# ELATION
## PROFESSIONAL

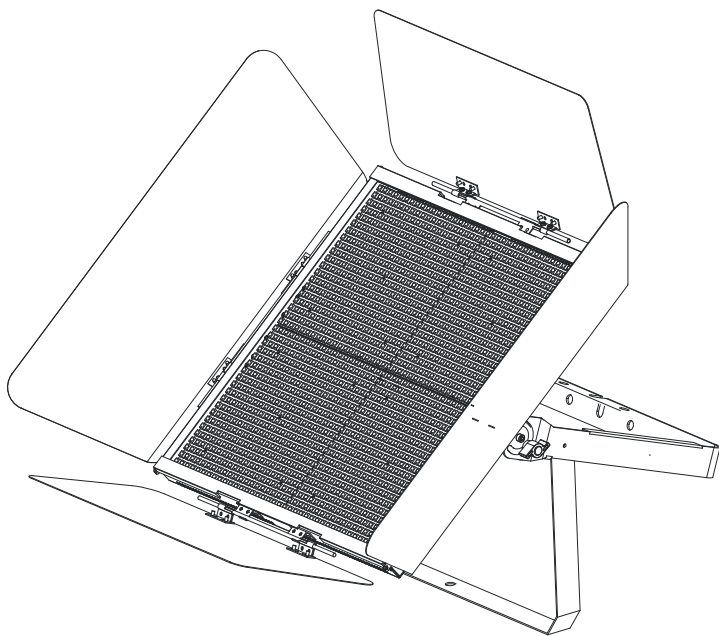# TVL4000 II



# User Manual

***Unpacking:*** Thank you for purchasing either the TVL4000 II by Elation Professionals®. Every TVL4000 II 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 TVL4000 II is a DMX intelligent LED fixture. The TVL4000 II has 3 DMX channel modes; Mode 1 is 2 DMX Channels, Mode 2 is 2 DMX Channels, and Mode 3 is 3 DMX Channels. This fixture has two operating modes; manual mode or DMX controlled. The TVL4000 II can be run as stand alone unit or in a master-slave configuration.

***Customer Support:*** Elation Professionals® 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.elationlighting.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

To purchase parts online visit http://parts.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.

• 3 DMX Channel Modes: Mode 1 is 2 DMX Channels, Mode 2 is 2 DMX Channels, & Mode 3 is 3 DMX Channels
• 2 Operating Modes - Manual Mode & DMX Control
• Digital Display for Address and Function Setting

The TVL4000 II carry a 2 year (730 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.elationlighting.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 Elation® 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 manufactures warranty. In the unlikely event your unit may require service please contact Elation Professionals®.

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

*Elation Professionals® 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.
• 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 16 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 Professionals® TVL4000 II contains an automatic voltage switch, which will auto sense the voltage when it is plugged into the power source. With this switch there is no need to worry about the correct power voltage, this unit can be plugged in anywhere. Also be sure to only use the included I.E.C. power cable supplied with the unit.

**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).
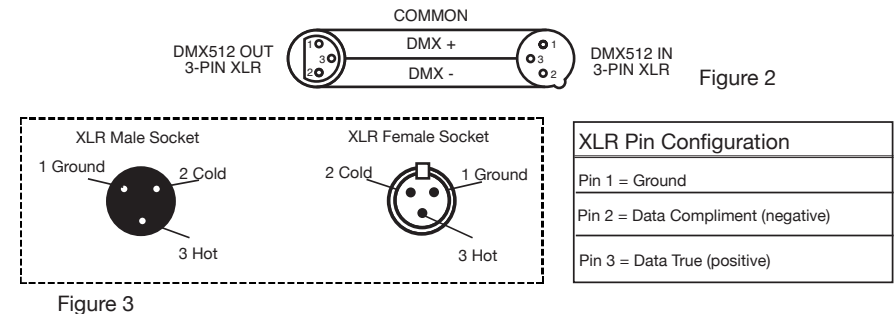
**DMX Linking:** DMX is a language allowing all makes and models of different manufactures to be linked together and operate from a single controller, as long as all fixtures and the controller are DMX compliant. To ensure proper DMX data transmission, when using several DMX fixtures try to use the shortest 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. 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 TVL4000 II has 3 DMX Channel Modes; Mode 1 has 2 Channels, Mode 2 has 2 Channels, and Mode 3 has 3 Channels. The DMX address is set electronically using the controls on the rear of the unit. Your unit and your DMX controller require a approved DMX-512 110 Ohm Data cable for data input and data output. 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.

Figure 1

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**Notice:** Be sure to follow figures two and three when making your own cables. Do not use the ground post 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.

COMMON

DMX512 OUT 3-PIN XLR    DMX +    DMX512 IN 3-PIN XLR    Figure 2
DMX -

XLR Male Socket    XLR Female Socket
1 Ground    2 Cold    2 Cold    1 Ground
3 Hot    3 Hot

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

Figure 3

*Special Note: Line Termination.* When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behavior. A terminator is a 90-120 ohm 1/4 watt resistor which is connected between pins 2 and 3 of a male XLR connector (DATA + and DATA -). This unit is inserted in the female XLR connector of the last unit in your daisy chain to terminate the line. Using a cable terminator (ADJ part number Z-DMX/T) will decrease the possibilities of erratic behavior.
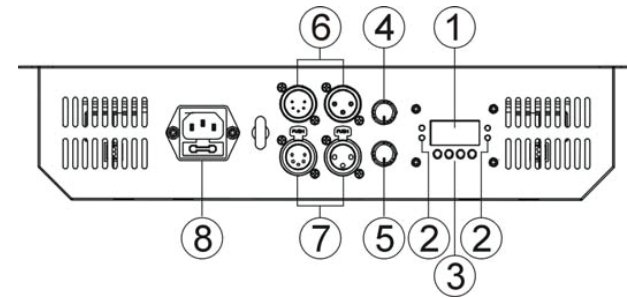
Termination reduces signal errors and avoids signal transmission problems and interference. It is always advisable to connect a DMX terminal, (Resistance 120 Ohm 1/4 W) between PIN 2 (DMX-) and PIN 3 (DMX +) of the last fixture.    Figure 4

***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 |

1   **Display:** To show the various menus and the selected functions

2   **Indicator LED:**

| DMX | On | DMX input present |
|---|---|---|
| MASTER | On | Master Mode |
| SLAVE | On | Slave Mode |
| COLOR TEMP. | Flashing | Max. power consumption of CW/WW |

3   **Button:**

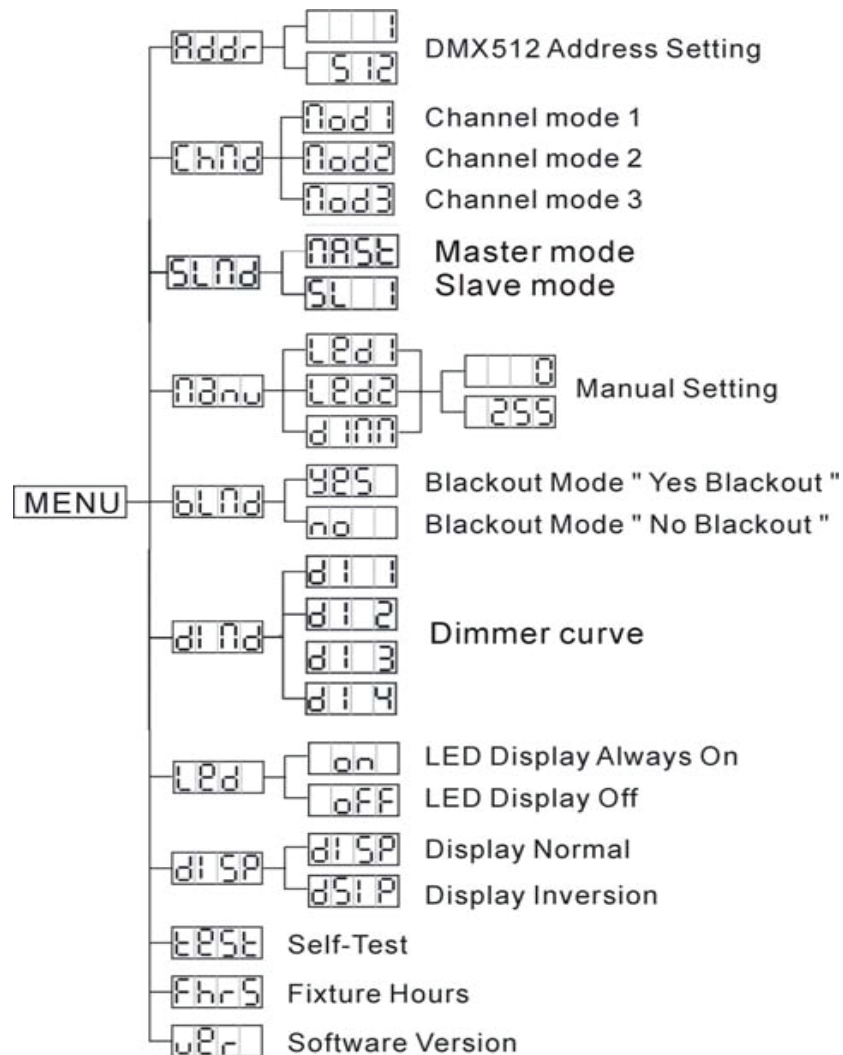| MENU | To select the programming functions |
|---|---|
| DOWN | To go backward in the selected functions |
| UP | To go forward in the selected functions |
| ENTER | To confirm the selected functions |

4   **Color Temperature:** Adjust the color temperature from 3200k to 6500k, 25K as a step. When the value is between 4825K and 4875K the green LED indicator will light .It means the power consumption of CW/WW color the has reached maximum.

5   **Dimmer Adjust knob:** Adjust bightness for the unit.

6   **DMX output:** For DMX512 link, use 3/5-pin XLR plug cable to link the next unit.

7   **DMX input:** For DMX512 link, use 3/5-pin XLR plug cable to input DMX signal

8   **Mains input:** Connect to supply mains power

***System Menu.*** The TVL4000 II comes with an easy to navigate system menu, which this next section will detail the functions of each command in the system menu.

***Please read the next section thoroughly!***

## ADDR – DMX Address Setting.

1. First set the unit to your desired DMX Channel mode.

2. To set your address, tap either the MENU, UP, or DOWN buttons until "ADDR" is displayed, press ENTER. "1" will now be displayed and flashing.

3. Press the UP or DOWN buttons to find your desired address. When you have found your desired DMX address press ENTER, and connect your DMX Controller.

## CHND – Switch between the 3 DMX Channel Modes.

1. Press the MENU button until "CHND" is displayed, press ENTER. Either "MOD 1" (2 Channel Mode), "MOD 2" (2 Channel Mode), or "MOD 3" (3 Channel Mode) will be displayed

2. Press the UP or DOWN buttons to choose your desired DMX mode and press ENTER to confim and exit.

## SLND – Set unit in a master/slave configuration.

1. Tap the MENU button until "SLND" is displayed, press ENTER. Either "MAST" or "SL 1" will be displayed.

2. Tap the UP or DOWN buttons until your desired setting is displayed, press ENTER and then hold MENU for at least 2-3 seconds to confim.

## MANU – Manually adjust LED intensity to create desired color temperature.

1. Press the MENU button until "MANU" is displayed, press ENTER. "LED1", "LED2" or "DIMM" will be displayed. LED 1 is warm white, LED 2 is cool white, and DIMM is the master dimmer for this mode.

2. Use the UP or DOWN buttons to scroll to the color you would like adjust first, and press ENTER.

3. Use the UP or DOWN buttons to adjust the intensity of the chosen color, and press ENTER after the adjustment.

4. Continue to make adjustments to the two colors until your desired color is reached. Once your desired color is reached do not leave this mode.

5. To leave this mode, press the MENU button. Once you leave this mode, all settings will be reset.
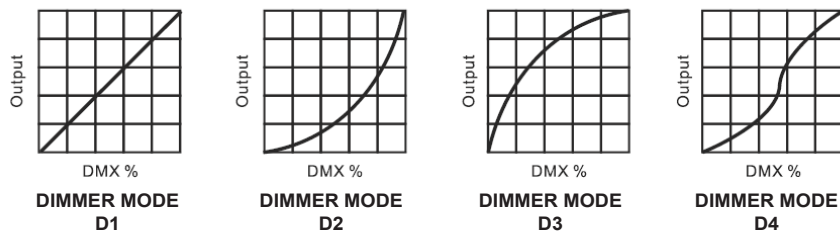
## BLND – Blackout or Stand by mode.

1. Press the MENU button until "BLND" is displayed, press ENTER. Either Yes or No will be displayed.

2. To activate Blackout press the UP or DOWN buttons until Yes is displayed, press ENTER to confim and exit. The fixture will now be in Blackout mode. To deactivate Blackout mode, select No and press Enter.

## DLND – Dimmer Modes.

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

2. The display will show either "DI 1", "DI 2", "DI 3", "DI 4". (see Dimmer Mode diagrams below) To activate a Dimmer Mode, press the UP or DOWN buttons to select Dimmer Mode "DI 1", "DI 2", "DI 3", or "DI 4", then press ENTER to confirm.

3. Press MENU to exit and reset the Dimmer Mode setting.

### Dimmer Modes

| DIMMER MODE D1 | DIMMER MODE D2 | DIMMER MODE D3 | DIMMER MODE D4 |

## LED – With this function you can have the LED display turn off after 20 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" so that the LED display turns off after 20 seconds.

3. Press ENTER to confirm.

## DISP - This function will reverse the display 180º.

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

2. Press the UP button to select "DISP" to activate this function, or "DSIP" to deactivate this function.

3. Press ENTER to confirm.

## TEST - This function will run a self test program.

1. Tap the MENU button until "TEST" is displayed, press ENTER.

2. The fixture will now run a self test program. To stop the self test press either the MENU or ENTER button.

## FHRS - With this function you can display the running time of the unit.

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

2. The display will show the software version.

**Universal DMX Control:** This function allows you to use a Elation® universal DMX-512 controller to create unique programs tailored to your individual needs.

1. The TVL4000 II has 3 DMX Channels Modes; Mode 1 is a 2 Channel Mode, Mode 2 is another 2 Channel Mode, and Mode 3 is a 3 Channel Mode. For the DMX modes, values, and traits, see page 15.
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. This will allow you to create your own programs.
4. Follow the instructions on page 9 to set the DMX address.
5. For longer cable runs (more than a 100 feet) use a terminator on the last fixture.
6. For help operating in DMX mode consult the manual included with your DMX controller.

**Manual Mode:** This mode allows the user to adjust the color intensity to create their own desired color temperature.
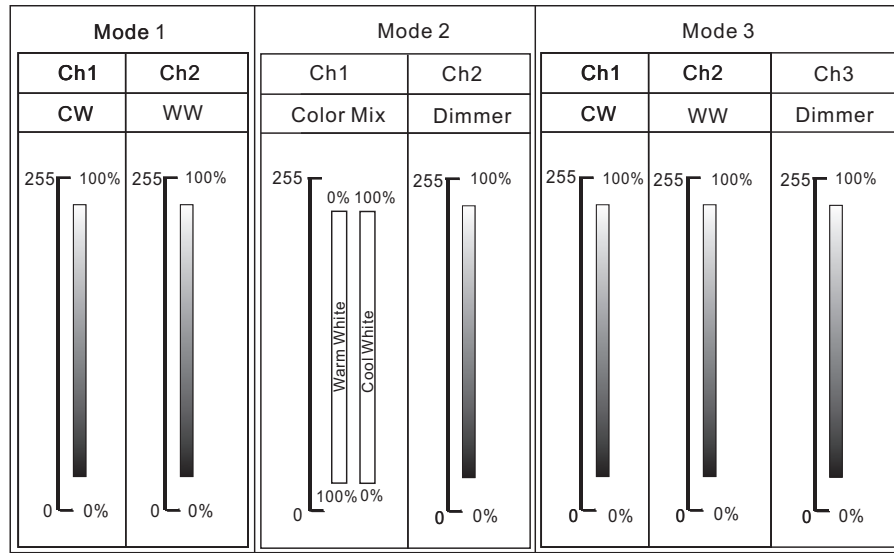1. Press the MENU button until "𝖬𝖠𝖭𝖴" is displayed, and press ENTER.
2. Follow the instructions on pages 10-11 to operate this mode.
3. You can also use the Color Adjust Knob and Dimmer Knob to manually create your desired color temperature. Please see the Control Panel on page 8.

The unit should be mounted using a mounting clamp (not provided), affixing it to the mounting bracket that is provided with the unit. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. Always ensure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times the unit's weight. Also, always use a safety cable that can hold 12 times the weight of the unit when installing the fixture. The equipment must be installed by a professional, and it must be installed in a place where it is out of the reach of people's grasp.
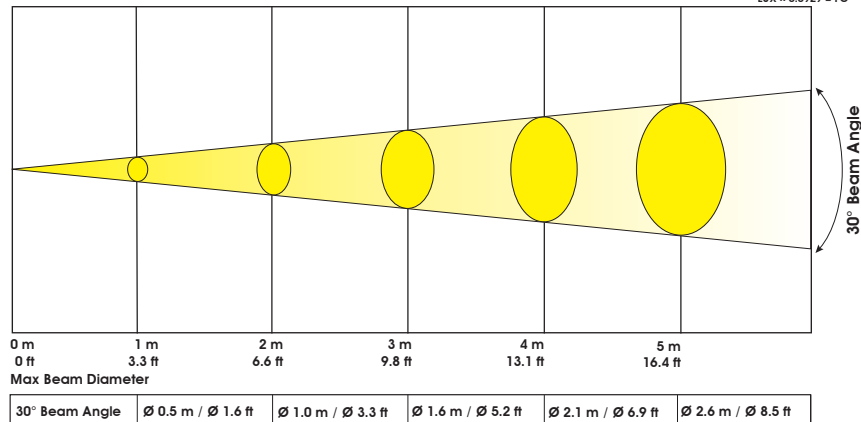
| Mode 1 | | Mode 2 | | Mode 3 | | |
|---|---|---|---|---|---|---|
| **Ch1** | **Ch2** | Ch1 | Ch2 | **Ch1** | **Ch2** | Ch3 |
| CW | WW | Color Mix | Dimmer | CW | WW | Dimmer |

Mode 1: CW — 255/100%, 0/0%; WW — 255/100%, 0/0%

Mode 2: Color Mix — 255, Warm White / Cool White (0% 100% / 100% 0%), 0; Dimmer — 255/100%, 0/0%

Mode 3: CW — 255/100%, 0/0%; WW — 255/100%, 0/0%; Dimmer — 255/100%, 0/0%

| | | | | | |
|---|---|---|---|---|---|
| WARM WHITE (3200K) | 352 FC / 3800 LUX | 139 FC / 1500 LUX | 65 FC / 700 LUX | 39 FC / 420 LUX | 27 FC / 293 LUX |
| COOL WHITE (6500K) | 446 FC / 4800 LUX | 177 FC / 1900 LUX | 84 FC / 900 LUX | 50 FC / 542 LUX | 34 FC / 362 LUX |
| FULL ON (4500-5000K) | 790 FC / 8500 LUX | 316 FC / 3400 LUX | 146 FC / 1570 LUX | 87 FC / 940 LUX | 59 FC / 630 LUX |

LUX x 0.0929 = FC



30° Beam Angle

| | 0 m / 0 ft | 1 m / 3.3 ft | 2 m / 6.6 ft | 3 m / 9.8 ft | 4 m / 13.1 ft | 5 m / 16.4 ft |
|---|---|---|---|---|---|---|

**Max Beam Diameter**

| 30° Beam Angle | Ø 0.5 m / Ø 1.6 ft | Ø 1.0 m / Ø 3.3 ft | Ø 1.6 m / Ø 5.2 ft | Ø 2.1 m / Ø 6.9 ft | Ø 2.6 m / Ø 8.5 ft |
|---|---|---|---|---|---|

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

1. Use normal glass cleaner and a soft cloth to wipe down the outside casing.
2. Use a brush to wipe down the cooling vents and fan grill.
3. Clean the external optics and mirror with glass cleaner and a soft cloth every 20 days.
4. Clean the internal optics with glass cleaner and a soft cloth every 30-60 days.
5. Always be sure to dry all parts completely before plugging the unit back in.

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

***1. The unit does not work, no light and the fan does not work***
- Check the power connection on both the unit and power source.

***2. Not responding to DMX controller***
- DMX LED should be on. If not, check DMX connectors and cables make sure they are linked properly.
- If the DMX LED is on and no response to the channel, check the address settings
- If you have intermittent DMX signal problems, check the pins on connectors.
- Try to using another DMX controller.
- Check if the DMX cables run near or run alongside high voltage cables that may cause damage or interference to DMX interface circuit.

## 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.

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| ORDER CODE | ITEM |
|---|---|
| TRIGGER CLAMP | Heavy Duty Wrap Around Hook Clamp |
| DRCQTVL4 | Quad Road Case for TVL4000 II™ **Special Order Item** |
| LSF536 | Light Shaping Filter 30° 20" x 24" Sheet |
| LSF537 | Light Shaping Filter 20° 20" x 22" Sheet |
| LSF538 | Light Shaping Filter 60° x 1° 20" x 24" Sheet |
| LSF559 | Light Shaping Filter 10° 20" x 24" Sheet |
| AC3PDMX10PRO | 10 ft. (3m) 3pin PRO DMX Cable |
| AC5PDMX10PRO | 10 ft. (3m) 5pin PRO DMX Cable |
| | Additional cable lengths available |

| Model: | **TVL4000 II** |
|---|---|
| *Voltage:* | 110 - 240V~50/60Hz |
| *LEDs:* | 1600 LEDs (800 Cool White & 800 Warm White) |
| *Power Consumption:* | 160W |
| *Dimensions:* | 25.9"(L) x 22.7"(W) x 5.1"(H) 658mm x 576mm x 130mm |
| *Weight:* | 27 Lbs. / 12 kgs. |
| *Colors:* | Cool & Warm White |
| *DMX:* | 3 DMX Channel Modes: (2 DMX Channels, 2 DMX Channels, & 3 Channels) |
| *Working Position:* | Any Safe, Secure Position |
| *Warranty:* | 2 Year (730 days) |

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

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