CUSTOM MATRIX SWITCHERS

INSTRUCTION MANUAL

VGA Serial Matrix Switches

RGB Serial Matrix Switches

AV Serial Matrix Switches

A-NEUVIDEO®

AUDIO / VIDEO MANUFACTURER

A-NeuVideo.com | Frisco, Texas 75034 | (317) 456-2461

V.2.3

SAFETY INFORMATION

1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the “ON” position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically “blown free” of foreign dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
19. Service Information Equipment should be serviced by qualifier service personnel when:
    A. The power supply cord or the plug has been damaged.
    B. Objects have fallen, or liquid has been spilled into the equipment.
    C. The equipment has been exposed to rain
    D. The equipment does not appear to operate normally, or exhibits a marked change in performance
    E. The equipment has been dropped, or the enclosure damaged.

INTRODUCTION

TABLE OF CONTENTS

VGA Matrix Switcher

RGB Matrix

Composite Video Switcher

Dear Customer

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any infringements of patents or other rights of third parties which may result from its use.

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INTRODUCTION / SWITCHER CATEGORY / CONTENTS

INTRODUCTION

Matrix switch is a high-performance matrix switcher designed for video and audio signal routing. It supports unbalanced audio, Composite, RGBHV (Component), or VGA (DB15).

The excellent quality of this series of matrix switchers comes from using the industry's best performing IC chips and we design each switcher to ensure the highest signal quality. The VGA and RGBHV switcher has a signal bandwidth of 350MHz (-3db) to support resolution up to 2048x1536 60Hz refresh rate and1280x1024 120Hz refresh rate, meeting the strict requirements of a variety of high quality sources and displays. The Composite video switcher has a signal bandwidth of 100MHz (-3db), supporting a variety of standard video signals but also able to meet the bandwidth requirements of true HDTV.

This series of matrix switcher provides users with a user friendly GUI that supports all versions of Windows OS. This series of switches has a monochrome dot-matrix LCD display, with control via the front panel push buttons or via RS-232 communication interface. The matrix switch can store up to 30 user presets.

SWITCHER CATEGORY

Matrix series switchers can be divided into the following categories:		
Audio Matrix	Audio Only	Balanced or unbalanced
Composite Matrix	Video Only	Bandwidth 100M Hz (-3dB)
Composite / A Matrix	Video & Audio	Video with Audio Breakaway
VGA Matrix	VGA	Bandwidth 350M Hz (-3dB)
VGA / A Matrix	VGA & Audio	Video with Audio Breakaway
RGB Matrix	RGB/HV	Bandwidth 350M Hz (-3dB)
RGB / A Matrix	RGB/HV & Audio	Video with Audio Breakaway

PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

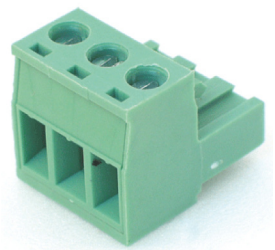
- Host Device
- RS-232 Cable
- Power Cable
- CD of testing and application software
- User Manual, Certification and Guarantee Card
- Audio connector

SIGNAL INPUT & OUTPUT, REMOTE CONTROL AND COMMUNICATION PORT

The AV matrix series switchers support standard BNC connectors; VGA matrix uses standard VGA HD15F connectors; RGBHV matrix uses standard BNC.

All matrix series uses standard RS-232 serial communication interface DP9-F, in addition to the included GUI software, this document explains the ASCII protocol command set.

Audio connections use a terminal block, commonly call Pheonic Connector



TYPES OF MATRIX SWITCHERS

VGA

Model#	Signal Type	Input Connection Type	# of Inputs	Output Connection Type	# of Outputs
ANI-VGA404	VGA	HD15	**4**	HD15	4
ANI-VGA404A	VGA w/Audio	HD15 & Terminal	**4**	HD15 & Terminal	4
ANI-VGA801	VGA	HD15	**8**	HD15	1
ANI-VGA801-A	VGA w/Audio	HD15 & Terminal	**8**	HD15 & Terminal	1
ANI-VGA802 (1RU)	VGA	HD15	**8**	HD15	2
ANI-VGA802-A	VGA w/Audio	HD15 & Terminal	**8**	HD15 & Terminal	2
ANI-VGA 804	VGA	HD15	**8**	HD15	4
ANI-VGA804-A	VGA w/Audio	HD15 & Terminal	**8**	HD15 & Terminal	4
ANI-VGA 808	VGA	HD15	**8**	HD15	8
ANI-VGA808-A	VGA w/Audio	HD15 & Terminal	**8**	HD15 & Terminal	8
ANI-VGA1602	VGA	HD15	**16**	HD15	2
ANI-VGA1602-A	VGA w/Audio	HD15 & Terminal	**16**	HD15 & Terminal	2
ANI-VGA 1604	VGA	HD15	**16**	HD15	4
ANI-VGA1604-A	VGA w/Audio	HD15 & Terminal	**16**	HD15 & Terminal	4
ANI-VGA 1608	VGA	HD15	**16**	HD15	8
ANI-VGA1608-A	VGA w/Audio	HD15 & Terminal	**16**	HD15 & Terminal	8
ANI-VGA 1616	VGA	HD15	**16**	HD15	16
ANI-VGA1616-A	VGA w/Audio	HD15 & Terminal	**16**	HD15 & Terminal	16
ANI-VGA2401	VGA	HD15	**24**	HD15	1
ANI-VGA2402	VGA	HD15	**24**	HD15	2
ANI-VGA 2404	VGA	HD15	**24**	HD15	4
ANI-VGA2404-A	VGA w/Audio	HD15 & Terminal	**24**	HD15 & Terminal	4
ANI-VGA2408	VGA	HD15	**24**	HD15	8
ANI-VGA2408-A	VGA w/Audio	HD15 & Terminal	**24**	HD15 & Terminal	8
ANI-VGA2416	VGA	HD15	**24**	HD15	16
ANI-VGA2416-A	VGA w/Audio	HD15 & Terminal	**24**	HD15 & Terminal	16
ANI-VGA3204	VGA	HD15	**32**	HD15	4
ANI-VGA3204-A	VGA w/Audio	HD15 & Terminal	**32**	HD15 & Terminal	4
ANI-VGA3208	VGA	HD15	**32**	HD15	8
ANI-VGA3208-A	VGA w/Audio	HD15 & Terminal	**32**	HD15 & Terminal	8
ANI-VGA3216	VGA	HD15	**32**	HD15	16
ANI-VGA3216-A	VGA w/Audio	HD15 & Terminal	**32**		16
ANI-VGA4808	VGA	HD15	**48**	HD15	8
ANI-VGA4816	VGA	HD15	**48**	HD15	16
ANI-VGA7608	VGA	HD15	**76**	HD15	8

RU=RACK UNITS

TYPES OF MATRIX SWITCHERS

COMPOSITE VIDEO

Model#	Signal Type	Input Connection Type	# of Inputs	Output Connection Type	# of Outputs
ANI-V404-A	Composite Video w/Audio	BNC	**4**	BNC	4
ANI-V801-A	Composite Video w/Audio	BNC	**8**	BNC	1
ANI-V802-A	Composite Video w/Audio	BNC	**8**	BNC	2
ANI-V804-A	Composite Video w/Audio	BNC	**8**	BNC	4
ANI-V808-A	Composite Video w/Audio	BNC	**8**	BNC	8
ANI-V1602-A	Composite Video w/Audio	BNC	**16**	BNC	2
ANI-V1604-A	Composite Video w/Audio	BNC	**16**	BNC	4
ANI-V1608-A	Composite Video w/Audio	BNC	**16**	BNC	8
ANI-V1616-A	Composite Video w/Audio	BNC	**16**	BNC	16
ANI-V2408-A	Composite Video w/Audio	BNC	**24**	BNC	8
ANI-V2416-A	Composite Video w/Audio	BNC	**24**	BNC	16
ANI-V2424-A	Composite Video w/Audio	BNC	**24**	BNC	24
ANI-V3208-A	Composite Video w/Audio	BNC	**32**	BNC	8
ANI-V3216-A	Composite Video w/Audio	BNC	**32**	BNC	16
ANI-V3232-A	Composite Video w/Audio	BNC	**32**	BNC	32
ANI-V4816-A	Composite Video w/Audio	BNC	**48**	BNC	16
ANI-V4824-A	Composite Video w/Audio	BNC	**48**	BNC	24
ANI-V4832-A	Composite Video w/Audio	BNC	**48**	BNC	32
ANI-V4848-A	Composite Video w/Audio	BNC	**48**	BNC	48
ANI-V6416-A	Composite Video w/Audio	BNC	**64**	BNC	16
ANI-V6432-A	Composite Video w/Audio	BNC	**64**	BNC	32
ANI-V6448-A	Composite Video w/Audio	BNC	**64**	BNC	48
ANI-V6464-A	Composite Video w/Audio	BNC	**64**	BNC	64
ANI-V12832-A	Composite Video w/Audio	BNC	**128**	BNC	32
ANI-V404	Composite Video	BNC	**4**	BNC	4
ANI-V802	Composite Video	BNC	**8**	BNC	2
ANI-V804	Composite Video	BNC	**8**	BNC	4
ANI-V808	Composite Video	BNC	**8**	BNC	8
ANI-V1604	Composite Video	BNC	**16**	BNC	4
ANI-V1608	Composite Video	BNC	**16**	BNC	8
ANI-V1616	Composite Video	BNC	**16**	BNC	16
ANI-V2416	Composite Video	BNC	**24**	BNC	16
ANI-V3216	Composite Video	BNC	**32**	BNC	16
ANI-V2424	Composite Video	BNC	**24**	BNC	24
ANI-V4816	Composite Video	BNC	**48**	BNC	16
ANI-V4832	Composite Video	BNC	**48**	BNC	32
ANI-V4848	Composite Video	BNC	**48**	BNC	48
ANI-V6416	Composite Video	BNC	**64**	BNC	16
ANI-V6432	Composite Video	BNC	**64**	BNC	32
ANI-V6448	Composite Video	BNC	**64**	BNC	48
ANI-V6464	Composite Video	BNC	**64**	BNC	64

TYPES OF MATRIX SWITCHERS

RGB/HV

Model#	Signal Type	Input Connection Type	# of Inputs	Output Connection Type	# of Outputs
ANI-RGB404	RGB/HV	BNC	**4**	BNC	4
ANI-RGB404-A	RGB/HV w/Audio	BNC & Terminal	**4**	BNC & Terminal	4
ANI-RGB802	RGB/HV	BNC	**8**	BNC	2
ANI-RGB802-A	RGB/HV w/Audio	BNC & Terminal	**8**	BNC & Terminal	2
ANI-RGB804	RGB/HV	BNC	**8**	BNC	4
ANI-RGB804-A	RGB/HV w/Audio	BNC & Terminal	**8**	BNC & Terminal	4
ANI-RGB808	RGB/HV	BNC	**8**	BNC	8
ANI-RGB808-A	RGB/HV w/Audio	BNC & Terminal	**8**	BNC & Terminal	8
ANI-RGB1604	RGB/HV	BNC	**16**	BNC	4
ANI-RGB1604-A	RGB/HV w/Audio	BNC & Terminal	**16**	BNC & Terminal	4
ANI-RGB1608	RGB/HV	BNC	**16**	BNC	8
ANI-RGB1608-A	RGB/HV w/Audio	BNC & Terminal	**16**	BNC & Terminal	8
ANI-RGB1616	RGB/HV	BNC	**16**	BNC	16
ANI-RGB1616-A	RGB/HV w/Audio	BNC & Terminal	**16**	BNC & Terminal	16
ANI-RGB2408	RGB/HV	BNC	**24**	BNC	8
ANI-RGB2416	RGB/HV	BNC	**24**	BNC	16
ANI-RGB2424	RGB/HV	BNC	**24**	BNC	16
ANI-RGB3216	RGB/HV	BNC	**32**	BNC	16
ANI-RGB3224	RGB/HV	BNC	**32**	BNC	24
ANI-RGB3232	RGB/HV	BNC	**32**	BNC	32
ANI-RGB4816	RGB/HV	BNC	**48**	BNC	16
ANI-RGB4824	RGB/HV	BNC	**48**	BNC	24
ANI-RGB4848	RGB/HV	BNC	**48**	BNC	48
ANI-RGB6416	RGB/HV	BNC	**64**	BNC	16
ANI-RGB6432	RGB/HV	BNC	**64**	BNC	32
ANI-RGB6448	RGB/HV	BNC	**64**	BNC	48
ANI-RGB6464	RGB/HV	BNC	**64**	BNC	64

AUDIO CONNECTIONS

The series matrix switchers with audio input/output supports unbalanced.

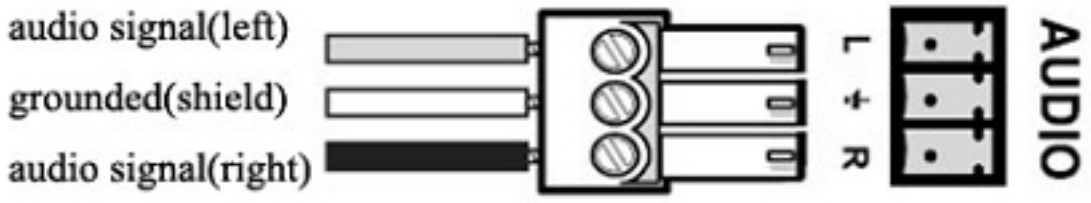


Figure 1: Unbalanced Input/Output audio connection

VGA MATRIX SWITCHER

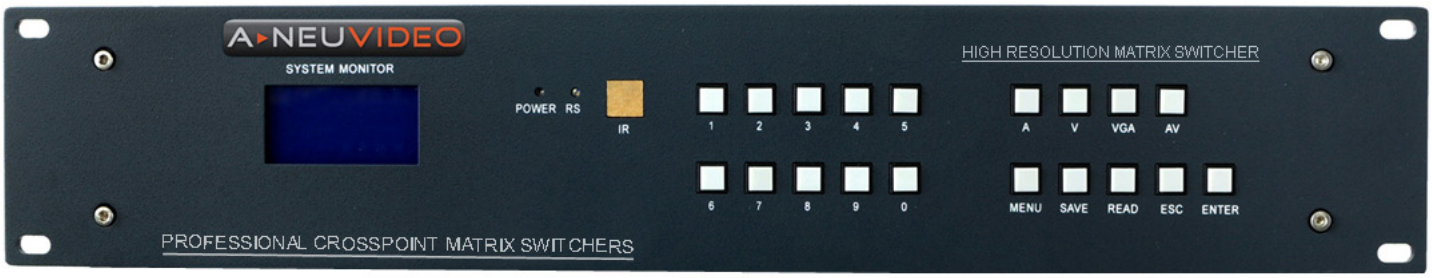


Figure 2: ANI-VGA1608A FRONT PANEL

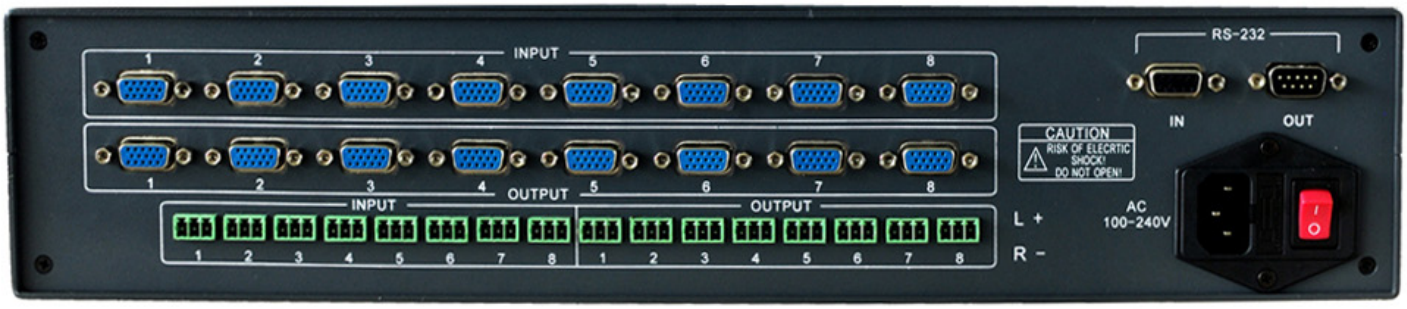


Figure 3: ANI-VGA1608A REAR PANEL

FEATURES

- Professional matrix chip with 350MHz (-3dB) bandwidth when fully loaded
- Supports HDTV up to 2048x1536 60Hz refresh rate and 1280x1024 120Hz refresh rate
- The switching status can be read directly from the LCD display
- Remote control via front panel push buttons or RS-232
- Audio follow Video or Audio Break-away
- Device address range is 1-255. Up to 255 devices can be controlled by cascading
- Store 30 preset matrixes
- Matrix control software to manually switch matrix or automatically switch, etc.
- Faster switching speed with delay time less than 100ns
- Standard rack mountable 19-inch chassis

VGA MATRIX SWITCHER

VGA SPECIFICATIONS

VGA Port	Input & Output:	15HD-F Standard VGA
	Bandwidth:	350MHz (-3dB)
		0-10MHz (+0.2dB to -0.1dB)
		0-120MHz (+6.5dB to -1.0dB)
	Input Level:	0.5Vp-p min, 2.0Vp-p max
	Input I/O Impedance:	75Ω
	Brightness Color Interfere:	-68.5dB@5MHz
	Echo Wasting:	-85dB@10MHz
	SNR (S/N):	72.8dB
	Switch Speed:	Up to 100ns
H&V SYNC Port	Input level:	1Vp-p-5Vp-p
	Input impedance:	10KΩ
	Output level:	Compatible TTL
	Output impedance:	75Ω
	Synchronous polarity:	Following
Audio Port	Input & Output:	3.81mm connector
	Bandwidth:	1MHz
	Gain:	Unbalanced 0dB (Can be changed), balanced 6dB
	SNR (S/N):	73.5dB (1Vpp) empty-load
	Channel isolation:	>76dB @1KHz
	Input Impedance:	High resistance, >47KΩ
	Output Impedance:	47Ω
Control Type	Front Panel Push Button	
	RS-232	
	Windows based GUI Software	
General	Power Supply: AC 85V-265V, 50Hz/60Hz	
	Power: 20-50W	
	Size (WxHxD): 19 x 3.5 x 9.4 in (482x89x240mm)	
	Weight: 9.9 lb / 4.5 kg	
	MTBF: 30000 hours	

Input & Output VGA (HD15Pin) port

Pin	Name	Description		Pin	Name	Description
1	R	Red signal		**9**	NC	Not used
2	G	Green signal		**10**	GND	Place
3	B	Blue signal		**11**	GND	Place
4	NC	Not used		**12**	NC	Not used
5	GND	Place		**13**	H SYNC	H SYNR
6	R GND	Red signal ground		**14**	V SYNC	V SYNR
7	G GND	Green signal ground		**14**	V SYNC	V SYNR
8	B GND	Blue signal ground		**15**	NC	Not used

RGB/HV MATRIX SWITCHER

Figure 4: ANI-RGB808 FRONT PANEL

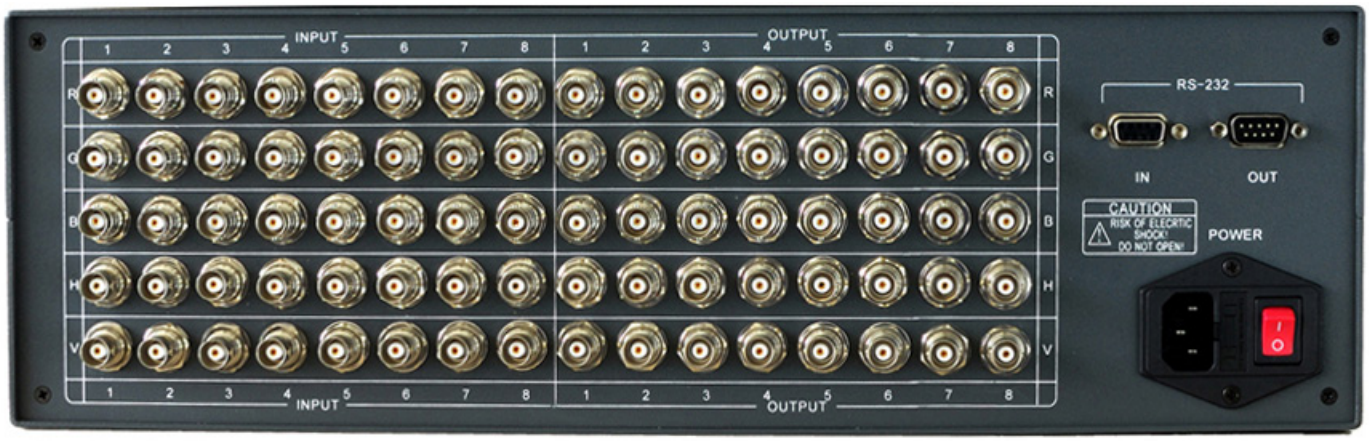


Figure 5: ANI-RGB808 REAR PANEL

FEATURES

- Professional matrix chip with 350MHz (-3dB) bandwidth when fully loaded
- Supports HDTV up to 2048x1536 60Hz refresh rate and 1280x1024 120Hz refresh rate
- The switching status can be read directly from the LCD display
- Remote control via front panel push buttons or RS-232
- Audio follow Video or Audio Break-away
- Can be used for RGB, RGBHV, YPBPR
- Device address range is 1-255. Up to 255 devices can be controlled by cascading
- Store 30 preset matrixes
- Matrix control software to manually switch matrix or automatically switch, etc.
- Faster switching speed with delay time less than 100ns
- Standard rack mountable 19-inch chassis
- Aluminum chassis to ensure better EMC

RGB/HV MATRIX SWITCHER

RGB SPECIFICATIONS

RGB Port	Input & Output:	Standard BNC
	Bandwidth:	350MHz (-3dB)
		0-10MHz (+0.2dB to -0.1dB)
		0-120MHz (+6.5dB to -1.0dB)
	Input Level:	0.5Vp-p min, 2.0Vp-p max
	Input I/O Impedance:	75Ω
	Brightness Color Interfere:	-68.5dB@5MHz
	Echo Wasting:	-85dB@10MHz
	SNR (S/N):	72.8dB
	Switch Speed:	Up to 100ns
H&V Port	Input level:	1Vp-p - 5Vp-p
	Input impedance:	10KΩ
	Output level:	Compatible TTL
	Output impedance:	75Ω
	Synchronous polarity:	Following
Audio Port	Input & Output:	3.81mm connector
	Bandwidth:	1MHz
	Gain:	Balanced 0dB
	SNR (S/N):	73.5dB (1Vpp)
	Channel isolation:	>76dB @1KHz
	Input Impedance:	High resistance, >47KΩ
	Output Impedance:	47Ω
Control Type	Front Panel Push Button	
	RS-232	
	Windows based GUI Software	
General	Power Supply: AC 85V-265V, 50Hz/60Hz	
	Power: 25W-100W	
	Size (WxHxD): 19 x 5.3 x 9.4 in (482x134x240mm)	
	Weight: 14.3 lbs / 6.5 kg	
	MTBF: 50000 hours	

COMPOSITE VIDEO SWITCHER

Figure 4: ANI-RGB808 FRONT PANEL

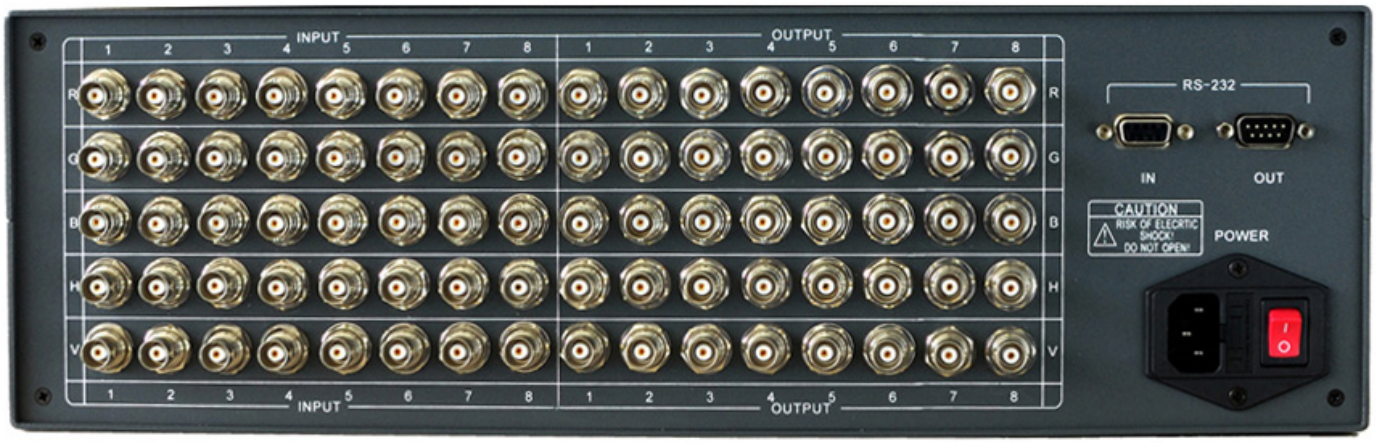


Figure 5: ANI-RGB808 REAR PANEL

FEATURES

- Professional matrix chip with 100MHz (-3dB) bandwidth when fully loaded
- The switching status can be read directly from the LCD display
- Remote control via front panel push buttons or RS-232
- Audio follow Video or Audio Break-away
- Device address range is 1-255. Up to 255 devices can be controlled by cascading
- Store 30 preset matrixes
- Matrix control software to manually switch matrix or automatically switch, etc.
- Faster switching speed with delay time less than 100ns
- Standard rack mountable 19-inch chassis

COMPOSITE VIDEO SWITCHER

COMPOSITE VIDEO SPECIFICATIONS

RGB Port	Input & Output:	BNC connector
	Bandwidth:	100MHz (-3dB)
		0.5Vp-p Min, 2.0Vp-p Max
		75Ω
	Input Level:	1.0Vp-p Min, 2.0Vp-p Max
	Input I/O Impedance:	75Ω
	Brightness Color Interfere:	75dB
	Echo Wasting:	0.23%
	SNR (S/N):	72.8dB
	Switch Speed:	Up to 100ns
H&V Port	Input level:	1Vp-p-5Vp-p
	Input impedance:	10KΩ
	Output level:	Compatible TTL
	Output impedance:	75Ω
	Synchronous polarity:	Following
Audio Port	Input & Output:	3.81mm connector
	Bandwidth:	1MHz
	Gain:	Unbalanced 0dB (Can be changed), balanced 6dB
	SNR (S/N):	73.5dB (1Vpp) empty-load
	Channel isolation:	>76dB @1KHz
	Input Impedance:	High resistance, >47KΩ
	Output Impedance:	47Ω
Control Type	Front Panel Push Button	
	RS-232	
	Windows based GUI Software	
General	Power Supply: AC 100V-220V, 50Hz/60Hz	
	Power: 25W-100W	
	Size (WxHxD): 19 x 3.5 x 9.4 in (482x89x240mm)	
	Weight: 9.9 lb / 4.5 kg	
	MTBF: 50000 hours	

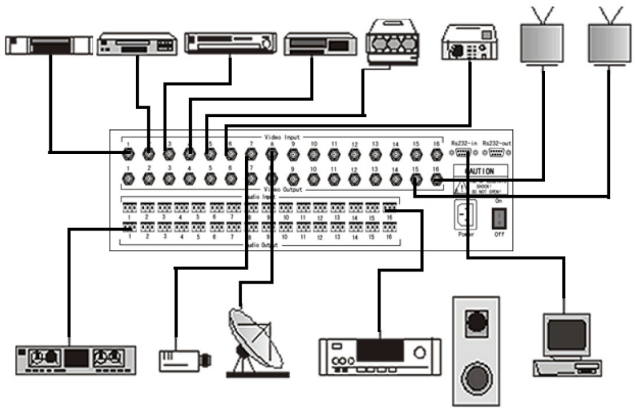
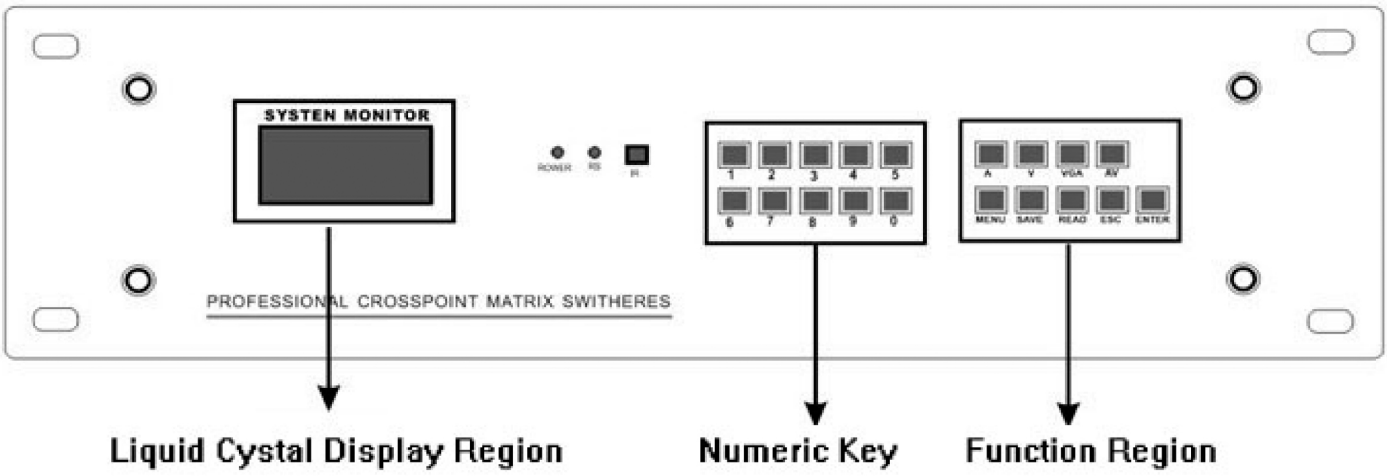


Figure 4-4: Connection Diagram of AV Matrix System

OPERATION



PRESS KEY OF FUNCTION REGION

A	Stands for Audio when switch	SAVE	Stands for saving the current status switching
V	Stands for Video when switch	READ	Stands for reading saved status switching
VGA	Stands for VGA Model when switch	ESC	Cancel
AV	Stands for Audio synchronize with Video when switch	ENTER	Ascertain
MENU	Stands for into device menu		

NOTE OF FUNCTION KEY

"V, AV, A, VGA": **Model key for choosing VGA, VIDEO, AUDIO, DVI and HDMI, also can switch computer and video sync or separate.**

e.g. 1: Press"1"+"V"+"6"+"ENTER" means sync switching Video input signal (VGA, VIDEO, DVI, HDMI) to output 6

e.g. 2: Press"2"+"AV"+"4"+"ENTER" means separate switching the Audio/ Video input 2 (VGA, VIDEO, DVI, HDMI) to output 4

e.g. 3: Press"3"+"A" +"5"+"ENTER" means separate switching Video input 3 to output 5

e.g. 4: Press "3"+"VGA" +"5"+"ENTER" means separate switching computer signal input 3 to output 5

"SAVE": **To save the corresponding connection of the input & output**

e.g. 1: Press "SAVE" 

+"2" 

+"ENTER" means saving the current status of input & output to storage location 2 while the total up to 30.

OPERATION

"READ": Call the saved input & output connection

e.g.1: Press "READ" 

+"2" 

+"ENTER" 

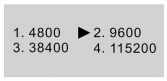
means saving the current status of input & output to storage location 2 while the total up to 30.

"MENU": To set baud, addr, beep and cycle

The LCD shows four choices 

"1"For Setting Baud

Operation: Press "MENU" will popout 

Press "1" popout 

choose baud rate (such as press 2 for baud 9600), then press "enter" to finish the setting. 

"2" For Setting the Addr

Operation: Press "MENU" popout 

Press "2" popout 

choose the addr (such as press "1" and the number of LCD will change to 1), press "ENTER" to finish the setting. 

"3" For Setting Beep

Operation: Press "MENU" popout 

Press "3" popout 

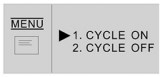
Press "1"beep on and then press " ENTER" to finish the setting.

"4" For Setting the Cycle of Status

Operation: Press "MENU" popout 

Press "4" popout 

setting the cycle time of status (measure by second) then to next step 

setting the cycles of saved status, for example if cycle of 5 status, press "5" popout 

choose cycle on to finish setting 

PANEL SWITCH

OPERATION FORMAT OF INPUT & OUTPUT SWITCH

Way like this: “input”+”switch model”+”output”+”enter”

Input: 9 number on the panel, also can combined two or three numbers together to choose double or triple digital.

Switch Model: “A”,”AV”,”V”,”VGA” means switching computer & audio/ computer /Audio

Output: 9 number on the panel, also can combined two or three numbers together to choose double or triple digital.

OTHER OPERATION:

1. Input switch to Output: “input”+“V, AV, A, VGA”+“output”+“ENTER”

2. One input switch to all output: “input”+“V, AV, A, VGA”+“output 0”+“ENTER”

3. Close one output: “input 0”+“V, AV, A, VGA” +“ENTER”

4. Close all output: “0”+“V, AV, A, VGA”+“0”+“ENTER”

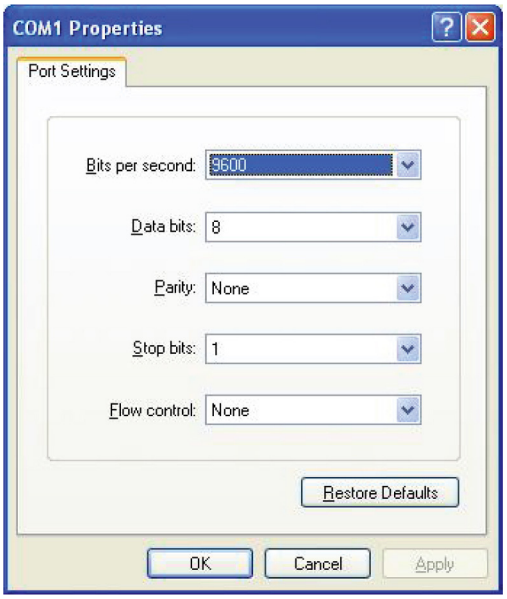
PROTOCOL OF SERIAL PORT AND COMMAND CODE

Before using the serial port to control the device, please confirm the following configuration:

FACTORY DEFAULT SETTING FOR RS-232

Baud Rate: 9600bps
Data bit: 8 bits
Parity: None
Stop Bits: 1
Flow Control: None

Use a straight RS-232 cable. DO NOT USE null modem cable.



RS-232 PORT

Matrix switcher has two serial ports: RS-232 input port and RS-232 output ports (Figure 1.6-1). The input port is connected to the computer and the output port is connected to other devices that communicate with the computer. If a user wants to control multiple serial devices by a computer or a central controller, you can cascade multiple devices without more serial ports by sending commands to other devices through RS-232 input port and RS-232 output port. Refer figure A and figure B.

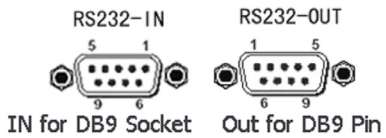


Figure 1.6-1 RS-232 connector pins used

Figure A: RS-232 input port connected to computer

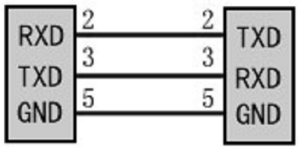


Figure B: Matrix RS-232 output port

PROTOCOL OF SERIAL PORT AND COMMAND CODE

Definition of RS-232 Port COM IN (D-SUB9F)

Pin	Name	Description
1	--	Not used
2	TXD	Transferring data
3	RXD	Receiving data
4	--	Not used
5	GND	Signal ground
6	--	Not used
7	--	Not used
8	--	Not used
9	--	Not used

Definition of RS-232 Port COM OUT (D-SUB9M)

Pin	Name	Description
1	--	Not used
2	RXD	Receiving data
3	TXD	Transferring data
4	--	Not used
5	GND	Signal ground
6	--	Not used
7	--	Not used
8	--	Not used
9	--	Not used

ASCII CODE

Code	[x1]All.	Switch input port [x1] to all output port.
	All#.	Switch the input port to its corresponding output port (1>1, 2>2, 3>3…).
	All$.	Close all the output ports.
	[x1]#.	Switch input port [x1] to output port [x1].
	[x1]$.	Close output port [x1].
	[x1]V[x2].	Switch video signal of input port [x1] to output port [x2].
	[x1]V[x2],[x3],[x4].	Switch video signal of input port [x1] to output port [x2], [x3], [x4].
	[x1]A[x2].	Switch audio signal of input port [x1] to output port [x2].
	[x1]A[x2],[x3],[x4].	Switch audio signal of input port [x1] to output port [x2], [x3], [x4].
	[x1]B[x2].	Switch audio & video signal of input port [x1] to output port [x2].
	[x1]B[x2],[x3],[x4].	Switch audio & video signal of input port [x1] to output port [x2], [x3], [x4].
Compatible code	[x1]*[x2]!	Switch audio & video signal of input port [x1] to output port [x2].
	[x1]*[x2]$	Switch audio signal of input port [x1] to output port [x2].
	[x1]*[x2]%	Switch video signal of input port [x1] to output port [x2].
	[x1]*[x2]&	Switch video signal of input port [x1] to output port [x2].

Note:

1. [x1], [x2], [x3] are number of port, its range is 1~4/8/16/24/32/64/96/128/256 (according to different types of matrix). The code cannot be executed if it is out of range.

2. [and] in the code are not sending characters.

3. The ending character of each code cannot be omitted, i.e. ”.”, ”,” etc. Be sure it must be an English character.

PROTOCOL OF SERIAL PORT AND COMMAND CODE

CODE EXAMPLES

1. Switch an input port to all output ports: [x1]All.
e.g. : The code to switch input port 3 to all output ports is **“3All.”**

2. Switch all input ports to corresponding output ports: All#.
e.g. : The status of AV8x8 matrix after executing the code is: 1->1,2->2,3->3…,8->8

3. Close all output ports: All$.
e.g. : To close all the output ports, execute **”All$.”**.

4. Close one or more output ports: [x]$.
e.g. : To close output port 5, execute **”5$.”**. To close output port 1, 2 and 3, execute **”1,2,3,4$.”**.

5. Switch video signal: [x1]V[x2].
e.g. : To switch video signal of input port 3 to output port 5, execute: **”3V5.”** ;To switch video signal of input port 3 to output port 3, 5 and 10, execute: **”3V3,5,10.”**.

6. Switch audio signal: [x1]A[x2].
e.g. : To switch audio signal of input port 5 to output port 6, execute: **”5A6.”**; To switch audio signal of input port 12 to output 3, 5 and 10, execute: **”12V3,5,10.”**.

7. Switch audio & video signal: [x1]B[x2].
e.g. : To switch audio & video signal of input port 10 to output port 12, 14 and 15, execute: **”10B12,14,15.”**.

TROUBLESHOOTING

Please check when the following problems occur: When the peripherals connected to the matrix switcher have a ghost image and the display does not generally have problems. The display may not be correctly tuned or quality wire impedance is mismatched by the signal generating double or multiple reflections. Adjust the display or replace the wire to solve the problem.

In case of color loss or no signal on an Output, check the connecting port.

When the AV matrix cannot be controlled by RS-232 (PC Serial port), please check the configuration of the port and the connection of the port.

Switch with no output image: Check corresponding Input signal (can refer to oscilloscope or multimeter), if there’s no Input signal, check the connecting cable, connector, maybe change to another connector.

Check corresponding Output signal (refer to oscilloscope or multimeter), if there’s no Output signal, check the connecting cable, connector, maybe change to another connector.

If power light is Off and no display on the LCD check the connection of power. While you may laugh at this, it does happen.

If the output image shows interference, the input & output devices may not be grounded.

If you feel electrostatic spark when pulling, inserting audio or video connectors, it is possible the matrix switcher is not properly grounded. Please ground the device(s) or it will easily damage the equipment and reduce the life.

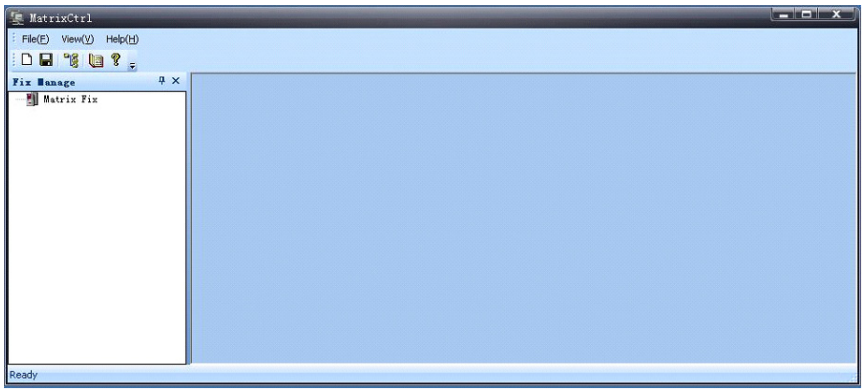
If LCD displays, the serial port returns code, but there is no video or audio output: The audio and video connector may be loose. The cable may be short-circuited.

If the AV matrix cannot be controlled by the front panel push buttons or RS-232, the switcher may be damaged.

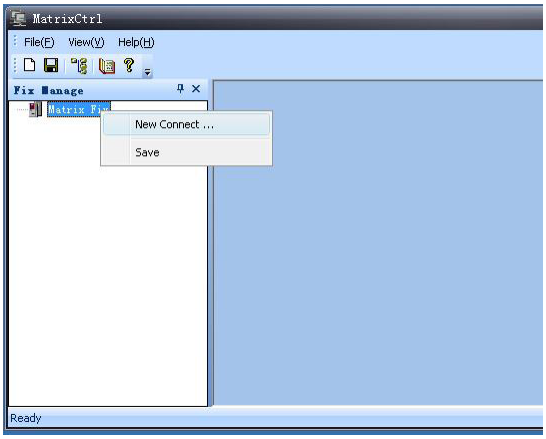
SOFTWARE OPERATION INSTRUCTION

SOFTWARE OPERATION INSTRUCTION

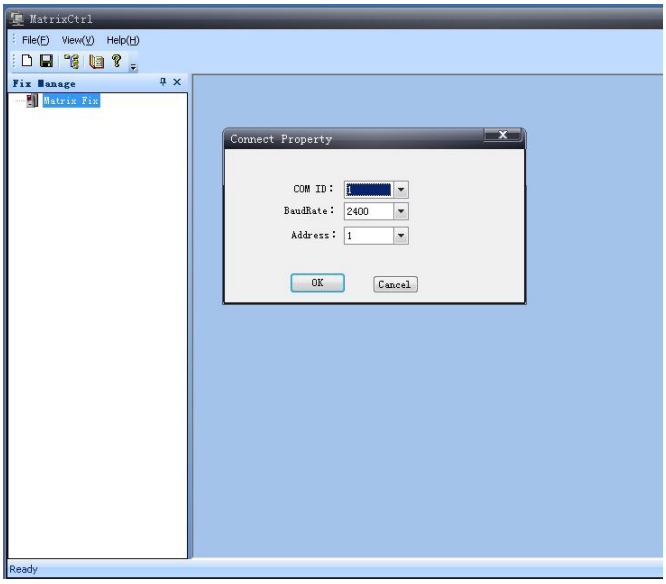
1. Run the software and the interface is as following:



2. Right click **"Matrix Fix"** and menu appears like

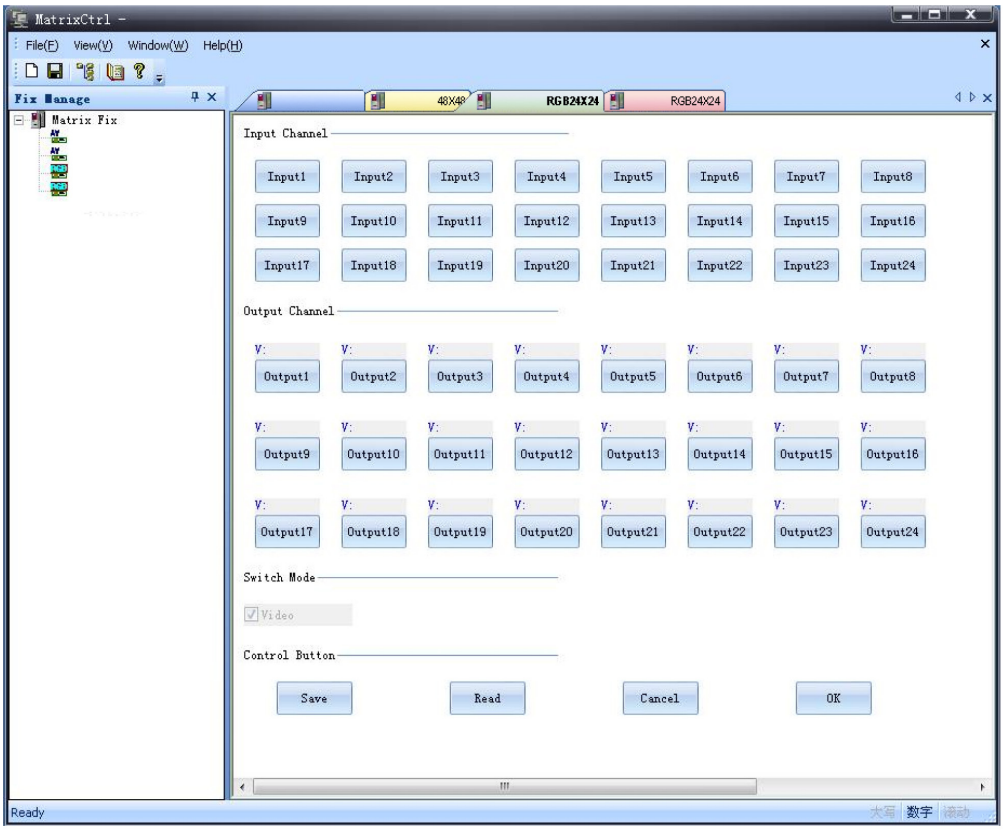


3. Click **"Add Device"**, a dialog appears. Select serial port number, baud rate and address.

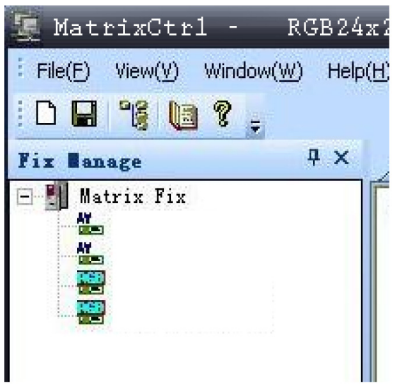


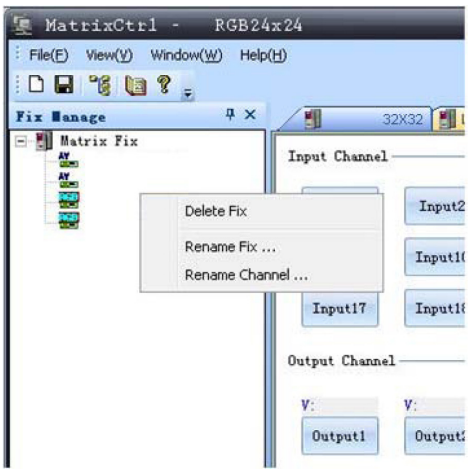
SOFTWARE OPERATION INSTRUCTION

4. Click **"OK"** to connect the device. After receiving device information, the controlling Interface is done



The left bar displays the name and type of the device connected. The name can be renamed. Right click on the name, a pop menu appears:

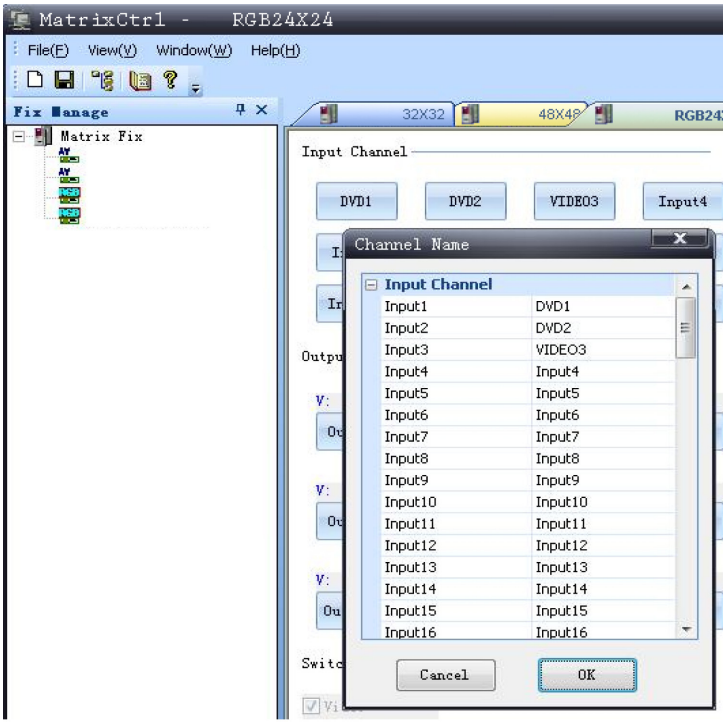




Click **"Delete Device"** to delete the device connected.
Click **"Rename"** to rename the device connected.

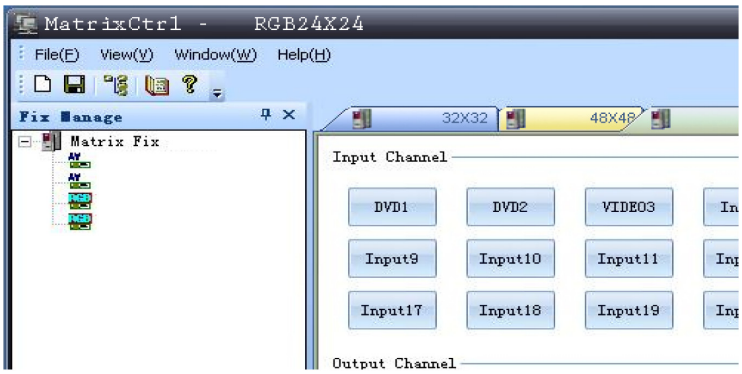
SOFTWARE OPERATION INSTRUCTION

Click **"Port Name"** to change the names of input & output and preset groups. The interface is as following:

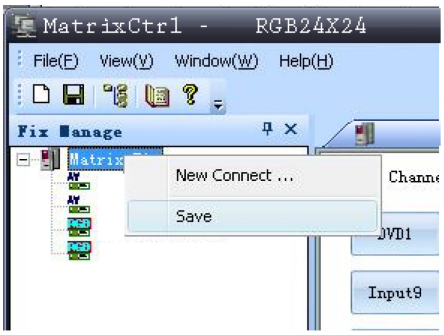


Click **"OK"** to save changes.

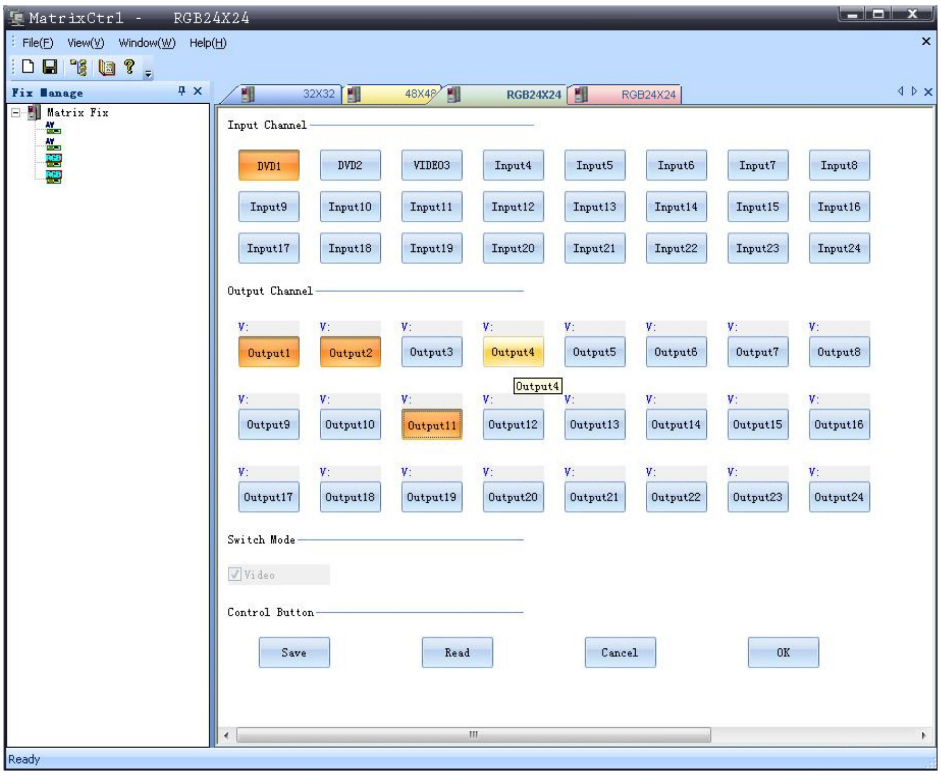
The caption of button on the interface is also changed as shown below:



5. When the device is connected to the software, the connection information is saved. If the number of serial port, the address of the device and the baud rate are not changed, the software can directly display the device information and the status of connection the next time the software starts. To save the device information, click **"Matrix Device"** and select **"Save Device Information"** as shown below:

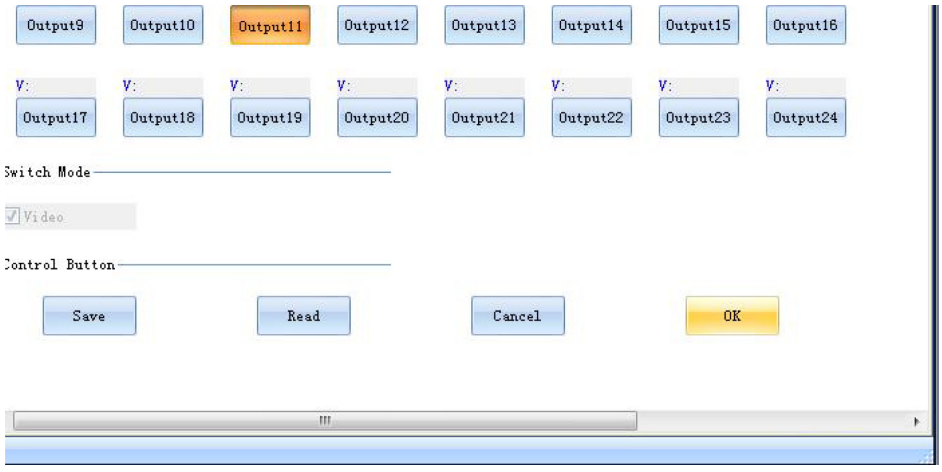


6. Users can switch the input port to more output ports in one time as shown below:



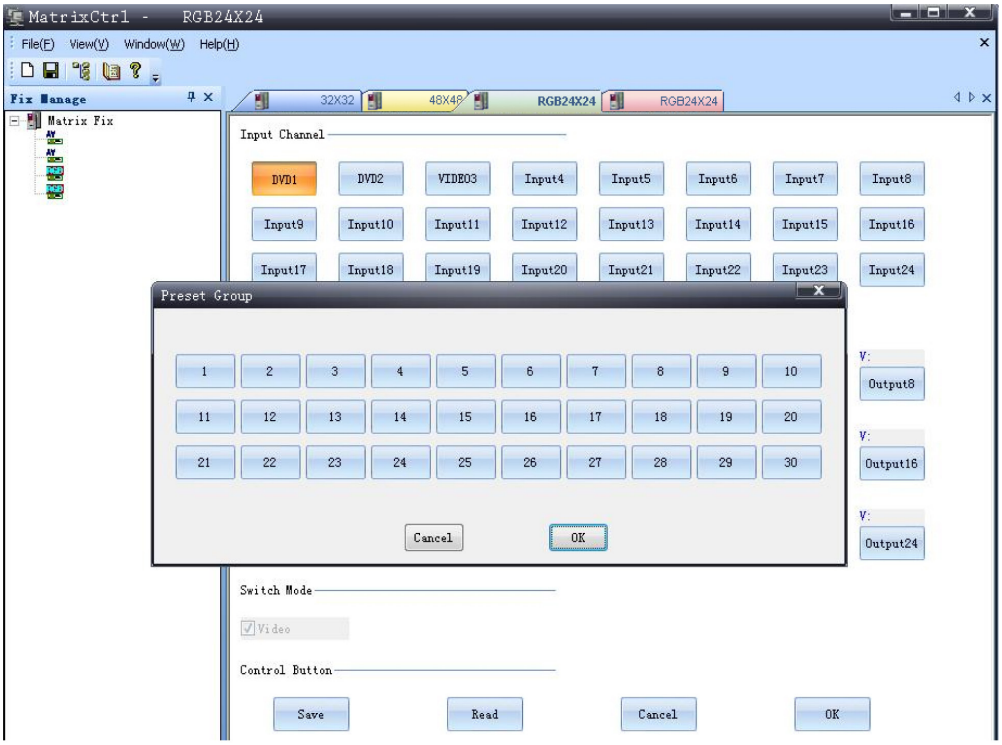
The above operation switches input port 8 to output port 1, 2, 4, 10 and 19 in one time.

Click **"OK"** to execute as shown below:



SOFTWARE OPERATION INSTRUCTION

7. Click **“Save”**, **“Read”** to operate preset groups. There are altogether 30 preset groups as shown below:



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