Operation manual of the recording machine

425mm

340mm

120mm

Catalogue

一、 Instructions for use

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 can be limited。

二、 Live broadcast machine use precautions

● Before use, please read this manual carefully and keep this manual properly;
● Please follow the warning signs and instructions on the product;
● Before cleaning the equipment, please unplug the power plug, alcohol, thinner, insecticide or other volatile solvents, because doing so can deform the housing or damage the surface;
● Do not use this product near water;
● Do not place the product in an unstable place, such as wheelbarrow, stand, etc., to avoid 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 of the equipment. Avoid placing the product on the bed, sofa, blanket and other objects, beware of blocking the opening hole, do not place the product near the fire source, heating furnace or hot air outlet. Do not place this product in a closed space unless a proper vent is available;
● The power supply used in this product, please follow the mark on the power converter;
● When using the extension cord, please confirm that the total electricity/total amperage used shall not exceed the total amperage loaded by the extension cord;
● Do not insert anything into the body opening to avoid short circuit, do not spill any liquid on this product
● Please do not disassemble and repair without authorization.
● If the following situations occur, please unplug the product and consult a qualified technician;
① The power cord or plug is damaged or unraveled;
② Liquid seeps into the product;
③ If the product has been soaked in rain or poured with water;
④ Damage caused by computer system viruses or 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。

三、 KD-BC8HN KIND Characteristics of the recording system

KD-BC8HN is a portable video recording machine that integrates multi-channel video capture, video stunt transfer, PTZ control, tuning and mixing, director communication, multi-channel screen monitoring screen and streaming media server.

It is not only portable, but also combines video switching and mixing functions with video surveillance and webcast, making it an all-in-one complete set of equipment for live content generation. With this product, you can eliminate the need for a variety of equipment, which greatly reduces the time and effort required to install, connect and adjust equipment.

The KD-BC8HN can seamlessly hardcut the full frame in multiple video input transitions.

This system provides the functions of mixing (overlapping), cross image transition effect, combined video and so on. You can mix videos with up to a hundred effects at once.

You can mix audio inputs from 5-way stereo and 5-way microphones. Each channel has a range of functional components, including channel faders and input gain adjustments that will allow you to adjust the quality and level of sound individually on each channel.

PGM footage can be streamed live.

This system is a high performance network broadcast system, which can provide audio and video live broadcast, recording and broadcasting services based on metropolitan area network and wide area network. At present, the system has been widely used in the studio video live broadcast, quality class, distance education, news live broadcast, conference live broadcast, academic exchange and other occasions requiring audio and video live broadcast. Using modular design idea, portable live broadcast can be built according to different needs。

Product specification

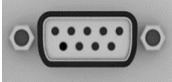| Model number	KD-BC-8HN
Power supply	INPUT:AC110V-240V，50~60Hz,5A；OUTPUT:12V,5A
Operating temperature	0~40℃
dimension	（L*W*H）425mm*340mm*120mm
weight	5kg
Video input	3G-SDI*8,HDMI*4
Signal specification	1080/50P,1080/60P,1080/50I,1080/60I,2160/30P,2160/25P
Video output	PGM OUTPUT HDMI*2,SDI*1,PVW OUTPUT SDI*1
Audio input	Stereo(L,R)IN RCA*5 MIC XLR*5
Audio output	Stereo (L,R) OUT RCA×1,Balanced XLR OUT×1,MonitorΦ3.5×1,Playback monitorΦ3.5×1,The director calls MICΦ3.5×2
Other interface	USB 2.0*2 RJ45*1
Director communication	TALLY MINI XLR OUT×8,Director calls(选配)
switchboard	PGM：Hardware switch signal×16 PVW：Hardware switch signal×8
Sound console	Digital mixer×5,Analog mixer×5
record	MP4、TS、MOV
Live broadcast	RTMP/SRT/RTSP/NDI

四、 Host topology
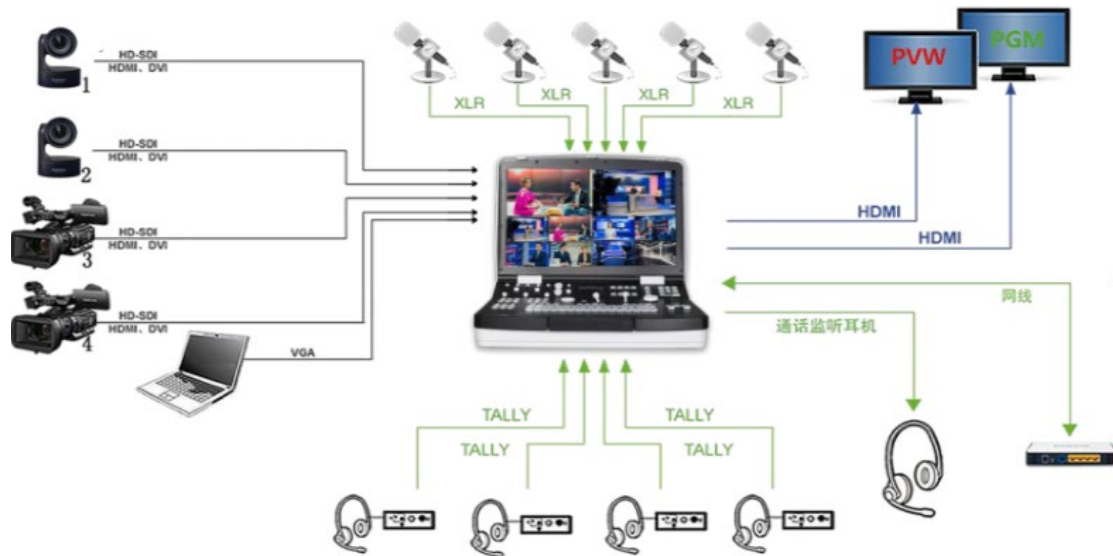
# 五、 Rear interface diagram

①RS485:485 control

②Audio stereo, MIC input, output

③PTZ control switch

④HDMI*4 input, SDI*8 I input

⑤HDMI output, SDI*2 output

⑥Power switch

⑦DCport

⑧MIC：3.5 Audio input；

　HDMI：Video output；

　USB：Memory interface；

　TF：TF storage interface；

　NDI/SRT：Network interface；

port	Instructions
	485 Control interface: adopts RS485 control signal and supports PELCO-D and VISCV control protocols
	1 to 5 Audio input XLR Balanced analog audio input interface and Each with 48V phantom power switch (support professional microphone power supply)
	1 to 5 Audio input RCA stereo analog audio input interface (left/right channel), OUT audio output RCA stereo analog audio output interface
	SDI1 to 8 Video input ports: Supports signal specifications 1920 x 1080P50 video source input
	PGM/PVW video output interface: Signal specifications 1920×1080P25 video source; HDMI video output interface: Signal specifications 3840×2160P25 video source
	DC power interface: 12V~5A will be provided The adapter power cable is connected to the DC power port
	Power switch: Power on/off
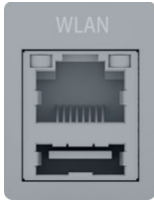
|	
WLAN	Network port: Supports firmware upgrade, software parameter debugging, live streaming, recording, NDI, and so on. USB, TF: USB and TF storage devices can be connected to perform video file storage

六、 Operation panel introduction and operation instructions
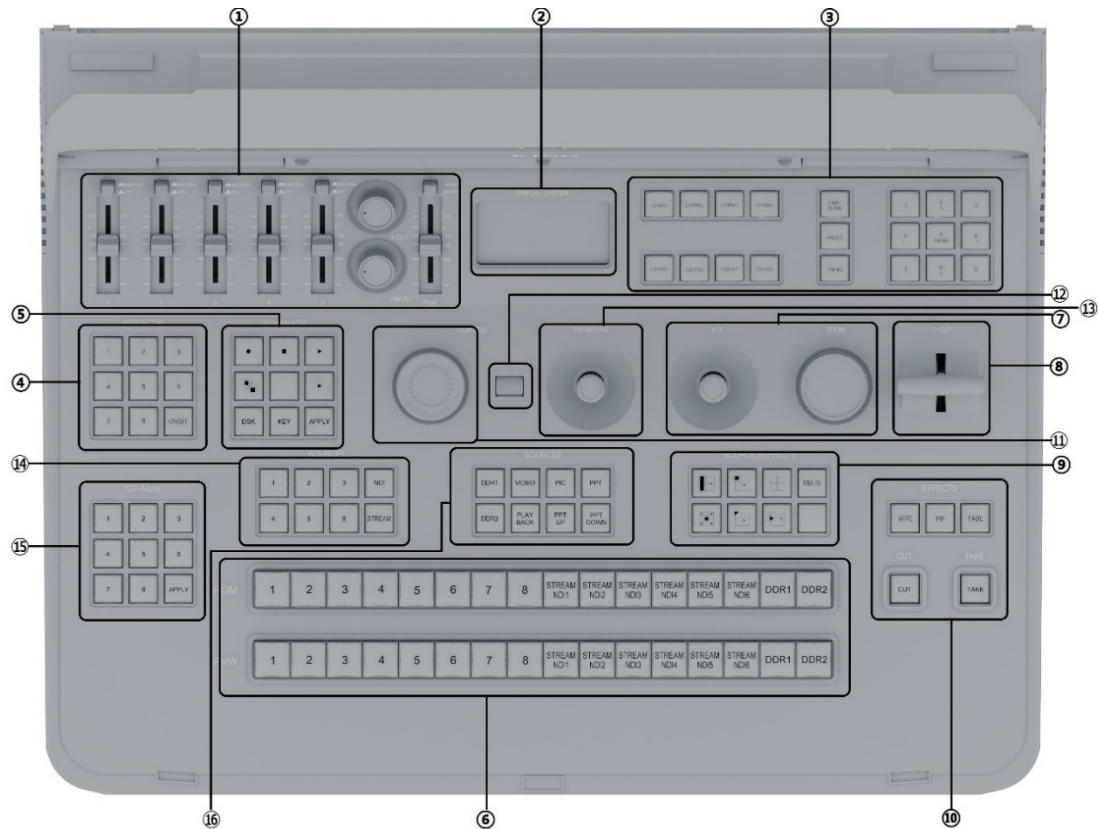
① Mixing console, audio delay device, digital/analog audio switch key

② Audio display

③ 8 Station channel address, preset bit call, speed adjustment

④ Call switchboard (not supported for some models)

⑤ Hardware and software record, stop button

⑥ PGM/PVW Video switchboard

⑦ Camera PTZ controller

⑧ T-putter

⑨ WIPE Transition special effects group key.4K/HD key to switch HD and 4K modes

⑩ Multi-mode switch key

⑪ Effect regulator

⑫ Title shortcut

⑬ Picture in picture position control key

⑭ 1-6 Premonitor window NDI and STREAM quick switch key

⑮ Subtitles select shortcut keys

⑯ Quick switching of local video, picture and PPT functions

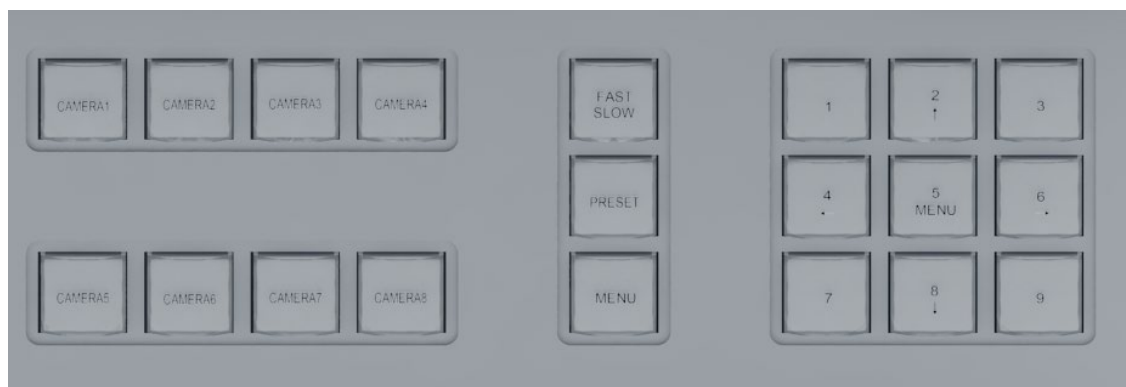Note: Switching between 4K/HD keys requires restarting the device

1.1 Detailed operating instructions：
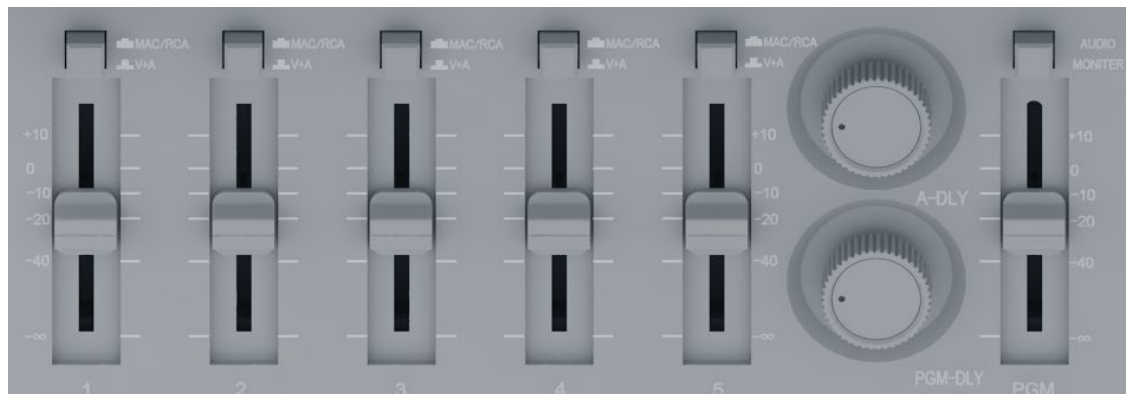
1 to 5 channel audio gain adjustment, corresponding to the backplane 1-5 audio input, MAC/V+A digital/analog audio switch key, audio delay, PGM audio gain adjustment. PGM Mute with one click。

Audio display: display left and right channels, delay time

CAMERA1-8:8 Station channel address. You can switch different stations by pressing the button.

FAST/SLOW: Control the speed of the camera, the indicator on is fast, the indicator off 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 selected;

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 top, left, right and bottom four directions of the selection key, press the 5 (MENU) key once, the camera menu opens, after the setting is completed, press the menu key once, the 2/4/5/6/8 key lights off, restore the preset bit function

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

Call function panel: Click ON/OFF to open this function, a total of 8 sets of buttons, you can make calls respectively (professional call equipment is required)

The first row is the software recording, stop, and live function shortcut keys, and the second row is the local recording and stop, live, and NDI recording
DSK is the hardware subtitles open key, the indicator light is on, you can select subtitles; KEY is the shortcut key for starting the image picking, and the indicator is on to start the image picking function;
DSK and KEY are used only after the software is opened;

The first row of software record, stop and live button can be used after connecting the software
The second row recording stop button needs to be inserted into an SD card or USB flash drive

Main output screen and preview output screen source key, PGM row key main output key, that is, live output screen. The playback channel will be displayed in the PGM screen, and the PVW row key will be the preview output screen, and the preview output screen will be displayed in the preview window。

Note: Among the rows of PGM and PVW keys, the STREAM/NDI 1~DDR2 keys can be used only after the software is started；
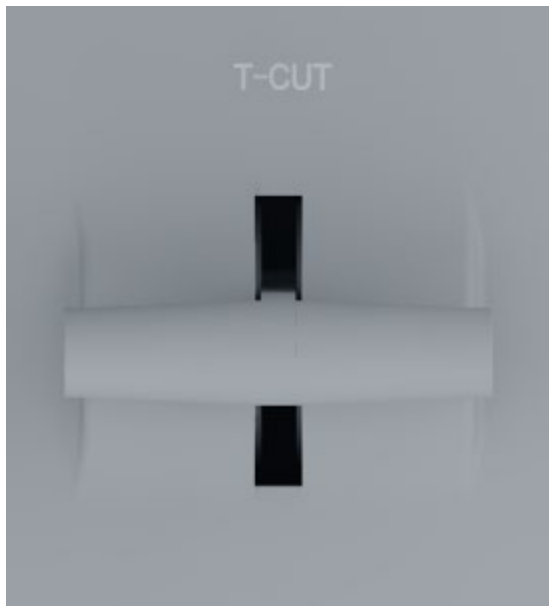
T-push rod: The T-push rod is a manual transfer mode, and the PGM and PVW switch is completed with WIPE or fade in and fade out effects
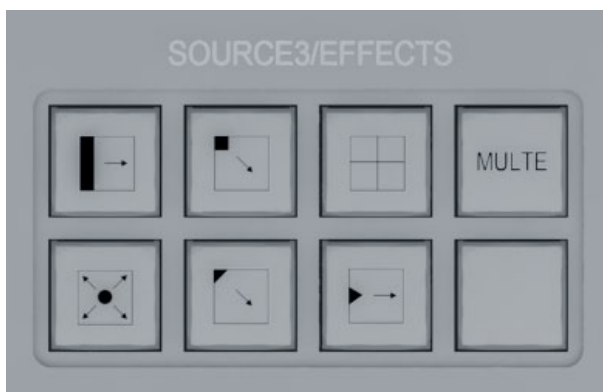
WIPE Transition effects selection key set: 6 fixed WIPE effects selection keys, the user directly on the panel to select the WIPE effects according to the icon。
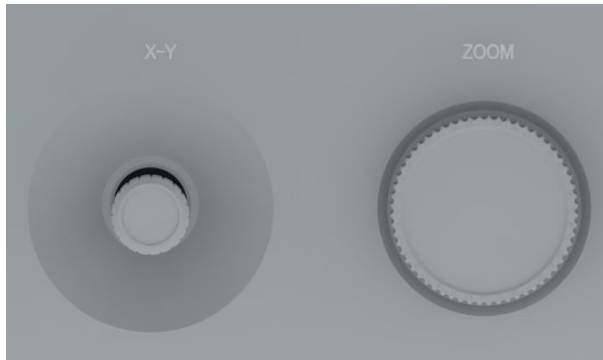
Camera PTZ controller: achieve the effect of pushing, pulling and rolling the PTZ camera position

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

WIPE: Switch on transfer effects mode and use with WIPE transfer keys

FADE: The fade in and Out button enables the fade in and out transition effect

CUT and TAKE button switch, can switch PGM and PVW lens, make the transition more convenient and fast

PIP: picture-in-picture function, indicator light function on

Note :WIPE and FADE cannot be used together。

MAIN is a 3.5 listening interface

MONI is a 3.5 call radio interface

The MIC is a 3.5 microphone port

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 a preview and then click Apply to apply to the PGM

After connecting the software, you can quickly switch the premonitor window mode. Select the window value and press the NDI or STREAM key to quickly switch between NDI and STREAM

Fast switching of local materials; After connecting the software, you can use this function to control the playback of videos, pictures and PPT in the local materials in the software;
DDR1 and DDR2 represent two Windows, respectively, and the DDR1 indicator lights up to control DDR1

七、How an external computer connects to a device

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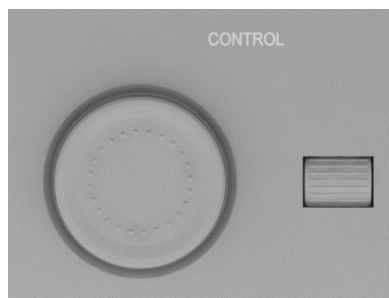
Inside the advanced Settings, you can accurately repair the image picking function

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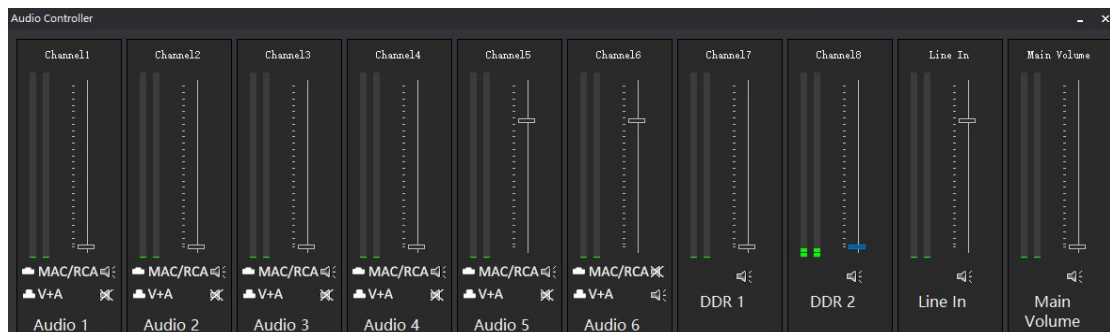
Click the horn button on the software to pop up the eight-channel audio controller. This function is mainly used for the adjustment of NDI and STREAM audio of each signal source channel. The MIC and stereo audio are subject to the equipment mixer

10、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

11、Signal source setup

The above picture shows the eight-channel signal premonitoring interface. Since the device with the software installed cannot access the camera, the signal can only use NDI and STREAM modes, and DDR1 and DDR2 are independent footage Windows.

Take camera1 as an example, select NDI and click the Set button to enter the NDI function setting interface as shown in the following figure:
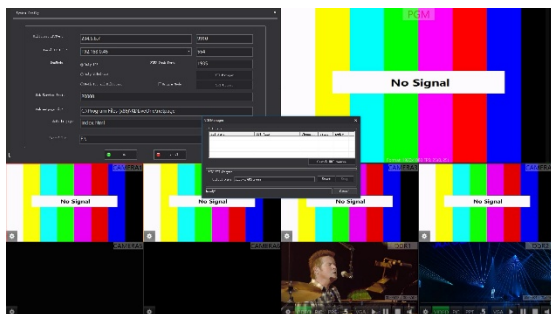
Search for the NDI signal source in the LAN and configure the corresponding channel address. The current channel is channel 1, so select Channel 1.

The NDI signal can be generated as shown below
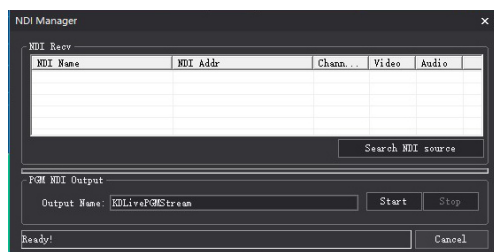
Select the "Set" button in the stream state to pop up the "Push and pull" stream setting window as shown below
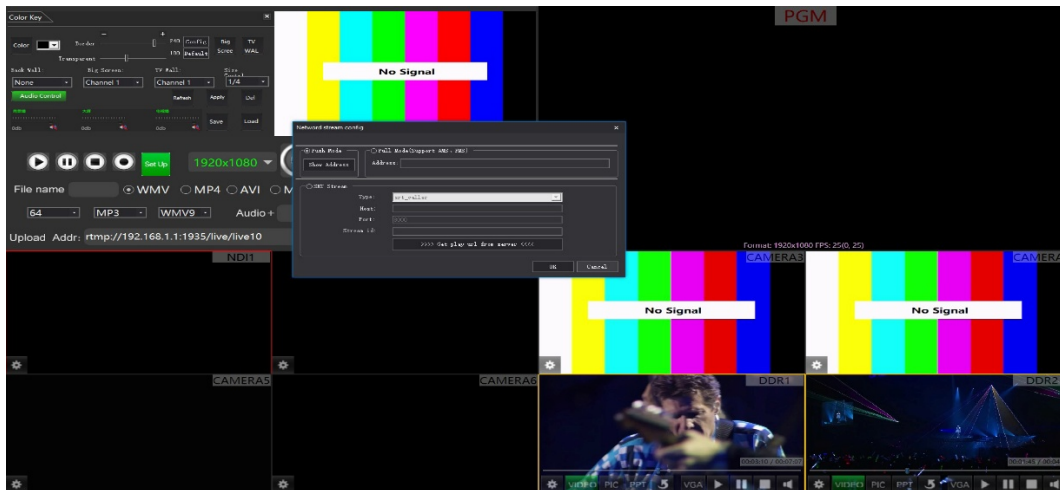
In push mode, a mobile phone or any device with the push function can be used to push the stream in the LAN. According to the push address in the push mode, the push stream can be sent to the device as a signal source to switch the broadcast. The following picture shows the mobile phone after pushing the stream.
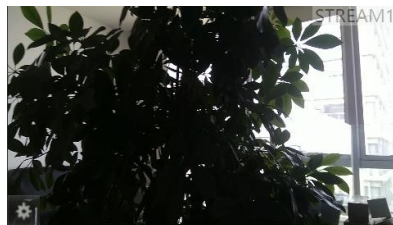
The pull mode means that the system can link the RTMP of a third party in the live broadcast to the software as a signal source for broadcasting switchover. The method of using this mode is to fill the address of the third party in the address bar of the pull mode (unencrypted RTMP link). Note: If the 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：

12、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).

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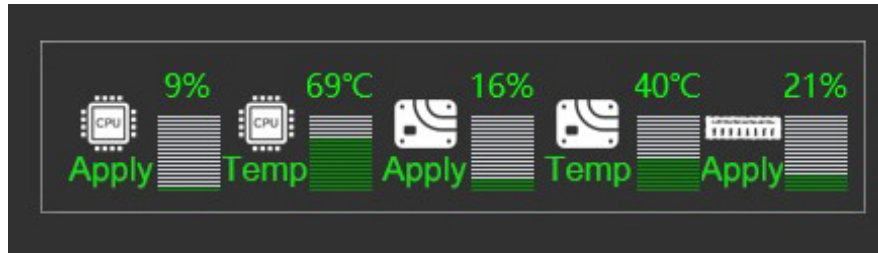
This function is used to monitor the hardware load of the software under various conditions of recording live broadcast

八、The instructions for connecting the computer to the driver

Background Settings for connecting the mobile phone
1. First, open the mobile phone and search for WIFI(the default naming format of the device is as follows, the password is 12345678). After the wireless connection is successful, open the system browser and enter the device name http://kind-.
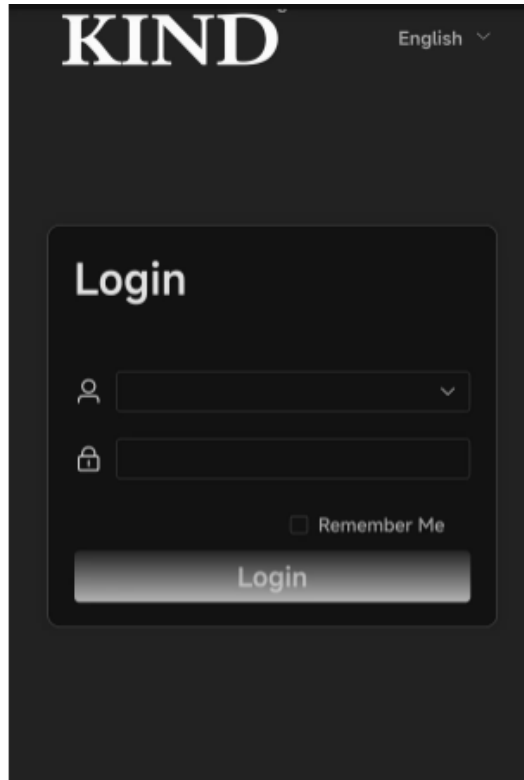
Computer login method

Open your browser, enter http://device ID.local, and set the account password to admin

As shown in the figure
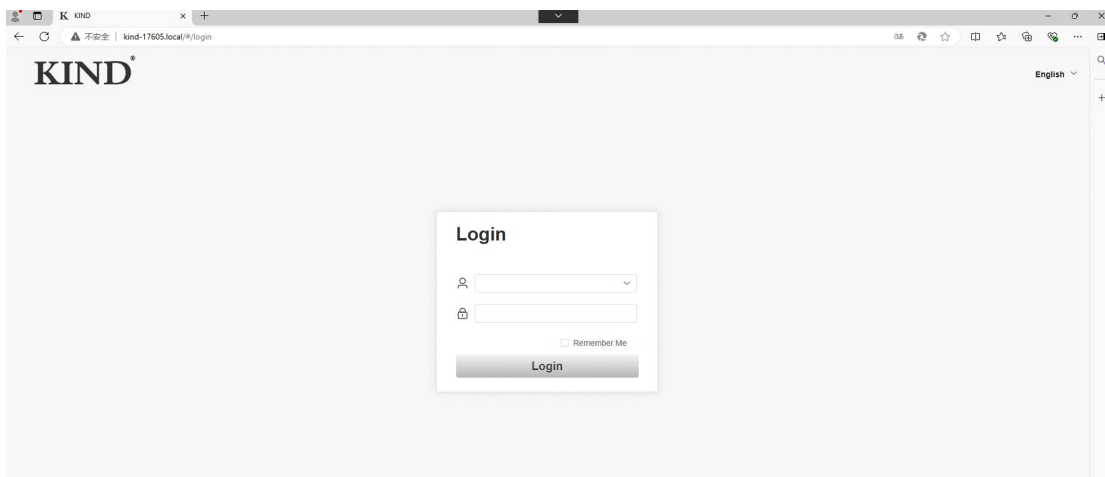
Enter the page
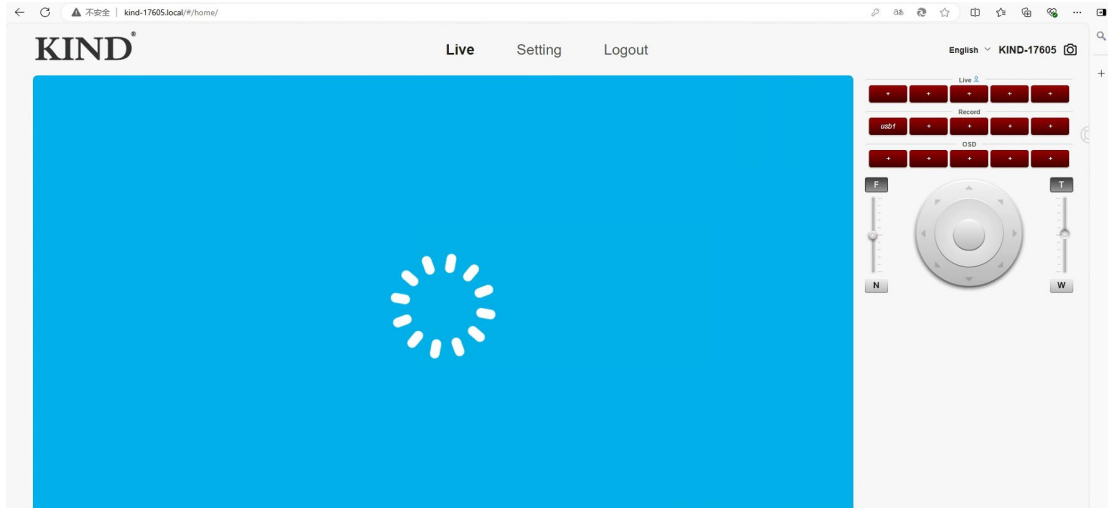
Click the Settings option to access the configuration page
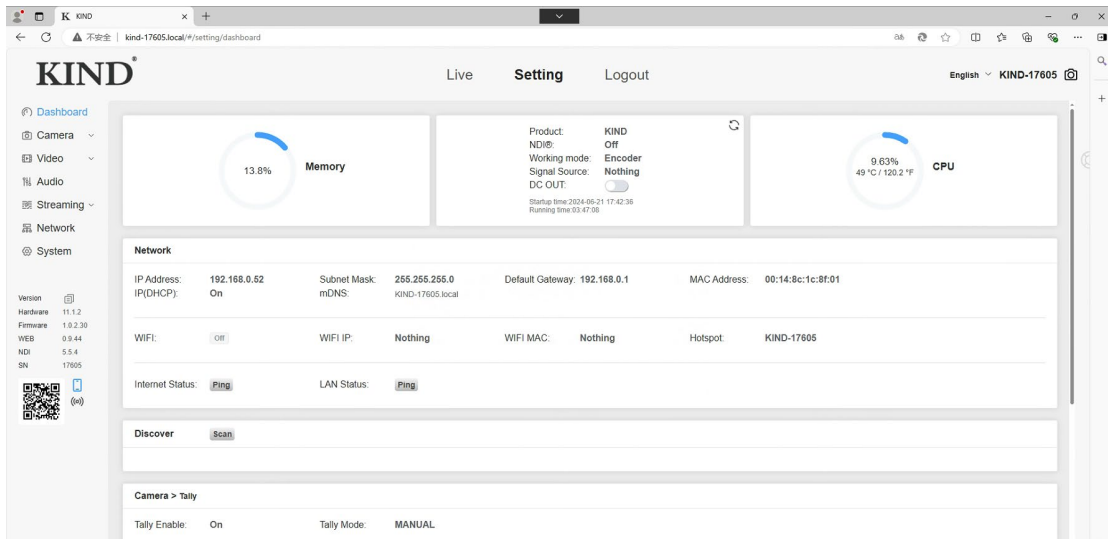
Configuration screen: Displays the overall configuration screen

Camera configuration: PTZ Settings can select the protocol, IP address, transport protocol, port, address and other information

Tally allows you to set switches, modes and more

Video configuration Set the video coding, video output, and OSD canvas

KIND®

Live **Setting** Logout

- ⊙ Dashboard
- ⊙ Camera ⌄
- ⊡ Video ⌃
  - Input
  - Encoder
  - Output
  - OSD
- ⥯ Audio
- ⊞ Streaming ⌄
- ⊞ Network
- ⚙ System

HDMI   ⟳

Resolution	No Signal
Audio	No

Version
Hardware   11.1.2

KIND®

Live **Setting** Logout

- ⊙ Dashboard
- ⊙ Camera ⌄
- ⊡ Video ⌃
  - Input
  - Encoder
  - Output
  - OSD
- ⥯ Audio
- ⊞ Streaming ⌄
- ⊞ Network
- ⚙ System

Encoder Settings

Main Stream

Codec	H.264
Profile	MP
Resolution	1920x1080
Rate Control	CBR
Bitrate	12000
Frame Rate	30
I Frame Interval	60

Save

Secondary Stream

Codec	H.264
Profile	MP
Resolution	1280x720
Rate Control	CBR
Bitrate	1000
Frame Rate	30
I Frame Interval	60

Save

Version
Hardware   11.1.2
Firmware   1.0.2.30
WEB   0.9.44
NDI   5.5.4
SN   17605

KIND®

Live **Setting** Logout

- ⊙ Dashboard
- ⊙ Camera ⌄
- ⊡ Video ⌃
  - Input
  - Encoder
  - Output
  - OSD
- ⥯ Audio
- ⊞ Streaming ⌄
- ⊞ Network
- ⚙ System

Video Out

Output Format	2160p30
Mute	⚪
Loopout	⚪

Save

Version
Hardware   11.1.2
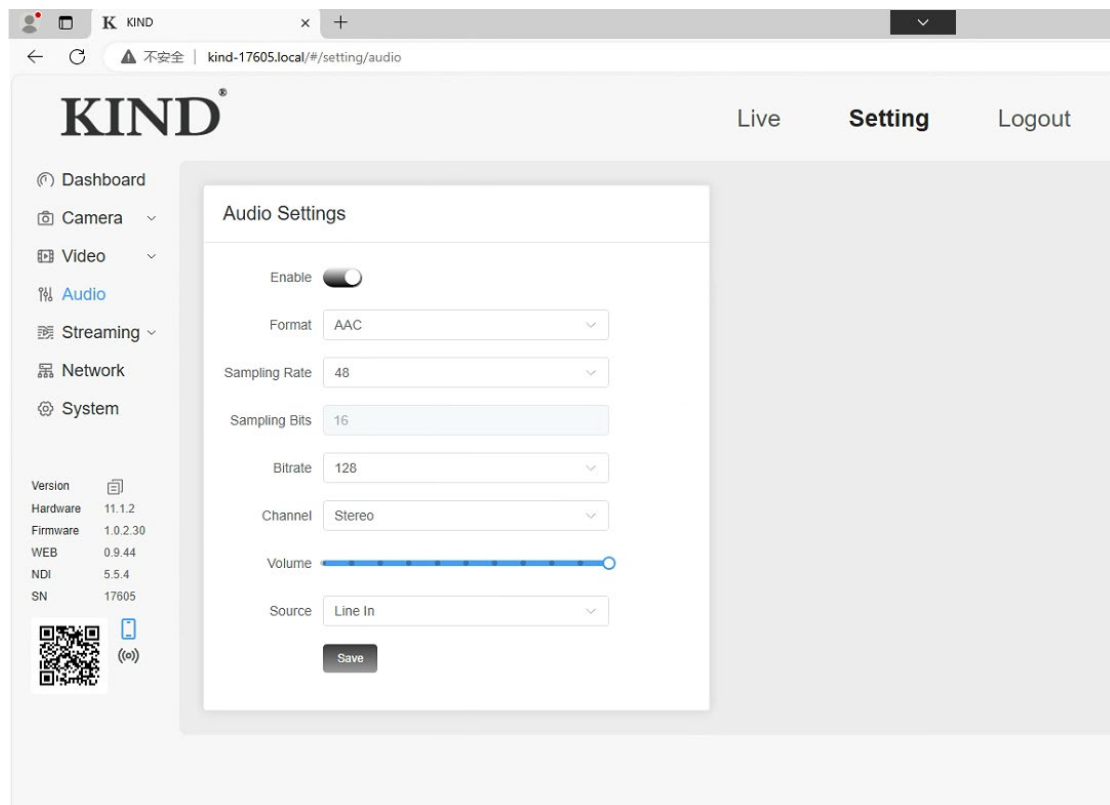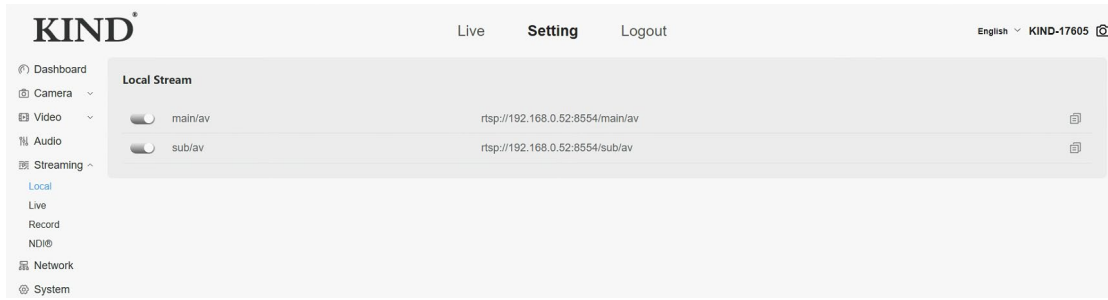Firmware   1.0.2.30
WEB   0.9.44
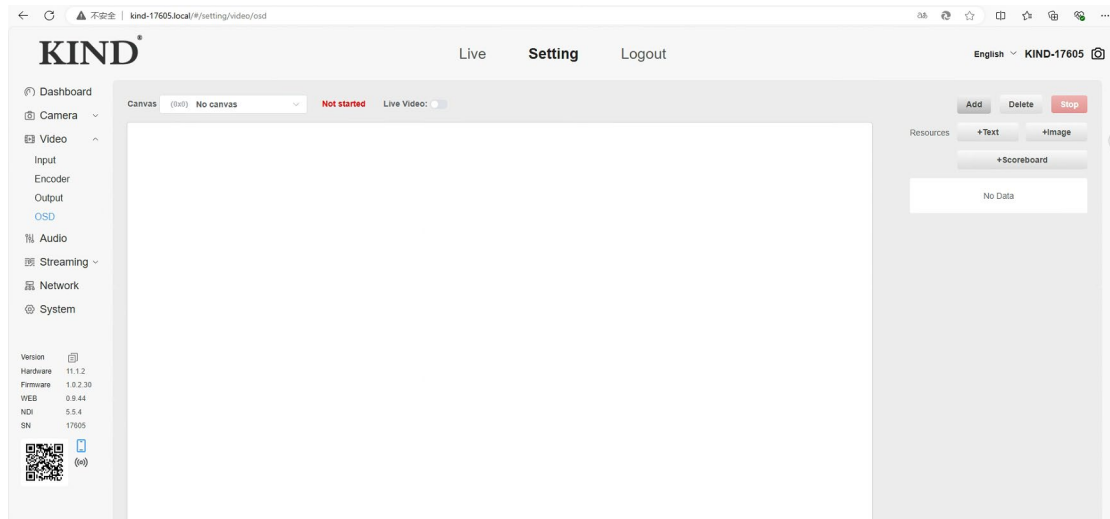
Audio configuration: Set the audio format, sample rate, bit rate, channel, volume, and audio source
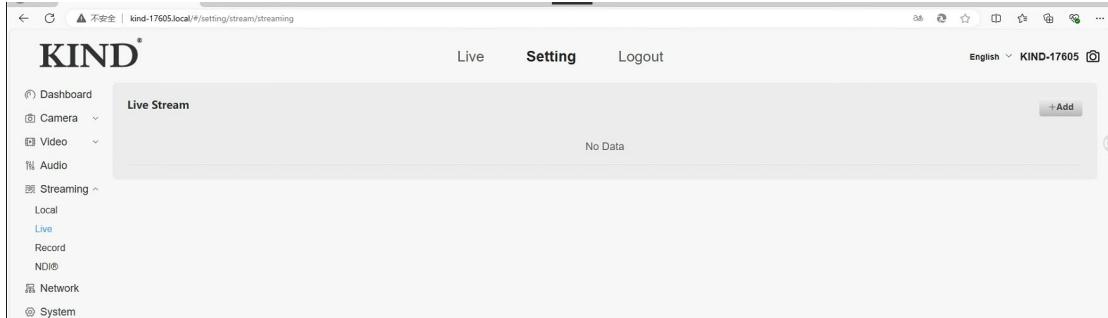

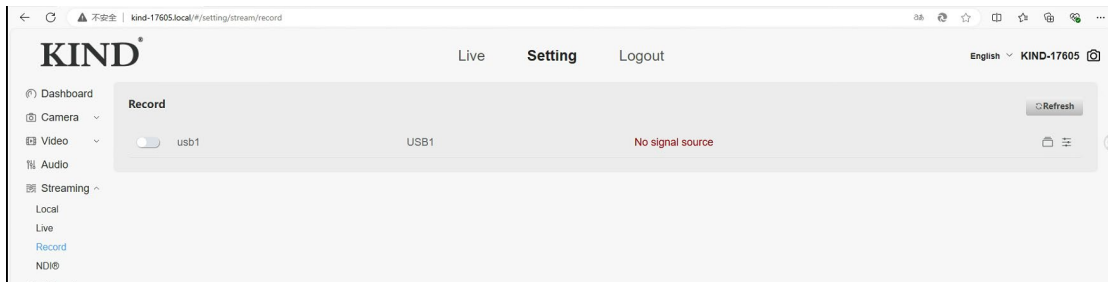Media configuration: local stream, network stream, video, and NDI information
The local stream can extract the RTSP protocol of the device
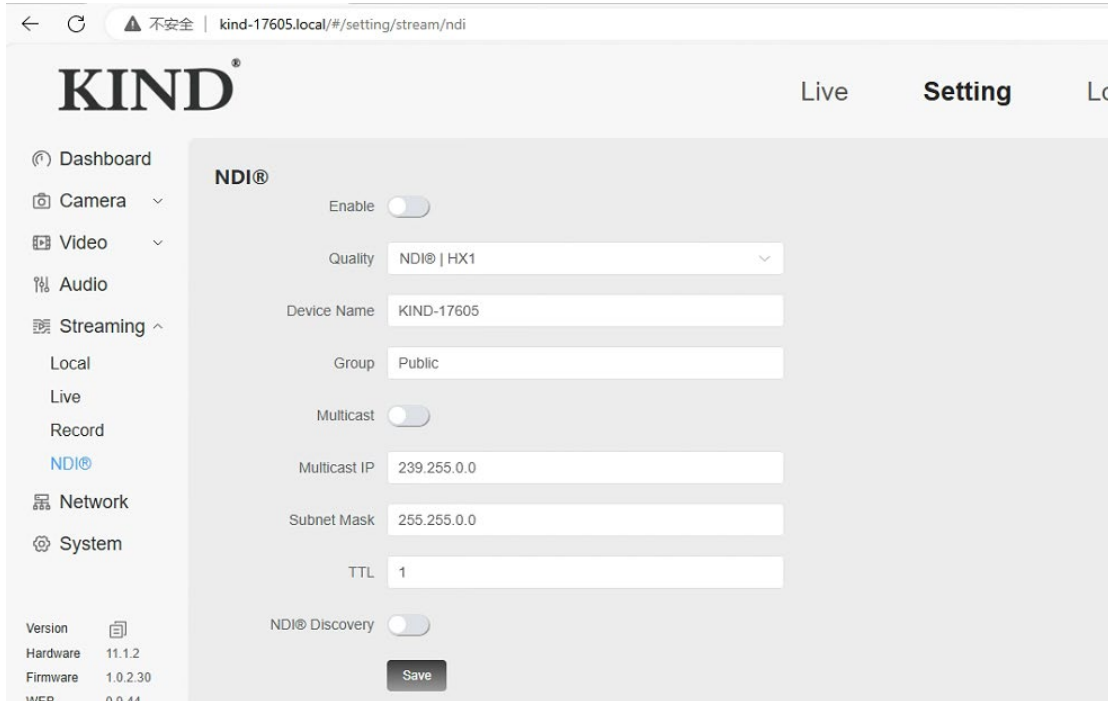
Network stream: Configure information such as multiple live broadcast addresses

Video: Displays information about the inserted storage device

NDI: Configure NDI information

Network configuration: Set the network, hotspot, WIFI, and network port information of the device

System Settings: Set the device name, working mode, NDI information, user management, system time, recovery and restart, firmware upgrade, and log information

九、Contact us

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