

DECO 250



User Instructions

American DJ
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Los Angeles CA. 90058
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Deco 250™

General Information

Unpacking: Thank you for purchasing the Deco 250™ by American DJ®. Every Deco 250™ 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 equipment necessary to operate the unit has arrived intact. In the event 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: This unit uses 11 pieces of individual textured glass mounted on a wheel and a 11 colored tiles to produce vibrant colors and extravagant gobo patterns. The Deco 250™ is an intelligent fixture that can operate in DMX mode, as a stand alone sound active piece, or in a Master/Slave configuration. The Deco 250™ also comes with several built in programs. This piece is best used with a fog or haze machine to enhance the beam output. When used in DMX mode the fixture requires 3 DMX channels. When used as a stand alone unit or when used in multiples linked in a master/slave configuration an optional MINI/C controller may be used to control a blackout function.

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 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

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®.

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. If you do not wish to read through the manual, listed below are the master/slave dipswitch setting. Link the units together using XLR cables and follow the dip-switch chart for sound activation mode. Please keep this manual with the unit, for future reference.

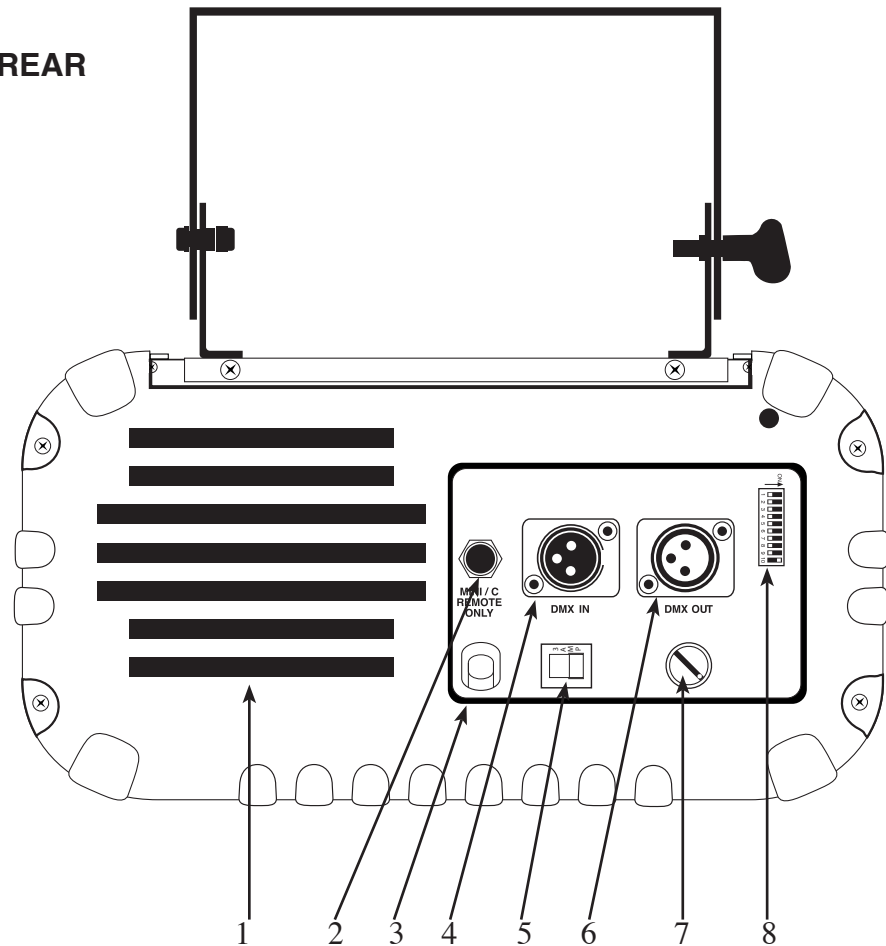
The Deco 250™ carries a one year (365 days) limited warranty. Please fill out the enclosed warranty card to validate your purchase. All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. Please contact American DJ® customer support for a R.A. number.

- ELC 24v/250w Lamp
- DMX-512 Compatible
- 11 Textured Glass Gobos, and 11 Colors
- Fan Cooled.
- Master/Slave Operation
- Linkable

This chart details the Master/Slave dipswitch setting for Master/Slave configuration. Use this configuration only when you will be using your fixtures in a Master/Slave configuration. Be sure the number 2 function switch is set to the on position for sound-active operation.

- 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 cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- Cleaning -The fixture should be cleaned only as recommended by the manufacturer. See page 13 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.

REAR



1. Cooling Fan -

Keep the fan grill clean. Never block the fan vents, always allow at least four inches between the fan and any other surface. Improper cooling may result in premature lamp failure.

2. MINI/C Controller Jack -

This is for use the optional MINI/C Black out controller only. **Do not attempt to connect an audio signal this jack, this will damage the PC board and void your manufactures warranty!**

3. Power Cord -

Connect only to a matching power outlet. Never use this fixture is the ground prong has been removed or broken off.

4. XLR Input Jack -

This jack is used to accept an incoming DMX signal or Master/Slave signal.

5. Breaker -

A 10A built-in safety breaker to reduce the risk of electrical shock or fire and protect the circuitry. In the case of a internal short or power surge.

6. XLR Output Jack -

This jack is used to transmit the incoming DMX signal to another DMX fixture, or in master/slave mode transmit a Master/Slave signal to the next Deco 250™ in the chain. For best results in DMX or Master/Slave mode terminate this jack if it is the last unit in the chain. See "Terminator" on page 11.

7. Audio Sensitivity Knob -

This adjusts audio sensitivity of the INTERNAL MICROPHONE. Turning the sensitivity knob in the clockwise direction will increase the sensitivity to sound. Turning the knob in the counter clockwise direction will decrease the fixture's sensitivity to sound.

8. Dipswitches -

These switches serve two functions. In master slave mode these switches are used to assign a specific head address. In DMX mode these switches are used to assign a DMX address to the unit. In DMX mode each switch corresponds to a specific value based on binary code. See page 7 for a detailed explanation of DMX binary code.

Operating Modes:

You may operate your Deco 250™ in three different ways:

- **Stand Alone Mode** - The unit will react to sound, chasing through the built in programs. You may also use the optional MINI/C Remote to control a blackout function.
- **Master/Slave Mode** - This mode allows you to daisy chain up to 4 units together to get a synchronized light show that will react to sound and chase through the several built in programs.
- **DMX Mode** - This function will allow you to control each individual fixtures traits with a standard DMX 512 controller such as the LSC® Show Designer.™

Note: Sound Active and Master-Slave operation require sound to activate! If the units do not move adjust the volume sensitivity knob on the rear of the fixture.

Note: To conserve lamp life, the unit will automatically turn off the lamp when the fixture has been inactive for longer than 60 seconds. This is not a malfunction and will aid lamp and unit longevity by decreasing heat.

Stand-Alone Operation (Sound Active): This function allows a single unit to run to the beat of the music or run any of the built in programs. Only use this function when running a single unit, or when running several units as individuals.

1. To activate the Sound-Active mode or a built in program, refer to the Special Function list on page 15.
2. The unit will now react to the low frequencies of music via the internal microphone. The unit is preset to activate at a certain sound pressure level. Occasionally the unit will not react to certain high pitch sounds.
3. The optional *MINI/C Controller* may be used with this mode to control stand-by (blackout).

Master-Slave Operation (Sound Active): This function will allow you to link up to 4 units together and operate without a controller or with the MINI/C. The units will react to sound. In Master-Slave operation one unit will act as the controlling unit and the others will react to the controlling units programs. Any unit can act as a Master or as a Slave.

1. Using standard XLR microphone cables, daisy chain your units together via the XLR connector on the rear of the units. Remember 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. For longer cable runs we suggest a terminator at the last fixture.
2. Follow the chart on page 15 for proper unit dipswitch settings.
3. The optional *MINI/C Controller* may be used with this mode to control stand-by (blackout).
4. After all the units settings have been set and are plugged in, they will begin to run to sound. If there is no sound present the units will blackout to preserve and extended lamp life.

Universal DMX Control: This function allows you to use a universal DMX-512 controller such as the LSC® DMX Operator™ or Show Designer.™ to control the textured glass gobo wheel, the color arm, and mirror kit. Using a DMX controller will allow you to customize programs and expand functionality. Operating through a DMX controller gives freedom to create unique programs tailored to one's individual needs.

1. The Deco 250™ uses 3 DMX channels. Channel 1 controls the textured glass gobo wheel, channel 2 controls the color arm and channel 3 controls the dichric mirror. See page 14 for detailed description of the DMX traits.
2. To control your fixture in DMX mode, follow the set-up procedures on pages 9 - 11 as well as the set-up specifications that are included with your DMX controller. Assign a DMX address to the unit.
3. Use the controller's faders to control the various DMX fixture traits.
4. This will allow you to create your own programs.
5. For help operating in DMX operation consult the manual included with your DMX controller.
6. For longer cable runs (more than a 100 feet) use a terminator on the last fixture.

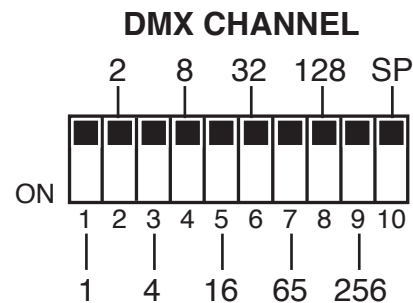
Power Supply: Before plugging your unit in, be sure the source voltage in your area matches the required voltage for your American DJ® Deco 250.™ The American DJ® Deco 250™ is available in a 120v and 220v version. Because line voltage may vary from venue to venue, you should be sure your unit voltages 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.

Dip-switches in DMX mode: This unit uses dipswitches to assign a DMX address. Each dipswitch represents a binary value.

Dipswitch 1 address equals 1
 Dipswitch 2 address equals 2
 Dipswitch 3 address equals 4
 Dipswitch 4 address equals 8
 Dipswitch 5 address equals 16
 Dipswitch 6 address equals 32
 Dipswitch 7 address equals 64
 Dipswitch 8 address equals 128
 Dipswitch 9 address equals 256
 Dipswitch 10 - Some units omit dipswitch 10. When a unit does include



dipswitch 10 it is used for special functions such as sound activation.

Each dipswitch has a preset value. A specific DMX address is set by combining the dipswitches that sum your desired value. For example: To achieve a DMX address of 21, combine dipswitches 1, 3, and 5. Sense dipswitch 1 has a value of 1, dipswitch 3 has a value of 4, and dipswitch 5 has a value of 16, the combination of the create a DMX value of 21.

Set DMX address 21:
 Dipswitch # 1 = 1
 Dipswitch # 3 = 4
 Dipswitch # 5 = 16
 = 21

Set DMX address 201:
 Dipswitch # 1 = 1
 Dipswitch # 4 = 8
 Dipswitch # 7 = 64
 Dipswitch # 8 = 128
 = 201

Data Cable (DMX Cable) Requirements (For DMX and Master/Slave Operation): The Deco 250™ can be controlled via DMX-512 protocol. The American DJ® Deco 250™ is a three channel DMX unit. The DMX address is set on the back panel of the Deco 250™. 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.

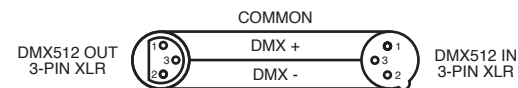


Figure 2

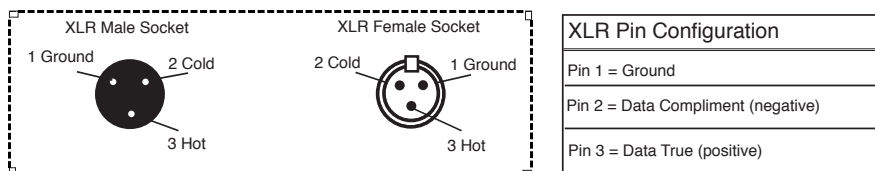


Figure 3

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 ZDMX/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

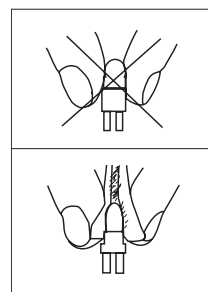
Caution: Always replace with the exact same type lamp, unless otherwise specified by an authorized American DJ® technician. Replace with anything other than the specified part can damage your unit and will void your manufactures warranty.

Warning: If you continue to blow either the lamp or the breaker, STOP using the unit. Contact customer support for further instructions, you may have to return the unit for servicing. Continuing to use the unit may cause serious damage.

Breaker Reset: This unit is equipped with a built-in safety breaker. This breaker is designed to close the power circuit in the event of an internal short or power surge. This will reduce the risk of electrical shock or fire and protect the circuitry. To reset the breaker, push the breaker button in until you hear it “pop” back in to place. If the breaker continues to pop, stop using the unit and contact our customer support team, the unit may need to be returned for service.

Lamp Replacement: Caution! Never attempt to change the lamp while the fixture is plugged in. Always disconnect the main power and allow the unit ample time to cool before attempting to replace the lamp. Lamp replacement has been made simple by incorporating the use of a flip-up front cover that is retained by a thumb screw.

1. Be sure to follow the proper handling procedures that deal with halogen lamps.
2. Remove the thumb screw on the top of the unit.
3. After removing the thumb screw, pull off socket assembly protective cover.
4. Carefully remove the old lamp and discard it in the trash.
5. Replace the lamp with an exact match and reassemble in reverse order.



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.

Fixture Cleaning: Due to fog residue, smoke, and dust cleaning the internal and external optical lenses and mirror should be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates (i.e. smoke, fog residue, dust, dew). In heavy club use we recommend cleaning on a monthly basis. Periodic cleaning will ensure longevity, and crisp output.

1. Use normal glass cleaner and a soft cloth to wipe down the outside casing.
2. Use a brush to wipe down the cooling vents and fan grill.
3. Clean the external optics and mirror 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.

Trouble Shooting: Listed below are a few common problems that you may encounter, with solutions.

No light output from the unit;

1. Be sure you have connected your unit into a wall outlet with a matching power supply.
2. Be sure the breaker has not blown. The breaker is located on the rear panel of the unit.
3. Remove the lamp cover and be sure the lamp is seated in its socket properly. Occasionally lamps become loose during shipping be sure the lamp is push in to its socket all the way.

Unit does not respond to sound;

1. Low frequencies (bass) should cause the unit to react to sound. Tapping on the microphone, quiet or high pitched sounds may not activate the unit.

Channel	Value	Function
1 ↓	0 - 255	<u>TEXTURED GLASS GOBO</u>
	0	OFF
	01 - 21	SPOT
	22 - 43	GOBO 1
	44 - 65	GOBO 2
	66 - 87	GOBO 3
	88 - 109	GOBO 4
	110 - 131	GOBO 5
	132 - 153	GOBO 6
	154 - 175	GOBO 7
	176 - 197	GOBO 8
	198 - 219	GOBO 9
	220 - 241	GOBO 10
242 - 254	GOBO 11	
255	GOBO WHEEL ROTATION	
2 ↓	0 - 255	<u>COLOR ARM</u>
	0	BLACKOUT
	01	MULTI-COLOR 1
		MULTI-COLOR 2
		MULTI-COLOR 3
		MULTI-COLOR 4
		MULTI-COLOR 5
		MULTI-COLOR 6
		MULTI-COLOR 7
		MULTI-COLOR 8
		MULTI-COLOR 9
		MULTI-COLOR 10
	MULTI-COLOR 11	
	RAINBOW EFFECT	
	254	
	255	

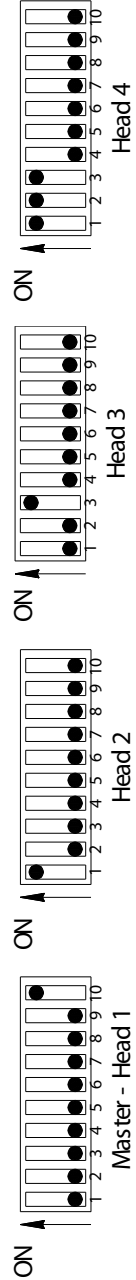
Channel	Value	Function
3 ↓	0 - 255	<u>MIRROR</u>
	0	STOP
	01 - 127	COUNTER-CLOCKWISE ROTATION FAST → SLOW
	128	STOP
	129 - 255	CLOCKWISE ROTATION SLOW → FAST

Special Function List

0= Off
1= On
-- Don't Carry

Function	Dp10	Dp9	Dp8	Dp7	Dp6	Dp5	Dp4	Dp3	Dp2	Dp1
Sound Active	1	0	0	0	0	0	0	0	0	0
Color Slow Speed CCW/CW	1	0	0	0	-	1	-	-	0	0
Color Mid Speed1 CCW/CW	1	0	0	0	-	1	-	-	0	1
Color Mid Speed2 CCW/CW	1	0	0	0	-	1	-	-	0	1
Color Fast Speed CCW/CW	1	0	0	0	-	1	-	-	0	1
Moon Slow Speed CCW/CW	1	0	0	0	-	1	0	0	-	-
Moon Mid Speed1 CCW/CW	1	0	0	0	-	1	0	1	-	-
Moon Mid Speed2 CCW/CW	1	0	0	0	-	1	1	0	-	-
Moon Fast Speed CCW/CW	1	0	0	0	-	1	1	1	-	-

MASTER/SLAVE DIPSWITCH SETTINGS



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.

Technical Specifications:

Model:	Deco 250™
Lamps:	LL-ELC, 24v/250w
Voltage:	120v~60Hz / 220v~50/60Hz
Dimensions:	10.3" x 9.5" x 5" 262mm x 240mm x 130mm
Colors:	11
Textured Glass:	11, Plus Spot
Weight:	12.76 Lbs. / 5.8 Kgs
Breaker:	10A
Duty Cycle:	None
DMX:	2 Channels
Sound Active:	Yes
Working Position:	Any Safe, Secure Position
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.

A Division of the American DJ® Group of Companies

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