



Information specifically for:

DL-BAR10C5MM

v1.0

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



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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 (circle)**: DL-BAR10C5MM

Serial Number:	
Dealer:	
Date of Purchase:	

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Table of Contents

Specifications	
Fixture Overview	5
Physical	5
Environmental	5
Electrical	5
Control	5
Optics	5
Rigging	5
Unpacking	6
Power	6
Mounting	7
Basic Reference	7
Setup and Operation Modes (LCD Display)	7
Control Panel Menu Navigation	8
Menu Definitions and Functions	9
Auto Run Operation	9
Static Color Operation	9
Slave Operation	
Sound Active Operation	
Software Version	
DMX-512 Control	
DMX Data Connection	
Data Terminator	
Adapter 5-to-3 pin	
DMX Start Address	
DMX Channel Overview	
DMX Channel Layout	
3 channels	
5 channels	
8 channels	
14 channels	12
24 channels	
26 channels	13
DMX Channel Table	
Dimmer, Internal Programs and Function DMX Values	
Speed DMX Values	14
Maintenance	
Accessory Items (sold separately)	
Troubleshooting	
DMX-512 Background	16

Specifications

Fixture Overview

- RGB color segments with intensity and strobe effects
- 384 ultra bright 5mm LEDs: 128 red, 128 green, 128 blue
- Long Life LED light source
- Controllable as one bar or in 8 sections
- Operating modes: DMX, Color Changing, Sound Active, Master/Slave
- Floor standing with side brackets or hanging
- Beam angle: approximately 30 degrees
- DMX512 using up to 26 channels maximum
- DMX input/output via 3 pin XLR
- Display menu & push buttons for settings

Physical

Color Black

Size 41.5" x 2.55" x 3.5" Weight 4.62 lbs (2.1 kgs)

Environmental

Location Indoor

Max. ambient temperature 105°F (40°C) Min. distance to flammable surface 3.3ft (1m) Min. distance to illuminated surface 1ft (0.3m)

Electrical

Voltage Auto-Ranging 100-230vAC, 50-60Hz

Rated Power 60W

Fuses 0.5 Mini Size: 5x20mm

Control

Digital Protocol USITT DMX512 (1990)

Channels 3, 5, 8, 14, 24, 26 (26 maximum)

Data I/O 3 Pin XLR (Cannon)
Modes DMX512 or Stand-Alone

Optics

Light Source 384 High Output 5mm RGB LED Elements

Light Output Red 30,000mcd, Green 30,000mcd, Blue 20,000mcd

Beam Angle 30 degrees

Rigging

Orientation Any

Mounting Points Angle adjustable side L-brackets with 1/2" (13mm) mounting

hole

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, notify the shipper immediately. Retain carton and all packing material for inspection. 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.

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, 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 days of receiving merchandise.

Returns

Returned merchandise must be 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 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



Do not apply power to the fixture until power source is verified.

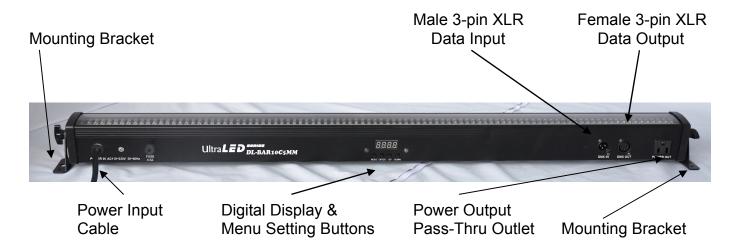
For protection against electric shock, fixture must be connected to suitable earth ground. Make sure fixture is disconnected from power mains before any service.

The mains voltage and frequency of this fixture is automatically set. The input voltage can range from 100vAC to 240vAC 50/60Hz. The listed power rating is its average wattage under normal conditions. All fixtures must be powered directly from a switched circuit. This fixture cannot be run on a rheostat or dimmer circuit even if used solely for a 0% to 100% switching. Before applying power to a fixture, check that the fixture's input voltage matches the power source voltage. Consult a qualified electrician if there are any concerns about proper connection to power.

Mounting

Always consult a qualified professional when rigging. Consider access for routine maintenance when selecting a mounting position. This fixture may be mounted in any position provided there is adequate room for movement and ventilation. Mount the fixture securely using proper hardware, clamps and a safety cables. This fixture features a dual rear brackets that allows adjustment and positioning when mounted. Adjusts to the brackets require an alley key tool. The bracket may be used to floor stand this unit or mount on wall. Slotted mounting holes are provided on each bracket in two different sizes. Always keep cords out of the way, thus preventing any trip hazards. Secure all cables properly. Do not mount where the fixture will be exposed to constant water or rain, high humidity, extreme temperature changes or restricted ventilation. Do not obstruct any vents or heat-sinking.

Basic Reference

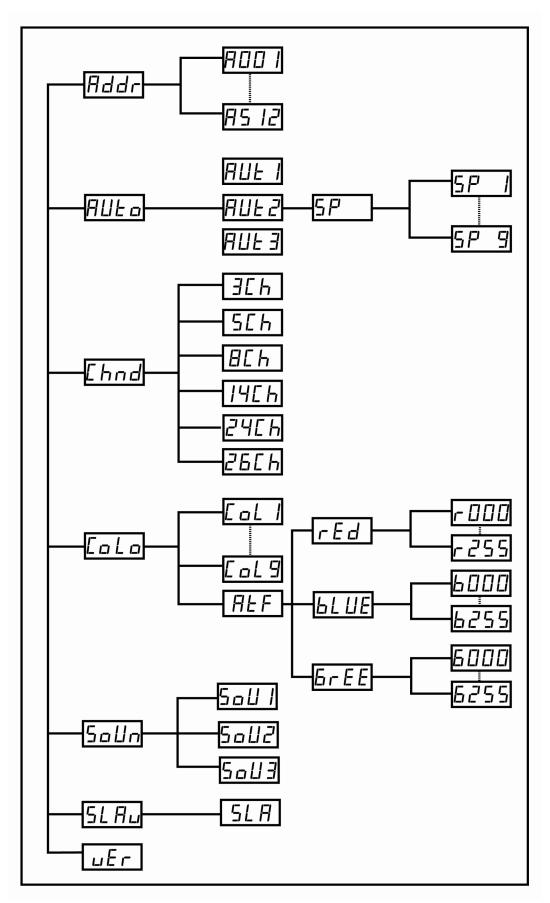


Setup and Operation Modes (LCD Display)

The following refers to the different settings that are available on this fixture via the LCD Control Panel display located at the back of the fixture. The MODE key puts the fixture in the settings menu itself. It can also be used as a BACK or ESC key to return back. The UP/DOWN moves through the menu options and allows the assignment of a value. The ENTER key is used to enter that option and confirms the selection once the UP/DOWN is used to adjust the value. Settings are stored and recalled on subsequent power cycles.

Note: R, G, B, refers to Red, Green and Blue respectively.

Control Panel Menu Navigation



Menu Definitions and Functions

Note: To operate using DMX requires the use of a DMX output controller of your choice that is compatible with this type of LED unit. DMX and master/slave modes require data cables to be connected between fixtures. Manual and some standalone modes do not require data cables for independent use of the fixture

Auto Run Operation

In Auto Mode you may select one of the three built-in programs. These run automatically in a continuous loop. You may also set a speed from 1 to 9. Press the MODE button, use UP/DOWN to find the AUTO Mode. Press the ENTER button, use UP/DOWN to select one of the programs, Aut1, Aut2 or Aut3. Press ENTER again to set the speed. Select speed using UP/DOWN, and again press enter to select.

Static Color Operation

In Color Mode you may select one of the nine preset colors or you can create your own specific color by setting the RGB values.

Press the MODE button, use UP/DOWN to find the CoLo Mode. Press the ENTER button, use UP/DOWN to select one of the preset colors from CoL1 to Col9, or AtF to create your own color. If you selected AtF, then you must hit enter again and set the intensity of the RGB values. RGB color intensity values are between 0 (off) to 255 (100% maximum). By varying the intensity of the RED, GREEN, and BLUE values, you can mix your own specific color.

Slave Operation

The master/slave operation enables several LED bars to be synchronized and controlled by one master device. For slave operation to function, XLR data cables must be used to connect fixtures together. To set this mode, press the MODE button, use the UP/DOWN to find the SLAV mode. Press ENTER. To make unit a SLAVE, turn this mode ON. Any devices set in this manner can now be controlled by the master unit. Press the ENTER button to confirm and to exit the SLAVE Mode.

Sound Active Operation

Press MODE button, then use the UP/DOWN keys to reach SOUND mode. Press ENTER, then use the UP/DOWN keys to select one of the three sound modes, SoU1, SoU2 or SoU3. The fixture will respond to the sound of audio. Press the ENTER button again to confirm and to exit the SOUND Mode.

Software Version

Use the vEr mode to determine the software version. Press MODE button, then use the UP/DOWN keys to get to vEr mode, Press ENTER. The display will show the version number "XX". Press MODE to return to main menu.

DMX Operation

The DMX operation mode allows you to control the bar using a standard DMX controller. In this mode you set the start address at which the fixture will respond to the controller on. Also the channel assignment mode to be used is set. To address simply press the MODE button, then use the UP/DOWN until the display shows Addr. Press the ENTER button and the display shows the DMX address. Use the UP/DOWN to select a start address from 001 to 512. Then press ENTER. After setting the DMX start address, select a Channel Mode. Press the MODE button, and use the UP/DOWN keys to find Chnd. Press ENTER button. Using the UP/DOWN select one of the Channel Modes: 3Ch, 5Ch, 8Ch, 14Ch, 24Ch or 26Ch. Press ENTER.

The decimal period in the display denotes proper DMX signal is being received. If there is no period in the display, DMX is NOT being received.

Note: The following DMX-512 Control section explains how to select a DMX start address for your fixture. It also covers connecting data cables, proper termination, specific channel assignments and channel value tables.

DMX-512 Control

Fixtures require a "Start Address" from 1 to 512, setting the first DMX channel containing data for the fixture (see DMX Background). Before addressing fixtures, consult the manual of the system's DMX controller to select a desirable addressing scheme. 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. One mode of this fixture requires 5 channels of DMX, if set to a Start Address of 3 it would use data from channels: 3 and 4, 5, 6, 7. 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. Because all fixtures see the same data, fixtures may be set to any address without concern for the order they are connected by the DMX cables.

DMX Data Connection

This fixture uses 3 pin XLR type connectors and shielded twisted pair cable approved for EIA-422/EIA485 use. Fixtures are connected in Daisy Chain topography: Connection is made from the controller to the DMX-IN of the first light, then from the DMX-OUT to the DMX-IN of the next light and so on. Only one data source can be on a chain and no branching is allowed. The physical order in which the fixtures are connected is not important, use the most convenient.

DMX-IN XLR Connector - Plug:



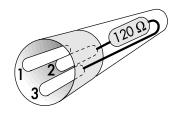
DMX-OUT XLR Connector - Socket:



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

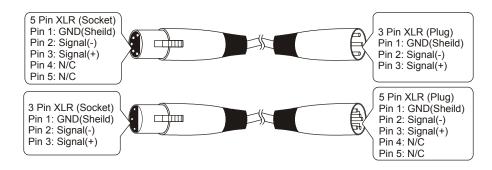
Data Terminator

A Data Terminator can be connected to the DMX-OUT of the last fixture to reduce the effects of signal noise; it is not required for all installations. To make a Terminator, connect a 120-ohm ¼ watt resistor across pin 2, Data Negative (S-) and pin 3, Data positive (S+). Whether it is a 5 pin XLR or 3 pin XLR connector (shown on right) does not matter, the pin numbers remain the same. A qualified technician can determine if a Data Terminator is needed.



Adapter 5-to-3 pin

Systems using 5 pin DMX interfaces can be accommodated by purchasing 3-to-5 pin adapters or building adapter cables. 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, regardless of either connector's gender or pin count. No connection is made to Pins 4 & 5.



DMX Start Address

To place the fixture in DMX mode, press the MODE key, then using the UP/DOWN keys get to the Address Menu Option. Press ENTER and using the UP/DOWN buttons, set the start address number for this particular unit in the DMX chain. Once selected, press ENTER again to save your selection. More than one fixture may have the same start address, but they will behave the same. Giving a unique start address that does not overlap with any other units allows you to individually control that fixture's features fully. Never allow channels to overlap. You will need to select the number of channels you wish the fixture to use first. Your choices are 3, 5, 8, 14, 24 or 26 channel modes. This will determine the spacing of channels you will need to avoid overlapping of channels when selecting your start addresses.

Example Select Start Addresses for 4 fixtures each requiring 5 channels of DMX (5 channel mode).

For this example, start with the first unit set to the first possible Start Address = 1. This fixture occupies DMX channels 1 thru 5. The next DMX channel available for a Start Address is found by adding the previous fixture's Start Address to its channel requirement: 1+5=6. To maximize channel usage, we will leave no empty channels between fixtures so the second Start Address is set to DMX channel 6 and that fixture occupies channels 6 thru 10. The third fixture will be addressed 6+5=11 and occupy channels 11 thru 15. The last fixture is addressed 11+5=16 and will occupy channels 16 thru 20. Thus, 4 fixtures using 5 channels each have Start Addresses of 1, 6, 11 and 16 and the next free channel in the system is 16+5=21.

DMX Channel Overview

This fixture features 6 different DMX Channel modes. A 3, 5, 8, 14, 24, and 26 channel mode. Using the 3 channel mode provides the least granular control, and relatively uses the least number of DMX channels. The different channel assignments and values are shown below in the following tables.

DMX Channel Layout

The following shows each channel mode layout and how it relates to the physical sections of this bar.

3 channels: Bar completely operates as 1 complete section only.

| Ch |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 |

5 channels: Bar completely operates as 1 complete section with 2 additional control channels.

| Ch |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 3,4,5 | 3,4,5 | 3,4,5 | 3,4,5 | 3,4,5 | 3,4,5 | 3,4,5 | 3,4,5 |

8 channels: Bar is divided into 2 sections of 4 groups with 2 additional control channels.

| Ch |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 3,4,5 | 3,4,5 | 3,4,5 | 3,4,5 | 6,7,8 | 6,7,8 | 6,7,8 | 6,7,8 |
| | | | | | | | |

14 channels: Bar is divided into 4 sections of 2 groups with 2 additional control channels.

Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch
3,4,5	3,4,5	6,7,8	6,7,8	9,10,11	9,10,11	12,13,14	12,13,14

24 channels: Bar is divided into 8 individual sections without any macro or speed control channels.

Ch Ch 1,2,3 4,5,6	Ch	Ch	Ch	Ch	Ch	Ch
	7,8,9	10,11,12	13,14,15	16,17,18	19,20,21	22,23,24

26 channels: Bar is divided into 8 individual sections with 2 additional controls channels.

Ch Ch Ch Ch Ch Ch Ch Ch 3,4,5 6,7,8 9,10,11 12,13,14 15,16,17 18,19,20 21,22,23 24,2	h 5,26
--	-----------

DMX Channel Table

	3	5	8	14	24	26	Francticus
	channel mode	channel mode	channel mode	channel mode	channel mode	channel mode	Functions
	1	3	3	3	1	3	Red
	2	4	4	4	2	4	Green
	3	5	5	5	3	5	Blue
			6	6	4	6	Red
			7	7	5	7	Green
			8	8	6	8	Blue
				9	7	9	Red
				10	8	10	Green
				11	9	11	Blue
_				12	10	12	Red
ne				13	11	13	Green
Control Channel				14	12	14	Blue
Ĕ					13	15	Red
0					14	16	Green
2					15	17	Blue
Ę					16	18	Red
ပိ					17	19	Green
					18	20	Blue
					19	21	Red
					20	22	Green
					21	23	Blue
					22	24	Red
					23	25	Green
					24	26	Blue
		1	1	1		1	Dimmer, Internal
							Programs and
							Functions
							(see below)
		2	2	2		2	Speed
							(see below)

Dimmer, Internal Programs and Function DMX Values

Decimal	Percentage	Effect Feature
000 – 007	0% – 3%	Dimmer
008 – 015	3% – 6%	Strobe Effect
016 – 023	6% – 9%	Internal Program 1
024 – 031	9% – 12%	Internal Program 2
032 – 039	13% – 15%	Internal Program 3
040 - 047	16% – 18%	Internal Program 4
048 – 055	19% – 22%	Internal Program 5
056 – 063	22% – 25%	Internal Program 6
064 – 071	25% – 28%	Internal Program 7
072 – 079	28% - 31%	Internal Program 8
080 – 087	31% - 34%	Internal Program 9
088 – 095	35% - 37%	Internal Program 10
096 – 103	38% - 40%	Internal Program 11
104 – 111	41% - 44%	Internal Program 12
112 – 119	44% - 47%	Internal Program 13
120 – 127	47% - 50%	Internal Program 14
128 – 135	50% - 53%	Internal Program 15
136 – 143	53% - 56%	Internal Program 16
144 – 151	56% - 59%	Internal Program 17
152 – 159	60% - 62%	Internal Program 18
160 – 167	63% - 65%	Internal Program 19
168 – 175	66% - 69%	Internal Program 20
176 – 183	69% - 72%	Internal Program 21
184 – 191	72% - 75%	Internal Program 22
192 – 199	75% - 78%	Internal Program 23
200 – 207	78% - 81%	Internal Program 24
208 – 215	82% - 84%	Internal Program 25
216 – 223	85% - 87%	Internal Program 26
224 – 231	88% - 91%	Internal Program 27
232 – 239	91% - 94%	Sound 1
240 – 247	94% - 97%	Sound 2
248 – 255	97% - 100%	Sound 3

Speed DMX Values

Decimal	Percentage	Effect Feature
000 – 255	0% – 100%	Speed from slow to fast

Note: When the Strobe Effect is active, the LEDS are controlled via channels 3-26.

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, reduced 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.
- 4) Clean all optical elements when the fixture is cold. Use a soft lint free cotton cloth or tissue and cleaner safe for plastics.
- 5) Inspect clamps and safety cables to ensure fixture is secure and safe.

Accessory Items (sold separately)

Order Code	Description
CLAMP-MEGA/B	Mega Heavy Duty Aluminum Clamp – Black
CLAMP-CBHALF	Half Cheeseborough Coupler 300kg Max Load
CLAMP-O	O clamp for stands – Plastic - Black
SAFETYCABLE30B	Safety Cable Black 30"
SAFETYCABLE18B	Safety Cable Black 18"
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-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

Troubleshooting

Symptom	Possible Cause / Solution
No Power	Check for power on mains
	Check main fuse and fuse holder
Erratic / No response to DMX	Check data cables: connection and proper wiring
	Check Display settings
	Check Start Address
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 Menu settings
	Check Data cables (faults and proper wiring)

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. 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 into 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, attach 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 uses 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	Connection	
1	Common (Shield)	
2	Data Negative (S- or Cold)	
3	Data Positive (S+ or Hot)	
4	n/c (not used)	
5	n/c (not used)	



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