

# American DJ®

## CONCEPT:1



### User Instructions

American DJ®  
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Los Angeles Ca. 90058  
www.americandj.com

Revised 10/03

#### Concept 1™

#### Introduction

**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.

**Unpacking:** Thank you for purchasing the Concept 1™ by American DJ®. Every Concept 1™ 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 Concept 1™ is part of American DJ's continuing pursuit for creating high quality affordable intelligent fixtures. The Concept 1™ is a DMX scanner with a built-in 4.9mW diode laser. Both the laser and the lamp can be operated at the same time for truly amazing effects. This unit is light weight and compact which makes it a great piece for mobile DJ's and clubs. For best results use this unit with a fog machine to enhance the output of the beams and laser.

**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 9:00 a.m. to 5:00 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>

**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®.

## Concept 1™

## Features

- Scanner and Laser in one effect
- 4.9mW diode laser
- 15 colors plus white
- Two 4 split colors
- 19 gobos plus spot
- Two interchangeable gobos
- Separate color and gobo wheels
- High Speed Shutter with variable Speed
- 230 degree pan / 110 degree tilt
- Projection angle 16 degrees
- Full Micro-stepping, with 4 stepper motors.
- Built in Microphone
- Auto switch to Stand-Alone (Master/Slave) operation when DMX signal is disconnected
- Run up to 16 heads without controller
- DMX-512 protocol
- Full Focusing
- Fan cooled
- Uses nine DMX Channels
- Digital DMX display
- Optional Concept-C controller (Not Included)

## Concept 1™

## Warranty Registration

The Concept 1™ carries a one year (365 days) limited warranty. Please fill out the enclosed warranty card to validate your purchase. 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.

## Concept 1™

## Product Registration

The Concept 1™ comes with a 1 year limited warranty. We recommend filling out the warranty registration card that came with your fixture to validate your warranty. You may also register your product on-line at [www.americandj.com](http://www.americandj.com).

## Concept 1™

## Safety Precautions

**Safety Issue:** This unit may blow a fuse if the maximum allotted load of 7 amps is reached. If the fuse needs replacement, please see the fuse replacement guidelines on page 17.

- 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 outdoors 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 18 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.



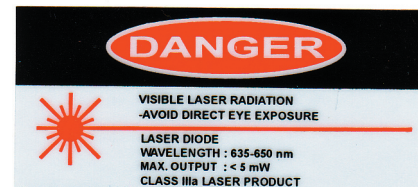
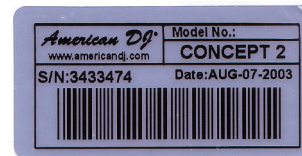
**CAUTION IMPORTANT!** When installing this projector, make sure that it is mounted in a manner that prevents the audience from looking directly into the beam, and the beam from striking the audience.

This Laser product complies with the CDRH/BRH radiation performance standards, 21 CFR Subchapter J.



"DANGER -Laser radiation when open. AVOID DIRECT EYE EXPOSURE." For Class IIIa accessible laser radiation with an irradiance greater than 25 x 10-3 Wcm-2

**AVOID EXPOSURE**  
Laser light is emitted from this aperture



**Power Supply:** Before plugging your unit in, be sure the source voltage in your area matches the required voltage for your American DJ® Concept 1.™ The American DJ® Concept 1™ 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 Concept 1™ can be controlled via DMX-512 protocol. The American DJ® Concept 1™ is a nine channel DMX unit. The DMX address is set on the front panel of the Concept 1™. 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

**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.

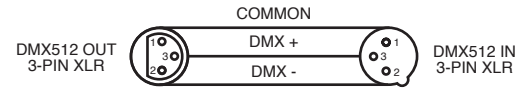


Figure 2

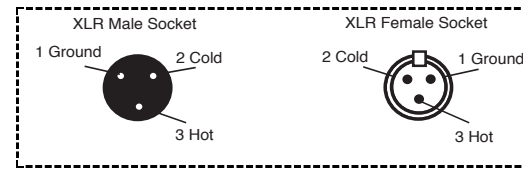


Figure 3

XLR Pin Configuration	
Pin 1 =	Ground
Pin 2 =	Data Compliment (negative)
Pin 3 =	Data True (positive)

**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.

3-Pin XLR to 5-Pin XLR 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 Concept 1™ in three ways:

- Stand alone mode - The unit will react to sound, chasing through the several built in programs. You can also use the optional Concept-C Controller to manually control blackout, strobe, pan, tilt, gobo, color, and scan mode.
- Master/Slave mode - You can daisy chain up to 16 units together to get a synchronized light show that will react to sound chasing through several 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 American DJ Show Designer.™

**Stand Alone Mode:**

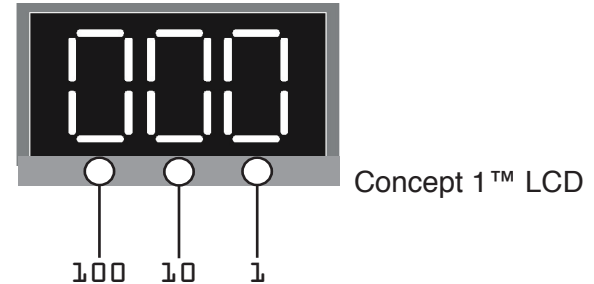
The Concept 1™ has a sophisticated built-in light show that will run to sound when there is no DMX signal present. Plug the fixture in and it will chase through its programs via sound. You can also use the optional controller to operate blackout, strobe, or slow scan the units.

**Master-Slave Operation:**

This function will allow you to link up to 16 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, a unit must be programmed to act as “Master.”

**Master-Slave Connections:**

1. Daisy chain your units via the XLR connector on the top 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.

**Setting Units as Masters or Slaves:**

This section will detail the procedure for switching units between Masters and Slaves. Each unit can function as a “Master” or as a “Slave” To adjust the settings:

1. Be sure the main power switch is set to the “OFF” position.
2. With the power off press and hold down the LCD “1-Key,” and turn the power on.
3. Hold the right LCD button down until the LCD reads “Aud.”
4. Connect the “Slave” unit or units and they will automatically start to follow the “Master.”
5. To toggle between Master and Slave mode repeat steps 1-3.

**Adjusting The DMX address:**

The DMX address is adjusted by using the “1, 10, and 100” keys directly below the LCD. Each press of a button will increase the selected value of one. Please note that each tap of the keys will only increase the displayed value, you may decrease the value.

**Reverse Pan:**

1. Be sure the main power switch is set to the “OFF” position.
2. With the power off, press and hold the middle LCD button “10-key,” and turn the power on.
3. Hold the middle LCD button down until the LCD reads “r - p.”
4. To deactivate this function, repeat the same steps.

**Reverse Tilt:**

1. Be sure the main power switch is set to the “OFF” position.
2. With the power off, press and hold the left LCD button “100-key,” and turn the power on.

## Concept 1™

## Operation Cont.

3. Hold the middle LCD button down until the LCD reads "r - t."
4. To deactivate this function, repeat the same steps.

### **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 American DJ® Show Designer™ or the American DJ® DMX Operator.™
2. The Concept 1™ uses nine DMX channels to operate; Channel 1 is mirror pan, channel 2 is mirror tilt, channel 3 is color, channel 4 is gobo, channel 5 is shutter, channel 6 is mirror movement speed, channel 7 controls the mirror movement, channel 8 controls the laser, and channel 9 controls the color chase, pan/tilt, and reset.
3. To run your fixture in DMX mode, plug in the fixture via the XLR connections to any standard DMX controller. - Follow the set-up specifications that come with your DMX controller.

**Concept-C Controller:** This is a optional controller made specifically for the Concept 1™ and Concept 2.™ The Concept-C is a handheld controller, with a choice of control modes, AUTO and MANUAL. No DMX address has to be adjusted. *Note: The dipswitches on the back of the controller do not apply to the Concept 1 or Concept 2.*

1. Connect the controller to the Concept as you would a standard DMX controller.
2. To run your fixture, follow the directions that come with the Concept-C controller

## Concept 1™

## Reset Function

You may reset the fixture by turning the unit on and off. If your units are being controlled through a DMX controller, you may also reset the fixtures by adjusting DMX channel nine to a value of 250-255 and wait 3 seconds.

## Concept 1™

## Focusing

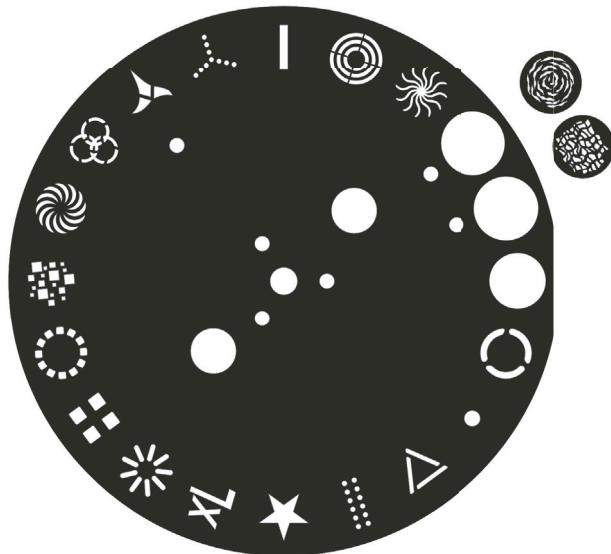
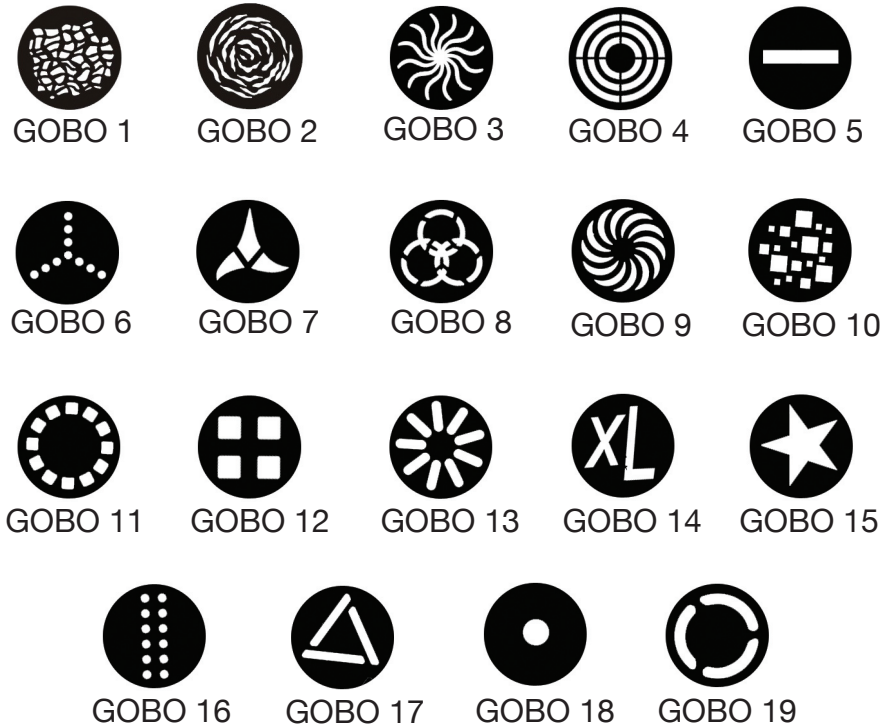
1. To focus the Concept 1™ it is best to first turn down the music so the mirror stops moving.
2. Adjust the focus by turning the focus lens clockwise and counter-clockwise, until you reach proper focus.

<b>Concept 1™ DMX Values and Functions</b>		
Channel	Value	Function
1	0 - 255	PAN
2	0 - 255	TILT
3 ↓	<u>0 - 139</u>	<u>COLOR</u>
	0 - 3	WHITE
	8 - 11	GREEN
	16 - 19	RED
	24 - 27	BLUE
	32 - 35	YELLOW
	40 - 43	PINK
	48 - 51	DARK AQUA
	56 - 59	LIGHT MAGENTA
	64 - 67	SKY BLUE
	72 - 75	MAGENTA
	80 - 83	VIOLET
	88 - 91	PURPLE
	96 - 99	CANARY YELLOW
	104 - 107	LIME GREEN
	112 - 115	ORANGE
	120 - 123	LIGHT AQUA
124 - 131	MULTICOLOR 1 (yellow,blue,red,magenta)	
132 - 139	MULTICOLOR 2 (sky blue,green,pink,orange)	
140 - 253	RAINBOW EFFECT SLOW → FAST	
254	SOUND ACTIVE SLOW	
255	SOUND ACTIVE FAST	
4 ↓	<u>0 - 159</u>	<u>GOBO</u>
	0 - 7	SPOT
	8 - 15	GOBO 1
	16 - 23	GOBO 2

<b>Concept 1™ DMX Values and Functions cont.</b>		
Channel	Value	Function
4 cont. ↓	24 - 31	GOBO 3
	32 - 39	GOBO 4
	40 - 47	GOBO 5
	48 - 55	GOBO 6
	56 - 63	GOBO 7
	64 - 71	GOBO 8
	72 - 79	GOBO 9
	80 - 87	GOBO 10
	88 - 95	GOBO 11
	96 - 103	GOBO 12
	104 - 111	GOBO 13
	112 - 119	GOBO 14
	120 - 127	GOBO 15
	128 - 135	GOBO 16
	136 - 143	GOBO 17
	144 - 151	GOBO 18
	152 - 159	GOBO 19
160 - 253	SPOT	
254	SOUND ACTIVE SLOW	
255	SOUND ACTIVE FAST	
5 ↓	0 - 15	SHUTTER CLOSED
	16 - 31	STROBE WITH RANDOM TIME
	32 - 47	SOUND ACTIVE STROBE
	48 - 239	STROBE SLOW → FAST
	240 - 255	SHUTTER OPEN
6		Controls the mirror movement speed (used with channel 7)
	0 - 1 2 - 255	RELATIVE SPEED SLOW → FAST

**Concept 1™**

**Gobo Layout**



**Concept 1™**

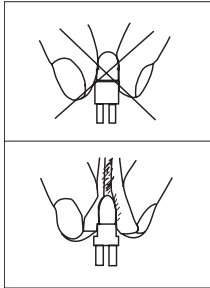
**DMX Values and Functions cont.**

Channel	Value	Function
7 ↓	0	<u>MIRROR MOVEMENT</u>
	1 - 31	MOVEMENT OFF
	32 - 63	X - MOVEMENT
	64 - 95	Y - MOVEMENT
	96 - 127	X/Y - MOVEMENT
	128 - 159	X/Y - MOVEMENT INVERTED
	160 - 191	CIRCLE MOVEMENT
	192 - 228	CIRCLE MOVEMENT INVERTED
	224 - 255	EIGHT MOVEMENT RANDOM MOVEMENT
	8 ↓	0 - 15
16 - 31		LASER OFF
32 - 47		FLASHING WITH RANDOM TIME
48 - 239		SOUND ACTIVE
240 - 255		BLINKING SLOW → FAST
		LASER ON
9 ↓	64 - 79	<u>SPECIAL FUNCTIONS</u>
	80 - 95	COLOR < - > COLOR SLOW → FAST
	96 - 111	COLOR < - > COLOR + 2 SLOW → FAST
	112 - 127	SOUND ACTIVE PAN/TILT SLOW
	128 - 143	SOUND ACTIVE PAN/TILT FAST
	230 - 249	PAN/TILT RANDOM MOVEMENT (CONTROL WITH CHANNEL FADER)
	250 - 255	LAMP OFF AFTER 3 SEC. WHEN SHUTTER IS CLOSED RESET AFTER 3 SEC.



## Concept 1™

## Halogen Lamp Warning



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

## Concept 1™

## 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 four thumb screws on the bottom of the unit.
3. Slide the lamp compartment out of the unit.
4. Remove and replace the bulb.
5. Reassemble.

## Concept 1™

## Fuse Replacement

**Fuse Replacement: Caution!** *Always disconnect the main power before attempting to replace the fuse.* Remember always replace with the same type lamp and fuse.

1. With a flat screwdriver wedge the fuse holder out of the its housing
2. Remove the old fuse from the holder and replace with the exact same type fuse.
3. Replace the fuse holder in to the fuse holder housing.
4. Reconnect main power.

## Concept 1™

## Changing Gobos

This unit comes with two 14mm interchangeable gobos. Changing the gobos is a easy procedure. Follow the instructions below.

**Caution!** *Never open the unit when in use. Always disconnect the main power before attempting to change the gobos.*

1. Unscrew the four allen screws on the body of the unit, and the two phillips screws on bottom of the unit. Remove the shell of the body.
2. When you remove the shell you will be able to access the gobo wheel. Turn the wheel with your hand until you come across the two changable gobos. Look at how the gobos are set in the wheel. They are very easy to remove.
3. Using your thumb, push the gobo out, towards the mirror. When doing this you do not need a lot of pressure. The same time that you are pushing the gobo out, use your finger and slide the gobo up and out.  
***If you notice how the gobo is set in the wheel it is a very easy procedure.***
4. Change the gobo, and reassemble the unit.

## Concept 1™

## Cleaning

Due to fog residue, smoke, and dust cleaning the internal and external optical lenses must be carried out periodically to optimize light output.

1. Use normal glass cleaner and a soft cloth to wipe down the outside casing.
2. Use a brush to wipe down the fan grill.
3. Clean the external optics with glass cleaner and a soft cloth every 20 days.
4. Clean the internal optics with glass cleaner and a soft cloth every 30-60 days.
5. Always be sure to dry all parts completely before plugging the unit back in.

Cleaning frequency depends on the environment in which the fixture operates (i.e. smoke, fog residue, dust, dew).

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

***No light from the unit:***

1. Check if the (red) LCD is lit and the fan is running. If not, there is no main power supply.
2. Check the fuse in the back panel.
3. Check if lamp is lit. If power is present but the lamp is 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. Check to see if the the sensitivity knob is turned all the way counter-clockwise.
2. Quiet or high pitched sounds will not activate the unit.

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

**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.

**Model: Concept 1™**SPECIFICATIONS:

Working Position:	Any safe working position
Voltage:	120V
Lamp:	ZB ELC 24V 250W
Weight:	16 lbs.
Dimensions:	12.5" (L) x 8.0" (W) x 21.5" (H)
Fuse:	7A GMA
Colors:	15 colors + 2 multicolor + white
Gobos:	19 plus spot
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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