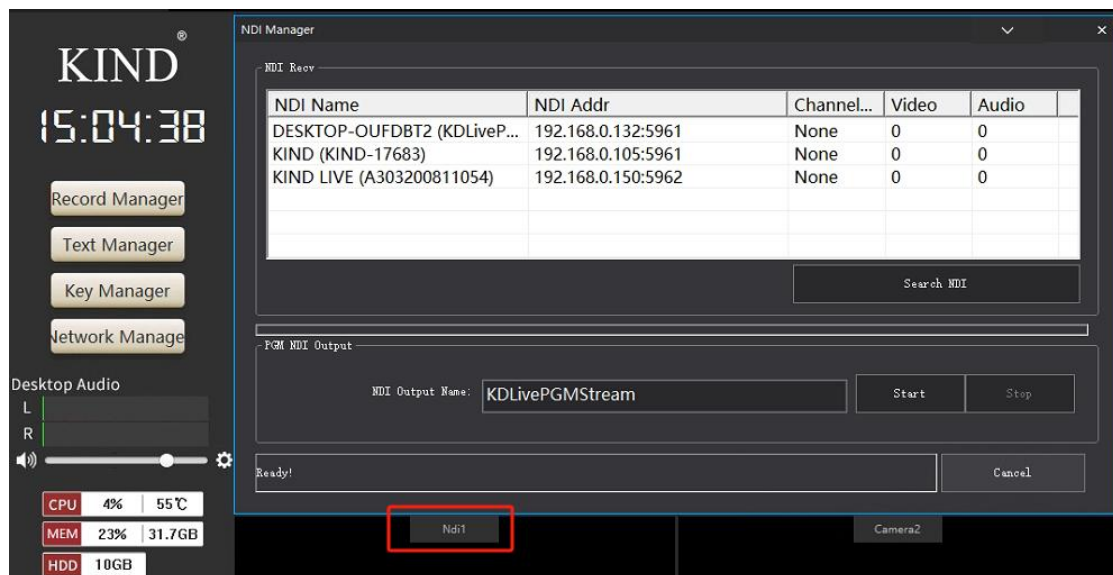
(2)、NDI: Network signal source, transmission through the network ;

How to set NDI

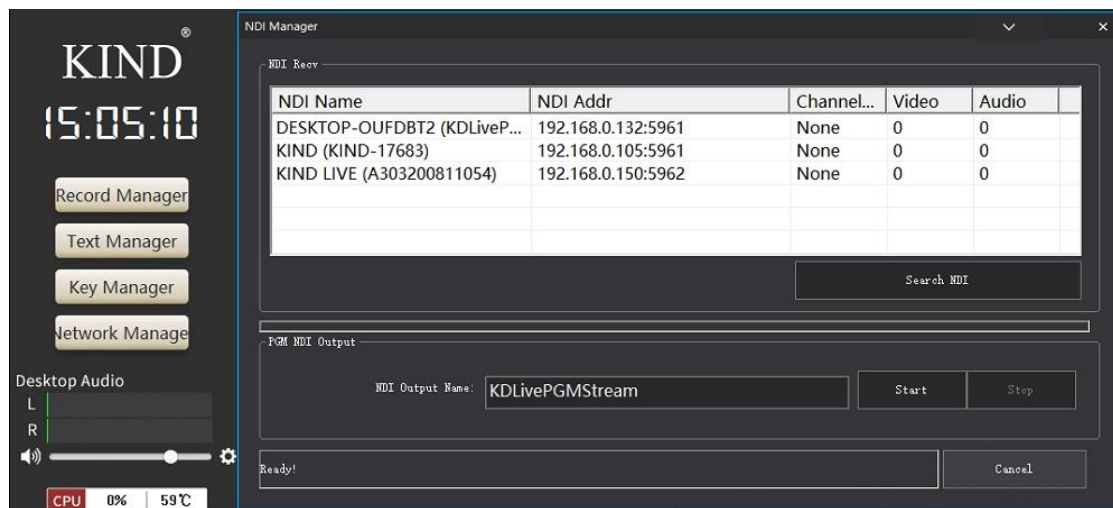
① Select the NDI option



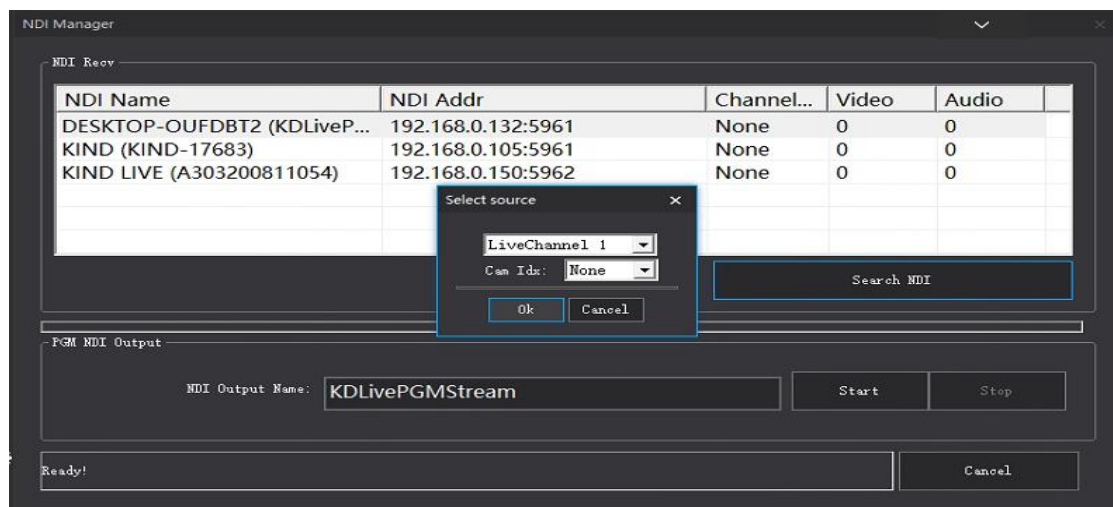
②Click the Settings button in the lower left corner of the small window as shown



③After the NDI signal source is enabled, click the search NDI source option in the same LAN, as shown in the figure



④Double-click the signal source found, select the corresponding window and cam serial number (cam represents the control address) and click OK. After the setting is complete, the signal source will be used in the selected window.

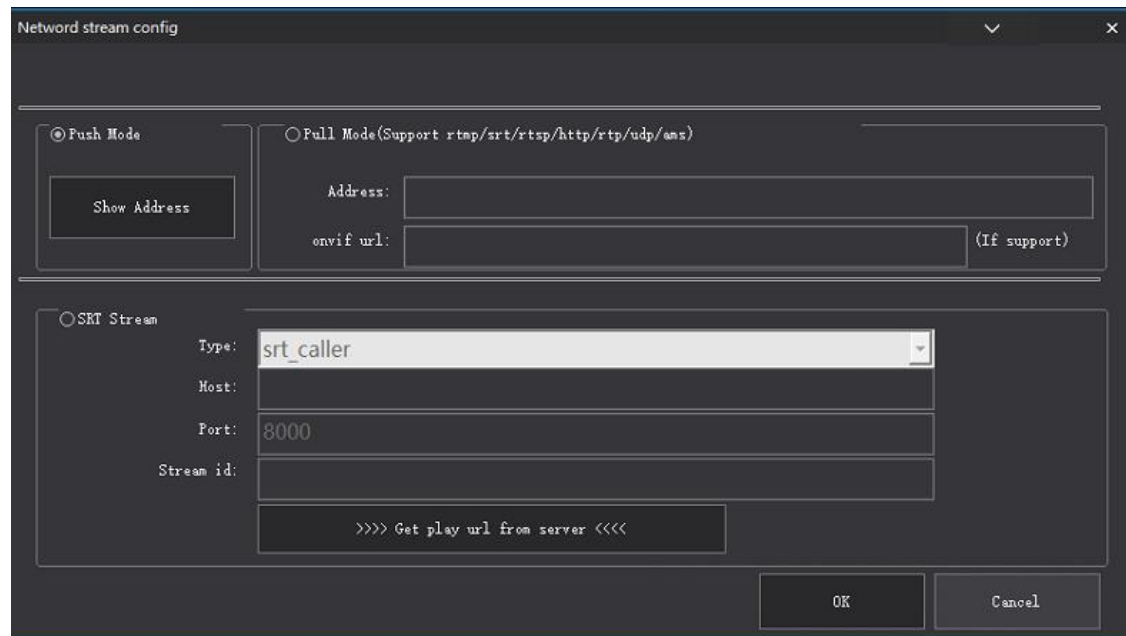


(3)、STREAM:

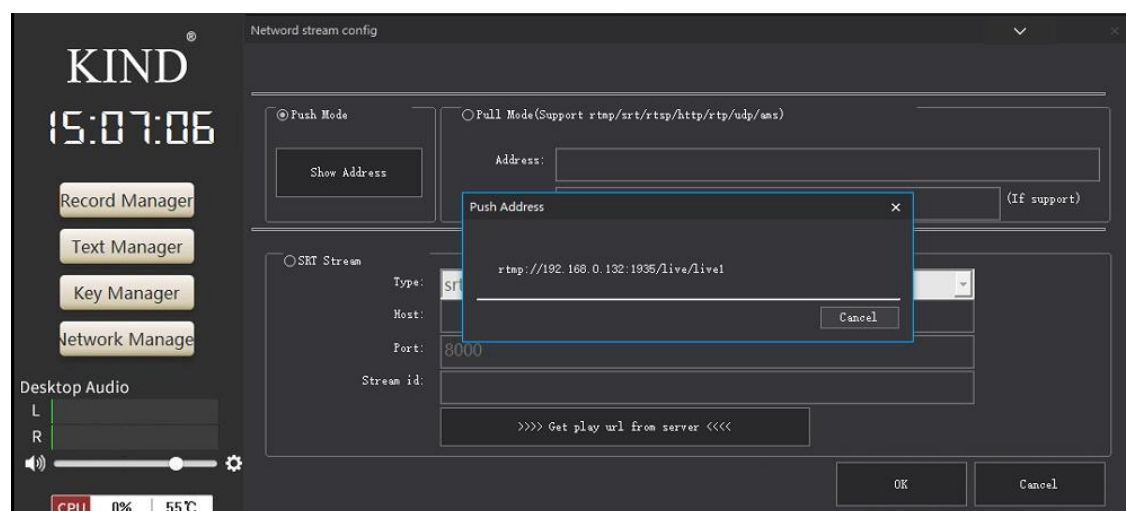
①Switch to STREAM mode;

②Click the Settings button in the lower left corner of the preview window;

③STREAM mode is divided into three modes, push mode, pull mode and SRT flow mode



④Push mode Click to view the push stream address, enter the address into a device with the same mode (in the same LAN), and the push stream will be displayed in the preview window.

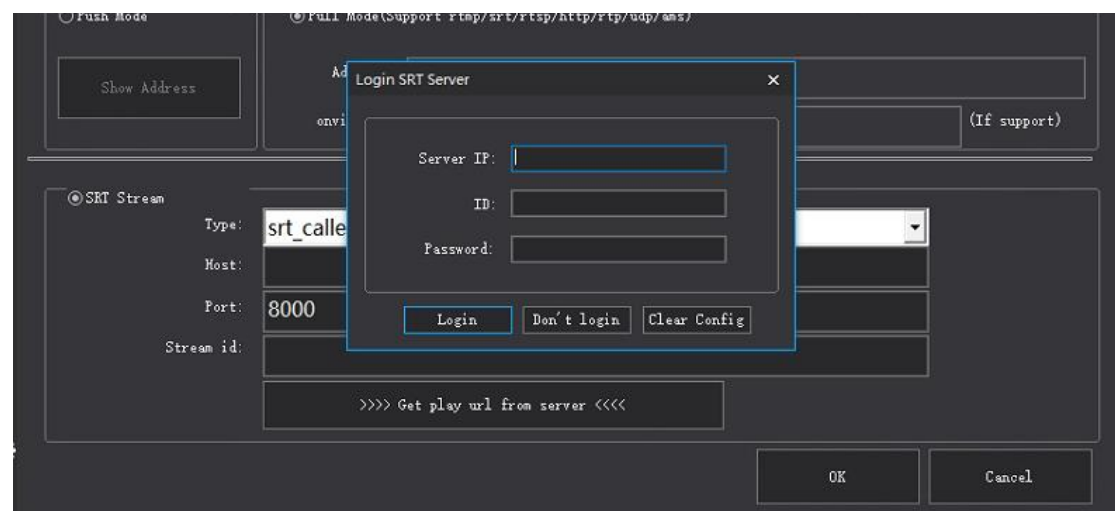
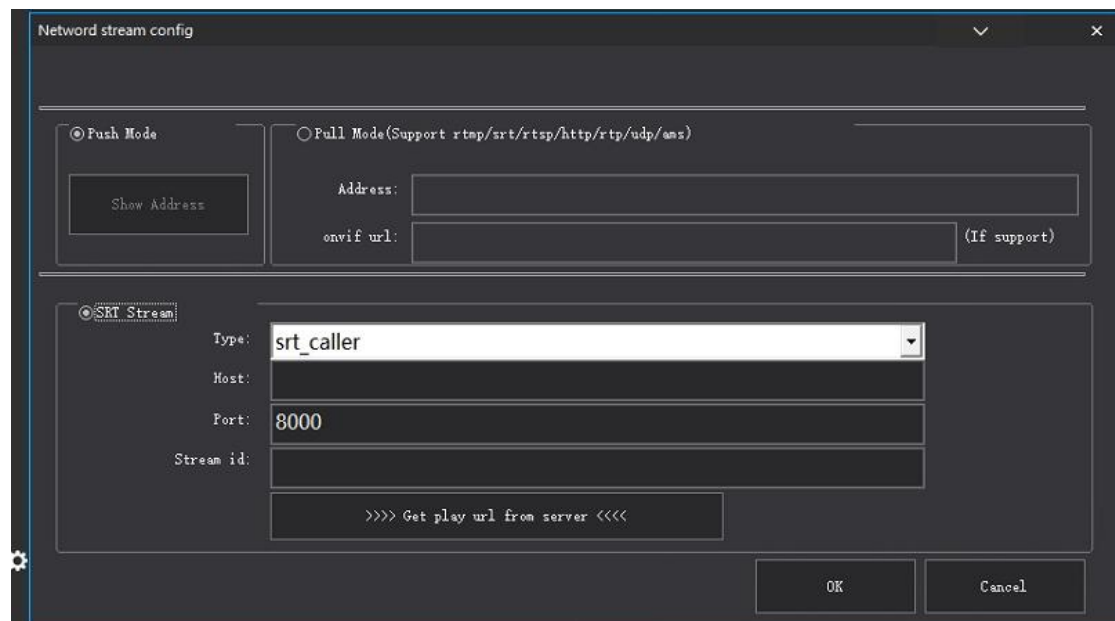


⑤Pull mode supports RTMP/SRT/RTSP/HTTP/RTP/udp/ams deal

Enter the corresponding address to pull the camera picture to the corresponding preview window.

The screenshot shows a 'Network stream config' window. It has two main sections. The top section is for 'Pull Mode' (selected with a radio button) and includes a 'Show Address' button, an 'Address' text field, and an 'onvif url' text field with a '(If support)' label. The bottom section is for 'SRT Stream' (unselected with a radio button) and includes a 'Type' dropdown menu (set to 'srt_caller'), 'Host', 'Port' (set to '8000'), and 'Stream id' text fields. Below these fields is a button labeled '>>> Get play url from server <<<'. At the bottom right are 'OK' and 'Cancel' buttons.

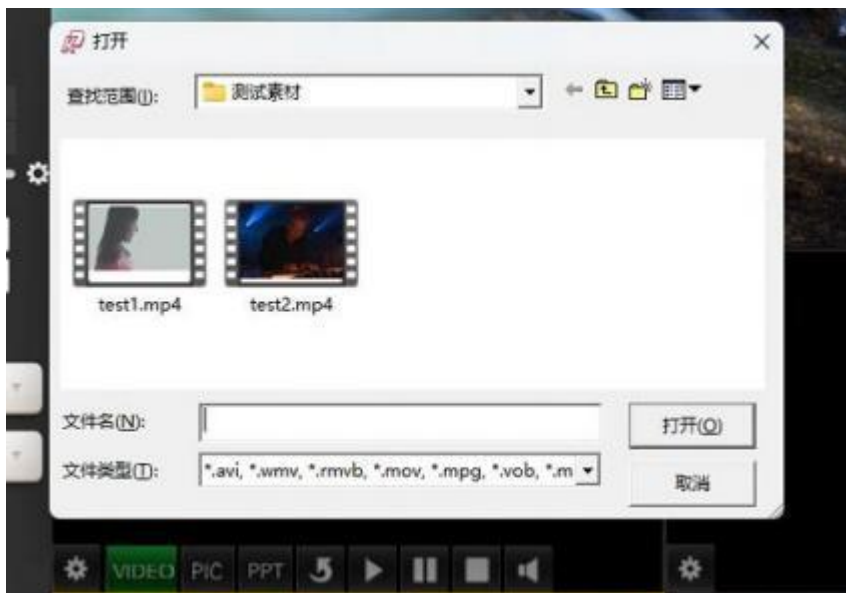
⑥SRT output: Pull the picture captured by the camera into the software through the streaming media server for recording and broadcasting, and select the route as shown in the figure (after logging in to the server)



(4)、DDR: Play local videos, pictures, and PPT, as shown in the figure



①Click the VIDEO button under the preview window



②Find the location of the file Select the file and click the Open button ;

③ The preview window plays the selected file (PIC and PPT, PPT needs to download the version above office 2013 to be used) ; As shown in the following figure, the window switch of premonitor 1-8 can be quickly switched through the hardware switch desk

SOURCE1

1

2

3

4

CAMERA

STREAM

NDI

DDR

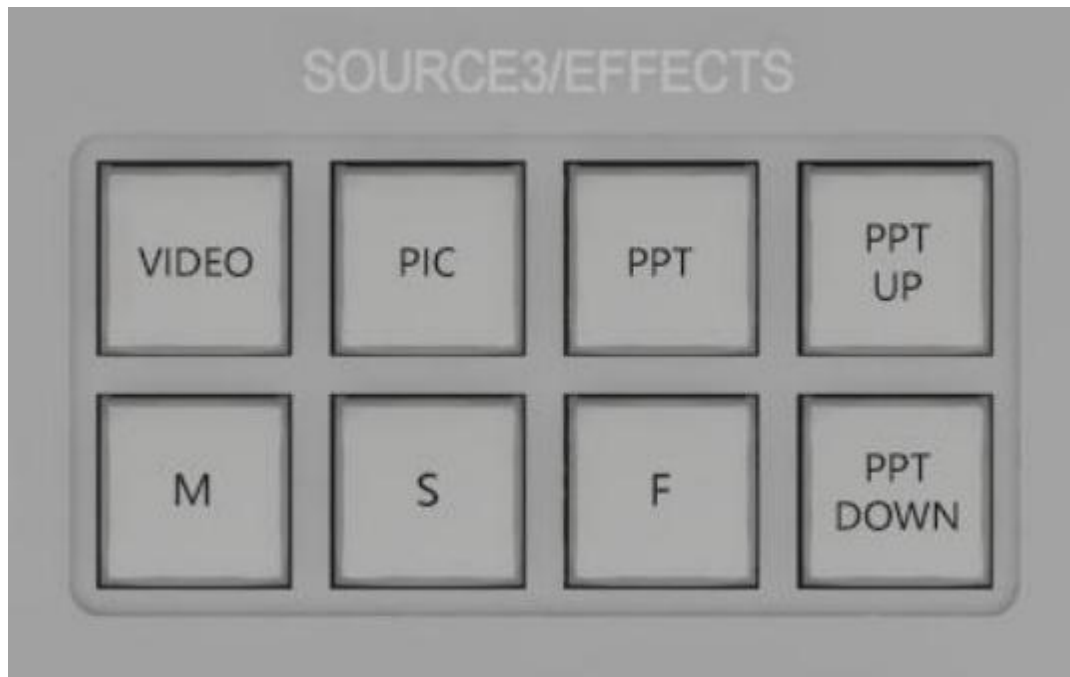
SOURCE2

5

6

7

8



Switch between PPT UP and PPT DOWN in PPT mode.

M, S, and F represent minutes, seconds, and frames respectively for video playback.

The recommended DDR image format is JPG and BMP, the resolution is 1080P, and the size is within 2MB;

五、Contact us

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