

# LIGHT SKY

# Service Manual



Product serie:

IP serie

Product mode:

IP1000E、IP2000、IP2000E、  
IP3000、IP3000E Aquabeam



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FLY DRAGON LIGHTING EQUIPMENT CO.,LTD  
[WWW.lightsky.com.cn](http://WWW.lightsky.com.cn)

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Thank you for choosing our product! This fixture is the same as our other models, The design and production are all through comprehensive quality control to ensure the excellent performance , and maximum to approach the customers' satisfaction and demand.

1. Please read all the contents of this manual and keep it for your reference.
2. During the using of this manual for maintenance, please pay attention to the following points:
  - A. Prepare for maintenance, includes the maintenance tools.
  - B. Make good records of maintenance and repair.
  - C. Take the photos as record before disassembly the part to sure that all parts can be easily remounted.
  - D. All the parts and screws should be placed separately to avoid mistake.
3. Do not cut the belt, even if the light is equipped with spare belt.
4. No repairing and maintenance is allowed with Power ON, keep safe;
5. Make sure the failure reason is found before dismantle the fixture.
6. The maintenance requires professional skill.
7. The part that it's not listed in Service Manual, please refer to 'User Manual'.
8. The copyright of this service manual is owned by Fly Dragon lighting equipment Co. Ltd, brand LIGHTSKY.

## Attention:

Based on the fixture's continuous upgrade , the data or part contained in this manual are probably to be changed in the future. while Our company reserves the right to change the relevant information in following product improvement without the further notice.

The publisher of this manual is not responsible for the accuracy of the information in this manual and will not be responsible for the consequences associated with the information.

# The installation and routine maintenance

1. The installation and use: Please read carefully with the lights attached 'User Manual', in strict accordance with the related manual content to guide the installation and use.
2. To install and use the lights, pay attention to the following points:
  - ◆ The lights installation: the light must be installed on the surface of the solid & noncombustible object. When the light is hung, it is necessary to verify that the facilities and the light hook can withstand at least 10 times of lights weight, and add the safety rope and other security measures;
  - ◆ Electrical connections:
    - ◎ The professional skill person is required ;
    - ◎ The lighting power connections must be installed in accordance with the relevant standards, the incorrect power supply connection may lead to damage the light!
    - ◎ Please check whether the power supply voltage and frequency meet the requirements of the light before power on, and check the power cord connection, whether the plug and socket are closely connected, each light must be properly grounded;
    - ◎ Please do not use the power cable with damaged insulating layer , if the power cable insulating layer is damaged, it must be operated by the manufacturer or distributor or a professional qualification person to avoid danger!
  - ◆ If the lights were controlled by the console, it must be turned on by different groups so as not to turn on the lights in large quantities and to bring down the city electricity in a flash;
  - ◆ When the light fixture is ON, the projected object should be more than 12 meters distance to avoid danger.
  - ◆ The distance between the light fixture and ventilation at least 1 meters, and no obstructions is allowed.
  - ◆ No direct contact between lamp and eyes is allowed when the lamp is turned ON.
  - ◆ Don't let the light in long time Power On when the light fixture with failure issue ;
    - ◎ Correct steps : Once Confirmed the light is not working properly, the power cable and signal connection should be disconnected from the light, move to the workbench or ground for inspection;
  - ◆ Do not switch on/off the light frequently, even if the lamp is not turned ON or installed, for which will affect the life span of the fixture.
  - ◆ In long time use, it's not recommended to use over 4 hours each time, otherwise it will greatly shorten the service life of light. The alternate operation method can be used to solve Above issue.
  - ◆ Please cut off the power immediately if the light working with some unusual noise;
  - ◆ If the light is strongly hit by accident, check the interior of light firstly to make sure there is no short circuit, no electric leakage. and the lamp is fine. then , test the fixture with Power ON.
  - ◆ Do not pack the lighting fixture into carton or flycase before it is completely cooled;
  - ◆ After the event is finished, we suggest turn OFF the lamp by console, but let the lamp fan keep working for a few minutes to cool down the fixture interior temperature. the bulb can be off by console, and let the light continue
  - ◆ When replacing the new lamp, it must be carried out at the condition that the fixture is completely cooled and power off. Wear clean gloves, check the new lamp to make sure there is no oil stain, dirt or fingerprints, and wipe them with clean paper or alcohol.
  - ◆ Do not use it in wet, rain, dusty or blown sand situation if there are not enough protections.
  - ◆ When the fixture is accidentally with water intrusion and seriously humid, the power must be cut OFF immediately, and open cover plate, wipe off the water, and put the light in the outdoor ventilation area to dry (the cover plate should be opened);
  - ◆ Keep distance from the smoke machine, bubble machine, snow machine and so on to avoid influence to the lights; if lights must be close to smoke machine, bubble machine, snow machine, please shorten the cleaning period of lights.

# Maintenance methods and attentions

1. Cleaning period: In order to ensure the light fixture to be operated normally, it should keep the lights clean, the cleaning period generally is one month, if the light is used in a environment with dust ,or near to the smoke machine, bubble machine or snow machine, the cleaning period should be shortened.

2. Cleaning Method:

- ◎ If there is dust inside the lights, firstly use the vacuum cleaner, gasbag or air gun (with pressure) to blow the dust on the surface gently, or use a soft brush to wipe it;
- ◎ Clean the optical lens, use the odorlessness tissue paper or cotton cloth to wipe the granular material, then, use the cotton cloth soaked with ethanol (alcohol) or odorlessness paper to remove dust and odor residue, lastly, use the distilled water for final cleaning, then dry it with a soft cotton cloth;
- ◎ clean the color wheel, Gobo wheel and optical lenses ,because they are easy to be scratched, so do not use destructive solvents for cleaning ;
- ◎ The other parts should be cleaned by the soft cotton cloth;
- ◎ Clean the focus, zoom and other sliding parts should adopt the high and low temperature resistant lubricating oil, do not use unqualified oil to effect mechanical slide ;
- ◎ The lens and other rotating parts must be inspected regularly, keep them clean and stable, if there is a obvious damage or looseness, it is necessary to replace or reinforce to prevent the accident.

3. Cleaning attentions:

- ◎ All the lights in the cleaning and maintenance must be power off, completely disconnect from the power, and move the light on the desk or on the ground.
- ◎ Do not use any paper or cloth which will produce the crumbs to clean the inside of the light. Do not use any destructive solvent except the special cleaning solution or absolute alcohol, and do not flush the lamp with water.
- ◎ Do not touch the glass bulb by hands directly to avoid the fingerprints which will lead to the uneven heating and bulb burst.
- ◎ Attention intensity when clean rotation Gobo & color wheel and strobe plate to avoid the deformation and interference, do not collide and shift the electronic induction element to keep sensor function correctly.
- ◎ Do not pull the power and signal connection cables inside the light strongly to avoid the abnormal connection.
- ◎ After cleaning, check the cleaning parts for deformation, stripping, disconnection or other abnormality, make sure the alcohol and other flammable materials is completely volatile away after cleaning, then switch on the light to avoid the fire.



## Faulty issues Maintenance

The following are the common faulty issues of lights and the corresponding treatments. All the repairs shall be handled by professional technician. all the fixtures must be Switch off before maintenance.

### 1. Faulty issue 1 : Lamp can not TURN ON

- ◎ Check if the lamp comes to the end of life span or damaged, then, replace the same type of lamp with the same specifications.
- ◎ Check that if the fixture received the lamp turn ON order from the DMX controller or if the DMX controller send the order to the fixture of Lamp Turn on.
- ◎ Check if there are too many lamps Turn ON at same time, which effect the city power in improper operation, try to TURN ON this lamp individual .
- ◎ Check If the lamp is too hot ,or the interior temperature is not cool enough, which makes the lighting fixture in lamp self-protection procedure. so, just Let the lamp cooling for more than 15 minutes with all Power off .when the lamp and fixture cooled enough the lamp would be turned on normally .
- ◎ Check the DC380V power supply output & connection cables to see if they are good connection, and check if the power supply itself is abnormal, if yes ,replace the same type of power supply.
- ◎ Check if the e-ballast's cables are connected well to the lamp, and check if the E-ballast itself work fine, If no, please replace same type of E-ballast.
- ◎ Check if the electronic temperature switch is damaged, use the multimeter to check two cables marked WK on the Driver PCB ,which located on the base bottom., if these two cables are conducted means the temperature switch is connected properly, otherwise replace the electronic temperature switch.
- ◎ Check the display board menu: Information—Fans speed, check the Rump fan: FAN1, Lamp fan1, Lamp fan2, these three fans speed should be more than 500RPM,otherwise, the lamp would be turn off automatically. if the fan speed is less than 500RPM , check these fan to see if they are workingfine , if fan work improperly ,please replace the fan .  
if the fan work proper, but the display board show wrong information, then , please replace a new display board.
- ◎ Check the menu: Information—Fixture Temperatures—LAMP TEM, check the temperature sensor near the lamp, whether the temperature is normal. Otherwise check whether the temperature sensor is damaged or the connecting cable is abnormal.

### 2, Faulty Issue 2 : Lamp TURN ON & OFF Automatically

Troubleshooting:

If the lamp TURN ON & OFF automatically after a few minutes, check whether the cooling system is working properly, the failed cooling system will cause the high temperature inside the light which would generate lamp self-protection procedure and turn OFF AND ON automatically..

- ◎ Check if the lamp come to the end of lifespan ,if yes , please replace the same type of lamp
- ◎ Check if the electronic temperature switch near the lamp is damaged or abnormal.
- ◎ Check whether the electronic temperature sensor near the lamp is damaged.
- ◎ Check the lamp fan to see if they run properly, or if there are the dust, paper scraps, foreign objects and others cased the poor heat dissipation.
- ◎ When the lamp fans are working well, check the display menu, Information—Fans speed, check Rump fan. Check the FAN1/Lamp fan1/Lamp fan2, if one of the fan speed is 0 or with an unexpected data fluctuation, and the lamp ON/OFF in a short time, check the Yellow fan cable to see if connect well.
- ◎ Check whether the power is under-supply, or the power supply DC28V output is abnormal.

### 3. Faulty issue 3: The spot is off-center, dark, uneven:

Troubleshooting:

- ⊙ Check if the lamp come to the end of service life which cause the brightness insufficient, replace the same model lamp .
- ⊙ Check if there is dust on the optical components, clean it.
- ⊙ Check if the power is under-supply.
- ⊙ When the spot is off-center in left & right direction, finely adjust the lamp screw to change the lamp position until the ideal spot.
- ⊙ When the spot is off-center in up & down direction, please refer the 'User Manual' and adjust it via display board menu, the following is the steps: Menu— SERVICE— Calibration— STAT Gobo— Gobo, then adjust the spot. the password is 2222.

### 4. Faulty Issue 4: Reset failure, display board failure

Troubleshooting:

- ⊙ Make sure the lighting fixture connect normally with the city power.
- ⊙ Open base cover, check if the fixture's power supply input fuse is burned.
- ⊙ Check if the fixture's power supply input and output voltage is normal .
- ⊙ Check the fixture's interior connection cables and plugs to see if they are in good conditions.
- ⊙ Check if the display screen is damaged, replace a new display board .

### 5. Faulty Issue 5: the fixture is out of control

Troubleshooting:

- ⊙ Make sure the DMX IP address is correct.
- ⊙ Open base cover, check if the cables between DMX connector-- the X/Y board-- the Display board are in good connection .
- ⊙ Check if signal cable have broken circuit and short circuit, if the display board keep flashing means the signal connection is abnormal .
- ⊙ Check if console setup is correct and ensure the console output signal is working .
- ⊙ Check if the communication chip on display board is burned, if yes, please replace a new display board .
- ⊙ The light fixtures start to be out of control or disorder after several hours working: the main reason is the PCB boards are in bad heat radiation, which means too hot. then, Open the base box cover, clean the fan dust, make sure the fans are normal working, then clean up the air inlet and outlet.
- ⊙ Abnormal operation, which means the user adopts “ ONE ORDER, Multi-pcs fixture ON” working way. it generate Ten Thousand V Power to ignitor the lighting fixture in one second, which cause the fixture out of control , PCB board burned etc. so, the factory recommend “ ONE ORDER , ONE FIXTURE ON”

## 6. Faulty Issue 6: The Gobo wheel, color wheel or CMY module is stuck, or with shaking, stepping out and out of control performance

### Troubleshooting:

- ◎ The stuck issue is usually caused by the mechanical reasons, such as the Gobo wheel or color wheel is deformed, the screw is loose etc.
- ◎ shaking, stepping out or out of control maybe caused by the screw loose and missing, but the damage of the related chips in the PCB, interior bad cables connection, the damage of motors are would be the reason of these issue.

**Method of confirming the Motor cause:** first, find the corresponding motor cable, for example, the GOBO wheel is M, find the M position in the PCB. Measure the motor with a multi meter. if the motor is damaged, replace the motor. If the cable is bad connection, fix it.

- ◎ Check the space between the small magnet and the sensor, the best distance should be between 1.0-2.0mm, the big distance will case the inaccurate location or asynchronous.

## 7. Faulty Issue 7 :The focus or prism has big noise, stuck ,and stepping out.

- ◎ The focus and prism have sliding parts, if there are some noise, shake, stuck, it's generally caused by lacking of mechanical lubricant or blocked by massive dust, it needs to be cleaned regularly, and add heat-resistant and cold-resistant lubricant.
- ◎ The focus stuck may be caused by the motor damage or the screws on the motor are loose or missing.
- ◎ The aging, loose or broken of prism belt would cause the issue of prism and focus 's stuck, stepping out.
- ◎ The stuck and stepping out: Except the above reasons, the other cause maybe: the damage of the corresponding chip on the PCB, the bad connection of motor cable, the cable short circuit to the ground, or the motor damage.

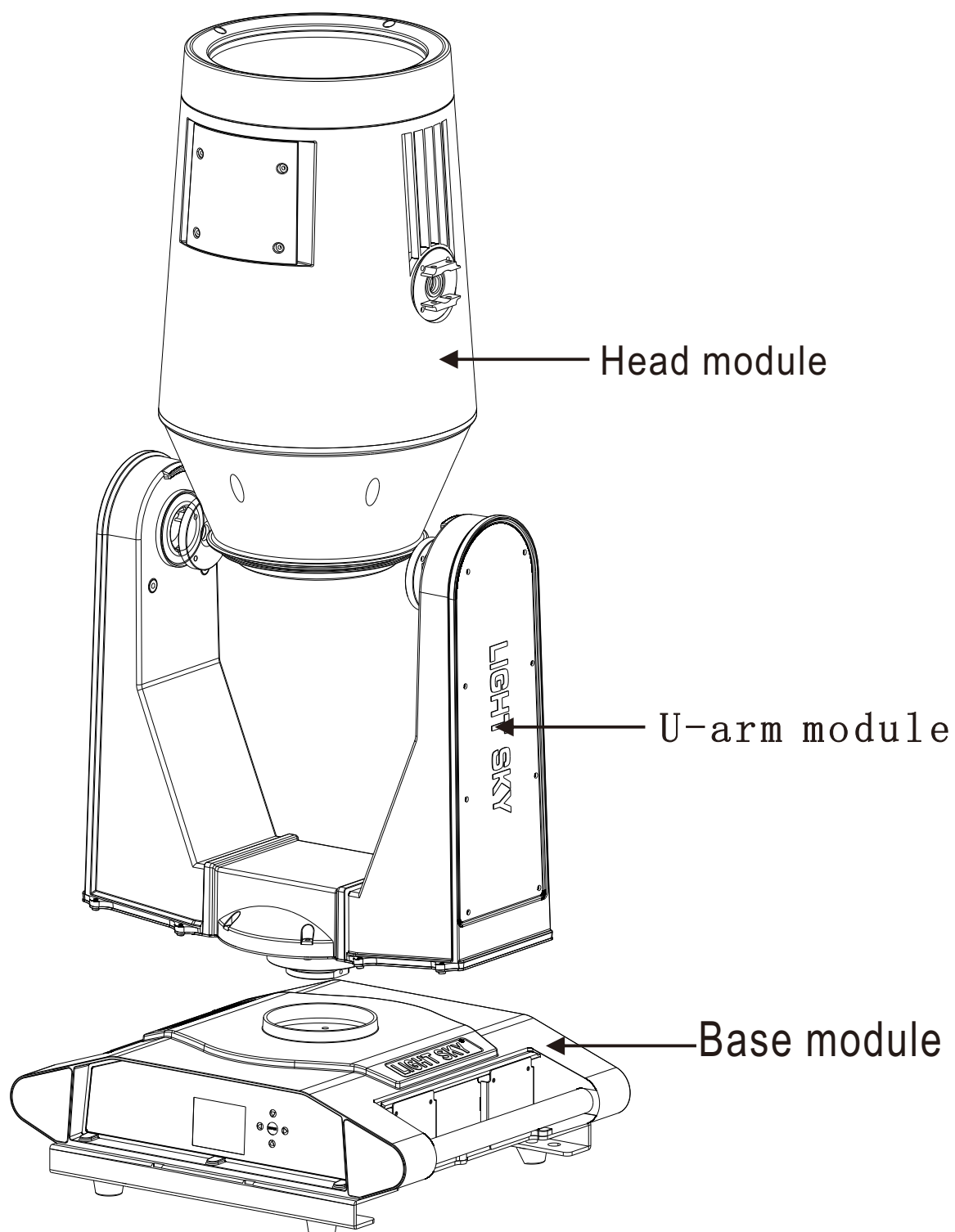
## 8. Faulty Issue 8: the PAN/TILT direction out of step, no position correct, bad synchronization

### Troubleshooting:

- ◎ Check if the PAN/TILT sensor are covered with too much dust , clean it water-free alcohol.
- ◎ Check if the PAN/TILT sensor are damaged. when POWER ON, manually move the Pan/ Tiltbut no reset, it means the PAN/TILT sensor are damaged, then replace the new ones.
- ◎ The wrong distance between the PAN/TILT sensor and sensor data reading wheel, the sensor data reading wheel should be in the middle position, and no scrape, no collide, no rub.
- ◎ For outdoor use, check if there is water appears on the sensor data reading wheel, which would cause PAN/TILT issue.
- ◎ Check if the cable of PAN/TILT motors are loose and bad contact.
- ◎ Check if the PAN/TILT belt is too tight, aging or loose, adjust or replace the belt.
- ◎ When PAN/TILT position is deviate from original, please enter into Display board MENU, and the adjust steps are as followings: SERVICE—Adjust—Pan or Tilt, adjust it , Exit it.

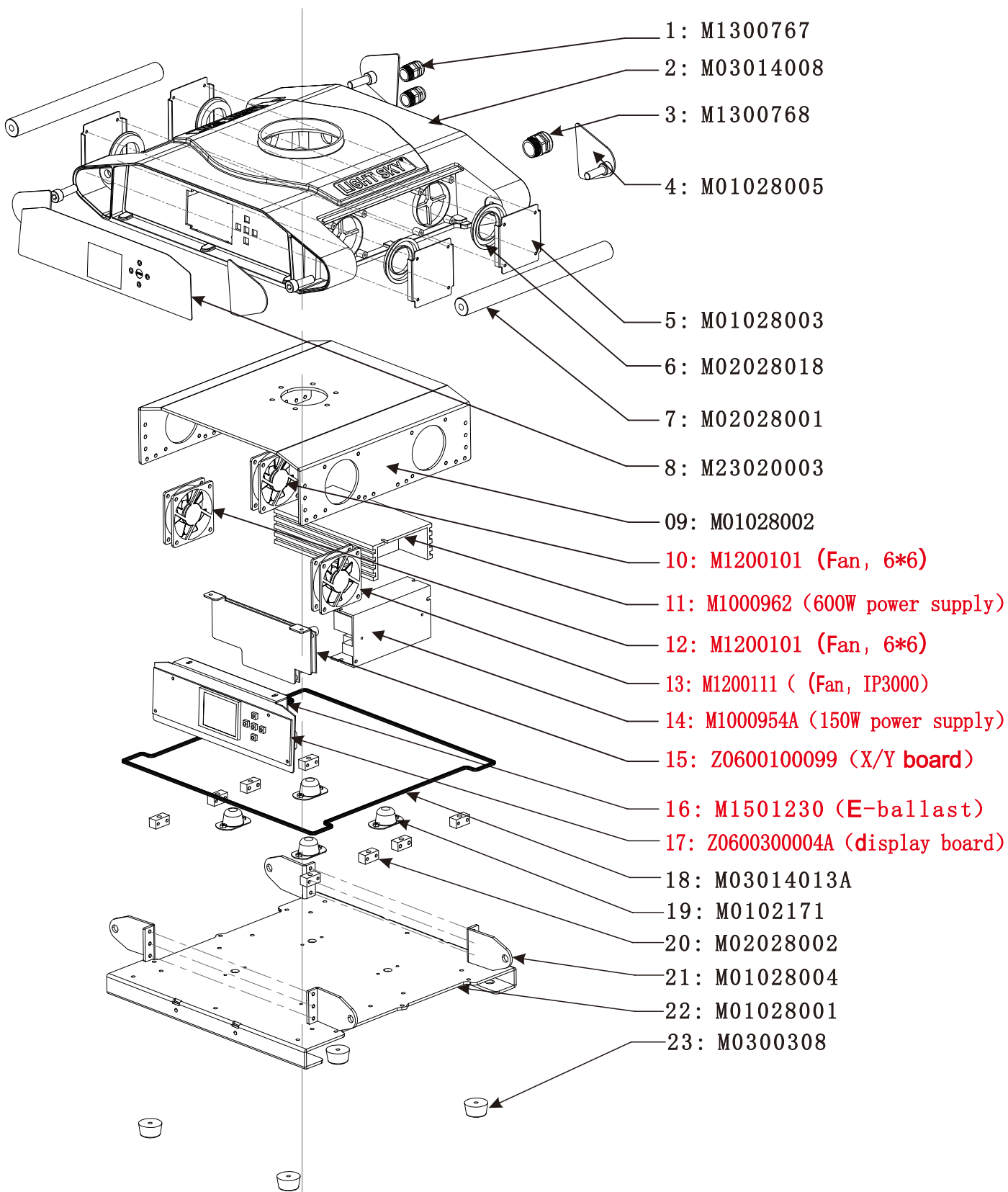
## Exploded view

### Brief exploded view

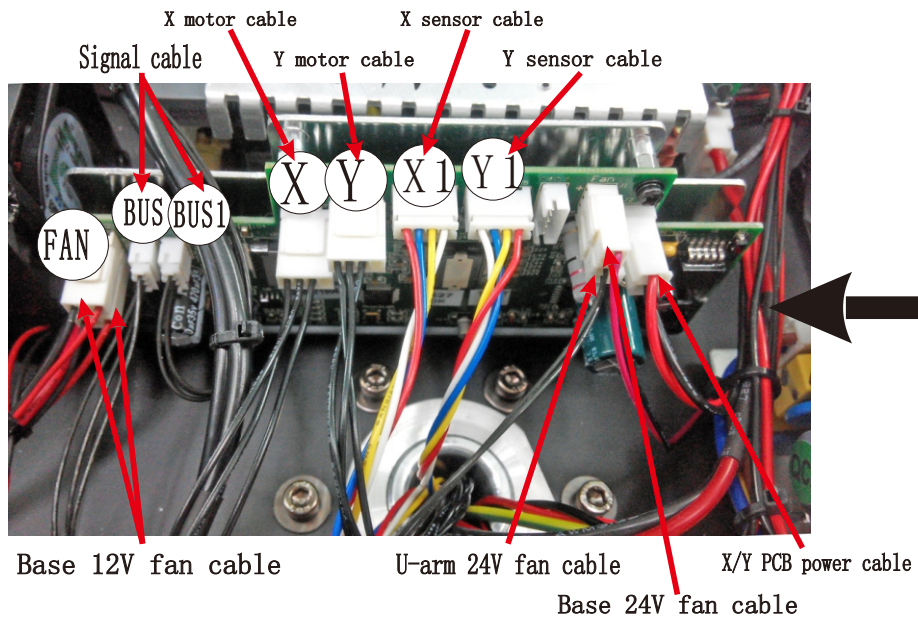


## Base exploded view

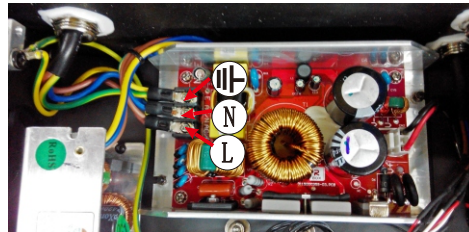
### Item number



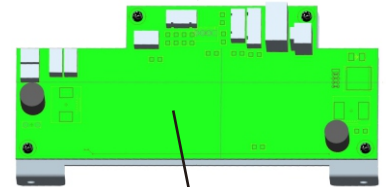




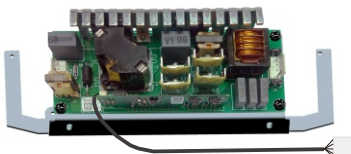
Item number: **M1000954A**  
 VUP150F28A344  
 IN:100-240VAC 50/60Hz  
 OUT:28VDC 5.36A  
 150W Power supplier



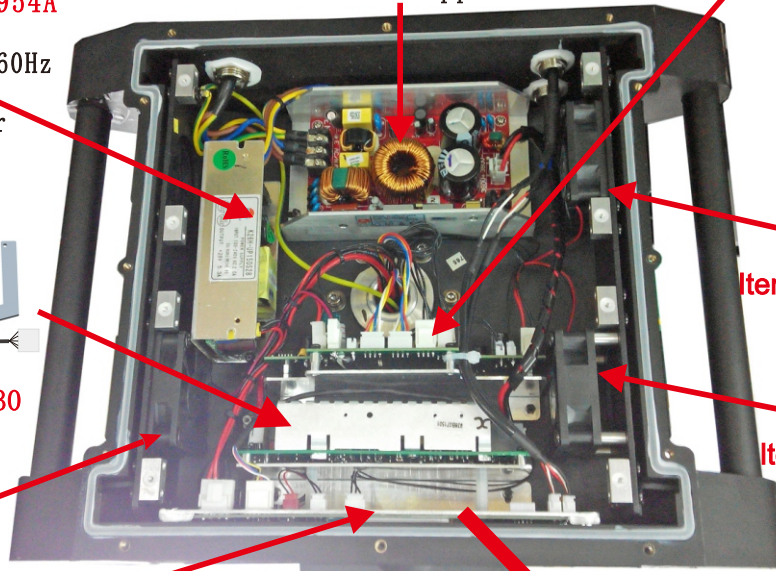
Item number: **M1000962**  
 RUP600F380A  
 AC100-240VAC 380, 1.58A  
 600W Power supplier



X/Y PCB part



E-Ballast  
 Item number: **M1501230**

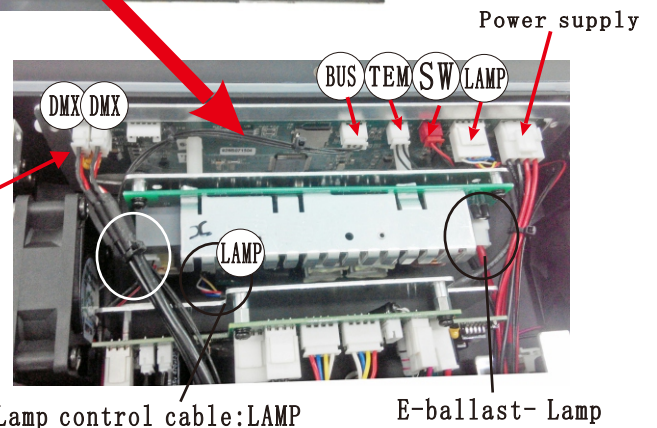
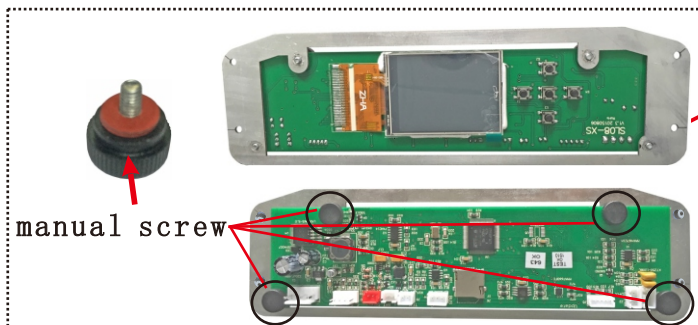


Fan  
 Item number: **M1200111**

Fan  
 Item number: **M1200101**

Fan  
 Item number: **M1200101**

Display board  
 Item number: **Z0600300004A**



## U-arm exploded view

### Item number

1: M01028012  
 2: M03014013A  
 3: M03014007  
 4: M03014011  
 5: M03014006  
 6: M03014013A  
 7: M02028027  
 8: M01028016  
 9: M02028013  
 10: M02028005A

11: M1200521 (Fan)

12: M01028010A

13: M02028006

14: M01028010

15: M02028005

16: M02028007

17: M0800256A (Belt)

18: Z0600500004 (position board)

19: M0500639 (motor)

20: M02028008

21: M02028009

22: M0102513

23: M0800213B (Belt)

24: M03014014

25: M03014015

26: M01028014

27: M0202503

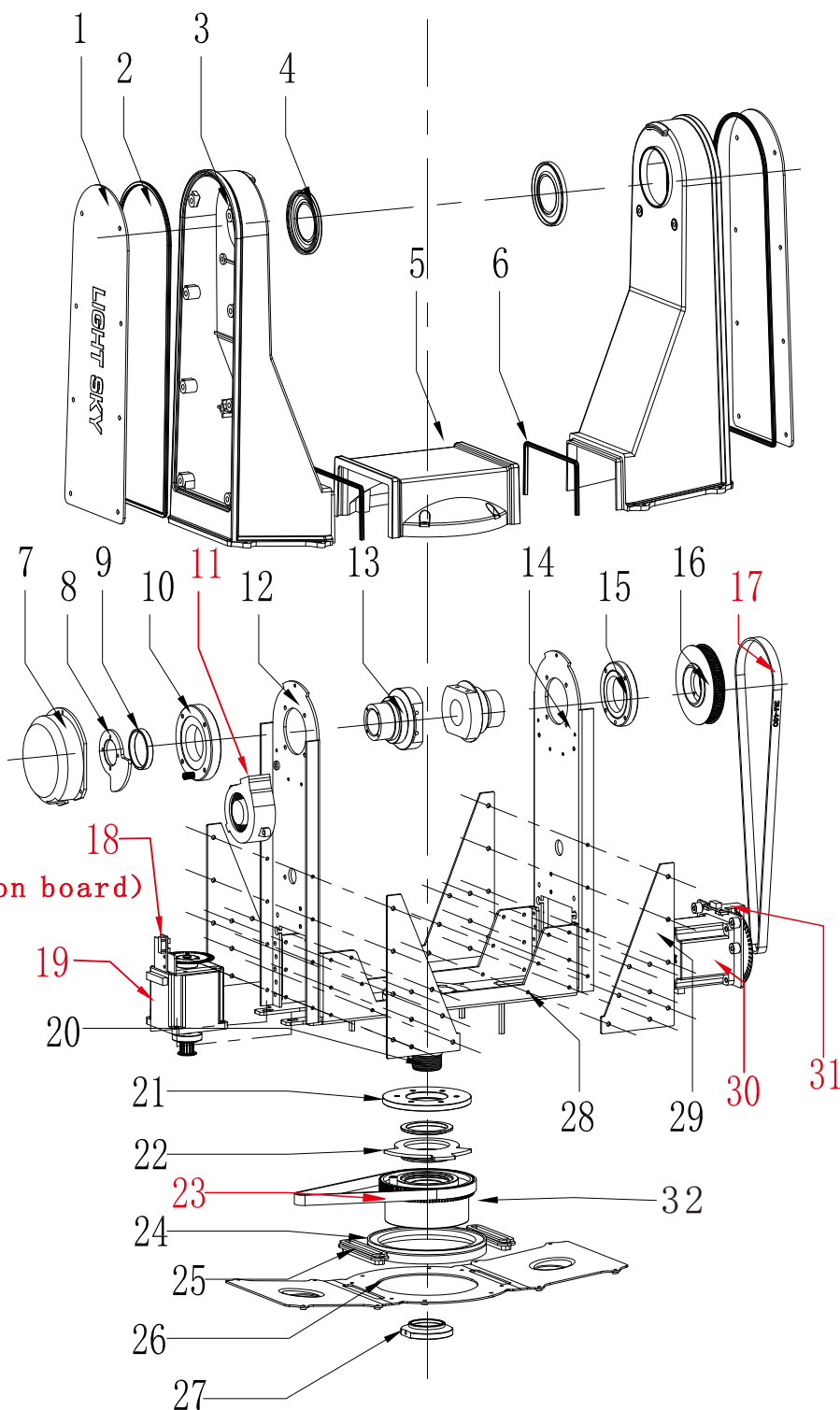
28: M01028009

29: M01028015

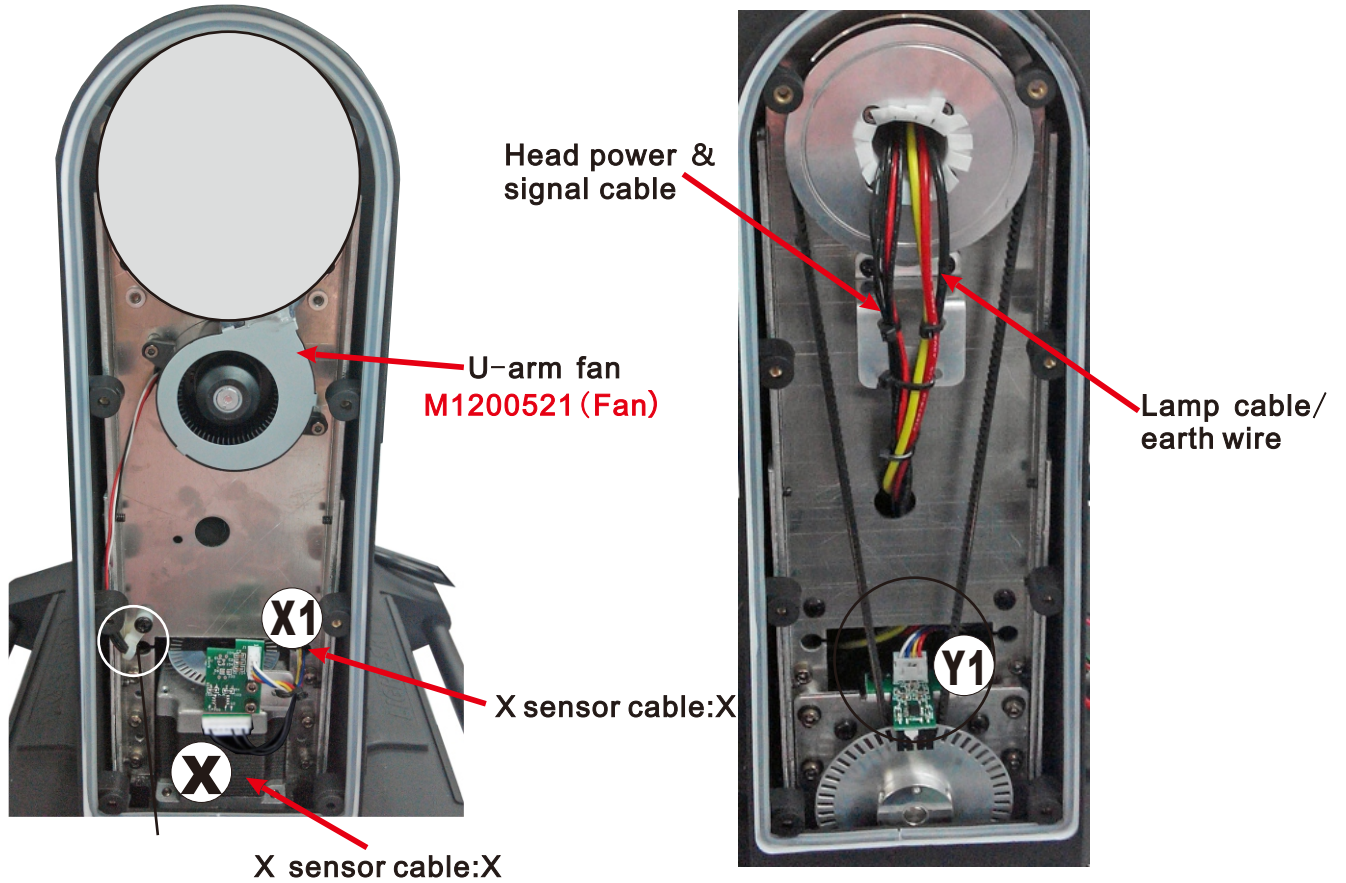
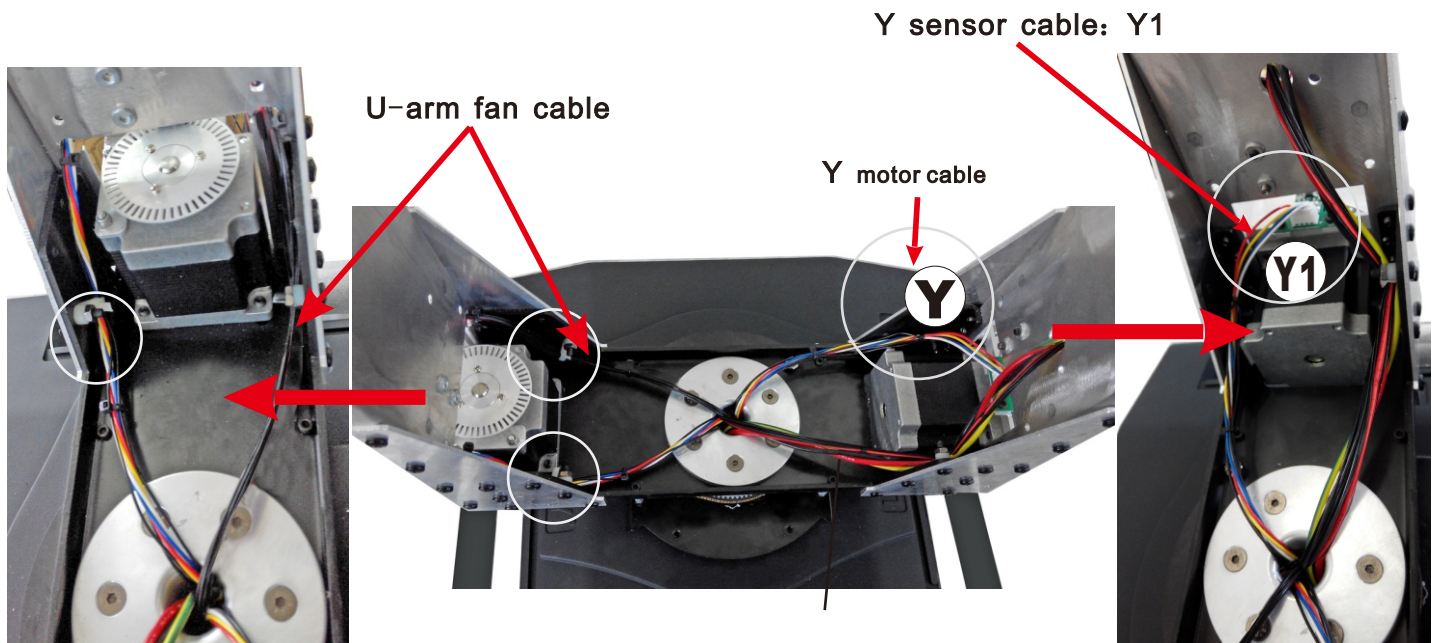
30: M0500640 (motor)

31: Z0600538 (Position board)

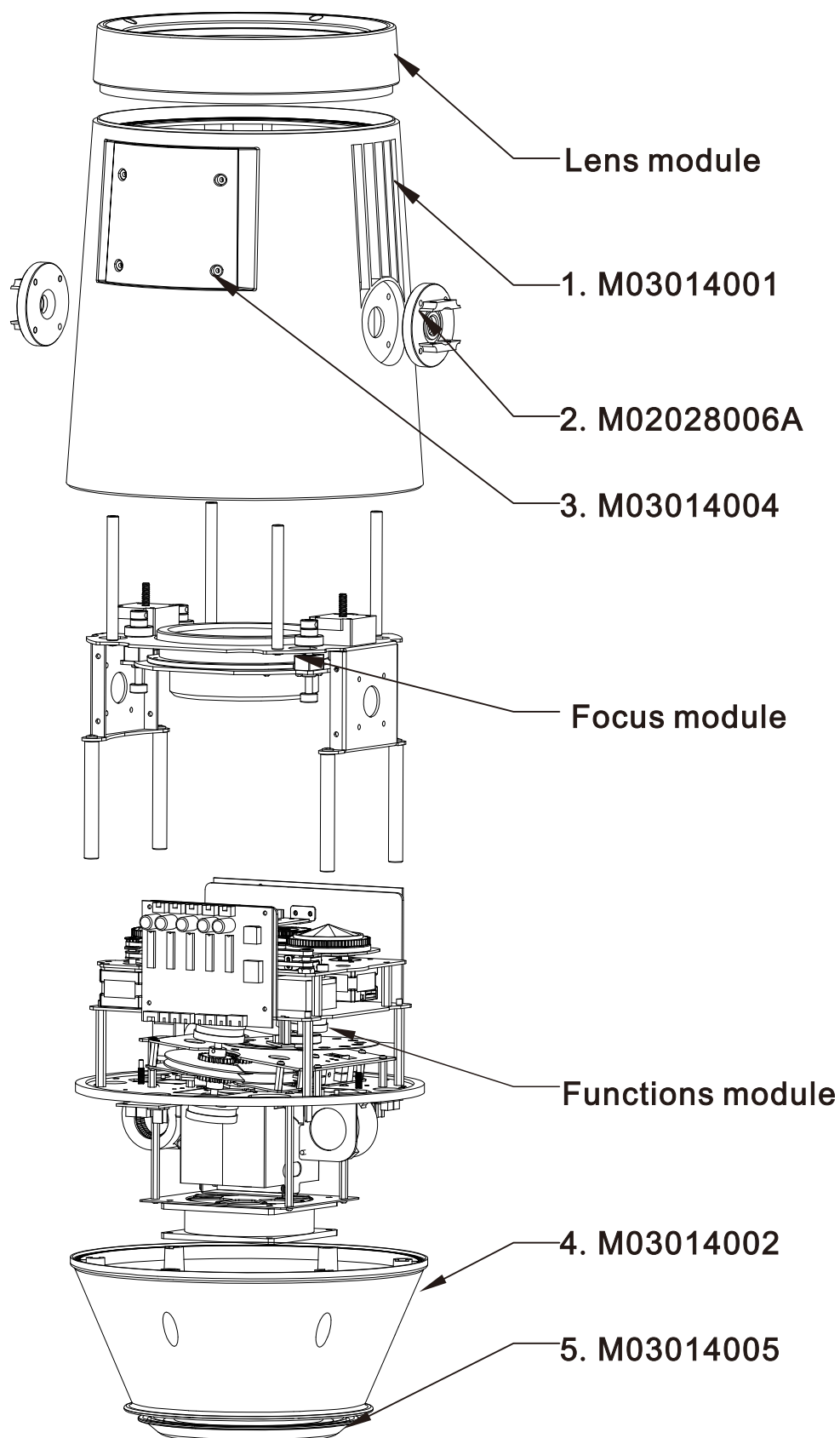
32: M02028010



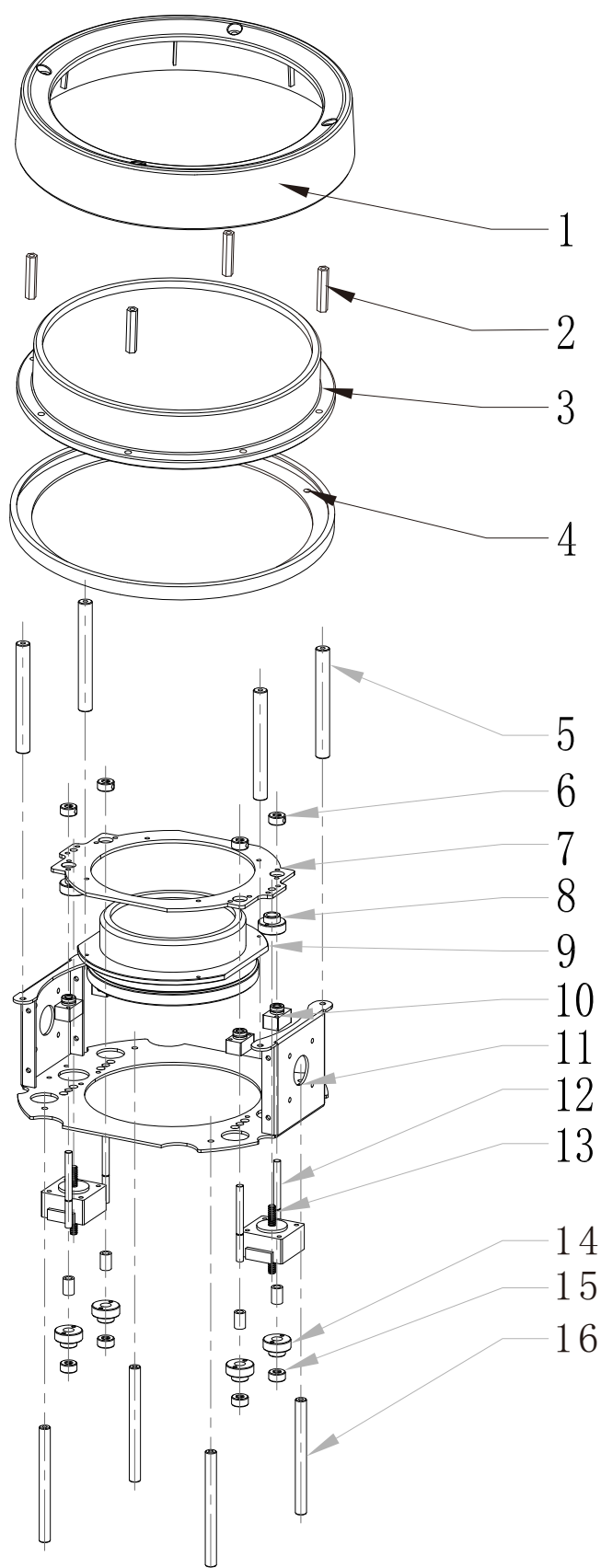




## Head exploded view



## Focus& lens exploded view



### Item number

1: M03014003

2: M0200915

3: M0600237 (front lens)

4: M03014009

5: M02028016

6: M0202535

7: M01028017

8: M02025166

9: M0600238 (back lens)

10: M02025167

11: M01028018

12: M02028014

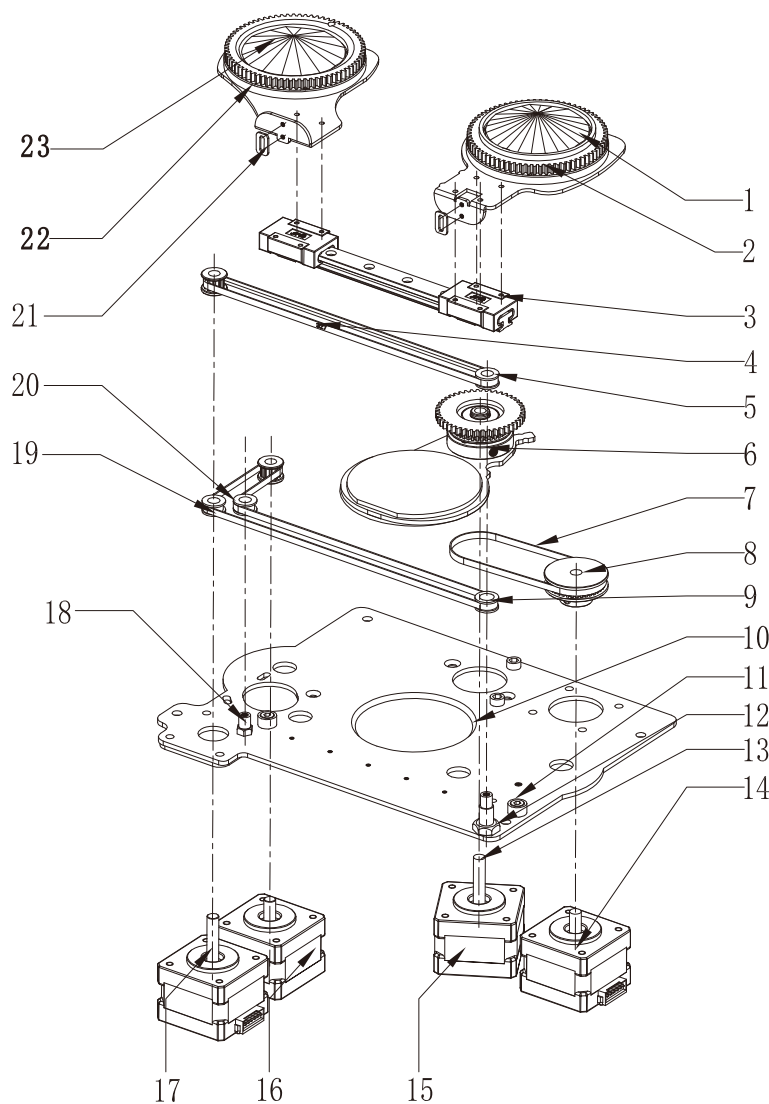
13: M0500613 (motor)

14: M02028015

15: M0202535

16: M02028017

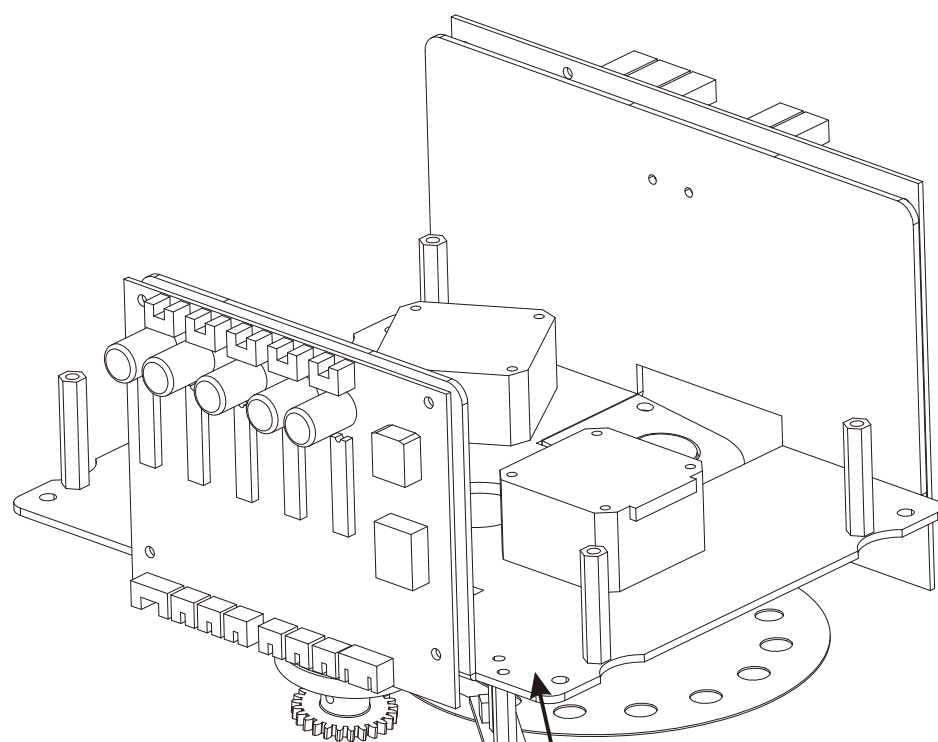
## Prism exploded view



### Item number

- 1: 32facet prism (8+24prism)
- 2: M02025161 (prism)
- 3: M1100311
- 4: M0800218K
- 5: M0202573K
- 6: Frost Module
- 7: M0300795
- 8: M0202565
- 9: M0202572K
- 10: M01028022
- 11: M0202581
- 12: M0202574K
- 13: M0500637
- 14: M0500637 (motor)
- 15: M0500637 (motor)
- 16: M0500619 (motor)
- 17: M0500618K (motor)
- 18: M0202575K
- 19: M0800217K
- 20: M0202572K
- 21: M01025100
- 22: M0202568
- 23: M0600335

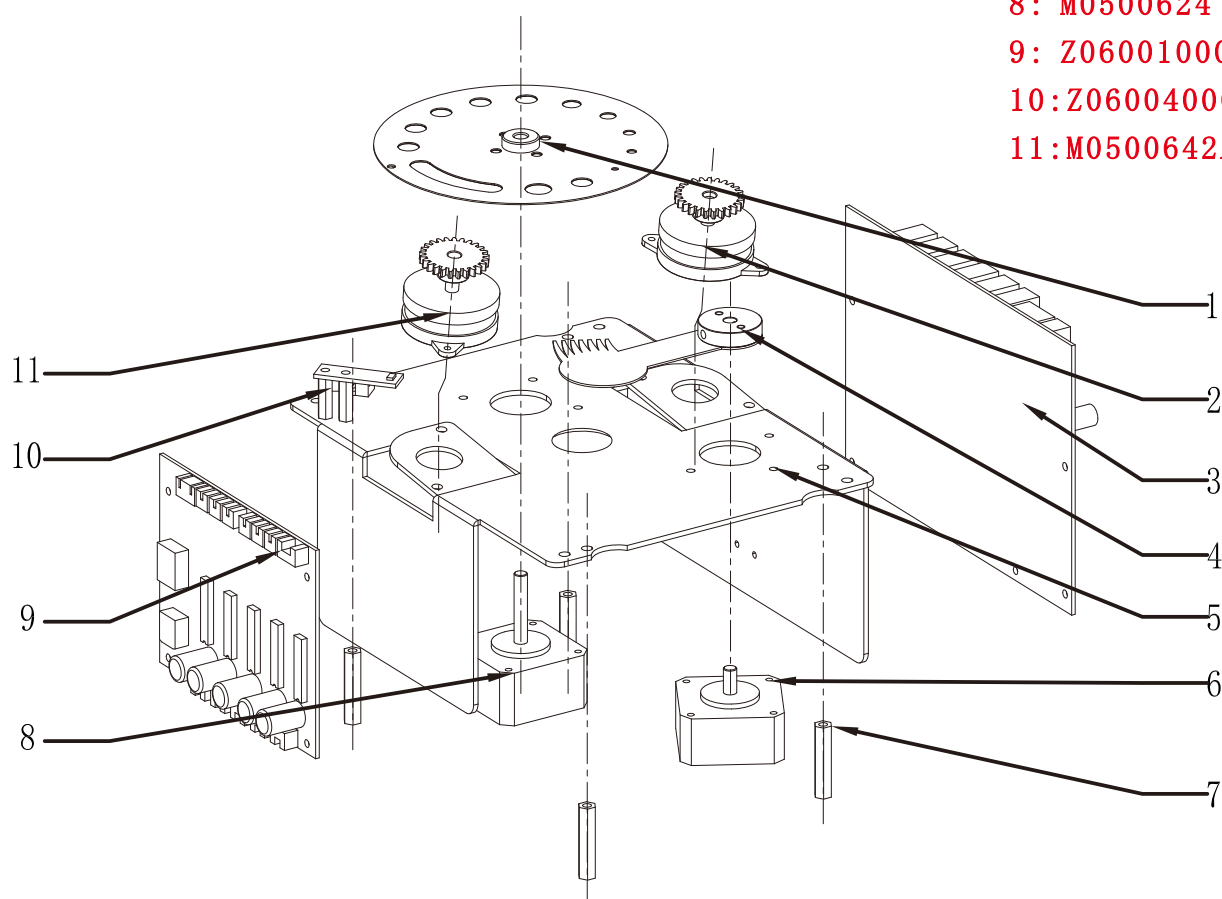
## Gobo exploded view



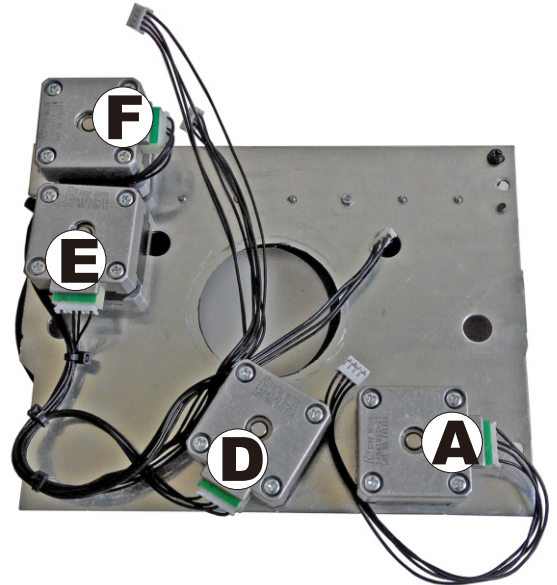
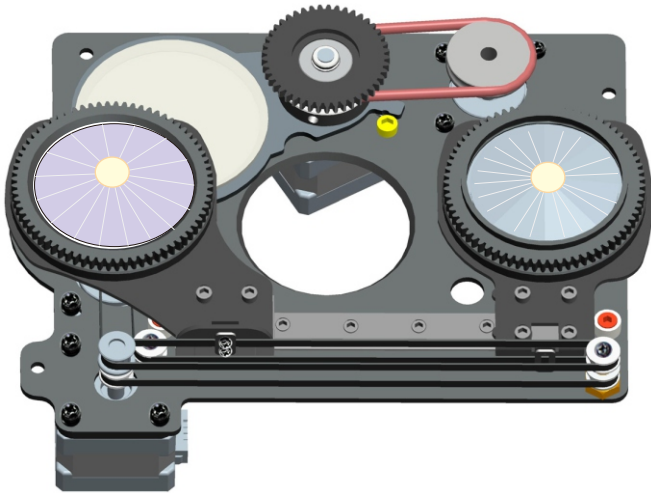
Gobo module

### Item number

- 1: Fixation Gobo
- 2: M0500642A (motor)
- 3: Z0600100090
- 4: strobe
- 5: M01028034
- 6: M0500130 (motor)
- 7: M02026041D
- 8: M0500624 (motor)
- 9: Z0600100089
- 10: Z0600400003
- 11: M0500642A (motor)



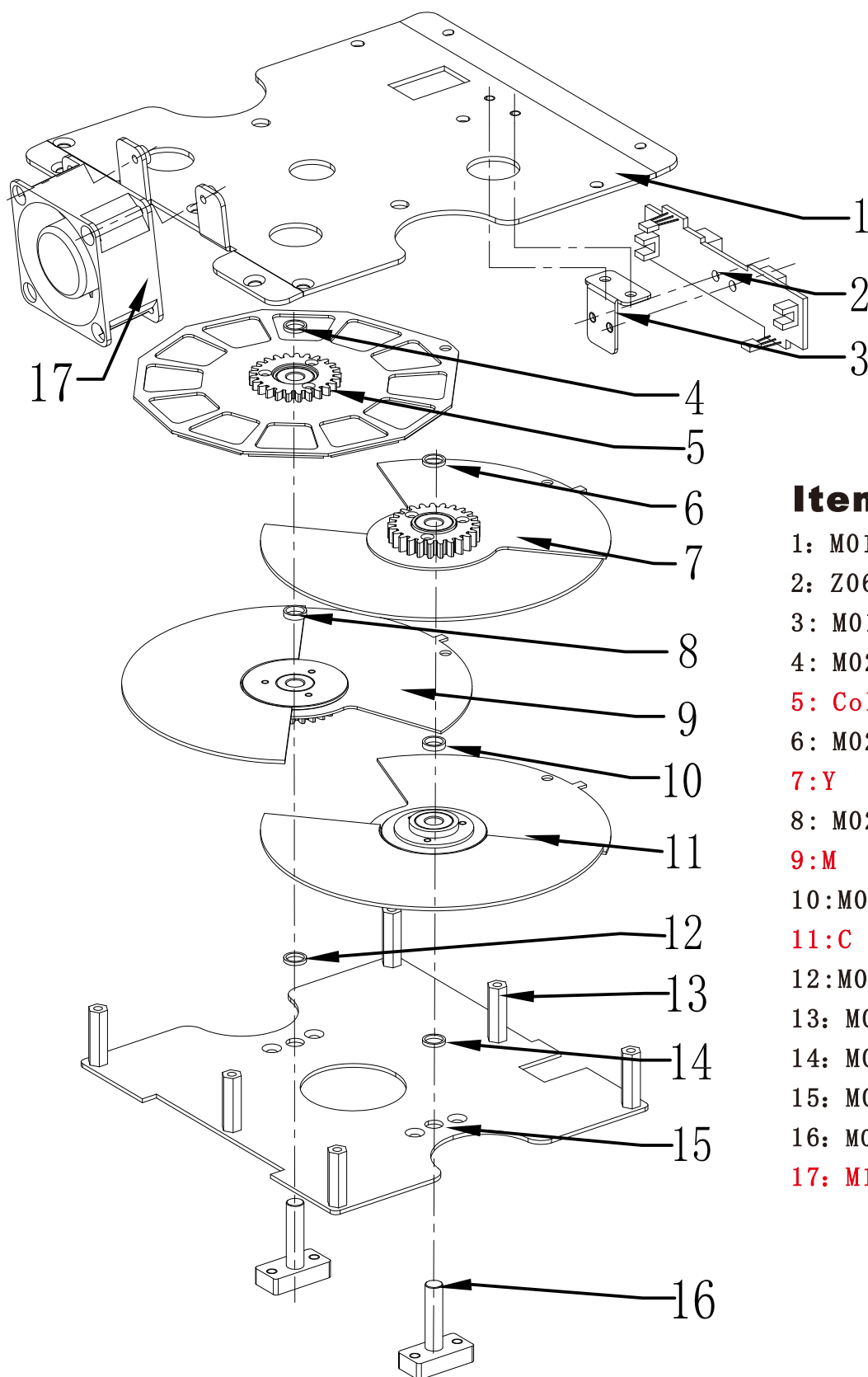




### Prism& frost cables list

Cable name	Item number	length	mark
Prism 1 motor cable	M19256D020	20cm	E
Prism 2 motor cable	M19256D032	35cm	F
Prism rotation motor cable	M19178D010	10cm	A
Frost motor cable	M19256D025	25cm	D

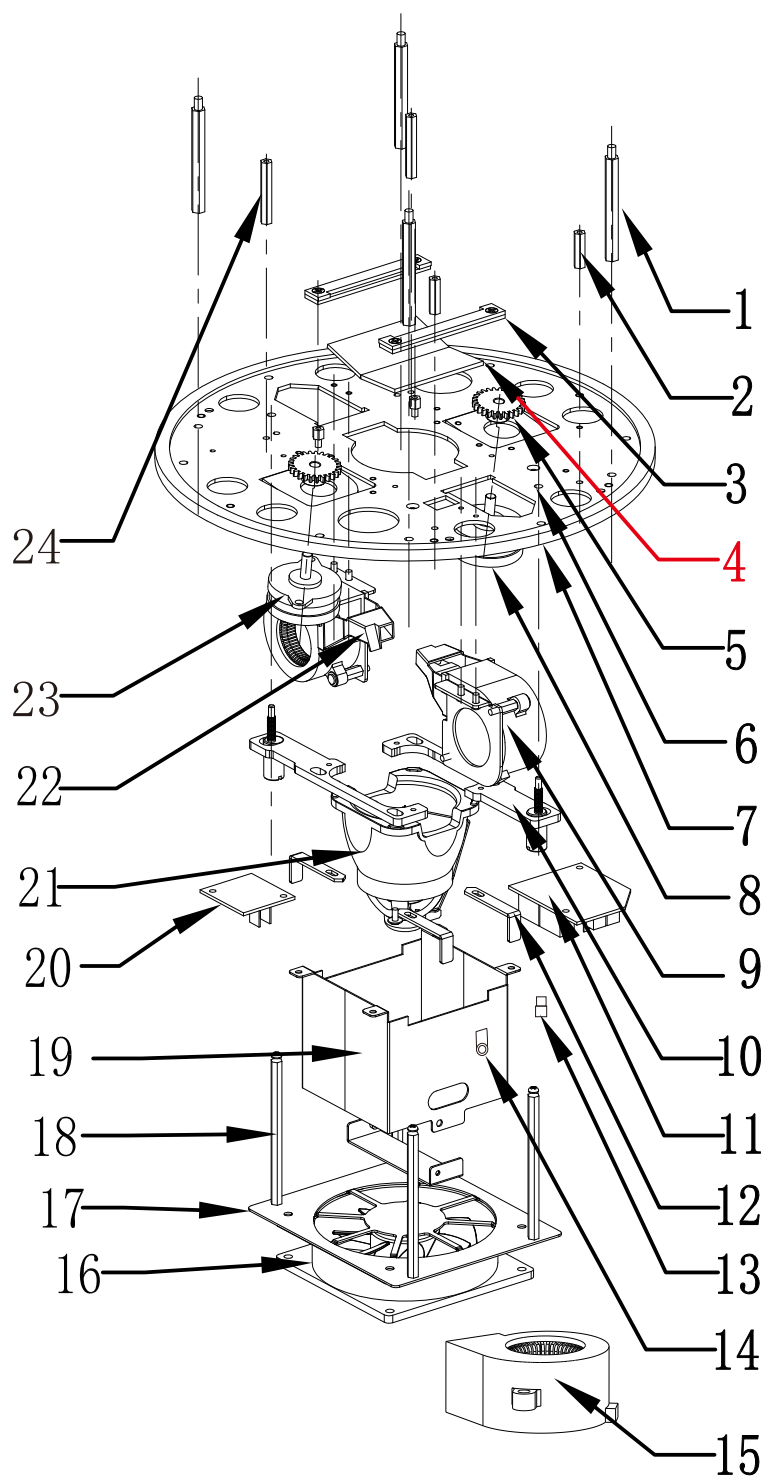
## Color& CMY exploded view



### Item number

- 1: M01028032
- 2: Z0600400015
- 3: M01025137
- 4: M02028025
- 5: Color wheel
- 6: M02028025
- 7: Y
- 8: M02028026
- 9: M
- 10: M02028026
- 11: C
- 12: M02028026
- 13: M0202189
- 14: M02028026
- 15: M01028031
- 16: M02028019
- 17: M1200801A (Fan)

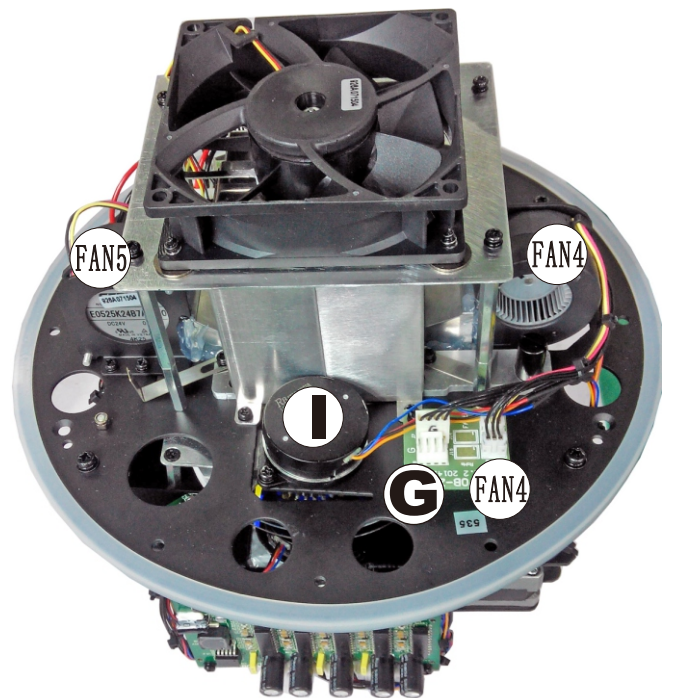
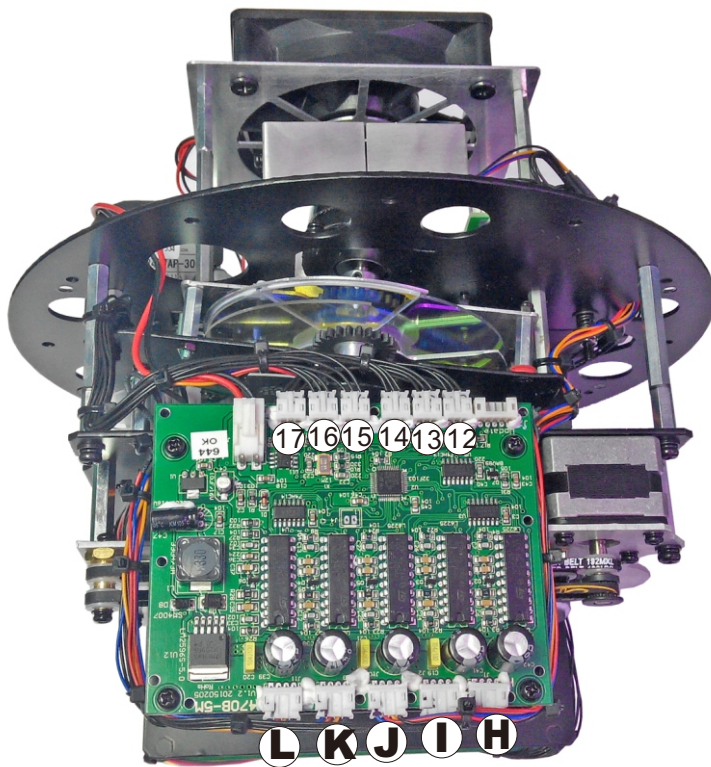
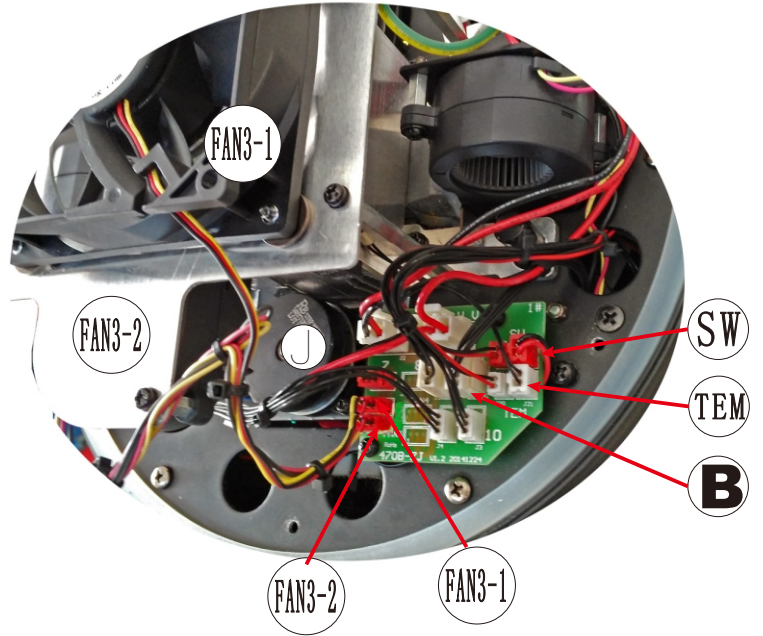
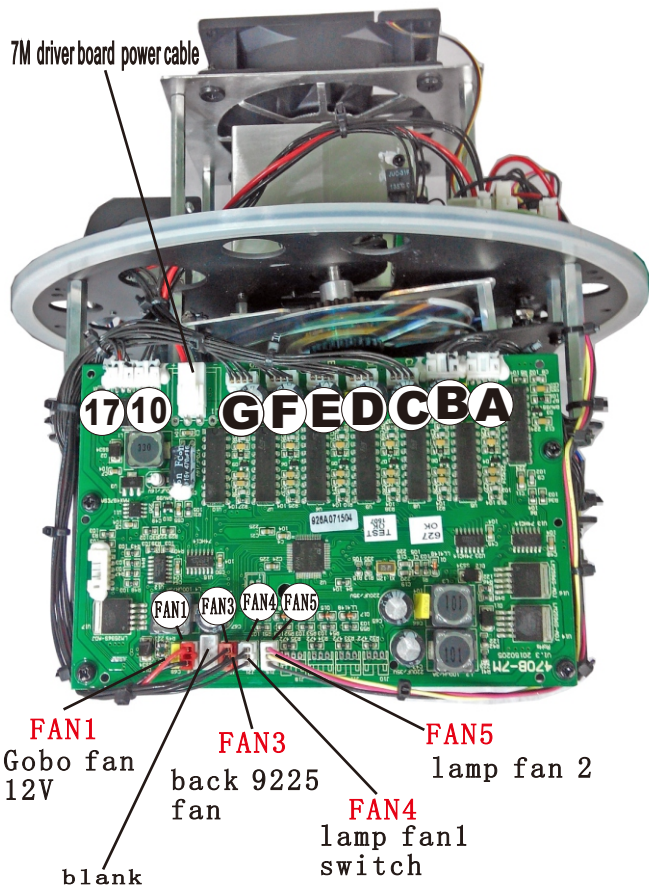
## Light source exploded view

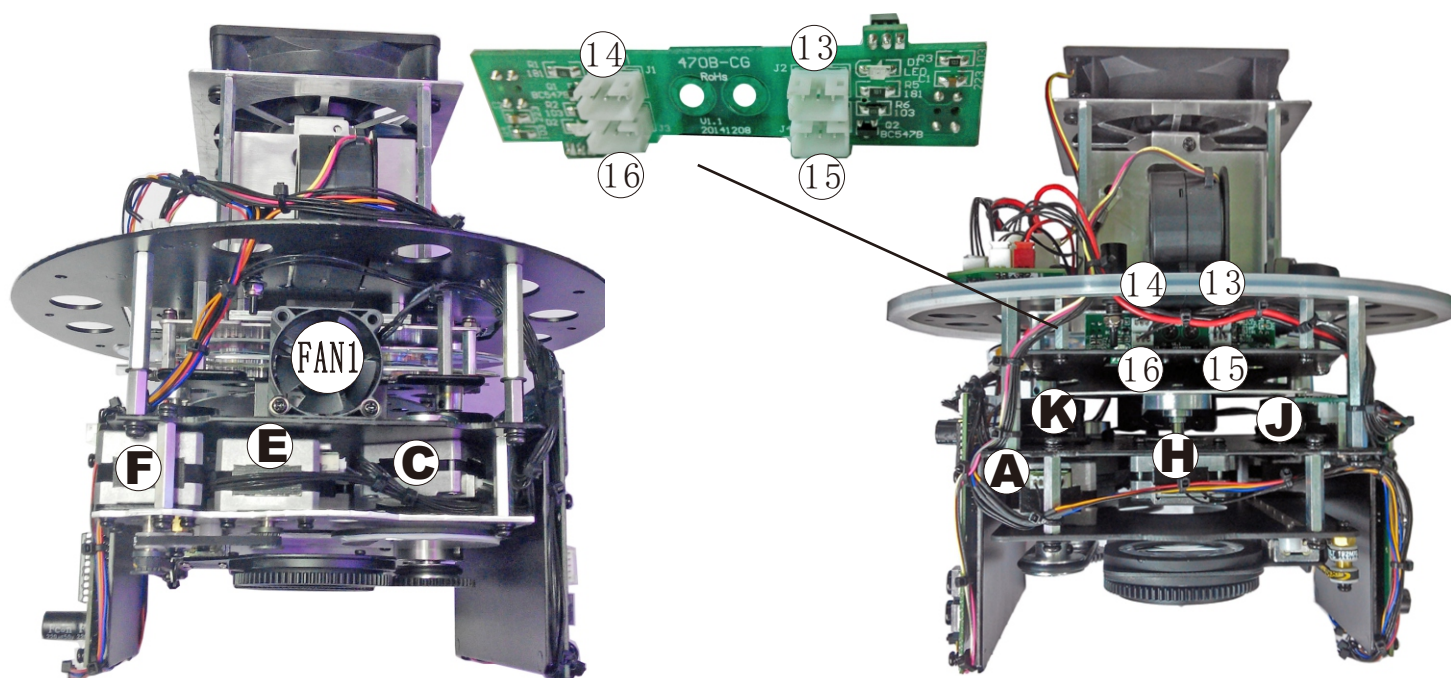


### Item number

- 1: M0202198
- 2: M0202157
- 3: M01028039
- 4: M1801026 (heat filter)
- 5: M02028024
- 6: M01028035
- 7: M03014010
- 8: M0500641A (motor)
- 9: M1200513A (Fan)
- 10: M01028037
- 11: Z0600638 (adaptor 1)
- 12: M01028049
- 13: M1604104A(TDS(temperature switch))
- 14: M1699943 (Temperature sensor)
- 15: M1200513A (Fan)
- 16: M1200306A (Fan)
- 17: M01028054
- 18: M0202196
- 19: M01028023
- 20: Z0600638A (adaptor 2)
- 21: M1501229 (Lamp)  
(SIRIUS HRI 440W S )
- 22:M0400172
- 23:M0500641B(motor)
- 24:M0202188







### Gobo / color / light source cable list:

Cable name	Item number	Mark
Prism motor cable	M19256D010	A
Focus motor cable 1	M19244D020	B
Stroble motor cable	M19178D022	C
Frost motor cable	M19256D025	D
Prism 1 motor cable	M19256D020	E
Prism 2 motor cable	M19256D032	F
Focus motor cable 2	M19244D025	G
Gobo motor cable	M19178D025	H
C motor cable	default	I
M motor cable	default	J
Y motor cable	default	K
K motor cable	default	L
Gobo sensor cable	M19140D010	12
C motorsensor cable	M19140D020	13
M motor sensor cable	M19140D022	14
Y motor sensor cable	M19140D018	15
color motor sesnor cable	M19140D020	16
7M board signal cable	M19140D018	10
7M+5M board signal cable	M19140D030	17
back fan 9225 cable	M19140D033A	FAN3
Power fan 1 cable	M19140D040	FAN4
7M+5M power cable	M19264H025	
gobo+color fan cable	M19223D020	FAN1
lamp turbofan 2 cable		FAN5
Temperature switch cable	M19176G015A	SW
Temperature sensor(display) cable	default	TEM

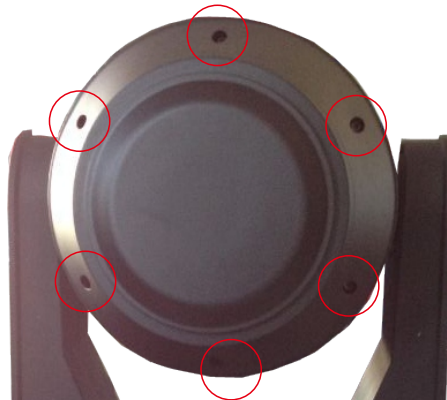


# Lamp's installation and dismantle

Step 1: Disconnect with the power, make sure the lamp is cool.

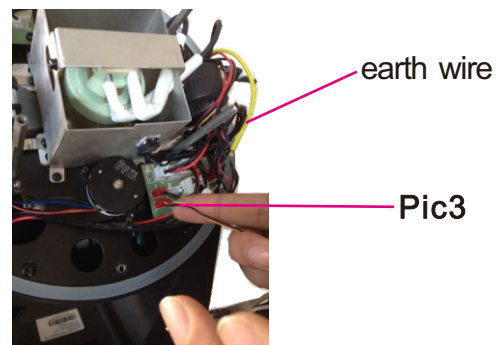
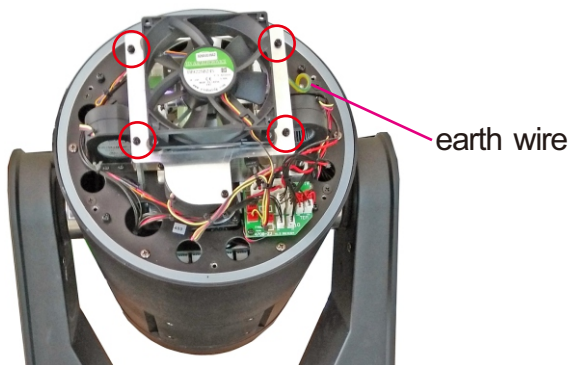
Step 2: loose 6 screws as Pic 1, but no need take the screws out and open the cover.

Pic 1



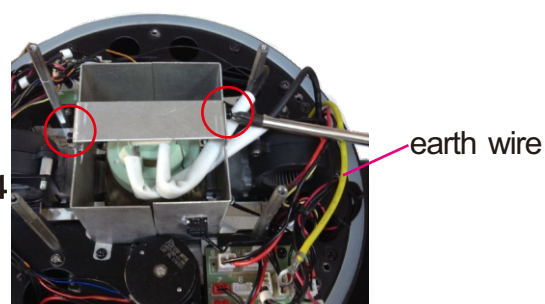
Step 3: dismantle the 4 screws as Pic2, pull out the fan cable as Pic3, move the fan module away.

Pic2



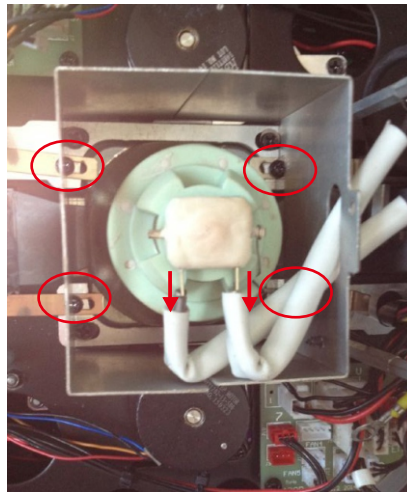
Step 4: dismantle the lamp strengthen board.

Pic4

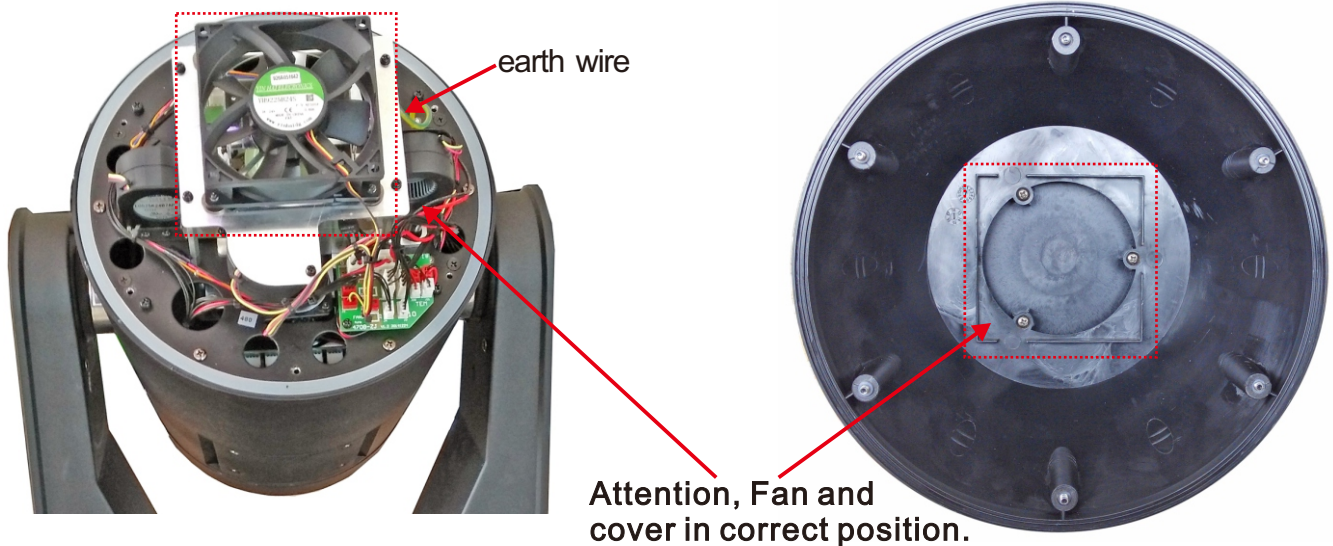


**Step 5:** pull out the lamp power cable as the arrow direction in Pic 5, loose the 4 pcs fixed screw (no need to take the screw out),replace the lamp.

Pic5

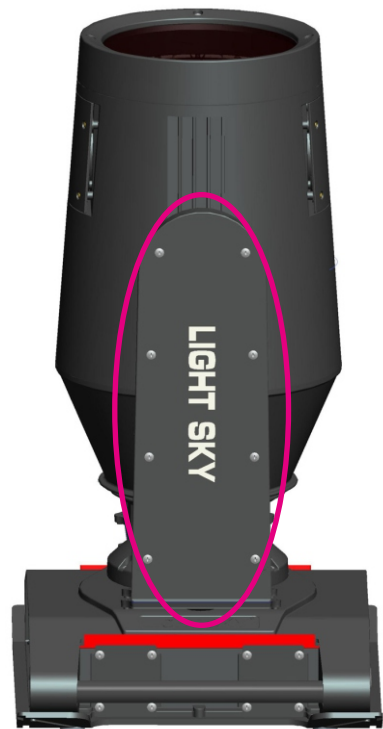


**Step 6:** After Finished the lamp replacement, repeat step5 , 4 ,3 ,2 ,1 , and make sure all the connector and cables are in original place and good contact. Lastly pay attention to the big lamp fan position and Cover position as the pic shows.

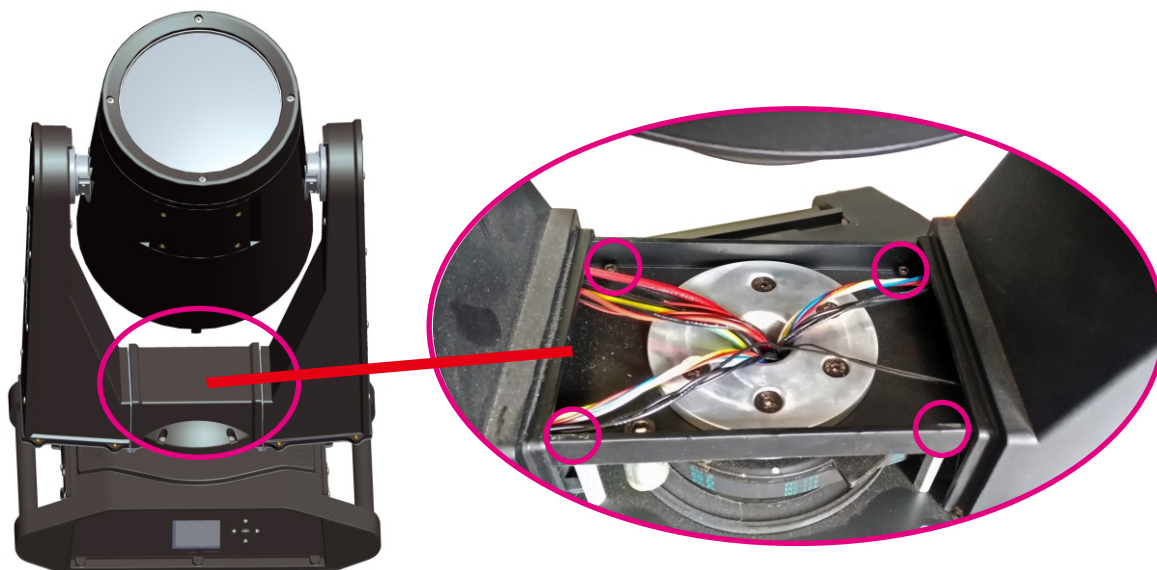


# IP series X motor replacement

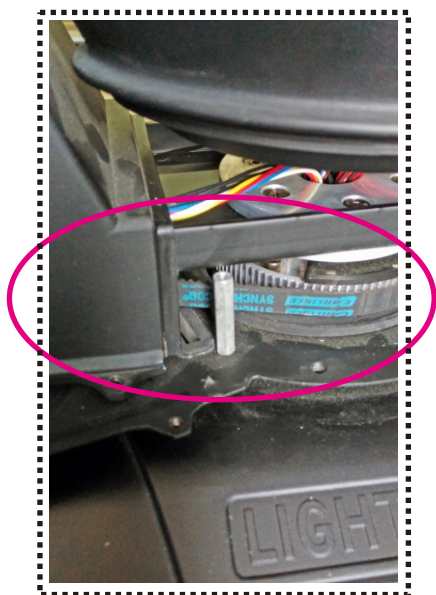
1. Unscrew the screws, open the arm cover.



2. Open the axis cover , then you will see the cables.



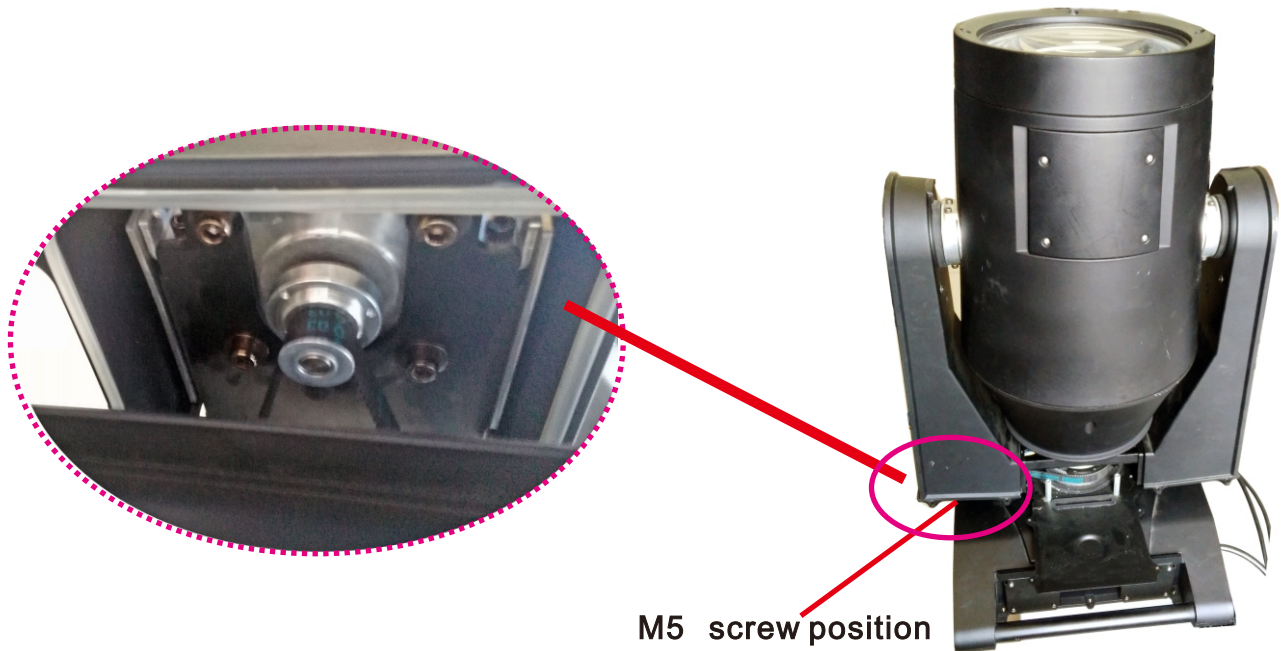
3, Dismantle the METAL STICK,which is near to the X belt. And clockwise turn 90 degree of the marked cover. (the second photo is how it look like after colorwise 90 degree ).



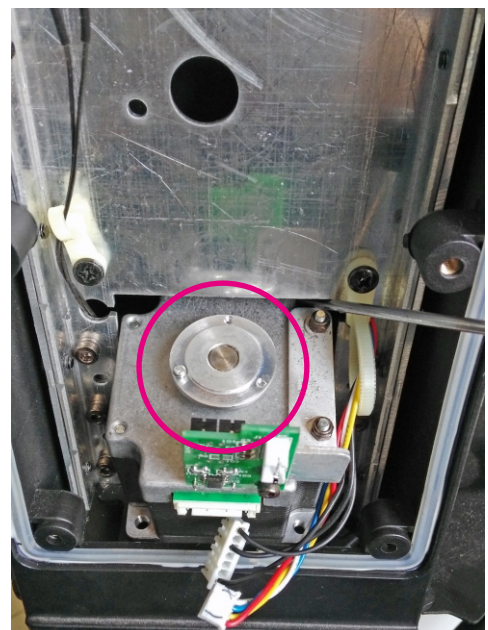
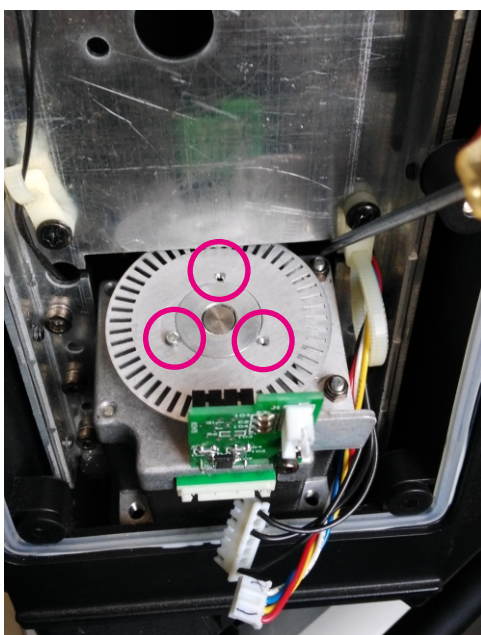
after 90° degree rotation to the other side



4. Dismantle those fixed M5 screw of Pan Motor.



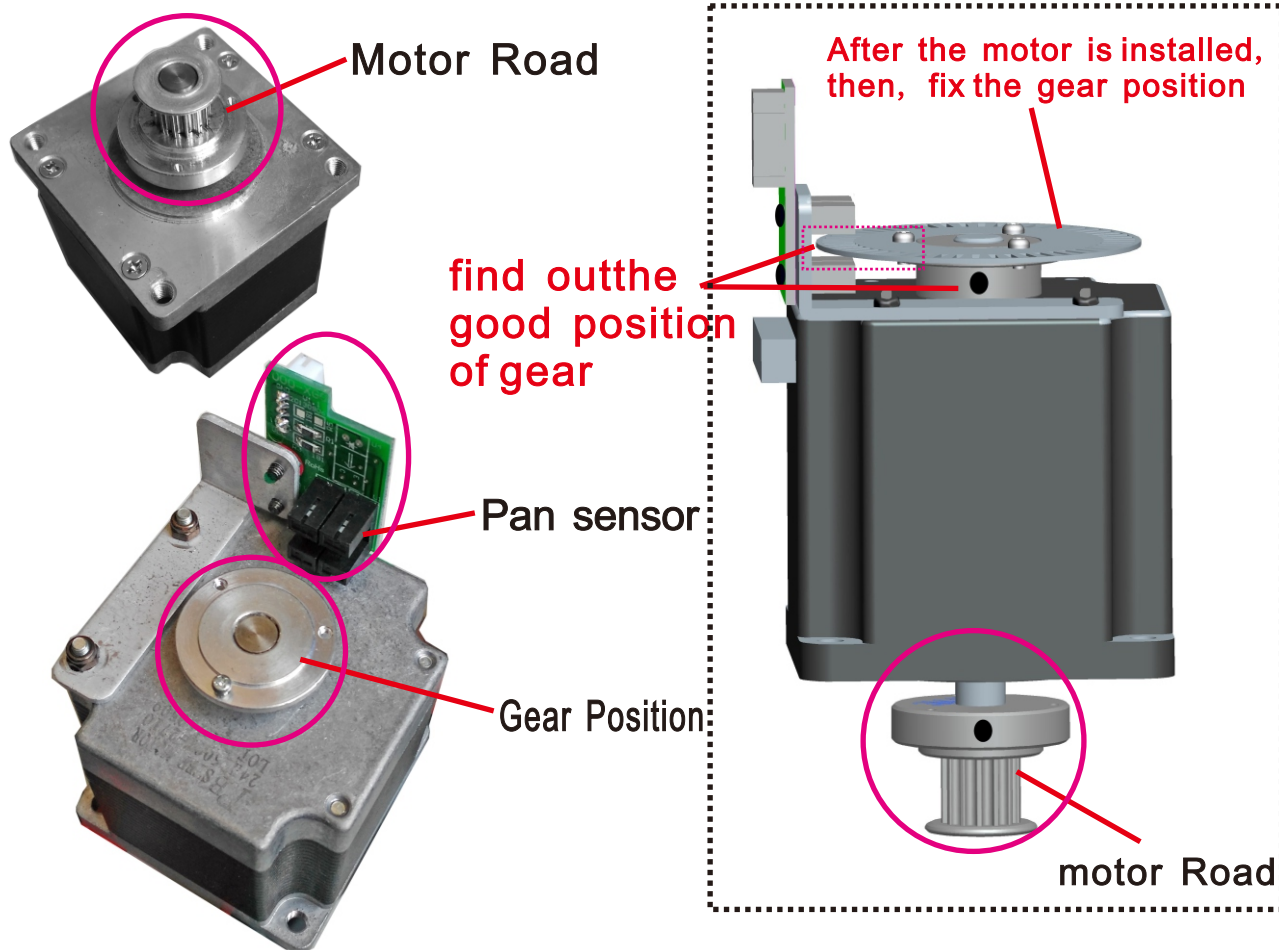
5. After dismantling the fixed screws of PAN MOTOR, like the photo shows, turn the gear into a different position, and dismantle the gear, and get out of gear, then you can take out the PAN motor.



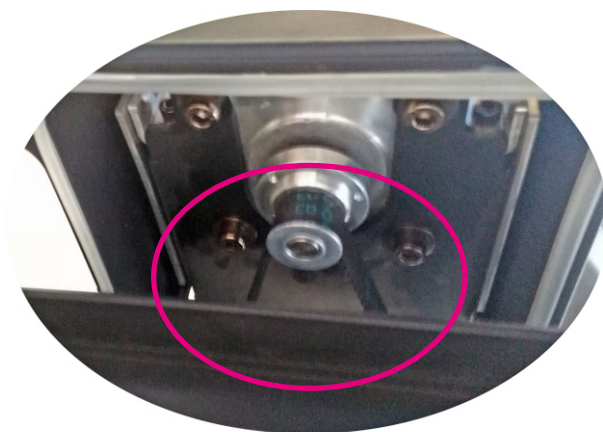
6. Replace the Pan Motor, here are two position need to pay attention

A, Motor ROAD must keep balance with Motor axis

B, gear can not be fixed in advance , but must keep in its position to make sure the X sensor is in its center position. After the motor put in fixture position, then , fix the gear screws.



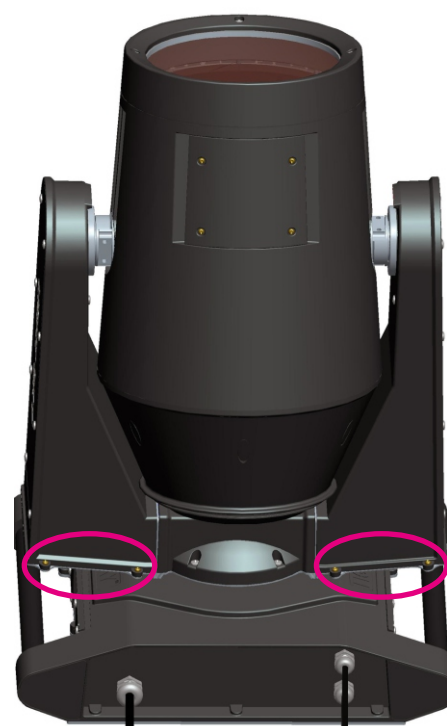
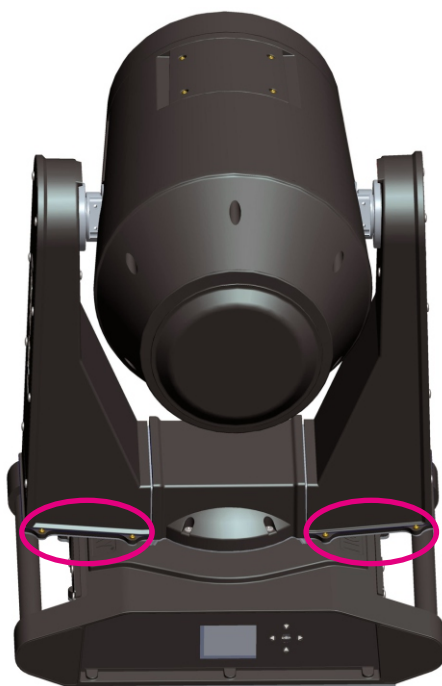
7. Please remember to install the belt , and reconnect the cables before fix the screws PAN MOTOR. Then , install those parts from step 7,6,5,4,3,2,1.



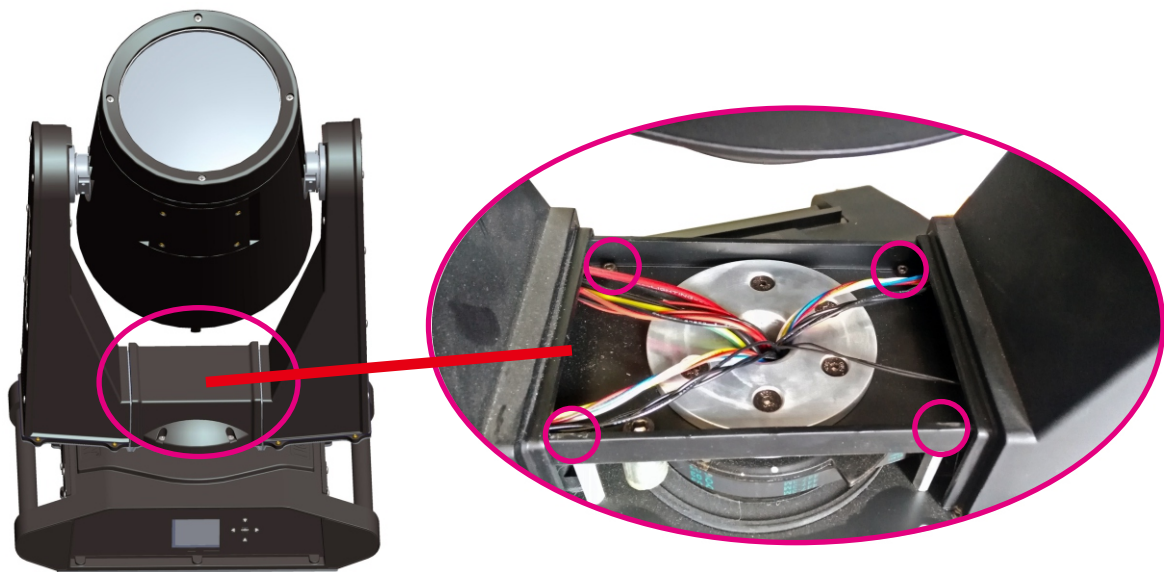


# IP series Y motor replacement

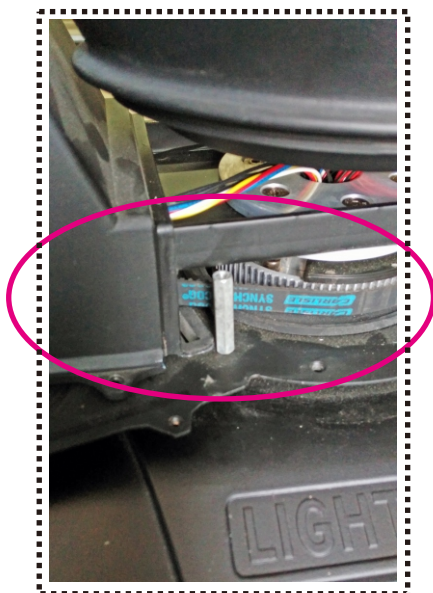
1. Dismantle those screws ,and open the marked covers.



2. Open the axis cover , then you will see the cables.

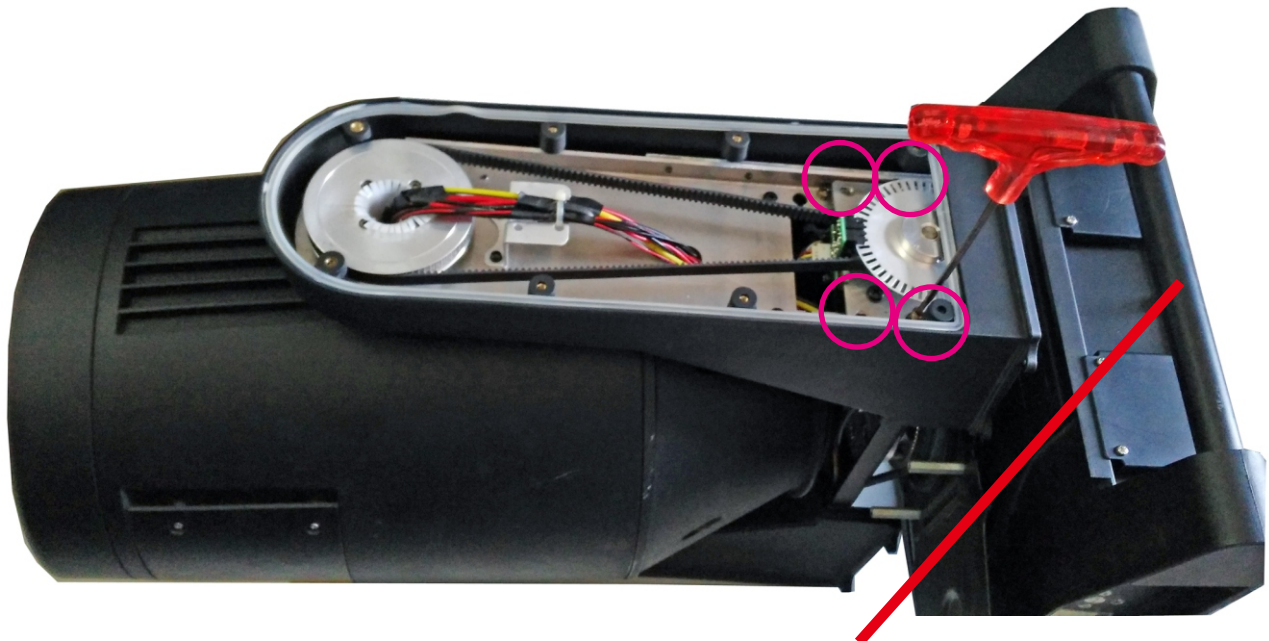


3. Dismantle the METAL STICK, which is near to the X belt. And clockwise turn 90 degree of the marked cover. (the second photo is how it look like after colorwise 90 degree ).



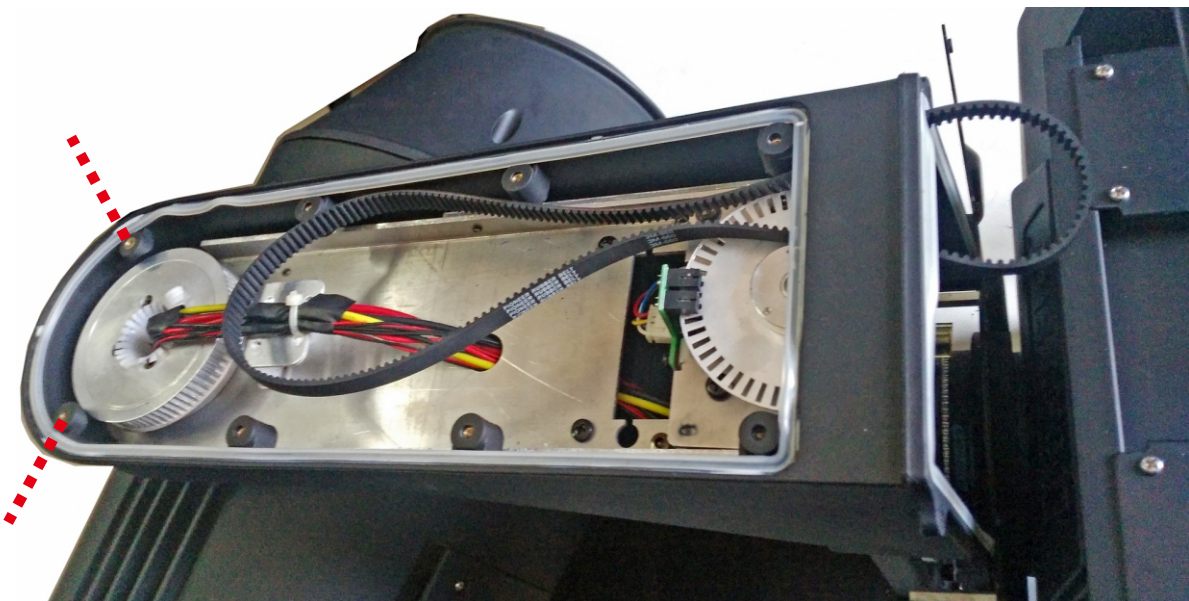
clockwise turn 90 degree position

4. Put down the fixture with side arm face you, dismantle these 4 pcs fixed screw of PAN MOTOR.



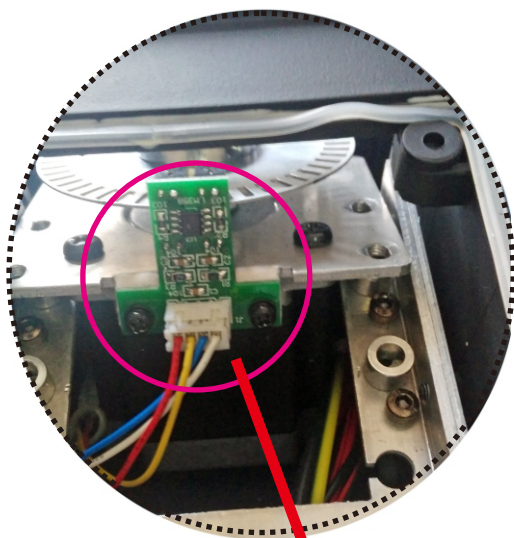
Make the handle up

5. After dismantle the screws , and take out the Y Belt according to the arrow direction shows.



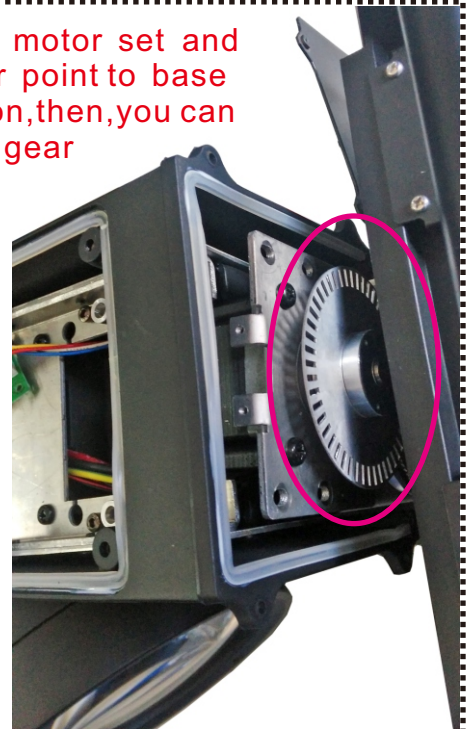


6. Dismantle the Y sensor and gear set.

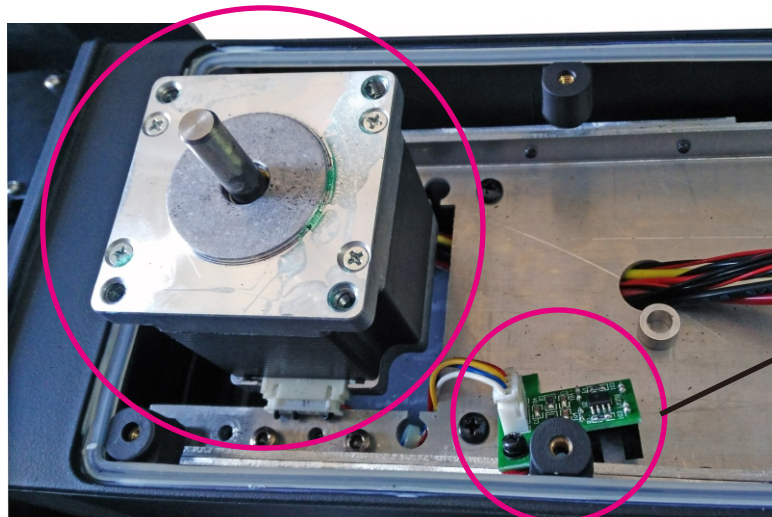
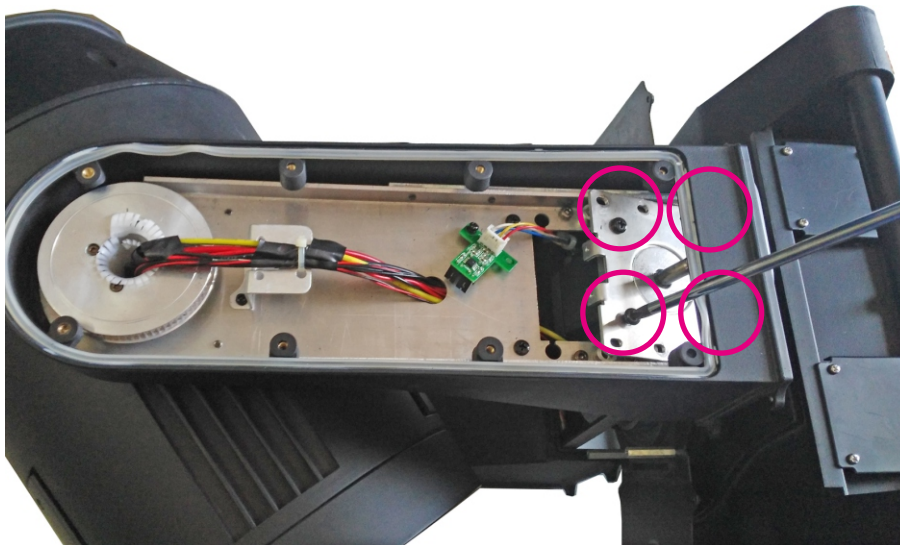


Y motor sensor

put down the motor set and  
make the gear point to base  
cover direction, then, you can  
dismantle the gear



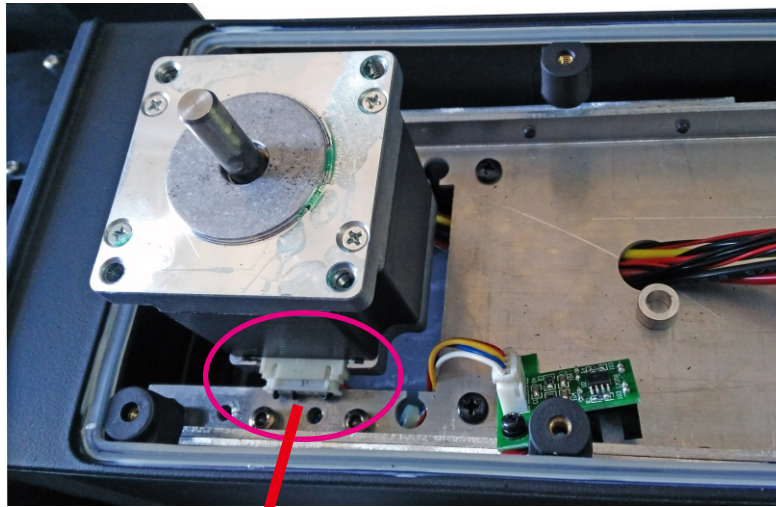
7. Dismantle Y motor fixed metal. then, get out the Y motor.



Y motor sensor

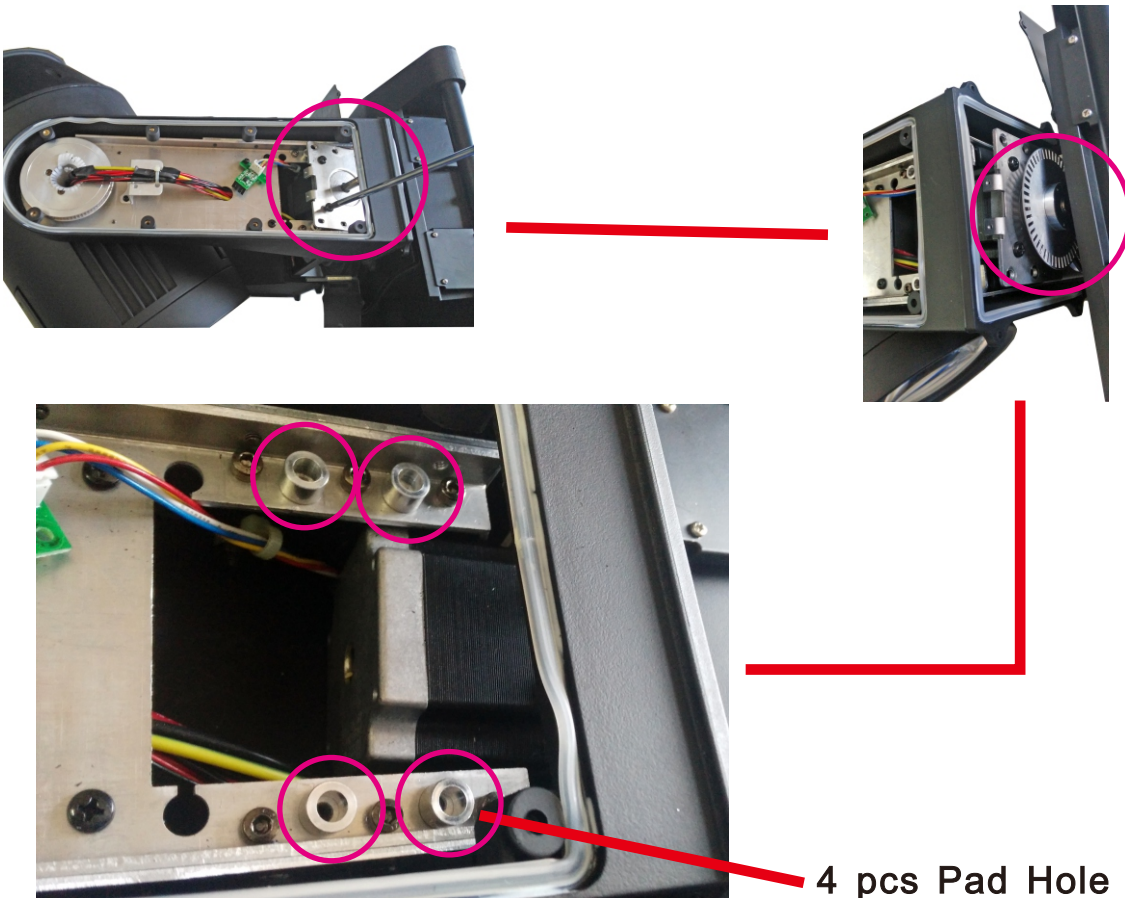
8. When replace the Y motor , there are 4 points need to pay attention,

A, Please remember to connect the motor cable when you replace the Y motor



Motor cables

B, the 4pcs Pad hole and Pad must be fit perfectly before fix the screws of Y motor.

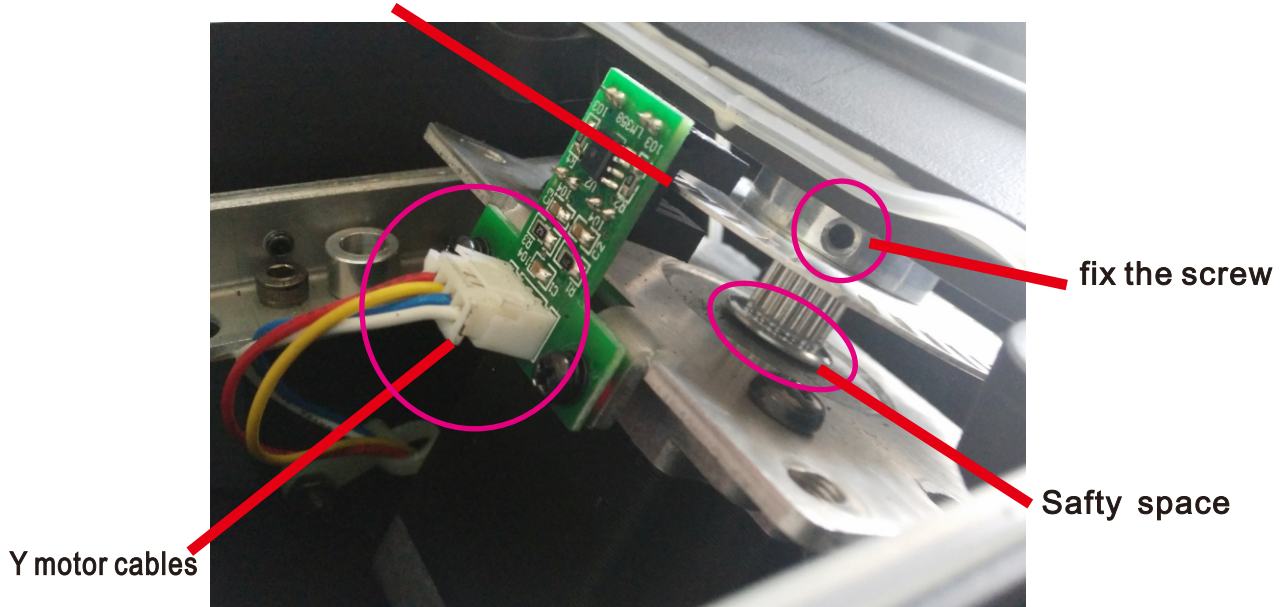


4 pcs Pad Hole

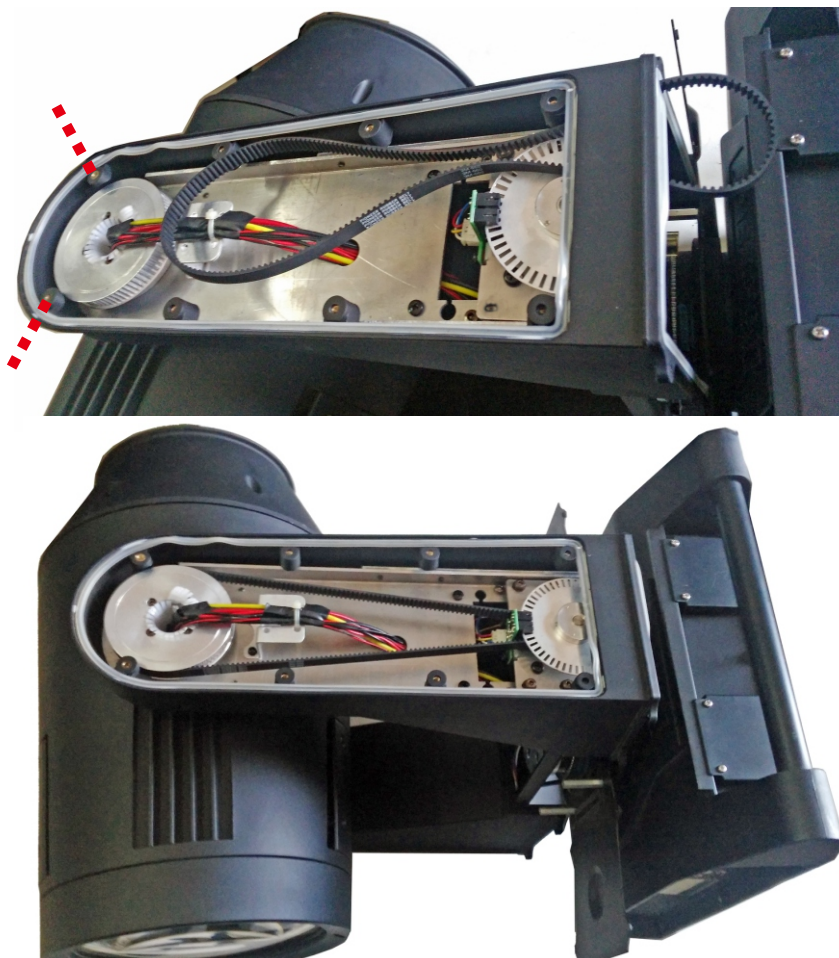


C,  
Please note the Motor Road must be have a safety space with Motor to avoid the motor be stuck. And Y gear should be in the centre position of Y motor sensor , and make sure the cables are well connected and screws are well fixed.

Center position



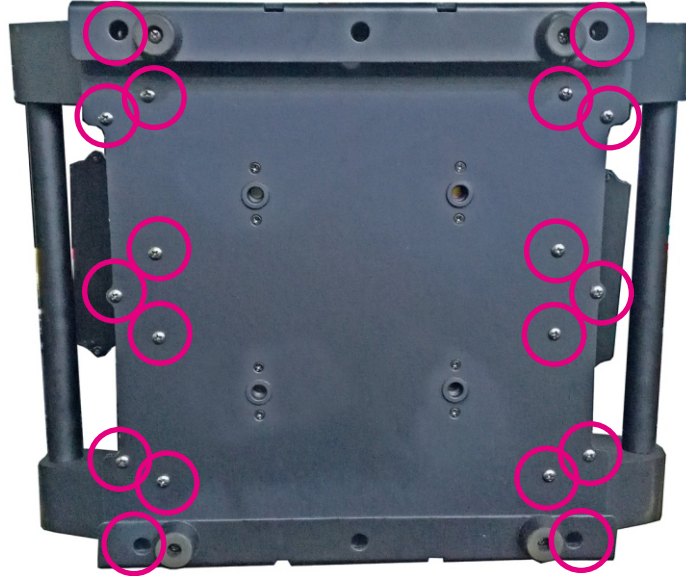
D, reinstall the Y belt according to the arrow direction , then fix the screws.



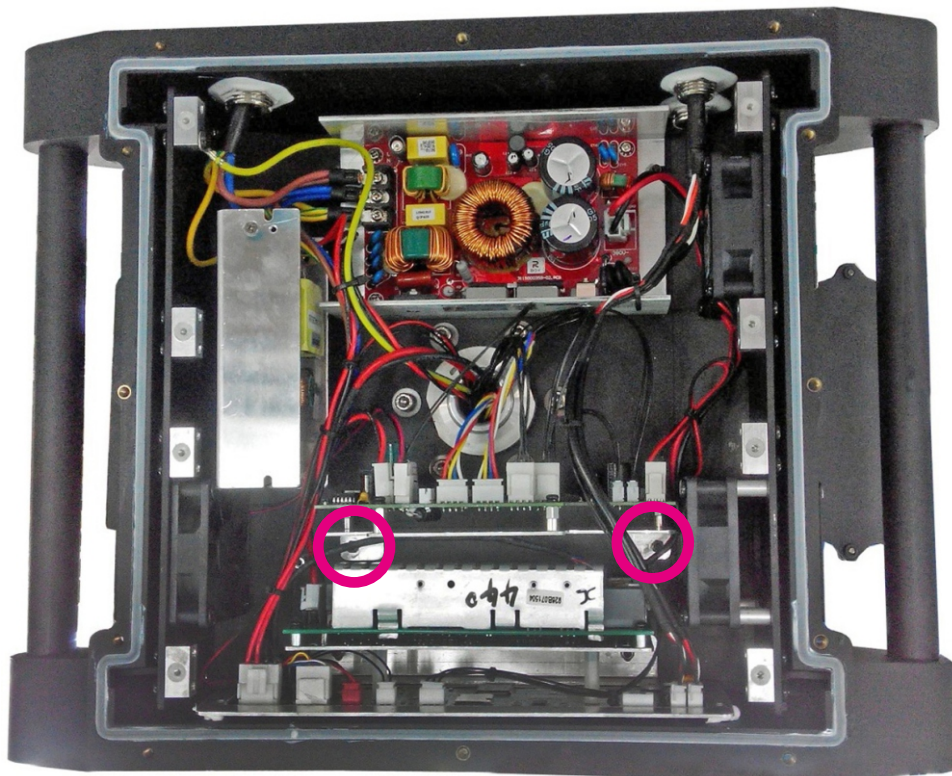
9, Reinstall the parts from step 9, 8 , 7, 6 ,5 ,4 ,3 ,2 ,1.

## IP series, X/Y motor driver board replacement

1. Dismount the bottom cover screws and open it.

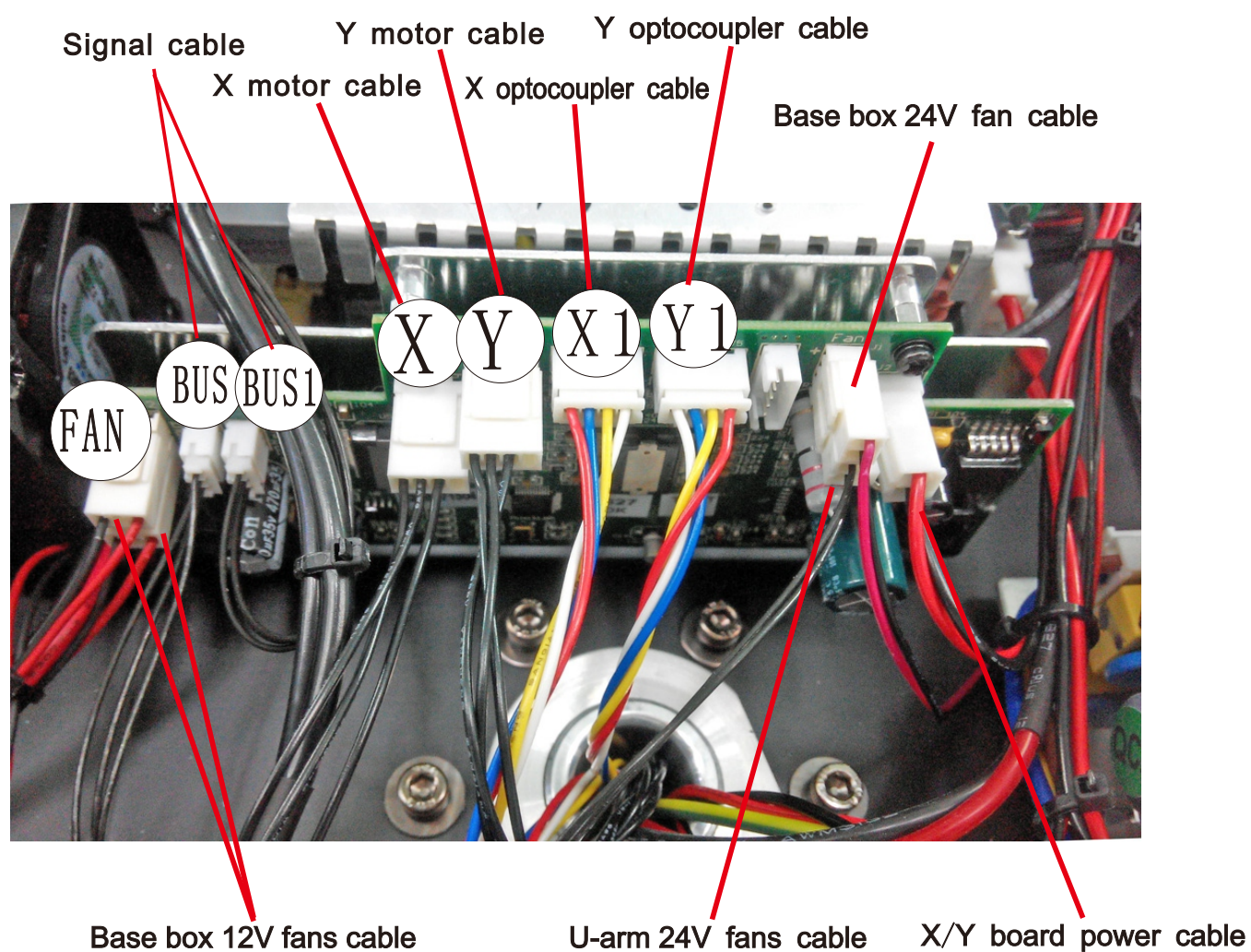


2. Screw off the 2pcs M3 screws as the picture below, take the X/Y board out.





### 3. PCB cables list.



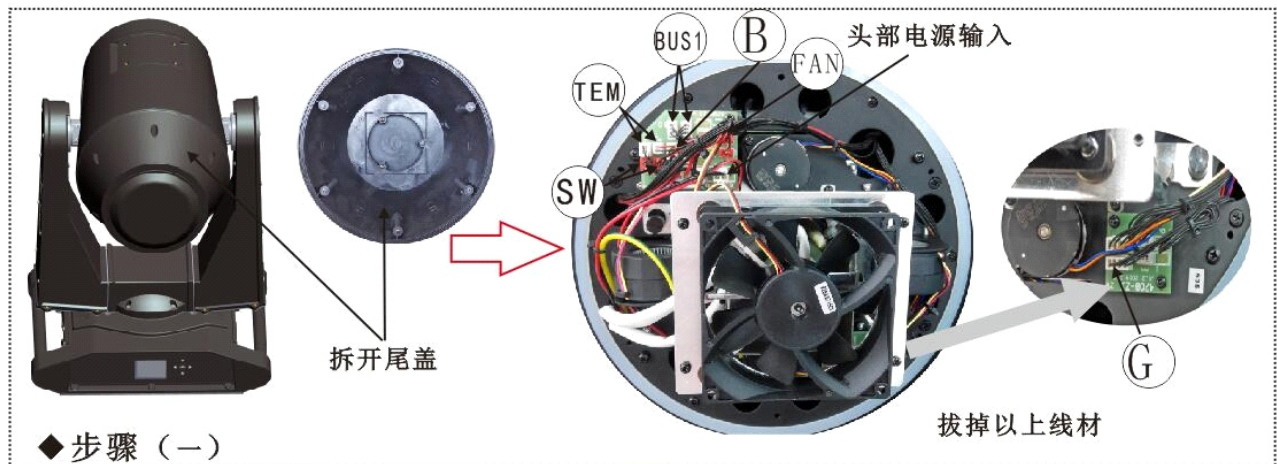


# IP series CMY and color wheel replacement

Step 1 : as following pics show

A: Open the base cover

B: Pull out SW, TEM, BUS1, B, FAN and AC in cables . Pull out all the cables show in the photo.

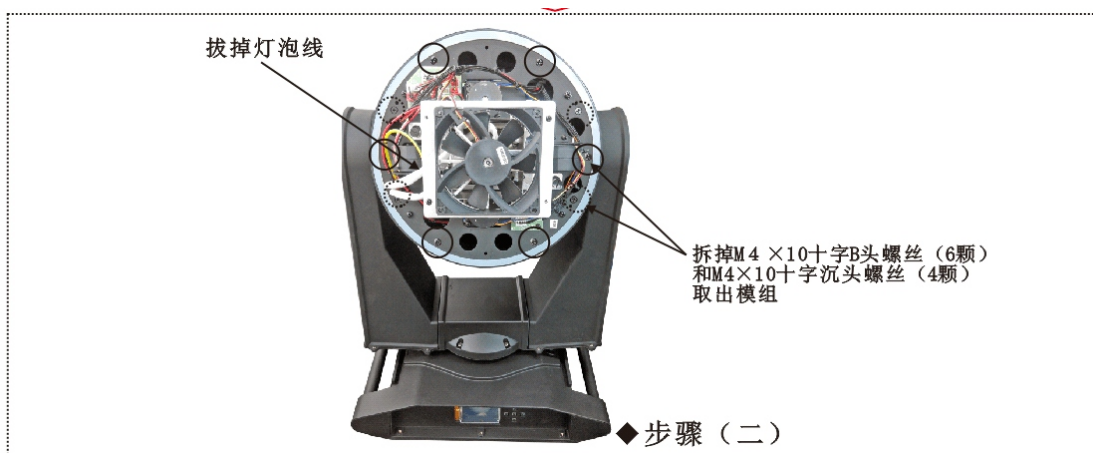


Step2 ,as following photos show,

A, Pull out the lamp cable

B, Dismantle 6 pcs M4\*10 screwA and 4 pcs M4\*10 ScrewB.

C, Get out of the Module.

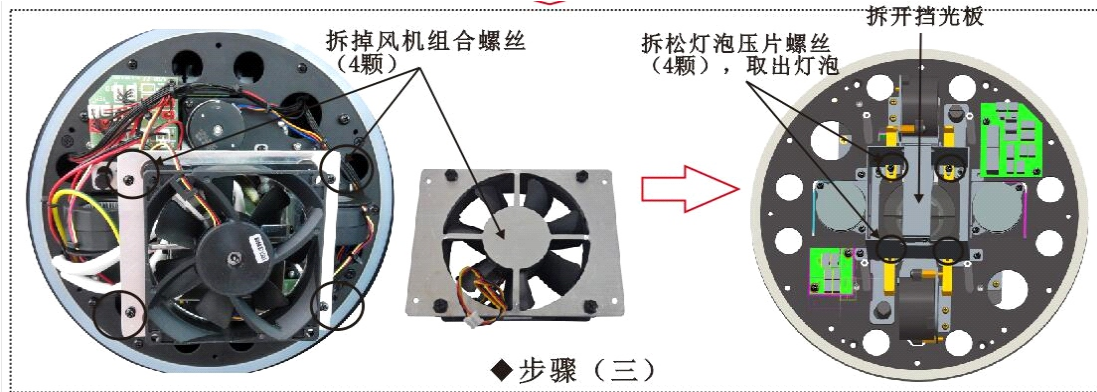


Step3 , as Above photos show, (for safety )

A, Dismantle those 4 pcs screws for the Fan, and get out of the fan.

B, Dismantle another 4 pcs screw for the lamp , and get out of the lamp

C, Dismantle the shutter plate.

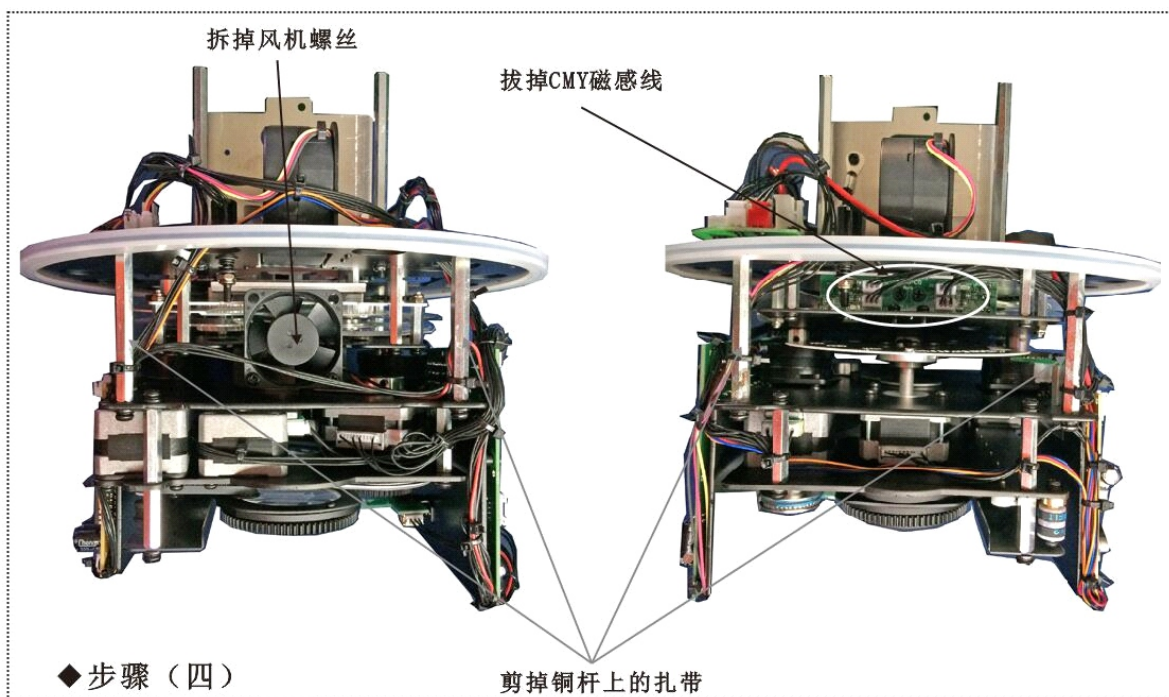


Step 4, as Above photos show

A, Dismantle the fan

B, Cut those four Belt on the metal sticker

C, Pull out the CMY cables .



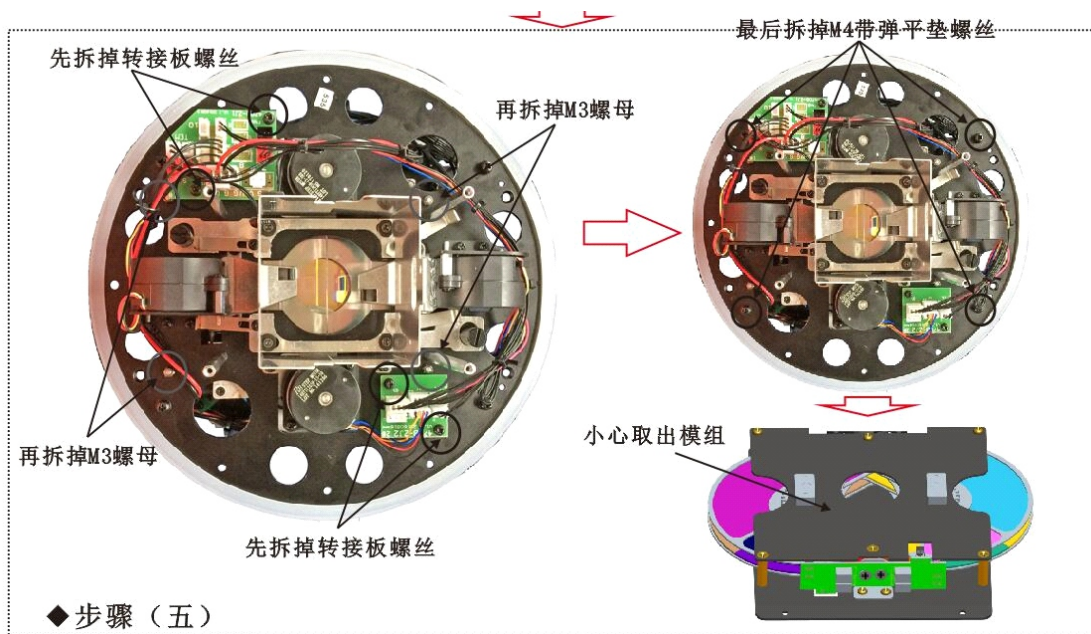
Step 5 as Above photos show

A, Firstly , Dismantle these two Mini green PCB's screws , each PCB board , 2pcs screws.

B, Secondly , Dismantle those 4 pcs M3 screws.

C, Dismantle those 4 pcs M 4 screws

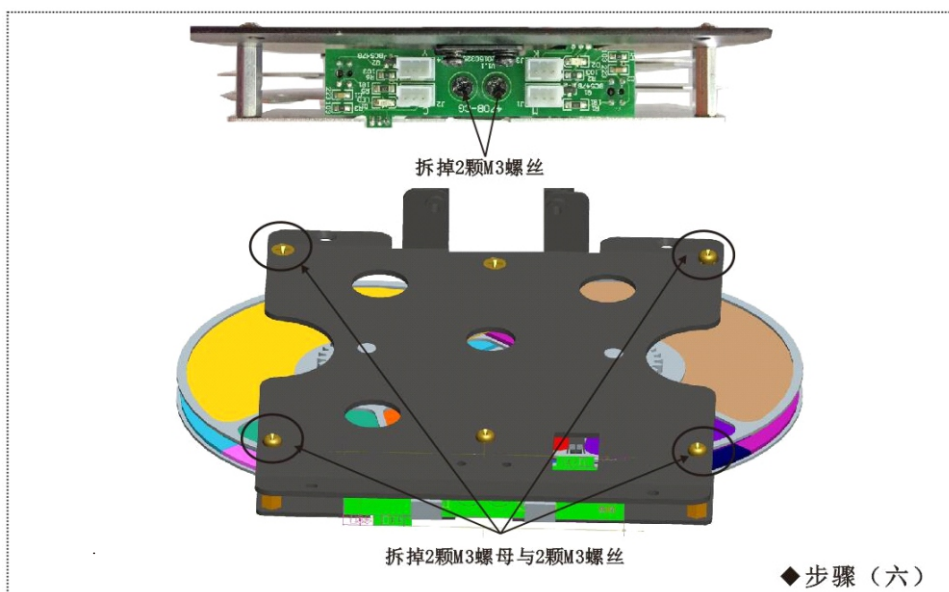
D, take out of the CMY filter module.



Step6, As the Above photos show,

A, Dismantle those 2 pcs M3 screws on the green Mini PCB board

B, Dismantle those 4 pcs screws of the Module.





Step 7, as Above photos show

A, Take out those Pads, color wheel , and Y, C, M according to the installation sequence of the filter according to your repairing request.

B, When you need to install the CMY or color wheel , just repeat 7, 6. ,5,4, 3,2,1 steps.

