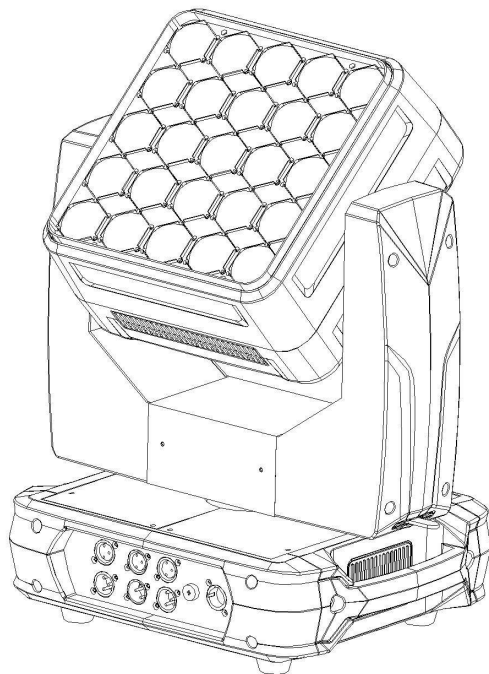


# MAGIC MATRIX

## 25\*4in1 LED Matrix Moving Head Zoom



This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.

### User manual

Please read the instructions carefully before use

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## statement

The product has well capability and intact packing when leave factory. All of the user should comply with warning item and manual, any misuse cause of the damages are not included in our guarantee, and also can not be responsible for any malfunction & problem owing to ignore the manual.

## 1. Safety Instructions

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.

- ☒ Unpack and check carefully there is no transportation damage before using the unit.
- ☒ Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- ☒ It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- ☒ The unit is for indoor use only. Use only in a dry location.
- ☒ The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- ☒ Disconnect main power before replacement or servicing.
- ☒ Make sure there are no flammable materials close to the unit while operating as it is fire hazard.
- ☒ Use safety cable when fixes this unit. DO NOT handle the unit by taking its head only, but always by taking its base.

☒ Maximum ambient temperature is Ta: 40°C. DO NOT operate it where the temperature is higher than this Unit surface temperature may reach up to 85°C. DO NOT touch the housing bare-hand during its operation. Turn off the power and allow about 15 minutes for the unit to cool down before replacing or serving.

☒ In the event of serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.

☒ DO NOT touch any wire during operation as high voltage might be causing electric shock.

### **Warning:**

☒ To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.

☒ DO NOT open the unit within five minutes after switching off.

☒ The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

### **Caution:**

There are no user serviceable parts inside the unit. DO NOT open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact your nearest dealer.

### **Installation:**

The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. And make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.

The equipment must be fixed by professionals. And it must be fixed at a place where is out of the touch of people and has no one pass by or under it.

## 2. Technical Specifications

**Light Sources:** 25x 4in1 RGBW LED

LENS Beam Angle: 6.5-60°

Power Consumption: 484W

Power Voltage: AC 100-240V, 50/60Hz

Dimension: 40\*31\*47CM

Net Weight: 14Kgs

### **Control**

Control Modes: DMX512, Artnet control

DMX mode : 13/ 24/88/113 Channels

Artnet mode : 75/100 channels

### **Pan/Tilt**

Pan/Tilt: infinite rotation

Pan/Tilt Resolution: 8/16 bit

### **Construction**

Display: 180° reversible LCD Display

Data In/Out socket: 3-pin & 5-pin XLR sockets

Powercon in

Protection Rating: IP20

### **Features**

Dimmer: 0~100% smooth dimming ; Two dimmers model in optional( delay or without delay)

Outstanding color macro effect

Fast, quiet operation and flicker free

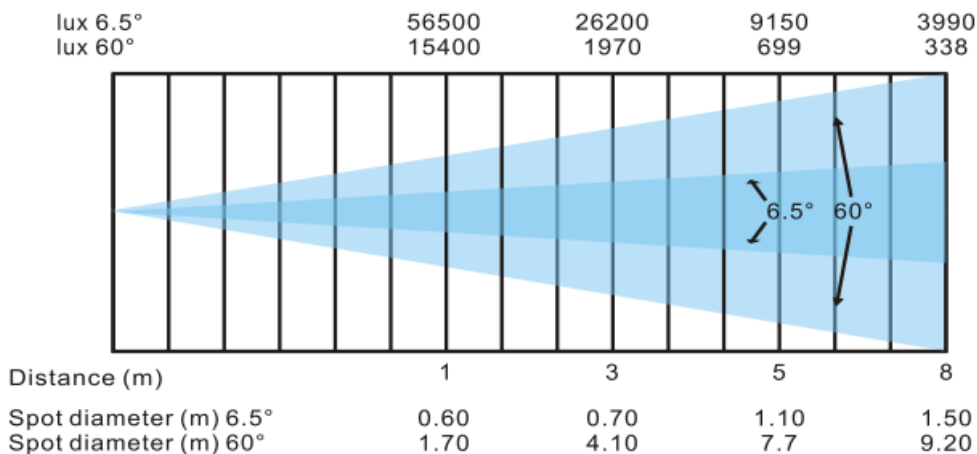
Led temperature protection & Speed of fan run automatic based on the temperature of the head.

Single led control, zoom effect, Artnet control , infinite Pan and tilt rotation.

### 3. Lux Data

Min Zoom range =6.5°

Max Zoom range =60°



### 4. How To Control The Unit

The DMX512 is widely used in intelligent lighting control, with a DMX 512 controller. connect several lights together, dmx in and dmx out,

3 pin XLR connectors: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)

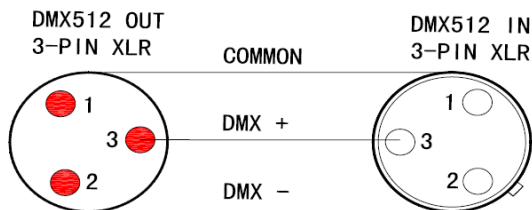
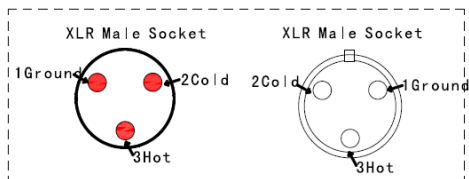


Figure2



#### XLR Pin Configuration

pin1=Ground

pin2=Data Compliment (negative)

pin3=Data true (positive)

## Display:

- MENU To select the programming functions
- DOWN To go backward in the selected functions
- uP To go forward in the selected functions
- ENTER To confirm the selected functions

## Set DMX Address Code

- 1 Press "**Menu**" to "Set DMX Address", and press "**ENTER**" keys to enter into
- 2 Show "Set DMX Address DMX Address:001", Press the "**UP and DOWN**" keys to amended
- 3 Press "**ENTER**" keys to save and Exit, Press the "**MENU**" Keys does not save and Exit
- 4 . Press 'left' and 'right' to reverse the display

## Menu

Address	Address001~XXX		Set DMX Address
---------	----------------	--	-----------------

	Dmx Value	ALL...		Display DMX Value
	LED Temperature	XXXC/F		
	Fixture Hours	Current Hours Total Hours Last Hours		
	Ethernet IP	X.X.X.X X.X.X.X		IP Address IP Mark
	Software Version	VX.X.X...		Software Version
Option Config	Pan Tilt	Pan Reverse Tilt Reverse Pan-Degree Encoder Pan Tilt Speed	ON/OFF ON/OFF 540/360 ON/ OFF Speed 1~ 4	
	Service	Password	XXXX	Password Code=123
		RDM PID	0-131071	RDM PID
		IP Address	Manual Set Art-Net On IP2 Art-Net On IP10	
		IP Mask	X.X.X.X	IP Mask
		Universe	• OFF,1-255	Art Universe
		LED Address	1-512	LED Address
	Source Select	DMX Only Art-Net DMX&Art-Net		Signal Select DMX、 Art、 DMX and Art
	Display	Shutoff	2-60m	
		Reverse	ON/OFF	
		Lock On	ON/OFF	

	Temperature C/F	Celsius Fahrenheit		
	Reset Default	ON/OFF		Reset To Factory Default
Manual Control	Manual	PAN ..... White All	Password=XXX ... White All =XXX	
	Test Channel	PAN ... White All		
	Calibration	Password PAN TILT ZOOM Rotation	Password=XXX PAN=XXX PAN=XXX ZOOM=XXX Rotation =XXX	
	Reset	Reset ALL	Reset All Motors	
DMX Mode Set	Standard Shape RGB Shape RGBW DMX&Net RGB DMX&Net RGBW	Standard Mode Shape Mode With RGB Shape Mode With RGBW Shape Mode With RGB While   DMX&Art-Net select Shape Mode With RGBW While   DMX&Art-Net select		

1. When DMX mode is DMX&NetRGB or DMX&NetRGBW, DMX&Artnet under Option Config /Source select should be selected. LED1-LED25 (RGBW) control by Artnet, and the rest controlled by DMX.

2. When DMX Mode set is DMX&NET RGB or DMX&NET RGBW. DMX&Artnet under source select was choosed. LED R/G/B/W will be controlled by the Artnet.LED address means from which channel begin to control. LED address=10, means control Red of first LED from channel 10 , channel 11 control Green of first LED, channel 12 control control Blue of first LED,channel



12 control White of first LED, channel 14 control RED of second LED.

DMX channel's functions and values (24/88/113DMX channels):

Mode/Channel						Value	Function
Standard	Sha pe RG B	Shap e RGB W		DMX &Net RGB	DMX& Net RGBW		
1	1	1	control by DMX	1	1		<b><u>PAN Movement 8bit :</u></b>
						0-255	Pan Movement
2	2	2		2		<b><u>Pan Fine 16bit</u></b>	
					0-255	Fine control of Pan movement	
3	3	3		3		<b><u>TILT Movement 8bit :</u></b>	
					0-255	Tilt Movement	
4	4	4		4		<b><u>Tilt Fine 16bit</u></b>	
					0-255	Fine control of Tilt movement	
5	5	5		5	5		<b><u>Speed Pan/Tilt movement:</u></b>
						0-225	max to min speed
						226-255	no function
6	6	6		6	6		<b><u>PAN Ritation :</u></b>
						0-127	No function
						128-189	PAN Rotation Forward min to max speed
						190-193	PAN Rotation Stop
						194-255	PAN Rotation Reverse min to max speed
7	7	7		7	7		<b><u>TILT Ritation :</u></b>
						0-127	No function
						128-189	TILT Rotation Forward min to max speed
						190-193	TILT Rotation Stop
						194-255	TILT Rotation Reverse min to max speed
8	8	8		10	10		<b><u>Zoom :</u></b>
						0-255	Zoom adjustment
9	9	9			9	9	

					0-31	Led trun off
					32-63	Led turn on
					64-95	Strobe effect slow to fast
					96-127	Led turn on
					128-159	Pulse-effect in sequences
					160-191	Led turn on
					192-223	Random strobe effect slow to fast
					224-255	Led turn on
10	10	10		10		<b><u>Dimmer intensity:</u></b>
					0-255	Intensity 0 to 100%
11	11	11		11		<b><u>Dimmer Mode:</u></b>
					0-20	Mode1
					21-40	Mode2
					41-60	Mode3
					61-80	Mode4
					81-100	Mode5
					100-255	Mode1
12	12	12		12		<b><u>LED Gamma:</u></b>
					0-59	Gamma 2.0
					60-119	Gamma 2.2
					120-179	Gamma 2.4
					180-239	Gamma 2.6
					240-255	Gamma 2.8
13						<b><u>Rainbow:</u></b>
					0-7	No function
					8-39	RED to YELLOW
					40-71	YELLOW to GREEN
					72-103	GREEN to CYAN
					104-135	CYAN to BLUE
					136-167	BLUE to MAGENTA
					168-199	MAGENTA to RED

						200-231	RED to WHITE
						232-255	Crossfading colours from slow to fast
14							<b><u>Color Presets:</u></b>
						0-4	No function
						5--9	White1
						10--14	White2
						15-19	White3
						20-24	White4
						25-29	White5
						30-34	White6
						35-39	Color1
						40-44	Color2
						45-49	Color3
						50-54	Color4
						55-59	Color5
						60-64	Color6
						65-69	Color7
						70-74	Color8
						75-79	Color9
						80-84	Color10
						85-89	Color11
						90-94	Color12
						95-99	Color13
						100-104	Color14
						105-109	Color15
						110-114	Color16
						115-119	Color17
						120-124	Color18
						125-129	Color19
						130-134	Color20
						135-139	Color21

						140-144	Color22
						145-149	Color23
						150-154	Color24
						155-159	Color25
						160-164	Color26
						165-169	Color27
						170-255	Reserved
15							<b><u>Color Presets Dimmer:</u></b>
						0-255	Dimmer 100 to 0%
16							<b><u>Chase Patterns:</u></b>
						0-5	No function
						6-10	Number'0'
						11-15	Number'1'
						16-20	Number'2'
						21-25	Number'3'
						26-30	Number'4'
						31-35	Number'5'
						36-40	Number'6'
						41-45	Number'7'
						46-50	Number'8'
						51-55	Number'9'
						56-60	A
						61-65	B
						66-70	C
						71-75	D
						76-80	E
						81-85	F
						85-90	G
						91-95	H
						96-100	I
						101-105	J

17						106-110	K
						111-115	L
						116-120	M
						121-125	N
						126-130	O
						131-135	P
						136-140	Q
						141-145	R
						146-150	S
						151-155	T
						155-160	U
						161-165	V
						166-170	W
						171-175	X
						176-180	Y
						181-185	Z
						186-190	0'-'9'
						191-195	A'-'Z'
						196-200	0'-'Z'
						201-205	Patter function1
						206-210	Patter function2
						211-215	Patter function3
						216-220	Patter function4
						221-225	Patter function5
						226-230	Patter function6
						231-235	Patter function7
						236-240	Patter function8
						241-245	Patter function9
						246-250	Patter function10
						251-255	Patter function11
							Chase Patterns Direction:

						0-49	↑Chase Up
						50-99	←Chase Left
						100-149	↓Chase Down
						150-255	→Chase Right
18							<b><u>Chase Speed:</u></b>
						0-125	Fast to Slow Backward
						126-130	Stop(Speed=0)
						131-255	Slow to Fast Forward
19							<b><u>Chase Fade:</u></b>
						0-255	Fade Chase
20							<b><u>Red LED -all arrays :</u></b>
						0-255	Red ( 0-Black , 255-100% Red )
21							<b><u>Green LED-all arrays :</u></b>
						0-255	Green ( 0-Black , 255-100% Green )
22							<b><u>Blue LED -all arrays :</u></b>
						0-255	Blue ( 0-Black , 255-100% Blue )
23							<b><u>White LED -all arrays :</u></b>
						0-255	White ( 0-Black , 255-100% White )
24	13	13		13	13		<b><u>Lamp on/off, reset, internal programs:</u></b>
						0-79	Normal
						80-99	All motor reset
						100-255	Normal
	14	14	control by ART_NET	1	1		<b><u>Red LED -array 1 :</u></b>
						0-255	Red ( 0-Black , 255-100% Red )
	15	15		2	2		<b><u>Green LED-array 1 :</u></b>
						0-255	Green ( 0-Black , 255-100% Green )
	16	16		3	3		<b><u>Blue LED -array 1 :</u></b>
						0-255	Blue ( 0-Black , 255-100% Blue )
		17			4		<b><u>White LED -array 1 :</u></b>
						0-255	White ( 0-Black , 255-100% White )

	17	18		4	5		<u>Red LED -array 2 :</u>
						0-255	Red ( 0-Black , 255-100% Red )
	18	19		5	6		<u>Green LED-array 2 :</u>
						0-255	Green ( 0-Black , 255-100% Green )
	19	20		6	7		<u>Blue LED -array 2 :</u>
						0-255	Blue ( 0-Black , 255-100% Blue )
		21			8		<u>White LED -array 2 :</u>
						0-255	White ( 0-Black , 255-100% White )
	20	22		7	9		<u>Red LED -array 3 :</u>
						0-255	Red ( 0-Black , 255-100% Red )
	21	23		8	10		<u>Green LED-array 3 :</u>
						0-255	Green ( 0-Black , 255-100% Green )
	22	24		9	11		<u>Blue LED -array 3 :</u>
						0-255	Blue ( 0-Black , 255-100% Blue )
		25			12		<u>White LED -array 3:</u>
						0-255	White ( 0-Black , 255-100% White )
	23	26		10	13		<u>Red LED -array 4 :</u>
						0-255	Red ( 0-Black , 255-100% Red )
	24	27		11	14		<u>Green LED-array 4 :</u>
						0-255	Green ( 0-Black , 255-100% Green )
	25	28		12	15		<u>Blue LED -array 4 :</u>
						0-255	Blue ( 0-Black , 255-100% Blue )
		29			16		<u>White LED -array 4 :</u>
						0-255	White ( 0-Black , 255-100% White )
	26	30		13	17		<u>Red LED -array 5 :</u>
						0-255	Red ( 0-Black , 255-100% Red )
	27	31		14	18		<u>Green LED-array 5 :</u>
						0-255	Green ( 0-Black , 255-100% Green )
	28	32		15	19		<u>Blue LED -array 5 :</u>
						0-255	Blue ( 0-Black , 255-100% Blue )
		33			20		<u>White LED -array 5 :</u>

					0-255	White ( 0-Black , 255-100% White )
	29	34		16	21	<u>Red LED -array 6 :</u>
					0-255	Red ( 0-Black , 255-100% Red )
	30	35		17	22	<u>Green LED-array 6 :</u>
					0-255	Green ( 0-Black , 255-100% Green )
	31	36		18	23	<u>Blue LED -array 6 :</u>
					0-255	Blue ( 0-Black , 255-100% Blue )
		37			24	<u>White LED -array 6:</u>
					0-255	White ( 0-Black , 255-100% White )
	32	38		19	25	<u>Red LED -array 7 :</u>
					0-255	Red ( 0-Black , 255-100% Red )
	33	39		20	26	<u>Green LED-array 7 :</u>
					0-255	Green ( 0-Black , 255-100% Green )
	34	40		21	27	<u>Blue LED -array 7 :</u>
					0-255	Blue ( 0-Black , 255-100% Blue )
		41			28	<u>White LED -array 7:</u>
					0-255	White ( 0-Black , 255-100% White )
	86	110		73	97	<u>Red LED -array 25:</u>
					0-255	Red ( 0-Black , 255-100% Red )
	87	111		74	98	<u>Green LED-array 25 :</u>
					0-255	Green ( 0-Black , 255-100% Green )
	88	112		75	99	<u>Blue LED -array 25 :</u>
					0-255	Blue ( 0-Black , 255-100% Blue )
		113			100	<u>White LED -array 25:</u>
					0-255	White ( 0-Black , 255-100% White )

When channel mode is DMX&ARTNET RGB or DMX&ARTNET RGBW. The yellow parts are (RGBW of LED1-LED25) channels controlled by Artnet, rest channels controlled by DMX.



## 5.How to control Unit with ArtNet

1. Setting IP Address, choose **Manual set** to manual input IP address, better choose **ON IP2** or **ON IP10** auto set.

2. **IP Mask**, input **255.0.0.0**

3. **Universe** choose **OFF** or **1**

4. **Source select**, input signal selection, there are three options:

**DMX only** → input signal is DMX

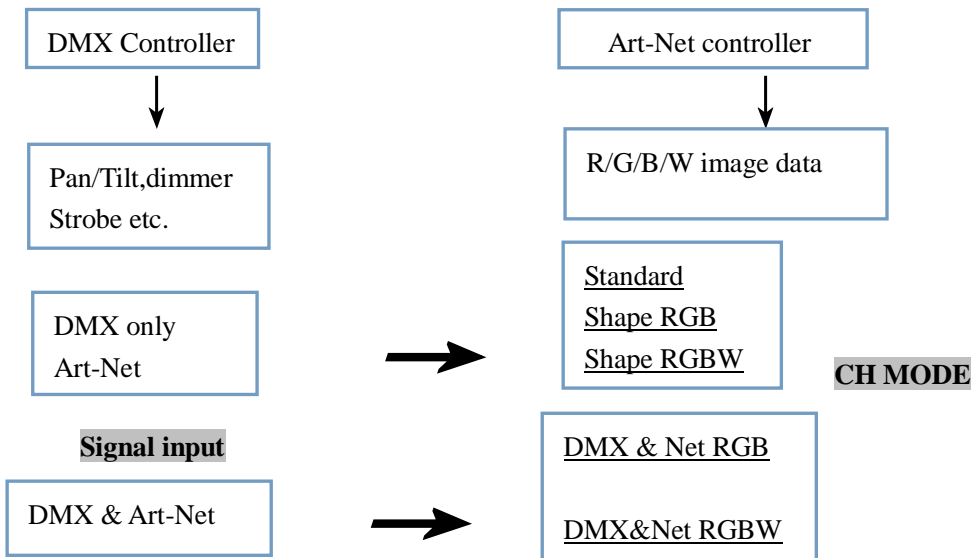
**Art-Net** → input Art-Net signal

**DMX & Art-Net** → Simultaneous input DMX & Art-Net signal

Notice:

- If Select **DMX only** or **Art-Net**, Channels mode only can choose **Standard** or **Shape RGB** or **Shape RGBW**. Then only have DMX or Art-Net signal separately control Pan/Tilt, Dimmer and RGBW, etc.
- If select **DMX & ArtNet**, means simultaneously controlled by DMX and Art-Net, and Art-Net only control RGBW Channels, DMX control others channels, meantime, CH MODE only can choose **DMX & Artnet RGB** or **DMX & Net RGBW**.

For example,if now choose **DMX & Artnet RGB** CH Mode, then CH 1 - CH13 are controlled by DMX, RGB matrix controlled by Art-Net.



5. When fixtures signal input select Art-Net or DMX & Art-Net, means selected Art-Net controller to control fixtures. But Art-Net controller also need set the same IP address, IP MARK as fixtures.

Setting via menu

**Information** → **Ethernet IP** → select search fixture's **IP Address**, **IP MARK** information.

## 6. Trouble shooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

### A. The unit does not work, no light and the fan does not work

1. Check the connection of power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED.

### B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

### C. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

## **7. Fixture Cleaning**

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- **Clean with soft cloth using normal glass cleaning fluid.**
- **Always dry the parts carefully.**
- **Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.**