EVC MH LED

User Instructions

Unpacking: Thank you for purchasing the EVC MH LED by Elation Professional®. Every EVC MH LED 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 EVC MH LED by Elation Professional® is a unique twelve channel DMX controllable moving head video camera, designed to spotlight almost anything and project it onto a video wall or TV. An array of 48 total Cool and Warm White LED's allow you to customize to different skin tones and ambient light in a room so that the EVC MH LED always projects the best images. The EVC MH LED is compact and light weight so that it is very discreet and easy to transport and mount. The EVC MH LED is ideal for use at corporate events, wedding receptions, nightclubs, school dances, or anywhere that you wish to put someone in the spotlight.

Customer Support: Elation Professional® 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 8:00 a.m. to 4:30 p.m. Pacific Standard Time.

     Voice: (323) 582-3322
     Fax: (323) 832-9142
     E-mail: support@elationlighting.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.

EVC MH LED   Features

- LED Moving Head Video Camera
- DMX-512 Protocol Compatible (12 DMX Channels)
- Digital Display for Address and Function Setting

EVC MH LED   Warranty Registration

The EVC MH LED carries a two year 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. The R.A. number must be clearly written on the outside of the return package. A brief description of the problem as well as the R.A. number must also be written down on a piece of paper included in the shipping carton. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. You may obtain a R.A. number by contacting our customer support team on our customer support number. All packages returned to the service department not displaying a R.A. number on the outside of the package will be returned to the shipper.

EVC MH LED   Handling Precautions

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 Elation Professional®.

During operation the housing may become extremely hot. Avoid touching the unit with bare hands while in use.

Elation Professional® 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 15 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: The Elation Professional® EVC MH LED contains a automatic voltage switch, which will auto sense the voltage when it is plugged into a power source. With this switch there is no need to worry about the correct power voltage, this unit can be plugged in anywhere.

DMX-512: *DMX is short for Digital Multiplex. This is a universal protocol used by most lighting and controller manufactures 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. 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 EVC MH LED is a 12 channel DMX unit. The DMX address is set electronically using the controls on the front panel of the unit. Your unit and your DMX controller require a approved DMX-512 110 Ohm Data cable for data input and data output (Figure 1). We recommend Accu-Cable DMX cables. If you are making your own cables, be sure to use standard 110-120 Ohm 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.

Figure 1

Notice: Be sure to follow figures two and three when making your own cables. Do not use the ground lug on the XLR connector. Do not connect the cable's shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR's outer casing. Grounding the shield could cause a short circuit and erratic behavior.
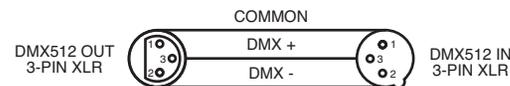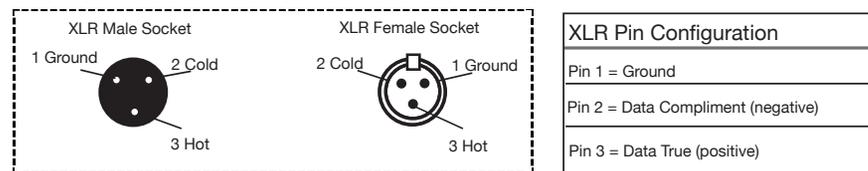

Figure 2

Figure 3

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

Special Note: Line Termination. When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behavior. A terminator is a 110-120 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.
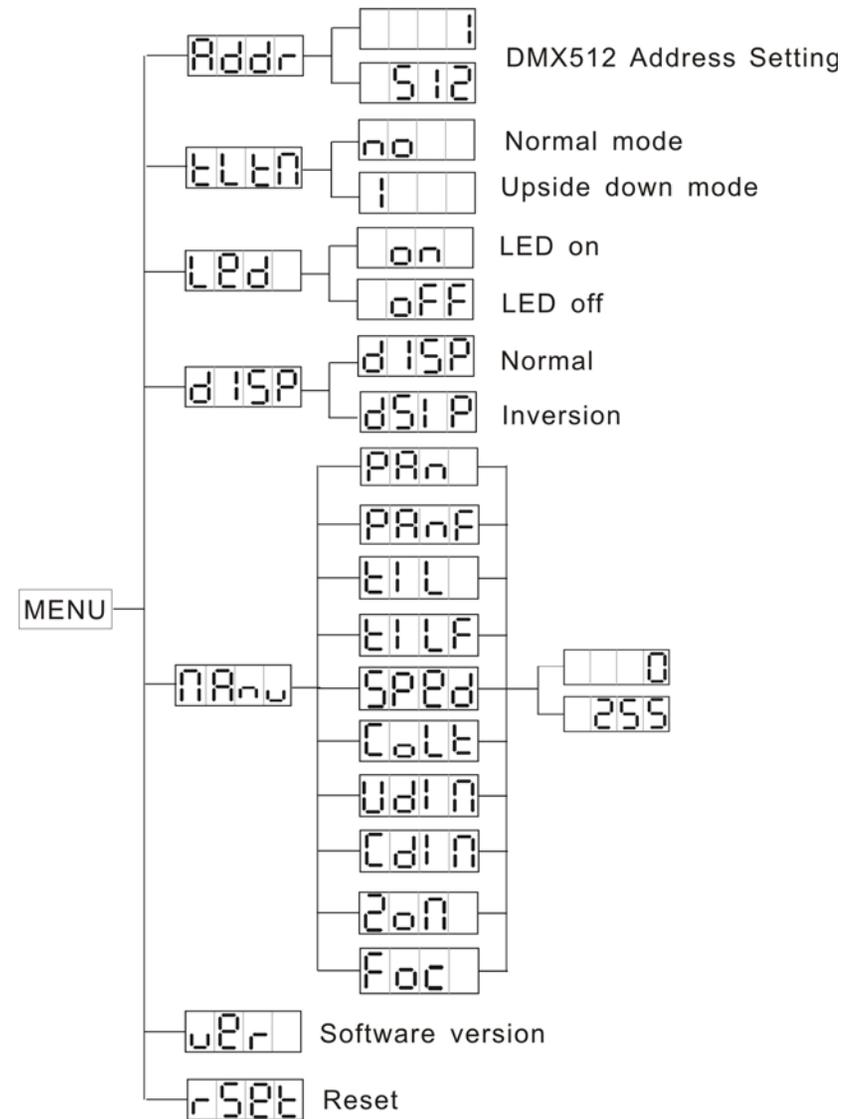

Termination reduces signal errors and avoids signal transmission problems and interference. It is always advisable to connect a DMX terminal, (Resistance 120 Ohm 1/4 W) between PIN 2 (DMX-) and PIN 3 (DMX +) of the last fixture.

Figure 4

5-Pin XLR DMX Connectors. Some manufactures use 5-pin DMX-512 data cables for DATA transmission in place of 3-pin. 5-pin DMX fixtures may be implemented in a 3-pin DMX line. When inserting standard 5-pin data cables 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. Press the MENU, UP, or DOWN buttons until "ADDR" is displayed, press ENTER.

2. The current address will now be displayed and flashing. Use the UP and DOWN buttons to find your desired address. Once you have found your desired DMX address press ENTER then press and hold the MODE button for at least 3 seconds to set the address.

TLTN – Tilt Inversion

1. Press the MENU button until "TLTN" is displayed, press ENTER. Either NO or 1 will be displayed.

2. To activate the Tilt inversion press the UP or DOWN buttons until I is displayed, press ENTER to confim. To deactivate Tilt inversion, select No and press Enter.

LED – With this function you can have the LED display turn off after 10 seconds.

1. Press 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 keep the LED display on at all times, or "OFF" to have the LED display switch off after 10 seconds.

3. Press ENTER to confirm.

DISP - This function will reverse the display 180°.

1. Press the MENU button until "DISP" is displayed, press ENTER.

2. Press ENTER to "flip" the display. Press ENTER to "flip" it

again. Press ENTER when you have made your desired setup.

MANU – In this mode you are able to manually test the various functions; Pan and Tilt and Pan/Tilt Speed, color temperature, LED intensity, zoom and focus.

1. Press the MENU button until "MANU" is displayed, press ENTER. One of the submenus listed below will be displayed.

2. Use the UP and DOWN buttons to find the function that you would like to test. When you have found it press ENTER.

3. Once you have entered the submenu, use the UP and DOWN buttons to adjust the values and test the function.

4. Once you are finished, press the MENU button to exit.

SUBMENUS:

PAn - Test the Pan function.

PAnF - Test the Fine Pan.

tiL - Test the Tilt function.

tiLF - Test the Fine Tilt.

SPed - Test the Pan and Tilt Speed.

CoLt - Test the Color Temperature.

UdIn - Test the Warm White intensity.

CdIn - Test the Cool White intensity.

Zon - Test the Zoom.

Foc - Test the Focus.

VER - With this function you can display the version software of the unit.

1. Press the MENU button until "VER" is displayed, press ENTER.

2. The software version will now be displayed. Press MENU to exit

RSET - Use this function to reset the unit.

1. Press the MENU button until "RSET" is displayed, press ENTER.

2. The fixture will now reset.

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 EVC MH LED is a 12 channel DMX fixture. See page 13 for detailed description of the DMX values and 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 9 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.

Master-Slave Operation This function will allow you to link up to 16 units together and operate without a controller. 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 approved DMX data 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. The slave units will now follow the Master unit.

Ch1	Ch2	Ch3	Ch4	Ch5	Ch6
Pan	Pan Fine	Tilt	Tilt Fine	Pan/Tilt Speed	LED color temperature
255 — 540° 0 — 0°	255 0	255 — 270° 0 — 0°	255 0	255 — Slow 0 — Fast	255 — 100% 0% Cool white / Warm white 0% 100% 7 0 — OFF

Ch7	Ch8	Ch9	Ch10	Ch11	Ch12
WW	CW	Zoom	Focus	Focus fine	Fuction
255 — 100% 0 — 0%	255 — 100% 0 — 0%	255 — 100% 0 — 0%	255 — ▲▲ Far Manual focus 👤 👤 Near 7 0 — Auto focus	255 0	210-255 No Function 200-209 Reset All 90-199 No Function 80-89 (LED ON) Disable blackout while X/Y Move 70-79 (LED OFF) Enable blackout while X/Y Move 0-69 No Function

Use a BNC video cable or RCA video cable, with RCA/BNC adaptor, to connect to a video converter or source such as Elations' EPV Image VSC.

Locate and remove the unit's power cord. Once the cord has been removed located the fuse holder located inside the power socket. Insert a flat-head screw driver into the power socket and gently pry out the fuse holder. Remove the bad fuse and replace with a new one. The fuse holder has a built-in socket for a spare fuse be sure not to confuse the spare fuse with active fuse.

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 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 standard wall outlet.
2. Be sure the external fuse has not blown. The fuse is located on the rear panel of the unit.
3. Be sure the fuse holder is completely and properly seated.

2-YEAR LIMITED WARRANTY

A. Elation® Architectural hereby warrants, to the original purchaser, Elation® Professionals® products to be free of manufacturing defects in material and workmanship for a period of two years (730 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 Elation® Professionals® factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Elation® Professionals® 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, Elation® Professionals® 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 Elation® Professionals® concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Elation® Professionals® factory unless prior written authorization was issued to purchaser by Elation® Professionals®; 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, Elation® Professionals® 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 Elation® Professionals® under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Elation® Professionals®. All products covered by this warranty were manufactured after January 1, 1990, and bear identifying marks to that effect.

E. Elation® Professionals® 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 Elation® Professionals® 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 Elation® Professionals® 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 Elation® Professionals® Products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

Model:	EVC MH LED
Voltage:	100V ~ 240V 50~60Hz
LED:	48 LEDs (24 Cool White & 24 Warm White)
Power Consumption:	36W
Beam Angle:	60 Degrees
Dimensions:	8.14"(L) x 8.22"(W) x 9.6"(H) 207mm x 209mm x 246mm
Weight:	8.3 Lbs. / 3.8 kgs.
Fuse:	1 Amp
Duty Cycle:	None
DMX:	12 DMX Channels
Working Position:	Any Safe, Secure Position
Warranty:	2 Year (730 days)

Auto Sensing Voltage: *This fixture contains a automatic voltage switch, which will auto sense the voltage when it is plugged into the power source.*

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