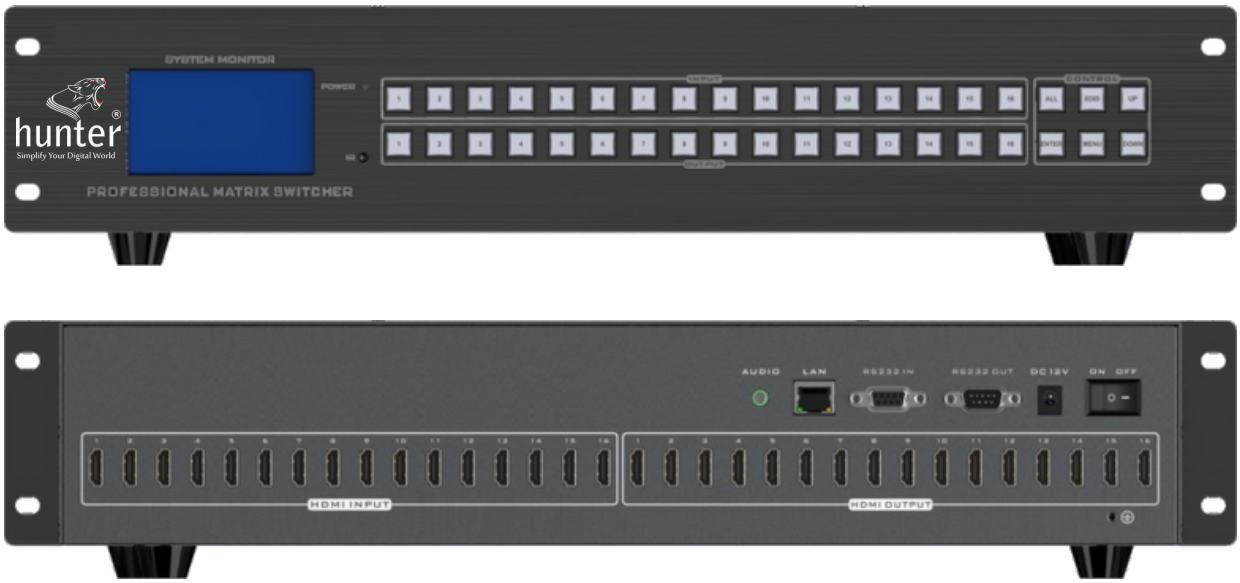
User Manual

9301-HUM-M44AL4K - Hunter HDMI 4K Matrix 4x4 With Audio

9302-HUM-M88AL4K - Hunter HDMI 4K Matrix 8x8 With Audio

9303-HUM-M1616AL4K - Hunter HDMI 4K Matrix 16x16 With Audio



Product Introduction

Hunter HDMI Matrix Switcher is a high performance professional switching device with built-in intelligent control. It is used to switch various audio and video input signals to any audio and video output channel synchronously or asynchronously. It adopts a unique processing method, which greatly improves the switching speed of the device. The control method is flexible, with long-life button panel operation. The large-screen illuminated matrix LCD screen displays various information. It provides a standard RS 232 communication interface to facilitate users to cooperate with various remote control devices (such as Crestron, AMX, CREATOR). Use it with an infrared remote control device.

HDMI matrix switchers are mainly used in radio and television projects, multimedia conference halls, large-screen display projects, TV teaching, command and control centers and other places.

Features

- Support maximum resolution, 4Kx2K@30HZ, 1080P@60HZ
- Full hardware architecture without CPU and operating system, the operation response speed is faster
- Using 3.4G high-bandwidth original switching chip, all signals can be switched synchronously
- The product has ESD electrostatic design inside, supports hot swapping, and the system is stable and reliable
- Each signal supports HDCP decoding, Blu-ray, 3D
- Support signal timing reshaping, 36-bit true color technology
- Supports fast channel switching and quick saving and retrieval of scene modes in one-to-one correspondence;
- Visual operation buttons, the input and output channels can be visualized through the button indicators; Supports panel buttons, infrared remote control, RS232 serial port, LAN, WEB and other control methods;
- Broadcasting and television-level switching chip, image switching can be completed with a single chip, and the integration level is higher
- Supports EDID rewritable EDID adaptive function to better adapt to various on-site display devices and improve compatibility;
- The input supports reception delay, which effectively compensates for time when the differential pairs are of unequal length;
- Audio de-embedding and switching functions, 3.5mm audio follows the last HDMI output interface;
- The software supports 16 built-in scene modes and can call any scene;
- Power-off memory on-site protection function, automatically saves the current scene status;
- The host display adopts English high-resolution display and supports LOGO and model burning customization.

Technical Parameters

brand	Hunter		
name	4K HDMI Matrix Switcher		
model	9301-HUM-M44AL4K	9302-HUM-M88AL4K	9303-HUM-M1616AL4K
Input interface	HDMI*4	HDMI*8	HDMI*16
Output interface	HDMI*4+3.5MM*1	HDMI*8+3.5MM*1	HDMI*16+3.5MM*1
HDMI compatible	HDMI 1.4		
HDCP compatible	HDCP 1.4		
Control method	Visual buttons, infrared remote control, RS232 serial port, LAN, WEB and other control methods		
Controlling software	Professional control software		
RS-232	Baud rate: 115200, Data bits: 8, Stop bits: 1, No parity		
Video format	4K*2K@30HZ		
Audio output	HDMI interface + left and right analog stereo		
Audio de-embedding	OUT 4 way follow	OUT 8 way follow	OUT 16 way follow
Power supply	DC 12V 2A	DC 12V 2A	DC 12V 3A
Power consumption	⩽8W	⩽15W	⩽30W
Electrostatic protection	Human body model: ±8kV (air discharge), ±4kV (contact discharge)		
high	1U	1U	2U
size (length*width* height MM)	430*138*45 (Excluding hanging ears)	430*138*45 (Excluding hanging ears)	480*252*90

Interface Display

4.1

9301-HUM-M44AL4K - Hunter HDMI 4K Matrix 4x4 With Audio

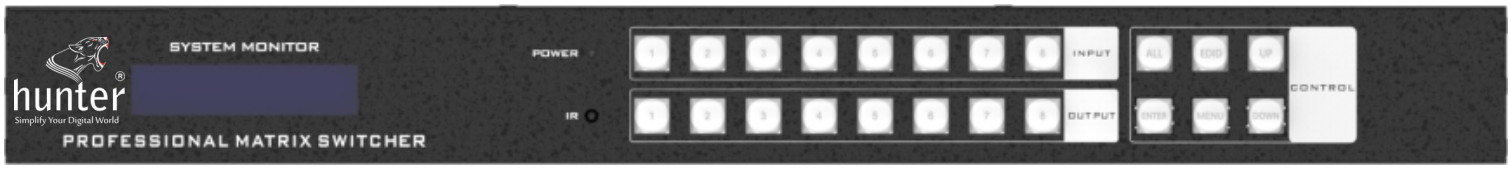
Front Panel

Rear Panel

4.2

9302-HUM-M88AL4K - Hunter HDMI 4K Matrix 8x8 With Audio

Front Panel

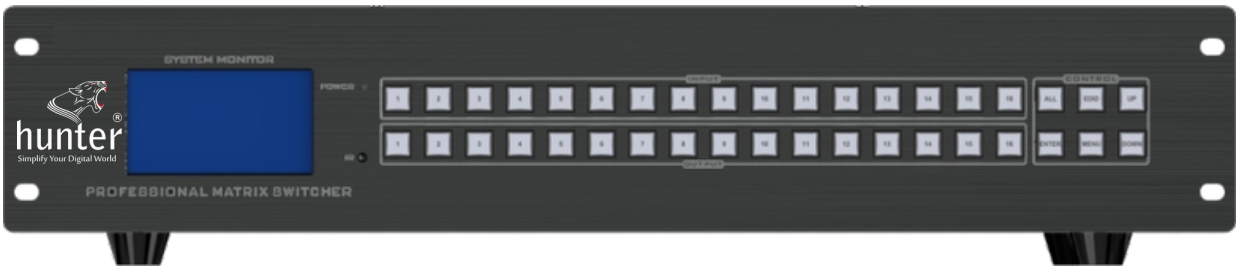


Rear Panel

4.3

9303-HUM-M1616AL4K - Hunter HDMI 4K Matrix 16x16 With Audio

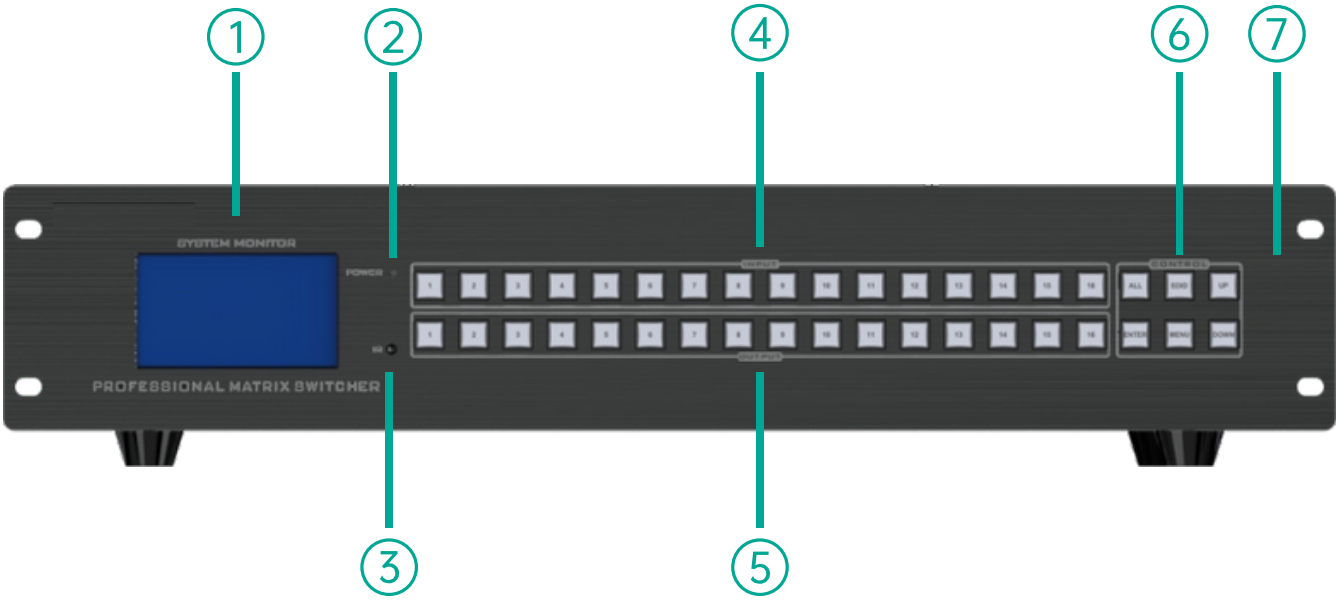
Front Panel



Rear Panel

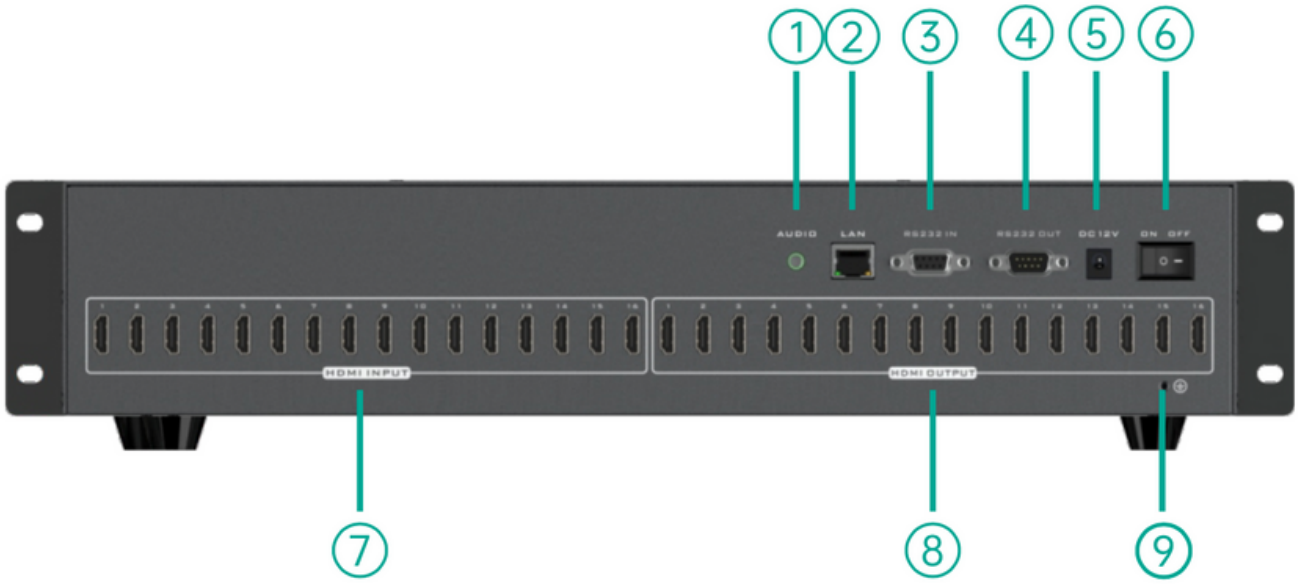
4.4

front Panel Interface - (16x16 is depicted)



serial number	name	illustrate
①	LCD	Display the current operating command of the device
②	POWER	Power indicator light (green light for normal operation, red light for standby)
③	IR	Infrared indicator light (receives commands transmitted by the infrared remote control)
④	IN PUT (0~16) key	Input channel switching button
⑤	OUT PUT (1~16) key	Output channel switching button
⑥	ALL key	Select all button
⑥	EDID key	EDID learning button
⑥	UP key	Up selection key
⑥	ENTER key	Enter
⑥	MENU key	menu
⑥	DOWN key	down select key
⑦	front panel bezel	For fixed use on the rack

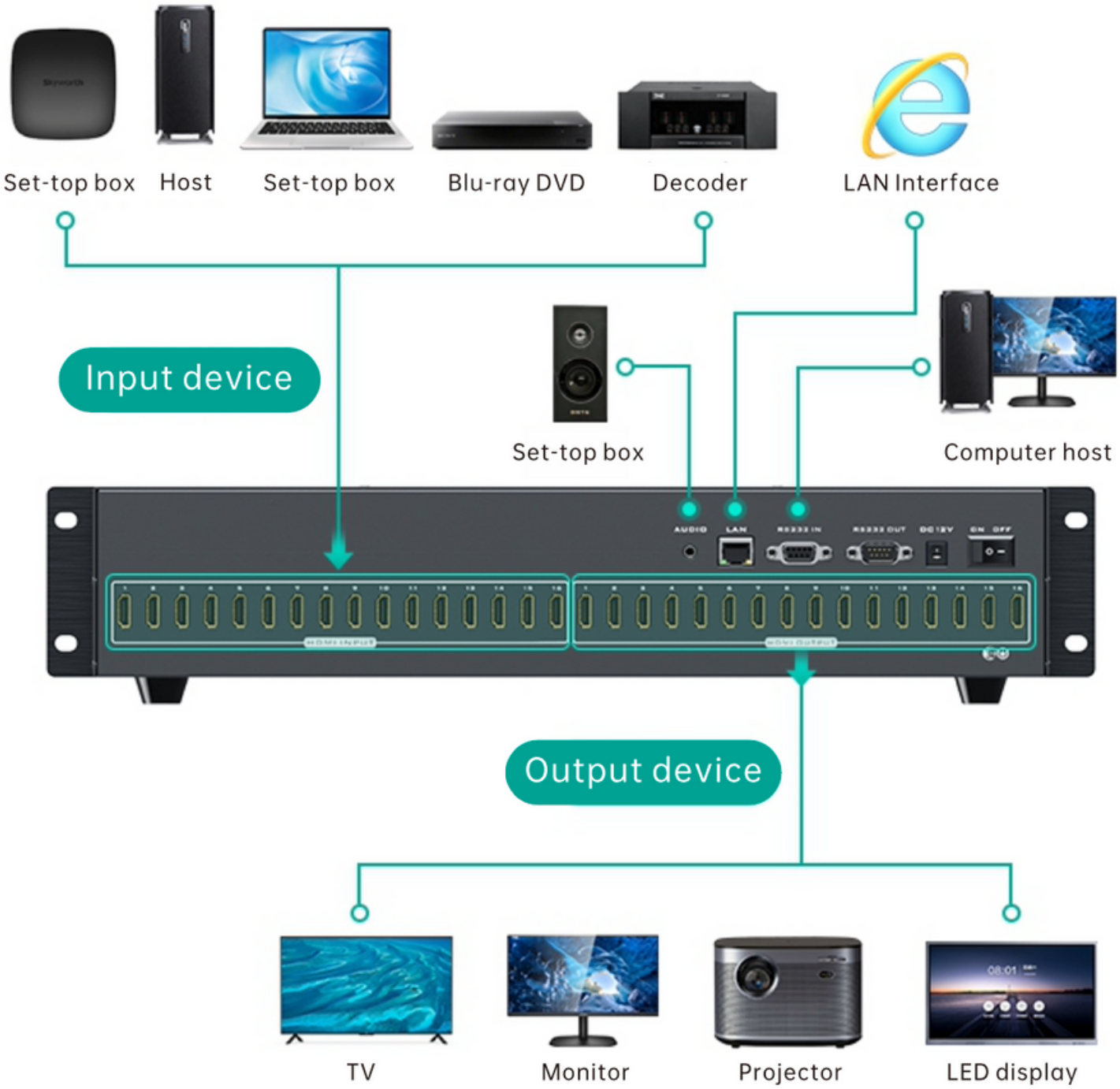
Rear Panel Interface - (16x16 is depicted)



serial number	name	illustrate
①	AUDIO	3.5MM audio output interface
②	LAN	network control interface
③	RS232 IN	RS232 control interface (connected to computer control matrix)
④	RS232 OUT	RS232 control interface (connect other RS232 interface devices in series)
⑤	DC 12V	Power interface (powering the matrix)
⑥	Power switch	On/Off Matrix
⑦	IN PUT	Signal input interface
⑧	OUT PUT	Signal output interface
⑨	Ground wire	Ground wire grounding identification

Product Connection

Product Connection Diagram (16x16 is depicted)



Operation

Equipment Operation and Instructions

Matrix panel description

Numeric keys

1. Input and output channel selection keys are used to set the input and output channels of audio and video signals or for current matrix status query, EDID selection, etc.

Function keys

1. "ALL" means selecting all input or output ports (different representations in different states) to switch selections and execute all switching commands.
"EDID" Press the EDID key, and the key panel will automatically prompt the input sources that can be learned. You can select a certain channel or all input sources to read. There are many internal EDID formats (4K30_DTS, 4K30 AC3, 4k30_5.1, 4K3OPStereo, HD8Suport4K, HD12DolbyDTS, HD12Stereo3D, HD8Lossless, HD8DolbyDTS, HD8Stereo, OUT1-OUT16, USER1-USER5) Do not unplug or plug in the HDMI cable, the EDID will be read automatically.

Remote Operation

s #	Name	Description
1		On/off function key
2		Mute button (turn on/off buzzer sound)
3	F1-F8 keys	Keep function keys
4	SAVE key	save scene key
5	RECALL key	Call scene key
6	Up and down keys	Page turning operation under menu function
7	left and right keys	Keep function keys
8	OK button	Confirm action
9	FUN key	Main menu function keys
10	CANCEL key	return key
11	0-9 keys	numeric keypad
12	ALL key	Execute all switching keys when switching
13	EDID key	EDID learning key

Remote control operation example

1. One-on-one operation steps: 1-->1-->OK
2. A pair of all operation steps: 1—>ALL—>OK
3. Save scene operation steps: Save-+Up and down keys (1-16 mode)->OK
4. Recall scene operation steps: Recall-'up and down keys (1-16 mode)-->OK

EDID learning operation steps:

1. Certain EDID->numeric keys (1-8)->up and down keys to select mode->OK
2. All EDID->ALL->Use up and down keys to select mode->OK

Remote Operation

QD21D-1PCB code table 00FF		
45	46	47
44	40	43
07	15	09
16	19	0D
0C	18	5E
08	1C	5A
42	52	4A

User code: 00FF			
A8			88
90	83	98	82
93	9C	8C	D6
97	95		96
98	9E		99
91	9A		A4
87	86		85
8B	8A		89
8F	8E		8D
84	92		94

Matrix Control Protocol

RS232 communication protocol and central control command code description:

Use direct connection cable (if USB-RS232 conversion cable is used, it can be directly inserted into the matrix serial port for control)

Communication protocol:

(Baud rate 115200, stop bit 1, data bit 8, parity bit none)

type	Control instruction	Function description
Hold to refer -to make	[x1]LL.	Switch the input of [x1] channel to the output of all channels
	[x0]ALL.	Turn off all outputs
	[x0]X[x1].	Output [x1] is closed
	ALL[1].	Set all channels to correspond one to one , such as: 1->1, 2->2, 3->3....
	[x1]X[x2].	Switch [x1] input to [x2] output
	[x1]X[x2]&[x3]&[x4].	Switch [x1] input to [x2], [x3], [x4] output
	Save[Y].	Save the current state to the [Y]th storage unit, [Y] is the 1-9 numeric key
	Recall[Y].	Save the current state to the [Y]th storage unit, [Y] is the 1-9 numeric key
	Beep ON.	Turn on the buzzer
	Beep OFF.	Turn off the buzzer

Matrix Control Protocol

Remark:

1. [x1], [x2], [x3], [x4] are the number of input and output channels, which are determined according to the controlled matrix. If the controlled matrix is an 8*8 matrix, their effective range is 1-10. If it exceeds the range, it will be treated as a command input error, and the " [" and "]" in the command are not sending characters ;
2. The ending character of each instruction cannot be missed. There is a "." at the end of each instruction. , punctuation marks are all punctuation marks in the English input method ;
3. Letters are not case-sensitive , and some instruction codes are illustrated with examples ;

- Switch the input of [x1] channel to the output of all channels: [x 1] All . Example : To switch the 3rd input to all output channels, enter '3 All.'
- Turn off all outputs : [x0]All, Example : Just enter 0All
- The [x1]th output is closed : [x0]X[x1]. Example : If you need to turn off output 1, just enter ‘0x1.’ If you need to turn off output one and output two at the same time, Then just enter '0x1.0x2.'
- Set to one-to-one correspondence for all channels : All[1]. Example : For example , a 16 * 16 HDMI matrix, after running, the status is: 1- >1, 2->2, 3- > 3 , 16- > 16 , enter ‘All1.'
- Video switching command: [x1]X[x2]. Example : If you want to switch the 3rd input to the 5th output, you only need to enter "3X5.". If you want to switch the 3rd input to the four outputs 5, 6, 7, and 8, you only need to enter "3X5&6&7&8." ."
- Save current status command: Save[Y]. Example : To save the current state to the 7th storage unit, enter "Save7."
- Recall the stored unit instruction: Recall[Y]. Example : To call out the state of the 7th storage unit and configure it as the input and output state of the matrix, enter Just enter "Recall7."
- Turning on and off the buzzer Example: BeepON. , turn on the buzzer, and you can hear the buzzer sound when switching. BeepOFF. , turns off the buzzer, and you will not hear the buzzer sound when switching .