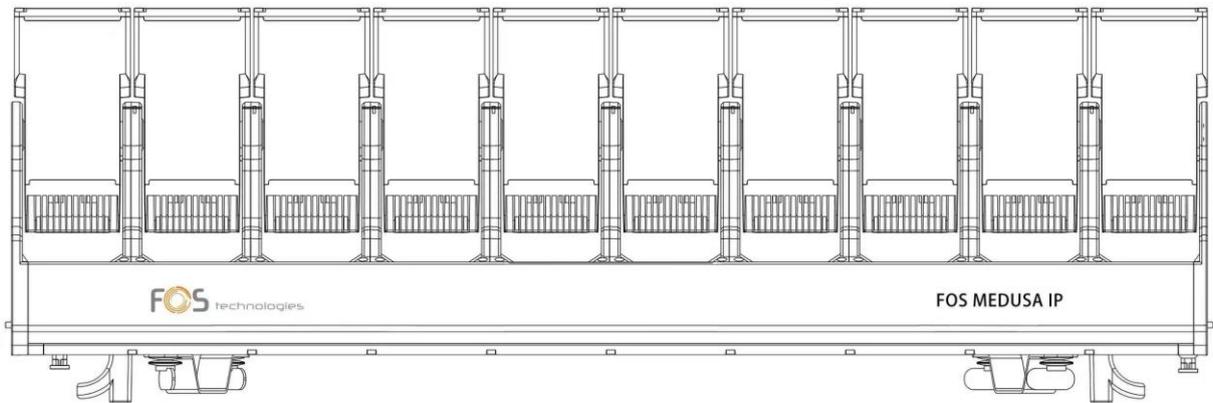




## FOS MEDUSA IP



# USER MANUAL

**KEEP THIS USER MANUAL FOR FUTURE NEEDS**



Thank you for your patronage!

We are confident that our excellent products and service can satisfy you.

For your own safety, please read this user manual carefully before installing the device.

To install, operate, and maintain the lighting safely.

We suggest that the installation and operation should be done by a verified technician and that you follow the instructions strictly.



**CAUTION!**

Keep this device away from rain and moisture!



**CAUTION!**

Unplug mains lead before device's installation, cleaning and maintenance!

Every person involved with the installation, operation and maintenance of the device has to:

- be qualified
- Follow the instructions of this manual

## INTRODUCTION

Thank you for having chosen this professional moving head.

You will see you have acquired a powerful and versatile device.

Unpack the device. Inside the box you should find:

1. One power in cable
  2. One 3 Pin DMX cable (5 Pin optional)
  3. Folding Clamps
  4. One safety rope
  5. One English user manual
- (Flight case is optional, please contact your dealer)

Please check carefully that there is no damage caused by transportation. Should there be any questions, please consult your dealer and don't install this device.

## GENERAL GUIDELINES

This device is a lighting effect for professional use on stages and in discotheques. The device was designed for indoor use only.

This fixture is only allowed to be operated with the max alternating current as stated in the technical specifications in 6<sup>th</sup> page of this manual.

Lighting effects are not designed for continuous operation. Consistent operation breaks may ensure that the device will serve you for a long time without defects.

Do not shake the device. Avoid brute force when installing or operating the device.

While choosing the installation spot, please make sure that the device is not exposed to extreme heat, moisture or dust. Please don't project the beam onto combustible substances. The minimum distance between the light output from the projector and the illuminated surface must be more than 0,5 meter.

If you use the quick lock cam when hanging up the fixture, please make sure the quick lock fasteners turn in the quick lock holes correctly.

Operate the device only after having familiarised yourself with its functions. Do not permit operation by people not qualified to operate the device. Most damages are the result of unprofessional operation.

Please use the original packaging if the device is to be transported.

For safety reasons, please be aware that all modifications to the device are forbidden. If this device is to be

operated in any way different to the one described in this manual, the product may suffer damage and the guarantee becomes void. Furthermore, any other operation may lead to short-circuit, burns, electric shock, crash, etc.

## SAFETY INSTRUCTIONS



### CAUTION!

Be careful with your operations. With a high voltage, you can suffer a dangerous electric shock when touching wires!

This device has left the factory in perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.

1. In order to guarantee the product's life, please don't put it in damp places or an environment over 60 degrees.
2. Always mount this unit in a safe and stable manner.

The qualified professionals are allowed to carry out the lamp installation, operation and maintenance, but they must guarantee to operate in strict accordance with the instructions referred to.

### ▲ 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.**

If the device has been exposed to temperature changes due to environmental changes, do not switch it on immediately. The arising condensation could damage the device. Leave the device switched off until it has reached room temperature.

This device falls under protection-class I. Therefore, the device must be earthed. The electric connection must be carried out by a qualified person.

Make sure the power cord is never crimped or damaged by sharp edges. If this were the case, replacement of the cable must be done by an authorised dealer.

Always disconnect from the mains when the device is not in use or before cleaning it. Only handle the power cord by the plug. Never pull out the plug by tugging the power cord.

During initial start-up, some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective; it should decrease gradually.

Please don't project the beam onto combustible substances.

If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.



### CAUTION!

Never touch the device during operation!  
The housing may heat up!



### CAUTION!

Never look directly into the light source,  
As sensitive persons may suffer an epileptic shock.

**Please be aware that damages caused by manual modifications to the device are not subject to warranty. Keep away from children and non-professionals.**

## CLEANING AND MAINTENANCE

1. To reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.
2. Do not spill water or other liquids into or onto your unit.

3. During long periods of non-use, disconnect the unit's main power.
4. It should be installed in a well-ventilated place, at a distance of 50 centimetres or more from the walls. At the same time, please check if the fan and ventilation holes are unobstructed.

The following points must be considered during the inspection

- 1) All screws for installing the devices or parts of the device have to be tightly connected and must not be corroded.
- 2) There must not be any deformations on the housing. Fixation and installation spots (ceiling, suspension, trussing).
- 3) Mechanically moved parts must not show any traces of wear and must not rotate with unbalances.
- 4) The electric power supply cables must not show any damage, material fatigue or sediments. Further instructions depending on the installation spot and usage have to be adhered to by a skilled installer, and any safety problems have to be addressed.



**CAUTION!**

Disconnect from mains before starting maintenance operation!

In order to keep the lights in good condition and extend their lifetime, we suggest a regular cleaning of the lights.

- 1) Clean the inside and outside lenses each week to avoid weakening of the lights due to the accumulation of dust.
- 2) Clean the fan each week.
- 3) A detailed electrical check by a n approved electrical engineer every three months, to ensure that the circuit contacts are in good condition, and prevent the poor contact of the circuit from overheating.

We recommend a frequent cleaning of the device.

Please use a moist, lint-free cloth. Never use alcohol or solvents!

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# Precautions and installation

## 1.1. Declarations

Thank you for choosing our company's products! When this product leaves the factory, the performance is intact, and the packaging is complete. In order for you to use this product safely and effectively, please read this instruction manual carefully and completely before you use this product. This manual contains important information for installation and use. Please install and operate according to the requirements of the manual, and at the same time, please keep this manual properly so that it can be used at any time.

This manual is subject to technical change without notice.

## 1.2. Maintenance

- This fixture is for professional use only.
- If the external flexible cable or wire of this luminaire is damaged, it should be replaced with a special wire or wire provided by the manufacturer or its service agent.
- The light source contained in this luminaire should only be replaced by the manufacturer, its service agent or a similar qualified person.
- Always connect the product to a protected circuit (circuit breaker or fuse). Ensure that the product has proper electrical grounding to avoid the risk of electric shock or fire.
- To avoid unnecessary wear and tear and prolong its service life, the power supply should be completely cut off by a circuit breaker or unplugged when not in use.
- The housing may generate heat while the product is operating. This product should be installed in a well-ventilated location.
- When a product is transferred from an extreme temperature environment (e.g., from a cold truck to warm and humid), the internal electronics of the product may condense. To avoid failure, allow the product to fully acclimatize to the surrounding environment before turning on the power supply.
- Flashing lights are known to trigger seizures. Users must comply with local notification laws regarding flash use.

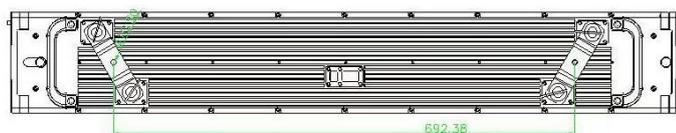
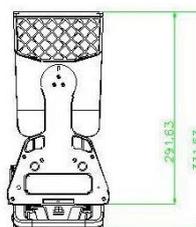
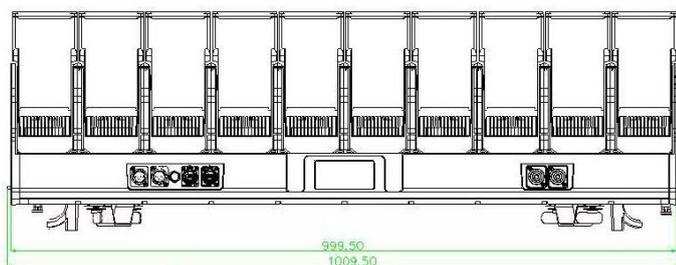
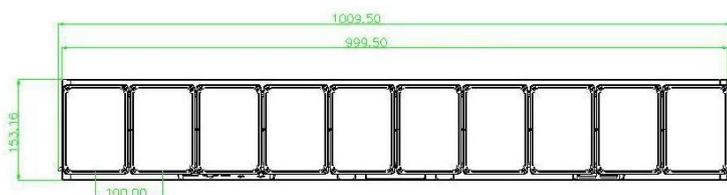
## 1.3. Product Precautions

- Disconnect the power supply before cleaning the product or replacing the fuse.
- When not in use, replace and secure the shields of all power, data, USB, or other ports to IP rating.
- When installing this product above your head, use a safety cord.
- Connect this product to a grounded and protected circuit.
- When the product is turned on, look at the light source.
- Do not place any flammable materials within 20 cm of this product when operating or plugging in a power supply.
- Do not operate the product if the housing, lenses, or cables are damaged.
- Only use handles or hoisting/mounting brackets to handle this product.
- To avoid unnecessary wear and tear and prolong its service life, the power supply should be completely cut off by a circuit breaker or unplugged when not in use.
- In case of serious operational problems, it should be discontinued immediately

## 1.4. Product Introduction

- Voltage: 220/240 V AC, 50/60 Hz
- Power: 880W
- LEDs: 10pcs 4-in-1 80W LED LEDs, 360pcs 2016 Golden Yellow LEDs, 360pcs 2016 Cool White LEDs
- Control mode: DMX/Sound Active/Automatic
- Channel: CH29, CH56, CH144, CH216, CH262, CH282
- Dimming: 16bit 0~100% linear dimming
- Features: Single Swing + Wash + Beam
- Operating temperature: -30°C~50°C
- Strobe frequency: 1~30HZ
- Appearance: Metallic, black
- Connection: DMX512 input and output/power input and output.
- IP Rating: IP65
- Size: 1009.5\*154\*332mm
- Weight:28.5kg

## 1.5. Fixture size



# Display panel and button definition

## 2.1 Control Panel



Menu key: Enter/return to the main menu

Up Arrow: Menu function up selection/parameter increment

Down Arrow: Menu function to select down/decrement parameters

Confirm button: Select the menu function, and confirm and save it when the menu function parameters are modified.

## 2.2 Menu Function

After powering on and resetting the whole machine, press the menu button to enter the main menu (the main menu interface will exit after 30 seconds of no operation), see the main menu function table (a total of 5 main menu options) for details; Up or down key to select the main menu, confirm button to enter the modification of the function parameters of each menu, and then press the confirm button to save the current function parameters (after saving, it has a power-off memory).

Main menu	submenu	Menu function description
1. System settings	1. DMX address	Modify the DMX address code up or down (the address code can be selected in the range 001-512), and save the confirmation key, which is 002 by default.

	2. Encoder	Modify up/down on/off, confirm key save, and enable by default.
	3. Y reversal	Modify on/off up or down, confirm key to save, and turn off by default.
	4. Zoom and reverse	Modify on/off up or down, confirm key to save, and turn off by default.
	5. No signal	Modify clearing/holding up or down, confirm the key to save, and clear by default.
	6. Voice-activated sensitivity	Modify the sensitivity of the voice control up or down (optional range 00-99), confirm the key to save, default 009.
	7. Reset	Modify Yes/No up or down, confirm key to save, default no.
	8. Restore factory settings	Modify Yes/No up or down, confirm key to save, default no.
	9. Advanced settings	
2. Operation mode	1. Operation mode	Up or down to select the run mode DMX/Voice Activated/Auto, confirm key to save, default DMX.
	2. Channel selection	Select channel CH29.CH56.CH144.CH216.CH262.CH282 up or down to save the confirmation key, the default CH29.
	3. Y mode amplitude	Modify the amplitude of Y mode up or down (optional range 000-255), confirm key to save, default 000.
3. Manual control	1. Y	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	2. Y 16bit	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	3. Y speed	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	4. Y mode	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	5. CTO	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	6. White CTC	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	7. Colour macro	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	8. Pattern	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	9. White light pattern	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	10. LED mode	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	11. LED speed	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	12. LED tailing	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	13. White light mode	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.
	14. White light	Modify the value up or down (adjustable range 000-255), confirm the key to

	speed	save, default 000.	
	15. White light trailing	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	16. Background colour	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	17. Background colour light	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	18. Dimming	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	19. White light dimming	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	20. Strobe	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	21. White light strobe	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	22. Amplify	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	23. Functions	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	24. Red	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	25. Green	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	26. Blue	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	27. White	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	28. Cool white dimming	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
	29. Warm white dimming	Modify the value up or down (adjustable range 000-255), confirm the key to save, default 000.	
4. Display settings	1. Language selection	Select Chinese/EN (English) up or down, confirm the key to save, default Chinese.	
	2. Inverted display settings	Up or down select Off/On Inverted Display Settings, Confirm key Save, which is on by default.	
	3. Screen protection	Up or down select Turn off/on screen saver and confirm that it is on by default.	
	4. Software version	AW. F program identification code, non-modifiable.	
5. Information settings	sensor	Used to view Hall status and temperature communication status	
	error message	Used to display error messages	
	Channel information	Used to display DMX channel data	
	Time information	Lights on time Fixture time	
6. Factory setting	DisplayPlease enter password! Modify it up or	1. Y1 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
		2. F1 axis	Modify the parameters up or down (000-255) and save the

down to 138, and then press the confirm button to enter the factory settings.	calibration	confirmation key, which is 128 by default.
	3. Y2 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	4. F2 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	5. Y3 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	6. F3 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	7. Y4 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	8. F4 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	9. Y5 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	10. F5 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	11. Y6 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	12. F6 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	13. Y7 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	14. F7 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	15. Y8 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	16. F8 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	17. Y9 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	18. F9 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	19. Y10 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	20. F10 axis calibration	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	21, Y stroke	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	22. Focusing stroke	Modify the parameters up or down (000-255) and save the confirmation key, which is 128 by default.
	23, red 1	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	24, green 1	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	25, blue 1	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	26, white 1	Modify the parameters up or down (range 000-255), confirm

		the key to save, default 252.
	27, red 2	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	28, green 2	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	29, blue 2	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	30, white 2	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	31, red 3	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	32, green 3	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	33, blue 3	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	34, white 3	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	35, red 4	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	36, green 4	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	37, blue 4	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	38, white 4	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	39, red 5	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	40, green 5	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	41, blue 5	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	42, white 5	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	43, red 6	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	44, green 6	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	45, blue 6	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	46, white 6	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	47, red 7	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	48, green 7	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	49, blue 7	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
	50, white 7	Modify the parameters up or down (range 000-255), confirm

			the key to save, default 252.
		51, red 8	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		52, green 8	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		53, blue 8	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		54, white 8	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		55, red 9	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		56, green 9	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		57, blue 9	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		58, white 9	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		59, red 10	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		60, green 10	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		61, blue 10	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		62, white 10	Modify the parameters up or down (range 000-255), confirm the key to save, default 252.
		63. LEDYF direction	Modify parameter 000/001 up or down, and save the confirmation key, default 000.
		64. an electric current	Modify the parameters up or down (range 032-255), confirm the key to save, default 225.
		65. Logo	Select 000 /001 up or down, confirm the key to save, and 000 is the default.
		66. Temperature	Modify the temperature parameter (range 40-70) up or down, save the confirmation key, default 055.
		67. Temperature-fan	Modify Off/Standard/Quiet up or down, Confirm key to save, Off by default.
		68. LED	Modify LEDA/LEDB up or down, confirm that the key is saved, and LEDA is the default.
		69. Colour mixing mode	Up or down RGBW/CMY, confirm key to save, default RGBW.
		70. PWM frequency	Up or down 600/1200/2000/4000/6000/15000Hz, confirm key to save, default 1200Hz.
		71. a dimming curve	Modify the linear curve/square rate curve/inverse square rate curve/S-curve up or down, confirm the key to save, and the default linearity.

		72. Dimming mode	Modify Quick/Smooth up or down, confirm key to save, default fast.
		73. Exercise off the light	Up or down off/on, confirm key to save, off by default.
		74. Time clears	Modify Yes/No up or down, confirm key to save, default no.

## Master-slave control

One fixture can be set as a master, while the rest on the same chain can act as slaves, when their address is the same as the one that the host (master) uses.

Important note:

- A group of fixtures can only be set up with one host; if there are multiple hosts, all lamps will flash randomly and not be synchronised.

## DMX512 control

### 4.1 Address Code

The address code of all fixtures is set, and all are connected to the DMX512 console in parallel with DMX three-core signal cables. The address code stops flashing, indicating that the DMX512 console signal has been sent to the fixture.

### 4.2 CH29 channel table

pass age	Channel value	Basic functions
1	000-255	Y coarse adjustment (Y mode orientation)
2	000-255	Y micro-adjuster (Y mode amplitude)
3	000-255	Y speed
4	000-255	Y mode (4 values and 1 effect for motors). 0-3 invalid 4-255 (63 effects total)
5	000-255	CTC
6	000-255	White light CTC
7	000-255	Colour Chart
8	000-255	Pattern
9	000-255	White light pattern

10	000-255	LED built-in effect (main light, 2 values, 1 effect) 0-1 is invalid 2-255 (127 effects total)
11	000-255	LED built-in effect speed
12	000-255	LED built-in effect trailing time
13	000-255	Built-in white light effect (8 values and 1 effect for fill light) 0-7 invalid 8-255 (31 effects total)
14	000-255	White light built-in effect speed
15	000-255	White light built-in effect trailing time
16	000-255	LED background colour
17	000-255	LED background tint light
18	000-255	Master Dimmer
19	000-255	White LEDs dimmer
20	000-255	Strobe
21	000-255	White LEDs Strobe
22	000-255	Zoom on the whole
23	000-255	function
24	000-255	Red (colour selection for the effect)
25	000-255	Green (effect colour selection)
26	000-255	Blue (effect colour selection)
27	000-255	White (colour selection for effect)
28	000-255	Cool white Master Dimmer
29	000-255	Warm white Master Dimmer

### 4.3 CH56 channel table

pass age	Channel value	Basic functions
1	000-255	Y1 Coarse (Y mode direction)
2	000-255	Y1 16bit
3	000-255	Y2 Coarse (Y mode amplitude)
4	000-255	Y2 16bit
5	000-255	Y3 coarse
6	000-255	Y3 16bit
7	000-255	Y4 coarse
8	000-255	Y4 16bit
9	000-255	Y5 coarse
10	000-255	Y5 16bit
11	000-255	Y6 coarse tuning
12	000-255	Y6 16bit
13	000-255	Y7 coarse
14	000-255	Y7 16bit
15	000-255	Y8 coarse
16	000-255	Y8 16bit
17	000-255	Y9 coarse

18	000-255	Y9 16bit
19	000-255	Y10 coarse
20	000-255	Y10 16bit
21	000-255	Y speed
22	000-255	Y mode (4 values and 1 effect for motors). 0-3 invalid 4-255 (63 effects total)
23	000-255	CTC
24	000-255	White light CTC
25	000-255	Colour Chart
26	000-255	Pattern
27	000-255	White light pattern
28	000-255	LED built-in effects (2 values for the main light, 1 effect). 0-1 is invalid 2-255 (127 effects total)
29	000-255	LED built-in effect speed
30	000-255	LED built-in effect trailing time
31	000-255	Built-in white light effect (8 values and 1 effect for fill light). 0-7 invalid 8-255 (31 effects total)
32	000-255	White light built-in effect speed
33	000-255	White light built-in effect trailing time
34	000-255	LED background colour
35	000-255	LED background colour light coarse adjustment
36	000-255	Master Dimmer
37	000-255	White LEDs dimmer
38	000-255	Strobe
39	000-255	White LEDs Strobe
40	000-255	Zoom 1
41	000-255	Zoom 2
42	000-255	Zoom 3
43	000-255	Zoom 4
44	000-255	Zoom 5
45	000-255	Zoom 6
46	000-255	Zoom 7
47	000-255	Zoom 8
48	000-255	Zoom 9
49	000-255	Zoom 10
50	000-255	function
51	000-255	Red (colour selection for the effect)
52	000-255	Green (effect colour selection)
53	000-255	Blue (effect colour selection)
54	000-255	White (colour selection for effect)
55	000-255	Cool white Master Dimmer
56	000-255	Warm white Master Dimmer

#### 4.4 CH144 channel table

pass age	Channel value	Basic functions
1	000-255	Master Dimmer
2	000-255	Master Dimmer 16bit
3	000-255	Strobe
4	000-255	White LEDs Strobe
5	000-255	CTC
6	000-255	Pattern
7	000-255	White light pattern
8	000-255	Colour Chart
9	000-255	Built-in white light effect (8 values and 1 effect for fill light). 0-7 invalid 8-255 (31 effects total)
10	000-255	White light built-in effect speed
11	000-255	White light built-in effect trailing time
12	000-255	function
13	000-255	Y1 Coarse (Y mode direction)
14	000-255	Y1 16bit
15	000-255	Zoom 1
16	000-255	Red 1 coarse
17	000-255	Red 1 16bit
18	000-255	Green 1 coarse
19	000-255	Green 1 16bit
20	000-255	Blue 1 coarse
21	000-255	Blue 1 16bit
22	000-255	White 1 coarse
23	000-255	White 1 16bit
24	000-255	Cool white 1-2-3-58-59-60
25	000-255	Warm white 1-2-3-58-59-60
26	000-255	Y2 Coarse (Y mode amplitude)
27	000-255	Y2 16bit
28	000-255	Zoom 2
29	000-255	Red 2 coarse
30	000-255	Red 2 16bit
31	000-255	Green 2 coarse
32	000-255	Green 2 16bit
33	000-255	Blue 2 coarse
34	000-255	Blue 2 16bit
35	000-255	White 2 coarse
36	000-255	White 2 16bit
37	000-255	Cool white 4-5-6-55-56-57
38	000-255	Warm white 4-5-6-55-56-57
39	000-255	Y3 coarse
40	000-255	Y3 16bit

41	000-255	Zoom 3
42	000-255	Red 3 coarse
43	000-255	Red 3 16bit
44	000-255	Green 3 coarse
45	000-255	Green 3 16bit
46	000-255	Blue 3 coarse
47	000-255	Blue 3 16bit
48	000-255	White 3 coarse
49	000-255	White 3 16bit
50	000-255	Cool white 7-8-9-52-53-54
51	000-255	Warm white 7-8-9-52-53-54
52	000-255	Y4 coarse
53	000-255	Y4 16bit
54	000-255	Zoom 4
55	000-255	Red 4 coarse
56	000-255	Red 4 16bit
57	000-255	Green 4 coarse
58	000-255	Green 4 16bit
59	000-255	Blue 4 coarse tones
60	000-255	Blue 4 16bit
61	000-255	White 4 coarse
62	000-255	White 4 16bit
63	000-255	Cold white 10-11-12-49-50-51
64	000-255	Warm white 10-11-12-49-50-51
65	000-255	Y5 coarse
66	000-255	Y5 16bit
67	000-255	Zoom 5
68	000-255	Red 5 coarse
69	000-255	Red 5 16bit
70	000-255	Green 5 coarse
71	000-255	Green 5 16bit
72	000-255	Blue 5 coarse
73	000-255	Blue 5 16bit
74	000-255	White 5 coarse
75	000-255	White 5 16bit
76	000-255	Cold white 13-14-15-46-47-48
77	000-255	Warm white 13-14-15-46-47-48
78	000-255	Y6 coarse tuning
79	000-255	Y6 16bit
80	000-255	Zoom 6
81	000-255	Red 6 coarse
82	000-255	Red 6 16bit
83	000-255	Green 6 coarse
84	000-255	Green 6 16bit
85	000-255	Blue 6 coarse tones
86	000-255	Blue 6 16bit

87	000-255	White 6 coarse
88	000-255	White 6 16bit
89	000-255	Cold white 16-17-18-43-44-45
90	000-255	Warm white 16-17-18-43-44-45
91	000-255	Y7 coarse
92	000-255	Y7 16bit
93	000-255	Zoom 7
94	000-255	Red 7 coarse
95	000-255	Red 7 16bit
96	000-255	Green 7 coarse
97	000-255	Green 7 16bit
98	000-255	Blue 7 coarse
99	000-255	Blue 7 16bit
100	000-255	White 7 coarse
101	000-255	White 7 16bit
102	000-255	Cool white 19-20-21-40-41-42
103	000-255	Warm white 19-20-21-40-41-42
104	000-255	Y8 coarse
105	000-255	Y8 16bit
106	000-255	Zoom 8
107	000-255	Red 8 coarse
108	000-255	Red 8 16bit
109	000-255	Green 8 coarse
110	000-255	Green 8 16bit
111	000-255	Blue 8 coarse
112	000-255	Blue 8 16bit
113	000-255	White 8 coarse
114	000-255	White 8 16bit
115	000-255	Cold white 22-23-24-37-38-39
116	000-255	Warm white 22-23-24-37-38-39
117	000-255	Y9 coarse
118	000-255	Y9 16bit
119	000-255	Zoom 9
120	000-255	Red 9 coarse
121	000-255	Red 9 16bit
122	000-255	Green 9 coarse
123	000-255	Green 9 16bit
124	000-255	Blue 9 coarse
125	000-255	Blue 9 16bit
126	000-255	White 9 coarse
127	000-255	White 9 16bit
128	000-255	Cool white 25-26-27-34-35-36
129	000-255	Warm white 25-26-27-34-35-36
130	000-255	Y10 coarse
131	000-255	Y10 16bit
132	000-255	Zoom 10

133	000-255	Red 10 coarse
134	000-255	Red 10 16bit
135	000-255	Green 10 coarse
136	000-255	Green 10 16bit
137	000-255	Blue 10 coarse
138	000-255	Blue 10 16bit
139	000-255	White 10 coarse
140	000-255	White 10 16bit
141	000-255	Cool white 28-29-30-31-32-33
142	000-255	Warm white 28-29-30-31-32-33
143	000-255	Cool white Master Dimmer
144	000-255	Warm white Master Dimmer

#### 4.5 CH216 Channel Table

pass age	Channel value	Basic functions
1	000-255	Y1 Coarse (Y mode direction)
2	000-255	Y1 16bit
3	000-255	Y2 Coarse (Y mode amplitude)
4	000-255	Y2 16bit
5	000-255	Y3 coarse
6	000-255	Y3 16bit
7	000-255	Y4 coarse
8	000-255	Y4 16bit
9	000-255	Y5 coarse
10	000-255	Y5 16bit
11	000-255	Y6 coarse tuning
12	000-255	Y6 16bit
13	000-255	Y7 coarse
14	000-255	Y7 16bit
15	000-255	Y8 coarse
16	000-255	Y8 16bit
17	000-255	Y9 coarse
18	000-255	Y9 16bit
19	000-255	Y10 coarse
20	000-255	Y10 16bit
21	000-255	Y speed
22	000-255	Y mode (4 values and 1 effect for motors). 0-3 invalid 4-255 (63 effects total)
23	000-255	CTC
24	000-255	White light CTC
25	000-255	Colour Chart
26	000-255	Pattern
27	000-255	White light pattern

28	000-255	LED built-in effects (2 values for the main light, 1 effect). 0-1 is invalid 2-255 (127 effects total)
29	000-255	LED built-in effect speed
30	000-255	LED built-in effect trailing time
31	000-255	Built-in white light effect (8 values and 1 effect for fill light). 0-7 invalid 8-255 (31 effects total)
32	000-255	White light built-in effect speed
33	000-255	White light built-in effect trailing time
34	000-255	LED background colour
35	000-255	LED background colour light coarse adjustment
36	000-255	Master Dimmer
37	000-255	White LEDs dimmer
38	000-255	Strobe
39	000-255	White LEDs Strobe
40	000-255	Zoom 1
41	000-255	Zoom 2
42	000-255	Zoom 3
43	000-255	Zoom 4
44	000-255	Zoom 5
45	000-255	Zoom 6
46	000-255	Zoom 7
47	000-255	Zoom 8
48	000-255	Zoom 9
49	000-255	Zoom 10
50	000-255	function
51	000-255	red
52	000-255	green
53	000-255	blue
54	000-255	white
55	000-255	Cool white Master Dimmer
56	000-255	Warm white Master Dimmer
57	000-255	Red 1 (Effect Selection)
58	000-255	Green 1 (Effect colour selection)
59	000-255	Blue 1 (effect colour selection)
60	000-255	White 1 (effect colour selection)
...	...	...
		
93	000-255	Red 10
94	000-255	Green 10
95	000-255	Blue 10
96	000-255	White 10
97	000-255	Cold white 1
98	000-255	Warm White 1

... ↓	... ↓	... ↓
215	000-255	Cool white 60
216	000-255	Warm white 60

#### 4.6 CH262 channel table

pass age	Channel value	Basic functions
1	000-255	Y1 Coarse (Y mode direction)
2	000-255	Y1 16bit
3	000-255	Y2 Coarse (Y mode amplitude)
4	000-255	Y2 16bit
5	000-255	Y3 coarse
6	000-255	Y3 16bit
7	000-255	Y4 coarse
8	000-255	Y4 16bit
9	000-255	Y5 coarse
10	000-255	Y5 16bit
11	000-255	Y6 coarse tuning
12	000-255	Y6 16bit
13	000-255	Y7 coarse
14	000-255	Y7 16bit
15	000-255	Y8 coarse
16	000-255	Y8 16bit
17	000-255	Y9 coarse
18	000-255	Y9 16bit
19	000-255	Y10 coarse
20	000-255	Y10 16bit
21	000-255	Y speed
22	000-255	Y mode (4 values and 1 effect for motors) 0-3 invalid 4-255 (63 effects total)
23	000-255	CTC
24	000-255	White light CTC
25	000-255	Colour Chart
26	000-255	Pattern
27	000-255	White light pattern
28	000-255	LED built-in effect (main light, 2 values, 1 effect) 0-1 is invalid 2-255 (127 effects total)
29	000-255	LED built-in effect speed
30	000-255	LED built-in effect trailing time
31	000-255	Built-in white light effect (8 values and 1 effect for fill light) 0-7 invalid 8-255 (31 effects total)

32	000-255	White light built-in effect speed
33	000-255	White light built-in effect trailing time
34	000-255	LED background colour
35	000-255	LED background colour light coarse adjustment
36	000-255	LED background tint light adjustment
37	000-255	Master Dimmer
38	000-255	Master Dimmer 16bit
39	000-255	White LEDs dimmer
40	000-255	Strobe
41	000-255	White LEDs Strobe
42	000-255	Zoom 1
43	000-255	Zoom 2
44	000-255	Zoom 3
45	000-255	Zoom 4
46	000-255	Zoom 5
47	000-255	Zoom 6
48	000-255	Zoom 7
49	000-255	Zoom 8
50	000-255	Zoom 9
51	000-255	Zoom 10
52	000-255	function
53	000-255	red
54	000-255	Red 16bit
55	000-255	green
56	000-255	Green 16bit
57	000-255	blue
58	000-255	Blue 16bit
59	000-255	white
60	000-255	White 16bit
61	000-255	Cool white Master Dimmer
62	000-255	Warm white Master Dimmer
63	000-255	Red 1 coarse (effect colour selection)
64	000-255	Red 1 16bit
65	000-255	Green 1 coarse (effect colour selection)
66	000-255	Green 1 16bit
67	000-255	Blue 1 coarse adjustment (effect colour selection)
68	000-255	Blue 1 16bit
69	000-255	White 1 coarse (colour selection for effect)
70	000-255	White 1 16bit
...	...	...
		
135	000-255	Red 10 coarse
136	000-255	Red 10 16bit
137	000-255	Green 10 coarse

138	000-255	Green 10 16bit
139	000-255	Blue 10 coarse
140	000-255	Blue 10 16bit
141	000-255	White 10 coarse
142	000-255	White 10 16bit
143	000-255	Cold white 1
144	000-255	Warm White 1
...	...	...
261	000-255	Cool white 60
262	000-255	Warm white 60

## 4.7 CH282 channel table

pass age	Channel value	Basic functions
1	000-255	Y1 Coarse (Y mode direction)
2	000-255	Y1 16bit
3	000-255	Y2 Coarse (Y mode amplitude)
4	000-255	Y2 16bit
5	000-255	Y3 coarse
6	000-255	Y3 16bit
7	000-255	Y4 coarse
8	000-255	Y4 16bit
9	000-255	Y5 coarse
10	000-255	Y5 16bit
11	000-255	Y6 coarse tuning
12	000-255	Y6 16bit
13	000-255	Y7 coarse
14	000-255	Y7 16bit
15	000-255	Y8 coarse
16	000-255	Y8 16bit
17	000-255	Y9 coarse
18	000-255	Y9 16bit
19	000-255	Y10 coarse
20	000-255	Y10 16bit
21	000-255	Y speed
22	000-255	Y mode (4 values and 1 effect for motors). 0-3 invalid 4-255 (63 effects total)
23	000-255	CTC
24	000-255	White light CTC
25	000-255	Colour Chart
26	000-255	Pattern

27	000-255	White light pattern
28	000-255	LED built-in effects (2 values for the main light, 1 effect). 0-1 is invalid 2-255 (127 effects total)
29	000-255	LED built-in effect speed
30	000-255	LED built-in effect trailing time
31	000-255	Built-in white light effect (8 values and 1 effect for fill light). 0-7 invalid 8-255 (31 effects total)
32	000-255	White light built-in effect speed
33	000-255	White light built-in effect trailing time
34	000-255	LED background colour
35	000-255	LED background colour light coarse adjustment
36	000-255	LED background tint light adjustment
37	000-255	Master Dimmer
38	000-255	Master Dimmer 16bit
39	000-255	White LEDs dimmer
40	000-255	Strobe
41	000-255	White LEDs Strobe
42	000-255	Zoom 1
43	000-255	Zoom 2
44	000-255	Zoom 3
45	000-255	Zoom 4
46	000-255	Zoom 5
47	000-255	Zoom 6
48	000-255	Zoom 7
49	000-255	Zoom 8
50	000-255	Zoom 9
51	000-255	Zoom 10
52	000-255	function
53	000-255	red
54	000-255	Red 16bit
55	000-255	green
56	000-255	Green 16bit
57	000-255	blue
58	000-255	Blue 16bit
59	000-255	white
60	000-255	White 16bit
61	000-255	Cool white Master Dimmer
62	000-255	Warm white Master Dimmer
63	000-255	Dimming 1 coarse adjustment
64	000-255	Dimming 1 16bit
65	000-255	Red 1 coarse (effect colour selection)
66	000-255	Red 1 16bit
67	000-255	Green 1 coarse (effect colour selection)
68	000-255	Green 1 16bit

69	000-255	Blue 1 coarse adjustment (effect colour selection)
70	000-255	Blue 1 16bit
71	000-255	White 1 coarse (colour selection for effect)
72	000-255	White 1 16bit
153	000-255	Dimming 10 coarse adjustments
154	000-255	Dimming 10 16bit
155	000-255	Red 10 coarse
156	000-255	Red 10 16bit
157	000-255	Green 10 coarse
158	000-255	Green 10 16bit
159	000-255	Blue 10 coarse
160	000-255	Blue 10 16bit
161	000-255	White 10 coarse
162	000-255	White 10 16bit
163	000-255	Cold white 1
164	000-255	Warm White 1
281	000-255	Cool white 60
282	000-255	Warm white 60

#### 4.8 Functional Channel Description

<b>1</b>	000-009	empty	No function
<b>2</b>	010-014	Y-axis motion turns off the light on	Blackout on tilt on
<b>3</b>	015-019	Y-axis motion is turned off and off	Blackout on tilt Off
<b>4</b>	020-024	RGBW	RGBW (additive) colour-mixing mode
<b>5</b>	025-029	CMY light reverse control	CMY (subtractive) colour-mixing mode
<b>6</b>	030-034	Y-axis control is turned on	Combine heads
<b>7</b>	035-039	The Y-axis is closed by the whole control	Disable combine heads
<b>8</b>	040-044	Idle	Reserved for future use
<b>9</b>	045-049	Idle	Reserved for future use
<b>10</b>	050-054	Idle	Reserved for future use
<b>11</b>	055-059	Y-axis reset	Tilt reset
<b>12</b>	060-064	Amplified reset	Zoom reset
<b>13</b>	065-069	Zoom on the quiet reset	Quiet zoom reset
<b>14</b>	070-074	Reset the whole machine (need to reset to zero)	All reset
<b>15</b>	075-079	Lamp head order 1-10	Cell order 1-10
<b>16</b>	080-084	Lamp head order 10-1	Cell order 10-1

<b>17</b>	085-089	Idle	Reserved for future use
<b>18</b>	090-094	Y reversal is turned on	Tilt reverse
<b>19</b>	095-099	Idle	Reserved for future use
<b>20</b>	100-104	Y reversal closes	Disable tilt reverse
<b>21</b>	105-109	Idle	Reserved for future use
<b>22</b>	110-114	Idle	Reserved for future use
<b>23</b>	115-119	Idle	Reserved for future use
<b>24</b>	120-134	Idle	Reserved for future use
<b>25</b>	135-139	Fast dimming	Dimmer fast
<b>26</b>	140-144	Smooth dimming	Dimmer smooth
<b>27</b>	145-149	Linear curves	Linear
<b>28</b>	150-154	Squared rate curve	Square
<b>29</b>	155-159	Inverse square rate curve	I Square
<b>30</b>	160-164	S-curve	S-Curve
<b>31</b>	165-169	Idle	Reserved for future use
<b>32</b>	170-174	Idle	Reserved for future use
<b>33</b>	175-179	PWM frequency 600HZ	PWM 600HZ
<b>34</b>	180-184	PWM frequency 1200HZ	PWM 1200HZ
<b>35</b>	185-189	PWM frequency 2000HZ	PWM 2000 HZ
<b>36</b>	190-194	PWM frequency 4000HZ	PWM 4000 HZ
<b>37</b>	195-199	PWM frequency 6000HZ	PWM 6000 HZ
<b>38</b>	200-204	PWM frequency 15000HZ	PWM 15000 HZ
<b>39</b>	205-255	Idle	Reserved for future use

### Note 1

The amplitude of the menu Y mode is 0, and the amplitude of the Y mode is controlled by Y whole control, fine adjustment or Y2 coarse adjustment

The amplitude of the menu Y mode is 1--255, and the function channel is 205--255, which controls the amplitude of the Y mode

The function channel is 0--204, and the Y mode amplitude is set by the menu controls the Y mode amplitude

## Strobe

pass age	Channel value	Basic functions
1	000-019	Shutter is closed
2	020-024	Shutter opens
3	025-064	The strobe goes from fast to slow
4	065-069	Shutter opens
5	070-084	100-0% strobe, from fast to slow
6	085-089	Shutter opens
7	090-104	0-100% strobe, from fast to slow
8	105-109	Shutter opens
9	110-124	Random strobe, from fast to slow
10	125-129	Shutter opens
11	130-144	Random 100-0% strobe, from fast to slow
12	145-149	Shutter opens
13	150-164	Random 0-100% strobe, from fast to slow
14	165-169	Shutter opens
15	170-184	Pulse strobe 1, from fast to slow
16	185-189	Shutter opens
17	190-204	Random pulse strobe, from fast to slow
18	205-209	Shutter opens
19	210-224	0-100-0% strobe, from fast to slow
20	225-229	Shutter opens
21	230-244	Pulse Strobe 2, from fast to slow
22	245-255	Shutter opens

## Colour Chart

pass age	Channel value	Basic functions
1	0	not
2	001-002	2700k
3	003-004	3200k
4	005-006	4200k
5	007-008	5600k
6	009-010	8000k
7	011	blue
8	012-048	Blue to cyan
9	049	cyan
10	050-086	Cyan to green
11	087	green
12	088-124	Green to yellow
13	125	Yellow
14	126-162	Yellow to red
15	163	red

16	164-200	Red to magenta
17	201	magenta
18	202-238	Magenta to blue
19	239	blue
20	240-247	Gradient effect, from fast to slow
21	248-255	Pulse effect, from fast to slow

## 5. Common faults

In view of some common faults, corresponding solutions are proposed. Any unsolvable problem should be handled by professional and experienced personnel. Disconnect the power supply before maintaining the fixture.

### 1. The fixtures' head modules are not lit

- Check that the voltage matches the luminaire's nominal voltage.
- Check whether the power supply connection or the control switch of the lamp is in poor contact.
- Check if the power supply is in working condition.
- Check if the DMX512 controller sends commands.

### 2. The fixture does not accept the control of the console after a normal reset

- Check whether the numerical start address and function options of the lamp are correct.
- Check whether the connection of the communication control line is correct, the communication line is too long or has been interrupted.
- Check whether the control equipment is invalid, and check whether the signal amplifier connected in series is invalid.
- Check whether the communication line is too long or if other equipment interferes with each other.
- Optimise the wiring, shorten the length of the control signal line, and separate the wiring of high-voltage and low-voltage lines.
- Add a signal amplifier.
- The signal line adopts high-quality shielded twisted pair cable.
- Connect a signal termination resistor (120 ohms) at the end of the luminaire.

### 3. The fixture's functions cannot be activated

- Check whether the power supply parameters are consistent with the lamp.
- Check that the lamps have poor contact or fall off due to extrusion deformation, internal parts vibration, moisture and other reasons during long-distance transportation.
- Please check whether the internal wires and connectors of the lamp are falling off or loose.
- Check whether the electronic components of the lamp (such as electronic transformers, PCB boards, motor control boards, etc.) are loose, short-circuited, or burned.

## **REMARK**

The product has perfect performance and integrity in packaging. All users should strictly comply with the warning and operating instructions as stated. The manufacturer does not hold responsibility for damage resulted due to misuse. Any damage resulting from misuse is not within the Company's warranty. Any fault or problem caused by neglecting the manual is also not in charge of dealers. Errors and omissions for every information given in this manual are excepted. All information is subject to change without prior notice.