COLOR BALL

DMX-version

User manual

Please read the instructions carefully before use

1D

1. Safety Introductions

WARNING

Please read the instructions carefully which includes important information about the installation, operation and maintenance.

- Please keep this User Manual for future consultation. If you sell the fixture to another user, be sure that they also receive this instruction booklet.
- Unpack and check carefully there is no transportation damage before using the fixture.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the fixture.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Disconnect main power before servicing and maintenance.
- Use safety chain when fixes this fixture. Don't handle the fixture by taking its head only, but always by taking its base.
- Maximum ambient temperature is Ta : 40℃. Don't operate it where the temperature is higher than this.
- In the event of serious operating problem, stop using the fixture immediately. Never try to repair the fixture by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.
- Do not connect the device to any dimmer pack.
- Do not touch any wire during operation and there might be a hazard of electric shock.
- To prevent or reduce the risk of electrical shock or fire, do not expose the fixture to rain or moisture.
- The housing must be replaced if they are visibly damaged.
- Do not look directly at the LED light beam while the fixture is on.
- There are no user serviceable parts inside the fixture. Do not open the housing or attempt any repairs by yourself. In the unlikely event your fixture may require service, please contact your nearest dealer.

2. Technical Specifications

- **Power supply**

  Input Voltage：AC 100V~240V 50/60HZ

  Power consumption：10W

- **LED**

  Red 31pcs, Green 30pcs, Blue 30pcs
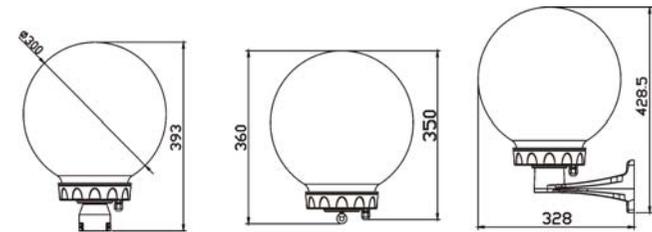
- **Channels**

  Channel 1 = Red

  Channel 2 = Green

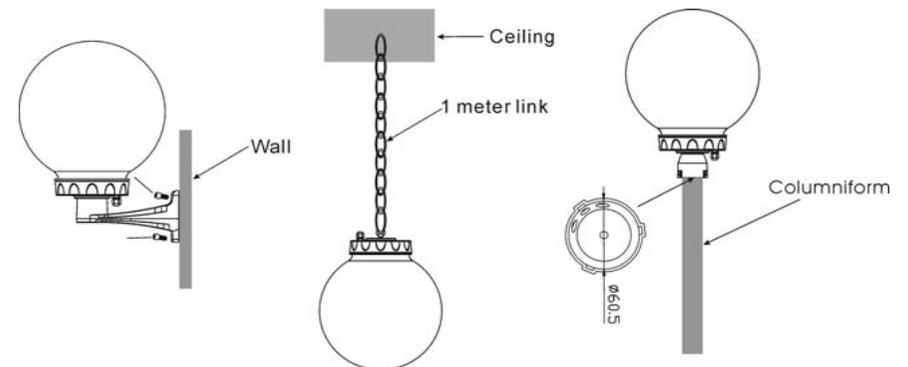 Channel 3 = Blue

  Channel 4 = Dimmer / Strobe

- **Dimension**：300mm x 300mm x 355mm
- **Weight**：1.2 kgs

3. Installation

The fixture can be fixed on wall, under ceiling or clamp on the truss. Please checkout the voltage before applying power. Do not connect the fixture to an electrical dimmer system which it could damage the electronics.

Important: The electrical installation should be carried out by qualified personal only, according to the regulations for electrical and mechanical safety in your country.

- Gently unscrew the plastic dome from the plastic base and separate both parts.
- Place the plastic dome in a safe place so it won't be damaged during the installation.
- If the LED BALL is used with one of the optional adapters, make sure the base is mechanically well fixed before you start connecting the electrical wires.
- Especially when the unit is installed outdoors, you should use suitable cabling that withstands the weather conditions in your country (rain, sun, heat, cold, …)
- On the base you will see 3 cable entry glands that make it possible to make waterproof connections. Feed the cables from the outside through the cable entry glands.
- Strip the cables and connect them to the corresponding contacts. Please check the picture to see the different possibilities:
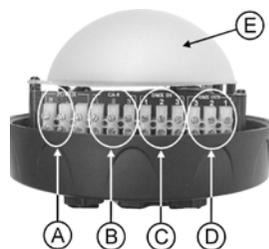
A. Mains contacts: connect the mains power cable to the N and L contacts (100V~240V 50/60Hz). Since the complete unit is made of plastic, you won't find a ground connection. However you can connect an eventual ground wire to the dummy contact, next to the L contact.

B. CA-8 remote controller: use the CA-8 contacts when you want to use the unit in stand alone and/or master/slave mode. In most cases you will have to connect the 3 contacts to a female stereo 6.3mm JACK cable-connector. Check the drawing to see how the contacts must be wired.
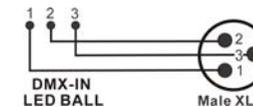
- **Contact 1:** jack connector ground.
- **Contact 2:** Tip of the stereo jack.
- **Contact 3:** Ring of the stereo jack.
- When all cables are well connected, you must tighten the cable entry glands so the cables are fixed and the unit is waterproof!
- Gently place the plastic dome on the base and close the unit by turning the dome in clockwise direction.

Important! If the unit is used outside, make sure that the rubber sealing ring of the dome is in good condition otherwise you must replace it to keep the unit waterproof.

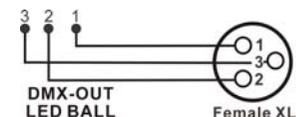*Remark: You don't have to use connectors when the unit is used in a fixed installation. However we strongly suggest to use XLR & JACK cable connectors when the unit is used in mobile applications. (mobile DJs, hiring companies, …)*

C. DMX input contacts: use the DMX in/out contacts when you want to control the unit by DMX or if you want to connect several units together in master/slave mode. In most cases you will have to connect the 3 contacts to a male XLR cable-connector. The numbering on the contacts of the unit correspond to the numbering of the contacts on the XLR connector.

**D. DMX output contacts:** use the DMX in/out contacts when you want to control the unit by DMX or if you want to connect several units together in   master/slave mode. In most cases you will have to connect the 3 contacts to a female XLR cable-connector. The numbering on the contacts of the unit corresponds to the numbering of the contacts on the XLR -connector.

4. DMX512 Address Setting

1. Each fixture needs to have an address set to receive the data sent by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1). The address, also know as the start channel, is the first channel used to receive instructions the controller.
2. The fixture uses four channels, the next fixture's will be automatic calculate their own DMX address, no need to calculate the DMX channels of each fixture in the chain. (Fixture 1 = 1, Fixture 2 = 5, Fixture 3 = 9, Fixture 4 = 13, Fixture…)
3. No need to turn the fixture off when you change the DMX address, as new DMX address setting will be effected at once. Every time you turn the fixture on, it will be ready to receive DMX signal or run the built-in programs.

A. By Auto setting

1. Each fixture needs to have an address set to receive the data sent by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1). The address, also know as the start channel, is the first channel used to receive instructions from the controller.
2. The DMX address of fixture can be set automatically. You have to press the auto addressing button from the first fixture's main PC Board. When you hold the button 5secs, the fixture will be set the DMX address to 1, and the other fixtures of the chain will be set their own DMX address automatically.
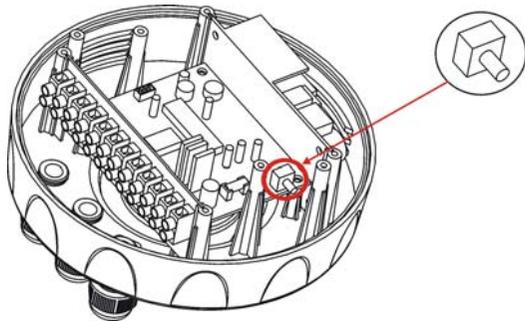
3. The LED fixtures use four channels, the next fixture's will be automatic calculate their own DMX address, not need to calculate the DMX channels of each fixture in the chain. (Fixture 1 = 1, Fixture 2 = 5, Fixture 3 = 9, Fixture 4 = 13, Fixture…)
4. Needn't to turn the fixture off when you change the DMX address, as new DMX address setting will be effected at once. Every time you turn the fixture on, it will be ready to receive DMX signal or run the built-in programs.

B. By CA-T DMX TESTER

The fixture can be set the DMX address remotely by CA-T *DMX TESTER*. Please refer to the CA-T user manual to set the DMX address to the fixture.
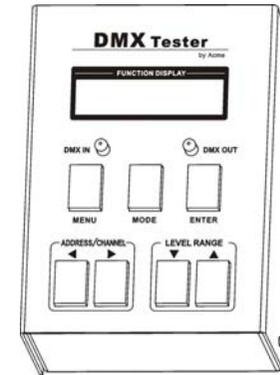
C. By Universal DMX controller

- Make sure the DMX cables of all units are connected.
- Connect the first unit to a universal DMX controller.
- Connect all units to the mains so they are switched on.
- Set all DMX-channels on your DMX-controller to zero (value 000).
- Set the DMX-channel, that you want to assign as DMX start address on you projector, tot maximum (value 255).
- Press the "Auto DMX address" button on the projector shortly.
- If you want to set another projector to the same DMX start address, simply press it's "Auto DMX address", button and it will receive the same address.
- Done!

An example to make things clear:

- We will set the DMX start address of a projector to 106:
- Connect the projector to the DMX-controller as described above and make sure all is switched on.
- Set all DMX-channels on the controller to zero (000).
- Now set DMX-channel 106 to maximum (255).
- Press the "Auto DMX address" button on the projector shortly.
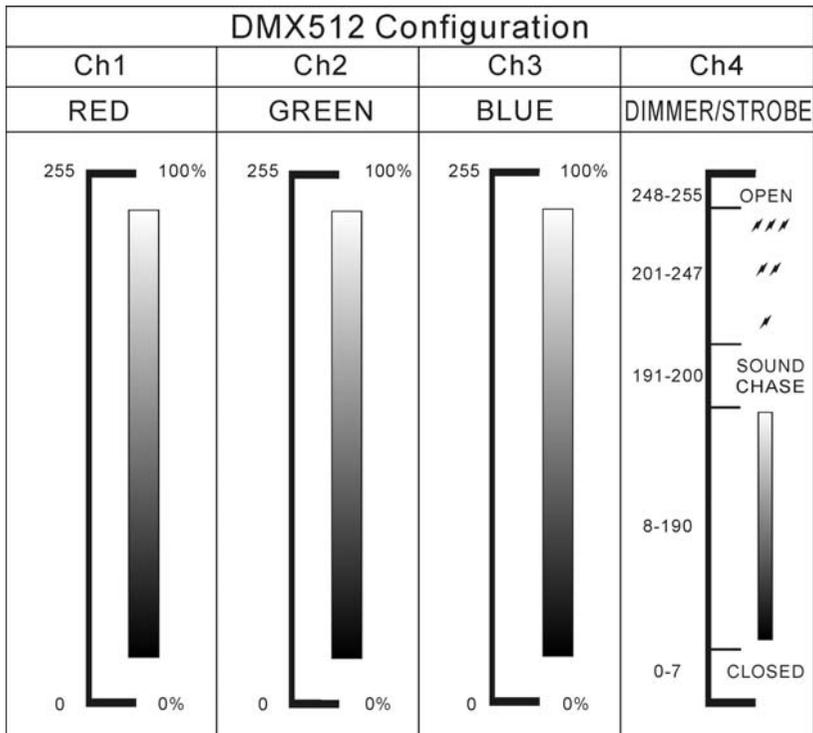- Done! Your projector now has DMX address 106!

5. How to control the fixture

Three ways to set-up DMX address

    A. Universal DMX controller

    B. Master/Slave operation

    C. Easy controller (by CA-8)

A. Universal DMX controller

The fixture can be set the DMX address remotely by universal DMX controller. First, you need to programming two scenes into a chase, and then link the fixtures to the universal DMX controller. When you run the chase, all the fixtures of the chain will be set the series DMX address automatically. If you use a controller with 5 pins DMX connector, you need to use a 5 to 3 pin adapter. The fixture uses four channels. Please refer to the following diagram to use your controller to activate the fixture.

DMX512 Configuration

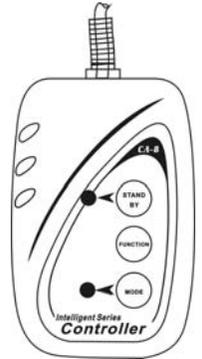| Ch1	Ch2	Ch3	Ch4
RED	GREEN	BLUE	DIMMER/STROBE
255 — 100% 0 — 0%	255 — 100% 0 — 0%	255 — 100% 0 — 0%	248-255 OPEN 〃〃〃 201-247 〃〃 〃 191-200 SOUND CHASE 8-190 0-7 CLOSED

B. Master/Slave operation

The fixtures will allow you to link 16 fixtures together and operate without a controller. In Master/Slave mode, the first fixture will control the others to give an automatic, sound activated, synchronized light show. This function is good when you want an instant show. The first unit it's DMX input cable will have nothing connect it, and the other fixtures will be set in slave mode automatically. Their DMX input cables connect the last fixture DMX output cable (daisy chain). Any fixture can act as a Master or as a Slave
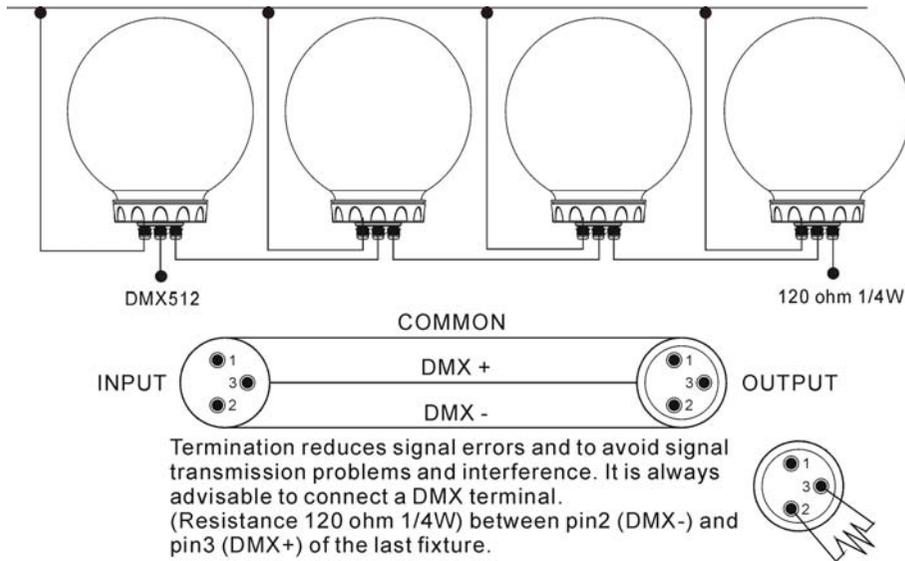
C. Easy Controller (by CA-8)

The easy remote control is used only in master/slave mode. There is a terminator for connect the easy controller inside the fixture. By connecting the cable into DMX IN waterproof cable entry gland to the CA-8 terminator of the first fixture, you will find that the remote control on the first fixture will control all the other fixtures for Stand by, Function and Mode functions.

Blackout	To blackout all the fixture			
Function	Strobe 1.Synchronous strobe in white color 2.The same color chase 3.Different color strobe	9 Color select White➔Red➔Blue➔Purple➔Orange➔Green➔Yellow➔Magenta➔Cyan	Color Chase 1. The same color 2. Different color 3. One light chase 4. Two lights chase 5. Four lights chase	Color Fade 1. Fast speed 2. Middle speed 3. Slow speed
Mode	Sound 1 (LED OFF)	Manual (LED ON)	Sound 2 (LED slow blinking)	Auto (LED fast blinking)

6. DMX 512 Connection

The DMX512 is widely used in intelligent lighting control, with a maximum of 512 channels.

DMX512

120 ohm 1/4W

COMMON

INPUT

DMX +

DMX -

OUTPUT

Termination reduces signal errors and to avoid signal transmission problems and interference. It is always advisable to connect a DMX terminal.
(Resistance 120 ohm 1/4W) between pin2 (DMX-) and pin3 (DMX+) of the last fixture.

1. Connect the fixture together in a "daisy chain" from the output of the fixture to the input of the next fixture. DMX512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.

2. The DMX output and input connectors are pass-through to maintain the DMX circuit when no power is connected to the fixture.

3. At last fixture, the DMX cable has to be terminated with a terminator to reduce signal errors. Solder a 120-ohm 1/4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.

7. Fixture Cleaning

The cleaning of internal must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the fixture's optics.

• Clean with soft cloth using normal glass cleaning fluid.

• Always dry the parts carefully.

• Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.

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