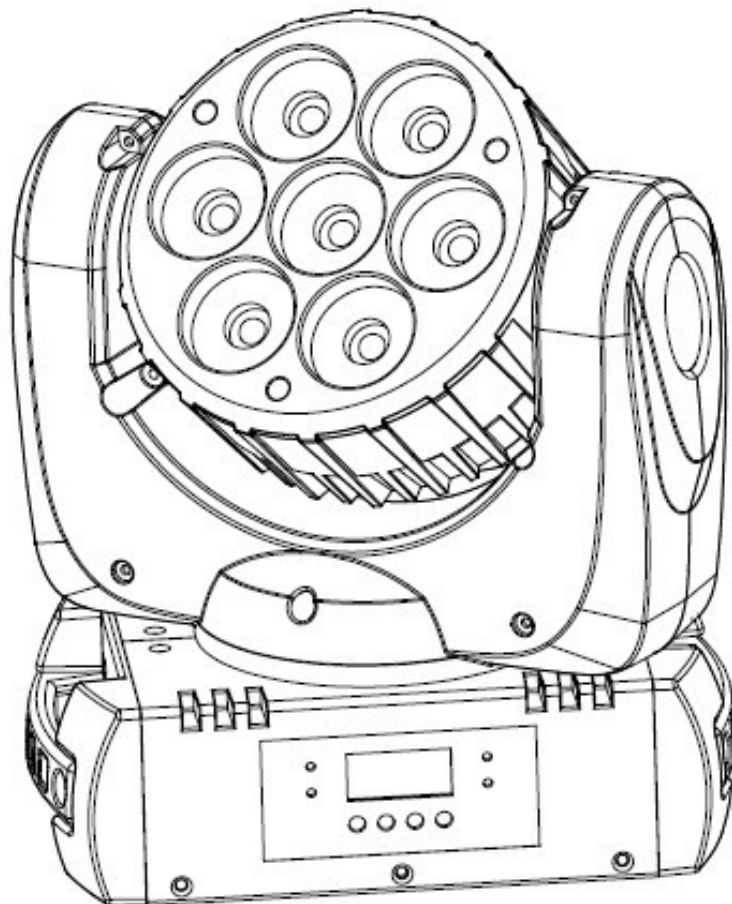


# vectorLED<sup>SERIES</sup>



Information specifically for:  
DM-VECTORLED712QB

This manual contains important information.  
Please read before operating fixture.

V1.0



# **IMPORTANT INFORMATION**

**Save original packing and documentation for warranty, service and return issues.**

Limited Warranty: This warranty covers defects or malfunctions in this equipment. This warranty lasts for a period of one year from date of purchase. It is the owner's responsibility to provide invoices for proof of purchase, purchase date and dealer or distributor. If purchase date can not be provided, warranty period will start at manufacture date. It is the sole discretion of Techni-Lux to repair or replace parts or equipment. All shipping will be paid by purchaser. This warranty does not cover lamps, fuses, belts, power semiconductors, relays, cleaning, standard maintenance adjustments or normal wear items or any problem resulting from the following: improper wiring, incorrect voltage (including low or over voltage conditions and lightning), abuse, misuse, improper maintenance or an act of God or damage resulting from shipping. Warranty will be null and void if the product is altered, modified, misused, damaged, or subjected to unauthorized repairs. Lamps are covered by relevant manufacturer warranty. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Any liability for consequential and incidental damages is expressly disclaimed. No other warranty, expressed or implied is made. Techni-Lux liability in all events is limited to, and shall not exceed, the purchase price paid.

Returning equipment and Repairs: All returns must be accompanied by a Return Merchandise Authorization (RMA) number and sent pre-paid. Contact the dealer or Techni-Lux directly to obtain an RMA. The RMA number must be clearly listed on the shipping label. Due care must be exercised in packing all merchandise to be returned. All repairs must be accompanied by a written explanation of the claimed problem or error encountered. Techni-Lux is solely responsible for determining a product's eligibility for coverage under warranty. If returning for consideration of credit, all accessories and documentation, original protective material and cartons must be included and the equipment, packing and carton must be in new resalable condition. Credit for returned merchandise will be issued at the lowest current price and is subject to a restocking fee. No returns accepted on discontinued items. Techni-Lux is not responsible for merchandise damaged in transit and reserves the right to refuse any return that is damaged by the carrier, not accompanied by a Return Authorization Number (RMA#) or sent by freight collect.

Claims: All claims must be made within seven (7) days of receipt of merchandise. Any physical damage must be reported to carrier upon receipt of merchandise.

**Please record the following information for future reference:**

**Model Number: DM-VECTORLED712QB**

**Serial Number:** \_\_\_\_\_

**Dealer:** \_\_\_\_\_

**Date of Purchase:** \_\_\_\_\_

www.Techni-Lux.com  
10900 Palmbay Drive  
Orlando, FL 32824  
U.S.A.

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# Specifications

## *Fixture Overview*

- Extremely small, fast and powerful LED moving beam
- 7 Long Life 12w Quad RGBW LEDs
- Independent control of each LED
- Pan range of movement: 540°
- Tilt range of movement: 270°
- High resolution 16 Bit Pan/Tilt movement for accurate positioning
- Pan/Tilt motor speed
- Consistent & auto correcting Pan/Tilt positioning
- Beam angle 8°
- Special optical combining lenses for smooth and even color mixing
- Digital dimming 0-100% for smooth fades and even field
- Electronic strobe with pulse or random effects
- DMX512 Control using 6, 13, or 37 channels
- 3 pin In/Out XLRs
- Remote reset
- Digital display for DMX addressing and fixture settings
- Forced Air Ventilation, user controllable
- Light weight 13 pounds

## *Physical*

Color	Black
Width	10.25" (26cm)
Depth	6.25" (15.9cm)
Height	12.50" (31.7cm)
Weight	13.00" (5.9 kgs)

## *Lamp Source*

Lamp Type                      7 x High Output LEDs 12w RGBW  
Light Output

Lux	Distance (meters)	Beam Diameter (cm)
7100	3	90
1950	6	170
750	9	235

## *Environmental*

Environmental Protection Rating	IP20
Maximum ambient temperature	105°F (40°C)
Maximum exterior surface temperature	176°F (80°C)
Minimum distance to flammable surface	3.3ft (1m)
Minimum distance to illuminated surface	3.3ft (1m)

## *Electrical*

Selectable Voltages	Auto Switching 110-240v @ 50 or 60Hz
Connection	IEC (C13) Power Inlet with Fuse
Rated Power	150W, 1.5A @ 115v
Fuses	5A Fast Blow, Size: 5x20mm

## *Control*

Protocol	USITT DMX512 (1990)
Channels	6, 13 or 37
Pan/Tilt Resolution	8 bit or 16 bit
Data I/O	3 Pin XLR (Cannon)
Modes	Master / Slave / Audio / DMX

## *Optics*

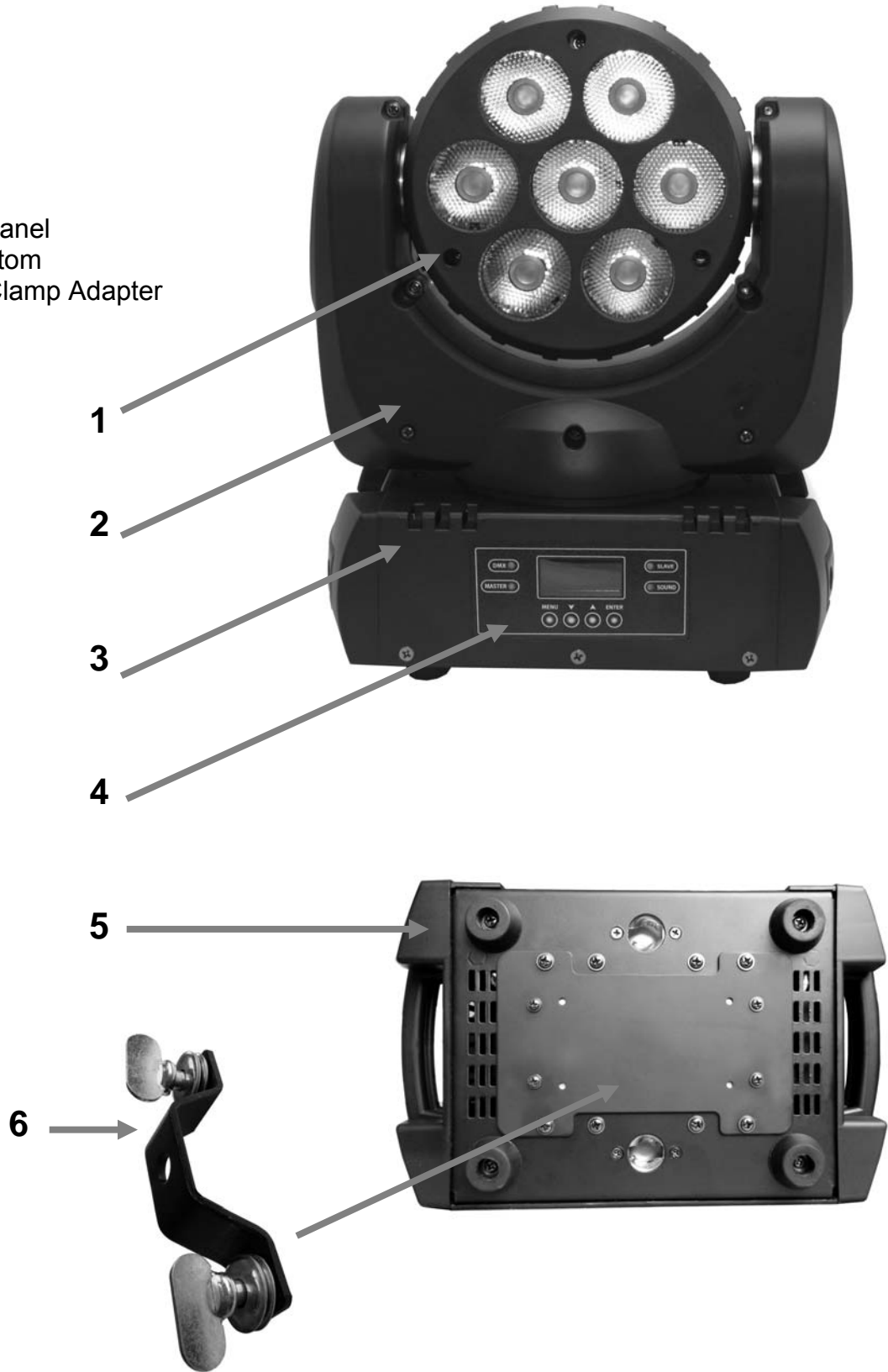
Lenses	Special optical combining lenses
Beam Angle	8°

## *Rigging*

Position	Floor or Truss mount
Orientation	Any
Mounting	Omega clamp adapter

# Unit Parts

- 1 Head
- 2 Yoke
- 3 Base
- 4 Control Panel
- 5 Base Bottom
- 6 Omega Clamp Adapter



# Unpacking

Immediately upon receipt, carefully unpack and inspect the fixture to verify that all parts are present and have been received in good condition. If any parts appear damaged from shipping or the shipping carton shows signs of mishandling, retain all packing material for inspection and notify the shipper immediately. Save original carton and packing. In the event that the merchandise is to be returned, the original carton and packing must be used. The customer will be billed for a new carton and packing if merchandise is received without the original carton and packing. The plastic bag shipped with the fixture can be used to keep the fixture clean if stored or installed in a temporarily dusty environment. Do not operate fixture with plastic bag in place.

## *Save Shipping Materials*

The packing and carton are designed to provide the fixture with protection during shipping. Save original packing and documentation for warranty, service and return issues. Additional charges will be applied to return items not received in original or incomplete packing.

## *Claims*

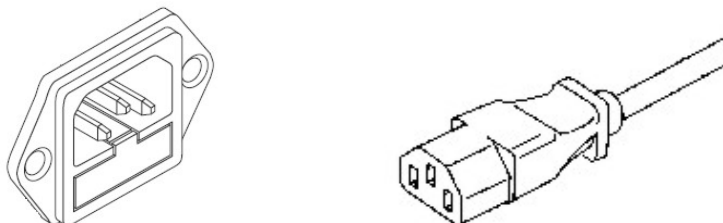
Physical damage must be reported to the Freight Carrier or Shipping Company upon receipt of merchandise. Damage incurred in shipping is the responsibility of the Freight Carrier or Shipping Company. It is the customer's obligation in the event that merchandise is received damaged caused by shipping to notify the Freight Carrier or Shipping Company immediately. All other claims not related to damage incurred during shipping must be made to the Dealer or Distributor within 7 (seven) days of receiving merchandise.

## *Returns*

Returned merchandise must be sent prepaid, in the original packing with a Return Merchandise Authorization number (RMA) clearly listed on the shipping label. Items sent by Freight Collect or without a RMA number will be refused. Call your sales person and request a RMA prior to shipping. Be prepared to provide the model number, serial number and a brief description of the nature of the return. Shipping damage resulting from inadequate packaging is the customer's responsibility. Customer will be charged additional shipping charges to return products received in non original packing and or cartons.

## Power

Power is connected to the fixture with an IEC power inlet and cord.



Before applying power to fixture, verify input voltage matches the power source voltage. Check all power cords to verify they are of proper type and sufficient rating for the equipment attached. For protection against electric shock, fixture must be connected to suitable earth ground. The listed current rating is its average draw under normal conditions. All fixtures must be powered directly from a switched circuit. This fixture cannot be run on rheostat or dimmer circuits - even if used solely for a 0% to 100% switching. Consult a qualified electrician if there are any concerns about proper connection to power.

Note: After a few seconds of powering this fixture, it will begin its reset function.

## Voltage Selection

This Fixture is equipped with an Auto Switching Power Supply. It will automatically adjust to any line voltage within the specified range.

## LED Engine

This unit is equipped with 7 Long Life LED RGBW Engines that are aligned at the factory. There is no need for the user to change lamps or perform any alignment.



**Do not stare directly into the light source.**



# Mounting

Always consult a qualified professional when rigging. This fixture may be placed on any flat surface or truss that is capable of safely supporting the weight. When selecting a mounting position, take into consideration access for routine maintenance. This fixture may be mounted in any position provided there is adequate room for movement and ventilation. Mount the fixture securely using an appropriate clamp and a safety cable. Safety cables must always be attached to the fixture. Do not use handles as mounting points. Do not mount in a place where the fixture will be exposed to rain, high humidity, extreme temperature changes or restricted ventilation. Do not obstruct the vents or fans. Keep fixture a minimum of 3.3ft (1m) from flammable materials.

Mount clamp to omega clamp adaptor first. The fixture has fast locks for quick fastening and removing of the omega adaptor to the fixture. Push and fit the omega adaptor into the fast lock sockets and turn the fast locking wing knobs until it locks.



# Control Panel

Use the Control Panel to access the fixture's Menus. Pressing the MENU Key turns the display on and enables the settings mode. Use UP/DOWN to cycle options and change values, ENTER to select or confirm. Settings are stored and recalled on subsequent power cycles. The MENU button also moves back in the menu. The display can be set to turn off after 60 seconds of inactivity.



## Control Panel Indicators

LED	Function
DMX	DMX detected, flashing when no DMX detected.
MASTER	Unit is set to AUTO run.
SLAVE	Unit is set to SLAVE.
SOUND	Unit is set to respond to the internal microphone.

## Control Panel Display

Display Flashing: No DMX Signal	Display Steady: Receiving DMX Signal
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                     -NO DMX- ADDR: 001                 </div>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                     -DMX512- ADDR: 001                 </div>

## Control Panel Menu

Menu Option	Sub Menu	Value	Description
>DmxAddr	Address >xxx	0-512	DMX512 Start Address
>WorkMod		Dmx512	Operating Trigger Mode
		Auto	
		Sound	
>ChanMod		6CH	Number of Control Channels: 6= Compact, 13= Standard, 37= Extended
		13CH	
		37CH	
>TOOL	DimmMOD	Fast	LED Dimming Response
		Smooth	
	Display	60S	Display Back Light Behavior: Either turn off after 60 seconds or stay ON
		ON	
FanSetp	0-255	Maximum Fan Speed: Use highest possible	
>PT Sett	Xrevise	128◀0▶127	Adjusts X (Pan) or Y (Tilt) axis offset, Note: Out=128◀255, 0 = None, In= 1▶127
	Yrevise	128◀0▶127	
	X revers	YES	Reverse Pan Direction
		NO	
	Y revers	YES	Reverse Tilt Direction
		NO	
	XYtrade	YES	Swap Pan and Tilt Control
		NO	
	XYspeed	XY fast	Pan/Tilt motor speed
		XY norm	
		XY slow	
XYfbsti	YES	Enable Pan/Tilt Position Auto Correction.	
	NO		
X statu	RIGHT	Status of Pan Feedback Sensor	
Y statu	RIGHT	Status of Tilt Feedback Sensor	
>Control	CH1-CH40	0-255	Manual Control of Channels 1 to 40
>DmxLive	CH1-CH40	0-255	Displays current DMX data on channels 1 to 40
>RGBwhit	WhiteSW	OFF	Enable User Setting for White Balance (WB)
		ON	
	WhitR	0-255	User Selected Red LED Level for WB
	WhitG	0-255	User Selected Green LED Level for WB
WhitB	0-255	User Selected Blue LED Level for WB	
>Info	Version	Xm7x12(x)	(x) = firmware version letter
>Rest		YES	Fixture Reset: returns to <NO> when complete
		NO	

## DMX-512 Start Address

The Start Address of a fixture is set using the “Address” mode in the Control Panel Menu. Consult the manual of the system’s DMX512 controller to select a desirable addressing scheme before addressing fixtures. Each fixture connected to the DMX-512 data link requires a Start Address to indicate the first DMX channel containing data designated for that fixture, see DMX-512 Background. Valid Start Addresses range from 1 to 512. Fixtures requiring more than one channel for control will read subsequent channels up to the total number of channels required. A fixture requiring five (5) channels of DMX, set to a Start Address of eleven (11), would read data from channels: 11 and 12, 13, 14, 15. The next logical Start Address would be channel 16. Because all fixtures see the same data, fixtures may be set to any address without concern to order in the DMX-512 chain or physical location. Choose a Start Address so the channels used do not overlap with other fixtures. In some cases, it may be desirable to set two or more same type fixtures to the same Start Address. In this case, the fixtures will be slaved together and respond to the same data.

*Example Select Start Addresses for 4 fixtures each requiring 13 channels of DMX.*

Since these are the first fixtures added to the system, the first unit will be set to Start Address=1. This fixture occupies DMX channels 1 thru 13. The next DMX channel available for a Start Address is found by adding the previous fixture’s Start Address to its channel requirement:  $1+13=14$ . DMX channel 14 is the next available Start Address. In this example, to maximize channel usage no empty channels are left between fixtures so the second Start Address is set to DMX channel 14. The second fixture occupies DMX channels 14 thru 26. Repeat the process for the remaining two fixtures:  $14+13=27$  and  $27+13=40$ . Therefore, the four 13 channel fixtures have Start Addresses of 1, 14, 27 and 40. Repeat the technique once more for the next free channel in the system,  $40+13=53$ . Channels 53 thru 512 are available for expansion of the system.

# DMX-512 Channel Assignment

The VectorLED 712 Quad Beam has 3 different DMX channel modes: Compact 6 Ch Mode, Standard 13 Ch Mode or Extended 37 Ch mode. The 13 channel mode adds high resolution pan and tilt, reset channel and color macros. The 37 channel mode additionally allows the independent control of each of the 7 LEDs.

## *6 Channel Mode*

<b>Channel</b>	<b>Function</b>
1	Pan
2	Tilt
3	Red
4	Green
5	Blue
6	White

## *37 Channel Mode*

<b>Channel</b>	<b>Function</b>
1	Shutter / Strobe
2	Dimmer
3	Pan
4	Pan Fine
5	Tilt
6	Tilt Fine
7	Pan/Tilt Speed
8	LED control / Reset
9	Color Macro
10	LED Position 1 Red
11	LED Position 1 Green
12	LED Position 1 Blue
13	LED Position 1 White
14	LED Position 2 Red
15	LED Position 2 Green
16	LED Position 2 Blue
17	LED Position 2 White
18	LED Position 3 Red
19	LED Position 3 Green
20	LED Position 3 Blue
21	LED Position 3 White
22	LED Position 4 Red
23	LED Position 4 Green
24	LED Position 4 Blue
25	LED Position 4 White
26	LED Position 5 Red
27	LED Position 5 Green
28	LED Position 5 Blue
29	LED Position 5 White
30	LED Position 6 Red
31	LED Position 6 Green
32	LED Position 6 Blue
33	LED Position 6 White
34	LED Position 7 Red
35	LED Position 7 Green
36	LED Position 7 Blue
37	LED Position 7 White

## *13 Channel Mode*

<b>Channel</b>	<b>Function</b>
1	Shutter / Strobe
2	Dimmer
3	Pan
4	Pan Fine
5	Tilt
6	Tilt Fine
7	LED control / Reset
8	Color Macro
9	Red
10	Green
11	Blue
12	White
13	Reserved – no function

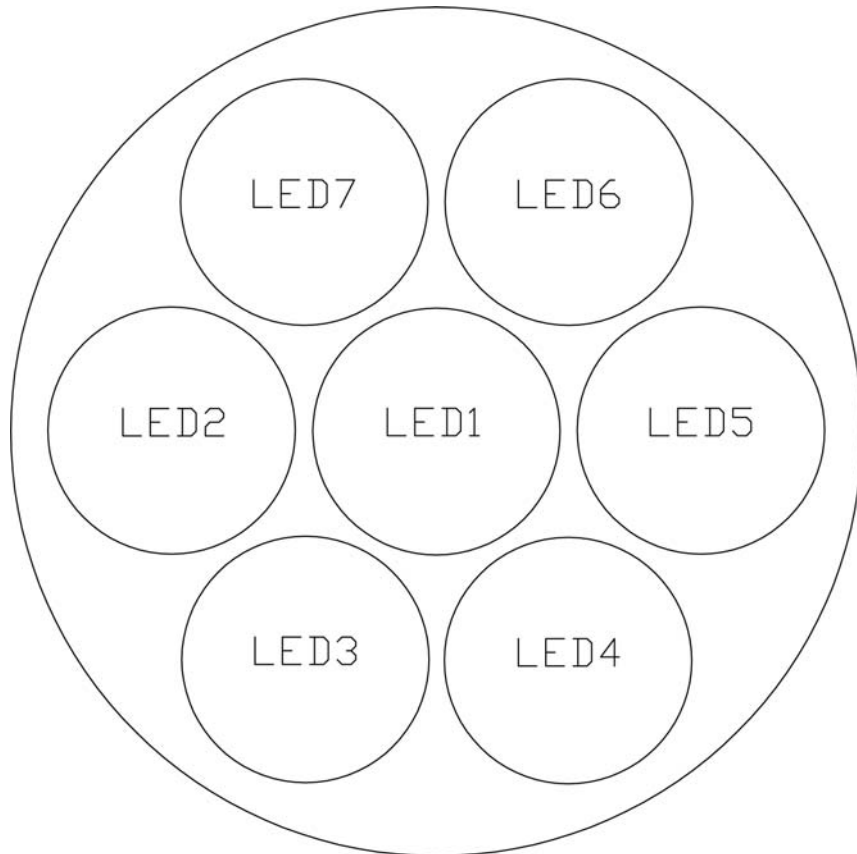
## Channel Functions by DMX Values

6 Ch Compact	13 Ch Standard	37 Ch Extended	DMX Value	Function
				<b>Shutter/Strobe Effects</b>
			0-19	No LED output – “Shutter closed”
			20-49	LED output – “Shutter open”
			50-64	Strobe 1 (fast-slow)
			65-69	Shutter open
			70-84	Strobe 2: opening pulse (fast-slow)
			85-89	Shutter open
			90-104	Strobe 3: closing pulse (fast-slow)
			105-109	Shutter open
			110-124	Strobe 4: random strobe (fast-slow)
			125-129	Shutter open
			130-144	Strobe 5: random opening pulse (fast-slow)
			145-149	Shutter open
			150-164	Strobe 6: random closing pulse (fast-slow)
			165-169	Shutter open
			170-184	Strobe 7: burst pulse (fast-slow)
			185-189	Shutter open
			190-204	Strobe 8: random burst pulse (fast-slow)
			205-209	Shutter open
			210-224	Strobe 9: sine wave (fast-slow)
			225-229	Shutter open
			230-244	Strobe 10: random burst (fast-slow)
			245-255	Shutter open
				<b>Dimmer</b>
	2	2	0-244	Closed to Open, does not affect Macro
			245-255	100% Intensity
1	3	3	0-255	<b>Pan Coarse</b>
	4	4	0-255	<b>Pan Fine</b>
2	5	5	0-255	<b>Tilt Coarse</b>
	6	6	0-255	<b>Tilt Fine</b>
				<b>Pan/Tilt Speed</b>
		7	0-9	Motor Speed Dynamically Calculated
			10-255	Motor Speed Fixed (Fast to Slow)
				<b>Fixture Control Settings</b>
	7	8	0-9	Control all LEDs together
			10-14	Reset entire fixture (hold 5 seconds)
			15-248	In Macros, all pixels are the same
			249-255	In Macros, pixels can be different (patterns)
	8	9		<b>Color Macros</b> – overrides RGBW
			0-9	No Macro
			10-14	LEE 790-Moroccan pink
			15-19	LEE 157-Pink
			20-24	LEE 332-Special rose pink
			25-29	LEE 328-Follies pink
			30-34	LEE 345-Fuchsia pink
			35-39	LEE 194-Surprise pink
			40-44	LEE 181-Congo Blue

6 Ch Compact	13 Ch Standard	37 Ch Extended	DMX Value	Function			
	8 continued	9 continued	45-49	LEE 071-Tokyo blue			
			50-54	LEE 120-Deep Blue			
			55-59	LEE 079-Just Blue			
			60-64	LEE 132-Medium Blue			
			65-69	LEE 200-Double CT Blue			
			70-74	LEE 161-Slate Blue			
			75-79	LEE 201-Full CT blue			
			80-84	LEE 202-Half CT BLUE			
			85-89	LEE 117-Steel Blue			
			90-94	LEE 353-Lighter Blue			
			95-99	LEE 118-Light blue			
			100-104	LEE 116-Medium Blue Green			
			105-109	LEE 124-Dark Green			
			110-114	LEE 139-Primary Green			
			115-119	LEE 089-Moss Green			
			120-124	LEE 122-Fern Green			
			125-129	LEE 738-JAS Green			
			130-134	LEE 088-Lime Green			
			135-139	LEE 100-Spring yellow			
			140-144	LEE 104-Deep Amber			
			145-149	LEE 179-Chrome Orange			
			150-154	LEE 105-Orange			
			155-159	LEE 021-Gold Amber			
			160-169	LEE 778-Millennium Gold			
			170-174	LEE 164-Flame Red			
			175 - 179	ALL RGBW LEDS ON			
							<b>Color Effects – overrides RGBW</b>
						180 – 201	Color Roll - Clockwise (fast-slow)
						202 - 207	Stop Color Roll on color
						208 - 229	Color Roll – Counterclockwise (slow-fast)
						230 - 234	RGBW Full ON
						235 - 239	Color Snap Random (fast)
						240 - 244	Color Snap Random (medium)
			245 - 249	Color Snap Random (slow)			
			250 - 255	RGBW Full ON			
3	9		0-255	<b>LED 1-7 Red</b>			
4	10		0-255	<b>LED 1-7 Green</b>			
5	11		0-255	<b>LED 1-7 Blue</b>			
6	12		0-255	<b>LED 1-7 White</b>			
	13			<i>Reserved – No Effect</i>			
		10	0-255	<b>LED 1 Red</b>			
		11	0-255	<b>LED 1 Green</b>			
		12	0-255	<b>LED 1 Blue</b>			
		13	0-255	<b>LED 1 White</b>			
		14	0-255	<b>LED 2 Red</b>			
		15	0-255	<b>LED 2 Green</b>			
		16	0-255	<b>LED 2 Blue</b>			
		17	0-255	<b>LED 2 White.</b>			
		18	0-255	<b>LED 3 Red</b>			

6 Ch Compact	13 Ch Standard	37 Ch Extended	DMX Value	Function
		19	0-255	<b>LED 3 Green</b>
		20	0-255	<b>LED 3 Blue</b>
		21	0-255	<b>LED 3 White</b>
		22	0-255	<b>LED 4 Red</b>
		23	0-255	<b>LED 4 Green</b>
		24	0-255	<b>LED 4 Blue</b>
		25	0-255	<b>LED 4 White</b>
		26	0-255	<b>LED 5 Red</b>
		27	0-255	<b>LED 5 Green</b>
		28	0-255	<b>LED 5 Blue</b>
		29	0-255	<b>LED 5 White</b>
		30	0-255	<b>LED 6 Red</b>
		31	0-255	<b>LED 6 Green</b>
		32	0-255	<b>LED 6 Blue</b>
		33	0-255	<b>LED 6 White</b>
		34	0-255	<b>LED 7 Red</b>
		35	0-255	<b>LED 7 Green</b>
		36	0-255	<b>LED 7 Blue</b>
		37	0-255	<b>LED 7 White</b>

*LED Position Layout*





# DMX-512 Background

DMX-512 is a digital data transmission standard developed by the United States Institute for Theater Technology (USITT). It is designed to enable control of lighting equipment, originally dimmers. DMX deals solely with the formatting of data for transmission and does not dictate how the data is created or used.

Under DMX, signals are transmitted in much the same way a computer modem transmits data. The Data, divided in to channels, is "Framed" using a start bit, high (1), eight data bits and finally, two stop bits, both high (1). DMX uses no parity to check the integrity of the signal. Instead, DMX relies on the ultra low probability of an error occurring in the same place when the data is resent. The rate at which data is sent is fixed at 250k bps, almost four and a half times faster that a 56k modem. This speed allows all data on a DMX chain to be updated more than 44 times every second.

The transmitted data follows a specific format. DMX allows for 512 channels each with eight data bits, giving each channel the possibility of 256 values. When a data "Packet" is sent, all channels are transmitted one after another. Even if the data on a specific channel has not been changed, it must be sent. In a packet, a "start code" of all zeros is sent before the data to identify the signal as a Standard DMX transmission. This start code is transparent to the user and is handled by the controller.

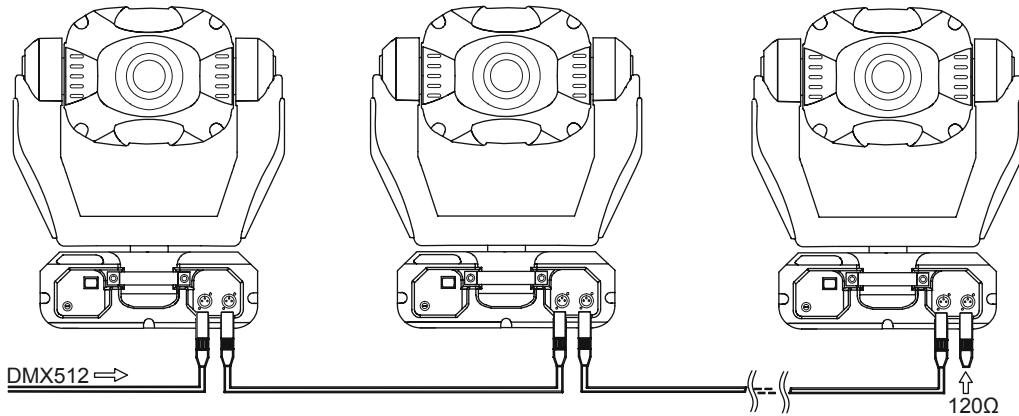
The physical signals are transmitted using a twisted pair of wires and a common shield, a configuration called Balanced. The controller and all receiving equipment are connected using a "Daisy Chain" connection. The signal is jumped from the controller to a piece of DMX equipment. From there, the signal is jumped to the next piece of equipment and so on until the last piece of equipment is connected. No branches are allowed and the signal does not come back to the controller. The final piece of equipment will have only one cable connection. As a result, all equipment connected to the chain will see exactly the same signal whether it is first or last. When connecting equipment, no particular attention needs to be paid to the order in which the equipment is connected. Depending on the conditions and equipment, a line terminator may be required. If there is any question, in most circumstances the addition of a terminator will not degrade the signal. To make a terminator, add a 120-ohm resistor between the Signal Data Negative and Signal Data Positive pins of a connector in the last piece of equipment in the chain.

The DMX Standard calls for connections between DMX compatible equipment to be made using 5 pin XLR connectors. However, it is common to see fixtures with 3 pin XLR connectors as these types of balanced or "Lo-Z" cables are common in the audio industry. In either case, pin numbers are the same and carry the same signals.

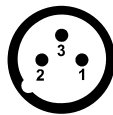
- Pin 1 - Signal Common (Shield)
- Pin 2 - Signal Data Negative
- Pin 3 - Signal Data Positive
- Pin 4 - (not used)*
- Pin 5 - (not used)*

## Data Link DMX-512

For data, this fixture uses XLR (Cannon) type connectors and shielded twisted pair cable approved for EIA-422/EIA485 use. Fixtures are connected in Daisy Chain topography with only one data source and no branching. Systems using 3 or 5 pin DMX interfaces can be accommodated by purchasing 3-to-5 pin adapters or building adapter cables.

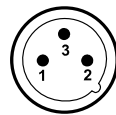


**DMX-OUT**  
XLR Connector - Socket:



- 1 - Ground
- 2 - Signal (-)
- 3 - Signal (+)

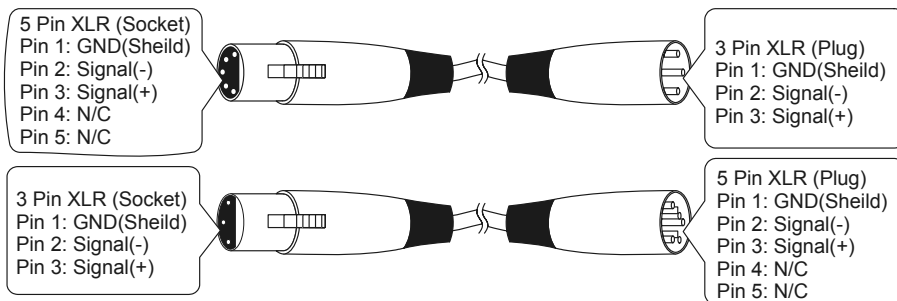
**DMX-IN**  
XLR Connector - Plug:



- 1 - Ground
- 2 - Signal (-)
- 3 - Signal (+)

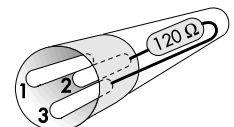
## Adapter 5-to-3 pin

Numbers designating each pin can be found on connectors. Converting between the two XLR types is done in a pin-to-pin fashion. Connect the shields to pin 1, then connect pin 2 to pin 2 and pin 3 to pin 3. This is true for converting either 5 to 3 pin or 3 to 5 pin regardless of either connector's gender. Pins 4 and 5 are not used on the 5 pin XLR connectors.



## Data Terminator

A Data Terminator can be connected to the DATA OUT connection of the last fixture to reduce the effects of noise in the signal; it is not required for all installations. To make a Data Terminator, connect a 120-ohm ¼ watt resistor across pin 2, Data Negative (S-) and pin 3, Data positive (S+). A qualified technician can determine if a Data Terminator is needed.



# Maintenance



**Make sure fixture is cool and disconnected from power mains before any service.**

Weekly operating hours and environmental conditions will establish how often the fixtures need cleaning. Fixtures should be cleaned and inspected at least once a month to maintain optimum performance. Accumulation of dust and fog residue increases heat build up, can lead to malfunctions, overheating and reduction in maximum light output. This condition may cause undue stress on electronics, mechanical elements, reduce LED life, fixture life and over all performance. Before conducting any maintenance, disconnect fixture from power mains.

- 1) Disconnect fixture from power mains.
- 2) Use a vacuum with a soft brush to remove dust collected on external vents and internal components. If using an air compressor, use low pressures and extreme care to prevent damaging any internal parts or effects.
- 3) Vacuum dust buildup from fan intakes and check that all fans function correctly.
- 4) Clean all optical elements when the fixture is cold. Use a soft lint free cotton cloth or tissue and either Isopropyl or Denatured Alcohol. Any cleaner approved for coated eyeglass lenses will also work.
- 5) Inspect clamps and safety cables to ensure fixture is secure and safe.

# Troubleshooting

Symptom	Possible Cause / Solution
No Power	Check power switch
	Check for power on mains
	Check main fuse and fuse holder
No response to DMX	Check data cables
	Check Start Address
	Check that fixture isn't in the Demo mode
Incorrectly responds to DMX  (Diagnostic technique for DMX issues: Set suspect fixture's Start Address the same as a correctly functioning fixture. If both units then function correctly, issue is programming)	Check Start Address
	Check for overlapping addresses
	Check fixture set up (Pan/Tilt Invert...)
	Check Data cables (faults and proper wiring)
No Light Output / Low Output	Check that both Shutter and Dimmer values are set properly
	Inspect fixture light path and verify no effects are blocking beam
	Remove from DMX, Control Panel to test in demo/manual mode
	Over temperature – Turn fixture off and allow to cool then attempt again. If condition improves, check all fans.
Erratic operation	Check Pan/Tilt are not blocked or coming in contact with anything during movement
	See "Incorrectly responds to DMX"
	Check for properly wired DMX cables
	Check for broken wires inside unit
	Check for damaged Data transceiver IC
	Mains Voltage too low or noisy

# Accessory Items

(sold separately)

Order Code	Description
CLAMP-MEGA/B	Clamp-Mega Black - Heavy Duty
CLAMP-CBHALF	Coupler Half Cheese borough
SAFETYCABLE30S	Safety Cable Silver 30"
SAFETYCABLE30B	Safety Cable Black 30"
SAFETYCABLE18B	Safety Cable Black 18"
SAFETYCABLE18S	Safety Cable Silver 18"
CA-XLR3/1	Pre-made 1' 3-pin XLR Cable
CA-XLR3/5	Pre-made 5' 3-pin XLR Cable
CA-XLR3/10	Pre-made 10' 3-pin XLR Cable
CA-XLR3/25	Pre-made 25' 3-pin XLR Cable
CA-XLR3/50	Pre-made 50' 3-pin XLR Cable
CA-XLR3/100	Pre-made 100' 3-pin XLR Cable
CO-XLR3M	XLR Connector 3-pin Male
CO-XLR3F	XLR Connector 3-pin Female
CO-XLR5M	XLR Connector 5-pin Male
CO-XLR5F	XLR Connector 5-pin Female
CO-XLRTERM3	XLR 3 Pin Data Terminator
CO-XLR3MTO5F	XLR 3 Pin Male to 5 Pin Female Adapter
CO-XLR5MTO3F	XLR 5 Pin Male to 3 Pin Female Adapter