Legend™ 412

412

User Manual

Legend 412
Legend 412 VW
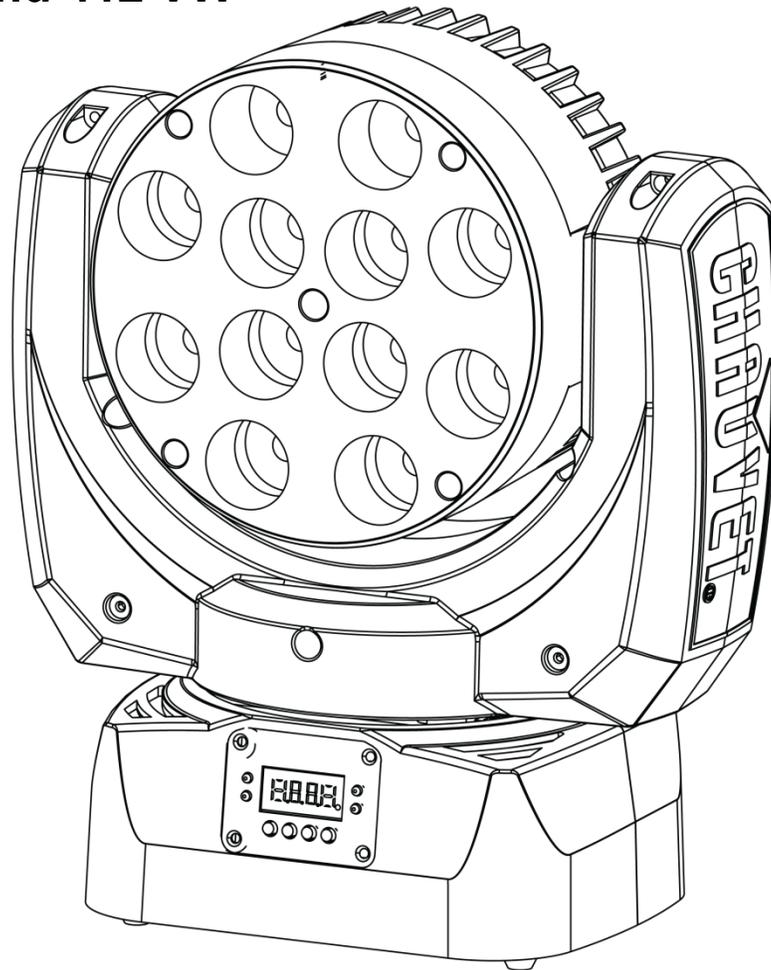
CHAUVET®

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Edition Notes

The Legend™ 412 Series User Manual Rev. 5 covers the description, safety precautions, installation, programming, operation, and maintenance of the Legend™ 412 and the Legend 412 VW. CHAUVET® released this edition of the Legend™ 412 Series User Manual in August 2012.

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Document Printing

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 accordingly.

Intended Audience

Any person in charge of installing, operating, and/or maintaining this product should completely read through the guide that shipped with the product, as well as this manual, before installing, operating, or maintaining this product.

Disclaimer

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Document Revision

The Legend™ 412 Series User Manual Rev. 5 supersedes all previous versions of this manual. Discard any older versions of this manual you may have, whether in printed or electronic format, and replace with this version.

Author	Date	Editor	Date
D. Couppe	12/30/11	S. Diaz	8/24/12

Table of Contents

1. Before You Begin

What Is Included
- One Legend™ 412 or Legend™ 412 VW
- One Eye Bolt (for safety cable)
- One Omega Bracket with M12 Bolts
- Warranty Card
- Quick Reference Guide

Unpacking Instructions

Immediately upon receiving this product, carefully unpack and check the container. Make sure you have received all the parts indicated above and all the parts are in good condition.

Claims

If the container or the material inside the container (the product and included accessories) appear damaged from shipping, or show signs of mishandling, upon receipt notify the carrier immediately, not CHAUVET®. Failure to notify the carrier in a timely manner may invalidate your claim. In addition, keep the container and all the packing material for inspection.

For other issues such as missing components or parts, damage not related to shipping, or concealed damage, file a claim with CHAUVET® within 7 days of receiving the merchandise.

Refer to the Contact Us section in this manual for addresses and phone numbers.

Conventions

Convention	Meaning
1~512	A range of values in the text
50/60	A set of mutually exclusive values in the text
Claims	A new term, another document reference, or section or chapter in this document
<SET>	A button on the product's control panel
Settings	A product function or a menu option
MENU > Settings	A sequence of menu options
1~10	A range of menu values from which to choose in a menu
Yes/No	A set of two mutually exclusive menu options in a menu
ON	A unique value to be entered or selected in a menu

Symbols

Symbol	Meaning
⚠	Critical installation, configuration, or operation information. Failure to comply with this information may render the product partially or completely inoperative, damage third-party equipment, or cause harm to the user.
ⓘ	Important installation or configuration information. Failure to comply with this information may prevent the product from functioning correctly.
📝	Useful information.

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

Product at a Glance

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

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, single LED conditions. For this reason, using clustered LEDs at their fullest intensity significantly reduces the LEDs' lifespan. Under normal conditions, this lifespan can be 40,000 to 50,000 hours. If extending this lifespan is vital, lower the operational temperature by improving the product's ventilation and reducing the ambient temperature to an optimal operating temperature. In addition, limiting the overall projection intensity may also help to extend the LEDs' lifespan.

Safety Notes

Read all the following Safety Notes before working with this product. These Notes include important information about the installation, usage, and maintenance of this product.

There are no user-serviceable parts in this product. Any reference to servicing in this User Manual applies only to properly certified CHAUVET® technicians. Do not open the housing or attempt any repairs unless you are certified.

Please refer to all applicable local codes and regulations for the proper installation of this product.

Personal Safety
- Avoid direct eye exposure to the light source while the product is on.
- Always disconnect this product from its power source before servicing.
- Always connect this product to a grounded circuit to avoid the risk of electrocution.
- Do not touch this product's housing when operating because it may be very hot.

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 this product while operating.
- When hanging this product, always secure it to a fastening device using a safety cable (not included).
- Do not carry this product from the head. Always use the base.

Power and Wiring
- Always make sure you are connecting this product to the proper voltage, as per the specifications in this manual or on the product's specification label.
- Never connect this product to a dimmer pack or rheostat.
- Never disconnect this product by pulling or tugging on the power cable.

Operation
- Do not operate this product if you see damage on the housing, lenses or cables. Have the damaged parts replaced by an authorized technician at once.
- Do not cover the ventilation slots when operating to avoid internal overheating.
- The maximum ambient temperature is 104° F (40° C). Do not operate this product at a higher temperature.
- In case of a serious operating problem, stop using this product immediately!

**In the unlikely event that your CHAUVET® product may require service, contact CHAUVET® Technical Support.**

2. Introduction

**Product Description**

The Legend™ 412 Series consists of high power LED moving head wash products with 4 independent quadrants of control. It is available in a RGBW version or a VW (variable white) version with quad color LEDs. The product consists of a base and a moving head on a yoke. A Top Hat is pre-installed to reduce glare, creating a flat field of light.

Legend™ 412 Features

- 12- or 28-channel RGBW quad color LED moving yoke wash product
- Pan: 630°
- Tilt: 200°
- RGBW quad color mixing with or without DMX controller
- Fast movement
- Bright quad color LEDs
- Strobe macros with quadrant strobe
- Flicker free operation for HD cameras

Legend™ 412 VW Features

- 10- or 20-channel VW quad color LED moving yoke wash product
- Pan: 630°
- Tilt: 200°
- VW quad color mixing with or without DMX controller
- Fast movement
- Bright quad color LEDs
- Strobe macros with quadrant strobe
- Fast movement
- Flicker-free operation for HD cameras

Product Overview

DMX In/Out

Power/Fuse
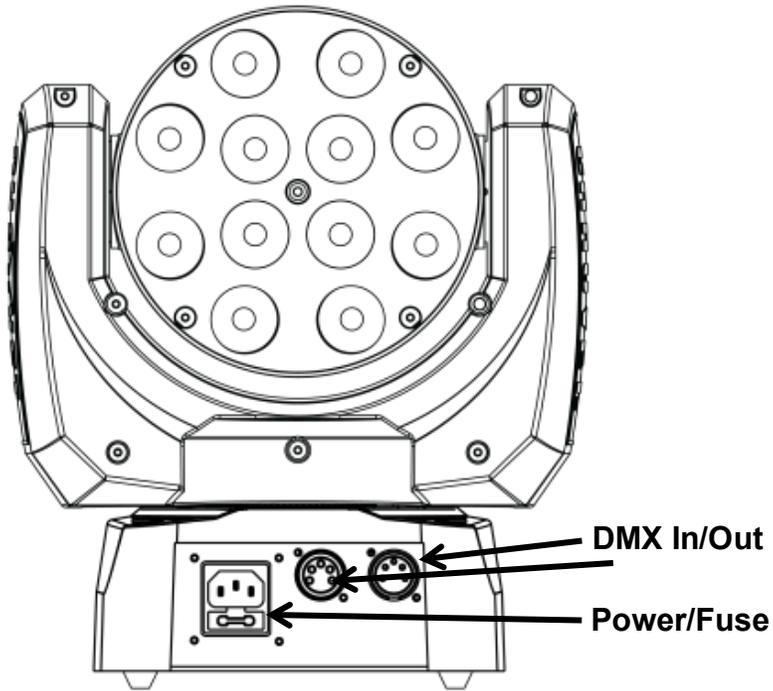
Rear View

Side View

Control Panel
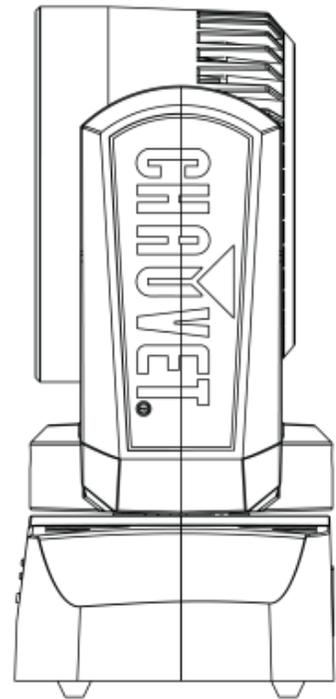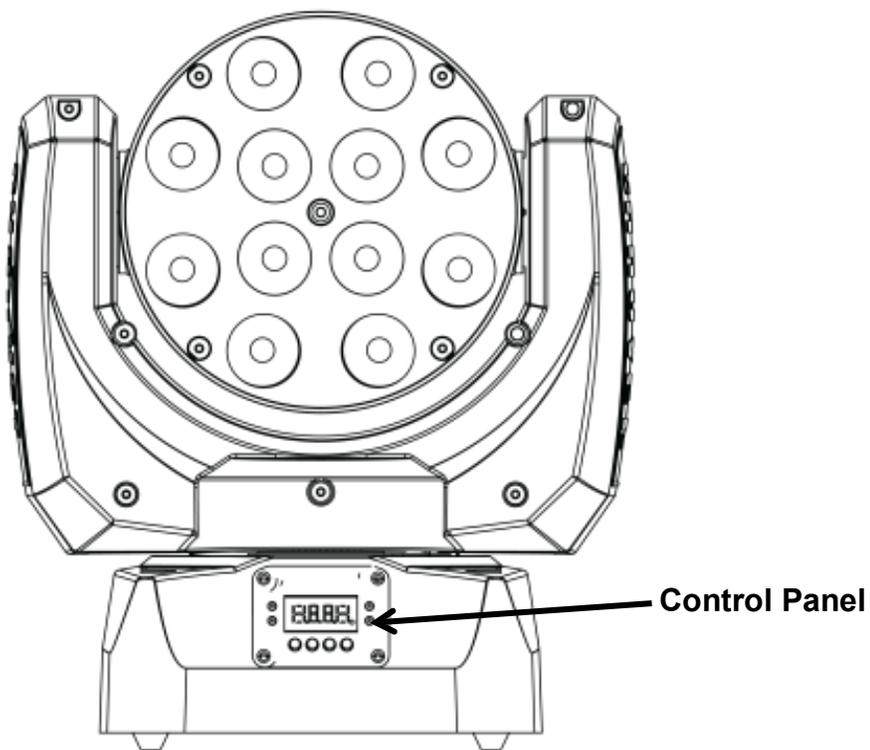
Front View

Product Dimensions

6.5 in
165 mm

12.0 in
304 mm

3.1 in
80 mm

7.2 in
182 mm

10.1 in
257 mm

11.2 in
285 mm

10.6 in
269 mm

Product Dimensions (Cont.)

4.5 in
114 mm

5.5 in
140 mm

3.5 in
89 mm
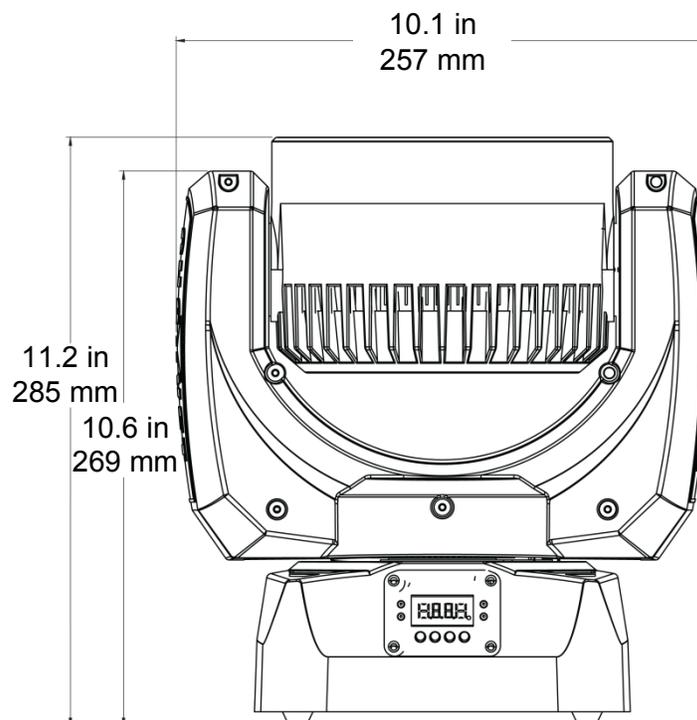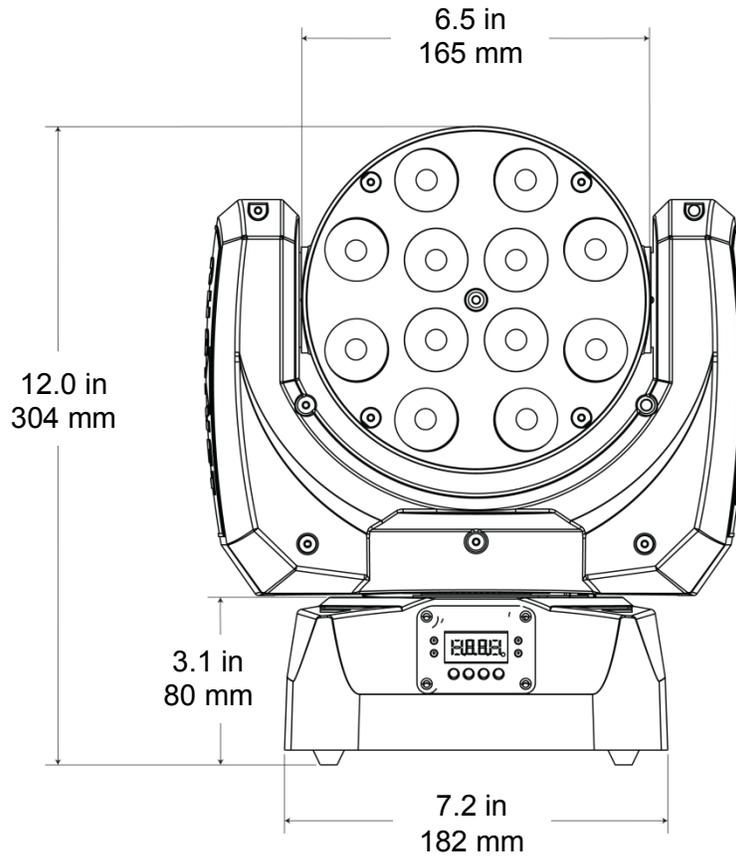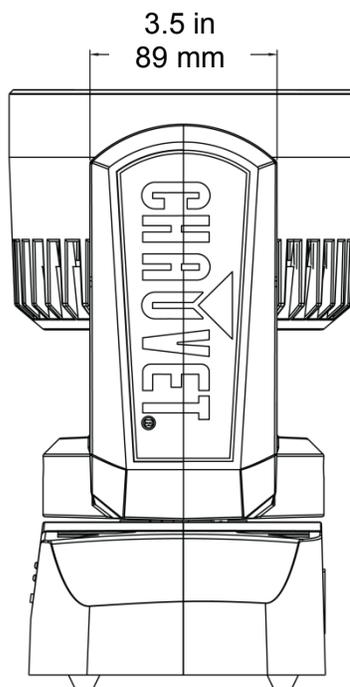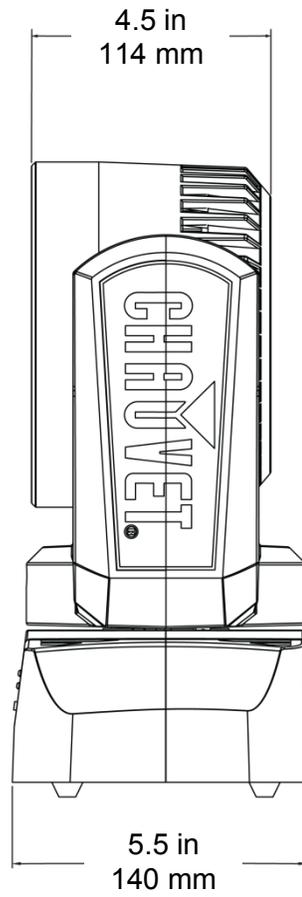
3. Setup

AC Power

The Legend™ 412 Series has an auto-ranging power supply that works with an input voltage range of 100~240 VAC, 50/60 Hz.

Make sure that you are connecting this product to the proper voltage. To determine the power requirements for the Legend™ 412 Series, refer to the specification label affixed to the product or the specifications in this manual.

⚠ **Always connect this product to a protected circuit with an appropriate electrical ground to avoid the risk of electrocution or fire.**

The listed current rating indicates the maximum current draw during normal operation. For more information, download Sizing the Circuit Breakers from www.chauvetpro.com.

ⓘ **Never connect this product 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 Legend™ 412 Series should be used with a power input cord terminated with an IEC connector on one end and an Edison plug on the other end (U.S. market). Use the table below to wire a new plug if needed.

Connection	Wire (U.S.)	Wire (Europe)	Screw Color
AC Live	Black	Brown	Yellow or Brass
AC Neutral	White	Blue	Silver
AC Ground	Green/Yellow	Green/Yellow	Green

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

Fuse Replacement

This product uses a T 3.15 A, 250 V fuse.

1. Disconnect the product from the power outlet.
2. Using a flat head screwdriver, wedge the tip into the slot of the fuse holder.
3. Pry the safety cap out of the housing to pull out the installed fuse.
4. Remove the blown fuse from the safety cap and replace with a fuse of the exact same type and rating (T 3.15 A, 250 V).
5. Insert the fuse holder back in place and reconnect power.

Installed fuse
(held by plastic clip)

Safety cap

Spare fusel
(inside safety cap)
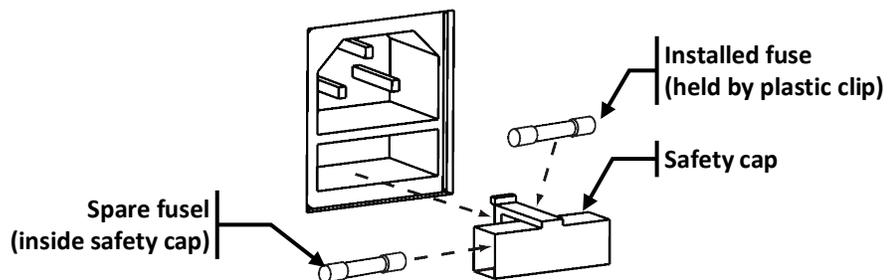
📝 **This product ships with a spare fuse inside the safety cap, as shown above.**

DMX Linking

You can link the Legend™ 412 Series to a DMX controller using a standard 5-pin DMX serial connection. If using other DMX compatible products with the Legend™ 412 Series, you can control each individually with a single DMX controller.

DMX Modes

The Legend™ 412 Series uses the standard 5-pin DMX data connection for its ADVANCED and BASIC DMX personalities.

Refer to the Introduction chapter for a brief description of these modes.

Refer to the Operation chapter to learn how to configure the Legend™ 412 Series to work in these modes.

The DMX Values section will provide you with detailed information regarding the DMX modes.

Master/Slave Connectivity

The Master/Slave mode allows a Legend™ 412 or a Legend™ 412 VW (the "master unit") to control one or more Legend™ 412's or Legend™ 412 VW's (the "slave units") without a DMX controller. The product becomes the master unit when set in master mode via the control panel. You must configure the slave units to operate in one of the two (2) slave modes from their respective control panels. During the Master/Slave operation, the slave units will operate in unison with the master unit or run offset depending on the slave mode chosen.

Do not connect a Legend™ 412 together with a Legend™ 412 VW in Master/Slave mode.

If you are not familiar with or need more information about DMX standards, master/slave connectivity, or the DMX cables needed to link this product to a DMX controller, download the DMX Primer from the CHAUVET® website: www.chauvetpro.com

DO NOT connect a DMX controller to the products operating in Master/Slave mode. The DMX controller signals may interfere with the signals from the master product.

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

Mounting

Before mounting this product, read and follow the Safety Notes in this manual.

Orientation

Always mount this product in any safe position making sure there is adequate room for ventilation, configuration, and maintenance.

Rigging

CHAUVET® recommends using the following general guidelines when mounting this product.

- When selecting an installation location, consider easy access to this product for operation, programming adjustments, and routine maintenance.
- Make sure to mount this product away from any flammable material as indicated in the *Safety Notes* section.
- Never mount the product in places where rain, high humidity, extreme temperature changes, or restricted ventilation may affect it.
- If hanging this product, make sure that the mounting location can support the product's weight. Refer to the Technical Specifications section for the weight requirement of this product.

Procedure

The Legend™ 412 Series comes with 1 omega bracket, which attaches to the bottom of the product via M12 Allen bolts. This allows you to attach a single clamp to hang the product. You may also attach 2 clamps directly to the fixture via the same 2 M12 mounting screw holes. You must supply your own clamps and make sure the clamps are capable of supporting the weight of this product.

Product Mounting Diagram

Safety Cable

Bracket
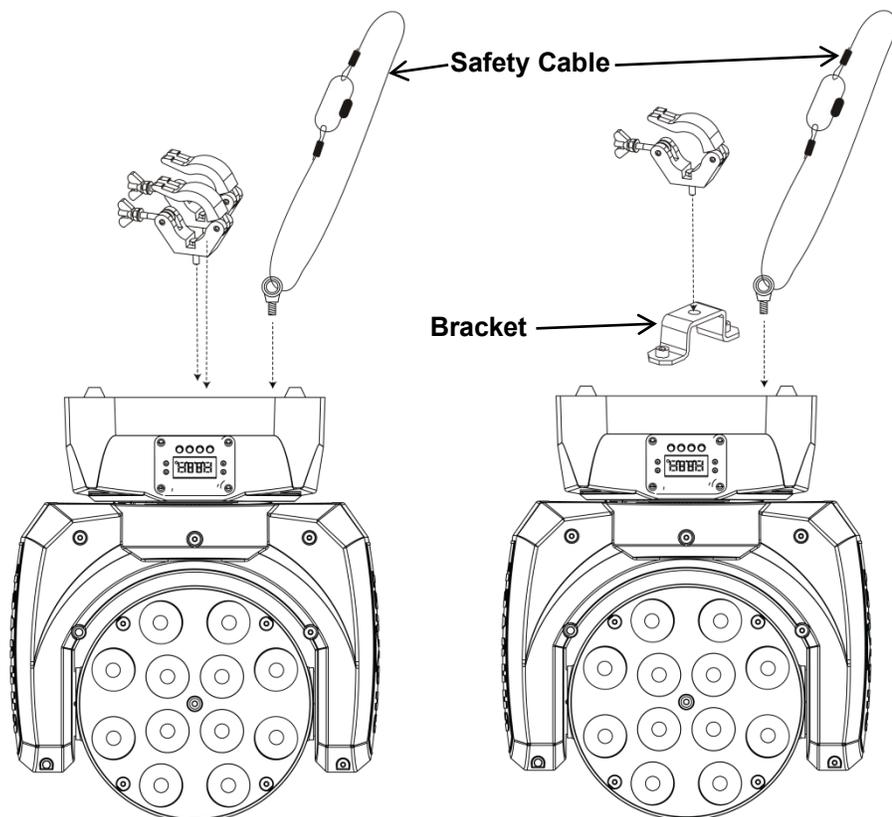
4. Operation

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 upward through the menu list and increases the numeric value when in a function
<DOWN>	Navigates downward through the menu list and decreases the numeric value when in a function

Control Options Legend 412

You can set the Legend™ 412 start address in the 001~512 DMX range. This enables control of up to 18 units in the 28 channel ADVANCED personality.

Control Options Legend 412 VW

You can set the Legend™ 412 VW start address in the 001~512 DMX range. This enables control of up to 25 units in the 20 channel ADVANCED personality.

Programming

Refer to the Menu Map to understand the menu options. The menu map has a Menu Level and a variable number of programming levels for each option.

- To go to an option in the Menu Level, press **<MENU>** repeatedly until the option shows on the display. Press **<ENTER>** to select. This will take you to the first programming level for that option.
- To select an option or value within the current programming level, press **<UP>** or **<DOWN>** until the option shows on the display. Press **<ENTER>** to select. In this case, if there is another programming level, you will see that first option, or you will see the selected value.
- To exit to the previous menu level, press **<MENU>**.

DMX Personality

This setting allows you to choose a particular DMX personality.

1. Go to *Chnd* and press **<ENTER>**.
2. Select the desired personality based on the product.
   - Legend™ 412:
     Select **12Ch** (Basic) or **28Ch** (Advanced)
   - Legend™ 412 VW:
     Select **10Ch** (Basic) or **20Ch** (Advanced)

- **See the DMX Values section for the highest starting address you can select for each personality.**
- **Make sure that the starting addresses on the various products do not overlap due to the new personality setting. See the DMX Values section.**

DMX Control

In this mode, each product will respond to a unique starting address from the DMX controller. All products with the same starting address will respond in unison.

1. Select a DMX personality as shown in the <u>DMX Personality</u> section.
2. Set the starting address:
   a. Go to **Addr** and press **<ENTER>**.
   b. Select the starting address (**001~512**).

The highest recommended starting address for each DMX mode are as follows:

Legend™ 412		Legend™ 412 VW	
DMX Mode	DMX Address	DMX Mode	DMX Address
Advanced	485	**Advanced**	493
Basic	501	**Basic**	503

Static Color

The Static mode allows for permanent positioning, strobing, dimming, and RGBW or VW color mixing without a DMX controller.

1. Go to **NAnu** and press **<ENTER>**.
2. Select the desired position (**Pan** or **tILt**).
3. Select the desired position value (**0~255**).
4. Repeat for the other position.
5. Select the desired color based on the product.
   - Legend™ 412:
     Red1~4, **Gre1~4**, **bLu1~4**, or **Uhl1~4**.
   - Legend™ 412 VW:
     UU1~4, or **CU1~4**.
6. Select the desired color value (**0~255**).
7. Repeat for the other colors.
8. Select the desired intensity (**dINN**).
9. Select the desired intensity value (**0~255**).
10. Select Strobe effect (**Stro**).
11. Select the desired frequency (**0~255**).

Auto Programs

Auto programs allow for dynamic RGBW (Legend™ 412) or VW (Legend™ 412 VW) color mixing without a DMX controller.

1. Go to **Shnd** and press **<ENTER>**.
2. Select the desired auto program (**Sh 1~4**).

You cannot edit any of the auto programs (Sh 1~4).

Master/Slave	The Master/Slave mode allows a group of Legend™ 412's or Legend™ 412 VW's (the slave units) to simultaneously duplicate the output of another Legend™ 412 or Legend™ 412 VW (the master unit) without a DMX controller.

1. Set each of the slave units:
   a. Go to *SLNd* and press **<ENTER>**.
   b. Select **SL 1** (duplicates the master unit exactly) or **SL 2** (offsets pan and tilt settings that creates a different look).
2. Set the master unit:
   a. Go to *SLNd* and press **<ENTER>**.
   b. Select **NASt**.
   c. Go to **ShNd** and press **<ENTER>**.
   d. Select the desired auto program (**Sh 1~4**).

Do not connect a Legend™ 412 together with a Legend™ 412 VW in Master/Slave mode.

- **The master unit is the one that runs an auto program.**
- **Do not connect a DMX controller to the units configured for Master/Slave operation.**
- **The master unit should be the first unit in the DMX daisy string.**

Color Settings (Legend™ 412 Only)	The color setting determines how the Legend™ 412 generates the white color based on various RGB settings.

1. Go to **bALA** and press **<ENTER>**.
2. Select **red**, **Gree**, or **bLue**.
3. Select the desired color value (**125~255**).
4. Repeat for the other colors.

Blackout Mode	This setting determines whether the Legend™ 412 or the Legend™ 412 VW starts playing an auto program when powered up or remains static in the "Home" position.

1. Go to **bLnd** and press **<ENTER>**.
2. Select **YeS** or **no**.

Display Mode	This setting determines whether the control panel display stays on indefinitely or turns off after 2 minutes of inactivity.

1. Go to **Led** and press **<ENTER>**.
2. Select **YeS** or **no**.

Pan Invert	This setting allows the user to invert the direction of the pan control.

1. Go to **PAn** and press **<ENTER>**.
2. Select **YeS** or **no**.

Tilt Invert	This setting allows the user to invert the direction of the tilt control.

1. Go to **tILt** and press **<ENTER>**.
2. Select **YeS** or **no**.

Display Invert	This setting allows the user to invert the direction of the control panel display.

1. Go to **Led** and press **<ENTER>**.
2. Select **on** or **oFF**.

LED Temperature   This option allows the user to view the LED temperature (C°) of the Legend™ 412 or the Legend™ 412 VW.
   1. Go to **Ledt**.
   2. Press **<ENTER>**.

CPU Temperature   This option allows the user to view the CPU temperature (C°) of the Legend™ 412 or the Legend™ 412 VW.
   1. Go to **CPut**.
   2. Press **<ENTER>**.

Product Hours   This option shows the user the amount of hours the Legend™ 412 or the Legend™ 412 VW has been in use throughout its lifetime.
   1. Go to **FhrS**.
   2. Press **<ENTER>**.

Software Version   This option shows the user the software version currently installed in the Legend™ 412 or the Legend™ 412 VW.
   1. Go to **ver**.
   2. Press **<ENTER>**.

Self-Test   This setting allows the user to set the Legend™ 412 or the Legend™ 412 VW to the self-test mode.
   1. Go to **teSt**.
   2. Press **<ENTER>**.

Reset   This setting allows the user to reset the Legend™ 412 or the Legend™ 412 VW to the "Home" position.
   1. Go to **rSet**.
   2. Press **<ENTER>**.

Factory Defaults   This setting allows the user to set the Legend™ 412 or the Legend™ 412 VW to the original factory default settings.
   1. Go to **Prod** and press **<ENTER>**.
   2. Select **YeS** or **no**.

Menu Map (Legend™ 412)

Main Level	Programming Levels		Description
Addr	1~512		Sets the DMX starting address
Chnd	12Ch		Sets the 12 channel personality
	28Ch		Sets the 28 channel personality
SLnd	NASt		Sets product to Master in Slave mode
	SL 1		Sets product to Slave 1 in Slave mode
	SL 2		Sets product to Slave 2 in Slave mode
Shnd	Sh 1		Sets the Auto program
	Sh 2		
	Sh 3		
	Sh 4		
bLnd	YeS		Selects whether Blackout mode is active
	no		
Led	on		Selects whether the display stays on indefinitely or turns off after 2 minutes of inactivity
	oFF		
PAn	YeS		Pan is inverted
	no		Pan is normal
tILt	YeS		Tilt is inverted
	no		Tilt is normal
dISP	on		Display is inverted
	oFF		Display is normal
bALA	red	125~255	Set White Balance
	Gree		
	bLue		

-Continued on next page-

Menu Map cont. (Legend™ 412)

Main Level	Programming Levels		Description
NAnu	Pan		Sets Pan 0~630°
	tILt		Sets Pan 0~200°
	Red1		Sets Quadrant 1 Red LED intensity
	Gre1		Sets Quadrant 1 Green LED intensity
	bLu1		Sets Quadrant 1 Blue LED intensity
	Uhl1		Sets Quadrant 1 White LED intensity
	Red2		Sets Quadrant 2 Red LED intensity
	Gre2		Sets Quadrant 2 Green LED intensity
	bLu2		Sets Quadrant 2 Blue LED intensity
	Uhl2	0~255	Sets Quadrant 2 White LED intensity
	Red3		Sets Quadrant 3 Red LED intensity
	Gre3		Sets Quadrant 3 Green LED intensity
	bLu3		Sets Quadrant 3 Blue LED intensity
	Uhl3		Sets Quadrant 3 White LED intensity
	Red4		Sets Quadrant 4 Red LED intensity
	Gre4		Sets Quadrant 4 Green LED intensity
	bLu4		Sets Quadrant 4 Blue LED intensity
	Uhl4		Sets Quadrant 4 White LED intensity
	dINN		Sets dimmer intensity for all LEDs
	Stro		Sets strobe rate 0~30 Hz
teSt	N/A		Runs Self-test program
Ledt	N/A		Shows LED temperature (C°)
CPut	N/A		Shows CPU temperature (C°)
FhrS	N/A		Shows fixture hours
ver	N/A		Shows software version
Prod	YeS		Reset product to factory default
	no		
rSet	N/A		Resets product to "Home" Position

Menu Map (Legend™ 412 VW)

Main Level	Programming Levels	Description
Addr	1~512	Sets the DMX starting address
Chnd	10Ch	Sets the 10 channel personality
	20Ch	Sets the 20 channel personality
SLnd	NASt	Sets product to Master in Slave mode
	SL 1	Sets product to Slave 1 in Slave mode
	SL 2	Sets product to Slave 2 in Slave mode
Shnd	Sh 1	Sets the Show mode
	Sh 2	
	Sh 3	
	Sh 4	
bLnd	YeS	Selects whether Blackout mode is active
	no	
Led	on	Selects whether the display stays on indefinitely or turns off after 2 minutes of inactivity
	oFF	
PAn	YeS	Pan is inverted
	no	Pan is normal
tILt	YeS	Tilt is inverted
	no	Tilt is normal
dISP	on	Display is inverted
	oFF	Display is normal

-Continued on next page-

Menu Map cont. (Legend™ 412 VW)

Main Level	Programming Levels		Description
NAnu	Pan		Sets Pan 0~630°
	tILt		Sets Pan 0~200°
	UU1		Quadrant 1 warm white LED intensity
	CU1		Quadrant 1 cool white LED intensity
	UU2		Quadrant 2 warm white LED intensity
	CU2	0~255	Quadrant 2 cool white LED intensity
	UU3		Quadrant 3 warm white LED intensity
	CU3		Quadrant 3 cool white LED intensity
	UU4		Quadrant 4 warm white LED intensity
	CU4		Quadrant 4 cool white LED intensity
	dINN		Sets dimmer intensity for all LEDs
	Stro		Strobe rate 0~30 Hz
teSt	N/A		Runs Self-test program
Ledt	N/A		Shows LED temperature (C°)
CPut	N/A		Shows CPU temperature (C°)
FhrS	N/A		Shows fixture hours
ver	N/A		Shows software version
Prod	YeS		Reset product to factory default
	no		
rSet	N/A		Resets product to "Home" Position

DMX Values (Legend™ 412)

	Channel	Function	Value	Percent/Setting
12-Channel (Basic Mode)	1	Pan	000 ⇔ 255	0~100%
	2	Pan Fine	000 ⇔ 255	0~100%
	3	Tilt	000 ⇔ 255	0~100%
	4	Tilt Fine	000 ⇔ 255	0~100%
	5	Pan/Tilt Speed	000 ⇔ 255	0~100%
	6	Dimmer	000 ⇔ 255	0~100%
	7	Strobe	000 ⇔ 019 020 ⇔ 039 040 ⇔ 059 060 ⇔ 079 080 ⇔ 099 100 ⇔ 119 120 ⇔ 139 140 ⇔ 159 160 ⇔ 179 180 ⇔ 199 200 ⇔ 219 220 ⇔ 255	Open Strobe 0~30 Hz Strobe Macro 1 Strobe Macro 2 Strobe Macro 3 Strobe Macro 4 Strobe Macro 5 Strobe Effect 1 Strobe Effect 2 Strobe Effect 3 Strobe Effect 4 Open Full **Note: Speed will vary dependent on value within the strobe effect/macro.**
	8	Red	000 ⇔ 255	0~100%
	9	Green	000 ⇔ 255	0~100%
	10	Blue	000 ⇔ 255	0~100%
	11	White	000 ⇔ 255	0~100%
	12	Control	000 ⇔ 007 008 ⇔ 069 070 ⇔ 129 130 ⇔ 190 191 ⇔ 205 206 ⇔ 221 222 ⇔ 236 237 ⇔ 255	No function Reset Pan/Tilt Reset All Move in Black Reserved for future use Reserved for future use Reserved for future use Reserved for future use

Channel	Function	Value	Percent/Setting	
1	Pan	000 ⇔ 255	0~100%	
2	Pan Fine	000 ⇔ 255	0~100%	
3	Tilt	000 ⇔ 255	0~100%	
4	Tilt Fine	000 ⇔ 255	0~100%	
5	Pan/Tilt Speed	000 ⇔ 255	0~100%	
6	Dimmer	000 ⇔ 255	0~100%	
7	Strobe	000 ⇔ 019 020 ⇔ 039 040 ⇔ 059 060 ⇔ 079 080 ⇔ 099 100 ⇔ 119 120 ⇔ 139 140 ⇔ 159 160 ⇔ 179 180 ⇔ 199 200 ⇔ 219 220 ⇔ 255	Open Strobe 0~30 Hz Strobe Macro 1 Strobe Macro 2 Strobe Macro 3 Strobe Macro 4 Strobe Macro 5 Strobe Effect 1 Strobe Effect 2 Strobe Effect 3 Strobe Effect 4 Open Full	**Note: Speed will vary dependent on value within the strobe effect/macro.**
8	Red Quad 1	000 ⇔ 255	0~100%	
9	Green Quad 1	000 ⇔ 255	0~100%	
10	Blue Quad 1	000 ⇔ 255	0~100%	
11	White Quad 1	000 ⇔ 255	0~100%	
12	Red Quad 2	000 ⇔ 255	0~100%	
13	Green Quad 2	000 ⇔ 255	0~100%	
14	Blue Quad 2	000 ⇔ 255	0~100%	
15	White Quad 2	000 ⇔ 255	0~100%	
16	Red Quad 3	000 ⇔ 255	0~100%	
17	Green Quad 3	000 ⇔ 255	0~100%	
18	Blue Quad 3	000 ⇔ 255	0~100%	
19	White Quad 3	000 ⇔ 255	0~100%	
20	Red Quad 4	000 ⇔ 255	0~100%	
21	Green Quad 4	000 ⇔ 255	0~100%	
22	Blue Quad 4	000 ⇔ 255	0~100%	
23	White Quad 4	000 ⇔ 255	0~100%	

28-Channel (Advanced Mode)

28-Channel Cont.
(Advanced Mode)

Channel	Function	Value	Percent/Setting
24	Color Macros	000 ⇔ 019	No Function
		020 ⇔ 029	Macro 1
		030 ⇔ 039	Macro 2
		040 ⇔ 049	Macro 3
		050 ⇔ 059	Macro 4
		060 ⇔ 069	Macro 5
		070 ⇔ 079	Macro 6
		080 ⇔ 089	Macro 7
		090 ⇔ 099	Macro 8
		100 ⇔ 109	Macro 9
		110 ⇔ 119	Macro 10
		120 ⇔ 129	Macro 11
		130 ⇔ 139	Macro 12
		140 ⇔ 149	Macro 13
		150 ⇔ 159	Macro 14
		160 ⇔ 169	Macro 15
		170 ⇔ 179	Macro 16
		180 ⇔ 189	Macro 17
		190 ⇔ 199	Macro 18
		200 ⇔ 209	Macro 19
		210 ⇔ 219	Macro 20
		220 ⇔ 229	Macro 21
		230 ⇔ 239	Macro 22
		240 ⇔ 255	Macro 23
25	Color Macro Speed	000 ⇔ 255	0~100%
26	Pan/Tilt Macro	000 ⇔ 007	No Function
		008 ⇔ 015	Macro 1
		016 ⇔ 023	Macro 2
		024 ⇔ 031	Macro 3
		032 ⇔ 039	Macro 4
		040 ⇔ 047	Macro 5
		048 ⇔ 055	Macro 6
		056 ⇔ 063	Macro 7
		064 ⇔ 071	Macro 8
		072 ⇔ 079	Macro 9
		080 ⇔ 087	Macro 10
		088 ⇔ 095	Macro 11
		096 ⇔ 103	Macro 12
		104 ⇔ 111	Macro 13
		112 ⇔ 119	Macro 14
		120 ⇔ 127	Macro 15
		128 ⇔ 135	Macro 16
		136 ⇔ 143	Macro 17
		144 ⇔ 151	Macro 18
		152 ⇔ 159	Macro 19
		160 ⇔ 167	Macro 20
		168 ⇔ 175	Macro 21
		176 ⇔ 183	Macro 22
		184 ⇔ 191	Macro 23
		192 ⇔ 199	Macro 24
		200 ⇔ 207	Macro 25
		208 ⇔ 215	Macro 26
		216 ⇔ 223	Macro 27
		224 ⇔ 231	Macro 28
		232 ⇔ 239	Macro 29
		240 ⇔ 247	Macro 30
		248 ⇔ 255	Macro 31

28-Channel Cont.
(Advanced Mode)

Channel	Function	Value	Percent/Setting
27	**Pan/Tilt Macro Speed**	000 ⇔ 255	0~100%
28	**Control**	000 ⇔ 007	No function
		008 ⇔ 069	Reset Pan/Tilt
		070 ⇔ 129	Reset All
		130 ⇔ 190	Move in Black
		191 ⇔ 205	Reserved for future use
		206 ⇔ 221	Reserved for future use
		222 ⇔ 236	Reserved for future use
		237 ⇔ 255	Reserved for future use

DMX Values (Legend™ 412 VW)

10-Channel **(Basic Mode)**	Channel	Function	Value	Percent/Setting
	1	Pan	000 ⇔ 255	0~100%
	2	Pan Fine	000 ⇔ 255	0~100%
	3	Tilt	000 ⇔ 255	0~100%
	4	Tilt Fine	000 ⇔ 255	0~100%
	5	Pan/Tilt Speed	000 ⇔ 255	0~100%
	6	Dimmer	000 ⇔ 255	0~100%
	7	Strobe	000 ⇔ 019 020 ⇔ 039 040 ⇔ 059 060 ⇔ 079 080 ⇔ 099 100 ⇔ 119 120 ⇔ 139 140 ⇔ 159 160 ⇔ 179 180 ⇔ 199 200 ⇔ 219 220 ⇔ 255	Open Strobe 0~30 Hz Strobe Macro 1 Strobe Macro 2 Strobe Macro 3 Strobe Macro 4 Strobe Macro 5 Strobe Effect 1 Strobe Effect 2 Strobe Effect 3 Strobe Effect 4 Open Full **Note: Speed will vary dependent on value within the strobe effect/macro.**
	8	Warm White	000 ⇔ 255	0~100%
	9	Cool White	000 ⇔ 255	0~100%
	10	Control	000 ⇔ 007 008 ⇔ 069 070 ⇔ 129 130 ⇔ 190 191 ⇔ 205 206 ⇔ 221 222 ⇔ 236 237 ⇔ 255	No function Reset Pan/Tilt Reset All Move in Black Reserved for future use Reserved for future use Reserved for future use Reserved for future use

20-Channel
(Advanced Mode)

Channel	Function	Value	Percent/Setting
1	Pan	000 ⇔ 255	0~100%
2	Pan Fine	000 ⇔ 255	0~100%
3	Tilt	000 ⇔ 255	0~100%
4	Tilt Fine	000 ⇔ 255	0~100%
5	Pan/Tilt Speed	000 ⇔ 255	0~100%
6	Dimmer	000 ⇔ 255	0~100%
7	Strobe	000 ⇔ 019 020 ⇔ 039 040 ⇔ 059 060 ⇔ 079 080 ⇔ 099 100 ⇔ 119 120 ⇔ 139 140 ⇔ 159 160 ⇔ 179 180 ⇔ 199 200 ⇔ 219 220 ⇔ 255	Open Strobe 0~30 Hz Strobe Macro 1 Strobe Macro 2 Strobe Macro 3 **Note: Speed will vary** Strobe Macro 4 **dependent on value** Strobe Macro 5 **within the strobe** Strobe Effect 1 **effect/macro.** Strobe Effect 2 Strobe Effect 3 Strobe Effect 4 Open Full
8	Warm White Quad 1	000 ⇔ 255	0~100%
9	Cool White Quad 1	000 ⇔ 255	0~100%
10	Warm White Quad 2	000 ⇔ 255	0~100%
11	Cool White Quad 2	000 ⇔ 255	0~100%
12	Warm White Quad 3	000 ⇔ 255	0~100%
13	Cool White Quad 3	000 ⇔ 255	0~100%
14	Warm White Quad 4	000 ⇔ 255	0~100%
15	Cool White Quad 4	000 ⇔ 255	0~100%
16	Color Macros	000 ⇔ 019 020 ⇔ 029 030 ⇔ 039 040 ⇔ 049 050 ⇔ 059 060 ⇔ 069 070 ⇔ 079 080 ⇔ 089 090 ⇔ 099 100 ⇔ 109 110 ⇔ 119 120 ⇔ 129 130 ⇔ 139 140 ⇔ 149 150 ⇔ 159 160 ⇔ 169 170 ⇔ 179 180 ⇔ 189 190 ⇔ 199 200 ⇔ 209 210 ⇔ 219 220 ⇔ 229 230 ⇔ 239 240 ⇔ 255	No Function Macro 1 Macro 2 Macro 3 Macro 4 Macro 5 Macro 6 Macro 7 Macro 8 Macro 9 Macro 10 Macro 11 Macro 12 Macro 13 Macro 14 Macro 15 Macro 16 Macro 17 Macro 18 Macro 19 Macro 20 Macro 21 Macro 22 Macro 23
17	Color Macro Speed	000 ⇔ 255	0~100%

20 Channel Cont.
(Advanced Mode)

Channel	Function	Value	Percent/Setting
		000 ⇔ 007	No Function
		008 ⇔ 015	Macro 1
		016 ⇔ 023	Macro 2
		024 ⇔ 031	Macro 3
		032 ⇔ 039	Macro 4
		040 ⇔ 047	Macro 5
		048 ⇔ 055	Macro 6
		056 ⇔ 063	Macro 7
		064 ⇔ 071	Macro 8
		072 ⇔ 079	Macro 9
		080 ⇔ 087	Macro 10
		088 ⇔ 095	Macro 11
		096 ⇔ 103	Macro 12
		104 ⇔ 111	Macro 13
		112 ⇔ 119	Macro 14
		120 ⇔ 127	Macro 15
18	**Pan/Tilt Macro**	128 ⇔ 135	Macro 16
		136 ⇔ 143	Macro 17
		144 ⇔ 151	Macro 18
		152 ⇔ 159	Macro 19
		160 ⇔ 167	Macro 20
		168 ⇔ 175	Macro 21
		176 ⇔ 183	Macro 22
		184 ⇔ 191	Macro 23
		192 ⇔ 199	Macro 24
		200 ⇔ 207	Macro 25
		208 ⇔ 215	Macro 26
		216 ⇔ 223	Macro 27
		224 ⇔ 231	Macro 28
		232 ⇔ 239	Macro 29
		240 ⇔ 247	Macro 30
		248 ⇔ 255	Macro 31
19	**Pan/Tilt Macro Speed**	000 ⇔ 255	0~100%
		000 ⇔ 007	No function
		008 ⇔ 069	Reset Pan/Tilt
		070 ⇔ 129	Reset All
20	**Control**	130 ⇔ 190	Move in Black
		191 ⇔ 205	Reserved for future use
		206 ⇔ 221	Reserved for future use
		222 ⇔ 236	Reserved for future use
		237 ⇔ 255	Reserved for future use

5. Technical Information

Product Maintenance

To maintain optimum performance and minimize wear, clean this product frequently. Usage and environment are contributing factors in determining the cleaning frequency.

As a rule, clean this product 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.

To clean a product, follow the recommendations below:

* Unplug the unit from power.
* Wait until the unit has cooled.
* Use a vacuum (or dry compressed air) and a soft brush to remove dust collected on the external vents and accessible internal components.
* Clean all external optics and plastic surfaces with a mild solution of non-ammonia glass cleaner or isopropyl alcohol.
* Apply the solution directly to a soft, lint-free cotton cloth or a lens cleaning tissue.
* Wipe any dirt or grime to the outside edge of the lens surface.
* Gently polish the lens surfaces until they are free of haze and lint.

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

Refrain from spinning this product's fan using compressed air.

Troubleshooting Guide

Symptom	Cause(s)	Action(s)
Product does not light up	Dimmer fader set to "0"	Increase the value of the dimmer channel
	All color faders set to "0"	Increase the value of the color channels
	All colors in **Static mode** are set to "0"	Increase the values of the colors
	No power	Verify external power circuit and wiring
	Faulty internal power supply	Send unit for repair
	Faulty main control board	
One of the LEDs does not work	Faulty LED	Send unit for repair
	Faulty LED module	
	Faulty LED driver	
Two or more LEDs do not work on a single module	Faulty LED module	Send unit for repair
	Faulty LED driver	
The wrong LEDs light up when using DMX	Wrong personality	Change the personality
	Wrong DMX address	Change the DMX address
Circuit breaker/fuse keeps tripping/blowing	Excessive circuit load	Reduce total load placed on the electrical circuit
	Short circuit along the power wires	Check electrical wiring
Unit does not power up	No power	Check for voltage on outlet
	Loose or damaged power cord	Check power cord
	Blown fuse	Replace fuse
	Faulty internal power supply	Send unit for repair
Unit does not respond to wired DMX or responds erratically	Wrong DMX addressing	Check 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
	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 before a long section of cable or right after the unit with the strong signal
	Too many units	Install an optically coupled DMX splitter after unit #32
	Interference from AC wires	Keep DMX cables separated from power cables or fluorescent/black lights
	Faulty Display/Main/DMX interface board	Send unit for repair
	Faulty Display/Main board	Send unit for repair

If you have technical problems after trying the solutions provided, contact CHAUVET® Technical Support.

Returns Procedure

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

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

Clearly label the package with an RMA number. CHAUVET® will refuse any product returned without an RMA number.

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

Once you have received the RMA number, include the following information on a piece of paper inside the box:

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

Be sure to pack the product properly. Any shipping damage resulting from inadequate packaging will be the customer's responsibility. FedEx packing or double boxing are recommended.

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

Contact Us

World Headquarters

CHAUVET®

General Information

Address:	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) 756-8015
Email:	tech@chauvetlighting.com

World Wide Web

www.chauvetpro.com

United Kingdom & Ireland

CHAUVET® Europe Ltd.

General Information

Address:	Unit 1C
	Brookhill Road Industrial Estate
	Pinxton, Nottingham, UK
	NG16 6NT
Voice:	+44 (0)1773 511115
Fax:	+44 (0)1773 511110

Technical Support

Email:	uktech@chauvetlighting.com

World Wide Web

www.chauvetlighting.co.uk

Outside the U.S., United Kingdom, or Ireland, contact your distributor of record. Follow their instructions to request support or to return a product. Visit our website for contact details.

Technical Specifications Legend™ 412

Dimensions and Weight	Length	Width	Height	Weight
	5.5 in (140 mm)	10.1 in (257 mm)	12.0 in (304 mm)	10.1 lbs (4.58 kg)

Note: Dimensions in inches rounded to the nearest decimal digit.

Electrical	Power Supply Type	Range	Voltage Selection
	Switching (internal)	100~240 V, 50/60 Hz	Auto-ranging

	Parameter	120 V, 60 Hz	230 V, 50 Hz
	Consumption	144 W	139 W
	Operating current	1.8 A	.5 A
	Fuse	T 3.15 A, 250 V	T 3.15 A, 250 V

	Power I/O	US/Worldwide	Europe
	Power input connector	IEC	IEC
	Power output connector	N/A	N/A
	Power cord plug	Edison (US)	Local plug

Light Source	Type	Power	Lifespan
	LED	10 W	50,000 hours

	Color	Quantity	Current
	Quad Color	12	700 mA (per die)

Photo Optic	Parameter	Standard Optics
	Illuminance @ 5 m	1,500 lx
	Beam angle	12.0º
	Field angle	23.0º

Thermal	Max. External Temperature	Cooling System
	104° F (40° C)	Convection

DMX	I/O Connectors	Connector Type	Channel Range
	5-pin XLR	Sockets	12,28

| Ordering	Product Name	Item Code	UPC Number
	Legend™ 412	06010406	781462207588

MET ® US   UL 1573
CSA C22.2 No. 166
E113093   C E

Technical Specifications Legend™ 412 VW

Dimensions and Weight	Length	Width	Height	Weight
	5.5 in (140 mm)	10.1 in (257 mm)	12.0 in (304 mm)	10.1 lbs (4.58 kg)

Note: Dimensions in inches rounded to the nearest decimal digit.

Electrical	Power Supply Type	Range	Voltage Selection
	Switching (internal)	100~240 V, 50/60 Hz	Auto-ranging

	Parameter	120 V, 60 Hz	230 V, 50 Hz
	Consumption	165 W	170 W
	Operating current	1.4 A	.7 A
	Fuse	T 3.15 A, 250 V	T 3.15 A, 250 V

	Power I/O	US/Worldwide	Europe
	Power input connector	IEC	IEC
	Power output connector	N/A	N/A
	Power cord plug	Edison (US)	Local plug

Light Source	Type	Power	Lifespan
	LED	10 W	50,000 hours

	Color	Quantity	Current
	Quad Color	12	700 mA (per die)

Photo Optic	Parameter	Standard Optics
	Illuminance @ 5 m	1,680 lx
	Beam angle	12.0º
	Field angle	23.0º

Thermal	Max. External Temperature	Cooling System
	104° F (40° C)	Convection

DMX	I/O Connectors	Connector Type	Channel Range
	5-pin XLR	Sockets	10,20

Ordering	Product Name	Item Code	UPC Number
	Legend™ 412 VW	06010425	781462207779

UL 1573
CSA C22.2 No. 166
E113093

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C E

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Legend™ 412 User Manual Rev. 5
August 2012