



SIERRA VIDEO

SVG Multi Viewer

User's Manual



SVG MULTI VIEWER

User's Manual

© Sierra Video
P.O. Box 2462 Grass Valley, CA 95945
Tel: (530) 478-1000
Fax: (530) 478-1105
Email: info@sierravideo.com

Version 2.0
Publication Date: February 2012

The information contained in this manual is subject to change by Sierra Video

Regulatory Warnings & Safety Information

The information in the following section provides important warnings and safety guidelines for both the operator and service personnel. Specific warnings and cautions may be found throughout this manual. Please read and follow the important safety precautions noting especially those instructions relating to risk of fire, electrical shock and injury to persons.

Any instructions in this manual that require opening the equipment cover or enclosure are intended for use by qualified service personnel only. To reduce the risk of electrical shock, do not perform any servicing other than what is contained in the operating instructions unless you are qualified.

Warnings

- Heed all warnings on the unit and in the operating instructions.
- Disconnect AC power before installing or removing device or servicing unit.
- Do not use this product in or near water.
- This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting inputs or outputs.
- Route power cords and other cables so that they are not likely to be damaged, or create a hazard.
- Dangerous voltages exist at several points in this product. To avoid personal injury, do not touch unsafe connections and components when the power is on.
- Have qualified personnel perform safety checks after any completed service.
- To reduce risk of electrical shock, be certain to plug each power supply cord into a separate branch circuit employing a separate service ground.
- If equipped with redundant power, this unit has two power cords. To reduce the risk of electrical shock, disconnect both power cords before servicing.
- Operate only with covers and enclosure panels in place – Do Not operate this product when covers or enclosure panels are removed.
- This is an FCC class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take necessary measures.

Cautions

- Use the proper AC voltage to supply power to the switcher. When installing equipment, do not attach the power cord to building surfaces.

•  **Cautions (continued)**

- Use only the recommended interconnect cables to connect the switcher to other frames.
- Follow static precautions at all times when handling the equipment.
- Power this product only as described in the installation section of this manual.
- Leave the sides of the frame clear for air convection cooling and to allow room for cabling. Slot and openings in the frame are provided for ventilation and should not be blocked.
- Only an authorized Sierra Video technician should service the switchers. Any user who makes changes or modifications to the unit without the expressed approval of Sierra Video will void the warranty.
- If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than the room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (TMRA).
- Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Other connections between peripherals of this equipment may be made with low voltage non-shielded computer data cables.
- Network connections may consist of non-shielded CAT 5 cable.
- Do not cover chassis ventilation slots or block enclosure openings.

FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the expense of the user.

The user may find the following publication prepared by the Federal Communications Commission helpful:

“How to Identify and Resolve Radio-TV Interference Problems” (Stock number 004-000-00345-4). Available exclusively from the Superintendent of Documents, Government Printing Office, Washington, DC 20402 (telephone 202 512-1800).

Warning

Changes or modifications not expressly approved by the party responsible for compliance to Part 15 of the FCC Rules could void the user's authority to operate the equipment.

Power Supply Cords

Use only power cord(s) supplied with the unit.

If power cord(s) were not supplied with the unit, select as follows:

For units installed in the USA and Canada: select a flexible, three-conductor power cord that is UL listed and CSA certified, with individual conductor wire size of #18 AWG, and a maximum length of 4.5 meters. The power cord terminations should be NEMA Type 5-15P (three-prong earthing) at one end and IEC appliance inlet coupler at the other end. Any of the following types of power cords are acceptable; SV, SVE, SVO, SVT, SVTO, SVTOO, S, SE, SO, SOO, ST, STO, STOO, SJ, SJE, SJO, SJOO, SJT, SJTOO, SP-3, G, W.

For units installed in all other countries; select only a flexible, three-conductor power cord, approved by the cognizant safety organization of your country. The power cord must be Type HAR (Harmonized), with individual conductor wire size of 0.75 mm². The power cord terminations should be a suitably rated earthing-type plug at one end and IEC appliance inlet coupler at the other end. Both of the power cord terminations must carry the certification label (mark) of the cognizant safety organization of your country.

A non-shielded power cord may be used to connect AC power to every component and peripheral of the system.

Connect an external 16 AWG or larger wire from earth ground to the chassis of the system as designated by the earth ground symbol.

North American Power Supply Cords

This equipment is supplied with North American power cords with molded grounded plug (NEMA-15P) at one end and molded grounding connector (IEC 320-C13) at the other end. Conductors are CEE color coded, light blue(neutral), brown(line), and green/yellow(ground). Operation of the equipment at voltages exceeding 130VAC will require power supply cords that comply with NEMA configurations.

International Power Supply Cords

If shipped outside North America, this equipment is supplied with molded ground connector (IEC 320-C13) at one end and stripped connectors (50/5mm) at the other end. Connections are CEE color coded, light blue (neutral), brown(line), and green/yellow(ground). Other IEC 320-C13 type power cords can be used if they comply with safety regulations of the country in which they are installed.

EMC Regulatory Notices

Federal Communications Commission (FCC) Part 15 Information: This device complies with Part 15 of the FCC standard rules. Operation is subject to the following conditions:

This device may not cause harmful interference

This device must accept any interference received including interference that may cause undesirable operations.

Delivery Damage Inspection

Carefully inspect the frame and exterior components to be sure that there has been no shipping damage.

Table of Contents

Overview	1	Alignment Tools	37
SVG Multi Viewer	1	Full Screen	38
Introduction	1	Layout Management	38
Installation	5	Save Layout	38
Introduction	5	Edit Layout	38
Rack Mounting	5	Delete Layout	38
Dimensions	5	Download Layout File	39
Input/ Output Rear Panel	7	Upload Layout File	39
Overview	7	HDMI/VGA Output Resolution	39
RS-232 Connection	8	SDI Output Resolution HDSDI/HDMI Output	40
Timing Connection	8	Card	40
Single Output System	9	Audio Monitor Output Select	41
Dual Output System	10	Frame Layout	43
Input Rear Panel	11	Aspect Ratio	43
HD/SD-SDI Input module	11	Input Source	43
HDMI Input module	12	Waveform Display	44
CVBS/SDI Input module	13	UMD and Audio Meters Display	45
Output Rear Panel	14	Attach to point	45
HDMI/VGA Output Card	14	Position and Size	46
HDMI/HD/SDI Output Card	16	Set Air Timer	46
Typical Application	17	OSD Elements	46
Configuration	19	UMD Settings	47
Using the Web-Server	19	Via network-Static UMD	47
Basic Physical Configuration	20	Upload UMD Text	47
Edit Input Source	21	Via serial port (RS232)-Dynamic UMD	48
Edit Screens	23	Dynamic UMD Protocol	49
General Configuration	24	Tally Settings	50
Function Overview	24	Via GPI-Static Tally	50
System Settings	25	Dynamic Tally Via serial port (RS232)	51
Create a Channel	26	Audio and UMD Settings	51
Create a Video Channel	27	Border Color	52
Choose an Input Source	29	Extended Settings	53
Video Channel input Source (HD)	30	Set Color Parameters	53
Make/Delete signal marker	31	Serial Port Settings	54
Create Clock/ Timer/ Logo	33	Timing Settings	56
Delete an Object	34	Upload Custom Picture	57
Clear All	34	Channel Style	57
Screen 1 and Screen 2	35	Detection Settings	58
Quick Tools	36	Audio Detection	60
		Video Detection	61
		User Configuration	68
		Network Configuration	69
		Upgrade Text file for UMD font	70
		Help	70
		Warranty	71

Overview

SVG Multi Viewer

Introduction

Multi-viewer adopts 1RU platform with six slots. It totally provides three kinds of input cards and two kinds of output cards. According varied actual applications, different types of multi-viewers can be constructed flexibly within 1RU frame.

Three kinds of input modules are provided as following.

4xSD input cards (auto-sensing CVBS/SDI);

4xHD input cards (auto-sensing HD/SD);

4xHDMI input cards

Two kinds of output modules are provided as following.

HDMI+VGA output card; Output resolution of VGA and HDMI signal is up to 1920x1200x60p ;

HDMI+HDSDI output card; Output resolution of HDMI signal is up to 1920x1080p;

Output format of HD-SDI signal is up to 1080p 50/60 ;

Each type of output card provides one HDMI input interface and one RJ45 interface for Ethernet.

Based on the quantity of output cards installed into the frame, products are divided into two types as following.

SVG-X: Compact multi-viewer system with single output;

SVG-D: Compact multi-viewer system with dual outputs;

SVG-X is equipped with one output card and up to five input cards. So it supports up to 21 (20+1) signals to input. Signal sources can be appointed to display on the channels freely as long as input sources and video channels are from the same input card.

SVG-D is equipped with two output cards, and up to four input cards. So it supports up to 18 (16+2) signals to input. Moreover, one output shares all the signal sources with another. Signal can be appointed to display on any output or both outputs freely. Moreover any video channel can be directly and simply moved from one screen to another screen in real-time.

SVG Series is a multi-view display system with rich features of high-quality, multi-format input, flexible and customizable functions, remote panel, audio monitoring, waveform display, real time monitoring and voice alarm warning, and dynamic UMD & tally from routers. It can be widely used in studio, broadcasting room, general control center, production editing studio.

The most flexible combination and feature-rich platform make it ideal for many applications where video/audio monitoring and display are required!



Features

- Provide high-quality dual outputs with flexible and individual configuration on each output
- For single output system, it can be 4+1 images, 8+1 images, 12+1 images, 16+1 images, or 20+1 images display system
- For dual outputs system, it can be 4+2 images, 8+2 images, 12+2 images, or 16+2 images display system, and dual outputs share all input sources
- For dual outputs system, any video channel can be directly and simply moved from one output to another output in real-time. Each signal source can be displayed in any output or both outputs
- Support the same input signal displaying in different video channels (HDSDI input card)
- Provide built-in web server to control whole system via RJ45 interface
- Audio signals from input source are selectable to be embedded into HDMI output signal on the web control page
- Combine different types of input cards within the same frame freely
- Flexible output options : 4:3, 16:9, customized aspect ratio
- Editable dual program UMD and up to 4 channel audio meters display
- Provides several types of timer: air timer and countdown timers, analog and digital clocks types
- Mark key signal/signals to find it/them rapidly in one complicated layout
- Support user-defined border color of each channel separately or cancel border display
- Dynamic UMDs & Tally from routers and Switchers via RS232 interface
- Support format display of input signal and AFD information display
- Video/audio auto detection and alarming, such as video loss, video frozen, video black, audio silence, audio overload with high rate of accuracy
- Two forms of alarm: text alarm and icon alarm
- Support customized layout to preset various layouts for different application, such as studio, OB van, production room and so on
- Standard 1RU frame with Dual power supply

SVG

Frame Front Panel



Frame Back Panel



Note

The models shown here and in the subsequent sections are fully populated systems. In some cases, these frames may be configured with more or fewer I/Os. Consult the rear panel serial number and model number to verify your order and product.

The system you receive is customized for the size & type requested at time of purchase from Sierra Video

Installation

Introduction

Installation procedures are similar for all frames covered under this manual. Exceptions, if any, have been noted in each of the following paragraphs.

Rack Mounting

Carefully inspect the frame to ensure that there has been no shipping damage. Make sure all shipping material is removed from the multi-viewer frame.

The multi-viewer described in this manual can be rack mounted in a standard 19" (RU) EIA rack assembly and includes rack "ears" at the ends of the front of the frames. It does not require spacing above or below the unit for ventilation.

To rack mount any of the multi-viewers, simply place the unit's rack ears against the rack rails of the rack, and insert proper rack screws through each of the holes in the rack ears. Always rack mount the multi-viewer prior to plugging the unit into a power receptacle or attaching any cables.

CAUTION!

The operating temperature range of this product is 0 to 40°C. Do not exceed the maximum (40°C) or minimum (0°C) operating temperature.

If installed in a closed or multi-rack assembly, the operating ambient temperature of the rack environment may be greater than the room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature.

Installation of the equipment in a rack should be such that the amount of air flow to the sides of the routing switcher required for safe operation of the equipment is not compromised.

Dimensions

The SVG multi viewer frame is 1 rack units high, 19" wide, and 20" deep.

Notice

In order to avoid network traffic congestion, please do not submit parameters before the last modification is applied.

In order to avoid hardware loose contact caused by continuous operations on the front panel, please do your second operation after you have gotten the first operation result. Generally, it will spend about three seconds to get the results after you submit. The time is related with the monitor type. If the time is too long (over 7seconds), maybe there is something abnormal with the hardware's working status (overheating for example), please wait patiently.

Do not plug the HDMI connector without powering-down the system.

Without the professional technological guidance from our company, users are not permitted to re-plug the modules away from the chassis or debug the internal operation. We do not undertake any obligation or responsibility of intentional destruction or damage of the machine.

Built-in Web server to control SVG-X easily by your computer via Ethernet. Please make sure IP address of SVG-X is in the same network segment as your computer. And the IP and MAC addresses of SVG-X are unique values in Ethernet.

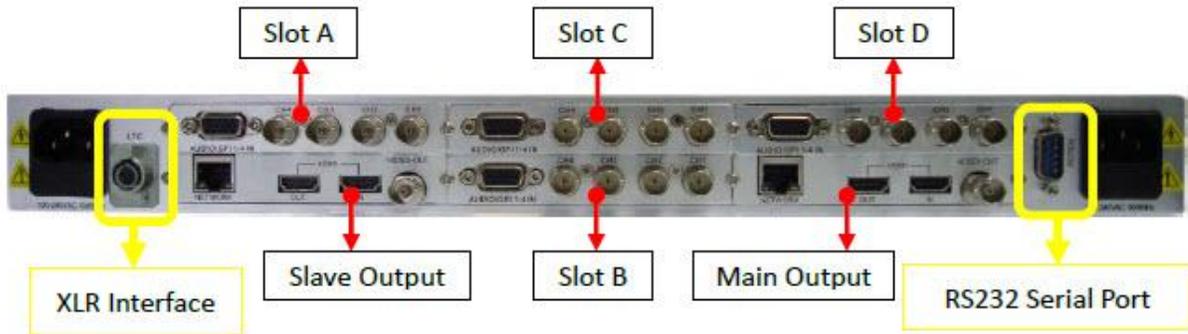
Windows 2003, Windows XP, Windows Vista and Windows 7 are strongly recommended with Internet Explorer.exe.

User can also upgrade system under the label "Network". Before the upgrade, the anti-virus software and firewall have to be closed to make sure that the upgrade data is transmitted to SVG-D system without rejection. Power and network cannot be cut off during the upgrade process.

Please set all channels to input inner test signal without waveform display before upgrade. So it will take less time to upgrade the system.

If the current output resolution of HDMI signal is not compatible with your monitor, you can change the output resolution on the web control server.

Input/ Output Rear Panel



Overview

Chassis of SVG series is 1RU structure with six slots. From left to right, and from bottom to top, the identity of each slot is Slot S, Slot A, Slot B, Slot C, Slot M, and Slot D. See the picture above.

Table-module type allowed inserting into each slot

Slot	Allowed Module Type	Slot	Allowed Module Type
M	Output Card	B	Input Card
S	Input Card/Output Card	C	Input Card
A	Input Card	D	Input Card

Note:

*For Slot M, no matter what the system is, it only allows inserting an output card.
 For Slot S, when system is single output, it only allows inserting an input card; when it is dual outputs, it only allows inserting an output card.
 For example, when one input card is inserted into Slot A, up to four virtual channels can be created from this input card as a channel group named group A. If there is no input card inserted into Slot A, then there is no group A displayed on the web page. So does Slot B, C and D.
 Input signals can be only displayed in virtual channels which are created from the same input card.*

RS-232 Connection

The RS232 connector is a serial port for multiple functions. According to different baud rates and parity, configured on the web page. You can achieve multiple functions, such as dynamic UMD and Tally, GPS timing and remote control of layouts.

RS232, DB9 definition (For TSL and GPS)

Pin #	Function
2	Rx
3	Tx
5	GND

RS232 to RS232 cable (for dynamic UMD & Tally and GPS Timing)

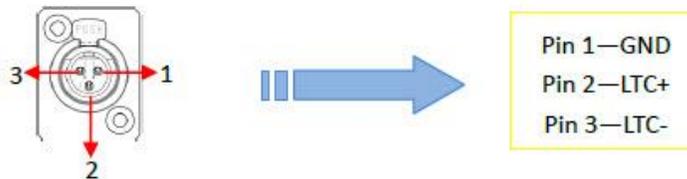
Pin # PC	Pin# SVG
2	3
3	2
5	5

RS232 to DB26 cable (for connecting with SVG-X-SRCP)

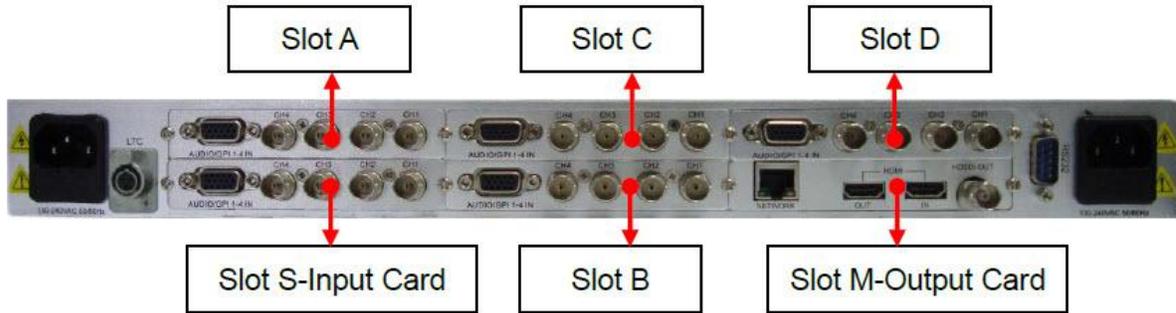
Pin #	Pin#
2	8
3	9
5	7

Timing Connection

This uses an XLR interface. LTC timing of SVG is based on EBU code according to IEC standard. Pin 1 is GND, and pins 2 & 3 receive LTC data. See the picture below. Check the box "LTC" on the web page. By default, the LTC timing function is enabled, but may be disabled. See the details about Timing Settings.



Single Output System

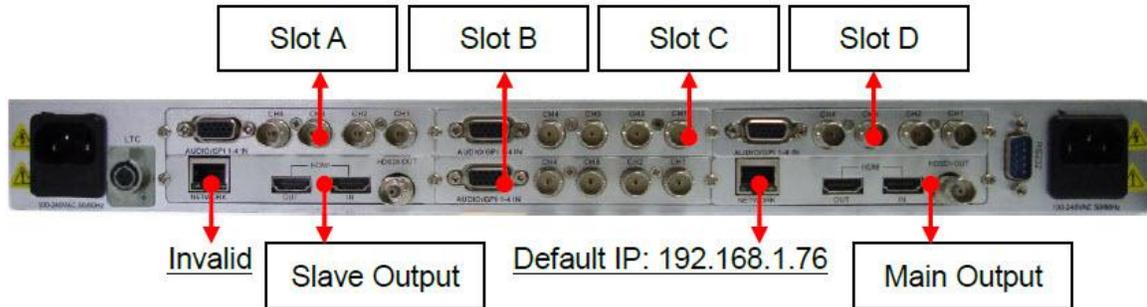


In this configuration, there is only one output card for SVG single output system. The output card can be HDSDI+HDMI output card, or VGA+HDMI output card.

Based on different quantity of input cards, the combination of SVG is described as following:

Qty of Output Cards	Qty of Input Cards	Combination
1	1	5 pictures (4+1) display system
1	2	9 pictures (8+1) display system
1	3	13 pictures (12+1) display system
1	4	17 pictures (16+1) display system
1	5	21 pictures (20+1) display system

Dual Output System



For dual outputs display system, system has two output cards, which are identified as main output card and slave output card. See the picture above. The dual outputs are both configured by web server at the same time via the network interface (RJ45) on main output card. The default IP address is 192.168.1.76. And the RJ45 interface on the slave output card is invalid with no function.

Dual outputs system can be configured to be single output system easily via web page of Physical configuration.

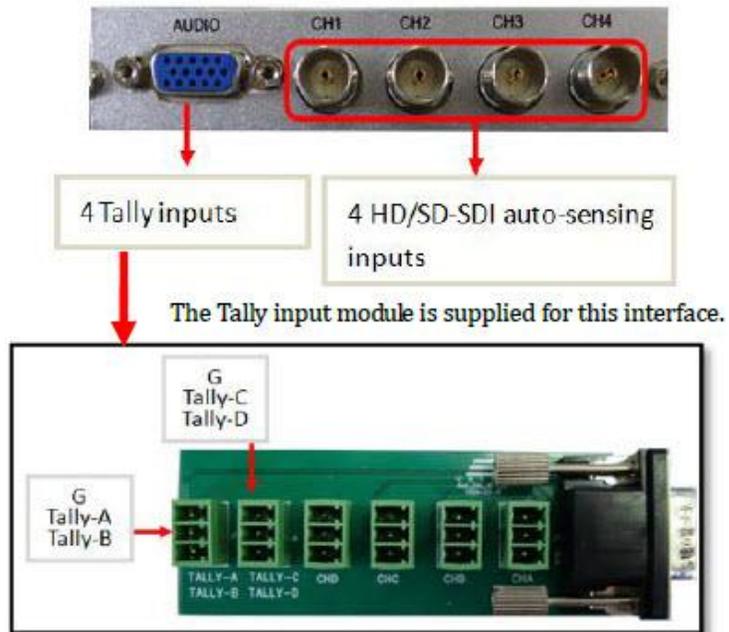
Based on different quantity of input cards, the combination of SVG is described as following:

Qty of Output Cards	Qty of Input Cards	Combination
2	1	6 pictures (4+2) display system
2	2	10 pictures (8+2) display system
2	3	14 pictures (12+2) display system
2	4	18 pictures (16+2) display system

Input Rear Panel

There are three kinds of input modules: HD/SD-SDI input module, CVBS/SD-SDI input module, and HDMI input module.

HD/SD-SDI Input module



Support resolutions:

SD: 480i 60, 576i 50

HD: 720p 50Hz/60Hz

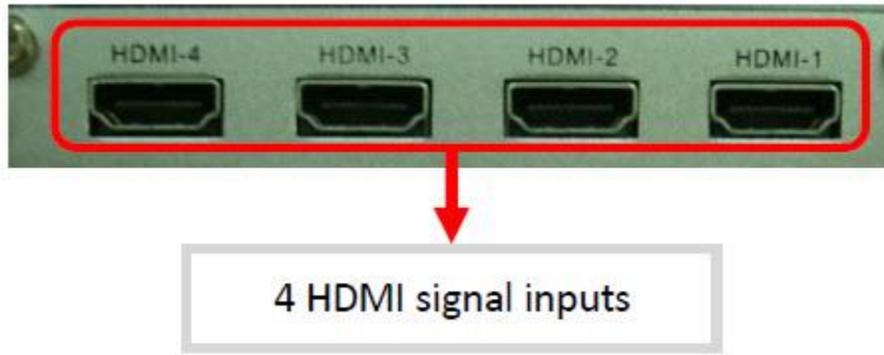
1080i 50Hz/59.94Hz/60Hz

1080p 23.976Hz/24Hz/25Hz/29.97Hz/30Hz

1080p 50Hz/60Hz

Support HD/SD signal with embedded audio and indicate 4 audio channels of Group1.

HDMI Input module



Support resolutions:

Video:

SD: 480i 59.94, 576i 50

HD: 720p 50Hz/60Hz

1080i 50Hz/60Hz

1080p 24Hz/25Hz/30Hz

1080p 50Hz/60Hz

Graphic:

1280x720px50/60Hz

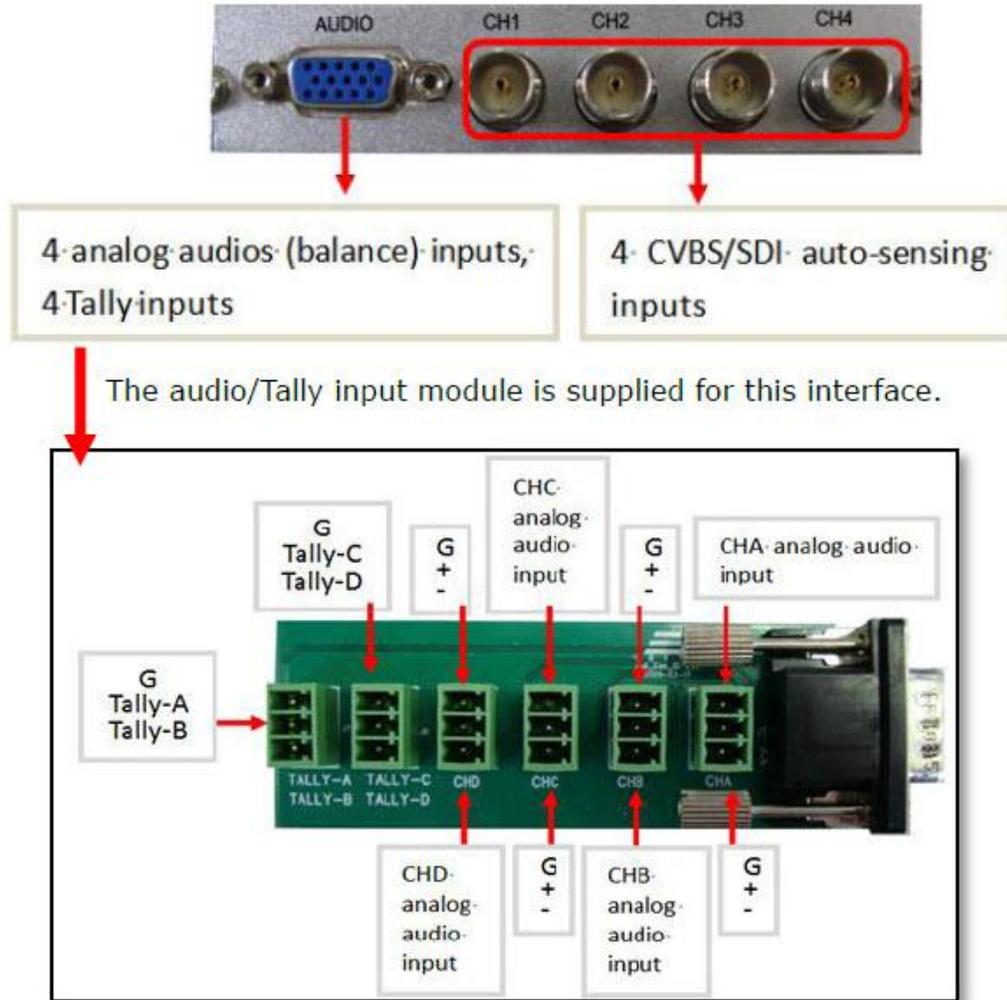
1920x1080px25/30Hz

1920x1080px50/60Hz

Supports HDMI signals with embedded audio and indicates up to 4 audio channels of Group1.

Supports HDCP protocol.

CVBS/SDI Input module



Definition of DB15 interface;

Pin #	Definition	Pin #	Definition	Pin #	Definition
1	Ch1-Aud	6	GND	11	
2	Ch2-Aud	7	Ch1-Tally	12	
3	Ch3-Aud	8	GND	13	
4	Ch4-Aud	9	Ch2-Tally	14	
5	Ch3-Tally	10	GND	15	

Support formats :

CVBS : NTSC/ Pal,

SDI : 480i 60/576i 50

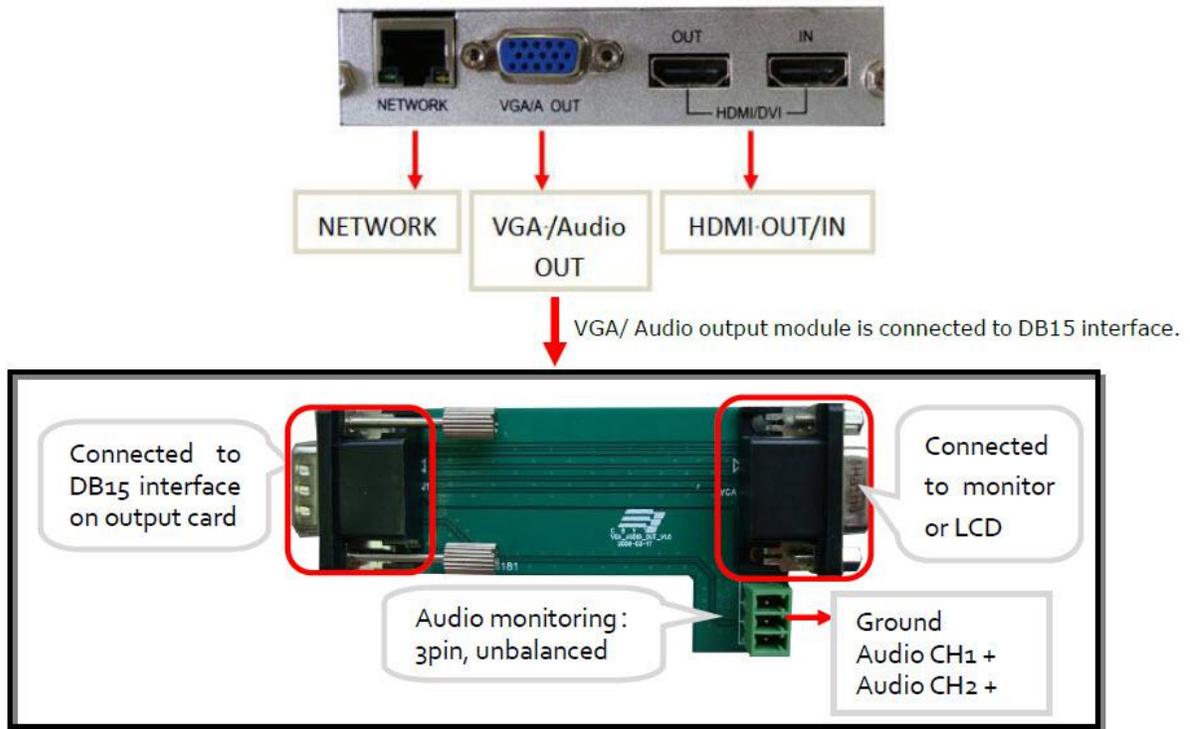
Support SDI signal with embedded audio and indicate up to 4 audio channels of Group1.

Audio/Tally input module supports one audio channel for each analog composite video signal.

Output Rear Panel

There are two types of output modules: HDMI+VGA output module, and HDMI+HDSDI output module.

HDMI/VGA Output Card



Each output module provides VGA and HDMI dual output interfaces. Moreover, on the output module, there is an HDMI input and RJ45 interface for Web server.

Network

RJ45 interface with 10/100/1000M auto-detection.

When system has dual output cards, both output cards are configured by web server with the network interface (RJ45) on MAIN output card. And the default IP address is 192.168.1.76. When facing the rear panel of chassis, if the output card is on the left, it is a slave output card. The RJ45 interface on the slave output is invalid without function.

HDMI OUT

HDMI output interface. There is no audio signal embedded into HDMI output signal. The output resolution of HDMI signal is up to 1920x1200X60p. The output resolutions are provided as below:

1024x768x60p, 1280x720x60p, 1280x768x50p
 1280x768x60p, 1280x1024x60p, 1366x768x60p
 1366x768x60p, 1400x1050x60p, 1680x1050x60p
 1600x1200x60p, 1920x1080x50p, 1920x1080x60p, 1920x1200x60p

HDMI IN

HDMI input interface. It is compatible with both HDMI and DVI signal to input. And it supports HDMI signal with embedded audio. There is no display of UMD and audio meters for this HDMI channel. Supports HDCP protocol. The HDMI input channel is always on the top of all the channels from input cards.

Supported input resolutions of HDMI/DVI signals:

Video:

SD: 480i 59.94, 576i 50
 HD: 720p 50Hz/60Hz
 1080i 50Hz/60Hz
 1080p 24Hz/25Hz/30Hz
 1080p 50Hz/60Hz

Graphic:

1280x720px50/60Hz
 1920x1080px25/30Hz
 1920x1080px50/60Hz

VGA Out

The VGA output uses a DB15 interface. It provides VGA output signal and independent analog audio signals. The content of VGA output signal is the same as HDMI output signal.

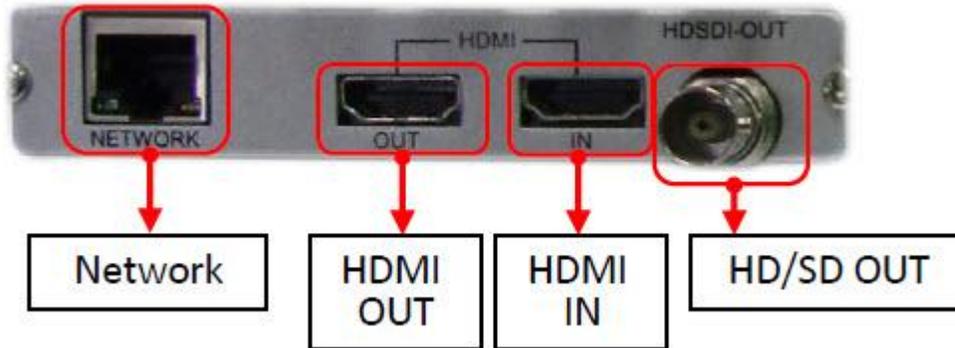
Supported output resolutions of VGA:

1024x768x60p, 1280x720x60p, 1280x768x50p
 1280x768x60p, 1280x1024x60p, 1360x768x60p
 1366x768x60p, 1400x1050x60p, 1680x1050x60p
 1600x1200x60p, 1920x1080x50p, 1920x1080x60p, 1920x1200x60p

The VGA/Audio output module can monitor two audio channels from HD/SD/HDMI signal, and one audio channel of analog composite video signal, which is provided by the Audio/Tally input module.



HDMI/HD/SDI Output Card



Each output module provides HDSDI and HDMI dual output interfaces. Moreover, on the output module, there is an HDMI input and RJ45 interface for Web server.

Network: RJ45 interface with 10/100/1000M auto-detection. When system has dual output cards, both output cards are configured through the web server with the network interface (RJ45) on main output card. And the default IP address is 192.168.1.76. When facing the rear panel of chassis, if the output card is on the left, it is a slave output card. The RJ45 interface on the slave output is invalid without function.

HDMI OUT

Two HD/SD-SDI audio channels, eight HDMI audio channels, or one analog audio signal can be embedded into the HDMI output signal. Users can select audio source via the web control to monitor. The output resolution of HDMI signal is up to 1920x1080. The output resolutions are provided as below:

1024x768, 1280x720, 1280x768
1280x1024, 1360x768, 1400x1050
1600x1200, 1680x1050, 1920x1080

HDMI In

HDMI input interface. It is compatible with both HDMI and DVI signals to input. And it supports HDMI signal with embedded audio. There is no display of UMD nor audio meters for this HDMI channel. Supports HDCP protocol. The HDMI input channel is always on the top of all the channels from input cards.

Supported input resolutions of HDMI/DVI signals:

Video:

SD: 480i 59.94, 576i 50
HD: 720p 50Hz/60Hz
1080i 50Hz/60Hz
1080p 24Hz/25Hz/30Hz
1080p 50Hz/60Hz

Graphic:

1280x720px50/60Hz
1920x1080px25/30Hz
1920x1080px50/60Hz

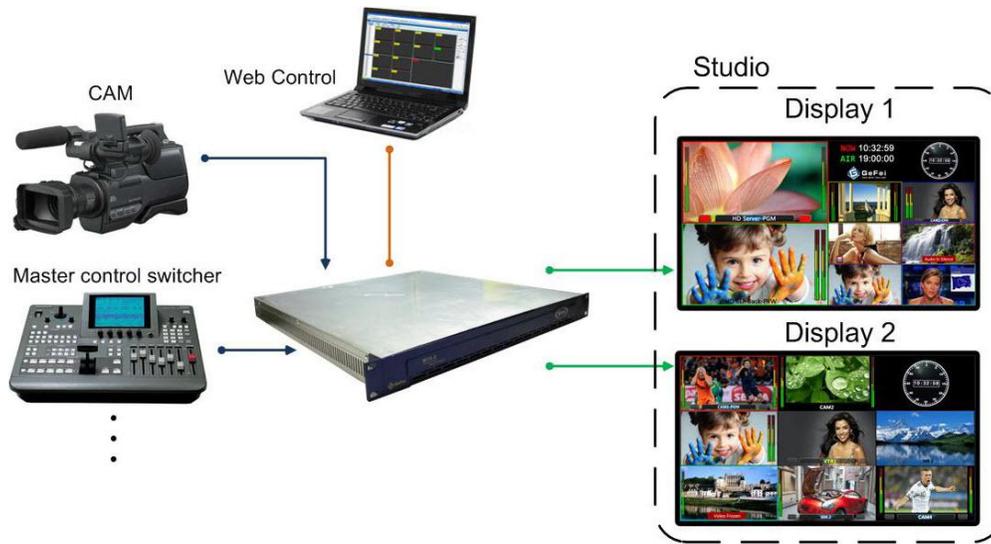
HDSDI OUT

There is an HD/SD-SDI output interface on the output module. HD/SD-SDI interface outputs the same video signal as HDMI interface. So far there is no audio signal embedded into HD/SD-SDI output signal.

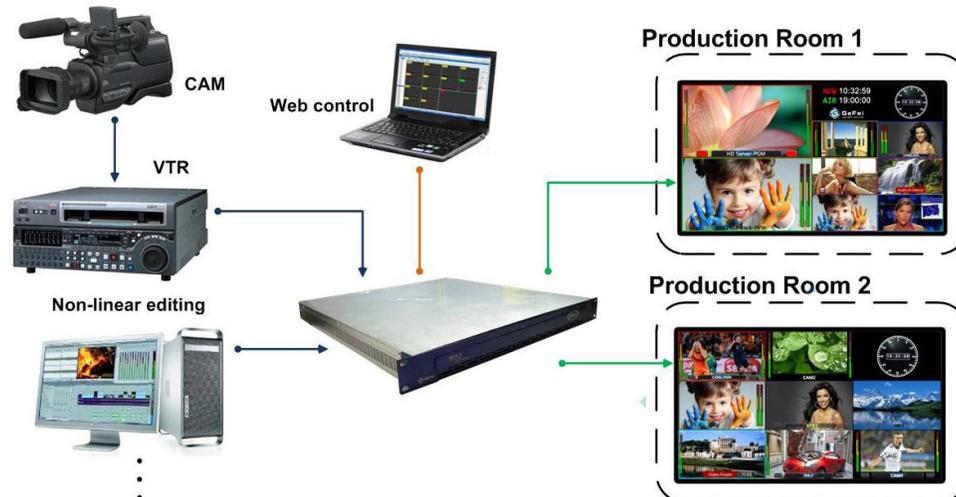
The output format can be configured via web server to fixed value as below:
 576i 50/480i 59.94
 720p, 1080i, 1080p

Typical Application

Take dual outputs system for example here. SVG can be applied in a Studio system with two individual outputs from a single device. Moreover, signal sources can be appointed to display on any output or both outputs.



The SVG can be applied in a Production station. Single device can be used in two different rooms for monitoring at the same time. Moreover, signal sources can be appointed to display on any output or both outputs.



Configuration

Using the Web-Server

The SVG multi-viewer system has a built-in WEBSERVER, so the user can configure it by Internet Explorer easily and quickly when connecting the RJ45 interface in the SVG with one straight-through cable.

First step: you need to login 192.168.1.76/config.html to open physical configuration of SVG, such as editing the names of input sources and setting the position for screens.

Second step: Login 192.168.1.76 to open general web control. There are several web labels, which are System, Alarm, User, Network, and Help.

The default IP address: 192.168.1.76.

The default user name: admin

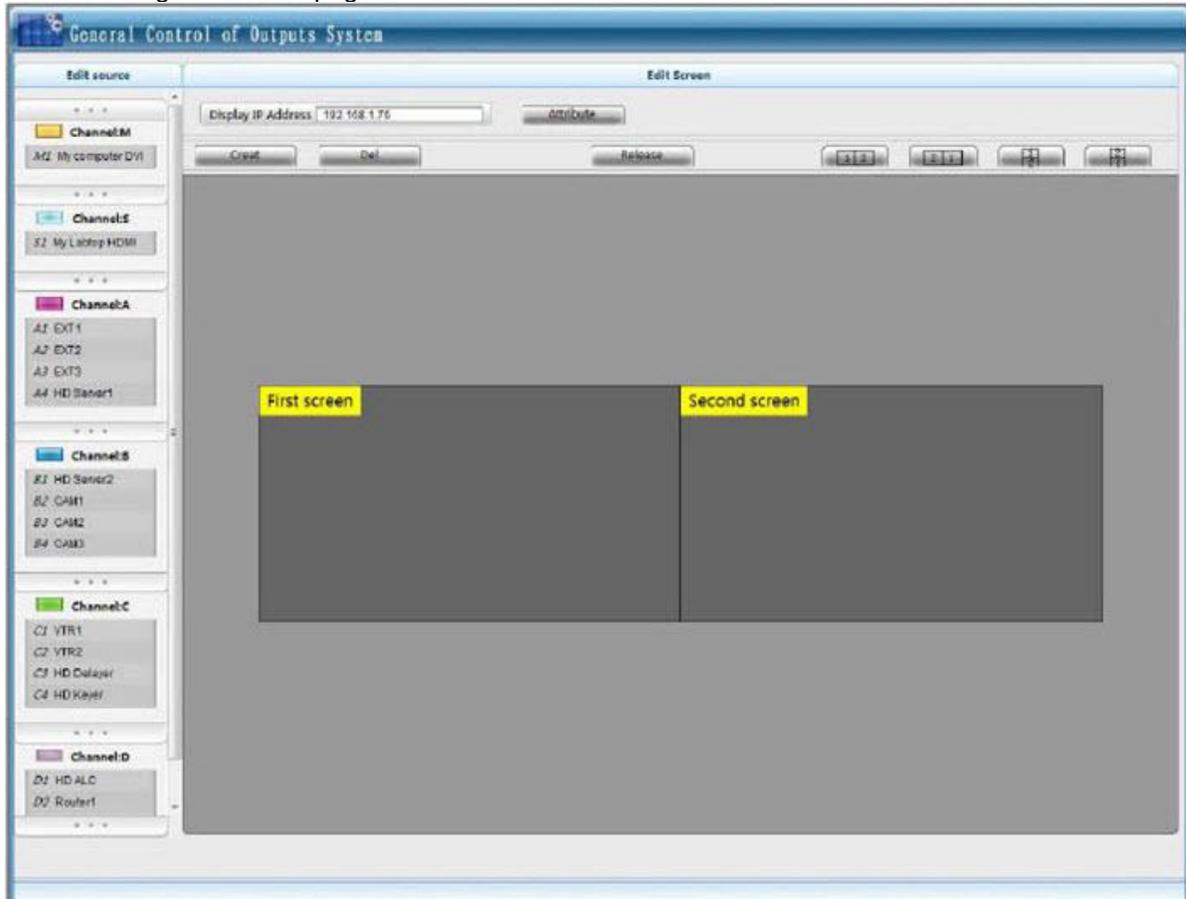
The default password: 000000

Note:

Examples in the following sections depict the dual output system. If you have a single output system, configuration screens will only show "first screen".

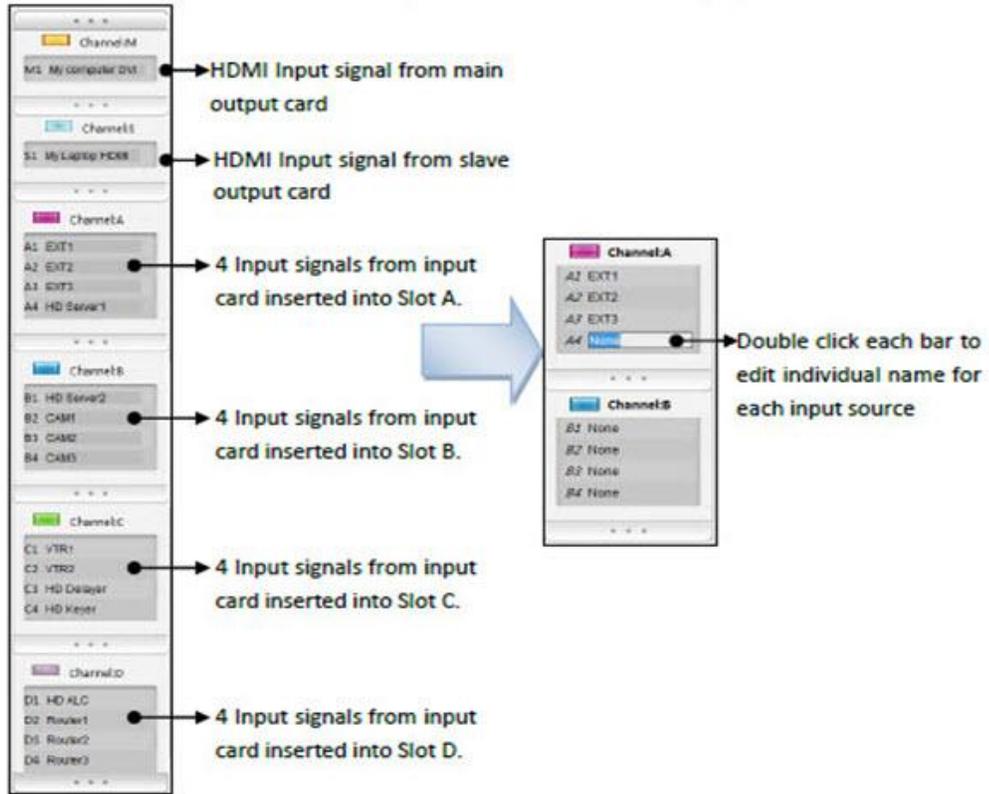
Basic Physical Configuration

Open an internet browser, and input <http://192.168.1.76/config.html> to open the configuration web page.



Edit Input Source

Edit name of input source for each input card on the left.



Note:

When the system is a single output system, and there is an output card inserted into slot S, then group S includes channel S1, S2, S3, and S4, not just S1 anymore.

SIERRA VIDEO

Description of rear panel.

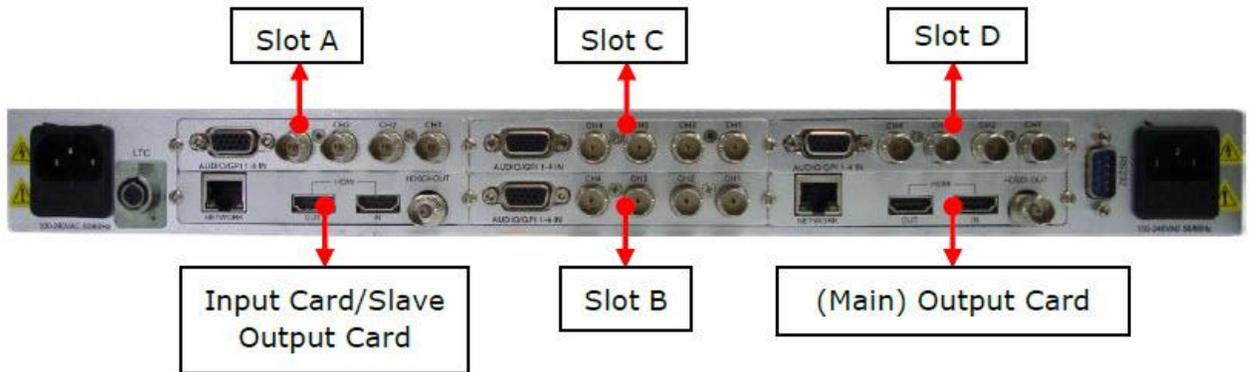


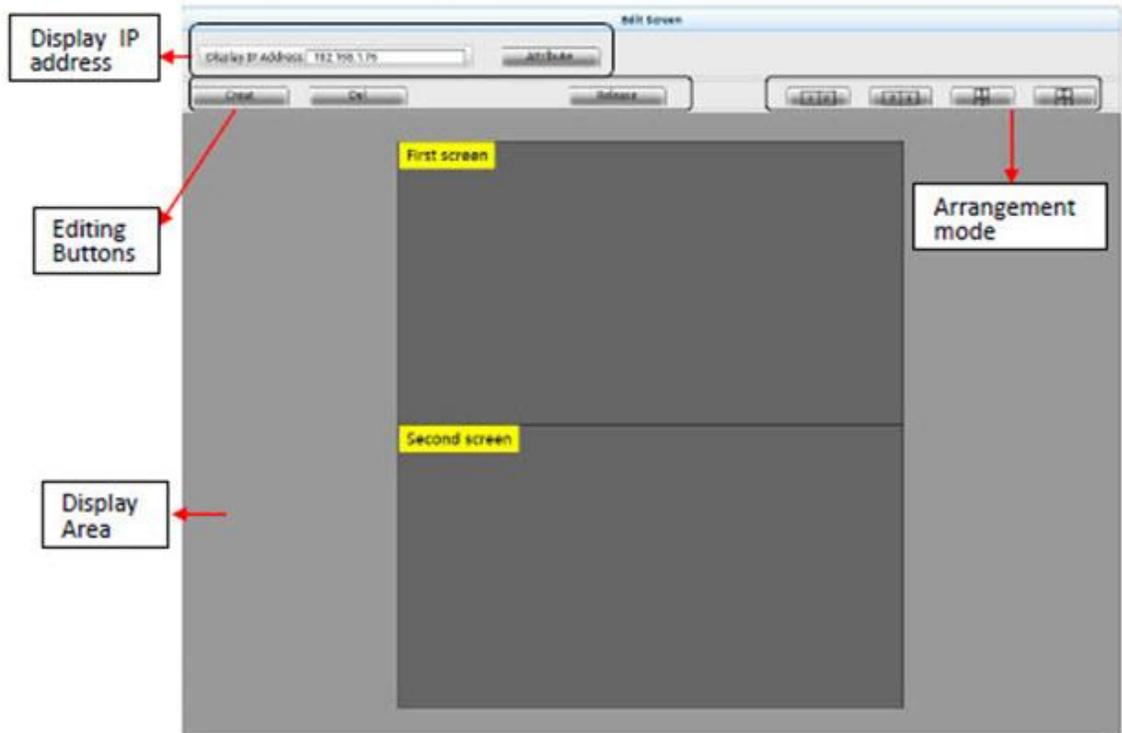
Table of relationship between input sources and inserted slots:

Slot	Module Type	Interface on Rear	Channel Name on Web Page
M	Output card (Main)	HDMI IN	M1
S	Dual outputs system-Output card (Slave)	HDMI IN	S1
	Single output system-Input card	CH1, CH2, CH3, CH4	Group S: S1, S2, S3, S4
A	Input card inserted into Slot A	CH1, CH2, CH3, CH4	Group A: A1, A2, A3, A4
B	Input card inserted into Slot B	CH1, CH2, CH3, CH4	Group B: B1, B2, B3, B4
C	Input card inserted into Slot C	CH1, CH2, CH3, CH4	Group C: C1, C2, C3, C4
D	Input card inserted into Slot D	CH1, CH2, CH3, CH4	Group D: D1, D2, D3, D4

Note:

1. Interfaces named CH1~CH4 on rear panel of input card inserted into Slot A are corresponding to A1~A4 on Web. So does Group B, C and D
2. If there is no input card inserted into certain slot, like Slot A, the related channel group, that is channel group A, will not be shown on the web page interface.
3. The signal sources from each input card can only be displayed in its own four channels. For example, input sources from Slot A can be only displayed in one channel or channels from group A. So does group B, C and D.
4. For Slot S, when system is single output, it only allows inserting an input card; when it is dual outputs, it only allows inserting an output card.

Edit Screens



Display IP address: Show the IP address of dual output system, read only.

Editing Buttons: Create, Delete, and Release.

Create: To create a screen. Up to two screens can be created.

Del: To delete an existed screen.

Release: To release current name of input sources and arrangement of screens and jump to web page of 192.168.1.76

Arrangement mode: To arrange the position of screens, according actual physical position of monitors that MVS-X-D connected with. Screen 1 is the HDMI output signal of main output card. Meanwhile, Screen 2 is the HDMI output signal of slave output card.

: Screen 1 is left and Screen 2 is right.

: Screen 2 is left and Screen 1 is right.

: Screen 1 is up and Screen 2 is down.

: Screen 2 is up and Screen 1 is down.

General Configuration

You do not need to install any client software. Open any internet browser and input the IP address (192.168.1.76).

Input the user name "admin" and password "000000". Click on "login in" to enter into the actual operation remote control.



The image shows a web-based login form titled "User Login". It contains two input fields: "User Name" and "Password". Below the "Password" field are two buttons labeled "Login" and "Exit".

Function Overview



There are many labels at the top of the web page: System, Alarm, User, Network, and Help.

System: To design the output display layout via creating or deleting tiles, clock, logo, UMD's and other display elements.

Alarm: The system supplies detection of audio, mute, freeze-frame, black, signal loss, EDH detection. Each alarm threshold can set to meet your needs.

User: The system supports a user name called 'admin. The initial password is 000000, which can be changed, and the new password will take effect when user logs in next time.

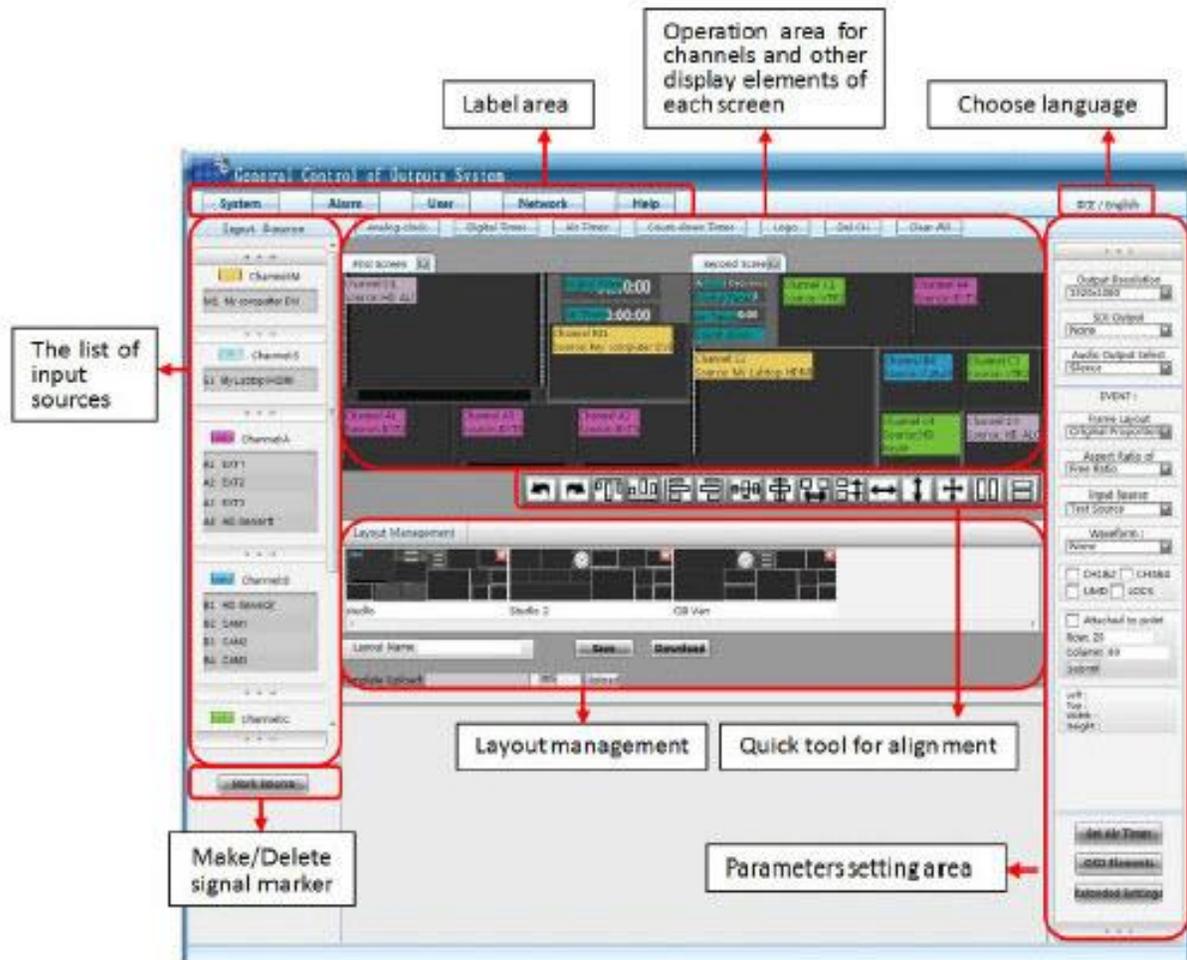
Network: To modify the IP address and upgrade the firmware. The modification will take effect after restarting the machine.

Help: To show the versions of each firmware here.

System Settings

You can accomplish the basic configuration in the System Settings, which includes the following functions: to create or delete the channels, to add the clock and logo, to align selected channels via the quick tools, to undo the previous operations, to set the parameters, such as output resolutions, aspect ratio, extended configuration and so on.

The descriptions are in detail as follows.

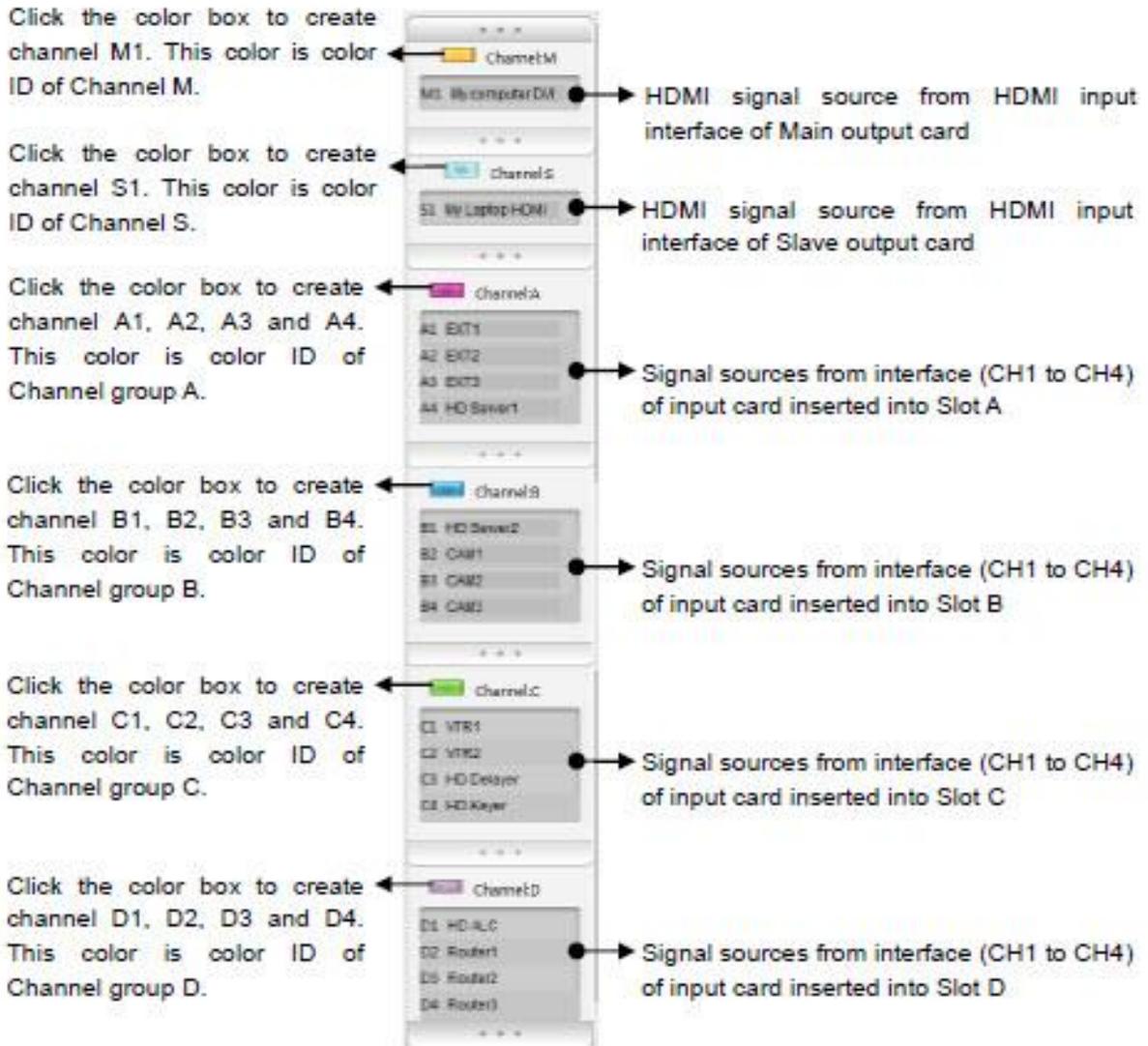


Create a Channel

According to the settings on the web page of Physical Configuration, the system detects the name of input source for each input card and makes a list of them.

If there is no input card inserted into certain slot, such as Slot A, the related channel group, that is channel group A, will not be shown on the web page.

Each channel group has their own color box.

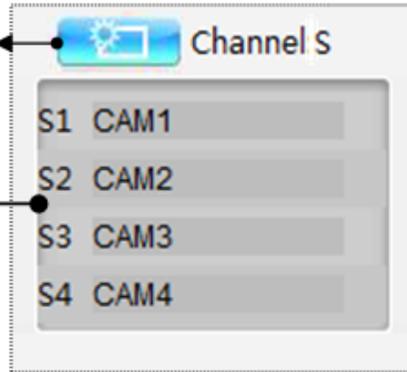


Note:

When the system is a single output system, and there is an input card inserted into Slot S, then group S includes channel S1, S2, S3 and S4, not just S1 anymore.

Click cyan button to create channel S1, S2, S3 and S4. Cyan is color ID of Channel group S.

Signal sources from interface (CH1 to CH4) of input card inserted into Slot S



Create a Video Channel

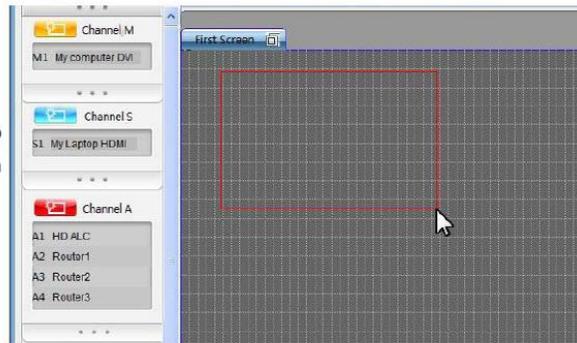


Step 1-Click the needed channel in the list of signal sources. For example, if the needed channel is A4, click the bar of "Router3", which turns blue.

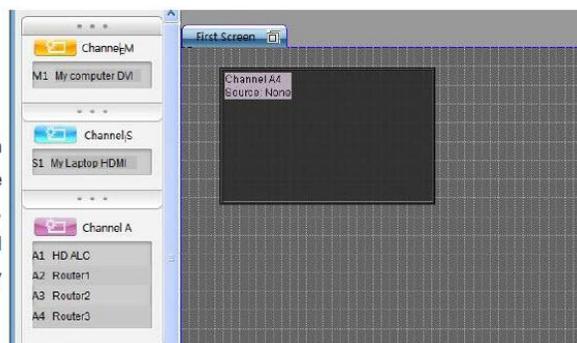
Step 2-Click color button. For example, click pink button of channel A, which turns red.



Step 3-Hold the mouse and from top to bottom to drag a frame on the target screen.



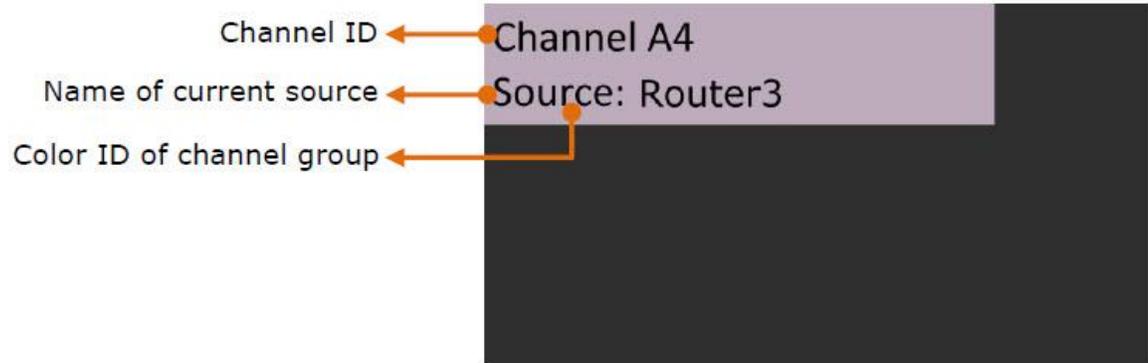
Step 4-Release the mouse. System creates a channel A4 as the size and position of the frame. You can change the size and position of the channel freely afterwards.



Note:

If you skip step 1 and operate by step 2 directly, then the channels will be created in the order of number 1 to number 4.

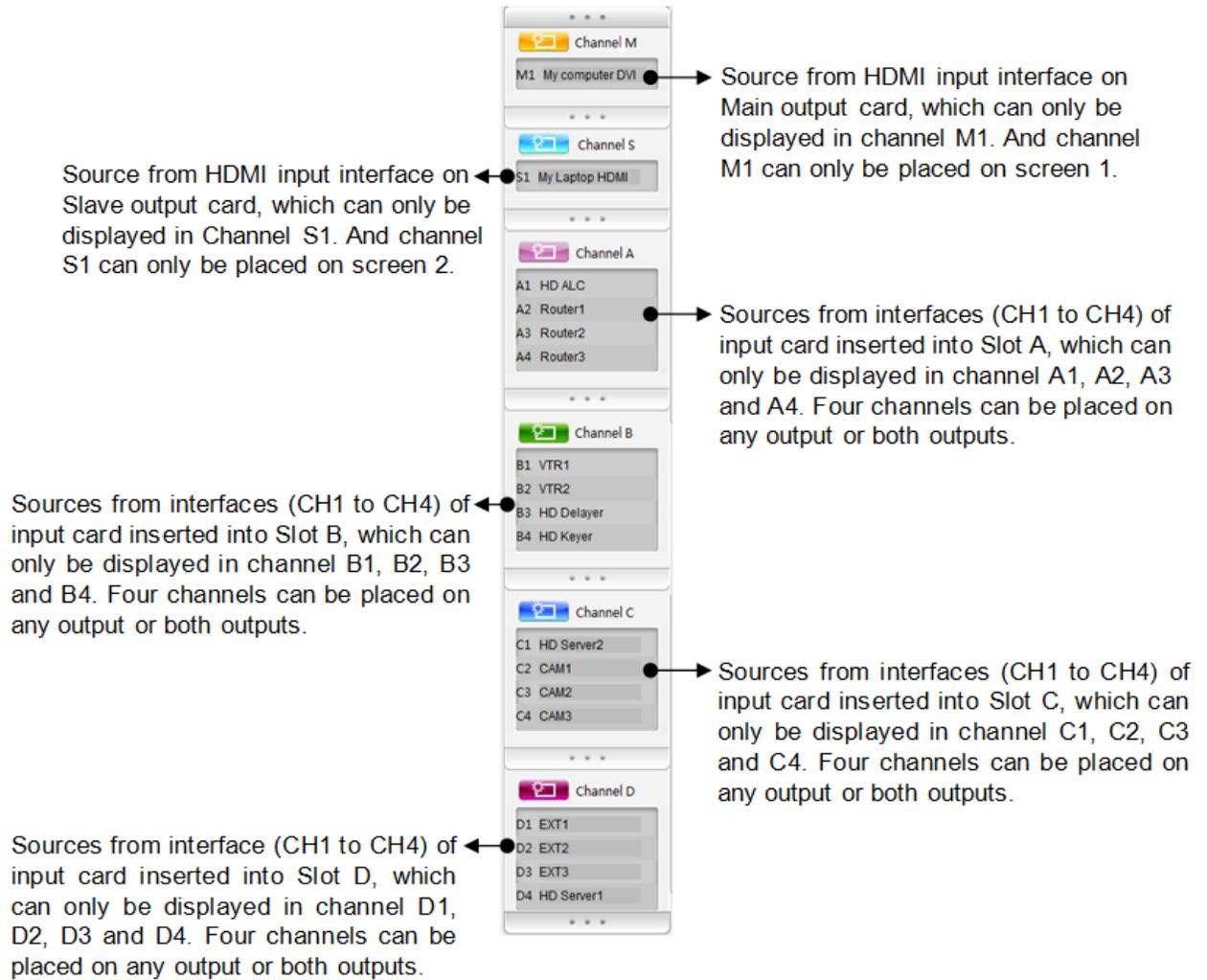
Channel A4 is created as below:



For each virtual channel, three details are shown.

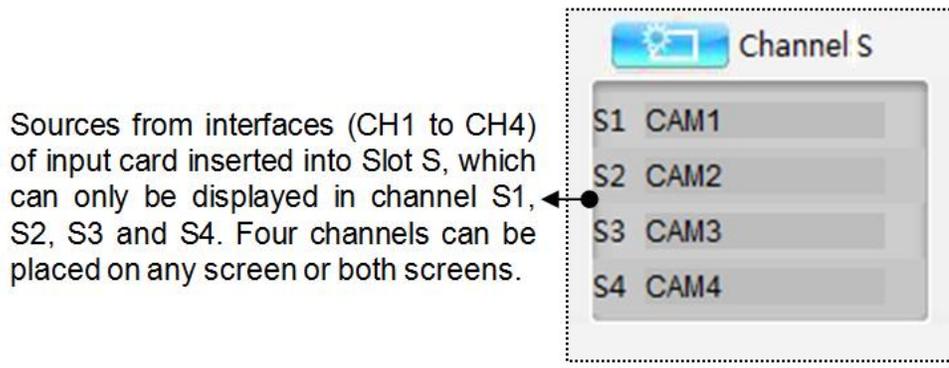
1. Channel ID, showing which group it comes from, for example, A4. Each channel has an exclusive Channel ID;
2. Name of input source displaying in this channel currently, for example, "Router3";
3. Color ID of channel group, distinguishing which group the channel belongs to directly in a complicated layout.

Choose an Input Source



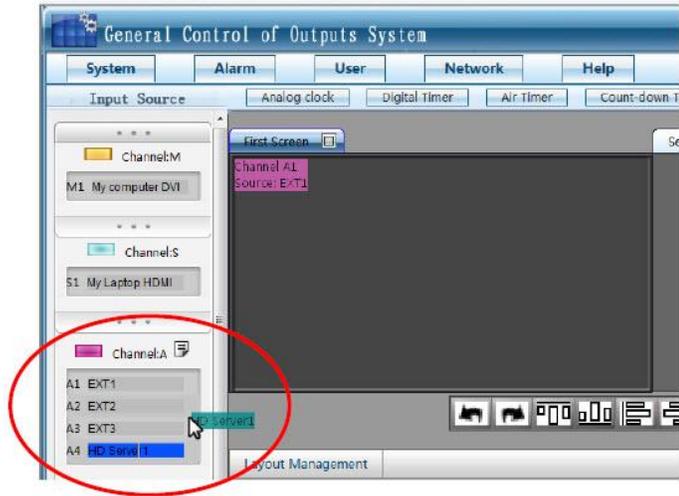
Note:

1. Input signal sources from each input card can only be displayed within their own four channels. In other words, input signals and channel group are binding together.
2. When system is single output system, and there is an input card inserted into Slot S, then group S includes channel S1, S2, S3 and S4, not just S1 anymore.

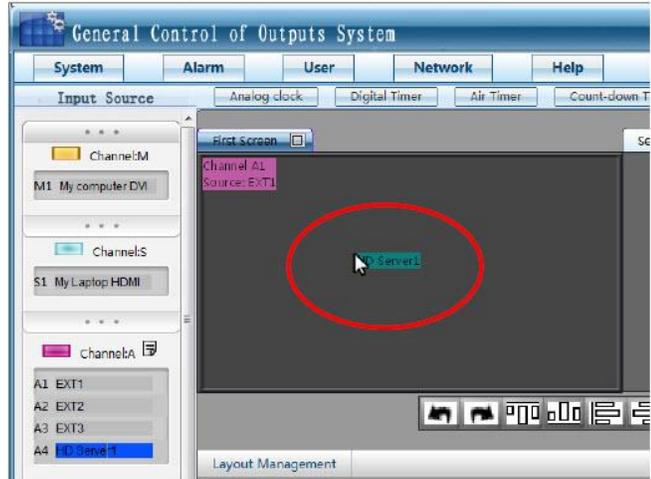


Video Channel input Source (HD)

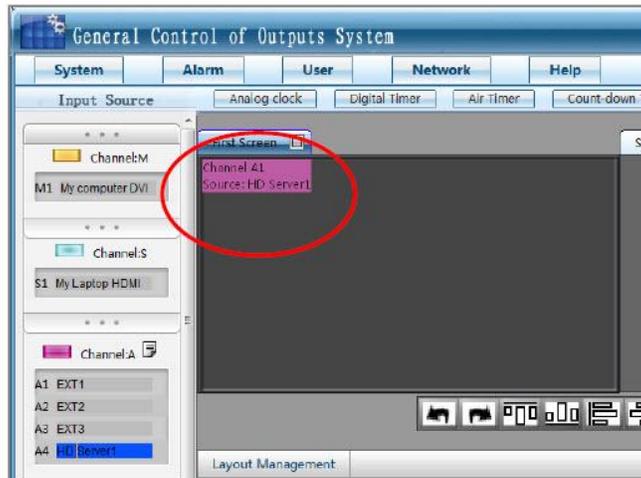
Step 1- Use the mouse to choose one needed input source in the list, and drag it out, such as "HD Server1" from channel group A.



Step 2- Drag the signal out of the list until it locates on the target channel, and then release the mouse, such as channel A1. (Signal source and the selected channel must belong to the same group.)



The display source of channel A1 currently turns to "HD Server1".

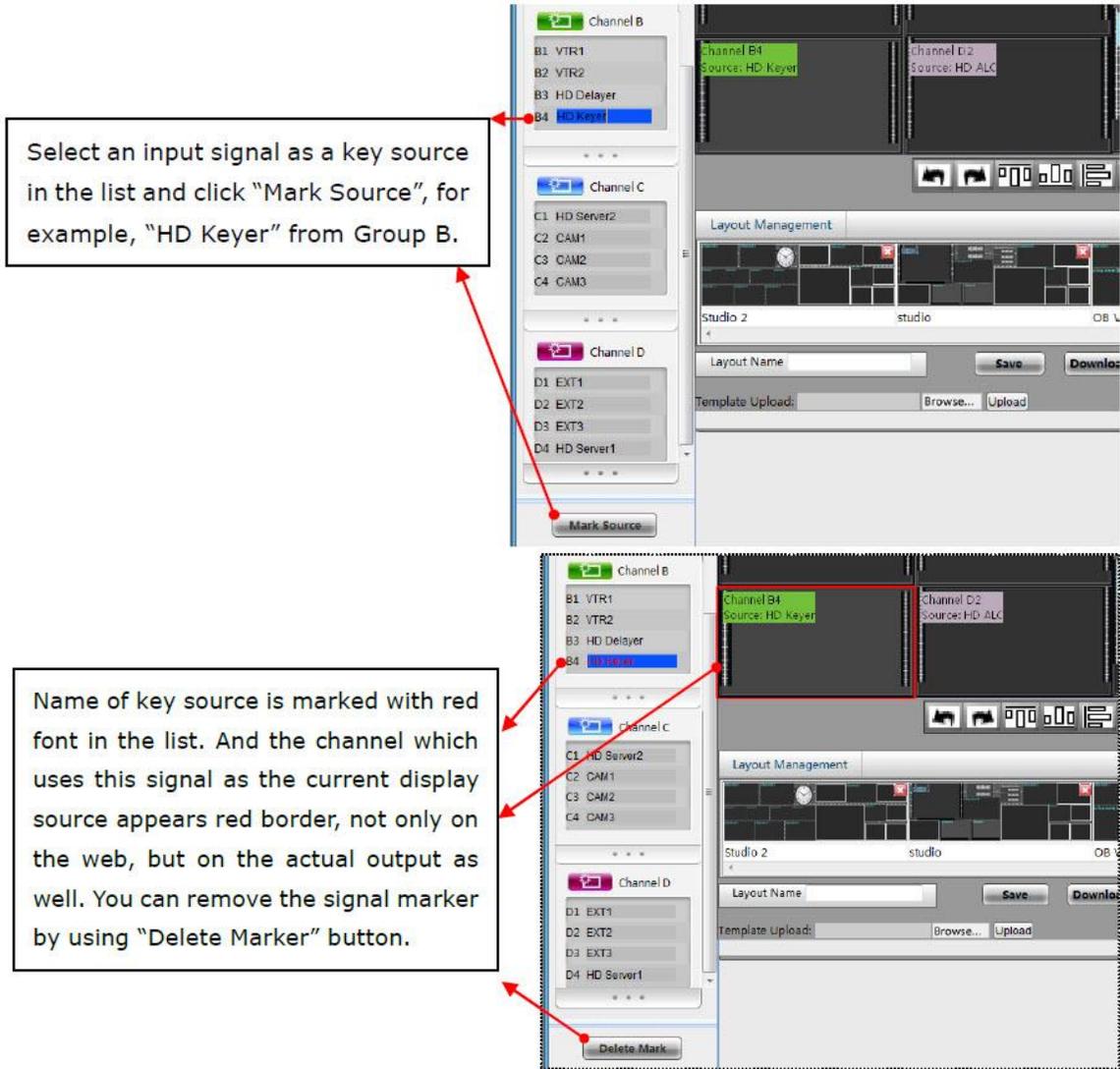


Make/Delete signal marker

Key signals can be marked with red font. Meanwhile, the channel displayed with it will be marked with red border, in order to locate it quickly in a complicated layout, even after a series of position adjustments.

Note:

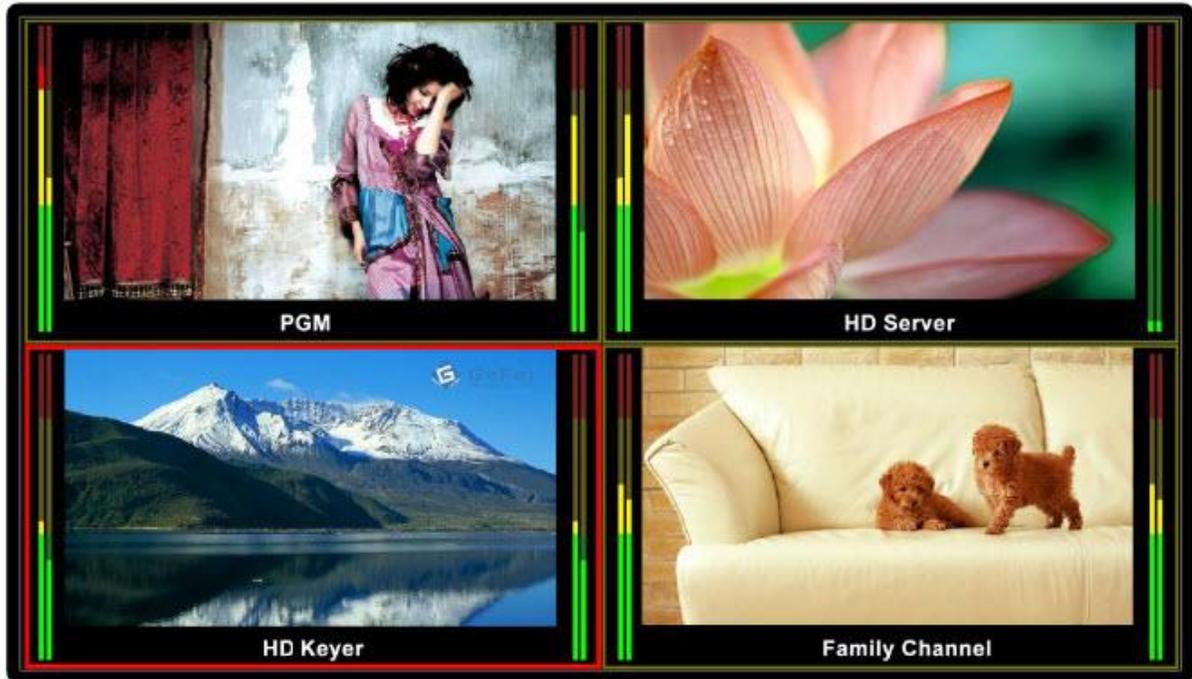
You can mark multiple signals at same time.



SIERRA VIDEO

Note:

*Multiple signals can be marked at the same time.
On the actual output, the channel which uses the signal as the currently displayed source
appears in a red border.*



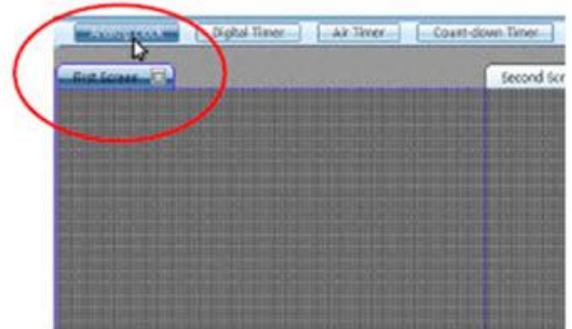
Create Clock/ Timer/ Logo



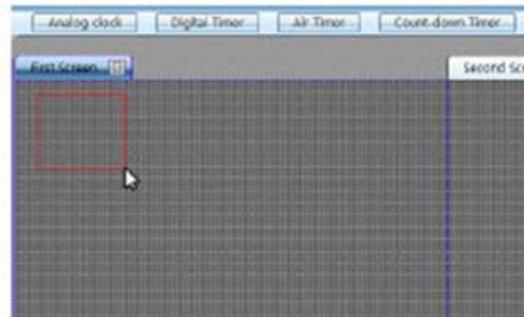
The following objects can be created besides video channels.
Analog Clock, Digital Timer, Count-down Timer, Air Timer, and Logo.

You can create up to two objects of Analog Clock/ Digital Timer/ Count-down Timer/ Air Timer/ Logo, but on each screen, only one of each object can exist.
The size of Logo and Analog Clock cannot be changed. You can change the size of Digital Timer, Count-down Timer, and Air Timer freely.

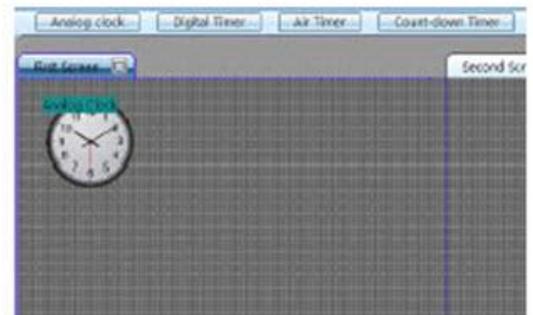
Step 1- Click the button of the needed object. For example, click the button of "Analog Clock".



Step 2- And hold the mouse from top to bottom to drag a frame on the target screen.

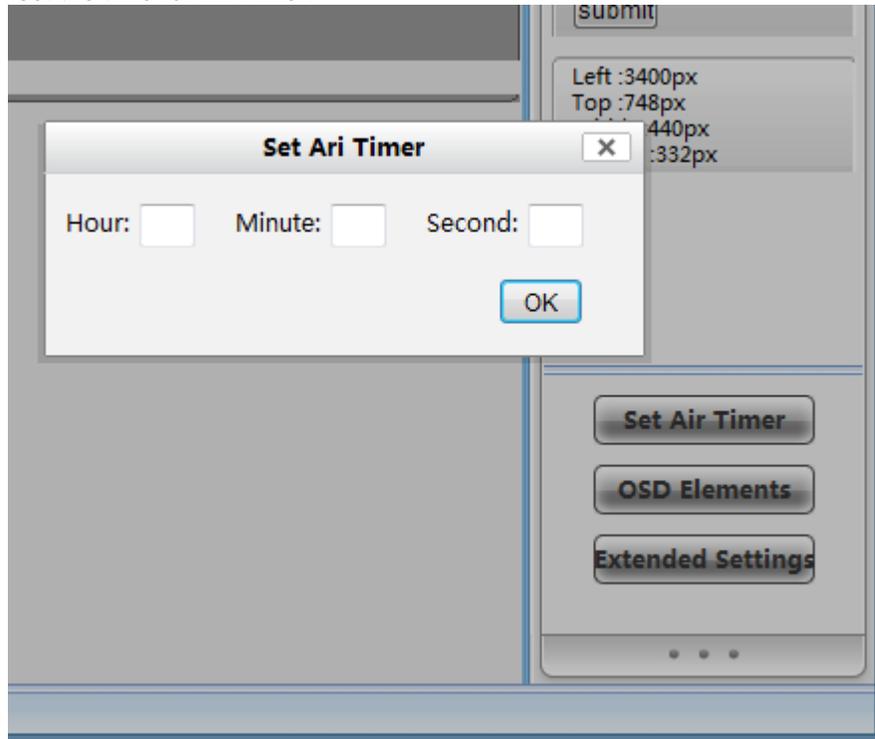


Step 3- Release the mouse. Then System creates an analog clock as the position of the frame with fixed size. You can change the position of the clock freely.



SIERRA VIDEO

You can set the time for Air Timer.



The Air Timer of each screen can be configured separately. First, click the target screen, and then press "Set Air Timer" button. A message box pops out. See the picture above. Enter the numbers on the three blank areas separately. Then press the "OK" button to submit the data. The countdown timer is the interval time between air timer and current timer.

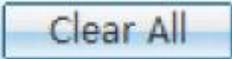
Delete an Object

Choose the unnecessary objects (channels/ clock/ Timer/ LOGO), and then press the

button . The selected object will be deleted immediately. The hot key is the "Delete" key on the keyboard.

Clear All

Each screen can be cleared up individually. First, Click the needed screen, and then

press the button , and then clear up all the objects on the screen.

Screen 1 and Screen 2

Screen 1 is the HDMI or HDSDI output signal of the main output card. And Screen 2 is the HDMI or HDSDI output signal of the slave output card. The position of the two screens is configurable on the Basic Physical Configuration.

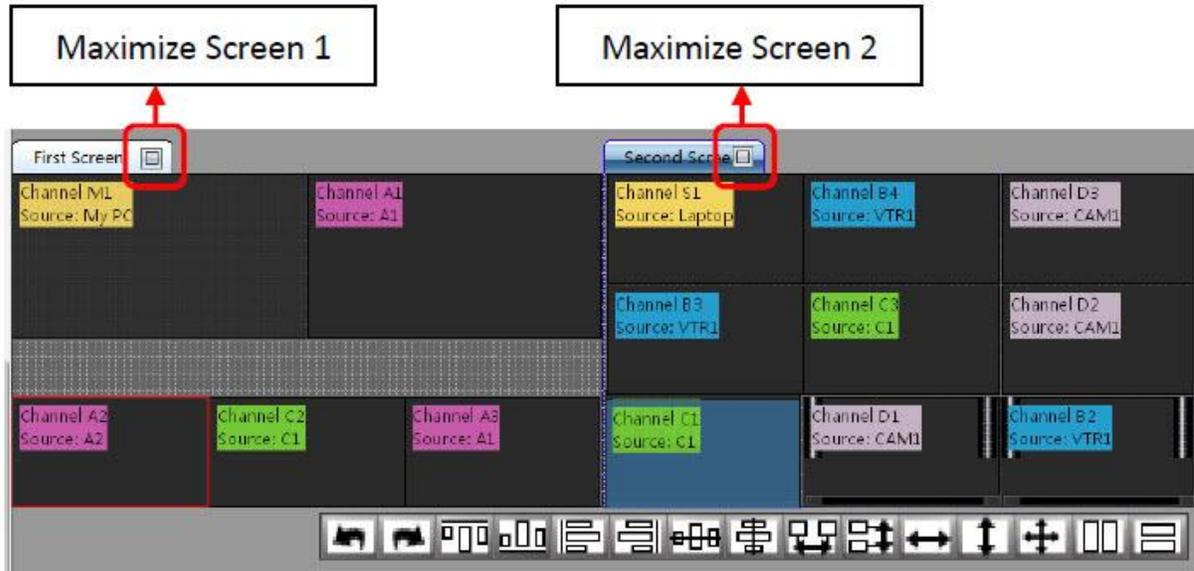
Note:

If the system is a single output system, there is no slave output, that is, there is no virtual "Screen 2" on the web.

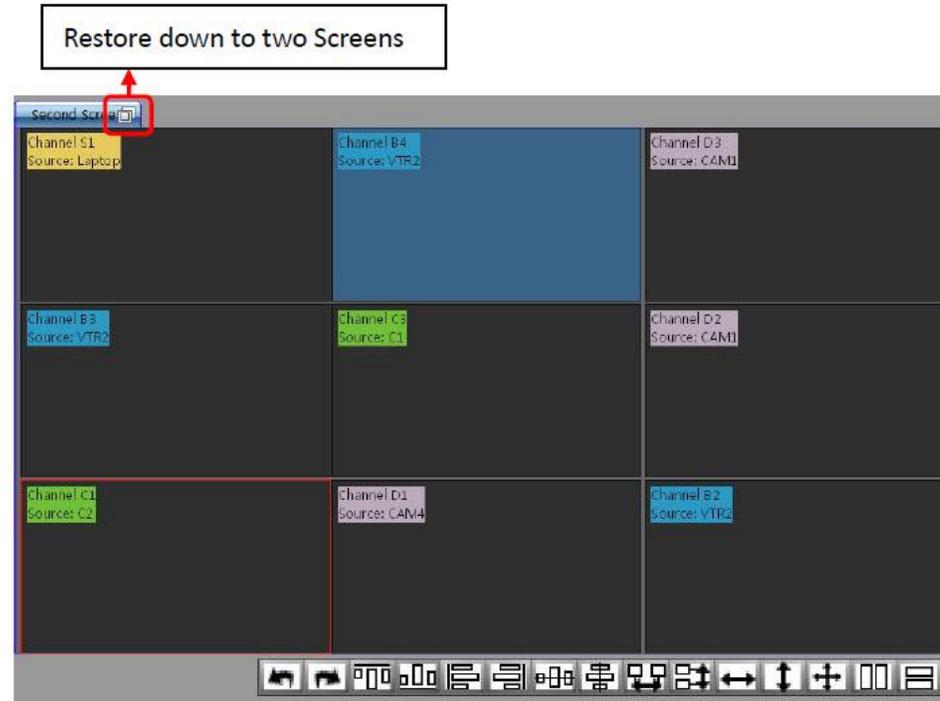
There are various functions in this area. The main are following:

1. Display all the channels, clock, timer and logo.
2. Adjust the position of the clock and logo with a mouse in this area.
3. Adjust the position and size by dragging the edge of channels with a mouse in this area.
4. Adjust the position and size of the audio meters and UMD for each channel by dragging the edge of each audio meter or UMD with the mouse in this area.
5. Choose one or more objects in this area, before you change parameters or take further actions.
6. Any video channel can be directly and simply moved from one screen to another screen in real-time.

Each screen can be magnified to full screen to be edited more easily. All operations in this area update the display on the monitor or LCD in real time.



SIERRA VIDEO



Quick Tools



There are various quick tools for creating various layouts.

Do & Undo



= Undo, hotkey is "Ctrl+Z"



= Do, hotkey is "Ctrl+Y"

Alignment Tools



All operations among these windows are aligned to the last selected one.



: Align Top



: Align Bottom



: Align Left



: Align Right



: Align Horizontal Center



: Align Vertical Center



: Horizontal Average



: Vertical Average



: Overspread with horizontal equal width



: Overspread with vertical equal height

The buttons below are not only for channels, but also for UMD & Audio Meters as well. The selected audio meter is adjusted according to another one in the same channel. The buttons below can't be applied for audio meters from different channels.



: Equal Width



: Equal Height



: Equal Width & Height.

Except for these alignment tools, software supports hotkeys on the keyboard, such as direction key “↑ ↓ ← →”, in order to move channels in this area.

Full Screen

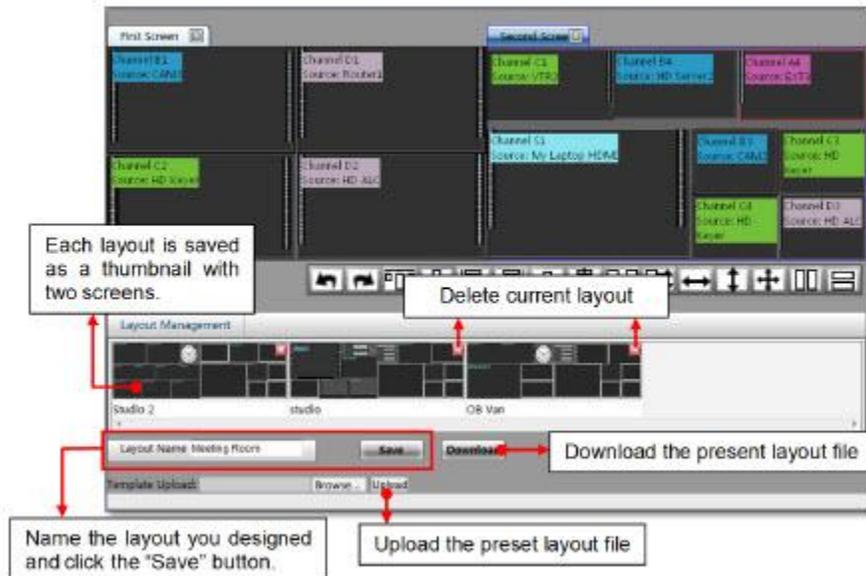
Choose one channel and double click it. The selected channel will output in full screen mode.

When you want to quit the full screen mode, please use hot key “Ctrl+Z” or

click .

Layout Management

The system allows customers to save multiple user-defined layouts. The max number of layouts is 10 per customer. Layouts can be saved or applied at any time.



Save Layout

Enter the name for the layout in the blank area and click the “Save” button. The layout is saved as a thumbnail in the layout management area. The layouts of both screens are saved together at the same time. Clicking the thumbnail applies the relevant layout.

If the name of the layout already exists, the newly-saved layout will take the place of the older one.

Edit Layout

Click the thumbnail of the required layout, and adjust the layout as needed. After all the modifications are done, click the “save” button.

Delete Layout

 = Delete button

Click the “delete” button on top of each layout thumbnail to delete it.

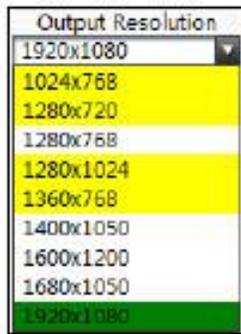
Download Layout File

Click the “Download” button and save the layouts you just designed in form of a BIN file. All the layouts in the layout setting area are saved as one file, so they can't be downloaded individually.

Upload Layout File

Click the “Browse” button to find and upload the layout file you have downloaded before. After a message box appears to inform successful uploading, please refresh the page, and then layouts will appear in the layout display area as thumbnails. And apply a layout by clicking its relevant thumbnail. Note that the latest uploaded layouts will replace the original ones.

HDMI/VGA Output Resolution



Adjust the HDMI or VGA output resolution for the main and slave output cards.

Choose the required screen (Screen 1 or Screen 2) first, and choose the output resolution in the drop-down list. (Screen 1 is connected to the output interface from main output card and Screen 2 is connected to the output interface from slave output card.)

Note:

If the system is single output system, there is no slave output, that is, there is no virtual “Screen 2” on the web.

According to the different types of output card, menu in the drop-down list is different.

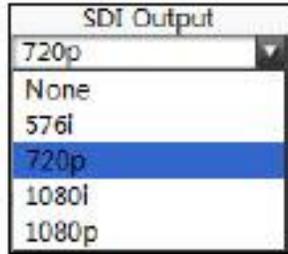
1. For the HDMI+HDSI output card, HDMI output interface provides EDID detection from the monitor. And the resolutions from EDID are highlighted in the dropdown list. See the picture shown above. The output resolution of HDMI signal is up to 1920x1080.

1024x768, 1280x720, 1280x768
1280x1024, 1360x768, 1400x1050
1600x1200, 1680x1050, 1920x1080

2. For the HDMI+VGA output card, VGA and HDMI output resolutions are configured at the same time. The output resolution of HDMI signal is up to 1920x1200x60p.

1024x768x60p, 1280x720x60p, 1280x768x50p
1280x768x60p, 1280x1024x60p, 1360x768x60p
1366x768x60p, 1400x1050x60p, 1680x1050x60p
1600x1200x60p, 1920x1080x50p, 1920x1080x60p, 1920x1200x60p

SDI Output Resolution HDSDI/HDMI Output Card



For the HDMI+HDSDI output card, HD/SD-SDI and HDMI interfaces output the same video signal at the same time. But the SDI output format differs from HDMI output signal, which can be set independently. So far, there is no audio signal embedded into the HD/SD-SDI output signal.

Choose the needed screen (Screen 1 or Screen 2), and choose output format for the HD/SD-SDI signal in the drop-down list. (Screen 1 is connected to the output interface from main output card and Screen 2 is connected to the output interface from slave output card.)

Note:

If the system is single output system, there is no slave output, that is, there is no virtual "Screen 2" on the web.

Configurable output formats:
None, 576i 50/480i 60, 720p, 1080i, 1080p

Audio Monitor Output Select

According to different types of output card, processing mode of audio de-embedding is different.

1. For the HDMI+VGA output card.

Via independent audio output interface on VGA/Audio output module, system can monitor two audio channels from the HD/SD/HDMI signals, and one audio channel of analog composite video signal, which is provided by Audio/Tally input module.

2. For the HDMI+HDSDI output card.

Audio monitoring for one certain channel is achieved by monitoring the embedded audio from HDMI output signal.

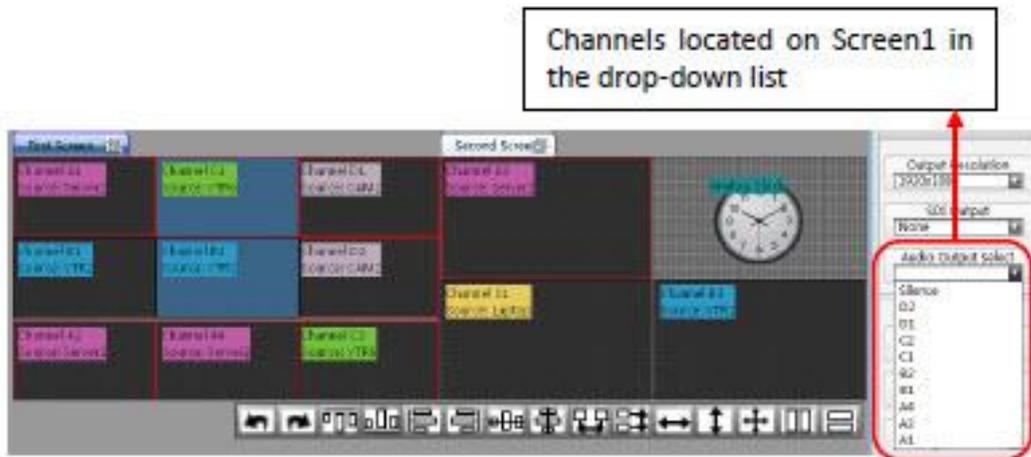
A. When the input source is HD/SD-SDI signal, two channel HD/SD-SDI audio signals can be embedded into the HDMI output signal.

B. When the input source is HDMI signal, up to eight channels of HDMI audio signals can be embedded into the HDMI output signal.

C. When the input source is CVBS signal, one channel analog audio signal can be embedded into the HDMI output signal via the audio/Tally input module.

Note:

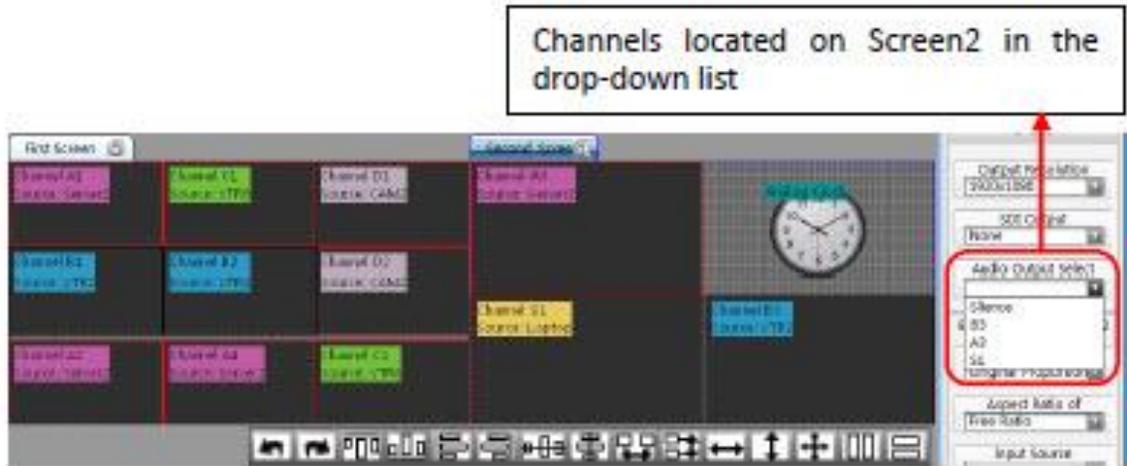
If system is single output system, there is no virtual "Screen 2" on the web



Choose Screen 1. And channels in the drop-down list are all located on Screen 1. Choose one of them. For the HDMI+HDSDI output card, audio signals from the input source, which is currently displayed on the selected channel, are embedded into the HDMI output signal of the main output card; for the HDMI+VGA output card, they are monitored via the audio output interface provided by the VGA/Audio output module of the main output card.

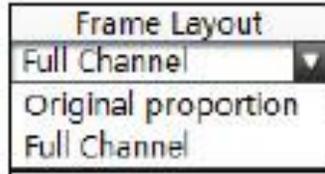
SIERRA VIDEO

For example, when selecting channel D2, audio signals on channel D2 are embedded into the HDMI output signal, or monitored via the VGA/Audio output module in the main output card.



Choose Screen 2. And channels in the drop-down list are all located on Screen 2. Choose one of them. For the HDMI+HDSI output card, audio signals from input source, which is currently displayed on the selected channel, are embedded into the HDMI output signal of the slave output card; for the HDMI+VGA output card, they are monitored via the audio output interface provided by the VGA/Audio output module of the slave output card. For example, if selecting channel B3, audio signals on channel B3 are embedded into the HDMI output signal, or monitored via the VGA/Audio output module of the slave output card.

Frame Layout

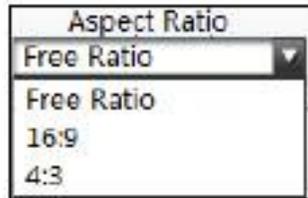


This function aims to adjust aspect ratio of the output video image. There are two types of video display: Full channel and Original proportion.

Full channel means the video image will cover the entire channel and ignore the aspect ratio of the video signal.

Original proportion means the video image always keeps the aspect ratio of the video signal, even though the ratio of the channel or the size of UMD and Audio meters are changed. So for SD input signals, the aspect ratio of video image is 4:3; And for HD input signals, it is 16:9.

Aspect Ratio



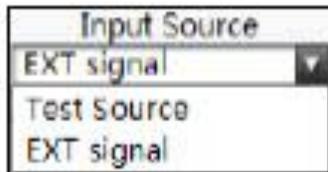
This function aims to adjust aspect ratio of virtual channels. Aspect ratio contains 4:3, 16:9, and Free Ratio.

4:3-The size of channels can be changed following the aspect ratio of 4:3.

16:9- The size of channels can be changed following the aspect ratio of 16:9

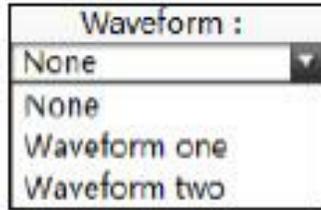
Free Ratio- The size of channels can be changed freely following any aspect ratio.

Input Source



Select the video type between the External Signal (HD/SD-SDI) and the test signal generated by the system.

Waveform Display



SVG supports the display of real-time waveforms. Clicking the drop-down list, there are three options: None, Waveform one and Waveform two.

Waveform one (from top to bottom): Y waveform, PbPr waveform, and Vector;

Waveform two (from top to bottom): Y waveform, Audio waveforms of G1 CH1, and Audio phase of G1 CH1&CH2.

Choosing "None" means there is no waveform on the image. There will not be audio meters with waveform display.

Waveform one:



Waveform Two:



UMD and Audio Meters Display

CH1&2 CH3&4
 UMD LOCK

Checking the box “UMD” will show the UMD within the channel. The system supports dual UMD displays. The further configuration can be completed in the configuration of “OSD Elements” on the right-bottom of the web page.

Checking the box “CH1&2”, will display meters for CH1 and CH2 from the HD/SD signal within the channel.

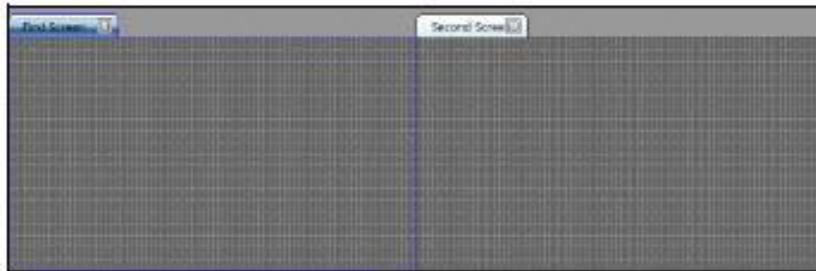
Checking the box “CH3&4”, will display meters of CH3 and CH4 from the HD/SD signal within the channel.

Checking the box “Locked” locks both the audio meters and UMD within the window, so the audio meters or UMD can’t be operated separately.

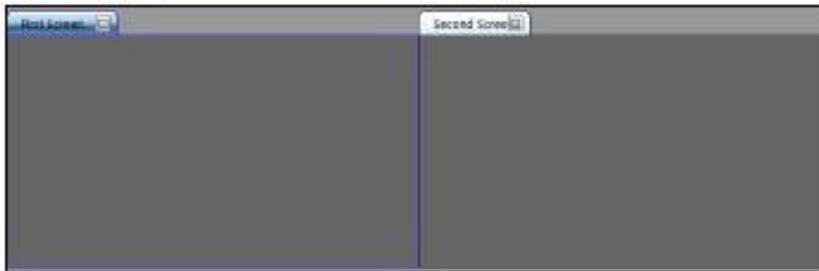
Attach to point

Attached to point
 Row: 20
 Column: 80

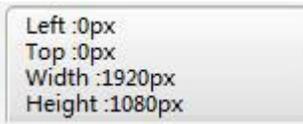
Checking this box, there will be horizontal and vertical lines across both output screens. So objects are moved or adjusted by attaching to the point or align to the line. You can set the rows and columns to change the amount of lines and density of the cross points.



Un-checking the box, there will be no lines across both screens. So objects are moved or adjusted freely.



Position and Size



Choose one object, the values of the channel's coordinates, width and height are shown on the right part of the web page, which are for read only, and cannot be adjusted, so far.

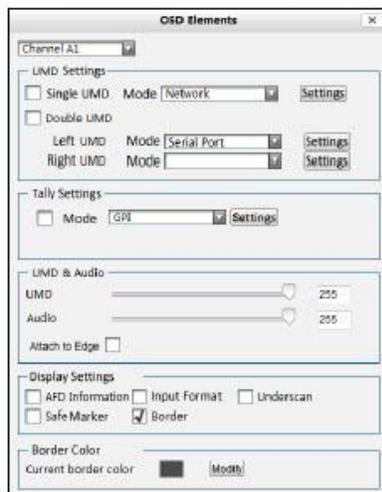
Set Air Timer



The Air Timer for each screen can be configured separately. First, click the target screen, and then press the “Set Air Timer” button. A message box pops out. See the picture above. Enter the numbers on three blank areas, separately. Then press the “OK” button to submit the data. The countdown timer is the interval time between air timer and current timer.

OSD Elements

Click the button “OSD Elements”, prompting the dialog box as following:



UMD Settings

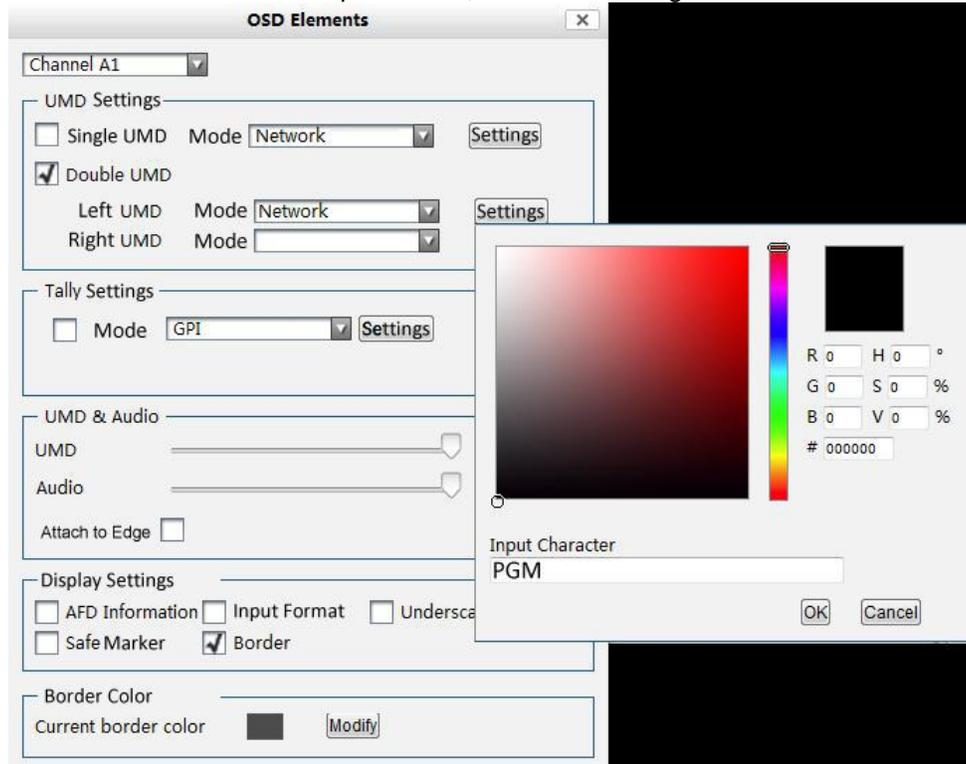
First, select the desired channel in the drop-down list.
 The system supports single or dual program UMD display at one time. Dual UMD is composed of left UMD and right UMD. There is a white line between left and right UMD text.



Single UMD, left and right UMD's of Dual UMD's can be configured separately.
 UMD text can be edited via both network and Serial port.

Via network-Static UMD

Choose "Network" in the drop-down list, and click "Settings".



Upload UMD Text

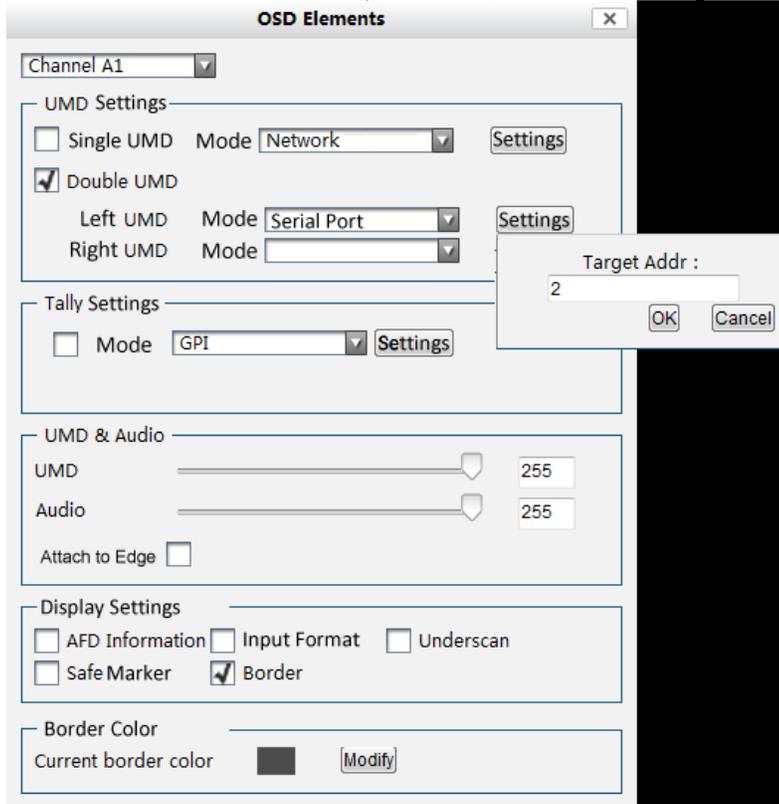
Type the characters in the blank bar, change font color. Click "OK" to submit changes after all parameters are settled and all characters will be displayed in the UMD.

To clear the UMD:

Enter a "space", and then click "OK", the characters in the UMD area will be cleared.

Via serial port (RS232)-Dynamic UMD

Choose “Serial Port” in the drop-down list, and click “Settings”.



Here are a few steps to achieve dynamic UMD:

First, set the baud rate and parity. The baud and parity must be the same as the ones of TSL Tallyman. Please see the details about configuration of the Serial Port in Extended Settings.

Second, check the box "TSL" to enable this function. Please see the details about configuration of the Serial Port in Extended Settings.

Third, set the target address for the selected channel to receive the data from TSL Tallyman. Please make sure there are no same target addresses for single or dual UMD's of the channels, that is, each target address has a unique value, even for right and left UMD of a dual UMD display.

Note:

You can send multiple strings for TSL function at the same time, with a maximum of 10 strings.

RS232, DB9 definition (For TSL and GPS)

Pin #	Function
2	Rx
3	Tx
5	GND

Dynamic UMD Protocol

| HEADER | CONTROL BYTE | DISPLAY DATA |

Header = Display address (0-126) + 80 hex
(1 byte) (Control byte and display data will be sent)

Control (1 byte)

bit 0 = tally 1 (1=on, 0=off)

bit 1 = tally 2 (1=on, 0=off)

bit 2 = tally 3 (1=on, 0=off)

bit 3 = tally 4 (1=on, 0=off)

bits 4-5 = brightness data

bit 4 = 0, bit 5 = 0 (0 brightness)

bit 4 = 0, bit 5 = 1 (1/7 brightness)

bit 4 = 1, bit 5 = 0 (1/2 brightness)

bit 4 = 1, bit 5 = 1 (full brightness)

bit 6 = reserved (clear to 0)

bit 7 = cleared to 0

Display Data (16 bytes) = 16 displayable ASCII characters in the range 20 hex to 7E hex.
All 16 characters must be sent.

Tally Settings

Select the desired channel in the drop-down list.

Check the box, to enable Tally Display function.

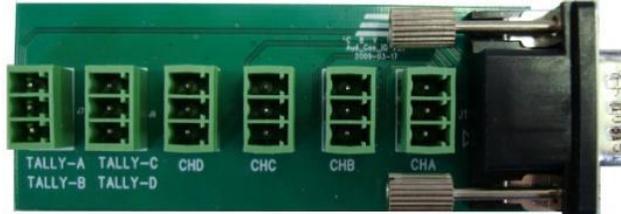
The system supports single Tally display. Tally can be achieved via both GPI and Serial ports.



Via GPI-Static Tally

Choose "GPI" in the drop-down list to enable static Tally.

Static Tally is applied with the Tally input module as below.



Check the box, when there is a high level trigger, the TALLY area will turn light red; otherwise, dark red. If the box is not checked, no matter whether there is a high level, the TALLY area will turn gray. High level is the voltage which higher than 3.3V and Lower than 7V. Users can choose the modified channel from the drop-down list.

Unchecked box, the Tally area will turn grey.



If the box is checked and there is not a high level trigger, the Tally area will turn dark red.



If the box is checked and there is a high level trigger, the Tally area will turn light red.



Dynamic Tally Via serial port (RS232)

Choose “Serial Port” in the drop-down list to enable Tally.
 Check the box, the tally is implemented with dynamic UMD for both single UMD and dual UMD. The current color of Tally is changed based on the latest operation of dynamic UMD.

Tally 1=Red.



Tally 2=Yellow.



Audio and UMD Settings

UMD & Audio

UMD 255

Audio 255

Attach to Edge

Choose the target channel or all channels from the drop-down list.
 In this area, users can modify transparency for the audio meters or UMD for each channel. Choose the channel to be modified from the drop-down list, put the mouse on the cursor and drag it to the assigned position; or you can fill in the certain parameter ranging from 0 to 255. “0” stands for full transparency and “255” stands for opacity

Attach to edge

Check “Attach to Edge”, when the audio meters and the UMD are located at the bottom edge of the image, let the audio meters and the UMD cling to the edge which make the image be shown completely. If not, UMD and audio meters are overlaid on image.

Display settings

Display Settings

AFD Information Input Format Underscan

Safe Marker Border

Choose the target channel or all channels from the drop-down list.
 Check the box “AFD Information” and AFD information will be overlaid on top of the channel. AFD information is shown in the form of picture, according to the AFD code inside of the input signal.

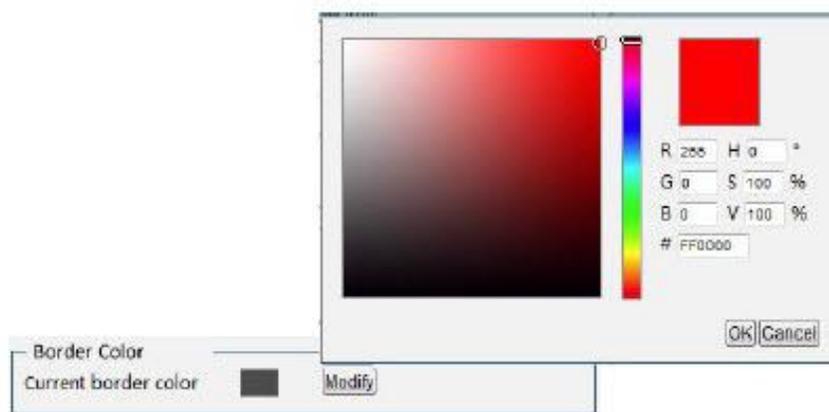
SIERRA VIDEO

Check the box "Input Format", and input resolution will be overlaid on top of the channel. Input resolution is shown as 480i 60/525i 50/720p/1080i/1080p.



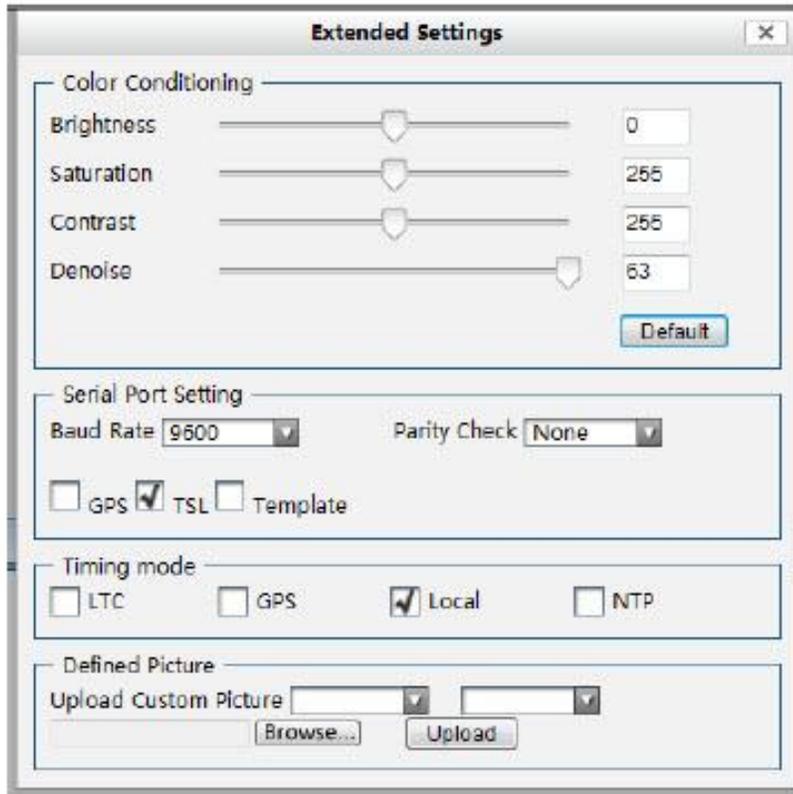
Check the box "Underscan" to make effect on the selected channel. Check the box "Safe Marker". The picture of the SD-SDI signal is marked with 16:9 safe area markers, and the picture of HD-SDI signal is marked with 4:3 safe area markers. By checking the box "Border", the selected channel is showed with border. The border color of each channel can be configured freely.

Border Color



Choose the target channel or all channels from the drop-down list, and click "Modify" to display a color palette. Select the desired color and click "OK". The current border color is changed to the one you selected.

Extended Settings



Set Color Parameters



Brightness: to set the brightness and darkness of picture. The range is from -512 to 511.

Saturation: to set the color of picture. The range is from 0 to 511.

Contrast: to adjust the clarity of picture. The range is from 0 to 511.

De-noise: The range of de-noise is from 0 to 63.

Restore default button: to restore the factory default settings.

Serial Port Settings



There are three functions provided by SVG-D system via a RS232 interface, which are RS232 timing, TSL UMD & Tally and Layout Remote Control.

Here are a few steps to achieve these functions:

First, set the baud rate and parity. The baud and parity must be the same as the ones of RS232 devices such as TSL Tallyman.

Second, check the box "TSL", "GPS" or "Template" to enable this function. Only one function can take effect at any given time, because they share the same RS232 interface.

Third, for TSL UMD & Tally, choose "Serial Port" in the drop-down list under "UMD Settings" of OSE Elements, then set the address for the target channel to receive the data from TSL Tallyman. GPS Timing and Layout Remote Control don't need the third step.

Note:

You can send multiple strings for TSL function at the same time, and the maximum is 10 strings.

RS232, DB9 definition (For TSL and GPS)

Pin	Function
2	Rx
3	Tx
5	GND

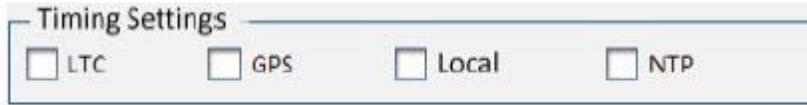
RS232 to RS232 cable (for dynamic UMD & Tally and GPS Timing)

2-----3
 3-----2
 5-----5

RS232 to DB26 cable

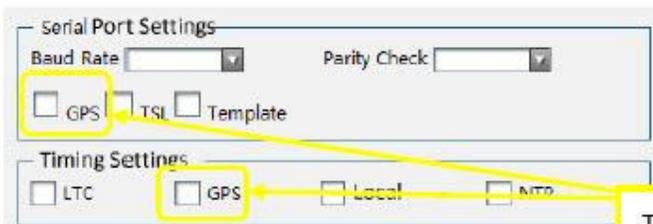
DB9 (Female) ----- DB26 (Male)
 2-----8
 3-----9
 5-----7

Timing Settings



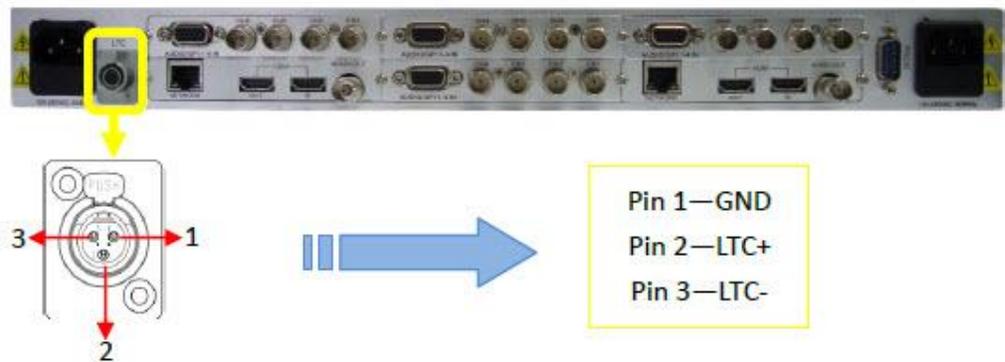
There are four kinds of timing mode. These are GPS timing, LTC timing, NTP timing and Local timing. Only one timing mode can take effect at a time. See the details of each mode below:

GPS timing means that both, the analog clock, and digital timer are controlled by the GPS timer via the RS232 interface. To achieve this function, baud rate and parity should be configured. By checking the box "GPS", the GPS timing function is enabled.



Two "GPS" options are bound together. Check one of them, and another one is also checked.

LTC timing means timing is based on LTC code via XLR interface. So far the LTC in the SVG-D is EBU code according to IEC standards. Pin 1 is GND, and pins 2 & 3 receive LTC data. See the picture below. By checking the "LTC" checkbox, the LTC timing function is enabled.



NTP timing means the analog clock and digital timer are set by an NTP Server through the RJ45 interface. It supports Network Time Protocol (NTP). The IP address of the NTP Server should be configured in the same network segment as SVG-X, and configure the "NTP Server" under the label "Network". By checking the "NTP" checkbox, the NTP timing function is enabled.

If the "Local" checkbox is selected, the analog clock and digital timer are controlled by the computer, which also accesses to the web control of SVG-D, through the RJ45 interface. There are two items that require notice. First, the local IP address of the computer should be configured in the same network segment as the SVG-X. Second, refresh the web page after checking the box "Local", in order to submit the current time from the computer to the SVG-X. The factory setting for timing mode is set to Local timing. By checking the "Local" checkbox, the local timing function is enabled.

SVG-D adopts built-in battery-backed clock, so that the clock keeps timing when the SVG-D power is turned off. The battery-backed clock stores time corrected by GPS or LTC time code, not Local or NTP.

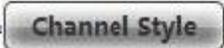
Upload Custom Picture



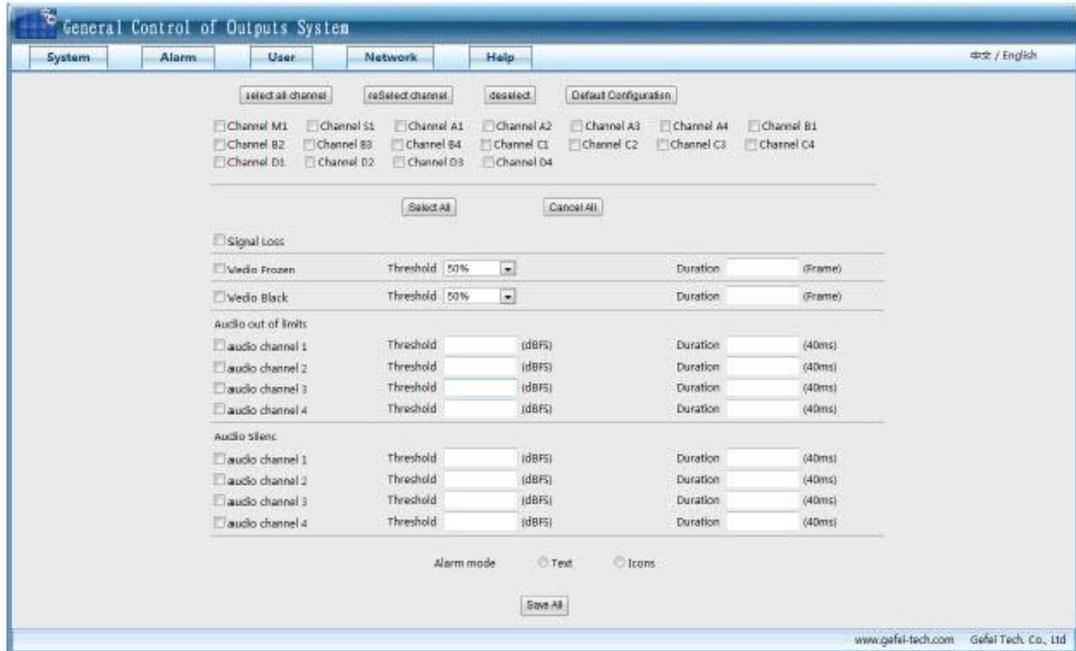
The background, logo, and UMD picture of each channel can be changed to customize one through this function.

The picture you need to upload must be 32bits TGA format with Alpha channel. The maximum sizes of pictures are 720x60 pixels for UMD and 960X540 pixels for background. The amount of data in the logo picture must be less than 500KB, and also should be 32bits TGA format with Alpha channel.

Channel Style

This button  is invalid without function.

Detection Settings



select all channel : Check all the boxes for channels

reSelect channel : Selected will be clear, the others will be selected.

deselect : Cancel all the checks

Default Configuration : Restore Factory Setting

Select All : Check all the boxes for detection settings of selected channels

Cancel All : Cancel all the checks for detection settings of selected channels

SVG provides two kinds of warning mode: texts and small icons. And only one mode takes effect at a time. Text is shown at the bottom of each channel. Video warning icon is shown at left edge of each channel, while audio warning is at the right edge.



The video and audio input of each channel can report signal status and validity, with detection of (text and icons):

(1) Loss of signal: **Loss Of Video** and 

(2) Video frozen: **Video Frozen** and 

(3) Video black: **Video Black** and 

(4) Audio overload: **Audio Overload** and 

(5) Audio in silence: **Audio In Silence** and 

Several channels can be configured at the same time. If the detection parameters of each channel differ from others, the configuration should be completed separately.

Audio Detection

Measure unit of digital audio is dBFS (dB Full Scale) . 0dBFS is the maximum audio level, corresponding to +24dBu of analog audio.



Audio Overload

It will prompt a warning picture as soon as the audio level overloads the threshold you have set up. It provides detection for up to 4 audio channels. And there is a box in front of each audio channel. This detection will take effect only when the box is checked. The threshold and duration of detection can be configured for detection of each audio channel. The threshold means a maximum audio level. When actual volume is above this threshold, the system will prompt a warning of audio overload.

Audio out of limits			
<input checked="" type="checkbox"/> audio channel 1	Threshold	-10 (dBFS)	Duration 25 (40ms)
<input checked="" type="checkbox"/> audio channel 2	Threshold	-10 (dBFS)	Duration 25 (40ms)
<input checked="" type="checkbox"/> audio channel 3	Threshold	-10 (dBFS)	Duration 25 (40ms)
<input checked="" type="checkbox"/> audio channel 4	Threshold	-10 (dBFS)	Duration 25 (40ms)

Audio in Silence

It will prompt a warning picture as soon as the audio level lowers the threshold you set up. It provides detection for up to 4 audio channels. And there is a box in front of each audio channel. This detection takes effect only if the box is checked. The threshold and duration of detection can be configured for detection of each audio channel. The threshold means a minimum audio level.

When actual volume is below this threshold, the system will prompt a warning of audio in silence.

Audio Silenc			
<input checked="" type="checkbox"/> audio channel 1	Threshold	-56 (dBFS)	Duration 25 (40ms)
<input checked="" type="checkbox"/> audio channel 2	Threshold	-56 (dBFS)	Duration 25 (40ms)
<input checked="" type="checkbox"/> audio channel 3	Threshold	-56 (dBFS)	Duration 25 (40ms)
<input checked="" type="checkbox"/> audio channel 4	Threshold	-56 (dBFS)	Duration 25 (40ms)

Video Detection

<input checked="" type="checkbox"/> Signal Loss			
<input checked="" type="checkbox"/> Video Frozen	Threshold	85%	Duration: 100 (Frame)
<input checked="" type="checkbox"/> Video Black	Threshold	85%	Duration: 100 (Frame)

Loss of Signal

It prompts a warning picture as soon as signal is lost. This detection takes effect only if the box is checked.

Video Frozen

It will prompt a warning picture as soon as the regular pixels ratio of the image is lower the threshold you have set up. This detection will take effect only if the box is checked. The threshold and duration of detection can be configured. The threshold means the frozen pixel percentage in one frame.

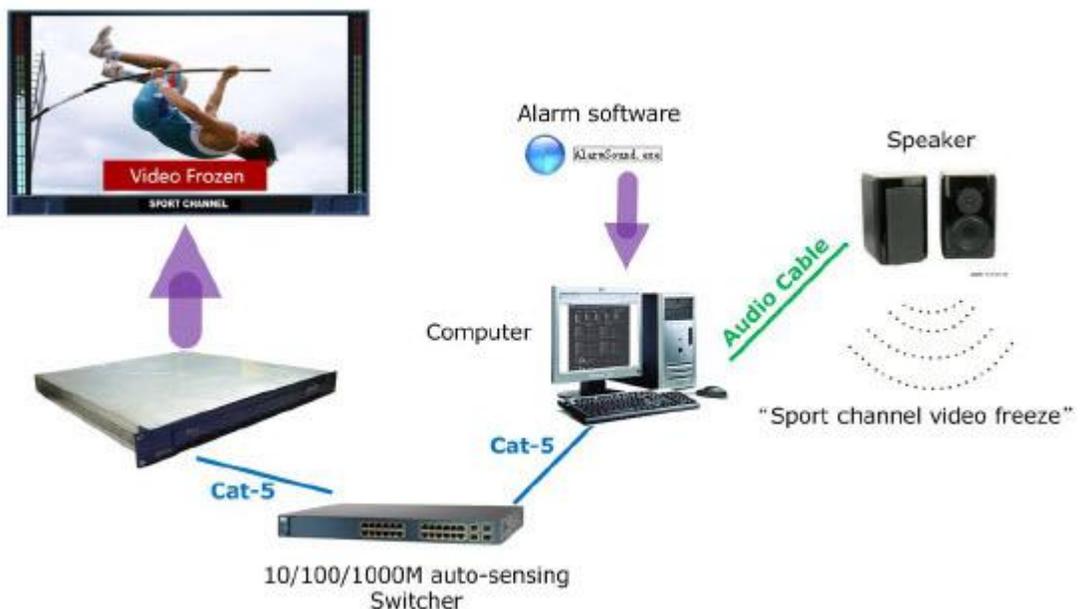
Video Black

It will prompt a warning picture as soon as video level is lower the threshold. This detection will take effect only if the box is checked. The duration of detection can be configured.

Voice Alarm

The system supports signal alarm in form of not only pictures, but also voice. The alarm information is transmitted to the computer though cable via the RJ45 interface, and is heard through the speakers or headphones of the computer. Please use Windows 2003, Windows XP, Windows Vista and/or Windows 7 system. The anti-virus software and firewall must be disabled to make sure that the alarm data is transmitted from the SVG-X system without rejection.

The form of the alarm is "UMD text + audio 1(2/3/4) silence/ video lost". For example, if UMD text for channel A1 is "Sport channel", and video freezes, the alarm will display that sport channel video froze. If channel A1 doesn't have UMD text, the alarm will display "channel A1 video freeze".



SIERRA VIDEO

1. Configure the Manager IP under the “Network” label on the web page. It should be the local IP address of the computer. After the operations, please click “submit”. A message box pops out, and then restarts the device.

Note: the computer and SVG-X should be in the same network segment.

The screenshot shows the 'Network' configuration page. The fields are as follows:

IP Address:	192 . 168 . 1 . 76
Subnet Mask:	255 . 255 . 255 . 0
Default Gateway:	192 . 168 . 1 . 200
DNS Address:	0 . 0 . 0 . 0
MAC Address:	0 . 50 . c2 . 19 . 50
Manager IP:	192 . 168 . 1 . 44
Trap common:	Gefei
Trap Port:	162
NTP Server:	192 . 168 . 1 . 51

A red box highlights the 'Manager IP' field, which is labeled 'Local IP' in a speech bubble. Below the network settings is a 'submit' button.

The 'update program' section contains the following fields and buttons:

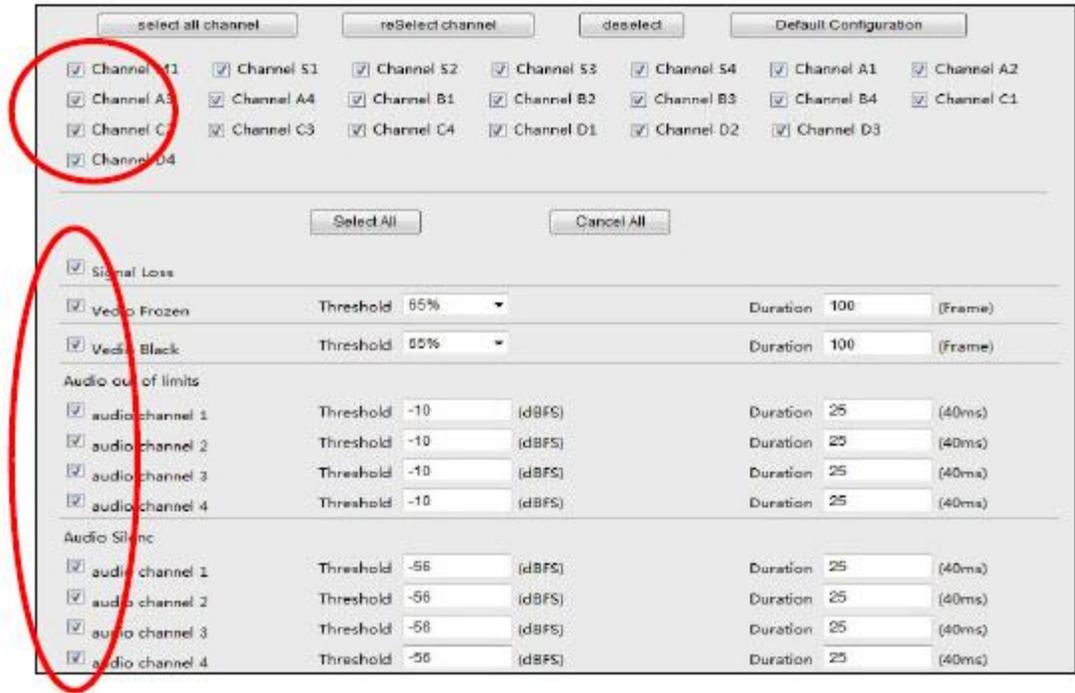
Main DSP:	Browse...	update
Slave DSP1:	Browse...	update
Slave DSP2:	Browse...	update
Output modular:	Browse...	update
Input modular:	Browse...	update
Front Base file:	Browse...	update
Font file:	Browse...	upload

2. Enable the voice alarm function under the “Alarm” label on the web page. Check the box “Voice Alarm” to enable this function. You can decide if voice alarm takes place when the status of signal is back to normal, and change the count of cycles for the alarm. The adjustment will take effect when new alarm dates are transmitted to the computer.

The screenshot shows the 'Alarm' configuration page with the following settings:

Voice Alarm	<input checked="" type="checkbox"/>
Voice Alarm When Status Resume	<input type="checkbox"/>
Count of Cycle Alarm(1--10)	1

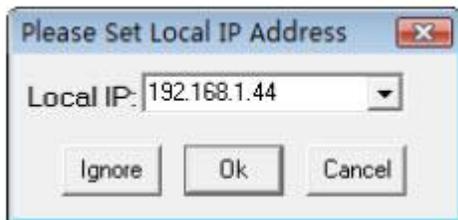
3. Check the boxes of alarm parameters to monitor video and audio signals. First, choose the channels for monitoring as desired; second, choose the alarm parameters as needed. Please click “submit” after all the modifications.



4. Install the alarm software on the computer.



Double click the icon of the executable file named “AlarmSound.exe”; a dialogue box pops out. Please fill in the local IP address, and click “ok” button.

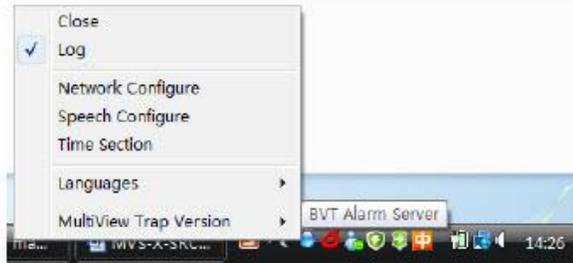


The software is now running in the notification area of the taskbar.



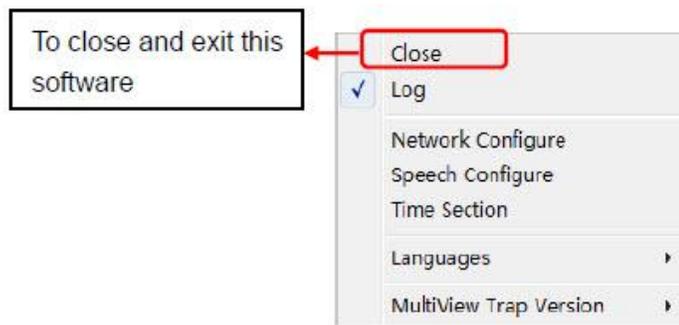
SIERRA VIDEO

Move the mouse on the icon, and right click on it to show a menu for further configuration.

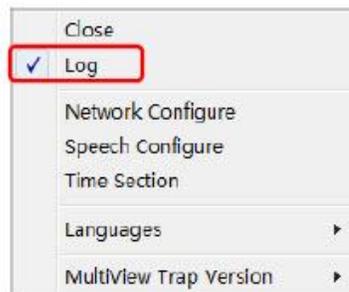


Here are descriptions about menu of alarmsound.exe

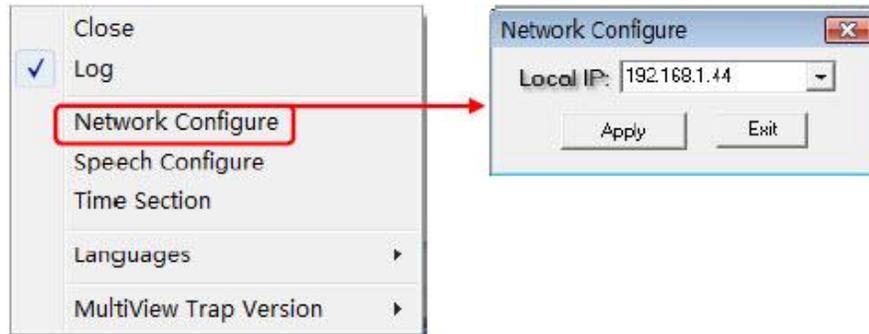
1) Close



- 2) **Log:** To choose if there are alarms Logs recorded in this folder. Logs are saved in the form of text document. The names of text document are named after the date when the alarms take place, such as "2010-06-08.txt".

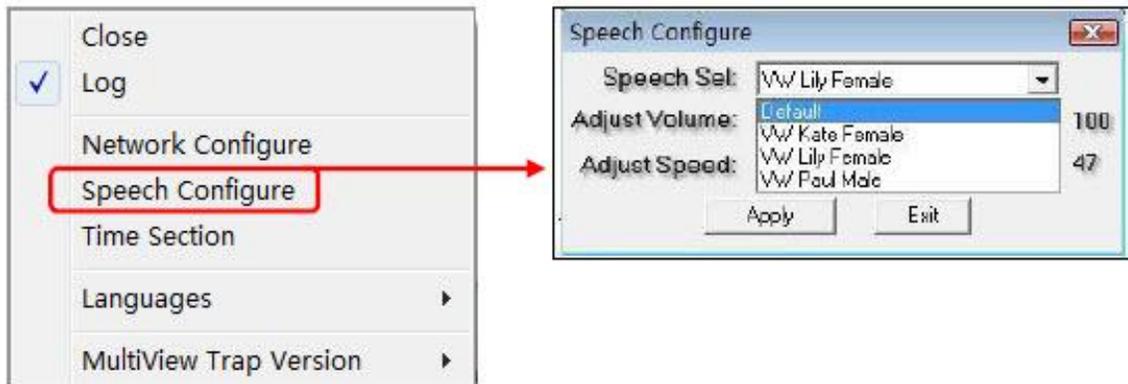


- 3) **Network Configure:** To change the local IP address if needed. After the operation, please click "Apply".



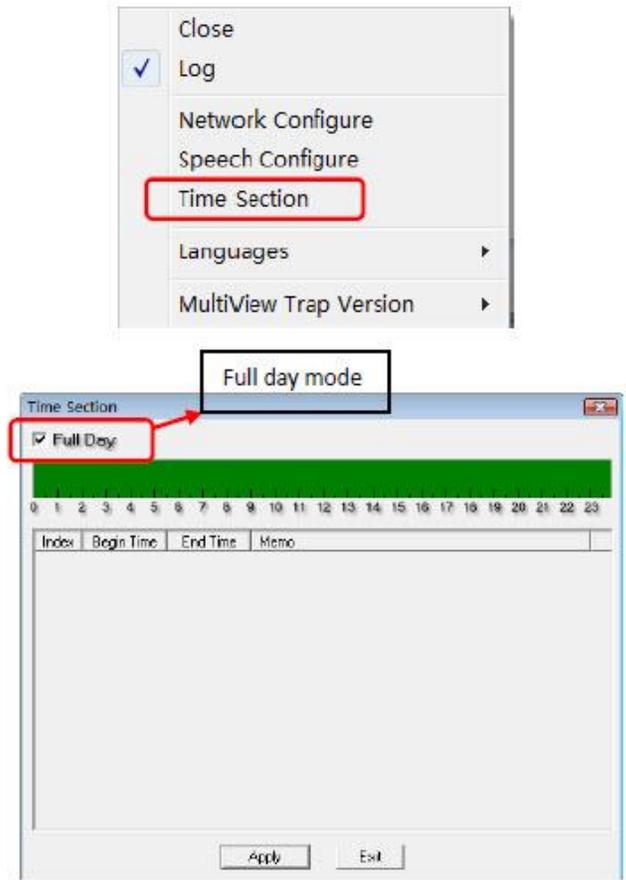
- 4) **Speech Configure:** To select the speech corpora, adjust volume and adjust speed. After the adjustments are done, click "Apply" to hear the effect.

Choose "Default" to apply the speech corpora provided by Windows XP/Vista/win7.

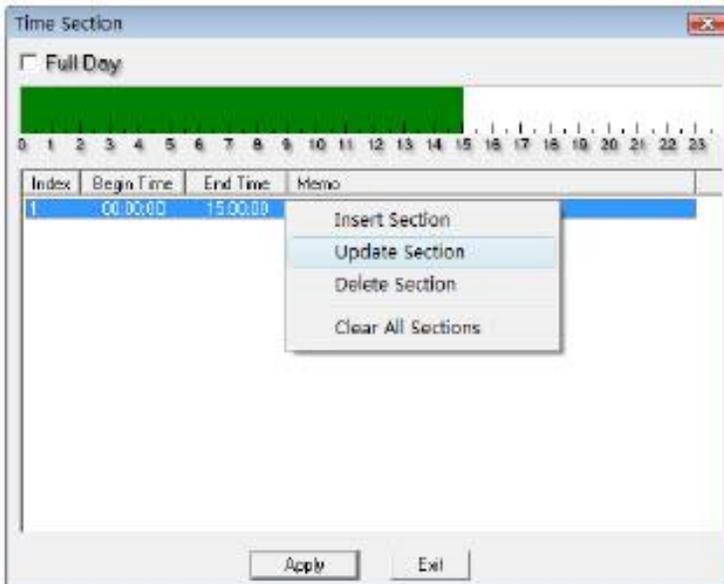


SIERRA VIDEO

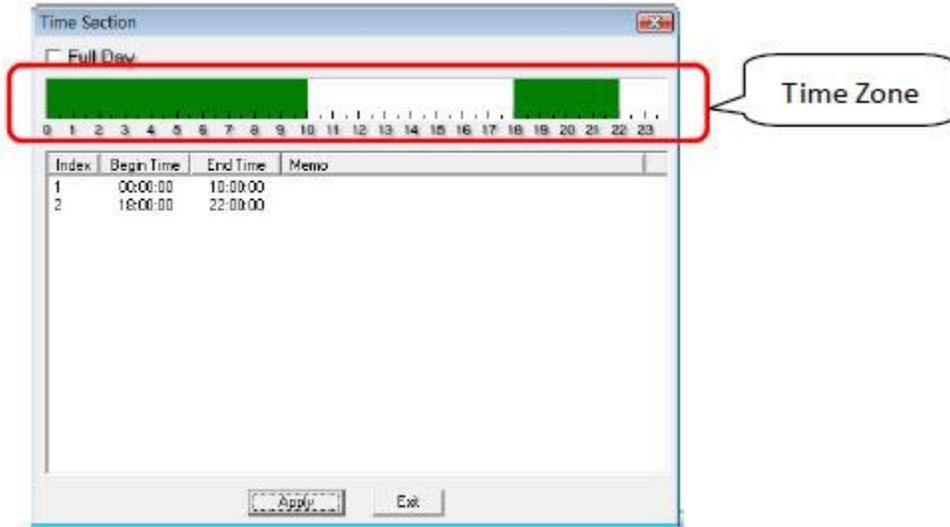
5) **Time Section:** To create working time sections for voice alarms, even for a full day. If in full day mode, the function of voice alarm is taking effect for 24 hours.



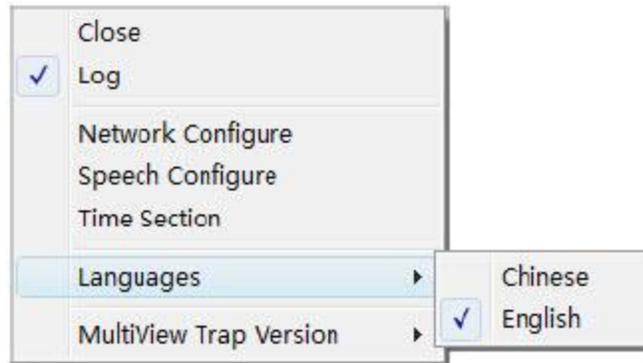
Out of full day mode, right click mouse in the blank area. You can insert a new time section. Select a time section which is already created, then right click mouse, you can update or delete it, even clear all sections. After all operation, please click "Apply".



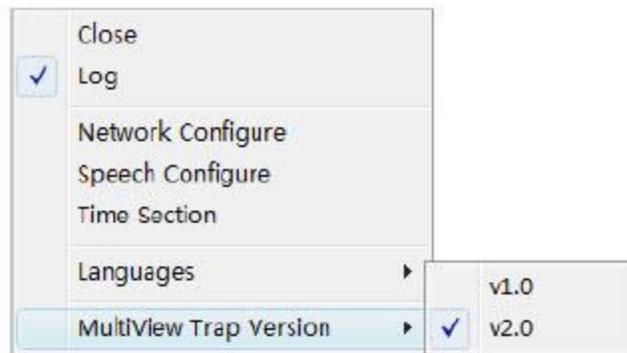
The system assembles all the time section you inserted and build them together to generate the final time section, and show it as a green area in the time zone. That means voice alarm function will take effect during the period within the green area.



6) **Language:** Select software language, English or Chinese.



7) **Trap version:** MVS-X-D must use the Version 2.0.



User Configuration

The software provides password-protected functionality. The initial user name is admin, and the initial password is 000000. Users can modify the password; maximum password length is 12 bits. When you modify the password successfully, information will prompt as "The password is altered successfully. It will take effect when you login next time." The function of download alarm diary is reserved.

Current User:

Switch User

User Name:

Password:

Change Password

User Name:

Old Password:

New Password:

Confirm New Password:

Network Configuration

Network

IP Address: 192 . 168 . 1 . 76

Subnet Mask: 255 . 255 . 255 . 0

Default Gateway: 192 . 168 . 1 . 200

DNS Address: 0 . 0 . 0 . 0

MAC Address: 0 . 50 . c2 . 19 . 50 . d

Manager IP: 192 . 168 . 1 . 51

Trap common: Getel

Trap Port: 162

NTP Server: 192 . 168 . 1 . 51

update program

Main DSP:

Slave DSP1:

Slave DSP2:

Output modular:

Input modular:

Front Base file:

Font file:

Changing the IP address

Users can modify the IP address. If modified successfully, the system prompts a message box labeled "Network has been configured successfully, please turn off the power and restart the device again." Restart the device, enter the new IP address in IE address and the web software will be opened.

Changing manager IP for Voice Alarm

Configure the "Manager IP" to be the local IP address of the computer for Voice Alarm. Both the computer and SVG-D should be in the same network segment. And Trap common and Trap port are for SNMP of voice alarm. Do not change them.

Changing NTP IP for NTP Timing

Configure the "NTP Server" to be the IP address of the NTP server for NTP timing. And the NTP server and SVG-D should be in the same network segment.

Upgrading firmware of system

User can also upgrade system under this label. Before the upgrade, the anti-virus software and firewall have to be disabled to make sure that the upgrade data is transmitted to the SVG-D system without rejection. Windows 2003, Windows XP, Windows Vista and Windows 7 system are strongly recommended to upgrade the system with Internet Explorer.

Set all channels to input inner test signal without waveform display before upgrade. So it will take less time to upgrade the system.

SIERRA VIDEO

There are six items for upgrading, such as main DSP, slave DSP 1, slave DSP 2, output module, input module, and front base file, if there are new version released, we will supply 1-5 files named according to the items names. Each item should be upgraded separately one by one from main DSP.

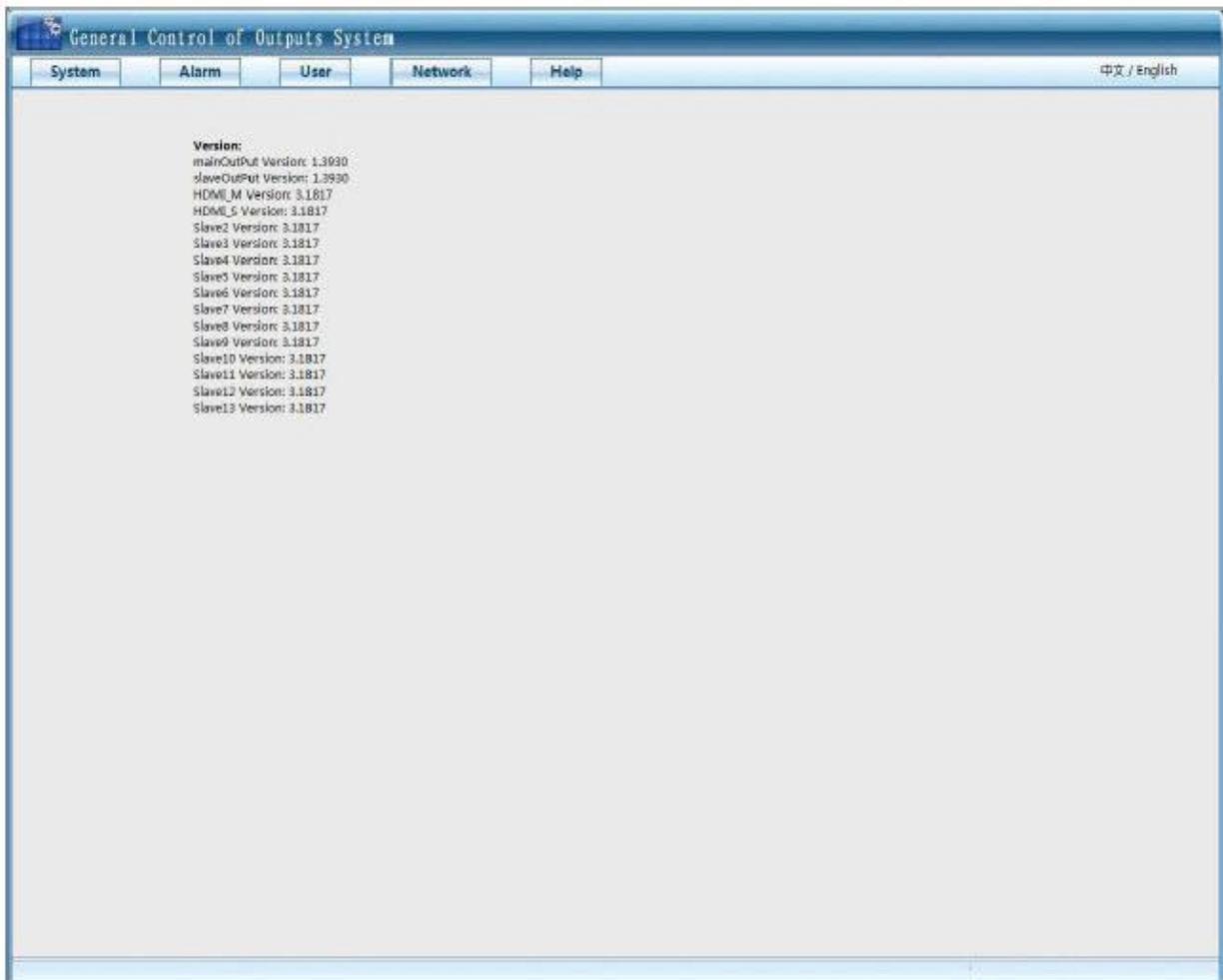
Power and network services should not be cut off during upgrading. When the system is upgraded successfully, please turn off the power and restart the device again. It takes about 30 minutes to upgrade slave DSP, about 15 minutes to upgrade main DSP and about 5 minutes to upgrade the rest of the IC's.

Upgrade Text file for UMD font

The "Font" item means you can refresh the font style from your PC system. So as to upgrade the software, you can update the font for Font item. The amount of data in the font file must be less than 6MB. Before the upgrade, the anti-virus software and firewall must be disabled to make sure that the upgrade data is transmitted to the SVG-D system without rejection.

Help

Show2 the version of firmware.



Warranty

A. General

Buyer assumes all responsibility for ascertaining the suitability of Sierra Video (hereinafter "SVS") products for Buyer's intended use. No product sold by SVS is designed or manufactured for use in any manner or under any conditions other than those described in SVS's instruction manuals and other printed material for each particular product. If any product is used or applied in a manner or under conditions not specifically authorized by such written materials or if any product is used by unqualified or improperly trained personnel, Buyer agrees that SVS shall have no liability of any kind arising from such use, and Buyer agrees to indemnify and hold SVS harmless from any claims of third parties arising from such use, and Buyer shall provide SVS with counsel of SVS's choice to defend against such claims.

B. Limited Warranty

1. This warranty applies only to the original purchaser and is non-transferable. This warranty begins on the date of purchase and will be in effect for five (5) years, 3 years on fans and power supplies, for new equipment or and for three (3) years for "Factory Refurbished" equipment. Power Supplies and fans are warranted for three (3) years from the date of purchase for new equipment and two (2) years for "Factory Refurbished" units, from the date of purchase. Buyer must obtain a Return Material Authorization ("RMA") number from SVS prior to returning a product for repair. If, in SVS' sole discretion, the product is found to be defective during the term of this warranty, SVS will at its option: (a) provide free replacement parts, and/or (b) repair the unit at an SVS facility. During the warranty period, SVS will make every reasonable effort to support critical emergencies by supplying no-cost loan equipment while the defective unit is being repaired. SVS will provide replacement parts and/or factory service at no charge. Buyer bears the cost of shipping products returned to SVS under this warranty. SVS will bear the cost of shipping repaired products or replacement parts to the Buyer.

This limited warranty shall not apply to any of SVS's goods which have been altered or which shall have been subjected to misuse, mishandling, improper storage or negligence. The aforementioned provisions do not extend the original warranty period of any goods which have been replaced by SVS. This limited warranty shall not apply to any goods not of SVS's manufacture, Buyer to be entitled only to the warranty set forth in the original manufacturer's limited warranty.

SIERRA VIDEO

THIS LIMITED WARRANTY IS EXPRESSED IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER OBLIGATIONS OR LIABILITIES ON SVS'S PART.

SVS neither assumes nor authorizes any other person to assume for SVS any other liabilities in connection with the sale of products of its own manufacture.

2. SVS's liability hereunder on any claim of any kind, except as set forth herein for any loss, injury to person or property or damage, shall in no case exceed the price allocable to the goods which give rise to such claim.
3. In no event shall SVS be liable for any damages or injuries to person or property if any goods do not meet the above limited warranty, including, without limitation, incidental expenses or consequential or special damages, except as set forth in such limited warranty. The foregoing states the exclusive remedy of Buyer and the exclusive liability of SVS for any breach of the foregoing limited warranty.

C. Cancellation

Except as provided in paragraph B immediately above, all sales are final, and Buyer may cancel this order or return products only upon written consent of SVS.

D. General

In the event of a breach of any of the terms hereof, the non-breaching party shall be entitled to recover all of its costs, fees, and expenses, including, without limitation, reasonable attorney's fees, from the breach party incurred as a result of such breach, regardless of whether or not a suit is actually filed to enforce the terms hereof.

The provision hereof shall be governed by the laws of the State of California (excluding its choice of law provisions).

The headings are for convenience only and do not limit or amplify the terms and provisions hereof.

In case any one or more of the provisions set forth herein shall be held to be invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

No waiver, alteration, or modification of any of the provisions hereof shall be binding unless in writing and signed by an authorized Officer of SVS.

NOTE:

All products returned to SVS for service must have prior approval. Return authorization requests may be obtained from your SVS dealer.