



LP-X24 and LP-X48 Users Manual— Addendum

**LP-X24 and LP-X48 Users Manual—Addendum
Version 3.2**

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Introduction

This addendum provides updated information to corresponding chapters and sections in the *LP-X24 and LP-X48 Users Manual*.

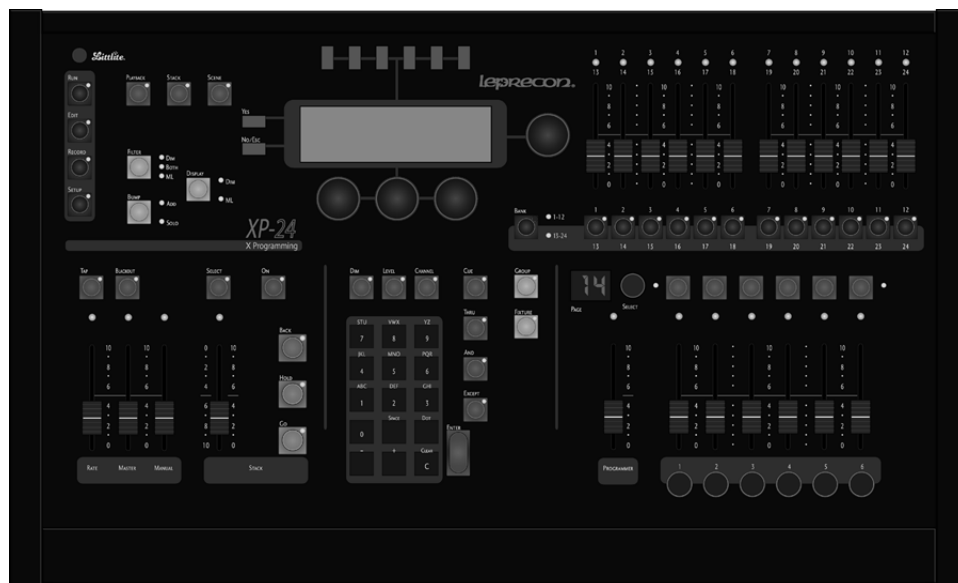
LP-X Series Console Features

The LP-X series consoles are cross-functional consoles that can be used in a wide variety of situations. Ideally, they will be used in productions that incorporate both moving and conventional light fixtures; however they are well suited to run either individually.

The LP-X24 has quick fader/button access to 24 dimmers and 24 moving light fixtures. Show sizes can vary and are limited to 512 DMX channels.

The LP-X48 has quick fader/button access to 48 dimmers and 48 moving light fixtures. As with the LP-X24, show sizes can vary but are limited to 1024 DMX channels.

The numeric keypad provides access to additional dimmers and fixtures. The shows built on the LP series consoles may be simple or complex. Programming is quick and easy; access to features requires a limited number of keystrokes and button presses.



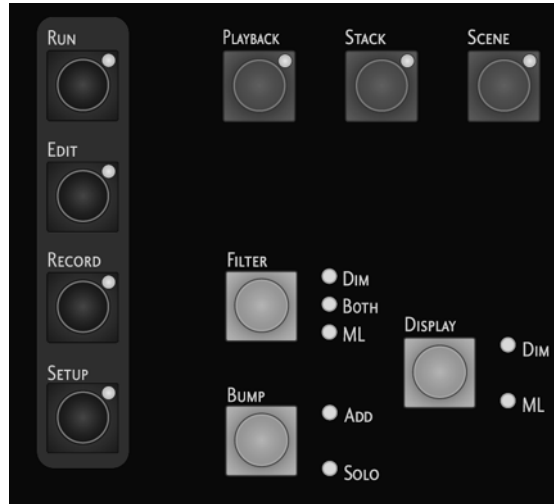
Feature	LP-X24	LP-X48
DMX Channels	512	1024

Feature	LP-X24	LP-X48
Conventional Channels	96	192
Simultaneous Moving Light Playbacks	6	12
Moving Light Autopatch	✓	✓
Custom Color Palette	✓	✓
Color Changer Control	✓	✓
Proportional Dimmer Patch	✓	✓
Blind Edit	✓	✓
Chase Memory	120 Programmable (6 Playbacks x 20 Pages)	240 Programmable (12 Playbacks x 20 Pages)
Theatrical Stack	✓	✓
Go, Back and Hold Buttons	✓	✓
Timed Fades (Separate In/Out)	✓	✓
Built-in 3.5" Disk Drive	✓	✓
Moving Light Effects	✓	✓
Video, keyboard and mouse support	✓	✓
Weight	29 lbs. (boxed)	36 lbs. (boxed)
Height, Width, Depth (in inches)	4.75" x 26.5" x 18"	4.75" x 36.5" x 18"

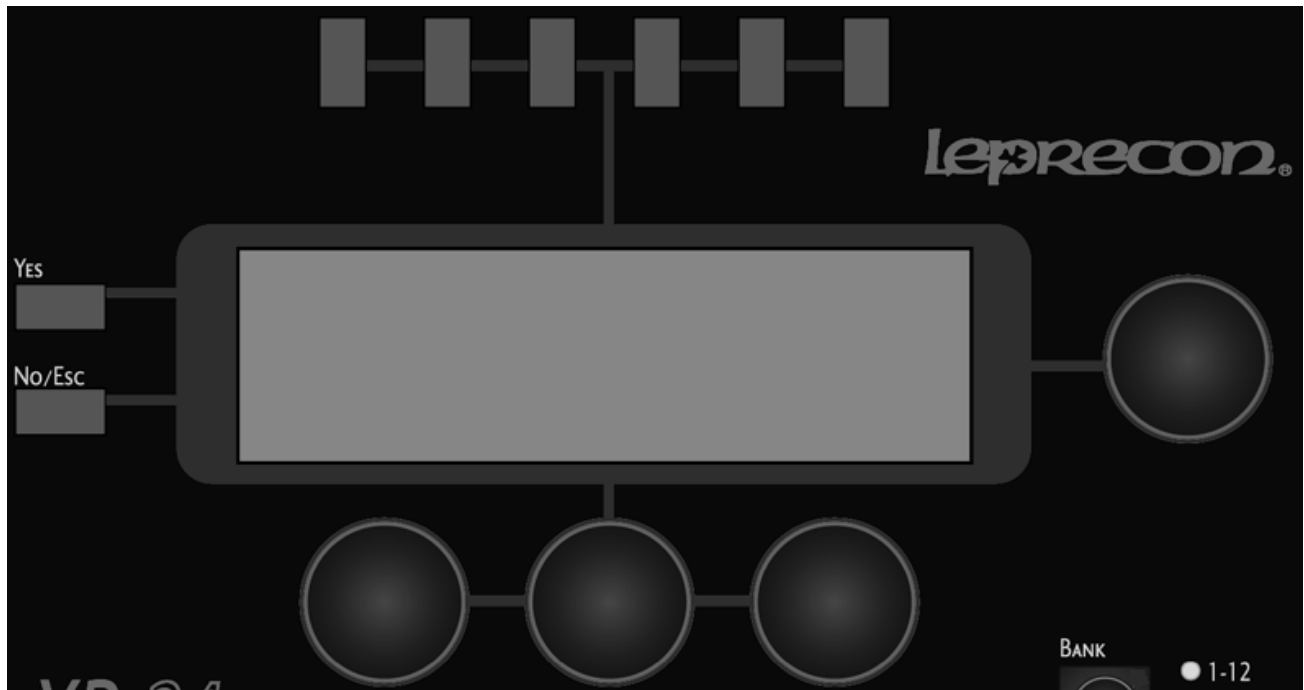
Board Layout

The LP-X series consoles consist of seven distinct sections.

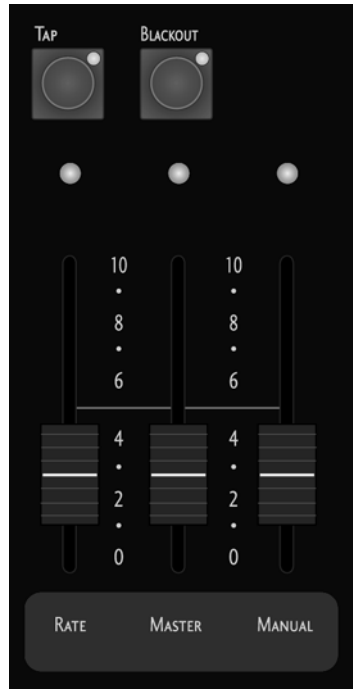
- *Mode Controller Section:* Switch between Run, Record, Edit and Setup modes. Select Playback, Stack or Scene for Run or Edit. Set the recording filter to dimmer only, moving light only or both. Switch between dimmer and moving light programming displays. Switch between solo and add functions.



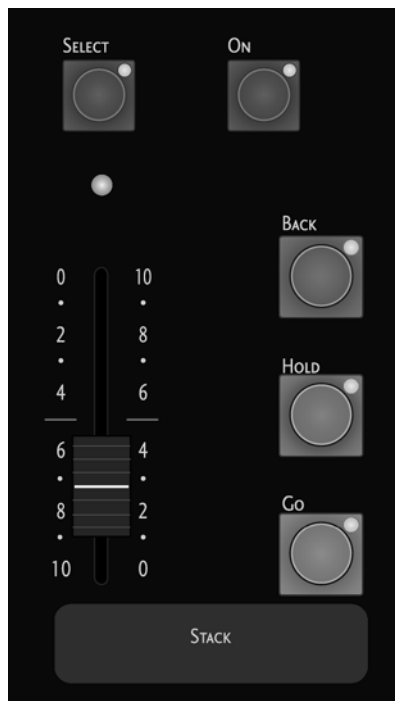
- *Display Section:* This section includes the LCD display, four selection wheels (left, right, center and side), six softkeys for menu selection, a **Yes** button and a **No/Escape** button.



- *Master Section:* Includes the **Master** fader, the **Manual** fader and the **Blackout** button. Also includes two chase rate controllers—the **Rate** fader and a **Tap** button.



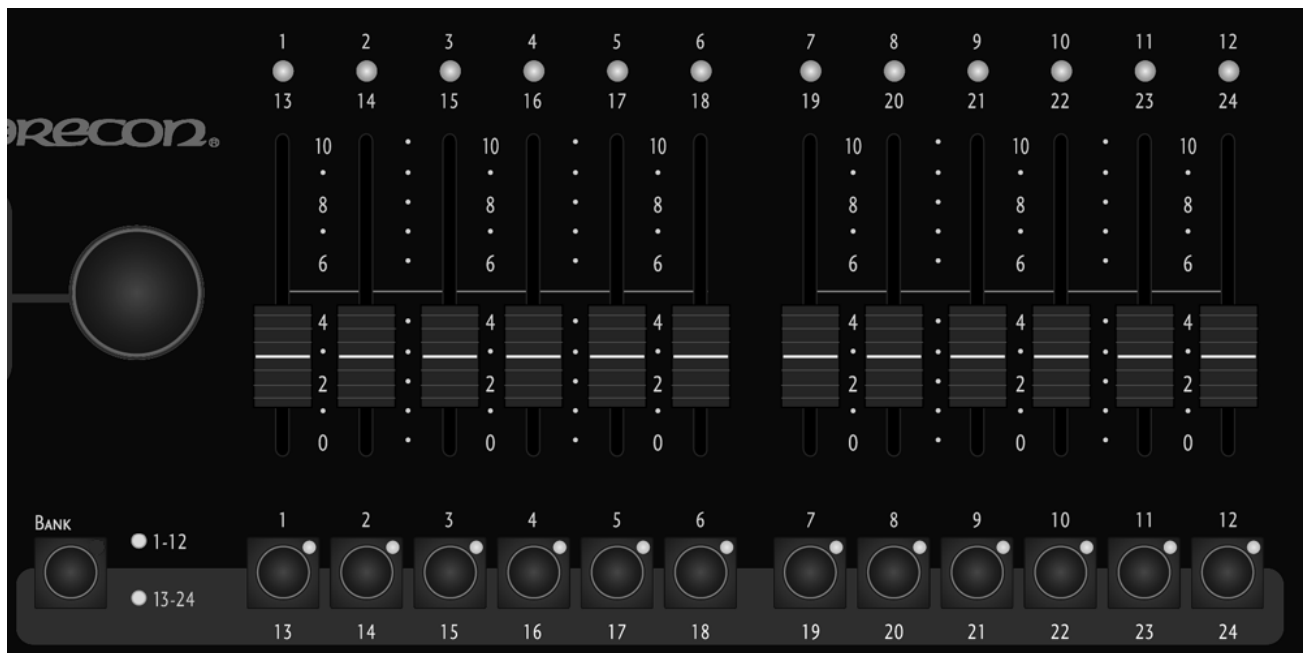
- *Stack Section:* Includes **Back**, **Hold** and **Go** buttons, the **Stack** cross-fader, the **On** button and the **Select** button.



- *Keypad Section:* Includes numeric/text keys and an assortment of special function keys.

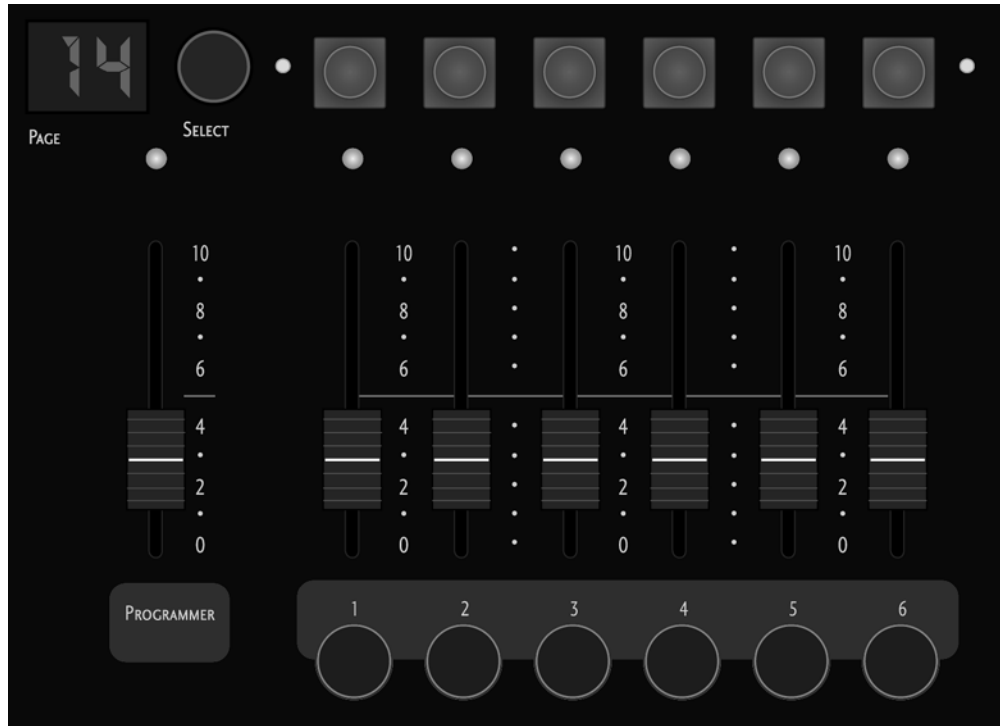


- *Manual Scene Section:* On the LP-X24 (shown below), this section includes 12 **Manual Scene Faders**, **Bump** buttons for each and the **Bank** switching button. **Bump** buttons are also used for moving light fixture selection. When this is the case, we refer to the buttons as **ML Selects**.



On the LP-X48 (not shown), this section includes 24 **Manual Scene Faders**, **Bump** buttons for each and the **Bank** switching button.

- **Playback Section:** Includes the **Page** selector and display, **Playback** select buttons, faders and bumps, and the **Programmer** fader. The LP-X24 (shown below) has six playbacks. The LP-X48 (not shown) has twelve playbacks.



Power Up and Down Sequences

When the LP-X arrives from the factory, it will be set to operate on 110V current. To change the setting to 220V, move the red switch that is underneath the power jack from the 115 setting to the 230 setting.

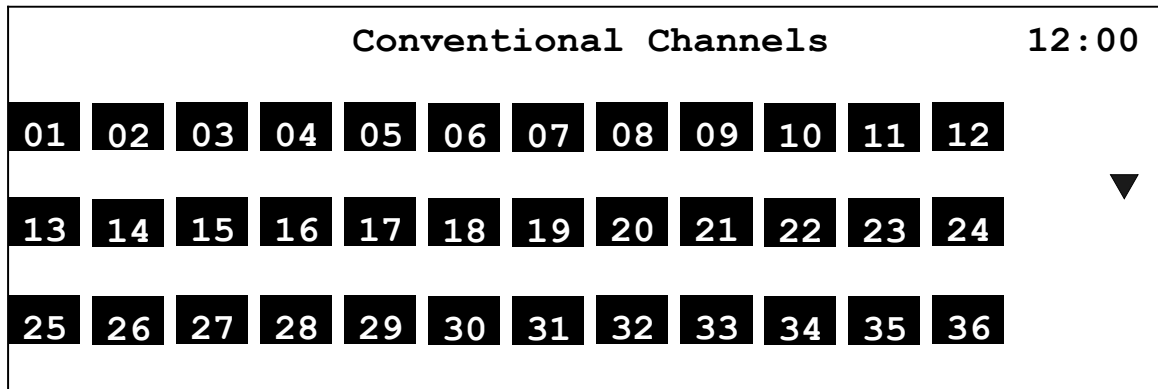
To Power Up the LP-X

1. Move the power switch to the **On** position.

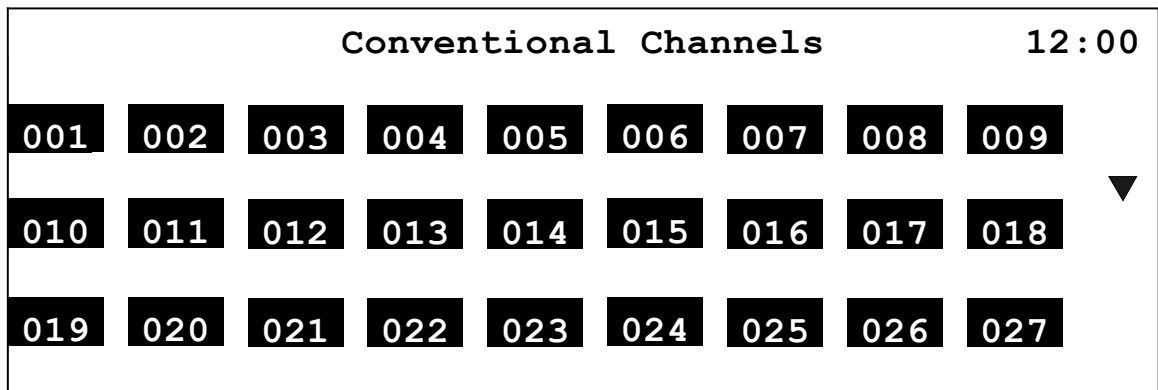
The power switch is located on the back of the console next to the power cord jack.

The LP-X starts in **Run/Scene** mode and displays the **Conventional Channels** screen.

LP-X24



LP-X48



To Power Down the LP-X

1. To ensure that all show data is properly saved, we recommend that you always put the LP-X into **Run** mode before powering down.
2. Move the power switch to the **Off** position.
All show information is saved.

Shows

All of the user-defined data of the LP-X—such as looks, scene lists, chases and patch tables—are saved as a computer file called the *Show* file. There is only one show on board at a time.

The LP-X autosaves information to the *Show* file every *N* minutes—where *N* is an interval between five and thirty minutes that can be set by the user. The LP-X also autosaves information whenever you put the board into **Run** mode.

A show file can and should be copied to floppy for backup and for portability between boards. The LP-X saves one show per floppy disk.

Display Modes

The LP-X runs in two display modes—LCD Mode and Video Mode. In LCD Mode, there is minimal output to the monitor. In Video Mode, there is minimal output to the LCD.

The console starts up in LCD mode.

To use the video feature of the LP-X you will need:

- A VGA compatible monitor running at 1024X768 resolution
- A keyboard with a PC compatible PS-2 connection
- A Microsoft compatible mouse with a PS-2 connection

Connect the keyboard, mouse and monitor to the LP-X before turning on the console.

Touch Panel Monitor

Additionally, the LP-X series consoles are compatible with the ELO 1525 touch panel monitor.

Operating the console with a touch panel monitor provides an additional way in which to interact with the system. For example, to press a button you would normally point with a mouse pointer and then click the left mouse button. With a touch panel monitor, you literally press the button display on the monitor with your finger to activate it.

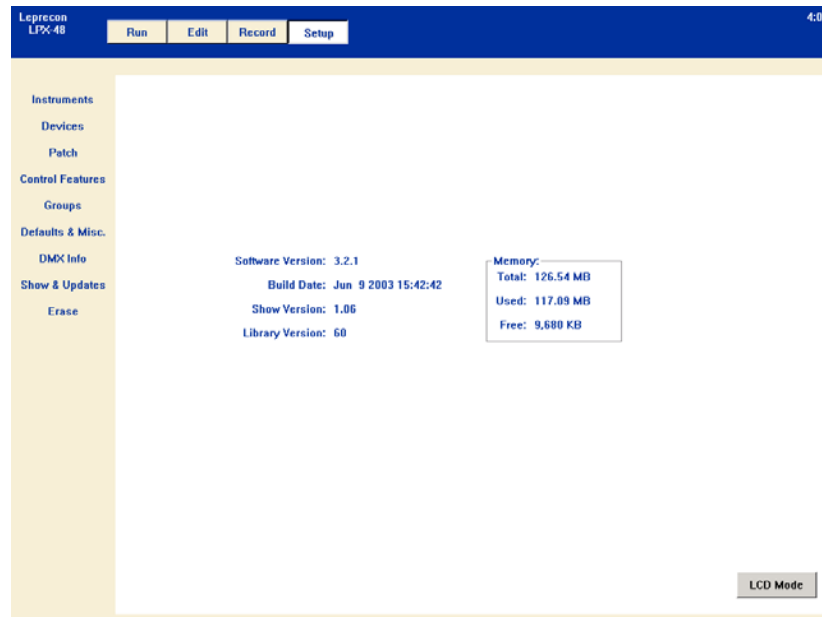
Every touch panel monitor responds a bit differently and, as a result, requires a few minutes to adapt. The ELO 1525 monitor does not sense pressure or heat, so there is no reason to press hard or to hold your finger in place. Simply press and let go—if the monitor doesn't perceive the press, try it again. Within a few minutes, you will find the right touch.

Switching Between Display Modes

To switch to Video Mode:

- (1) Click or press the **Switch to Video** Mode button that appears on the video monitor.

The output to the LCD is minimized and the full video display appears on the monitor. The image below is a sample LP-X Video Setup Mode screen. The screen that you see will vary depending upon whether you were in Run, Record or Setup at the time you switched to Video Mode.



There are two ways to switch to LCD Mode:

- (1) Press the first softkey on the console. The softkey is labeled **LCD Mode**.
- (2) From the **Setup** screen, click or press the **LCD Mode** button in the lower right corner.

Orientation to LCD Mode

The LCD display has several sections to it.

Across the top are the menus. You make menu selections by pressing the button or "softkey" above the menu item of your choice. The display shown below has menu items for Color, Beam, Focus, Attributes and Labels. The fifth slot is empty.

ColrFx	Beam	Focus	Attrib		Label
Recording new scene					
No Change					No Dowse
Defaults					Intensity: 100%
amber					
blue					
congo blue			Delay		Fade
cto			0:00.0		0:00.0

One or more of the wheels will assist you in utilizing the functions and features on the display. In this case, all four wheels are useful:

- The left wheel scrolls the color label list on this display.
- The center wheel increases and decreases the delay time.
- The right wheel increases and decreases the fade time.
- The side wheel increases and decreases the intensity.

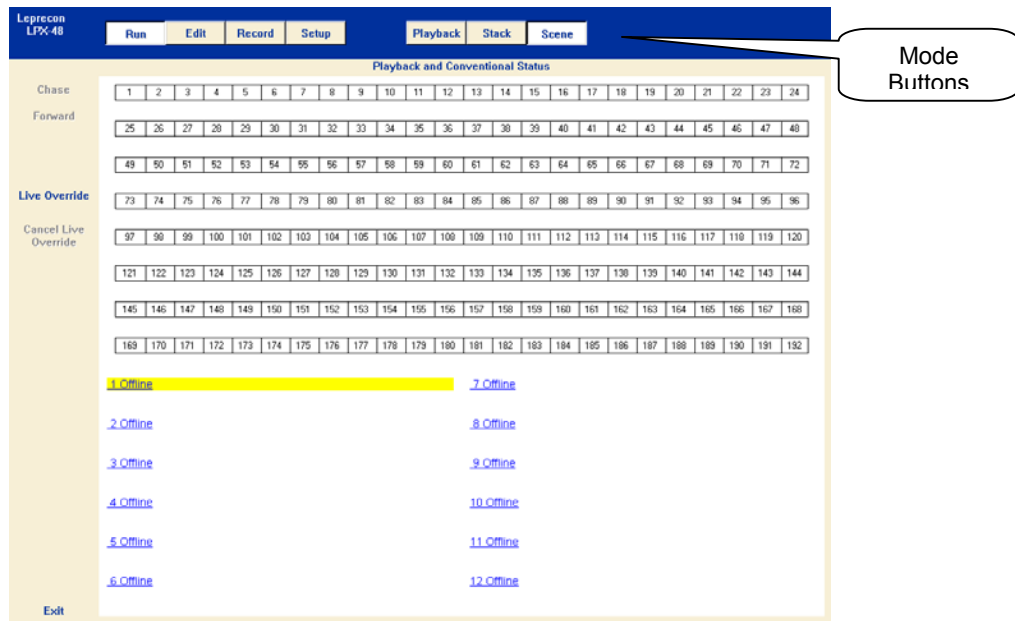
There may be instances when pressing the wheel down is meaningful. For example, on the screen shown above, pressing the center wheel makes the **Delay** time active. The highlight moves from the **Fade** to the **Delay**. Data entry on the keypad would affect the **Delay**. Also, pressing the side wheel on this screen toggles between Dowse and No Dowse modes. (See "**Error! Reference source not found.**" beginning on page **Error! Bookmark not defined.** for further details.)

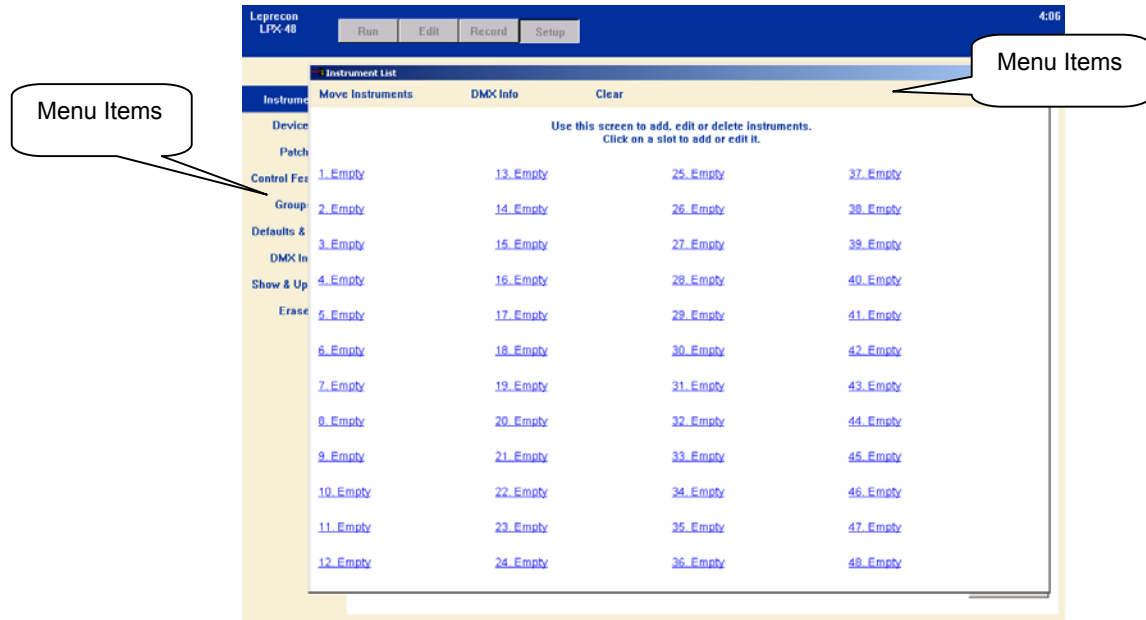
Orientation to Video Mode

Once you are familiar with the LP-X LCD mode operation, you will quickly adapt to Video Mode with just a few pointers.

Mode Buttons:

The **Mode Buttons** correspond to the buttons in the **Mode Controller Section** of the console itself. The **Playback**, **Stack** and **Scene** buttons are only displayed in **Run** and **Edit** mode.



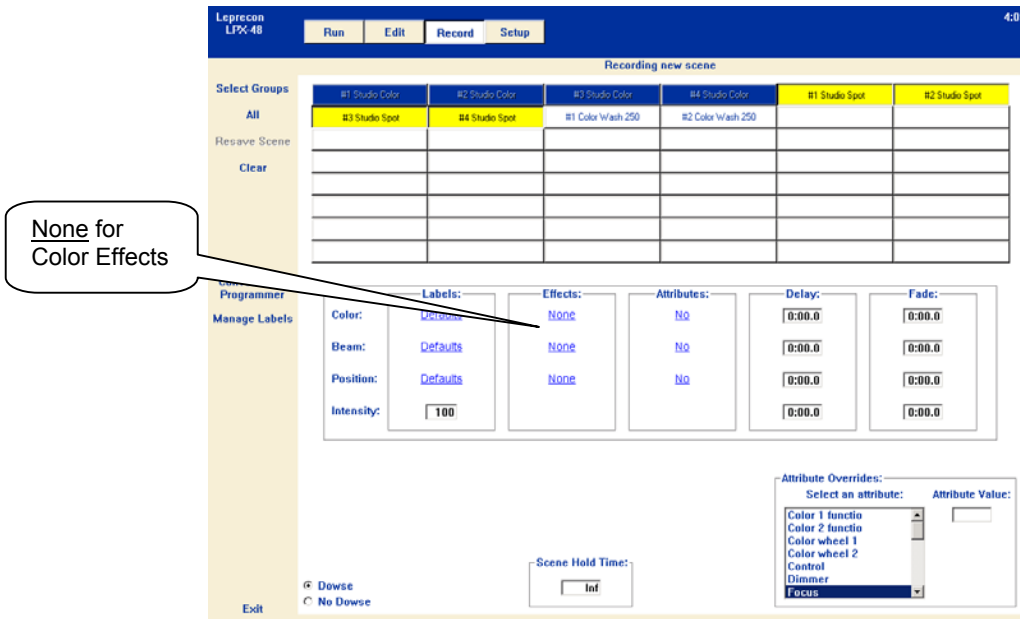
Menus:

Most screens have menu items in one of two places: along the left side or across the top. Many menu items correlate with the softkeys used in LCD Mode, so they will seem familiar to the experienced user. Click a menu item to display the window or dialog box associated with it.

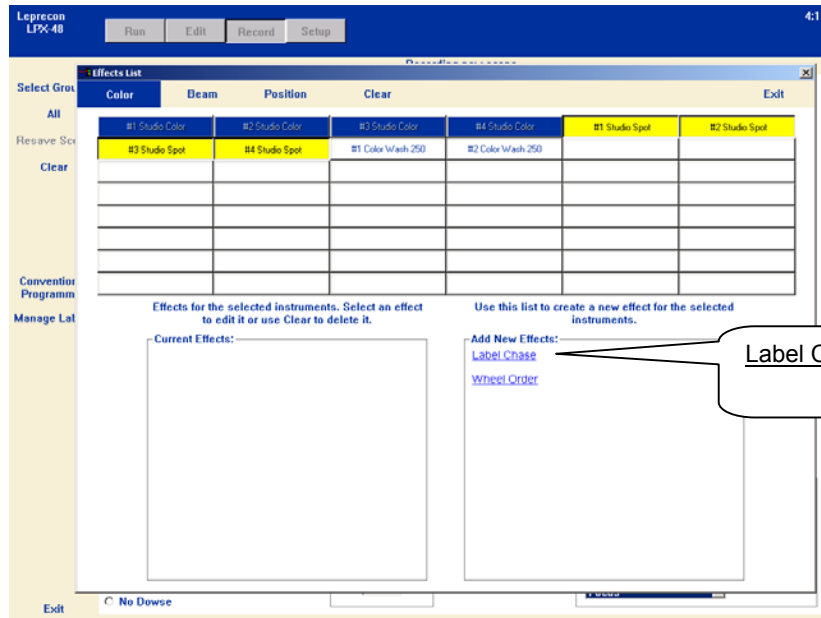
Underlined Items:

When an item is underlined, clicking on it provides access to additional functions that are uniquely associated with the item.

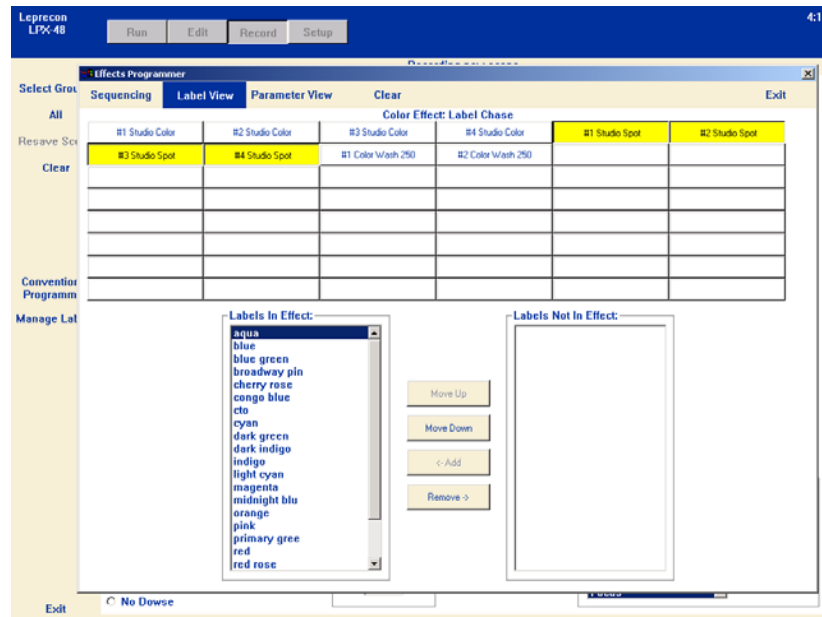
For example, the image below is of the **Moving Light Programmer** screen.



Clicking the **None** for the color effects opens the **Effects List** for colors, as shown below.



Clicking another underlined item, for example **Label Chase**, opens the **Effects Programmer**, as shown below.



Conventions Used in this Manual

- The value 100% is represented as *FF* (*Fader Full On*) on the LP-X.
- Where instructions state that you use a wheel to scroll through a list or increase or decrease values, it is understood that turning the wheel to the right moves the highlight up through the list or increases the values. Turning the wheel to the left moves the highlight down through the list or decreases values. In many cases, the wheels have the same function when your LP-X is connected to a monitor.
- Where instructions state that you press a menu softkey, you press the softkey button that is aligned above the menu item. If your LP-X is connected to a monitor, you press or click the menu item that corresponds with the softkey. In some cases, the softkey text on the LCD is abbreviated but the menu item text is always written out in full.
- In most cases, you confirm an operation by pressing the **Yes** button in the *Display* section of the board. Pressing the **Enter** key in the *Keypad* section will frequently confirm an operation, too. In most cases, pressing the **Enter** key on a full-sized keyboard, if your LP-X has one attached, will also confirm an operation.
- In most cases, you cancel an operation by pressing the **No/Esc** button in the *Display* section of the board. In most cases, pressing the **Escape** key on a full-sized keyboard, if your LP-X has one attached, will also cancel an operation.
- We use the expression "match and grab" to indicate a situation where a value on a fader has been "remembered" by the LP-X. You must move the fader to the position that matches the remembered value before changes of fader position will have any effect. Once you have "matched" the value, subsequent changes of fader position **will** affect the output value of the light.

For example, the LP-X24 has one set of faders in the *Manual Scene* section of the console, but pressing the **Bank** button changes the faders from numbers 1 through 12 to numbers 13 through 24. Assume that you set fader 1 to a level of 50%. You then press the **Bank** button so that you are controlling faders 13 through 24. You set fader 13 to a level of 100%. You press the **Bank** button again, giving you control of faders 1 through 12 again. Fader 1 was set to a level of 50% but the fader position is at 100% because it was used to set the level for fader 13. You must move the fader to the 50% position (matching) before you can change the level (grabbing) for fader 1.

- The **Filter** (Moving Light/Dimmer/Both) setting determines what information is saved when you:
 - (1) press a **Playback Select** button,
 - (2) press the **Stack Select** button,
 - (3) press the **Save** softkey on the **Conventional Programmer** screen or the **ML Programmer** screen,
 - (4) press the **Save As** softkey on the **ML Programmer** screen.

When the filter is set to **Moving Light**, only moving light information is saved. When the filter is set to **Dimmer**, only conventional light information is saved. When the filter is set to **Both**, information for moving lights *and* conventional lights is saved. In the manual, we always show the minimum filter setting that must be used to complete an operation—you may always set the filter to **Both**.

- On the **Moving Light Programmer** screen, pressing the **Color** softkey once displays color labels. The softkey button text changes from "Color" to "ColrFx". Pressing it a second time displays the **Color Effects** screen.
- On the **Moving Light Programmer** screen, pressing the **Beam** softkey once displays beam labels. The softkey button text changes from "Beam" to "BeamFx". Pressing it a second time displays the **Beam Effects** screen.
- On the **Moving Light Programmer** screen, pressing the **Focus** softkey once displays focus labels. The softkey button text changes from "Focus" to "FocsFx". Pressing it a second time displays the **Focus Effects** screen.

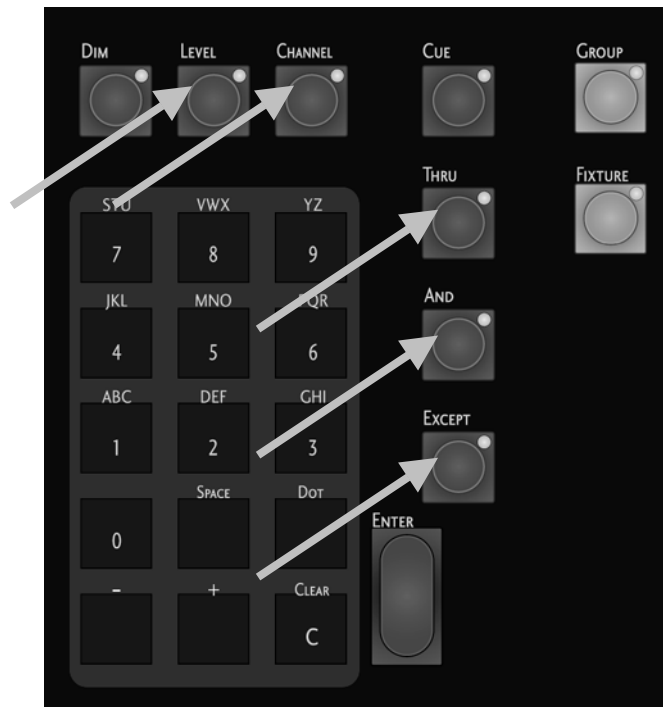
Using the Keypad

- When you use the keypad to enter a name, the first press of a letter key enters the first letter on the key. The second press of the same key changes the entry to the second letter on the key. The third press of the same key changes the entry to the third letter on the key. The fourth press of the same key changes the entry to the number of the key. The fifth press of the same key changes the entry to the first letter on the key—the same result as the first key press. If you wait more than 1.25 seconds between presses, the LP-X assumes that you have entered what you want and advances to the next square.

- When you press the **Space** key, the LP-X erases the entry in the current square, if any. Note that the **Space** key doesn't clear the current square if you've already entered something—it moves to the next square and clears its contents, if any.
- When you press the **Dot** key, the LP-X enters a decimal point in the current square. Note that the **Dot** key doesn't enter a dot in the current square if you've already entered something—it moves to the next square and enters a dot.
- In text entry situations, you use the **Plus (+)** button to move the cursor right and the **Minus (-)** button to move the cursor left. In non-text entry situations, you use the **Plus (+)** button to scroll up a list and the **Minus (-)** button to scroll down a list. Typically these buttons scroll the same list as the side wheel. However, if there are two or more lists on a screen, press the wheel that corresponds with one of the lists and then that list will respond to the buttons.
- In text entry situations, the **Clear** button is used as a delete key. It clears the current square and moves the rest of the text one space to the left. In non-text entry situations, the **Clear** button sometimes is used in combination with other buttons to accomplish specific tasks. For example, **Clear** plus an **ML Select** button will remove an instrument from a look. **Clear** plus **Enter** will clear all data from the programmer.

Conventional Channel Input

You may press the **Channel** key and specify one or a range of channels and then set their levels. You use the buttons **Level**, **Channel**, **Thru**, **And** and **Except** to do this. **Level** on some consoles is the **@** key.



Here are some sample assignments. Where a word appears in bold capital letters, it indicates that you would press the corresponding button on the board. The numbers are entered using the numeric keypad.

CHANNEL 1 LEVEL 75. With this assignment we have set channel 1 at the level 75%.

CHANNEL 1 THRU 10 LEVEL 50. With this assignment we have set channels 1 through 10 at the level 50%.

CHANNEL 1 THRU 10 EXCEPT 5. With this assignment we have set channels 1 through 10 with the exception of channel 5 at the level 100% (the default value).

CHANNEL 1 THRU 10 AND 15 LEVEL 75. With this assignment we have set channels 1 through 10 and channel 15 at the level 75%.

CHANNEL 1 THRU 10 LEVEL 0. With this assignment we have set channels 1 through 10 at level 0%, essentially taking them out of the look.

CHANNEL 1 THRU 10 AND 15 THRU 25 EXCEPT 20 EXCEPT 21 LEVEL 75. With this assignment we have set channels 1 through 10 and 15, 16, 17, 18, 19, 22, 23, 24 and 25 at the level 75%.

The screen below shows the level assignment for channels 1 through 5 at the level 75%.

```
Conventional Channel Input

Chan ## [Thru ##] [Except ##]] [And ##]

CHAN 1 THRU 5

Level 75
```

Press **Enter** to save the level assignment. Press **No/Esc** to cancel the level assignment.

Recording new scene											
01	02	03	04	05	06	07	08	09	10	11	12
75	75	75	75	75							
13	14	15	16	17	18	19	20	21	22	23	24
Select			Level						Fade		
									0:00		

Chapter One: Quick Start

This chapter is designed for those users who are experienced with moving light consoles. We give a high level overview of the LP-X and then describe those features that are unique about the board.

If you are new to moving light consoles, we recommend that you turn to "Chapter Two: Setup Essentials" beginning on page 31 and work your way through "Chapter Four: Moving Light Programming". These chapters take you through the basics of setting up the LP-X, programming conventional lights and programming moving lights. Afterwards you will be able to study the remaining chapters in any sequence to learn the more advanced techniques that most interest you.

How do I...

...put moving lights into the board?

On the LP-X24, DMX channels 1 through 100 are reserved for conventional lights by default when a new show is created. On the LP-X48, DMX channels 1 through 200 are reserved for conventional lights by default when a new show is created.

1. In **Setup** mode, press the **Instr** softkey.

LP-X24

Edit	Move	Delete	Resrve		
Instrument List					
1	#1	Cyberlight	101	Cyberlight	
2	#2	Cyberlight	121	Cyberlight	▼
3	Empty				
4	Empty				
5	Empty				
6	Empty				

LP-X48

Edit	Move	Delete	Resrve		
Instrument List					
1	#1	I Spot 150	A 201	I Spot 150	
2	#1	X Spot	A 214	X Spot	▼
3	# 2	X Spot	A 252	X Spot	
4	Empty				
5	Empty				
6	Empty				

2. Scroll to an empty slot and press the **Add** softkey.

Each slot is assigned to an **ML Select**, so you have a total of 24 or 48, depending upon your board type. For the LP-X24, there are 12 slots in the first bank and 12 slots in the second bank. For the LP-X48, there are 24 slots in the first bank and 24 slots in the second bank.

On the LP-X24, there are 24 additional slots that are "virtual", which is to say they are accessible from the software but are not accessible in the hardware. Please see "Programming Virtual Channels" beginning on page 51 for additional information.

If you prefer, you may press an **ML Select** button rather than scrolling to its slot on the screen.

3. Select an instrument from the list and press the **Add** softkey.
4. Press the **Pan** or **Tilt** softkey to invert the pan or tilt for the instrument.
5. On the LP-X48, select the desired line—A or B.
6. Press the **Save** softkey for each instrument you want to add into the board.
Pressing the **ML select** for an empty slot will also save the instrument.
7. Press the **No/Esc** button when you're done.
8. Repeat steps 2 through 7 for each instrument type that you want to add into the board.

Working in Video Mode

When you are familiar with the LP-X LCD Mode, it is very easy to learn to work in Video Mode. This section describes the differences between the two modes.

Unique Features in Video Mode

The following features are unique to Video Mode.

The ML Programmer Screen

The **ML Programmer** screen includes a group of buttons, six across and eight down. These buttons correspond to the **Instrument Select** buttons.

On the LP-X24:

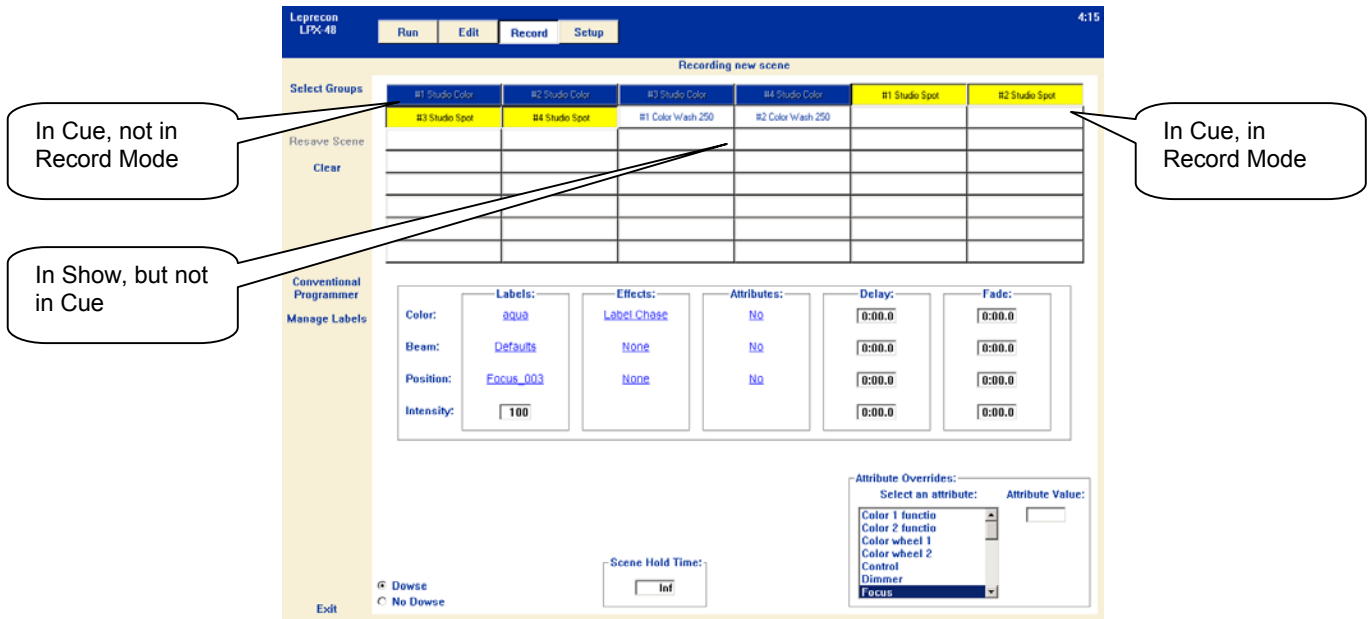
Row	Corresponding Instrument Select Buttons
1	Bank 1— Instrument Select buttons 1-6
2	Bank 1— Instrument Select buttons 7-12
3	Bank 2— Instrument Select buttons 1-6
4	Bank 2— Instrument Select buttons 7-12
5-8	Twenty-four “virtual” Instrument Selects . That is to say that there are twenty-four additional Instrument Selects accessible only through the software

On the LP-X48:

Row	Corresponding Instrument Select Buttons
1	Bank 1— Instrument Select buttons 1-6
2	Bank 1— Instrument Select buttons 7-12
3	Bank 1— Instrument Select buttons 13-18
4	Bank 1— Instrument Select buttons 19-24
5	Bank 2— Instrument Select buttons 1-6
6	Bank 2— Instrument Select buttons 7-12
7	Bank 2— Instrument Select buttons 13-18
8	Bank 2— Instrument Select buttons 19-24

Use the color of the buttons to determine the status of the instrument:

- Blue button with light blue text—in the cue but not in record mode. This corresponds with a glowing yellow light on the **Instrument Select**.
- Yellow button with blue text—in the cue and in record mode. This corresponds with a flashing yellow light on the **Instrument Select**.
- White button with light blue text—in the show but not assigned to the cue. This corresponds with an unlit **Instrument Select**.



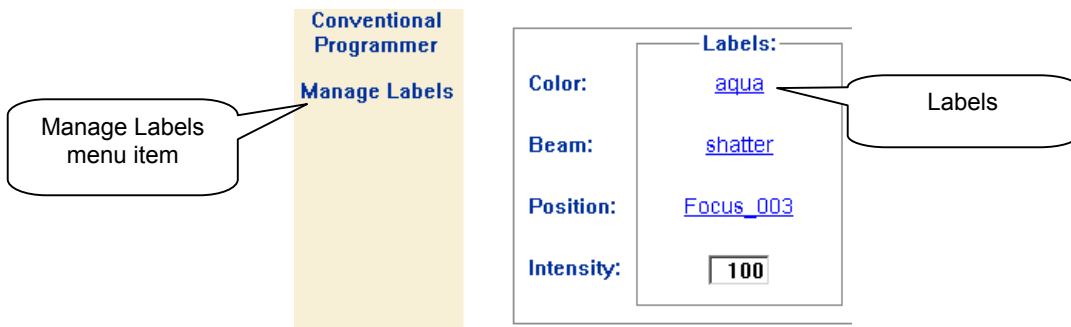
Toggle back and forth between *In Cue, Not in Record Mode* and *In Cue, In Record Mode* by clicking the button.

Remove a moving light from a cue by clearing it. See “Clearing Settings” on page 30 for details.

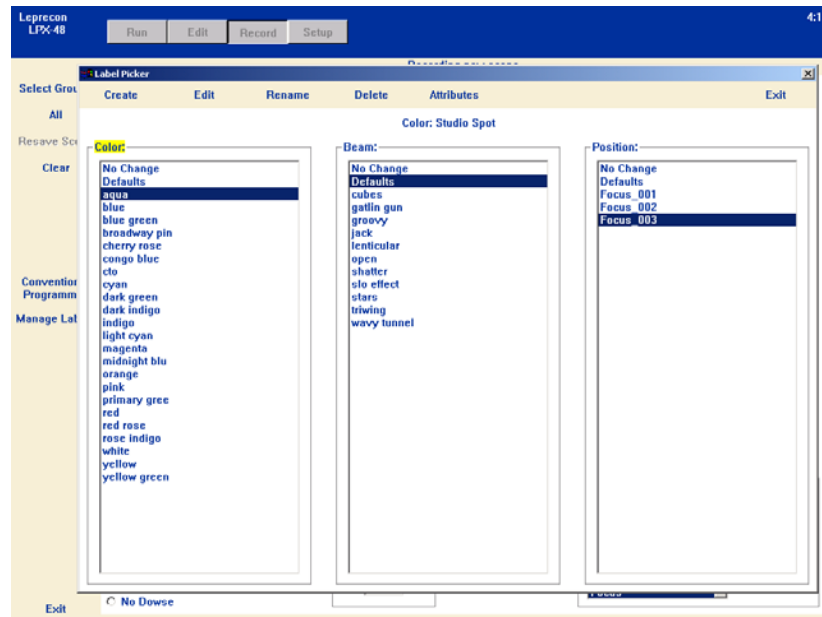
Manage Labels/Label Picker

In Video Mode, the ML Programmer makes it significantly more convenient to select, create, edit, rename and delete labels.

When you click the **Manage Labels** menu item or click the color, beam or position label...



...the **Label Picker** appears.

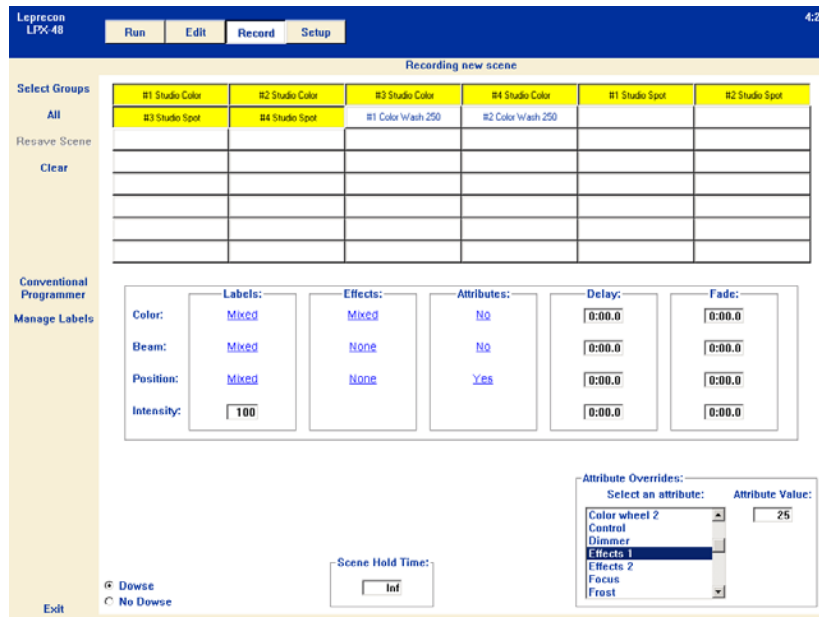


- (1) To select labels, click one each for color, beam and position. Then click **Exit**.
- (2) To modify a specific label, click the label and then click the appropriate menu item—**Create**, **Edit**, **Rename**, **Delete** or **Attributes**.

On-Screen Attribute Display

In Video Mode, you have access to attributes from the main screen of the **ML Programmer**.

The **Attribute Overrides** section of the screen displays all attributes for all selected instruments. In other words, with eight instruments selected, even if only four of them have the attribute *Effects 1*, the attribute appears in the list.



To override an attribute:

- (1) Select the instruments to which the attribute override should apply.
- (2) Select the attribute you want to override in the **Select and attribute** list box.
- (3) Position the cursor in the **Attribute Value** box. Type the desired value or use the **Up Arrow** and **Down Arrow** to increase and decrease the value.

Timing is Readily Accessible

Color, beam, position and intensity delay and fade times are now accessible from **the ML Programmer** screen as is the overall scene hold time.

Live Override Mode

Live Override Mode permits you to make changes to lights that are in a scene as the scene is displayed or to introduce a light into a scene.

Override Mode works in conjunction with the **Programmer Fader**. There are two schools of thought on how to override a scene. The first school of thought is to set up the override with the **Programmer Fader** at the zero level and then raise the fader to introduce the override into the scene. The second school of thought is to work with the **Programmer Fader** at the 100% level and introduce overrides immediately as they are made.

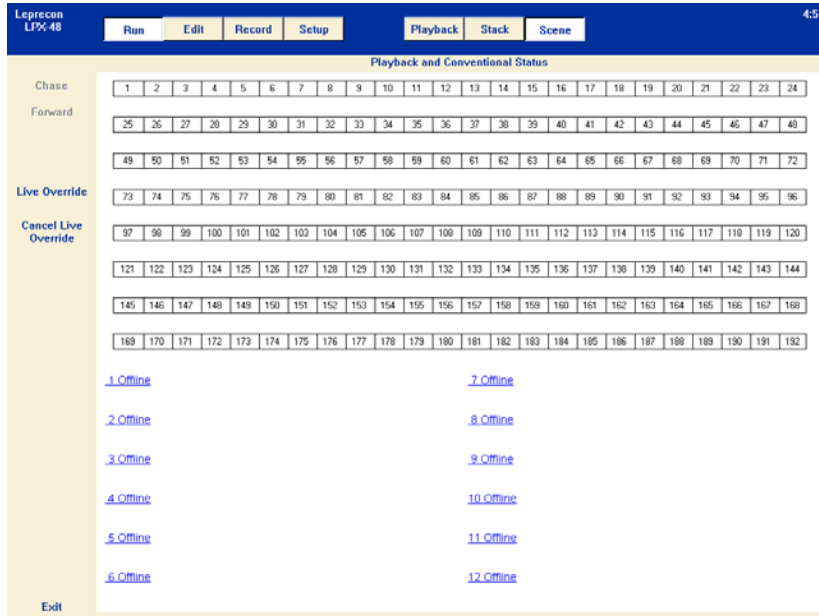
One important thing to understand about Live Override Mode is how it handles intensity. If you have a conventional or moving light in a scene, you cannot make its intensity lower than its current value. You may only increase its intensity. This is because of the highest-takes-precedence nature of intensity values in the LP-X.

Other important notes about Live Override Mode:

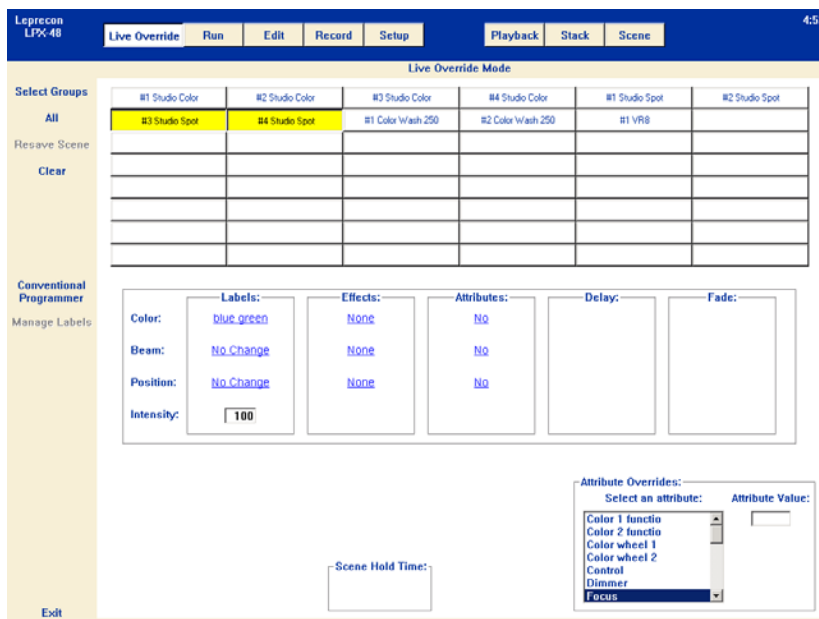
- The **Programmer** starts out in a cleared state with nothing selected.

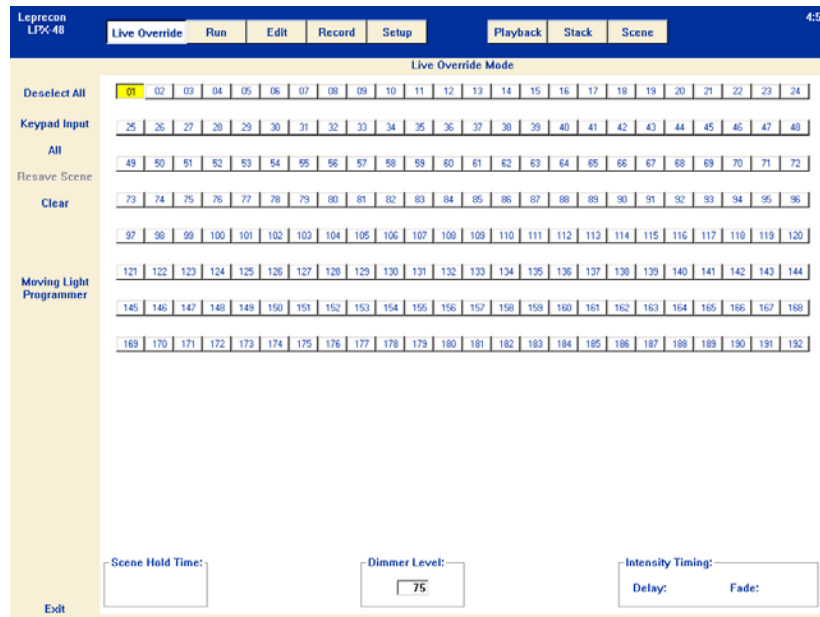
- When a light is selected, it starts with all labels set to *No Change* rather than the current values for the lights or the default values for the light. This enables you to change only the properties you want.
- Timing and *No Dowse* are not available.

(1) In Run Playback mode, click or press the **Live Override** menu item.



The ML or Conventional Programmer appears, depending upon which was the last selected. You may toggle between these two programmers using the **Conventional Programmer** and **Moving Light Programmer** menu items.





The **Run** mode button flashes when you are in live override mode.

- (2) Click or press the lights you want to override.
- (3) Adjust the properties of the fixture or fixtures that you want to override.

If you make adjustments with the **Programmer Fader** at 10% or higher, the changes you make will be visible immediately. Otherwise, you must raise the **Programmer Fader** to the desired level when you have adjust the fixtures as desired.

- (4) When your have completed all overrides and want to step out of Live Override mode, click or press the **Run** button and then the **Cancel Live Override** menu item.

Live Override will also be cancelled if you leave **Run** mode.

Console and Keyboard Buttons

Console Buttons that are Disabled in Video Mode:

- Only softkey 1 (Switch to LCD Mode) is enabled in Video Mode. All other softkeys are disabled.
- The **Fixture** button does not work in Video Mode. It has a point-and-click replacement in video mode.

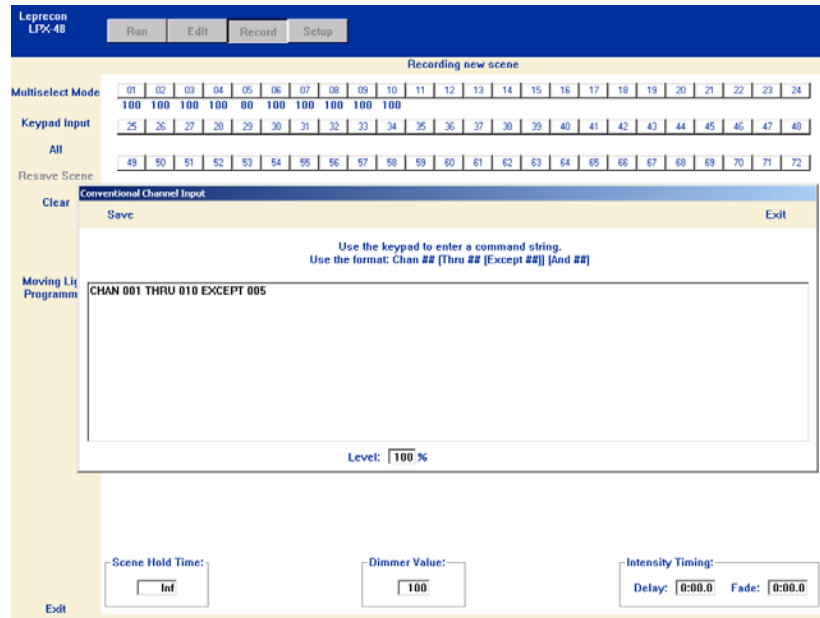
Items that are Still Controlled Only from the Console:

Some functions are still controlled only from the console. They do not have a Video Mode counterpart.

- Bump and Filter buttons
- Playback and Stack Select buttons

Console Buttons that Work in Both Modes:

- **Channel, Thru, Except, And, Level** and **Dim** buttons all work the same. The dialog box that appears when the buttons are pressed is very similar to the on-board display.



- Use the **Clear** key on the console to clear instrument selections during programming.
- **Yes** and **No/Esc** work in both modes.
- The four encoders (wheels below and to the right of the LCD) are enabled only in some instances. For example, they scroll the label lists in the **Label Picker** screen.

Keyboard Tips:

The keyboard provides a few additional shortcuts for use in Video Mode.

- Use the **Up Arrow** and **Down Arrow** keys to move through list boxes or scroll numeric values 1 item/value at a time
- Use the **Page Up** and **Page Down** keys to move through list boxes or scroll numeric values 10 items/values at a time.
- Use the **Escape** key to close and exit a window.

Typing Text or Numbers:

When you type text or numbers in Video Mode, the behavior is significantly different from the Windows or Macintosh style that most users are familiar with. Some differences:

- **Arrow** keys work in number boxes, as well as **Page Up** and **Page Down**.
- In text boxes, you may use the **Backspace**, **Delete**, **Home**, **End** and **Arrow** keys. In number boxes, you may not use any of these keys except **Delete**.

- In text boxes, typing moves text. In other words, if you position the cursor in the middle of a word and begin typing, the letters to the right of the cursor will shift.
- In number boxes, typing replaces text.
- If your mouse has a scroll wheel, when a number box is active you can scroll the wheel to increase or decrease the value in the active number box.

Clearing Settings

Many screens include a **Clear** button on one of the menus. When you click the **Clear** button, the cursor changes from a pointer to an eraser. The console is now in **Clear Mode**.

The results of clicking on an item when the console is in **Clear Mode** vary. For example:

- Clicking an on-screen **Instrument Select** button removes the light from the cue and erases its settings.
- Clicking on a label changes it from its current setting, if any, to **No Change**.
- In **Setup** mode on the **Group** screen, clicking on a group deletes the group.

To take the console out of **Clear Mode**, click the **Clear** button a second time.

Note: You may use the **Clear** key on the console's keypad instead of the video **Clear** button. It works like a Shift key rather than a toggle; hold down the **Clear** button on the console and then use the mouse pointer to point at the item that you want to clear and click it.

Playback Titles

In video mode, you may assign your own titles to each page and playback.

- (1) In **Edit Playback** mode, select a playback scenelist.
- (2) Click or press the **Name** button.

The **Name Playback** dialog box appears.



- (3) Enter a name for the playback scenelist and then click or press **Ok**.

The name now appears in the playback scenelist list.

Chapter Two: Setup Essentials

Setup Mode provides the following features and functionality. This mode is always accessible by pressing the **Setup** button in the **Mode Controller** section of the console.

Menu	Function
Instr	Use to add moving light instruments into a show.
Device	Use to create a new device—one not already included in the LP-X's fixture library.
Patch	Assign dimmers to board channels.
Groups	Create groups of instruments for easy editing.
Default	Use to set timing and show defaults.
CtrlF	Execute control features such as turning lamps on and off.
Show	Use to create a new show and perform all show maintenance such as backup and restore.
Update	Use to load program and library updates.
Erase	Use to erase patch, stack or playbacks.
DMX	View DMX line assignments and reserve DMX channels.
Lock	Lock a show, preventing recording.
Misc	Used for a variety of miscellaneous features such as setting MIDI In and MIDI Out channels and setting the time.

The Instrument Menu

The **Instrument** menu provides functionality to add, edit and delete moving lights within the system.

DMX Line Assignment

Before controlling instruments with the LP-X, you must configure the system with the correct numbers and types of instruments. DMX line assignment locates a moving light instrument at a specific DMX address.

The LP-X24 drives one DMX line with 512 channels. By default, the first 100 DMX channels are reserved for conventional lights—a setting that can be changed if desired.

The LP-X48 drives two DMX lines with 512 channels each. By default, the first 200 DMX channels on Line A are reserved for conventional lights—a setting that can be changed if desired.

To Add a Moving Light Instrument into the System

This procedure will determine the DMX assignments for moving lights and allow you to give names to the instruments for easier reference during programming.

1. From the **Setup Mode** screen, press the **Inst** softkey.

The **Instrument List** screen appears.

Add		Resrve	
Instrument List			
1	Empty		
2	Empty		▼
3	Empty		
4	Empty		
5	Empty		
6	Empty		

2. Press the **Add** softkey.

Use the side wheel to scroll to an empty slot if the **Add** softkey is not visible.

The instrument list appears. This list displays all instruments that are included in the LP-X library. The left column displays manufacturers. The right column displays instruments.

Add			
All		1220	CMYR
Abstract		1220	RPR
American DJ		1220	XR
Clay Paky		218	
Coemar		218	MkII
FAL		518	

3. Use the left wheel to select a manufacturer.
4. Use the right or side wheel to select an instrument.
5. Press the **Add** softkey.

There may be a slight delay as the LP-X opens the library.

Save	Pan	Tilt			
Add New Instrument					
#1 Cyberlight			Cyberlight		
Slot			DMX		
1			101		

The LP-X provides a default name for the instrument. You may use the keypad to change the name.

The LP-X automatically assigns the instrument to an unassigned slot. Each slot corresponds to a **ML Select** button in the **Manual Scene** section of the console.

On the LP-X24, Slots 1 through 12 correspond to **ML Select** buttons 1 through 12 in bank 1. Slots 13 through 24 correspond to **ML Select** buttons 1 through 12 in bank 2. Slots 25 through 48 do not correspond to any **ML Select** buttons. They are "virtual" slots, meaning that they exist in the computer's memory but do not have a corresponding button on the hardware. Slots 25 through 48 are programmable through the user interface, but not through the use of **ML Select** buttons.

On the LP-X48, Slots 1 through 24 correspond to **ML Select** buttons 1 through 24 in bank 1. Slots 25 through 48 correspond to **ML Select** buttons 1 through 24 in bank 2. Slots 49 through 96 do not correspond to any **ML Select** buttons. They are "virtual" slots, meaning that they exist in the computer's memory but do not have a corresponding button on the hardware. Slots 49 through 96 are programmable through the user interface, but not through the use of **ML Select** buttons.

Use the left wheel to change the slot to which the instrument is assigned.

The LP-X automatically assigns the instrument to the first available DMX channel. Use the right wheel to change the DMX start address.

The LP-X48 automatically assigns the instrument to Line A, if it can accommodate the fixture. Use the right wheel to change the line assignment.

6. You can invert the pan or tilt for the instrument by pressing the **Pan** or **Tilt** softkey. Pressing either key a second time toggles the setting off.

Save	Inv Pan	InvTlt		
Add New Instrument				
#1 Cyberlight	Cyberlight			
Slot	DMX			
1	101			

Inverting the pan or tilt switches the orientation of the pan or tilt for the light. For example, let us say that a DMX value of zero for the pan typically moves the light all the way to the right and a DMX value of 255 moves the light all the way to the left. Inverting the pan changes a value of zero to all the way left and a value of 255 to all the way right.

7. Press the **Save** softkey to save your settings.

The LP-X offers the opportunity to add another of the same instrument into the system. It automatically sets the slot and DMX values to the next available.

Save	Pan	Tilt		
Add New Instrument				
#2 Cyberlight	Cyberlight			
Slot	DMX			
2	121			

8. Modify the settings and press the **Save** softkey to add another of the same type of fixture. Or press **No/Esc** to return to the Manufacturer/Instrument screen and **No/Esc** a second time to return to the **Instrument List**.

Edit	Move	Delete	Resrve		
Instrument List					
1	#1 Cyberlight		101 Cyberlight		
2	#2 Cyberlight		121 Cyberlight		▼
3	Empty				
4	Empty				
5	Empty				
6	Empty				

- To add instruments of a different type, scroll to an empty slot, press **Add** and repeat this procedure.

You may also press an **ML Select** button to jump to a specific slot. The **ML Select** button LEDs are lit for slots that are already assigned and unlit for empty ones.

Note: During this procedure, you may also press a **ML Select** button to save DMX assignment settings to a specific slot. Pressing the **ML Select** for an empty slot is the equivalent of scrolling to the slot and pressing the **Save** softkey at Step 7—but much faster. The **ML Select** LEDs will be lit for slots that are full and unlit for available slots.

To Edit a Moving Light Instrument

Use this procedure if you want to change the name or DMX assignment for an instrument that you have already added into the system.

- From the **Setup Mode** screen, press the **Inst** softkey.

The **Instrument List** screen appears.

- Using the side wheel, scroll to select a moving light instrument for editing or press the **ML Select** button for the slot.

Edit	Move	Delete	Resrve		
Instrument List					
1	#1 Cyberlight		101 Cyberlight		
2	#2 Cyberlight		121 Cyberlight		▼
3	Empty				
4	Empty				
5	Empty				
6	Empty				

- Press the **Edit** softkey.

This screen looks similar to the screen you see after you first add a moving light instrument into the system.

Save	Pan	Tilt		
Edit Instrument				
#1 Cyberlight		Cyberlight		
Slot		DMX		
1		101		

4. Change the instrument name, DMX start address, or, on the LP-X48, DMX Line as desired.

The slot assignment cannot be changed from this screen. Use the procedure described in the section "**Error! Reference source not found.**" beginning on page **Error! Bookmark not defined.** to change the slot assignment.

5. Invert the pan or tilt as desired.
6. When you are done, press the **Save** softkey.

To Reserve and Un-reserve DMX Channels

By default, the LP-X reserves DMX channels 1 through 100 (LP-X24) or channels 1 through 200 (LP-X48) for conventional lights. You may prefer to reserve more, fewer or different channels for conventional lights. Use this procedure to make such changes.

1. From the **Setup Mode** screen, press the **Inst** softkey.

The **Instrument List** screen appears.

Note that you can display the same screen when you press the **DMX** softkey from the **Setup Mode** screen and then the **Resrve** softkey.

2. Press the **Resrve** softkey.

Resrve	Delete				
001 - 100 <100> Default Reserved					
Space			DMX		
1			141		

- Use the left wheel to specify the number of DMX channels to reserve.
- Use the center wheel to specify the start address for the reserved channels.
- On the LP-X48, use the right wheel to specify the DMX line for which the channels will be reserved.
- Press the **Resrve** softkey.

Resrve	Delete				
001 - 100 <100> Default Reserved					
141 - 141 <01> Reserved					
Space			DMX		
1			142		

- To un-reserve DMX channels, use the side wheel to select the channel(s) and then press the **Delete** softkey.

Dimmer Patch

Dimmer Patch is the system used to interconnect conventional lights to board channels. The LP-X allows you to assign conventional lights to board channels using software controls. Up to five custom patches plus the standard 1:1 default patch are available in the board.

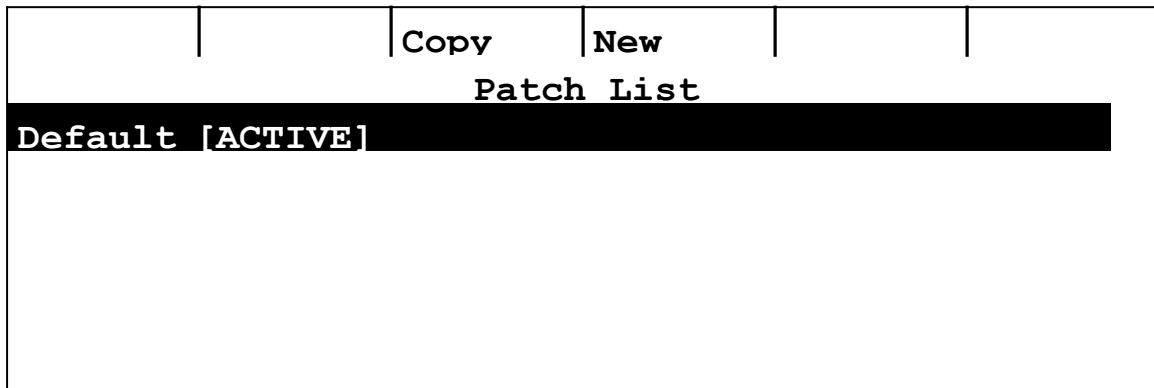
The most common use of Dimmer Patch is to connect several conventional light channels to a single board channel. Another common use is to allow the operator to build a logical layout of the dimmers on the control board regardless of the dimmer circuit that is used. For example, all lighting from the left side of the stage might be

assigned to board control channels 1 through 6, even if they were physically wired to dimmer circuits 101 through 106.

To Create a New Dimmer Patch

1. From the **Setup Mode** screen, press the **Patch** softkey.

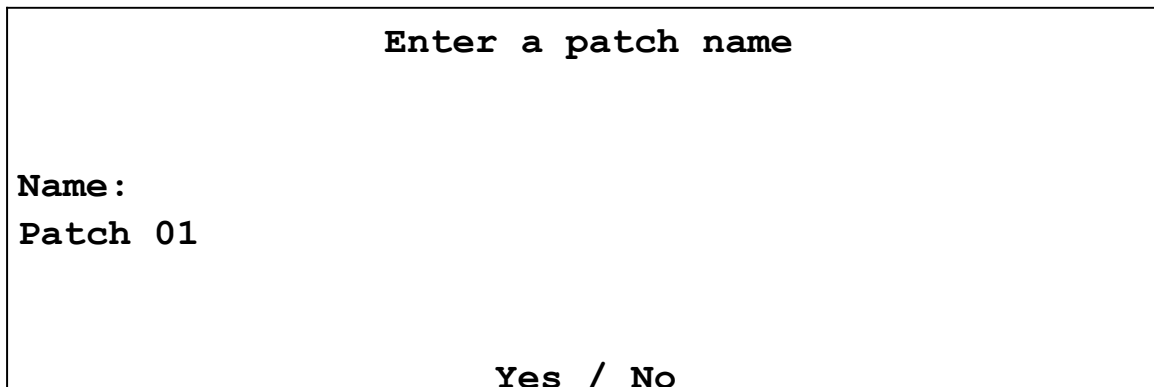
The **Patch List** screen appears.



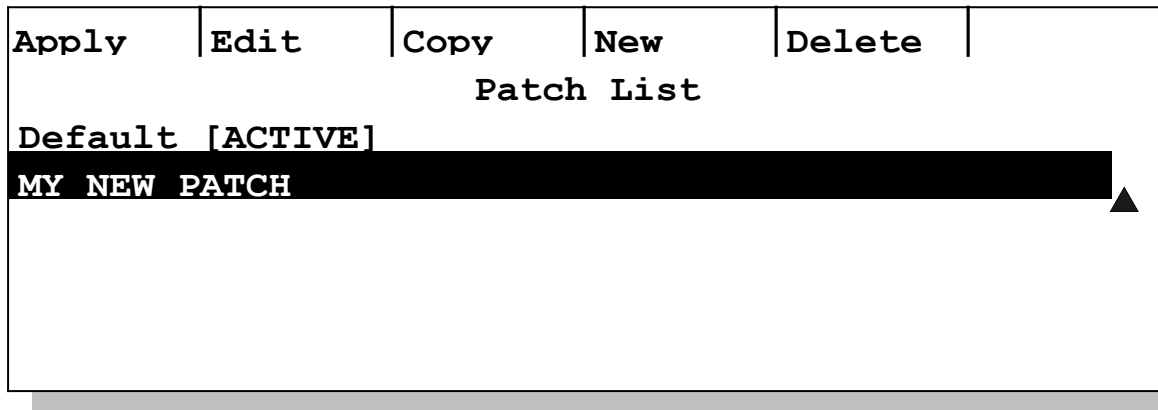
The **Default** patch is 1:1 with channels 1 through N set to 100% intensity.

The first N channels are mapped, where N is the number of hardware and "virtual" faders—currently 96 (LP-X24) or 192 (LP-X48).

2. Press the **New** softkey.



3. Using the keypad, enter a name for the patch.
4. Press **Yes** to proceed or **No/Esc** to cancel.



The LP-X displays the **Patch List** screen. Note that there are additional softkeys for activating, editing and deleting your custom patch.

Show Maintenance

Transferring a Show from an LP-X48 to an LP-X24

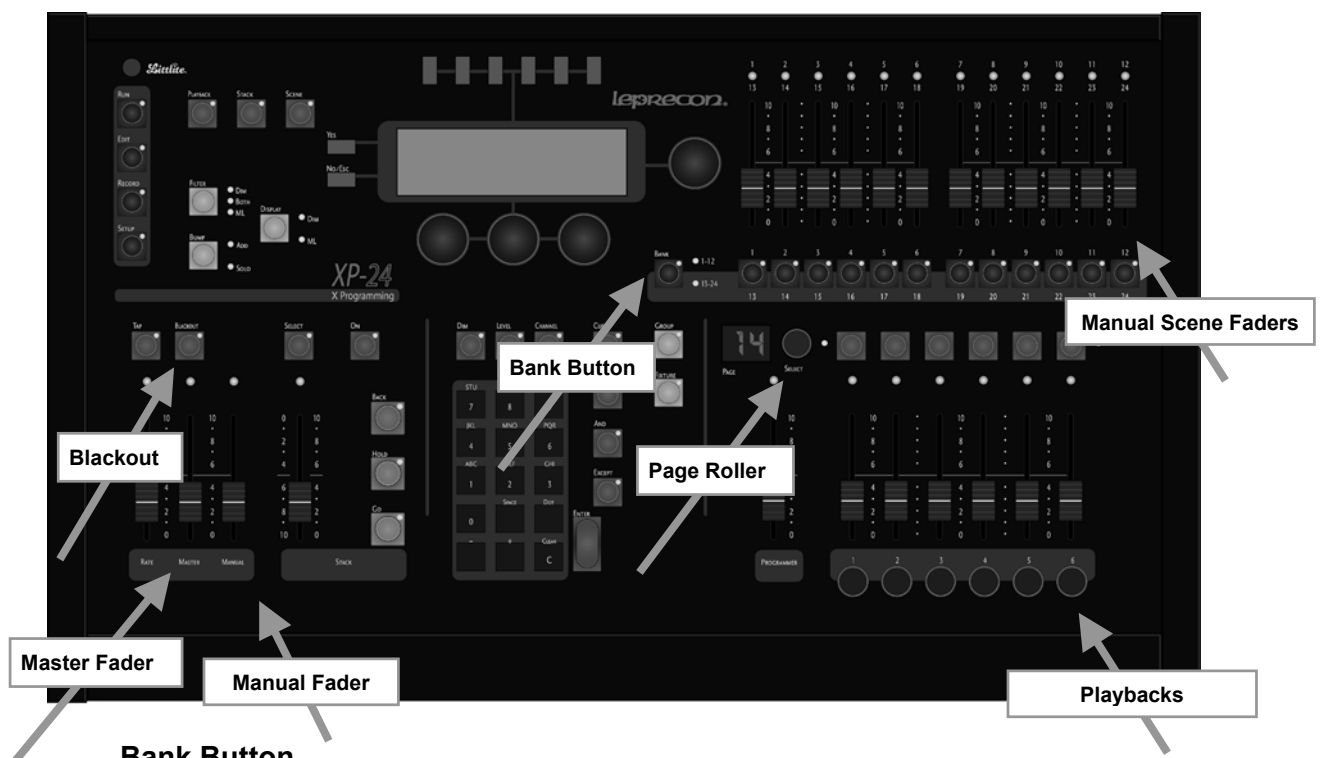
There are very few issues that you will have to address if you need to transfer a show from an LP-X48 to an LP-X24.

The LP-X24 will not delete any information. It ignores information above channel 96 and on DMX Line B.

If you want to, you may re-patch conventional lights and re-assign moving lights to slots recognized by the LP-X24.

Chapter Three: Conventional Light Programming

The following controls are the ones you will use when you operate the LP-X as a conventional light console—that is, to operate non-moving light fixtures with intensity only.



Bank Button

The LP-X24 provides twelve faders in the *Manual Scene* section of the board. The **Bank** button effectively doubles the number of faders by permitting you to switch between controlling faders 1 through 12 and faders 13 through 24.

The LP-X48 provides twenty-four faders in the *Manual Scene* section of the board. The **Bank** button effectively doubles the number of faders by permitting you to switch between controlling faders 1 through 24 and faders 25 through 48.

When you switch between banks, you may have to match and grab levels previously set in order to control the fader's level again. For information about match and grab, please see "Conventions Used in this Manual" beginning on page 12.

Page Roller

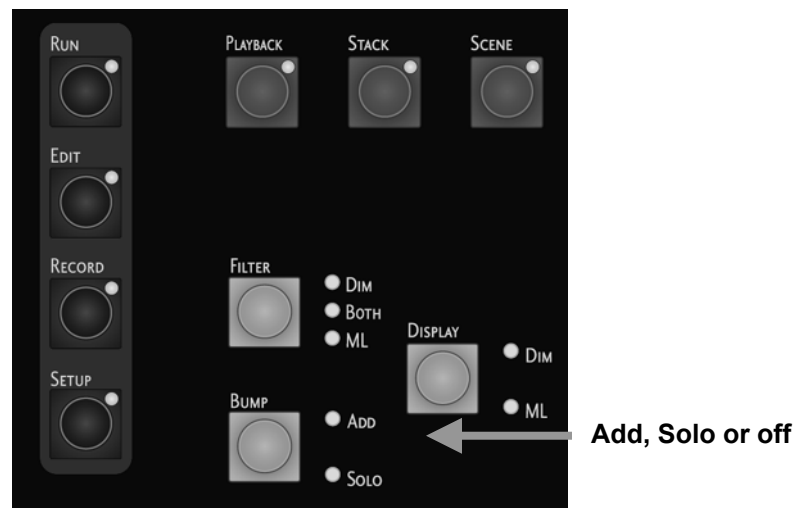
Although there are only six physical playbacks on the LP-X24 and twelve on the LP-X48, the **Page Roller** selects any of twenty pages that will be active for a playback. This

effectively increases the number of playbacks from six to one hundred twenty or from twelve to two hundred forty. To switch between pages, turn the **Page Roller** until the desired page number appears on the **Page Display**.

During playback, when the **Page Roller** is moved to a new page, only the playbacks that are at zero level will be loaded with new looks. Any fader that is not at zero will be in “page hold” and will retain its current assignment until the fader is returned to zero. As soon as the fader is moved to zero, the playback for the currently selected page is automatically loaded.

Solo and Add “Bump” Buttons

In **Run** mode, the buttons beneath the six **Playbacks** and the twelve **Manual Scene Faders** (LP-X24) or twelve **Playbacks** and twenty-four **Manual Scene Faders** function as **Solo** or **Add** buttons—or are turned off—depending upon the **Bump** mode set for the board.



Pressing and holding an **Add** button has the same effect as bringing up the fader. The selected scene is added to the current look on stage. When you release the button, the scene is removed from the look.

Pressing and holding a **Solo** button temporarily blacks out the rest of the console and leaves only the selected scene up. Releasing the button restores normal operation.

Solo and **Add** buttons operate independently of the **Master** fader level.

Recording and Playing Back Conventional Light Looks

Before you begin, you must decide whether or not to use the default patch or to create a custom patch of conventional lights to manual scene faders. Please see the section “Dimmer Patch” beginning on page 37 for more information.

To Record Conventional Light Looks

1. Start by ensuring that all buttons and faders are in the proper positions.

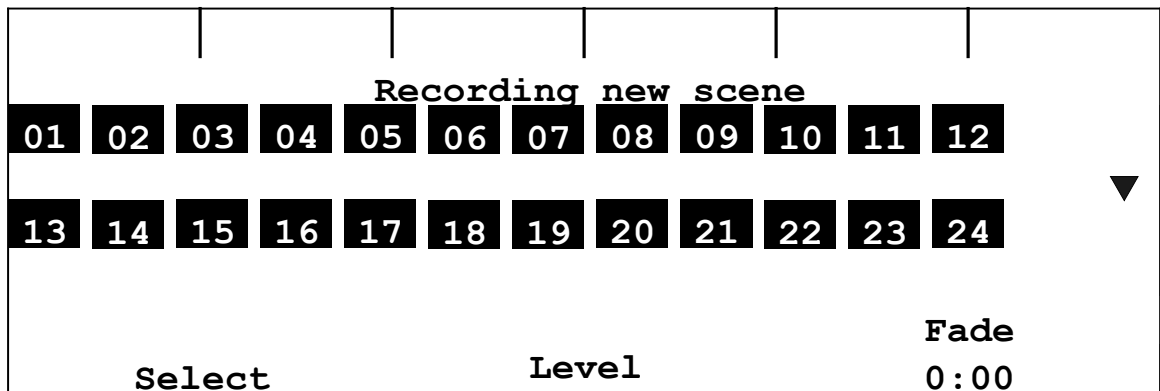
Button/Fader	Setting
Modes	Record and Scene
Display	DIM
Filter	DIM or BOTH
Bump	Any setting
Master Fader	Up (typically full on)
Manual Fader	Up (typically full on)
Programmer Fader	Up (typically full on)

- Raise the manual scene faders for the lights in the first look.

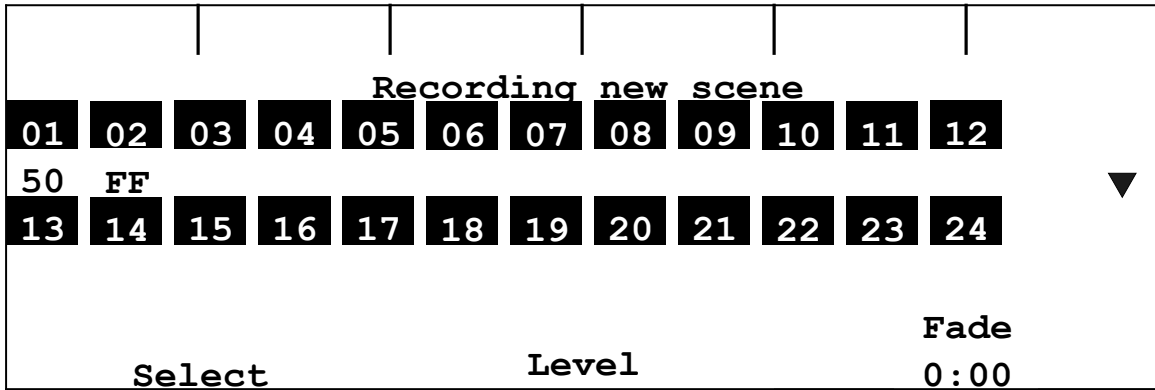
Start with the **Bank** button set to the first bank. Raise the faders for the lights you want to include. Switch the **Bank** button to the second bank. Raise the faders for the lights you want to include. Note: If you raised Manual Scene Fader 1, for example, and now want to include the lights on Manual Scene Fader 13 (LP-X24) or 25 (LP-X48), you will need to bring the fader down to the zero level and then raise it. This is called *match and grab*.

The LP-X display shows you the manual scene faders and their levels.

All faders at zero:



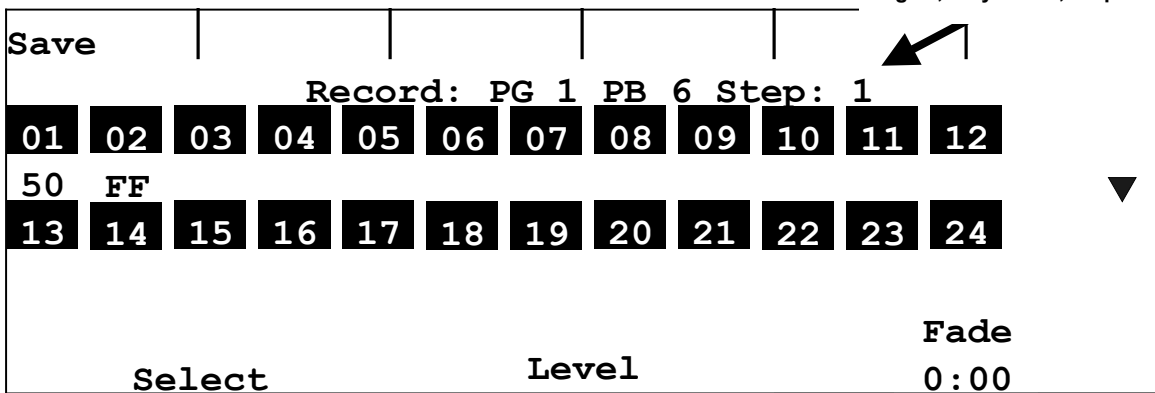
Manual Scene Fader 1 set to 50% and Manual Scene Fader 2 set to 100% (FF).



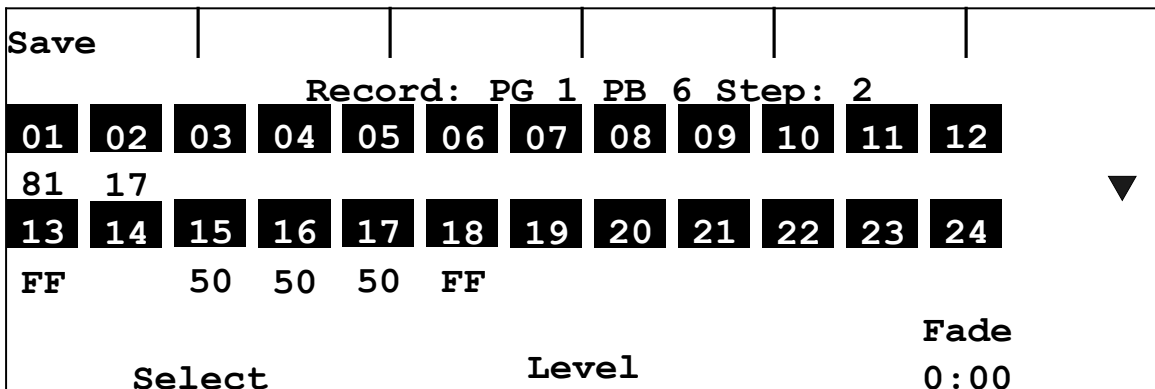
3. Using the **Page Roller** select the desired page.
4. To save the first look, press the **Select** button for the desired playback.

The LP-X display shows the page, playback and step that you just recorded

Page 1, Playback 6, Step 1



5. To add another look to the playback, use the Manual Scene faders to create the look and then press the **Select** button for the same page and playback.



6. Repeat Step 5 until you have recorded all desired looks.

Manual Scene Fader Bump Buttons

The twelve or twenty-four **Manual Scene Faders** have **Bump** buttons. The function of the **Bump** buttons is determined by the setting on the **Bump Master** in the *Mode Controller Section*.

When the **Bump Master** is set to **Add**, pressing a **Bump** button automatically adds the light into the look at 100%.

When the **Bump Master** is set to **Solo**, pressing a **Bump** button automatically kills all other lights and solos the light at 100%.

When the **Bump Master** is off, pressing a **Bump** button has no effect.

Chapter Four: Moving Light Programming

In this chapter we introduce the subject of moving light programming and provide the key information you will need to use the LP-X as a moving light programmer.

You will find additional information on advanced or specialized moving light programming techniques in subsequent chapters.

Selecting Moving Lights for Programming using the Select Instruments Screen

You use this selection technique when you are programming moving lights that have been assigned to virtual slots—that is, moving lights that have been assigned to slots that are higher than number 24 (LP-X24) or 48 (LP-X48).

1. In **Record** mode with the display set to **ML**, press the **Fixture** button.

The LP-X displays the **Select Instruments** screen. Instruments that are already selected are highlighted.

Select Instruments		Clear
##	[THRU ##] (+ -)	
2	#1 Studio Spot	Selected
3	#1 Studio Color	Deselected
4	#1 Technobeam	Out of Cue
5	#2 Technobeam	Out of Cue
6	#3 Technobeam	Out of Cue

2. To select one instrument, enter its number on the numeric keypad and then press the **Plus (+)** key on the keypad.
3. To deselect one instrument, enter its number on the numeric keypad and then press the **Minus (-)** key on the keypad.
4. To select a range of instruments, enter the lowest number in the range on the numeric keypad, press the **Thru** key, enter the highest number in the range, and then press the **Plus (+)** key on the keypad.

Select Instruments		Clear
## [THRU ##] (+ -)		
4 THRU 5		
2	#1 Studio Spot	Selected
3	#1 Studio Color	Deselected
4	#1 Technobeam	Out of Cue
5	#2 Technobeam	Out of Cue
6	#3 Technobeam	Out of Cue

Select Instruments		Clear
## [THRU ##] (+ -)		
2	#1 Studio Spot	Selected
3	#1 Studio Color	Deselected
4	#1 Technobeam	Selected
5	#2 Technobeam	Selected
6	#3 Technobeam	Out of Cue

- To deselect a range of instruments, enter the lowest number in the range on the numeric keypad, press the **Thru** key, enter the highest number in the range, and then press the **Minus (-)** key on the keypad.
- When you are done selecting and deselecting instruments, press the **Yes** key or the **Fixture** button to confirm the operation. Press **No/Esc** to cancel the operation.

Taking Moving Light Instruments out of a Scene using the Select Instruments Screen

You use this clearing technique when you are programming moving lights that have been assigned to virtual slots—that is, moving lights that have been assigned to slots that are higher than number 24 (LP-X24) or 48 (LP-X48).

- In **Record** mode with the display set to **ML**, press the **Fixture** button.
The LP-X displays the **Select Instruments** screen.

Select Instruments		Clear
## [THRU ##] (+ -)		
2	#1 Studio Spot	Selected
3	#1 Studio Color	Deselected
4	#1 Technobeam	Out of Cue
5	#2 Technobeam	Out of Cue
6	#3 Technobeam	Out of Cue

2. Press the **Clear** softkey.

The LP-X displays the **Clear Instruments** screen.

Clear Instruments		
## [THRU ##] Enter		
2	#1 Studio Spot	In Cue
3	#1 Studio Color	In Cue
4	#1 Technobeam	Out of Cue
5	#2 Technobeam	Out of Cue
6	#3 Technobeam	Out of Cue

3. To clear one instrument, enter its number on the numeric keypad and then press the **Enter** key on the keypad.
4. To clear a range of instruments, enter the lowest number in the range on the numeric keypad, press the **Thru** key, enter the highest number in the range, and then press the **Enter** key on the keypad.

Recording Moving Light Looks

You record a look or a series of looks—a *scene list*—to a playback. On the LP-X24, there are six playbacks and twenty pages for each, so you may record up to 120 scene lists. On the LP-X48, there are twelve playbacks with twenty pages for each, so you may record up to 240 scene lists.

Overriding Moving Light Looks at Run Time

NOTE: In **Video Mode**, this has been replaced with **Live Override Mode** which operates somewhat differently. Please refer to information on **Live Override Mode** beginning on page 26 for details.

Chapter Five: Advanced Programming and Editing Techniques

Programming Virtual Channels

The LP-X24 has twenty-four manual faders—twelve in Bank 1 and twelve in Bank 2.

The LP-X48 has forty-eight manual faders—twenty-four in Bank 1 and twenty-four in Bank 2.

In certain cases it will be desirable to have extra control channels. The LP-X24 has seventy-two "virtual" channels—that is, channels that exist in the board's software but do not have corresponding faders. The LP-X48 has 144 "virtual" channels.

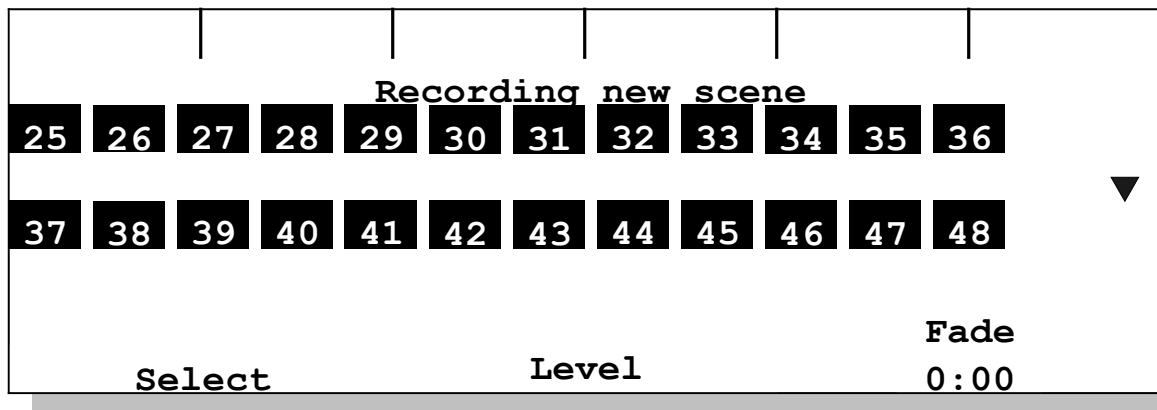
You can see and program these channels only in the display section of the LP-X.

To Program Virtual Channels

1. Start by ensuring that all buttons and faders are in the proper positions.

Button/Fader	Setting
Modes	Record and Scene
Display	DIM
Filter	DIM or BOTH
Bump	Any setting
Master Fader	Up (typically full on)
Manual Fader	Up (typically full on)
Programmer Fader	Up (typically full on)

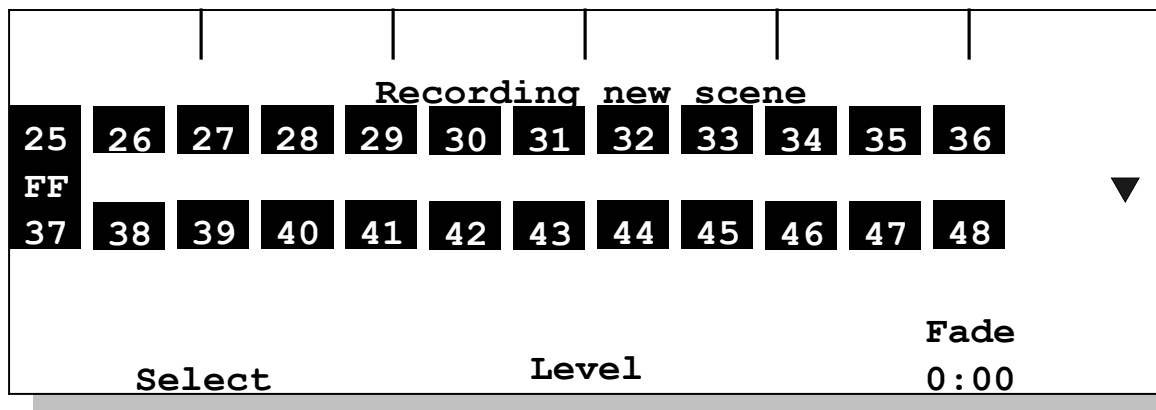
2. Using the side wheel, display channels with numbers higher than 24 (LP-X24) or 48 (LP-X48).



3. Set levels for the virtual channels.

You may use the left wheel to select a channel and then use the center wheel to set a level for it. You may also use the **Channel** button on the board. Please see "Conventional Channel Input" beginning on page 17 for complete details.

These techniques will also work for setting levels for channels that have hardware faders, too.



4. Save your settings.

Press the **Select** button for a playback to record a new look. Or press the **Save** softkey to update the current look.

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