

PHILIPS

Strand Lighting

200 plus series consoles



200 plus 12/24 console (64331)



200 plus 24/48 console (64341)

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200 Plus Series Console Operations Manual

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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:

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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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PREFACE

1. About this Guide

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

- 200 Plus 12/24 Control Console (LBE) - Strand Lighting Part Number 64331
- 200 Plus 24/48 Control Console (LBE) - Strand Lighting Model Number 64341

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 Descriptions

The 200 plus series consoles are the latest in a long line of enhanced manual lighting desks from Philips Strand Lighting. The consoles feature Ethernet and DMX ports as well as a video display port for users needing more information than is provided by the on panel LCD display.

Easy to set up and use the 200 plus series consoles are ideal for any application that needs manual and memory control. For complete technical specifications, see "[TECHNICAL SPECIFICATIONS](#)" on [page 72](#).



Figure 1: 200 Plus Series Consoles

3. Compliance Information

This equipment is designed and manufactured to comply with international safety standards IEC950, 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) - <i>Do not restrict ventilation</i>

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.

- 200 Plus Series Console (either 12/24 or 24/48 model)
- 800 x 600 VGA monitor output card (installed in console)
- Operation's Manual (this document)
- Universal Power Supply (90 to 240 VAC, auto-ranging)
- Dust Cover

INTRODUCTION

1. 200 Plus Series Console Layout 12/24 Version

Figure 2 illustrates the layout of the control features of the 200 Plus Series Console (12/24 version).

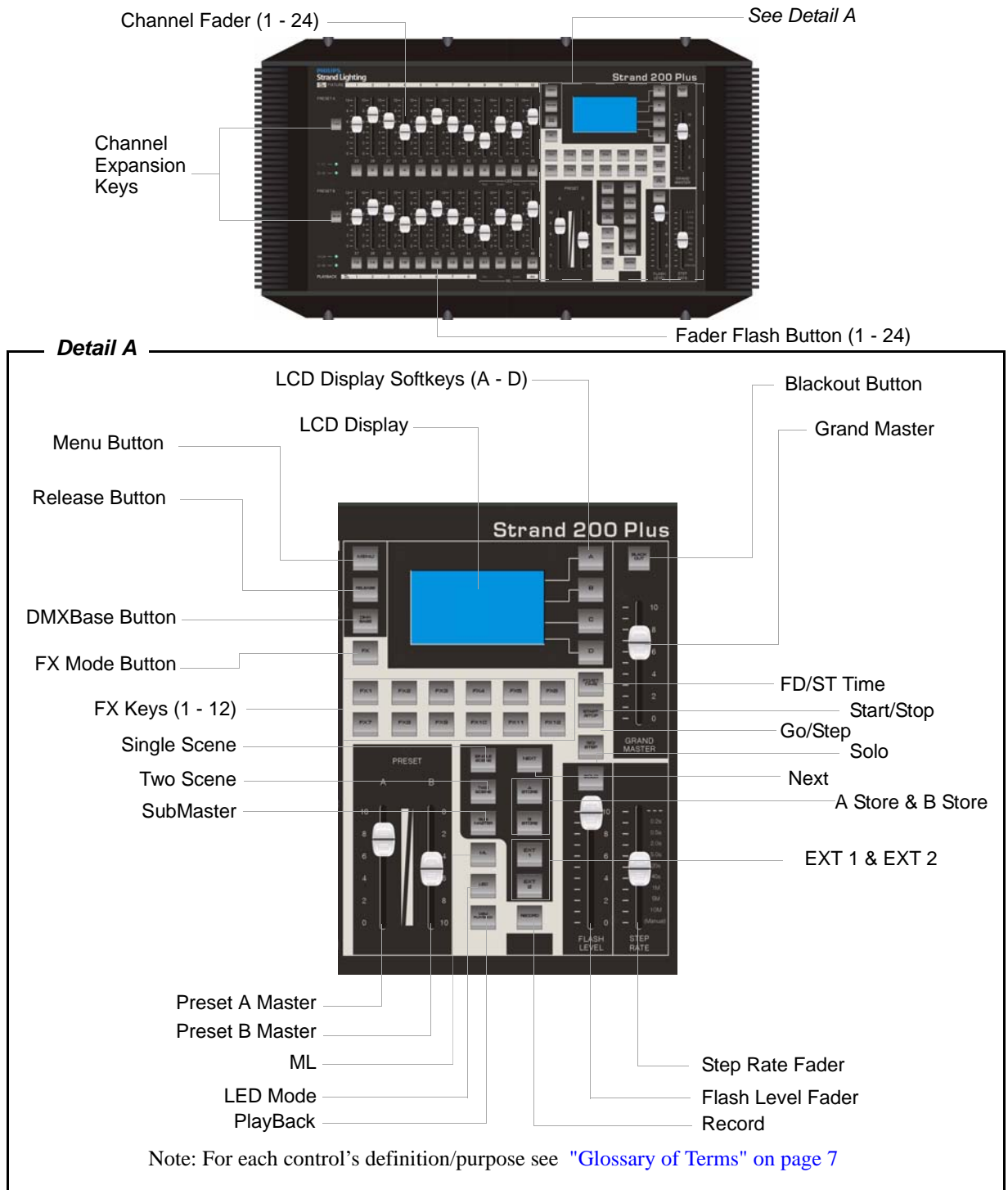


Figure 2: 200 Plus Series 12/24 Console Control Features

24/48 Version

Figure 3 illustrates the layout of the control features of the 200 Plus Series Console (24/48 version).

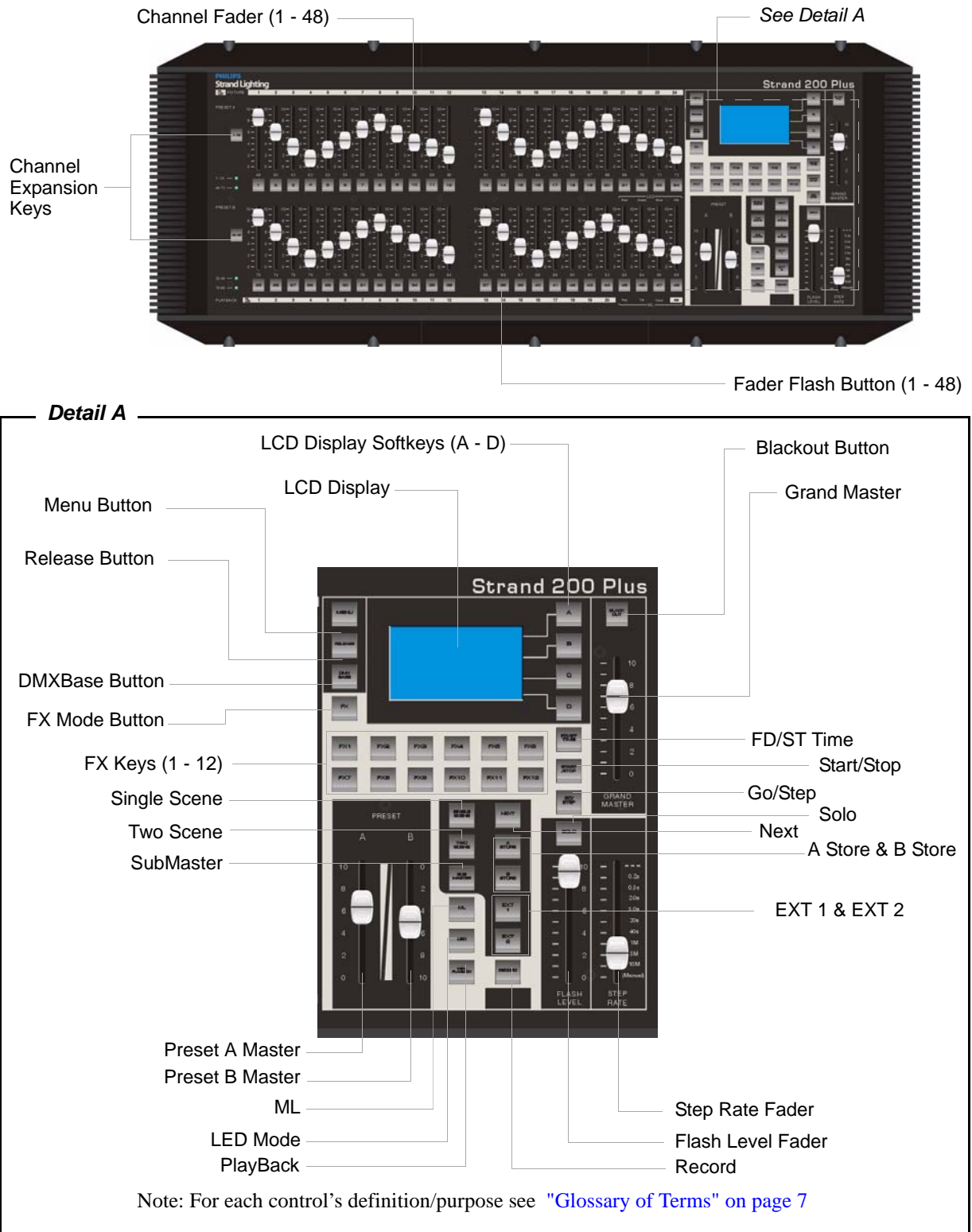


Figure 3: 200 Plus Series 24/48 Console Control Features

2. Glossary of Terms

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

Channel Expansion Keys: Key 1-48 & Key 49-96 (Key 12-24 & Key 25- 48)

Used to Page up/down for faders allowing the 24/48 console to control up to a maximum of 96 fader channels (maximum of 48 faders on the 12/24). Pressing Key 1-48 will set the faders to control channels 1-48, Pressing Key 49-96 will set the faders to control channels 49-96.

Key 1, Key 2, Key 3, ...Key48

Under each channel fader is a flash button (bump button) for that channel.

SingleScene Button

Used to enter into Single Scene Mode which allows access to all the fader channels.

TwoScene

Used to enter into TwoScene Mode. Allows the console to be run in a standard two scene preset mode. This limits access to 24 channels. (12 channels on the 12/24 version).

SubMaster

Used to enter into SubMaster Mode. Allows users to record generic channels into a memory for manual playback.

ML (Moving Light)

Used to enter into ML Mode. Allows for the programming of moving lights into Playback faders or into FX stacks.

LED Mode

Used to enter into LED Mode. Allows for the programming of LEDs into Playback faders or into FX stacks.

PlayBack

Used to enter into PlayBack Mode. Allows for access to submaster playback of generic lights and the manual playback of ML and LED memories.

NEXT

Used to process CrossFade function in SingleScene Mode and submaster mode.

A Store / B Store

Used to store temporary memories when operating the console manually in Single Preset mode.

Record

Used to record submasters, playbacks and FX stacks.

EXT 1 and EXT 2

Allows remote control of DMX devices like smoke machines, toggles the remote device on or off.

Key A, Key B, Key C, Key D

Soft keys to allow access and navigation of the LCD screen.

Menu

Allows access into specific functions like patch, ML set up, LED set up etc.

FX 1 - 12

Selects the relevant FX key to allow programming or playback of FX stacks 1 through 12.

Release

Clear the current operations. This is useful for resetting MLs and LEDs when you have finished programming with them.

DMX Base

This key allows the FX keys to play back memories stored and created using DMX in or from offline programming.

FD/ST TIME

The Fader Time is available when the indicator is red. The Step Time is available when the indicator is yellow. Moving the Step Rate fader allows for a time to be set and stored in an FX stack. It is also possible to set times manually for all functions at any time.

Start/Stop

Used to activate or deactivate any of the FX1-12 stacks.

GO/STEP

Used to manually run through the steps in an activated FX stack.

SOLO

Sets the flash buttons under the faders to Solo mode, only that faders contents will flash to full when the flash button is pushed.

Preset A and Preset B Faders

Used to manually fade between A bank of faders or B bank of faders in Two Preset mode. Used to fade between stored A or B and preset faders in Single Preset mode.

Flash Level Fader

The maximum output level that will be output when a flash button is pushed.

Step Rate Fader

Allow for the setting of Fade Times or Step rates.

GrandMaster

The master fader controller of intensity output for the console, it is always active.

Note: CONVENTIONS - When a key is referred to in the manual it will be in capital letters. For instance RECORD would refer to the record button. A softkey command on the LCD screen will be written contained inside "". So for instance the "Enter" would refer to a softkey option available on the LCD screen. For operational information, refer to ["CONSOLE BASIC OPERATION" on page 12](#).

3. Getting Started

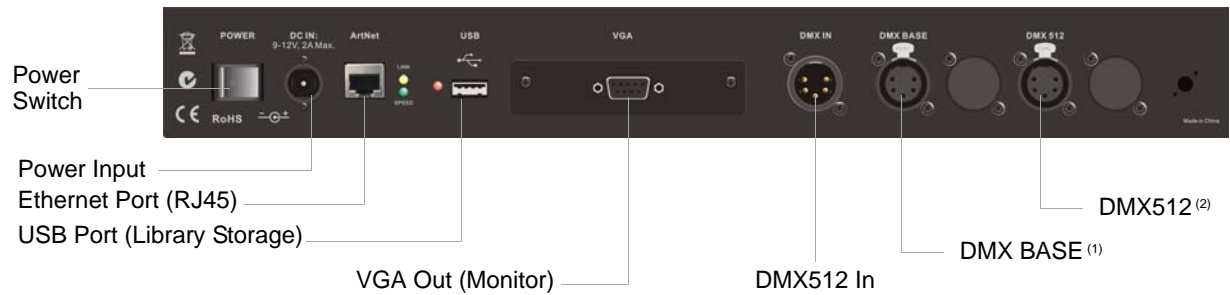
After unpacking the console and checking that you have all the included items shipped with your console (refer to ["Included Items" on page 4](#) for details), you may begin connecting your 200 Plus Series Console to power and lighting system.

Site Requirements

The 200 Plus Series Console requires a sturdy, flat surface for installation (unless the unit is to be rack mounted - see ["Product Care" on page 11](#) 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 72](#).

Console Rear Panel Connections and Controls

Figure 4 identifies all the connections and controls on the rear panel of the 200 Plus Control Console. Detailed information is contained throughout the manual for each connection. Below is a list of connections and their purpose.



NOTES:

- (1) DMX BASE is an advanced DMX512 port for the DMX BASE feature in the console. Please see ["Update DMX Base" on page 58](#) for details.
- (2) The DMX512 connection is the primary DMX512 port.

Figure 4: 200 Plus Series Console Rear Panel Connections and Controls

Power Switch

Turns console On or Off. Note, turning off this switch does not disconnect power from console.

Power Input

Power into console from universal (AC to DC) power supply. See ["Connecting Power" on page 9](#) for details.

Ethernet Port (RJ45)

Art-Net connection for faster communication with the other compatible devices.

USB Port (Library Storage)

USB connection for connection of a USB drive to load libraries, save shows, or update console software.

VGA Out (Monitor)

VGA connection for driving a VGA video monitor. See ["VGA connection for driving a VGA video monitor. for details. Note, video monitor sold separately." on page 9](#) for details. Note, video monitor sold separately.

DMX512 In

DMX512 input connection for DMX512 signals from another console or device. See ["Connecting DMX512" on page 10](#) for details.

DMX512 Out (2 Connections)

DMX512 output connections for controlling DMX512 devices. The DMX BASE port allows output for DMX Based functions. The DMX512 port allows output of DMX from the consoles functions. See ["Connecting DMX512" on page 10](#) for details.

Connecting Power

The power supply shipped with your 200 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 5**, make sure unit's power switch is set to "Off"

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

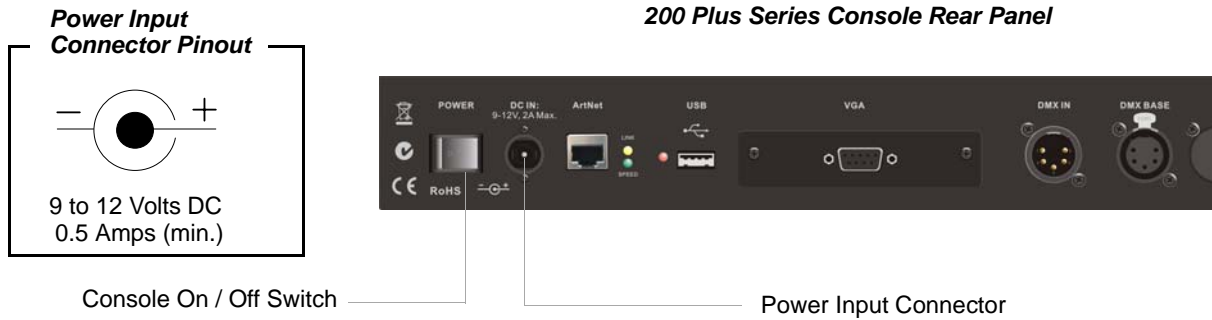


Figure 5: 200 Plus Series Control Console Power Connection

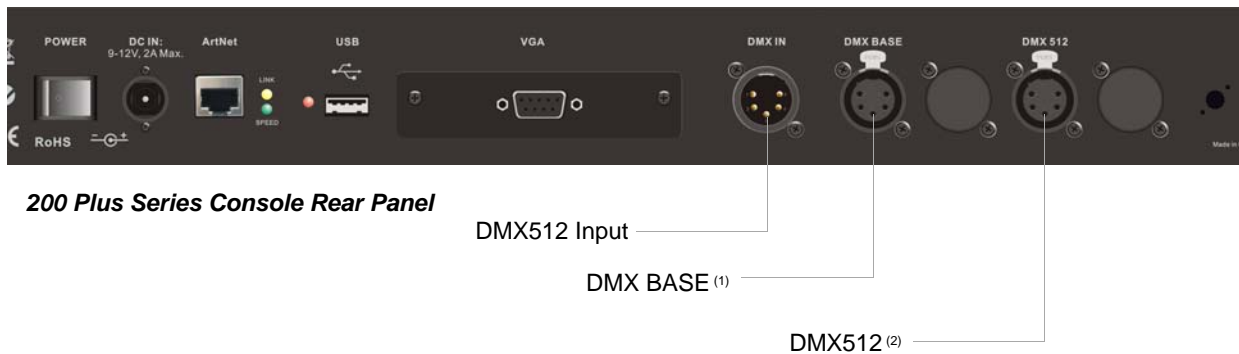
Step 3. Connect power supply to AC supply source.

Step 4. 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 10](#) for more information.

Connecting DMX512

The console provides two standard, female XLR 5-pin connector for connecting to DMX512 devices. DMX512 is for outputting to a universe of DMX devices for your primary output. This can include dimmers, LEDs, and moving lights. The port labeled DMX BASE is for outputting to a universe of LED devices. For more information on DMX BASE, refer to ["DMX Base" on page 7](#).



NOTES:

- (1) DMX BASE is an advanced DMX512 port for the DMX BASE feature in the console. Please see ["Update DMX Base" on page 58](#) for details.
- (2) The DMX512 connection is the primary DMX512 port.

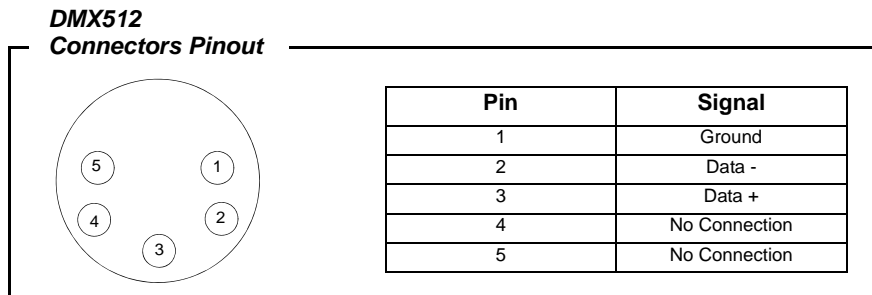


Figure 6: 200 Plus Series Control Console DMX512 Connection

Note: For more information on DMX512, refer to ["Additional Resources for DMX512" on page 1](#).

4. Video Monitor Connection

The 200 plus series console comes equipped with a VGA monitor output card and drives any standard VGA monitor*.

200 Plus Series Console Rear Panel

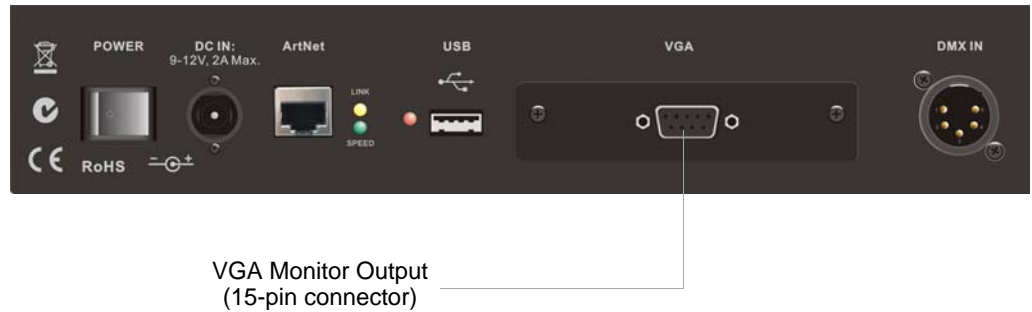


Figure 7: 200 Plus Series Control Console VGA Connection.

* Video monitor sold separately.

5. Product Care



WARNING! Do not use or place this device in vicinity of equipment that generates strong electromagnetic radiation or magnetic fields. Strong static charges or strong magnetic fields produced by equipment such as radio transmitters could interfere with the display or affect the product's internal circuitry.

The 200 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.

When the console is not in use, turn off power using the console on / off switch and place included dust cover over console.

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 Offices](#)" on the inside front cover of this manual.

CONSOLE BASIC OPERATION

Naming Conventions

When a key is referred to in the manual it will be in capital letters. For instance RECORD would refer to the record button. A softkey command on the LCD screen will be written contained inside "". So for instance the "Enter" would refer to a softkey option available on the LCD screen.

Note: All screen shots in the "[CONSOLE BASIC OPERATION](#)" section are simulated for clarity.

1. Two Scene Control

In Two Scene operation, separate scenes are set up on PRESET A and PRESET B faders. The A MASTER and B MASTER faders are used to crossfade between the two different scenes.

Entering Two Scene Operation Mode

There are two ways of entering into Two Scene mode:

If the TWO SCENE button is not lit at all:

- 1) Press the TWO SCENE button once and it will turn yellow.
- 2) Press the TWO SCENE button a second time and it will turn dark green.
- 3) You are now in Two Scene mode.

Note: If any channels on PRESET A or PRESET B are above 0% and the relevant PRESET A or PRESET B MASTER faders are at full the intensity of those channels will snap on.

Fading into TWO SCENE mode is also possible. If the TWO SCENE button is not lit at all:

- 1) Press the TWO SCENE button once and it will turn yellow.
- 2) If the PRESET A or PRESET B FADERS are at the bottom move them to the top. This will cross fade in any channels set above 0% on the PRESET A faders and the TWO SCENE button will turn dark green or;
- 3) If the PRESET A or PRESET B FADERS are at the top move them to the bottom and then move them to the top. This will cross fade in any channels set above 0% on the PRESET A faders and the TWO SCENE button will go dark green.

In most cases during Two Scene operation you will want to control 24 channels (12 channels on the 12/24 version) as this is the basic control mode. However it is possible to access up to 48 channels (24 on the 12/24 version) by using the 1-48 (1-24) and the 49-96(25-49) buttons. You can page between the pages to set the levels as you require. Remember to re-page to lower these channels if you have set them. The LCD next to the channel numbers you have selected will light up to represent the channels that you are working with on each fader bank.

The monitor displays information (as shown in **Figure 8**) about Channel levels and the position of the A/B MASTER faders.

REV1.00	Strand Lighting	2*48	GM: FL
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24			
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48			
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72			
73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96			
Submaster		Preset	Effect
Page: 01		A B	FX Base
01 02 03 04 05 06 07 08 09 10 11 12			FX1 FX2 FX3
13 14 15 16 17 18 19 20 21 22 23 24			FX4 FX5 FX6
25 26 27 28 29 30 31 32 33 34 35 36			FX7 FX8 FX9
37 38 39 40 41 42 43 44 45 46 47 48			FX10 FX11 FX12

Figure 8: Two Scene Operation - Video Monitor Screen

If a video monitor is disconnected or not used, the LCD can be used to show information during console operation. Channel levels are shown as bar lines next to the numbers in the middle left window.

Menu	Two Scene	A Fade	A
Release	01: 13: 25: 37:	B Fade	B
DMX Base			C
FX	Master XXX		D

Note: The video monitor's output will change color schemes occasionally to help minimize color burn out on the monitor.

Figure 9: Two Scene Operation - LCD Display

To Output a Scene from Preset A - Use the PRESET A faders to set the required levels for each channel. Set the PRESET A MASTER to full and the PRESET B MASTER to zero (both faders will be at the top). The scene set up on the PRESET A faders will output live.

To Output a Scene from Preset B faders- Set the required levels for each channel on the PRESET B faders. Set the PRESET A MASTER to zero and the PRESET B MASTER to full (both faders will be at the bottom). The scene set on the PRESET B faders will output live.

Example:

- 1) Make sure that the PRESET A MASTER and PRESET B MASTER faders are at the top.
- 2) Set PRESET A faders 1, 2 and 3 to 100%. (as you move these faders to 100% you will see the intensities of these channels turn on)
- 3) Set PRESET B faders 10, 11, 12 to 100%. You will see no change in these channels intensities in real time.
- 4) Move the PRESET A MASTER and PRESET B MASTER fader to the bottom.

Note: As the PRESET MASTERS move to the bottom the intensity on channels 1,2 and 3 will fade to 0% and the intensity on channels 10, 11 and 12 will fade to 100%.

Congratulations! You have just run your first lighting cue.

Timed Operation

Manual Fades

Use the PRESET A faders to set a scene. On the PRESET B faders set a different scene. Set the PRESET A MASTER to full and the PRESET B MASTER to zero. This will output the channels set on the PRESET A faders.

To crossfade to the scene on PRESET B move the PRESET A MASTER to zero and the PRESET B MASTER to full at the same time. The speed with which you move the master faders will control the time taken for the transition between PRESET A and PRESET B. As the two master faders are moved the scene on the PRESET A faders will fade out and the scene on the PRESET B faders will fade in.

A new scene can now be set up on the PRESET A faders without affecting the live outputs. To crossfade to the new scene on PRESET A, move the PRESET A MASTER to full and the PRESET B MASTER to zero. As the two master faders are moved the currently outputting scene set up on PRESET B faders will fade out and the scene set on PRESET A faders will fade in.

Timed Fades

It is possible to set a fade time between scenes by using the STEP RATE fader. Make sure the FD/ST TIME button is red by pressing the button as needed. When red, this indicates that the STEP RATE fader is in time mode. To apply the time press the A and C soft buttons on the right of the LCD, the text will invert its colors to show the selection has occurred. This will apply the time on the STEP RATE FADER to the PRESET A and PRESET B faders. Set the time to the desired level. When you move the PRESET A and PRESET B faders the time will now be applied to the transition. The LCD will show the time in the bottom Left window.

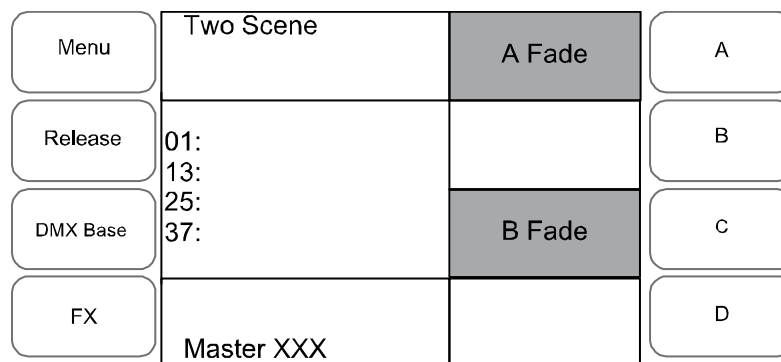


Figure 10: Timed Fades - LCD Display

The example below will show you how to set and apply Time to the Preset Master moves.

Example:

- 1) Make sure that the PRESET A MASTER and PRESET B MASTER faders are at the top.
- 2) Set PRESET A faders 1, 2 and 3 to 100%. (as you move these faders to 100% you will see the intensities of these channels come on)

- 3) Set PRESET B faders 10, 11, 12 to 100%.
- 4) Ensure that the PRESET A and PRESET B faders have been selected in the LCD window.
- 5) Use the STEP RATE fader to set the desired time, 5 secs.
- 6) Move the PRESET A MASTER and PRESET B MASTER FADERS to the bottom quickly.

Note: The time will be used to control the crossfade.

Flashing Channels

Pressing the flash button (Bump Button) of any channel fader will flash that channel to the level set by the FLASH MASTER. This will be added to the scene. If the SOLO button is selected then any channels flashed will come on and all other channels will go to 0%.

2. Single Scene Operation

The monitor display is similar to that for Two Scene.

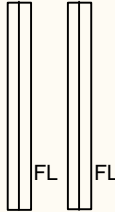
REV1.00	Strand Lighting	1*96	GM: FL
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24			
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48			
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72			
73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96			
Submaster		Preset	Effect
Page: 01		A B	FX Base
01 02 03 04 05 06 07 08 09 10 11 12			FX1 FX2 FX3
13 14 15 16 17 18 19 20 21 22 23 24			FX4 FX5 FX6
25 26 27 28 29 30 31 32 33 34 35 36			FX7 FX8 FX9
37 38 39 40 41 42 43 44 45 46 47 48			FX10 FX11 FX12

Figure 11: Single Scene Operation - Video Monitor Display

If the video (VGA) display card is disconnected or a video monitor is not used, you can still view information on the LCD screen.

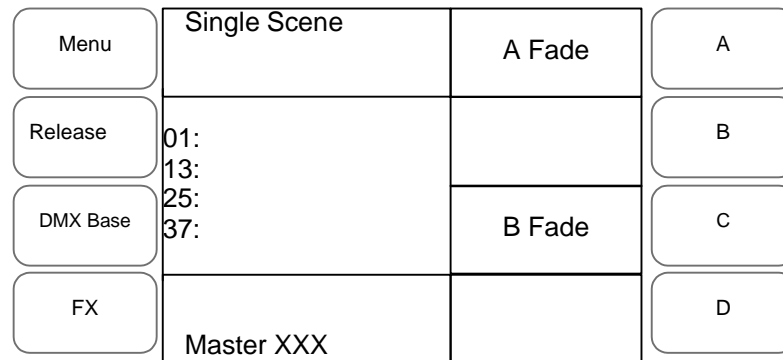


Figure 12: Single Scene Operation - LCD Display

Entering Single Scene Operation Mode

There are two ways of entering Single Scene mode:

If the SINGLE SCENE button is not lit at all:

- 1) Press the SINGLE SCENE button once and it will turn yellow.
- 2) Press the SINGLE SCENE button a second time and it will turn dark green.
- 3) You are now in Single Scene mode.

Note: Be aware that if any channels on PRESET A or PRESET B are above 0% and the relevant PRESET A or PRESET B MASTER faders are at full the intensity of those channels will snap on.

Fading into Single Scene mode is also possible. If the SINGLE SCENE button is not lit at all:

- 1) Press the SINGLE SCENE button once and it will turn yellow.
- 2) If the PRESET A or PRESET B FADERS are at the bottom move them to the top. This will cross fade in any channels set above 0% on the PRESET A faders and the SINGLE SCENE button will turn dark green.
Or
- 3) If the PRESET A or PRESET B FADERS are at the top move them to the bottom and then move them to the top. This will cross fade in any channels set above 0% on the PRESET A faders and the SINGLE SCENE button will turn dark green.

In most cases during Single Scene operation you will only want to control 48 channels (24 channels on the 12/24 version) as this is the basic control mode. However it is possible to access up to 96 channels (48 on the 12/24 version) by using the 1-48 (1-24) and the 49-96 (25-49) buttons. You can page between the pages to set the levels as you require. Remember to re-page to lower these channels if you have set them. The LCD next to the channel numbers you have selected will light to show which ones you are working on.

Setting a Scene

In Single Scene Mode you are able to crossfade between, or combine two scenes which are 48 channels wide (24 channels on the 12/24 version). To use this function, the NEXT button must be activated. This will allow the A STORE and B STORE buttons to be used. Select the NEXT button and it will turn red.

A scene is set up using both the PRESET A and PRESET B faders (PRESET A faders control channels 1-24, PRESET B faders control channels 24 - 48). This scene can then be stored temporarily by pressing the A STORE if the PRESET A fader is at full or in the B STORE button if the PRESET B fader is at full.

A second scene can then be set up on the PRESET A and PRESET B faders. The A PRESET and B PRESET MASTER faders can then be used to crossfade between the two scenes.

Example:

- 1) Press the NEXT button to select the crossfade mode for single scene operation.
- 2) Make sure that the PRESET A MASTER and PRESET B MASTER faders are at the top.
- 3) Set the faders 1, 2, 3, 22, 23 and 24 to 100%. (as you move these faders to 100% you will see the intensities of these channels come on)
- 4) Press the A STORE button. It will turn red.
- 5) Reset the faders so 10, 11, 12, 19, 20 and 21 are at 100%. You will see no change in these channels intensities in real time.
- 6) Move the PRESET A MASTER and PRESET B MASTER FADERS to the bottom.
- 7) The A STORE button will flash.
- 8) Press the B STORE button it will turn red. The A STORE button will stop flashing.
- 9) Reset the faders so 5, 6, 7, 13, 14 and 15 are at 100%.
- 10) Move the PRESET A MASTER and PRESET B MASTER FADERS to the top.
- 11) The B STORE button will flash.

Congratulations! You have run three cues in Single Scene Mode.

When cross fade occurs the A STORE button will continue to flash until a scene is stored in the B STORE button. This means a scene can be reused.

Example:

- 1) Press the NEXT button to select the crossfade mode for single scene operation.
- 2) Make sure that the PRESET A MASTER and PRESET B MASTER FADERS are at the top.
- 3) Set the faders 1, 2, 3, 22, 23 and 24 to 100%. (as you move these faders to 100% you will see the intensities of these channels come on)
- 4) Press the A STORE button. It will turn red.
- 5) Reset the faders so 10, 11, 12, 19, 20 and 21 are at 100%. You will see no change in these channels intensities in real time.
- 6) Move the PRESET A MASTER and PRESET B MASTER FADERS to the bottom. Channels 10, 11, 12, 19, 20 and 21 will be outputting at 100%.
- 7) The A STORE button will flash.
- 8) Move the PRESET A MASTER and PRESET B MASTER FADERS to the top.
- 9) Channels 1,2,3,22,23 and 24 will be outputting at 100%. The A STORE button will continue to flash.
- 10) Reset channels 7,8,9,14,15 and 16 to 100%.
- 11) Move the PRESET A MASTER and PRESET B MASTER FADERS to the bottom. Channels will be 7,8,9,14,15 and 16 outputting at 100%.
- 12) The A STORE button will flash.
- 13) Press the B STORE button. It will turn red. The A STORE button will stop flashing
- 14) Reset channels 10, 11, 12, 20, 21 and 22 to 100%.
- 15) Move the PRESET A MASTER and PRESET B MASTER FADERS to the top. Channels 11, 12, 20, 21 and 22 to 100% will be outputting. The B STORE button will flash.

Timed Fades

It is possible to set a fade time between scenes by using the STEP RATE fader. Make sure the FD/ST TIME button is red by pressing the button as needed. When red, this indicates that the STEP RATE fader is in time mode. To apply the time press the A and C soft buttons on the right of the LCD, the text will invert its colors to show the selection has occurred. This will apply the time on the STEP RATE FADER to the PRESET A and PRESET B faders. Set the time to the desired level. When you move the PRESET A and PRESET B faders the time will now be applied to the transition. The LCD will show the time in the bottom Left window.

To leave the crossfade function in Single Preset mode press the NEXT button when the PRESET A and PRESET B MASTER faders are at the top. This will turn out the red light and the A STORE and B STORE buttons will be inactive.

3. Submaster Operation

In Submaster mode it is possible to store generic channels and play them back using the PRESET A and PRESET B faders as submasters.

Recording a Submaster

Set the console to Single Scene or Two Scene mode. Remember, Single Scene gives you access to more channels.

Set the level of the channels using the PRESET A and PRESET B faders. Once you have set the levels to the intensity required press the RECORD button. The flash buttons under the faders will begin to flash red. Select which of the available 48 submasters (24 on the 12/24 version) you wish to store the set channels in and press the flash button associated with that submaster. The flash buttons will stop flashing and the button of the submaster you have recorded to will go red. You can see the record function happening in the lower left corner of the LCD screen, a series of blocks will scroll across the screen as the memory is written.

Example:

- 1) Go into Single Scene Mode.
- 2) Set channels 1, 2, 3 and 4 to 100%. Set channels 9, 10, 11 and 12 to 50%.
- 3) Press RECORD.
- 4) Select Submaster 1 by pressing the flash button under Fader 1.
- 5) Set channels 5 through 10 to 75% and channels 15 through 24 to 30%.
- 6) Press RECORD.
- 7) Select Submaster 5 by pressing the flash button under Fader 5.
- 8) Set channels 12 through 18 to 100% and channels 1 through 9 at 40%.
- 9) Press RECORD.
- 10) Select the Submaster 9 by pressing the flash button under Fader 9.

Congratulations! You have recorded three Submasters.

Playing Back a Submaster

Set all the channel faders to 0%. Press the SUBMASTER button. It will turn red.

The flash button below any submaster in which information has been stored will be red. You can output the submaster by raising that fader to 100%. If you press the flash button you will flash the contents of the submaster to the level set by the FLASH LEVEL fader.

Example: (we will use the three submasters recorded in "Recording a Submaster")

- 1) Go to Submaster mode by pressing the SUBMASTER button. It will turn red to show that Submaster mode is selected.
- 2) The flash buttons under Faders 1, 5 and 9 will be red.
- 3) Raise Fader 1 to 100%. Channels 1 through 4 and 9 through 12 will be outputting at their recorded values.
- 4) Lower Fader 1 and raise Fader 5, channels 5 through 10 and 15 through 24 will be playing back at their recorded levels.
- 5) Lower Fader 5 and raise Fader 9, channels 12 through 18 and channels 1 through 9 will be outputting at their recorded values.

Playing Back a Submaster with Time

It is possible to assign a time to a Submaster fader. This time will be used to fade the submaster in and out. There are two ways to assign a time to a Submaster, when recording it or after it is recorded.

To set the time for a Submaster when recording it set the channels levels as described in recording submasters section. Press the RECORD button, set the time using the STEP RATE fader. The time will be shown in the lower left window of the LCD screen. Select which Submaster you wish to record to by pressing the relevant flash button.

Example:

- 1) Set channel faders 1 through 12 to 100%.
- 2) Press RECORD.
- 3) Adjust the time to 5 seconds using the STEP RATE fader.
- 4) Select Submaster 8 by pressing the relevant flash button.
- 5) Enter Submaster mode by pressing the SUBMASTER button.
- 6) Raise Submaster fader 8. Channels 1 through 12 will fade to 100% over 5 seconds.

It is also possible to assign a time or edit a time within an existing Submaster. To do this you need to be in Submaster mode. Press the SOFT KEY A next to the LCD screen to select the ASSIGN FADE function. ASSIGN FADE will invert its colors to show it is selected. Adjust the STEP RATE fader to the required time, the time will be shown in the lower left window of the LCD, while holding down the flash button of the Submaster you wish to assign the time to.

Menu	Submaster Mode	Assign Fade	A
Release	01: 13:	Fade A	B
DMX Base	25: 37:	Fade B	C
FX	Master xxx		D

Figure 13: Assign Fade Function - LCD Display

Note: To leave the ASSIGN FADE function, press the SOFT KEY A.

Example:

We will edit the time set in one of the Submasters we recorded earlier.

- 1) Go into Submaster mode by pressing the SUBMASTER BUTTON.
- 2) Select the ASSIGN FADE function by pressing the SOFT KEY A.
- 3) Adjust the time using the STEP RATE fader to 10 seconds while holding down the flash key under Submaster 1.
- 4) Playback Submaster 1. The channels will fade in over 10 seconds.
- 5) Lower Submaster 1 to 0%. The channels will fade to 0% over 10 seconds.

Note: It is possible to override a stored time while it is playing back. While holding the Submasters Flash Button, move the STEP RATE Fader. You can speed up or slow down the time.

Changing Submaster Pages

There are 24 pages of 48 Submasters (12 Pages of 24 Submasters on the 12/24 version) available.

To change pages, hold down the SUBMASTER button. The LCD screen will show the following:

Menu	Submaster Mode	Assign Fade	A
Release	01: 13:	Fade A	B
DMX Base	25: 37:	Fade B	C
FX	P:01 Select 1 - 24		D

Figure 14: Submaster Mode - LCD Display

The display in the lower left window shows that the console is on Page 1 (P:01) and that there are 24 pages available. To select a different page the Flash buttons 1 to 24 are used (1 to 12 on the 12/24 version). To select Submaster Page 4 you would select the Flash button 4 while holding down the SUBMASTER button.

While the SUBMASTER button is held down the light in the currently select Submaster page will be lit. Submaster pages that have Submasters recorded on them will flash.

If a Submaster is currently outputting and the page is changed it will continue to output and the flash button for that Submaster will flash. Once the Submaster has been lowered to 0% it will change pages and be available for use on the newly selected page.

Playing Back Submasters Sequentially

It is possible to play back the recorded Submasters on a page sequentially using the PRESET A and PRESET B MASTER faders. This allows you to playback recorded Submasters as a theatrical style cue stack. The sequence will start with the first recorded memory and end with the last recorded memory on that page before cycling back to the first memory.

Note: Any Submasters that have no values stored in them will be ignored in the sequence.

To access this function ensure that the PRESET A and PRESET B MASTER faders are at the bottom (PRESET A MASTER at 0 and PRESET B FADER at 10). Press the NEXT button, it will turn blue to show you have selected Sequential Submaster Playback.

The Flash button of the first recorded fader will flash yellow. Raise the PRESET A and PRESET B faders to the top. The first recorded Submaster will output. Its flash button will turn solid yellow. The next sequential Submaster's flash button will flash yellow. Lower the PRESET A and PRESET B FADERS to the bottom. This will select the next memory.

There are three ways to exit the sequential playback:

- 1) Move PRESET A MASTER to 0% if it is at Full (top) or move PRESET B MASTER to 0% if it is at Full (bottom). This will fade the last Submaster that was outputting to 0%. The NEXT button's blue light will go out.
- 2) Press the NEXT button. This will snap the last outputting Submaster to 0%. The NEXT button's blue light will go out.
- 3) You can fade into Single Scene or Two Scene Mode. Select Single Scene for instance, it will turn yellow. Set the channel faders to the values that you require. If the PRESET A and PRESET B MASTERS are at the bottom, move them to the top. If they are at the top you will need to move them to the bottom and then back to the top. This will fade in the values that you have set on the channel faders.

Example:

- 1) Record a variety of channel levels into Submasters 1, 5, 9, 15, 20, 21 and 22.

- 2) Move PRESET A and PRESET B MASTERS to the bottom.
- 3) Press the NEXT key. It will turn blue. The flash button under Submaster 1 will flash yellow.
- 4) Raise the PRESET A and PRESET B MASTER faders. This will output Submaster 1 and its flash button will turn yellow. Submaster 5's flash button will now be flashing yellow.
- 5) Lower PRESET A and PRESET B MASTER faders to the bottom. This will output Submaster 5.
- 6) Continue the sequence until you have run through all of the stored submasters.
- 7) To exit the Sequence move PRESET A MASTER fader to the bottom. The blue light in the NEXT button will go out.

Note: It is possible to change Submaster pages during the sequential playback and the memories on the newly selected page will then fade in and run in sequence the next time the PRESET A and PRESET B MASTER faders are moved.

Using Time to Playback Submasters Sequentially

It is also possible to use times when playing back the Submasters sequentially. Make sure the FD/ST TIME button is red by pressing the button as needed. When red, this indicates that the STEP RATE fader is in time mode. To apply the time press SOFTKEY B and SOFTKEY C buttons on the right of the LCD, the text will invert its colors to show the selection has occurred. This will apply the time on the STEP RATE FADER to the PRESET A and PRESET B faders. Set the time to the desired level. When you move the PRESET A and PRESET B faders the time will now be applied to the transition.

REV1.00	Strand Lighting	Submaster	GM: FL
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 50 50 50 33 33 FL FL FL			
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48			
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72			
73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96			
Submaster		Preset	Effect
Page: 01		A B	FX Base
01 02 03 04 05 06 07 08 09 10 11 12	CrossFade	In 02 Out 01	FX1 FX2 FX3
13 14 15 16 17 18 19 20 21 22 23 24			FX4 FX5 FX6
25 26 27 28 29 30 31 32 33 34 35 36	FL FL		FX7 FX8 FX9
37 38 39 40 41 42 43 44 45 46 47 48	1.49 1.49		FX10 FX11 FX12

Figure 15: Using Time to Playback Submasters Sequentially - Video Monitor Display

Monitor showing a crossfade from Submaster 01 to 02 running. The time is set to 1.49 seconds and the lines in the Preset display move to show the fade happening. The channel levels are shown changing in real time.

The LCD will show the time in the bottom Left window.

Menu	Submaster Mode	Assign Fade	A
Release	01: 13:	Fade A	B
DMX Base	25: 37:	Fade B	C
FX	Fade Time: 1.90		D

Figure 16: Using Time to Playback Submasters Sequentially - LCD Display

Deleting Submasters

It is possible to delete individual Submasters, a complete page of Submasters, or all the recorded Submasters. To access any of these functions you need to be in Submaster mode and to have pressed the RECORD button. The LCD screen will show you the three options available:

Menu	Record Submaster	Del Sub	A
Release	01: 13:	Del Page	B
DMX Base	25: 37:	Del All	C
FX	Pg01 Record sub	Exit	D

Figure 17: Deleting Submasters - LCD Display

Delete a Single Submaster

To delete a single Submaster press the SOFT KEY A. The flash buttons which have Submasters stored in them will not be lit. Select the Submaster you wish to delete by pressing the flash button under it. If you select Submaster 10 the LCD screen will show as:

Menu	Del Pg01 Sub10?	Yes	A
Release	01: 13:		B
DMX Base	25: 37:	No	C
FX	Pg01 Record sub		D

Figure 18: Deleting a Single Submaster - LCD Display

To delete the Submaster press SOFTKEY A for yes. If you change your mind, press SOFTKEY C for no.

Delete a Submaster Page

To delete a whole page of Submasters press SOFTKEY B. You will need to select the Page required by holding down the SUBMASTER button and using the Flash button associated with the page you want to select it. The example of the LCD screen below shows that you are going to delete Page 01.

Menu	Del Pg01?	Yes	A
Release	01:		B
DMX Base	13:	No	C
FX	25:		D
	37:		
	Pg01 Record sub		

Figure 19: Deleting a Submaster Page - LCD Display

To delete the page press SOFTKEY A for yes or SOFTKEY C if you change your mind.

Delete All Submasters

To delete all of the recorded Submasters select SOFTKEY C. The LCD Screen will be as below:

Menu	Del All Sub?	Yes	A
Release	01:		B
DMX Base	13:	No	C
FX	25:		D
	37:		
	Pg01 Record sub		

Figure 20: Deleting All Submasters - LCD Display

Note: To delete all of the recorded Submasters press SOFTKEY A for yes or SOFTKEY C if you change your mind.

It is also possible to leave "DELETE" by pressing the RECORD button a second time.

CONSOLE ADVANCED OPERATION

1. Moving Light (ML) Mode

It is possible to control up to 12 moving lights on the 12/24 console and 24 on the 24/48 console. Please be aware that this is a basic moving light console with limited features and control interface. It is seen as suitable for smaller shows that use moving lights occasionally and moving lights whose parameter set is limited. If you intend to use moving lights with a high channel count on a regular basis, this console is not suitable for you.

A maximum of 20 Playbacks (8 Playbacks on the 12/24 version) can be recorded. Each playback can have a maximum of 99 steps. Each step can have an individual fade time and wait time.

It is also possible to combine Moving Lights with generic fader channels and LEDs and save these into the FX stacks. This functionality will be described in the section dealing with FX functions.

Setting Up Moving Lights

Before using Moving Lights, they need to be set up on the console.

Press the ML button to enter Moving Light mode. The button will turn pink to show it is selected.

Press the MENU SOFTKEY; it will turn red to show menu is selected. The LCD screen will show the options available for the setting up Moving Lights.

Menu	Fixture Menu	ML Patch	A
Release		Channel SetUp	B
DMX Base		Record Group	C
FX	Master: xxx	Next.	D

Figure 21: Moving Light Set Up Main Screen - LCD Display

The first function we will consider is Channel SetUp.

Channel SetUp

This is used to set the range of DMX channels for use with Dimmers, LEDs and MLs.

Menu	Channel Set Up	UP	A
Release	Start End	Down	B
DMX Base	Dim:>001 052 LED: 053 153 ML: 154 512	>	C
FX	Master: xxx	Enter	D

Figure 22: Channel SetUp Screen - LCD Display

The SOFTKEYS A through C are used to change the values and navigate the screen.

- SOFTKEY A "UP" will raise the value

- SOFTKEY B "Down" will lower the value
- SOFTKEY C ">" is used to navigate between fields.

To rapidly change values hold down the Softkey or use the SOLO fader to change the values extremely quickly.

To store your changes use the SOFTKEY D for "Enter".

If you wish to leave this screen without storing any changes press the MENU button. It will return you to the previous screen.

ML Patch

First you need to allocate each fixture in your rig to a preset fader on the console. The Preset A set of Faders are used in ML mode to control the moving light fixtures. The fader will control the intensity of the fixture and the Flash button under the fader will be used to select the fixture to allow programming associated with the fixture.

A moving light can have many attributes that control color, pan, tilt, gobos etc.

The first step in patching the fixtures is to select it from the fixture library. To do this you will need to insert the USB stick with the fixture library on it into the console.

Note: If you do not have the fixture library, it can be downloaded from the Support section on the Strand Lighting web site at www.strandlighting.com.

Select SOFTKEY A to enter ML Patch. The LCD screen will change to show you the manufacturers' names.

Menu	Read 20 Fixture	Back	A
Release	01: Varilite 02: Martin	Next	B
DMX Base	25: ELAT 37: Selecon	More	C
FX	Master: xxx	Enter	D

Figure 23: ML Patch Screen - LCD Display

Manufacturer's Fixture Selection

- SOFTKEY A "BACK" and SOFTKEY B "NEXT" are used to navigate the list of manufacturers.
- SOFTKEY C "MORE" is used to access the next page of manufacturers.
- SOFTKEY D "ENTER" is used to select the manufacturer of the fixture you wish to use.
- SOFTKEY D is used to select the manufacturer whose fixtures you have. The LCD will show the fixtures available for that manufacturer.

Fixture Starting Address Selection

- SOFTKEY A "BACK" and B "NEXT" are used to navigate the list of fixtures.
- SOFTKEY C "MORE" is used to access the next page of fixtures.
- SOFTKEY D "ENTER" is used to select the fixture you wish to use.

- Use **SOFTKEY D** to select the fixture that you want. The LCD screen will change to allow you to set the start address for the fixture you have selected.

Menu	Fixture Patch	Other Fix	A
Release	Pat. ELA36LTB1 to DMX [215]		B
DMX Base	Press Bump Button To Patch		C
FX	Master: xxx	Exit	D

Figure 24: ML Starting Address - LCD Display

It is possible to change the DMX address using the FX 1 through FX 10 keys. (FX10 is 0).

The Flash buttons that have no fixture assigned to them will be flashing. Press a Flash button to assign a fixture to it.

It is possible to assign more than one fixture at the same time. If you wish to assign 4 fixtures of the same type, press and hold the flash button where you wish to store the first one. Then press and the flash button 4 along. You will now have patched 4 fixtures of the same type.

Note: The 200 Plus will not allow you to over-patch fixtures. You will get a warning if you try and do this.

Repeat these steps until you have patched all the fixtures you have. When you have completed this process press Menu to leave the set up functions.

Note: To create a new or your own fixture library, see ["CREATING MOVING LIGHT \(ML\) AND LED FIXTURE LIBRARIES"](#) on page 70.

Using your Moving Lights

Now that the moving lights are patched, the **Preset A** faders are used to set the intensity of the fixtures. The **Preset A** Flash buttons are used to select fixtures. Once a fixture is selected it is possible to adjust its various parameters.

The monitor display will provide you with information about the moving lights and their attributes as shown in **Figure 25 on page 27**.

REV1.00		Strand Lighting		Moving Light		GM: FL	
01: STRPirouete	02: STRPirouete	03: STRPirouete	04: STRPirouete	05: STRPirouete	06: STRPirouete		
Pan: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000		
Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000		
Colour: 000	Colour: 000	Colour: 000	Colour: 000	Colour: 000	Colour: 000		
Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000		
Focus: 000	Focus: 000	Focus: 000	Focus: 000	Focus: 000	Focus: 000		
07: STRPirouete	08: STRPirouete	09: STRPirouete	10: STRPirouete	11: STRPirouete	12: STRPirouete		
Pan: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000		
Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000		
Colour: 000	Colour: 000	Colour: 000	Colour: 000	Colour: 000	Colour: 000		
Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000		
Focus: 000	Focus: 000	Focus: 000	Focus: 000	Focus: 000	Focus: 000		
13: CPAS300ve	14: CPAS300ve	15: CPAS300ve	16: CPAS300ve	17: CPAS300ve	18: CPAS300ve		
Pan: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000		
Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000		
Colour: 000	Colour: 000	Colour: 000	Colour: 000	Colour: 000	Colour: 000		
Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000		
Focus: 000	Focus: 000	Focus: 000	Focus: 000	Focus: 000	Focus: 000		
19: CPAS300ve	20: CPAS300ve	21: CPAS300ve	22: CPAS300ve	23: CPAS300ve	24: CPAS300ve		
Pan: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000		
Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000	Tilt: 000		
Colour: 000	Colour: 000	Colour: 000	Colour: 000	Colour: 000	Colour: 000		
Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000	Dimmer: 000		
Focus: 000	Focus: 000	Focus: 000	Focus: 000	Focus: 000	Focus: 000		
Playback Status				Current FX Status		13: CPAS300ve	
				Color: 000 Prism: 000 Color: 000		Color: 000 Focus: 128 Beam: 000	
				Shutt: 252 Pan: 128 Gobo: 000			
				Dimme: 255 Pan L: 000			
				Gobo: 000 Tilt: 128			
				Gobo: 000 Tilt L: 000			
				Gobo: 000 Contr: No Func			
				Gobo: 000 Lamp: No Func			
				Prism: Open P/T S: 000			
Fix DMX Patch ASL200							
01:200 05:224 09:248 13:272 17:356 21:440							
02:206 06:230 10:254 14:293 18:377 22:							
03:212 07:236 11:260 15:314 19:398 23:461							
04:218 08:242 12:266 16:335 20:419 24:482							

Figure 25: Moving Light Attributes - Video Monitor Display

Note: The bottom right display shows the attributes and their settings for the currently selected fixture. The bottom left window shows the DMX address for each fixture.

The parameters are always controlled by Faders 21 through 24. Fader 21 is always used for Pan, Fader 22 for Tilt and Fader 23 for Color and are labeled accordingly. Fader 24 can have any of the other attributes that fixture has assigned to it for adjustment.

Your console allows you to edit and record various scenes for a patched moving light. You may set the Pan, Tilt, Intensity, Color and any other attributes it has.

Recording a Moving Light Scene

To record a moving light scene:

- 1) In ML mode, press the "RECORD" button
- 2) Press Preset A Flash button you have patched a ML in, it will turn red. The bottom Right window of the monitor display will show you all the information for that fixture. If the VGA display has been disabled the LCD will show you the moving light parameters you've selected. The LCD display the screen as shown in **Figure 26 on page 28**.

Menu	Record Playback		A
Release	Pan: 127 Tilt: 127 Color: Open		B
DMX Base	Dimmer: 255 Gobo: Open		C
FX	Master: 255		D

Figure 26: Recording a Scene in a Moving Light - LCD Display

- 3) The Preset B Flash Buttons are used to store the look or sequence you wish to program. If a button has nothing recorded in it, it will flash. Press the Flash button where you want to record a scene. For instance Select "PlayBack 1", it will flash red. The LCD will show the ML home page as below:

Menu	Record Playback	Focus	A
Release	Pan: 127 Tilt: 127 Color: Open	Group	B
DMX Base	Dimmer: 255 Gobo: Open	Attrib	C
FX	PL: 01 S000 T000	Next.	D

Figure 27: Recording a Scene in a Moving Light - LCD Display

- 4) You can now adjust Pan, Tilt and Color using Preset B Faders 21, 22, and 23, the Intensity will be controlled on the Preset A Fader to which the ML is assigned. Preset B Fader 24 can have the other attributes of the moving light assigned to it. At the moment you will see, in the example, it controls Gobo. If you use SOFTKEY C "Attrib" you will get a list of available attributes:

Menu	ML Attribute	Gobo	A
Release	Pan: 127 Tilt: 127 Color: Open	Shutter	B
DMX Base	Dimmer: 255 Gobo: Open	P/T Macro	C
FX	PL: 01 S000 T000	More.	D

Figure 28: Adjusting Moving Light Attributes - LCD Display

- 5) You can select the attributes you wish to control on Fader 24 by using the relevant SOFTKEY. For instance for Shutter control you would use SOFTKEY B, the LCD screen will update to show you which attributes you have control of. If there are more attributes than 3 you can cycle to them using SOFTKEY D, "More".

- 6) The MENU Key can be used to return you to the ML home page.
- 7) You can now select an alternative moving light and set it as you require. It is possible to select multiple moving lights and control them at the same time.
- 8) Once you have set all the moving lights you require press the Playback button you had previously selected. (It is the one that is flashing on the Preset B row of flash buttons.)
- 9) This will store the first scene. If you only wish to have a single scene, press the RECORD key. This will save the scene. If you wish to record a chase do not press the RECORD key but go to the step below.
- 10) If you wish to record a chase then repeat the steps above to set the moving lights for the next step. Each time you press the Flash button of the playback you will see the Scene increment in the lower left of the LCD window.
- 11) Once you have finished recording all the steps you require press the RECORD key. This will store the playback into the consoles memory. If you wish to exit without recording anything press the MENU key.

After you have recorded a step, pressing the RELEASE key to the left of the LCD will empty the programmer. If you wish to build on the current scene do not empty the programmer. When you have finished recording a chase it is a good idea to use RELEASE to reset the moving lights before playing back a chase.

When recording, it is also possible to record only the channels that have been changed or all the channels available in that fixture. To access this function use the SOFTKEY D "Next" to go to the second page of the LCD menu. You can toggle between Record by Fixture and Record by Channel by using SOFTKEY A.

You can also set a chase to run in a loop. To access this function use the SOFTKEY D "Next" to go to the second page of the LCD menu. You can toggle between "Loop On" and "Loop Off" by using SOFTKEY B. If you choose Loop Off the chase will only run through one full cycle before stopping. To retrigger the chase you will need to lower the fader for that chase and retrigger it by raising the fader.

Timing for MLs

It is possible to set a time for each step and a wait time. To perform this function, use the STEP RATE fader and the FD/ST TIME key. If the FD/ST TIME key is red the fader will allow you to set the step time and if it is green it will allow you to set the wait time.

Playing Back a ML Scene or Chase.

To play back a scene or chase raise the relevant playback fader, the buttons under the faders with a scene or chase recorded in them will be lit red. The chase will begin to run. The Flash button under the fader will flash to tell you the chase is running. If you select a moving light by pressing its flash button you will be able to see the attribute values changing on the Monitor as the chase runs.

If you wish to play a chase back manually then press the Flash button for that chase, it will turn green to show it is in manual mode. You can now use the GO/STEP button to manually trigger each step. It is possible to select multiple chases to trigger them manually.

To stop a Chase running or to stop outputting a scene, lower the fader to zero.

Editing a ML Scene or Chase

It is possible to edit a scene or chase that you have recorded. To do this you need to go into the ML menu function by selecting the MENU key while in ML mode.

You will need to go to the third page of the ML menus. To do this use SOFTKEY D "Next" when you have pressed the MENU key. This will take you to the LCD display as shown in **Figure 29 on page 30**.

Menu	Fixture Menu	Modify Playbk	A
Release		P/T Invert	B
DMX Base		Memory Lock	C
FX	Master: xxx	Back	D

Figure 29: Editing a ML Scene or Chase - LCD Display

Select SOFTKEY A "Modify Playbk". You will get the information as shown in **Figure 30** on the LCD display.

Menu	Hit a Playbck		A
Clear Buffer	Pan: 127 Tilt: 127 Color: Open		B
DMX Base	Dimmer: 255 Gobo: Open		C
FX	PL: 01 S000 T000		D

Figure 30: Modify Scene Playback - LCD Display

You will need to select the Scene or Chase you wish to edit by pressing the relevant playbacks Flash Button. The LCD will change as shown in **Figure 31**.

Menu	Modify Playback	Focus	A
Release	Pan: 127 Tilt: 127 Color: Open	Group	B
DMX Base	Dimmer: 255 Gobo: Open	Attrib	C
FX	PL: 08 S005 T005	Next.	D

Figure 31: Scene or Chase Edit - LCD Display

Note: All the normal ML programming tools like Focus, Shape etc. are available to you. However, there are also other buttons available to allow editing.

The bottom left of the LCD screen shows which playback you are editing, which scene you are in and the total number of scenes. In the example above we are editing Playback 8, we are in Scene 5 and there are a Total of 5 scenes.

To change which Scene you are editing you will need to use SOFTKEY D "Next" to move to the next Menu screen as illustrated in **Figure 32**.

Menu	Modify Playback	Up	A
Release	Pan: 127 Tilt: 127 Color: Open	Down	B
DMX Base	Dimmer: 255 Gobo: Open	Delete	C
FX	PL: 08 S005 T005	Next.	D

Figure 32: Changing a Scene - LCD Display

SOFTKEY A "UP" and SOFTKEY "Down" allow you to scroll through the available scenes.

SOFTKEY C "Delete" will delete the currently selected scene.

SOFTKEY D "Next" will take you to the next Menu Screen (see **Figure 33**).

Menu	Modify Playback	Cover	A
Release	Pan: 127 Tilt: 127 Color: Open	Insert	B
DMX Base	Dimmer: 255 Gobo: Open	Record	C
FX	PL: 08 S005 T005	Next.	D

Figure 33: Changing a Scene - LCD Display

- SOFTKEY A "Cover" is used once you have made a change to a scene and you wish to store your changes for that step. Once you have completed the changes by adjusting the parameters using Faders 21 to 24, in the screen above it would be for Scene 5, you would then press SOFTKEY A "Cover" to overwrite the current information in Scene 5. You will be promoted to select SOFTKEY A "Yes" to overwrite the scene or SOFTKEY C "No" to exit without overwriting it.
- SOFTKEY B "Insert" will add a new step to the Chase. If you are currently in Scene 5 it will add a new Scene 5 and move all the subsequent scenes up by one. Adjust the parameters to get the look on stage that you require then use SOFTKEY B "Insert" to store them as the new step.
- SOFTKEY C "Record" will save all the changes you have made to the chase and exit the Modify Playback function.

ML Programming Aides (Groups, Focus, Shapes)

There are several tools available to help program your moving lights.

Groups

If you've got several units of one moving light type, you often want to select them all at the same time. To avoid lots of button presses, the Console allows you to put fixtures into groups. This makes it possible to select all these fixtures with one button press.

Recording Groups

To record a Group follow this sequence:

- 1) Select the fixture you want put it into the group using the fixture select buttons.
- 2) Press MENU button, then Press SOFTKEY C "Record Group".
- 3) The Flash Buttons 1~24 (1-12 on the 12/24 version) will flash blue to indicate that no groups is stored in that button. If the button is not lit it means there is a group already stored in it.
- 4) Press the flash button where you wish to store the group.
- 5) When you have stored the group press the MENU key to leave the record group function.

Note: It is possible to overwrite groups if you desire.

Selecting a Group

To select a group while in ML mode use SOFTKEY B "Recall Group". Buttons 1 to 24 (1 to 12 on the 12/24 version) will now be the group select keys. If a button is lit blue it means there is a group stored in it.

Press the button associated with the group you wish to select. The moving lights are selected and the relevant Fixture select button(s) are lit.

If you decide you do not wish to select a group press the SOFTKEY B again and this will exit Group select.

Focus

This function allows commonly used colors, gobos and positions to be stored as part of the Moving Lights fixture library. It makes recalling a predefined color a simple task.

There are 10 Master Focus Groups. Each group can have up to 10 palettes associated with it. To access the Focus function while in moving light mode, press SOFTKEY A. You will then have a list of the Focus Master Groups as per the LCD display as shown in **Figure 34**.

Menu	ML Palette	01. Color	A
Release	Pan: 127 Tilt: 127 Color: Open	02. Shutter	B
DMX Base	Dimmer: 255 Gobo: Open	03. Gobo	C
FX	PL: 01 S000 T000	More.	D

Figure 34: Focus - LCD Display

Select the Master Focus Group you want by pressing the relevant softkey. This will allow you access to the Palettes associated with that fixture. Pressing the relevant softkey will select that palette. **Figure 35** shows the LCD display screen for the Master Focus Group for Gobos.

Menu	ML Palette	01. Open	A
Release	Pan: 127 Tilt: 127 Color: Open	02. Gobo 1	B
DMX Base	Dimmer: 255 Gobo: Open	03. Gobo 2	C
FX	PL: 01 S000 T000	More.	D

Figure 35: Master Focus Group for Gobos - LCD Display

Pressing the MENU button at anytime will take you back to the previous screen.

Details of how to set up Focus Master Groups and the palettes within them are covered in the Appendix of how to create Moving Light and LED libraries.

Shape

The console comes with some built in movement effects for moving lights. To access these you need to go to "Shape" by using SOFTKEY A on the second page of the ML LCD screen.

Once you access the Shape function you can select a Circle, Figure 8, or Fan Function.

Circle

To program a circle:

- 1) Select the fixtures the shape is to be applied to by pressing the Fixture select button(s).
- 2) SOFTKEY D "Next" to move to the next LCD menu screen.
- 3) Select SOFTKEY A "Shape".
- 4) Select SOFTKEY A "Circle" as shown in **Figure 36**.

Menu	Circle	Radius UP	A
Release	Center Pan: 127 Center Tilt: 127 Radius: CW	Radius Down	B
DMX Base		CW	C
FX	Master: xxx	Next	D

Figure 36: Circle Selection Screen - LCD Display

You can adjust the Pan and Tilt faders to set the Center position of the circle. The Radius of the circle can be adjusted with the SOFTKEY A "Radius UP" and SOFTKEY B "Radius Down".

Note: The direction of the circle can be toggled between CW (clockwise) and CCW (counter clockwise) using SOFTKEY C.

Use SOFTKEY D "Next" to access further functions.

- SOFTKEY A "Speed" allows the user to set the speed at which the effect will run. To change the speed press and hold SOFTKEY A "Speed" key and then use the Step Rate Fader to set the speed that you require.
- "Run" will start the effect running.
- "Stop!" allows you to end the effect once the effect is running.

Figure 8

The Figure 8 effect runs in a similar way to the Circle with the same controls.

Fan

The Fan effects can be applied to either the Pan or the Tilt or to both by selecting Wave.

The best way to understand the effects is to apply them to your moving lights and play with the settings.

Note: Anytime you are in a menu and wish to leave it, press the MENU key to go back to the previous menu screen.

Storing an Effect

- It is possible to store a running effect into a Scene or a Chase.
- To access RECORD you will need to use the MENU key to return to the main LCD menu screen.
- Press RECORD.
- Select a fader to store the Circle in by pressing the Flash button where you wish to store it.
- Press the Flash button a second time to store the Scene. (The LCD will show a scene has been recorded)
- Press RECORD to store the effect.
- You will need to return to the "Shape" LCD and then use SOFTKEY D "Stop!" to halt the Circle effect.
- It is now possible to play back the Circle effect by raising the fader in which you have stored it.

Restore ML

This function will reset the moving lights currently selected to their home values as defined in the fixture library.

Further ML Functions available in the Menu Function

The following moving light functions are available through the console's menu.

Delete

The Delete function allows you to delete a scene or chase or a ML from the patch.

To access Delete you need to Press the MENU key while in ML mode. SOFTKEY D "Next" will take you to the menu screen for "Delete". Use SOFTKEY A "Delete" to select the function.

You now have the option to Delete Fixtures or Delete Chases (as shown in **Figure 37**).

Menu	Delete Menu	Delete Fix	A
Release		Delete Chase	B
DMX Base			C
FX	Master: xxx	Exit	D

Figure 37: Delete Function - LCD Display

Deleting Fixtures

To delete fixtures press SOFTKEY A "Delete Fix". To delete all the fixtures select SOFTKEY B. You will be prompted to confirm this decision by pressing SOFTKEY A for "Yes" or SOFTKEY C for "No".

To select a single fixture select SOFTKEY A. Select the fixture by pressing the Flash button for that fixture. Confirm the deletion select SOFTKEY A "Yes". To exit without completing the Delete, select SOFTKEY C "No".

Note: Deleting a Fixture will remove it from all the Scenes and Chases in which it is recorded.

Deleting Chases

To delete Chases select SOFTKEY B "Delete Chase" from the Delete Menu home screen.

You can delete a single chase by selecting SOFTKEY A "Delete One". Select the chase you wish to delete by selecting the Flash button for that Chase. Confirm the deletion by selecting "Yes" or leave without deleting the chase by selecting "No".

To delete all the currently recorded chases select the "Delete All" function. Confirm you wish to delete all the chases by selecting "Yes" or exit by selecting "No".

List ML

This function is available if the MENU key is pressed while in ML mode. It is on the second page of the ML menu pages. The List ML function will show which Fixtures are patched to the console and which DMX address they have. This information is permanently available in lower left window of the monitor.

Auto DMX

This function will automatically patch all the fixtures assigned starting with the first channel available for Moving lights. The function is available on the second page of the ML menu screens.

P/T Invert

This allows you to invert either or both of the pan and tilt functions. If you have mistakenly hung a moving light in the wrong orientation - in relation to the others of the same type - reversing the pan and tilt will mean it works in the same way as the other fittings when adjusting pan and tilt.

To use P/T Invert function:

- 1) Select the Moving Light(s) you wish to adjust.
- 2) Press MENU then go to the third page of the menu by using SOFTKEY D "Next".
- 3) Select SOFTKEY B "P/T Invert".
- 4) You can now toggle Pan and Tilt between Normal and Inverted by using SOFTKEY A "Pan Normal" and SOFTKEY C "Tilt Normal".
- 5) To store the changes you make use SOFTKEY D "Enter". To exit without making any changes press the MENU key.

Memory Lock

This allows the user to lock the console using a password to stop any changes being made to the console. The password is entered using the FX Keys. (See "Change Password" on page 67 for more information). This function is on the third page of the menu screens.

To access memory lock:

- 1) Press MENU.
- 2) Press SOFTKEY D "Next" three times.
- 3) Press SOFTKEY C "Lock Memory".
- 4) You will be prompted to input your password (See "Change Password" on page 67 for more information). Use SOFTKEY D "Enter" to input your password.
- 5) The console will now be locked and further programming is prohibited until unlocked. You are still able to play back any Scenes, FX or Submasters recorded.

Note: To unlock the console either press the MENU or RECORD keys. This will prompt you to enter the password and unlock the console.

2. LED Mode

It is possible to control up to 12 LEDs on the 12/24 console and 24 LEDs on the 24/48 console.

A maximum of 20 Playbacks (8 Playbacks on the 12/24 version) can be recorded. Each playback can have a maximum of 99 steps. Each step can have an individual fade time and wait time.

It is also possible to combine LEDs with Moving Lights and with generic fader channels and save these into the FX stacks.

Setting up LED Lights

Before using LEDs they need to be set up on the console.

Press the LED button to enter LED mode. The button will change to Blue to show it is selected.

Press the MENU SOFTKEY. It will be lit red to show menu is selected. The LCD screen will show the options available for the setting up of LEDs Lights.

Menu	Led Menu Mode	LED Patch	A
Release		Channel SetUp	B
DMX Base		Record Group	C
FX	Master: xxx	Next.	D

Figure 38: LED Menu Options - LCD Display

The first function we will consider is Channel SetUp.

Channel SetUp

Used to set the range of DMX channels for use with Dimmers, LEDs and MLs.

Menu	Channel Set Up	UP	A
Release	Start End	Down	B
DMX Base	Dim:>001 052	>	C
	LED: 053 153		
FX	ML: 154 512	Enter	D
	Master: xxx		

- SOFTKEY A "UP" will raise the value
- SOFTKEY B "Down" will lower the value
- SOFTKEY C ">" is used to navigate between fields.
- To rapidly change values, hold down the Softkey or use the SOLO fader to change the values extremely quickly.

- To store your changes use SOFTKEY D "Enter".

Note: If you wish to leave this screen without storing any changes press the MENU button. It will return you to the previous screen.

LED Patch

First you need to allocate each LED fixture in your rig to a preset fader on the console. The Preset A set of Faders are used in LED mode to control LED fixtures. The fader will control the intensity of the fixture and the Flash button under the fader will be used to select the fixture to allow programming of all the attributes associated with the fixture.

A LED usually has Red, Green and Blue colors but may also have others like Amber, White etc. These can also be controlled and used.

The first step in patching the fixtures is to select it from the fixture library. To do this you will need to insert the USB stick with the fixture library on it into the console.

To patch a LED fixture:

- 1) Select SOFTKEY A to enter LED Patch.

Menu	Read 10 Fixture	Back	A
Release	Total: 10 01: SEL001	Next	B
DMX Base	02: SEL002 03: SEL003 04: SEL004	More	C
FX	Master: xxx	Enter	D

Figure 39: LED Patch - LCD Display

- 2) The SOFTKEY A "Back" and SOFTKEY B "Next" are used to navigate the list of Fixtures.
- 3) The SOFTKEY C "More" is used to access the next page of Fixtures.
- 4) SOFTKEY D "Enter" is used to select the Fixture you wish to use.
- 5) Use SOFTKEY D "Enter" to select the fixture that you want. The LCD screen will change to allow you to set the start address for the fixture you have selected.

Menu	Fixture Patch	Other Fix	A
Release	Pat.ABanDA To DMX [019]		B
DMX Base	Press Bump Button to Patch		C
FX	Master: xxx	Exit	D

Figure 40: LED Fixture Selection - LCD Display

It is possible to change the DMX address using the FX 1 through FX 10 keys. (FX10 is 0).

The Flash buttons that have no fixture assigned to them will be flashing. Press a Flash button to assign a fixture to it.

It is possible to assign more than one fixture at the same time. If you wish to assign 4 fixtures of the same type, press and hold the flash button where you wish to store the first fixture. Then press the flash button representing the fourth fixture from the first fixture. (For example, if you start with fixture 5, then the fourth fixture will be fixture 8). You will now have patched 4 fixtures of the same type.

Note: The 200 Plus will not allow you to over-patch fixtures. You will get a warning if you try and do this.

Repeat these steps until you have patched all the fixtures you have. When you have completed this process press Menu to leave the set up functions

Note: To create a new or your own fixture library, see ["CREATING MOVING LIGHT \(ML\) AND LED FIXTURE LIBRARIES"](#) on page 70.

Programming LEDs

It is now possible to program the LEDs. The Preset A faders are used to set the intensity of the fixtures. The Preset A Flash buttons are used to select fixtures. Once a fixture is selected it is possible to adjust its colors.

The colors are always controlled by Faders 21 through 24. Fader 21 is always used for Red, Fader 22 for Green and Fader 23 for Blue and they are labeled accordingly. Fader 24 can have an attribute, for instance Cool White assigned to it for adjustment.

Recording an LED Scene or Chase

Your console allows you to edit and record various scenes for a patched LED. You may set the Intensity, Color and any other attributes it has.

To record a LED scene or chase:

- 1) In LED mode, press the "RECORD" button. Press Preset B Flash button where you wish to store the Scene or Chase.
- 2) Press the appropriate LED's flash button on the Preset A Flash button bank and it will turn red. The monitor will show you the information for your LEDs (as shown in **Figure 41**).

REV1.00		Strand Lighting		LED Mode		GM: FL	
01: XBandDA	02: XBandDA	03: XBandDA	04: XBandDA	05: XBandDA	06: XBandDA		
Red: 000	Red: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000		
Green: 000	Green: 000	Green: 000	Green: 000	Green: 000	Green: 000		
Blue: 000	Blue: 000	Blue: 000	Blue: 000	Blue: 000	Blue: 000		
07: PLBlaze	08: PLBlaze	09: PLBlaze	10: PLBlaze	11: PLBlaze	12: PLBlaze		
Red: 000	Red: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000		
Green: 000	Green: 000	Green: 000	Green: 000	Green: 000	Green: 000		
Blue: 000	Blue: 000	Blue: 000	Blue: 000	Blue: 000	Blue: 000		
13:Empty	14:Empty	15:Empty	16:Empty	17:Empty	18:Empty		
Red: 000	Red: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000		
Green: 000	Green: 000	Green: 000	Green: 000	Green: 000	Green: 000		
Blue: 000	Blue: 000	Blue: 000	Blue: 000	Blue: 000	Blue: 000		
19:Empty	20:Empty	21:Empty	22:Empty	23:Empty	24:Empty		
Red: 000	Red: 000	Pan: 000	Pan: 000	Pan: 000	Pan: 000		
Green: 000	Green: 000	Green: 000	Green: 000	Green: 000	Green: 000		
Blue: 000	Blue: 000	Blue: 000	Blue: 000	Blue: 000	Blue: 000		
Playback Status		Current FX Status		02: XBandDA			
		Red: 000 Green: 000 Blue: 000					
Fix DMX Patch		ASL200					
01:101	05:113	09:125	13:137	17:	21:		
02:104	06:116	10:128	14:140	18:	22:		
03:107	07:119	11:131	15:143	19:	23:		
04:110	08:122	12:134	16:146	20:	24:		

Figure 41: LED Scene or Chase SetUp - Video Monitor Display

Note: The bottom right display shows the attributes and their settings for the currently selected fixture. The bottom left window shows the DMX address for each fixture.

- 3) You can now adjust RED, GREEN and BLUE using Preset B Faders 21, 22, and 23, the Intensity will be controlled on the Preset A Fader to which the LED is assigned. Preset B Fader 24 can have the other attributes of the LED assigned to it (see FIG).

Menu	Record Playback	Group	A
Release	09:PLBLAZEM1 Red: 127 Green: 255 Blue: 255	Attrib	B
DMX Base		Shape	C
FX	PL: 01 S000 T000	Next.	D

Figure 42: LED Attribute Adjustments - LCD Display

- 4) You can select the attributes you wish to control on Fader 24 by using the SOFTKEY B "Attrib".
- 5) The MENU Key can be used to return you to the LED home page.
- 6) You can now select an alternative LED and set it as you require. It is possible to select multiple LEDs and control them at the same time.

- 7) Once you have set all the LEDs you require press the **Playback** button you had previously selected. (It is the one that is flashing on the **Preset B** row of flash buttons.)
- 8) This will store the first scene. If you only wish to have a single scene, press the **RECORD** key. This will save the scene. If you wish to record a chase do not press the **RECORD** key go to the step below.
- 9) If you wish to record a chase then repeat the steps above to set the LEDs for the next step. Each time you press the **Flash** button of the playback you will see the Scene increment in the lower left of the LCD window.
- 10) Once you have finished recording all the steps you require press the **RECORD** key. This will store the playback into the consoles memory. If you wish to exit without recording anything press the **MENU** key.

Note: After you have recorded a step, pressing the **RELEASE** key to the left of the LCD will empty the programmer. If you wish to build on the current scene do not empty the programmer. When you have finished recording a chase it is a good idea to use the **RELEASE** key to reset the LEDs before playing back a chase.

When recording, you can choose to stored only changed information (Record by Channel) or all parameters in the selected fixture (Record by Fixture). To access this function use the **SOFTKEY D "Next"** to go to the second page of the LCD menu. You can toggle between Record by Fixture and Record by Channel by using **SOFTKEY A**.

You can also set a chase to run in a loop. To access this function use the **SOFTKEY D "Next"** to go to the second page of the LCD menu. You can toggle between "Loop On" and "Loop Off" by using **SOFTKEY B**. If you choose "Loop Off" the chase will only run through one full cycle before stopping. To retrigger the chase you will need to lower the fader for that chase and retrigger it by raising the fader.

Timing for LEDs

It is possible to set a time for each step and a wait time. To do this, use the **STEP RATE** fader and the **FD/ST TIME** key. If the **FD/ST TIME** key is red the fader will be setting the fade time and if it is green it will be setting the wait time.

Playing Back a LED Scene or Chase.

To play back a scene or chase raise the relevant playback fader, the buttons under the faders with a scene or chase recorded in them will turn red. The chase will begin to run. The **Flash** button under the fader will flash to tell you the chase is running. You will be able to see the values for the moving light changing on the monitor display as the chase runs. If you select a moving light by pressing its flash button you will be able to see the attribute values changing in the bottom right window of the monitor as the chase runs.

If you wish to play a chase back manually then press the **Flash** button for that chase, it will turn green to show it is in manual mode. You can now use the **GO/STEP** button to manually trigger each step. It is possible to select multiple chases to trigger them manually.

To stop a Chase running or to stop outputting a scene, lower the fader to zero.

Editing a Scene or Chase

It is possible to edit a scene or chase that you have recorded. To do this you need to go into the LED menu function by selecting the **MENU** key while in the LED mode.

You will need to go to the third page of the LED menus. To do this, use the SOFTKEY D "Next" after pressing the MENU key. This will take you to the LCD display as shown in **Figure 43**.

Menu	Led Menu Mode	Modify PlayBK	A
Release		Memory Lock	B
DMX Base			C
FX	Master: XXX	Back.	D

Figure 43: Editing a Scene or Chase - LCD Display

Select "Modify Playbk" by using SOFTKEY A. You will see the following on the LCD display as shown in **Figure 44**.

Menu	Hit a Playbck		A
Clear Buffer	Hit: 127 Color: Open		B
DMX Base	Dimmer: 255 Color: Open		C
FX	PL: 01 S000 T000		D

Figure 44: Selecting the Modify Playback Option - LCD Display

You will need to select the Scene or Chase you wish to edit by pressing the relevant playbacks Flash Button.

The LCD will change to:

Menu	Modify Playback	Group	A
Release	09:PLBLAZEM1 Red: 127 Green: 255 Blue: 255	Attrib	B
DMX Base		Shape	C
FX	PL: 01 S008 T011	Next.	D

Figure 45: Selecting a Scene or Chase to Modify - LCD Display

Note: All the normal LED programming tools are available to you. However there are also other buttons available to allow editing.

The bottom left of the LCD screen shows which playback you are editing, which scene you are in and the total number of scenes. In the example above we are editing Playback 1, we are in Scene 8 and there are a Total of 11 scenes.

To change which Scene you are editing you will need to use SOFTKEY D "Next" to move to the next Menu screen as seen in **Figure 46**.

Menu	Modify Playback	UP	A
Release	09:PLBLAZEM1 Red: 127 Green: 255	Down	B
DMX Base	Blue: 255	Delete	C
FX	PL: 01 S008 T011	Next.	D

Figure 46: Scene Editing Screen - LCD Display

- "UP" and "Down" allow you to scroll through the available scenes.
- "Delete" will delete the currently selected scene.
- "Next" will take you to the next Menu Screen as shown in **Figure 47**.

Menu	Modify Playback	Cover	A
Release	09:PLBLAZEM1 Red: 127 Green: 255	Insert	B
DMX Base	Blue: 255	Record	C
FX	PL: 01 S008 T011	Next.	D

Figure 47: Scene Editing Menu Screen - LCD Display

"Cover" is used once you have made a change to a scene and you wish to store your changes for that step. Once you have completed the changes by adjusting the parameters, in the screen above it would be for Scene 8, you would then press SOFTKEY A "Cover" to overwrite the current information in Scene 8. You will be promoted to select "Yes" to overwrite the scene or "No" to exit without overwriting it.

"Insert" will add a new step to the Chase. If you are currently in Scene 8 it will add a new Scene 8 and move all the subsequent scenes up by one. Adjust the parameters and then use "Insert" to store them as the new step.

"Record" will save all the changes you have made to the chase and exit the Modify Playback function.

To exit without making any changes press the MENU key.

LED Programming Aides (Groups, Shapes, Effects)

There are several tools available to help program your LEDs.

Groups

If you've got several units of one LED type, you often want to select them all at the same time. To avoid lots of button pressing, the Console allows you to put fixtures into groups. This makes it possible to select all these fixtures with one button press.

Recording Groups

To record a Group, follow this sequence:

- 1) Select the LEDs you want put it into the group using the fixture select buttons.
- 2) Press MENU button, then Press SOFTKEY C "Record Group".
- 3) The Flash Buttons 1~24 (1-12 on the 12/24 version) will flash blue to indicate that no groups are stored in a button. If any button is not lit, it means there is a group already stored in it.
- 4) Press the flash button where you wish to store the group.
- 5) When you have stored the group press the MENU key to leave the record group function.

Note: It is possible to overwrite groups if you desire.

Selecting a Group

To select a group while in LED mode use SOFTKEY B "Recall Group". Buttons 1 to 24 (1 to 12 on the 12/24 version) will now be the group select keys. If a button is lit blue it means there is a group stored in it.

Press the button associated with the group you wish to select. The LEDs stored in that group are selected and the relevant Fixture buttons are lit.

Note: If you decide you do not wish to select a group press the SOFTKEY B again and this will exit Group select.

Shape

The console comes with some built in color effects for LEDs. To access these you need to press SOFTKEY C "Shape" on the LCD Screen.

Once you access the Shape function you can select a Rainbow, Knight Rider or Chase.

Rainbow

A Rainbow effect can be used to change colors across all the LEDs on the console. It is possible to define the colors to be used and the transition steps between each color. The speed of the transition can also be set.

To program a Rainbow:

- 1) Select SOFTKEY C "Shape".
- 2) Select SOFTKEY A "Rainbow".
- 3) The LCD display will appear as shown in **Figure 48**.

Menu	Led Shape	Item Set	A
Release	1 : ColorNumb [02] 2 : ColorSize [01]	DirBy Set	B
DMX Base	3 : Speed : 1.00 4 : Direct : Left	Color Set	C
FX	Master : XXX	Run!	D

Figure 48: Rainbow Shape Selection - LCD Display

- You can adjust the number of colors in the Rainbow; in **Figure 48** example, 2 colors have been selected.
- You can adjust the number of transitions between each color. In the above example there will be one step.
- The speed is the rate at which the transitions will happen.
- Direction can be set so that the Rainbow will run from the left or from the right using SOFTKEY B.

- SOFTKEY D "Run!" will start the rainbow.
- To change the number of colors, the color size or the speed SOFTKEY A "Item Set" allows you to select the relevant field. The FX keys can then be used to enter a value of between 1 and 10 for the Color Number or size. The Speed can be set using the STEP RATE fader.
- Once you have started the Rainbow running SOFTKEY D "Stop!" will halt the Rainbow.
- Softkey C "Color Set" allows you to set the colors that you want to use in the Rainbow.

To set the colors in Rainbow:

- 1) Press Softkey C.
- 2) You can now use the Red, Green and Blue faders to set the level required or you can select from the pre-recorded colors stored on the console. Refer to **Figure 49**.

Menu	Color Select	Back	A
Release	1 : Aqua 2 : Aqua Marine 3 : Bastard Amber	Next	B
DMX Base	ColorLib [01] R255 G000 B000	More	C
FX	Master : XXX	Enter	D

Figure 49: Setting Colors in Rainbow - LCD Display

- 3) SOFTKEYS A, B and C can be used to navigate through the 57 predefined colors.
- 4) SOFTKEY D "Enter" is used to select a color for use in the Rainbow. You can store up to 10 Colors for use in the Rainbow.

It is possible to store the Rainbow into a Scene or a Chase as follows:

- 1) To access RECORD you will need to use the MENU key to return to the main LCD menu screen.
- 2) Press RECORD.
- 3) Press the flash button for the fader in which you want to store the Rainbow effect.
- 4) Press the Flash button a second time to store the Scene. (The LCD will show a scene has been recorded)
- 5) Press RECORD to store the effect.
- 6) You will need to use SOFTKEY C "Shape", SOFTKEY A "Rainbow" and then SOFTKEY D "Stop!" to halt the Rainbow effect.
- 7) It is now possible to play back the Rainbow effect by raising the fader in which you have stored it.

The other color effects work in the same manner.

KnightRider

This effect will use two colors only. It will run from Fixture 1 through Fixture 24 (Fixtures 1 to 12 on the 12/24 version). Each fixture will change color in sequence. Once all the fixtures have changed color the effect will run in the opposite direction.

Chase

This effect will use two colors only. The Color Size setting will set the spacing for the chase steps. Setting Color Size to 1 means all the odd fixtures will be the first color and all the even fixtures will be the second color.

The best way to understand the effects is to apply them to your LEDs and play with the settings.

Note: Anytime you are in a menu and wish to leave it please use the MENU key to go back to the previous menu screen.

Further ML Functions available in the Menu Setting

Delete

The **Delete** function allows you to delete a scene or chase or a LED from the patch.

To access **Delete** you need to Press the MENU key while in LED mode. SOFTKEY D "Next" will take you to the menu screen for "Delete". Use SOFTKEY A to select the Delete function.

You now have the option to Delete Fixtures or Delete Chases (as shown in **Figure 50**).

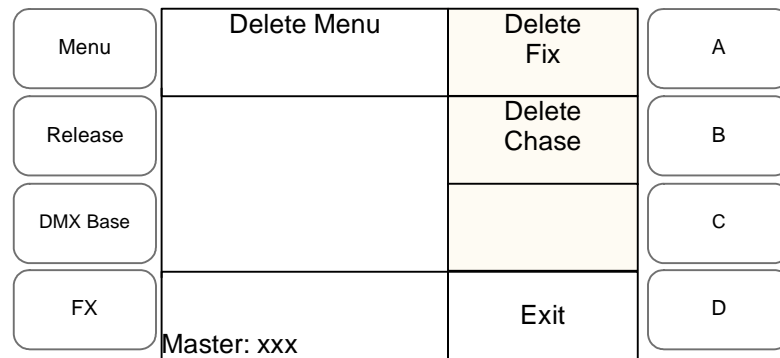


Figure 50: Delete Function - LCD Display

Deleting Fixtures

To delete fixtures, press SOFTKEY A "Delete Fix". To delete all the fixtures select SOFTKEY B. You will be prompted to confirm this decision by pressing SOFTKEY A "Yes" or SOFTKEY C "No".

To select a single fixture select SOFTKEY A. Select the fixture by pressing the Flash button for that fixture. Confirm the deletion select SOFTKEY A "Yes". To exit without completing the delete select SOFTKEY C "No".

Note: Deleting a Fixture will remove it from all the Scenes and Chases in which it is recorded.

Deleting Chases

To delete Chases select SOFTKEY B "Delete Chase" from the Delete Menu home screen.

You can delete a single chase by selecting SOFTKEY A "Delete One". Select the chase you wish to delete by selecting the Flash button for that Chase. Confirm the deletion by selecting SOFTKEY A "Yes" or leave without deleting the chase by selecting SOFTKEY C "No".

To delete all the currently recorded chases, select the "Delete All" function. Confirm you wish to delete all the chases by selecting SOFTKEY A "Yes" or exit by selecting SOFTKEY C "No".

List LED

This function is available if the MENU key is pressed while in ML mode. It is on the second page of the ML menu pages. The List ML function will show which Fixtures are patched to the console and which DMX address they have. This information is always shown on the LED monitor display in the lower left window.

Auto DMX

This function will automatically patch all the fixtures assigned starting with the first channel available for LEDs. The function is available on the second page of the ML menu screens.

Memory Lock

This allows the user to lock the console using a password to stop any changes being made to the console. The password is entered using the FX keys. (See section in Setup chapter on setting passwords).

Memory Lock is accessed by pressing the MENU key and then going to the third page of menus using the SOFTKEY D "Next". Enter the password and then select SOFTKEY D "Enter". The console is now locked. You are still able to play back any Scenes, FX or Submasters recorded.

Note: To unlock the console either press the MENU or RECORD keys. This will prompt you to enter the password and unlock the console.

MEMORY PLAYBACK

1. Memory Playback Mode

Memory playback mode is entered by pressing the MEM PLAYBACK key. You will be prompted to use SOFTKEY A "Yes" to enter this mode. If you do not wish to enter use SOFTKEY C "No".

Memory Playback Mode allows you to combine Submasters with the LED and ML scenes or chases that you have recorded. This makes it a good mode for busking for concert or club type applications where you want to quickly combine looks of generic lights with chases you have recorded for MLs and LEDs.

The first 24 submasters (12 on the 12/24 version) on all 24 pages of submasters (12 on the 12/24 version) are available for playback. These can be accessed using the Preset A faders.

The Preset B faders are used to access the MLs and LEDs. The ML and LEDs are combined into one fader. If you have recorded a LED chase and a ML chase into Fader 25 on their separate pages when you raise fader 25 in Memory Playback Mode both the LEDs and MLs will be output. It is a good idea to program with this in mind if you intend to combine these two types of fixtures together in this way. For instance you may want a blue wash of LEDs and MLs. It would be a good idea to program both looks into the same fader on their relevant pages so that when you play them back together you get a blue stage.

It is also possible to program some faders as LEDs and some as ML. Again be aware of this when you are planning your programming.

When in Memory Playback Mode, the LCD display will show as seen **Figure 51**.

Menu	Mem Playback	Assign Fade	A
Release	Submaster Page: [01]	Page Up	B
DMX Base		Page Down	C
FX	Master: xxx		D

Figure 51: Memory Playback Mode - LCD Display

You can assign a time to a submaster using SOFTKEY A "Assign Fade". Press SOFTKEY A "Assign Fade" Move the STEP RATE fader to the required level while holding down the flash button of the Submaster you want to set a time for. To exit Assign Fade, press SOFTKEY A again.

SOFTKEY B "Page UP" and SOFTKEY C "Page Down" will change the submaster page that you have access to.

To exit Memory Playback Mode select the mode that you wish to go into, this can be Single Scene, Two Scene, Submaster, ML, or LED modes. The LCD screen will prompt you and tell you which mode you are going to enter.

In the example above selecting SOFTKEY A "Yes" will take us into LED mode. SOFTKEY C "No" will leave us in Memory Playback Mode.

Note: Be aware that you will go into a blackout on exiting until you activate fixtures in the mode into which you exit. It is a good idea therefore to only exit Memory Playback Mode in a planned blackout. The only way to avoid this is to enter Memory Playback with channels set at a level in Single Scene or Two Scene mode. If you exit Memory Playback to Single Scene or Two Scene mode these channels will be on. You can then set a new scene and fade into it in the normal way.

FX MODE

FX mode allows you to program channels, MLs and LEDs into a single cue stack. These stacks can have a time for each scene and also a wait time for each scene if you want them to run automatically.

If the cue stack is recorded with the Step Time set to Manual then it can be run using the GO/STEP button to trigger each step. This allows for theatrical style programming where a cue stack is run using a GO button to provide a consistent show each time it is replayed.

1. Recording an FX Stack

There are 12 FX stacks and each can have 96 scenes stored in it (48 scenes on the 12/24 version). We will begin with a basic example of recording a FX stack using only the generic channels.

Example:

- 1) Go into Single Scene Operation.
- 2) Set Channels 1 to 4 at 75 %
- 3) Press RECORD.
- 4) Press FX1 (it will flash blue). The flash buttons on Preset A and Preset B will flash red.
- 5) Set the FD/ST TIME button to Step mode (it will be yellow). Set the STEP RATE Fader to Manual (at the bottom).
- 6) Set the FD/ST TIME button to Time mode (it will be red). Set the STEP RATE Fader to 3 seconds. You can see the fade time changing in the lower left window of the LCD.
- 7) Press Flash Button 1. It will go out. The first scene is now stored in this button.
- 8) Set channels 5 to 8 at FL.
- 9) Set the STEP RATE Fader to 5 Seconds.
- 10) Press Flash Button 2. It will go out. The second scene is stored in this button.
- 11) Set channels 9 to 12 at 50%.
- 12) Set the STEP RATE Fader to 1 Second.
- 13) Press Flash Button 5. It will go out. The third scene is stored in this button.
- 14) Press SOFTKEY C "Record FXBase". This will store the FX 1 stack. The FX 1 button will turn red. You will return to Single Scene Mode.

Notes:

- When recording an FX it is also possible to use Submasters to set the levels. To do this go into Submaster mode by pressing SUBMASTER. Raise the fader that you want to use for a scene and then follow the steps above to record it into an FX Step. You can switch between the channel faders and submasters by pressing the SINGLE SCENE or SUBMASTER buttons as required. To return to FX to record the scene, simply press the relevant FX key that you are working on. This will give you access to the flash buttons to store your scene.
- To access all the available memories you will need to use the Channel expansion keys. There are 48 (24) memories on the first page. To access the extra memories press the CHANNEL EXPANSION alongside the Preset B faders. This will give you access to memories 49 to 96 (25 to 48). To return to memories 1 to 48 (1 to 24) use the CHANNEL EXPANSION key next to the Preset A faders.

2. Playing Back an FX Stack

We will playback the stack that we recorded in the example in "Recording an FX Stack".

Example:

- 1) Press FX 1. It will turn yellow to show the stack is selected.
- 2) Press START/STOP to activate FX1. The first scene will playback and FX1 will flash red to show it is active. The video on the monitor will display as shown in **Figure 52**.

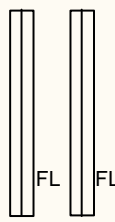
REV1.00	Strand Lighting	1*96	GM: FL
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 75 75 75 75			
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48			
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72			
73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96			
Submaster		Preset	Effect
Page: 01		A B	FX Base
01 02 03 04 05 06 07 08 09 10 11 12			FX1 FX2 FX3 SP:01
13 14 15 16 17 18 19 20 21 22 23 24			FX4 FX5 FX6
25 26 27 28 29 30 31 32 33 34 35 36			FX7 FX8 FX9
37 38 39 40 41 42 43 44 45 46 47 48			FX10 FX11 FX12

Figure 52: Playback FX Stack - Video Monitor Display

- 3) The Channel intensities are shown in the Channel Window and the Scene number is shown under FX1 in the lower right window.
- 4) Press **GO/STEP** to playback the second scene.
- 5) Press **GO/STEP** to play back the third scene.
- 6) Press **GO/STEP** and we will go back to scene one.
- 7) To stop FX 1 press it and it will turn yellow. Now press **START/STOP** and the FX1 will turn red and all outputs for FX1 will stop.

It is possible to now go back and add scenes into Flash Buttons 3 and 4. If you do this and playback FX1 you will see that the sequence will be 1, 2, 3, 4, 5 instead of the original 1, 2, 5. When programming this can be a useful tool to build some core scenes and leave spaces if you are not sure you will need further cues between them.

If you want to record an FX stack to run as a chase then you can set a Step Time for each cue by using the **FD/ST TIME** button to toggle between Step Time and Fade Time. The **STEP RATE** fader is then used to set the step time or fade time required.

Example:

- 1) Go into Single Scene Operation.
- 2) Set Channels 1 to 4 at 100 %
- 3) Press **RECORD**.
- 4) Press **FX2** (it will flash blue). The flash buttons on Preset A and Preset B will flash red.
- 5) Set the **FD/ST TIME** button to Step mode (it will be yellow). Set the **STEP RATE** Fader to 3.00, you can see the step time changing in the lower left window of the LCD.
- 6) Set the **FD/ST TIME** button to Time mode (it will be red). Set the **STEP RATE** Fader to snap at the top of the faders travel. You can see the fade time changing in the lower left window of the LCD.

- 7) Press Flash Button 1. It will go out. The first scene is now stored in this button.
- 8) Set channels 5 to 8 at FL.
- 9) Set the FD/ST TIME button to Step mode (it will be yellow). Set the STEP RATE Fader to 2.00, you can see the step time changing in the lower left window of the LCD.
- 10) Set the FD/ST TIME button to Time mode (it will be red). Set the STEP RATE Fader to 1.00. You can see the fade time changing in the lower left window of the LCD.
- 11) Press Flash Button 2. It will go out. The second scene is stored in this button.
- 12) Set channels 9 to 12 at FL.
- 13) Set the FD/ST TIME button to Step mode (it will be yellow). Set the STEP RATE Fader to 5.00, you can see the step time changing in the lower left window of the LCD.
- 14) Set the FD/ST TIME button to Time mode (it will be red). Set the STEP RATE Fader to 4.00. You can see the fade time changing in the lower left window of the LCD.
- 15) Press Flash Button 5. It will go out. The third scene is stored in this button.
- 16) Press SOFTKEY C "Record FXBase". This will store the FX 2 stack. The FX 2 button will turn red. You will return to Single Scene Mode.

To playback the chase you have recorded:

- 1) Press FX 2. It will turn yellow to show the stack is selected.
- 2) Press START/STOP to activate FX2. The first scene will playback and FX2 will flash red to show it is active. The display on the monitor will show the 3 scenes running automatically.

Note: Even though you have recorded this as an auto chase you can over-ride it and run it manually. Once you have started the chase running, press FX2 so it turns yellow. Set the FD/ST TIME button Step mode. Set the STEP RATE fader to Manual. You can now use the GO/STEP button to step through the chase. If you want to return to the chase then press the FX2 button again and the chase will automatically run.

3. Combining MLs, LEDs and Channels

It is possible to make up an FX stack that combines channels, LEDs and MLs (moving lights). Select the FX stack that you want to record into by pressing RECORD and then the relevant FX key.

Example:

- 1) Go into Single Scene by pressing the SINGLE SCENE button twice (it will turn Green). You can now set your channel levels.
- 2) Once you have finished setting your channel levels press ML. Select the moving lights and then set the attributes as required.
- 3) Once you have finished setting your MLs press LED. Select the LEDs you require and set the attributes as required.
- 4) Press the FX button you originally selected (it will be flashing blue).
- 5) Select which scene you want to store the look in and press the relevant flash button.
- 6) You can continue until you have stored all the scenes you require and then play them back as described above.

NOTES:

- Remember when going into Single Scene to press the button twice, it needs to be Green to be active.
- Remember to release the LEDs and MLs when you have finished recording them.
- Be aware that this console tracks. If you change a parameter on an LED or ML in one step it will not change until you make a change in a later step.

4. FX Programming Tools

This section covers available FX programming tools.

Copying a Scene

It is possible to copy a scene from one scene to another in an FX stack.

- 1) To access this function press RECORD and then the FX you wish to work with. The FX button will flash blue.
- 2) Select the scene you wish to copy by holding down the flash button associated with it. The LCD screen will appear as shown in **Figure 53**.

Menu	Record FXBase	Copy To	A
Release		Insert	B
DMX Base		Delete	C
FX	Master: xxx	Cover	D

Figure 53: Copying a Scene - LCD Display

- 3) Press SOFTKEY A "Copy To".
- 4) Now press the flash button where you wish to copy the scene to.
- 5) Use SOFTKEY.
- 6) Exit by pressing SOFTKEY C "Record FXBase" to update the FX stack.

Note: This is a useful tool if you wish to use a look you have previously created in a new cue.

Inserting a Cue

It is possible to insert a scene into an FX stack provided you have not used all the scenes available for the FX stack.

- 1) To access this function press RECORD and then the FX where you wish to work. The FX button will flash blue.
- 2) Select the scene where you wish to insert a scene by holding down the flash button associated with it. The LCD screen will display as shown in **Figure 54**.

Menu	Record FXBase	Copy To	A
Release		Insert	B
DMX Base		Delete	C
FX	Master: xxx	Cover	D

Figure 54: Inserting a Cue - LCD Display

- 3) Press SOFTKEY B "Insert".
- 4) The scene will move up 1 leaving you a blank scene you can add a look to.

- 5) Set the scene you require in the normal way by setting Channels, MLs and LEDs.
- 6) Hold down the flash button where you wish to store the scene.
- 7) Press SOFTKEY D "Cover" to store the scene.
- 8) Exit by pressing SOFTKEY C "Record FXBase" to update the FX stack.

Editing a Scene

It is possible to edit a scene in a FX stack.

- 1) To access this function press RECORD and then the FX where you to change a scene. The FX button will flash blue.
- 2) Set the channels, MLs and LEDs to the state you want on stage.
- 3) Hold down the Flash button of the scene you wish to change. The LCD display will appear as shown in **Figure 55**.

Menu	Record FXBase	Copy To	A
Release		Insert	B
DMX Base		Delete	C
FX	Master: xxx	Cover	D

Figure 55: Editing a Scene - LCD Display

- 4) Press SOFTKEY D "Cover".
- 5) The scene previously stored in that button will be replaced by the new scene you have set on stage.
- 6) Exit by pressing SOFTKEY C "Record FXBase" to update the FX stack.

Deleting a Scene

It is possible to delete a scene in a FX stack.

- 1) To access this function press RECORD and then the FX where you wish to delete a scene. The FX button will flash blue.
- 2) Hold down the Flash button of the scene you wish to delete. The LCD screen will show as follows (see **Figure 55**).

Menu	Record FXBase	Copy To	A
Release		Insert	B
DMX Base		Delete	C
FX	Master: xxx	Cover	D

Figure 56: Editing a Scene - LCD Display

- 3) Press SOFTKEY C "Delete".

- 4) The scene previously stored in that button will be deleted and the flash button will flash red to show it is empty.
- 5) Exit by pressing SOFTKEY C "Record FXBase" to update the FX stack.

5. Deleting an FX

It is possible to delete an FX stack completely.

- 1) To access this function press RECORD and then the FX you wish to delete. The FX button will flash blue. The LCD screen will show as seen in **Figure 57**.

Menu	Record FXBase	Preview	A
Release		Del-FXBase	B
DMX Base		Record FXBase	C
FX	Master: xxx	Exit	D

Figure 57: Deleting an FX - LCD Display

- 2) Press SOFTKEY B "Del-FXBase".
- 3) Confirm deletion with SOFTKEY A "Yes" or use SOFTKEY C "No" if you do not wish to delete the selected FX Stack.

6. Previewing an FX Stack

It is possible to preview the scenes recorded in an FX stack.

- 1) To access this function press RECORD and then the FX stack you wish to preview scenes in. The FX button will flash blue. The LCD screen will show as seen in **Figure 58**.

Menu	Record FXBase	Preview	A
Release		Del-FXBase	B
DMX Base		Record FXBase	C
FX	Master: xxx	Exit	D

Figure 58: Previewing an FX Stack - LCD Display

- 2) Press SOFTKEY A "Preview". The text will invert its colors to show the selection has occurred.
- 3) The buttons which have scenes stored in them will turn red.
- 4) Press the Flash button of the scene you wish to preview.
- 5) It will flash red and the scene will be outputting live on stage.
- 6) You can use the SINGLE SCENE, LED or ML buttons to change the monitor display to see the contents of the scene displayed on the monitors associated with those functions.
- 7) To preview a different scene press the relevant Flash button. That scene will be output live.

- 8) To exit preview press SOFTKEY A "Preview". It will go back to normal.
- 9) Use SOFTKEY D "Exit" to leave the function.

SET UP FUNCTIONS

All the set up functions are accessed by pressing the MENU key when in Single Scene, Two Scene or Submaster modes.

1. DMX Settings

When you press Menu the LCD display will appear as shown in **Figure 59**.

Menu	Menu	Chan Set Up	A
Release		DMX Patch	B
DMX Base		LCDSet	C
FX	Master: xxx	Next	D

Figure 59: DMX Settings - LCD Display

Channel Set Up

To enter this function, press SOFTKEY A "Chan Set Up". There are 512 channels available for use with the Strand Lighting 200 Plus Series Consoles. You need to allocate channels to each type of device that can be used with the console, Channel faders, LEDs and MLs. **Figure 60** shows the Channel Set Up screen on the console's LCD display.

Menu	Channel Set Up	UP	A
Release	Start End Dim:>001 052	Down	B
DMX Base	LED: 053 153 ML: 154 512	>	C
FX	Master: xxx	Enter	D

Figure 60: Channel Set Up - LCD Display

- SOFTKEY A "UP" will raise the value
- SOFTKEY B "Down" will lower the value
- SOFTKEY C ">" is used to navigate between fields.
- To rapidly change values hold down the Softkey or use the SOLO fader to change the values extremely quickly.
- To store your changes use SOFTKEY D "Enter".

Note: If you wish to leave this screen without storing any changes press the MENU button. It will return you to the previous screen.

DMX Patch

To enter this function, press SOFTKEY B "DMX Patch".

In DMX Patch, you have three options:

- Channel Patch. This allows you to allocate the DMX addresses you wish to control to any of the 96 channel faders available (48 on the 12/24 version).
- DMX Patch. This function is similar to the above but allows you to work in the opposite way by assigning a specific DMX address to a channel fader.
- Default Patch. This will return the console to its default settings.

Channel Patch

Select this function with SOFTKEY A "Chan Patch". The LCD display will appear as shown in **Figure 61**.

Menu	address Patch	UP	A
Release	Patch By Cha>01 Dimmer: 001	Down	B
DMX Base		>	C
FX	Master: xxx	Enter	D

Figure 61: Channel Patch - LCD Display

- Use SOFTKEY A "UP" or SOFTKEY B "Down" to change the channel number with which you are working.
- Use SOFTKEY C ">" to move to the dimmer field.

Channel Patch (Dimmers)

If you move to the dimmer field the LCD display will appear as shown in **Figure 62**.

Menu	address Patch	UP	A
Release	Patch By Cha 01 Dimmer: >001	Chan	B
DMX Base		>	C
FX	Master: xxx	<	D

Figure 62: Channel Patch (Dimmers) - LCD Display

- Use SOFTKEY B "Chan" to return to the Channel select field.
- Use SOFTKEY C ">" or SOFTKEY D "<" to add more dimmers to the channels.
- Use SOFTKEY A "Up" to change the dimmer number.
- Use SOFTKEY B "Down" to lower the dimmer number.
- Use SOFTKEY C ">" to add another dimmer.
- Use SOFTKEY D "Enter" to store the settings.
- You can use the FLASH LEVEL fader to rapidly change the value.
- If you wish to remove a dimmer from the patch set it to "00", it will then be removed.

- To exit without saving the changes press MENU.

DMX Patch (Associate an Address with a Channel)

This function allows you to associate a DMX address with a channel.

Use SOFTKEY B "DMX Patch" to select the function. The LCD display will appear as shown in **Figure 63**.

Menu	address Patch	UP	A
Release	Patch By Dimmer D: >001 C: 01	Down	B
DMX Base		>	C
FX	Master: xxx	Enter	D

Figure 63: DMX Patch (Associate an Address with a Channel) - LCD Display

- Use SOFTKEY A "UP" and SOFTKEY B "Down" to raise or lower the value of the selected field.
- Use SOFTKEY C ">" to move between the DMX and Channel fields.
- Use SOFTKEY D "Enter" to save any changes you have made.
- Use MENU to exit without saving any changes you have made.
- It is possible to rapidly change the value of a field by using the FLASH LEVEL fader.

Default

This function will restore the DMX patch to a 1 to 1 basis. Channel Fader 1 will control DMX 1; Channel Fader 2 will control DMX 2 etc.

- Use SOFTKEY C "Default" to enter this function.
- Set the default patch by using SOFTKEY A "Yes" or exit without changing back to the default patch by using SOFTKEY C "No".

2. LCD Settings

This allows you to set the brightness and contrast of the LCD Screen on the console.

- Access by using SOFTKEY C "LCDSet".
- Use SOFTKEY A "UP" or SOFTKEY B "Down" to change the setting.
- Use SOFTKEY C ">" to switch between the Contrast and Backlight functions.
- Use SOFTKEY D "Enter" to save the settings.

3. Updating Console Software

This function is available on the second page of the Setup Menus. You also need to insert the USB with the software on it into the console.

You will need to insert the Password you have set for the console using the FX Keys to enter the number. Use SOFTKEY D "Enter" to input the password.

To access console software update:

- 1) Press MENU key.
- 2) Press SOFTKEY D "Next".
- 3) Press SOFTKEY A "Update SW".

- 4) The Software will begin loading.

4. Update VGA

In the future there may be updates of the VGA screens. It is on the second page of the Menu screens. You also need to insert the USB key (preloaded with the software) into the USB port on the rear panel of the console.

To access VGA update:

- 1) Press MENU key.
- 2) Press SOFTKEY D "Next".
- 3) Press SOFTKEY B "Update VGA".
- 4) Use SOFTKEY D "Enter" to load the settings.

5. Update DMX Base

DMX Base uses the DMX BASE output port. It is a unique feature that allows the console to run up to 12 Light shows that are independent of the output of the console. It can be used to control two different types of show.

- The first type allows you to control up to 170 RGB type LED fittings by using shows created from Flash files. This is a quick and efficient way to program a series of rainbows or other color movement effects over the RGB fittings.
- The second type of show allows you to record a DMX stream in real time. The best way to think of this is as a video recorder. You plug a console into the DMX In on the 200 Plus Series Console rear panel, start the external show running and all the DMX changes from that show will be recorded in real time. You can then play this show back as required.

LED Show

There are several show files that can be downloaded from the Support section of the Strand Lighting web site at www.strandlighting.com. Place these in the DMXBASE folder on a USB key. To assign one of these shows to the DMX Base Function you will need to load your USB stick into the consoles.

Note: You need to be in the Menu function to load a show. The Update DMX Base is on the second LCD screen.

To access and load LED shows:

- 1) Press MENU key.
- 2) SOFTKEY D "Next" to go to the second screen.
- 3) SOFTKEY C "Update Dmx_Bs" to enter the function.
- 4) You will be prompted to enter your Password using the FX Keys.
- 5) The LCD Screen will show you the available shows.
- 6) Move to the show you wish to use using the SOFTKEY A "Back", SOFTKEY B "Next" or SOFTKEY C "More".
- 7) Select the show using SOFTKEY D "Enter".
- 8) The DMX BASE Key will turn blue. The LCD will prompt you to select an FX Key 1 to 12 to store your show into.
- 9) The FX Key you select will flash purple while the show is written to it.
- 10) When it is completed you will be promoted to Exit pressing SOFTKEY D.
- 11) You will be in DMX Base Menu mode, the DMX BASE key will be blue and any FX Keys that have a show assigned to them will be blue. To exit Menu mode press the MENU key.
- 12) Select the show by pressing the FX Key. You will see the show running across the LEDs plugged into DMX Base.

Note: If you want to create your own show or edit one of the ones provided with the console, you will need Strand 200 Flash Tools. You can also download Strand 200 Flash Tools from the Strand Web Site at www.strandlighting.com. You will need to load this onto a computer.

Run the software. **Figure 64** shows the opening screen.

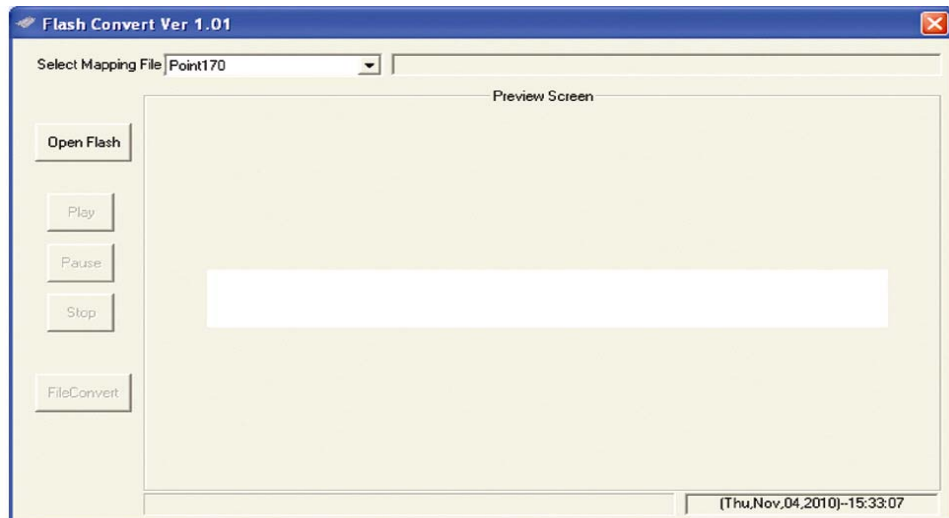


Figure 64: Flash File Opening Screen

First, you need to load a flash file using the "OPEN FLASH" button. Several suitable Flash Files shipped with the software. These will be stored in the folder where you saved the software. You will need to open the FLASH Subfolder. **Figure 65** illustrates Flash Files.

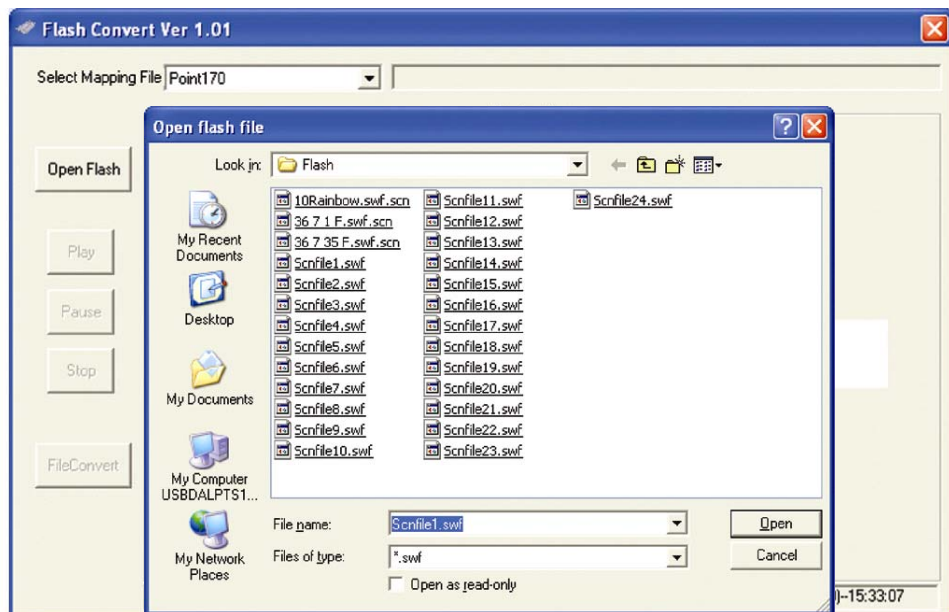


Figure 65: Flash Files

Select the folder for the show you want to edit.

The show will run in the preview window. **Figure 66** illustrates the preview screen.

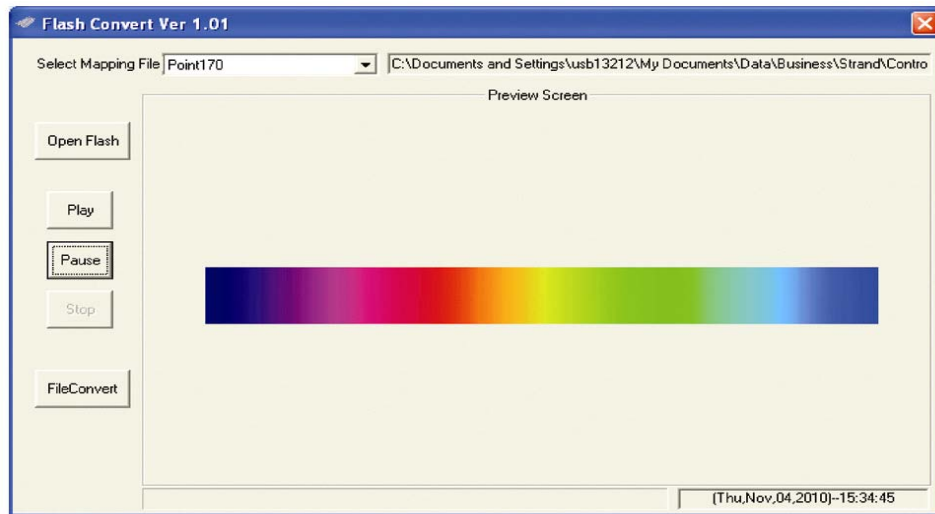


Figure 66: Preview Screen

You can change the number of fixtures that the show is applied to by selecting the Point window on the top left of the screen.

Point 1 will be a single RGB or 3 channels. Point 10 would be 10 RGB fittings or 30 DMX channels. Point 170 will be all 512 DMX channels. To work out how many channels will be played multiply the Point number by 3.

When you have set the required number of channels select "FILE CONVERT".

You will be prompted to set the number of frames per second. You can select any number between 1 and 35.

You can then select a name for your show and a destination. It is recommended that you save it directly to your USB stick under the DMX Base folder. If you store it elsewhere you will have to copy it to that folder later.

You can now load the show onto the console in the normal way, assign it to a FX Playback and run it.

DMX In Show

You will need to plug an external DMX512 source into the DMX Input connection on the rear panel of the console.

To record:

- 1) Press DMX BASE to enter the function, the DMX BASE Button will turn blue.
- 2) Press RECORD.
- 3) Select which FX Key you wish to store the show into, the FX Key will flash pink. The LCD display will appear as shown in **Figure 67**.

Menu	Record DMX Base	BBT Record	A
Release	A: BBT Record B: DMX Record\ C: DEL BASE [XX]	DMX Record	B
DMX Base	D: DEL ALL BASE Record Key: Exit	Delete Base	C
FX	PL: 01 S000 T000	DelAll	D

Figure 67: DMX In Show Recording - LCD Display

- 4) You have two choices for recording. BBT Record will record the incoming DMX stream until all channel are set to "Zero:" This mode has two options (Auto Record and Manual Record).
 - a. Auto Record. This mode will stop recording the DMX stream as soon as it sees a Blackout.
 - b. Manual Record. This mode allows you to record a DMX stream with blackouts. When you have been past the penultimate blackout, you can press the Stop key and the next time a blackout is seen recording will stop.
- 5) DMX Record will record the incoming DMX stream until you manually stop it.

Manual Record

You will need to be in DMX Base mode. You will need to have an external DMX512 source plugged into the DMX In connection.

To Manually record:

- 1) Press RECORD.
- 2) Press SOFTKEY B "DMX Record".
- 3) Press the FX Key where you wish to store the show. It will flash pink. The LCD display will appear as shown in **Figure 68**.

Menu	Record DMX Base	Yes	A
Release	Yes: Will Cancel Other Function No: Exit		B
DMX Base	Free Space: 49920K	No	C
FX	PL: 01 S000 T000		D

Figure 68: Manual Recording - LCD Display

- 4) Select SOFTKEY A "Yes". The LCD display will appear as shown in **Figure 69**.

Menu	DMX Record	Start	A
Release	Recording.... Time: 00:00		B
DMX Base			C
FX	PL: 01 S000 T000	Exit	D

Figure 69: Manual Recording - LCD Display

- 5) Press SOFTKEY A "Start" when you are ready to start recording.
- 6) The timer will begin as soon as the console sees a DMX change happening.
- 7) When your show is finished use SOFTKEY D "Stop" to end the process.
- 8) To play back your show press the FX Key in which it is stored. It will flash blue to show it is playing.

BBT Record

You will need to be in DMX Base mode. You will need to have an external DMX512 source plugged into the DMX In connection in the rear panel of the console.

BBT Auto Record

To perform a BBT Auto Record:

- 1) Press RECORD.
- 2) Press SOFTKEY A "BBT Record".
- 3) Press the FX Key where you wish to store the show. It will flash pink. The LCD display will appear as shown in **Figure 70**.

Menu	BBT Record Sel.	AUTO Record	A
Release		MANUAL Record	B
DMX Base			C
FX	PL: 01 S000 T000	Exit	D

Figure 70: BBT Auto Recording - LCD Display

- 4) Press SOFTKEY A "AUTO Record". The LCD display will appear as shown in **Figure 71**.

Menu	Record DMX Base	Yes	A
Release	Yes: Will Cancel Other Function No: Exit		B
DMX Base	Free Space: 49920K	No	C
FX	PL: 01 S000 T000		D

Figure 71: BBT Auto Recording - LCD Display

- 5) Select SOFTKEY A "Yes". The LCD display will appear as shown in **Figure 72**.

Menu	BBT Record		A
Release	Recording... Time: 00:00		B
DMX Base			C
FX	PL: 01 S000 T000	Exit	D

Figure 72: BBT Auto Recording - LCD Display

- 6) The timer will begin as soon as the console sees a DMX change happening and recording will start.
- 7) The recording will stop as soon as the console sees a blackout on the incoming DMX stream.
- 8) To play back your show press the FX Key it is stored in. It will flash blue to show it is playing.

BBT Manual Record

To perform a BBT manual record:

- 1) Press RECORD.
- 2) Press the FX Key where you wish to store the show. It will flash pink.
- 3) Press SOFTKEY A "BBT Record". The LCD display will appear as shown in **Figure 73**.

Menu	BBT Record Sel.	AUTO Record	A
Release		MANUAL Record	B
DMX Base			C
FX	PL: 01 S000 T000	Exit	D

Figure 73: BBT Manual Recording - LCD Display

- 4) Press SOFTKEY B "MANUAL Record". The LCD display will appear as shown in **Figure 74**.

Menu	BBT Record Sel.	AUTO Record	A
Release		MANUAL Record	B
DMX Base			C
FX	PL: 01 S000 T000	Exit	D

Figure 74: BBT Manual Recording - LCD Display

- 5) Select SOFTKEY A "Start" when you are ready to start your show.
- 6) The timer will begin as soon as the console sees a DMX change happening and recording will start.
- 7) When you have passed the penultimate blackout, press SOFTKEY D "Stop!".
- 8) The recording will stop as soon as the console sees the next blackout on the incoming DMX stream.
- 9) To play back your show press the FX Key it is stored in. It will flash blue to show it is playing.

Delete DMX Base

It is possible to delete all the DMX Base shows or a single one.

Delete all DMX Base

You will need to be in DMX Base mode.

To delete all DMX base:

- 1) Press RECORD.
- 2) Select any FX Key.

- 3) Select SOFTKEY D "DelALL".
- 4) Select SOFTKEY A "Yes" to delete or SOFTKEY C "No" to exit without deleting.

Delete Single DMX Base

You will need to be in DMX Base mode.

To delete a single DMX base:

- 1) Press RECORD.
- 2) Select the FX Key of the show you wish to delete.
- 3) Select SOFTKEY C "Delete Base".
- 4) Select SOFTKEY A "Yes" to delete or SOFTKEY C "No" to exit without deleting.

6. VGA Set

VGA Set is usually used to reset the VGA screen if the VGA card has been removed or if you do not have a VGA monitor and wish to make the LCD your source of information for channel data, ML and LEDs. This function is on the third screen of the console's Setup menu.

To access VGA set:

- 1) Press MENU.
- 2) Press SOFTKEY D "Next" two times.
- 3) Press SOFTKEY A "VGA Set".
- 4) You have two choices - Disable VGA or Enable VGA.
 - a. Disable VGA. If you wish to disable the VGA monitor:
 - 1) Press SOFTKEY A "Exit".
 - 2) Turn the console off and then on.
 - 3) The LCD Display will now be your main display device.
 - b. Enable VGA. To enable the VGA monitor:
 - 1) Press SOFTKEY D "Enter" this will reboot the console.
 - 2) The VGA display your main display device.

7. ArtNet Setup

Instead of using your DMX connections you can send information from the console over an ArtNet Ethernet network.

To access ArtNet setup:

- 1) Press MENU.
- 2) Press SOFTKEY D "Next" two times.
- 3) Press SOFTKEY B "ArtNet Set". The LCD display will appear as shown in **Figure 75**.

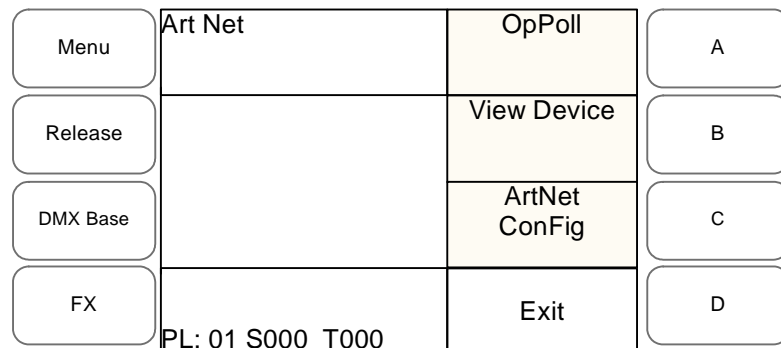


Figure 75: ArtNet Setup - LCD Display

- 4) SOFTKEY A "OpPoll" will pole the network for ArtNet Devices.
- 5) SOFTKEY B "View Device" will allow you to view all the ArtNet Devices on the network.
- 6) SOFTKEY C "ArtNet Config" is used to configure the ArtNet Network. The LCD display will appear as shown in **Figure 76**.

Menu	Art Net	Set SubSw	A
Release	Status: Enabled	Set Univer	B
DMX Base	SubSwitch: 00 Universe: 00	Enable	C
FX	PL: 01 S000 T000	Disabl	D

Figure 76: ArtNet Setup (Config) - LCD Display

ArtNet Setup Options:

- SOFTKEY A "Set SubSw" will set the Sub Switch for 00 to 15.
- SOFTKEY B "Set Univer" will set the universe number from 01 to 15.
- SOFTKEY C "Enable" will broadcast ArtNet over the settings chosen.
- SOFTKEY D "Disable" will turn ArtNet off.

Note: It is recommended that you disable ArtNet if you are not using it.

8. Upload Library

This function allows you to store all or parts of the consoles information onto a USB memory stick.

To access Upload Library:

- 1) Press MENU.
- 2) Press SOFTKEY D "Next" two times.
- 3) Press SOFTKEY C "Upload Lib.". The LCD display will appear as shown in **Figure 77**.

Menu	Upload Lib	System Upload	A
Release		Fix Upload	B
DMX Base		SubMst Upload	C
FX	PL: 01 S000 T000	Next	D

Figure 77: Upload Library - LCD Display

Upload Library Options:

- SOFTKEY A "System Upload" will upload all the information from the console to the USB. You will be prompted to start the upload when you have selected this function. The LCD will show the actions as the files download. If you have a large show on the console the process will take some time.

- SOFTKEY B "Fix Upload" will upload only the Fixture Information.
- SOFTKEY C "SubMst Upload" will upload only the Submaster information.
- SOFTKEY D "Next" will bring up further options as shown in **Figure 78**.

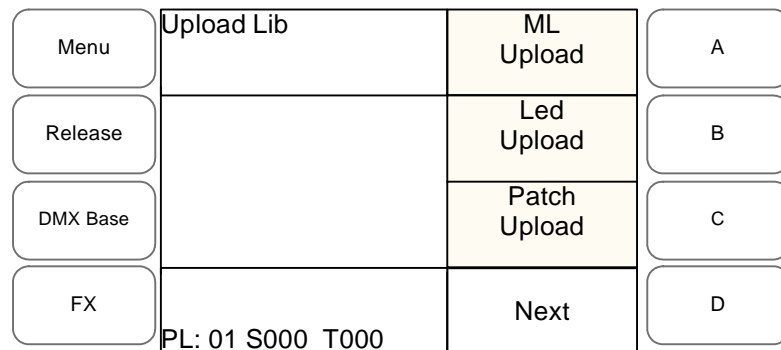


Figure 78: Upload Library Options - LCD Display

- SOFTKEY A "ML Upload" will upload only the ML information.
- SOFTKEY B "Led Upload" will upload only the LED information.
- SOFTKEY C "Patch Upload" will upload only the DMX Patch information.
- SOFTKEY D "Back" will return you to the first screen of the Upload options.

Note: To exit Upload Library, press MENU.

9. System Files

This function allows you to load show files from the USB memory stick to the console or to restore the console to its original factory settings. This function is on the third page of the menu screens.

To access System Files:

- 1) Press MENU.
- 2) Press SOFTKEY D "Next" three times.
- 3) Press SOFTKEY A "System Files".
- 4) You will be promoted to input your Password using the FX Keys (See "Change Password" on page 67 for more information). The LCD display will appear as shown in **Figure 79**.

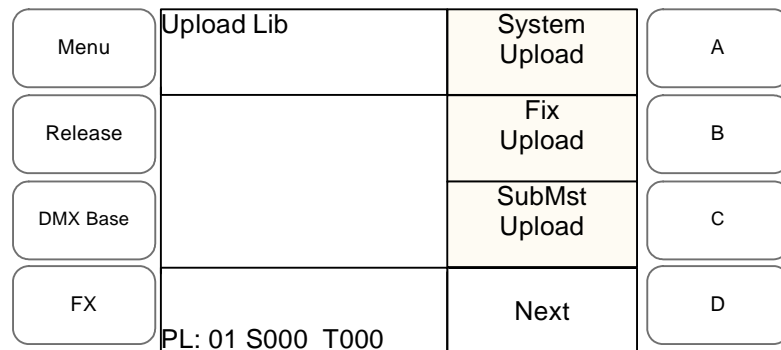


Figure 79: System Files - LCD Display

System Files Options:

- SOFTKEY A "System DwLoad" will load the complete show file from the USB to the console.

- SOFTKEY B "Fix DwLoad" will load all the fixture information to the console.
- SOFTKEY C "SubMst DwLoad" will load all the submaster information to the console.
- SOFTKEY D "Next" will bring up further options as shown in **Figure 81**.

Menu	System Files	System DwLoad	A
Release		Fix Dwload	B
DMX Base		SubMst Dwload	C
FX	GM xxx	Next	D

Figure 80: System Files Options - LCD Display

- SOFTKEY A "ML DwLoad" will load all the ML information to the console.
- SOFTKEY B "Led DwLoad" will load all the LED information to the console.
- SOFTKEY C "Patch DwLoad" will load the DMX patch to the console.
- SOFTKEY D "Next" will give you more options as shown in **Figure 81**.

Menu	System Files	ML DwLoad	A
Release		Led Dwload	B
DMX Base		Patch Dwload	C
FX	GM xxx	Next	D

Figure 81: System Files Options - LCD Display

- SOFTKEY A "Factory Restore" will delete all information from the console and return it to the factory settings.
- SOFTKEY D "Next" will return you to the first screen of the Download menu.

10. Change Password

The console ships with a factory set password of 168168. It is possible to change this password.

This function is on the third page of the menu screens.

To access Change Password:

- 1) Press MENU.
- 2) Press SOFTKEY D "Next" three times.
- 3) Press SOFTKEY B "Change Paswr".
- 4) You will be prompted to enter your old password using the FX Keys of 1 to 10. Note, 10 is 0.
- 5) You will then be prompted to input your new password. You must input the new password - at prompt - a second time to confirm it.

- 6) Your new password is stored in the console. Please store your new password in a safe location. Strand Lighting does not keep a record of user-defined passwords.

11. Master Password

For any reason, should the user no longer remember the user assigned password, there is a Master Password that is available that will allow access in order to reset the password. The Master Password is 861861.

Use this password to gain access and then change the password accordingly. (See “Change Password” on page 67 for more information).

12. Factory Defaults

To restore the console to its factory default settings:

- 1) Press MENU.
- 2) Press NEXT 3 times.
- 3) Press A for System Files.
- 4) Enter Password 168168. Press Enter.
- 5) Press NEXT two times.
- 6) Option A is Factory Restore to Default.
- 7) Select Yes to confirm restoring the console to factory default.

13. Console Memory Lock / Unlock

This allows you to lock the console so that unauthorized programming or menu changes cannot be made.

Locking the Console

This function is on the third page of the menu screens.

To access memory lock:

- 1) Press MENU.
- 2) Press SOFTKEY D "Next" three times.
- 3) Press SOFTKEY C "Lock Memory".
- 4) You will be prompted to input your password (See “Change Password” on page 67 for more information). Use SOFTKEY D "Enter" to input your password.
- 5) The console will now be locked and further programming is prohibited until unlocked. You are still able to play back any Scenes, FX or Submasters recorded.

Unlocking the Console

To unlock the console:

- 1) Press MENU or RECORD. The LCD display will appear as shown in **Figure 82**.

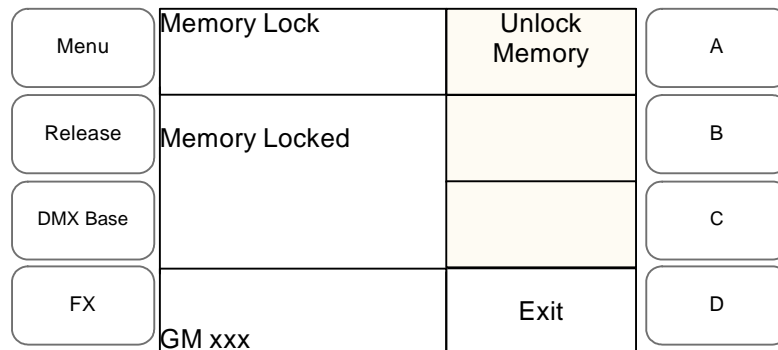


Figure 82: Memory Unlock - LCD Display

- 2) Use SOFTKEY A "Unlock Memory". You will be prompted to enter your password (See "Change Password" on page 67 for more information).
- 3) Once you have successfully entered your password the console will be unlocked.

14. Assign externals

There are two keys EXT 1 and EXT 2 that can have remote DMX512 devices like smoke/fog/haze machines, strobes, etc., assigned to them. This is done as part of the normal patch process.

This function allows you to set the keys as **Momentary** or **Latch**.

- **Momentary** will output the DMX as long as the key is pressed.
- **Latch** will turn the device on and leave it on until the key is pressed again.

This function is on the fourth page of the menu screens.

To access Assign externals:

- 1) Press MENU.
- 2) Press SOFTKEY D "Next" four times.
- 3) Press SOFTKEY A "Assign EXT".

Assign External Options:

- You can now use SOFTKEY A to toggle EXT 1 between Momentary and Latch.
- You can now use SOFTKEY B to toggle EXT 2 between Momentary and Latch.

15. Software Version

This will show you which version of software the console is currently running.

To determine what version software the console is using:

- 1) Press MENU.
- 2) Press SOFTKEY D "Next" four times.
- 3) The software version will be shown next to SOFTKEY B.

CREATING MOVING LIGHT (ML) AND LED FIXTURE LIBRARIES

Strand makes every effort to provide up to date fixture libraries but as manufacturers regularly launch new fixtures you may not always have a fixture profile when you need it. We have provided a tool to allow you to create your own fixture as you require. It is also possible to edit an existing fixture or change the palette libraries to better suit your needs.

You will need to load the Strand tools onto your PC. The file is called Setup-200-PlusSetup.exe and can be downloaded from the Strand Lighting website at www.strandlighting.com.

When you open the software you will have the following screen as shown in **Figure 83**.

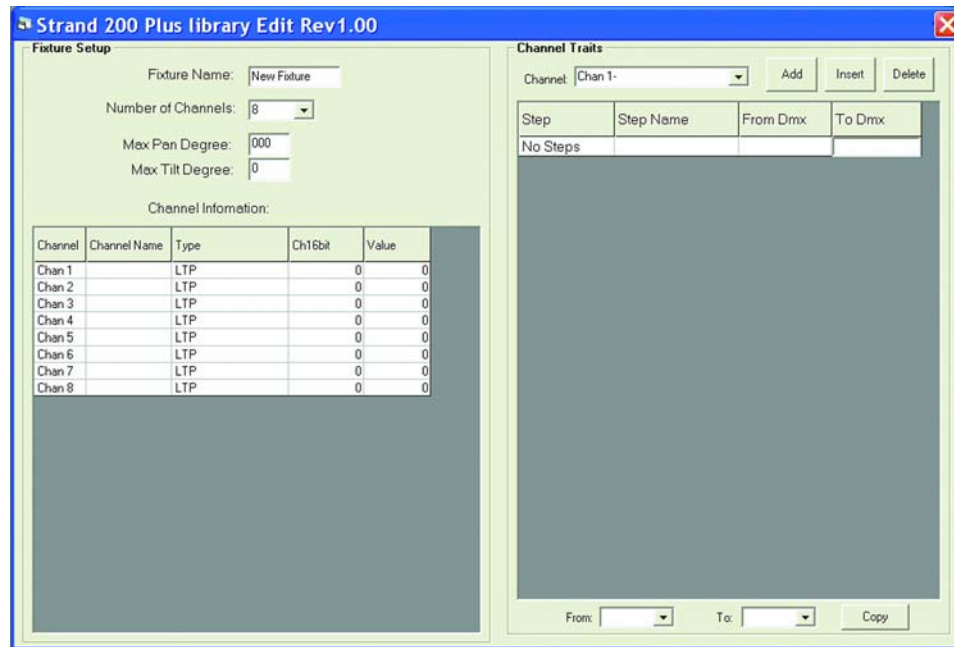


Figure 83: Strand 200 Plus Library Screen

1. Creating a New Fixture Library

Note: You will need the fixture's datasheet, user's manual, etc., that has detailed DMX mapping information for the fixture.

To create a new ML fixture library:

- 1) Click in the Fixture name field and give your fixture a name. When the fixture name is displayed on the console it can have a maximum of 11 characters.
- 2) Enter the number of channels available for the fixture.
- 3) Enter the maximum pan and tilt information for the fixture.
- 4) You can now enter the data for each channel.
 - a. Click on the Channel Name field. Most of the common types of attribute are already named.
 - b. For instance if the channel is for Pan select Pan, Colour for Colour 1, Gobo1 for gobo etc.
- 5) Move to the next column to select HTP or LTP. Dimmers are usually HTP and other attributes are LTP.
- 6) The final column allows you to set the home value. For a dimmer this is usually 255. Pan and Tilt are usually 128 as this will be the center position.

- 7) Once you have set all the channels it is possible to use the Channel Traits screen to set the steps for a channel. For instance, the moving light may have a colour wheel where the DMX value for each colour is given. You can configure these as steps.
- 8) Once you have finished your fixture you will need to save it. It is recommended that you save the fixture to the FLIB file on the USB key. This will allow you to access it when you load the fixture library into the console.

Note: For assistance, please contact your local Authorized Strand Lighting Dealer or Strand Lighting office. A complete listing of Strand Lighting offices is found on the inside cover of this manual.

TECHNICAL SPECIFICATIONS

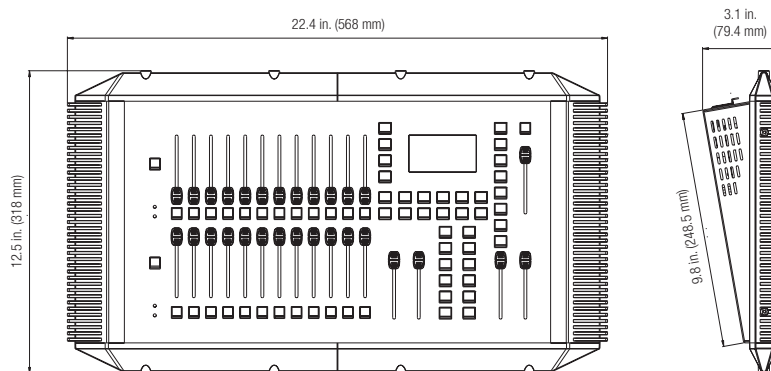
1. Electrical

Supply Voltage:	Universal power supply 90-240V
Approvals:	CE marked with UL listed and cUL power supply
Connectivity:	1 Ethernet (RJ45) port, ArtNet compatible
	1 USB port (Library Storage)
	1 VGA monitor output (monitor not included)
	1 DMX512 In (XLR5M) port
	2 DMX512 Out (XLR5F) ports

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:	200 plus 12/24 15.0 lbs / 6.8 kg
	200 plus 24/48 21.0 lbs / 9.5 kg
Dimensions (LxWxH):	200 plus 12/24 (64331): 22.4 x 12.5 x 3.1 in / 568.0 x 318.0 x 79.4 mm
	200 plus 24/48 (64341): 31.7 x 12.5 x 3.1 in / 804.0 x 318.0 x 79.4 mm

200 Plus 12/24 Console



200 Plus 24/48 Console

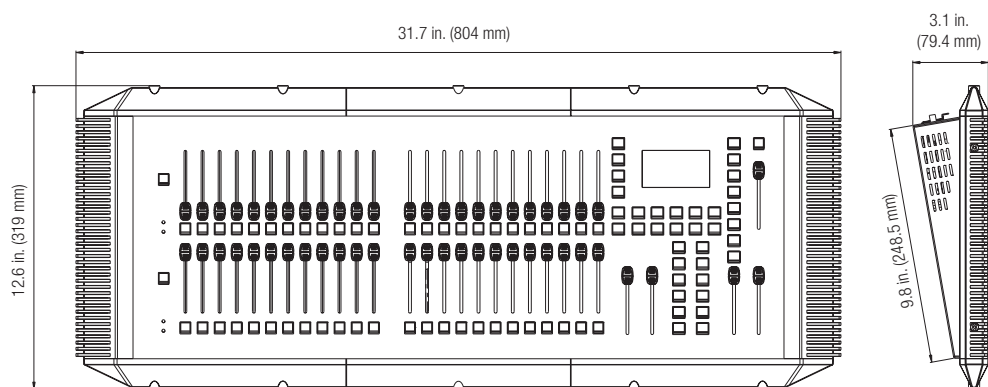


Figure 84: 200 Plus Consoles - Dimensions

Notes

PHILIPS

Strand Lighting

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