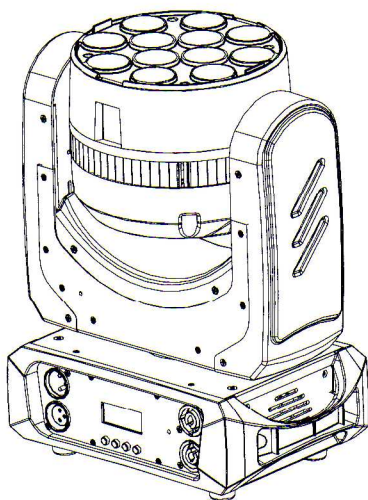


# **USER MANUAL**

## **COMET 200**

---



## **Moving head**

- Professional stage lighting equipment

## 1. Open the box and checking

Congratulations on choosing our products! Please carefully read this instruction manual in its entirety and keep it well for using reference. This manual contained about the installation and the relative using information of this products. Please according to this manual's relative speaking when using this equipment.

This equipment was made of new style, high intensity plastic. It fully shows the modern times light characteristic with beauty structure. And it was made according to CE standard. Fully up the international standard of DM X512 agreement. Master or slave in phase ntrol. Can be use in large entertainment theater, performing and palying hall etc.

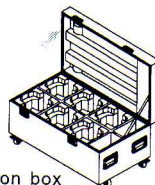
When receive the product, please be careful to take and put, check if the product has damage or not because of transportation, and check the following parts:

- |                    |                    |
|--------------------|--------------------|
| 1.Signal cable-1PC | 2.Safty cable-1PC  |
| 3.User Manval-1PC  | 4.Omega holder-1PC |
| 5.Power cable-1PC  | 5.Service card-1PC |

### 1. 1Package

Unpacking the fixture

- 1.Open the flight case couer
- 2.The equipment will be carried out from the bottom (Fig.)



Aviation box

Packing the fixture

- 1.Disconnect the fixture from power and allow it to cool
- 2.Place the fix ture in the bottom of the flight case,and cover the case without forcing

## 2. Safety instructions

Every person involved with installation and maintenance of this device have to:

- be qualified
- follow the instructions of this manual entertainment theater, performing and palying hall etc.

### **CAUTION!**

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

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

### **Important:**

- The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.
- Please consider that damages caused by manual modifications to the device are not subject to warranty.
- Never let the power-cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution!
- Make sure that the available voltage is not higher than stated on the rear panel.
- Always plug in the power plug least. Make sure that the power-switch is set to off-position before you co nnections with the mains with particular caution!
- Make sure that the power-cord is never crimped or damaged by sharp edges. Check the decide and the power-cord from time to time.
- 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 powercord.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- The electric connection, repairs and servicing must be carried out by a qualified employee.
- Do not connect this device to a dimmer pack.
- Do not switch the fixture on and off in short intervals as this would reduce the lamp's life. rly mean that the device is defective.
- Do not touch the device's housing bare hands during its operation (housing becomes hot)!
- For replacement use lamps and fuses of same type and rating only.

### **CAUTION ! EYEDAMAGES !**

Avoid looking directly into the light source  
(meant especially for epileptics) !

#### ➤ **Installation**

Make sure all parts for fixing the projector are in a good state of repair. Make sure the point of anchorage is stable before positioning the projector. The safety chain must be properly hooked onto the fitting and secured to the framework, so that, if the primary support system fails, the fitting falls as little as possible. If the safety chain gets used, it needs to be replaced with a genuine spare.

#### ➤ **Minimum distance of illuminated objects**

The projector needs to be positioned so that the objects hit by the beam of light are at least 0.8 metres from the lens of the projector.

#### ➤ **Minimum distance from flammable materials**

The projector must be positioned so that any flammable materials are at least 0.20 metres (8") from every point on the surface of the fitting.

#### ➤ **Mounting surfaces**

It is permissible to mount the fitting on normally flammable surfaces.

#### ➤ **Maximum ambient temperature**

For the fitting to operate well and reliably, the ambient temperature should not exceed 40°C (104°F).

#### ➤ **Protection against electrical shock**

Connection must be made to a power supply system fitted with efficient earthing (Class I appliance according to standard EN 60598-1). It is, moreover, recommended to protect the supply lines of the projectors from indirect contact and/or shorting to earth by using appropriately sized residual current devices.

#### ➤ **Hooking up to the supply mains**

Connection to the electricity mains must be carried out by a qualified electrical installer.

Check that the mains frequency and voltage correspond to those for which the projector is designed as given on the electrical data label.

This label also gives the input power to which you need to refer to evaluate the maximum number of fittings to connect to the electricity line, in order to avoid overloading.

240W (0.8m)



$t_a 45^{\circ}\text{C}$





#### ➤Maintenance

Before starting any maintenance work or cleaning the projector, cut off power from the mains supply.

After switching off, do not remove any parts of the fitting for at least 10 minutes.

After this time the likelihood of the lamp exploding is virtually nill. If it is necessary to replace the lamp, wait for another 15 minutes to avoid getting burnt.

The fitting is designed to hold in any splinters produced by a lamp exploding.

The lenses must be mounted and, if visibly damaged, they have to be replaced with genuine spares.

### 3. Operating determinations

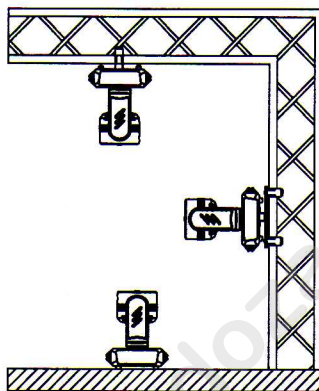
- This device is a moving-head for creating decorative effects and was designed for indoor use only.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- Never run the device without lamp!
- Do not shake the device. Avoid brute force when installing or operating the device.
- Never lift the fixture by holding it at the projector-head, as the mechanics may be damaged. Always hold the fixture at the transport handles.
- When choosing the installation-spot, please make sure that the device is not exposed to heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others!
- The minimum distance between light output and the illuminated surface must be more than 1.5 meters.
- Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.
- Always fix the fixture with an appropriate safety rope. Fix the safety rope at the correct holes only.
- Operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastend.
- The lamp must never be ignited if the objective-lens or any housing-cover is open, as discharge lamps may explode and emit a high ultraviolet radiation, which may cause burns.
- The maximum ambient temperature 40°C must never be exceeded.
- Operate the device only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation!
- Please use the original packaging if the device is to be transported.
- Please consider that unauthorized modifications on the device are forbidden due to safety reasons!
- If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, burns due to ultraviolet radiation, lamp explosion, crash etc.



## 4. Rigging the fixture

### 4. 1 Mounting

– The FIXTURE can be installed in any position.



Pay attention to the regulations of CE

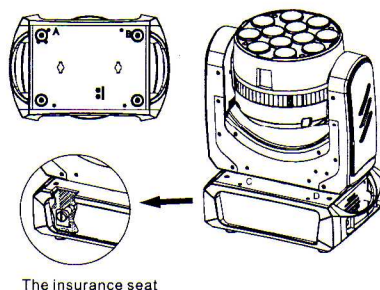
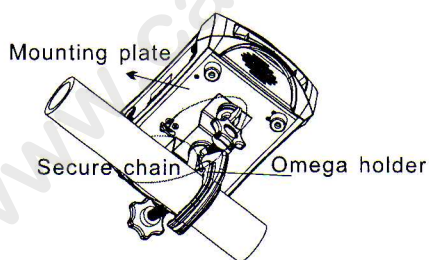
**The installation shall be done by qualified staff only**

- ☞ For the various mounting positions of the FIXTURE (standing on the floor, sideways or hanging) different accessories kits are available.
- ☞ Through this a safe and firm installation is assured.
- ☞ You'll find special connectors on the bottom side of the system which are put to use here.
- ☞ In addition the front side of the system is marked with (FRONT) as this is important for a even orientation during installation.

### 4. 2 Installing the Clamps

- **DANGER TO LIFE** Please consider the respective national norms during the Installation! The installation must only be carried out by an authorized dealer!
- The installation of the projector has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.
- The installation must always be secured with a secondary safety attachment, e.g. An appropriate catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall if the main attachment fails.


- When rigging, derigging or servicing the fixture staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.
- The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.
- The operator has to make sure that safety-relating and machine-technical installations are approved by an expert after every four year in the course of an acceptance test.
- The operator has to make sure that safety-relating and machine-technical installations are approved by a skilled person once a year.
- The projector should be installed outside areas where persons may walk by or be seated.
- Important! Overhead rigging requires extensive experience, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the projector. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury and or damage to property.
- The projector has to be installed out of the reach of people.
- If the projector shall be lowered from the ceiling or high joists, professional trussing systems have to be used. The projector must never be fixed swinging freely in the room.
- Caution Projectors may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do NOT install the projector!
- Before rigging make sure that the installation area can hold a minimum point load of 10 times the projector's weight.
- The projector can be placed directly on the stage floor or rigged in any orientation on a truss without altering its operation characteristics.
- For overhead use, always install a safety-rope that can hold at least 10 times the weight of the fixture. You must only use safety-ropes with screw on carabines. Pull the safety-rope through the two apertures on the bottom of the base and over the trussing system etc.



- First unscrew marked A/B/C/D screws, take off the bottom box plastic shell, can be seen as the insurance holder shown.

### 4. 3 Connection

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!

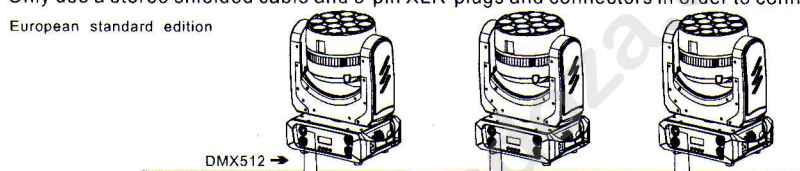
Cable (EU)	Cable (US)	Pin	International
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/ Green	Green	Earth	

#### 4. 3. 1 DM X-512 connection

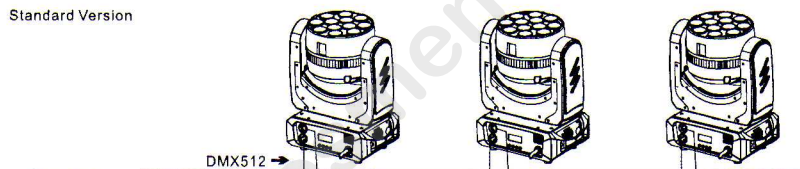
DM X-512 connection/connection between fixtures

Only use a stereo shielded cable and 3-pin XLR-plugs and connectors in order to connect

European standard edition



Standard Version



#### Caution:

At the last fixture, the DM X-cable has to be terminated with a terminator. Solder a 120 resistor between Signal (-) and Signal (+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.

#### 4. 3. 2 DMX Cable Connection Diagram

DMX output  
3-Pin XLR Socket



- 1: Ground
- 2: Signal (-)
- 3: Signal (+)

DMX input  
3-Pin XLR Socket



DMX output  
5-Pin XLR Socket

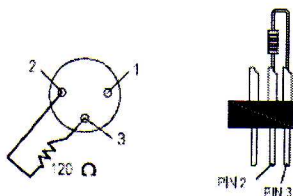


- 1: Ground
- 2: Signal (-)
- 3: Signal (+)
- 4: N. A.
- 5: N. A.

DMX input  
5-Pin XLR Socket

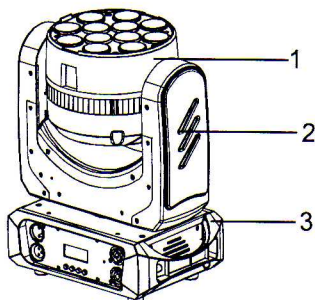


#### 4. 3. 3 DMX Terminator Diagram



- For installations where the DMX cable has to run a long distance or is in an electrically noisy environment it is recommended to use a DMX terminator. This helps in preventing corruption of the signal by electrical noise. The DMX terminator is simply an XLR plug with a  $120\Omega$  resistor connected between pins 2 and pins 3, which is then plugged into the output XLR socket of the last fixture in the chain.

#### 5. Description of the device



- 1. HEAD
- 2. ARM
- 3. BASE

#### European standard edition

4.5-pin XLR female

5.5-pin XLR male

6. display

7. power in

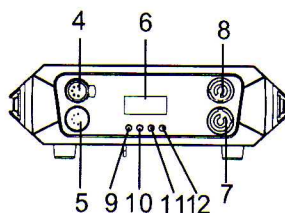
8. power out

9. MODE button

10. UP button

11. DOWN button

12. ENTER button



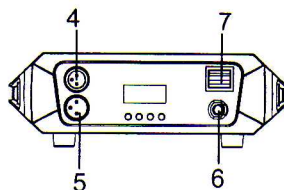
#### Standard Version

4.3-pin XLR female

5.3-pin XLR male

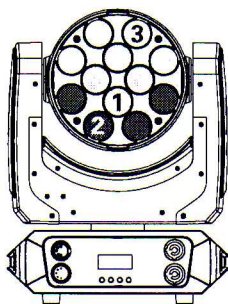
6. power in

7. power switch

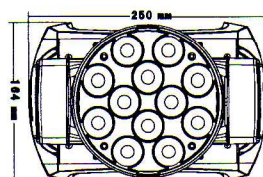
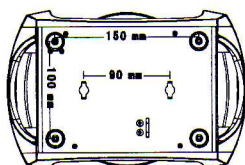
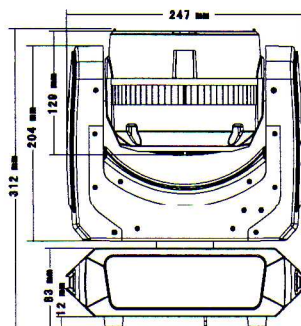
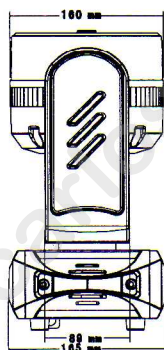




LED zone order



## 6.Dimension



## 7. Menu Maps

0	ADDR	A001--Axxx			
1	TEST	CH01--CHxx	Dxxx		
2	SET	RUN	MSTR/ALON		
		AUDI	MSTR/ALON		
		STAT	Clos/Hold//Auto/Audi		
3	REST	ALL			
		SCAN			
4	TIME	FIXT	0000~9999		
		CLET	(密码 10.3.10)		
5	RPAN	ON/OFF			
6	RTL	ON/OFF			
7	MIC	M-XX			
8	DISP	VALU	D-XX D-00 (DXXX)		
		D ON	ON/OFF		
		REVE	ON/OFF		
9	CONT	RDMX	ON/OFF (10.10/11.XXX)		
		MODE	35CH/14CH		
		INIT	ON/OFF		
		FEED	ON/OFF		
		VER	V1.0~V9.9		
		ADJU	CODE	CXXX (密码 088)	
			CH01~CHxx	XXXX(-128~127)	

Indicator: (from left to right): 1, bright :D M X      2, bright: read / write memory,  
3.no Indicator      4, bright: press the button

## 8.DMX protocol

1	2	Name	Function	DMX Value
1	1	PAN 8BIT		0-255
2	2	Pan 16BIT		0-255
3	3	TILT 8BIT		0-255
4	4	TILT 16BIT		0-255
5	5	Speed pan/tilt movement	max to min speed	0-255
6	6	Reset	normal control	0-19
			no function	20-79
			All motor reset	80-87
			Scan motor reset	85-87
			no function	88-99
			no function	100-255
	7	Red all zones	Red LEDs saturation control (0-100%)	0-255
		Red fine all zones	Fine red LEDs saturation control	0-255
	8	Green all zones	Green LEDs saturation control (0-100%)	0-255

		Green fine all zones	Fine green LEDs saturation control	0-255
	9	Blue all zones	Blue LEDs saturation control (0-100%)	0-255
		Blue fine all zones	Fine blue LEDs saturation control	0-255
	10	White all zones	White LEDs saturation control (0-100%)	0-255
		White fine all zones	Fine white LEDs saturation control	0-255
7		Red zone 1	Red LEDs saturation control (0-100%)	0-255
8		Red fine zone 1	Fine red LEDs saturation control	0-255
9		Green zone 1	Green LEDs saturation control (0-100%)	0-255
10		Green fine zone 1	Fine green LEDs saturation control	0-255
11		Blue zone 1	Blue LEDs saturation control (0-100%)	0-255
12		Blue fine zone 1	Fine blue LEDs saturation control	0-255
13		White zone 1	White LEDs saturation control (0-100%)	0-255
14		White fine zone 1	Fine white LEDs saturation control	0-255
15		Red zone 2	Red LEDs saturation control (0-100%)	0-255
16		Red fine zone 2	Fine red LEDs saturation control	0-255
17		Green zone 2	Green LEDs saturation control (0-100%)	0-255
18		Green fine zone 2	Fine green LEDs saturation control	0-255
19		Blue zone 2	Blue LEDs saturation control (0-100%)	0-255
20		Blue fine zone 2	Fine blue LEDs saturation control	0-255
21		White zone 2	White LEDs saturation control (0-100%)	0-255
22		White fine zone 2	Fine white LEDs saturation control	0-255
23		Red zone 3	Red LEDs saturation control (0-100%)	0-255
24		Red fine zone 3	Fine red LEDs saturation control	0-255
25		Green zone 3	Green LEDs saturation control (0-100%)	0-255
26		Green fine zone 3	Fine green LEDs saturation control	0-255
27		Blue zone 3	Blue LEDs saturation control (0-100%)	0-255
28		Blue fine zone 3	Fine blue LEDs saturation control	0-255
29		White zone 3	White LEDs saturation control (0-100%)	0-255
30		White fine zone 3	Fine white LEDs saturation control	0-255
31	11	CTC	No function	0-3
			Colour temperature correction from 9000K to 2700K	4-255



32	12	Virtual Colour Wheel	No function	0
			White 2700 K	1-3
			White 3200 K	4-6
			White 4200 K	7-9
			White 5600 K	10-12
			White 8000 K	13-15
			Blue (B=full, R+G+W=0)	16
			R=0, G->up, B =full, W=0	17-54
			Light Blue (R=0, G=full, B =full, W=0)	55
			R=0, G=full, B->down, W=0	56-94
			Green (R=0, G=full, B =0, W=0)	95
			R->up, G=full, B=0, W=0	96-132
			Yellow (R=full, G=full, B=0, W=0)	133
			R=full, G->down, B=0, W=0	134-170
			Red(R=full, G=0, B=0, W=0)	171
			R=full, G=0, B->up, W=0	172-208
			Magenta (R=full, G=0, B=full, W=0)	209
			R -> down, G=0, B=full, W=0	210-246
			Blue (R=0, G=0, B=full, W=0)	247
			Rainbow effect	248
			Rainbow effect	249
			Zone effect 1	250
			Zone effect 2	251
			Zone effect 3	252
			Zone effect 4	253
			Zone effect 5	254
			Zone effect 6	255
33	13	Strobe	Shutter closed	0-31
			Strobe effect from slow-> fast (zones 2,3 only)	32-63
			Strobe effect from slow-> fast (All zones together)	64-95
			Zone effects+rainbow effects speed control, slow-> fast(Virtual colour wheel 248/249)	96-111
			Zone effects+rainbow effects speed control, fast-> slow(Virtual colour wheel 248/249)	112-127
			Opening pulses in sequences from slow-> fast (All zones together)	128-143
			Closing pulses in sequences from fast-> slow (All zones together)	144-159
			Random strobe effect from slow-> fast (random zone)	160-175
			Random strobe effect from slow-> fast (random zone + random strobe)	176-191
			Random strobe effect from slow -> fast (All zones together)	192-223
			Shutter open	224-255
34	14	Dimmer	Dimmer intensity from 0% to 100%	0-255
35		Dimmer fine	Fine dimming	0-255



## 9. Maintenance and cleaning

It is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not buildup on or within the fixture. Otherwise, the fixtures light-output will be significantly reduced. Regular cleaning will not only ensure the maximum light-output, but will also allow the fixture to function reliably through out its life. A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

**DANGER :** Disconnect from the mains before starting any maintenance work

The front objective lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the light-output very quickly. The cooling-fans should be cleaned monthly

The gobos may be cleaned with a soft brush. The interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet.

The dichroic colour-filters, the gobo-wheel and the internal lenses should be cleaned monthly.

To ensure a proper function of the gobo-wheel, we recommend lubrication in six month intervals. The quantity of oil must not be excessive in order to avoid that oil runs out when the gobo-wheel rotates.

There are no serviceable parts inside the device except for the lamp and the fuse. Please refer to the instructions under "Fitting/Exchanging the lamp". Maintenance and service operations are only to be carried out by authorized dealers.

Replacing the fuse

If the lamp burns out, the fine-wire fuse of the device might fuse, too. Only replace the fuse by a fuse of same type and rating. Before replacing the fuse, unplug mains lead.

## 10. Electric equipment specification

**POWER CONSUMPTION : 240W AC100-240V50/60HZ**

**VOLTAGE : AC100-240V 50/60HZ**

**NET WEIGHT : 5KG**

### 10.1 Channel Characteristics

1. Standard 35 and 14 DMX channel mode.
2. LED were divided into three groups control, more dynamic effect.
3. Scan: scan speed adjustable. Fixture could auto reset.
4. Dimmer: linear dimmer.
5. 35 channel model has 65535 dimming.
6. Built-in a variety of strobe effect.
7. Built-in a variety of color mixing effect.

### 10.2 Menu Function

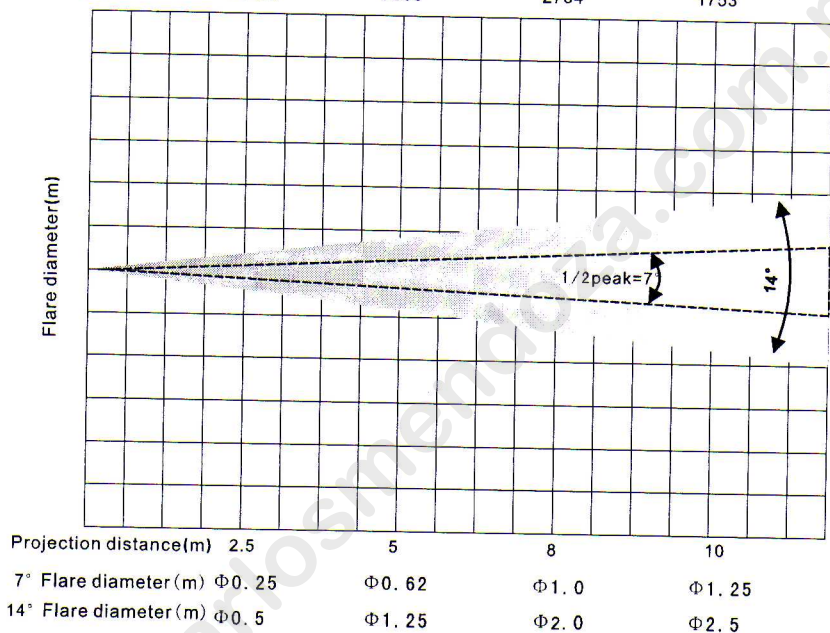
1. Blue/white LED display graphic.
2. Each DMX value displayable.
3. Monitor could ON/OFF automatically.
4. Show fixture, lamp use time.
5. No signal, fixture status keep reset status, maintain, AutoPlay procedure, sound control status.

## 11.light table

Field angle  $14^\circ$

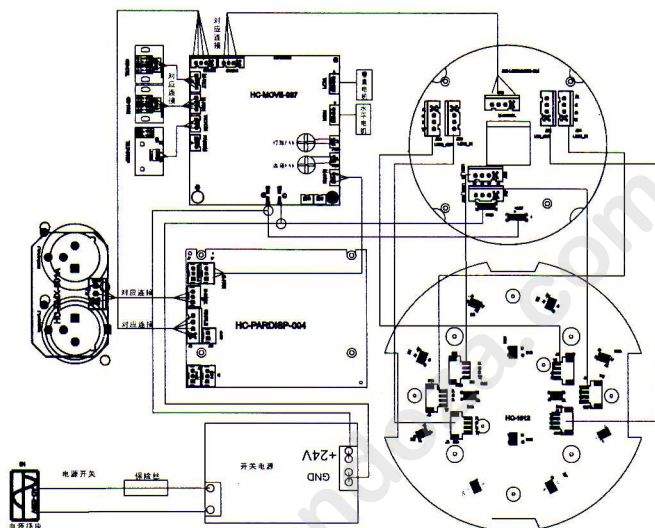
Beam angle  $7^\circ$

Red Led:	5480	1370	535	342
Green Led:	9552	2388	933	598
Blue Led:	3268	817	319	25
Full Led:	28000	7000	2734	1753



## 12.Electronic drawing

Standard Version



European standard edition

