

# American DJ® COLOR FUSION



## User Instructions

American DJ®  
4295 Charter Street  
Los Angeles Ca. 90058  
www.americandj.com

Rev. 7/06

### Color Fusion

### Introduction

**Unpacking:** Thank you for purchasing the Color Fusion by American DJ®. Every Color Fusion has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your fixture for any damage and be sure all accessories necessary to operate the unit has arrived intact. In the case damage has been found or parts are missing, please contact our toll free customer support number for further instructions. Do not return this unit to your dealer without first contacting customer support.

**Introduction:** The Color Fusion is part of American DJ's continuing pursuit for creating high quality affordable intelligent fixtures. The Color Fusion is a DMX intelligent stage wash. This unit is light weight and compact which makes it a great piece for mobile DJ's and clubs. This unit can be used as a stand alone, sound-active unit or in a Master/Slave configuration. The unit can also be controlled via DMX controller. For best results use this unit with a fog machine to enhance the output of the beams.

**Customer Support:** American DJ® provides a toll free customer support line, to provide set up help and to answer any question should you encounter problems during your set up or initial operation. You may also visit us on the web at [www.americandj.com](http://www.americandj.com) for any comments or suggestions. Service Hours are Monday through Friday 8:00 a.m. to 4:30 p.m. Pacific Standard Time.

Voice: (800) 322-6337

Fax: (323) 582-2610

E-mail: [support@americandj.com](mailto:support@americandj.com)

To purchase parts online visit <http://parts.americandj.com>

**Warning!** To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

**Caution!** There are no user serviceable parts inside this unit. Do not attempt any repairs yourself, doing so will void your manufactures warranty. In the unlikely event your unit may require service please contact American DJ®.

**PLEASE recycle the shipping carton when ever possible.**

## Color Fusion

## General Instructions

To optimize the performance of this product, please read these operating instructions carefully to familiarize yourself with the basic operations of this unit. These instructions contain important safety information regarding the use and maintenance of this unit. Please keep this manual with the unit, for future reference.

## Color Fusion

## Features

- 3 Colors with Various Chase Patterns
- Electronic Dimming 0-100%
- Strobe and Speed Control
- Uses Seven DMX Channels
- Easy Lamp Replacement
- DMX-512 protocol
- Fan cooled
- Color Mixing
- Built in Microphone
- Barn Doors

## Color Fusion

## Warranty Registration

The Color Fusion carries a 1 year (365 days) limited warranty. Please fill out the enclosed warranty card to validate your purchase and warranty. You may also register your product online at [www.americandj.com](http://www.americandj.com). All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. If the unit is under warranty you must provide a copy of your proof of purchase invoice. Please contact American DJ® customer support for a R.A. number.

## Color Fusion

## Cleaning Instructions

Due to fog residue, smoke, and dust cleaning the fixture should be carried out periodically to optimize light output.

1. Use normal glass cleaner and a soft cloth to wipe down the outside casing every 20 days.
2. Use normal glass cleaner with a soft cloth to wipe down the inside reflector and lens every 30-60 days.
3. Always be sure to dry all parts completely before plugging the unit back in.
4. Frequent cleaning the unit will extend lamp life and ensure the fixtures reliability.

Cleaning frequency depends on the environment in which the fixture operates (i.e. smoke, fog residue, dust, dew). In heavy use we recommend cleaning on a monthly basis. Periodic cleaning will ensure longevity, and crisp light output.

## Color Fusion

## Safety Precautions

**Safety Issue:** This unit may blow a fuse if the maximum allotted load of 15 amps is reached. If the fuse needs changing, please see the fuse replacement guidelines on page 10.

- To reduce the risk of electrical shock or fire, do not expose this unit rain or moisture
- Do not spill water or other liquids into or on to your unit.
- Be sure that the local power outlet match that of the required voltage for your unit.
- Do not attempt to operate this unit if the power cord has been frayed or broken. Do not attempt to remove or break off the ground prong from the electrical cord. This prong is used to reduce the risk of electrical shock and fire in case of an internal short.
- Disconnect from main power before making any type of connection.
- Do not remove the cover under any conditions. There are no user serviceable parts inside.
- Never operate this unit when it's cover is removed.
- Never plug this unit in to a dimmer pack
- Always be sure to mount this unit in an area that will allow proper ventilation. Allow about 6" (15cm) between this device and a wall.
- Do not attempt to operate this unit, if it becomes damaged.
- This unit is intended for indoor use only, use of this product out doors voids all warranties.
- During long periods of non-use, disconnect the unit's main power.
- Always mount this unit in safe and stable matter.
- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the point they exit from the unit.
- Cleaning -The fixture should be cleaned only as recommended by the manufacturer. See page 3 for cleaning details.
- Heat -The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- The fixture should be serviced by qualified service personnel when:
  - A. The power-supply cord or the plug has been damaged.
  - B. Objects have fallen, or liquid has been spilled into the appliance.
  - C. The appliance has been exposed to rain or water.
  - D. The appliance does not appear to operate normally or exhibits a marked change in performance.

## Color Fusion

## Set Up

**Power Supply:** Before plugging your unit in, be sure the source voltage in your area matches the required voltage for your American DJ® Color Fusion. The American DJ® Color Fusion is available in a 120v and 220v version. Because line voltage may vary from venue to venue, you should be sure your unit voltages matches the wall outlet voltage before attempting to operate you fixture.

**DMX-512:** DMX is short for Digital Multiplex. This is a universal protocol used as a form of communication between intelligent fixtures and controllers. A DMX controller sends DMX data instructions from the controller to the fixture. DMX data is sent as serial data that travels from fixture to fixture via the DATA “IN” and DATA “OUT” XLR terminals located on all DMX fixtures (most controllers only have a DATA “OUT” terminal).

**DMX Linking:** DMX is a language allowing all makes and models of different manufactures to be linked together and operate from a single controller, as long as all fixtures and the controller are DMX compliant. To ensure proper DMX data transmission, when using several DMX fixtures try to use the shortest cable path possible. The order in which fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned a DMX address of 1 may be placed anywhere in a DMX line, at the beginning, at the end, or anywhere in the middle. When a fixture is assigned a DMX address of 1, the DMX controller knows to send DATA assigned to address 1 to that unit, no matter where it is located in the DMX chain.

**Data Cable (DMX Cable) Requirements (For DMX and Master/Slave Operation):** The Color Fusion can be controlled via DMX-512 protocol. The Color Fusion is a seven channel DMX unit. The DMX address is set on the back panel of the Color Fusion. Your unit and your DMX controller require a standard 3-pin XLR connector for data input and data output (Figure 1). If you are making your own cables, be sure to use standard two conductor shielded cable (This cable may be purchased at almost all pro sound and lighting stores). Your cables should be made with a male and female XLR connector on either end of the cable. Also remember that DMX cable must be daisy chained and can not be split.



Figure 1

## Color Fusion

## Set Up

**Notice:** Be sure to follow figures two and three when making your own cables. Do not use the ground lug on the XLR connector. Do not connect the cable’s shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR’s outer casing. Grounding the shield could cause a short circuit and erratic behavior.

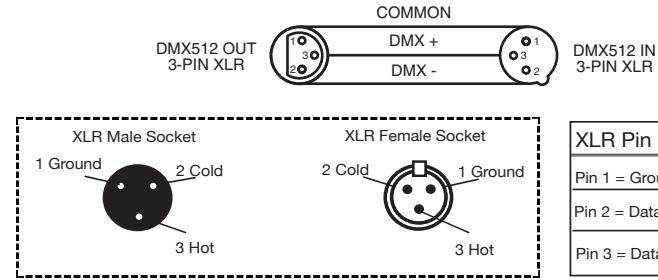


Figure 2

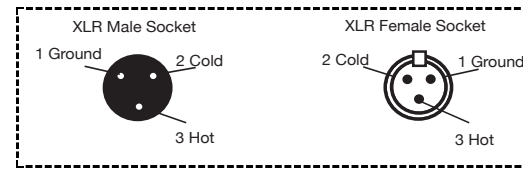


Figure 3

**Special Note: Line Termination.** When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behavior. A terminator is a 90-120 ohm 1/4 watt resistor which is connected between pins 2 and 3 of a male XLR connector (DATA + and DATA -). This unit is inserted in the female XLR connector of the last unit in your daisy chain to terminate the line. Using a cable terminator (ADJ part number Z-DMX/T) will decrease the possibilities of erratic behavior.



Termination reduces signal errors and avoids signal transmission problems and interference. It is always advisable to connect a DMX terminal, (Resistance 120 Ohm 1/4 W) between PIN 2 (DMX-) and PIN 3 (DMX +) of the last fixture.

Figure 4

**5-Pin XLR DMX Connectors.** Some manufactures use 5-pin XLR connectors for DATA transmission in place of 3-pin. 5-pin XLR fixtures may be implemented in a 3-pin XLR DMX line. When inserting standard 5-pin XLR connectors in to a 3-pin line a cable adaptor must be used, these adaptors are readily available at most electric stores. The chart below details a proper cable conversion.

Conductor	3-Pin XLR Female (Out)	5-Pin XLR Male (In)
Ground/Shield	Pin 1	Pin 1
Data Compliment (- signal)	Pin 2	Pin 2
Data True (+ signal)	Pin 3	Pin 3
Not Used		Do Not Use
Not Used		Do Not Use

**Operating Modes:**

You can use the Color Fusion in four ways:

- Sound-Active mode - The unit will react to sound, chasing through the built in programs.
- Master/Slave mode - You can daisy chain units together to get a synchronized light show that will react to sound, chasing through built in programs.
- DMX control mode - This function will allow you to control each individual fixtures traits with a standard DMX 512 controller such as the Elation® Show Designer.

**Sound Active Mode:**

In this mode the Color Fusion will react to sound, and chase through the different colors.

1. Switch dipswitch #10 to the “ON” position.
2. Plug the fixture in and it will chase through its colors via sound.

**Master-Slave Operation:**

This function will allows you to link units together to run in a Master-Slave mode. In Master-Slave operation one unit will act as the controlling unit and the others will react to the controlling units built-in programs. Any unit can act as a Master or as a Slave however, only one unit can be programmed to act as the “Master.”

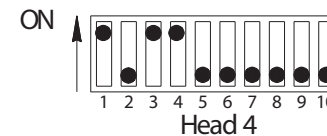
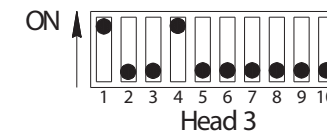
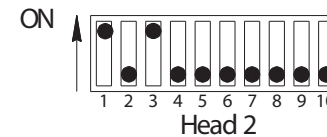
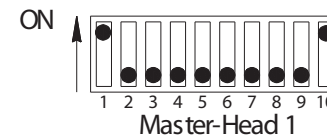
**Master-Slave Connections and Settings:**

1. Daisy chain your units via the XLR connector on the rear of the unit. Use standard XLR microphone cables to link your units together. Remember that the Male XLR connector is the input and the Female XLR connector is the output. The first unit in the chain (master) will use the female XLR connector only. The last unit in the chain will use the male XLR connector only.
2. Set dipswitches #1 and #10 to the “ON” position, on the “Master” unit.
3. For the “Slave” unit(s), follow the dipswitch settings on page 8.
4. Connect the “Slave” unit or units and they will automatically start to follow the “Master.”

**DMX Mode:**

Operating through a DMX controller give the user the freedom to create their own programs tailored to their own individual needs. This function also allows you to use your fixtures as spot lights.

1. This function will allow you to control each individual fixture’s traits with a standard DMX 512 controller such as the Elation® Show Designer™ or the Elation® DMX Operator.
2. The Color Fusion uses seven DMX channels to operate; Channel 1 is Red, channel 2 is Green, channel 3 is Blue, channel 4 is Color Mixing, channel 5 is dimming, channel 6 is Strobe and Speed control, and channel 7 is built-in modes .
3. To run your fixture in DMX mode, plug in the fixture via the XLR connections to any standard DMX controller. Switch dipswitch #1 to the “ON” position. - Follow the set-up specifications that come with your DMX controller.

**Master/Slave Chart**



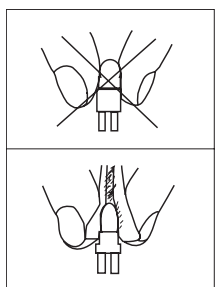
**Color Fusion DMX Values and Functions**

Channel	Value	Function
1	0 - 255	RED
2	0 - 255	GREEN
3	0 - 255	BLUE
4	0 - 255	COLOR MIXING
5	0 - 255	DIMMING CONTROL 0% → 100%
6	0 - 255	STROBE AND SPEED CONTROL SLOW → FAST
7 ↓	0 - 255	MODE
	0 - 127	BLACKOUT
	128 - 159	RAINBOW STROBE
	160 - 191	SLOW RAINBOW FLUTTER
	192 - 223	FAST RAINBOW FLUTTER
	224 - 255	SOUND ACTIVE

Channels 5 and 6 can be used with Channels 1, 2, 3, and 4. Channel 6 is also used with Channel 7.

If the value of Channel 7 is above 128, Channels 1, 2, 3, 4, and 5 will not work, Channel 6 will control the speed of the Channel 7 Modes.

**Color Fusion Halogen Lamp Warning**



This fixture is fitted with halogen lamps which are highly susceptible to damage if improperly handled. Never touch the inside lamp with your bare fingers as the oil from your hands will shorten lamp life. Also, never move the fixture until the lamp has had ample time to cool. Remember, lamps are not covered under warranty conditions.

**Color Fusion Lamp Replacement**

**Lamp Replacement: Caution!** Never open the unit when in use. Always disconnect the main power before attempting to replace the lamp. Remember always replace with the same type lamp and fuse.

1. Be sure to follow the proper procedures when handling halogen bulbs.
2. Unscrew the two phillips screws located directly under the top of the barn door hinge.
3. Pull the glass cover down, you will notice that it is connected with hinges.
4. Remove the bulb(s) by either pushing the bulb up and pulling it out or down and out. Replace the bulb with the same type of bulb.
5. Reassemble.

**Color Fusion Fuse Replacement**

**Fuse Replacement:** First unplug the power. Locate the fuse holder on the back of the unit underneath the power cord. Insert a flat-head screw driver into the power socket and unsecrew the fuse holder. Remove the bad fuse and replace with a new one.

**Color Fusion Trouble Shooting**

Listed below are a few common problems the user may encounter, with solutions.

**No light from the unit:**

1. Check the fuse in the back panel.
2. Check if the lamps are lit. If power is present but the lamps are not lit, the lamp may need to be replaced.

**Unit not responding to DMX:**

1. Check that the DMX cables are connected properly and are wired correctly (pin 3 is “hot”; on some other DMX devices pin 2 may be ‘hot’). Also, check that all cables are connected to the right connectors; it does matter which way the inputs and outputs are connected.

**Unit does not respond to sound:**

1. Quiet or high pitched sounds will not activate the unit.

If problems are not resolved; Contact American DJ® for service. 1-800-322-6337

## Color Fusion

## Warranty

### 1-YEAR LIMITED WARRANTY

A. American DJ® hereby warrants, to the original purchaser, American DJ® products to be free of manufacturing defects in material and workmanship for a period of 1 Year (365 days) from the date of purchase. This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.

B. For warranty service, send the product only to the American DJ® factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, American DJ® will pay return shipping charges only to a designated point within the United States. If the entire instrument is sent, it must be shipped in its original package. No accessories should be shipped with the product. If any accessories are shipped with the product, American DJ® shall have no liability whatsoever for loss of or damage to any such accessories, nor for the safe return thereof.

C. This warranty is void if the serial number has been altered or removed; if the product is modified in any manner which American DJ® concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the American DJ® factory unless prior written authorization was issued to purchaser by American DJ®; if the product is damaged because not properly maintained as set forth in the instruction manual.

D. This is not a service contract, and this warranty does not include maintenance, cleaning or periodic check-up. During the period specified above, American DJ® will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of American DJ® under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of American DJ®. All products covered by this warranty were manufactured after January 1, 1990, and bear identifying marks to that effect.

E. American DJ® reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured.

F. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products described above. Except to the extent prohibited by applicable law, all implied warranties made by American DJ® in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired. The consumer's and or Dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall American DJ® be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product.

G. This warranty is the only written warranty applicable to American DJ® Products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

H. Lamps are not covered under this or any other warranty, either written or implied.

## Color Fusion

## Specifications

### Model: Color Fusion

#### SPECIFICATIONS:

Working Position:	Any safe working position
Voltage:	115V/60Hz or 230V/50Hz
Lamp:	3 x LL EHM 120V/300W or 230V/300W
Weight:	13.21lbs./ 6Kgs.
Dimensions:	14.2" (L) x 8.86" (W) x 5.9" (H)
Fuse:	15 Amp
Colors:	3 colors
<b>Power Draw:</b>	
Lamps Off:	1.3 amps
One Lamp (100%):	2.7 amps
Two Lamps (100%):	4.8 amps
Three Lamps (100%):	7.1 amps
Cooling:	Fan Cooled
Warranty:	1 Year (365 days)

**Please Note:** Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

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