PHILIPS Strand Lighting

100 plus series console



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IMPORTANT INFORMATION

Warnings and Notices

When using electrical equipment, basic safety precautions should always be followed including the following:

a. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.



///

- b. Do not use outdoors.
- c. Do not use near gas or electric heaters.
- d. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- e. Do not use this equipment for other than intended use.
- f. Refer service to qualified personnel.

SAVE THESE INSTRUCTIONS.

WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltages and damage the device. A qualified electrician must perform this installation.

WARNING: Do not open the console. There are no user serviceable parts inside. This equipment is designed to operate from the mains electrical supply and contains voltages, which, if touched, may cause death or injury. It should only be operated in accordance with the instructions provided and for the purpose of a lighting control system.

WARNING: Avoid spilling liquid on the equipment If this should happen, switch the equipment off immediately at the mains. To reduce the risk of fire or electric shock, do not expose the equipment to rain or moisture. For indoor use only.

WARNING: Refer to National Electrical Code® and local codes for proper use specifications.

WARNING: This equipment is intended for use in accordance with the National Electric Code® and local regulations. It is also intended for installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

Additional Resources for DMX512

For more information on installing DMX512 control systems, the following publication is available for purchase from the United States Institute for Theatre Technology (USITT), "Recommended Practice for DMX512: A Guide for Users and Installers, 2nd edition" (ISBN: 9780955703522). USITT Contact Information:

USITT 6443 Ridings Road Syracuse, NY 13206-1111 USA 1-800-93USITT www.usitt.org

Philips Strand Lighting Limited Two-Year Warranty

Philips Strand Lighting offers a two-year limited warranty of its products against defects in materials or workmanship from the date of delivery. A copy of Philips Strand Lighting two-year limited warranty containing specific terms and conditions can be obtained from the Philips Strand Lighting web site at www.strandlighting.com or by contacting your local Philips Strand Lighting office.

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TABLE OF CONTENTS

Strand Lighting Locations	Inside Front Cover
IMPORTANT INFORMATION	
Warnings and Notices	
Additional Resources for DMX512	
Philips Strand Lighting Limited Two-Year Warranty	
TABLE OF CONTENTS PREFACE	
About this Guide	
Product Description	
Compliance Information	
Included Items	
INTRODUCTION	
100 Plus Series Console Layout	
Glossary of Terms	
Getting Started	
Site Requirements	
Connecting Power	6
Connecting DMX512	
Rack Mounting	
Product Care	
Customer Service and Support	
CONSOLE OPERATION	
Two Scene Operation	
Manual Crossfades	
Timed Crossfades	
Single Scene Operation	
Hold	
Effect - Single Scene Mode	
Effect - Two Scene Mode	
Memory Operation	
Record Mode	
Playback Mode	
Go Button Playback	
Timed Playback	
Preset Playback of Memories.	
Timed Playback	
Deleting Memories	
Single Memory Deletion	
All Memory Deletion	
Preview Recorded Memories	
TECHNICAL SPECIFICATIONS	1
Electrical	
Mechanical	

PREFACE

1. About this Guide

The document provides installation and operation instructions for the following product:

• 100 Plus Series Console

Please read all instructions before using this product. *Retain this manual for future reference*. Additional information for Strand Lighting control consoles including product descriptions may be downloaded at www.strandlighting.com

2. Product Description

The Strand 100 series console is a small, simple to use, preset lighting desk. It can either control 24 channels in 1 scene or 12 channels in 2 scenes with the ability to expand scenes with the Hold feature. The console also has the ability to run a single effect. It is also possible to program a single theatrical cue stack of 99 memories and play these back. This console can be rack mounted. For complete technical specifications, see "TECHNICAL SPECIFICATIONS" on page 16.



Figure 1: 100 Plus Series Console

3. Compliance Information

This equipment is designed and manufactured to comply with international safety standards 1EC950, UL1950, CS950 and is intended for use as part of a lighting control system. It must not be used for other purposes where there is a risk of safety to persons. The equipment contains power voltages, socket outlets shall be installed near to the equipment and be easily accessible. All units are CE marked and include UL, cUL listed power supplies.

Working Voltage (Current)	100 - 120 VAC (2A) / 220 - 240 VAC (1A)
Frequency	50 / 60 Hz
Maximum Ambient Temperature 40°C (104°F) - Do not restrict ventilation	

4. Included Items

Unpack the console from the packaging and check that the following components are contained within. If any parts are missing, or damaged, please contact the carrier and your nearest Strand Lighting office.

- 100 Plus Series Console
- Universal Power Supply (90 to 240 VAC, auto-ranging)
- Dust cover
- Operation's Manual (this document)

INTRODUCTION

1. 100 Plus Series Console Layout

Figure 2 illustrates the layout of the control features of the 100 Plus Series Console.

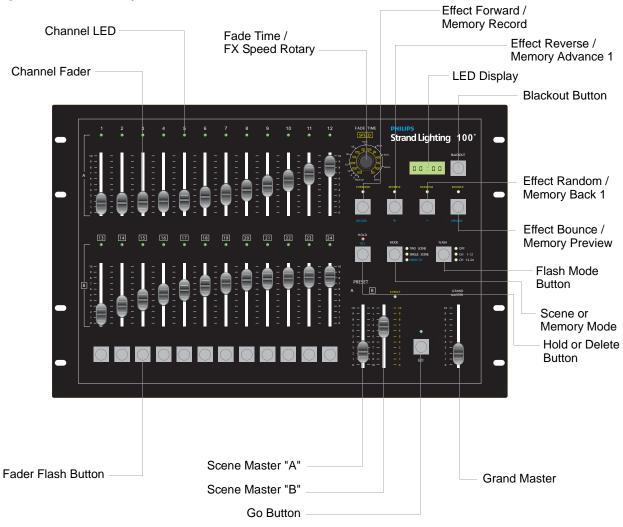


Figure 2: 100 Plus Series Console Control Features

2. Glossary of Terms

This section covers some of the common terms used throughout this manual.

Grand Master

An inhibitive fader that proportionately controls all other faders. This determines maximum output of all faders at all times. The grand master is always active.

Playback A

An inhibitive fader that proportionately controls all faders for the A scene.

Playback B / Effect Master

When not running the effect, an inhibitive fader that proportionately controls all faders for the B scene. When running the effect, the fader is a inhibitive master for the effect.

Channel Faders

A fader that controls the output of the corresponding dimmer number.

Fader Flash Button

A momentary button that flashes the level of the corresponding fader to full. Which fader is corresponding depends on the setting of the FLASH BUTTON. See below.

Mode Button

A button that toggles between the three modes of operation of the console. 1 Scene 24 channel mode, 2 Scene 12 channel mode or Memory allows recording and playback of all 24 channels. (In memory Mode all buttons labeled in blue text will perform the functions noted in blue.)

Hold Button

The Hold button will freeze the output of the faders so that the operator can reset the channel faders for a different look. This is only available in single scene mode.

Flash Button Mode Button

There are only 12 fader flash buttons and this button toggles the fader flash buttons between OFF, faders 1 - 12 and faders 13 - 24.

Fade Time / Effect Speed Dial

When not running the effect, this will allow the operator to set the fade time of the scene masters. When running the effect, this will allow the operator to set the rate at which the effect is running. See the LED display for time / speed readout.

Effect Options Buttons

These will allow the operator to change the stepping options of the effect. These buttons are only available in Two Scene or Single Scene operation. Refer to Table 1 for more information.

Button Name	Operation / Meaning
Forward	Forward allows the faders that have a level to step through their appropriate levels from the lowest number fader number to the highest.
Reverse	Reverse allows the faders that have a level to step through their appropriate levels from the highest number fader number to the lowest.
Random	Random allows the faders that have a level to step through their appropriate levels in a randomly generated order.
Bounce	Bounce allows the faders that have a level to step through their appropriate levels from the lowest number fader number to the highest then back to the lowest number fader.

Table 1: Effect Buttons

Memory Options Buttons

These buttons will allow for programming and deletion of memories and for access specific numbers in the cue stack. These buttons are only available in Memory Mode. Refer to Table 2 for more information.

Button Name	Operation / Meaning
Record	Record allows the current output of the console to be stored into a memory within the cue stack.
+	"+" (plus) will step the memory number forward by one
-	"-" (minus) will step the memory number back by one
Preview	Preview allows for a specific memory to be previewed.
Delete	Delete allows for a memory or the whole cue stack to be deleted.

Table 2: Memory Buttons

LED Display

This will show alpha / numeric information about the console. Such as fade time, effect step rate, memory number and whether the black out button is active.

LED Lights

All channel faders have LEDs that mimic the output level of each fader. LEDs also are indicators of the channel mode as well as when all features are activated. All LEDs are green.

Black Out Button

This will allow the operator to instantly stop all fader output. Press again to restore fader output.

3. Getting Started

After unpacking the console and checking that you have all the included items shipped with your console (refer to "Included Items" on page 3 for details), you may begin connecting your 100 Plus Series Console to power and lighting system.

Site Requirements

The 100 Plus Series Console requires a sturdy, flat surface for installation (unless the unit is to be rack mounted - see "Rack Mounting" on page 7 for information). The surface should be able to support the weight of the console and should provide suitable ventilation. Also, the site should be clean (i.e. absent of any construction dust or debris) and dry. Before setting up, ensure that the installation site meets these requirements. For operational and space requirements, refer to "TECHNICAL SPECIFICATIONS" on page 16.

Connecting Power

The power supply shipped with your 100 Plus Series Console is an auto-ranging, universal voltage supply. It operates between 90 to 240 VAC.

To connect the power supply:

Step 1. As shown in Figure 3, make sure unit's power switch is set to "Off"

Step 2. Connect DC connector from power supply to DC IN on console.

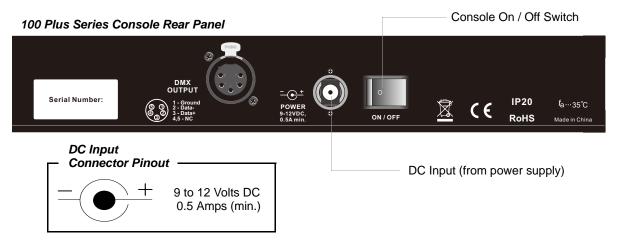


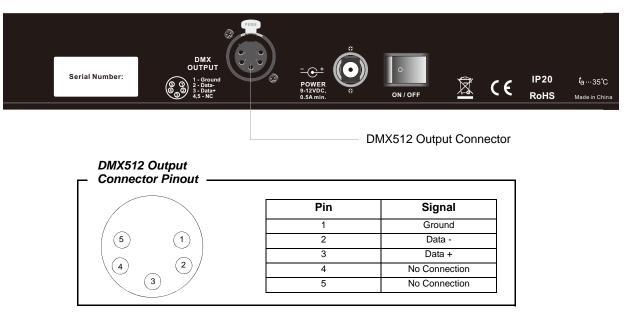
Figure 3: 100 Plus Series Control Console Power Connection

- Step 3. When DC connector is plugged in, twist it to lock in place.
- Step 4. Connect power supply to AC supply source.
- Step 5. Turn on console at Console On / Off Switch.

Note: You must connect the console to the lighting system via DMX512 before it is capable of providing control. See "Connecting DMX512" on page 7 for more information.

Connecting DMX512

The console provides one standard, female XLR 5-pin connector for connecting to DMX512 devices. This connector supports one DMX512 universe of the first 24 channels.



100 Plus Series Console Rear Panel



Note: For more information on DMX512, refer to "Additional Resources for DMX512" on page 1.

4. Rack Mounting

If you wish to mount the 100 Plus Series Console in a rack, using a Philips screwdriver, remove the hardware securing the four side pieces around the console. Use the eight mounting holes (as shown in **Figure 5**) to secure the console in a rack. Note, rack screws are not provided (by others).

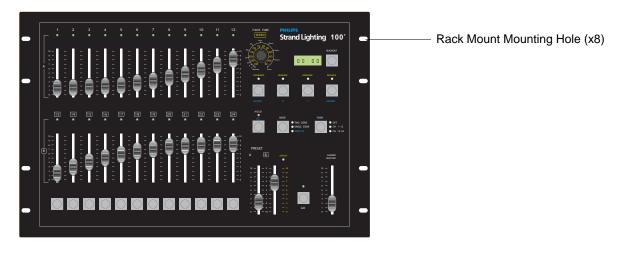


Figure 5: 100 Plus Series Console Rack Mounting

Note: The 100 Plus Series Console should be rack mounted before power or DMX512 cables are connected.

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7

5. Product Care

The 100 Plus Series Console requires very little care and does not have any user-serviceable parts. Avoid spilling liquid on the equipment If this should happen, switch the equipment off immediately at the mains. To reduce the risk of fire or electric shock, do not expose the equipment to rain or moisture.

In the event the console needs to be cleaned, remove all power from unit and use only a very mild soap on a damp cloth. Never saturate the console with any cleaning solution. Dry immediately with a soft lint-free cloth after cleaning.

WARNING! Never use harsh chemicals or solvents such as window cleaners, paint removers, etc.

6. Customer Service and Support

At Strand Lighting, we are committed to providing you the highest quality in customer service and product support. Whether your needs are telephone troubleshooting assistance or technical service, our full-time staff of experienced professionals are on-hand to provide support. We also have a world-wide network of Authorized Strand Lighting Service Centers. For a complete list of Authorized Strand Lighting Service Centers, please visit our web site at www.strandlighting.com and click on the Support section.

For your nearest Strand Lighting office, please see "Strand Lighting Locations" on the inside front cover of this manual.

CONSOLE OPERATION

1. Two Scene Operation

When the console is powered up, check the Mode LED indicators to determine the operating mode it is in. Press the Mode button as necessary to place the console in Two Scene Mode. The "Two Scene" LED will illuminate to confirm that the console is in two scene mode as shown in **Figure 6**.



Figure 6: Mode Button LED Indicator - Two Scene

Now, Preset A Master will be the scene master for the top bank of channel faders and Preset B Master will be the scene master for the bottom bank of channel faders. These two banks of faders both correspond to dimmers 1 - 12.

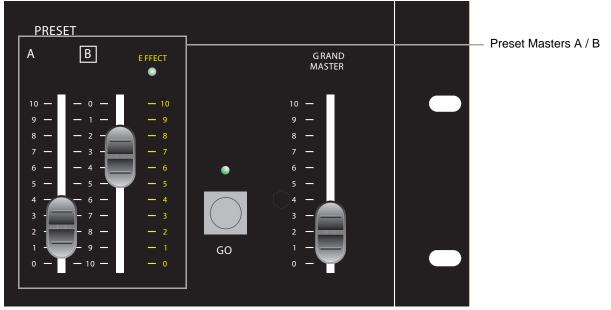


Figure 7: Preset Master A / B

2. Manual Crossfades

Preset Master A is at full when the fader is in the UP position and at 0 when the fader is in the DOWN position. Preset Master B is just the opposite of Preset Master A. (Refer to the vertical numbering beside the playbacks). This allows for proportional crossfades by moving both faders simultaneously in the same direction.

Individual channel fader control works the same in two scene mode as it does in one scene mode.

3. Timed Crossfades

For timed crossfades - use the same procedure as the manual crossfade but with the fade timer set to the preferred fade time. The LED display will show the fade time that is set. Timed crossfades can vary from 0 (Manual) to 15 minutes.

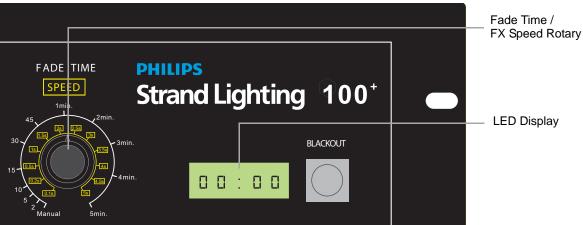


Figure 8: Preset Master A / B

4. Single Scene Operation

Make sure the MODE button has the console in the single scene mode. Change the mode by pressing the MODE button. The Single Scene LED indicator will illuminate as shown in **Figure 9**.

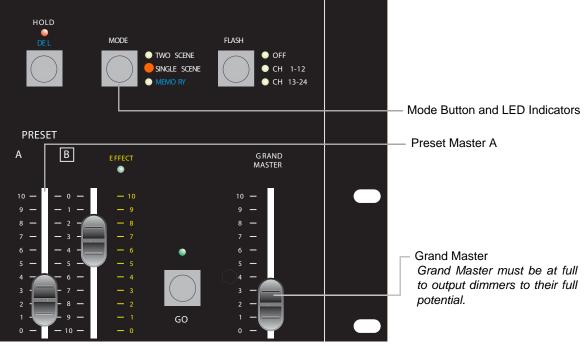


Figure 9: Mode Button LED Indicator - Single Scene

Make sure the Grand Master and Preset Master A levels are full or at the desired level.

Once the masters are set, simply set the Channel Faders (1 - 24) to the desired levels. At this point, the dimmers should correspond to the level of the Channel Faders. The fader output of the fader that is being adjusted will be shown in the LED Display on a scale from 0 to 100.



5. Hold

In single scene mode only, using the HOLD button (as shown in **Figure 10**) allows the operator to freeze all dimmer output and manually reset the levels for all 24 faders to create a different look.



Figure 10: Hold Button - Single Scene Mode

To use Hold Button Operation

Step 1. Select current settings with channel faders. Make sure Preset Master A is at "10" and Preset Master B is at "0" (zero).

Note: The hold feature can only be activated and deactivated with playbacks in these positions.

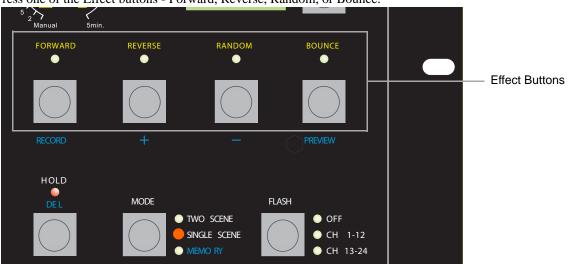
- Step 2. Press the HOLD button. The HOLD LED indicator should be illuminated. The current settings will now be recorded into the HOLD's memory.
- Step 3. You can now set the channels to the levels required for the next cue. The channel levels will not output as live.
- Step 4. You can now move Preset Master A to "0" (zero) while moving Master Preset B level to 10. During the crossfade, the HOLD LED will be flashing. The new cue will output and the previous cue will fade out.
- Step 5. Once both Preset Master A and Preset Master B have reached the bottom of the current Channel Fader settings, they will now be recorded into HOLD's memory. Note, the HOLD LED will stop flashing but remain on indicating the activation of the HOLD feature.
- Step 6. The operator is now free to reset all Channel Faders to the levels for the next cue. Once the channel faders are set, crossfade Preset Master A back to 10 and Preset Master B back to 0. During crossfade operation, the hold LED will flash. After the crossfade is complete, the new cue will now be outputting live and locked into HOLD's memory. Note, the HOLD LED should still be illuminated.
- Step 7. You can now repeat the above steps to continue crossfading between cues.
- Step 8. Press HOLD button again to release the HOLD function when Preset Master A and Preset Master B faders are at the top. After pressing HOLD, the HOLD LED should turn off.

Note: For timed crossfades - use the same procedure as the manual crossfade but with the fade timer set to the preferred fade time. The LED display will show the fade time that is set.

6. Effect - Single Scene Mode

An effect is a way to get fast changing output of dimmer levels in a specific order. The effect capability of this console is limited but simple to do. The console can run one effect at a time.

Set the console to single scene mode. Set Preset Master A to 0 (Down) and Preset Master B to 0 (Up). Preset Master B will become the effect master. (See the colored information beside the Playback B). Set current fader levels to include only the faders that will be in the effect. Set them to any level from 1 to 100.



Press one of the Effect buttons - Forward, Reverse, Random, or Bounce.

Figure 11: Hold Button - Single Scene Mode

Table 3 provides details of each Effect Button's operation.

Button Name	Operation / Meaning
Forward	Forward allows the faders that have a level to step through their appropriate levels from the lowest number fader number to the highest.
Reverse	Reverse allows the faders that have a level to step through their appropriate levels from the highest number fader number to the lowest.
Random	Random allows the faders that have a level to step through their appropriate levels in a randomly generated order.
Bounce	Bounce allows the faders that have a level to step through their appropriate levels from the lowest number fader number to the highest then back to the lowest number fader.

Table 3: Effect Buttons

The lights will now operate a chase in the selected Effect mode. The Effect Master will inhibit the levels of all effect channels. The fade time rotary becomes the SPEED dial. Set the speed of the effect as desired. The LED Display will show the set rate.

The effect can be faded in rather than the effect starting abruptly by pulling down the Effect Master and fading it up at the appropriate time.

7. Effect - Two Scene Mode

To run the effect in two scene mode, just change the MODE Button to two scene. Once the LED indicator illuminates "Two Scene", the console is set to two scene mode. Now all of the fader levels from the top fader bank will become the faders in the effect. With both playbacks in the up position, just press any of the effect directional buttons and the effect will start immediately.

Once the effect is running, adding new fader levels will add those faders into the effect.

Note: Only the faders in the top fader bank can be used in the effect. Press the effect button again to stop.

8. Memory Operation

Memory mode allows you to program a cue stack of up to 99 memories. These can be played back sequentially. In memory mode the buttons labeled in blue will be available.

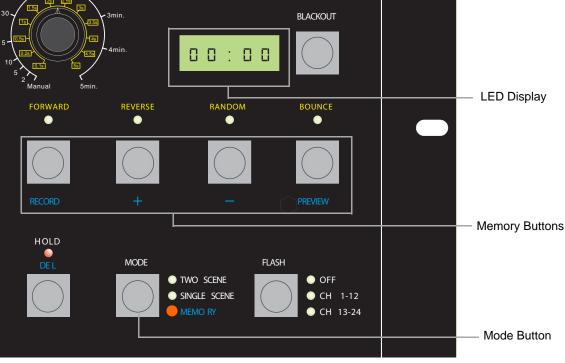
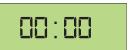


Figure 12: Hold Button - Single Scene Mode

To set the console to Memory Mode:

- Step 1. Make sure the MODE Button is set to Memory mode. Change the mode by pressing the MODE button. "Memory Mode" LED indicator will illuminate once the console is set to Memory Mode.
- Step 2. The LED Display will show "00:00".
- Step 3. The first two digits will be the currently outputting memory and the second two digits will be the next available memory. In this case (as shown to the right) there are no memories recorded.



Record Mode

To enter record mode hold down the MODE Button while in Memory mode and then press the RECORD button. The Memory LED will blink to show you are in Record mode.

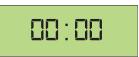
The LED Display will show, "SS:00". The "SS" signifies an unrecorded scene, "SP" signifies a recorded scene.

You can now set the 24 channel faders to the levels you require for the first cue. When the cue is as desired, press the RECORD Button. This will store the scene.

The display will automatically increment by one. If you wish to change the number use the [+] or [-] buttons. These will increment or decrease the memory numbers.

When you have recorded your cues press the MEMORY button again. The LED will stop blinking and the LED Display will show, "00:00".





Playback Mode

After recording cues into the console memory, you can play them back. There are two methods, one using the GO button (Flash Mode Button) and the other using the Preset Master A and Preset Master B.

Go Button Playback

Use the [+] button to take you to the memory that you wish to begin with. For instance memory 1.

The display shows that there is currently no memory outputting and that the next memory is 01. To play this back press the Go button.

Memory 1 will output and the next available memory will be displayed, in this case Memory 2.

If you wish to play back a different memory next you can use the [+] or [-] buttons to select it.

When you reach the last recorded memory it will select the first recorded memory as the next cue.

Only memories that have been recorded will be played back. If you have recorded 1, 2, 3, 10, 11 when you playback the memory stack these will be the five memories that will playback in sequence.

Timed Playback

It is possible to use times when playing back the memories. Before you press the GO button use the Fade Time rotatory dial to set the time. The time will be shown on the LED Display.

When you press the GO button the time selected will be used. The LED above the GO button will flash while the transition is happening.

Preset Playback of Memories.

While in memory mode if you move the Preset Master A and Preset Master B faders, the memory that is next to be output will be faded in and the current memory will be faded out. You can manually control the fade time by using this method.

For example if the Preset Master A and Preset Master B faders are at the top and the LED Display will show, "01:02".

Then moving the Preset Master A and Preset Master B faders to the bottom will fade Memory 1 out and fade Memory 2 in.

Timed Playback

It is possible to use times when playing back the memories. Before you move the Preset Master A and Preset Master B faders use the Fade Time rotatory dial to set the time. The time will be shown on the LED Display.

When you move the faders the transition will happen over the time set. The EFFECT LED will flash to show a timed transition is happening.

It is possible to switch between the two playback modes at any time either by moving the Preset Master A and Preset Master B faders or pressing the GO button.

9. Deleting Memories

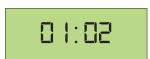
You can delete either a single memory or all of the memories recorded in the console.

Single Memory Deletion

Select Record function by pressing the RECORD button while holding down the MEMORY button. The MEMORY button's LED indicator will blink.

Use the [+] or [-] buttons to select memory you wish to delete.





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Press the DELETE button for 2 seconds. This will delete the currently selected memory it will change from an "SP" to "SS".



You can continue to the next memory you wish to delete.

All Memory Deletion

Select Record function by pressing the RECORD button while holding down the MEMORY button. The MEMORY button's LED indicator will blink.

Use the [+] or [-] buttons to select any recorded memory.

Press the DELETE button for 2 seconds. This will delete the currently selected memory it will change from an "SP" to "SS".

While continuing to hold the DELETE button press and hold the RECORD button for 2 seconds. This will delete the all the recorded memories.

10. Preview Recorded Memories

Note: Preview is a mode that displays what the memory (see "LED Display" on page 6) is outputting. [+] and [-] allow you to step through the stored memories in a very quick fashion (without fades) to allow you to preview the show.

This mode will allow you to rapidly step through all the memories that you have recorded.

Select Record function by pressing the RECORD button while holding down the MEMORY button. The MEMORY button's LED indicator will blink.

Press the PREVIEW button. You can step through the memories using the [+] or [-] buttons.

The LED Display will show, "Pr:02".

To exit Preview mode press the RECORD button once.

To return to Memory mode press the MEMORY button.



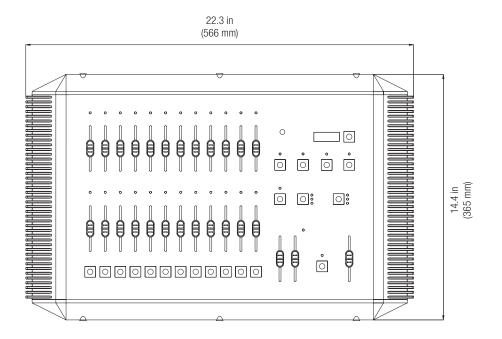
TECHNICAL SPECIFICATIONS

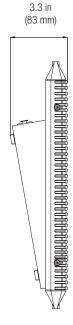
1. Electrical

Supply Voltage:	Universal power supply 90-240V
Approvals:	CE marked with UL listed and cUL power supply
Connectivity:	1 DMX512 Out (XLR5F) port

2. Mechanical

Construction:	Rigid folded sheet steel and Flame retardant ABS controls
Operating Temperature:	0° to 40°C / 32° to 104°F ambient
Humidity:	0% - 95% non-condensing
Storage Temperature:	0° to 35°C / 32° to 95°F
Weight:	4.4 lbs / 2.0 kgs
Dimensions (LxWxH):	22.3 x 14.4 x 3.3 in / 566.0 x 365.0 x 83.0 mm





Notes

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