

American DJ® QUAD GEM DMX



User Instructions

American DJ®
6122 S. Eastern Ave.
Los Angeles CA. 90040
www.americandj.com

Quad Gem DMX™

General Information

Unpacking: Thank you for purchasing the Quad Gem DMX™ by American DJ®. Every Quad Gem DMX™ 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. Please do not return this unit to your dealer without contacting customer support first.

Introduction: The Quad Gem DMX™ is a DMX intelligent LED fixture. When using DMX mode you can choose between a four channel mode and a 10 channel mode. The fixture can operate in three different operating modes; stand alone, sound-active, or in a Master/Slave configuration. The Quad Gem DMX™ comes with several built in programs. When used as a stand alone unit or when used in multiples linked in a master/slave configuration. *For best results use fog or special effects smoke to enhance the beams projections.*

Customer Support: American DJ® provides a toll free customer support line, to provide 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) 582-2941

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.

Warning! *This may cause severe eye damage. Avoid looking directly into the light source at all times!*

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.

- DMX-512 Protocol Compatible (Four or Seven DMX Channels)
- RGB + White
- 3 Operating Modes - Master/Slave; Stand Alone; Sound Active
- Internal Microphone
- Digital Display for Address and Function Setting
- UC3 Controller (Not Included)
- 12 Sound Active Shows
- Power Cord Daisy Chain

The Quad Gem DMX™ carries a 3 year (1095 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. 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.

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

American DJ® will not accept any liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to this unit.

For Your Own Personal Safety, Please Read and Understand This Manual Completely Before You Attempt To Install Or Operate This Unit!

- 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.
- 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.
- 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 14 for cleaning details.
- Heat -This fixture 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. Objects have fallen, or liquid has been spilled into the appliance.
 - B. The appliance has been exposed to rain or water.
 - C. The appliance does not appear to operate normally or exhibits a marked change in performance.

Power Supply: Before plugging your unit in, be sure the source voltage in your area matches the required voltage for your American DJ® Quad Gem DMX.™ The American DJ® Quad Gem DMX™ is available in a 120v and 220v version. Because line voltage may vary from venue to venue, you should be sure your unit voltage matches the wall outlet voltage before attempting to operate your fixture. Also be sure to only use the included I.E.C. power cable supplied with the unit, this cable matches the voltage and current requirements of the unit.

DMX-512: DMX is short for Digital Multiplex. This is a universal protocol used by most lighting and controller manufacturers 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 manufacturers 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. Therefore, the first fixture controlled by the controller could be the last fixture in the chain. 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 Quad Gem DMX™ can be controlled via DMX-512 protocol. The Quad Gem DMX™ can be a four or seven channel DMX unit. The DMX address is set electronically using the controls on the side panel of the unit. 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



Figure 1

to use standard two conductor shielded cable (This cable may be purchased at almost all professional 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 cannot be split.

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.

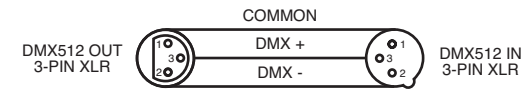


Figure 2

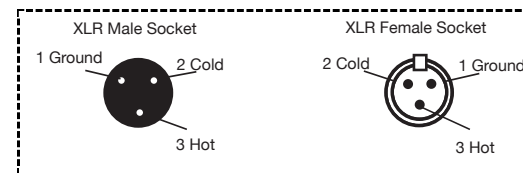


Figure 3

XLR Pin Configuration	
Pin 1 =	Ground
Pin 2 =	Data Complement (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		Pin 4 - Do Not Use
Not Used		Pin 5 - Do Not Use

ADDR - DMX Address Setting.

1. Tap the either the MENU, UP, or DOWN buttons until “ADDR” is displayed, press ENTER.
2. “1” will now be displayed and flashing. Press the UP or DOWN buttons to find your desired address. Leave the display on this address, and after a few seconds the address will be saved into memory.

CHND - This will let you switch between 4 Channel DMX mode and 7 Channel DMX mode.

1. Tap the either the MENU button until “CHND” is displayed, press ENTER. Either “4CH” or “7CH” will be displayed
2. Tap the UP or DOWN buttons to choose your desired DMX mode and press ENTER to confirm and exit.

SLND - This will let you set unit as a master or slave in a master/slave configuration.

1. Tap the either the MENU button until “SLND” is displayed, press ENTER. “MASTER”, “SL 1” or “SL 2” will be displayed.
2. Tap the UP or DOWN buttons until your desired setting is displayed, press ENTER to confirm and exit.

SHND - in this mode you can choose your desired sound active show or an preset program. Note: Only shows 4 & 6 are preset programs.

1. Tap the either the MENU button until “SHND” is displayed, press ENTER. If you cannot find this setting in the menu it means that the unit is set as a “Slave”. The unit must be set as a “Master” to choose a desired sound active show.

2. Tap the UP or DOWN buttons to scroll through 12 sound active shows.
3. Select your desired show by pressing the ENTER button to confirm and exit.

BLND - Blackout or Stand by mode.

1. Tap the either the MENU button until “BLND” is displayed, press ENTER. Either Yes or No will be displayed.
2. To activate Blackout tap the UP or DOWN buttons until Yes is displayed, press ENTER to confirm and exit. The fixture will now be in Blackout mode. To deactivate Blackout mode, select No and press Enter.

LED - With this function you can switch the LED on or off via the control board.

1. Tap the either the MENU button until “LED” is displayed, press ENTER.
2. The display will show either “ON” or “OFF”. Press the UP or DOWN buttons to select “ON” to switch on the LED, or “OFF” to switch off the LED.
3. Press ENTER to confirm and exit.

IDSP - This function will reverse the display 180°.

1. Tap the either the MENU button until “IDSP” is displayed, press ENTER.
2. Press the UP button to select “DSP I” to activate this function, or “IDSP” to deactivate this function.
3. Press ENTER to confirm.

FHRS - With this function you can display the running time

of the unit.

1. Tap the either the MENU button until “FHRS” is displayed, press ENTER.
2. The display shows the running time of the unit. Press MENU to exit.

VER - Use this function to display the Software version of the unit.

1. Tap the either the MENU button until “VER” is displayed, press ENTER.
2. The display will show the software version.

With this feature you can connect the fixtures to one another using the IEC input and output sockets. The quantity that can be connected is 17 fixtures maximum. After 17 fixtures you will need to use a new power outlet. They must be the same fixtures. DO NOT mix fixtures.

Operating Modes: The Quad Gem DMX™ can operate in three different modes. This next section will detail the differences in the operating modes.

• **Stand alone mode -**

The unit will react to sound, chasing through the built-in programs.

• **Master/Slave mode -**

You can daisy chain up to 16 units together to get a synchronized light show without the need of an external controller. The units will react to sound chasing through the 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 Elation® Show Designer.™

Universal DMX Control: This function allows you to use a Elation® universal DMX-512 controller to control the chases and patterns, dimmer and strobe. A DMX controller allows you to create unique programs tailored to your individual needs.

1. The Quad Gem DMX™ has two DMX Channel modes. A four channel mode and a seven channel mode. To set the channel mode see page 8. See page 13 for detailed description of the DMX traits.
2. To control your fixture in DMX mode, follow the set-up procedures on pages 5-7 as well as the set-up specifications that are included with your DMX controller.
3. Use the controller's faders to control the various DMX fixture traits.
4. This will allow you to create your own programs.
5. Follow the instruction on page 8 to set the DMX address.
6. For longer cable runs (more than a 100 feet) use a terminator on the last fixture.
7. For help operating in DMX mode consult the manual included with your DMX controller.

Stand-Alone Operation (Sound Active or Preset Programs):

This mode allows a single unit to run to the beat of the music or run an preset program. **Note: Only Shows 4 and 6 are preset programs. You must first set the unit to "Master" before you can choose your desired show.**

1. Tap the MENU button until "SLND" is displayed, and press ENTER.
2. Tap the UP or DOWN buttons until "PAST" is displayed, press ENTER.
3. Tap the MENU button until "SHND" is displayed, and press ENTER. If "SHND" does not appear anywhere in the display this means the unit is set as a "Slave".
4. Tap the UP or DOWN buttons until you find your desired show, and press ENTER. Adjust the sound sensitivity knob to make the fixture more or less sensitive to sound.
5. The optional UC3 Controller (not included) may be used to control different functions including blackout.

Master-Slave Operation (Sound Active): This function will allow you to link up to 16 units together and operate without a controller. The units will be sound activated. 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. On the Master unit find your desired show and set that show by pressing the ENTER button. Follow the instructions under STAND-ALONE OPERATION to set your unit as "Master" and to choose your desired show.
3. On the slave units tap the MENU button until "SLND" is displayed, and Press ENTER. Tap the UP and DOWN buttons to set the unit to "Slave".
4. The slave units will now follow the Master unit.
5. The optional UC3 Controller (not included) may be used to control different functions including blackout.

Quad Gem DMX™ DMX Traits

DMX512 Configuration					
Ch1	Ch2		Ch3		Ch4
Ch1	Ch2-5		Ch6		Ch7
Mode	Pattern	Chase	Pattern Strobe	Chase Speed	Dimmer
240-255 Stand-alone	250-255 Pattern 25	250-255 Chase 25	Fast Strobe //// //// //// //// 10-255 Slow Strobe 0-9 Blackout	255 Fast Speed	255 100%
	240-249 Pattern 24	240-249 Chase 24			
	230-239 Pattern 23	230-239 Chase 23			
	220-229 Pattern 22	220-229 Chase 22			
	210-219 Pattern 21	210-219 Chase 21			
	200-209 Pattern 20	200-209 Chase 20			
	190-199 Pattern 19	190-199 Chase 19			
	180-189 Pattern 18	180-189 Chase 18			
	170-179 Pattern 17	170-179 Chase 17			
	160-169 Pattern 16	160-169 Chase 16			
120-239 Chase	150-159 Pattern 15	150-159 Chase 15			
	140-149 Pattern 14	140-149 Chase 14			
	130-139 Pattern 13	130-139 Chase 13			
	120-129 Pattern 12	120-129 Chase 12			
	110-119 Pattern 11	110-119 Chase 11			
	100-109 Pattern 10	100-109 Chase 10			
	090-099 Pattern 09	090-099 Chase 09			
	080-089 Pattern 08	080-089 Chase 08			
	070-079 Pattern 07	070-079 Chase 07			
	060-069 Pattern 06	060-069 Chase 06			
0-119 Pattern	050-059 Pattern 05	050-059 Chase 05			
	040-049 Pattern 04	040-049 Chase 04			
	030-039 Pattern 03	030-039 Chase 03			
	020-029 Pattern 02	020-029 Chase 02			
	010-019 Pattern 01	010-019 Chase 01			
	000-009 Blackout	000-009 Blackout			

Quad Gem DMX™ UC3 Control

Blackout	Blackout the unit		
Function	Random (Fast)	Random (Slow)	Chase Select (Chase 1-12)
Mode	(LED OFF)	(LED ON)	(LED Strobe)

Quad Gem DMX™ Fuse Replacement

First unplug the power. The fuse holder is located next to the power cord. Using a flat-head screw driver unscrew the fuse holder. Remove the bad fuse and replace with a new one.

Quad Gem DMX™ Cleaning

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.

Quad Gem DMX™ Trouble Shooting

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 standard 120v wall outlet.
2. Be sure the external fuse has not blown. The fuse is located on the bottom panel of the unit.
3. Remove the lamp holder 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.
4. Be sure the fuse holder is completely and properly seated.

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.

Quad Gem DMX™**Warranty****MANUFACTURER'S LIMITED WARRANTY**

A. American DJ, Inc. hereby warrants, to the original purchaser, American DJ and American Audio products to be free of manufacturing defects in material and workmanship for a prescribed period from the date of purchase (see specific warranty period on reverse). 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 you must obtain a Return Authorization number (RA#) before sending back the product. Contact American DJ, Inc. Service Department at 800-322-6337. Send the product only to the American DJ, Inc. 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, Inc. 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, Inc. 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, Inc. concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the American DJ, Inc. factory unless prior written authorization was issued to purchaser by American DJ, Inc.; 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, Inc. will replace defective parts at its expense with new or refurbished parts, 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, Inc. 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, Inc. 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. 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, Inc. 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, Inc. be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product.

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

MANUFACTURER'S LIMITED WARRANTY PERIODS:

- All American Audio Products = 1-year (365 day) Limited Warranty (except V-Plus Series Amplifiers)
- All American Audio V-Plus Series Amplifiers = 3-year (1095 day) Limited Warranty
- American DJ Lighting and American DJ Branded Products = 1-year (365 day) Limited Warranty (Such as: Special Effect Lighting, Intelligent Lighting, UV lighting, Strobos, Fog Machines, Bubble Machines, Mirror Balls, Par Cans, Trussing, Lighting Stands etc. excluding Laser Products, lamps, and Star Tec Series)
- American DJ Laser Products and Star Tec Products = 90-Day Limited Warranty
- American DJ L.E.D. Products = 3-year (1095 day) Limited Warranty (excluding motors which have a 1-year (365 day Limited Warranty)

American DJ® - www.americandj.com - Quad Gem DMX™ Instruction Manual Page 15

Quad Gem DMX™**Specifications**

Model:	Quad Gem DMX™
Voltage*:	120v/60Hz or 230v/50Hz
Lamp:	224 LEDs (80 Red, 60 Green, 48 Blue, and 36 White)
Power Consumption:	34W
Fuse:	7A (120v & 230v)
Power Cord Daisy Chain:	17 Fixtures Max.
Dimensions:	19.3"(L) x 11.9"(W) x 6.49"(H) 491mm x 304mm x 165mm
Weight:	11 Lbs. / 5 kgs.
Colors:	RGB + White
Duty Cycle:	None
DMX:	4 or 7 DMX Channels
Sound Active:	Yes
Working Position:	Any Safe, Secure Position
Warranty:	3 Year (1095 days)

*Voltage is preset at the factory and is not user selectable

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

American DJ®

American DJ World Headquarters:

6122 S. Eastern Ave. Los Angeles, CA 90040 USA

Tel: 323-582-2650 / Fax: 323-582-2610

Web: www.americandj.com / E-mail: info@americandj.com