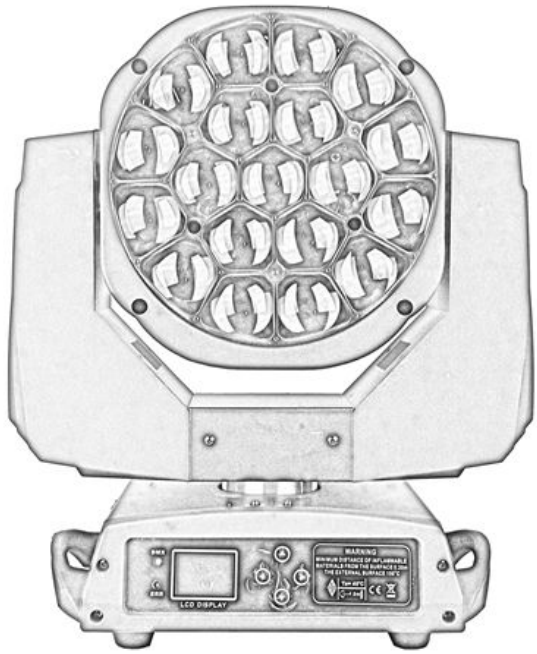
19*15W RGBW ZOOM MH

USER MANUAL



Before Using

What is include

- Equipment x 1
- Power cable with Plug x 1
- User manual x 1
- Iron holder x 2

Open Instruction

Help preserve the environment! Ensure that this product is recycled at the end of its life. Your supplier can give details of local arrangements for the disposal of products.

Please open the equipment carefully ,and check all the spare parts are included or not.If any part of the cause of the failure due to improper transportation or carton,please keep the packing materials and immediately inform the shipper to check.If the equipment must be returned to the factory,the equipment should be use the original carton and packaging.

AC Power Supply

The equipment power supply is able to adapt to the wide input voltage.Please confirm the input voltage is in the scale of rated voltage。The equipment can adapt to100V-240V AC voltage, Frequency 50-60HZ. It can not run a rheostat(variable resistor) or dimmer circuits.

Safety Instruction

This product is I level protection equipment,so it is must be connected well and connected by the professional people.

- Make sure the volatage don't be above or below which the user manual rated values.
- Confirm the power cord is not a sword cut or damaged.
- Must be cut off the power supply in the condition of no using or cleaning.
- Only allowed with the power cord plug connection.Please do not force when unplug the power cord to pull the plug.
- Be careful in the process of installation of equipment.Avoid touching the bare wire,otherwise it will suffer fatal shocks.。
- Don't look the light source directly,otherwise it will hurts the eyes.

- When choosing installation position of equipment and the equipment must be more than 0.5m distance between objects.
- Please use the equipment wires appropriate.
- Without the manufacturer's authorization or laypeople don't remove,repair and modification of equipment.
- The maximum operating temperture is 40℃，don't operate the equipment when it is over 40℃
- Do not connect the equipment to the dimmer equipment。
- Under 120V voltage,output power don't series more than 10 pcs equipment,voltage 230V.Output power don't series more than 15 pcs

Introduction

Specification

- Rated Voltage： AC100V～240V 50-60HZ
- Rated Power: 450W
- LED Qty: 19x15W high power 4 in 1 Osram LEDs
- LED Drive Current: 1000mA
- Beam Angle： 4-60°Zoom
- IP ： IP20
- DMX Mode： 21CH（Standard）/35CH(Shapes)/78CH(Extend) /97CH(Extend RGBW) / 97 CH(Extend RGBW))/92CH(Full)
- Net weight： 15 Kg
- Gross weight： 18.2Kg

Product feature

- XLR sockets input/output 3Pin
- Power input/output
- 3 kinds of control model: DMX512, Sound active,Master/slave
- LCD display screen
- Display screen can be turned upside down with 180°to fit the installation in different place
- Indoor operation temperature：-20°C～+40°C
- 5 DMX modes：21/35 /78/96/97/92CH
- dimmer:0-100% linear dimmer
- Pan/tilt：
  - 16bit fine pan/tilt control
  - Smooth and accurate locating
  - Pan：540°Tilt:210°
  - Motor rotation in forward and reverse can be setting up
- Each LED can be controlled individually，rich colour

- Smooth and accurate positioning
- Tilt：540°Pan270°rotation
- Tilt,Pan high-speed infinite rotation,speed can be adjusted.
- The scanning position can be memory,it will be automatically reset without expected movement after rotation.

- 0-20HZ Strobe、pulse strobe、Asynchronous stroboscopic effect.
- Super mixed color and rainbow effect.
- All the color can be for the total dimmer.
- 7 programmable program is invoked by controller.
- Fan cooling(fan will be change the speed with the temperature variation.

Temperature detecting system(If the temperature detection error,the light doesn't work).

Installation

Installation Requirements

- This equipment can be used in many places, it can hang and put on the ground。
- Choosing a suitable place to put or hang the equipment when installation.Must be use the special screws and hook to make sure the lamp's weight is in the weight range。
- When installing the equipment,ensure no inflammable and explosive goods at 0.5 meter distance.
- Please ask the professionals to install the equipment,any improper installation will cause personal injury or material damage.
- To prevent others entering the working ares below,the installation or maintenance of equipment with suitable and stable platform
- The equipment must be placed in ventilated place, at least 50 cm from the ground,please ensure that the vent without clogging.

Power supply connection

The equipment can be used in the wide voltage input。Please make sure the voltage is the scale of rated voltage when connecting the power.The equipment can adapt to 100V to 240 V AC voltage and 50-60 Hz.

- The front lens may be infinited rotation in foward and reverse
- 0-20HZ strobe
- Zoom range :4°-60°

DMX Signal Connection

1. Use DMX512 controller, use the DMX signal（male ）to plug into the first lamp(female）3 pin。
2. Put out of the equipment of the first signal wire(head),connected to the equipment of the next 3 pin plug(female),so on.See belowed pictures.

Operating Instruction

Control board function

Button	Function
MENU	Choose Menu or function exit
ENTER	Current show menu or enter into the current selected function
UP	Increase the value
DOWN	Decrease the value

Menu Map

MENU
Address
(001～512)
Run
DMX512
Auto1
Auto2
Sound1
Sound2
Dmx Mode
Normal
Standard
Shapes
Extended
Extended RGBW
FULL
Test
ALL
Pan&Tilt
LED
Set
Disp.setting
Shatoff time
02-60m
Flip display
ON/OFF
Key lock
ON/OFF
Disp flash
ON/OFF
Pan
Normal
Reverse
Tilt
Normal
Reverse
Info
Time Info
Power on
xxx(House)
Ttl Life Hrs
xxx(House)
Last Run Hrs
xxx(House)
Software Ver
Vxx
Reset
All Reset
No
Yes

DMX Channel Table

EXTENDED RGBW

CHAN-NEL	CHANNEL MODE
1	Red
2	Red fine
3	Green
4	Green fine
5	Blue
6	Blue fine
7	White
8	White fine
9	Linear CTO
10	Macro colour
11	Strobe
12	Dimmer
13	Dimmer Fine
14	PanPan
15	PanPan Fine
16	Tilt
17	Tilt Fine
18	Function
19	Reset
20	Zoom
21	Zoom Rotation
22	Red LED 1
23	Green LED 1
24	Blue LED 1
25	White LED 1
....	Red LED …
....	Green LED …
....	Blue LED …
....	White LED …
90	Red LED 18
91	Green LED 18
92	Blue LED 18
93	White LED 18
94	Red LED 19
95	Green LED 19
96	Blue LED 19
97	White LED 19

FULL

CHAN-NEL	CHANNEL MODE
1	Red
2	Red fine
3	Green
4	Green fine
5	Blue
6	Blue fine
7	White
8	White fine
9	Linear CTO
10	Macro colour
11	Strobe
12	Dimmer
13	Dimmer Fine
14	PanPan
15	PanPan Fine
16	Tilt
17	Tilt Fine
18	Function
19	Reset
20	Zoom
21	Zoom Rotation
22	Shape Selection
23	Shape Speed
24	Shape Fade
25	Shape R
26	Shape G
27	Shape B
28	Shape W
29	Shape Dimmer
30	Background Dimmer
31	Shape Transition
32	Shape Offset
33	Foreground Strobe （reserved）
34	Background Strobe（reserved）
35	Background Select（reserved）
36	Red LED 1
37	Green LED 1
38	Blue LED 1
....	Red LED …
....	Green LED …
....	Blue LED …
90	Red LED 19
91	Green LED 19
92	Blue LED 19

STANDARD

CHAN-NEL	CHANNEL MODE
1	Red
2	Red fine
3	Green
4	Green fine
5	Blue
6	Blue fine
7	White
8	White fine
9	Linear CTO
10	Macro colour
11	Strobe
12	Dimmer
13	Dimmer Fine
14	PanPan
15	PanPan Fine
16	Tilt
17	Tilt Fine
18	Function
19	Reset
20	Zoom
21	Zoom Rotation

SHAPES

CHAN-NEL	CHANNEL MODE
1	Red
2	Red fine
3	Green
4	Green fine
5	Blue
6	Blue fine
7	White
8	White fine
9	Linear CTO
10	Macro colour
11	Strobe
12	Dimmer
13	Dimmer Fine
14	PanPan
15	PanPan Fine
16	Tilt
17	Tilt Fine
18	Function
19	Reset
20	Zoom
21	Zoom Rotation
22	Shape Selection
23	Shape Speed
24	Shape Fade
25	Shape R
26	Shape G
27	Shape B
28	Shape W
29	Shape Dimmer
30	Background Dimmer
31	Shape Transition
32	Shape Offset
33	Foreground Strobe （reserved）
34	Background Strobe（reserved）
35	Background Select（reserved）

EXTENDED

CHAN-NEL	CHANNEL MODE
1	Red
2	Red fine
3	Green
4	Green fine
5	Blue
6	Blue fine
7	White
8	White fine
9	Linear CTO
10	Macro colour
11	Strobe
12	Dimmer
13	Dimmer Fine
14	PanPan
15	PanPan Fine
16	Tilt
17	Tilt Fine
18	Function
19	Reset
20	Zoom
21	Zoom Rotation
22	Red LED 1
23	Green LED 1
24	Blue LED 1
....	Red LED …
....	Green LED …
....	Blue LED …
76	Red LED 19
77	Green LED 19
78	Blue LED 19

NORMAL

CHAN-NEL	CHANNEL MODE
1	Pan
2	Pan Fine
3	Tilt
4	Tilt Fine
5	XY Speed
6	Zoom
7	Zoom Rotation
8	Dimmer
9	Strobe
10	Red
11	Green
12	Blue
13	White
14	Macro color
15	Shape Selection

16	Shape Speed
17	Shape Fade
18	Shape R
19	Shape G
20	Shape B
21	Shape W
22	Background Dimmer
23	Reset

MACRO COLOUR

BIT	LEE REFERENCE	COLOUR	BIT VALUE			
			R	G	B	W
209-255	--	White	255	235	66	255
208	--	Dirty White	255	255	122	255
207	197	Alice Blue	128	255	143	0
191-206	181	Congo Blue	77	0	255	0、
184-190	174	Dark Steel Blue	181	255	95	0
180-183	170	Deep lavender	255	168	64	0
179	169	Lilac Tint	255	199	49	0
175-178	165	Daylight Blue	82	214	90	0
174	164	Flame Red	255	46	2	0
172-173	162	Bastard Amber	255	181	28	0
168-171	158	Deep Orange	222	84	0	0
162-167	152	Pale Gold	253	171	26	0
157-161	147	Apricot	255	143	13	0
151-156	141	Bright Blue	0	255	87	0
149-150	139	Primary Green	77	255	0	0
147-148	137	Special lavender	219	197	79	0
146	136	Pale Lavender	255	197	61	0
145	135	Deep Golden Amber	255	58	0	0
142-144	132	Medium Blue	0	255	143	0
138-141	128	Bright Pink	255	53	36	0
136-137	126	Mauve	227	41	56	0
134-135	124	Dark Green	84	255	13	0
131-133	121	Leaf Green	206	255	0	0
129-130	119	Dark Blue	0	186	255	0
128	118	Light Blue	74	255	82	0
127	117	Steel Blue	206	255	56	0
126	116	Med Blu Green	206	255	56	0
125	115	Peacock Blue	51	255	51	0
123-124	113	Magenta	255	20	15	0
121-122	111	Dark Pink	255	109	33	0
120	110	Middle Rose	217	130	28	0
119	109	Light Salmon	255	138	31	0
118	108	English Rose	255	148	23	0
117	107	Light Rose	255	141	31	0
115-116	105	Orange	255	122	0	0
114	104	Deep Amber	255	166	0	0
113	103	Straw	230	160	0	69
112	102	Light Amber	237	163	0	0
110-111	100	Spring Yellow	245	202	0	0
100-109	90	Dark yellow green	41	219	0	0
89-99	79	Just Blue	0	194	130	0
78-88	68	Sky Blue	0	255	135	0
68-77	58	Lavender	243	117	133	199
62-67	52	Light Lavender	243	117	39	197
49-61	39	Pink Carnation	255	107	0	130
46-48	36	Medium Pink	255	87	0	107
45	35	Light Pink	255	112	0	141
35-44	25	Sunrise Red	255	83	2	0

32-34	22	Dark Amber	255	65	0	0
31	21	Gold Amber	255	100	0	0
30	20	Medium Amber	255	135	0	0
29	19	Fire	255	56	0	0
27-28	17	Surprise Peach	198	114	9	0
23-26	13	Straw Tint	152	115	9	0
20-22	10	Medium Yellow	156	126	0	0
19	-	Black	0	0	0	0
18	-	White 5000 K	255	137	0	193
17	-	White 3700 K	255	201	25	255
16	-	White 7000 K	216	237	61	255
15	-	Magenta	255	0	255	0
14	-	Yellow	255	255	0	0
13	-	Cyan	0	255	255	0
12	-	Blue	0	0	255	0
11	-	Green	0	255	0	0
10	-	Red	255	0	0	0
0-9	-	Macro color OFF	-	-	-	-

•FUNCTION

BIT	EFFECT
103 – 255	Reserved
52 – 57	Dimmer Curve 4
48 – 52	Dimmer Curve 3
43 – 47	Dimmer Curve 2
38 – 42	Dimmer Curve 1
24 – 37	Pan Tilt Normal xy
12 – 24	Pan Tilt Fast (Default)
0 – 11	Function off – rearmed

SHAPE SELECTION-SHAPE SPED-SHAPE OFFSET

BIT	SHAPE-SELECTION	Description	PANDOM COLORS 1	SHAPE SPEED	SHAPE OFFSET	SHAPE FADE	BACKGROUND SELECT(*3)
0-7	Macro OFF		N.a	N.a	N.a	N.a	N.a
8	Ring 1	Static effects. The ring or rings used by the macro are turned-on with the foreground colour.	N.a	N.a	N.a	0-15=Snap effect 16-255=Fade effect and gamma selection	For K10: 0-7=wash 8-15=Bkgnd rings selection 16-255=wash
9	Ring 2						
10	Ring 3						
11	No function						
12	Ring 1+2						
13	Ring 1+3						
14	No function						
15	Ring Opening (Closing)		Yes	0-63 = Radius size, static. 64-158 = max to min speed, Closing effect 159-160 = STOP 161-255 = min to max speed, Opening effect	0-9 → continuous 10-255→ random distribution of flash from 2 to 20 fixtures 从 2-20	0-15=Snap effect 16-255=Fade effect and gamma selection	For K10: 0-7=wash 8-15=Bkgnd rings selection 16-255=wash
16	Ring Opening (Closing) Filled		Yes				
17	Ring Opening (Close/open)		Yes	0-63 = Radius size, static. 64-158 = max to min speed, Closing effect 159-160 = STOP. 161-255 = min to max speed, Opening effect			
18	Ring Opening (Close/open) Filled		Yes				
19	Random pixels distributed on many fixtures		Yes	0-63 = STOP 64-158 = max to min speed, Instant-on +fadeout. 159-160 = STOP. 161-255 = min to max speed, FadeIn + Fade Out Fade or snap depending on fade channel	0-255 → select random distribution from 2 up to 20 fixtures 0-255 → select pixel density	0-15=Snap effect 16-255=Fade effect and gamma selection	For K10: 0-7=wash 8-15=Bkgnd rings selection 16-255=wash All Fixture: 255=Mirror Effect
20	Random pixels with variable density and speed		Yes				
21	Rainbow 1 Variable speed		N.a	0-63 = Angle 0-360°, static. 64-158 = max to min speed, c.cw rotation 159-160 = STOP 161-255 = min to max speed, cw rotation	0-255 → angle offset from 0 to 360°	0-15=Snap effect 16-255=Fade effect and gamma selection	For K10: 0-7=wash 8-15=Bkgnd rings selection 16-255=wash
22	Rainbow 2 Fixed speed with variable color offset		N.a	0-63 = STOP 64-158 = c.cw rotationc.cw 159-160 = STOP 161-255 = cw rotation The value64-158 or 161-255 change the rainbow angle offset (the orange starting angle).	N.a	0-15=Snap effect 16-255=Fade effect and gamma selection	For K10: 0-7=wash 8-15=Bkgnd rings selection 16-255=wash
23	Fan（3 ams）		N.a	0-63 = angle offset, 0-360° 64-158 = max to min speed, c.cw rotation 159-160 = STOP1 61-255 = min to max speed, cw rotation	0-255 → angle offset from 0 to 360°	0-15=Snap effect 16-255=Fade effect and gamma selection	For K10: 0-7=wash 8-15=Bkgnd rings selection 16-255=wash For all fixtures: -Marco 25,26, 255=Mirror Effect with bkgnd color -Macro27,28, 29,255=Show Alternative Color
24	Bar (2 ams)						
25	Half moon						
26	Triangle						
27	Two rotating bars of different colors						
28	Two rotating arcs of different colors						
29	Two rotating arcs of different colors and direction						

***3:**See Aleda k10 Background Rings Selection table

BIT	Shape Selection	Description	PANDOM COLORS 1	SHAPE SPEED	SHAPE OFFSET	SHAPE FADE	BACKGROUND SELECT(*3)(*4)
30	Bar 2 (Variable size)		N.a.	0-63=STOP, indexed speed 64-158=max to min speed,c.cw rotation, 159-160=STOP 161-255=min to max speed cc rotation	0-255→select shape width	Linear fade	For K10: 0-7=wash 8-15=Bkgnd rings selection 16-254=wash 255=Mirror effect with bkgnd color
31	Random explosion		Yes		0-255→select random distribution 0-255→select shape width	Linear fade and wake length	
32	Segment 2		N.a.				
33	No Function				0-255→select macro offset	Linear fade	
34	No Function						
35	Bumping section						
36	Ramp by 6				0-255→select shape width	Linear fade and wake length	**Note:** Mirror effect unavailable for macro 31. Macro 67,68,69:the mirror effect is available only for options 1,3,9
37	Ramp by 4						
38	Left/Right scrolling bar						
39	Up/down scrolling bar						
40	Bar 3				0-255→select macro offset	Linear fade	
41	No Function						
42	Vertical arc 2						
43	No Function						
44	Horizontal arc 2						
45	Mirrored pixel				0-255→select shape width	Linear fade and wake length	
46	Pixel animation 1						
47	Pixel animation 2						
48	Pixel animation 3						
49	Pixel animation 4						
50	Pixel animation 5						
51	Semi arc(Ramp/+)						
52	Bumping arc section				0-255→select macro offset	Linear fade	
53	Pixel animation 6						
54	Vertical ramp by 2				0-255→select shape width	Linear fade and wake length	
55	Following pixel by 2						
56	Syncopation				0-255→select macro offset	Linear fade	
57	Bumping 1						
58	Bumping 2						
59	Bumping 3						
60	Vertical pixel scrolling				0-255→select Macro width	Linear fade and wake length	
61	Random vertical section				0-255→select random distribution	Linear fade	
62	Random central section		Yes				
63	Random ring 2		Yes				
64	No Function		Yes				
65	Random ring 1+3		Yes				
66	Random ring 2+3		Yes				
67	Single pixel ring 1		N.a.		0-255→select the number of rotating	Linear fade and wake length	
68	Single pixel ring 2						
69	Single pixel ring 3						
70	Spiral				0-255→select macro width	Linear fade and wake length	
71-255			N.a.	N.a.	N.a	N.a.	

1:Random colors activation with foreground R,G B,W=0

•ZOOM ROTATION

BIT	EFFECT
255	FAST ROTATION
.	
.	
.	
.	
.	
193	SLOW ROTATION
191-192	STOP
190	SLOW ROTATION
.	
.	
.	
.	FAST ROTATION
.	
128	
127	
.	
.	
.	LINEAR ROTATION
.	
.	
.	
.	
0	

•ZOOM ROTATION(available on zoom channel from 0 bit to 42 bit)

BIT	MACRO EFFECT
193-255	CCW Rotation, speed from 3 RPH to 10 RPM
191-192.	Stop rotation
128-190.	CW Rotation, speed from 10 RPM to 3 RPH
127.	Indexed zone. Lens angle = 60.00
126	Indexed zone. Lens angle = 59.52
.....	
3	Indexed zone. Lens angle = 1.42
2	Indexed zone. Lens angle = 0.94
1	Indexed zone. Lens angle = 0.47
0	Indexed zone. Lens angle = 0

• ZOOM ROTATION(available on zoom channel at 255 bit only)

BIT	MACRO EFFECT
128-255	Lens offset angle: 0.00 degree
127.	Lens offset angle: +4.00 degree
126	Lens offset angle: +3.94 degree
125	Lens offset angle: +3.87 degree
.....	
1	Lens offset angle: +0.06 degree
0	Lens offset angle: 0.00 degree

• RED LED 1 to…
GREEN LED 1 to…
BLUE LED 1 to…
WHITE LED 1 to…

BIT	EFFECT
255	LED ON
0	LED OFF

Rainbows

DMX channel value:23-24 .

t simulates a rainbow effect.

The Shape Speed channel increases the speed and defines the rotation: from 126 (min speed) to 0 (max speed) counter clock wise rotation and from 129 (min speed) to 255 (max speed) clock wise rotation. With DMX value 127 or 128 the macro stays still.

For the macro 24 (Rainbow with fixed) the Shape Speed channel also defines angle offset (the orange sector starting angle)

Rotating shapes

DMX channel value: from 25 to 31.

Shapes available: Fan(3 arms). Bar (2 arms), Half Moon, Triangle, Two rotating bars of different colors, Two rotating arcs of different colors, Two rotating arcs of different colors and direction.

The Shape Speed channel increases the speed and defines the rotation: from 126 (min speed) to 0 (max speed) counter clock wise rotation and from 129 (min speed) to 255 (max speed) clock wise rotation With DMX value 127 or 128 the macro stays still.

The Shape Offset channel defines the angle offset from 0 (0 degree) to 255 (360 degree).

•SHAPE FADE

BIT	EFFECT
246-255	Smooth, fading curve with automatic gamma*
245	Smooth, fading curve gamma 2
243	Smooth, fading curve gamma 1,986
244	Smooth, fading curve gamma 1,993
.	
.	
.	
.	
.	
.	
.	
18	Smooth, fading curve gamma 0,513
17	Smooth, fading curve gamma 0,506
16	Smooth, fading curve gamma 0,5
0-15	Snap

• SHAPE RGBW SHAPE DIMMER BACKGROUND DIMMER

BIT	EFFECT
255	LED ON
0	LED OFF

• SHAPE TRANSITION

BIT	EFFECT
255	4 sec
.	
.	
216	3 sec
.	
.	
171	2 sec
.	
.	
113	1 sec
.	
.	
73	0,5 sec
.	
.	
5	100 ms
0-4	No fade

Macro Off
DMX channel value: from 0 to 7.
No shape effects activated Turns off any previously selected shape
Static Rings
DMX channel value: from 8 to 14 .
The ring or ring used by the macro are turned on with the foreground colour (Shape Red+Shape Green+Shape blue+Shape White)
Avaliable combinations: Ring 1 On, Ring 2 On,Ring 3
Dynamic Rings
DMX channel DMX
Dynamic Ring
DMX channel value: From 15 to 18.
The ring used by the macro are turned on sequentially, simulating an opening, closing or both.
The Shape Speed channel increases the speed from 126 (min speed) to 0 (max speed) for the Closing and closing/opening effects and from 129 (min speed) to 255 (max speed) for the opening and opening/closing effects, With DMX value=127 or 128the macro stays still
The Shape Offset channel defines the macro effect diction over a number of fixtures (affects also the behavior of a single fixture)
Dmx values from 0 to 9:continous distribution;
Dmx values from 10 to 255 random distribution of flash from 2 to 20 fixtures.
If foreground colors are all set to 0, the Random-Colors mode is activated
The color used by the macro changes at every restart.

Rings with variable radius
DMX channel value:19-20.
The Shape Speed channel defines the ring radius: 0=min, 255=max
Random pixels
DMX

Random pixels
DMX DMX channel value:21-22.
Leds are turned and off randomly .
The Shape Speed channel increases the speed and defines the fade fade effect for the leds: from 126(min speed) to 0(max speed) with a Instant-on/fade-out led effect and from 129 (min speed) to 255 (max speed)with a fade-in+fade-out led effect, At a DMX value of 127 and 128 the macro stays still.
For macro 21 the Shape Offset channel defines leds random distribution from 0 (2 fixtures) to 255 over a set of fixtures (20 fixtures)
For macro 22 the Shape Offset channel defines defines pixels density from 0 (min density) to 255 (max density)
If foreground colors are all set to 0 the Random-Colors mode is activated.
The Shape Smoothing channel adjusts the fading effect applied to the macro movement
The color used by the macro changes at every restart.