VJDIRECTOR2

LIVE PRODUCTION SOFTWARE

PRODUCT SPECIFICATION

CONTENTS

1.General Overview of Nanjing Nagasoft Co., Ltd

1.1 Brief Introduction

Nanjing Nagasoft Co., Ltd which integrates software development, sales, system integration with the the streaming media technology as its core is an original as well as Double-soft certified enterprise (No.R-2009-0062). Our company, one of the member of Jiangsu Soft Association is an Industry-Academy-Research cooperative organization for many colleges and it has a lot of partners and distribution network in China.   All these make it gain the high awareness in industry.

Since the foundation in 2006, the rate of its market share has continually and stably risen. In 2010 we set up a wholly-owned subsidiary in Guangzhou——Guangzhou Naga Information and Technology Co., Ltd as the base of South China. Also, the Beijing Office was established in 2011.

With the original streaming media software products as its core competitiveness, Nagasoft has the long focus on the market of streaming media. Additionally, more kinds of products and solutions will be applied to different projects at home and abroad in pace with the research, development and sales. It has formed an impeccable product line from front-end capture to back-end watching with the pure soft products extending to hardware devices along with overall solutions of software and hardware.

As the professional streaming media software supplier, our company has a sound product service system and one-stop solutions that help it receive a highly comment from a lot of customers not only in the internet industry, education industry, enterprises and institutions but also in the professional field such as broadcasting and TV system and video editing. It has a huge and loyal customers, among which there are a lot of well-known enterprises and institutions such as Chinese Academy of Science, China News Service, Sina.com., China Telecom, China Mobile Communications, TVS, Hunan Broadcasting System, Macao Lotus Satellite TV, Beijing Normal University, Nanjing Daily, Dongfeng Nissan, National Astronomical Observatories, China TV media net, etc.

Meanwhile, we also has a large number of customers in overseas countries and regions and its products are sold to Germany, Tai Wang, South Korea, America, Netherland, Brazil, India, Japan, etc.

Gathering rivers into the sea and adding stones to make mountains. By virtue of its powerful

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technological development team and service system, Nagasoft, aiming at advancing streaming media technology of China along with serving the public better, endeavors to become the first-class streaming media technology supplier in the world!

1.2 Development History

2006, Nagasoft Co., Ltd was set up; published P2P VJVoD.

2007, launched the world's leading software director system; the number of global OEM partners requiring cooperation increased to 20.

2008, launched contents management system as well as media resources system; established after-sale service center in Taipei.

2009, set up the base in South China; overseas marketing business division came into existence; received the State Double-soft certification.

2010, launched IPTV Set Top Box; the integration of three network (telecom, broadcast network, internet) along with campus TV solution were settled down in the major TV station and colleges.

2011, began to construct the mobile STB platform for Apple and android; Beijing Office was found.

2012, introduced Naga solution for education.

1.3 Our Advantages

1) The original steaming media software is our core competitiveness.

2) The solution system with the productization as its core covers the integrated synthetical application involved in internet Live/video on demand, editing, directing, media resources management, construction of content management websites, IPTV STB, mobile platform, informational television, etc.

3) It contains from front-end capture to back-end watching with the pure software products extending to hardware devices and overall solutions of software and hardware.

1.4 Lists of Naga Products

◆ VJMS

◆ VJLive

◆ P2P VJVoD

◆ VJDirector2

◆ content management system（VJCMS）

◆ media resources management system(VJMIS)

◆ VJPlayer series

◆ VJEncoder

◆ education recorder system

◆ VJDirector AIO

◆ laptop director system

◆ IPTV Set Top Box;

◆ USB capture box

◆ multichannel encoder

◆ 3G movable encoder

◆ AV/HDMI/SDI multichannel card

2. VJDirector2 System Introduction

2.1 Brief Introduction of Function

VJDirector2 is not only the original software products to fill Chinese vacuum field, but also is the one that owns the main support by Jiangsu Information Industry Department.

Certification No. :[苏 DGY-2009-0142]. Register No. of the copyright: [2008SR30023].

VJDirector2 is a set of software system equipped with the audio/television all-in-one. It can substitute for hardware to complete the work of [switch console], [title generator], [audio mixer] [hard disk broadcasting system], [virtual studio], [video recorder], [linear editing system], [informational television manufacture system] and it is applicable to the realtime editing and recording (such as [activity live], [audio and television system], [webcast]) and video producing in later stage (the format of the created files contained WMV, FLV, AVI, etc.). VJDirector2 is the preferred option of the multimedia information construction for internet, education, audio and television system, governments and enterprises.

Note：This is the VJDirector 2.4 operating interface of ultimate edition

◆ Input

It supports a maximum of 10 video input channels (the specific number depends upon its version) and it can be customized to extend to more channels if necessary.

Device output: Support connecting all kinds of hardware device with WDM: camera, video recorder and capture card through 1394 / AV/HDMI/SDI/VGA capture card.

Loading files：Support all kinds of files input, such as WMV / Real Media / Mpeg4 / Mpeg2 / AVI, etc.。

Stream input：Support Windows Media/Real Media remote stream input.

◆ Effects of Realtime Switching

Support any two channels to switch among all.

Support a mass of switching effects of 2D and 3D .

The effects can be customized, enlarged and upgraded.

◆ Logo

It supports a maximum of four logos(the specific number depends upon its version) and their location can be selected from the four corners. It can be customized to expand to more channels if necessary.

It supports all kinds of image formats (bmp / jpg / gif / png / dds / dib / tga, etc.).

Support animated and transparent logos.

Intelligently cut the background of logo files.

◆ Subtitle

Support two methods of subtitle generation: automatically generate and manually generate.

Long distance subtitle publish: To edit the subtitle and send it to VJDirector from other computers.

The subtitle can be generated from file loading or manual input.

Support font setting and containing plentiful font effects: 3D, shadow, frame, etc.

◆ CG File Editor

CG File edited by VJCG File Editor can quickly publish the words that have been edited and the images that have been processed already.

Different kinds of image formats are supported(bmp / jpg / gif / png, etc.).

First, click button 'File' to load CG files and then all the CG items will be listed in the form of thumbnail. Second, select the item you want to publish and click button 'send to pre-monitor' which can send the item to pre-monitoring screen for preview. Or you can click button 'send to main monitor' to send it to the main output screen.

The time and speed of effects can be set.

◆ Chromakey

Chromakey and color adjustment.

Support chromakey in RGB background. That can perfectly achieve the effect of virtual studio.

The color and brightness adjustment of the video are supported and they can going at any time during the course of realtime broadcast.

◆ Output

It supports network streaming output and directly posting onto the internet. The contained streams are MMS and PRMP.

Hardware output is supported. It allows outputting hardware to the sound card, video card, VGA signal and outputting HD signal thorough SDI card (Decklink card), outputting A/V signal through A/V card(esp. Decklink card) and outputting 1394 signal by 1394 card.

Files output is supported. It provides WMV9, H264 and non-loss encoding format that can output files and save them as FLV, MP4, WMV, AVI video files.

The size of outputting screen and the frame rate can be configurated. Supporting all kinds of specification of HD and SD.

Virtual device output can widely extend the field of use by connecting with any third-party software like QQ video, capture software self-prepared by users.

◆ VJVGA Capture

It can capture the desktop from remote computers that can help save cost effectively.

The capture can take place on full screen, specified window or within the screen. Also it can come from more than one computer desktops.

◆ Delayed Output

When it postpones broadcasting considering for security in some Live scene, the signal of live broadcast that the audience are watching are delayed for a certain time so that if there's an emergency the director can switch to a secure video that have been produced in advance. At the same time, the secure video will come back to audiences eyes immediately. After the emergency is over, the director can switch it to a normal screen.

◆ Multichannel Record

Channel recording/encoding is used to encode the input signal of the channel with H.264/AAC to record files and push them to network streaming media server.

It supports encoding two streams simultaneously and each of them can record files and push them to two streaming media server.

◆ More Functions

VJDirector2 has their own audio mixer that can control the volume size and the effect of sound mix at will.

Automatical playing system is also included. It has some automated function, for instance, setting timing broadcast, automatical switchover and rotational broadcast.

It allows being equipped with other accessories like TALLY and external consoles.

2.2 Function Parameters Table

Features	VJDdirector2 Standard Edition	VJDdirector2 Ultimate Edition	VJDirector2 Deluxe Edition	VJDdirector2 Trail Edition
Max Input Channels	6	10	10	3
Chromakey		●	●	
MMS Input	●	●	●	●
RTMP Input			●	
Remote Connection		Extra Purchase	Extra Purchase	
*Multichannel Recording			●	
*Slow-motion Playback			●	
Delayed Broadcast			●	

*MPEG2 Output	●	●	●	●
*Effect Editor	●	●	●	●
CIF（640*480）	●	●	●	●
SD	●	●	●	●
HD 720P	●	●	●	●
HD 1080I	●	●	●	
HD 1080P		●	●	
HDV		●	●	
Sound Cart Output	●	●	●	●
AVI Output	●	●	●	●
Video Output	●	●	●	●
Virtual Device Output	●	●	●	●
WMV Encoding	●	●	●	●
1394 Output	●	●	●	●
Decklink Output	●	●	●	●
MPEG4 Output	●	●	●	●
VJVGA Capture		●	●	○ Capture Local Scream
VJCG Editor	●	●	●	●
Automated Tools（Auto play, Auto Switch, Automatic Subtitle）	●	●	●	●
Logo	2	4	4	1
Subtitle	●	●	●	●
CG File	●	●	●	●
Save Box	●	●	●	●
Hot Key	●	●	●	●
Parallel Port TALLY		●	●	
External Keyboard support	●	●	●	
COM Interface	●	●	●	
Web service Interface		●	●	
License	Online Register(Default 2 times)	Online Register(Default 2 times)		○100 Use count ○Watermark ○Time-outs

*marks the items that are under development. 。

marks that VJDirector2 Deluxe Edition is the special version for director all-in-one which is not sold separately. Naga director all-in-one is the all around director device that integrated with realtime broadcast, capture, recording, producing. **Please refer to VJDirector all-in-one specification for more details.
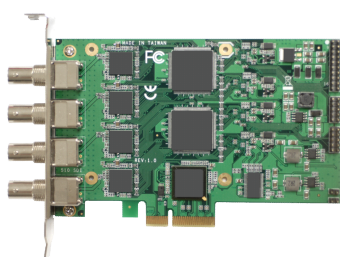
2.3 Recommended Configuration

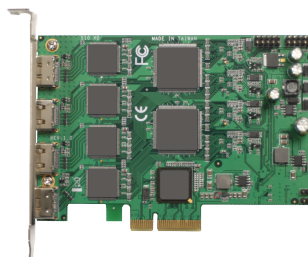| VJDirector2 Operating Configuration	SD Configuration	HD　Configuration
CPU	Intel i5-3450	Intel Core I7-3770
Motherboard:	MSI Z77A-G45	MSI Z77A-G45
Memory	Kinston 8G HyperX Blu 1600	Kinston HyperX Blu 8G 1600
Display Card	Yinchi(Galaxy)GTX650 1GB	Yinchi(Galaxy)GTX660 2GB
Hard Disk	Seagate 2TB 7200r 64M SATA3	Seagate 2TB 7200r 64M SATA3
Operating System	Windows XP / Vista / Win7	WIN7 ultimated x64

3. VJDirector2 Application Scheme

3.1 Camera Device Input

The first needed to input external signals like camera signal and SATV signal into a computer is capture card because usually there is no 1394 port or A/V port in the mother board.
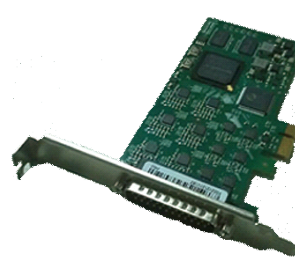
There are two signals that come from a camera, one is digital signal(SDI/HDMI signal) and the other is analog signal(A / V signal). They correspond separately to SDI capture card, HDMI capture card and A/V card as shown below:
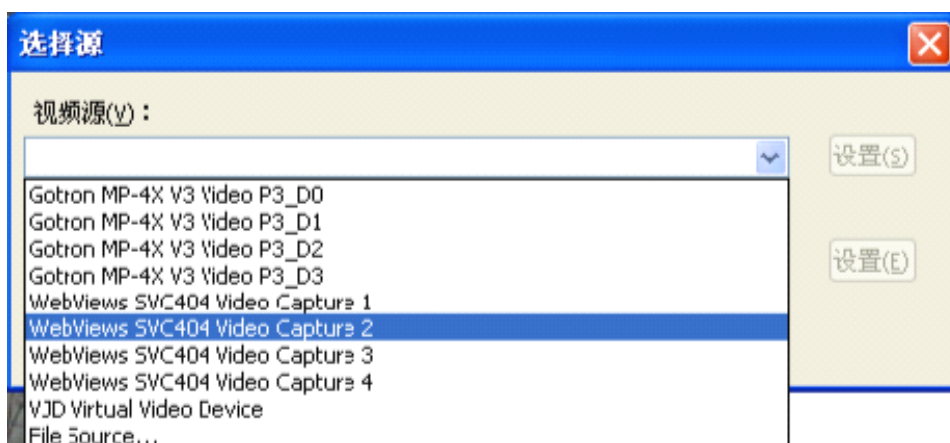

SDI capture card　　　　HDMI capture card　　　　AV capture card

Start VJDirector switch console after the capture card being installed and you will see the device source when video source is added.

Notice about multichannel signal: most 1394 cards on the market are single chip along with many sockets and one card can only identify one camera so that it can just corresponds to single channel signal. In addition, 1394 card must adopt NEC chip so as to avoid device conflicts at the cooperative work by

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many cards.

3.2 Computer Desktop, PPT File Output

Such Live situation as stock market comment, product presentation, experts classes often require broadcasting desktop and PPT files. For this case, it needs to acquire VGA data from one PC and then send them to other computer where the VJDirector is installed to carry out switching, editing and then broadcast it. Aiming at this request, we recommended these solutions as following:

Solution 1(recommended): adopt VJVGA specific to VJDirector2.4 ultimate edition which is, capture the desktop from remote computer via network cables, that can save cost efficiently. VJVGA capture supports collecting in full screen, specified window or within the screen . Also the acquisition can come from more than one computer desktop.

Following these steps below to arrange VJVGA capture：

◆ Install and run VJVGACap on a remote computer(what is being captured).

◆ Choose one channel in VJDirector and click 'load source' button. Then there will pop up a dialog box called select source. Enter 'vjvga://ip:port'in the 'video source' presenting in this dialog box. Here the IP is the remote computer's IP, the port is the monitor port (default 8015) set by VJVGACap running in the remote computer. For example, enter 'vjvga://192.168.0.28:8015' and then click 'confirm' button. The remote computer must connect to the computer where the

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VJDirector is running by cables. Then we can access to it by IP address.

Solution 2：Use VGA capture card such as KylinesVGA-plus, SunVision VGA to collect signals. VGA capture can display VGA signals separate from other path in local PC and collect it as well. Load VGA capture card by means of VJDirector as the video source, it can realize multiple realtime broadcast.

Advantages: no image loss, arrange easily

Disadvantages: expensive VGA capture card, not suitable for small-cost realtime broadcast.

VGA capture card

Solution 3: Use video switcher to convert VGA signal into video signal and then capture it and send to VJDirector via A/V capture card to broadcast.

Advantages: Cheap cost. Because of the cheap switcher and one-way capture card 1000RMB is enough to complete the arrangement.

Disadvantages: Converting into analog signal through digital one and then converting the analog signal into digital one will cause huge VGA signal loss and worse image effect. So it is not fit for
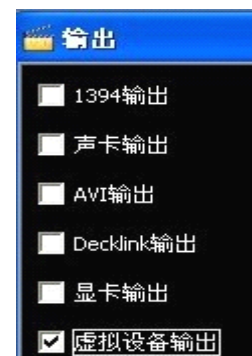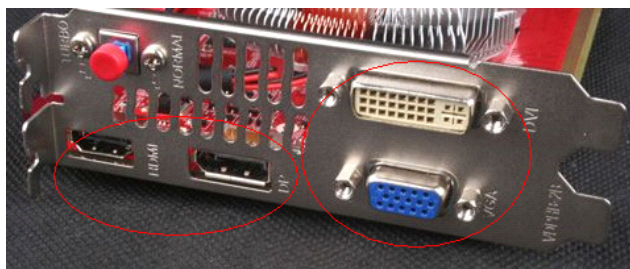
demanding clients.

Video switcher

3.3 TV-Set, Large Screen Output

Generally, TV and large screen output are needed at some party, wedding ceremony and meetings. A lot of users may feel awkward if such cases are encountered because they do not know what actions to take to let computer only displays video windows on the TV or on the large screen but hide the VJDirector operating interface. The configurations as following can solve that problem.

Solution 1: Connect VGA video card, terminal S, DVI, HDMI output signal to TV or large screen. Windows requires set to expanding double-desktop and then output it by 'virtual device' of VJDirector. After that , use the players like Storm Player to joint this device. Finally, drag the player window onto the TV or large screen picture to play in full screen.

Owning to virtual device output, the picture is clear as well as stable and takes up small memory capacity. Using VJDirector float window or video card output will cause more capacity usage. What's more, there may appear white strings on the screen occasionally.

The methods of setting expanding double-desktop:

Right click the blank of Windows desktop, then click 'property' -> 'setting'. Select monitor 2, then choose 'extending windows desktop to the monitor'. Last, click 'confirm' button.

Solution 2: Use DeckLink Intensity Pro to output compounded or component signal and connect it to TV or large screen.

DeckLink Intensity Pro output card

3.4 Webcast

At present, there are a great deal of websites engaged in webcast and they are popular as well. However, the effect of single camera Live is too boring to be eyes-catching. VJDirector can make dull broadcasting in the past become more colorful. But how does the pictures that have been processed by special effect switching get to server and be published? How does VJDirector combine with other
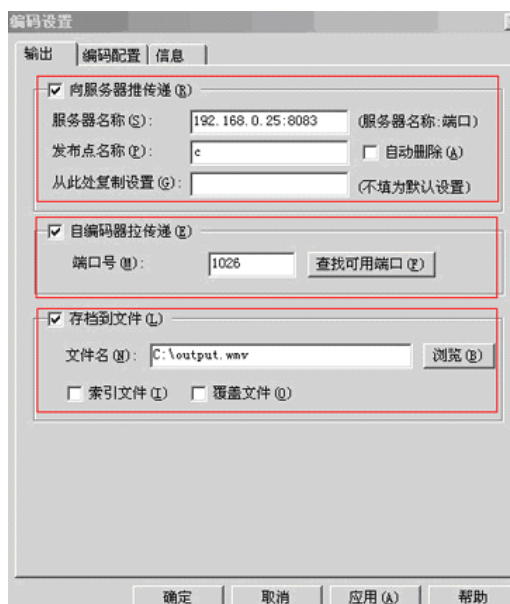
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traditional published system?

Solution 1: Adopt WMV encoding output. Running VJDirector; open 'output' in function column -> 'WMV encoding setting' . Such setting columns can be seen below.

<Push to server>: Here needs VJLive or windows media services to support.。

<Server name>: As '192.168.0.25:8083' shown above , [192.168.0.25] is the IP address of the server which VJLive locate. [8083] is the port number allowing plug flow（the defaulted port of VJLive can be set by yourself).

<Publishing point >: Here is name of publishing point. (VJLive can set it at will).

<Copy settings from>: Here needs not to set, just let the text box be empty.
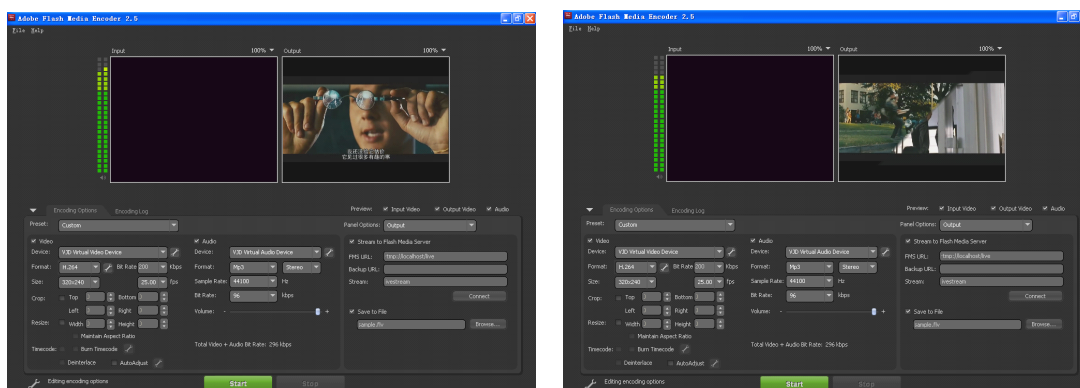
This function which is designed for those users who need to broadcast or transit through server requires Windows Media Service or VJLive to receive. It demands for this transmission mode when a computer in local area network needs transferring to the server in public network after being encoded for P2P broadcast.

Solution 2: For those users who use Flash Media Encoder, which can only load one device that results in monotonous image, to live broadcast, VJDirector is a great help.

First, start VJDirector and select virtual device output after loading program source.
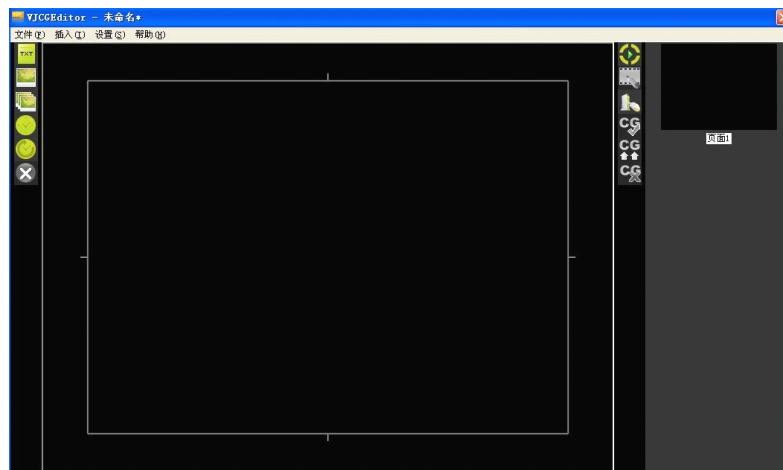
Second, start Flash Media Encoder 3.0 and add VJD Virtual Video Device in device item as the video source. After this, Flash Media Encoder can output the programs in VJDirector. At last，it is able to edit the stun show through VJDirector that would make your broadcast more colorful.
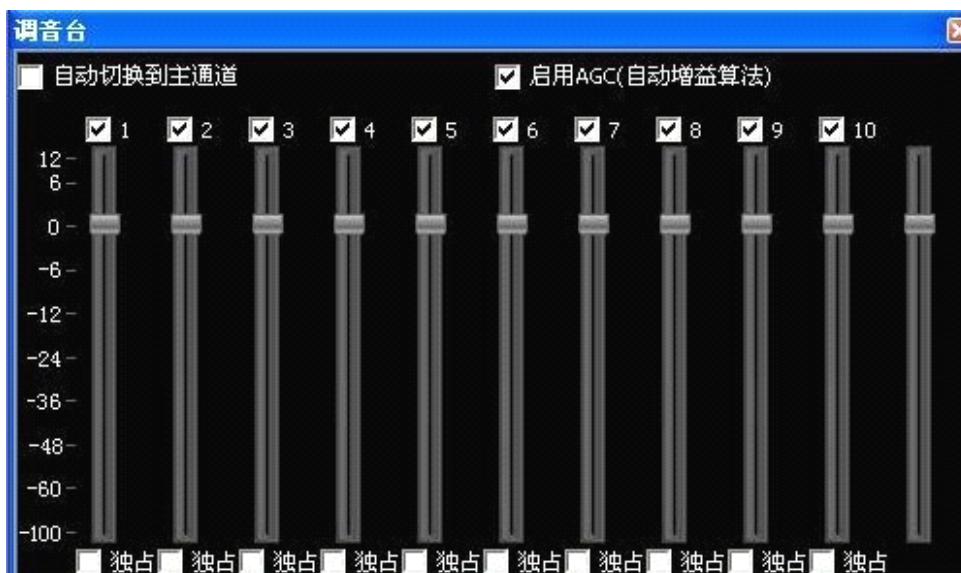

3.5 CG File Editor

CG File which is edited by VJCG editor can publish the edited words, images rapidly.

Click 'File' button to load CG files and then all the CG items will be listed in the form of thumbnail. Second, choose the item you want to publish and click button 'send to pre-monitor' which can send the item to pre-monitoring screen for preview. Or you can click button 'send to main monitor' to send it to the main output screen.

3.6 Audio Mixer

The mixer is the audio control panel where each input channel corresponds to a draw bar and the last one is to control the general output volume. There are separate controls for the volume of each input channel and whether mixing into output audio as well.

3.7 Logo

The logo supports single file(bmp/jpg/gif/tga, etc.) and TGA file array. TGA file is recommended。

Click button 'File' or 'File Array' to load the corresponding logo image file. Click button'1', '2', '3', '4' to select to set. Click the left check box of 'logo x' to send the logo to main output screen.

3.8 Chromakey

The chromakey of VJDirector2 can remove the RGB background to bring about the effect of virtual studio. After starting the software , open 'system' -> 'chromakey and color adjustment' .

Select the channel which needs chromakey according to the actual situation and check 'start chromakey ' . Select the channel or picture which is used as background. Finally, slightly adjust the range of color to get the best effect.

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