



Hirender S3 User Manual

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V2.0

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Hirender

Introduction

Thanks for your appreciation of Hirender S3. As a professional media server software, Hirender S3 can efficiently manage the entire video playback and control flow through its powerful timeline manager and window mode. The innovative program management module makes the switch simpler and more flexible. In addition, the multiple-channel synchronous can easily realize all the effects that need to be displayed, such as LED videowall, projector fusion and creative display. Need software dongle.

Hirender

1. Hirender S3 Main Function Module

- **Window mode**
Set the window position and size in advance, that is, click-to-play, flexible and fast, suitable for live scenes.
- **Timeline mode**
Precise time control, powerful program effects and media arrangement are more suitable for conference applications. It can also be mixed with the windows mode.
- **Support virtual screen**
Ability to realize complex LED screen construction (any angle rotation, splicing, etc.), providing a convenient way for innovative LED display applications.
- **Support NDI capture**
Up to 10 channels of 1920*1080 screen capture, extremely low latency and higher definition quality.
- **Support more video consoles and matrix control**
The control instruction of the switchboard can be sent on the timeline to achieve precise synchronization of play and video console switching.
- **Support 4K capture card**
Real-time capture of 4K PPT or video camera.
- **Powerful video decoding and 2D/3D rendering capabilities**
Hirender has a powerful non-linear rendering engine and real-time high-performance 2D/3D graphics rendering, supporting OpenGL and DirectX. It supports almost all current video formats and more than 30 kinds of video codec including sequence frames and can play all of them smoothly.
- **Support for large resolution video**
Support unlimited resolution (4K, 8K) video and image decoding, enabling point-to-point display of any resolution LED display and projector.
- **Humanized operation**
Single server with multi-channel output perfectly combined with humanized unified stage management mode, timeline and window, as well as intuitive operation interface enables zero-based technicians to get started quickly, making flexible display screen layout and freely creative display easy to be implemented.
- **Preview mode**
In the preview mode, the edited programs can be viewed in advance on the editing interface without affecting the normal output screen of the software.

2. System Requirement

Original Microsoft Windows 7/64-bit and above are recommended. Windows 10/64-bit is preferred.

3. Operating Mode


Hirender S3 needs to set your computer and output screen to the extended mode, which can be switched by [Win+P]. You can click the resolution setting to operate the display as the main display, and the screen or projector as the extended display. The software operation mode can be divided into single server mode and multiple server connection mode.

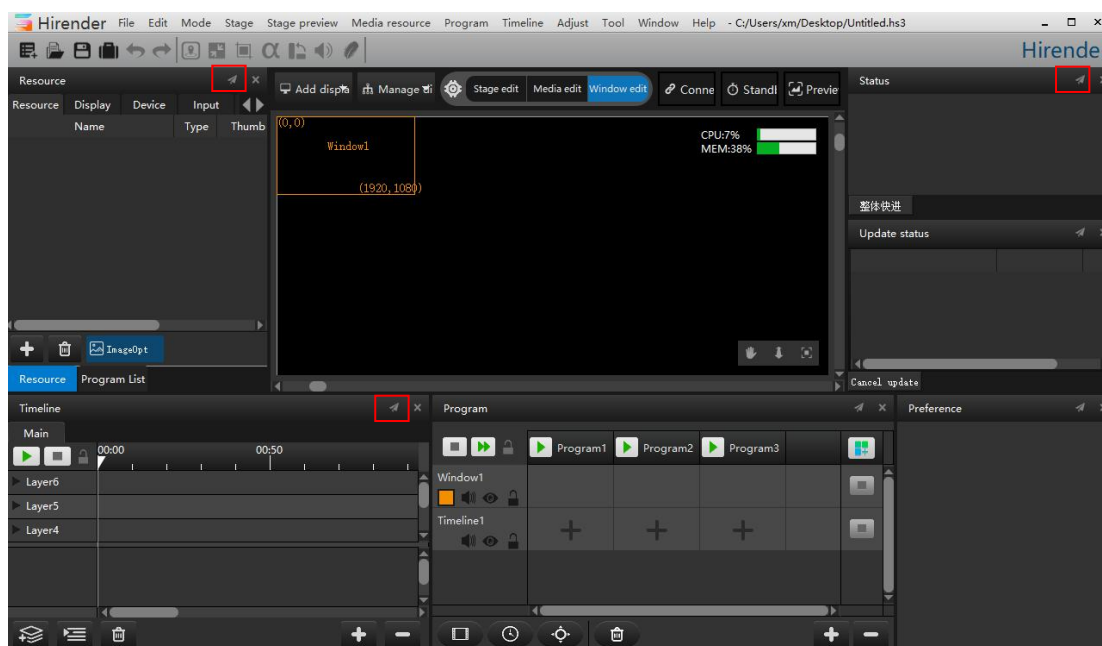
Single server mode: The usage of a single server—the operation interface and the video signal output are all performed on the same server. You can perform software operation, edit media effect, control output, and output video images to the display device. It does not need to carry out network data transmission, avoiding the influence of network error on the software. At the same time, real-time preview of the captured camera signal can be performed, making real-time preview, real-time editing and real-time rendering output become true. You can easily cope with application scenarios with fewer output channels as well.

Multiple server connection mode: Multiple servers are cascaded—there is a separate console server for software operation, and other display servers are used for video signal output. As the number of display servers increases, the number of graphics interfaces that can be used for video signal output increases, and the number of connectable display devices increases. It satisfies the current market demand for more and more display devices and increasing resolution.

4. Features

4.1 Window layout adjustment and floating window

Users can set floating window in Hirender S3 according to their personal preference. The button  is used for setting the floating window. You can drag each window directly to other places for layout arrangement. The floating state needs to be set.

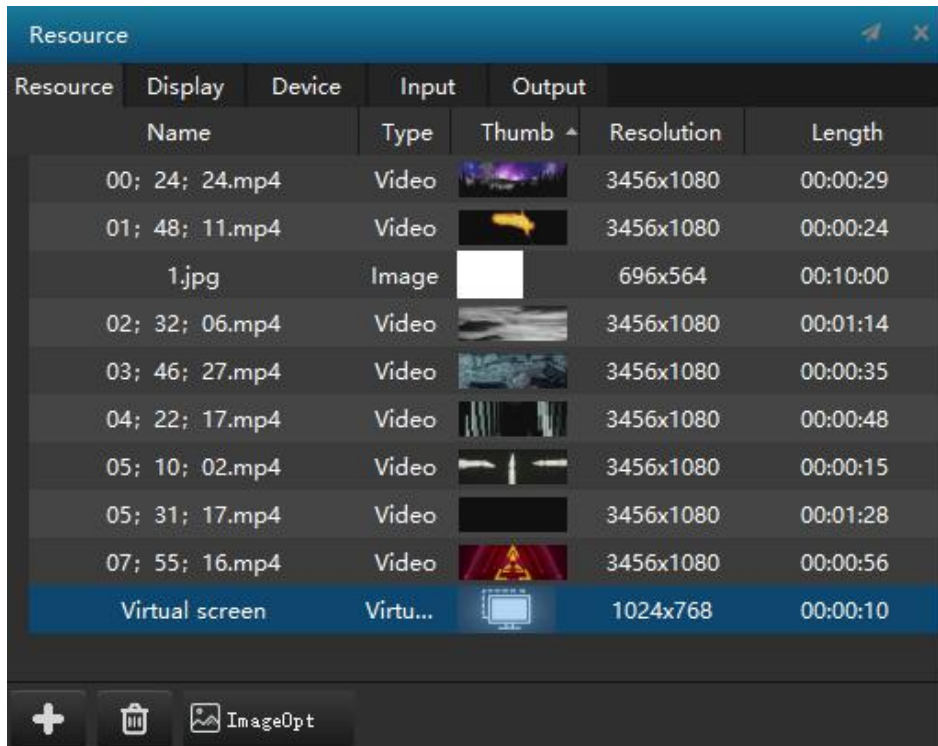








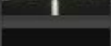



You can set the floating window by clicking the floating button. Click the button again to cancel the floating state. It not only allows you to set the software layout according to your habits, but also makes the window easily operated after the setting is completed.

4.2 Resource management

The resource management window includes resource library, input control, device management, output control, screen management, and image optimization.

4.2.1 Resource library

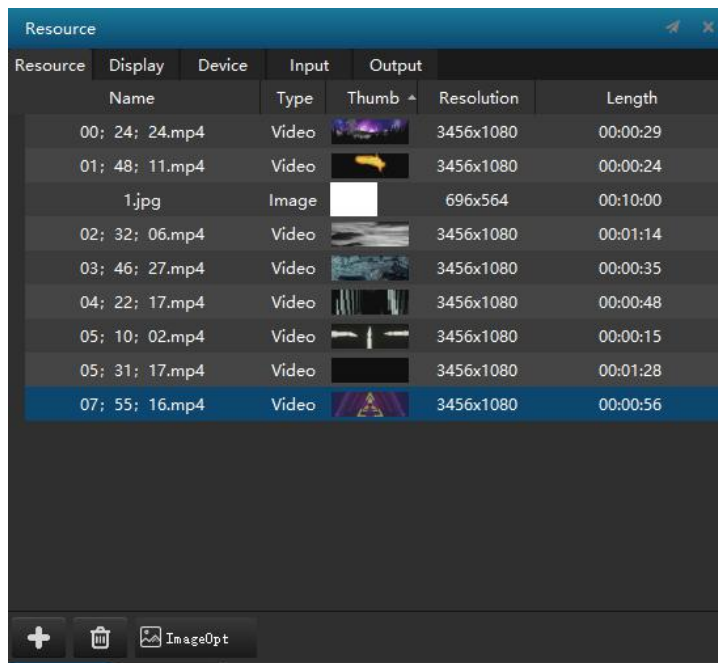


Resource	Display	Device	Input	Output
Name	Type	Thumb	Resolution	Length
00; 24; 24.mp4	Video		3456x1080	00:00:29
01; 48; 11.mp4	Video		3456x1080	00:00:24
1.jpg	Image		696x564	00:10:00
02; 32; 06.mp4	Video		3456x1080	00:01:14
03; 46; 27.mp4	Video		3456x1080	00:00:35
04; 22; 17.mp4	Video		3456x1080	00:00:48
05; 10; 02.mp4	Video		3456x1080	00:00:15
05; 31; 17.mp4	Video		3456x1080	00:01:28
07; 55; 16.mp4	Video		3456x1080	00:00:56
Virtual screen	Virtu...		1024x768	00:00:10

After the media is added to the resource library, the thumbnail will be displayed. This resource library panel stores all the media files used in your presentation. It can display the information of each media for the user to edit or use for other purposes.

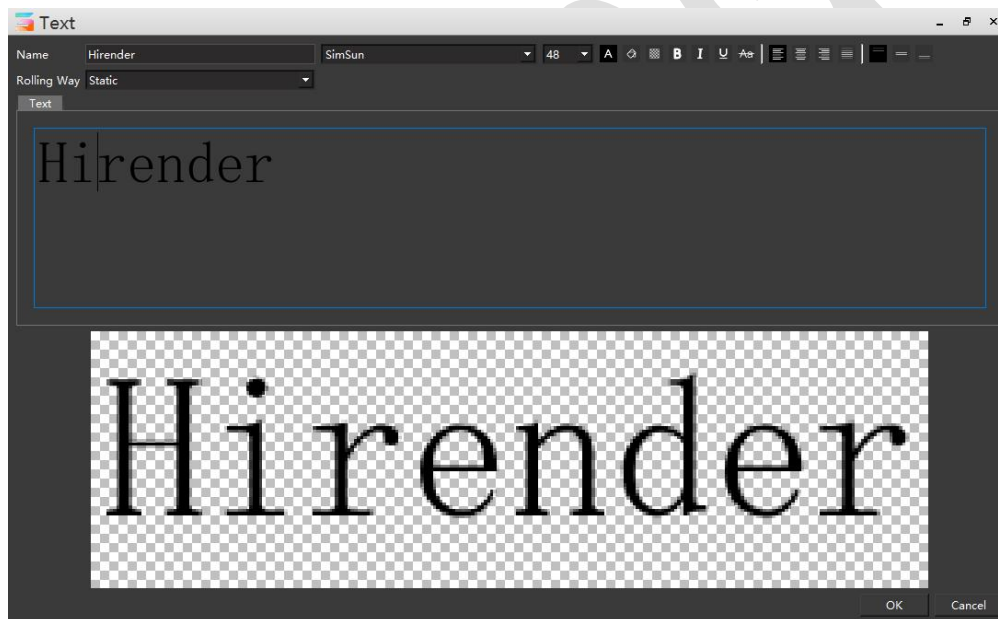
Add media:

Add media files to your library by selecting “Add local resources” on the media menu or by right-clicking “Add local resources”, or by dragging media files directly into the Resource Management Library. Media files can be dragged from the disk or folder into the library. The media resources displays information such as the media name, thumbnail, media type, resolution, duration, etc.



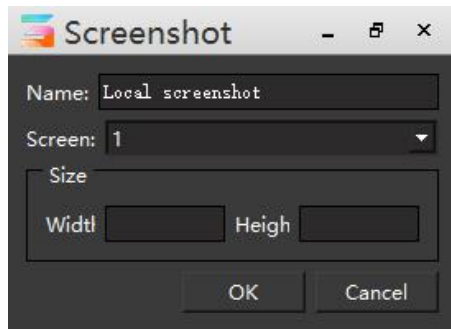
Add text:

This command can add text to the media and make various adjustments like other media.



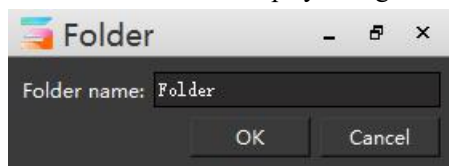
Add local screen capture:

This command can be used to capture the full screen of the machine, and the captured image can also be adjusted. The screen capture is played independently by default.



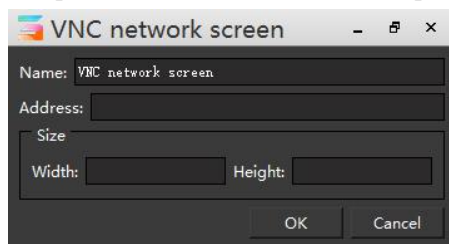
Add folders:

This command helps you organize the media resources of the library.



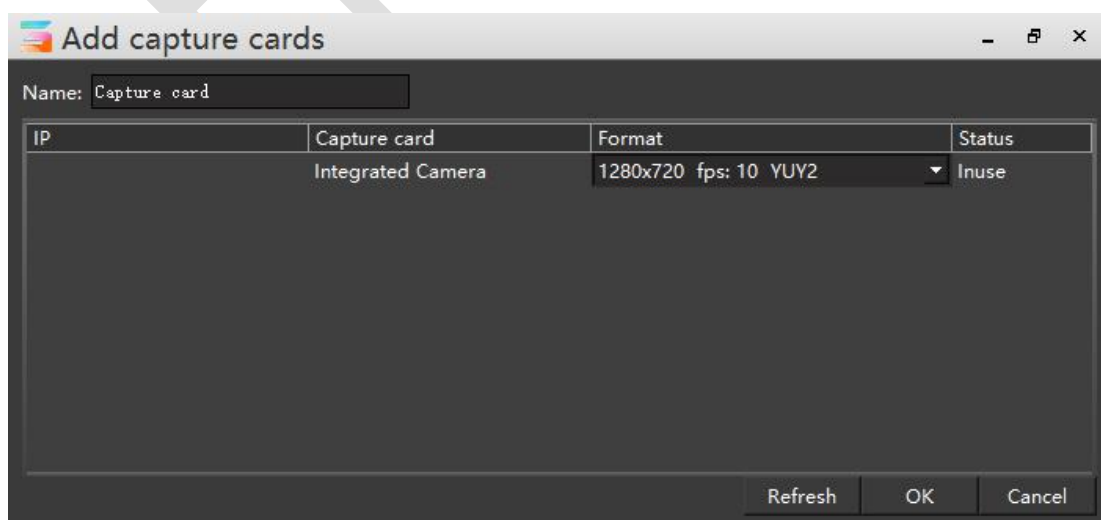
Add VNC capture:

This command allows you to add VNC capture to capture images from the display of a computer over the network. VNC captures are played independently.



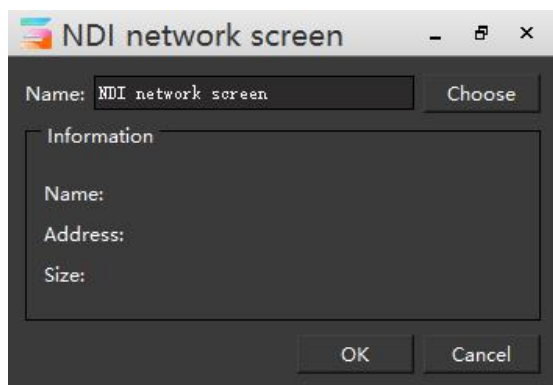
Add a capture card device:

With this command, you can add a capture card to achieve real-time video capture and other effects. Hirender also supports multiple capture cards to simultaneously capture and adjust the captured video. The capture card defaults to independent playback. By customizing, you can change the display size of the captured image.



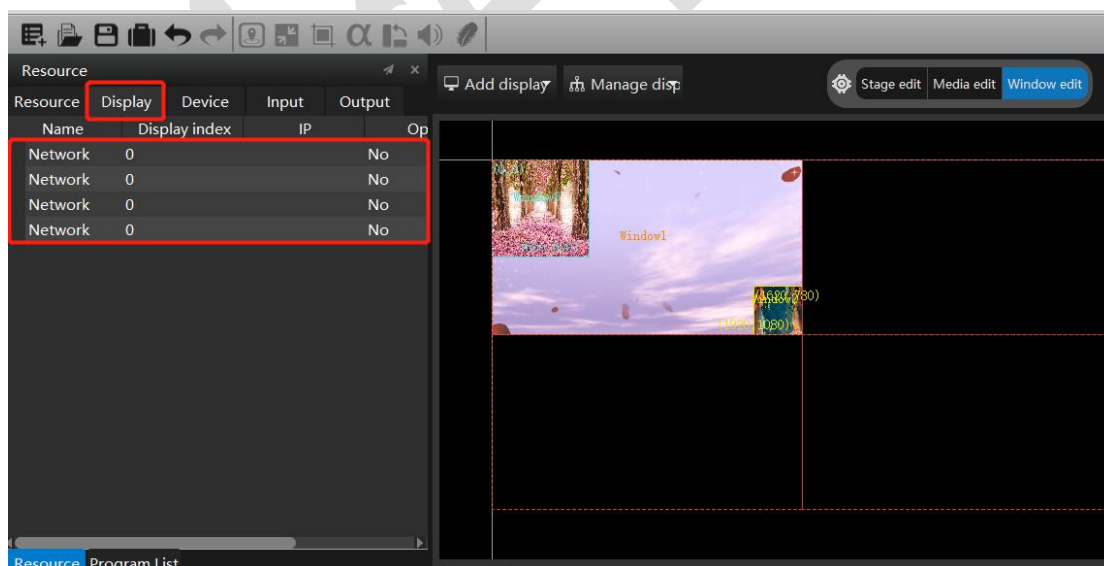
Add an NDI device:

With this command you can add an NDI device. NDI uses digital high-definition Ethernet transmission technology to achieve the same SDI transmission effect. The transmission of NDI is more stable than that transmitted by coaxial cable, and the anti-interference ability is stronger. Real-time, two-way audio, bidirectional control signals and the like can be transmitted while transmitting video signals.

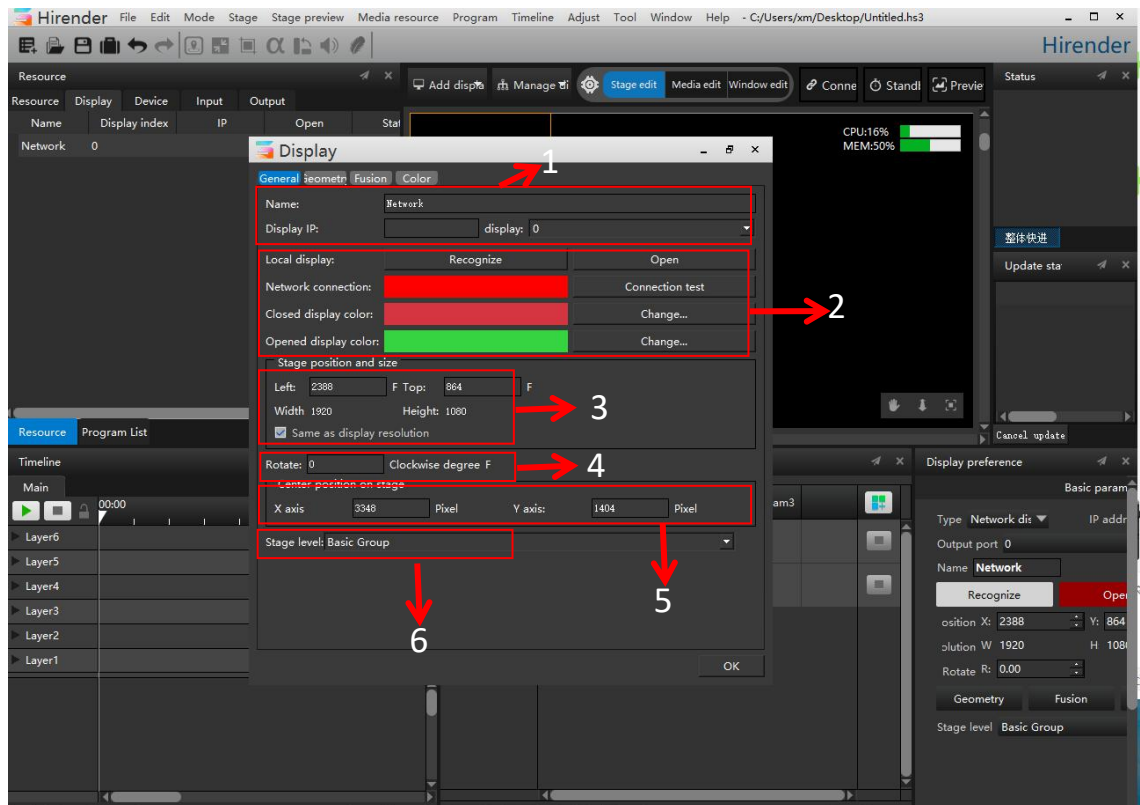


4.2.2 Screen management

This command displays all the display devices that have been added to the stage. Through the on-screen management interface, you can view the information of all display screens (including IP address and screen number information). Double-click the screen to pop up the display panel to set the properties of the display.



Double-click the screen with the IP address 192.168.2.223 as shown below. The pop-up display panel shows the information on the screen and can be modified.



1.The information displayed on the screen, including the name, IP address, screen number, and name, can be modified.

2.Turn on and off the screen display and modify the colors displayed in different states of the screen.

3.Shows the position of the screen on the stage and the resolution of that screen. If remove the check box with the width, height and same display resolution options, the resolution of the display frame can be modified (normally, the resolution of the display device can be automatically recognized).

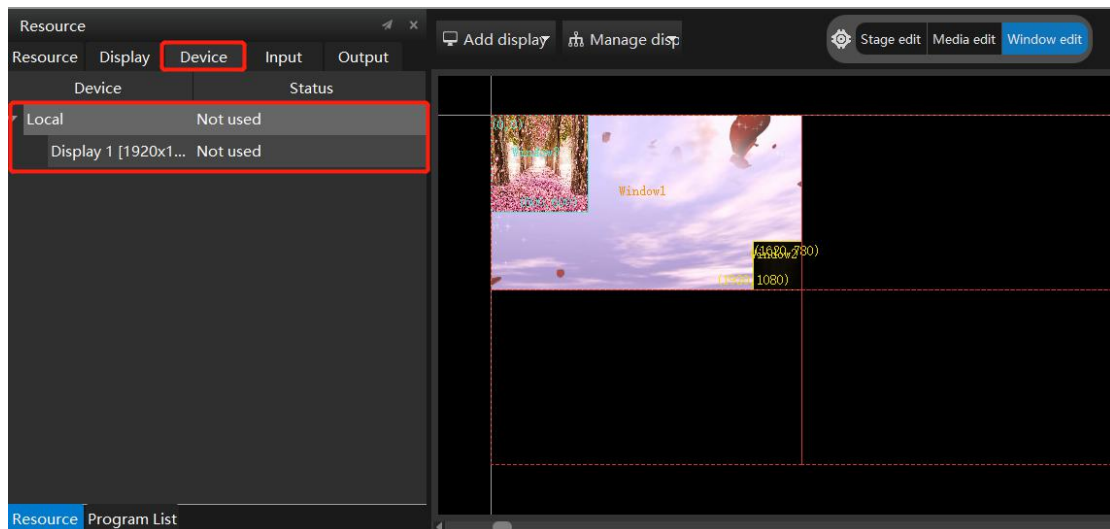
4.Set the rotation angle of the display screen.

5.Show the position of the screen on the stage.

6.The stage level of the display screen can be modified.

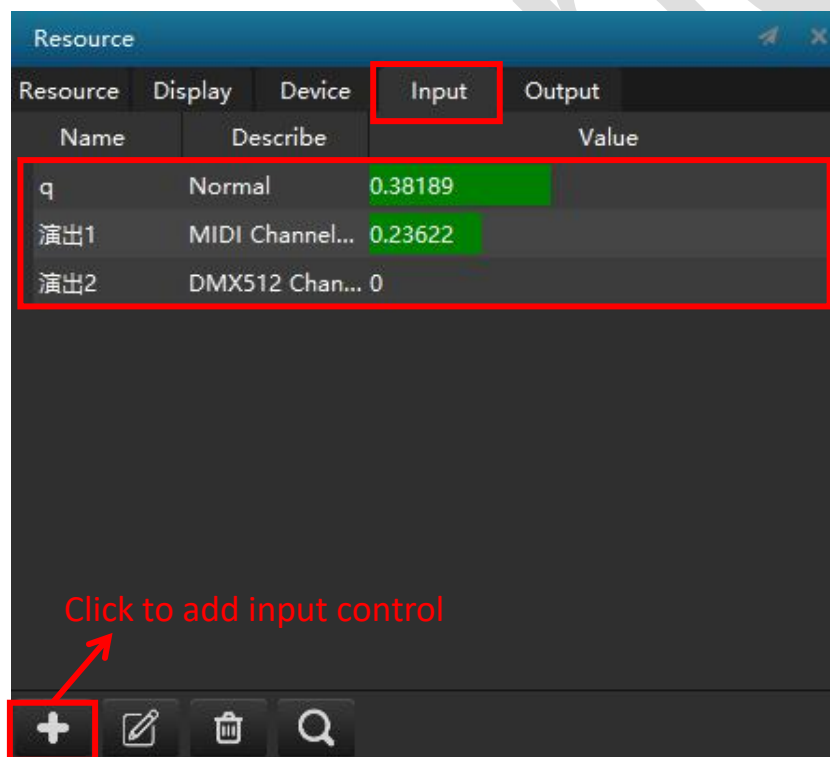
4.23 Device management

Device Management shows screens on all devices, including local connection screens and network connection screens. And shows all the information on the screen, such as usage, screen resolution, etc.

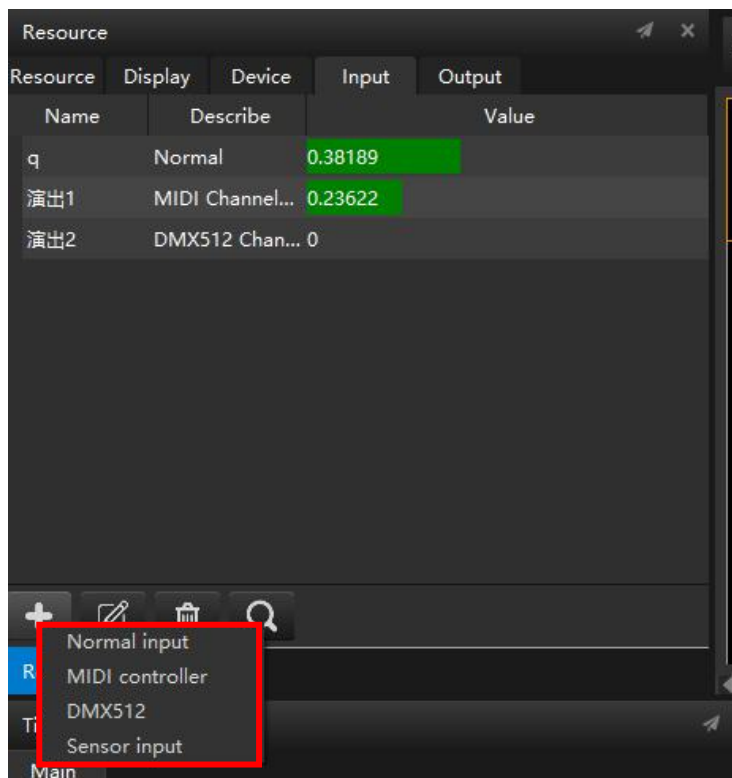


4.24 Input control

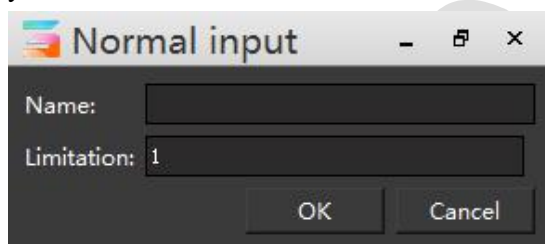
Input control includes normal input, MIDI controller, DMX512, sensor input. The input function allows Hirender to accept signals from the outside world. The incoming signal can be used to start or stop the timeline and control different instruction variables.



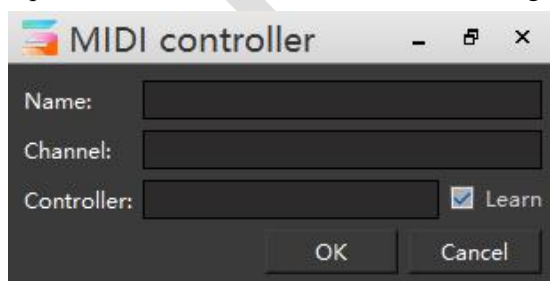
To set an input control, first open the Input Control interface and click the Add button in the lower left corner of the input form. After selecting the input method, you will see a dialog box that lets you choose to add input control.



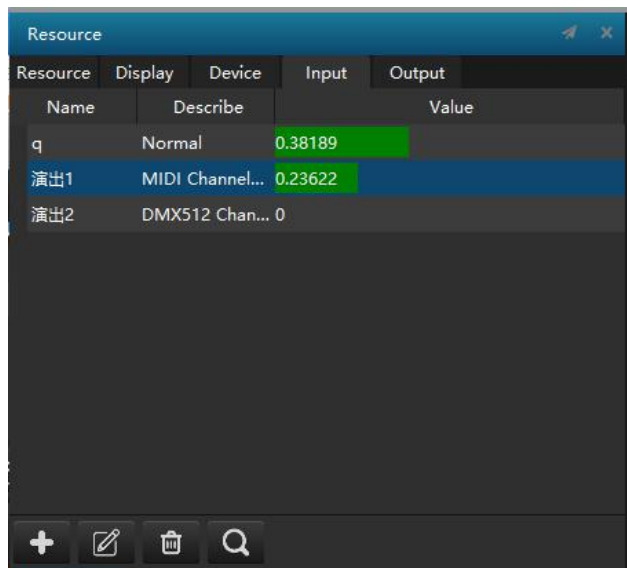
For normal input, you need to enter a name and a limit parameter. The name is the name used in the expression. The limit parameter system defaults to 0-1, here you can enter any positive number you want to enter.



For MIDI controller, when you see the keyboard knob or slider, click "learn" and move the controller knob or slider, the system will automatically select the channel and MIDI controller number. The name box is also used in the expression name. As you can see, when the input is normal input, the range of values in the dialog box is 0 to the positive number you input. When the input is MIDI controller, the value of the dialog box is 0-1 between.

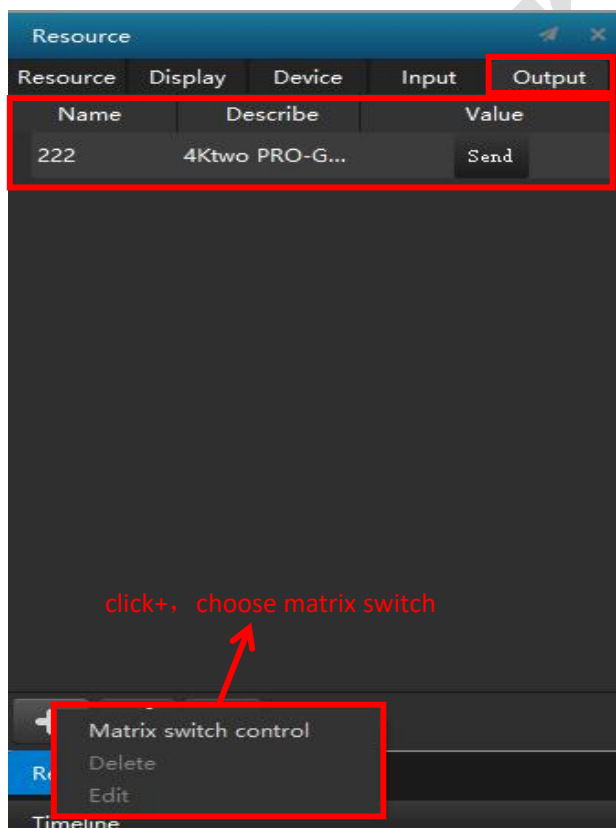


When the setup is complete, click the OK button in the MIDI Controller dialog box, move the controller and pay attention to the bar indicators in the input box to determine normal operation.

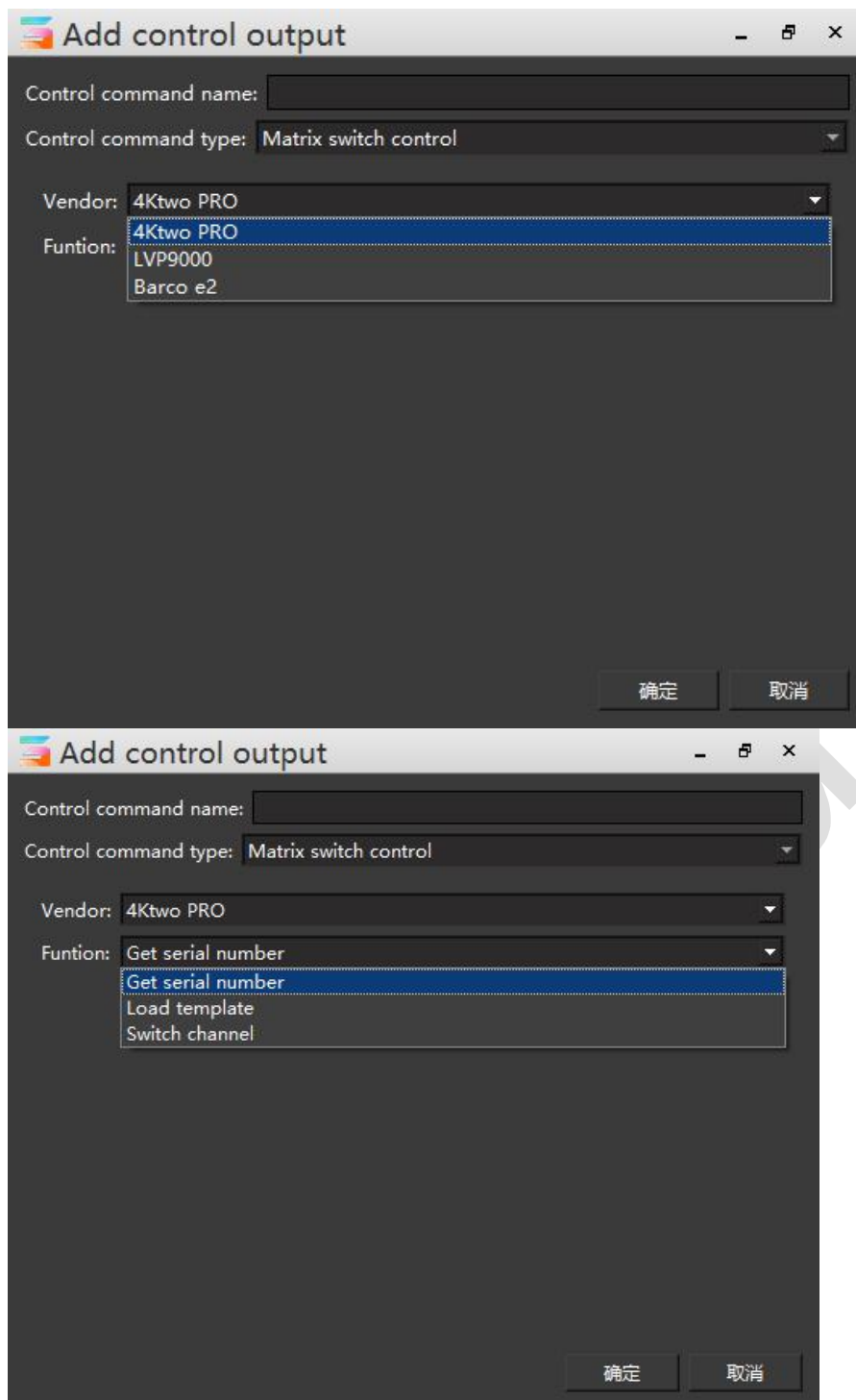


4.25 Output control

Output control allows the Hirender S3 software to directly control the console to recall presets or to switch between consoles. At present, the software supports 4Ktwo PRO, LVP9000 and Barco e2.

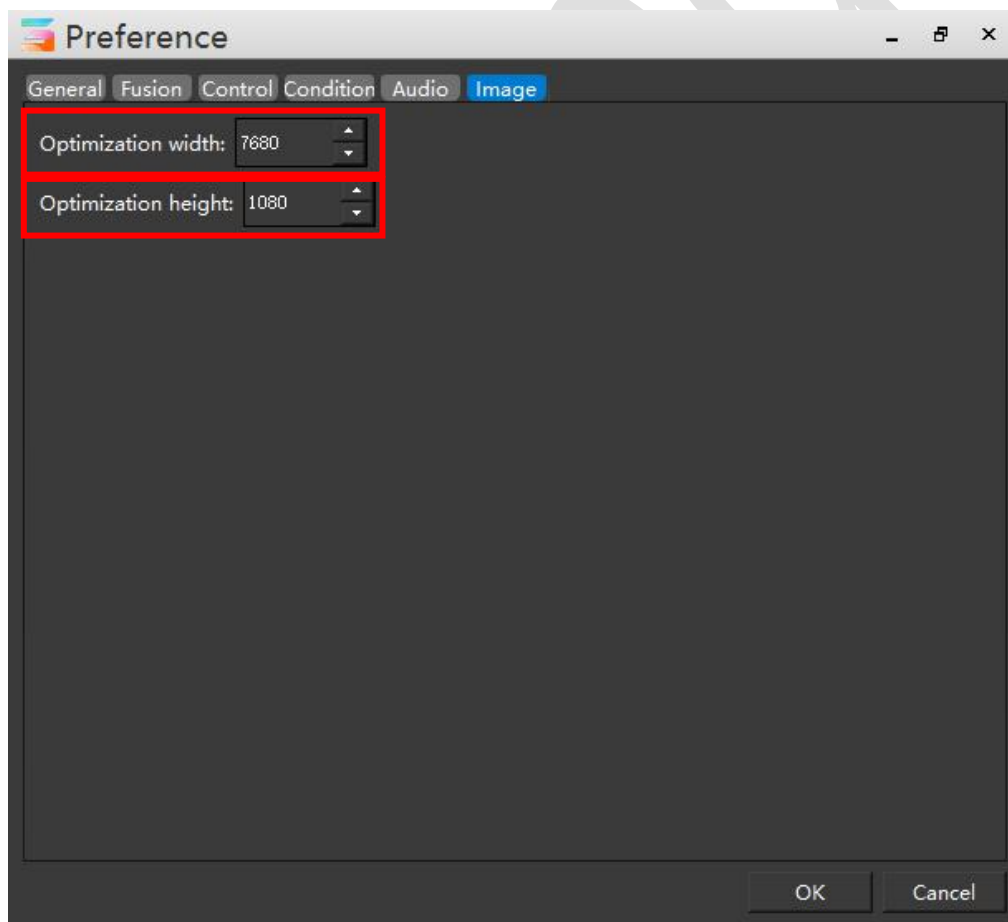
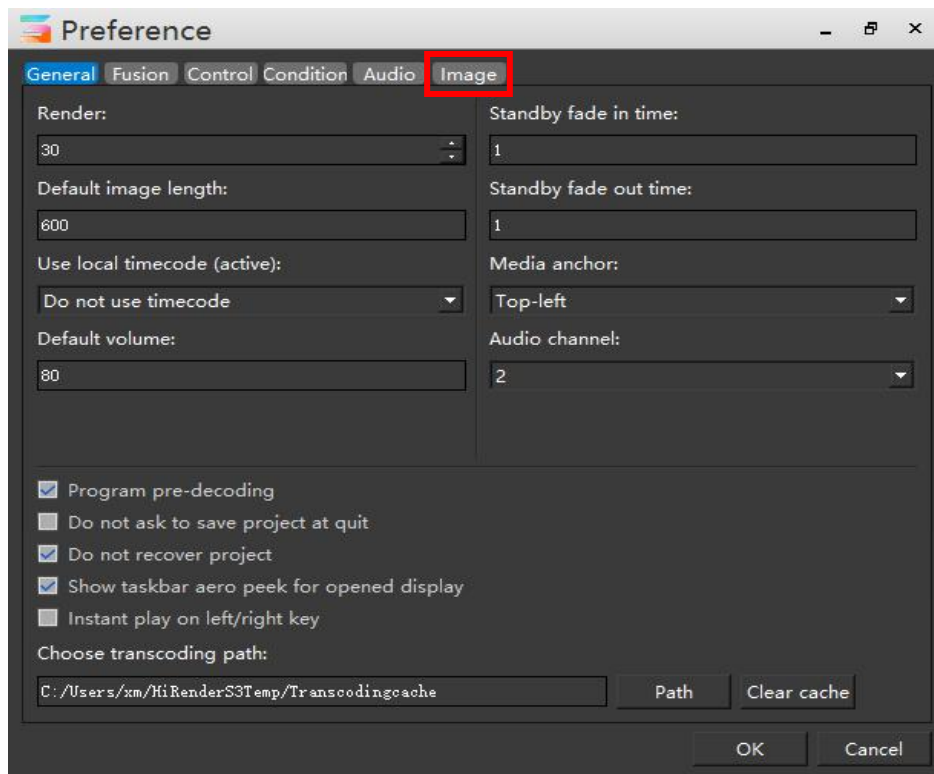


In the pop-up box of Console Switch, add a control command name, and select the device name, device function. When the settings are completed, the output control can be added to the timeline on the main timeline or on the show time line as a media resource.



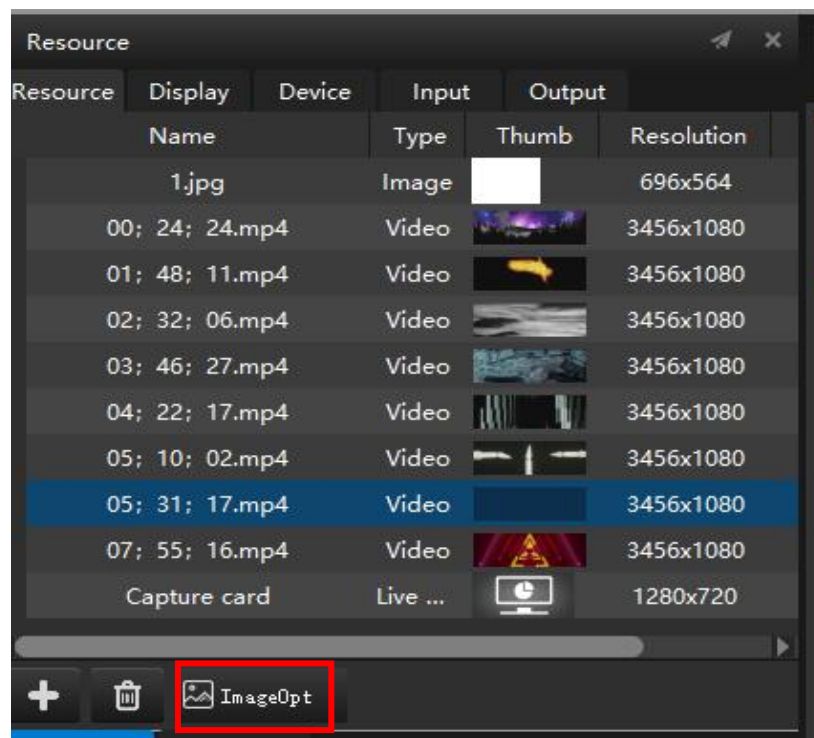
4.26 Image optimization

Image optimization is the optimization of image assets that have been added to media resources. As shown in the figures below, in the S3 software file-settings, after setting the width, height and resolution of the image optimization, you can optimize the image material in batches. Images larger than this resolution are optimized for this resolution, and pictures below the modified resolution are not optimized.



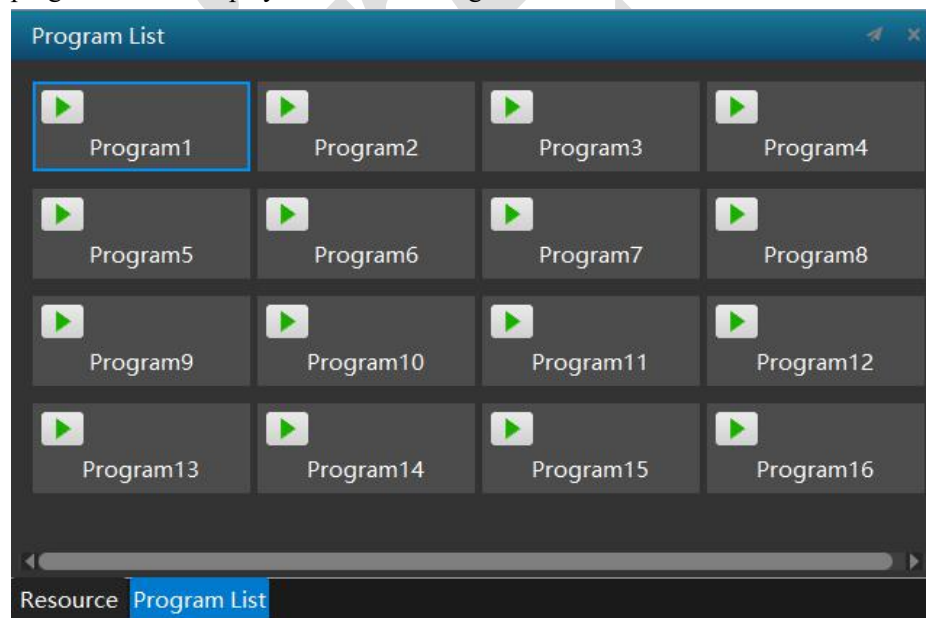
As shown in the figure below, by clicking on Image Optimization function, after using the image optimization function, all the materials larger than the set image resolution will be

compressed to the set image optimization resolution.

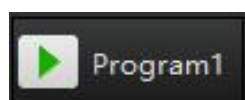


4.3 Program list

The program list shows all the created programs in the grid, which can float on the operation window. Users can play all the programs. When clicking the program, the properties of the program will be displayed in the lower right corner.



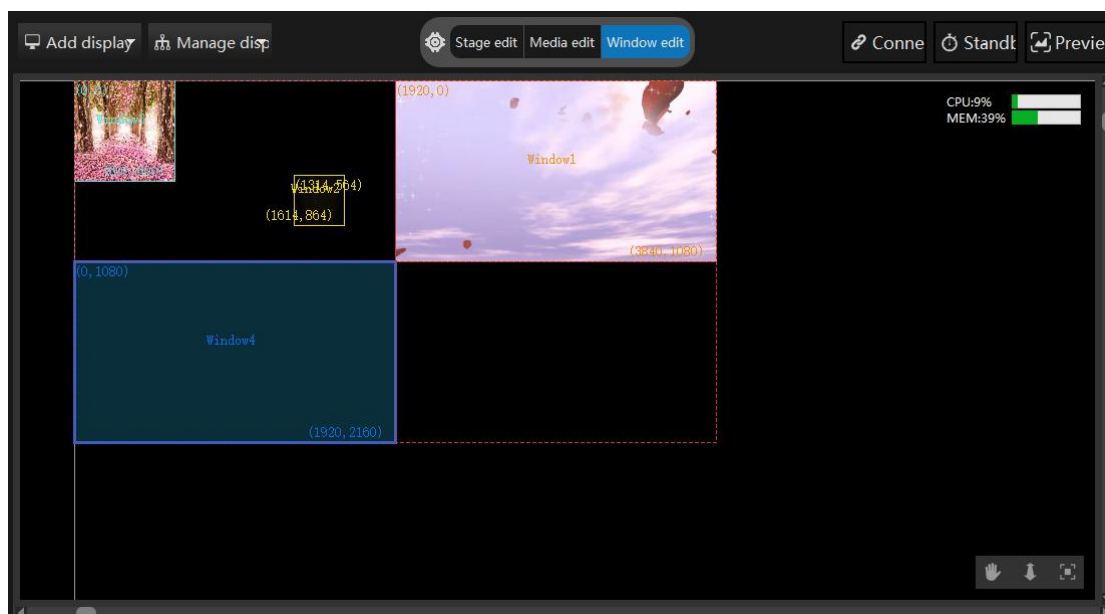
As shown below, the single program grid includes a play button, the keyboard triggers MIDI input control, program name, HC64 control, and the like.



4.4 Stage edit window

The Stage Edit window allows you to organize the display area and preview the display file. The image will also be displayed in its associated display device. By arranging display devices side by side or vertically, you can design an image that spans multiple display devices.

The Stage Edit window manages the display area of the display device (i.e., the screen area) and can be adjusted to the position you want. At the same time, it also provides a preview of the effects of the demo, and allows you to move and drag the window inside.

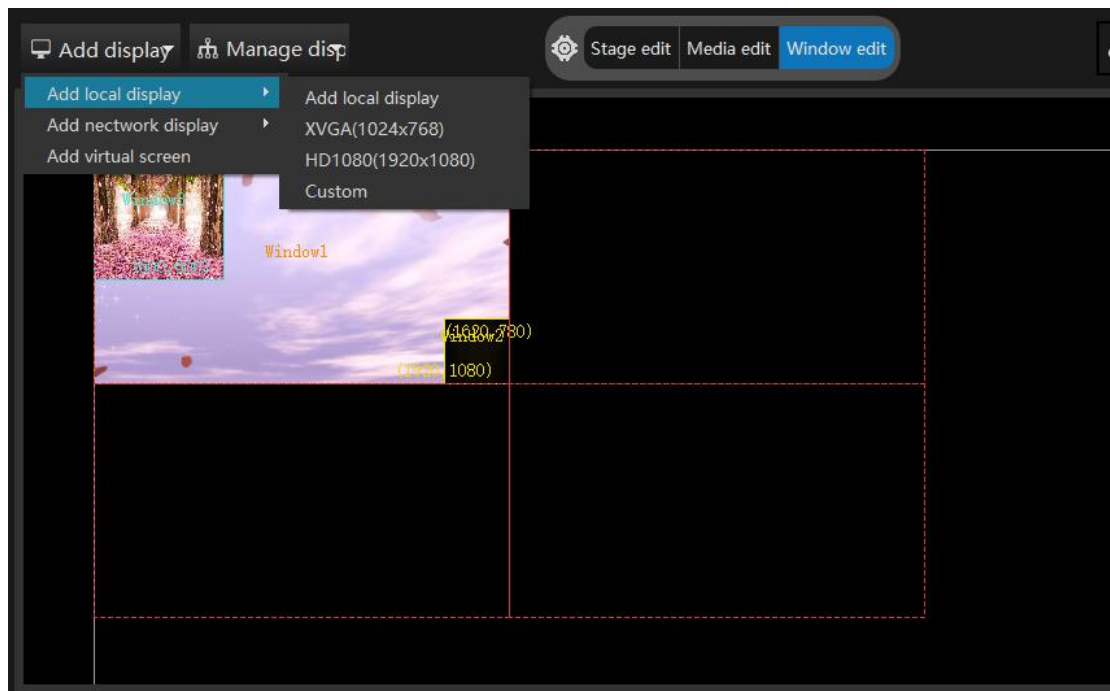


4.41 Stage edit

Add and remove display devices:

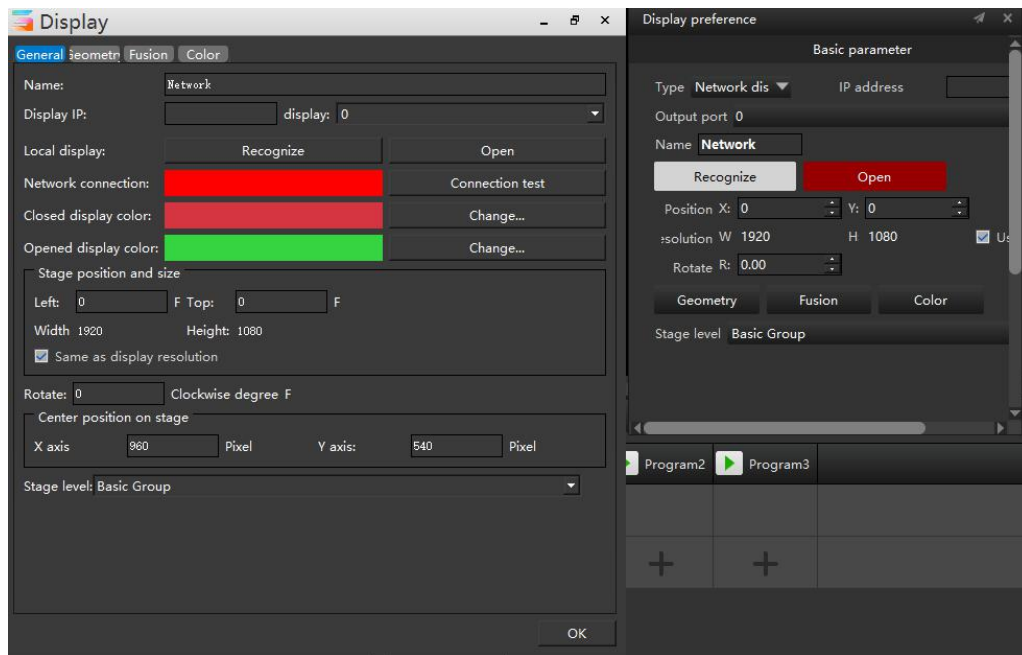
You can add connected display devices to this stage by first selecting "Add Screen" on the Stage menu and then selecting "Add Local Display Screen". This menu option provides a choice of standard display device sizes. Once the display device is added, you can set the IP address and other related settings through the properties dialog. The illustration is as follows:

- 1.Stage add interface.



2. After adding the stage, double-click or click on the local screen (red box) to display the properties dialog.

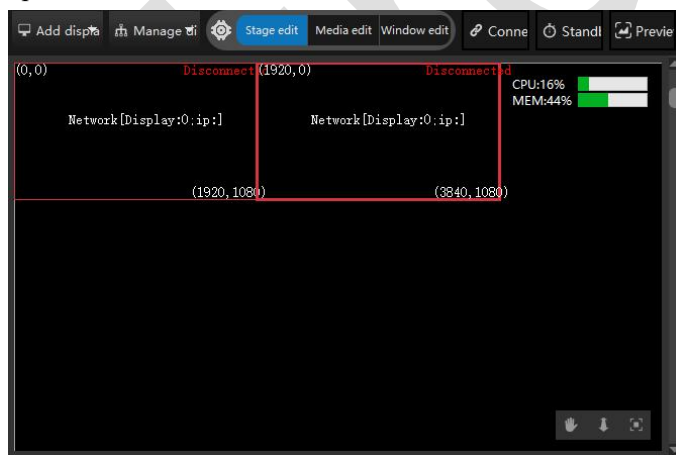




3.If you wish to delete the display device, in the stage edit state, click on the “Local screen” to make its border thicker, then press the delete key to delete.

Arrange display devices.:

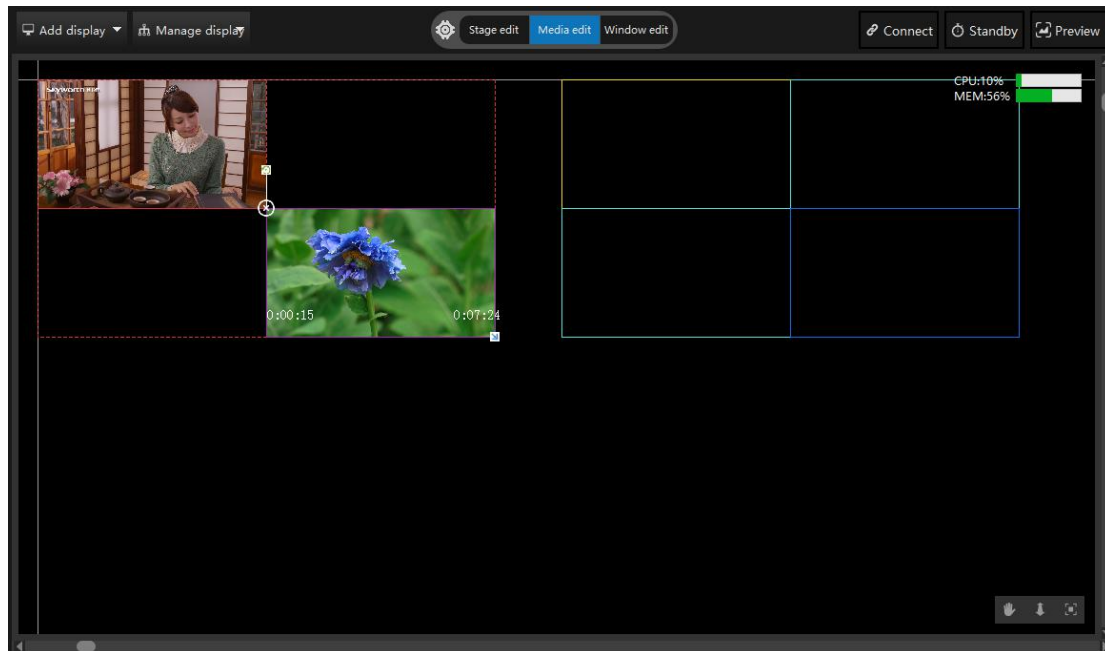
Display devices can be superimposed on each other, and images from multiple display devices will automatically edge blend. In addition, the display device can also achieve edge alignment, or an independent arrangement with slits on the edges like a liquid crystal splicing screen. Through the order of the terminal display device and the stage display window and the consistency of the interval, the order of the actual output pictures is normal and the effect is optimal.



Use a device that needs to overlap, such as a projector.

4.42 Media edit

In the media editing state, all the materials that have been added to the timeline can be dragged, moved, placed and so on.

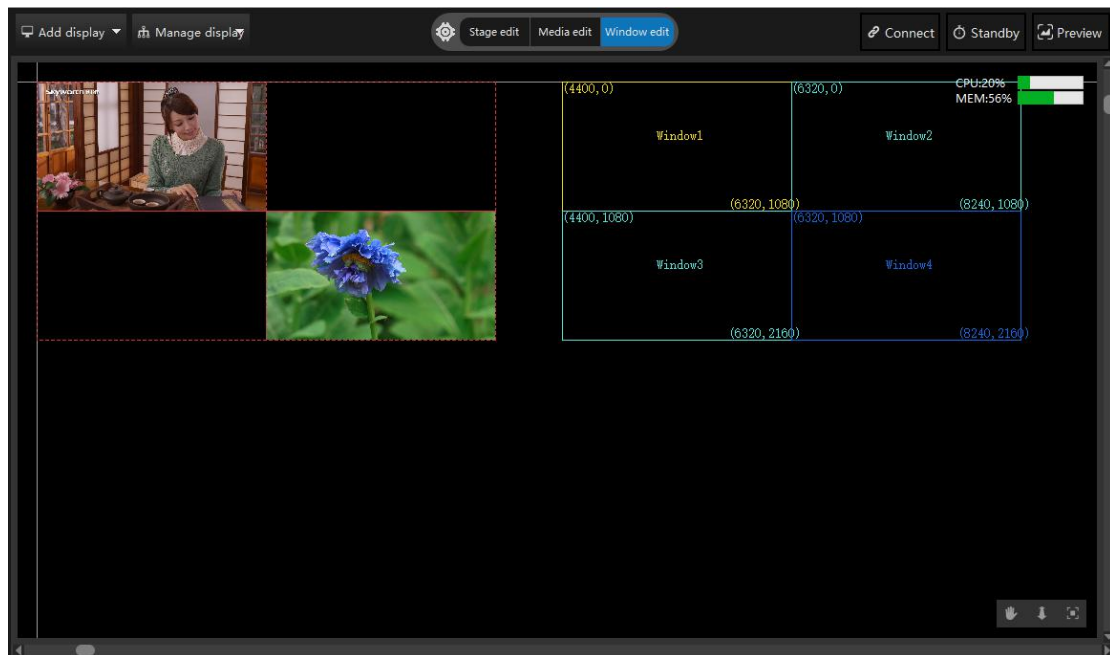


4.43 Window edit

Window function description:

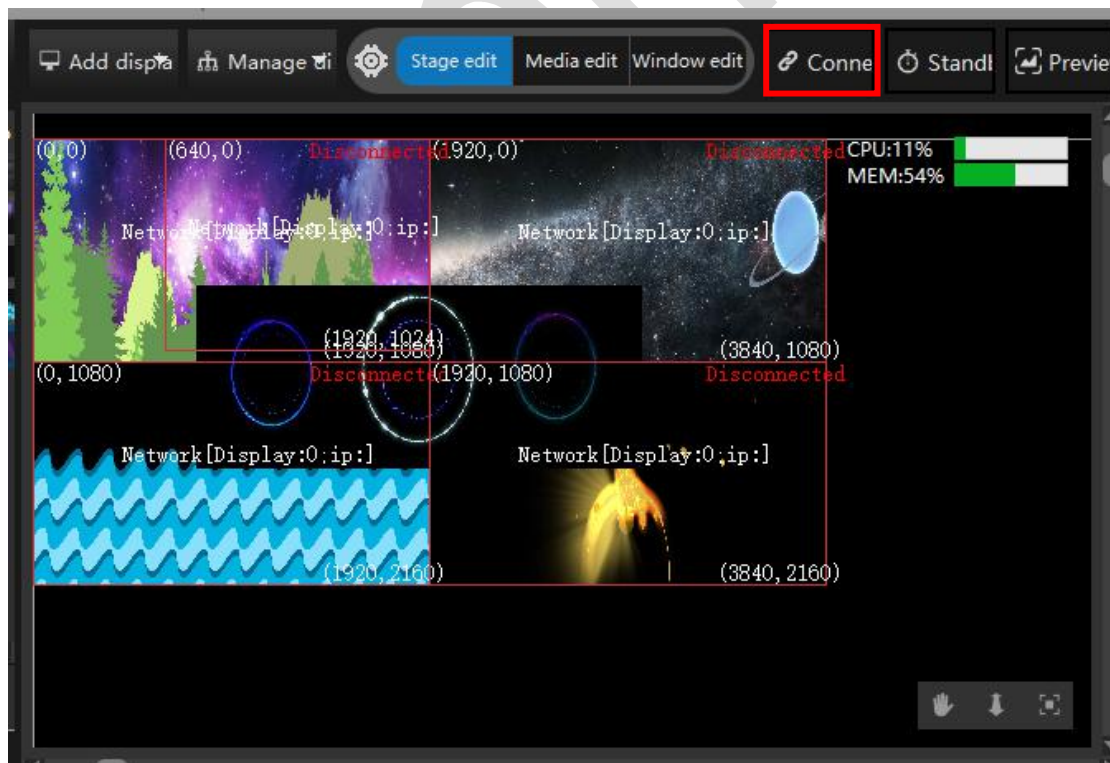
The window resolution can be customized to allow the windows to be randomly arranged on the display device. Add the media to be played in the corresponding window in the program, and set the playing order. The media resource is added at the window position of the corresponding program according to the program playing demand.

The position of all added windows on the Stage can be changed in the window editing state. Drag and drop the window to be changed and place it where you want it.



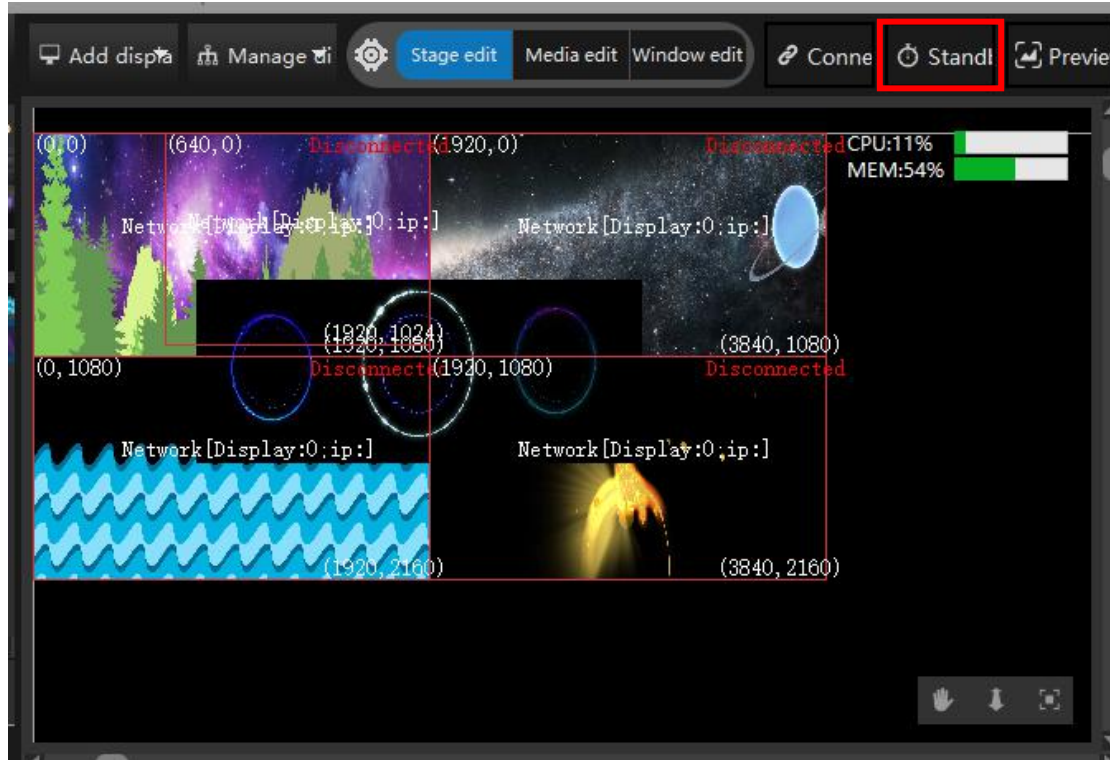
4.44 Online

Online means that to project edited media onto the display device, provided all added screens have been opened in the software. Online or offline by clicking the button in the upper right corner of the figure.



4.45 Standby

The layer of the main timeline and the timeline in the program can be set as a standby layer, and the video material in the standby layer is not displayed on the display device in the normal state. When switching to the standby state, the media picture on the standby layer will be displayed on the display device. As shown in the upper right corner of the standby button, the standby state and the execution state are switched, and the shortcut key Ctrl+B can also be used for switching.



4.46 Preview

Preview definition:

Monitor other programs to be broadcast in advance without affecting normal output. For example, if the connection is already made, the media has been played normally. When the next program is the SDI signal or other external signals, you can see whether the SDI and other signals are normal through the preview mode, or you can also use the preview mode to see if other programs to be played are normal. This can greatly reduce the problem that the signal is not normal after switching to the next program.

Preview usage:

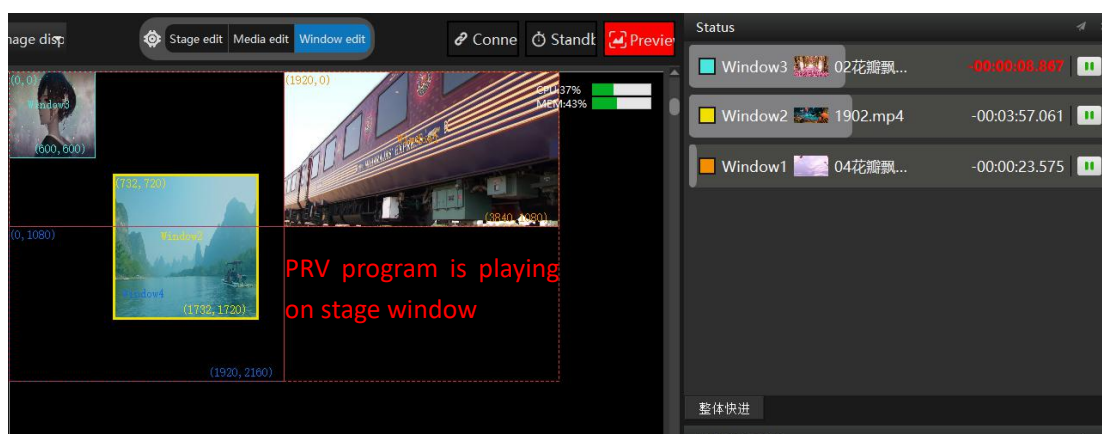
In the play state, click the preview button in the stage management, or select the preview mode in the mode menu to open the preview mode. When the preview mode is turned on, it will be displayed in red flashing mode.

After the preview mode is turned on, you can click to preview and play other programs. The previewed program will only be played in the stage management. Before the preview mode is

turned on, the media being played is played normally.



The above picture shows the open state of the preview mode.

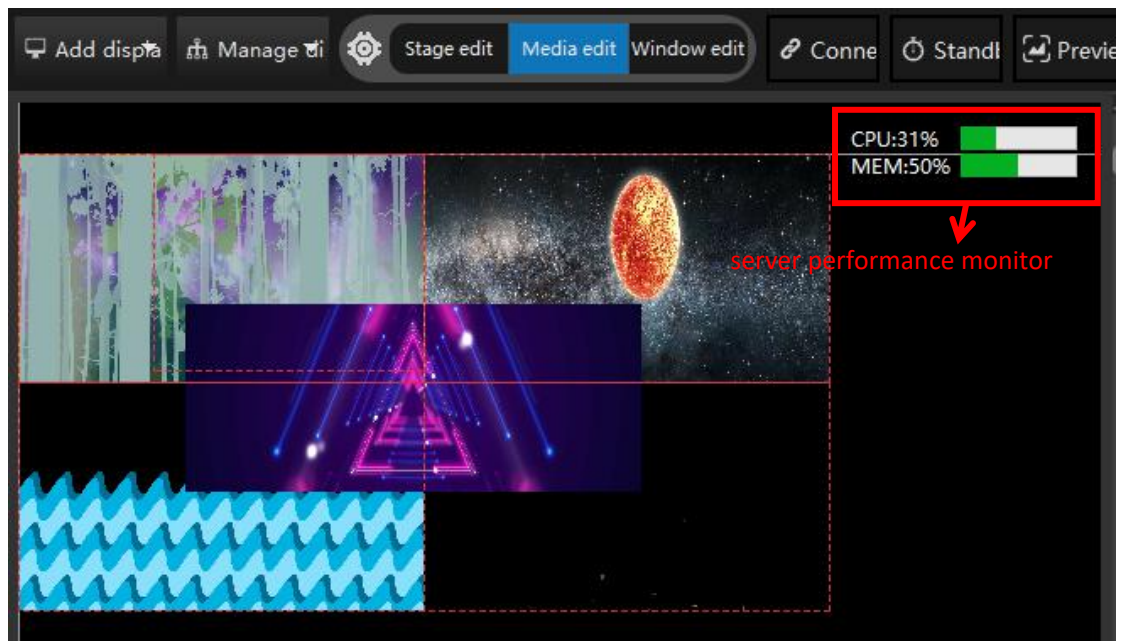


The picture above shows the preview program.

4.5 Hardware performance monitoring

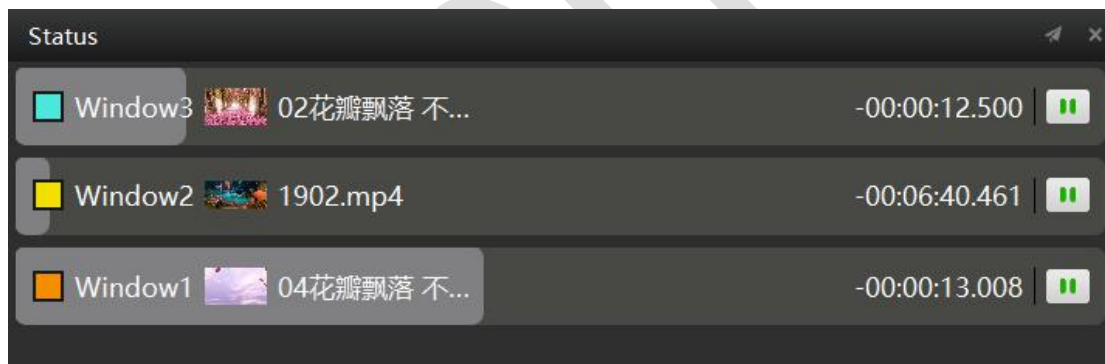
The hardware performance monitoring can monitor the hardware usage status of the entire server at each time point. If the output video picture is very stuck during usage, you can first look at the monitored CPU and memory usage. If the CPU and memory usage is high, it will cause the video picture to be jammed. It is necessary to transcode the video material by using the broadcast assistant provided by Hirender, or change the preview status of the software to thumbnail or wireframe mode.

After the optimization, if the hardware detection usage is still very high, it is recommended to improve the hardware configuration. It is recommended to use the Hirender professional multimedia server.



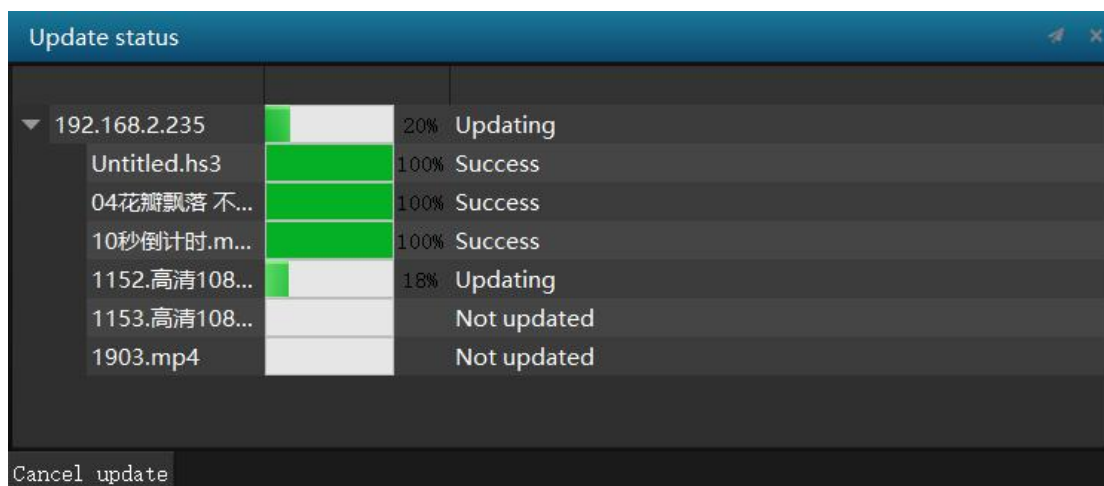
4.6 Play status

The playback status window displays all the windows in the currently playing program and the playback status of the timeline. The media playback pause can be controlled by buttons at the end of each window. Drag and drop the window playback progress bar to control the fast forward playback of the media.



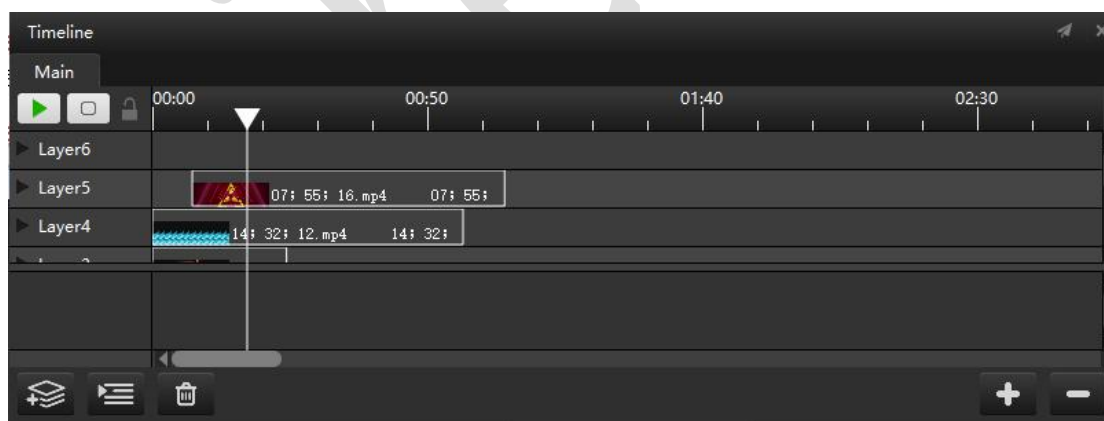
4.7 Network update status

The network update status shows the transmission status and update status when the console server transfers all edited material to each display server in online mode. As shown in the picture, the four material transmission IP addresses are 192.168.2.163 on the display server, and the transfer is completed.



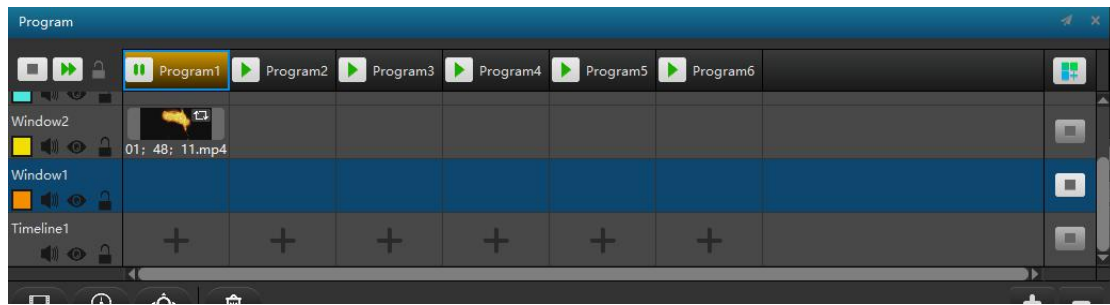
4.8 Main timeline

The media files are dragged from the hardware drive into the media resources library, where they will be displayed as a show command, and each clip will display the corresponding thumbnail icon. You can set the start time and duration of this show command by adjusting the position and length of the show command on the timeline. In the time window, the arrangement of the different layers represents the order of overlap. At the same time, the previous layer will cover the next layer unless the layer is adjusted for transparency or itself is a material with a transparent color.

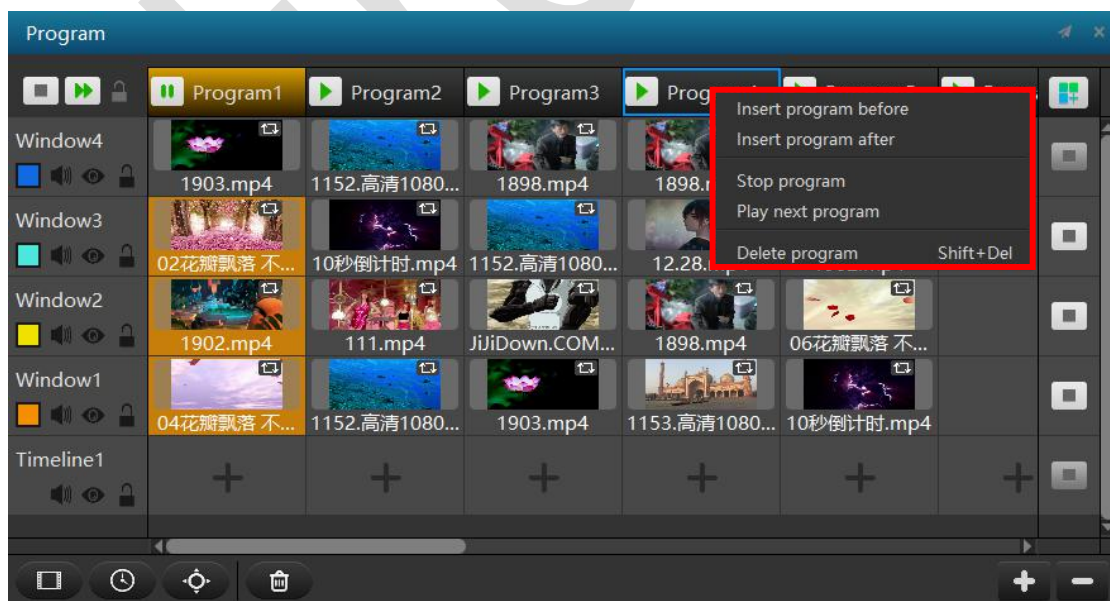
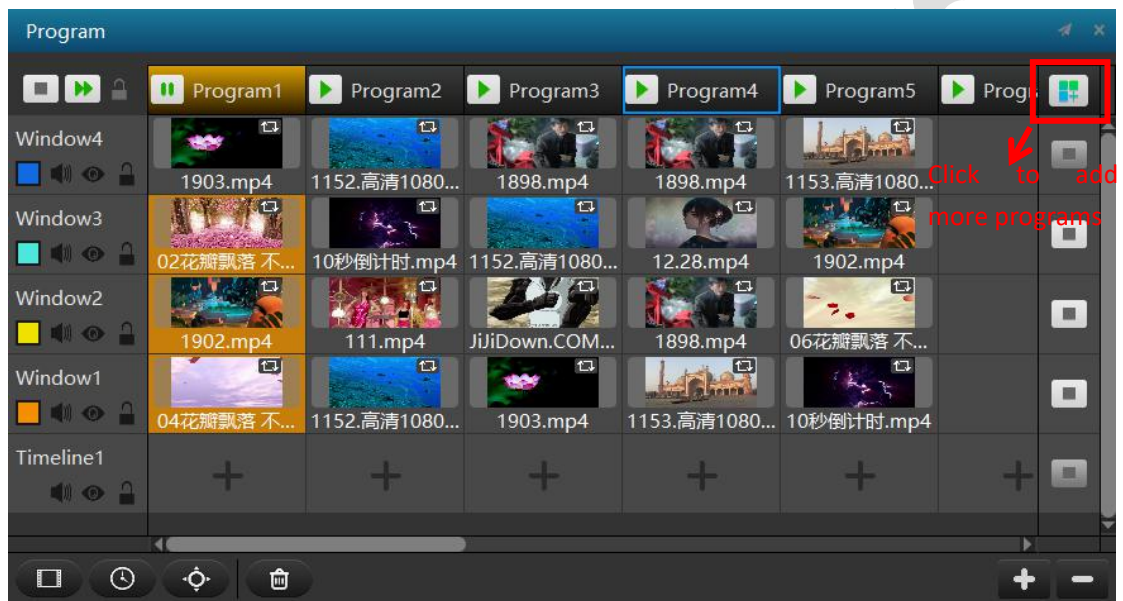


4.9 Program management

Programs, windows, and timelines can be added to program management to schedule programs. The properties of windows, programs, and timelines can be adjusted individually.



4.91 Add and delete program

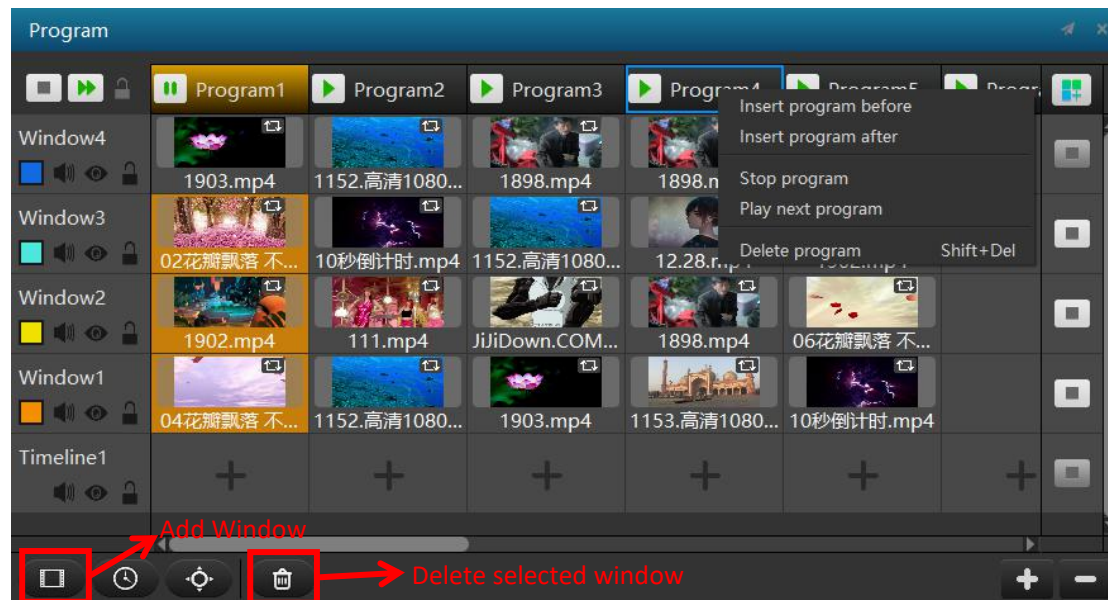


Click the button in the top right corner of the image to add a program. Or right click on a program to insert other programs in front of or behind the show.

Select a program to be deleted and right click to delete it.

4.92 Add and delete window

As shown below, click Add to create a window , and each window has a default color that can be modified. While deleting a window, select the window, and right click and confirm again to delete it.



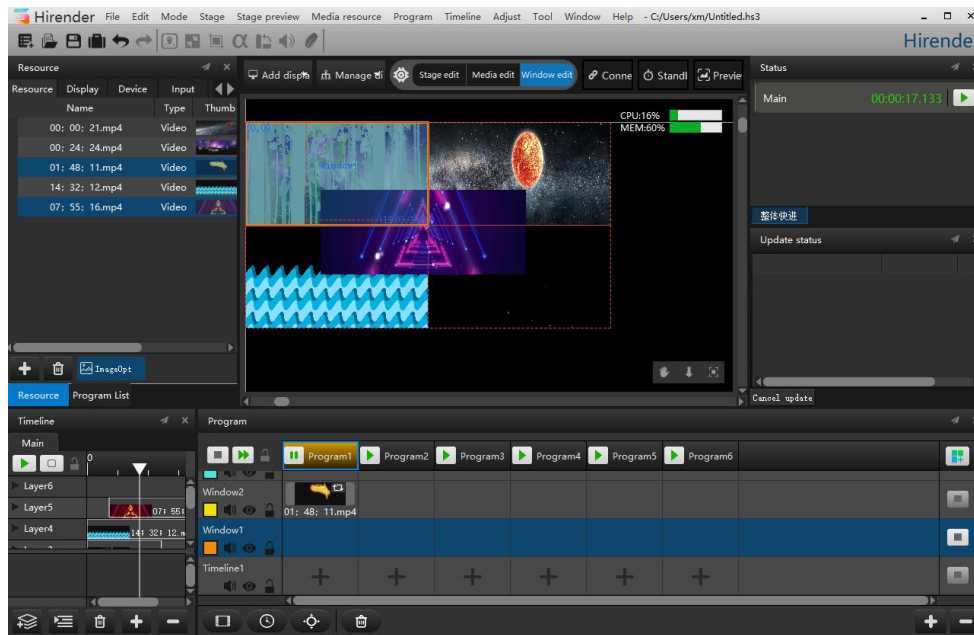
4.93 Window setting

Click on the window to be modified in the program management box to modify the window name, display color, window position and size, window rotation angle and other attributes in the window property box.

There is also a subordinate relationship similar to the layer between the window layers, and the window layer image located above can cover the screen of the lower window layer.

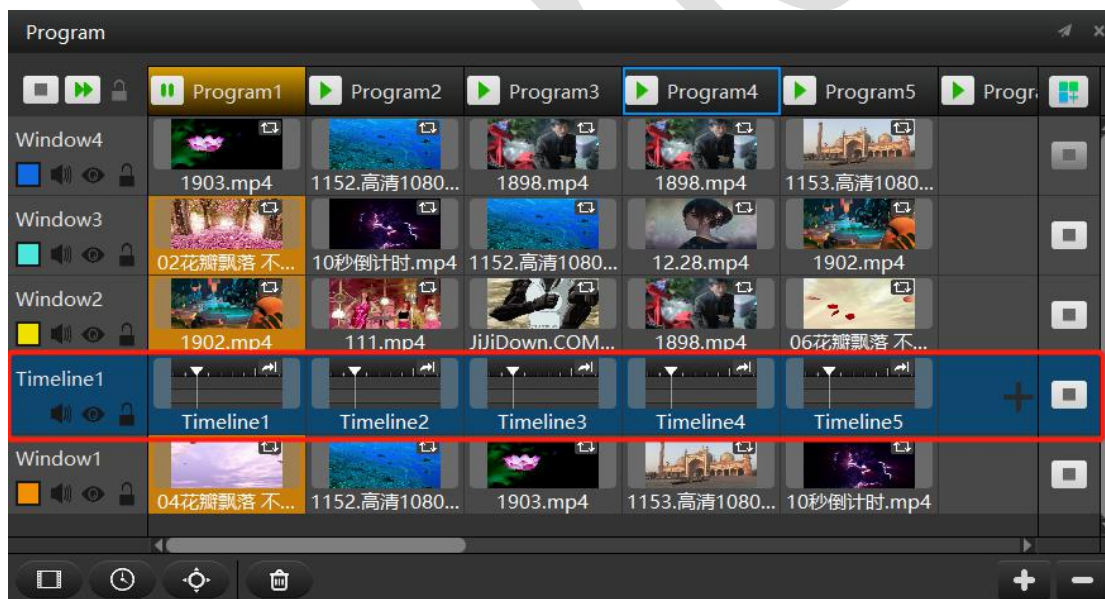
According to the program playback requirements, the media is added in the corresponding window in the program. Set the play order, fade time, and program end conditions of the program.

Select the media to set the clip's cropping, transparency, volume, hue, and saturation properties, whether to loop.



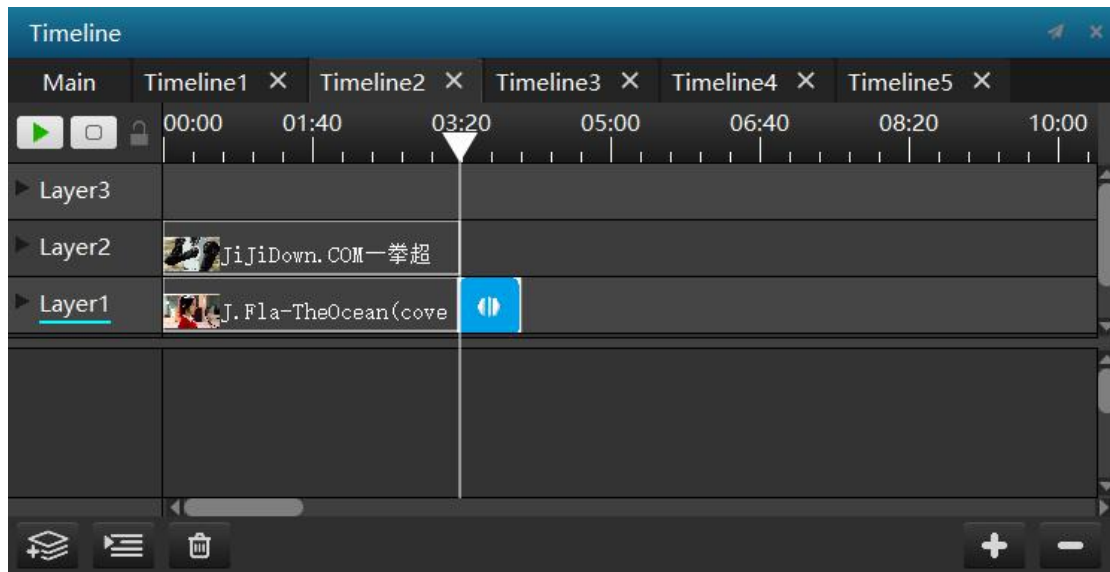
4.94 Timeline Edit

The timeline layer of the same program covers the main timeline. In the program management, the previous timeline layer covers the next timeline layer. Each timeline can be edited just like the main timeline, with media resources arrangement, control command addition, and material attribute addition as required.



Timeline edit:

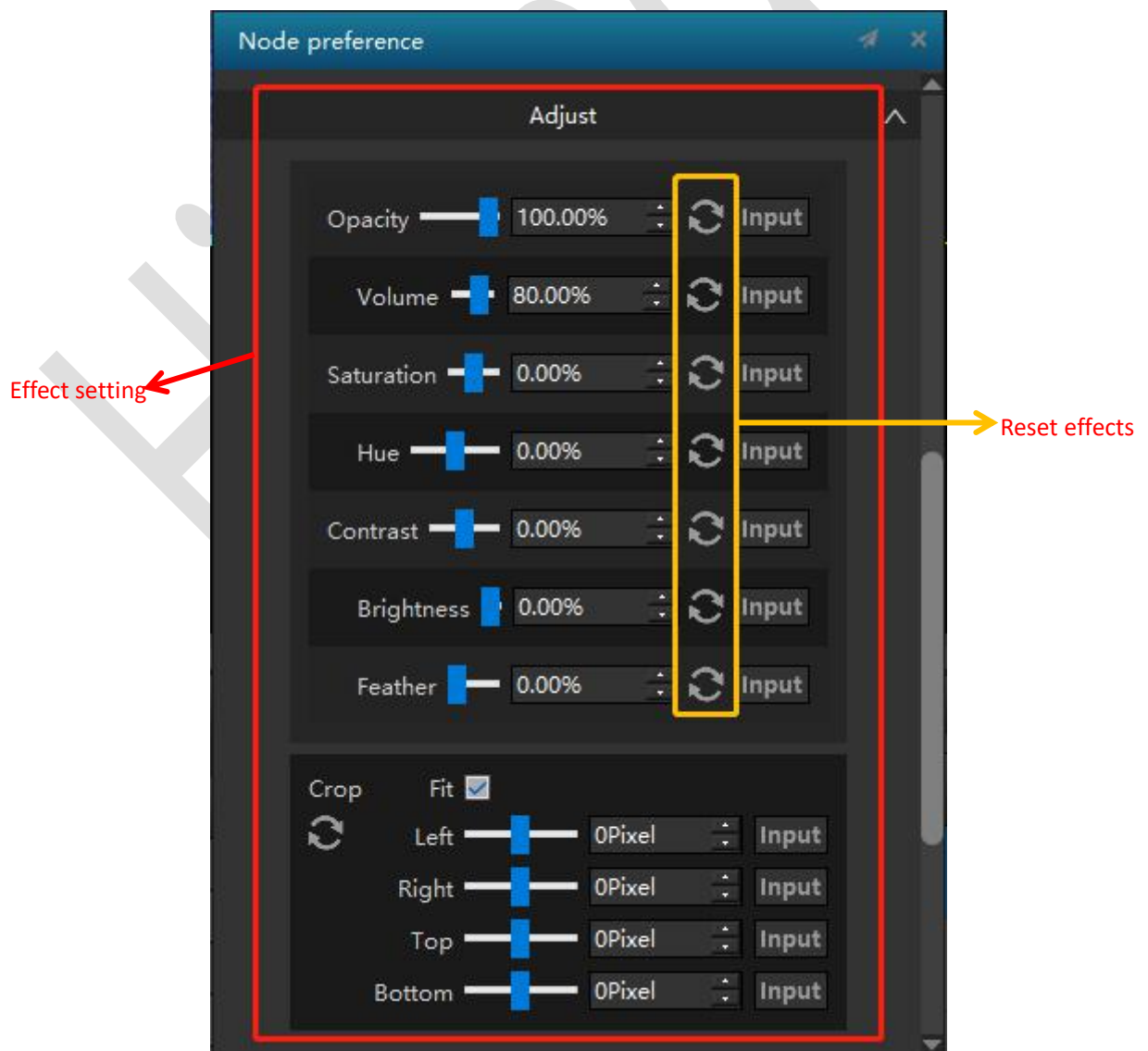
Edit the timeline 2 in timeline layer 1 as shown below.



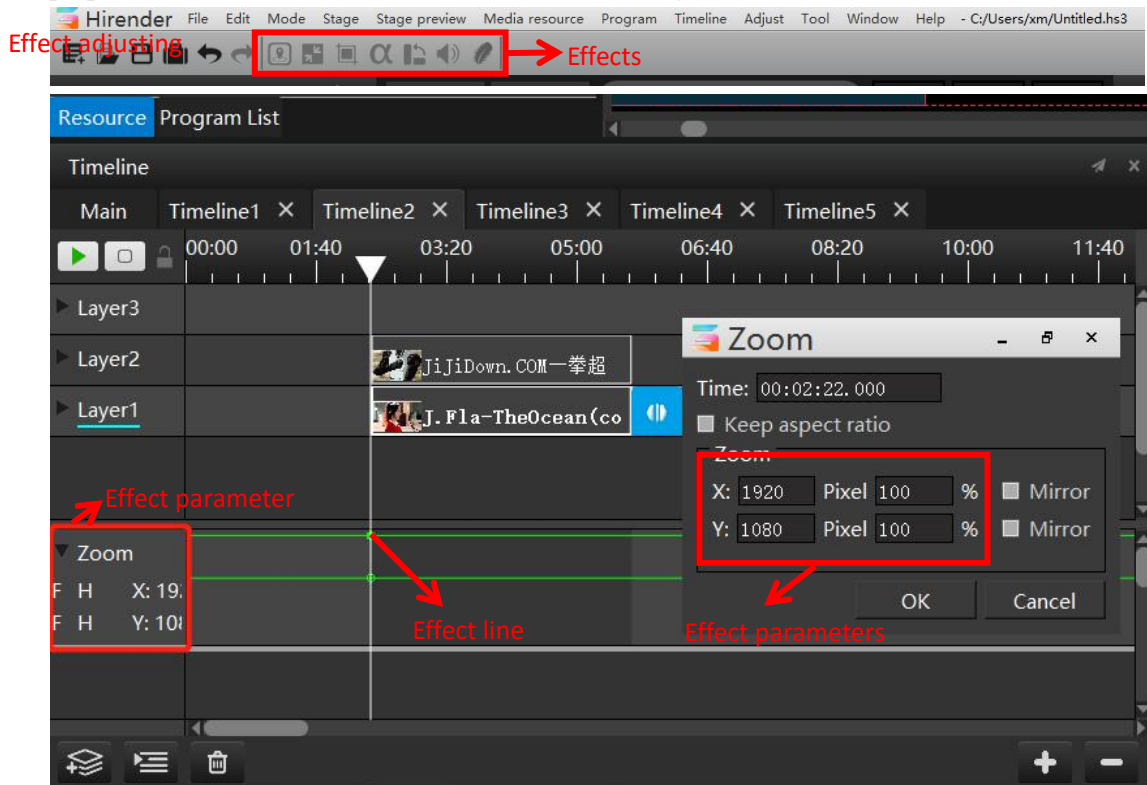
4.95 Effect use

Add effects to media resources and windows, such as rotation, position, transparency, cropping, and more.

① Add effects to media resources in the program node. Click on the media can directly adjust the effect in the attribute.



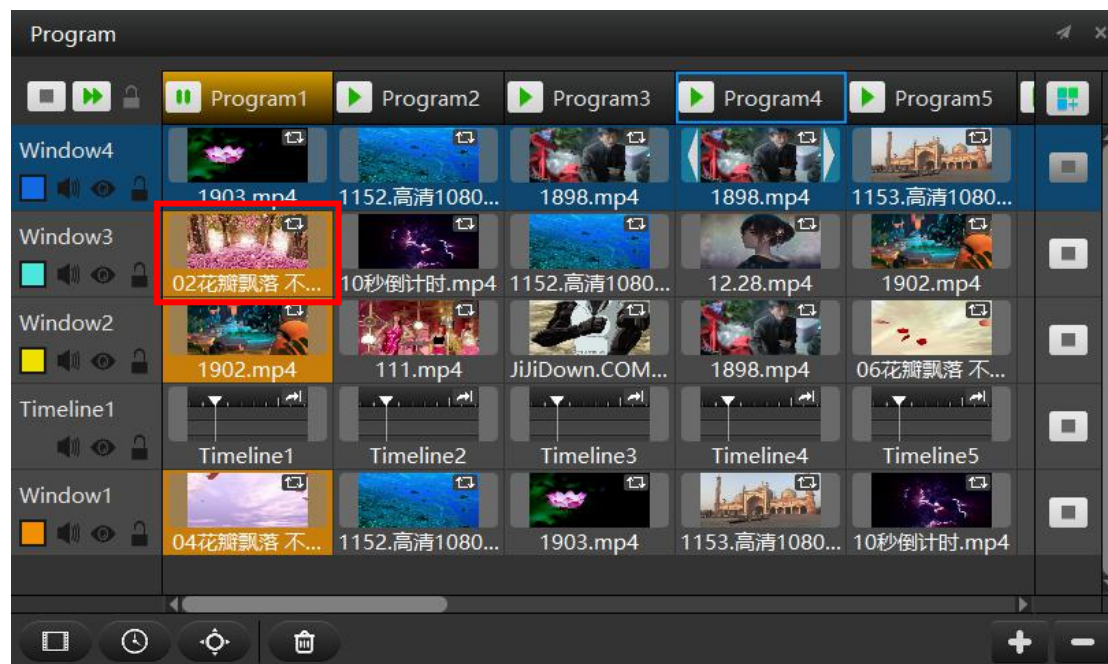
Add effects to media resources on the timeline. After clicking on the media resource that needs to be added effect, click the corresponding effect (position, zoom, crop, transparency, rotation Z axis, volume, feathering) in the effect bar, and the effect adjustment track will pop up. Double-click the effect adjustment track, and entering the corresponding value in the pop up property bar, the media resource will be added accordingly.



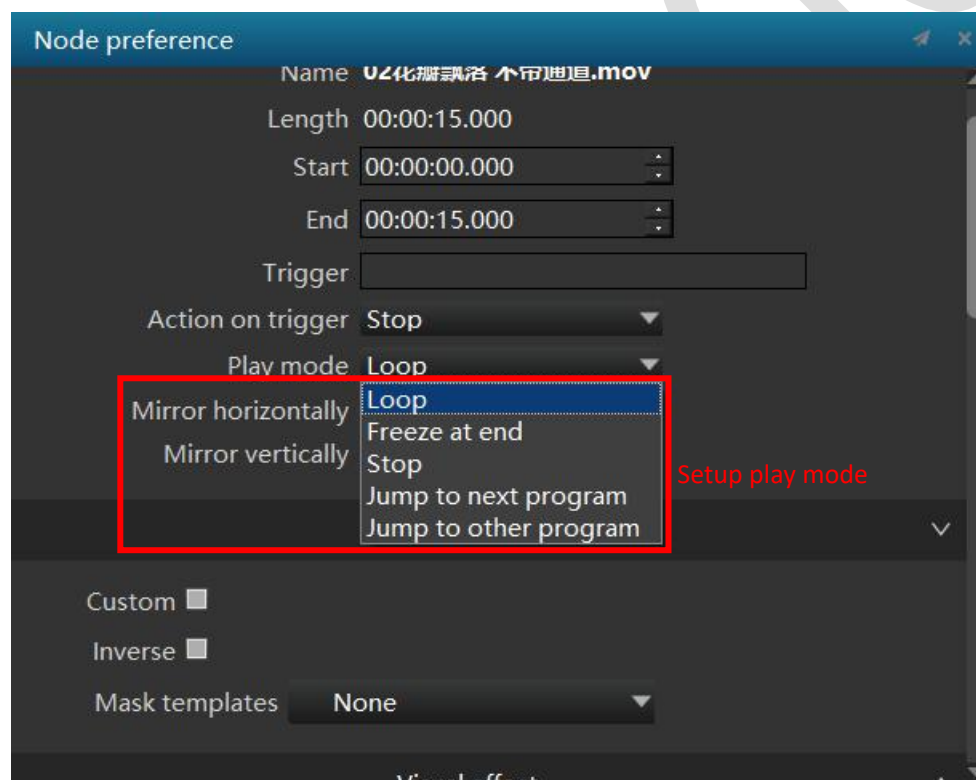
4.96 Program switch

Hirender S3 can switch to any other program after the program is finished playing. Program jump requires two settings.

① Select a video in the program as the time node for the program jump. The end of the playback of the video selected as shown in the red box is the time node for the program 1 to jump to the program 4.



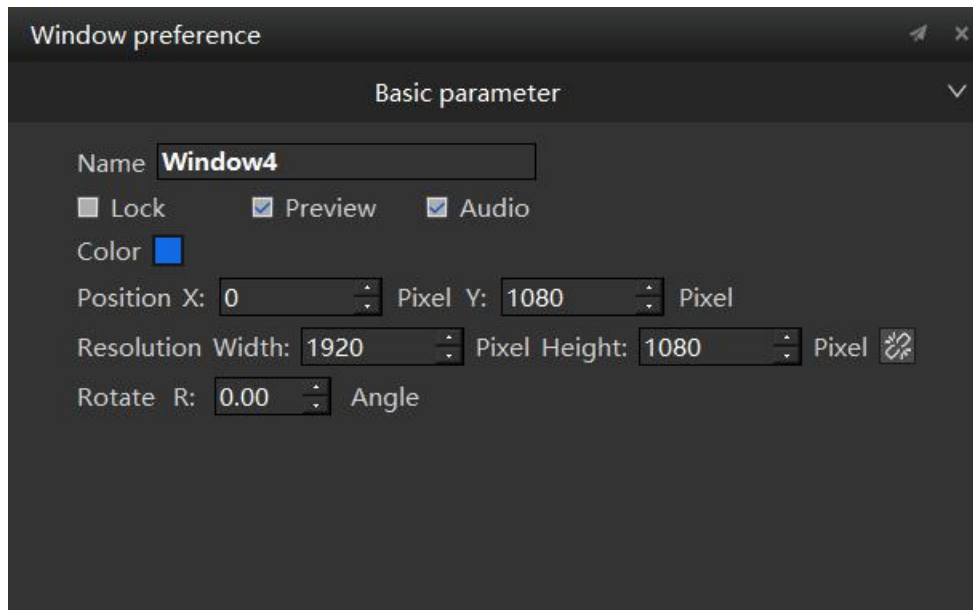
② Click to select the media, and set the playback property to "Jump to next program" in the pop-up display interface.



After the setting is completed, the video can be played and jumped to the next program.

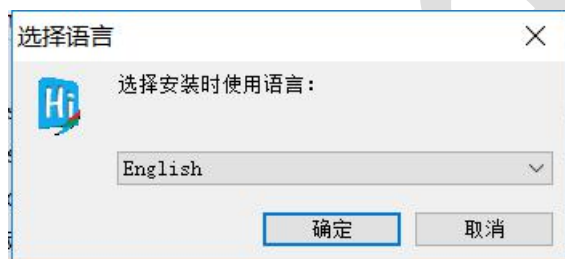
4.10 Properties

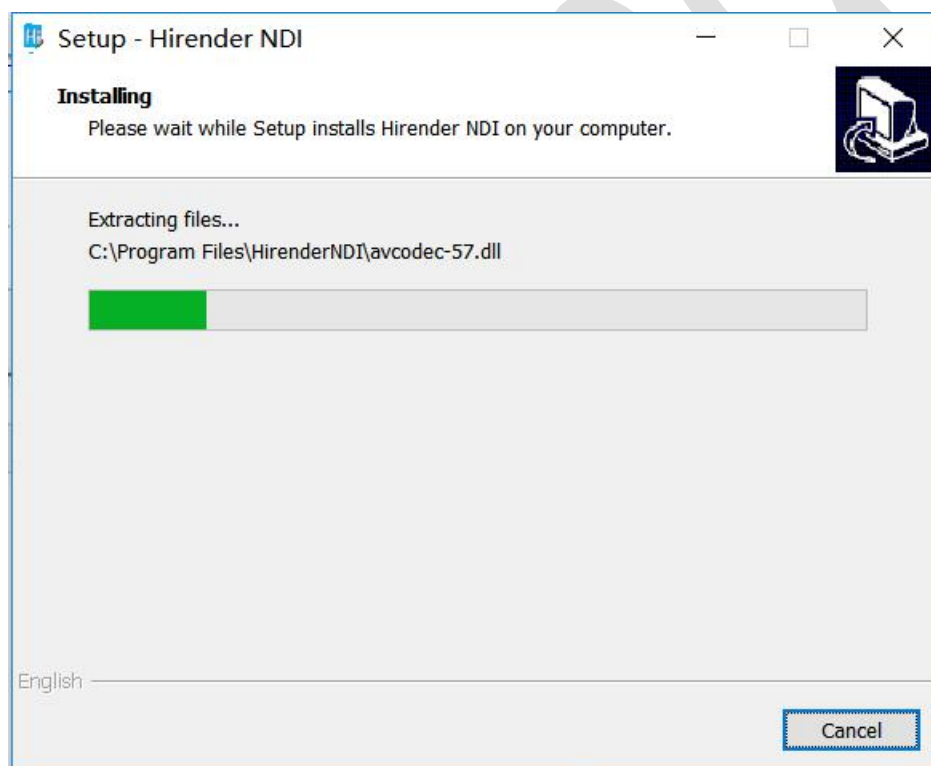
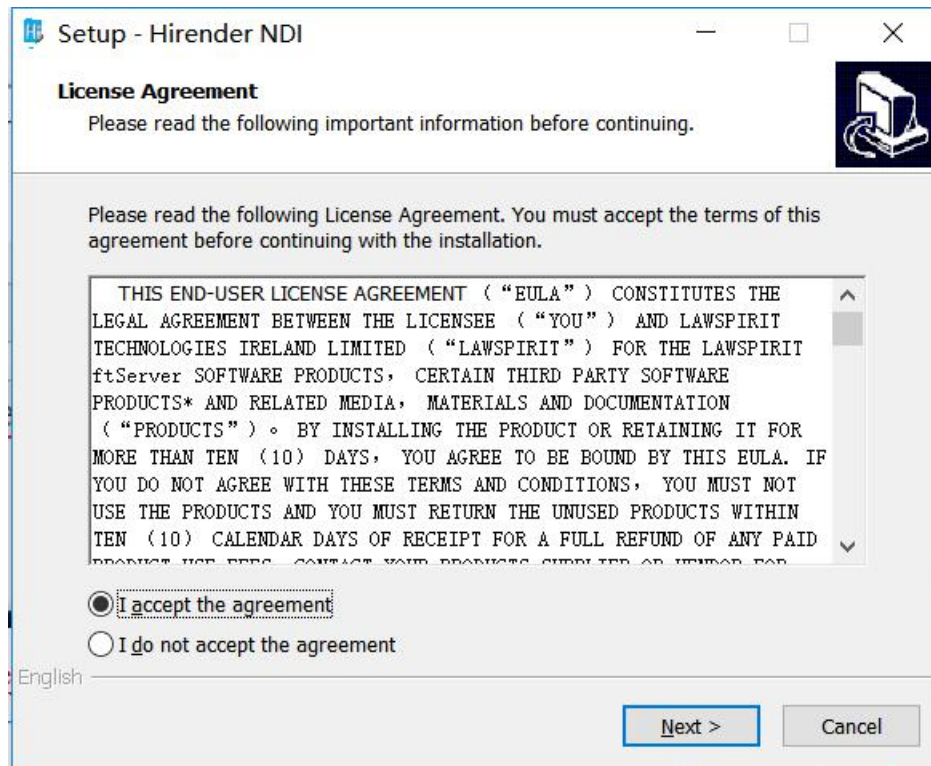
Properties can set preview, sound output, window default color, rotation, etc.



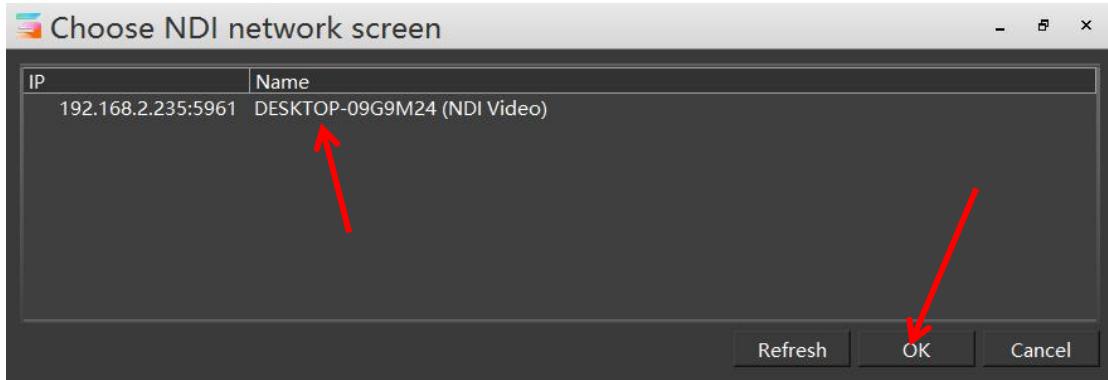
4.11 NDI capture

① Hirender NDI software Installation. Click the default installation to complete, as shown below:





② Install the Hirender NDI software on the computer being collected. After installation, open Hirender NDI in the start menu bar and select the screen video source and recording device, as shown below:



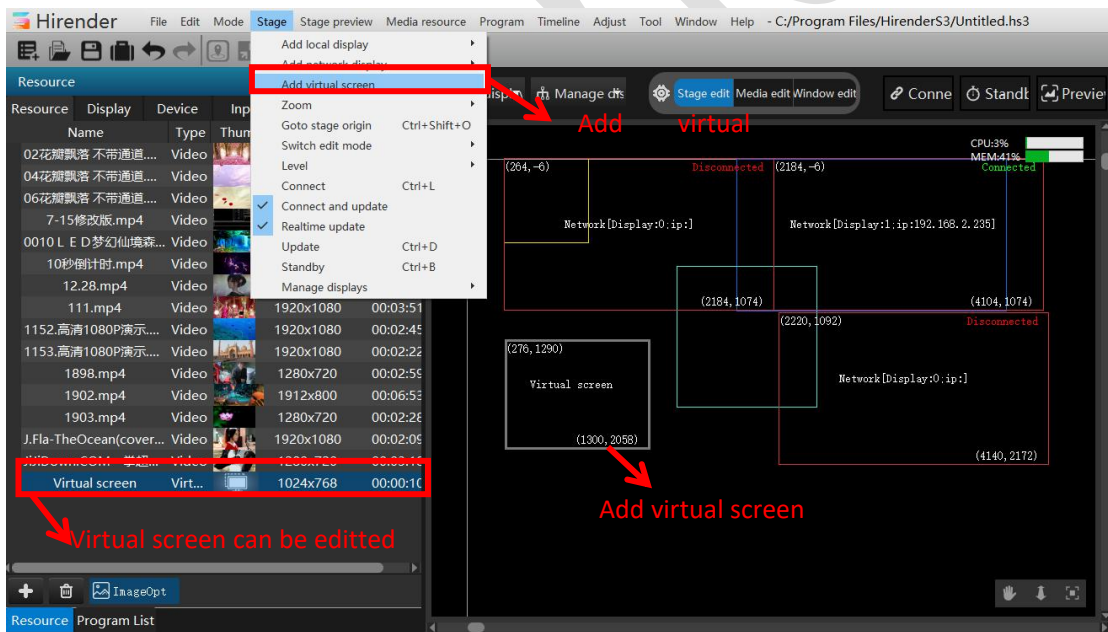
4.12 Virtual screen

Virtual screen description:

The virtual screen is to collect and play the programs in the stage management in real time. Virtual screen size, rotation and other effects can be adjusted freely, such as camera stitching, camera close-up, live capture, and special-shaped screen playback.

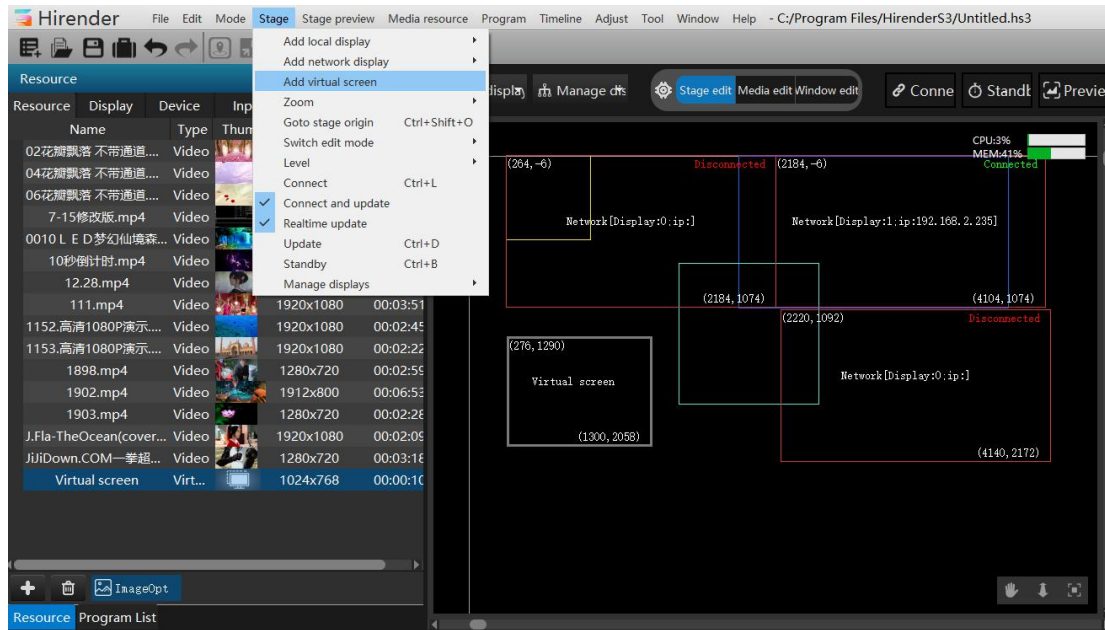
Add a virtual screen:

Add the virtual screen to the resource management window by selecting "Add Virtual Screen" from the Stage menu.

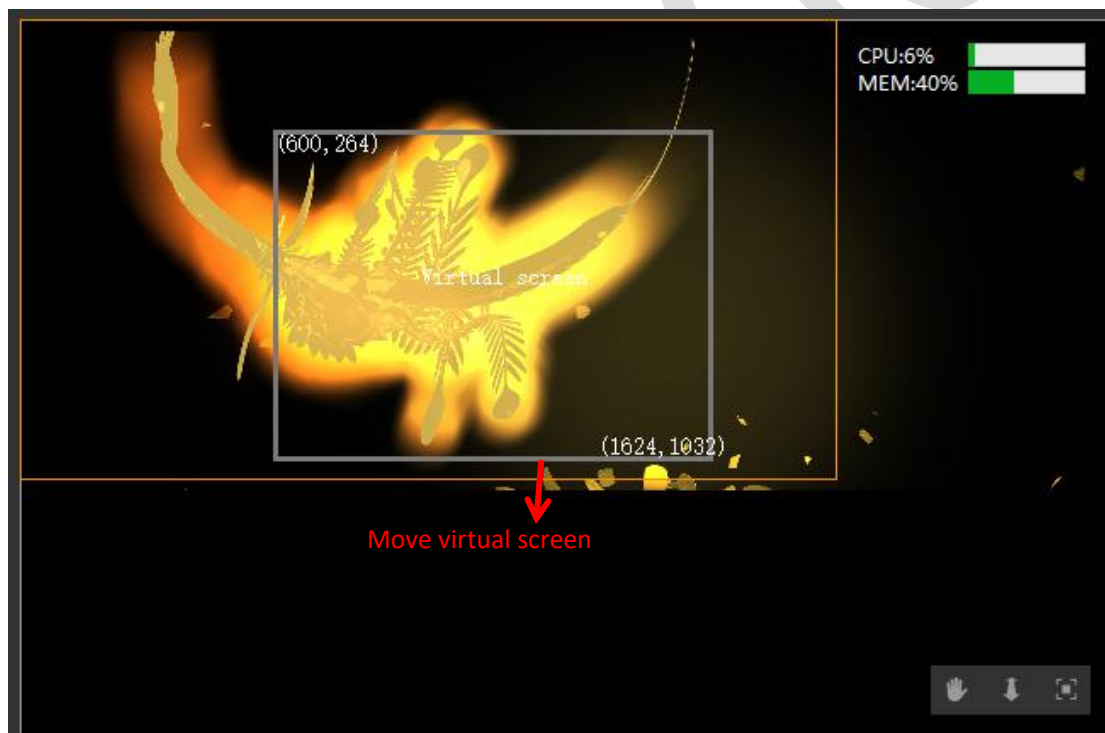


The virtual screen displayed in the stage management is a window for collecting media resources in real time. Add the media you want to capture the live show in the stage management to the stage management. Then, in the stage editing state, double-click Virtual Screen in the stage management to set the parameters such as the size, position, and angle of the virtual screen.

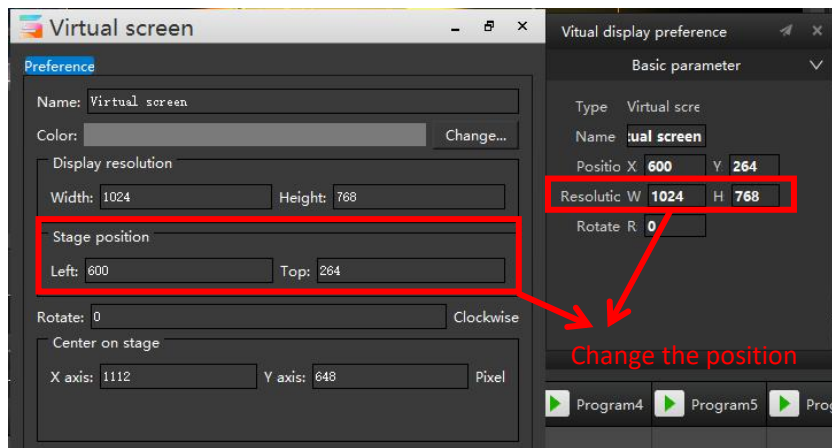
Click the virtual screen, or click the screen management menu in the resource window and double-click the virtual screen option displayed in the management menu to set the size, position, angle and other parameters of the virtual screen.



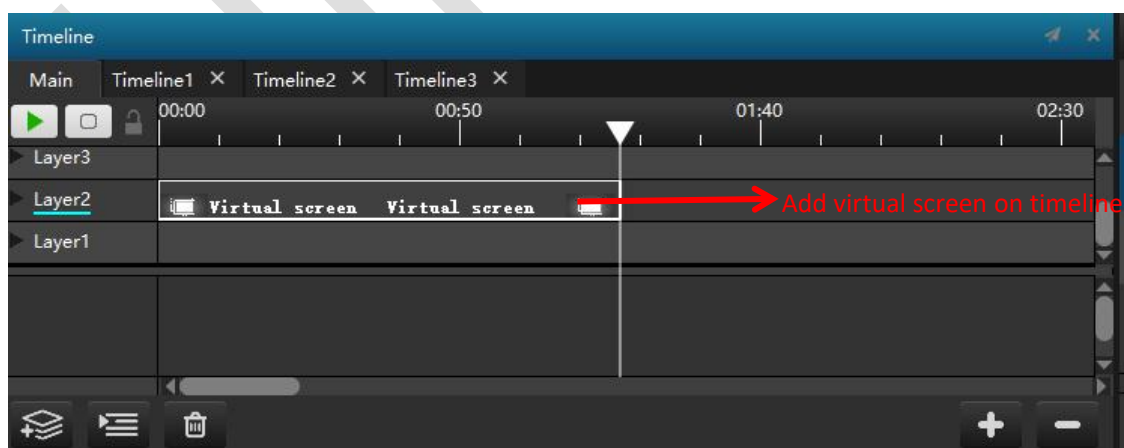
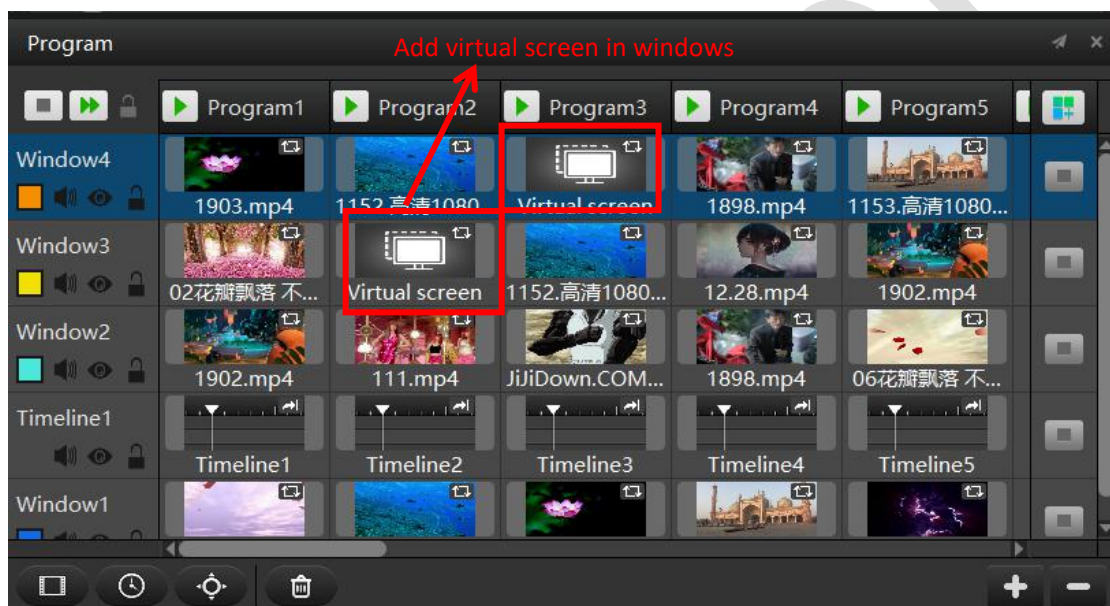
Then in the Stage Edit mode, click on the virtual screen in Stage Management to drag to the desired position.

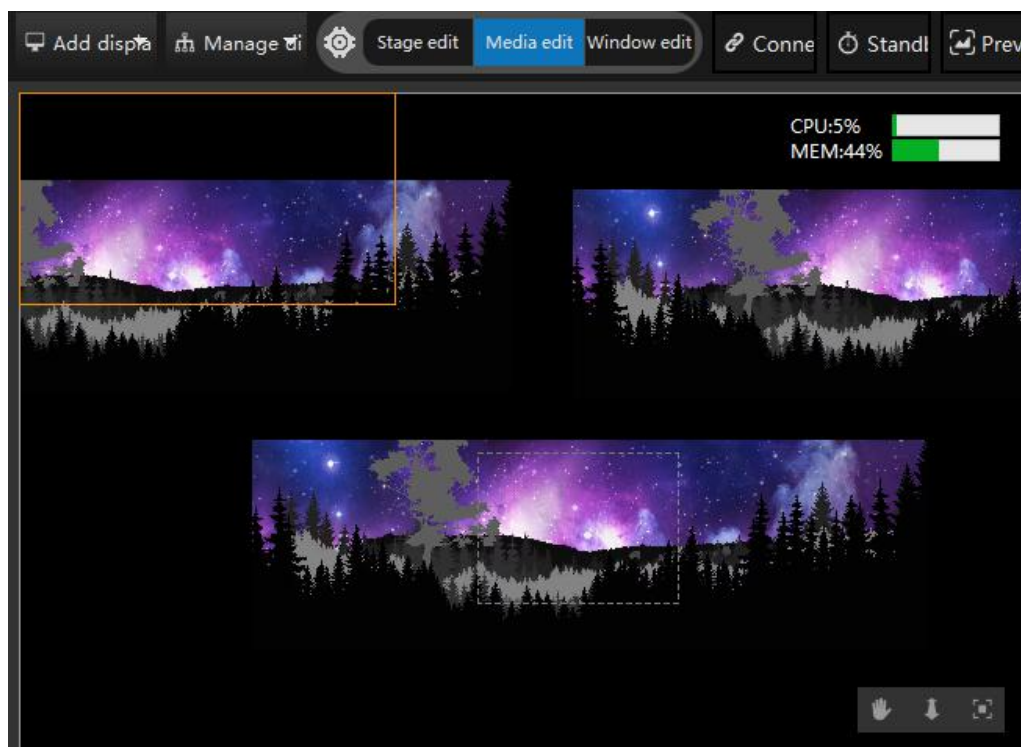


You can also enter coordinates directly in the virtual screen properties to change the position.



The media resource of virtual screen is then added to the timeline or added to the program list in the program management.



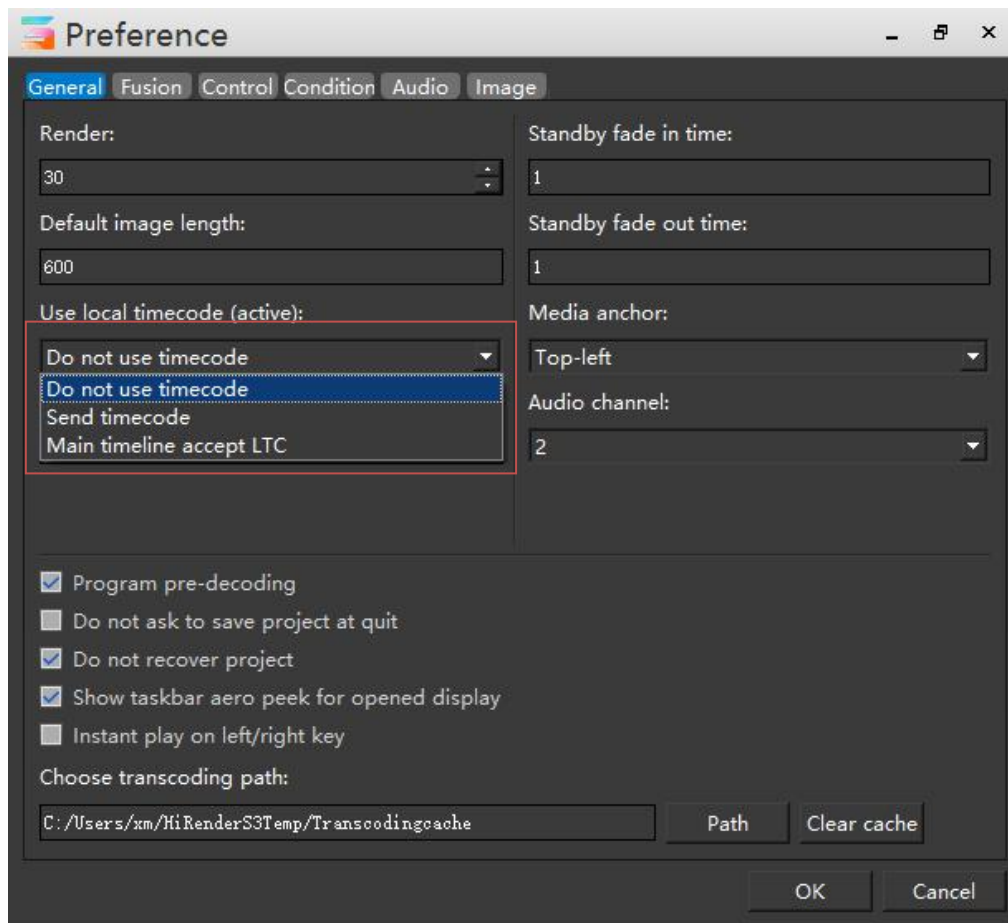


It is possible to play real-time captured media now. The methods of adjusting position, size and effect are the same with adjusting the media resources.

4.13 LTC synchronization time code

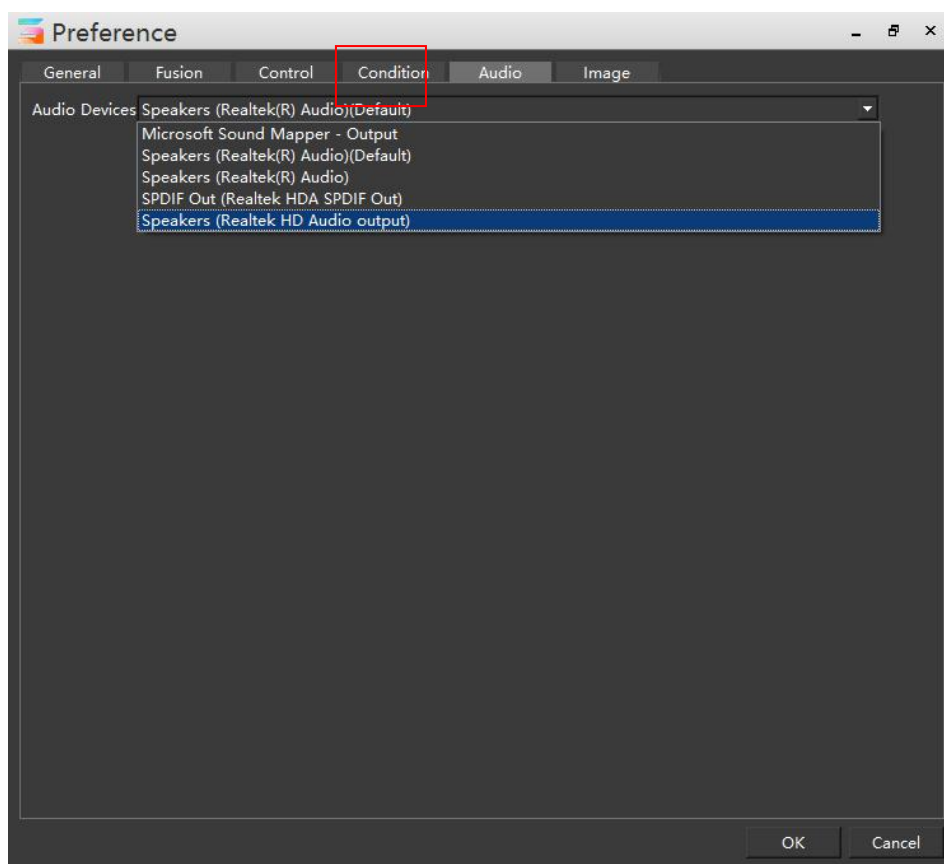
Synchronization of lighting, audio and video can be achieved by synchronizing time codes. The main timeline of the Hirender S3 software can accept the LTC audio sync time code, and the light console can also receive the audio sync time code. The S3 software and the light console receive the same audio time code sent by other software or the sound console, and its own time line follows the audio time code synchronously to achieve synchronous playback of sound, video and light.

The specific setting operation is as shown in the figure below: In File-Setting-Use local time code, select "Main timeline accept audio time code".



After the setting is completed, connect the audio line of the audio station to send the audio time code to the 3.5 audio input port (microphone interface) of the server, and then the microphone volume modulation can be maximized.

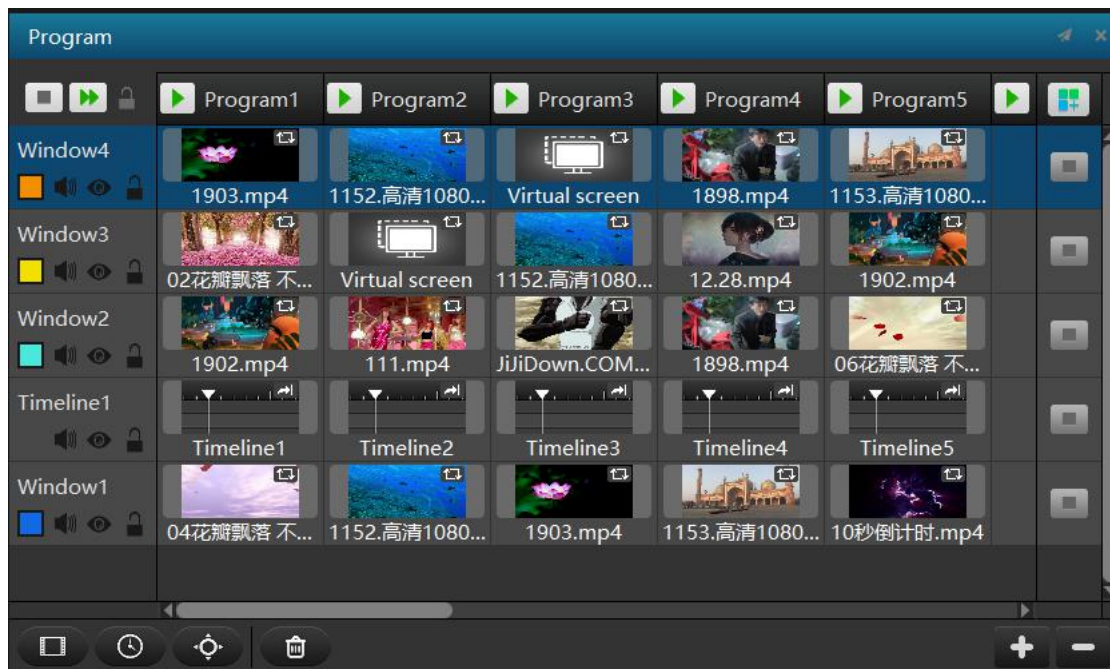
4.14 Sound card select



The Hirender S3 software can choose the audio playback device independently. All connected audio devices will be listed in the software, and can be set directly through the software. It is not necessary to select the settings in the computer system.

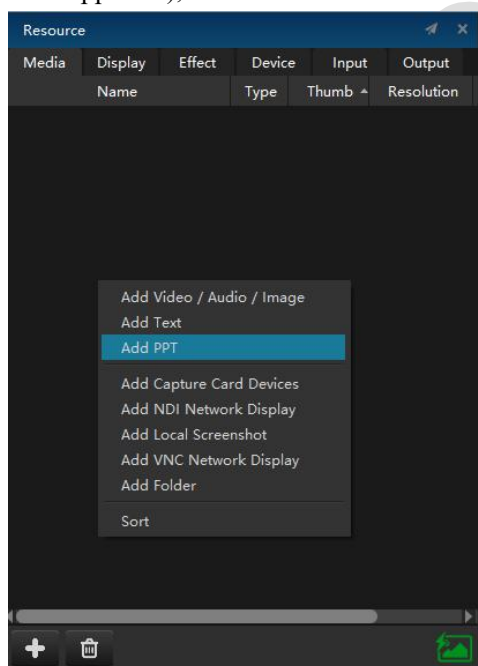
4.15 Fast play and page pen control

For all the programs that have been added and edited in the Hirender S3 software, you can use the up and down keys of the keyboard to switch the previous/next program and play it automatically. The up and down keys of the flip pen also correspond to the up and down keys of the keyboard, so that the switching of the program can be controlled by the flip pen. The left and right buttons of the keyboard can also be used to switch the previous/next program by checking the left and right arrow keys in the software settings.

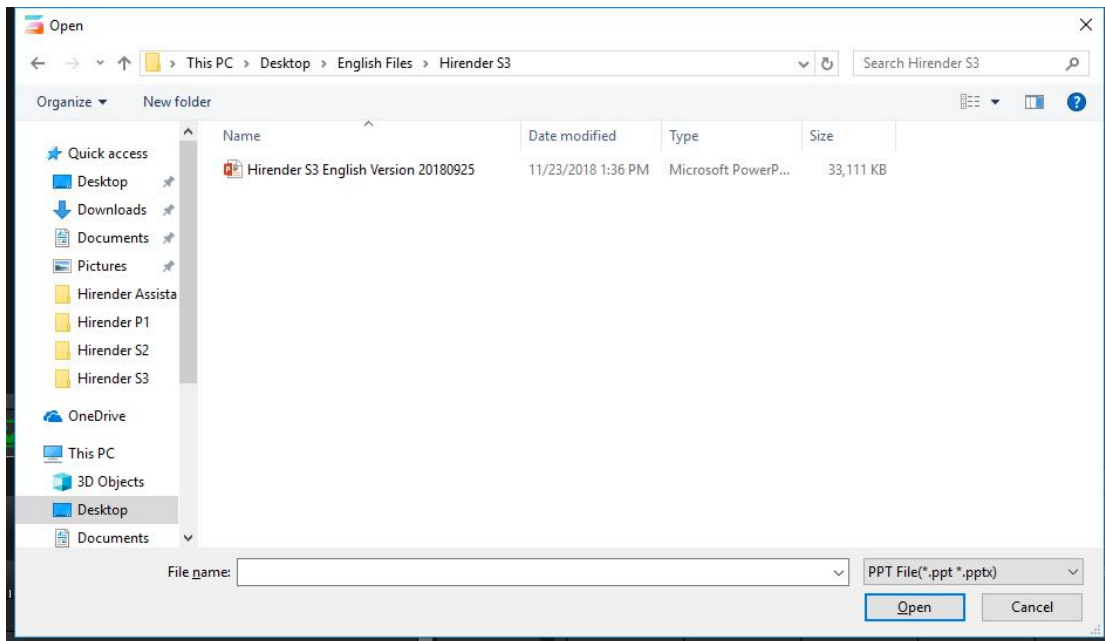


5. PPT

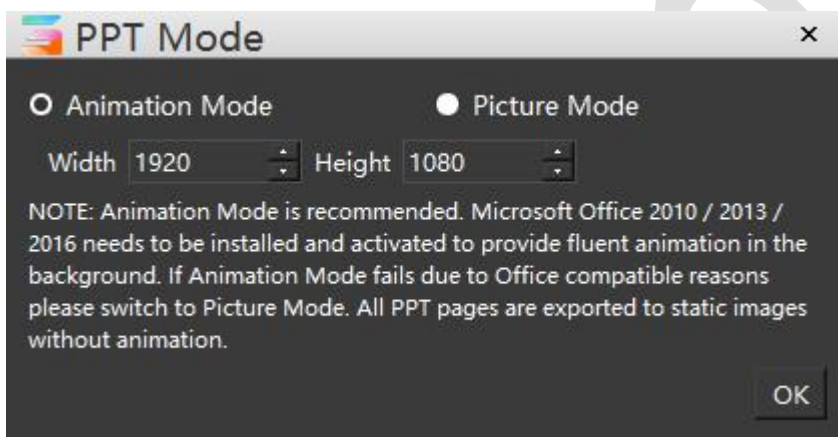
1. Add PPT directly, then play PPT on the software window. (note: Genuine version of office 2013 (64-bit) and above is installed on the computer to run the Hirender S3 (office365 is not supported), and make sure that PPT is activated and able to open and play.



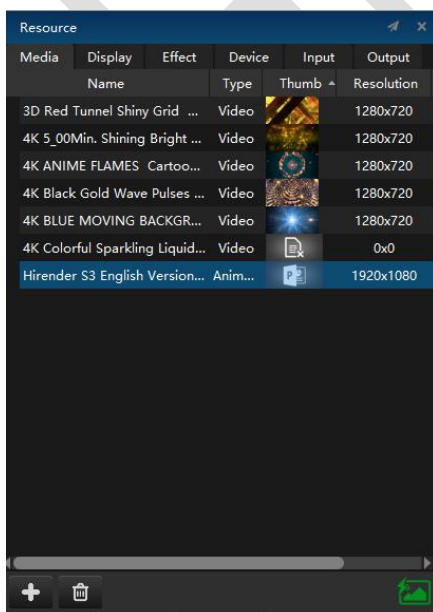
2. Select the PPT:



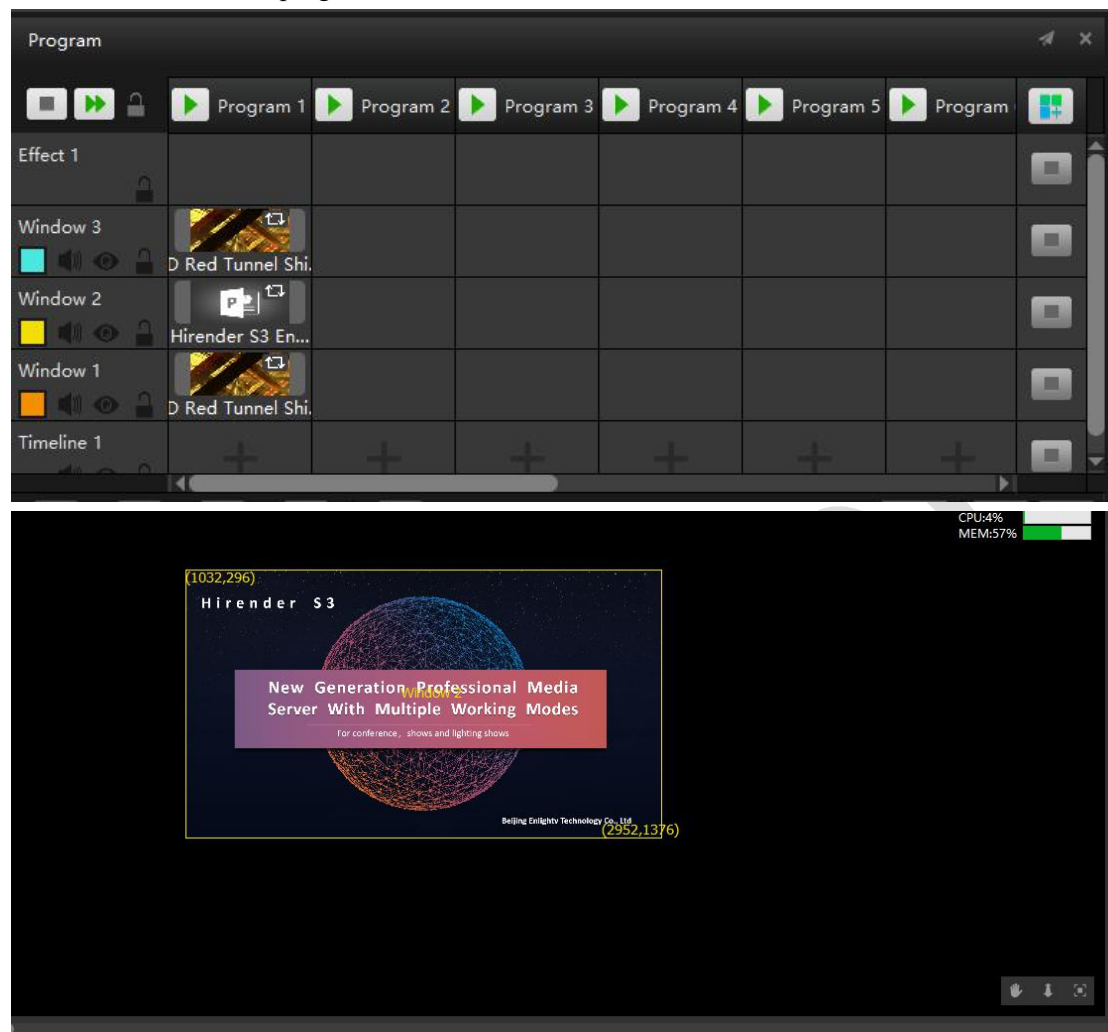
3. "After selecting PPT, set the resolution of the PPT on pop-up window, PPT and so on:"



4. The added PPT will be displayed in the property resources window after the setup is complete



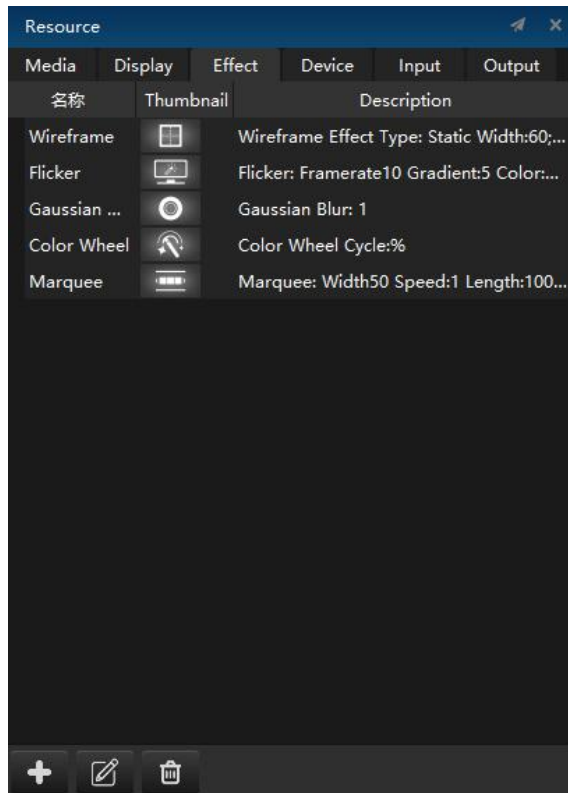
5. Add the PPT to the program window and edit:



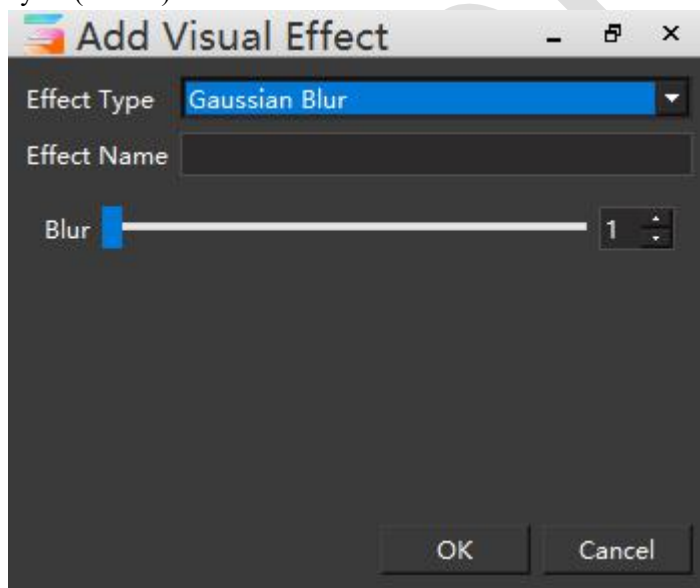
6. During the playback, the PPT can be switched by pressing the arrow keys of the keyboard, which is consistent with the normal use of the PPT. During the playback, the PPT can be switched by pressing the arrow keys of the keyboard, which is consistent with the normal use. As shown in the above figure, the PPT button in the button activation state (green), PPT page playback is applicable to the global, regardless of the current window selected by the software, the role of the direction button is used for PPT page playback. When the PPT button is in the inactive state (black), other programs without PPT files are played in the program management, and the arrow keys resume the switching program function.:

6. Program effects

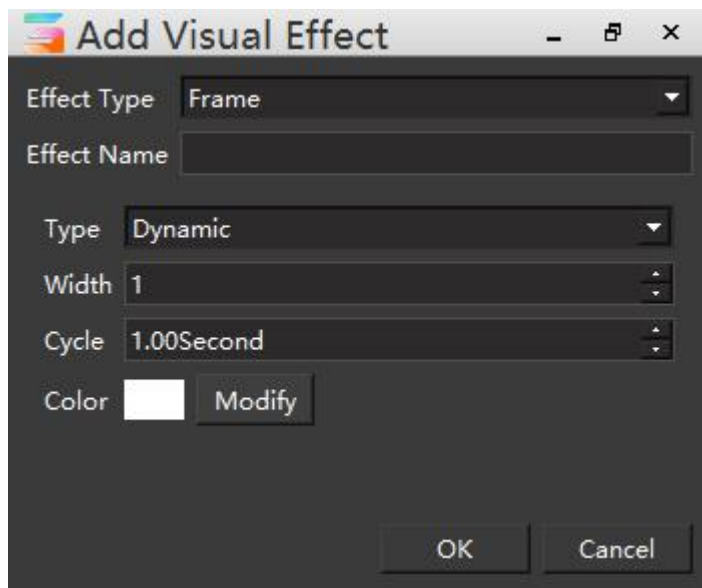
The effect function can make the output transform flexible, presents the more splendid effect. Effects include: Wireframe Gaussian Blur, Flicker, Color Wheel, Marquee. By default, Hirender S3 creates Wireframe Gaussian Blur, Flicker, Color Wheel, Marquee effects that can be set according to usage.



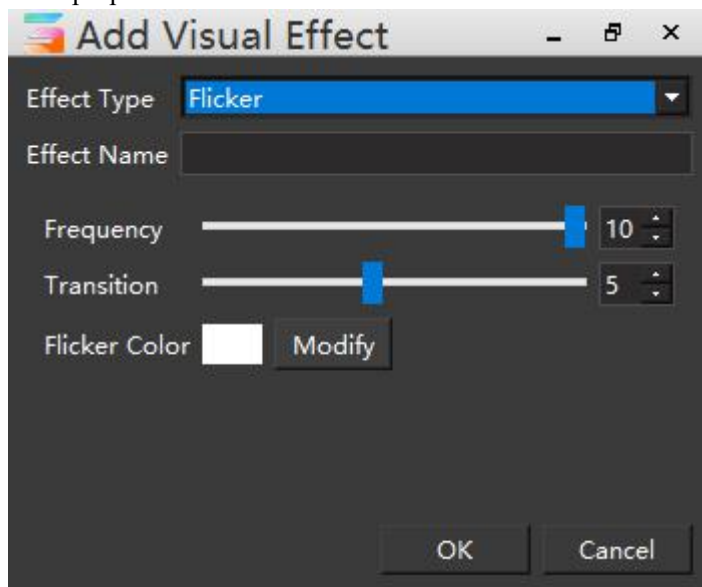
Add / Set wireframe effects: sets the effect name, wireframe width, type, color, and wireframe cycle (second).



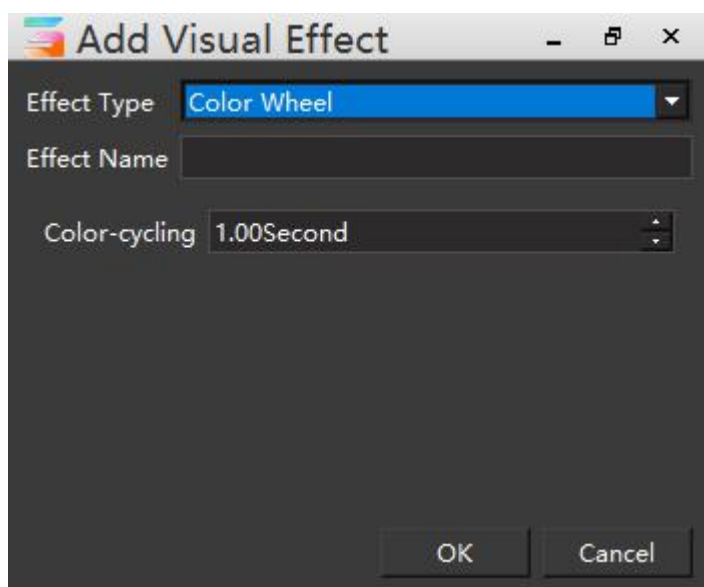
Add / Set Gaussian Blur effects: sets the name and blur of the effects.



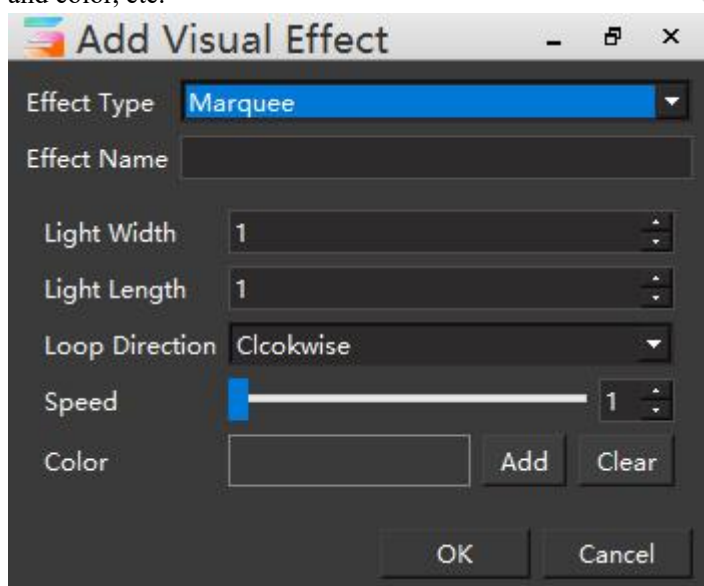
Add / Set Flicker effects: sets the name of the effect as well as the frequency, gradient, color, and other properties.



Add / Set color wheel effects: sets the effect name and color wheel cycle (second), color wheel effects for rainbow seven color rotation.



Add / Set Marquee effects: set effects name, strip width and length, direction of circulation, speed and color, etc.

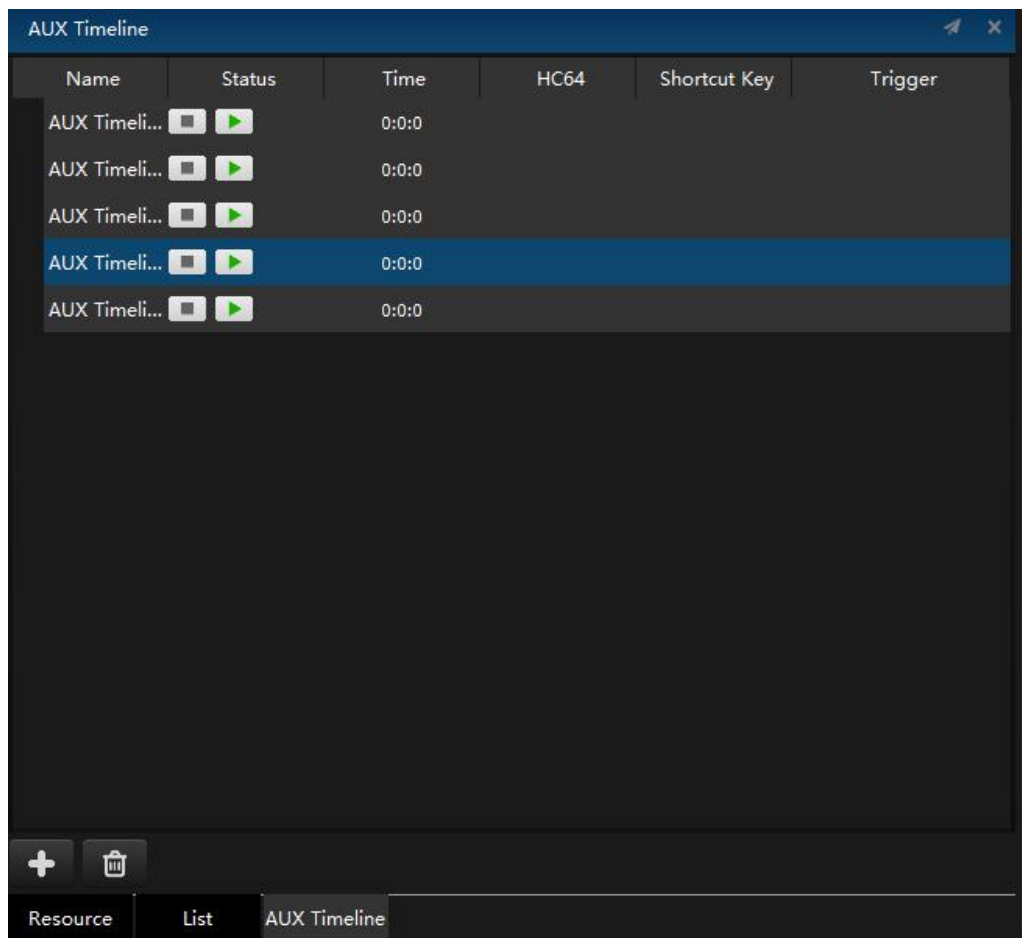


Hirender S3 software adds all the special effect effects by default. In the interface management of S3 software, special effects layer is added. Each special effect layer can add different special effect, and special effect can also be combined. The effects layer applies special effects (except PPT) to all of the programs and timeline layers below it, so you can adjust the layer order to achieve flexible effects control and combination.

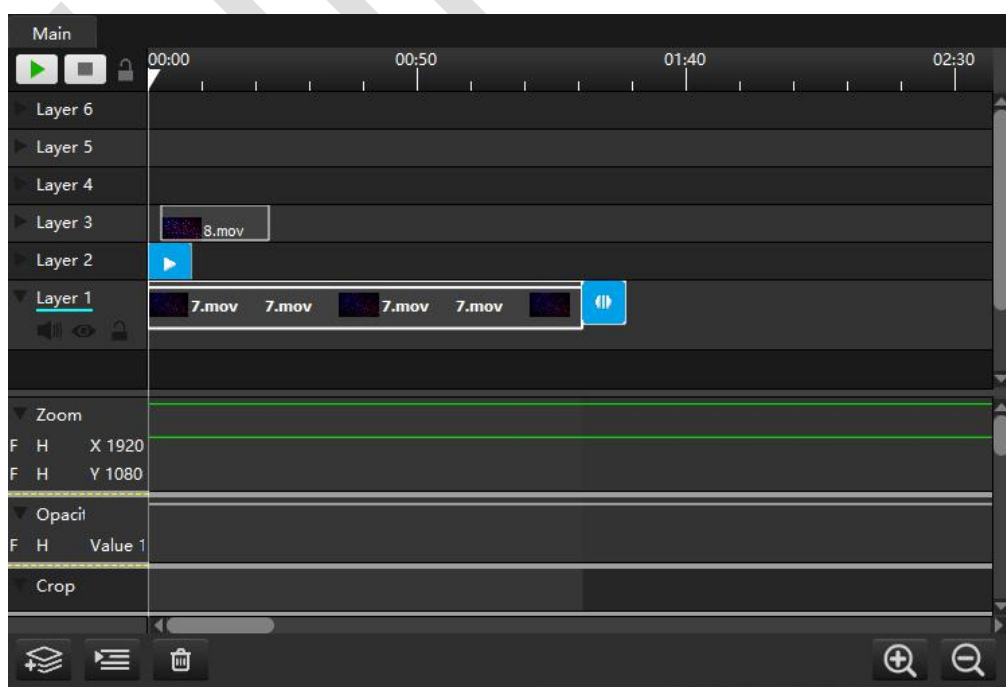
7. AUX timeline

Hirender S3 software adds AUX timeline function. The AUX timeline has higher priority than the main timeline and all the programs in the program management. When the content of the program is played, it will be displayed at the top of the screen, covering the main timeline and the video screen.

As shown below:



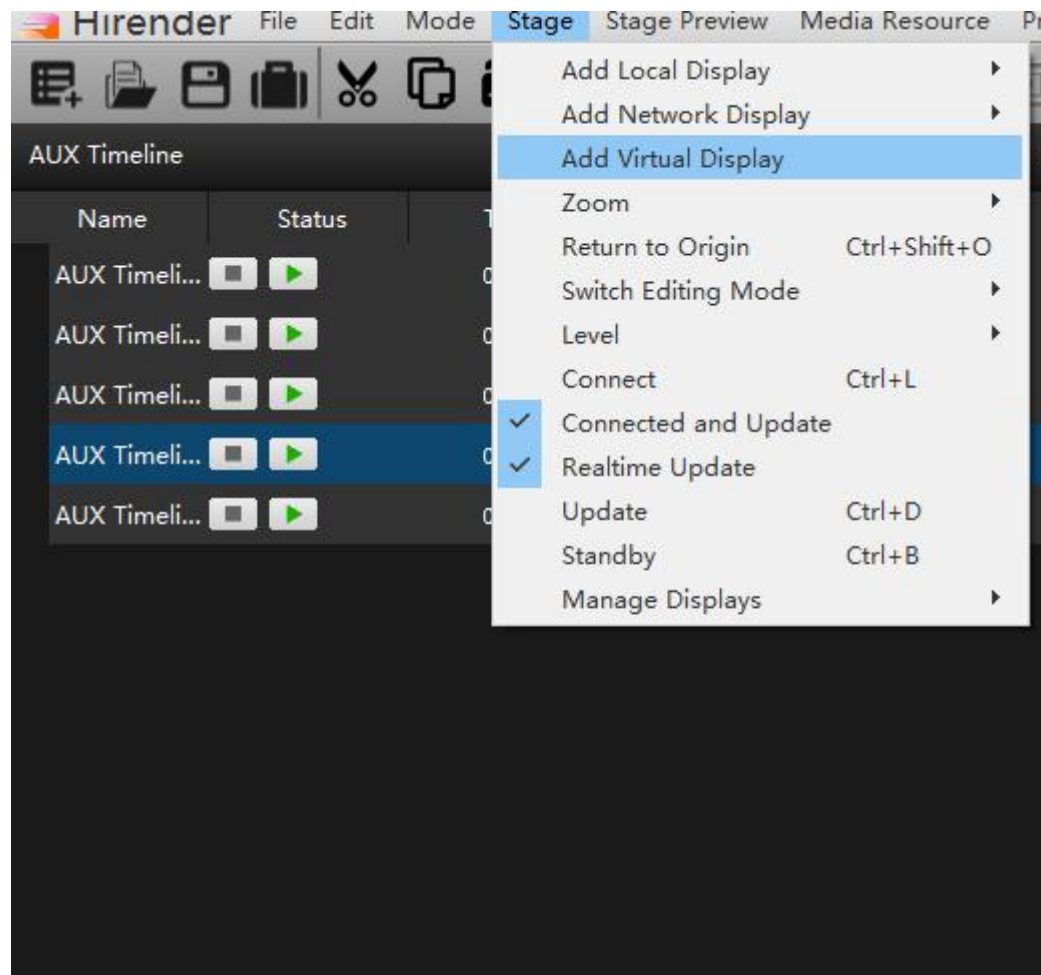
Edit the content of a program insertion: double-click to created display, the timeline of the AUX timeline at the location of the main timeline, select the timeline of the AUX timeline, and add the display content to the timeline. And has been added to the timeline of the material fade in and out, position, zoom, crop and other properties of the settings. You can also set the playback mode (loop, seek and so on).

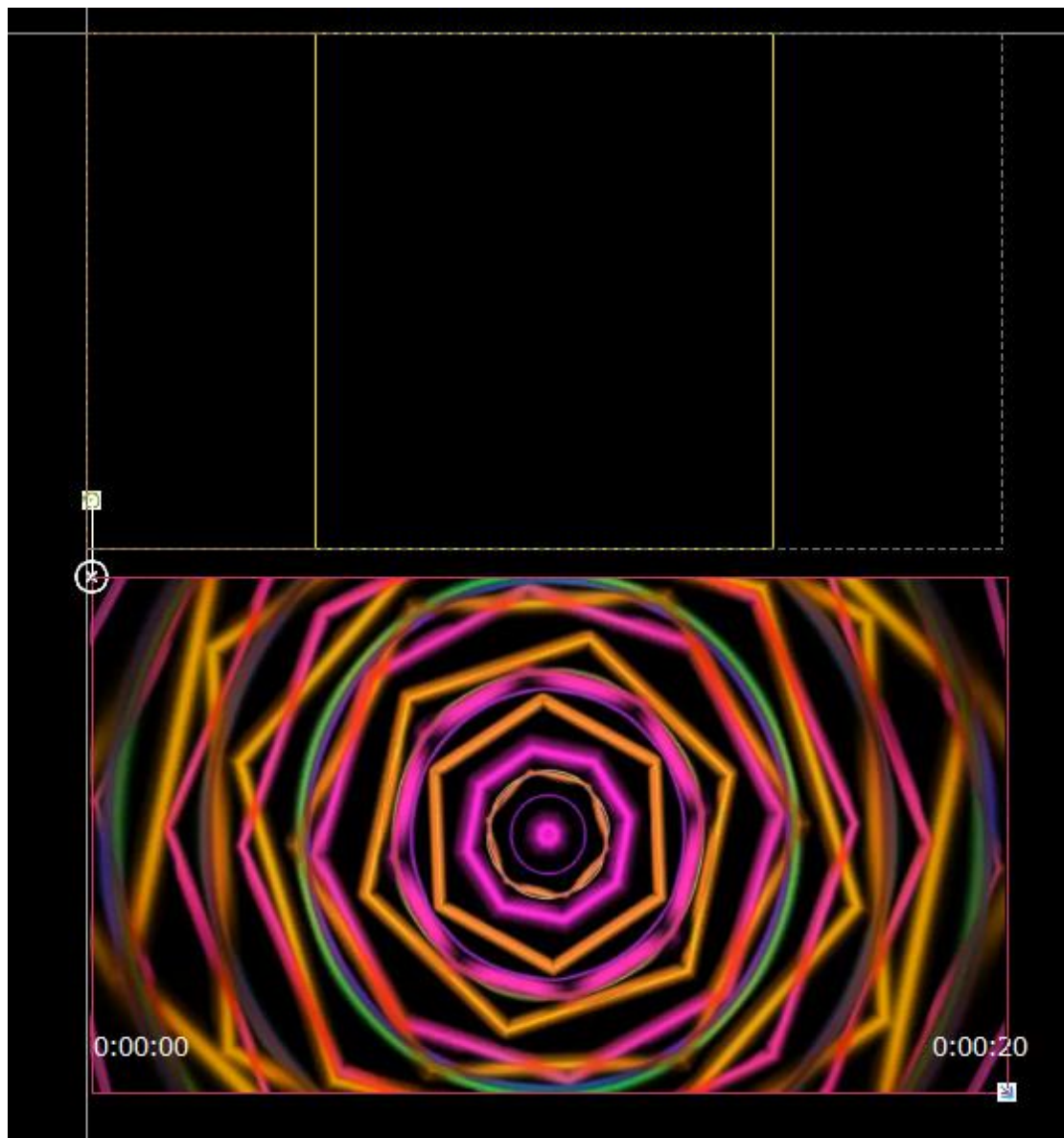


8. Slice function

Slice function is added to the virtual display of Hirender S3, which can cut the material selected by the frame of the virtual display and correct the output picture, transform the vertices and splice each slice content. Mainly used for irregular screen.

Create virtual display and change settings resolution, position, order



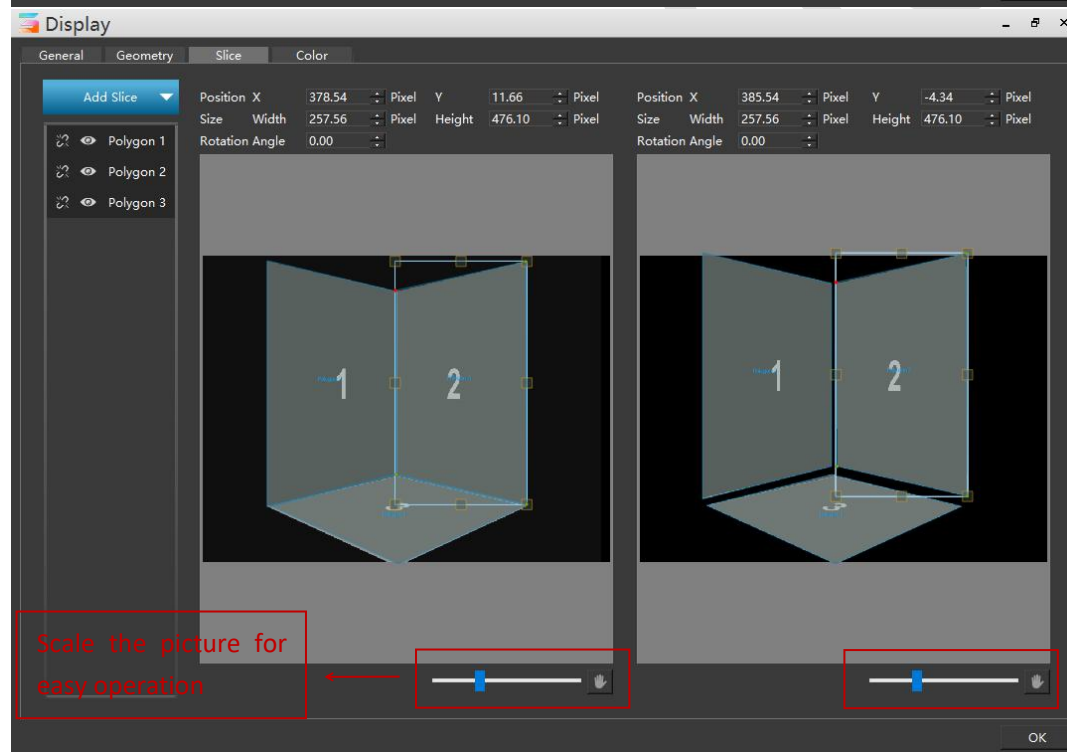
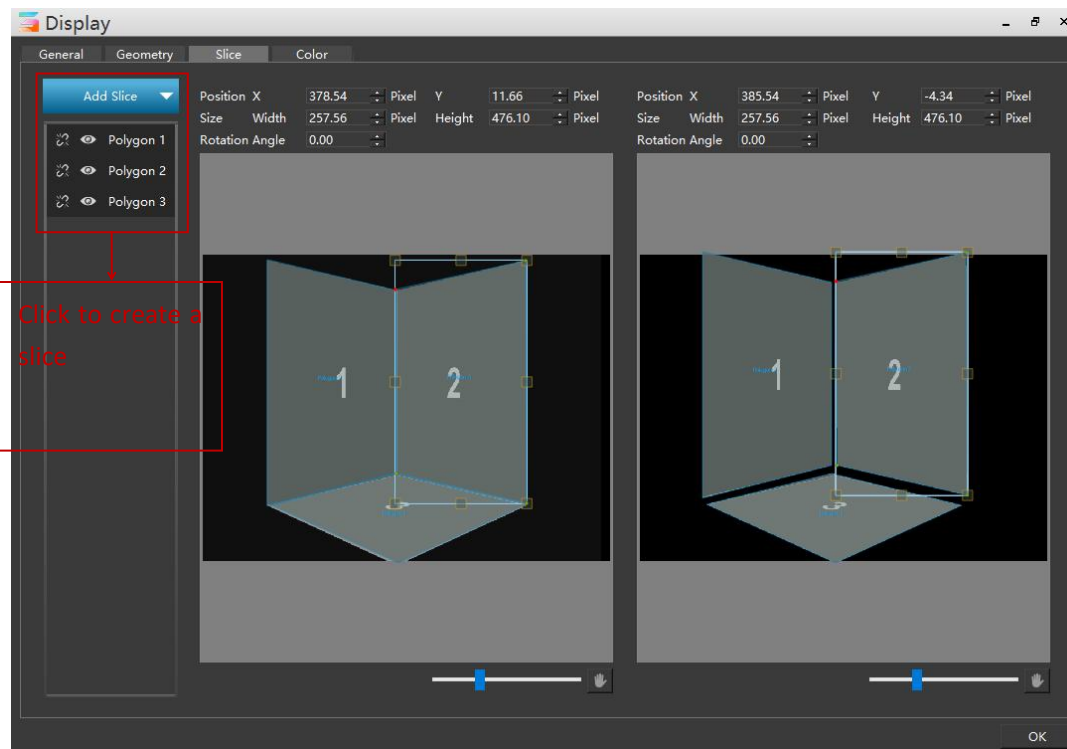


Add slices to the virtual display and video segment.

Double-click the virtual display to create a slice in the pop-up box and divide the screen in the virtual display.

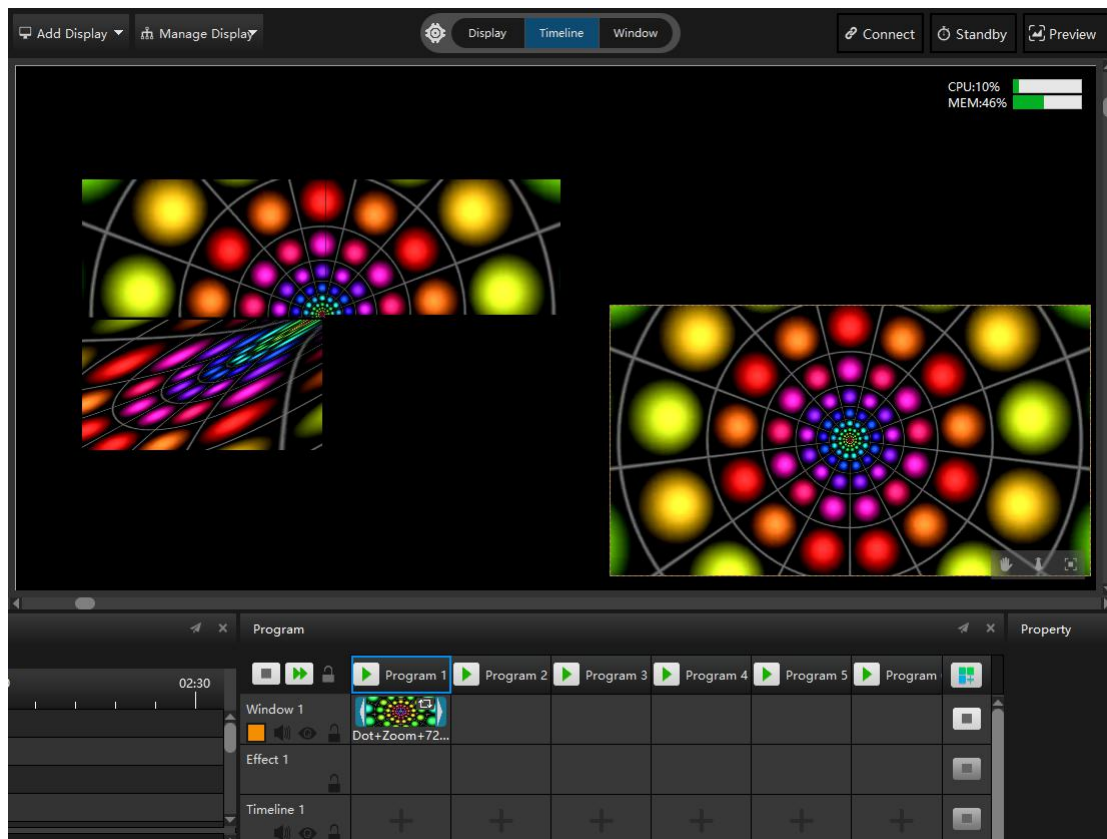
Add ordinary rectangular slice, select the corresponding point, press the CTRL+ key to move, but also the contents of the slice can be rotated and other operations.

To add a polygon slice, you need to stroke with a pen, and end up with back to the start point. You can select the point where you want to adjust the position by pressing the arrow keys to move the corresponding point. To make the cutting screen more accurate.

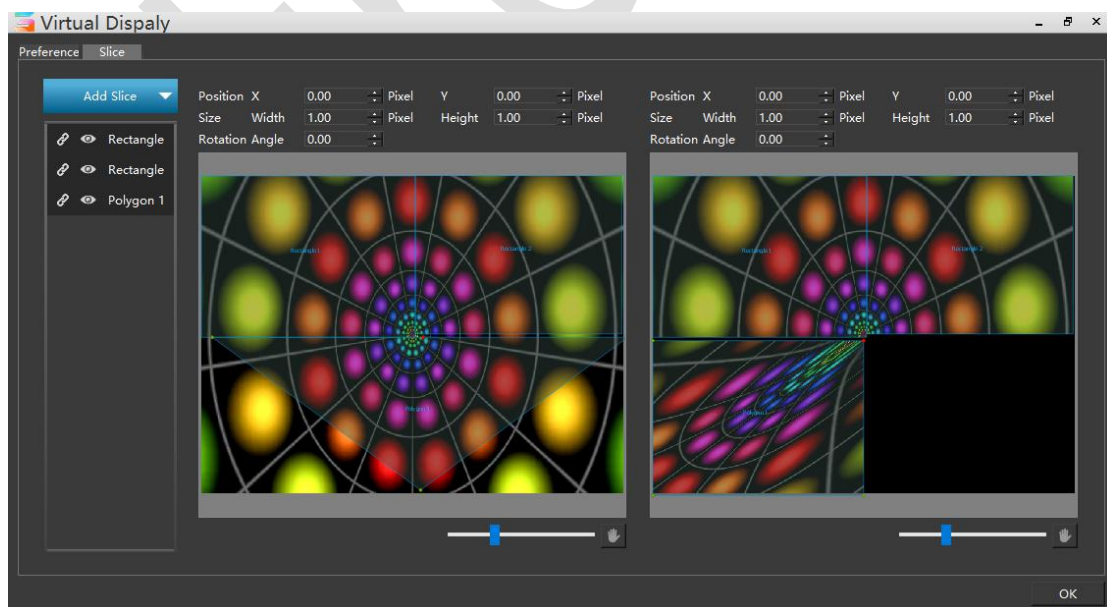


Add a virtual display to the display

Adds a virtual display to the window and edits the window's display position on the stage. The display frames are arranged according to the location of the large screen or projection. For example, the corner screen is divided into three screens, which need to be arranged according to the actual position of the pole.



According to the picture display, position, size and vertex of each slice image are processed. As shown in the following image, the picture shown on the left is an added slice and segmented using the slice. The right side is the segmented picture, according to the screen or projector to achieve screen display, on the right side of the three screen respectively for position, size, vertex and other operations.

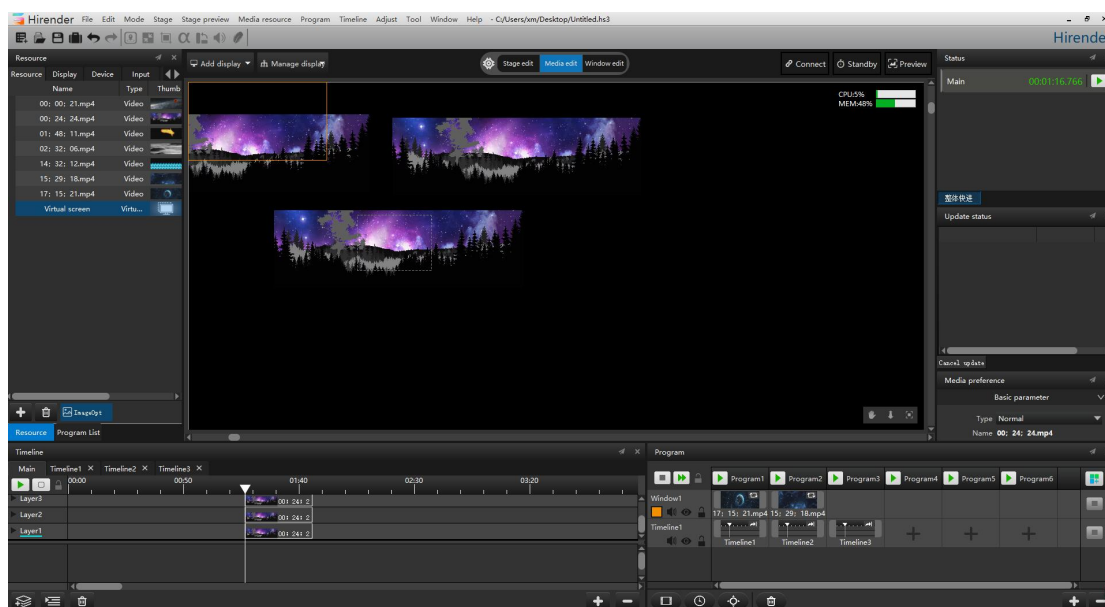


Appendix:

Appendix I: Hirender S3 Quick Start Guide

1. Window layout adjustment

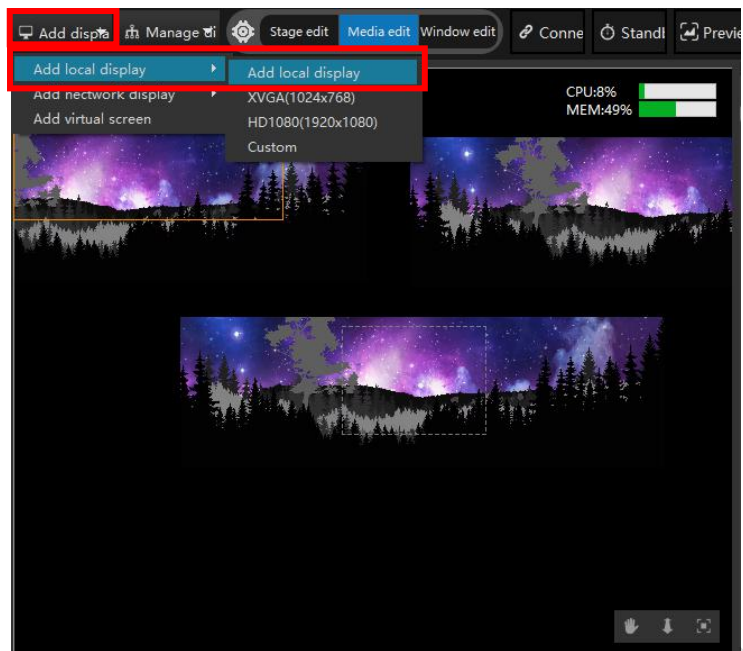
The window layout of the software operation interface can be adjusted according to personal preference. The size and position of program window management, play status, main program, timeline, program management, resource management, etc. can be adjusted. After adjustment, the adjusted layout can be saved by clicking the Save button.



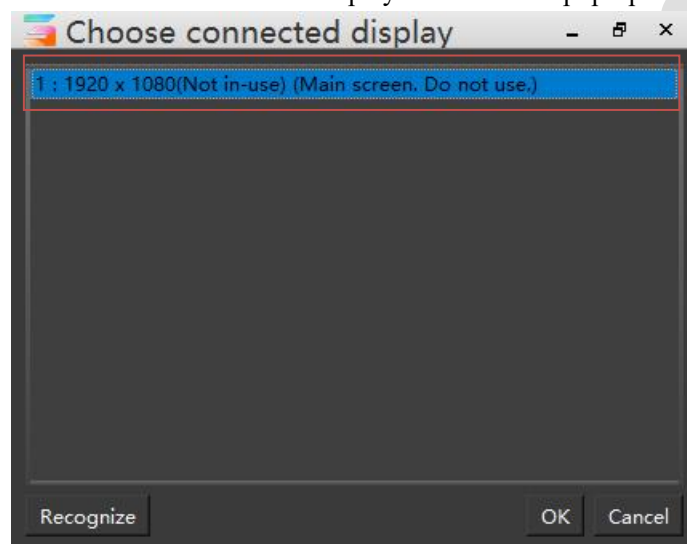
2. Video output

Add and arrange display screens:

Add a display screen as shown, add screen-add local display screen-add local connected screen.



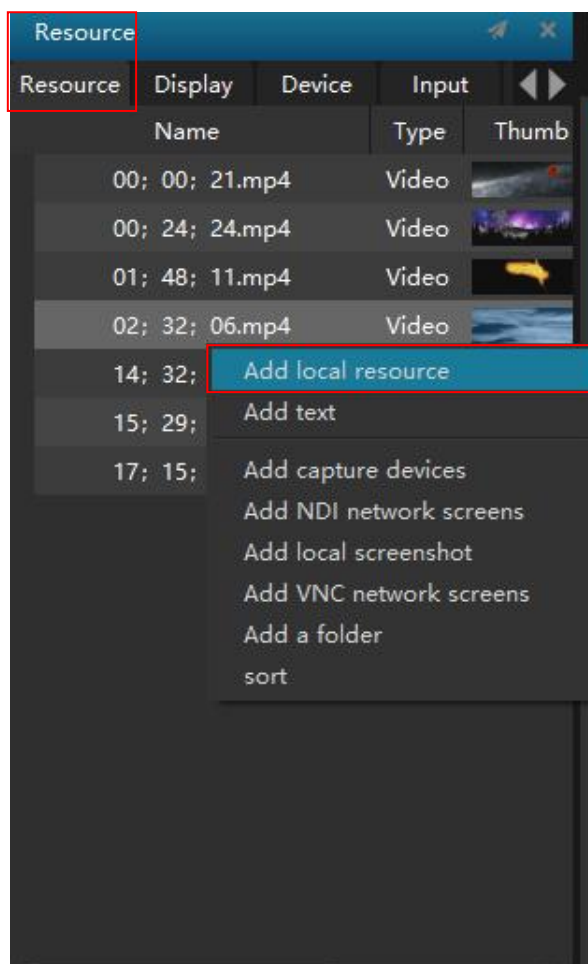
Select the "connected display screen" in the pop-up box, select and click OK to add.



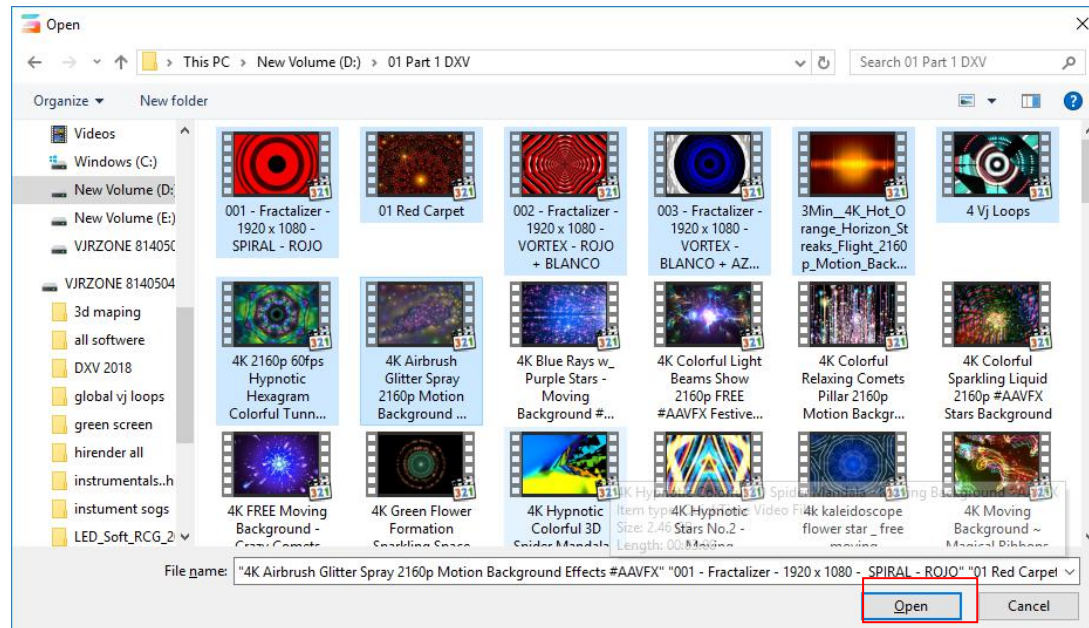
After the operation is completed, the position of the display frame can be moved and arranged as shown below.

**Add media:**

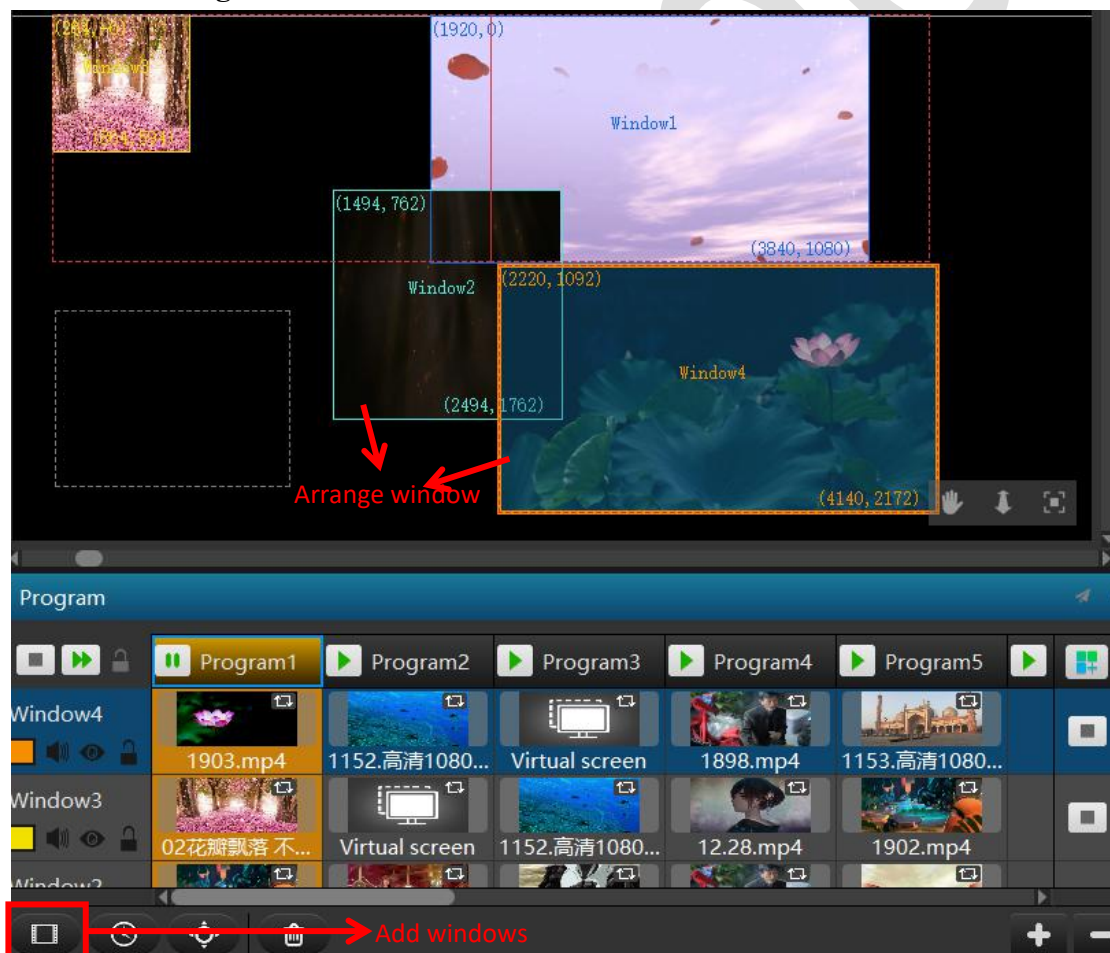
Select " Resources Library" in the "Resource Management" window. Right click to select "Add local resources".



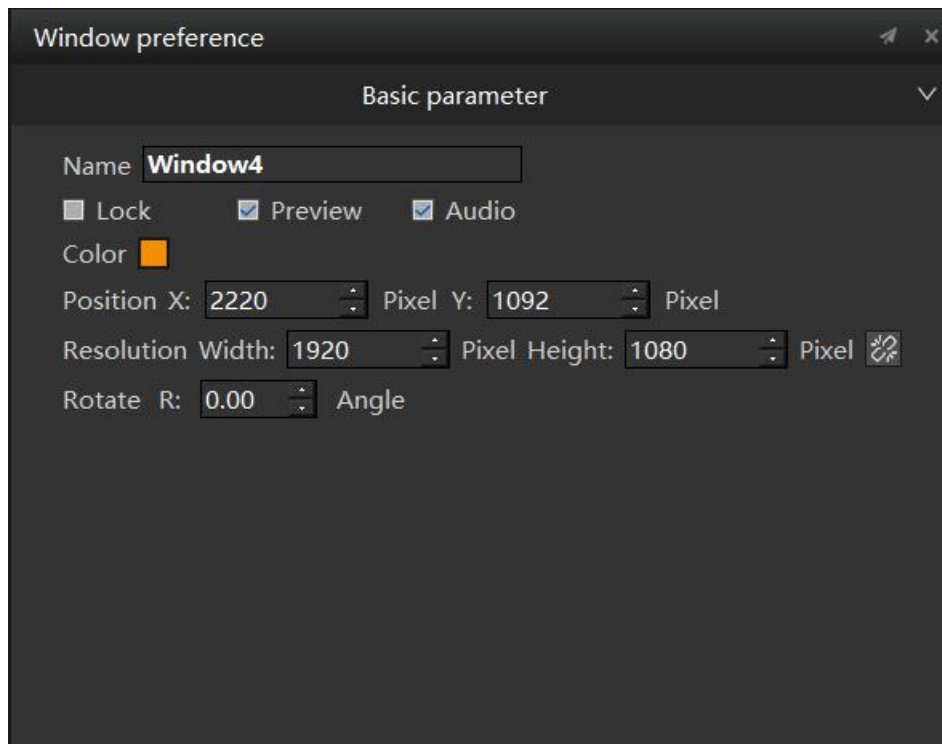
In the pop-up window, select your media, and click Open to add to the media resources library.



Add and arrange window:

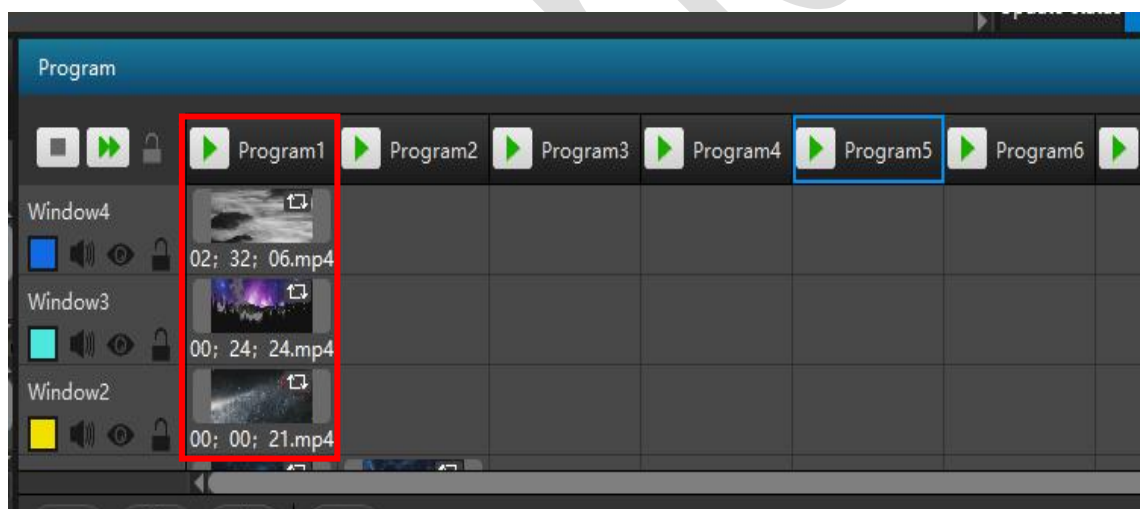


Set window size, color, position, etc.



Edit media :

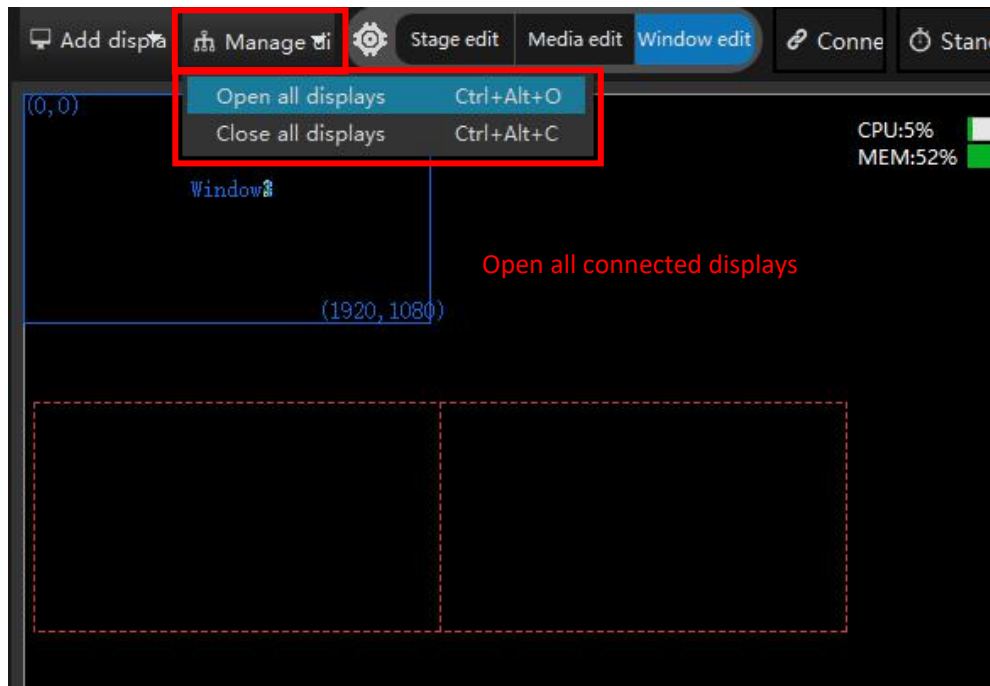
Add the media to the already arranged window for display.



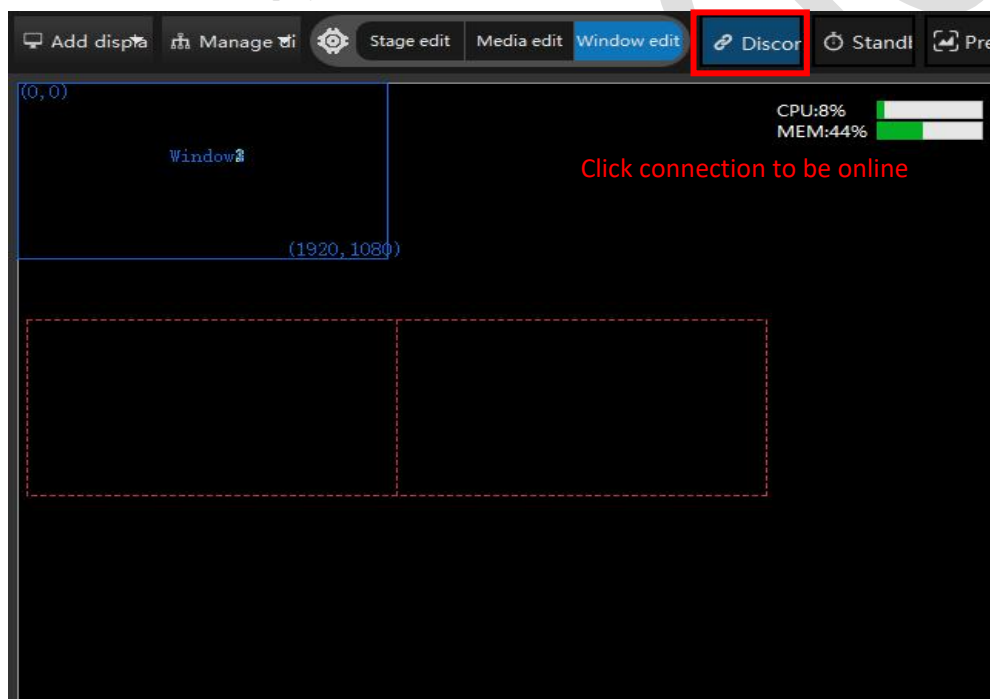
Output screen:

After the screen is added, the window is added and arranged, the media is added, and the media editing is completed, the edited media will be projected onto the display device.

First, click Open All Connected Devices as shown below, and the display device displays the logo of the Hirender S3.



Execute Online to project the edited media onto the screen.



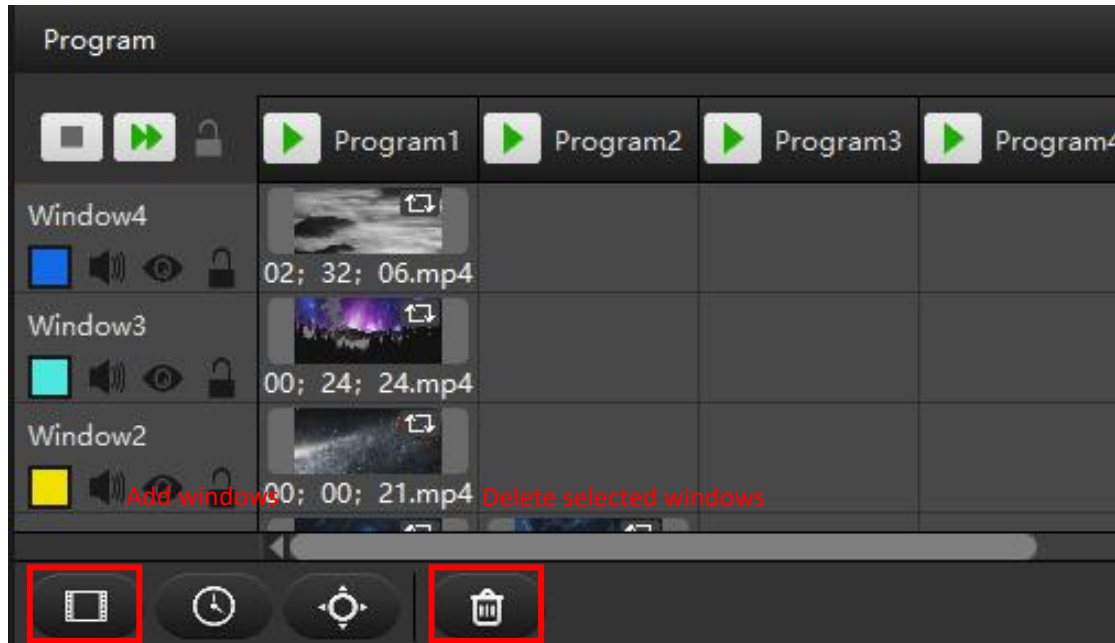
3.Window playback mode

Window function description:

Achieve custom window resolution, window random arrangement function. Add the material to be played in the corresponding window in the program, and set the order in which the program is played. The media file is added at the window position of the corresponding program according to the program playing demand.

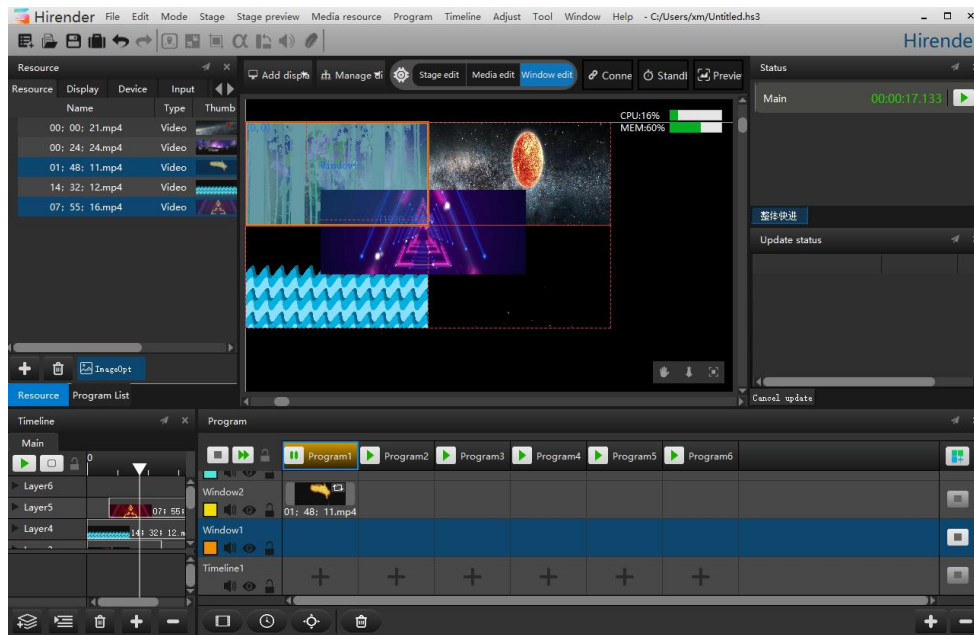
Add and delete window:

As shown in the figure below, click the "Create" button to add a window. Each window has a default color, which can be customized. When the window is deleted, select the window that will be deleted, right click and then delete it after confirming again.



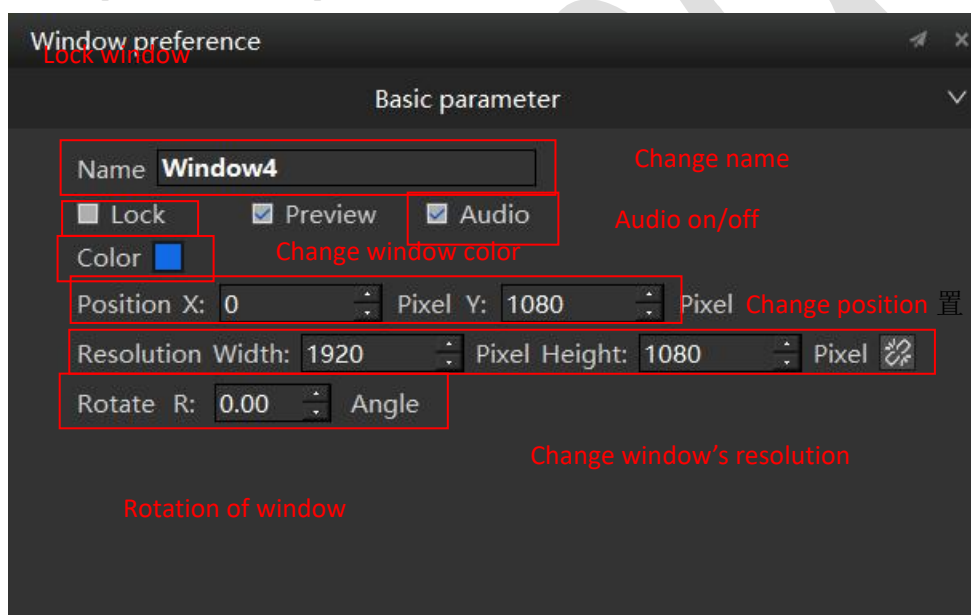
Window operation instructions:

- (1) Select the window whose resolution will be changed, change the window resolution in the property box in the lower right corner, change the window output sound, and so on.
- (2) Arrange all added windows on the display device as needed.
- (3) According to the program playback requirements, add media resource to the corresponding window in the program. Set the playback order, main KV, fade time, program end conditions and other attributes.
- (4) After selecting the media resource in the program management, set the effects in the property box in the lower right corner, such as crop, transparency, volume, hue, and saturation. In the play mode, you can also set the action after the clip is played, such as loop playback, stop playback, freeze in the last frame, play the next program, and jump to other programs. Media clips can also be clipped by setting the start time and the node time.
- (5) When the media is playing, the background color will turn yellow.



Set window properties:

set preview, sound output, window default color, rotation, and more.



Playback status preview:

The playback status window displays all the windows in the currently playing program and the playback status of the timeline. The media resource playback pause can be controlled by the button at the end of each window. Drag and drop the window playback progress bar to control the fast forward playback of the material.



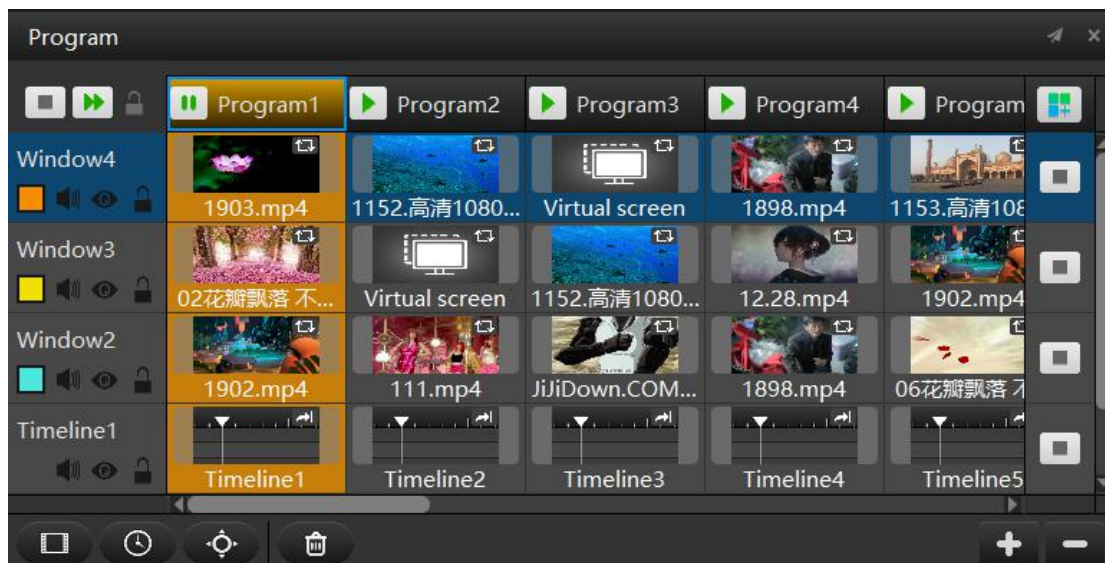
Right-click in the playback status window area and click on the time counting. The time displayed in the playback status becomes the length of time the media has been played. (Use the same method to switch back)



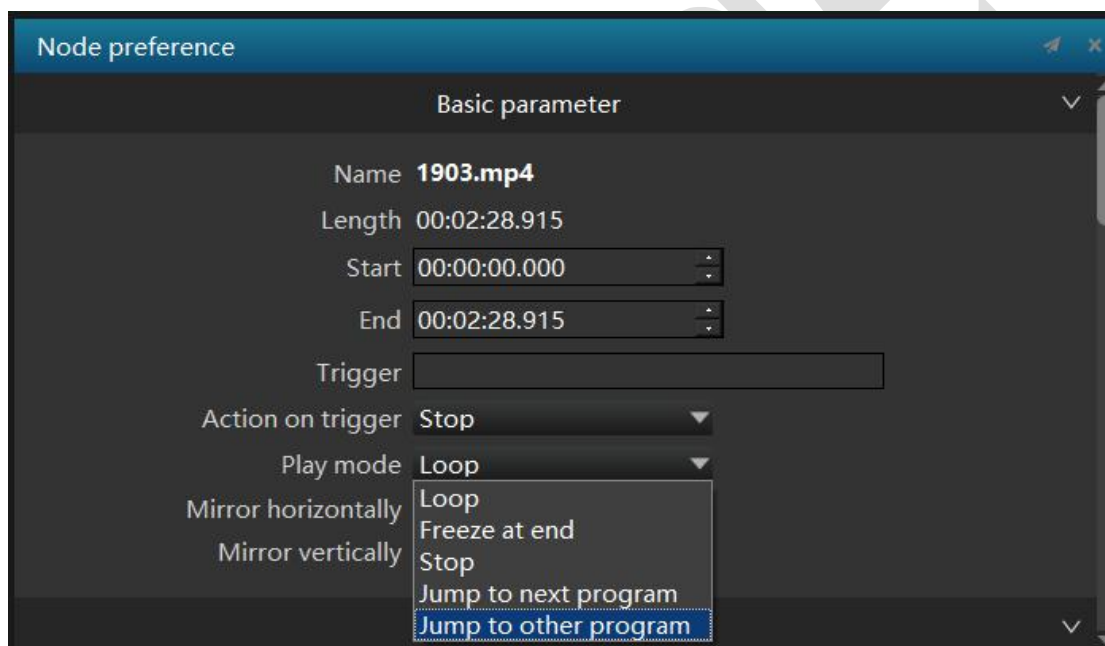
Program switch:

Hirender S3 can switch to any other program after the program is finished playing. Program jump requires two settings.

① Select a video in the program as the time node for the program jump. The end of the playback of the video selected as shown in the red box is the time node for the program 1 to jump to the program 4.



②Click to select the media, and set the playback property to "Go to next show" in the pop-up display interface. Then select "Program 4" in the pop down box to the right of the playback mode.



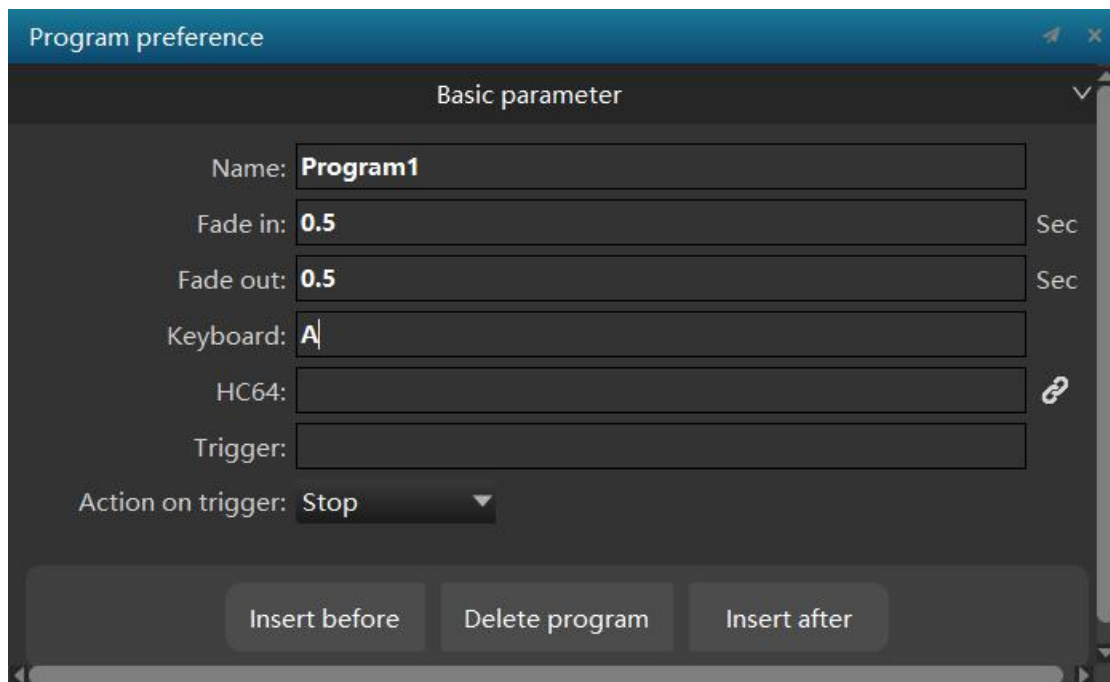
After the setting is completed, when the "d.mov" in the program 1 is finished, it will jump to the program 4 to play.

4. Quickly switch programs

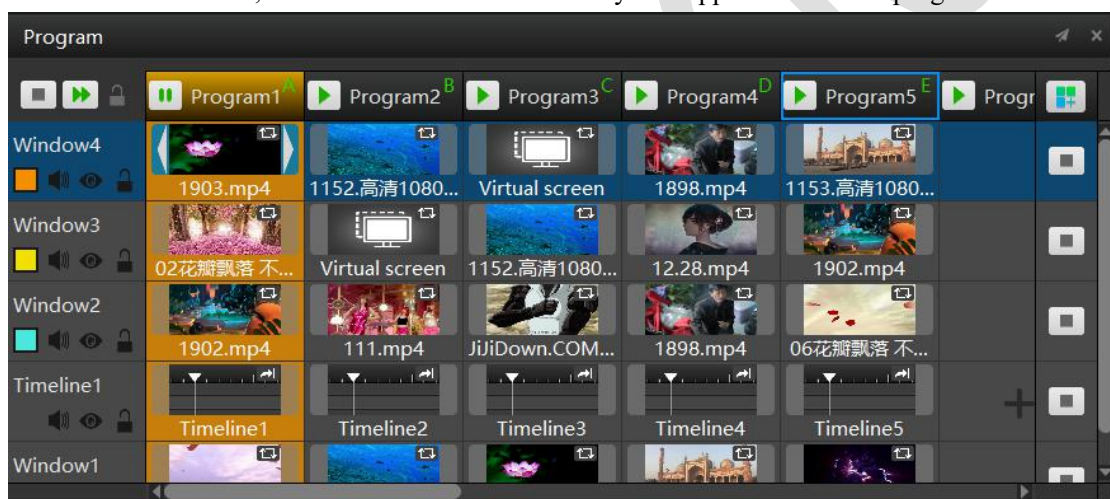
Hirender S3 supports fast switching programs. Users can quickly switch programs by editing shortcut keys and binding console push pole.

①Set keyboard shortcuts to trigger program:

Click on the program, then in the "keyboard trigger" input box of the properties window, fill in the shortcut key, for example "a".

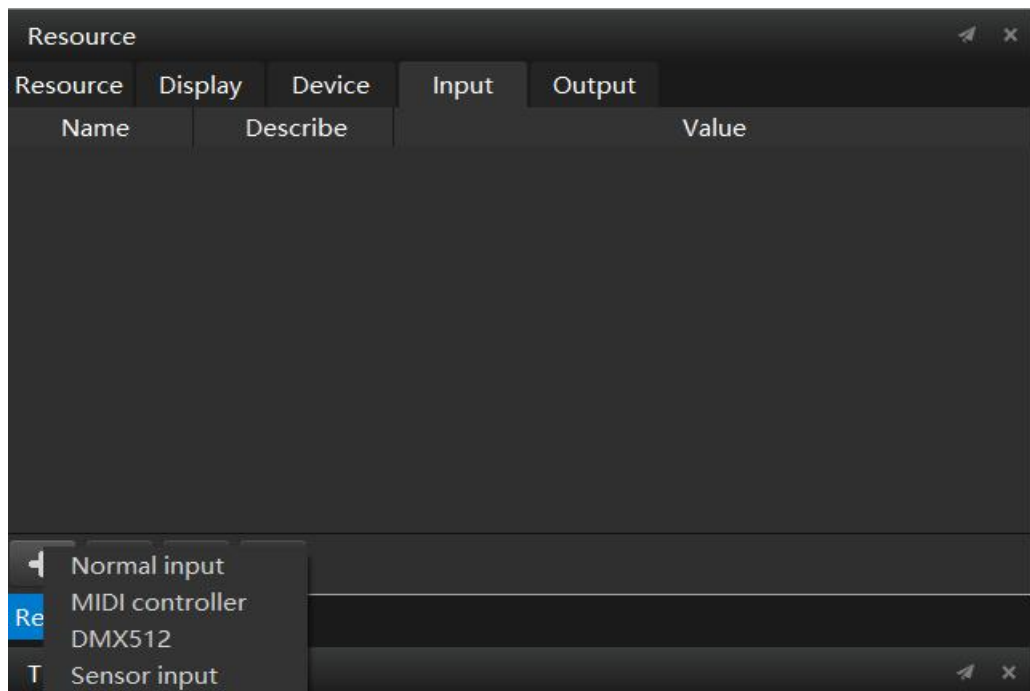


At the same time, the identifier of the shortcut key will appear next to the program name.

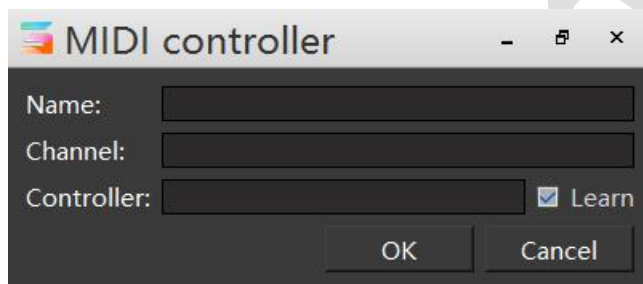


②Set the console fader to trigger the program

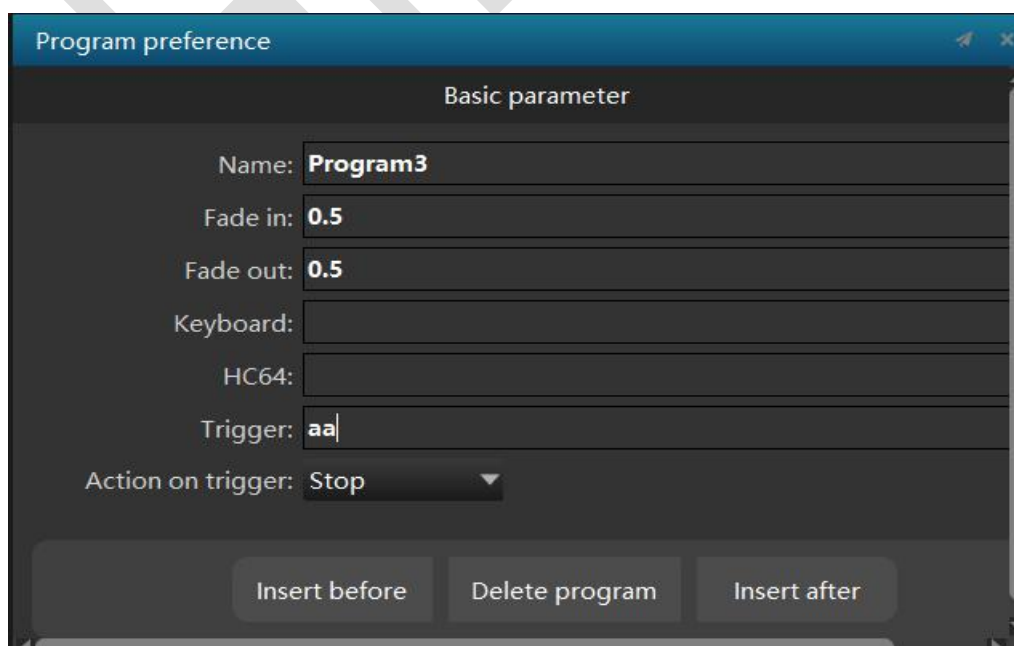
Take the MIDI console as an example. First, we need to add an input control. Click on the input control interface, then click the + sign in the lower right corner to add MIDI control.



Then fill in the name of the push pole such as "aa", in the pop-up interface. Push the MIDI console's push pole, then the push pole's channel and controller number will be automatically filled in.



After adding the push pole, we only need to click the program again, then write the name of the push pole in the trigger input box of the program property interface.

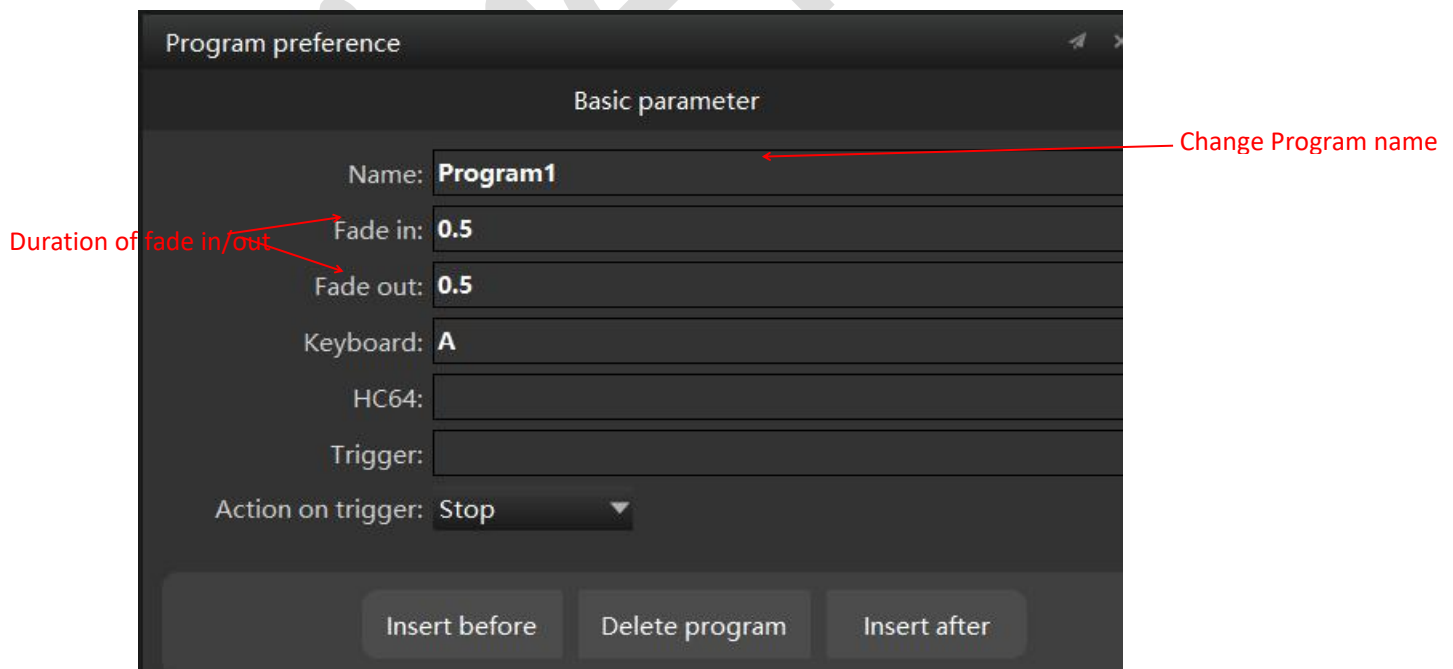


5. Modify the program name

Modify the program name as shown below. Select the program to be modified, then click the left mouse button.



After clicking the program whose name is to be modified, the program name, the fade time of the program, the insertion program, and the like can be modified in the pop-up program attribute window.



6.Preview

Preview definition:

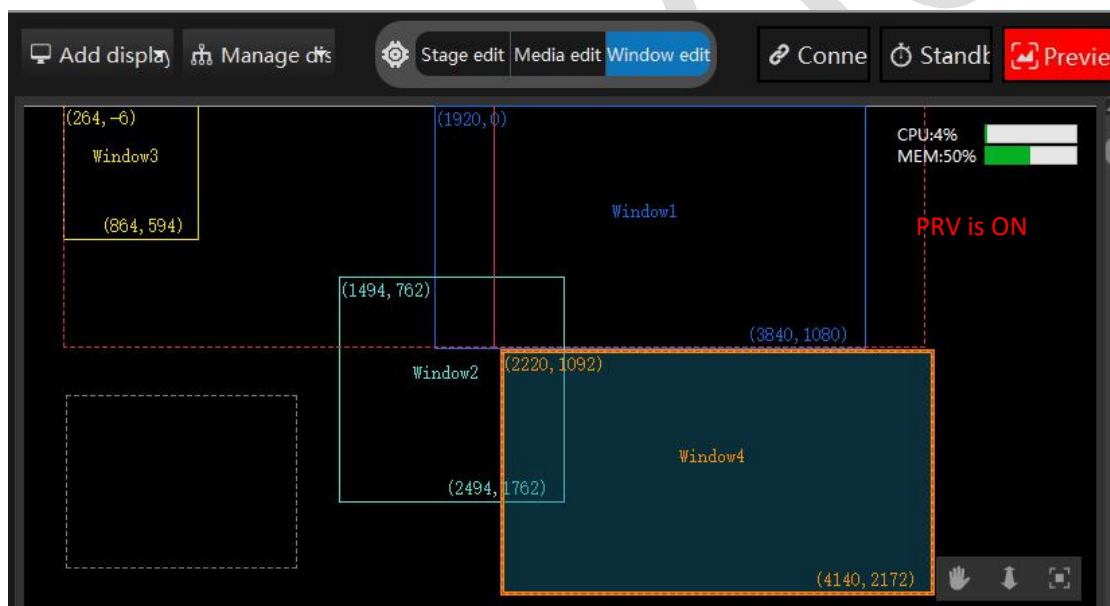
Monitor other programs to be broadcast in advance without affecting normal output. For example, if the connection is already made, the media has been played normally. When the next program is the SDI signal or other signals collected, you can see whether the SDI and other signals are normal through the preview mode, or you can also use the preview mode to see if other programs to be played are normal. This can greatly reduce the problem that the signal is not normal after switching to the next program.

Preview usage:

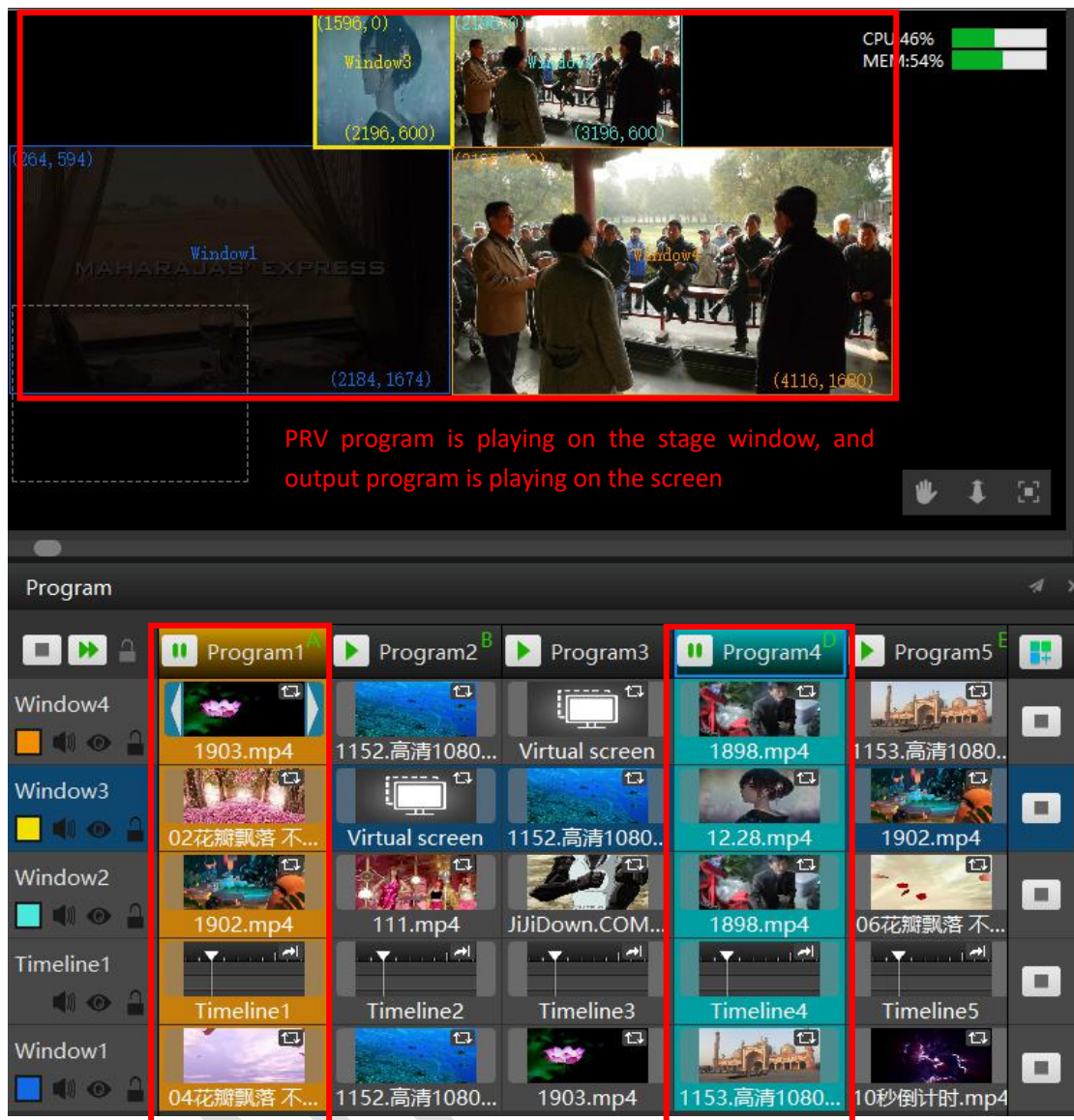
① In the play state, click the preview button in the stage management, or select the preview mode in the mode menu to open the preview mode. When the preview mode is turned on, it will be displayed in red flashing mode.

② After the preview mode is turned on, you can click to preview and play other programs. The previewed program will only be played in the stage management. Before the preview mode is turned on, the media being played is played normally.

The preview mode is turned on as shown below.

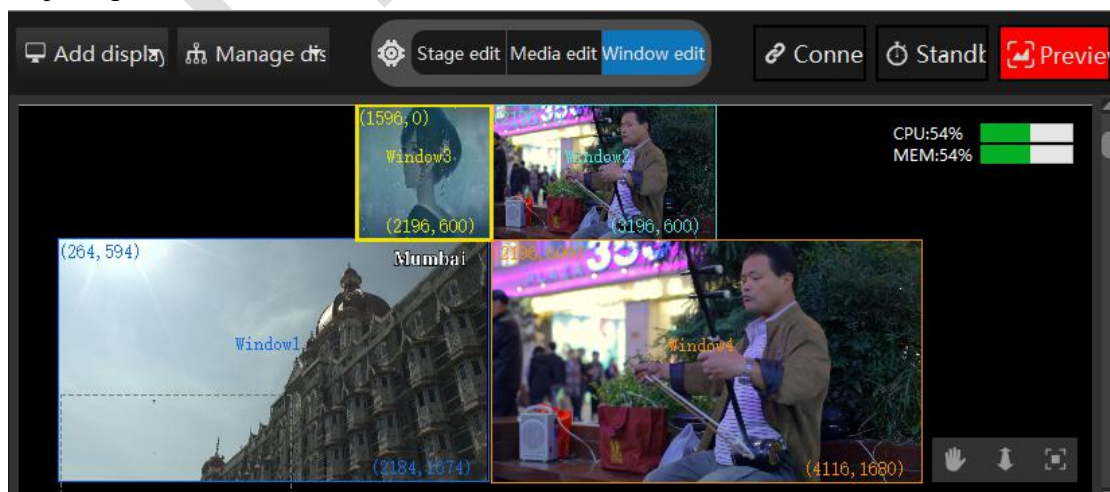


Browse the preview program as shown below:

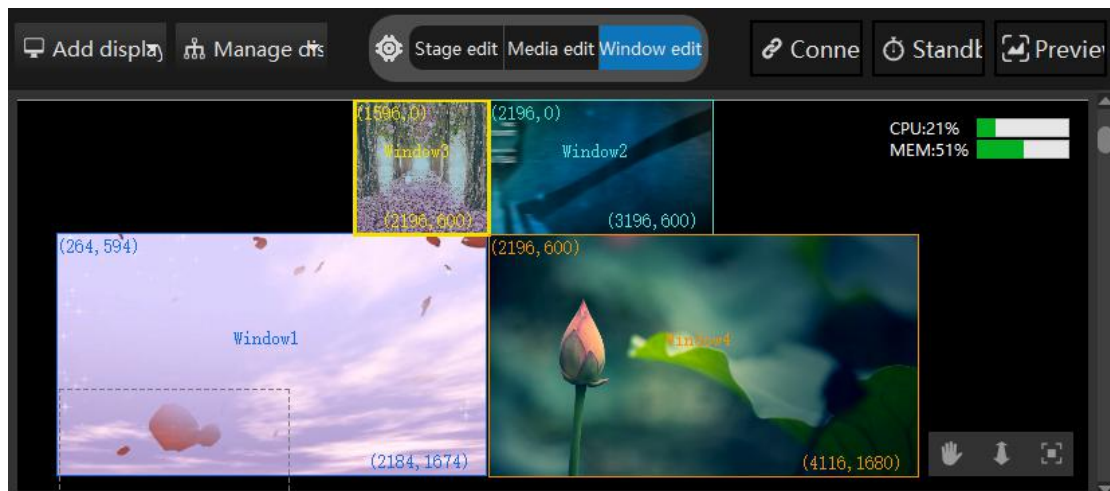


Exit the preview mode:

Click on the red box in the upper right corner to exit the preview status. The display screen on the stage also changes from the preview program screen to the screen that the display device is outputting.



After exiting preview mode:



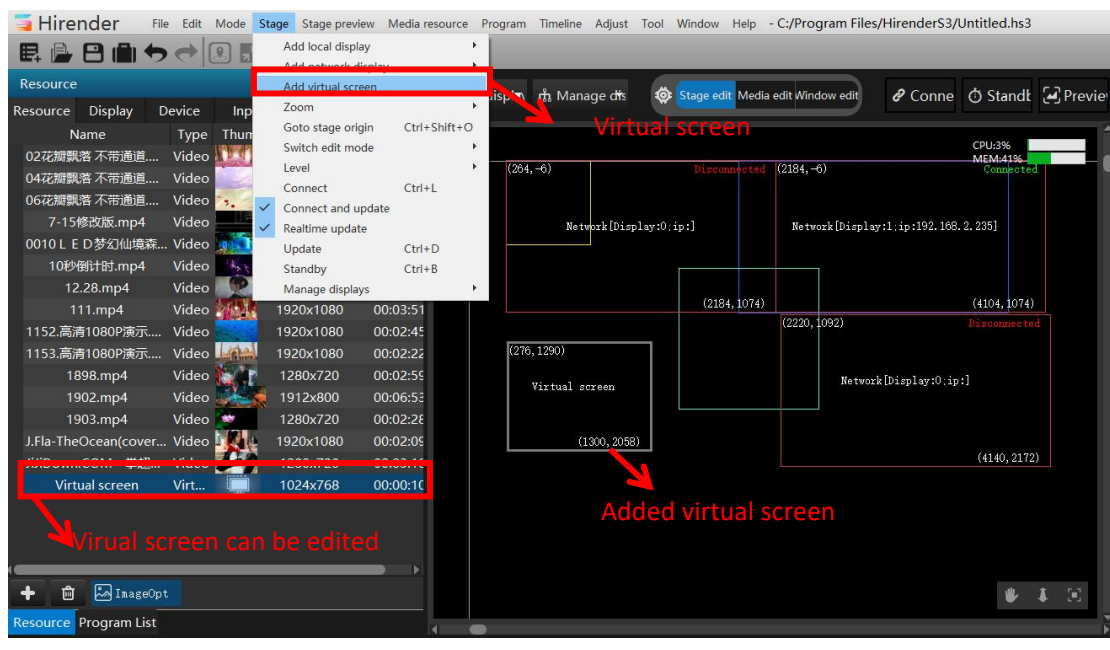
7.Virtual screen

Virtual screen description:

The virtual screen is to collect and play the programs in the stage management in real time. Virtual screen size, rotation and other effects can be adjusted freely, such as camera stitching, camera close-up, live capture, and special-shaped screen playback.

Add a virtual screen:

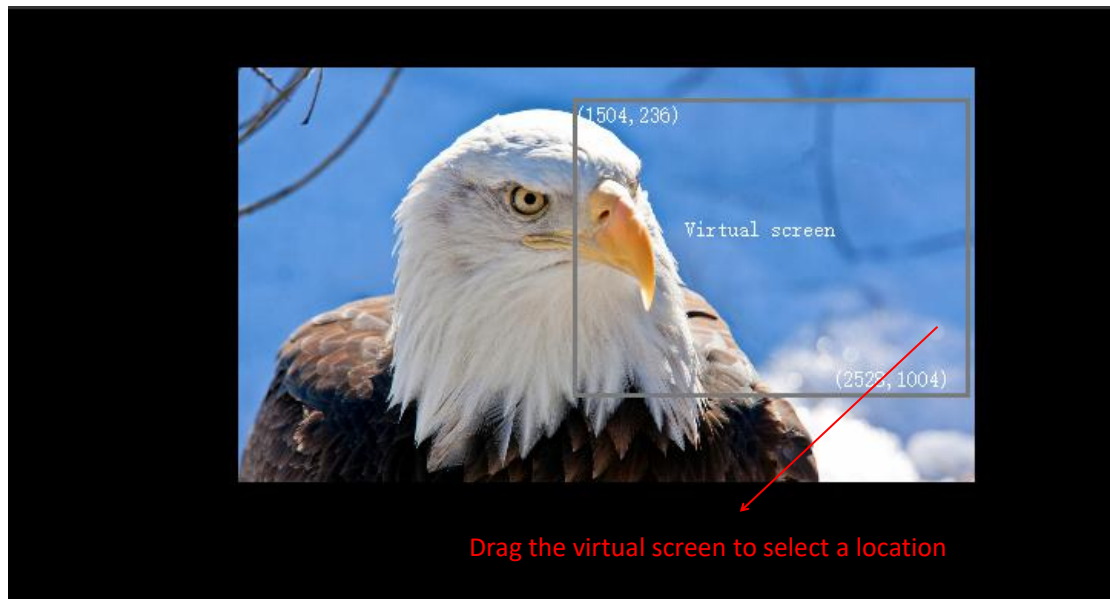
Add the virtual screen to the resource management window by selecting "Add Virtual Screen" from the Stage menu.



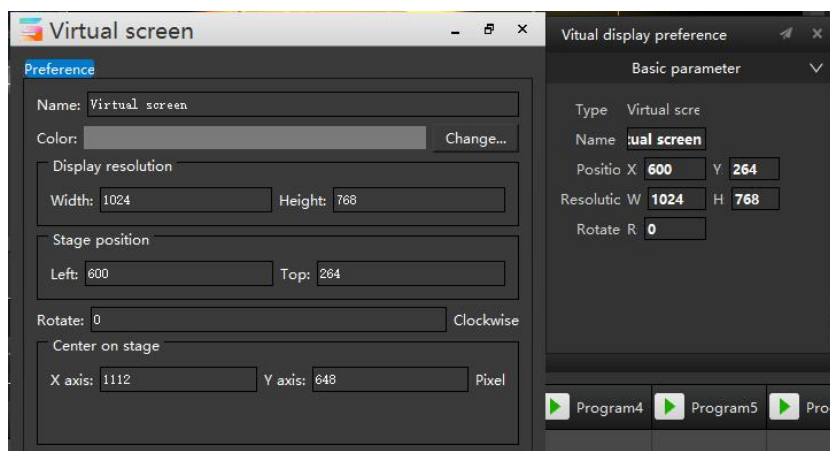
The virtual screen displayed in the stage management is a window for collecting media resources in real time.

Add the media you want to capture the live show in the stage management to the stage management. Then, in the stage editing state, double-click Virtual Screen in the stage management to set the parameters such as the size, position, and angle of the virtual screen

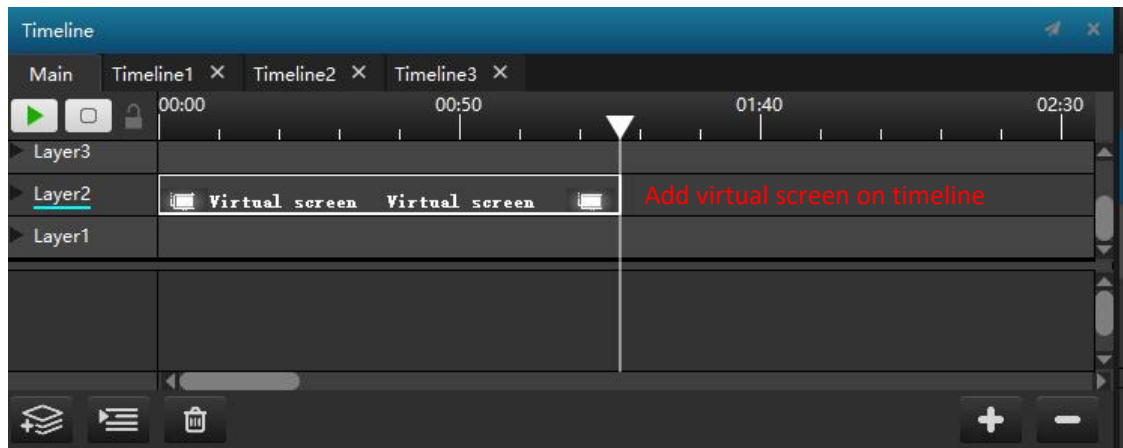
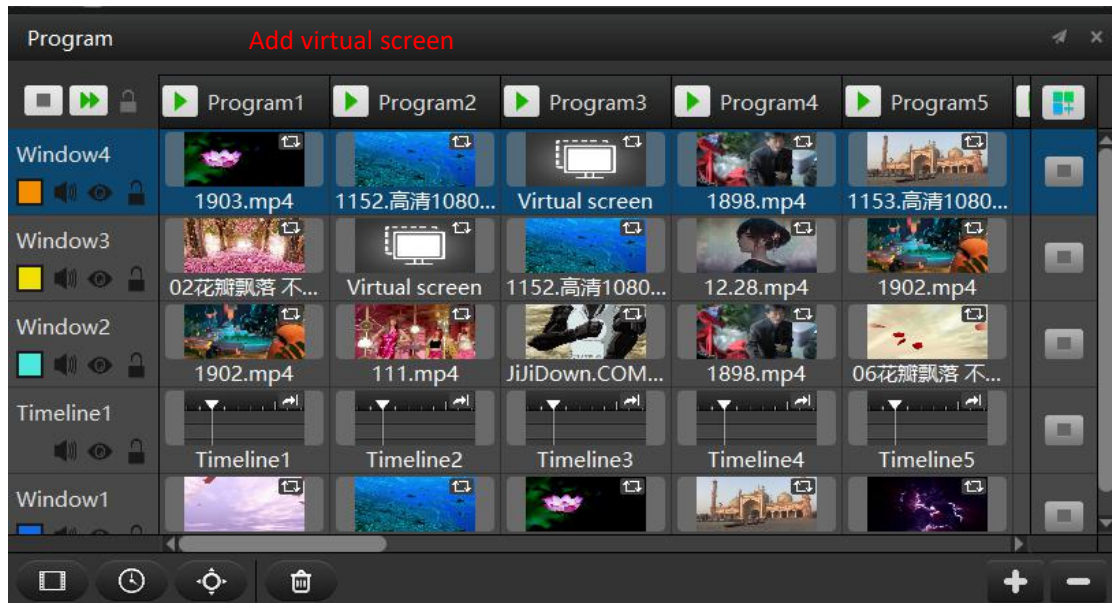
In the Stage Edit mode, click on the virtual screen in Stage Management to drag to the desired position.

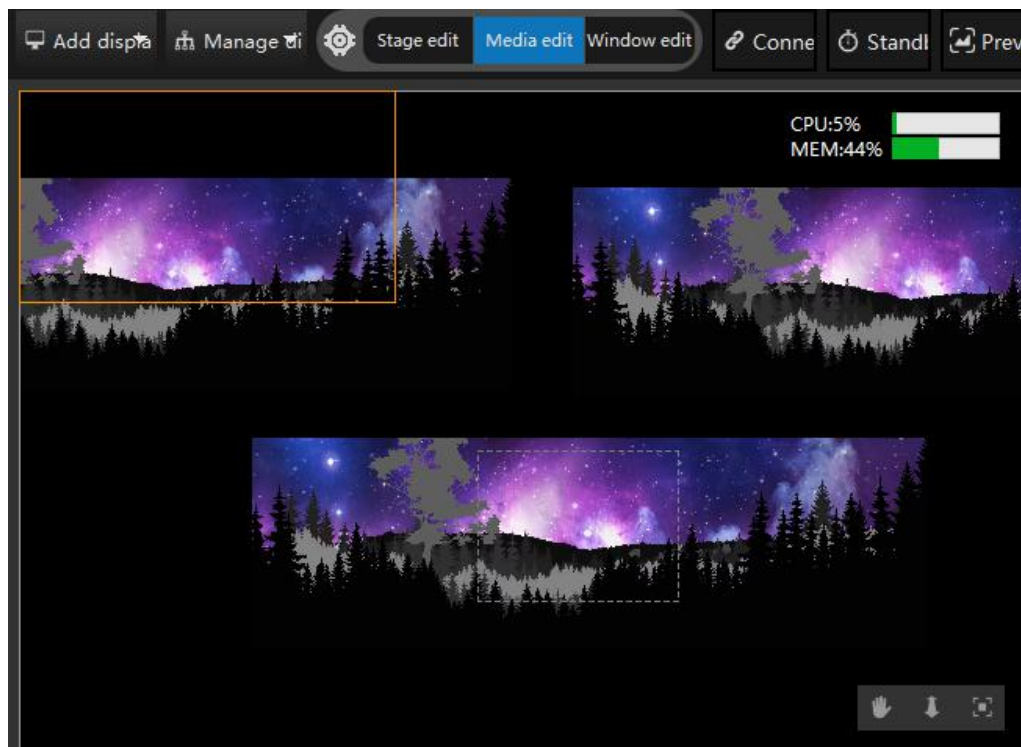


You can also enter coordinates directly in the virtual screen properties to change the position.



The media resource of virtual screen is then added to the timeline or added to the program list in the program management.





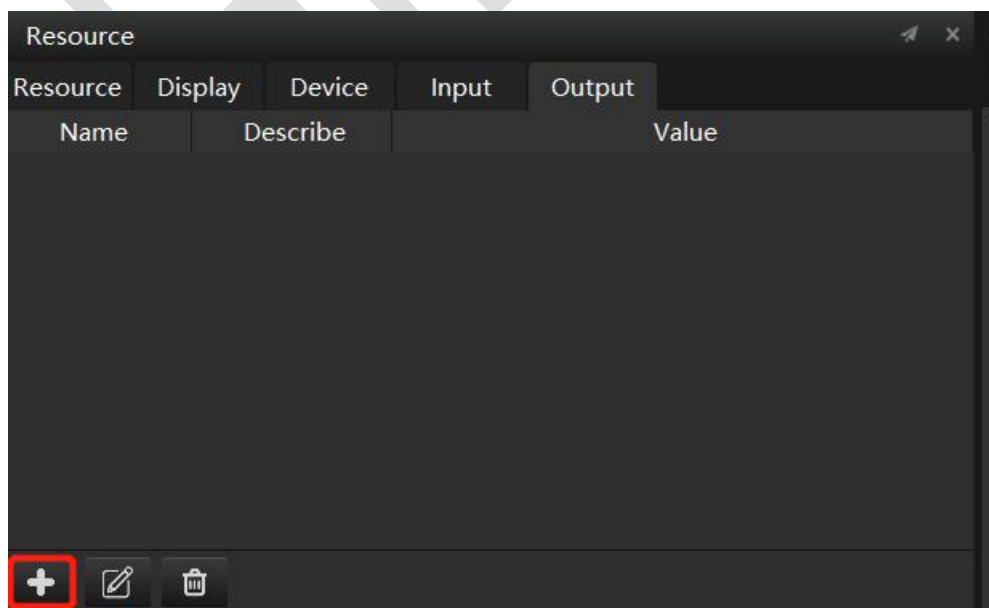
It is possible to play real-time captured media now. The methods of adjusting position, size and effect are the same with adjusting the media resources.

8. Video console switch

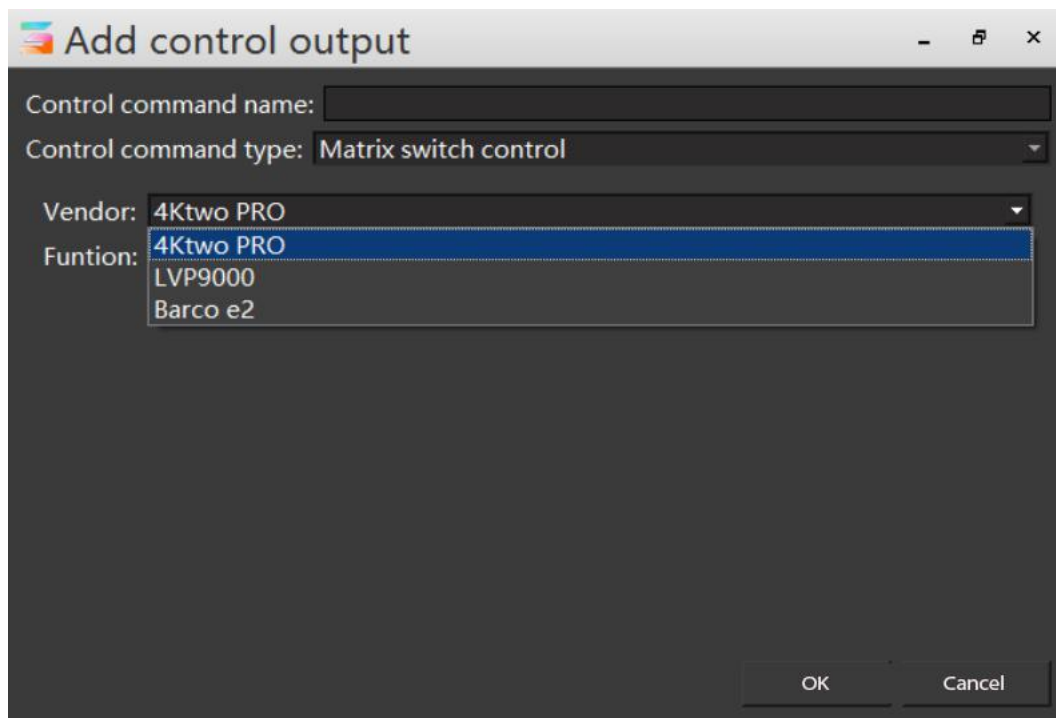
Hirender S3 can directly control video consoles, matrix and other hardware devices, by connecting the S3 server and other hardware devices in the same LAN.

The steps are as follows:

① Click the “Add Output Control” button below the output control interface to add an output control.

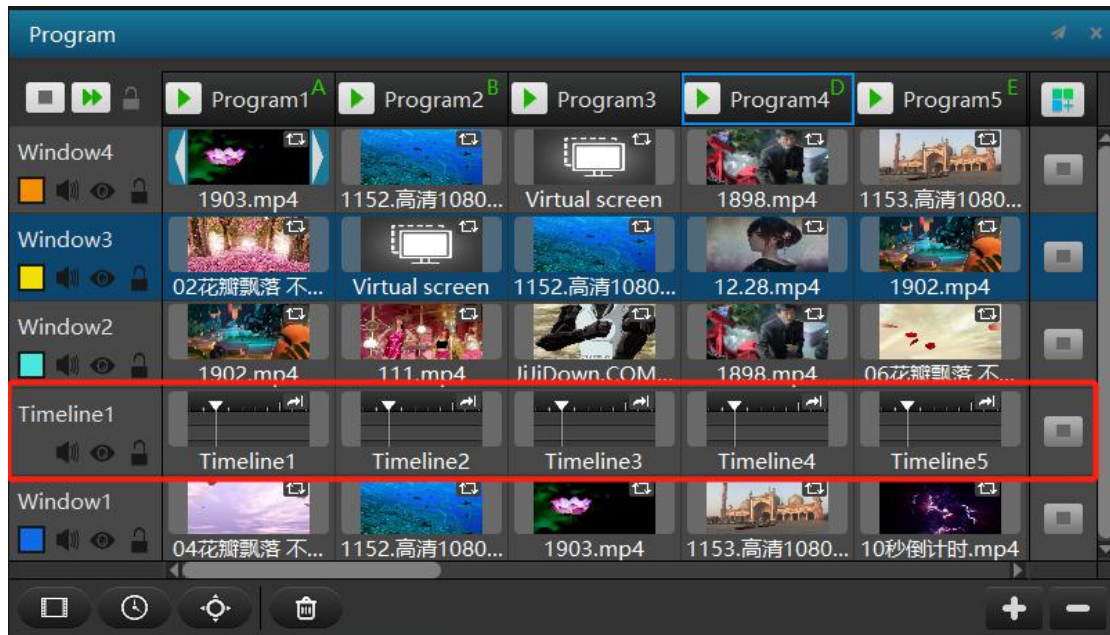


② In the “Add Output Control” command interface, set the command name , the matrix type of the control, and the function selection used.



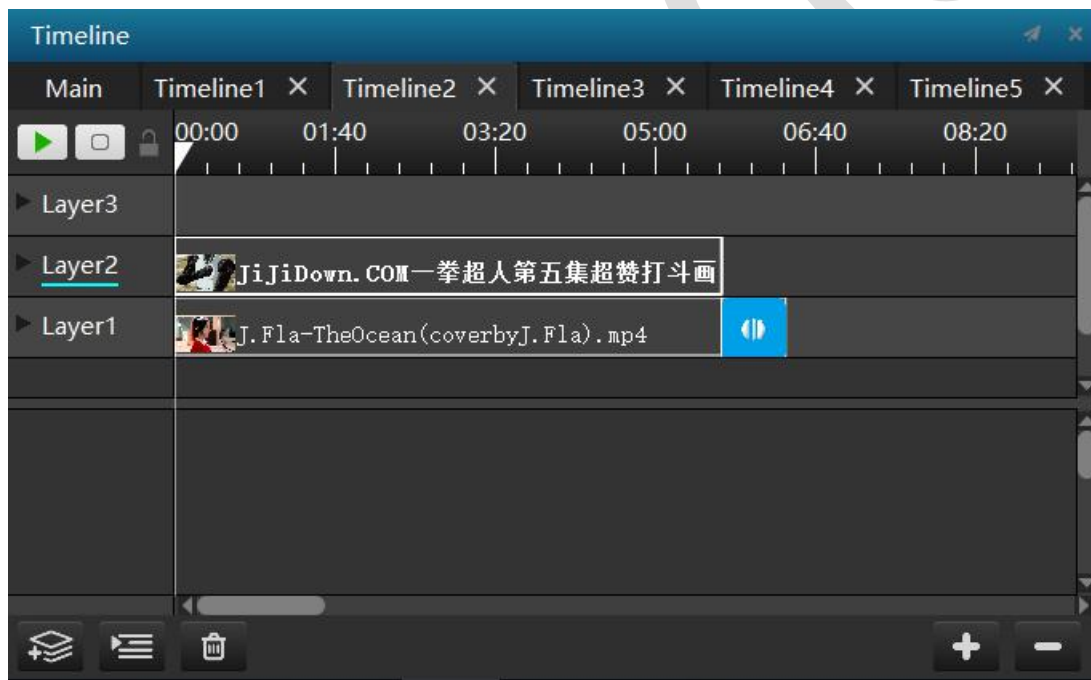
9. Timeline edit

Multiple editable timelines can be added to the timeline layer. A timeline can be added to each show. Each timeline can be edited just like the main timeline, with media resources arrangement, control command addition, and material attribute addition as required.



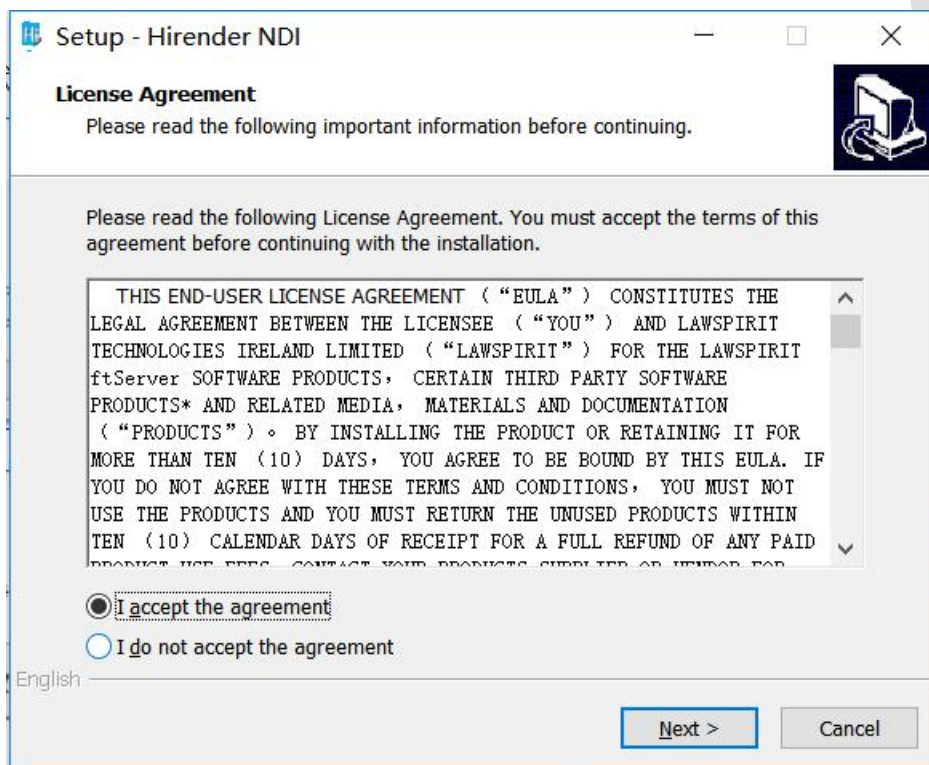
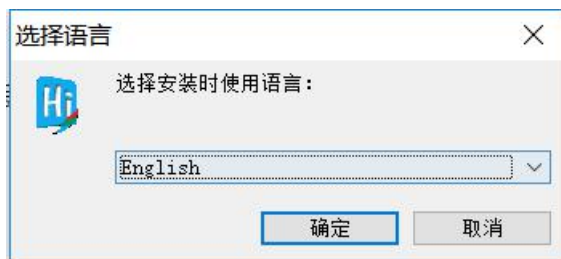
Timeline editing:

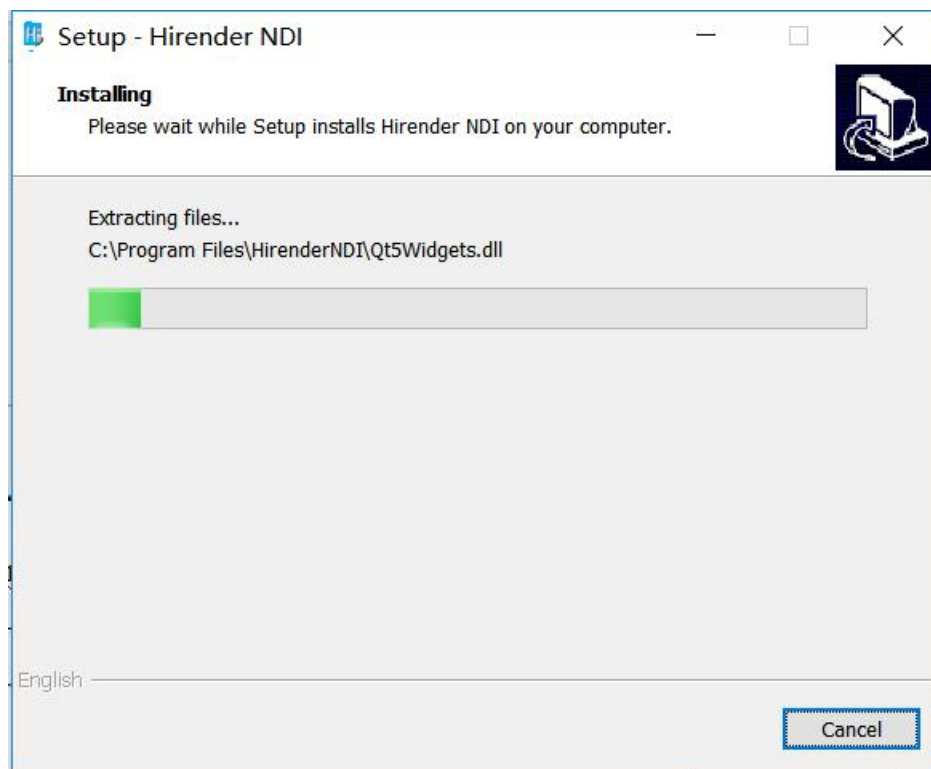
Edit the timeline 2 in timeline layer 1 as shown below.



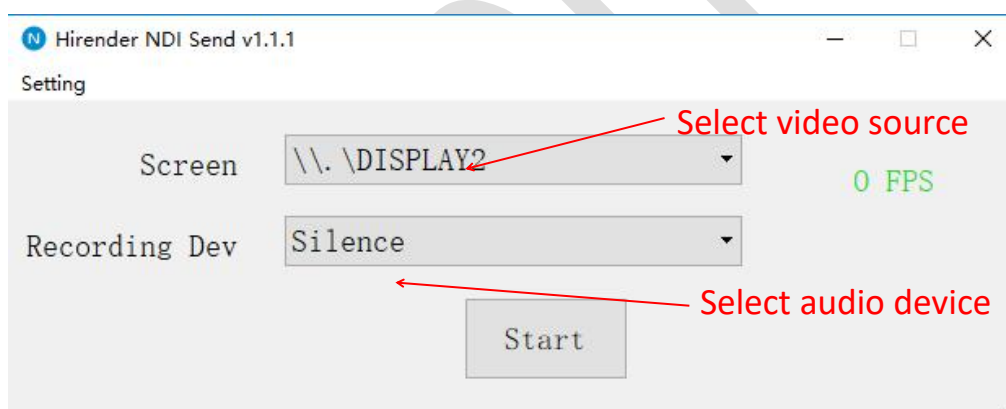
10.NDI capture

① Hirender NDI software Installation. Click the default installation to complete, as shown below:

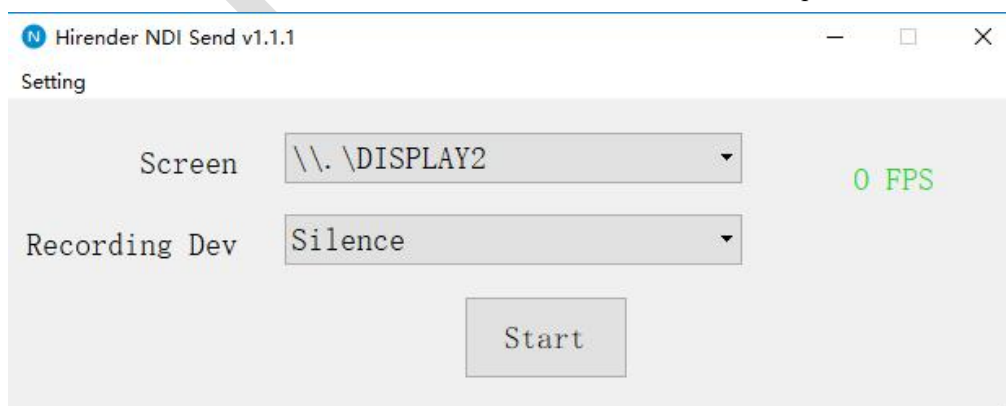




② Install the Hirender NDI software on the computer being collected. After installation, open Hirender NDI in the start menu bar and select the screen video source and recording device, as shown below:

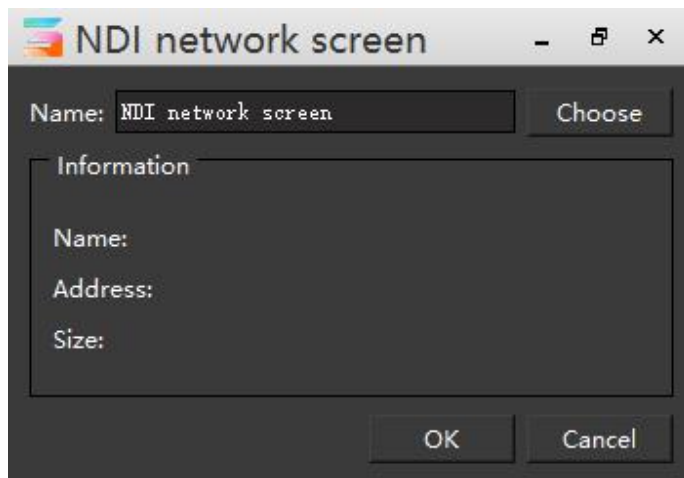


Save and click to start, as shown below. So the NDI sender is set up.

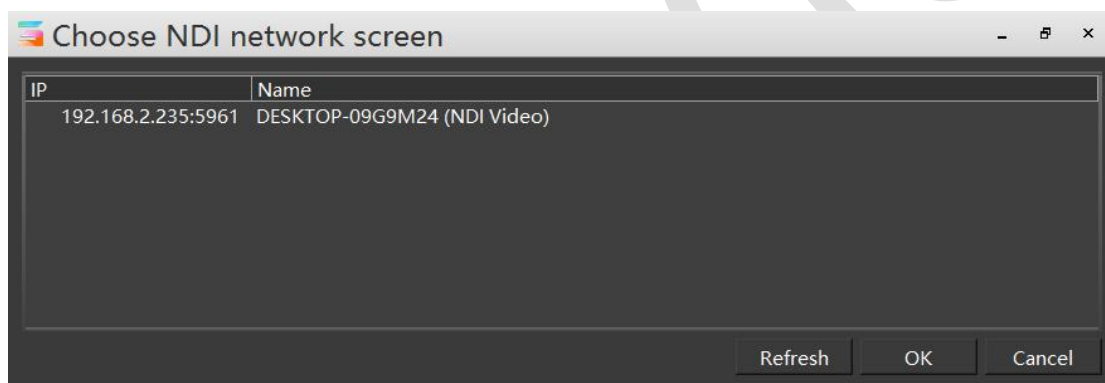


NDI receiving end setting:

Open S3 on the computer of another receiving end, right click in the resource library - select Add NDI device window (as shown below).



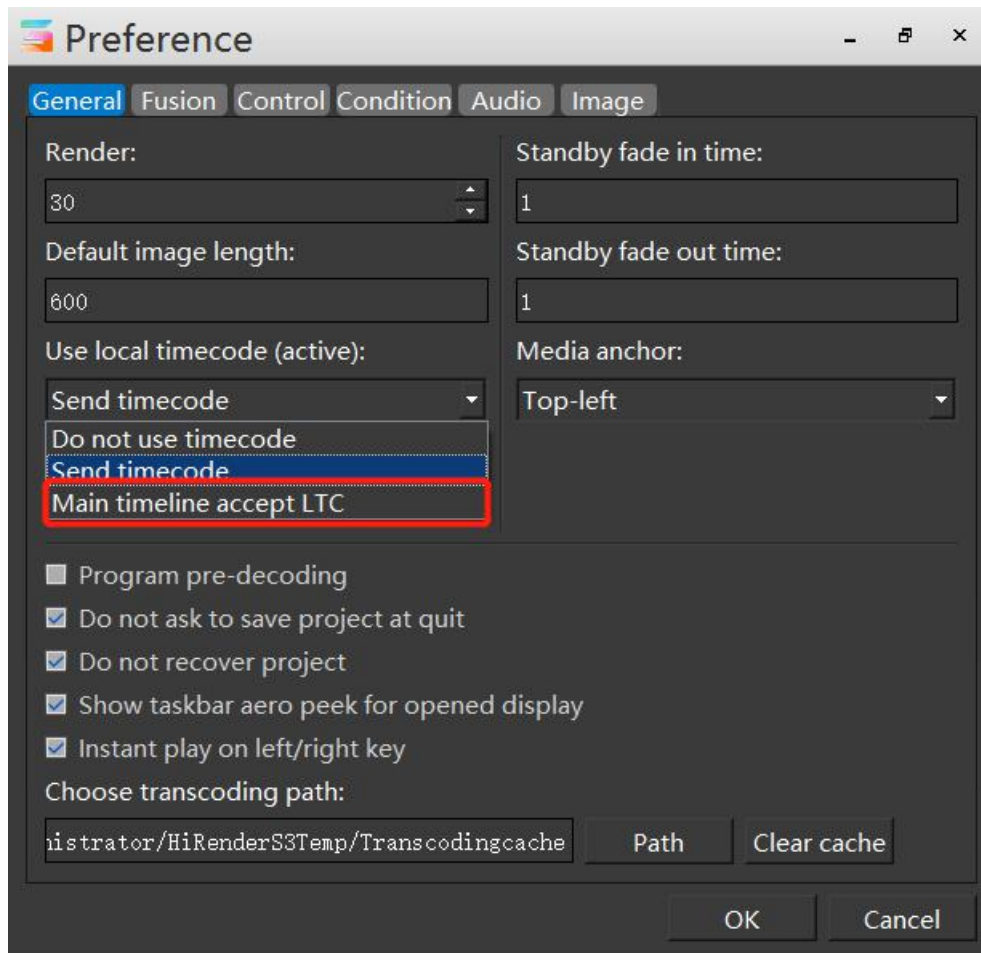
Click to “select the device” , then add the corresponding NDI device according to the IP address of the computer at the collection end. Click OK to use the added NDI device as a media resource .

**11.LTC time code setting and use**

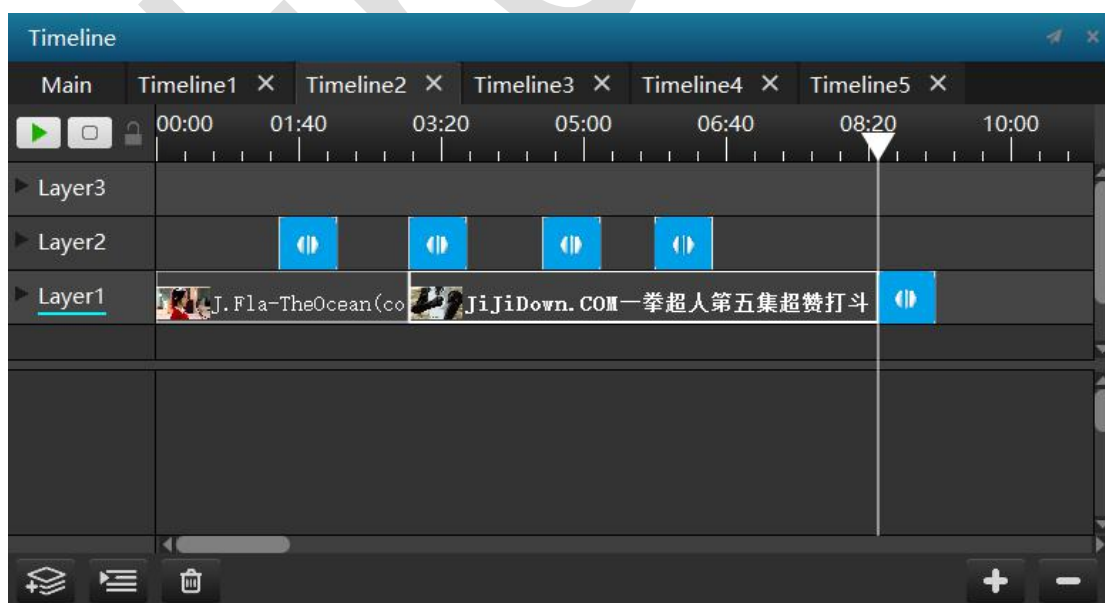
The Hirender S3 software main program timeline supports external LTC synchronous time code control, which can be controlled synchronously by the sound console to achieve synchronized sound, picture and light playback.

- (1) The setting software can accept the external mixer LTC audio synchronization time code as follows:

Click on the red box in the upper left corner of the file, in the File-Settings-Common interface, as shown in the figure below.



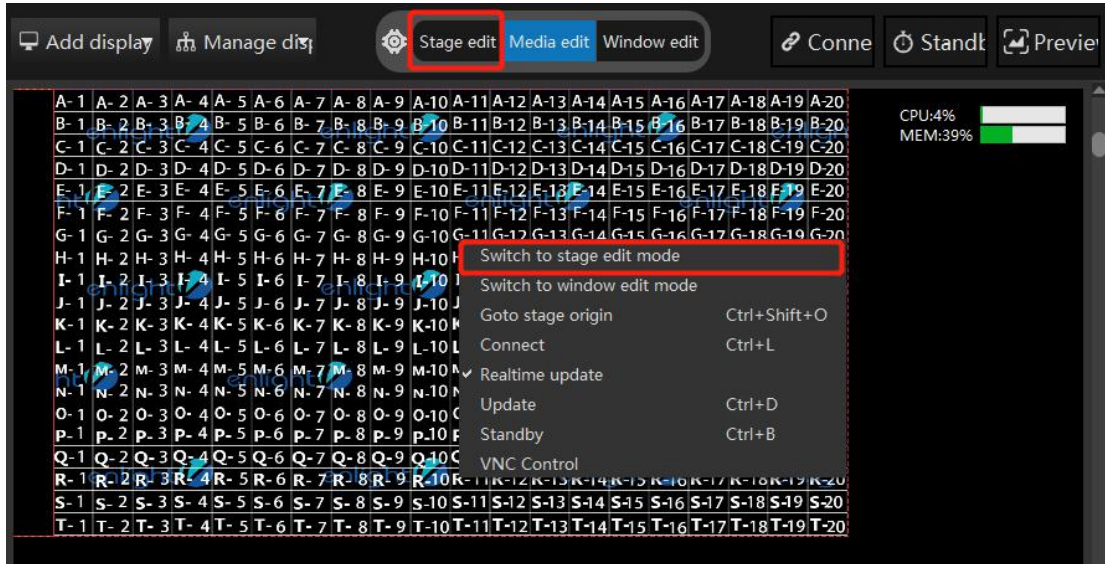
- (2) Perform material editing on the main program timeline, and add new programs in program management to realize program insertion and broadcast, and realize diversified dance effect.



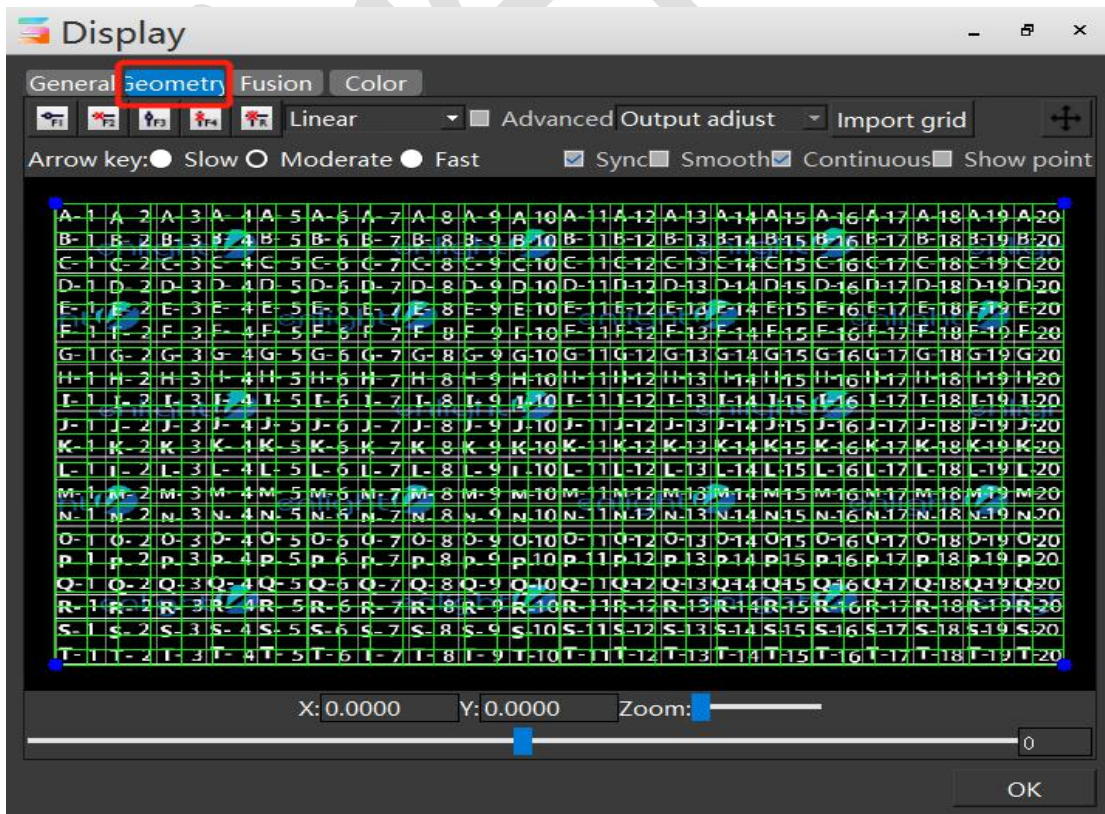
Appendix II: Projection Fusion



1. Enter the grid interface.

- (1) Enter the stage editing state: Right click on the stage editing interface, click to switch the editing stage status in the pop-up interface or click the stage editing button on the editing window.




- (2) Enter the grid debugging interface: In the state where all displays are displayed and connected, double-click the added screen display box and select the geometric deformation in the pop-up box.

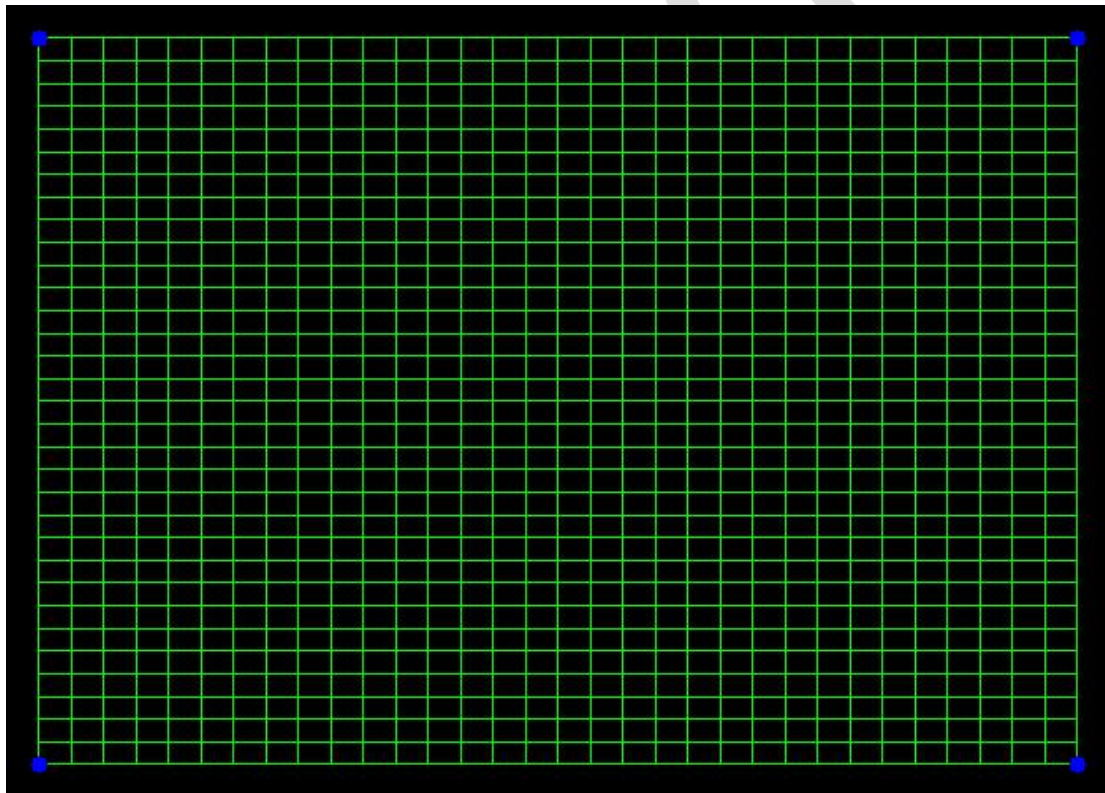



(3)The entire debugging interface introduction:  These five buttons in turn represent centering in the horizontal direction, centering in the horizontal direction, centering in the vertical direction, centering in the vertical direction, deleting all points added, and restoring the grid to the original state.  The mode used to select grid debugging, including linear mode, perspective mode, and full mode. Linear mode geometric deformation debugging is suitable for profile projection, plane projection, mountain projection and so on. Perspective mode is suitable for flat projection debugging. The full mode is suitable for arc surface projection debugging.

2.Introduction of geometric deformation debugging.

Linear mode:

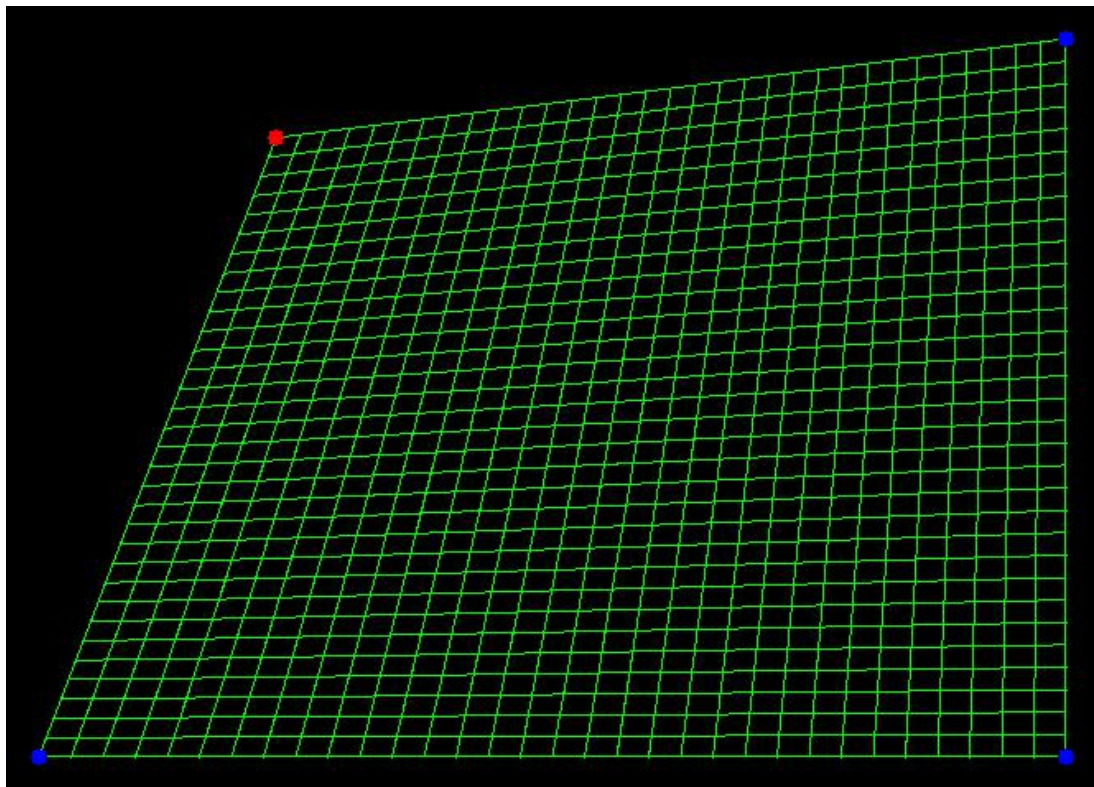
Linear mode is suitable for projection and debugging of profiled surfaces and planes, irregular faces, etc. As shown below, in addition to clicking  to add debug point in batches, all line intersections can be freely added to debug points for debugging.



Left click or select the blue debug point, click the up, down, left and right buttons of the keyboard to move the point, and move to a certain position according to the actual situation on site.  By selecting the direction key to adjust the speed of the direction key movement point, you can also select multiple points at the same time to shift at the same time. When debugging a single debugging point, you can debug by right-clicking the green

grid intersection to increase the debugging point. The overall debugging of each debugging point achieves the perfect effect of the projection screen output

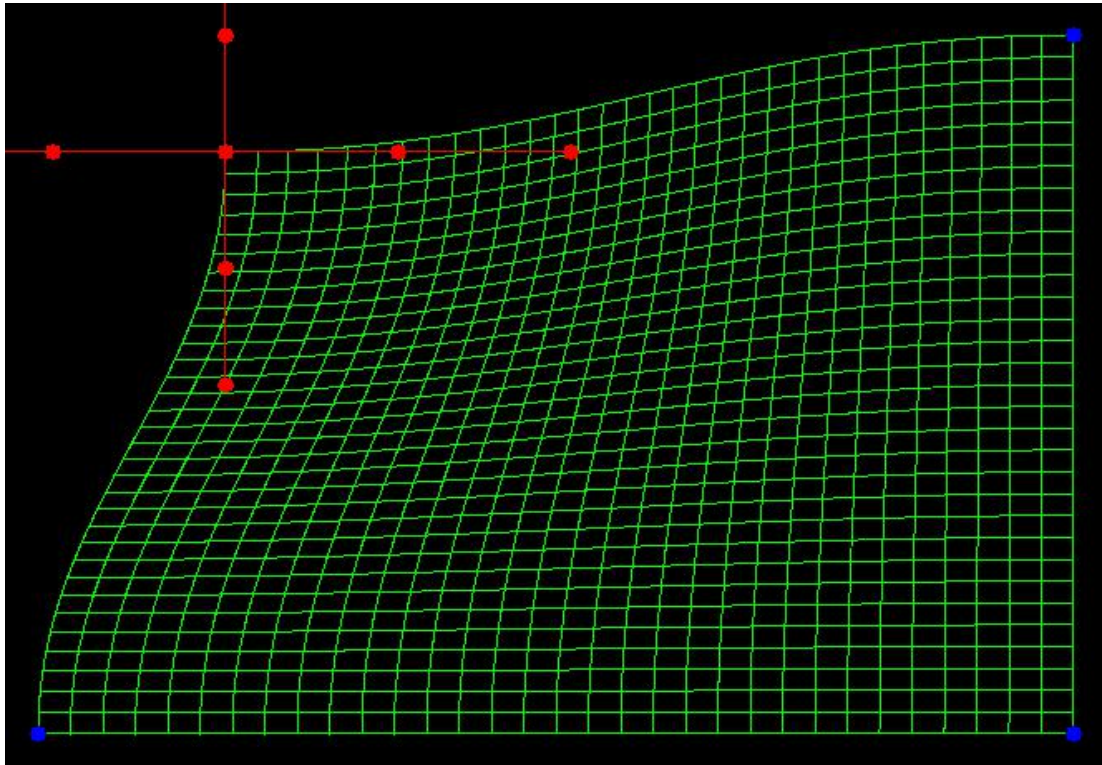
Perspective mode: Perspective mode is only available for debugging of planar projections. The perspective mode cannot increase the debug point, so only the four corners can be adjusted for debugging, and the output screen can be debugged according to the projection effect. Left click or select the blue debug point, click the up, down, left and right buttons of the keyboard to move the point, and move to a certain position according to the actual situation on site.



Arrow key: Slow Moderate Fast

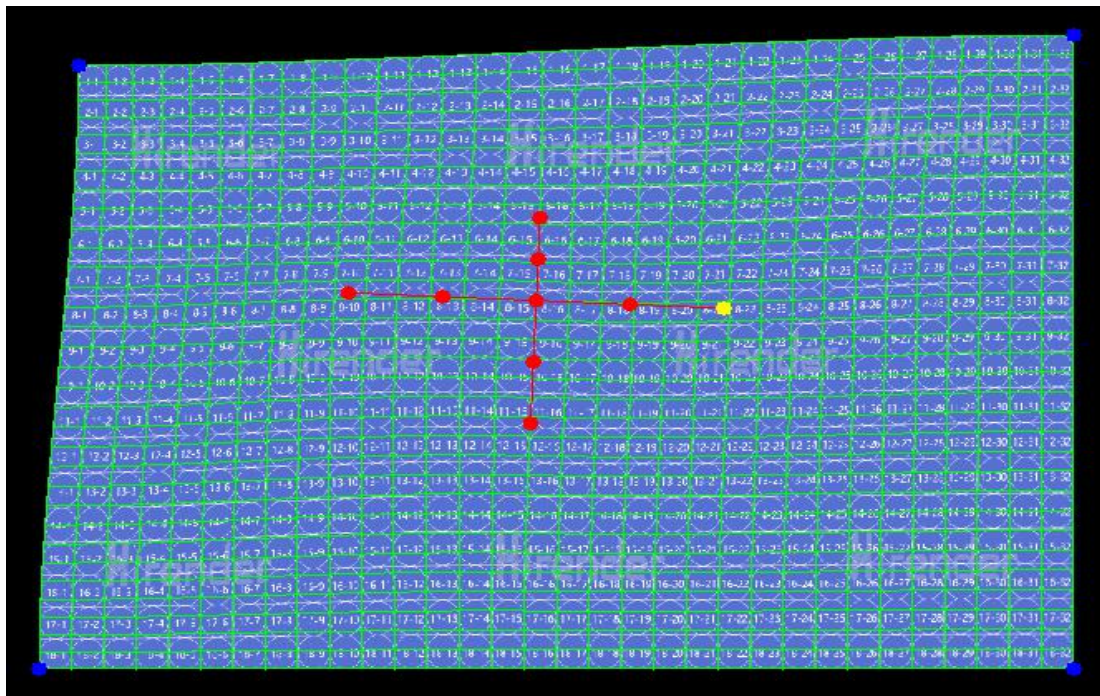
By selecting the direction key to adjust the speed of the direction key to move the point, you can also select multiple points at the same time to shift at the same time.

Full mode: The full mode is suitable for arc surface projection. After the debug mode is selected in the full mode, the arc will appear after the debug point moves, as shown in the following figure:

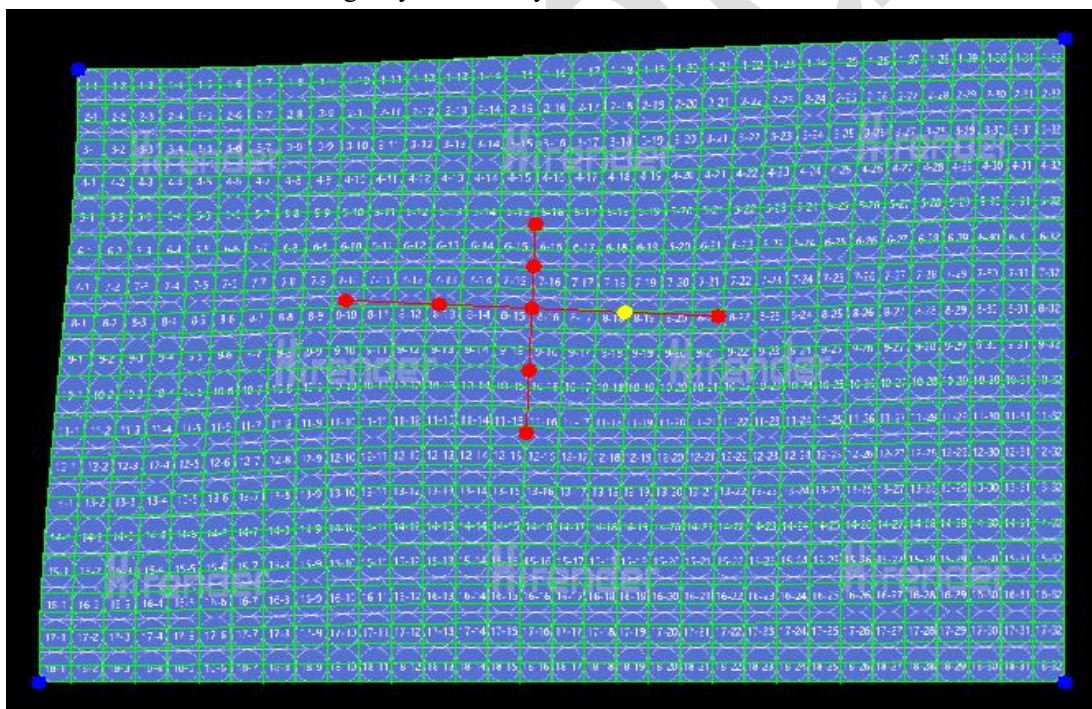


In full mode, a debug point like the cross handle will appear after selecting a debug point. Each point on the cross handle can be debugged by clicking the left button, and the outermost point can be moved up, down, left, and right. By

selecting Sync Smooth Continuous Show point, the synchronous display image takes the picture to the projection surface, and the edge smoothing is used to eliminate the jagged problem that occurs when moving the debugging point, and the curve smoothing is used to perform symmetric motion on the left and right sides when debugging the cross handle. For example, when the curve is smoothed, when the rightmost point of the mobile cross handle is up, the corresponding left handle will move downward. After removing the smoothed check state of the curve, if the right point moves up and down, only the right handle moves up and down.

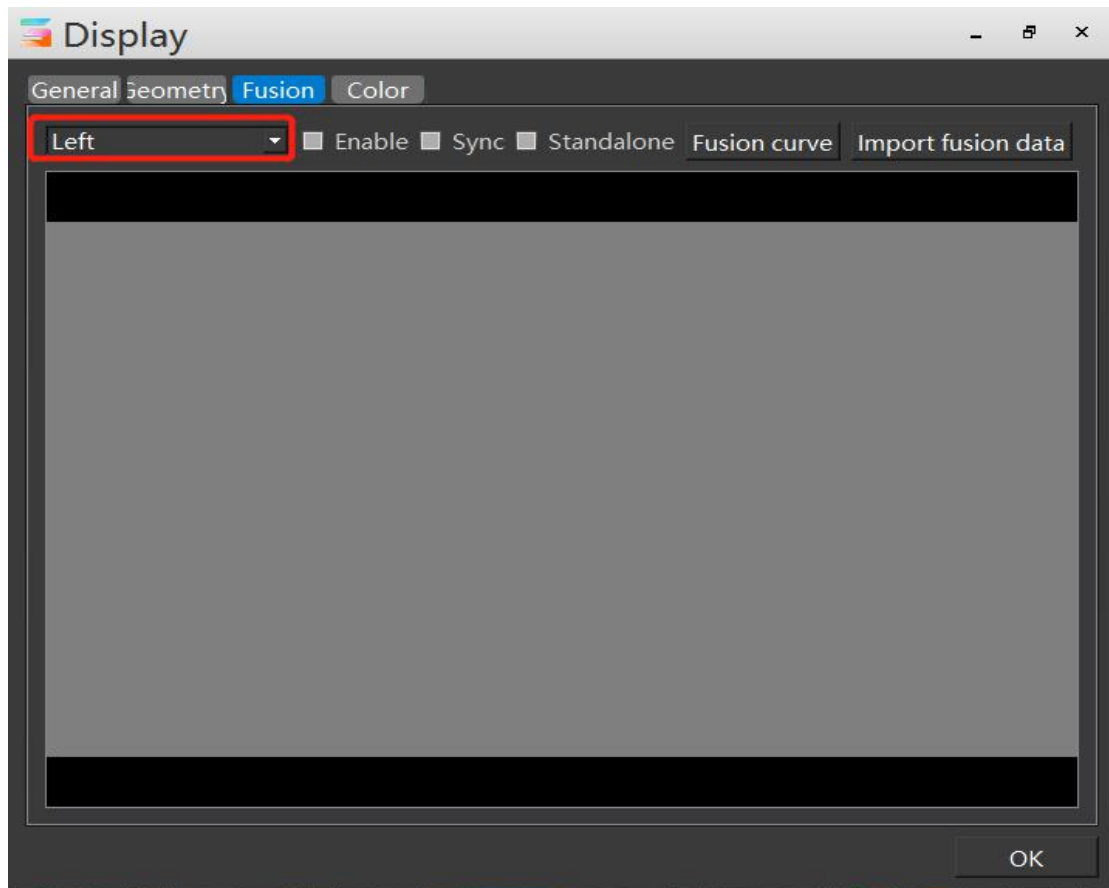


As shown in the figure below, the flat position can only move horizontally. The vertical position can only move in the vertical direction. Whether the smooth curve state is selected affects whether the cross handle changes symmetrically.

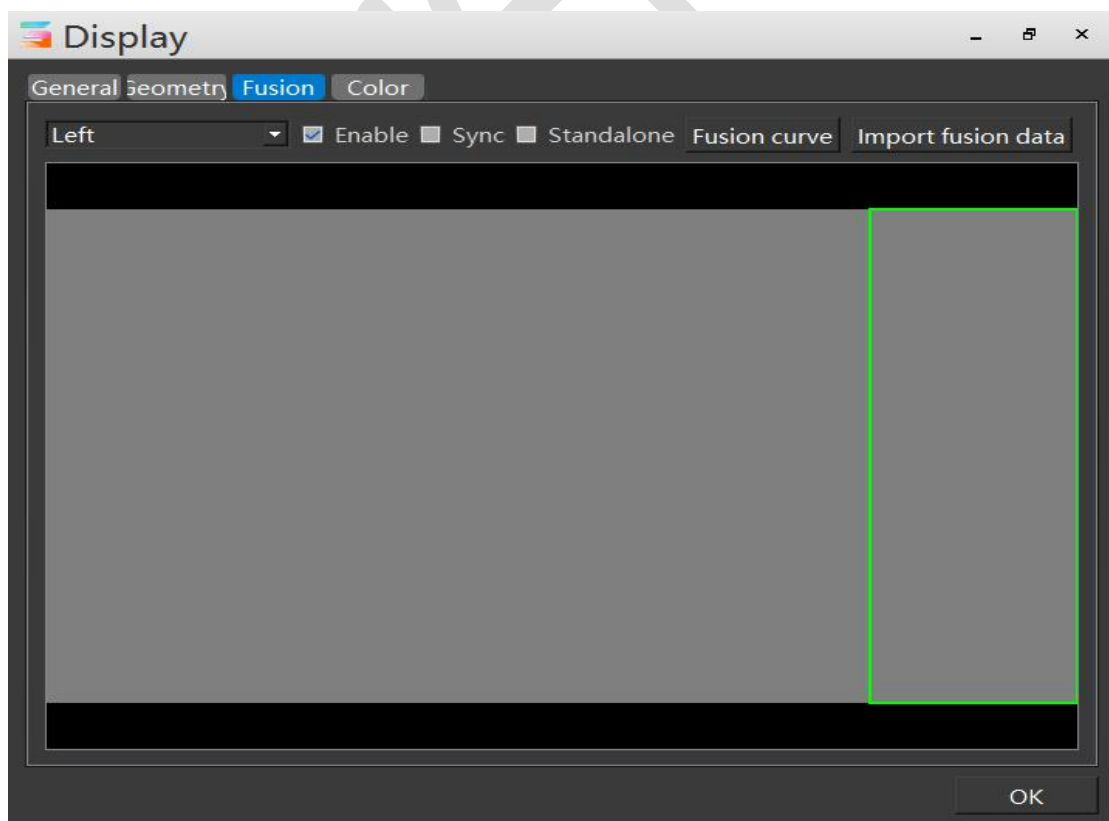


3.Fusion band addition debug

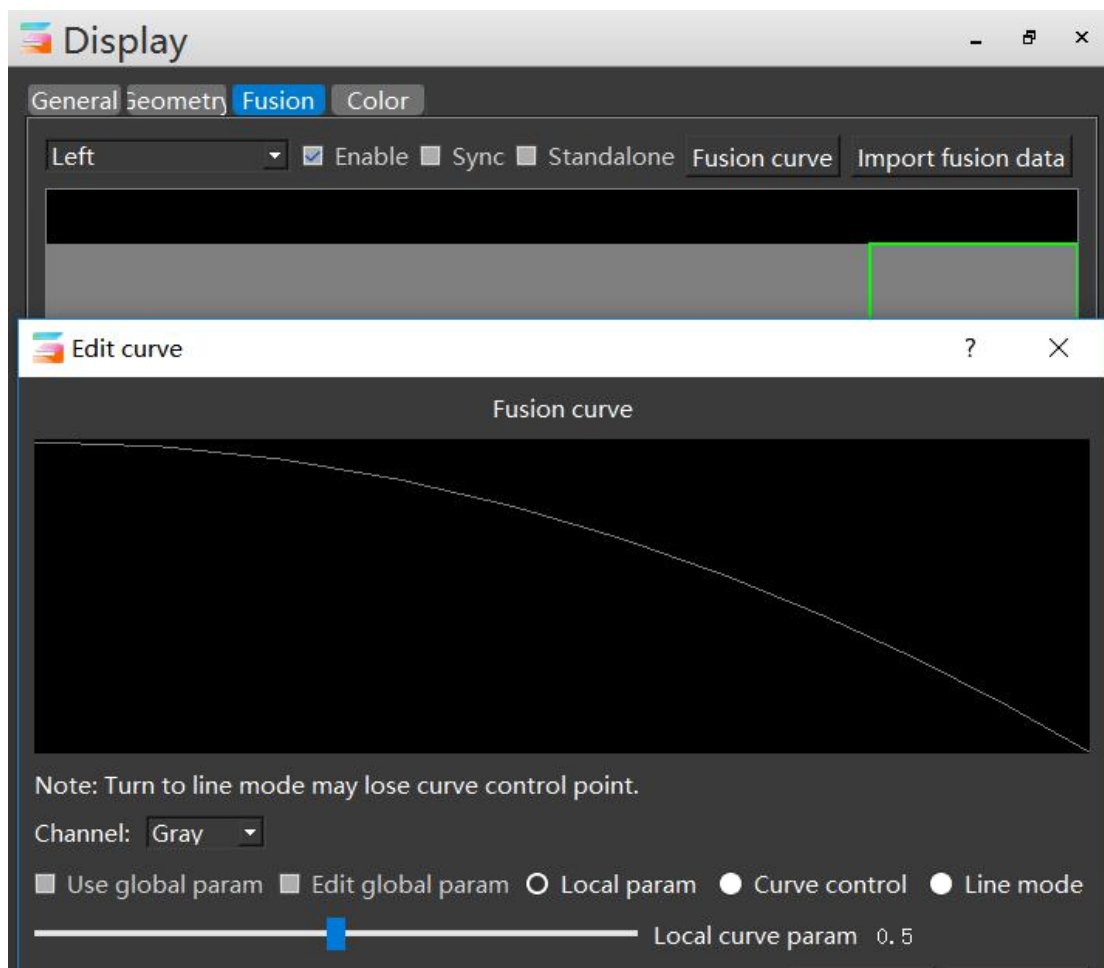
In the software operation interface, click the fusion band, and add the fusion band in the red area frame selection box. If the two projectors are spliced to the left and right, the right display frame is added to the left display frame and the left fusion band is added to the right display frame.



After adding the fusion band, as shown below: Check the sync button to display the fusion green border to the projector screen.



Left click on the green fusion band, click on the edge curve and select the local parameter in the pop-up box. Debug the fusion band brightness by sliding the blue pulley selected in the frame ,and debug the overall effect of the two projectors.



Appendix III: Frequently Asked Questions

It mainly answers various problems encountered by practitioners in the matching and debugging of software and hardware systems, and improves the ability to solve problems on the spot. This section will be updated continuously, please pay attention to the latest version. I believe this part will solve the technical doubts of most practitioners. If your question is not answered, please write to hirender@enlightv.com.

1. The software is closed after the project is created.

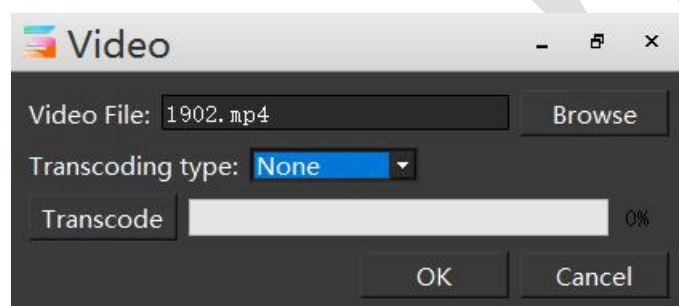
This situation is generally caused by the graphics card driver not installed. Solution: If it is a professional card such as the NVIDIA P series, go to our official website forum to download the corresponding graphics card driver, re-install,

Address: <http://www.hirender.cn/forum.php?mod=viewthread&tid=125&extra=page%3D1>

If it is a non-professional graphics card, you can download the driver wizard and use the driver wizard to upgrade the graphics card driver.


2. The video of large-size always gets stuck when broadcasting.

If the video of large-size got stuck when broadcasting, you can transcode the video by using our broadcast assistant software, or double-clicking the media directly in the software resource list to select the decoding optimization. After optimization, check the use of the optimized file.



3. Open the software prompt without authorization information.

Check if the dongle is plugged into the host. If not, please plug in the dongle. If the dongle is plugged in, it still prompts that there is no authorization. You need to check whether the dongle

driver is installed successfully. Check if there is this icon  in the lower right corner of the desktop. Reinstall the dongle driver named CodeMeterRuntime.exe which is stored in the S3 folder. Double-click to install the software by default, or reinstall the S3 software.

4. Open the software prompt AERO theme is not enabled.

Right click on the blank space on the desktop and select Personalize, System Theme, AERO Theme.

Note: Since WIN10 does not have the requirements of the system theme, recommend everyone to use the WIN10 theme

5. Software timeline runs faster than normal time (sound card driver problem).

Download the driver wizard and update the sound card driver to the latest version.

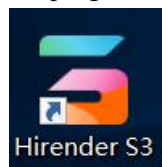
6. After the software is opened, the insertion window, media resource window, and stage editing window are gone.

Click the window command in the menu to check the program insertion, media resources, and stage editing window.

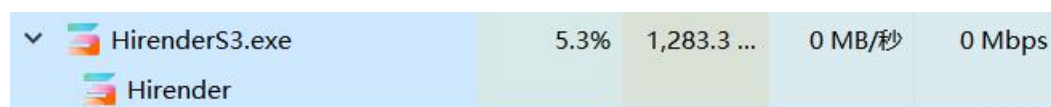
7. Software opens prompts the maximum number of users.



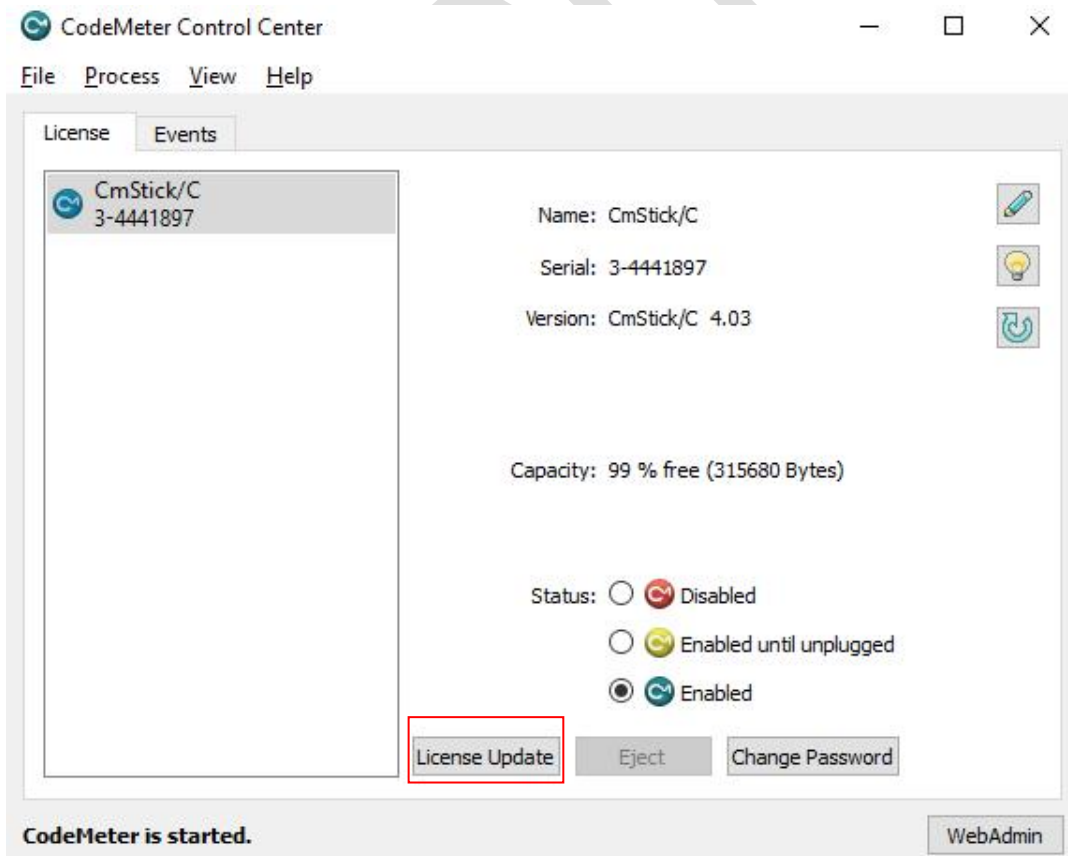
This situation is a problem with software open duplicates. Solution: First check the system address bar to see if there is an S3 program open, if any, close all S3 programs, and then re-open the program.



If there is no S3, right click on the address bar, click Task Manager, find Hirender S3.exe or HirenderS3Display.exe, then turn off the found program and reopen the software.

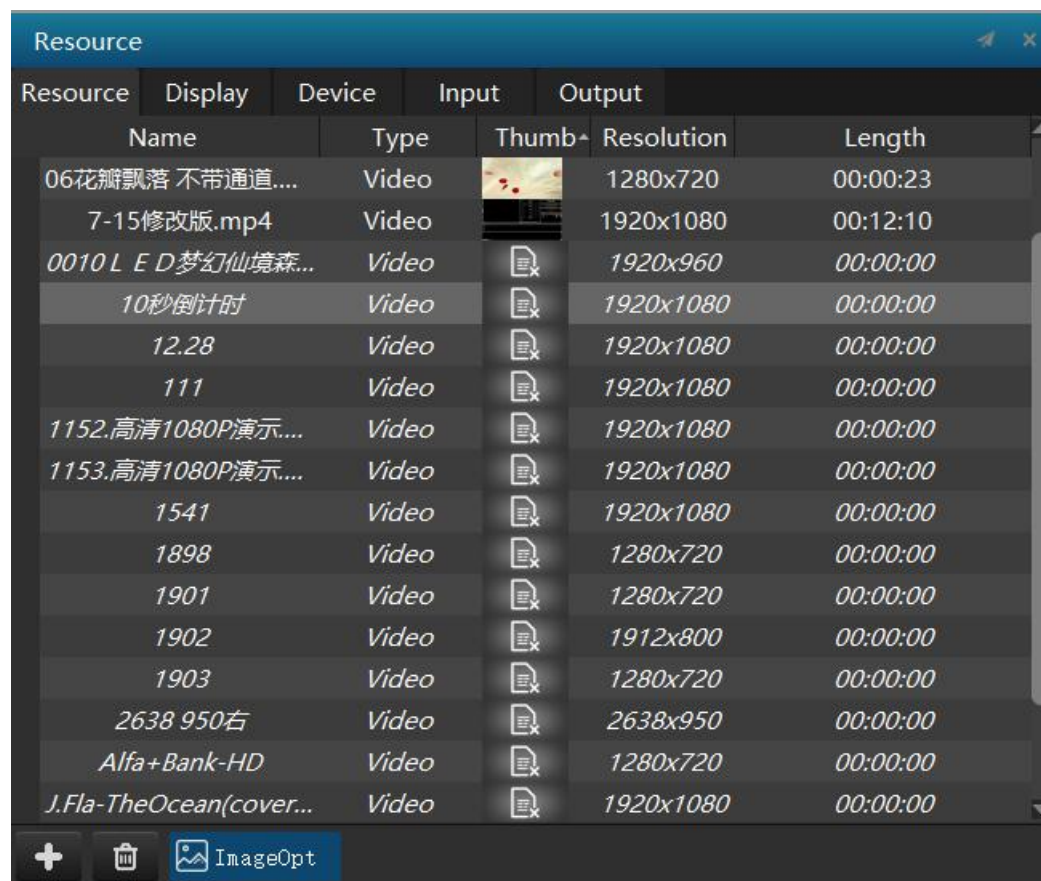


8. Open the pop-up encryption lock interface and display CodeMeter 102541 error.



9. After the software is opened, the edited program cannot be played normally, and the resolution of all the materials in the media resource is 0.

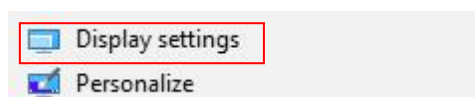
Open the saved program and find that the media resources are all 0, and the resource path is red, indicating that the path has not found the file. At this point you need to relocate the show file to its original location.



10. The computer boot screen is on the display device, and the computer screen only display a desktop.

This situation is caused by the system's main desktop settings on the display device, we need to set the system's main desktop to the display, the specific steps are as follows:

1. Right click on the blank area of the desktop and select the screen resolution or display settings.



2. Click the logo button in the settings screen to view the screen number of the monitor.

3. Click on the screen number, select the display, then check the settings below to set the current screen as the main desktop.

11. There are gaps in the splicing of multiple output stitching

1. Check whether the graphics card is set the stitching. If the graphics card is not set, you need to set the graphics card the stitching to ensure the synchronization of the graphics output.

2. If there is still a gap in the graphics card splicing, you need to check whether the device such as the back-end processor has set the synchronization mode.

12. After debugging the software, turn it off and then on again, the output resolution is disordered.

The reason is: 1. The output sequence is disordered, resulting in sequential switching of output channels of different resolutions.

2. Line transmission causes an error in the EDID.

Solution: Lock the EDID

13. The encryption lock suddenly cannot be opened (the encryption lock is locked).

Reason: 1. The system has a virus.

2. The system is a pirate system.

3. Antivirus software leads to.

Solution: After the original system image file is installed, the genuine activation is performed. The authorization file for extracting the encryption lock is sent to the relevant sales personnel, who provide the new authorization file.

14. Play video stuck and video out of sync solution.

When the machine performance is sufficient, the host's system is optimized to ensure the optimal state of the machine. Perform transcoding optimization on the video, transcode the video into the most suitable encoding, stream, and format. If the card is still in the situation, it is recommended to split the video and then transcode it.

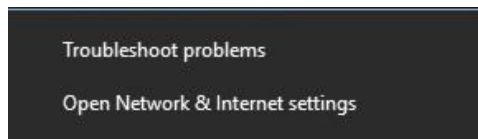
15. Settings of primary and backup devices and multiple machine-connected LANs.

1. Set the primary and backup machines to different fixed IP addresses, and the IP addresses need to be on the same network segment.

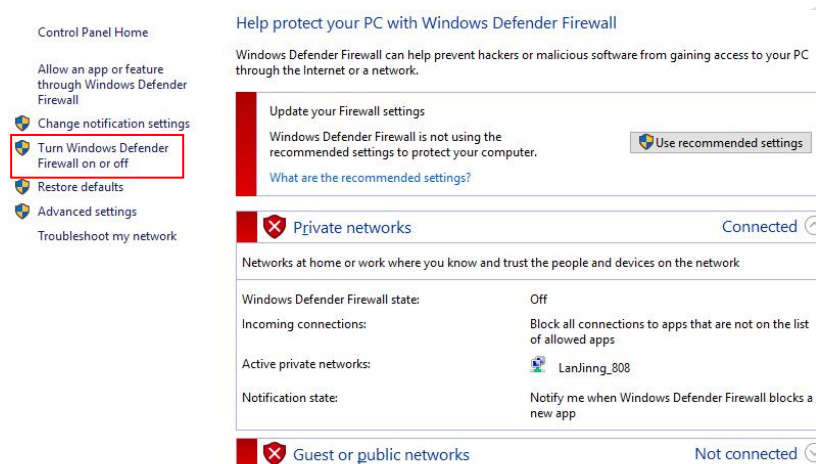
For example, the primary setting IP is 192.168.1.2, and the backup setting IP is 192.168.1.3.

2. Turn off the system's firewall.

Right click on the network icon in the taskbar and click on Open Network and Sharing Center.



Click on the Windows Firewall in the interface.



Then click to enable or disable the firewall.

Then set both the public and private networks to turn off the firewall.

Customize settings for each type of network

You can modify the firewall settings for each type of network that you use.

Private network settings

- Turn on Windows Defender Firewall
- Block all incoming connections, including those in the list of allowed apps
 - Notify me when Windows Defender Firewall blocks a new app

- Turn off Windows Defender Firewall (not recommended)

Public network settings

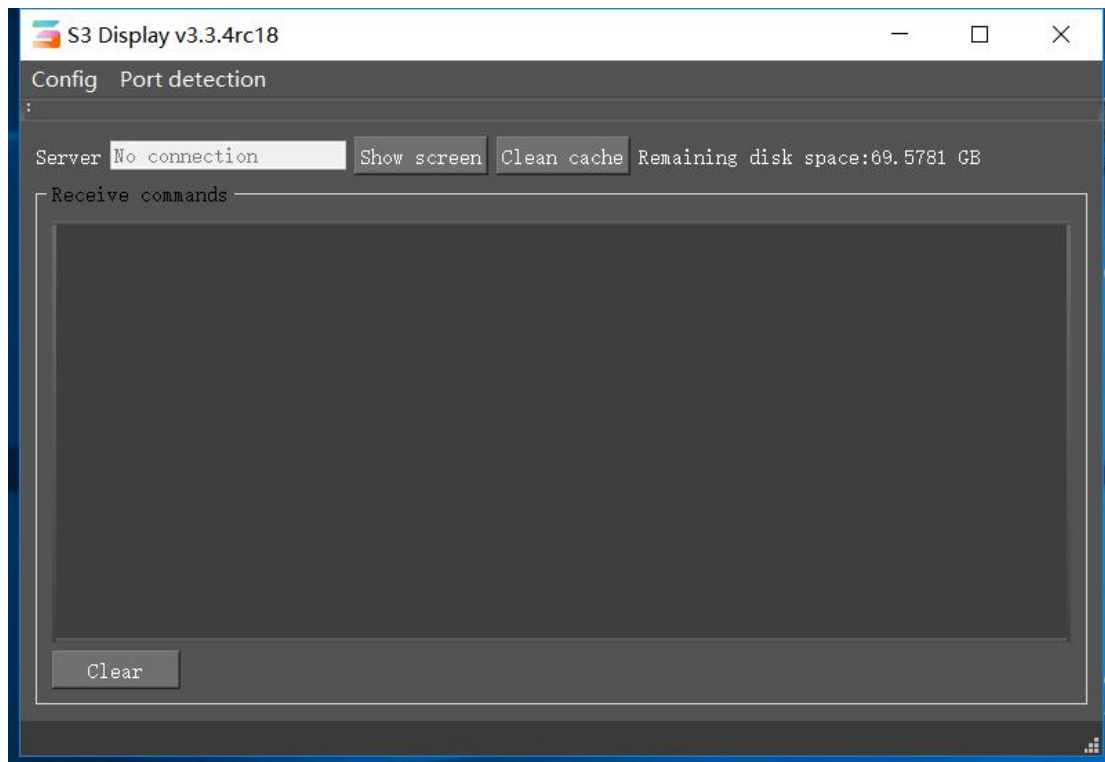
- Turn on Windows Defender Firewall
- Block all incoming connections, including those in the list of allowed apps
 - Notify me when Windows Defender Firewall blocks a new app

- Turn off Windows Defender Firewall (not recommended)

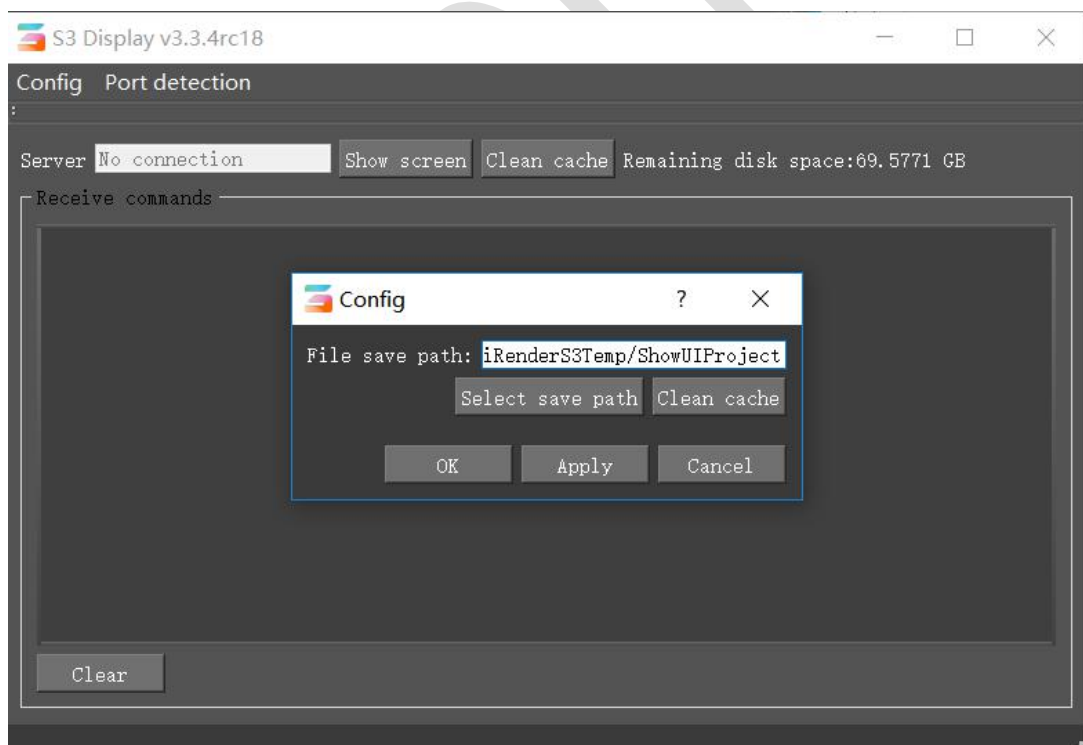
16. Update fails in active/standby mode and multiple online modes

1. Insufficient cache path space. Change the cache path of the active or backup device or clear the junk files on the disk, leaving enough space.

Steps: (1) Click the setting button in the upper left corner of the S3 display.



You can then choose to empty the cache or change the cached path to a different location.



2. Network error, check the network settings to see whether the active and standby networks are connected, and whether the IP is displayed correctly. You can reset the network according to the instructions in section 15.

17. Recommended video encoding and format

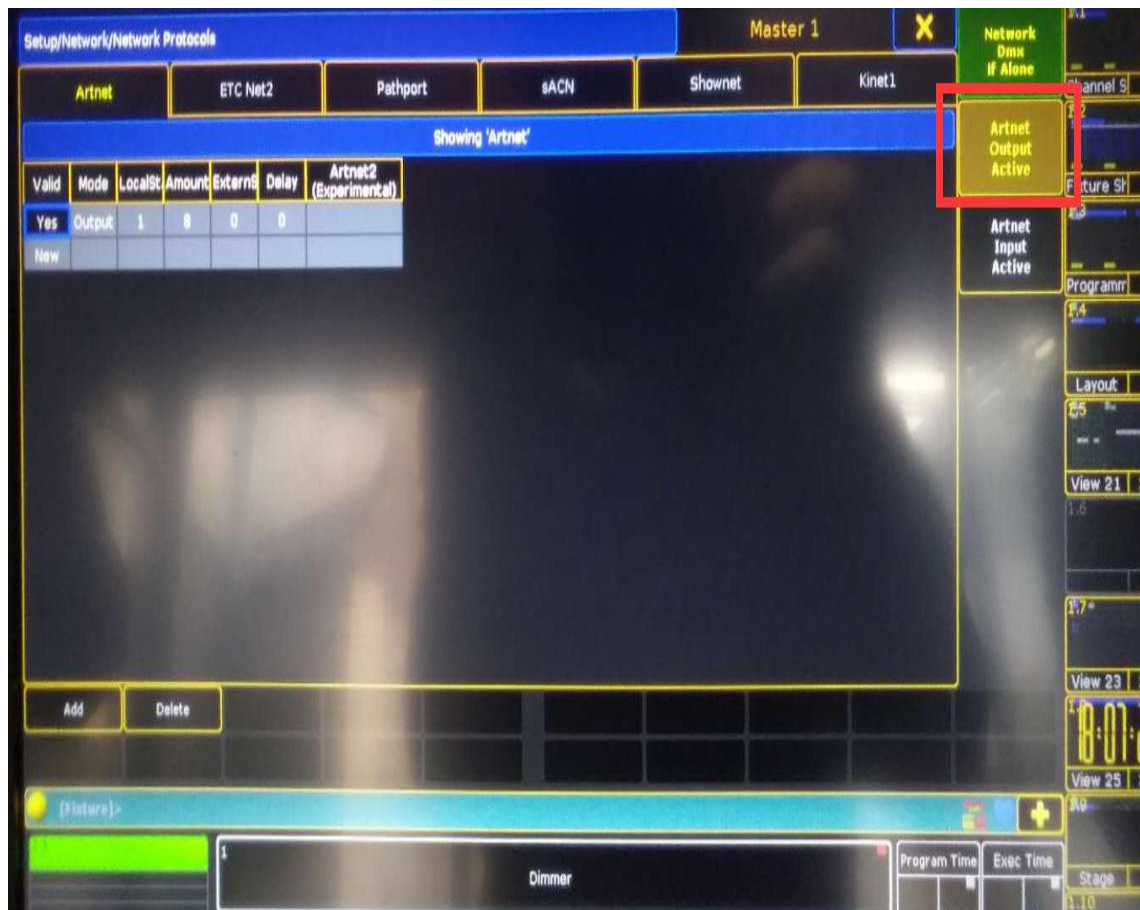
Resolution	Frame rate (frames /second)	Recommended bit rate (megabits/ second)	Encoding format	Encapsulation format
1280x720(720p30)	30	5	H.264 MPEG2	MP4/MOV/MKV MPG
1920x1080(1080p30)	30	10-15	H.264 MPEG2	MP4/MOV/MKV MPG
1920x1080(1080p60)	60	25-35	H.264 MPEG2	MP4/MOV/MKV MPG
3840x2160(4K 30p)	30	50-70	H.264 MPEG2	MP4/MOV/MKV MPG
3840x2160(4K 60p)	60	80-120	H.264 MPEG2	MP4/MOV/MKV MPG
7680x4320(8K 30p)	30	130-160	H.264 MPEG2	MP4/MOV/MKV MPG
7680x4320(8K 60p)	60	200	H.264 MPEG2	MP4/MOV/MKV MPG

Appendix IV: How to link with the lighting console, etc.

Hirender S2/C3 supports DMX512 triggering and docking through ARTNET protocol. Any lighting console that supports ARTNET protocol can trigger S2/C3 program insertion through network connection. If the lighting console does not support ARTNET, it can also convert DMX512 to ARTNET through the transfer box.

MA2 lighting console settings:

1. Open the ARTNET output of the MA2 console, click the ARTNET output active button to turn the ARTNET output on (the yellow is displayed after opening).

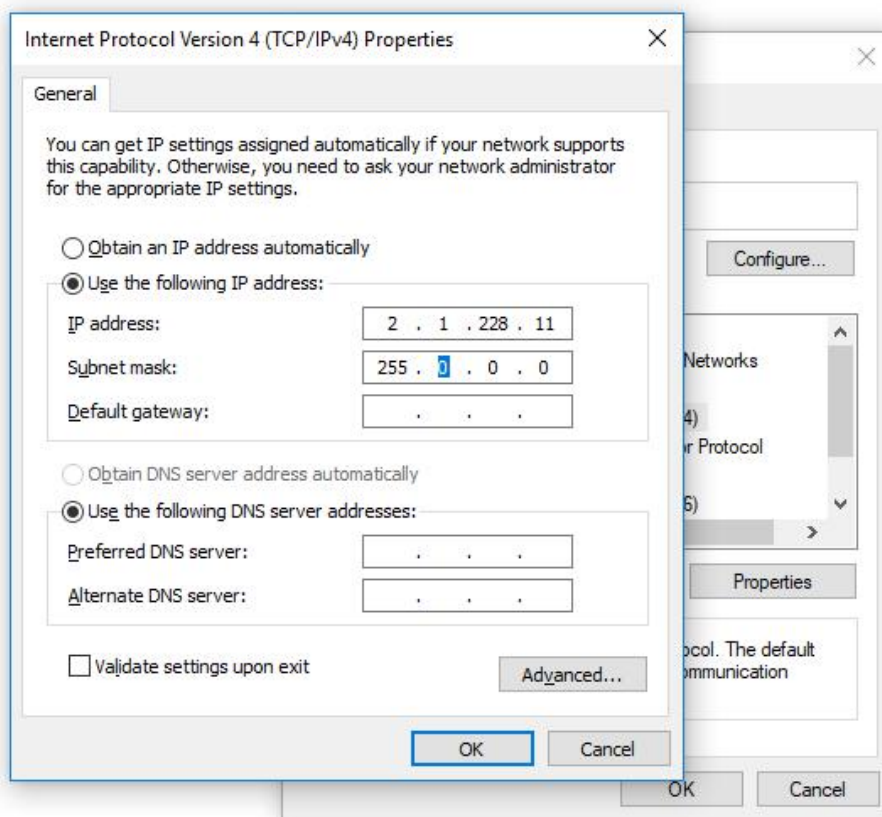


2. Check the IP address of the MA2 console. The IP address of the MA-Net is generally 192.168.1.x, and the IP address of ARTNET is generally 2.1.228.xx (the default IP address of the MA consoles of different brands may be different).

Note: The network port on the MA2 console must be plugged into the second network port.



3. Set the server IP address to the same network segment as the IP of ARTNET.



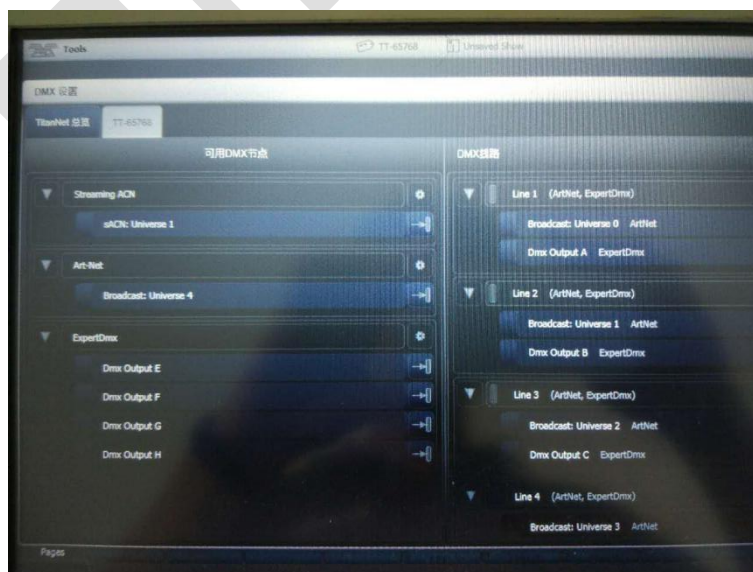
4. After the setup is complete, you can ping the IP of the MA2 console on the server to see if the network is connected.

Tiger console set

1. Set the console to the system settings option, then click on Network Settings to set the IP address. As shown below, the IP address is set to the same network segment as the server. For example, the IP address of the server is 192.168.1.100, and the IP address of the console can be set to 192.168.1.110.

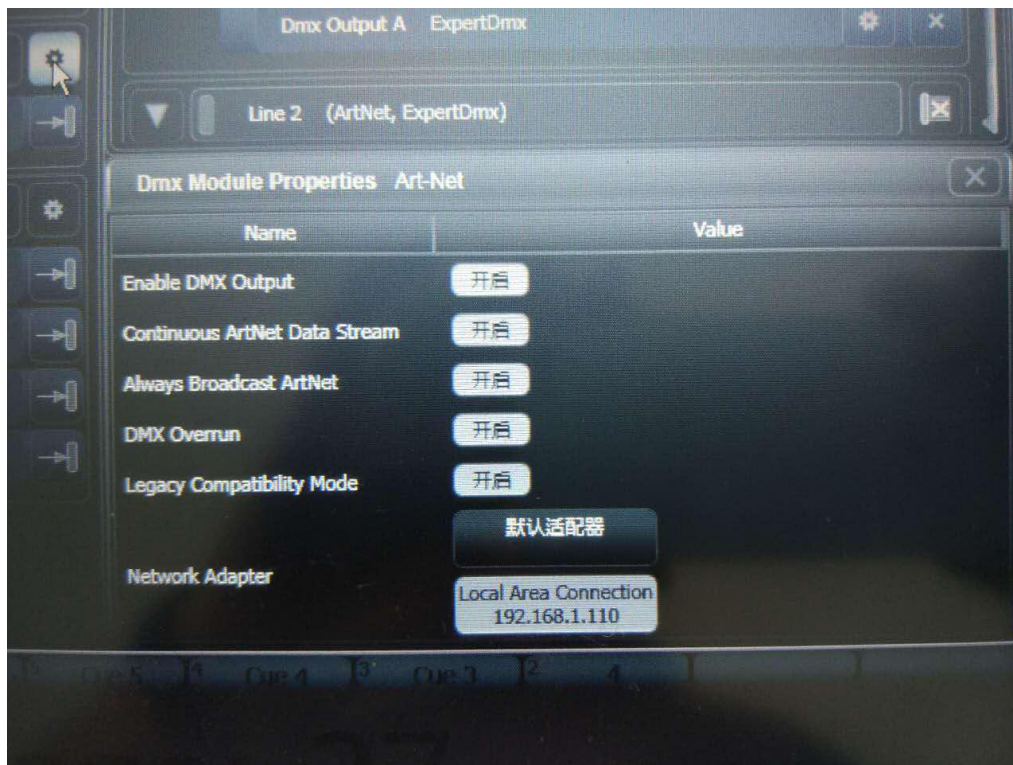


2. Turn on the ARTNET output of the console, set as shown below, click “DMX settings” to open the interface of ARTNET settings.



3. Click the settings icon on the right side of the ARTNET output window to open the settings

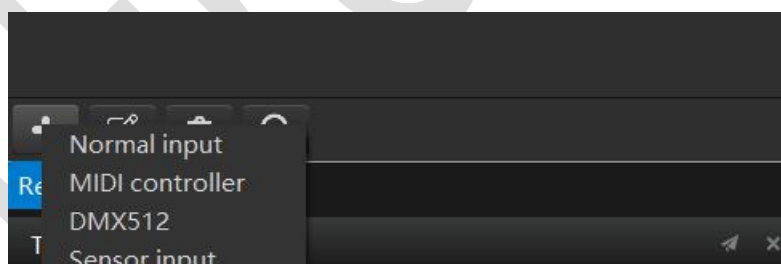
interface.



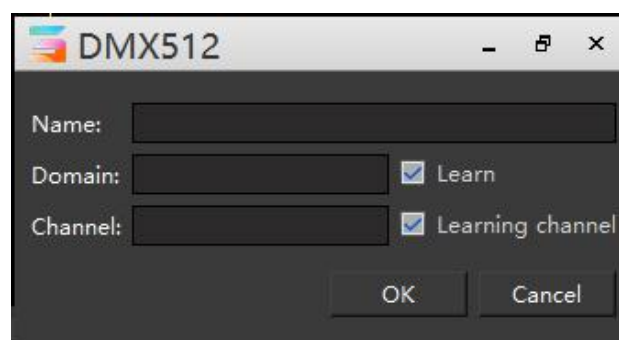
Turn on all settings, then ping the IP of the console through the server and test the network.

S3 software settings:

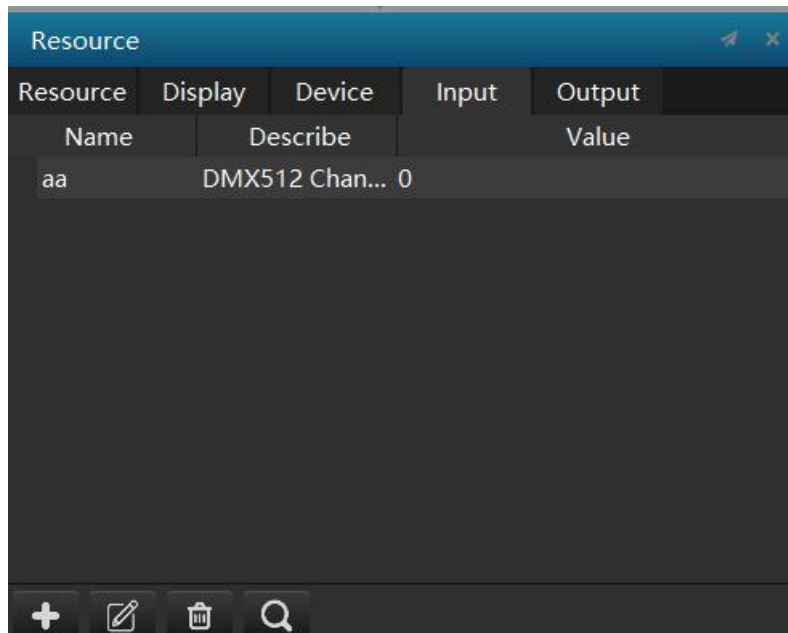
1. After opening the S3 software, click on the resource management box, and then select the input control, and click the "+" sign below the input control to select DMX512.



2. Add a name and channel, where the name is a combination of letters and the channel is the channel number of the push button.

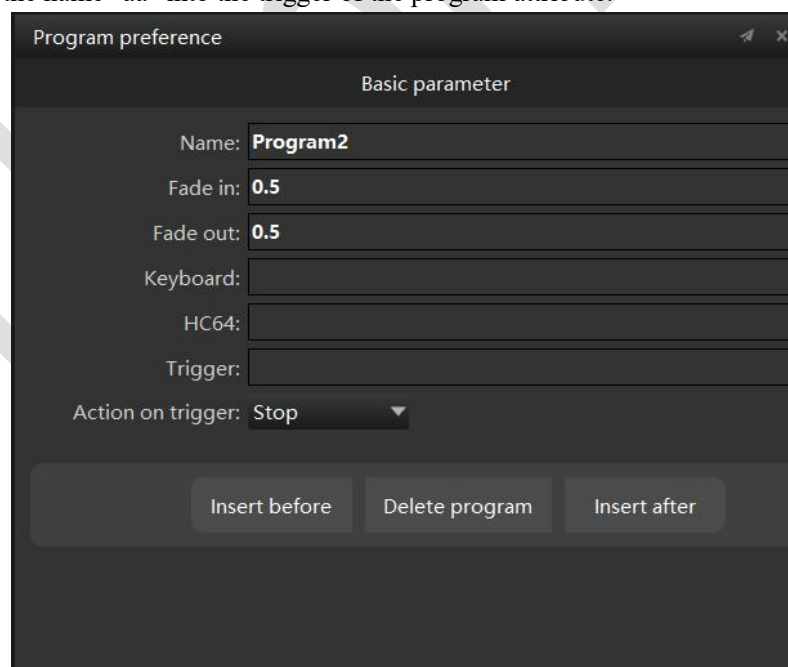


For example, set the name "aa" and the channel number "2", and then click OK to complete the addition.



If you push the putter of the MA2 console, the value in the figure will change accordingly, indicating that the addition is successful.

3.Fill in the name "aa" into the trigger of the program attribute.



Then, push the push pole of MA2 console or the tiger console to play a program in S3.

CAUTION:A user with the admin role implicitly has all roles ,allowing access to all parts of Hirender .