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# ANGUSTOS AMVC-0909 9×9 Modular Matrix Switcher with the WEB GUI, APP control User Manual



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## Safety Reminder

To protect the device and operating personnel from electrostatic discharge, you need to check and ensure that the device is grounding well before the device is powered on. Please observe the following when you install, use, maintain this equipment.

Make sure the device ground connection.

### Disposal Instruction (US)

For better protection of our earth, please don't throw this electronic device into municipal trash bin when discarding.

To minimize pollution and ensure utmost protection of the global environment, please recycle the product. For more information about the collection and recycling of Waste Electrical and Electronic Equipment (WEEE), please contact your local dealers.

# Safety Instructions

1. Please read these safety instructions carefully

- 2. Please keep this User Manual for later reference.
- 3. Please disconnect this equipment from connecter before cleaning. Don't use liquid or prayed detergent for cleaning. Use moisture sheet or cloth for cleaning.
- 4. Make sure the equipment is connected to the power source with the correct voltage, frequency, and ampere.
- 5. All cautions and warnings on the equipment should be noted
- 6. Never pour any liquid into opening, this could cause fire or electrical shock.
- 7. Never open the equipment. For safety reason, the equipment should only be opened by qualified service personnel.
- 8. If one of the following situations arises, get the equipment checked by a service personnel:
  - a. Liquid has penetrated into the equipment.
  - b. The equipment has been exposed to moisture.
  - c. The equipment has not work well or you can not get it work according to user's manual.
  - d. The equipment has dropped and damaged.
- e. If the equipment has obvious sign of breakage.
- 9. Ambient operation temperature: 0 ~ 45 degrees. 10. Risk of overheating! Don't put operating/installing equipment inside too closed space, be sure the installation space at least 1 to 2 inches or 2 to 5 cm of space for ventilation. To ensure that other objects do not cover the equipment.

#### Notice: Peripheral devices

Only peripherals (input/output devices, terminals, player, etc.) certified to comply with Class B limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

#### Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this equipment.

#### **Product Introduction**

This is a modular matrix switcher, with 9 input slots and 9 output slots, so it can support maximum 9 inputs and 8 outputs, all the input and output cards are using 1-card 1-port, the signals are including the DVI, HDMI, HDBasT, Fiber Optic, 3G-SDI. Users are able to have mixed signals inputs and mixed signals outputs.

The single channel signal switching speed can reach 12.5Gbps, and the main board is using Four core four links processing technology, the switching ability speed can reach 32Gbps. With uncompressed transmission technology for the digital signal to make sure the image High-fidelity output. Unique signal links shielding designing technology to make sure the signal completeness, the internal data switch has super strong capacity of resisting disturbance addling continuous and stable working ability. Supports 7\*24 continuously working and with dual LAN and RS232 backup control, it's convenient for users to control via PC, iPad, APP and the 3rd parties central control by the the RS232 control commands.

With the dual RS232 and LAN control, users also can simply set up and control the surrounding equipment, such as the projector, electric curtain and TVs.

This matrix switchers have been widely used in the conferencing, radio&television project,

multimedia conferencing hall, large screen display project, television teaching, commandcontrol center and so on applications.

#### **Product Features**

- · Modular designing chassis, with 9 input slots and 9 output slots
- 1-card 1-port input and output card
- Supports 1080P, 4K30 and 4K60 cards for selections
- Supports DVI-I/ HDMI/ 3G-SDI/ HDBaseT/ Fiber to mix input and output
- Support Video wall and seamless switching with the 1080P and 4K60 cards
- Support 3.5mm audio embedded and de-embedd function
- Support up/down scaling function via the DIP switch
- Support dual LAN and RS232 ports for backup control
- Front buttons with background lights, easier to operate at any time
- Support auto saving protection and auto recovery function while power cut

# Technical Datasheet

Model AMVC-0909

**Description** 9×9 modular matrix switcher

Input 1-card 1-port input, including DVI/HDMI/VGA/CVBS/YPbPr/SDI/ HDBaseT/Fiber

Output Support DVI/HDMI/VGA/CVBS/YPbPr/SDI/HDBaseT/Fiber Otpic output

Protocol Standard 1-card 1-port output, including DVI/HDMI/VGA/CVBS/YPbPr/SDI/ HDBaseT/Fiber

Color Space Support RGB444, YUV444, YUV422, x.v.C standard color extension

 $\textbf{Resolution} \hspace{1.5cm} 640 \times 480 - 3840 \times 2160 @60 \text{Hz} (\text{VESA} \ ), \ 480 \text{i} - 4 \text{K} @60 \text{Hz} (\text{HDTV} \ )$ 

Distance HDMI/DVI: 15m/40ft; HDBaseT: 70m/220ft; Fiber: 2km/6000ft

Control iOS/Android Apps, WEB GUI, RS232 & 10" Color Touchscreen

**Power** AC: 110V—260V 50/60Hz

Consumption 17W(No Cards)

**Dimension** 2U, 482×385×89(mm)/ 18.97\*15.35\*3.51(inch); Packing: 56\*49\*200(mm)

Weight 6kg/ 13.22lbs (No Cards)

Work Temperature  $0^{\circ}\text{C} \sim 50^{\circ}\text{C}$ 

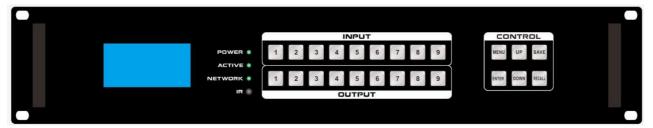
Storage Temperature -20°C ~55°C

# **Packing Details**

Matrix switch chassis with customized configuration	1 unit
Power cord	1 pcs
User manual	1 ncs

## **Panels**

Front Panel



Name	Description

LCD Screen Operation information real-time Display

POWER light up after power on, it will light off after power off

ACTIVE Flashing while using the buttons/ WEB switching successfully

NETWORK Flashing while using the WEB control operation

IR IR remote control receiver

OUTPUT Input buttons with background light, from 1~9 input buttons

INPUT Output buttons with background light, from 1~9 output buttons

MENU Select between View, Switch, Scene Save/ Recall and Setup

UP Upward and short cut button for switching to ALL outputs

SAVE For saving the scene or setup

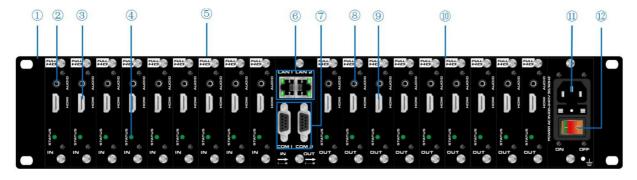
CONTROL

ENTER Enter button

DOWN Downward and short cut button for canceling to ALL outputs

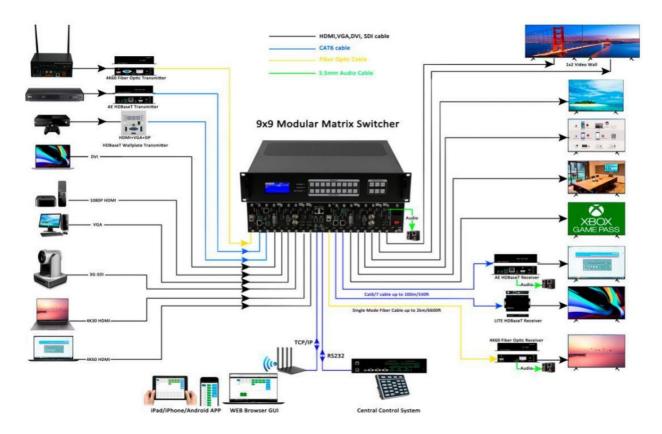
RECALL For recalling the saved scene

### Rear Panel:



No.	Name	Description
1	Rack ear	For installing on the 19 inch Rack Cabinet
2	3.5mm audio	External 3.5mm audio embedded
3	HDMI Port	HDMI input card
4	Status Indicator	Power on indicator
\$	Input slots	Supports DVI/HDMI/VGA/CVBS/YPbPr/FIBER/HDBaseT input
6	LAN Ports	Dual LAN ports for WEB/TCP/IP control
7	RS232 Ports	Dual RS232 ports for 3rd parties control
8	3.5mm audio	External 3.5mm audio de-embedded
9	HDMI Port	HDMI output card
10	Input slots	Supports DVI/HDMI/VGA/CVBS/YPbPr/FIBER/HDBaseT output
	Power Port	AC 220V-240V 50/60Hz
	Power Switch	Power ON/OFF switch with light

**Equipment Connection Diagram** 



#### **Equipment Operation and Instruction**

The LCD display screen will light up after power and turned on. It shows the current operation status, press MENU button, it will keep recycling between VIEW, SWITCH, SCENE, SETUP four different interface. The default interface is VIEW.

#### Font buttons switching operation

#### Switching operation

Switching with industry 2-key fast switching, first press the input button and then select/press output button. Details are as follow:

- There are 1~9 nine input buttons, 1~9 nine output buttons. First press MENU to show SWITCH interface, then can continue the next switching step
- Press input number at the INPUT area, the input button will light up with blue light
- Then press output number at the OUTPUT area, and the output button will light up.
- Users also can press the UP button to realize 1 to ALL switching.
- If need to cancel switching, can press the button again to cancel. Users also can press the DOWN button to cancel all outputs 7.1.2 Scene Operation

### Scene Operation

- The system can save 40 scenes, after switching successfully in the SWITCH interface, press MENU button and switch to SCENE interface.
- Enter the wanted scene save number(1~9), then press SAVE. If want to reload the saved scene, press the scene number and press RECALL button

# Setup Operation

- First press MENU switch to SETUP interface, then continue next operation
- Via SETUP, it can realize IP address changing, in SETUP interface can use UP/ DOWN button to position, enter the needed IP address from the left button side, then press SAVE button to save

## View Operation

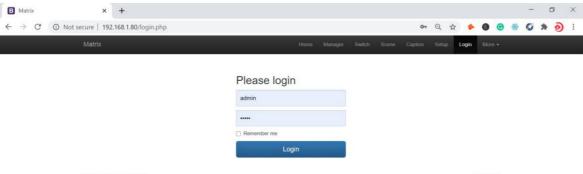
• Via MENU button switch to VIEW interface, will display the current switching status

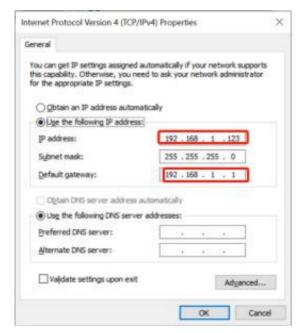
## WEB Control

The default IP address are 192.168.0.80(LAN1) and 192.168.1.80(LAN2).

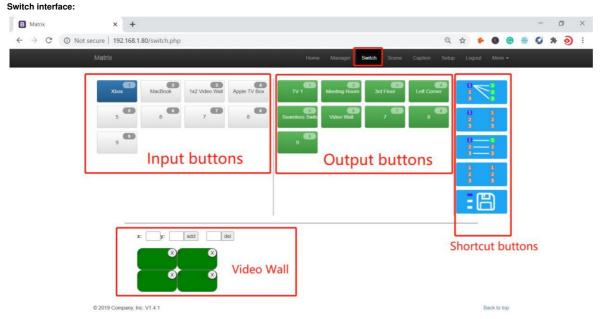
# Login Operation

Accordingly to connected LAN port, enter the corresponding IP address, if using the LAN2, then enter 192.168.1.80 in the browse(Recommend with Google Chrome) as below:

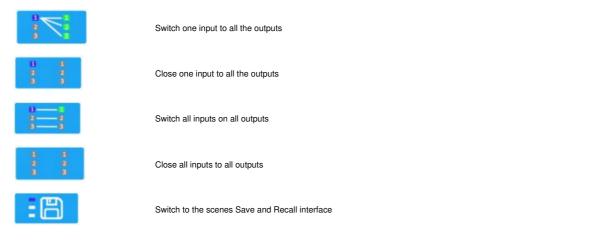




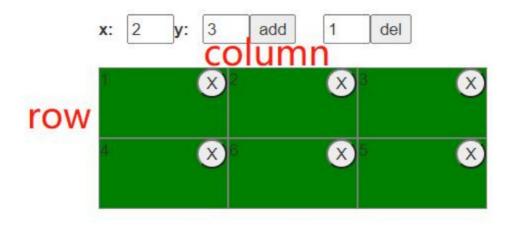
# Switch



Users can do the input sources switching by clicking the Input buttons first, then pressing the Output buttons. Or users can use the shortcut buttons on the right for the fast switching:

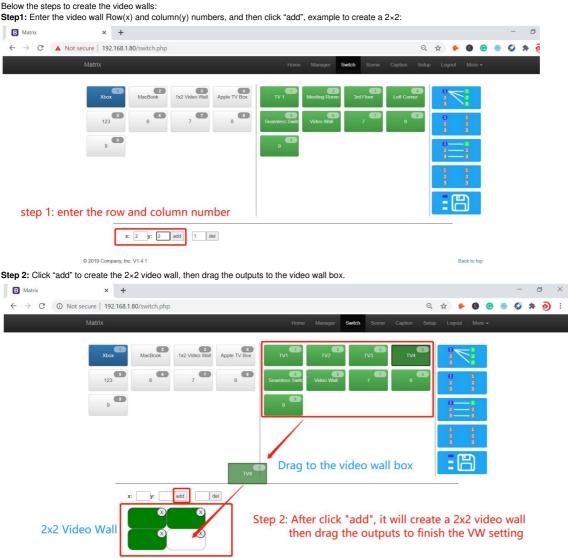


Users also can do the Video wall settings on the WEB GUI bottom by simply adding the x & y(x: for the rows; y: for column).

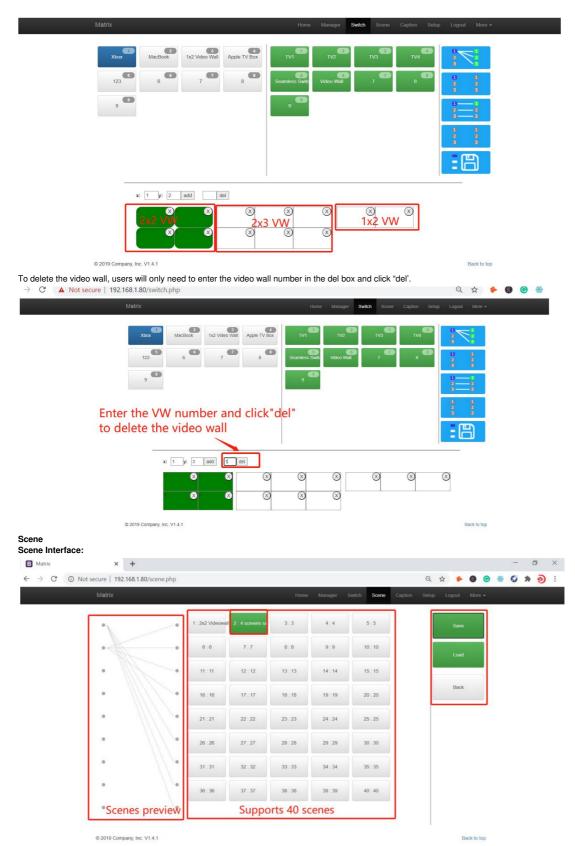


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Note that this video wall function only works with the 1080P HDMI/HDBaseT and 4K60 HDMI output card only.



Users can have multiple video walls by the same way to create, for the 9×9 matrix switcher, the video wall configuration will be limited to 9, it means the configuration could be 3×4 video wall.

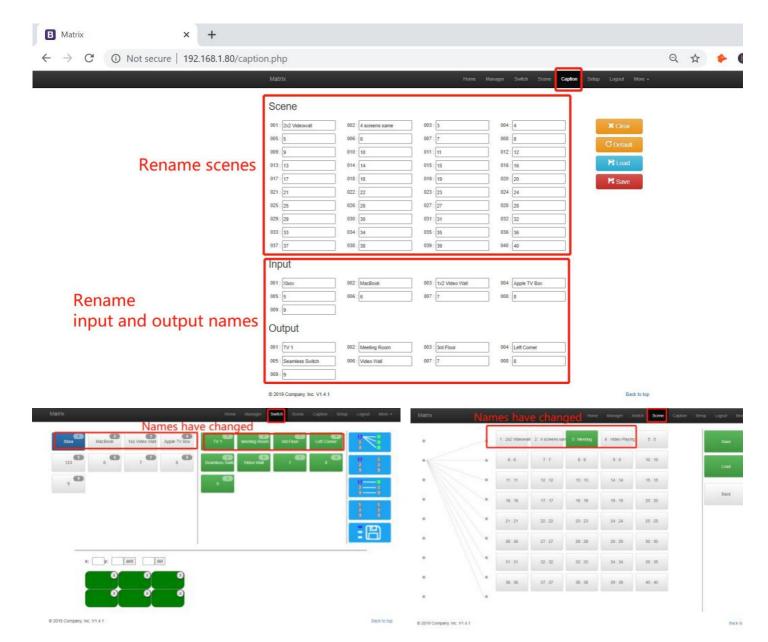


It can support 40 scenes in total, users can preview each scene switching status by clicking on any of the scene number. Click "Save" to save the switching status, and "Load" to recall the scenes. "Back" to return back to the switch interface.

# Caption:

### For changing the input, output and scenes' name

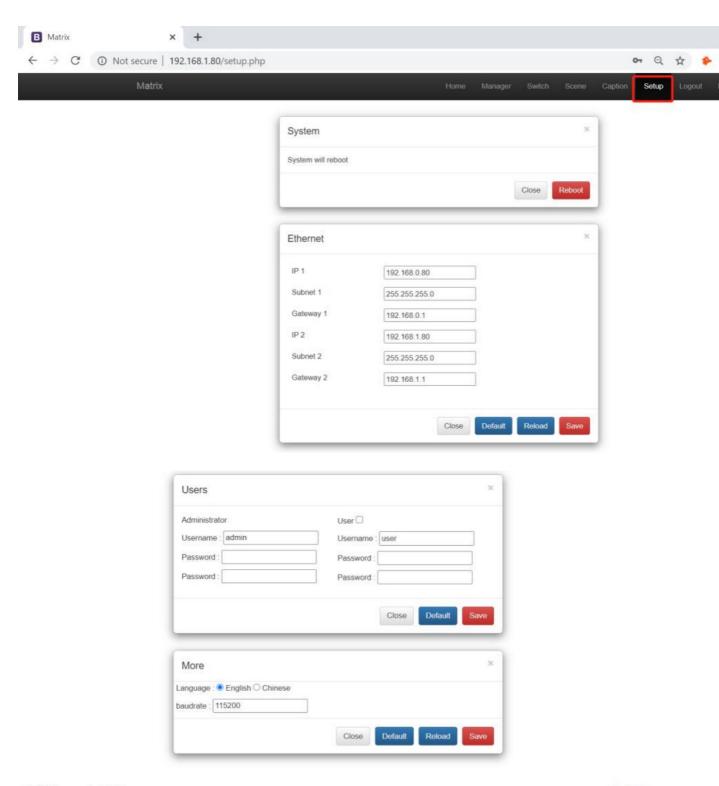
Users can rename the scenes, input and output names here, users can change all the names and then need to click the "Save" button on the right. After renamed the names, users will see the input, output and the scenes names have changed once click to the "Switch" and "Scenes" interface. With this renaming function, it can be easier for the users to know the sources and ends.



# Setup

# Setup interface:

Users can reboot, change the IP address, set up the login user names, language and the RS232 baud rate settings here. After changed the IP address, will need to reboot the matrix switcher, then the new IP address will take effect.



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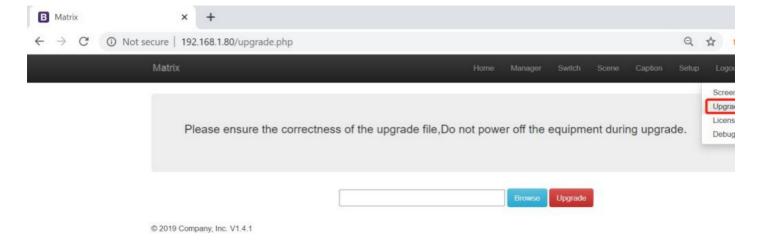
# More:

For the more interface, users mainly can do the firmware upgrade here.

Screen is for the other matrix models which with the touch screen, so users can monitor the touch screen switching status.

For the upgrade, users need to check with the factory to get the firm wares, the firmware is ".zip" format.

License and Debug is for factory engineering team to have the technical support.



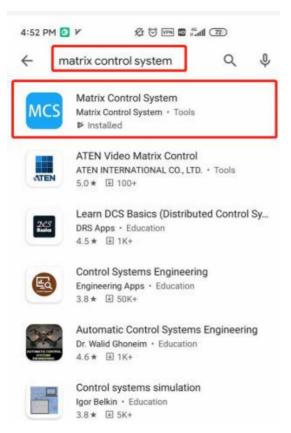
### Manager

This Manager interface, it allows the users to manage at most 254 units of the matrices which are installed at the same area network and at the same gateway but different IP addresses. As below are showing 3 matrices, users can rename each matrix and click button to do the switching or open in a new manage window.

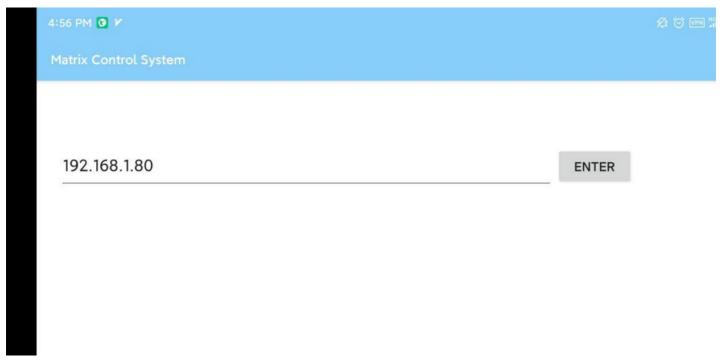


# APP Control

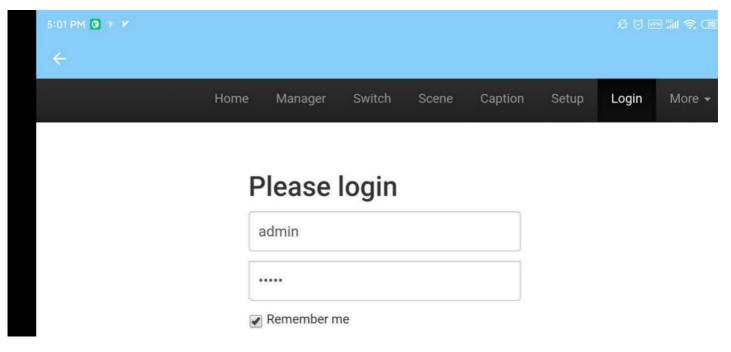
The matrix switchers also can support the iOS and Android APP control, users can search the keyword "Matrix Control System" in Apple store or the Google Play Store.



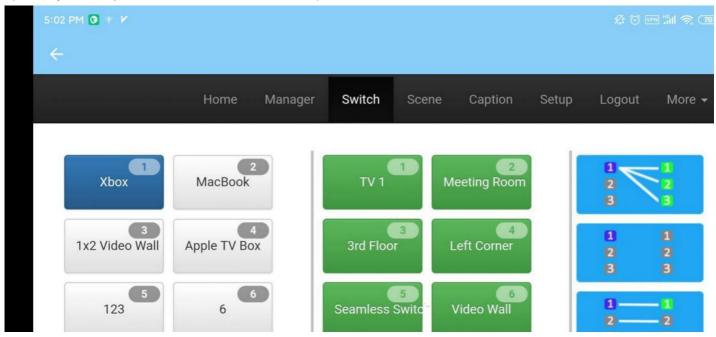
Step 1: Make sure the matrix well connected with the WIFI router, and the iPad/Android devices are connected to this same WIFI. Then open on the MCS (matrix control system) APP and Enter the IP address of the matrix switcher(the default IP addresses are: 192.168.0.80 or 192.168.1.80):



Step 2: After Enter the IP address, it will need to login, the default user name and password both are the admin:



Step 3: After log in successfully, users can do the same functions as the WEB GUI operation:



IR Remote Control

 $^{\star}$ Please NOTE: The EDID is not functional on this IR remote control for this  $9\times 9$  Modular Matrix Switcher as it couldn't support the EDID management.

# Inputs Switch:

number(1~9) ---> SWITCH ----> number(1~9) ---> ENTER

# Eg: input 1 to output 1:

1--> SWITCH ---> 1 ---> ENTER

# Inputs Switch to multiple outputs:

number(1~9) ---> SWITCH ---> number(1~9)-->ENTER--> number(1~9)--->ENTER

# Eg: input 2 to output 1,2,3,9:

2 --> SWITCH --> 1 --> ENTER ----> 2 ---> ENTER ----> 3 ---> ENTER ----> 9 ---> ENTER

# Scene Save(total 40 scenes):

number(0~9) ---> SAVE

# Eg: Save the current switch to scene2:

2--> SAVE(The LCD Screen will show 2 saved)

# Scene Recall(total 40 scenes):

number(0~9) ---> RECALL

Eg: Recall the scene 10:

10 --> RECALL(The LCD Screen will show 10 loaded)

#### COM Control Commands

RS232 cable with straight-through connection(USB-RS232 can be used directly to control)

Communication protocol:

Baud rate: 115200 Data bit: 8 Stop bit: 1

Check bit: None

#### Note:

- · Every command ends with a period "." and it can't be missing.
- · The letter can be capital or small letter
- · Switch success will return as "OK", and failed will return as "ERR".

# **Trouble Shooting and Attention**

No signal on the display?

- · Make sure all the power code well connected
- Check the display switcher and make sure it's in good condition
- Make sure the DVI cable between the device and display are short than 7 meters
- Reconnect the DVI cable and restart the system
- · Make sure the signal sources are on
- Check the cables between the devices and displays are connected correctly.
- Dial the switcher 7 to 1, then dial the switcher 1,2 and choose the corresponding inputs.
- Make sure the resolution less than WUXGA(1920\*1200)/ 60HZ
- Make sure the display can support the output resolution.

## After Sales

# Warranty Information

The Company warrants that the process and materials of the product are not defective under normal use and service for 2 (2) year following the date of purchase from the Company or its authorized distributors.

If the product does not work within the guaranteed warranty period, the company will choose and pay for the repair of the defective product or component, the delivery of the equivalent product or component to the user for replacement of the defective item, or refund the payment which users have made.

The replaced product will become the property of the Company.

The replacement product could be new or repaired.

Whichever is longer, any replacement or repaired of the product or component is for a period of ninety (90) days or the remaining period of the initial warranty. The Company shall not be responsible for any software, firmware, information, or memory data contained in, stored in, or integrated with the product repaired by the customer's return, whether or not during the warranty period.

## Warranty limitations and exceptions

Except above limited warranty, if the product is damaged by over usage, incorrectly use, ignore, accident, unusual physical pressure or voltage, unauthorized modification, alteration or services rendered by someone other than the Company or its authorized agent, the company will not have to bear additional obligations. Except using the product properly in the proper application or normal usage





# Documents / Resources





### Manuals+,

- home
- privacy