

VARYTEC

Manual



Mini Matrix Unlimited

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1. Safety instructions



- This device is suitable for indoor use (not outdoors) only.
- All modifications to the device will void the warranty.
- Repairs are to carry out by skilled personnel only.
- Use only fuses of the same type and original parts as spare parts.
- Protect the unit from rain and humidity to avoid fire and electric shocks.
- Make sure to unplug the power supply before opening the housing.

1.1. For safe and efficient operation

Be careful with heat and extreme temperature

Avoid exposing it to direct rays of the sun or near a heating appliance.
Not put it in a temperature bellow 32°F /0°C, or exceeding 104°F /40°C.

Keep away from humidity, water and dust

Do not place the set in a location with high humidity or lots of dust.
Containers with water should not be placed on the set.

To avoid placing on un-stable location

Select a level and stable location to avoid vibration.

Do not use chemicals or volatile liquids for cleaning

Use a clean dry cloth to wipe off the dust, or a wet soft cloth for stubborn dirt.

If out of work, contact sales agency immediately

Any troubles arose, remove the power plug soon, and contact with an engineer for repairing, do not open the cabinet by yourself, it might result a danger of electric shock.

Take care with the power cable

Never pull the power cable to remove the plug from the receptacle, be sure to hold the plug. When not using the device for an extended period of time, be sure to disconnect the plug from the receptacle.

Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems. Make sure the electrical connection is carried out by qualified personnel. All electrical and mechanical connections have to be carried out according to the European safety standards.

2. Designated use

This device was developed for professional use on stages, in discos, theatres etc. The device is only approved for a connection up to 230V 50/60 Hz AC voltage and only for indoor use.

Regular breaks during operation increase the lifetime of your device.

Avoid convulsions or any form of forceful impact during the installation or the start-up of the device.

Make sure that the device is not exposed excessive heat, humidity or dust at the place of installation. Take care that no cables are lying around. You would endanger your own safety and also the safety of a third party.

It is not allowed to operate or store the device in an environment in which spray water, rain, humidity or fog is expected. Humidity or very high atmospheric humidity could reduce the isolation of the device and could cause deathly electric shocks. If you use fog devices the device has not be exposed to a direct smoke jet. There has to be a safety distance of at least 0,5m between this device and the fog machine. Make sure that the saturation of the fog has to enable a visibility of at least 10m.

Operate the device not during thunderstorms. Surge voltages could destroy the device. Unplug the power supply during thunderstorms.

During the installation the use of the mounting bracket is obligatory.

Surrounding objects or surfaces should not be in contact with the device. And make sure that there is a distance of at least 3m between the lenses and illuminated objects.

Make sure that during the installation and removal of the device the area below the place of installation is basically cordoned off. This also applies to implementation of service.

The device has basically been protected by a suitable safety.

Make familiar yourself with the functions of the device before start-up. People without the experience should not handle with the device. The most cause of functional disorder is inappropriate handling.

Do not use chemicals or volatile liquids for cleaning. Use a clean dry cloth to wipe off the dust, or a wet soft cloth for stubborn dirt.

For transport use the original packing or designated accessory to avoid damages during the transport.

For reasons of safety unauthorized changes are forbidden.

A usage of the device which differs from usages which are described in this manual can cause damages of the device. In that case the warranty expires. Additional you should notice that every differed usage is related with dangers and can cause e.g. an electrical short, fire, electric shock or crash.

2.1. Overhead installation



Danger of life!

You have to observe the regulations of BGV C1 (formerly VBG 70) and EN60598-2-17 Installations are to carry out by skilled personnel only.

The suspension devices have to be build and measured so they can withstand for an hour the tenfold of the payload without suffering a permanent detrimental deformation.

Basically installation has to be made by using a second separate suspension. This can be e.g. a suitable net. The second suspension must be designed and attached so no part of the installation can fall down in case of failure.

During construction, reconstruction and deconstruction unnecessary stay in the range of moving areas, on lightning bridges, under elevated work stations or any other danger zones is forbidden.

The operator is obliged to following safety-related and mechanical facilities:

- Before the first start-up or after critical changes before restarting it has to be checked by an expert.
- Review in the frame of the inspection test at least all four years by an expert. .
- Review by a qualified person at least once a year.

How to carry out the overhead installation:

In tidal fall you should install the device out of the lounge area of people

IMPORTANT! Overhead installation requires a high level of experience. This includes knowledge of calculating the payload, used installation material and safety inspections of the used material and the projector whereas the required experience is not limited to this. Do not try to carry out installation yourself under any circumstances if you are not qualified. Contact a professional installer. An inappropriate installation can lead to injuries and/or damaged properties.

It is not allowed to install the device in the grip area of people.

If the device may hang from the ceiling or from high beams, the use of truss systems is mandatory. The device may not be installed so it can swing freely in the room.

Please note: Crashing down items can cause serious injuries! Do not install the projector, if you doubt the safety of a possible installation form!

Before installation make sure that the mounting surface has the ability to carry the tenfold point load of the own weight of the device.

Mount the device with the mounting-bracket to your trussing system using an appropriate clamp.

During overhead installation the device must be always secured by a safety rope which is designed to hold the twelfold weight of device. Only safety ropes with quick-release safety fastener elements may be used. Hang up the safety rope in the hole of the mounting bracket. Direct the rope over the truss or an appropriate fastening point. Hang up the end in the fastening element and tie up the locking nut. A safety rope once exposed to failing load or damaged may not be used furthermore.

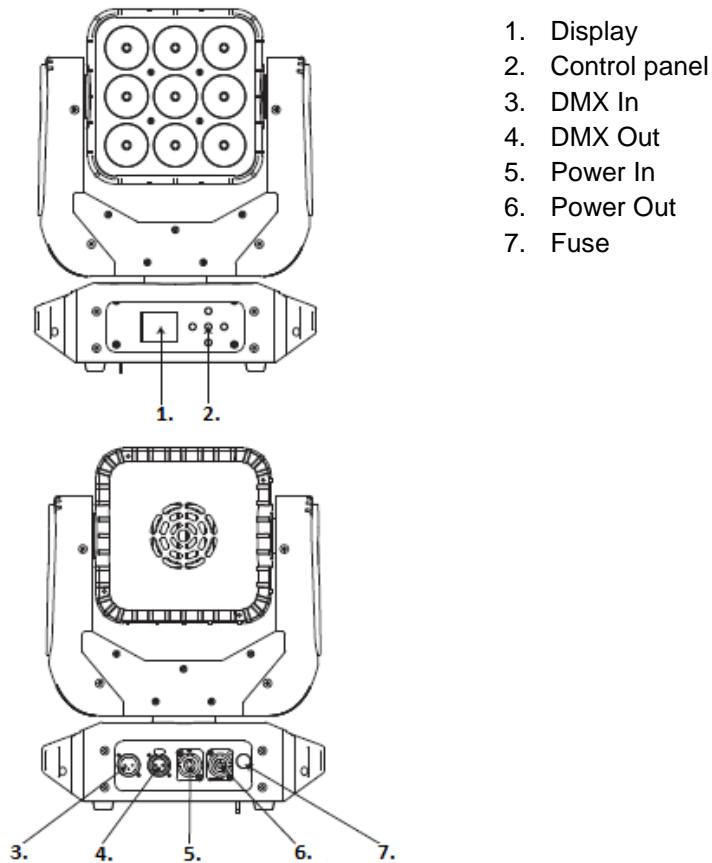
The maximum drop exceed must not exceed 20cm.

A safety rope once exposed to failing load or damaged may not be used furthermore.
Adjust the desired inclination angle via the mounting bracket and tighten the screw.

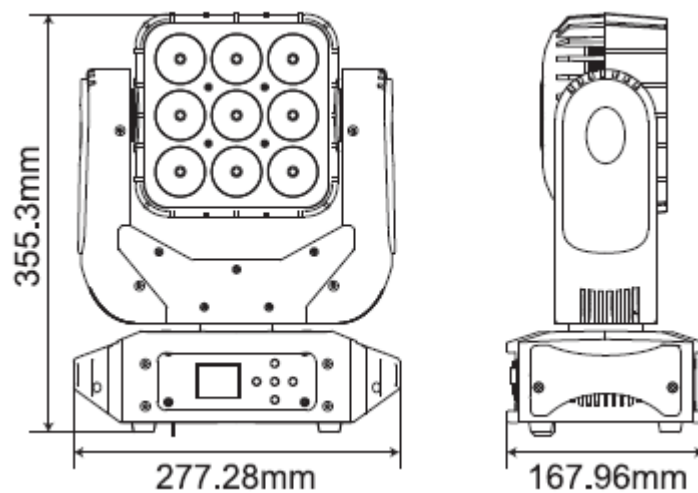
3. Introduction

Thank you for buying the **Mini Matrix Unlimited**. It is a powerful device.
For a successful installation and operation, please read this manual carefully.

3.1. Product overview



3.2. Dimensions



4. Connections

4.1. Electrical connections

If you wish to change the power supply settings, see the chapter Appendix. Connect the fixture to the mains with the enclosed power cable and plug. The earth has to be connected.

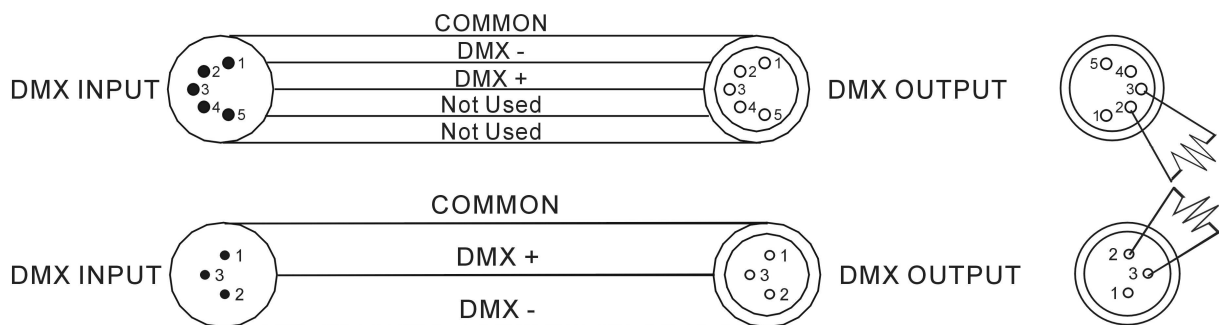
Cable (EU)	Cable (US)	Pin	International
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	⊕

4.2. DMX connections

To make a DMX512 connection go ahead like it is described in the picture. Make sure that you use shielded cable. 3pole or 5pole XLR cables are suitable. If you use a controller with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adapter.

4.3. DMX connection with terminator

Where the DMX cable has to run a long distance or the equipment is operated in an electrically noisy environment like a disco for installations, we recommend using a DMX terminator. This prevents corruption of the digital control signal by electrical noise. The DMX terminator is simply an XLR connector with a 120 Ω resistor between pins 2 and 3, which is then plugged into the XLR output socket of the last device in the series. Please look to the bottom drawings.



5. Control

Press MENU, with the arrow button UP/DOWN you can select the required point of menu. Confirm your selection with MENU. Select the setting you want to change with the arrow buttons UP/DOWN. Confirm your selection with MENU. You can make your settings with the arrow buttons RIGHT/LEFT and confirm with MENU. With the arrow button LEFT you can get back to main menu.

5.1. Structure of the menu

Menu	Submenu 1	Submenu 2	Submenu 3	Function
DMX Set	DMX Address	001 – 512		Setting the DMX address.
	DMX Channel	1Ch		Choosing a DMX mode.
		11CH		
		18CH		
		21CH		
	50CH			
Run Mode	Master – Slave	Master		Choosing a Master-Slave mode.
		Slave 1		
		Slave 2		
	Blackout	Yes / No		(De-)Activates the LEDs.
	Sound Play	On/Off		(De-)Activates the Sound-to-Light mode.
	Sound Sense	000 – 100		Setting the sensitivity of the microphone.
System Setting	Back Light	On / Off		(De-)Activates the backlight.
	Dimmer Curve	Mode 1 – Mode 4		Choosing the dimmer curve.
	Pan Inverse	Yes/No		(De-)Activates the inverted Pan.
	Tilt Inverse	Yes/No		(De-)Activates the inverted Tilt.
	Dimmer Speed	Yes/No		(De-)Activates the normal dimmer speed.
	Function Delay	No		The setting changes will be converting without delay.
		1s – 3s		Setting the delay time for setting changes.
	White Balance Set	Red	000 – 255	Dimmer red 0 – 100%.
Green		000 – 255	Dimmer green 0 – 100%	
Blue		000 – 255	Dimmer blue 0 – 100%	
Display Invert				The display will be inverted.
Fixture Test	Auto Test			Test mode.
	Manual Test	Pan	000 – 255	Manual control.
		Tilt		
		Red 1		
		Green 1		
		Blue 1		
White 1				

		...		
		Red 9		
		Green 9		
		Blue 9		
		White 9		
		Dimmer		
		Strobe		
Fixture Info	Temperature			Shows the current temperature.
	Fixture Time			Shows the current fixture times.
	Firmware Version			Shows the current software version.
	Boot Version			Shows the current boot version.

6. DMX chart

6.1. DMX mode 1 (1 channel)

Channel	Value from	Value to	Function
1	0	7	No function
	8	67	Automatic program 1
	68	127	Automatic program 2
	128	187	Automatic program 3
	188	247	Automatic program 4
	248	255	Random program

6.2. DMX mode 2 (11 channels)

Channel	Value from	Value to	Function
1	0	15	No function
	16	133	Rotation Pan clockwise fast - slow
	134	138	Stop
	139	255	Rotation Pan counter clockwise slow – fast
2	0	255	Pan
3	0	15	No function
	16	133	Rotation Tilt clockwise fast –slow
	134	138	Stop
	139	255	Rotation Tilt counter clockwise slow – fast
4	0	255	Tilt
5	0	15	No function
	16	131	Strobe slow – fast
	132	139	No function
	140	181	Opening pulse effect
	182	189	No function
	190	231	Closing pulse effect
	232	239	No function
	240	247	Strobe (Random)
248	255	No function	
6	0	255	Dimmer red 0 -100%.
7	0	255	Dimmer green 0 – 100%.
8	0	255	Dimmer blue 0 – 100%.
9	0	255	Dimmer white 0 – 100%
10	0	255	Dimmer 0 – 100%.
11	0	69	No function
	70	79	Blackout while Pan-/Tilt-Movements
	80	199	No function
	200	209	Reset
	210	239	No function
	240	255	Stand-Alone

6.3. DMX mode 3 (18 channels)

Channel	Value from	Value to	Function
1	0	15	No function
	16	133	Rotation Pan clockwise fast - slow
	134	138	Stop
	139	255	Rotation Pan counter clockwise slow – fast
2	0	255	Pan
3	0	255	Pan fine
4	0	15	No function
	16	133	Rotation Tilt clockwise fast –slow
	134	138	Stop
	139	255	Rotation Tilt counter clockwise slow – fast
5	0	255	Tilt
6	0	255	Tilt fine
7	0	255	Pan/Tilt Speed fast – slow
8	0	15	No function
	16	35	Pan-/Tilt-Macro 1
	36	55	Pan-/Tilt-Macro 2
	56	75	Pan-/Tilt-Macro 3
	76	95	Pan-/Tilt-Macro 4
	96	115	Pan-/Tilt-Macro 5
	116	135	Pan-/Tilt-Macro 6
	136	155	Pan-/Tilt-Macro 7
	156	175	Pan-/Tilt-Macro 8
	176	195	Pan-/Tilt-Macro 9
	196	215	Pan-/Tilt-Macro 10
	216	235	Pan-/Tilt-Macro 11
236	255	Pan-/Tilt-Macro 12	
9	0	255	Speed for channel 8 slow – fast
10	0	69	No function
	70	79	Blackout while Pan-/Tilt-Movements
	80	199	No function
	200	209	Reset
	210	239	No function
	240	255	Stand-Alone
11	0	255	Dimmer 0 – 100%
12	0	15	No function
	16	131	Strobe slow – fast
	132	139	No function
	140	181	Opening pulse effect
	182	189	No function
	190	231	Closing pulse effect
	232	239	No function
	240	247	Strobe (Random)
	248	255	No function

13	0	255	Dimmer red 0 -100%.
14	0	255	Dimmer green 0 – 100%.
15	0	255	Dimmer blue 0 – 100%.
16	0	255	Dimmer white 0 – 100%
17	0	7	No function
	8	11	Color 1
	12	15	Color 2
	16	19	Color 3
	20	22	Color 4
	23	26	Color 5
	27	30	Color 6
	31	34	Color 7
	35	37	Color 8
	38	41	Color 9
	42	45	Color 10
	46	48	Color 11
	49	52	Color 12
	53	56	Color 13
	57	60	Color 14
	61	63	Color 15
	64	67	Color 16
	68	71	Color 17
	72	75	Color 18
	76	78	Color 19
	79	82	Color 20
	83	86	Color 21
	87	89	Color 22
	90	93	Color 23
	94	97	Color 24
	98	101	Color 25
	102	104	Color 26
	105	108	Color 27
	109	112	Color 28
	113	115	Color 29
	116	119	Color 30
	120	123	Color 31
124	127	Color 32	
128	131	Color macro 1	
132	135	Color macro 2	
136	139	Color macro 3	
140	143	Color macro 4	
144	147	Color macro 5	
148	151	Color macro 6	
152	155	Color macro 7	
156	159	Color macro 8	

	160	163	Color macro 9
	164	167	Color macro 10
	168	171	Color macro 11
	172	175	Color macro 12
	176	179	Color macro 13
	180	183	Color macro 14
	184	187	Color macro 15
	188	191	Color macro 16
	192	195	Color change 1
	196	199	Color change 2
	200	203	Color change 3
	204	207	Color change 4
	208	211	Color change 5
	212	215	Color change 6
	216	219	Color change 7
	220	223	Color change 8
	224	227	Color change 9
	228	231	Color change 10
	232	235	Color change 11
	236	239	Color change 12
	240	243	Color change 13
	244	247	Color change 14
	248	251	Color change 15
	252	255	Color change 16
18	0	255	Speed for channel 17 slow - fast

6.4. DMX mode 4 (21 channels)

Channel	Value from	Value to	Function
1	0	15	No function
	16	133	Rotation Pan clockwise fast - slow
	134	138	Stop
	139	255	Rotation Pan counter clockwise slow – fast
2	0	255	Pan
3	0	255	Pan fine
4	0	15	No function
	16	133	Rotation Tilt clockwise fast –slow
	134	138	Stop
	139	255	Rotation Tilt counter clockwise slow – fast
5	0	255	Tilt
6	0	255	Tilt fine
7	0	255	Pan/Tilt Speed fast – slow
8	0	15	No function
	16	35	Pan-/Tilt-Macro 1
	36	55	Pan-/Tilt-Macro 2
	56	75	Pan-/Tilt-Macro 3

	76	95	Pan-/Tilt-Macro 4
	96	115	Pan-/Tilt-Macro 5
	116	135	Pan-/Tilt-Macro 6
	136	155	Pan-/Tilt-Macro 7
	156	175	Pan-/Tilt-Macro 8
	176	195	Pan-/Tilt-Macro 9
	196	215	Pan-/Tilt-Macro 10
	216	235	Pan-/Tilt-Macro 11
	236	255	Pan-/Tilt-Macro 12
9	0	255	Speed for channel 8 slow – fast
10	0	69	No function
	70	79	Blackout while Pan-/Tilt-Movements
	80	199	No function
	200	209	Reset
	210	239	No function
240	255	Stand-Alone	
11	0	255	Dimmer 0 – 100%
12	0	15	No function
	16	131	Strobe slow – fast
	132	139	No function
	140	181	Opening pulse effect
	182	189	No function
	190	231	Closing pulse effect
	232	239	No function
	240	247	Strobe (Random)
	248	255	No function
13	0	7	No function
	8	15	LED 1 Color 1
	16	23	LED 1 Color 2
	24	31	LED 1 Color 3
	32	39	LED 1 Color 4
	40	47	LED 1 Color 5
	48	55	LED 1 Color 6
	56	63	LED 1 Color 7
	64	71	LED 1 Color 8
	72	79	LED 1 Color 9
	80	87	LED 1 Color 10
	88	95	LED 1 Color 11
	96	103	LED 1 Color 12
	104	111	LED 1 Color 13
	112	119	LED 1 Color 14
	120	127	LED 1 Color 15
	128	135	LED 1 Color 16
	136	143	LED 1 Color 17
	144	151	LED 1 Color 18
152	159	LED 1 Color 19	

	160	167	LED 1 Color 20
	168	175	LED 1 Color 21
	176	183	LED 1 Color 22
	184	191	LED 1 Color 23
	192	199	LED 1 Color 24
	200	207	LED 1 Color 25
	208	215	LED 1 Color 26
	216	223	LED 1 Color 27
	224	231	LED 1 Color 28
	232	239	LED 1 Color 29
	240	247	LED 1 Color 30
	248	255	LED 1 Color 31
...
21	0	7	No function
	8	15	LED 9 Color 1
	16	23	LED 9 Color 2
	24	31	LED 9 Color 3
	32	39	LED 9 Color 4
	40	47	LED 9 Color 5
	48	55	LED 9 Color 6
	56	63	LED 9 Color 7
	64	71	LED 9 Color 8
	72	79	LED 9 Color 9
	80	87	LED 9 Color 10
	88	95	LED 9 Color 11
	96	103	LED 9 Color 12
	104	111	LED 9 Color 13
	112	119	LED 9 Color 14
	120	127	LED 9 Color 15
	128	135	LED 9 Color 16
	136	143	LED 9 Color 17
	144	151	LED 9 Color 18
	152	159	LED 9 Color 19
	160	167	LED 9 Color 20
	168	175	LED 9 Color 21
	176	183	LED 9 Color 22
	184	191	LED 9 Color 23
	192	199	LED 9 Color 24
	200	207	LED 9 Color 25
208	215	LED 9 Color 26	
216	223	LED 9 Color 27	
224	231	LED 9 Color 28	
232	239	LED 9 Color 29	
240	247	LED 9 Color 30	
248	255	LED 9 Color 31	

6.5. DMX mode (50 channels)

Chanel	Value from	Value to	Function
1	0	15	No function
	16	133	Rotation Pan clockwise fast - slow
	134	138	Stop
	139	255	Rotation Pan counter clockwise slow – fast
2	0	255	Pan
3	0	255	Pan fine
4	0	15	No function
	16	133	Rotation Tilt clockwise fast –slow
	134	138	Stop
	139	255	Rotation Tilt counter clockwise slow – fast
5	0	255	Tilt
6	0	255	Tilt fine
7	0	255	Pan/Tilt Speed fast – slow
8	0	15	No function
	16	35	Pan-/Tilt-Macro 1
	36	55	Pan-/Tilt-Macro 2
	56	75	Pan-/Tilt-Macro 3
	76	95	Pan-/Tilt-Macro 4
	96	115	Pan-/Tilt-Macro 5
	116	135	Pan-/Tilt-Macro 6
	136	155	Pan-/Tilt-Macro 7
	156	175	Pan-/Tilt-Macro 8
	176	195	Pan-/Tilt-Macro 9
	196	215	Pan-/Tilt-Macro 10
	216	235	Pan-/Tilt-Macro 11
236	255	Pan-/Tilt-Macro 12	
9	0	255	Speed for channel 8 slow – fast
10	0	69	No function
	70	79	Blackout while Pan-/Tilt-Movements
	80	199	No function
	200	209	Reset
	210	239	No function
240	255	Stand-Alone	
11	0	255	Dimmer 0 – 100%
12	0	15	No function
	16	131	Strobe slow – fast
	132	139	No function
	140	181	Opening pulse effect
	182	189	No function
	190	231	Closing pulse effect
	232	239	No function
	240	247	Strobe (Random)
248	255	No function	

13	0	255	Dimmer red LED 1 0 -100%.
14	0	255	Dimmer green LED 1 0 – 100%.
15	0	255	Dimmer blue LED 1 0 – 100%.
16	0	255	Dimmer white LED 1 0 – 100%
...
45	0	255	Dimmer red LED 9 0 -100%.
46	0	255	Dimmer green LED 9 0 – 100%.
47	0	255	Dimmer blue LED 9 0 – 100%.
48	0	255	Dimmer white LED 9 0 – 100%
49	0	7	No function
	8	11	Color 1
	12	15	Color 2
	16	19	Color 3
	20	22	Color 4
	23	26	Color 5
	27	30	Color 6
	31	34	Color 7
	35	37	Color 8
	38	41	Color 9
	42	45	Color 10
	46	48	Color 11
	49	52	Color 12
	53	56	Color 13
	57	60	Color 14
	61	63	Color 15
	64	67	Color 16
	68	71	Color 17
	72	75	Color 18
	76	78	Color 19
	79	82	Color 20
	83	86	Color 21
	87	89	Color 22
	90	93	Color 23
	94	97	Color 24
	98	101	Color 25
	102	104	Color 26
	105	108	Color 27
	109	112	Color 28
	113	115	Color 29
	116	119	Color 30
	120	123	Color 31
124	127	Color 32	
128	131	Color macro 1	
132	135	Color macro 2	
136	139	Color macro 3	
140	143	Color macro 4	

	144	147	Color macro 5
	148	151	Color macro 6
	152	155	Color macro 7
	156	159	Color macro 8
	160	163	Color macro 9
	164	167	Color macro 10
	168	171	Color macro 11
	172	175	Color macro 12
	176	179	Color macro 13
	180	183	Color macro 14
	184	187	Color macro 15
	188	191	Color macro 16
	192	195	Color change 1
	196	199	Color change 2
	200	203	Color change 3
	204	207	Color change 4
	208	211	Color change 5
	212	215	Color change 6
	216	219	Color change 7
	220	223	Color change 8
	224	227	Color change 9
	228	231	Color change 10
	232	235	Color change 11
	236	239	Color change 12
	240	243	Color change 13
	244	247	Color change 14
	248	251	Color change 15
	252	255	Color change 16
50	0	255	Speed for channel 49 slow - fast

7. Technical data

Power supply	
Voltage	100 – 240 V AC / 50-60 Hz
Power consumption max.	170 W
Light source	
LM type	LED 4in1
Color spectrum	RGBW
Power	135 W
Number / Power	9x 15 W
Optics	
Beam angle	5°
Functions	
Pan	Unlimited
Tilt	Unlimited
Connections	
Power in	IEC
Power out	IEC
XLR in/out	3pol
Controlling	
Sound-to-Light	Yes
Automatic	Yes
Master-Slave	Yes
DMX512	Yes
Number of channels	1 / 11 / 18 / 21 / 50 channels
Hardware	
Protection class	IP20
Suitability	Indoor
Dimensions (L/B/H)	278 x 168 x 356 mm
Weight	6,2 kg

Importer:

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