



LED CUBE 49



User Manual

Please read this manual carefully before use!

T ABLE OF CONTENTS

PART 1 PRODUCT (GENERAL).....	1.
1.1-- <i>PRODUCT INTRODUCTION</i>	1.
1.2-- <i>PRODUCT FEATURES</i>	1.
1.3-- <i>TECHNICAL SPECIFICATIONS</i>	2.
1.4-- <i>PHOTOMETRIC DATA</i>	3.
1.5-- <i>SAFETY WARNING</i>	4.
PART 2 INSTALLATION.....	5.
2.1-- <i>MOUNTING</i>	5.
2.2-- <i>POWER CONNECTION</i>	6.
2.3-- <i>ENTERTING UP WITH ADMX512 CONTROLLER</i>	7.
2.3-1-- <i>DMX512 ADDRESSING WITHOUT ID ADDRESSING</i>	7.
2.3-2-- <i>DMX512 ADDRESSING WITH ID ADDRESS</i>	7.
PART 3 DISPLAY PANEL OPERATION.....	8.
3.1-- <i>BASIC</i>	8.
3.2-- <i>MENU</i>	9.
3.3-- <i>STATIC COLOR</i>	10.
3.4-- <i>AUTO</i>	10.
3.5-- <i>DMX ADDRESSING</i>	10.
3.6-- <i>RUN MENU</i>	11.
3.7-- <i>PERSONALITY</i>	11.
3.8-- <i>ID ADDRESS</i>	11.
3.9-- <i>ENTERTINGS</i>	11.
3.10-- <i>PASSWORD</i>	12.
3.11-- <i>EDIT</i>	12.
3.12-- <i>FAN ENTERTING</i>	12.
PART 4 USING A DMX512 CONTROLLER.....	13.
4.1-- <i>BASIC ADDRESSING</i>	13.
4.2-- <i>CHANNEL ASSIGNMENT</i>	13.
4.3-- <i>BASIC INSTRUCTIONS FOR DMX512 OPERATION (STAGE 1)</i>	17.
PART 5 APPENDIX.....	18.
5.1-- <i>TROUBLE SHOOTING</i>	18.
5.2-- <i>MAINTENANCE</i>	19.

1 PRODUCT (GENERAL)

1.1 PRODUCT INTRODUCTION

This product is designed for indoor use. Suitable applications include wash or effect lighting for stage or nightclub applications. This product can also be installed for use in signage and advertising using the dynamic functions available with DMX512 control. Direct input of DMX512 signal allows the units to be controlled from any DMX512 controller. This product can be operated as a single unit or in multiple units for large applications.

1.2 PRODUCT FEATURES

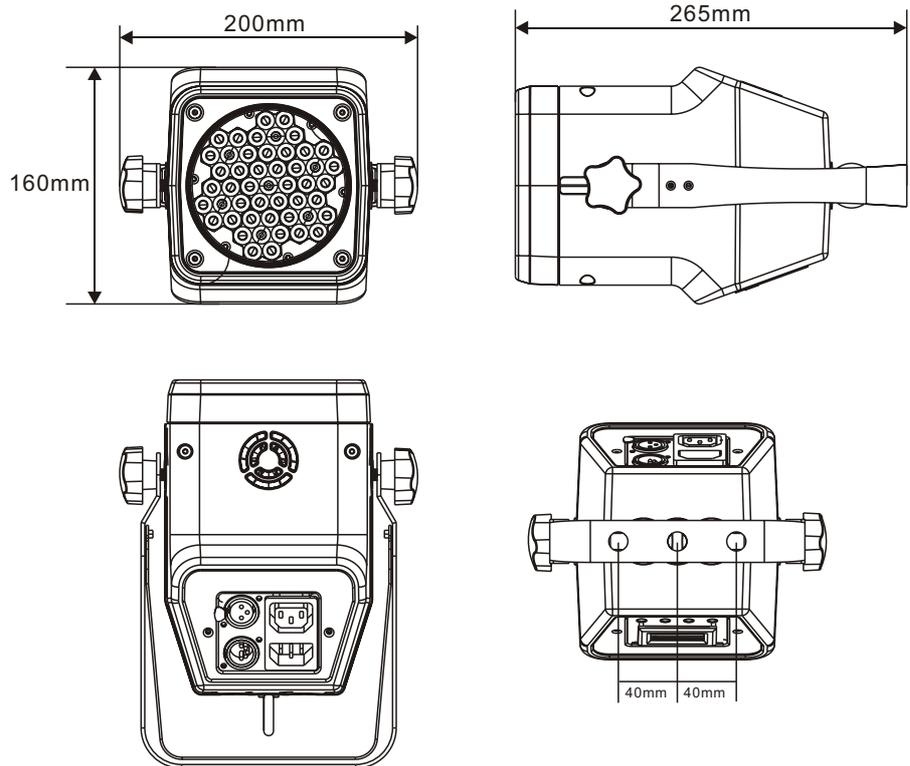
LED FIXTURE

- * Dimmer 0-100%
- * Strobe
- * Automatic/Customs programs
- * LCD display
- * Display control 'lock-out'
- * Direct DMX512 input
- * Independant ID address
- * Stand-alone/ Slave
- * 'Over-heat' protection
- * Fan speed control

1.3 TECHNICAL SPECIFICATIONS

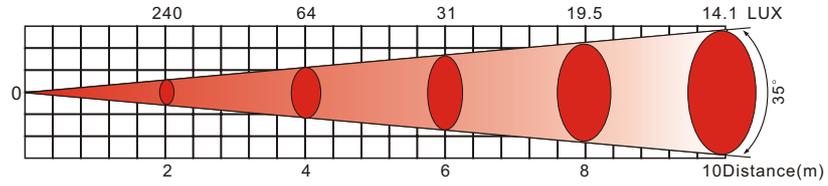
LED MODULE

LED MODULE:	
Voltage	AC 100~240V...50/60Hz
Rated Power	60W
LED/Unit	49pcs (14 x RED / 14 x GREEN /14 x BLUE/7 x WHITE)
Output/LED	1W
Environment Temperature	-20℃~40℃
Cooling	Forced air convection
Dimensions	200 x 160x265mm
Weight	2.5Kg

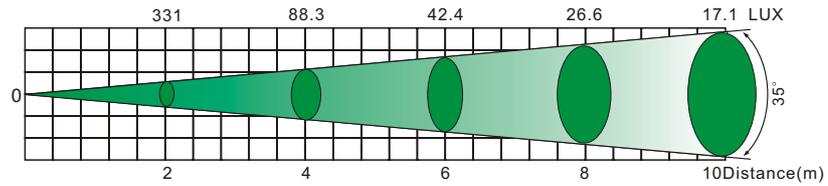


1.4 PHOTOMETRIC DATA

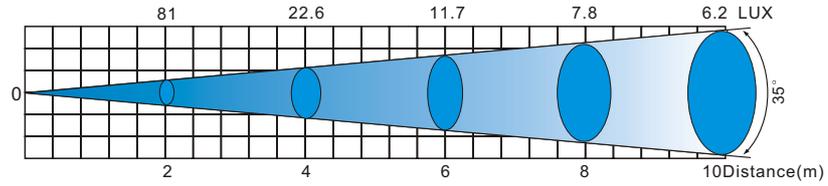
RED



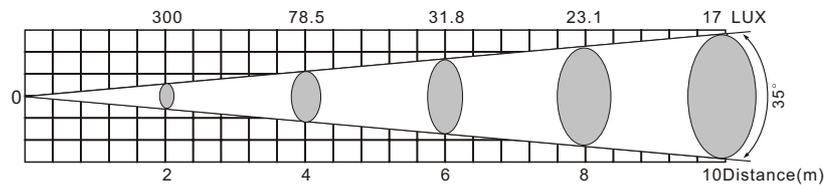
GREEN



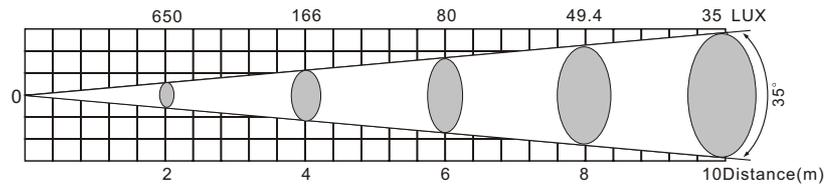
BLUE



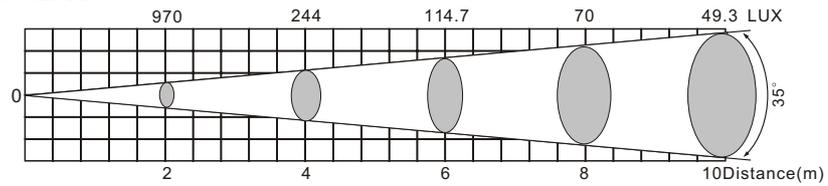
WHITE



RGB



RGBW



1.5 SAFETY WARNING

IMPORTANT

**[ALWAYS READ THE USER MANUAL BEFORE OPERATION.]
[PLEASE CONFIRM THAT THE POWER SUPPLY STATED ON THE
PRODUCT IS THE SAME AS THE MAINS POWER SUPPLY IN YOUR
AREA.]**

- This product must be installed by a qualified professional.
- Always operate the equipment as described in the user manual.
- A minimum distance of 0.5m must be maintained between the equipment and combustible surface.
- The product must always be placed in a well ventilated area.
- Always make sure that the equipment is installed securely.
- DO NOT stand close to the equipment and stare directly into the LED light source.
- Always disconnect the power supply before attempting and maintenance.
- Always make sure that the supporting structure is solid and can support the combined weight of the products.
- The earth wire must always be connected to the ground.
- Do not touch the power cables if your hands are wet.

ATTENTION



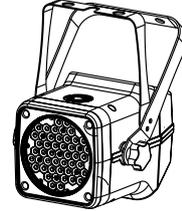
- This product left the place of manufacture in perfect condition. In order to maintain this condition and for safe operation, the user must always follow the instructions and safety warnings described in this user manual.
- Avoid shaking or strong impacts to any part of the equipment.
- Make sure that all parts of the equipment are kept clean and free of dust.
- Always make sure that the power connections are connected correct and secure.
- If there is any malfunction of the equipment, contact your distributor immediately.
- When transferring the product, it is advisable to use the original packaging in which the product left the factory.
- Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is impaired.
- The lamp (LED) shall be changed if it has become damaged or thermally deformed.

2 INSTALLATION

2.1 MOUNTING

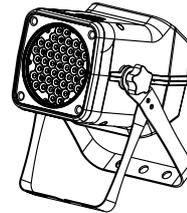
HANGING

The LED fixture can be mounted in a hanging position using the supporting bracket. The bracket should be secured to the mounting truss or structure using a standard mounting clamp. Please note that when hanging the unit a safety cable should also be used.



UPRIGHT

The LED fixture can be mounted in an upright or sitting position using the supporting brackets.



NOTE

The LED MODULE can be mounted at any angle and in any position. It is possible to further adjust the angle of the LED MODULE using the two adjustment knobs located on the side of the fixture.

2.2 POWER CONNECTIONS

@ 220V: 15 units may be connected in series

@120V: 7 units may be connected in series

Note:

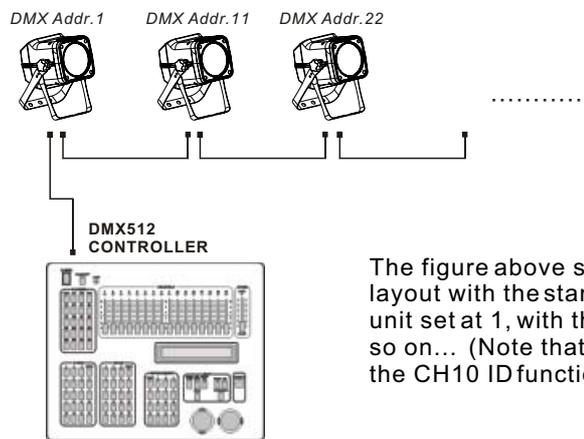
1. If over 15 units to be connected, then a DMX signal amplifier is needed.
2. If the signal cable is over 60m between the DMX512 controller and fixture or between two fixtures, then a DMX signal amplifier is needed as well.

2.3 SETTING UP WITH A DMX512 CONTROLLER

2.3-1 **DMX512 ADDRESSING WITHOUT ID ADDRESSING (STAGE 1 MODE)**

- Connect the DMX512 controller to the units in series.
- Each unit has 10 DMX channels so the DMX Addresses should increase by increments of 10 (e.g. 1,11,22,33...)
- The ID address has not been set so therefore when using the controller CH10 must be inactive (CH10=0).
- Each DMX Address may be used as many times as required.
- Any DMX address in the range from 001 to 512 may be used.

Example:

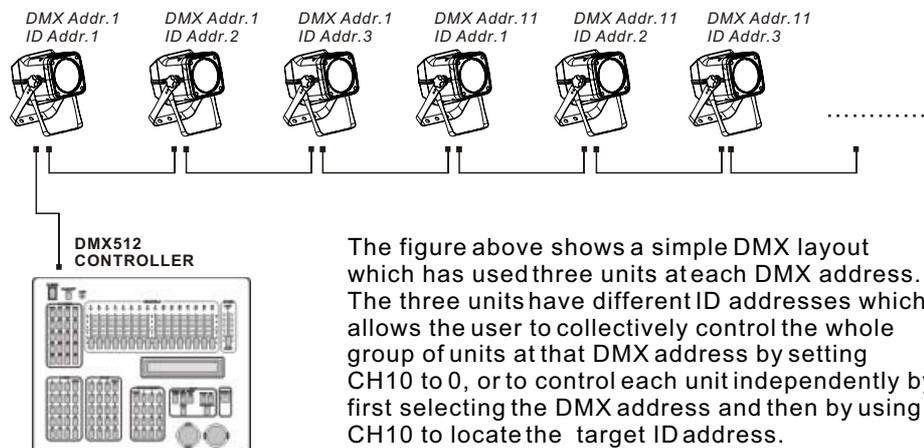


The figure above shows a simple DMX512 layout with the starting address of the first unit set at 1, with the second set at 11 and so on... (Note that when used in this way, the CH10 ID function must be inactive (CH10=0))

2.3-2 **DMX512 ADDRESSING WITH ID ADDRESS (STAGE 1 MODE)**

- Connect the DMX512 controller to the units in series
- Each unit has 10 DMX channels so the DMX Addresses should increase by increments of 10 (e.g. 1,11,22,33...)
- Each DMX Address may be used as many times as required.
- Any DMX address in the range from 001 to 512 may be used.
- Each DMX address may carry up to 66 separate ID addresses.
- **[ID]** should be set in the menu on each unit in ascending values (i.e. 1,2,3...)
- ID addresses are accessible from CH10 on the DMX512 controller.

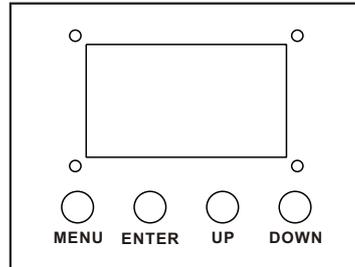
Example:



The figure above shows a simple DMX layout which has used three units at each DMX address. The three units have different ID addresses which allows the user to collectively control the whole group of units at that DMX address by setting CH10 to 0, or to control each unit independently by first selecting the DMX address and then by using CH10 to locate the target ID address.

3 DISPLAY PANEL OPERATION

3.1 BASIC



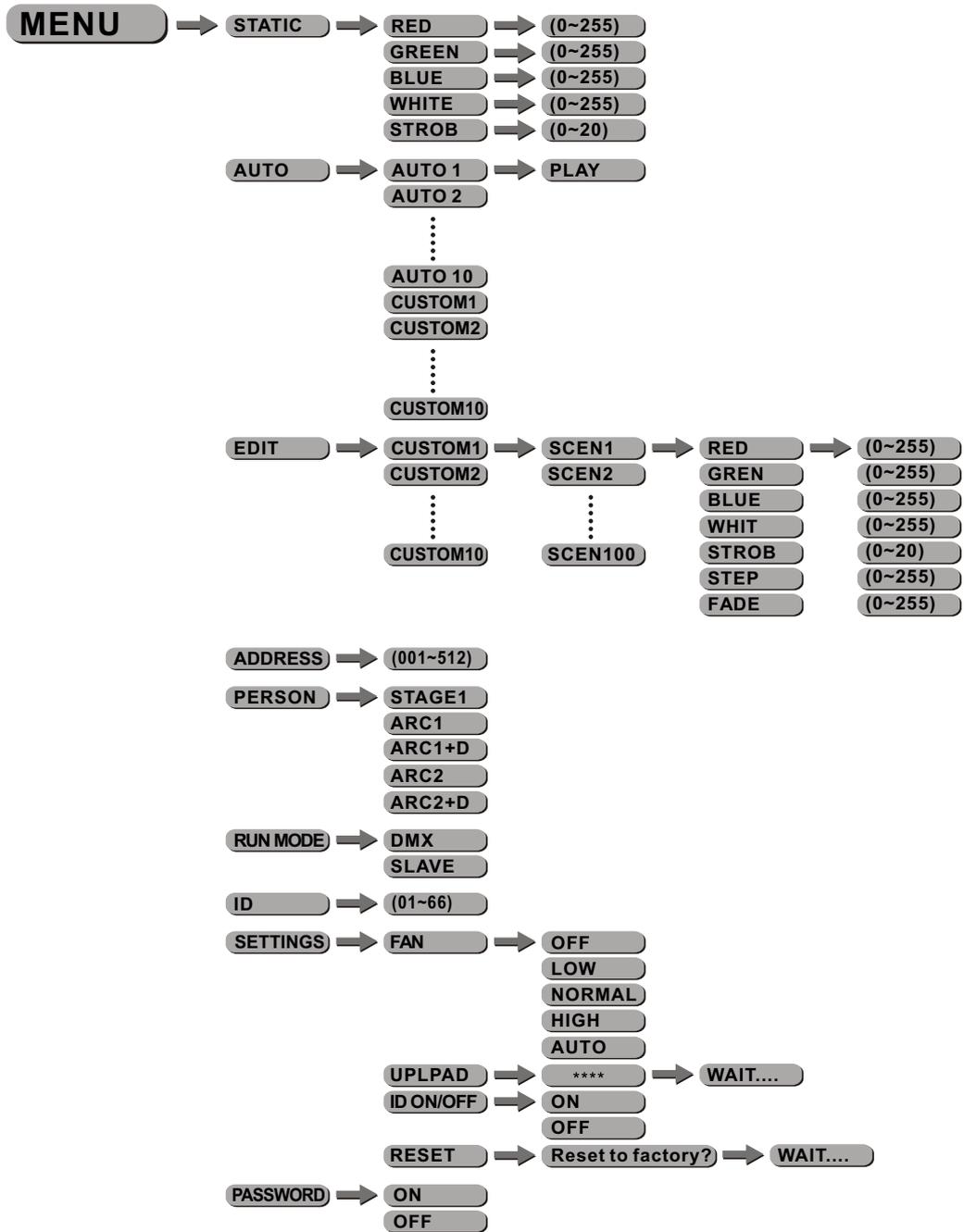
【 MENU 】 scroll through the main menu or exit from the current menu or function

【 ENTER 】 Enter the currently selected menu or confirm the current function value

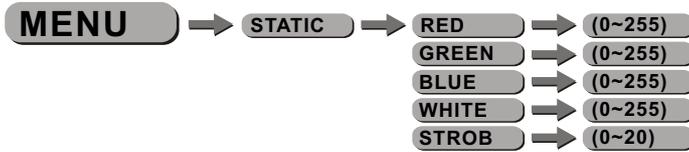
【 UP 】 scroll 'UP' through the menu list or increase the value of the current function

【 DOWN 】 scroll 'DOWN' through the menu list or decrease the value of the current function

3.2 MENU



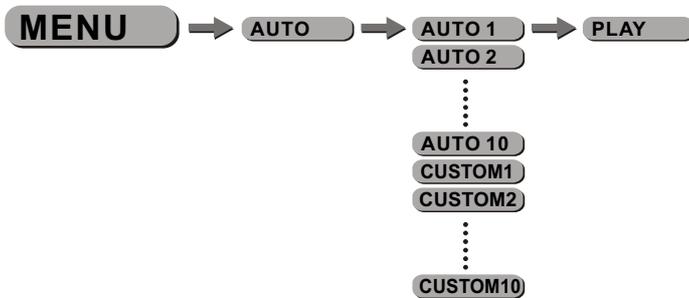
3.3 STATIC COLOR



【STATIC】

- Select **【RED】** / **【GREEN】** / **【BLUE】** / **【WHITE】** / **【STROB】** and set the value by pressing **【UP】** and **【DOWN】**
- Press **【ENTER】** to save and back to the upper menu
- The fixture will be automatic in Master running mode under this function

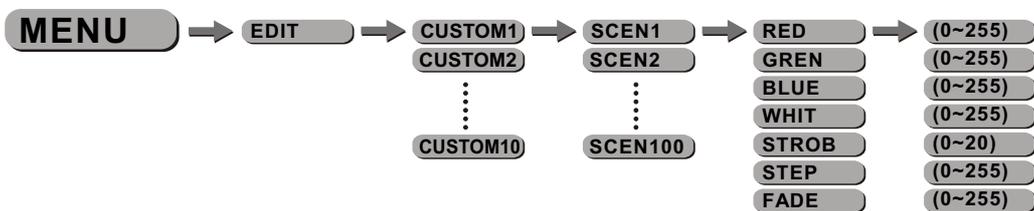
3.4 AUTO



【AUTO】

- Select the target **【AUTO】** program and press **【ENTER】**
- Programs **【AUTO 01】** to **【AUTO 10】** are fully pre-programmed and will not be altered
- Programs **【CUSTOM 01】** to **【CUSTOM 10】** are fully pre-programmed and can be edited in **【EDIT】** mode
- The fixture will be automatic in Master running mode under this function

3.5 EDIT



【EDIT】

- Enter **【EDIT】** to edit the custom programs **【CUSTOM 1】** to **【CUSTOM 10】**
- Each program has 30 steps to edit
- Each step allows a creation of a scene using Red, Green, Blue, White, Strobe, Step time, Fade time

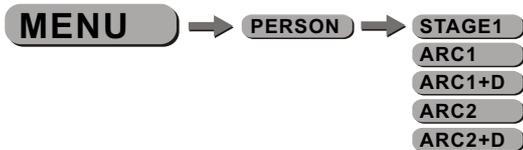
3.5 DMX ADDRESSING



【ADDRESS】

- Enter **【ADDRESS】** and set the DMX address **【1~512】**
- Press **【ENTER】** save the setting.

3.7 PERSONALITY



【PERSON】

- Enter **【PERSON】** and select **【STAGE1】** / **【ARC1】** / **【ARC1+D】** / **【ARC2】** / **【ARC2+D】** DMX mode

3.6 RUN MODE



【RUN MODE】

- Enter the **【RUN MODE】** mode to set working mode.
- **【DMX】** mode is for using the DMX512 controller to control the fixtures.
- **【SLAVE】** mode is for Master -- Slave operation, or controlled fixture by Pix-controller.

Note: When fixtures are under Auto program operation, the **【MENU】** no works.

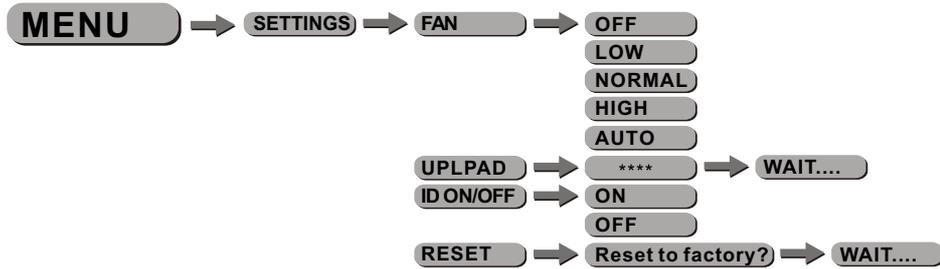
3.8 ID ADDRESS



【ID】

- Enter **【ID】** and set the ID address **【1~66】**

3.9 SETTINGS



【FAN】

- Enter **【FAN】** and select the working mode of fan: **【OFF】** , **【LOW】** , **【NORMAL】** , **【HIGH】** or **【AUTO】**

【UPLOAD】

- Select **【UPLOAD】** to upload the custom programs from the current MASTER unit to the SLAVE units.
- In order to activate the upload function the password must be entered
- Password is the same as the main access password
- When uploading the MASTER and SLAVE units will display YELLOW
- If an error occurs when uploading the MASTER and/or SLAVE units will display RED
- On successful uploading of the custom programs the MASTER and SLAVE units will display GREEN.

【ID ON/OFF】

- Choose **【ON】** / **【OFF】** to open or close ID

【RESET】

- This function will reset all settings to the original factory setting

3.10 PASSWORD



【PASSWORD】

- Enter the **【PASSWORD】** mode to set password ON/OFF
- When password is activated, display will demand password each time the fixture is powered on.
- The factory default password is **【UP】** > **【DOWN】** > **【UP】** > **【DOWN】**

4 USING A DMX512 CONTROLLER

4.1 BASIC ADDRESSING

- Connect all of the units in series using standard DMX512 signal cable or the IP65 rated cable provided.
- Set the DMX512 address in the **[DMX]** menu.
- It is possible to have the same DMX address or independent addresses for each fixture.

4.2 CHANNEL ASSIGNMENT

- Note: This product have five DMX512 channel configuration: **[STAGE 1]** , **[ARC 1]** , **[ARC 1+D]** , **[ARC 2]** and **[ARC 2+D]**

STAGE 1

CHANNEL	VALUE	FUNCTION
1		DIMMER
	0 ↔ 255	
2		RED
	0 ↔ 255	(or STEP TIME when Customs 01-10 in CH8 is activated)
3		GREEN
	0 ↔ 255	(or FADE TIME when Customs 01-10 in CH8 is activated)
4		BLUE
	0 ↔ 255	
5		WHITE
	0 ↔ 255	
6		MARCO
	0 ↔ 10	No function
	11 ↔ 35	RED 100% / GREEN UP / BLUE 0%
	36 ↔ 60	RED DOWN / GREEN 100% / BLUE 0%
	61 ↔ 85	RED 0% / GREEN 100% / BLUE UP
	86 ↔ 110	RED 0% / GREEN DOWN / BLUE 100%
	111 ↔ 135	RED UP / GREEN 0% / BLUE 100%
	136 ↔ 160	RED 100% / GREEN 0% / BLUE DOWN
	161 ↔ 185	RED 100% / GREEN UP / BLUE UP
	186 ↔ 210	RED DOWN / GREEN DOWN / BLUE 100%
	211 ↔ 215	WHITE 1: 3200K
	216 ↔ 220	WHITE 2: 3400K
	221 ↔ 225	WHITE 3: 4200K
	226 ↔ 230	WHITE 4: 4900K
	231 ↔ 235	WHITE 5: 5600K
	236 ↔ 240	WHITE 6: 5900K
241 ↔ 245	WHITE 7: 6500K	
246 ↔ 250	WHITE 8: 7200K	
251 ↔ 255	WHITE 9: 8500K	

CHANNEL	VALUE	FUNCTION
7	0↔4	STROBE No function
	5↔255	Strobe speed (0-20Hz)
8	0↔10	Fans, Auto Reset to display Fan setting
	11↔20	Fan closed (activated after 5 seconds)
	21↔30	Fan low speed (activated after 5 seconds)
	31↔40	Fan normal (activated after 5 seconds)
	41↔50	Fan high speed (activated after 5 seconds)
	51↔60	Fan auto speed (activated after 5 seconds)
	61↔70	Auto 1
	71↔80	Auto 2
	81↔90	Auto 3
	91↔100	Auto 4
	101↔110	Auto 5
	111↔120	Auto 6
	121↔130	Auto 7
	131↔140	Auto 8
	141↔150	Auto 9
	151↔160	Auto 10
	161↔170	Custom 1
	171↔180	Custom 2
	181↔190	Custom 3
	191↔200	Custom 4
201↔210	Custom 5	
211↔220	Custom 6	
221↔230	Custom 7	
231↔240	Custom 8	
241↔250	Custom 9	
251↔255	Custom 10	
9	0↔255	AUTO SPEED ADJUSTMENT When using CH8,AUTO01-AUTO10, this function activated
10	0↔9	ID ADDRESS ID1~ID66
	10↔19	ID1
	20↔29	ID2
	30↔39	ID3
	40↔49	ID4
	50↔59	ID5
	60↔69	ID6
	70↔79	ID7
	80↔89	ID8
	90↔99	ID9
	100↔109	ID10
	110↔119	ID11
	120↔129	ID12
130↔139	ID13	

CHANNEL	VALUE	FUNCTION
10	140 ↔ 149	ID14
	150 ↔ 159	ID15
	160 ↔ 169	ID16
	170 ↔ 179	ID17
	180 ↔ 189	ID18
	190 ↔ 199	ID19
	200 ↔ 209	ID20
	210	ID21
	211	ID22
	⋮	⋮
	254	ID65
	255	ID66

ARC 1

CHANNEL	VALUE	FUNCTION
1	0 ↔ 255	RED
2	0 ↔ 255	GREEN
3	0 ↔ 255	BLUE

ARC 1+D

CHANNEL	VALUE	FUNCTION
1	0 ↔ 255	MASTER DIMMER
2	0 ↔ 255	RED
3	0 ↔ 255	GREEN
4	0 ↔ 255	BLUE

ARC 2

CHANNEL	VALUE	FUNCTION
1	0 ↔ 255	RED
2	0 ↔ 255	GREEN
3	0 ↔ 255	BLUE
4	0 ↔ 255	WHITE

ARC 2+D

CHANNEL	VALUE	FUNCTION
1	0 ↔ 255	MASTER DIMMER
2	0 ↔ 255	RED
3	0 ↔ 255	GREEN
4	0 ↔ 255	BLUE
5	0 ↔ 255	WHITE

4.3 BASIC INSTRUCTIONS FOR DMX512 OPERATION (STAGE 1)

MASTER DIMMER

- CH1 controls the intensity of the currently projected color
- When the slider is at the highest position (255) the intensity of the output is the maximum

RED, GREEN, BLUE & WHITE COLOR SELECTION

- CH2, CH3, CH4 & CH5 control the intensity ratio of each of the RED, GREEN, BLUE & WHITE LEDs.
- When the slider is at the highest position (255) the intensity of the color is the maximum.
- CH2, CH3, CH4 & CH5 can be combined together to create over 16 million colors.

COLOR MACROS

- CH6 selects the required COLOR MACRO
- CH6 has priority over CH2, CH3, CH4 and CH5
- CH1 is used to control the intensity of the COLOR MACRO

STROBE

- CH 7 controls the strobe of CH1 to CH5

ID ADDRESS SELECTION

- Ch10 is used to select the target ID address.
- Each independent DMX address may have up to 66 independent ID addresses.
- An ID address of 0 will activate all ID address locations.

AUTO

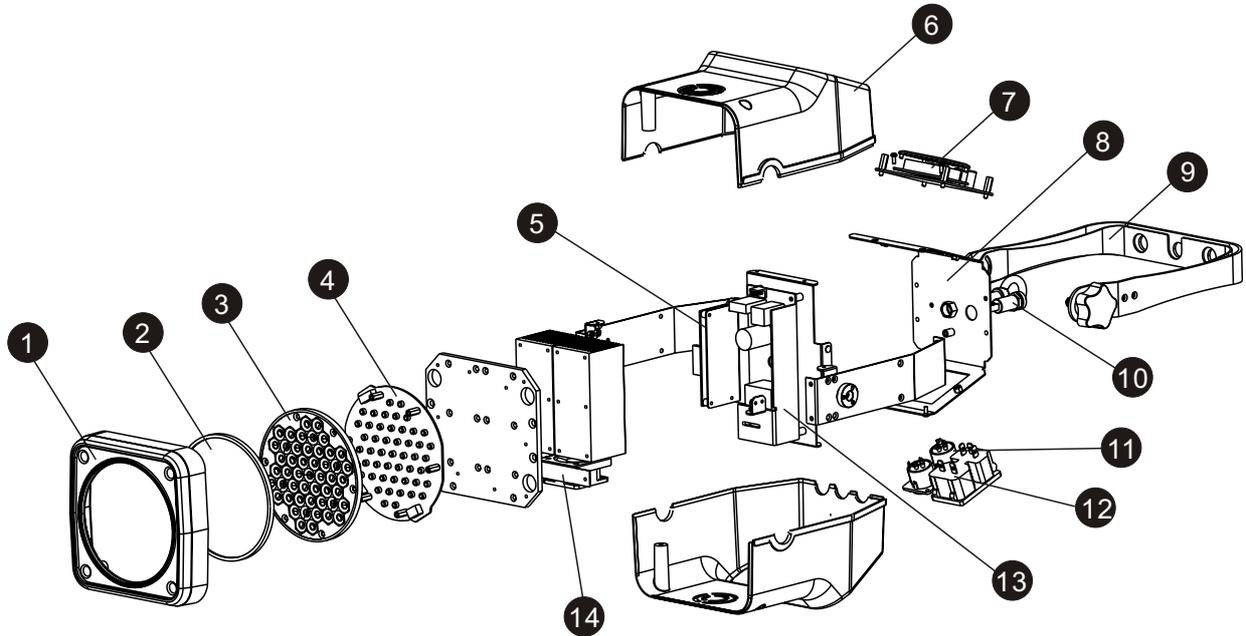
- CH8 selects the Fan Function, the preset AUTO programs Auto 01-10 or the custom programs Custom 01-10
- CH8 has priority over CH2, 3, 4, 5, 6.
- CH9 control speed of CH 8 (Auto 1 -Auto 10).

5 APPENDIX

5.1 TROUBLE SHOOTING

SITUATION	CAUSE	ACTION
No display	1) Power connection error	1) Check all power connections
	2) Power switch damaged	2) Replace powerswitch
	3) Display board damaged	3) Replace display board
LCD MODULE on, but no control from display	1) Keyboard damaged	1) Replace keyboard
	2) Display board damaged	2) Replace display board
LEDs of the same color are not lit	1) LED PCB damaged	1) Check and Replace PCB board
	2) LED PCB connection error	2) Check the wire connection
LCD module on, LEDs of all colors are not lit	1) Driver PCB damaged	1) Replace driver PCB board
	2) LED PCB damaged	2) Replace PCB board
	3) LED PCB connection error	3) Check the wire connection
Display normal, but no response to DMX 512 controller	1) Signal connection error	1) Check and replace signal cable
	2) DMX Address error	2) Check and reset DMX address
	3) Master & slave mode error	3) Check and reset the working mode
	4) ID error	4) Check and reset ID address

5.2 MAINTENANCE



No	ITEM
1	Front cover
2	Clear plate
3	Lens set
4	LED PCB
5	Driver PCB
6	Plastic cover
7	Display PCB
8	Display supporting cover
9	Bracket
10	Fuse socket
11	DMX board
12	Power supply
13	Power socket
14	Fan

EU-declaration of conformity



We hereby confirm that the following device

BRIGHTLIGHT LED CUBE 49

complies with the essential safety requirements, laid down in the regulations of the committee to assimilate the provisions of law of all participating EU states on the electromagnetic compatibility (89/336/EWG).

The device has been classified considering the following EU-norms on electromagnetic compatibility:

DIN EN 55015: 2006

DIN EN 61547: 1995 + A1:2000

DIN EN 61000-3-2:2000 + A2: 2005

DIN EN 61000-3-3:1995 + A1: 2001

Assessment of compliance of the product with the requirements relating to the Low Voltage Directive (LVD 2006/95/EG) was based on the following standards:

DIN EN 60065 : 2002

This declaration is executed on behalf of the BRIGHTLIGHT LED CUBE 49 manufacturer

Brightlight GmbH Geschäftsführer: Martin Werner

Rheinblick Residenz
Oberstrasse 1
8274 Tägerwilen
SCHWEIZ

place of business: 8274 Tägerwilen / SWITZERLAND
company number: CH-020.4.038.648-0
Commercial Registry Kanton Thurgau

www.brightlight-led.com
info@brightlight-led.com

[representative](#) according to EMVG:
Cleantech Europe GmbH
[Managing Director](#): Thomas Schulze
Fürkhofstr. 5
81927 München / DE