

G44-DVI User Guide

This user guide provides basic instructions for setting up SEADA G44-DVI video wall controllers using its management software.



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1. Product Introduction

1.1. Product profile

- G44 video wall controller can support up to 4 inputs/4 outputs.
- It supports HDMI, DVI, VGA, YPbPr, CVBS signal input/output through DVI-U jacket.
- It support RS232 communication interface, through the special PC tool to control the matrix signal switching, monitoring the working state of the matrix, set the signal resolution, etc..
- Seamless switching available;

1.2. Product capability

- Support 4 inputs and 4 outputs , 4 L/R audio inputs and 4 L/R audio outputs;
- Support HDMI/DVI, VGA, YPbPr, CVBS input;
- Support HDMI/DVI, VGA, YPbPr, CVBS output;
- Support a maximum resolution of 1600 x 1200@60hz;
- Support RS232 port control
- Support network port control
- Support IR remote control
- Support front panel button control
- Scalar inside, output resolution control available;

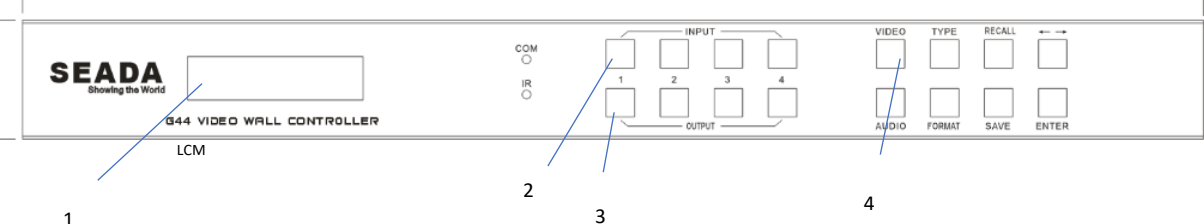
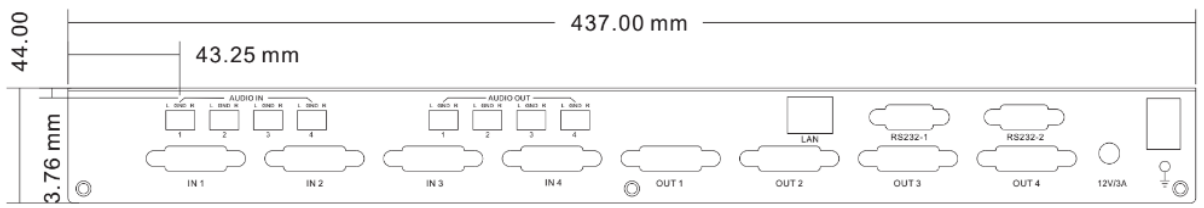
1.3. Specification & Parameters

Input	Interface	Signal	
	DVI-U	HDMI	HDMI -1.3
		DVI	DVI 1.0
		VGA	800x600,1024x768,1280x768,1280x800,1280x1024,1360x768,1400x1050,1600x1200,1920x1080
		YPbPr	576i50,720p50,720p60,1080i50,1080i60,1080p50,1080p60
		CVBS	PAL, NTSC
Output	Interface	Signal	
	DVI-U	HDMI	HDMI V1.3A 1024x768,1280x1024,1360x768,1280x720 1600x1200,1920x1080,1680x1050
		DVI	DVI 1.0 1024x768,1280x1024,1360x768,1280x720 1600x1200,1920x1080,1680x1050
		VGA	1024x768,1280x1024,1360x768,1280x720 1600x1200,1920x1080,1680x1050
		YPbPr	1080p60, 720p60
		CVBS	PAL/NTSC
Control	RS232	D-sub 9	Baud rate: 9600
Size	W*D*H	430 (mm) ×220 (mm) ×44 (mm)	

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Power	DC	12V/3A power adapter
	Power consumption	25W
Temperature	Operating temperature	0°C—40°C

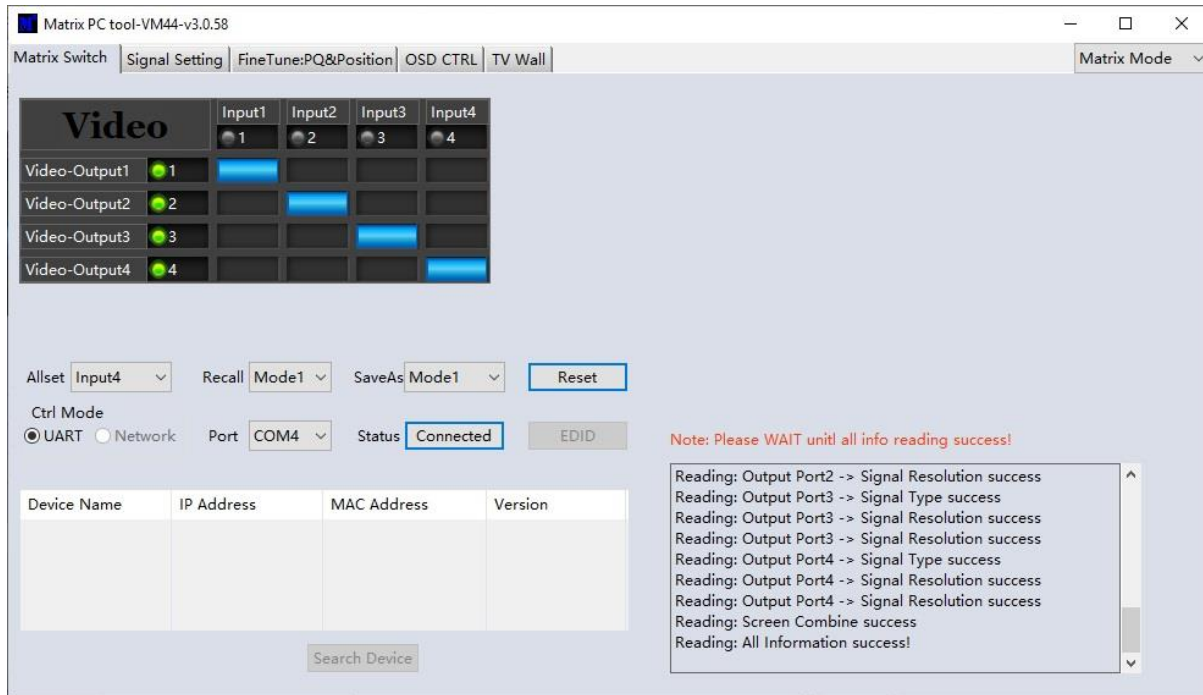
1. Hardware Overview

Model: G44-DVI		
 <p>1 – Display</p> <p>2 – Input Buttons</p> <p>3 – Output Buttons</p> <p>4 – Function Buttons</p>		
 <p>Back Panel includes 4 DVI-U Inputs and Outputs, Ethernet control port, 2x Serial ports and 4 3.5 mm captive screw connectors for audio inputs and outputs</p>		

2. G44 Software

Users can run the G44.exe software directly without installation. Software is on the disk in the package or you can download it from the SEADA website

There are 5 main tabs in this software to help users design a creative video wall layout. Device, Output and Input

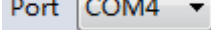
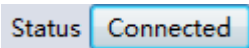


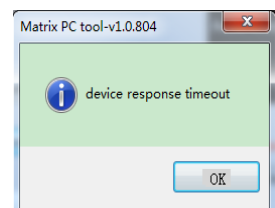
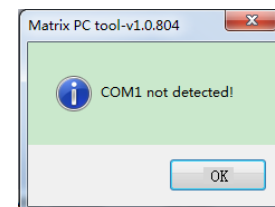
1.1. Matrix Switch

Users can configure the G44 device and connect the device to control PC in this section.

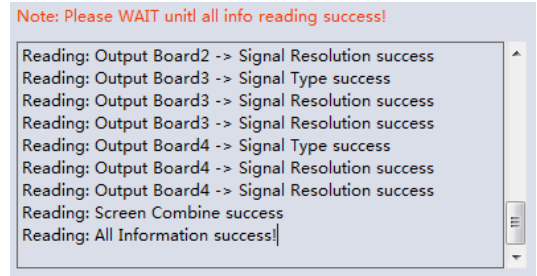
1.1.1. Connect to the G44 via UART

Connect the G44 to the control PC with a serial cable

1. Click the dropdown menu right of Port to select the COM port. 
2. Click the button right of Status to connect to the device (the button will change from Disconnected to Connected) 
3. If the COM port does not exist, then the PC tool will show a message of 'COM x not detected!'. If this message occurs, you should start from step 1 after you connect a serial cable to the computer.
4. If the device or the connection is faulty, then a message will occur as follows after 3 seconds. Please check if your device or hardware connection is correct.



5. If all is right, the PC tool will read some information from the device. It probably takes 5 seconds and it will show 'Reading: All information success!' when finished.



1.1.2. Connect to the G44 via Network

The default IP address for G44 controller is **192.168.0.247** Users need to change the IP address of the control PC to the same network segment as the G44.

- Change the '**Obtain an IP address automatically**' to '**Use the following IP address**' to set up a **static** IP address of **TCP/IPv4** in **Ethernet Properties**
 - IP address: any address between **192.168.0.2** and **192.168.0.254** except the address which has been taken by the G44
 - Subnet mask: **255.255.255.0**, Default Gateway: **192.168.0.1**
- Once the control PC IP address having been set up, connect PC to either the RJ45 ports of G44 controllers via a network cable and then press the **Connect** button to connect the device.

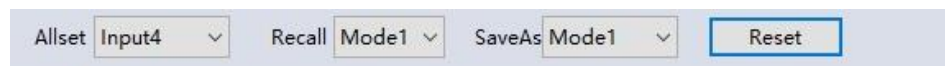
1.1.3. Matrix Switch Routing

Users can switch and assign different inputs to the selected outputs in the matrix. The name of the input/output can also be changed by selecting the default name – Input1/Video-Output1 and replacing it with the chosen name.



1.1.4. Allset, Recall, Save As and Reset

The G44 unit has 32 modes (or presets) already saved. Selecting one of them from the recall Menu will select that specific preset.



If you would like to save a preset you have already created, select the dropdown menu and choose which slot you want to save it in.

Finally, the Allset dropdown menu helps the users select a single input to be displayed on all of the screens (i.e. Allset Input 4 would display Input 4 on Output 1, Output 2, Output 3 and Output4.)

The reset button, resets the default settings of the unit – Input 1 mapped to Output 1, Input 2 mapped to Output 2 etc. (Including the audio)

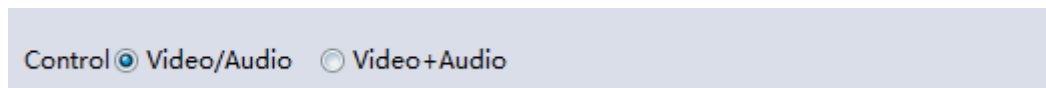
1.1.5. Presentation Mode

From the dropdown menu in the top-right corner, users can select either Matrix mode or Presentation mode.

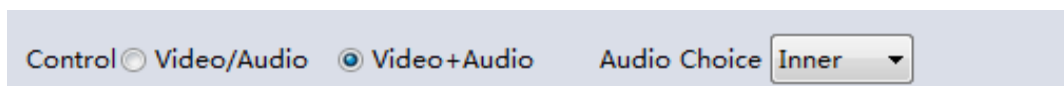
- **Matrix Mode** – The Inputs and their audio source are mapped to each other. Meaning that Input 1 will have the audio source from Input 1, Input 2 will have the audio source from Input 2 etc.
- **Presentation Mode** – This allows the user to control the audio source separately – The video screen can display input 2, however the audio source can be any of the inputs (including input 2)



Video and audio can be controlled separately(default):



Video and audio can be controlled together. And then you can select which audio channel will be controlled.



Audio route

Audio-Output1	 L/R				
	 Inner				
Audio-Output2	 L/R				
	 Inner				
Audio-Output3	 L/R				
	 Inner				
Audio-Output4	 L/R				
	 Inner				

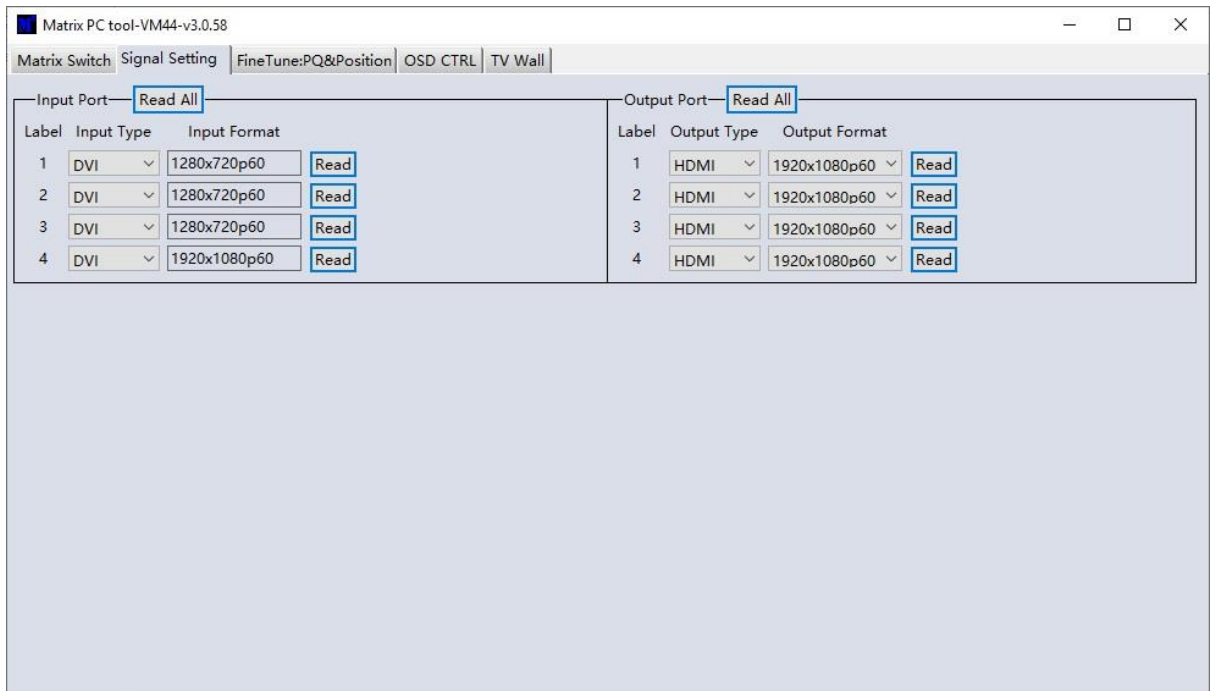
Click to control audio route. And the blue button represents current route information.

NOTE: Audio output X has two type (L/R and Inner).

1.2. Signal settings

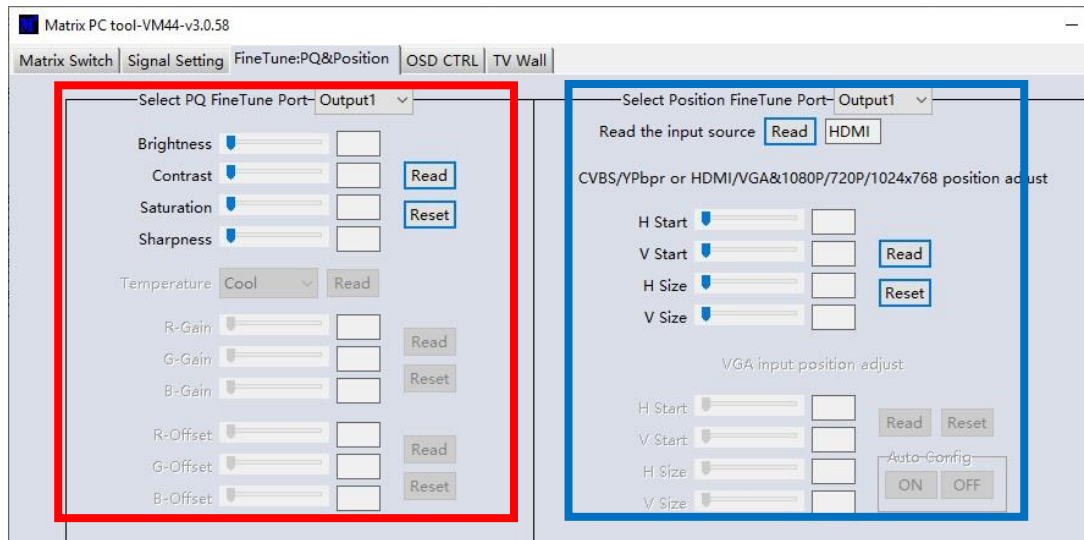
In the signal settings tab, the user can see the Input Resolution and Input Type as well as the Output Type and Resolution. The read all function will recognize the type and resolution automatically, however if the user wants to change the input resolution, then you can adjust it manually via the dropdown menu.

Additionally, you can also manually read one Input/Output at a time – pressing the read button next to the selected input will only read that input alone.



Input Port				Output Port			
Label	Input Type	Input Format		Label	Output Type	Output Format	
1	DVI	1280x720p60	Read	1	HDMI	1920x1080p60	Read
2	DVI	1280x720p60	Read	2	HDMI	1920x1080p60	Read
3	DVI	1280x720p60	Read	3	HDMI	1920x1080p60	Read
4	DVI	1920x1080p60	Read	4	HDMI	1920x1080p60	Read

1.3. FineTune: PQ & Position



1.3.1. PQ Control

This section highlighted in red allows the user to fine-tune the settings of their screen from the G44 software.

The dropdown menu at the top of the section allows the user to select which screen to apply the settings to

The read option reads the settings of the monitor/screen that are already in place and adjusts the values in the software, while the reset button will reset the settings to their default after they have been manually adjusted.

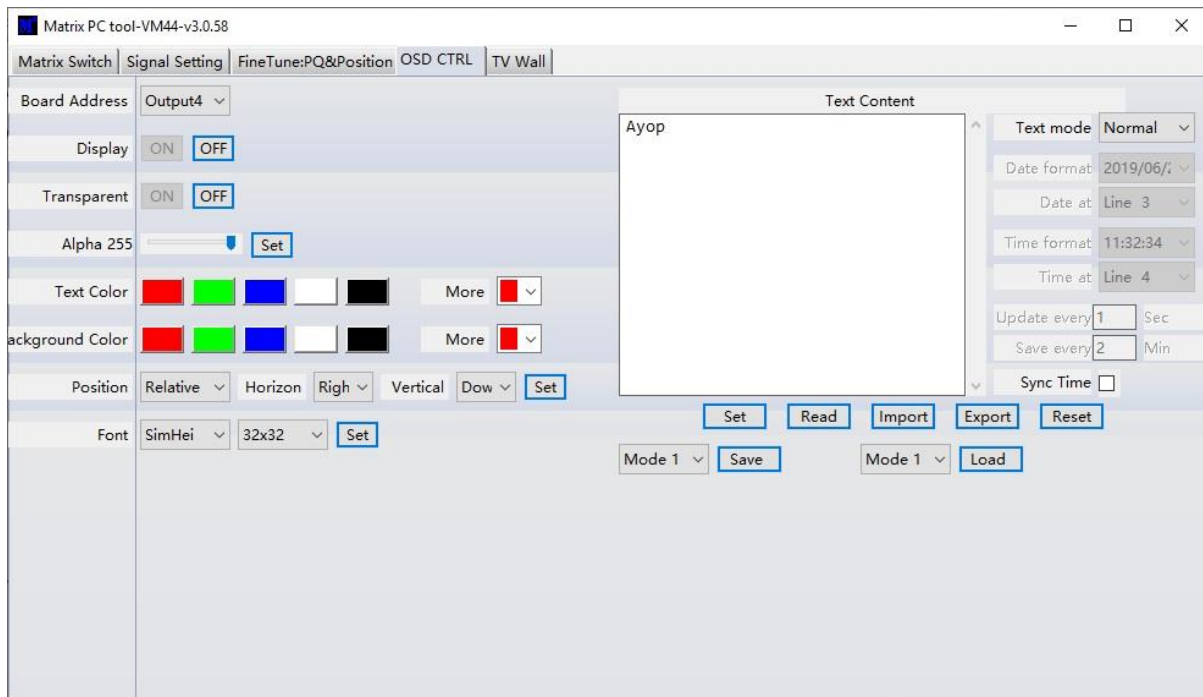
1.3.2. Position Control

The section highlighted in blue allows the user to fine-tune the position of their screen. Parameters such as H Start V start, and H Size and V Size will allow the user to adjust the starting position and the size of the screen (H – Horizontally, V - Vertically)

The dropdown menu at the top of the section allows the user to select which screen to apply the settings to

The read option will read the monitor/screen settings that are already in place and adjust the values in the software and the reset button will reset to the default values after the values have been manually adjusted.

1.4. OSD Control



1.4.1. Text Content

There are several modes of OSD – Normal, 3x3 and 3x4.

With the normal mode there will be only one column displayed at a time. Normal mode allows for more lines to be added as well. Simply press enter to go to a new line

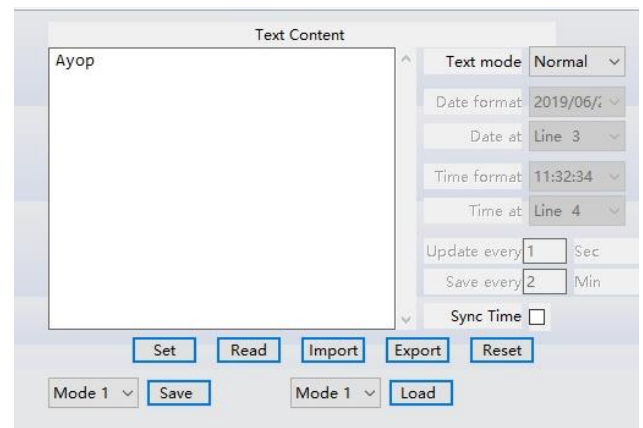
3x3 and 3x4 modes add additional columns that can be displayed on the OSD.

3x3 – Repeats the Text Content 3 times in 3 columns

3x4 – Repeats the Text Content 3 times in 4 columns

When the Sync Time checkbox is ticked, then the date and time will be displayed. The user can select on what line both the Date and the Time to appear and what their format is.

Additional settings can be found underneath for the time update settings. The “Update Every __ sec” setting will tell the OSD how often to update the time (every 1 second functions like a digital watch and updates every second, while anything over 1 second will update only as often as specified by the user)



- **Set** – This will apply the current settings for the OSD Text Content and will display it onto the screen
- **Read** – This function will read any existing OSD settings on the screen.
- **Import** – This allows the user to import any OSD settings from another control PC (Any settings that have not been saved on the device itself)
- **Export** – The user can export any of the OSD settings from this software into an .osd file
- **Reset** – This resets the OSD settings to factory default.

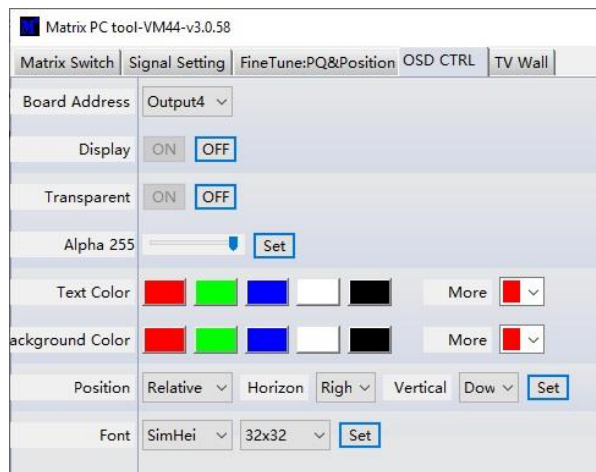
The mode save and mode load settings allow the user to load a pre-existing OSD preset and to save the current one into one of the 8 slots (Note: These mode slots are different than the Matrix Switch modes and there are only 8 of them)

1.4.2. Text Settings

The user can apply the OSD settings to one screen at a time. The Board Address dropdown menu dictates which screen is the OSD being setup on.

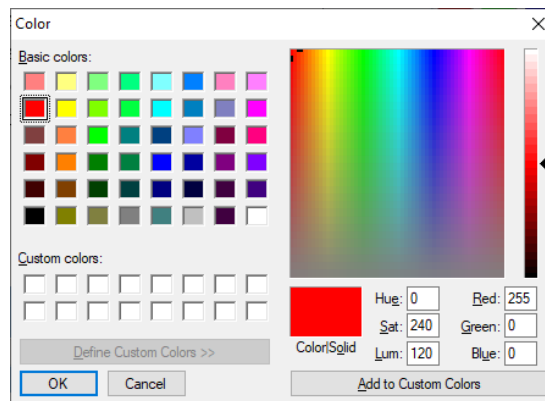
Display will hide or show the text

Transparent when selected off will apply a solid background to the text so that it is more easily readable. When selected on it will remove the solid background and only the text will remain.



The alpha slider dictates how opaque the text is – 0 being invisible and 255 being 100% opacity.

Text Color will change the color of the text only. This setting has 5 color slots, however when clicking the dropdown menu and clicking on one of the 5 colors, it will select that slot and open the following menu:



This allows the user to customize the colors they want.

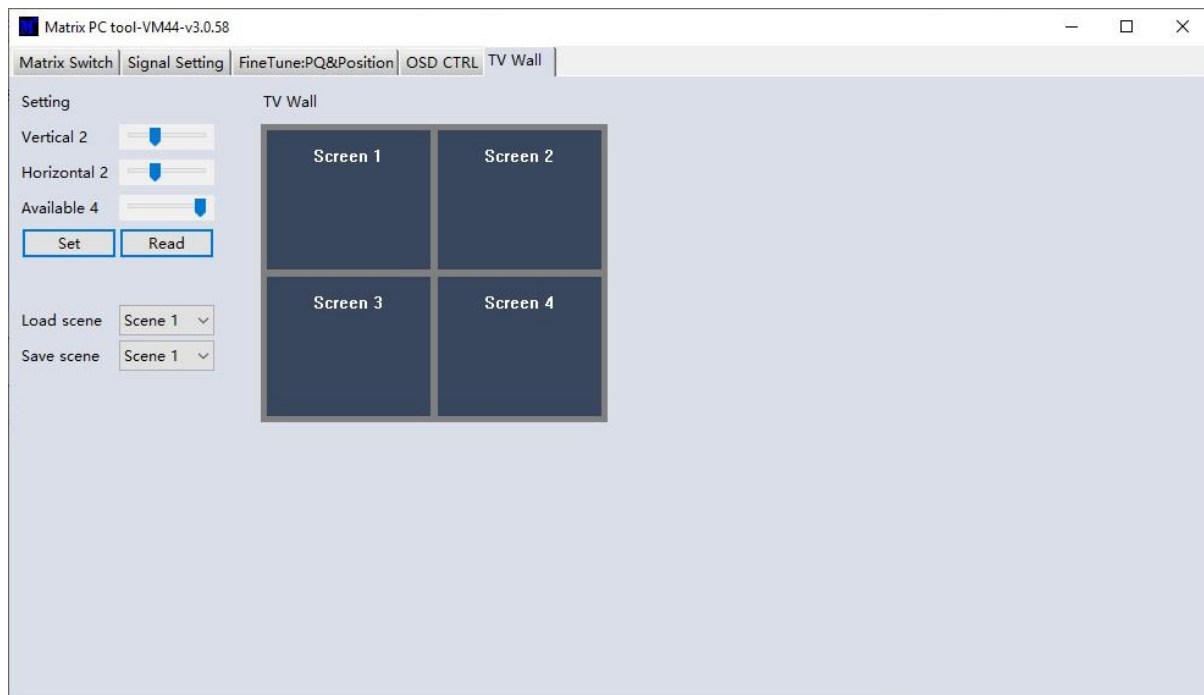
The BACKGROUND COLOR is similar to the Text Color setting; however, it only applies to the background (Only works if the Transparent setting is off)

Position can be relative or absolute. Relative will allow the customer to align the text – Top/Middle/Bottom vertically, and/or Left/Middle/Right horizontally. Absolute will allow more flexibility for the customer as it allows for X and Y positioning of the text.

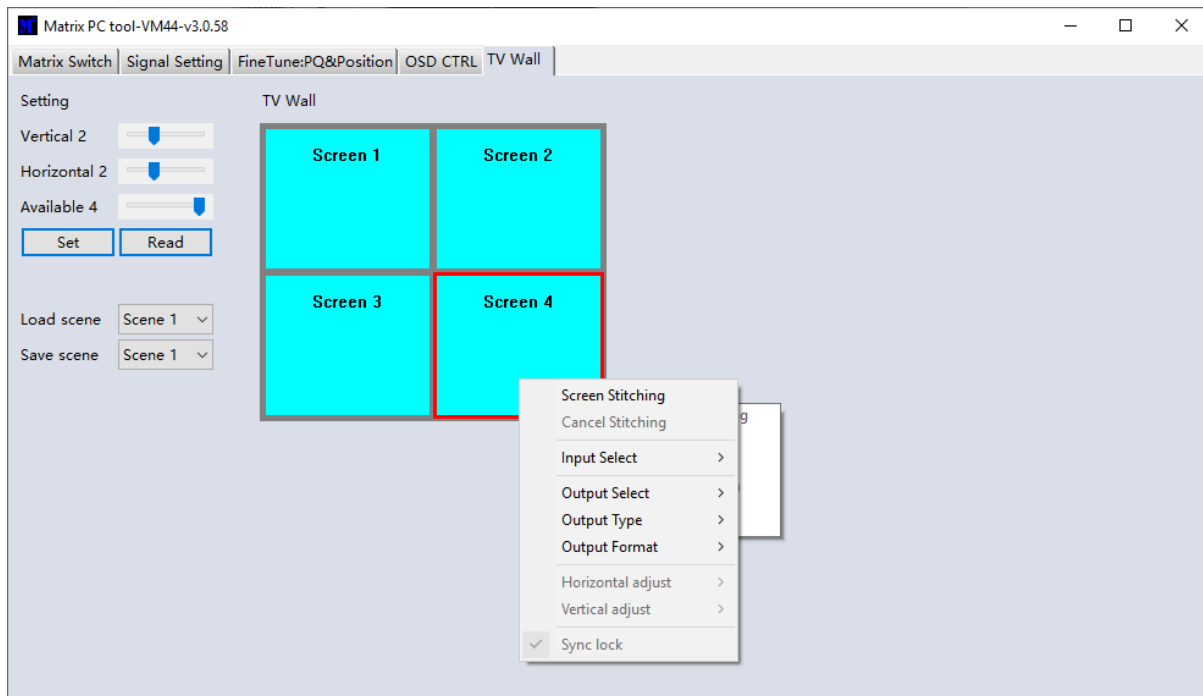
Font allows the user to select from three different fonts – SimHei, KaiTi, SimSun. The dropdown menu next to the font controls the size of the text.

Set applies the changes.

1.5. TV Wall

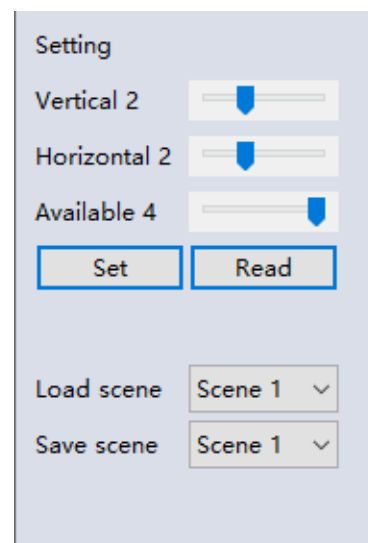


In the TV WALL tab, the user can design the setup they have in front of them to mirror it in the software. This allows for some video wall functionalities of the unit – screen stitching. Right-clicking on the screens will bring up the additional options menu.



- **Screen Stitching** - This combines the selected screens into one and displays the selected input across all of the stitched screens. For example, in the setup below 2x2, if all of them are stitched, then the input selected by the user will be displayed across all of the 4 screens (Note: this is not the same as duplicating a single input on each output)
- **Cancel Stitching** – This will undo the stitching and will revert to the screens being individual.
- **Input Select** – Similarly to the video routing matrix, this allows the user to control which output is displayed on which screen (Note: Selecting an input on any of the screens when stitched will display it on the stitched screen and not on the individual screen)
- **Output Select** – The user can control which screen should be mapped to which output
- **Output Type** – Allows the user to adjust the type of the output – HDMI, VGA, HDMI etc.
- **Output Format** – Controls the resolution of the output
- **Horizontal adjust** – Lets the user adjust the horizontal position of the screen
- **Vertical adjust** – Lets the user adjust the vertical position of the screen

The user can save the designed scene (preset) and load it later via the Load Scene and Save Scene dropdown menu. This allows for easier switching between layouts – for example a stitched layout, a layout of 2x2 individual screens, a 2-screen stitching with 2 individual screens etc.



2. Front Panel

Input/Output Buttons

Video/Audio Select Buttons

Type

Format

Recall

Save

←→

Enter

2.1. LCM display

LED light flashing once when device receives a valid key pressing.

Continuous key pressing should be within 5 seconds, and the LCM screen will show the video route info if timeout happens.

LCM screen can show two lines which consists of 16 characters each.

Some key words information as below:

V: Video route info;

A: Audio route info;

T: Type;

F: Format or resolution;

2.2. Audio Input Select (Default: Inner)

Key operation: AUDIO + INx + → + ENTER

Description: Select audio type: Inner or L/R.

Display: (LED light flashing once when a valid key pressed)

1. Press AUDIO, then the LCM screen will show function menu

S	E	T		I	N	P	U	T		A	U	D	I	O	
P	R	E	S	S		I	N		1		2		3		4

2. Press INx to select which input port will be set, and the LCM screen will show the current setting first.
3. Press → to change the setting (Inner or L/R).
4. Press ENTER to take effect.

2.3. Output Audio Select (Default: Inner)

Keys operation: AUDIO + AUDIO+ → + → + ENTER

Description: Select which audio will be controlled in 4.4 Audio Switch and 4.6 Video + Audio Switch.

Display (LED light flashing once when a valid key pressed):

1. Press AUDIO, then the LCM screen will show function menu

S	E	T		I	N	P	U	T		A	U	D	I	O	
P	R	E	S	S		I	N		1		2		3		4

2. Press AUDIO again, then the LCM screen will show function menu

S	E	T		O	U	T	P	U	T		A	U	D	I	O
P	R	E	S	S		<	-		-	>					

3. Press → the LCM screen will show the current setting.
4. Press → to change the setting value (Inner or L/R or Both).
5. Press ENTER to take effect.

2.4. Audio Switch

Keys operation: INx + AUDIO + OUTx [+ OUTX2 + OUTX3 + OUTX4] + ENTER

Description: Switch input audio port x to audio output port X1[X2] [X3] [X4]. And the output port NUM can be 1 to 4.

Display (LED light flashing once when a valid key pressed):

1. Press INx as audio input port
2. Press AUDIO, then the LCM screen will show current audio route information
3. Press X1[X2] [X3] [X4] keys as audio output ports, then the input of outputX1[X2] [X3] [X4] will show as '>XX'
4. Press ENTER to switch the input, and the LCM screen will show the latest video route information.

A		I	N	:		1			2			3			4
	O	U	T	:		1			2			3			4

Note: The output audio may be Inner or L/R or Both according to the user's setting in 4.3 Output Audio Select.

2.5. Video Switch

Keys operation: INx + VIDEO + OUTX1 [+ OUTX2 + OUTX3 + OUTX4] + ENTER

Description: Switch input video port XX to video output port X1[X2] [X3] [X4]. And the output port NUM can be 1 to 4.

Display (LED light flashing once when a valid key pressed):

1. Press INx as video input port
2. Press VIDEO, then the LCM screen will show current video route information
3. Press X1[X2] [X3] [X4] as video output port, then the input of output X1[X2] [X3] [X4] will show as '>XX'
4. Press ENTER to switch the input, and the LCM screen will show the latest video route information.

V		I	N	:		1		2		3		4
	O	U	T	:		1		2		3		4

2.6. Video + Switch

Key operation: INx + OUTX1 [+ OUTX2 + OUTX3 + OUTX4] + ENTER

Description: Switch input Audio + Video port XX to Audio + Video output port X1[X2] [X3] [X4]. And the output port NUM can be 1 to 4.

Display (LED light flashing once when a valid key pressed):

1. Press INXX as input port, then the LCM screen will show current video route information
2. Press X1[X2] [X3] [X4] as output port, then the input of outputX1[X2] [X3] [X4] will show as '>XX'
3. Press ENTER to switch the input, and the LCM screen will show the latest video route information.

Y		I	N	:		1		2		3		4
	O	U	T	:		1		2		3		4

Note: The output audio may be Inner or L/R or Both according to the user's setting in 4.3 Output Audio Select.

2.7. Input Type Setting

Keys operation: TYPE + INXX + → + ENTER

Display:

1. Press down TYPE, shows as follows:

T			S	E	T		I	N	/	O	U	T			
						T	Y	P	E						

2. Press down INXX as input port, then will show the current type of the input port

T			I	N	:			1							
	T	Y	P	E	:		C	V	B	S					

3. Press → 1 or more time to change the input type (DVI/VGA/YUV/CVBS)
4. Press ENTER to set the input type

2.8. Output Type Setting

Keys operation: TYPE + OUTXX + → + ENTER

Display:

1. Press TYPE, show as follows

T			S	E	T		I	N	/	O	U	T			
						T	Y	P	E						

2. Press OUTXX as output port, then will show the current type of the output port

T			O	U	T	:			1						
	T	Y	P	E	:		C	V	B	S					

3. Press → 1 or more time to change the input type (HDMI/DVI/VGA/YUV/CVBS)
4. Press ENTER to set the output type

2.9. Output Resolution Setting

Keys operation: FORMAT + OUTXX + → + ENTER

Display:

1. Press TYPE, shows as follows

F				S	E	T			O	U	T				
					F	O	R	M	A	T					

2. Press OUTXX as output port, then will show the current resolution of the output port

F		O	U	T	:	1									
		F	M	T	:	1	6	0	0	x	1	2	0	0	

3. Press → one or more times to change the output resolution
(1024x768/1280x1024/1360x768/1280x720 1600x1200/1920x1080/1680x1050)
4. Press ENTER to set the output resolution

2.10. Recall

Keys operation: RECALL+INXX+ENTER

OR: RECALL+OUTXX+ENTER

Description: Load the audio and video route info of mode XX

NOTE: (Only 8 modes supported via front panel, but it can be max to 32 modes via PC Software) :

IN1 – Mode 1

IN2 – Mode 2`

IN3 – Mode 3

IN4 – Mode 4

OUT1 – Mode 5

OUT2 – Mode 6

OUT3 – Mode 7

OUT4 – Mode 8

2.11. Save As

Key operation: SAVE + INXX + ENTER

OR: SAVE + OUTXX + ENTER

Description: Save current audio and video route info to mode XX

NOTE: (Only 8 modes supported via front panel, but it can be max to 32 modes via PC tool) :

IN1 – Mode 1

IN2 – Mode 2`

IN3 – Mode 3

IN4 – Mode 4

OUT1 – Mode 5

OUT2 – Mode 6

OUT3 – Mode 7

OUT4 – Mode 8

3. Command Lines

Save the layout (matrix switcher)

Instruction Format (ASCII)	x,S	
Function	To save the current displaying status as a preset layout for future recall	
Parameters	x	The layout ID (1-32)

【Example】 3,S

To save the current displaying status as layout 3

Load the layout (matrix switcher)

Instruction Format (ASCII)	x,R	
Function	Recall the preset layout	
Parameters	x	The layout ID (1-32) which need to be loaded.

【Example】 6, R

To load the 6th layout

Switch one input signal to all outputs

Instruction Format (ASCII)	x,Y	
Function	T switch the video and audio of one input to all outputs at the same time	
Parameters	x	The Input ID (1-4)

【Example】 2,Y

To output the video and audio from input 2 to all 4 outputs at the same time

Switch video/audio from one input signal to one output

Instruction Format (ASCII)	a,b,V	
Function	To switch the video of one input to one output, no audio switch	
Parameters	a	The Input ID (1-4)
	b	The Output ID (1-4)
Instruction Format (ASCII)	a,b,A	
Function	To switch the audio of one input to one output, no video switch	
Parameters	a	The Input ID (1-4)
	b	The Output ID (1-4)
Instruction Format (ASCII)	a,b,Y	
Function	To switch the video and audio of one input to one output at the same time	
Parameters	a	The Input ID (1-4)
	b	The Output ID (1-4)

【Example】

2,3,V

To output the video from input 2 to output3, no audio change on output3

2,3,A

To output the audio from input 2 to output3, no video change on output3

2,3,Y

To output the video and audio from input 2 to output3 at the same time

Switch multi input signals to multi outputs

Instruction Format (ASCII)	a,b,c,d,V a,b,c,d,A a,b,c,d,Y a,b,c,d,e,f,V a,b,c,d,e,f,A a,b,c,d,e,f,Y a,b,c,d,e,f,g,h,V a,b,c,d,e,f,g,h,A a,b,c,d,e,f,g,h,Y	
Function	T switch the video only (V) or audio only (A) or video & Audio (Y) of the multi inputs to multi outputs	
Parameters	a,c,e,g	The Input ID (1-4)
	b,d,f,h	The Output ID (1-4)

【Example】 **1,2,2,3,3,4,4,1,Y**

To output the video and audio from input 1 to output2 at the same time
 To output the video and audio from input 2 to output3 at the same time
 To output the video and audio from input 3 to output4 at the same time
 To output the video and audio from input 4 to output1 at the same time

Auto match all inputs to all outputs

Instruction Format (ASCII)	All;
Function	T switch inputs 1,2,3,4 to outputs 1,2,3,4 respectively

【Example】 All;

Output1 shows input1, output2 shows input2, output3 shows input3, output4 shows input4

4. Troubleshooting

4.1. No Connection

- 4.1.1. Ensure the G44 is powered up*
- 4.1.2. Ensure the PC and G44 at the same IP group*
- 4.1.3. Ensure the IP address is correct for G44*
- 4.1.4. IP address of each device will be shown on screen when no video input is applied.*

4.2. No Output

- 4.2.1. Ensure the video source is on*
- 4.2.2. Ensure the video source device sends the signal out (G44 INPUT status LED light will be on if input video signal presents)*

4.3. Black screen

- 4.3.1. Ensure the G44 and screens are powered up*
- 4.3.2. Ensure the connection to screens are OK*
- 4.3.3. Ensure the screens on correct channel (DVI or HDMI or VGA)*
- 4.3.4. Ensure that the inputs are assigned correctly (i.e. Input 1 on Output 1, Input 2 on Output 2 etc.*

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