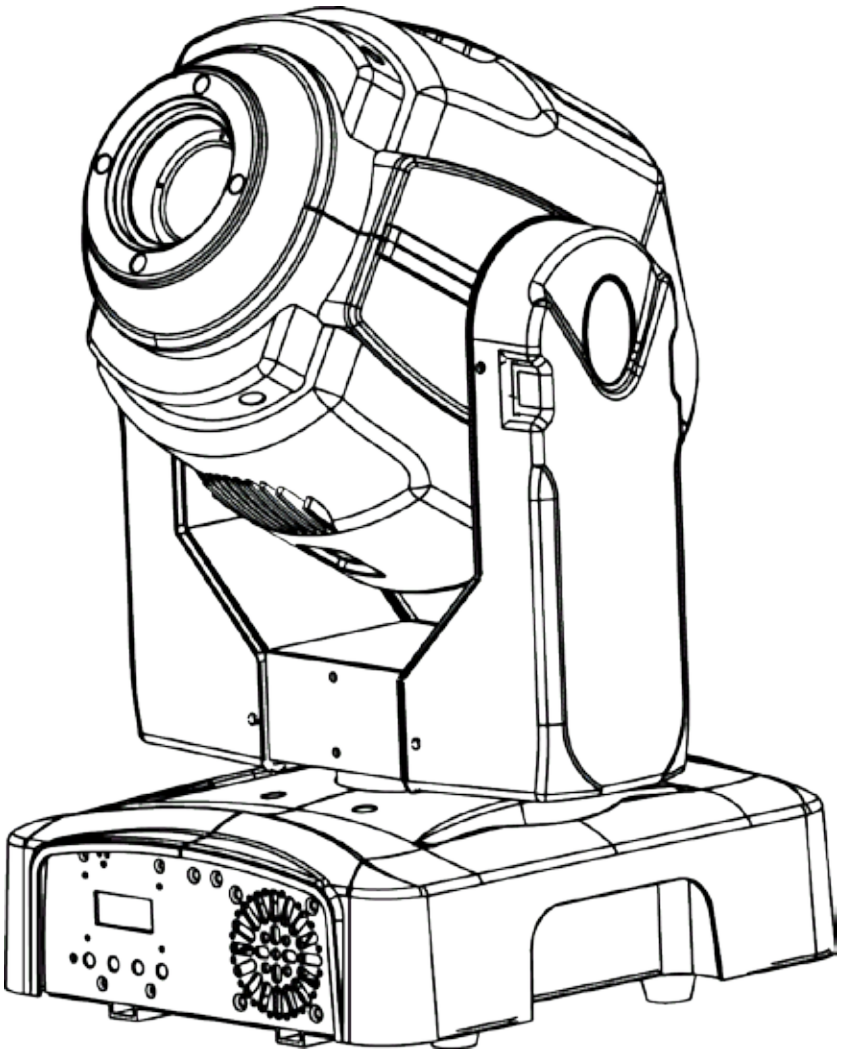
Q-SPOT 260-LED

User Manual



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Edition Notes

CHAUVET® released this edition of the Q-Spot 260-LED User Manual Rev. 02 in January 2012. The Q-Spot 260-LED User Manual Rev. 02 covers the description, safety precautions, installation, programming, operation and maintenance of the Q-Spot 260-LED fixture.

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For better results, print this document in color, on letter size paper (8.5 x 11 inches), double sided. If using A4 paper (210 x 297 mm), configure your printer to scale the content of this document to A4 paper.

Intended Audience

Any person in charge of installing, operating and/or maintaining the Q-Spot 260-LED should read the Guide that shipped with it and this manual in their entirety before installing, operating or maintaining this product.

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Document Revision

The Q-Spot 260-LED User Manual Rev. 02 supersedes all previous versions of this manual. Please discard any older versions of this manual you may have, whether in printed or electronic format, and replace them with this version.

Fixture at a Glance

Use on Dimmer	X	Auto Programs	P
Outdoor Use	X	Auto-ranging Power Supply	P
Sound Activated	P	Replaceable Fuse	P
DMX	P	User Serviceable	X
Master/Slave	P	Duty Cycle	X

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1. Before you Begin

What is Included

- One Q-Spot 260-LED
- One IEC power cord with Edison plug
- Two mounting brackets
- Warranty card
- Quick Reference Guide

Unpacking Instructions

Immediately upon receiving a fixture, carefully unpack the box. Check the box contents to ensure that all parts are present and that they are in good condition. If any part appears damaged from shipping, or if the box shows signs of mishandling, notify the shipper immediately. In addition, retain the box and all the packing material for inspection.

In any event, save the carton and all packing material because, in case that you have to return the fixture to the factory, you will have to do so in its original box, with its original packing. See the *Claims* section in the *Technical Information* chapter.

Text Conventions

Convention	Meaning
1~512	A range of values
50/60	A set of mutually exclusive values in the text
[10]	A DIP switch to be configured
Claims	A fixture function, a new term, a section or a chapter
"COLORado™ UM"	The name of another publication or manual
<SET>	A button to be pressed on the fixture's control panel
Settings	A menu option that can be selected but not modified
MENU > Settings	A sequence of menu options to be followed
[1~10]	A range of menu values of which one can be selected
Yes/No	A set of mutually exclusive menu options to choose
ON	A value to be entered or selected

Icons

Icons	Meaning
	This icon indicates critical installation, configuration or operation information. Failure to comply with this information may render the fixture partially or completely inoperative, damage third-party equipment, or cause harm to the user.
	This icon indicates important installation or configuration information. Failure to comply with this information may prevent the fixture from functioning correctly.
	This icon indicates useful, although non-critical information.

The term "DMX" used throughout this document refers to the USITT DMX512-A transmission protocol.

Safety Notes

Please read the following notes carefully because they include important safety information about the installation, usage and maintenance of this product.

It is important to read all these notes before starting to work with this product.

There are no user serviceable parts inside the Q-Spot 260-LED. Any reference to servicing this unit you may find from now on in this User Manual will only apply to properly CHAUVET® certified technicians. Do not open the housing or attempt any repairs unless you are one of them.

Please refer to all applicable local codes and regulations for proper installation of the Q-Spot 260-LED.

Keep this manual for future consultation. If you sell the Q-Spot 260-LED to another user, make sure that they also receive this manual.

Personal Safety

- Avoid direct eye exposure to the light source while the fixture is on.
- Always disconnect the Q-Spot 260-LED from its power source before servicing.
- Always connect the Q-Spot 260-LED to a grounded circuit to avoid the risk of electrocution.

Mounting and Rigging

- This product is for indoor use only! To prevent risk of fire or shock, do not expose this product to rain or moisture.
- Make sure there are no flammable materials close to the fixture(s) while operating.
- When hanging this fixture, always secure it to a fastening device using a safety cable (not provided).

Power and Wiring

- Always make sure that you are connecting the Q-Spot 260-LED to the proper voltage, as per the specifications in this manual or on the product's sticker.
- Never connect the Q-Spot 260-LED to a dimmer pack.
- Make sure that the power cable is not cracked, crimped or damaged.
- Never disconnect the fixture by pulling or tugging on the power cable.

Operation

- The maximum ambient temperature (Ta) is 104° F (40° C). Do not operate the fixture at a higher temperature.
- In case of a serious operating problem, stop using this product immediately!

In the unlikely event that your Q-Spot 260-LED may require service, please contact CHAUVET® Technical Support.

Expected LED Lifespan

LEDs gradually decline in brightness over time, mostly because of heat. Packaged in clusters, LEDs exhibit higher operating temperatures than in ideal or singular optimum conditions. For this reason, using all color LEDs at their fullest intensity significantly reduces the LEDs' lifespan. Under normal conditions, this lifespan can be of 40,000 to 50,000 hours. If extending this lifespan expectancy is vital, lower the operational temperature by improving ventilation and reducing the external temperature, as well as limiting the overall projection intensity

2. Introduction

Feature Description

The Q-Spot™ 260-LED is a high power moving yoke fixture equipped with a 60-watt white LED. It includes a color wheel with eight slots plus white. It also comes with two gobo wheels, one with seven rotating slot-n-lock gobos plus open, and the other with nine fixed gobos plus open. The easy-access hatch provides for tool-free gobo changes. It also includes remote focus and a rotating 3-face prism.

Features

- 11 or 14-channel DMX-512 LED moving yoke
- Pan: 540° / tilt: 270°
- Color wheel:
  - 8 colors + white
  - Rainbow color spin at variable speeds
- Gobo wheel 1:
  - Gobo shake
  - 9 gobos + open
  - Gobo wheel spin at variable speeds
- Gobo wheel 2:
  - Indexed, rotating gobo wheel with gobo shake
  - 7 slot-n-lock gobos + open
  - 2 glass, 5 metal
  - Rotating gobo wheel spin at variable speeds
- 3-facet, high-speed rotating prism at variable speeds
- Variable electronic shutter (for strobing)
- Variable electronic dimmer (0 – 100%)
- Remote fixture reset & vector speed channel
- 255 user-programmable steps without DMX controller
- Move-in-black for pan/tilt

Additional Features

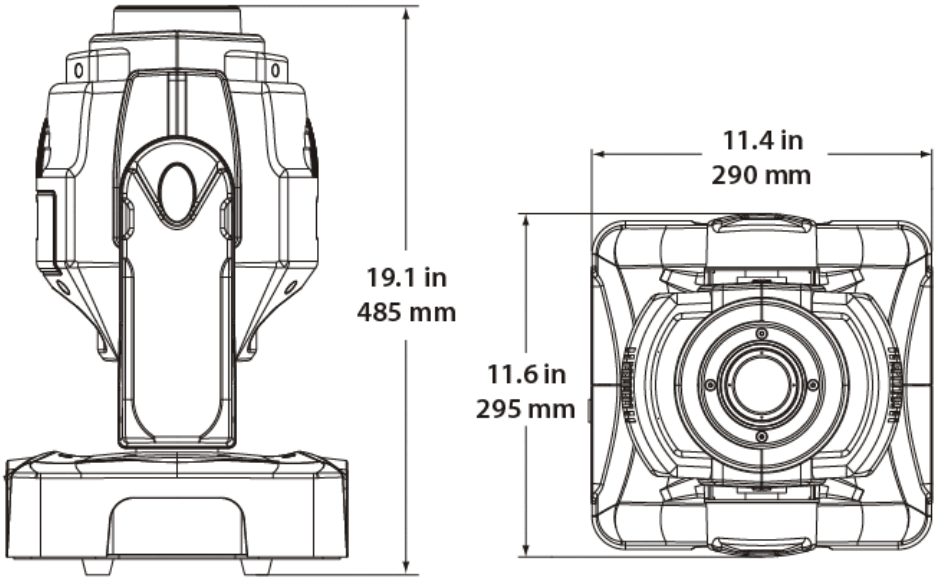
- Built-in automated programs
- Built-in sound activated programs
- High-powered, 60 W (12.6 A) LED
- Easy access door for gobo change
- User-selectable pan/tilt ranges
- Automatic pan & tilt correction
- User-selectable basic or advanced operating DMX modes

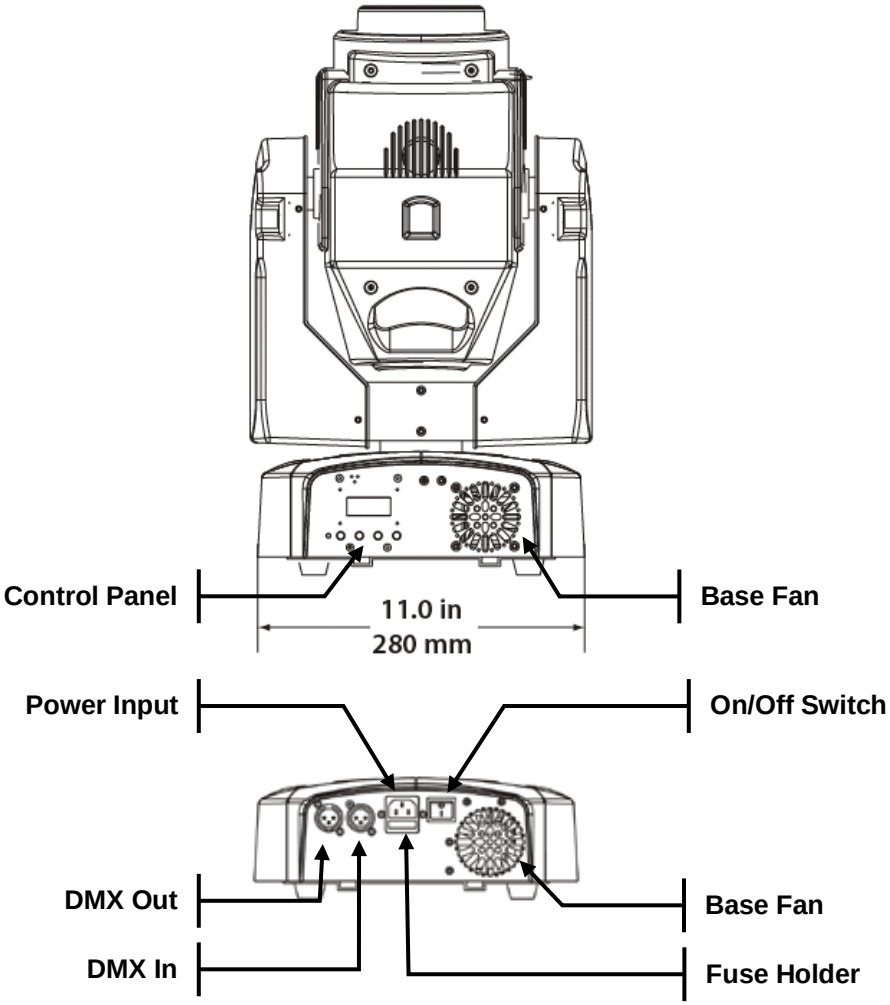
DMX Channel Summary

Advanced	Channel	Function
	1	Pan
	2	Pan Fine
	3	Tilt
	4	Tilt Fine
	5	Pan / Tilt Speed
	6	Color Wheel
	7	Fixed Gobo Wheel (#1)
	8	Rotating Gobo Wheel (#2)
	9	Gobo Rotation
	10	Rotating Prism
	11	Focus
	12	Dimmer
	13	Strobe
	14	Control

Basic	Channel	Function
	1	Pan
	2	Tilt
	3	Color Wheel
	4	Fixed Gobo Wheel (#1)
	5	Rotating Gobo Wheel (#2)
	6	Gobo Rotation
	7	Rotating Prism
	8	Focus
	9	Dimmer
	10	Strobe
	11	Control

Product Overview





3. Setup

AC Power

The Q-Spot 260-LED has an auto-ranging power supply that can work with an input voltage range of 100~240 VAC, 50/60 Hz.

Make sure that you are connecting this product to the proper voltage, as per the specifications in this guide, the product's user manual or on the product's sticker.

Always connect the Q-Spot 260-LED to a protected circuit with an appropriate electrical ground to avoid the risk of electrocution or fire.

To determine the power requirements for the Q-Spot 260-LED see the label affixed to the side of the fixture. Alternatively, you may refer to the technical specifications chart in the *Technical Information* chapter of this manual.

The listed current rating indicates the maximum current draw during normal operation. Please refer to the *Sizing the Circuit Breakers* section in the *Appendix* chapter of this manual.

Never connect the Q-Spot 260-LED to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel serves only as a 0 to 100% switch.

AC Plug

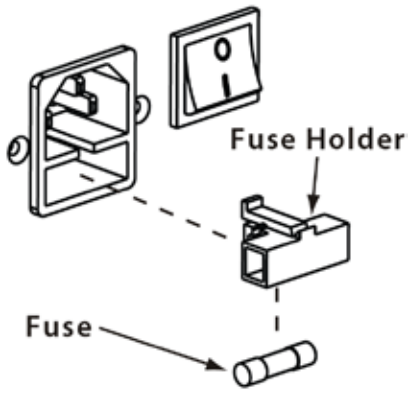
The Q-Spot 260-LED comes with a power input cord terminated with an IEC connector on one end an Edison plug on the other end (US market). If the power cord that came with your fixture has no plug or you need to change the Edison plug, use the table below to wire the new plug.

Connection	Wire (US)	Wire (Europe)	Pin
AC Live	Black	Brown	1
AC Neutral	White	Blue	2
AC Ground	Green/Yellow	Green/Yellow	3

Fuse Replacement

1) With a flat head screwdriver, wedge the fuse holder out of its housing and remove the blown fuse from the holder.
2) Replace the blown fuse with a fuse of the exact same type and rating.
3) Insert the fuse holder back in its place, and reconnect power.

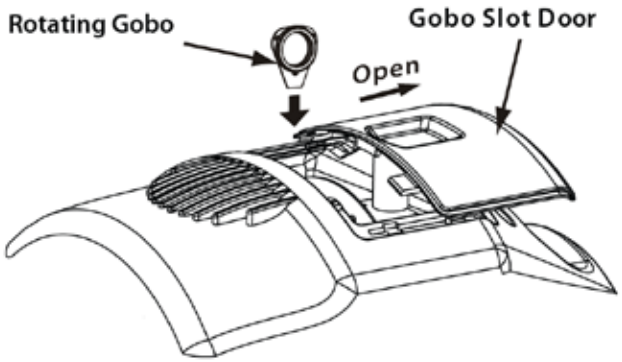
Make sure to disconnect the fixture's power cord before replacing a blown fuse, and always replace it with a fuse of the same type and rating.



Gobo Replacement

1) Unlock the gobo cover and slide it away.
2) Take the target gobo out of the gobo wheel.
3) Install the new rotating gobo.
4) Slide and lock the gobo cover.

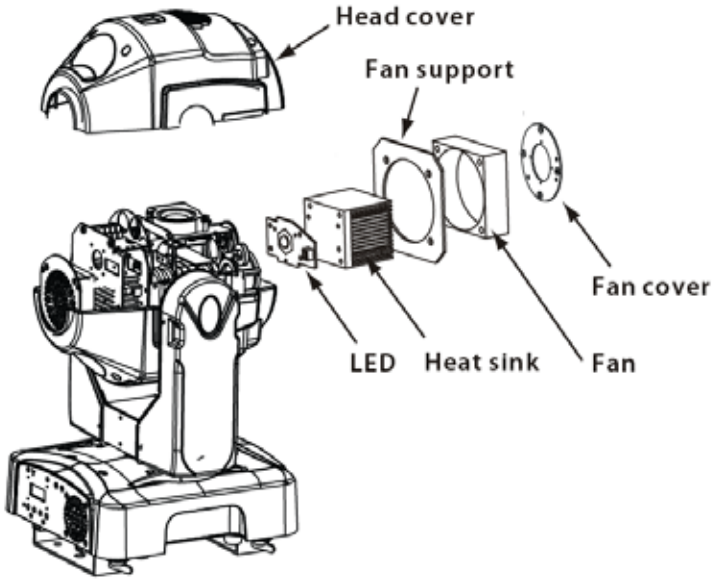
Make sure to disconnect the fixture's power cord before replacing the gobo.



LED Replacement

1) Remove the head cover by loosening its screws.
2) Remove the fan cover, the head fan, the fan support and the heat sink in this order.
3) Disconnect and remove the LED.
4) Mount and connect the new LED.
5) Reverse steps "2" and "1".

Make sure to disconnect the fixture's power cord before replacing the LED.



DMX Linking

You may link the Q-Spot 260-LED to a DMX controller using a standard DMX serial connection. If using other DMX compatible fixtures with the Q-Spot 260-LED, it is possible to control them individually with a single DMX controller.

It is also possible to run several DMX compatible fixtures synchronized without a DMX controller in a master/slave operating mode.

If you are not familiar with the DMX standard, please refer to the *DMX Primer* and *DMX Connectivity* sections in the *Appendix* chapter of this manual.

DMX Modes

The Q-Spot 260-LED uses the standard DMX data connection for its DMX modes, Advanced and Basic. Refer to the *Operation* Instructions chapter to learn how to configure the Q-Spot 260-LED to work in these modes. The *DMX Values* section will give you detailed information regarding the above-mentioned DMX modes.

Master/Slave Linking

The Master/Slave mode allows a Q-Spot 260-LED fixture (the master) running a preconfigured program to control several other Q-Spot 260-LED fixtures (the slaves) without requiring a DMX controller. In this mode, all the slave fixtures will operate in unison with the master fixture.

When in Master/Slave mode, the Q-Spot 260-LED units link to each other using the standard DMX connection.

If you are not familiar with the Master/Slave connectivity, please refer to the *DMX Primer* and *DMX Connectivity* sections in the *Appendix* chapter of this manual.

The *Operation* chapter of this manual provides detailed instructions on how to configure the Master and Slave units.

Mounting

Read the safety notes at the beginning of this guide and follow their recommendations before mounting this product.

Orientation

Always mount this fixture in any safe position while making sure that there is adequate room around it for ventilation.

Make sure to mount this fixture away from any flammable material as indicated in the *Safety Notes*.

Rigging

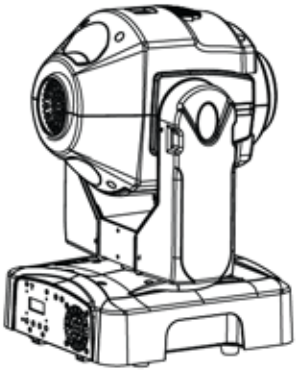
CHAUVET® recommends following the general guidelines below when mounting the Q-Spot 260-LED.

- When selecting an installation location, consider ease of access to the fixture for operation, programming adjustments and routine maintenance.
- Never mount the fixture in places where rain, high humidity, extreme temperature changes or restricted ventilation may affect it.
- Make sure that the location where you are mounting the fixture can support its weight. Please see the *Technical Specifications* section of this manual for the weight requirement of this fixture.

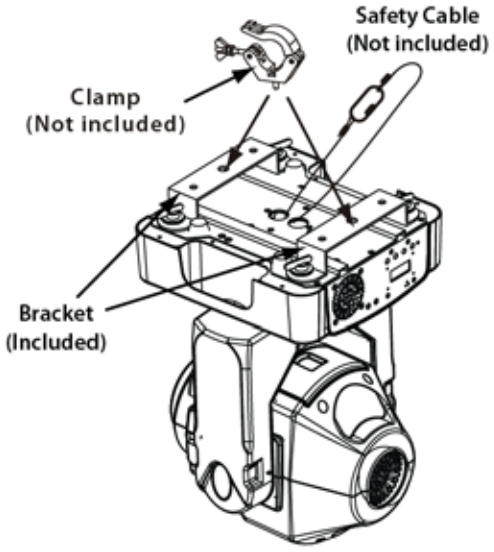
Procedure

The Q-Spot 260-LED comes with two mounting brackets to which you can attach “C” or “O” clamps. You must supply your own “C” or “O” clamps and make sure that they are capable of supporting the weight of this fixture. You will have to use two mounting points per fixture. In addition, you may mount this product on the floor or a platform, provided it is stable and it can support the weight of the fixtures on it.

Product Mounting Diagram



Upright Mounting

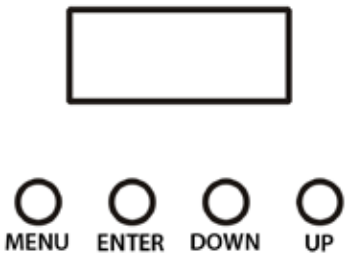


Overhead Mounting

4. Operation

Control Panel Description

Button	Function
<MENU>	Exits from the current menu or function
<ENTER>	Enables the currently displayed menu or sets the currently selected value in to the current function
<UP>	Navigates upwards through the menu list and increases the numeric value when in a function
<DOWN>	Navigates downwards through the menu list and decreases the numeric value when in a function



Control Options

You can set the Q-Spot 260-LED start address in the 001~512 DMX range. This allows for the control of up to 36 fixtures in the 14-channel **ADVANCED** DMX mode and up to 46 fixtures in the 11-channel **BASIC** DMX mode. The Q-Spot 260 LED does not support ID Addressing.

Programming

Carry out all the programming procedures indicated below from the control panel. Refer to the *Menu Map* page to learn how the menu options relate to each other.

Use **<ENTER>** and **<MENU>** to change levels in the *Menu Map*. This is equivalent to move right and left respectively. Use **<UP>** and **<DOWN>** to move vertically within the *Menu Map* options.

DMX Operation

1) Select DMX operation
   a) Go to ***MENU > INTRO > RUN***
   b) Select **DMX512**
2) Select a DMX mode
   a) Go to ***MENU > INTRO > CHANNELS***
   b) Select **BASIC** or **ADVANCED**
3) Select the starting address
   a) Go to ***MENU > INTRO > ADDRESS***
   b) Select a starting address, **001 ~ 498** (Advanced) or **001~501** (Basic)

Stand-alone Operation

1) Go to ***MENU > INTRO > RUN***
2) Select a stand-alone operation mode (**AUTO 1, AUTO 2, SOUND 1, SOUND 2, CUSTOM** or **TEST**)

Master/Slave Operation

1) Configure the Master fixture
   a) Select a stand-alone mode, as indicated above
2) Configure the Slave fixtures
   a) Go to ***MENU > INTRO > RUN***
   b) Select **SLAVE**

Of all the stand-alone operation modes indicated above, only "CUSTOM" is editable (see *Edit Custom*).

Display Mode

1) Go to ***MENU > INTRO > DISPLAY***
2) Select a display mode (**60 CLOSE** or **BRIGHT**)

When in the "60 CLOSE" setting, the display backlight will turn off after 60 s.
When in the "BRIGHT" setting, the display backlight will stay on.

Software Version

1) Go to ***MENU > INTRO > INFO***
2) The display will show the installed software version.

Keylock

1) Go to ***MENU > INTRO > KEYLOCK***
2) Select **YES** or **NO**

When in the "YES" setting, the user will have to enter the password after 30 seconds of control panel inactivity or each time he/she turns the fixture on.

The default (non-modifiable) password is <UP>, <DOWN>, <UP>, <DOWN> and <ENTER>.

Movement Inversion

1) Go to ***MENU > INVERT > PAN***
2) Select a movement mode (**NORMAL** or **REVERSE**)
3) Go to ***MENU > INVERT > TILT***
4) Select a movement mode (**NORMAL** or **REVERSE**)
5) Go to ***MENU > INVERT > USE***
6) Select **YES** to activate the new settings or **NO** to stop using them.

Color Wheel Movement

1) Go to ***MENU > INVERT > COLOR***
2) Select a movement mode (**STEP** or **LINEAR**)
3) Go to ***MENU > INVERT > USE***
4) Select **YES** to activate the new setting or **NO** to stop using it.

Edit Custom

1) Go to ***MENU > EDIT > STEP***
2) Select a programming step (**000~255**)
3) Go to ***MENU > EDIT > PAN***
4) Select a pan value (**000~255**)
5) Go to ***MENU > EDIT > TILT***
6) Select a tilt value (**000~255**)
7) Go to ***MENU > EDIT > XY SPEED***
8) Select a tilt/pan movement speed (**000~255**)
9) Go to ***MENU > EDIT > COLOR***
10) Select a color wheel position (**000~255**) as per the *DMX Values* table
11) Go to ***MENU > EDIT > GOBO 1***
12) Select a fixed gobo (**000~255**) as per the *DMX Values* table
13) Go to ***MENU > EDIT > GOBO 2***
14) Select a rotating gobo (**000~255**) as per the *DMX Values* table
15) Go to ***MENU > EDIT > GOBO 2 ROT***
16) Select a rotating gobo mode (**000~255**) as per the *DMX Values* table
15) Go to ***MENU > EDIT > PRISM***
16) Select a rotating prism mode (**000~255**) as per the *DMX Values* table
17) Go to ***MENU > EDIT > FOCUS***
18) Select a focus position (**000~255**)
19) Go to ***MENU > EDIT > DIMMER***
20) Select a dimmer setting (**000~255**)
21) Go to ***MENU > EDIT > STROBE***
22) Select a strobe setting (**000~255**) as per the *DMX Values* table
23) Go to ***MENU > EDIT > TIME***
24) Select the duration of this step (**000~255**)
25) Go to ***MENU > EDIT > USE***
26) Select **YES** to save the settings for this step or **NO** to delete them.
27) Repeat steps "3" to "26" for the other steps

To repeat the Custom steps in an endless loop mode, configure the "TIME" setting of the last step as "0".

Range Limitation

1) Go to ***MENU > RANGE > P/START***
2) Select the starting point for the limited pan (**000~255**)
3) Go to ***MENU > RANGE > P/FINISH***
4) Select the finishing point for the limited pan (**000~255**)
5) Go to ***MENU > RANGE > T/START***
6) Select the starting point for the limited tilt (**000~255**)
7) Go to ***MENU > RANGE > T/FINISH***
8) Select the finishing point for the limited tilt (**000~255**)
9) Go to ***MENU > RANGE > USE***
10) Select **YES** to activate the new settings or **NO** to stop using them.

Move-in Black

1) Go to ***MENU > SPECIAL > BLACK***
2) Select **YES** to enable the 3 seconds delay or **NO** to make the blackout immediate.

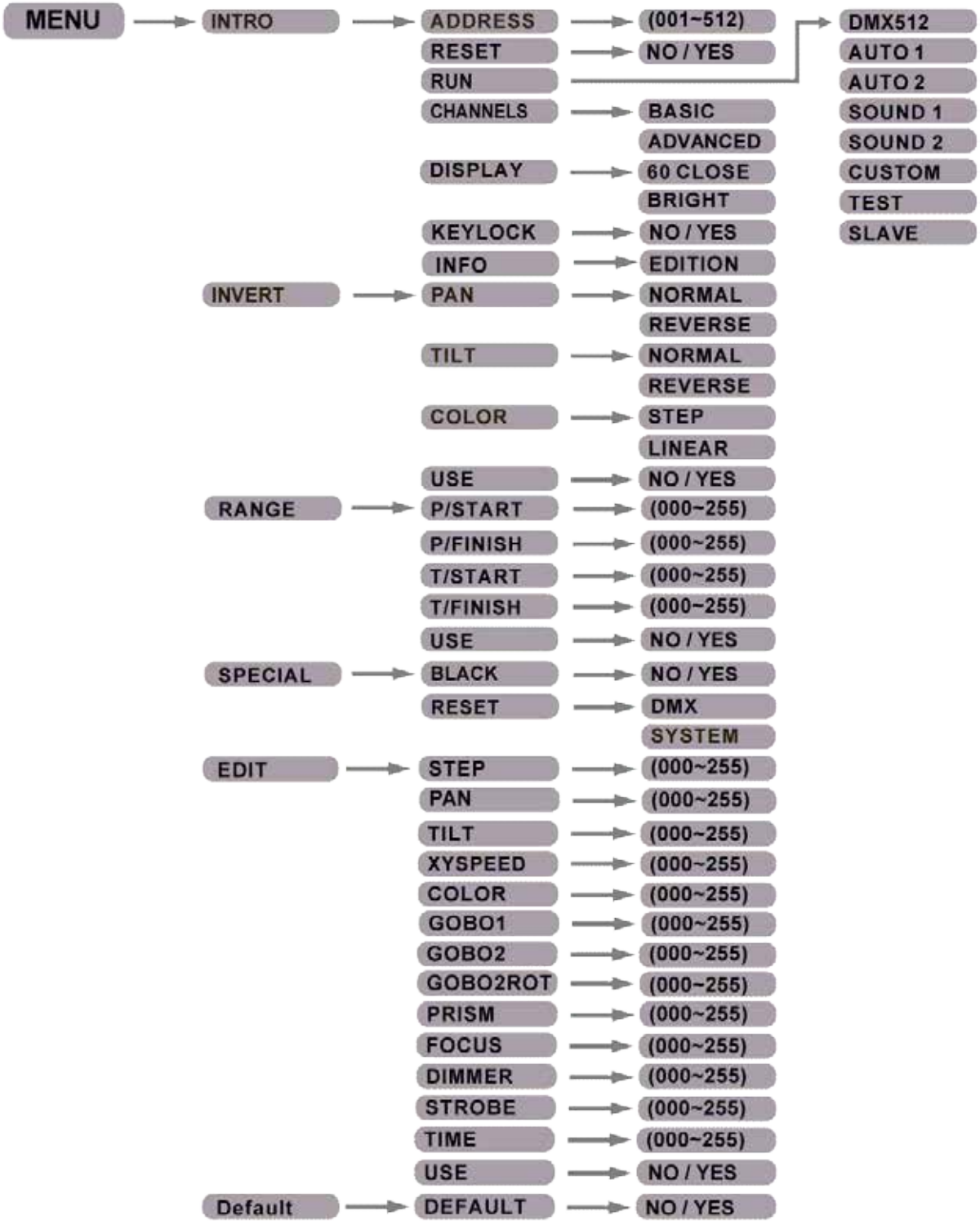
Reset Control

1) Go to ***MENU > SPECIAL > RESET***
2) Select **DMX** to enable the DMX controller to reset the fixture (**Control** function) or **NO** to reset the fixture only from the control panel.

System Default

1) Go to ***MENU > DEFAULT > DEFAULT***
2) Select **YES** to default the fixture to its original factory settings.

Q-Spot 260-LED Menu Map



DMX Values

ADVANCED

Channel	Function	Value	Percent/Setting
1	**Pan**	000 ó 255	0~540º
2	**Pan Fine**	000 ó 255	Fine movement control
3	**Tilt**	000 ó 255	0~270º
4	**Tilt Fine**	000 ó 255	Fine movement control
5	**Pan/Tilt Speed**	000 ó 255	Fast~Slow
6	**Color Wheel**	000 ó 016	White
		017 ó 033	Red
		034 ó 050	Yellow
		051 ó 067	Magenta
		068 ó 084	Green
		085 ó 101	Orange
		102 ó 118	Blue
		119 ó 135	Light blue
		136 ó 152	Light green
		153 ó 255	Rainbow or linear effect
7	**Fixed Gobo Wheel**	000 ó 009	No gobo
		010 ó 019	Gobo 1
		020 ó 029	Gobo 2
		030 ó 039	Gobo 3
		040 ó 049	Gobo 4
		050 ó 059	Gobo 5
		060 ó 069	Gobo 6
		070 ó 079	Gobo 7
		080 ó 089	Gobo 8
		090 ó 099	Gobo 9
		100 ó 114	Shaking gobo 9
		115 ó 129	Shaking gobo 8
		130 ó 144	Shaking gobo 7
		145 ó 159	Shaking gobo 6
		160 ó 174	Shaking gobo 5
		175 ó 189	Shaking gobo 4
		190 ó 204	Shaking gobo 3
		205 ó 219	Shaking gobo 2
		220 ó 234	Shaking gobo 1
		235 ó 255	Flow effect
8	**Rotating Gobo Wheel**	000 ó 009	No gobo
		010 ó 019	Gobo 1
		020 ó 029	Gobo 2
		030 ó 039	Gobo 3
		040 ó 049	Gobo 4
		050 ó 059	Gobo 5
		060 ó 069	Gobo 6
		070 ó 079	Gobo 7
		080 ó 099	Shaking gobo 7
		100 ó 119	Shaking gobo 6
		120 ó 139	Shaking gobo 5
		140 ó 159	Shaking gobo 4
		160 ó 179	Shaking gobo 3
		180 ó 199	Shaking gobo 2
		200 ó 219	Shaking gobo 1
		220 ó 255	Flow effect
9	**Gobo Rotation**	000 ó 060	Gobo indexing
		061 ó 158	CW rotation (Slow~Fast)
		159 ó 255	CCW rotation (Slow~Fast)
10	**Rotating Prism**	000	No function
		001 ó 004	Prism engaged (no rotation)
		005 ó 127	CCW rotation (Slow~Fast
		128 ó 132	No function
		133 ó 255	CW rotation (Slow~Fast)
11	**Focus**	000 ó 255	
12	**Dimmer**	000 ó 255	Dark~Bright

(Continues on next page)

ADVANCED (Cont.)

Channel	Function	Value	Percent/Setting
13	**Strobe**	000 ó 031	Close
		032 ó 063	Open
		064 ó 095	Strobe (Slow~Fast)
		096 ó 127	Open
		128 ó 159	Pulse strobe effect (Slow~Fast)
		160 ó 191	Open
		192 ó 223	Random strobe effect (Slow~Fast)
		224 ó 255	Open
14	**Control**	000 ó 019	No function
		020 ó 039	Pan/tilt black activation (3 s delay)
		040 ó 059	Pan/tilt black deactivation (3 s delay)
		060 ó 079	Auto 1 (3 s delay)
		080 ó 099	Auto 2 (3 s delay)
		100 ó 119	Sound 1(3 s delay)
		120 ó 139	Sound 2(3 s delay)
		140 ó 159	Custom
		160 ó 179	Test (3 s delay)
		180 ó 199	No function
		200 ó 219	Reset (3 s delay)
		220 ó 255	No function

BASIC

Channel	Function	Value	Percent/Setting
1	**Pan**	000 ó 255	0~540º
2	**Tilt**	000 ó 255	0~270º
3	**Color Wheel**	000 ó 016	White
		017 ó 033	Red
		034 ó 050	Yellow
		051 ó 067	Magenta
		068 ó 084	Green
		085 ó 101	Orange
		102 ó 118	Blue
		119 ó 135	Light blue
		136 ó 152	Light green
		153 ó 255	Rainbow or linear effect
4	**Fixed Gobo Wheel**	000 ó 009	No gobo
		010 ó 019	Gobo 1
		020 ó 029	Gobo 2
		030 ó 039	Gobo 3
		040 ó 049	Gobo 4
		050 ó 059	Gobo 5
		060 ó 069	Gobo 6
		070 ó 079	Gobo 7
		080 ó 089	Gobo 8
		090 ó 099	Gobo 9
		100 ó 114	Shaking gobo 9
		115 ó 129	Shaking gobo 8
		130 ó 144	Shaking gobo 7
		145 ó 159	Shaking gobo 6
		160 ó 174	Shaking gobo 5
		175 ó 189	Shaking gobo 4
		190 ó 204	Shaking gobo 3
		205 ó 219	Shaking gobo 2
		220 ó 234	Shaking gobo 1
		235 ó 255	Flow effect

BASIC (Cont.)

Channel	Function	Value	Percent/Setting
5	**Rotating Gobo Wheel**	000 ó 009	No gobo
		010 ó 019	Gobo 1
		020 ó 029	Gobo 2
		030 ó 039	Gobo 3
		040 ó 049	Gobo 4
		050 ó 059	Gobo 5
		060 ó 069	Gobo 6
		070 ó 079	Gobo 7
		080 ó 099	Shaking gobo 7
		100 ó 119	Shaking gobo 6
		120 ó 139	Shaking gobo 5
		140 ó 159	Shaking gobo 4
		160 ó 179	Shaking gobo 3
		180 ó 199	Shaking gobo 2
		200 ó 219	Shaking gobo 1
		220 ó 255	Flow effect
6	**Gobo Rotation**	000 ó 060	Gobo indexing
		061 ó 158	Clockwise rotating from slow to fast
		159 ó 255	Anti-clockwise rotating from slow to fast
7	**Rotating Prism**	000	No function
		001 ó 004	Prism engaged (no rotation)
		005 ó 127	CCW rotation (Slow~Fast)
		128 ó 132	No function
		133 ó 255	CW rotation (Slow~Fast)
8	**Focus**	000 ó 255	
9	**Dimmer**	000 ó 255	Dark~Bright
10	**Strobe**	000 ó 031	Close
		032 ó 063	Open
		064 ó 095	Strobe: Slow~Fast
		096 ó 127	Open
		128 ó 159	Pulse strobe effect: Slow~Fast
		160 ó 191	Open
		192 ó 223	Random strobe effect: Slow~Fast
		224 ó 255	Open
11	**Control**	000 ó 019	No function
		020 ó 039	Pan/tilt black activated (activated after 3 s)
		040 ó 059	Pan/tilt black deactivated (activated after 3 s)
		060 ó 079	Auto 1 (activated after 3 s)
		080 ó 099	Auto 2 (activated after 3 s)
		100 ó 119	Sound 1(activated after 3 s)
		120 ó 139	Sound 2(activated after 3 s)
		140 ó 159	Custom
		160 ó 179	Test (activated after 3 s)
		180 ó 199	No function
		200 ó 219	Reset (activated after 3 s)
		220 ó 255	No function

5. Technical Information

General Maintenance

To maintain optimum performance and minimize wear, the user should clean the light fixtures frequently. Usage and environment are contributing factors in determining the cleaning frequency. As a rule, the user should clean the fixtures at least twice a month. Dust build up reduces light output performance and can cause overheating. This can lead to reduced light source life and increased mechanical wear.

CHAUVET® recommends cleaning the fixture's external optics with a soft cloth using normal glass cleaning fluid.

To clean a fixture, follow the below recommendations:

- Unplug the fixture from power.
- Wait until the fixture is cold.
- Use a vacuum (or dry compressed air) and a soft brush to remove dust collected on the external vents and reachable internal components.
- Clean all external optics and glass surfaces with a mild solution of glass cleaner or isopropyl alcohol, and a soft, lint free cotton cloth or a lens cleaning tissue.
- Apply the solution directly to the cloth or tissue and drag any dirt and grime to the outside of the lens.
- Gently polish the external glass surfaces until they are free of haze and lint.
- When cleaning units with a movable mirror, you should keep the contact with the mirror surface to a minimum to avoid scratching or damaging it.

Always dry the external optics and glass surfaces carefully after cleaning them.

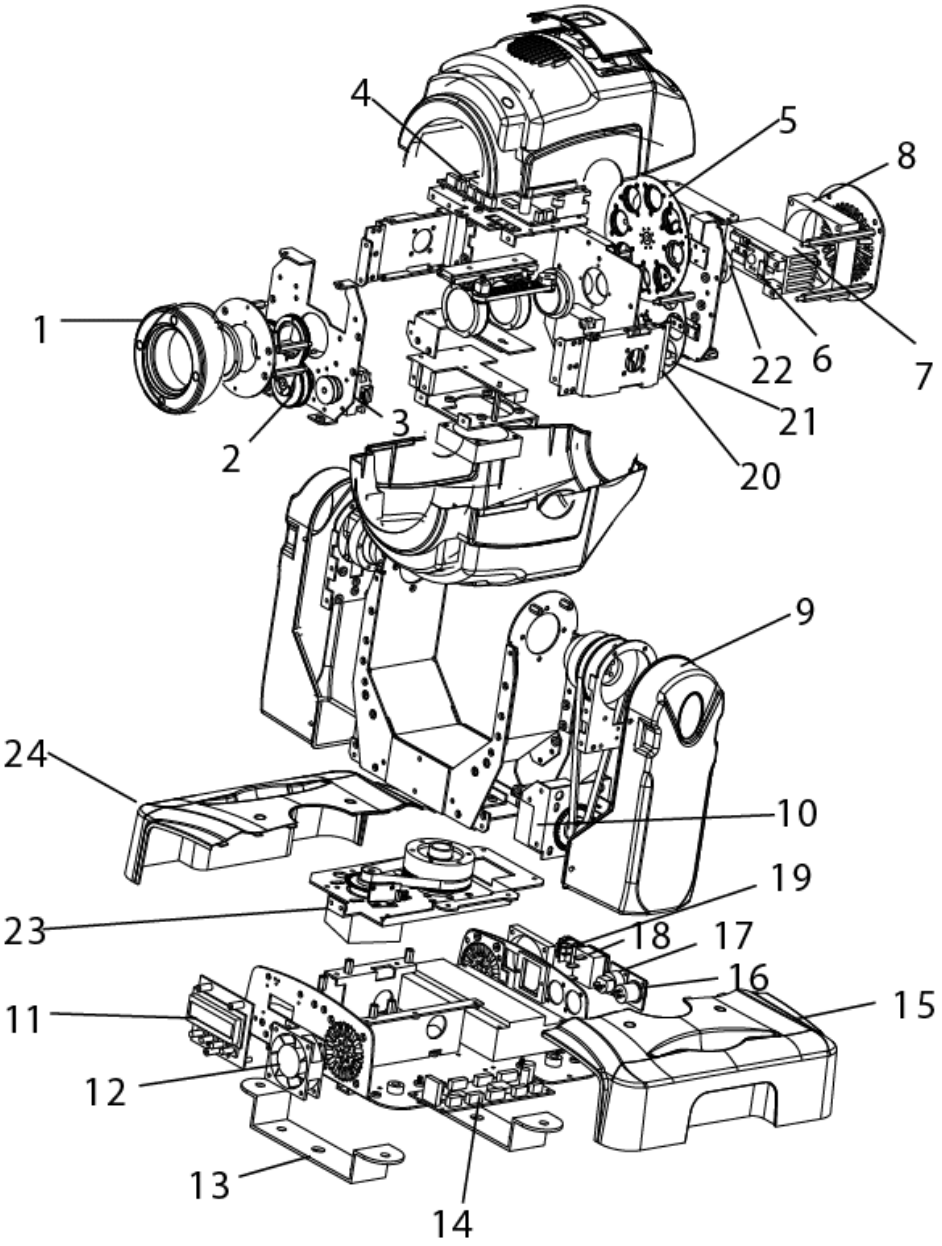
If the fixture has one or more fans, refrain from spinning them using compressed air.

Q-Spot 260-LED Troubleshooting Guide

Symptom	Cause(s)	Action(s)
Fixture is on LED is off	LED connection problems	Reconnect LED
	Faulty LED	Replace LED
	Faulty LED driver	Replace LED driver
Fixture is on Head fan is off	Faulty head fan	Replace head fan
	Faulty LED driver	Replace LED driver
Fixture is on Base fan is off	Faulty base fan	Replace base fan
	Faulty power supply	Replace power supply
Color wheel problem	Faulty color wheel motor	Replace color wheel motor
	Faulty sensor board	Replace sensor board
	Faulty X/Y control board	Replace X/Y control board
Prism problem	Faulty prism motor	Replace prism motor
	Faulty prism belt	Replace prism belt
	Faulty X/Y control board	Replace X/Y control board
Gobo wheel problem	Faulty gobo wheel motor	Replace gobo wheel motor
	Blocked gobo wheel	Unblock
	Faulty sensor board	Replace sensor board
	Faulty X/Y control board	Replace X/Y control board
Pan movement problem	Faulty pan motor	Replace pan motor
	Faulty pan belt	Replace pan belt
	Faulty magnetic sensor	Replace magnetic sensor
	Faulty optical sensor	Replace optical sensor
	Faulty X/Y control board	Replace X/Y control board
Tilt movement problem	Faulty tilt motor	Replace tilt motor
	Faulty tilt belt	Replace tilt belt
	Faulty magnetic sensor	Replace magnetic sensor
	Faulty optical sensor	Replace optical sensor
	Faulty X/Y control board	Replace X/Y control board
Circuit breaker/fuse keeps tripping/blowing	Excessive circuit load	Check total load placed on the electrical circuit
	Short circuit along the power wires	Check for a short in the electrical wiring
Fixture does not power up	No power	Check for power on power outlet
	Loose or damaged power cord	Check power cord
	Blown fuse	Replace fuse
	Faulty On/Off switch	Replace On/Off switch
	Faulty internal power supply	Replace internal power supply
Fixture does not respond to DMX	Wrong DMX addressing	Check control panel and unit addressing
	Damaged DMX cables	Check DMX cables
	Wrong polarity on the controller	Check polarity switch settings on the controller
	Loose DMX cables	Check cable connections
	Faulty DMX interface	Replace the display board
	Faulty Display board	Replace the display board
DMX signal problems	Non DMX cables	Use only DMX compatible cables
	Bouncing signals	Install terminator as suggested
	Long cable / low level signal	Install an optically coupled DMX splitter right after the fixture with the strong signal
	Too many fixtures	Install an optically coupled DMX splitter after unit #32 or before
	Interference from AC wires	Keep DMX cables separated from power cables or fluorescent/black lights

If you still experience technical problems after trying the above solutions, contact CHAUVET® Technical Support.

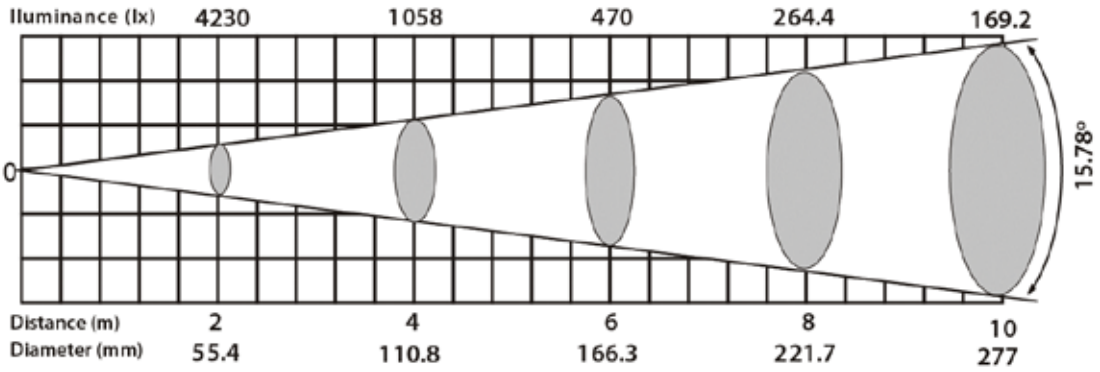
Exploded View



Parts List

Item	Description	CHAUVET Part Number
1	Front lens cover	P114-Q260LFL
2	Prism	P114-Q260PRSM
3	Prism motor	P113-Q260LP
4	Motor driver board	P188-Q260LED
5	Rotating gobo wheel	P169-Q260LED
6	LED board	P222-Q260LED
7	Heat sink	P222-Q260LHS
8	Moving head fan	P131-MVNHD
9	Arm cover	P300-Q260LA
10	Tilt motor	P113-Q260LEDT
11	Display/main board	P173-Q260LED
12	Base fan	P131-24V15A
13	Mounting bracket	P125-Q260LED
14	X/Y control board	P175-Q260LED
15	Right base cover	P300-Q260BB
16	3-pin XLR A socket	P135-XLRA
17	3-pin XLR B socket	P135-XLRB
18	IEC power input and fuse socket	P190-Q260LED
19	On/Off switch	P100-SWTCH
20	Fixed gobo wheel	P169-Q260LEDS
21	Color wheel	P149-Q260LED
22	Wheel motor	P113-Q260LG
23	Pan motor	P113-Q260LEDP
24	Left base cover	P300-Q260BB
	Not Shown	
25	Power supply	P142-Q260LED
26	Tilt belt	P118-4863M
27	Pan belt	P118-3M291
28	Rotating gobo wheel belt	P118-Q260LRG
29	Fixed gobo wheel belt	P118-Q260LSG
30	Color wheel belt	P118-Q260LC
31	Prism belt	P118-Q260LP
32	Fixed gobo wheel motor	P113-Q260LSG
33	Color wheel motor	P113-Q260LC

Photometrics



Returns Procedure

The user must send the merchandise prepaid, in the original box, and with its original packing and accessories. CHAUVET® will not issue call tags.

Call CHAUVET® and request a Return Merchandise Authorization Number (RMA #) before shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return.

The user must clearly label the package with a Return Merchandise Authorization Number (RMA #). CHAUVET® will refuse any product returned without an RMA #.

DO NOT write the RMA # directly on the box. Instead, write it on a properly affixed label.

Once you are given an RMA #, please include the following information on a piece of paper inside the box:

- Your name
- Your address
- Your phone number
- The RMA #
- A brief description of the symptoms

Be sure to pack the fixture properly. Any shipping damage resulting from inadequate packaging will be the customer's responsibility. As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

CHAUVET® reserves the right to use its own discretion to repair or replace returned product(s).

Claims

The carrier is responsible for any damage incurred during shipping. Therefore, if the received merchandise appears to have damages caused during shipping, the customer must submit the damage report and any related claims with the carrier, not CHAUVET®. The customer must submit the report upon reception of the damaged merchandise. Failure to do so in a timely manner may invalidate the customer's claim with the carrier.

For other issues such as missing components or parts, damage not related to shipping, or concealed damage, the customer must make claims to CHAUVET® within seven (7) days of receiving the merchandise.

Contact Us

World Wide

General Information

CHAUVET®
5200 NW 108th Avenue
Sunrise, FL 33351
Voice: (954) 929-1115
Fax: (954) 929-5560
Toll free: (800) 762-1084

Technical Support

Voice: (954) 929-1115 (Press **4**)
Fax: (954) 929-5560 (Attention: Service)

World Wide Web

www.chauvetlighting.com

It's Green Thinking

Technical Specifications

Weight & Dimensions

Length	11.4 in (290 mm)
Width	11.6 in (295 mm)
Height	19.1 in (485 mm)
Weight	30 lbs (13.6 kg)

Power

Auto-ranging	100~240 V, 50/60 Hz
Power Consumption @ 120 V, 60 Hz	150 W, 1.2 A (operation), 0.1 A (inrush)
Power Consumption @ 240 V, 50 Hz	145 W, 0.6 A (operation), 0.1 A (inrush)

Light Source

LED	60 W, 50,000 hours
Quantity	1

Photo Optic

Luminance at 2 m	5,400 lux
Beam angle	15°

Control & Programming

Data input	locking 3-pin XLR male socket
Data output	locking 3-pin XLR female socket
Data pin configuration	pin 1 shield, pin 2 (-), pin 3 (+)
Protocols	USITT DMX512-A
DMX Channels	11 and 14

Ordering Information

Q-Spot 260-LED	QSPOT260LED

6. Appendix

DMX Primer

The DMX protocol (USITT DMX512-A) is a networking protocol that enables a universal DMX controller device to control the features of multiple DMX compatible fixtures, whether par cans, wash lights, moving heads, followspots, foggers, proprietary fixture controllers, etc.

As any other networking protocol, the USITT DMX512-A describes the physical medium, the signals and the functions they control.

The Physical Medium

The DMX controller connects to it associated DMX compatible fixtures using a DMX connection. This connection consists of a series of jumps between the DMX controller and the various DMX compatible fixtures, also known as a daisy chain connection. In this type of connection, the DATA OUT of one fixture or the DMX controller connects to the DATA IN of the next fixture, and so on.

Each DMX fixture links to the previous and next DMX fixture or controller using a DMX cable. This type of cable consists of a section of shielded, two-conductor twisted pair cable with one 3-pin XLR male connector on one end and a 3-pin XLR female connector on the other end. The XLR connectors pin-out is as follows: pin 1 is the *Common* (shield), pin 2 is *Signal Negative* (S-) and pin 3 is *Signal Positive* (S+).

The Signals

The DMX signal stream is unidirectional, from the DMX controller to the DMX compatible fixtures. These signals conform to the EIA-485 standard.

The stream of DMX signals consists of 512 individual, sequential channels that form a frame. The DMX controller constantly sends frames of DMX signals to the DMX connection, even if not all of the 512 channels are in use. Because of this constant transmission method, there can be only one DMX controller in a DMX connection. Otherwise, the DMX signals sent by one controller would interfere with the signals sent by the other controller(s).

The Functions

Each DMX channel can have any unitary value in the 000~255 range. Each DMX compatible fixture uses as many consecutive DMX channels as features the user can control. The sequential numbers assigned to each DMX channel (1~512) are also known as DMX addresses.

The function each DMX channel has and the results of assigning a value to each depend on each controlled fixture. Some fixtures only use a single DMX channel, while others may require 15 or more DMX channels to control all their functions.

DMX Configuration

The DMX fixture configuration consists in determining how many channels each fixture will need as well as assigning the corresponding DMX channels to each fixture in order to size correctly the DMX controller.

Personalities

Most DMX fixtures use multiple personalities, each of them requiring a different number of channels, depending on the number of features it enables. The number of DMX channels used by a fixture may vary from only one (usually the general dimmer control) to 15 or more, as mentioned above.

When the job does not require using all the fixture's capabilities, the user can select a more basic personality (less channels), thus allowing the DMX controller to accommodate more DMX fixtures.

Starting Address

For the DMX controller to control each DMX fixture, the user must first configure each fixture's personality. This will determine the number of required channels to control the fixture. Each channel will have a DMX address assigned to it. However, since assigning a particular DMX address to each channel is impractical, the user will only need to configure on each fixture the DMX address that corresponds to the fixture's Channel 1. This is the fixture's starting address. The fixture will automatically assign the other channels to the subsequent DMX addresses.

Once this assignment is complete, and based on the number of channels it uses, the fixture will respond to the DMX signals sent to the range of DMX channels that begins with the starting address.

For example, a fixture that uses six DMX channels and whose starting address is 100, will accept DMX data sent by the DMX controller to channels 100, 101, 102, 103, 104, and 105.

DMX Configuration (Cont.)

Assigning Addresses

The user must carefully assign the starting addresses for each individual fixture to avoid DMX channel overlapping. If the DMX channels do overlap, the affected fixtures could operate erratically.

However, the user may decide to configure two or more similar fixtures with the same personality and starting address. In this case, all the fixtures with the same starting address will operate at unison.

DMX Universes

A DMX universe is the set of DMX compatible fixtures connected to the same DMX daisy chain, which are receiving DMX data from the same DMX controller using the same set of 512 DMX channels.

Although in most cases an installation will consist of only one DMX universe, it could be necessary to define two or more universes because of constrains imposed by the distance or the number of features.

Most DMX controllers support only one universe, although some DMX controllers may support two or more universes. Each universe will have its own separated DMX daisy chain. A DMX compatible fixture can only be part of a single DMX universe.

DMX Connectivity

Connecting the DMX fixtures to a DMX controller in small to medium installations is usually a rather simple operation that requires a minimum of tools and some planning (not including the actual fixture rigging and configuration).

However, in large installations it may be necessary to plan carefully the position and cabling of each fixture to avoid unexpected problems.

Fixture Location

The order in which the fixtures connect to the DMX controller is not important and it has no effect on how a controller communicates to each fixture. However, the user should always define a physical location for the fixtures that provides for the easiest and most direct cabling to the controller and other fixtures.

Number of Fixtures

When using a DMX controller, the combined number of channels required by all the fixtures on the serial data link determines the number of fixtures the DMX controller has to support. Conversely, the number of onboard sliders, page buttons and fixture buttons limits the number of discrete DMX channels a DMX controller can support.

To comply with the EIA-485 standard, which is the base for the USITT DMX512-A protocol, do not connect more than 32 fixtures without using a DMX optically-isolated splitter. Doing otherwise may result in deterioration of the digital DMX signal.

DMX Data Cabling

You must use DMX compliant data cables to link two or more DMX compatible fixtures. You may purchase CHAUVET® certified DMX cables directly from a dealer/distributor or construct your own cable.

USITT recommends limiting the total length of the DMX cable (from the first fixture/controller to the last fixture) to 300~455 m (985~1,500 ft).

Making your Own DMX Cable

If you choose to create your own DMX cable, make sure to use data-grade cables that can carry a high frequency signal and are less prone to electromagnetic interference. Use a Belden© 9841 or equivalent cable, which meets the specifications for EIA RS-485 applications.

Do not use standard microphone cables for DMX applications because they cannot transmit DMX data reliably over long distances.

DMX Cable Characteristics

The DMX data cable must have the following characteristics:

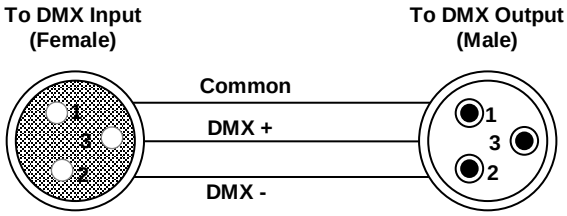
Type:	*shielded, 2-conductor twisted pair*
Maximum capacitance between conductors:	*30 pF/ft*
Maximum capacitance between conductor and shield:	*55 pF/ft*
Maximum resistance:	*20 ohms/1000 ft*
Nominal impedance:	*100~140 ohms*

DMX Connectivity (Cont.)

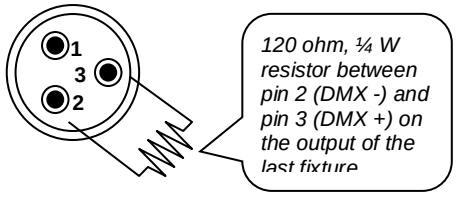
DMX Cable Connectors

Each DMX cable must have a male, 3-pin XLR connector on one end and a female, 3-pin XLR connector on the other end.

DMX Connector Configuration



To avoid signal transmission problems and interference, it is always advisable to connect a DMX signal terminator, as seen below.



Test all DMX cables with an ohmmeter to verify their correct polarity and to make sure that there are no short-circuits between any of the pins, or between any pin and ground.

If the Common wire (shield) touched the chassis ground, a ground loop could form, which may cause the fixture to perform erratically.

3-Pin to 5-Pin Conversion Chart

If you use a DMX controller or fixture with a 5-pin DMX connector, you will need to use a 5-pin to 3-pin adapter. The chart below details a proper cable conversion.

3-Pin to 5-Pin Conversion Chart

Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
Negative (-) signal	Pin 2	Pin 2
Positive (+) signal	Pin 3	Pin 3
Not Used		Pin 4
Not Used		Pin 5

DMX Connection

Make sure that the fixtures with which you are working can operate in DMX mode, not in a proprietary connection mode. Refer to the fixtures' manual to learn how to enable their respective DMX modes.

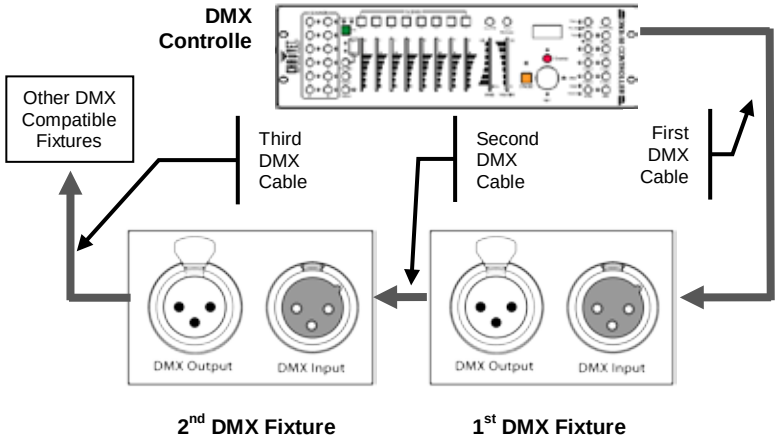
The procedure below illustrates a possible DMX connection method.

1) Connect the 3-pin, male connector of the first DMX cable to the DMX Output connector (3-pin, female) of the DMX controller.
2) Connect the 3-pin, female connector of the first DMX cable coming from the controller to the DMX Input connector (3-pin, male) of the first DMX fixture.
3) Connect the 3-pin, male connector of the second DMX cable to the DMX Output connector (3-pin, female) of the first DMX fixture.
4) Connect the 3-pin, female connector of the second DMX cable coming from the first DMX fixture to the DMX Input connector of the second DMX compatible fixture.
5) Continue linking the other DMX fixtures in the same way.

The figure below is only an example of a possible DMX serial connection.

DMX Connectivity (Cont.)

Generic DMX Data Connection Diagram



Master/Slave Linking

The Master/Slave mode allows one fixture (the master) to run a preconfigured program to control several other fixtures of the same model (the slaves) without requiring a DMX controller. In this mode, all the slave fixtures will operate in unison with the master fixture.

If a fixture supports the Master/Slave mode, it will have some sort of programming function to configure it as master or slave. Those fixtures that only support DMX mode cannot operate in Master/Slave mode.

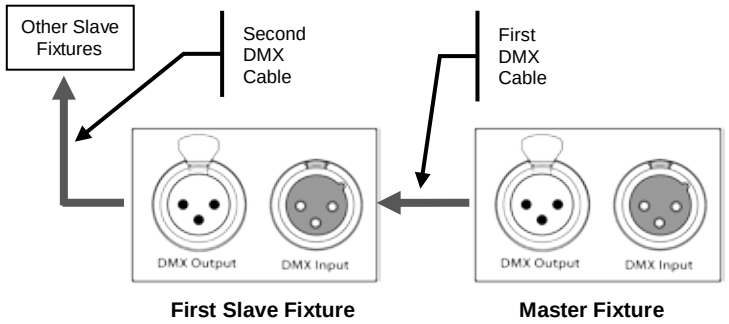
Master/Slave Connection

Make sure the fixtures with which you are working are capable of operating in Master/Slave mode. When working in Master/Slave mode, most fixtures use the DMX data connection as well. The difference in this case is that there is no DMX controller involved. Refer to the fixtures' manual to learn how to configure them to work in Master/Slave mode.

The procedure below illustrates a possible connection method.

1) Connect the 3-pin, male connector of the first DMX cable to the DMX Output connector (3-pin, female) of the master fixture.
2) Connect the 3-pin, female connector of the first DMX cable coming from the master fixture to the DMX Input connector (3-pin, male) of the first slave fixture.
3) Connect the 3-pin, male connector of the second DMX cable to the DMX Output connector (3-pin, female) of the first slave fixture.
4) Connect the 3-pin, female connector of the second DMX cable coming from the first slave fixture to the DMX Input connector (3-pin, male) of the second slave fixture.
5) Continue linking the other slave fixtures in the same way.
6) Follow the steps in fixtures' manual to configure the fixtures as master and slaves.

Generic Master/Slave Connection Diagram



ID Addressing
(Not supported by the Q-Spot 260-LED)

ID Addressing is a sub-addressing method by which each fixture, apart from its starting address, can also have an "ID" address in the 1~66 range. This allows users to multiply the number of fixtures they can control with a single DMX controller.

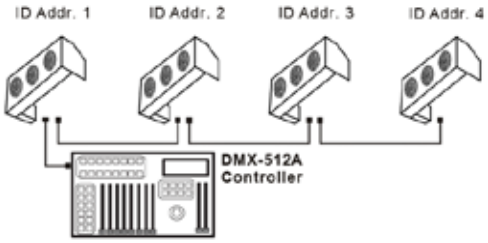
Many fixtures have at least one DMX personality or mode that enables ID addressing. In this case, one of the channels of such DMX mode is in charge of selecting an ID address. When using ID addressing, setting the value of the ID addressing channel to "0" allows for the simultaneous control of all the fixtures with the same starting address, regardless of their particular ID address.

ID addressing is also a tool for creating special lighting effects by having several fixtures sharing the same starting DMX address and ID address, as indicated below.

Single Row Connection

The figure below shows a simple DMX layout that uses four fixtures, all with the same DMX address and a unique ID address for each fixture. This allows the user to control simultaneously the whole group of units at that DMX address by setting the ID Addressing channel to **0**. Similarly, the user can control each fixture at that DMX address independently by first selecting the DMX address and then using the ID Addressing channel to locate the target ID address.

Single Row ID Addressing Diagram

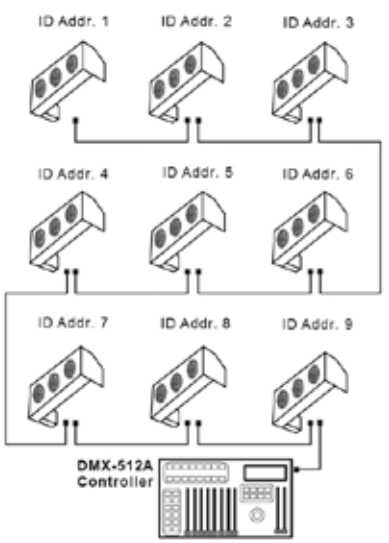


Standard Block Connection

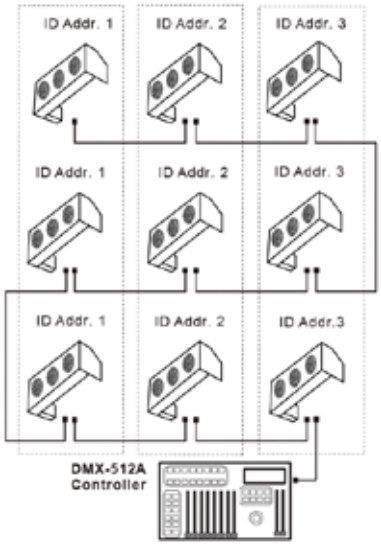
In the Standard Block connection, the fixtures appear in repeated rows of the same length to form a block. For instance, three rows of fixtures with three fixtures per row to form a 3 x 3 block. Each of the fixtures has unique, sequential ascending ID addresses for the controller to control each fixture individually.

Repeated Row Block Connection

In this type of connection, the fixtures appear in repeated rows or columns of the same length to form a block. For instance, there may be three columns of fixtures with three fixtures per column to form a 3 x 3 block. In this case, the fixtures form groups, each with its own sequential ascending ID addresses. This way, the controller will control each group of fixtures individually.



Standard Block Connection



Repeated Block Connection

Other Effects

For other types of effects, you may group the fixtures in diagonal lines or place them in random positions within a single block.

Sizing the Circuit Breakers

Calculating the total current drawn by the fixtures connected to a particular circuit is not complicated if the installer has the right information at hand and knows how to interpret it.

With the fixture's current draw information, the installer can calculate and select the right circuit breaker size (rating) to which they can connect a group of fixtures.

Using the Spec Sticker

CHAUVET® fixtures come with a sticker that indicates the current they consume in a circuit at the specified voltage. This greatly simplifies calculating the total current drawn.

For instance, if the sticker on the fixture indicates, "0.1 A @ 115 VAC, 60 Hz" and the installer is connecting 12 of them on the same 115 VAC circuit, to determine the total current required by the fixtures it would be enough to do this simple calculation:

0.1 A x 12 = 1.2 A

Using the Watts/Volts Method

Some installers may prefer to determine the current drawn by the fixture by dividing its power consumption, indicated in watts (W), by the voltage (V) on the circuit. As an example, assuming that a certain fixture consumes 240 W and it is connected to a 120 VAC circuit, the current it draws would be:

240 W / 120 V = 2 A

Considering the Power Factor

The above method is accurate only with fixtures whose power factor (PF) is equal, or very close, to "1." Otherwise, the calculated current may be too low with respect to the actual current drawn by the fixture.

In fact, as the PF decreases, the difference between the current calculated using the watts/volts method and the actual current increases.

Therefore, for fixtures with a PF below "0.9," the installer must always consider the fixture's PF when using the watts figure to calculate the current it draws.

For the above example, if the published fixture's PF were "0.7," the resulting drawn current would be as follows:

2 A / 0.7 = 2.8571 A

This is approximately equal (≈) to 2.86 A, 2.9 A, or even 3 A, depending on the installer's desire for accuracy. In other words, the actual current ended up being close to 50% higher than originally calculated.

Using the Volt Amps Method

If the fixture's sticker indicates the power consumption in "volt amps" (VA), the calculation of the drawn current is simply the result of dividing the amount in VA by the voltage on the circuit (V). For a fixture with a consumption of 360 VA, the calculation would be as follows:

360 VA / 120 V = 3 A

Note that when the power consumption is in VA, the fixture's PF is never part of the current draw calculation.

Selecting the Circuit Breaker

The National Electric Code (NEC) determines that circuit breakers should handle 80% of their rated capacity for continuous loads (those being on for three or more hours) and 100% for intermittent loads. For safety reasons, CHAUVET® recommends assuming that all loads are continuous.

After calculating the total current the fixtures connected to a particular circuit will draw, the installer must consider the 80% rule indicated above. For a total current of 22 A, the calculation is as follows:

22 A * 1.25 = 27.5 A

The installer should use a 30 A CB because the immediately lower CB rating, 25 A, would not be enough for this load.

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