



# Eos Family Console Programming

## Level 1: Essentials

### Workbook

V3.0 Rev A

[www.etconnect.com/education](http://www.etconnect.com/education)

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# Purpose of the Class

This class will provide an overview of the console and programming for conventional fixtures as well as movers and LED fixtures. If new to the console, then this class is perfect. Whether transitioning to an Eos family console or a new console owner, this class will teach the basics to get the programmer up and running with this versatile console.

## LEARNING OBJECTIVES:

After completing the class, one should be able to:

- Patch conventional and multi-parameter fixtures
- Work with channels in Live mode
- Work with basic display navigation
- Record, select, and delete Groups
- Record to, load, and clear Submasters
- Record, play, and delete Cues
- Understand Tracking versus Cue Only as well as Block and Assert
- Control non-intensity parameters at a basic level
- Apply additional cue features such as Delay, Auto-Follow and Loop
- Use Park efficiently
- Evaluate and make changes in Setup
- Create simple step-based Effects

## WORKBOOK SYNTAX ANNOTATION

- **Bold** Syntax and Browser menus
- **[Brackets]** Face panel buttons
- **{Braces}** Softkeys or buttons on touchscreen
- **<Angle brackets>** Optional keys or command line text
- **[Next] & [Last]** Keys to be pressed & held simultaneously
- **«Direct Select»** Direct Select button press
- **[MS Object]** Object on a Magic Sheet
- **Play Icon** [Link to video on ETC's YouTube Channel – ETCVideoLibrary](#)



## HELP

Press and hold **[Help]** and press any key to see:

- the name of the key
  - a description of what the key enables you to do
  - syntax examples for using the key (if applicable)
- As with hard keys, the "press and hold [Help]" action can be also used with softkeys and clickable buttons*

## THE MANUAL

The manual is available on the console, Tab #100.

**Click on Add-a-Tab (the {+} sign) , select Manual**

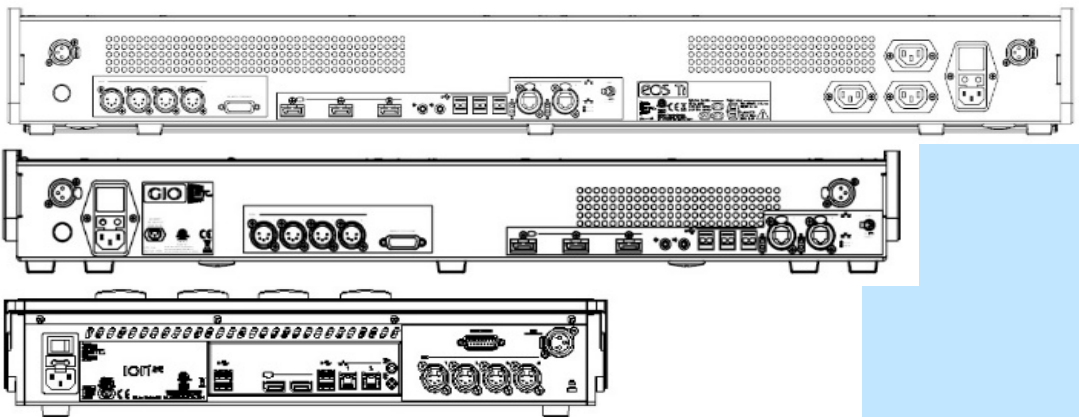
**Hold [Tab] & press [100]**

Please note that it is not available on Windows XP devices or on Macs, but is available as a download from the web site.

# Hardware Overview

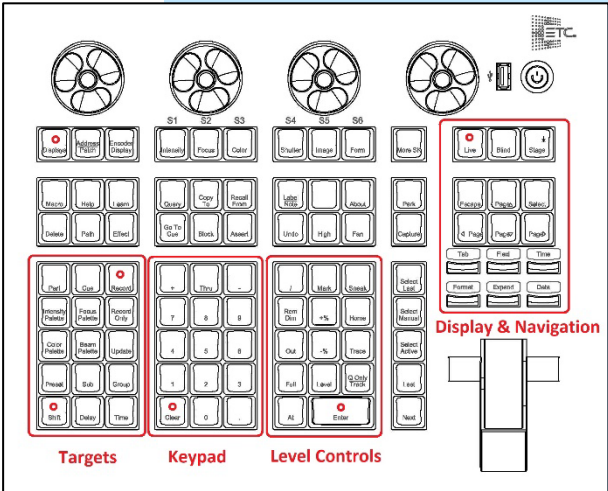
## EXPLORING THE BACK OF THE CONSOLES

- Hard Power Switch with IEC Receptacle – power cable included
- Motherboard – Windows7 embedded, support for multi-point touchscreens
- Video connections are Display Port connections. (2 or 3)
- USB ports (4 or 6)
- Two individually configurable Ethernet ports
- Four DMX/RDM ports
- Remote trigger/ contact inputs via D-Sub connector
- 3-pin XLRs for desk work lights, dimmer control through software



## EXPLORING THE FRONT OF THE CONSOLE

- Five, ten, or twenty 100mm faders, configurable and pageable
- Master Playback crossfade pair with 100mm faders, ► Go, ■ Stop/Back and Master (Load) buttons
- Rate Wheel (also used to page faders) and fader control buttons
- Keypad area – three sections: targets, numeric keypad, and level controls
- Display & Navigation keypad – Live and Blind displays, format, paging, and navigation within displays
- Level Wheel
- Encoders – 4 on Ion Xe, Gio, Gio@5 and 6 on the Eos Ti – the center of each encoder is a button
- Soft Power Switch – used to power up the console
- USB Port – primarily to connect any USB storage device (one on Gio/Ion Xe, two on Eos Ti)
- On Eos Ti/Gio – Built-in LCD touchscreens for display, direct selection and context sensitive control (Eos Ti/Gio)



### SOFTKEYS

On the Ion Xe face panel, you hold down **[More SK]** and press the Encoder Category button to access the softkey S1 thru S6 functions.

Softkey functions are displayed on the monitor in the lower right hand corner of the monitor with the CIA/Browser. White labels on bottom indicate active and gray labels on top indicate a second page of softkeys.

**[More SK]** will page between the two pages of softkeys.

# Patch

## START IN THE LEVEL 1 COMPLETE SHOW FILE

Double hit **[Address/Patch]** to get to the Patch display.

Or press **[Displays]**, then **{S3 Patch}**. Can also **Add-a-Tab (the {+} sign)** or hold **[Tab]** and type **[12]**.

By default, patch is displayed in a channel view. You can change the display to sort by address by pressing **[Format]**.



### PATCH BY CHANNEL

<b>[601] [At] [250] [Enter]</b>	selects channel 601 and patches address 250 to it
<b>[602] [At] [657] [Enter]</b>	selects channel 602 and patches the address 657 to it
<b>[603] [At] [2] [/] [146] [Enter]</b>	selects channel 603 and patches the 2 <sup>nd</sup> universe address 146 to it
<b>Press [Data]</b>	displays channels in <b>output address</b> style, note blue text in upper left corner
<b>Press [Data] again</b>	displays channels in <b>port/offset</b> style, note blue text in upper left corner
<b>Press [Data] again</b>	returns to how it was originally entered

### RANGE PATCHING

<b>[604] [Thru] [610] [At] [101] [Enter]</b>	selects a range of channels and patches addresses sequentially from first one
<b>[611] [At] [108] [Thru] [111] [Enter]</b>	selects channel, patches a range of addresses to it, creating parts
<b>[612] [Thru] [620] [At] [201] {Offset} [3] [Enter]</b>	allows for a three-cell cyclight patch



### CLEAR VS. UNPATCH VS. DELETE

<b>[601] [At] [Enter] [Enter]</b>	removes the address, leaves type, etc.
<b>[602] {Unpatch} [Enter] [Enter]</b>	restores to default properties – removes address, type, label, etc.
<b>[Delete] [603] [Enter] [Enter]</b>	deletes the whole channel from show

**[Live] and look at the Channel View**



### UNDO

From an empty command line, **[Undo]** opens a command history display in the CIA. The most recent completed command is highlighted in gold. Use the page arrow keys or a mouse to select multiple commands.

<b>[Undo] , select last three commands, [Enter]</b>	to restore channels 601 - 603
---	-------------------------------

*Not all commands can be undone including playback actions and manual attributes (in gray) placed on channels or encoder actions.*

Command histories are cleared when:

- a show file is saved, opened, merged, or imported
- a new show file is loaded
- a console logs on to the network



## PATCH BY ADDRESS

<b>Back in {Patch} and press [Format] to switch to 'By Address'</b>	Addresses are on the left
<b>[481] [At] [625] [Enter]</b>	selects one address and patches it to a channel – note command line
<b>[482] [Thru] [485] [At] [630] [Enter]</b>	selects a range of addresses and patches them to one channel (parts)
<b>Press [Format] to switch to 'By Channel'</b>	Channels are on the left



## PATCH A MULTI-PARAMETER DEVICE

<b>[651] [Thru] [656] [Enter]</b>	selects the channels for 6 fixtures
<b>Click on {Type} in the lower right hand corner of display</b>	notice softkeys {Show}, {Manfctr}, {Search} and {Add Show}
<b>Click on {Manfctr}</b>	left columns are manufacturers; right side are their devices
<b>Find {High End Systems} in left columns</b>	
<b>Then {SolaFrame Theatre [47]}</b>	notice SolaFrame Theatre in blue – multiple modes available
<i>If a fixture has multiple modes or types, it will display in blue text.</i>	
<b>Select {SolaFrame Theatre [47]} again for standard mode</b>	fixture placed on the command line after channels
<b>[At] [7] [/] [1] [Enter]</b>	patches all six fixtures with a starting address in universe 7
<b>[At] [7] [/] [1] {Offset} [50] [Enter] [Enter]</b>	now look at the addresses

## PATCH A COMPOUND CHANNEL

A compound channel is a channel that controls more than one device – such as a fixture with a color scroller, a gobo rotator, and so on.

<b>[641] [Thru] [645] [At] [41] [Enter]</b>	patches the first part of channels - the dimmer
<b>[Part] [2] [Enter]</b>	creates a part 2 for selected channels
<b>{Type}, {Manfctr}, {Generic}, find {Scroller}</b>	makes part 2 a generic scroller giving the channel a color parameter
<b>[At] [2] [/] [151] [Enter]</b>	gives a starting address for all the part 2's
<b>[Part] [3] [Enter] {Type}</b>	creates a part 3 for selected channels
<b>{Search} Gobo Rotator and double click on Rosco Gobo Rotator [2]</b>	makes part 3 a gobo rotator giving the channel a beam parameter
<b>[At] [2] [/] [161] [Enter]</b>	gives a starting address for all the part 3's

## Patch Exercise - see Appendix 1

Start a new show, **[Displays], File> New>** and press **[Select]** or double-click. Select **Continue without saving**. Are you sure? **[Enter]** or click on OK.

Now, go to Appendix 1 – Channel Hookup in the back of the book and patch the entire hookup (Ignore Notes/labels).



### CHANNEL/ADDRESS CHECK

**[Live] Press [Format] to be in Summary View**

**[1] [Full] {Chan Check} [Enter] then [Next] ... [Next] ... [Last] ...**

*Channel check automatically skips unpatched channels.*

quickly steps through all patched channels at 100%

**{Address} [1] [Full] [Enter] then [Next] ... [Next] ... [Last] ...**

same as channel check but with output addresses

**Press [Clear]**

to exit Channel or Address Check mode

### SAVE SHOW

To save the show you are working on:

**[Displays], {Browser}, File > Save As> Show File Archive> and press [Select] or double-click.**

stores the file with the same name, but new date stamp

**Do you really want to save? [Select] or click {OK}.**

You have several formats in which you can save a show file. Esf3d is the default and saves all information in a show. If you use 3D models (covered in the Augment3d workbook), you can opt out of saving the data (esf2) or you can save for compatibility to open a file in 2.8 software or earlier.

**If (untitled), “Enter new show name: Show File” appears above the virtual keyboard.**

**Press [Label]**

to clear the words “Show File.”

**Type a show name, then [Enter] on either the console or the keyboard.**

*When console saves the show, it makes a new copy of the file. Each show file has a date and time stamp in the show file name. Always have backup copies!*

**In Patch, [1] [Label] Front Light [Enter]**

to label a channel

**[Live]**

notice the \* at the end of the filename

An asterisk (\*) at the end of a filename indicates unsaved data.

### !! DON'T FORGET TO SAVE AND SAVE OFTEN!

**[Shift]&[Update]**

to do a Quick Save

The Quick Save always saves back to the hard drive. To save to a thumb drive, you'll need to go back through the Browser to Save As and select the thumb drive.



# Working with Channels



## CHANNELS IN LIVE

**[Live], if you are not already there**

**[1] [At] [Full] [Enter]**

**[At] [50] [Enter]**

don't have to retype the channel number if changing the same one

**[2] [+] [3] [At] [5] [Enter]**

sets level of 50% (use [05] for 5%)

*Red data means modified, but not yet stored. Notice "Manual Channels" in upper left corner*

**[31] [Thru] [50] [-] [34] [-] [35] [At] [65] [Enter]**

using minus for individual channels

**[59] [Thru] [62] [Full] [Enter]**

using Full without [At]

**[55] [Thru] [58] [Full] [Full]**

another way to get Full

**[51] [Thru] [54] [Level] (no Enter req'd.) can also do [At] [At]**

user-definable Level – change in Setup

**[51] [Thru] [62] <Enter> level wheel**

proportional control as long as selected

**[8] [At] [50] [Enter] then [+ %], [- %] also [Shift]&[+], [Shift]&[-]**

up a point, down a point (10% default)

**[5] [At] [50] [Enter] then [At] [+] [3] [Enter], [At] [-] [4] [Enter]**

add 3 points more, subtracts 4 points

**[At] [/] [50] [Enter] [At] [/] [400] [Enter]**

takes 50% of level, multiplies by 400%

**[1] [Thru] [35] [Out]**

self-terminating

**[31] [Thru] [35] [At] [10] [Thru] [Full] [Enter]**

called fanning intensity

**and roll the level wheel to full and then all the way out**

notice proportional control



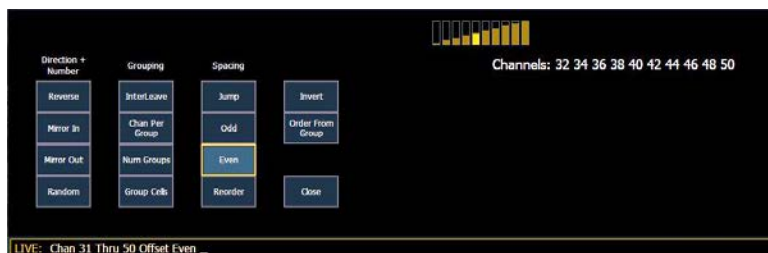
## OFFSET

Offset is a soft key to make custom selections. When pressed, additional options are accessible on the display and on the softkeys.

**[31] [Thru] [50] {Offset}**

**{Even}**

see preview in the CIA



**[At] [80] [Enter]**

**[31] [Thru] [50] [Out]**

**[31] [Thru] [50] {Offset} [3] [At] [75] [Enter]**

selects an offset of every third channel



## SNEAK

Sneak removes manual data and allows the channels to sneak back to their background states, if any. Uses a default Sneak Time.

**[34] [Sneak] [Enter]**

restores selected channel to background state using default sneak fade time

**[Clear] [Sneak] [Enter]**

restores all manual levels to background states

**[1] [Thru] [5] [At] [5] [Sneak] [Enter]**

brings channels to level in default time

**[5] [At] [25] [Sneak] [3] [Enter]**

brings channel to level in 3 seconds

**[8] [+] [9] [Full] [Sneak] [Enter]**

brings channels to full

**[8] [Out]**

brings channel out – notice red data

**[9] [Sneak] [0] [Enter]**

brings channels to background state in 0 secs – removes red (manual) data



## LIVE AND BLIND CHANNEL DISPLAY

### PRIMARY LIVE SCREEN (CHANNEL DISPLAY)

- Channel icon
- Selected cue detail line
- Tab area – currently Tab 1 and Tab 2
- Command line
- **[Format]** for summary or table view in Live
- Hold **[Format]** and move wheel to zoom in and out
  - Left button on mouse and use mouse wheel
- **[Page▲]** or **[Page▼]** - scrolls full page at a time, does wrap
- **[Shift]&[Stage]** – when on, scrolls one line at a time

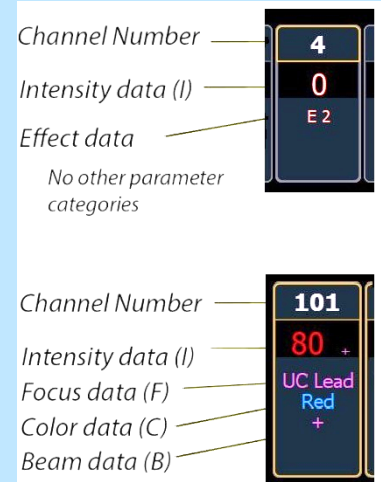
### **[1] [Thru] [10] [Enter] and scroll the level wheel**

- Hold **[Data]** and roll levels up to expose real values

### BLIND CHANNEL DISPLAY

Blind allows us to look at what is recorded without affecting what is currently in Live. When in Blind, you can edit any data (cues, presets, palettes, and so on), and changes will not automatically be output to your rig.

- Note the background color and command line color change!
  - Note the change at the top of the display
  - **[Next]** and **[Last]** navigates through targets like cues, groups...
  - **[Format]** for summary, table view or spreadsheet in Blind
- !!** When in Blind, **Record is not required** – changes are stored when you hit **[Enter]** and the command line is terminated.





## CENTRAL INFORMATION AREA (CIA)

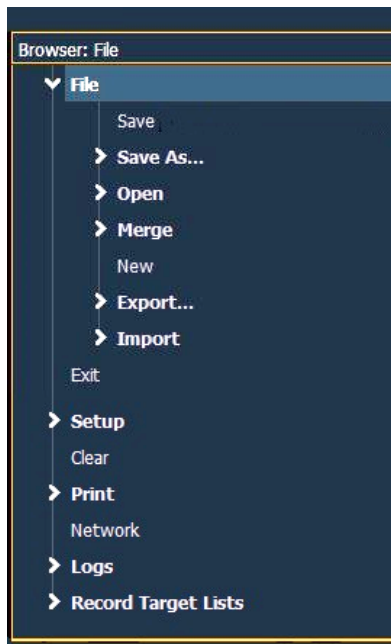
The Central Information Area (CIA) is the lower portion of one of the screens. By default, the CIA consists of two primary areas: the parameter tiles, and the browser.

- **[Displays]** will always draw focus to the CIA area or a display item set as favorite (Gold highlight)
- Collapse and expand the CIA by pressing **[Displays]** again or using the triangle ( $\Delta, \nabla$ )
- Double tap **[Displays]** will always bring up the browser.
- Use the **Lock** to prevent the CIA from being collapsed or opened

### BROWSER

An interface for numerous functions including saving a show, opening a show, changing settings, clearing targets, print functions and viewing record target lists.

- Can use a mouse, touch or the page arrow buttons to navigate in the browser
- **[Page▲] [Page▼]** - scrolls thru the menus
- **[Page▶]** opens submenus
- **[Page◀]** closes submenus or collapses the menu structure
- **[Select]** or **[Enter]** – opens the item



### BROWSER COLOR CODING:

Save	Green
Save As	Green
Open	Red
Merge	Yellow
New	Red
Clear	Red



## TAB NAVIGATION

Tabs are broken down into two categories: Display and Control. **Display tabs** are primarily to show information, such as Live, Blind, and the Playback Status Display (PSD). **Control tabs** are the virtual control options, such as the color picker, and ML Controls.

### TAB NAVIGATION

Be aware of where *focus* is on the displays (tab highlighted in gold).

Live/Blind display is Tab 1. Playback Status display is Tab 2. Neither can be closed and you can have multiple instances of either (Tab 1.2 or Tab 2.2).

#### TO OPEN DISPLAYS

**Press [Sub] [Sub] ... [Group] [Group] ... [Effect] [Effect]**

to either open the associated display or select it if it is already open

**Press Add-a-Tab (the {+} sign) to the right of the tabs**

opens the home screen or display and control options

#### TO MOVE DISPLAYS

**Hold [Tab] and use [Page▶] and [Page◀] keys**

to move the active display from one monitor to another

**Click on the tab and drag**

to reposition tabs within a frame

#### TO CLOSE DISPLAYS

**Press [Tab] until desired display is highlighted, then [Escape]**

to close any tab display

#### TO SELECT OPEN DISPLAYS

**Press [Tab] ... [Tab] ... [Tab]**

to change focus from open display to the next open display

**Hold [Tab] & press [#] of specific display, [12] for Patch**

to select/highlight a specific display by number

**Press [Live] or [Blind]**

to instantly bring Live/Blind into focus

#### ADDITIONAL TAB TOOLS

**Right click or double tap on the Live tab**

to see configuration settings

You can also click on the Gear tab for the same options. These options vary depending on the tab in focus.

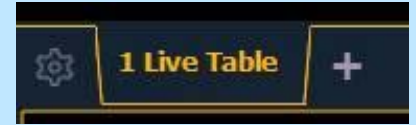
- **{Close Tab}**
- **{Replace Tab}** - replace tab with a different tab
- **{Close All Tabs But This}**
- **{Close All Tabs}**
- **{Reset Columns}**
- **{Lock Frame}** – prevents other tabs from being moved to the current frame
- **{Open New Tabs in this Frame}**
- **{Zoom Out}** and **{Zoom In}**

**Click or touch off the menu**

to close the configuration settings

**[Live]**

to put all in the same display



# Groups

Groups are a channel selection tool used for fast recall of specific channels. Up to 1000 groups can be recorded.

Note that groups are only a selection and do not contain any intensity or non-intensity information.

When recording groups, channels are stored in the original selection order.



## RECORDING GROUPS IN LIVE

**[Clear] [Sneak] [Enter]**

**[1] [Thru] [10] [Record] [Group] [1] [Enter]**

records channels to the target group

**[31] [+] [33] [+] [35] [+] [37] [Record] [Group] [2] [Enter]**

records the selected channels to group 2

**[31] [Thru] [38] {Offset} {Even} [Record] [Group] [3] [Enter]**

using offset to achieve the opposite

**[34] [+] [31] [+] [33] [+] [35] [+] [32] [Record] [Group] [30] [Label] Effect 1 [Enter]**

records the channels in a specific order and gives the group a label

## WORKING WITH A GROUP

**[Group] [1] [Full] [Enter]**

brings group 1's channels to Full

**[Group] [1] [At] [20] [Thru] [Full] [Enter]**

fanned intensity but in order this time

**[Group] [30] [Enter] then press [Next], [Next], [Last], [Last]**

accesses the group and then the first ordered channel in that group

**[Select Last] [At] [10] [Thru] [Full] [Enter]**

reselects the whole group and fans intensity across the range



## GROUP LIST DISPLAY (BLIND)

The group list allows viewing and editing of groups. Use **[Next]** and **[Last]** to navigate within the list or type **[Group]** followed by the number then **[Enter]** to jump to a specific group..

**[Group] [Group] or Add-a-Tab (the {+} sign)**

opens a list of all groups recorded

## CREATE OR EDIT A GROUP

**[Group] [4] [Enter], [71] [Thru] [82] [Enter], [Label] High Sides – Right [Enter]**

creates group 4 in the Group List

**[Group] [2] [Enter]    [+] [39] [Enter]    [-] [39] [Enter]**

adds or deletes channel to a group

**[Group] [1] [Enter]    [11] {Insert Before} [7] [Enter]**

watch softkeys for additional options

## DELETING GROUPS

**[Delete] [Group] [1] [Enter] [Enter]**

deletes group 1 (2<sup>nd</sup> enter to confirm)

**[Delete] [Group] [2] [Thru] [3] [Enter] [Enter]**

deletes groups 2 and 3

*Will still have 4 & 30 for later use*

**Group Exercise - Create the following new groups:**

Group #	Label	Channels
1	Frontlight	1 thru 10
2	Downlight	31 thru 50
3	High Sides – Left	51 thru 62
4	High Sides – Right	71 thru 82
5	FOH Movers	101 thru 105
7	OS Movers – Wash	121 thru 128
9	Side – Mids	141 thru 148
10	Side – Scrollers	151 thru 158
20	Cyc Top	301 thru 312
21	Cyc Bottom	351 thru 362
22	All Cyc	+ G20 + G21
30	Effect 1	34, 31, 33, 35, 32

*Group 4 and 30 will already exist.*



# Submasters

Submasters are a type of playback data that can be mapped to a fader. Subs can store any parameter from any channel. Current stage content can be also recorded directly to a Submaster.

## RECORD SUBMASTER IN LIVE

**[Live] [Clear] [Sneak] [Enter]**

**[1] [Thru] [9] [At] [Full] [Enter]**

set levels

**[Record] [Sub] [1] [Enter] Press [Load] button above fader**

**On Ion Xe, press both buttons (▶ & ■) to load a fader**

records the current stage state to sub 1

**[Clear] [Sneak] [Enter]**

**[51] [Thru] [53] [At] [40] [Enter],**

**[54] [Thru] [56] [At] [70] [Enter],**

**[57] [Thru] [59] [At] [Full] [Enter]**

**[Record], then [Load] the next fader, [Enter]**

**Can also press [Record] and double hit [Load]**

loads the fader with the submaster; note that we did not specify Sub

**[Clear] [Sneak] [Enter]**

to remove the manual data

Submasters may be loaded to any fader as long as it is blank or clear.

**Run each fader up and down.**

look at proportional values of Sub 2

## RECORD SUBMASTER IN BLIND

Edits done in Blind happen Live if the Sub is on.

**[Blind] [Sub] [31] [Enter]**

creates sub 31 – in Blind

**[71] [Thru] [79] [Full] [Enter], [At] [75] [Enter]**

records values to sub 31 – in Blind; no need to re-specify channels; remember that all changes are immediately saved

## COMMAND LINE CONTROL OF SUBMASTERS

**[Live] [Sub] [31] [At] [50] [Enter]**

brings contents of sub to 50% of their recorded values

**[Sub] [31] [At] [85] [Sneak] [Enter]**

will sneak sub to 85 in default sneak time

**[Sub] [31] [Out] [Enter]**

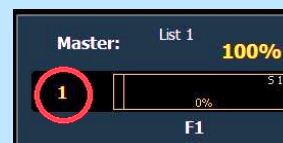
takes sub out regardless of fader position



## CHANGE FADER PAGES

The 100 pages of Faders are set up in increments of 10. The page number is visible below the Cue list on the left side under the word "Master".

Note: **[Fader Page]** jumps to the next page with content.



advances to page 3 - the only way to get to a blank page

**Hold [Fader Page] & press [3]\***

**[Sub] [31] [Load] to any fader on page 3 and bring up the fader**

loads sub 31 on a fader on page 3

**Press and hold [Shift] and tap [Fader Page]**

reverses one page at a time

**Press and hold [Fader Page] and press [17]**

jumps to a specific page\*

**Press and hold [Fader Page] and scroll the rate wheel**

increases or decreases pages of faders with content only

\* This is the only way to get to a blank fader page.

## UNLOAD FADERS

If a submaster (or a cue list) already occupies the fader, that fader must be cleared before another submaster or cue can be loaded.

**Press and hold [Fader Page] and scroll to page 3 (sub 31)**

**Press and hold [Shift] and press [Load] of the fader to clear sub 31**

## DELETE SUBMASTERS

**[Delete] [Sub] [31] [Enter] [Enter]**

deletes sub 31

**[Delete] [Sub] [1] [Thru] [Enter] Do not hit [Enter] again.**

deletes all subs

**[Shift]&[Clear]**

will clear the command line

If you delete the subs, you will need to recreate subs for the next exercises. Or use **[Undo] [Enter]**.

## Cues

Cues are single lighting looks that are stored in a list and often played back in order. There are various timing and transition options that affect how cues are played back.

### RECORD A CUE

<b>[Group] [2] [At] [30] [Enter], [8] [At] [35] [Enter]</b>	set levels for specials
<b>[Record] [Cue] [1] [Enter]</b>	stores cue 1 – note channels turn blue
<b>[2] [+] [5] [+] [6] [At] [35] [Enter]</b>	adds additional lights to look
<b>[Record] [2] [Enter]</b>	stores cue 2 – note channels colors; note we did not specify cue
<b>[2] [+] [6] [Out], [Group] [2] [At] [60] [Enter] [31] [+] [32] [+] [36] [+] [37] [+] [41] [+] [42] [+] [46] [+] [47] [Out]</b>	levels going up and down in cue
<b>[Record] [3] [Enter]</b>	all content will be recorded
<b>Run the first fader (with sub 1) up to 75%</b>	
<b>[Record] [Next] [Enter] * Bring the first fader back down</b>	stores next cue (4) – note channels colors adds the sub values into the cue, sub values cannot be removed with fader
<b>[1] [Thru] [9] [Out], [8] [At] [50] [Enter]</b>	
<b>[Record] [Next] [Enter]</b>	stores next cue (5)
* When you use <b>[Record] [Next]</b> , remember what cue number your command line is on. If Cue 1, then Next = 2. If Cue 2.7, then Next = 2.8. If Cue 2.11, then 2.12.	



### RECORD CUES WITH TIME

<b>[Select Last] [Out], [Group] [2] [At] [60] [Enter], [Group] [10] [At] [30] [Enter]</b>	selects channels that had been used
<b>[Record] [6] [Time] [3] [Enter]</b>	stores cue 6 with 3 second up/down time
<b>[151] [Thru] [154] [Full] [Rem Dim] [Enter]</b>	set levels using [Remainder Dim]
<b>[Record] [Next] [Time] [2] [Time] [7] [Enter]</b>	specifies split up and down times (7)
<b>[36] [Thru] [50] [At] [50] [Rem Dim] [Enter]</b>	set levels
<b>[Record] [8] [Time] [6] [/] [2] [Enter]</b>	specifies split up/down time with slash (8)

## RECORD WITH TIME AND LABEL

<b>[32] [Thru] [34] [At] [50] [Enter], [33] [%] [%] [%] [41] [Thru] [50] [At] [25] [Enter], [3] [Full] [Full]</b>	set levels
<b>[Record] [Next] [Time] [3] [/] [5] [Label] Speech [Enter]</b>	stores cue, timing and label (9)
<b>[Select Active] [Out]</b>	takes all active channels' intensities out
<b>[Record] [10] [Time] [0] [Label] Blackout [Enter]</b>	stores cue, timing and label (10)
<b>[1] [%] [3] [%] [6] [Full] [Enter], [Group] [2] [At] [25] [Enter]</b>	sets levels for new cue after blackout
<b>[Record] [11] [Time] [2] [Label] Entrance [Enter]</b>	stores cue, timing and label (11)
<b>[10] [Full] [Enter]</b>	sets levels for new cue
<b>[Record] [11] [.] [5] [Label] Follow up [Enter]</b>	stores a point cue



## DELETE CUES

<b>[Delete] [Cue] [11] [.] [5] [Enter] [Enter]</b>	deletes a cue, does not renumber
--	----------------------------------

Notice Cue 11.5 is still on stage although it was just deleted.

<b>[Go To Cue] [Enter]</b>	to refresh current state of the cue list
----------------------------	--

# Playback



## PLAYBACK STATUS DISPLAY (PSD OR CUE LIST)

PSD is a tab that displays a list of the cues, their timing and additional information associated with the cues.

**Use the triangle (▽) far right**

to collapse the CIA for more room

**Touch/click the screen or press [Tab] until it is selected.**

to make sure the PSD Tab is highlighted.

- **[Format]** – for selecting display options:
  - Two cue lists
  - A preview of the first 10 pages of 10 faders
  - Back to default single cue list with a fader ribbon
- **[Page▲]** or **[Page▼]** – scrolls the cue list up and down a full page
- If in another tab, **[Shift]&[Page▲]** or **[Page▼]** will page up and down in the PSD without needing to focus on that tab
- **[Next]** or **[Last]** – moves up and down through the cue list
- In Blind, **[Next]** and **[Last]** navigates through the cues on the PSD. The PSD will indicate the current selected cue. This has no effect on live output.



## BASIC CUE PLAYBACK

**[Live], [Go To Cue] [Out] [Enter]**

resets the cue list to the top, clears stage, and puts Cue 1 in pending

**Press [▶] (Go) on the Master Playback Fader pair**

executes the pending cue (1)

While a cue is running, both the cue line and the current cue display is red; when it is complete, both turn gold.

**Press [▶] (Go) again to go into cue 2...**

executes the next cue (2)

**Then press [■] (Stop/Back) while the cue is running**

fader activity is instantly paused mid-transition

**Press [▶] (Go) to continue into cue 2**

resumes the current cue

**Press [▶] (Go) again to go into cue 3...**

executes the next cue (3)

**Then press [■] (Stop/Back) while the cue is running**

fader activity is instantly paused mid-transition

**Press [■] (Stop/Back) again to back up into cue 2**

if cue paused or already complete, will play the previous cue

**[■] (Back)** uses default Back time established in Setup. It does not use the timing of the cue.

**When in a completed cue, (Cue 2), press [■] (Stop/Back)**

goes back to the previous cue in the Back time

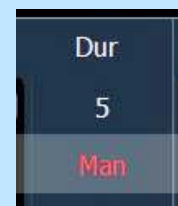
### CONTROLLING PLAYBACK MANUALLY

To manually take control of the intensity fade from the beginning of the cue, set the sliders at the bottom of the run before you press **[▶] (Go)**.

Notice a red 'Man' in the Duration column of the PSD and in the Master Playback status bar.

Raise the faders in the timing you desire.

AS A GENERAL RULE, IT IS GOOD TO MAKE SURE THAT YOUR MASTER FADER PAIR IS UP AT THE BEGINNING OF A SHOW.





## GO TO CUE

[Go To Cue] uses Go-To-Cue timing established in Setup.

[Go To Cue] [Out] [Enter]

sets all values to home and resets all cue lists active on faders to top of the list

[Go To Cue] [0] [Enter]

sets all current intensity values to zero and resets the current cue list to the top of the list, without affecting non-intensity parameters

### OTHER GO TO CUE FUNCTIONS

[Go To Cue] [Enter]

refreshes current cue

[Go To Cue] [Next] or [Last] [Enter]

takes you to the next or previous cue in the active list (like Back)

[Go To Cue] [5] [Enter]

all parameters with values in cue 5 faded to those values, even if they are tracked in the Go To Cue time

[Go To Cue] [6] [Time] [Enter]

fades to cue in the timing of the cue

[Go To Cue] [1] [Time] [2] [Enter]

fades to cue in 2 seconds

### LOAD A CUE ON THE MASTER PLAYBACK FADER

[Cue] [7] [Master] (Load) \* and then press [▶] (Go)

loads a specific cue to the main faders and then runs in that cue's time

\* Look at the Pending Cue in the PSD.



## CHANNEL DISPLAY COLOR CONVENTIONS

[Format] to be in Live Summary View

[Go To Cue] [9] [Enter]

Go to a cue

[1] [Thru] [5] [Full] [Full], [39] [Thru] [42] [At] [80] [Enter]

Add some manual values

### CHANNEL OR PARAMETER LEVELS

- **Red** Manual Data – changes have been made but have not been saved or stored yet
- **Blue** Movement – channel values are higher than in the previous cue. Non-intensity parameters (NPs) are blue when any move instruction has occurred.
- **Green** Movement – channel values have gone down from their previous level. Also used in reference marking to indicate a channel is marked.
- **Magenta** Tracking – value is unchanged from the previous cue (tracked) – not given a new move instruction.

### Bring up Sub 1

- **Yellow** Values are set from a submaster.
- **White** Values are blocked.

"GREEN, GRASS...BLUE, SKY!"

CHANNEL NUMBERS/CHANNEL HEADERS	CHANNEL OR PARAMETER LEVELS
<p><b>White</b> number – regular channel patched</p> <p><b>Bright White</b> number – parked channel (small p)</p> <p><b>Gray</b> number – unpatched channel</p> <p><b>Gray</b> number with no outline – deleted channel</p> <p><b>Gold</b> number – channel is captured</p> <p><b>Gold outline</b> – Selected channel</p>	<p><b>Red</b> – Manual Data</p> <p><b>Blue</b> – Level is increasing from previous cue</p> <p><b>Magenta</b> – Level is tracked from previous cue</p> <p><b>Green</b> – Level is decreasing from previous cue.</p> <p><b>Orange</b> – Level is owned by live playback</p> <p><b>White</b> – Level is blocked</p> <p><b>Yellow</b> – Level is set by Submaster</p>



## FLEXICHANNEL MODES (EASIER TO SEE IN LIVE – SUMMARY)

In Live, Flexi allows you to view only channels meeting a certain criteria, therefore removing unwanted data from view.

**Press [Flexi], [Flexi], [Flexi]**

to change to the next state

- All channels
- **Patched channels** – channels with an address patched to them
- **Manual channels** – selected channels and any channels with manual data (red data)
- **Show channels** – any channels currently active and channels with data stored in a record target (cue, groups, subs, palettes...)
- **Active channels** – any channels with intensity above 0 or fading to 0, running effects, or with non-intensity moves
- **In Use channels** – exactly like Flexi Active, but also includes dark channels that are marking for a future cue
- **Selected channels** – the channels selected on the command line

**Hold [Flexi] and use the softkeys and options in the CIA**

8 states and 2 modes appear in the CIA

To include channels not in the current flexi mode, use **[Thru] [Thru]**.

**In Flexi Patched Channels: [6] [Thru] [35] [Enter]**

see only patched channels in range

**[6] [Thru] [Thru] [35] [Enter]**

overrides flexi state and shows all channels in range

# ▶ Track/Cue Only

Eos is a move-fade console, meaning that only changes to channel levels are recorded. Another way to say this is that channels will stay at a given level until they are given another move instruction. Unchanged levels will track through cues until given a new level. When playing cues out of sequence, Eos will play back moves and tracked levels guaranteeing the correct stage look.

It is important to learn the rules of tracking when editing cues and recording cues out of sequence. When editing cues with tracking, changes to a level will propagate forward through a cue list until a move instruction or a block is encountered. When editing cues with cue only, only the level changes in the specific cue will change. The console may add move instructions into the next cue in order to preserve the intended look.

[Check out the Bobblehead Fred video that helps to explain the difference in style of operation between tracking and preset consoles and their origins.](#)

**Go to [Blind], and press [Format]**

to go into Spreadsheet view

Cue	Label	1	2	3	4	5	6	7	8	9	10	11	12
1		Intens	Intens	Intens	Intens	Intens	Intens	Intens	Intens	Intens	Intens	Intens	Intens
2			35			35	35		35				
3			0			35	0		35				
4		75	75	75	75	75	75	75	75	75			
5		0	0	0	0	0	0	0	50	0			
6		-	-	-	-	-	-	-	0	-			
7		-	-	-	-	-	-	-	-	-			
8		-	-	-	-	-	-	-	-	-			
9	speech	-	-	FL	-	-	-	-	-	-			
10	blackout	-	-	0	-	-	-	-	-	-			
11	entrance	FL	-	FL	-	-	FL	-	-	-			

## TRACK

**[Cue] [1] [Enter] [11] [At] [80] [Enter]**

adds channel to cue 1 and tracks it through the entire cue list, including the blackout cue

## CUE ONLY

**[12] [At] [40] [Q Only/Track] [Enter]**

adds channel to cue and inserts a move to restore it to zero in next cue

**[Cue] [1] [Thru] [5] [Enter] [12] [At] [40] [Q Only/Track] [Enter]**

creates a move in first cue, tracks through and adds a move to zero after last cue selected

**[Cue] [11] [.] [5] [Enter] [Enter]**

creates a new cue, all channels track through, note chan. 11 tracks through

## BLOCK

A block is an editing tool that prevents changes from tracking into or beyond a block. Blocks can be applied at a cue level, a channel level or a parameter level. It will not affect the contents of the cue.

**[Cue] [10] [Block] [Enter] Channel 11 is white (channel blocked)**

applies a block to the blackout cue

**[Cue] [1] [Enter] [13] [At] [80] [Enter]**

adds channel to cue 1 and tracks it till it reaches the block in cue 10

**[Cue] [10] [Enter] [Select Active] [Out]**

assures any lights on are set to zero as this is our blackout cue – this change will track forward

“B” is displayed in the flags field of the PSD, indicating a cue level block.



## AUTOBLOCK

Autoblock protects your cue data in the case of a redundant level change.

### Notice in Cue 2 that channel 2 is at 35

**[Cue] [1] [Enter] [2] [At] [35] [Enter]**

Autoblock created in cue 2

Now in Cue 2, the intensity level for channel 2 is displayed in white, with an underscore. This is the Autoblock, where the console is preserving the idea that this channel already has a move instruction.

**[2] [At] [55] [Enter]**

Autoblock turns back into a move instruction

**[2] [At] [35] [Enter]**

puts the Autoblock back

Autoblocks are displayed in the PSD by a "b".

## CLEAR AN AUTOBLOCK

If you want to remove the underlying move instruction:

**[Cue] [2] [Enter] {AutoBlock Clean} [Enter] [Enter]**

clears an autoblock

*{Autoblock Clean} removes all auto-blocks from a single cue, cue range or cue list.*



## ASSERT

Assert is a playback condition that collects unfinished fades and puts the entire look of the cue on stage. Assert is a way to regain ownership of a channel, or to force a new move command using the timing of that cue.

Asserts can be placed at a cue level, channel or parameter level.

**[Live] [Go To Cue] [9] [Enter]**

**[41] [Full] [RemDim] [Enter]**

set levels

**[Record] [9.5] [Time] [20] [Enter]**

stores cue with long fade time

**[Go To Cue] [9] [Enter] [▶] (Go) to run Cue 9.5**

**[▶] (Go) on cue 10 before cue 9.5 has completed...**

discuss what happens

**[Cue] [10] [Assert] [Enter]**

applies an Assert on the cue

Notice an "A" in the PSD flag field for Cue 10.

**[Go To Cue] [9] [Enter] [▶] (Go) on cue 9.5**

**then [▶] (Go) on cue 10**

discuss what happens

Assert plays back all values as move instructions. It collects unfinished fades and executes them in the time of the cue.

IT IS GOOD PRACTICE TO HAVE BLOCK AND ASSERT ON ALL BLACKOUTS, FADE TO BLACKS AND CRITICAL CUES



# ▶ Non-Intensity Parameter Control

## NON-INTENSITY PARAMETER CONTROL (IFCB)

FOUR MAJOR PARAMETER CATEGORIES (IFCB):

- **I = Intensity** . . . Intensity
- **F = Focus** . . . Pan and Tilt, changes to the position (X, Y or Z)
- **C = Color**. . . All color parameters (Scrollers, RGB, CMY, CTO, CTB...)
- **B = Beam** . . . All other parameters, divided into sub-categories:
  - **Form** - includes parameters that affect the quality or size of the light output, such as edge, zoom, iris, frost, etc.
  - **Image** - includes anything that drops into the gate and interrupts the beam of light, such as gobos, effects wheels, prisms, etc.
  - **Shutter** - includes all the framing parameters



## ▶ LAMP CONTROLS

Lamp controls allow you to execute control functions of selected fixtures such as calibrate, douse lamp, strike lamp, and reset. Each fixture type has its own set of lamp control options which are available to you when you select the fixture from Live.

**[Clear] [Sneak] [Enter] [Group] [5] [Enter] [About]**

**On the left side – {Lamp Controls}**

**[Group] [7] [Enter]**

**[About] again**

channel selection on command line

note different lamp controls

will clear the About display

## ▶ COLOR CONTROLS

COLOR CONTROL WITH SCROLLERS

**[Encoder Display]**

**[Group] [10] [Full] [Full]**

- Push the **[Color]** page button and use the encoder to dial to the frame desired
- By default, the scroller is expanded to see the individual frames
- Tap the word '**Scroller**' in the encoder display or use **{Scroller}** in the CIA parameter tiles – puts it on the command line – then press **[8]** for frame 8 and **[Enter]**
- Hold **[Shift]** and dial the encoder – see the '+/-' for half frames
- Press **{Home}** to take the scroller back to its starting frame

## COLOR CONTROL WITH LEDs

**Press [Encoder Display] if not open already**

**[Clear] [Sneak] [Enter] [Group] [3] [+] [Group] [4] [Full] [Enter]**

notice all colors at 100%

**Dial the encoders**

easy to use two hands for color mixing

**In Red, press {Min}; Lime {Min}, Green {Min}, Blue, press {Max}**

leaves just blue

**Press [Displays], then tap 'Red' tile in CIA, [50] [Enter]**

now magenta wash

*The Parameter tiles in the CIA remap based on the channel or fixture type selected.*

**Tap the 'Red' label on the touchscreen, then [Full] [Enter]**

adds 50% of red

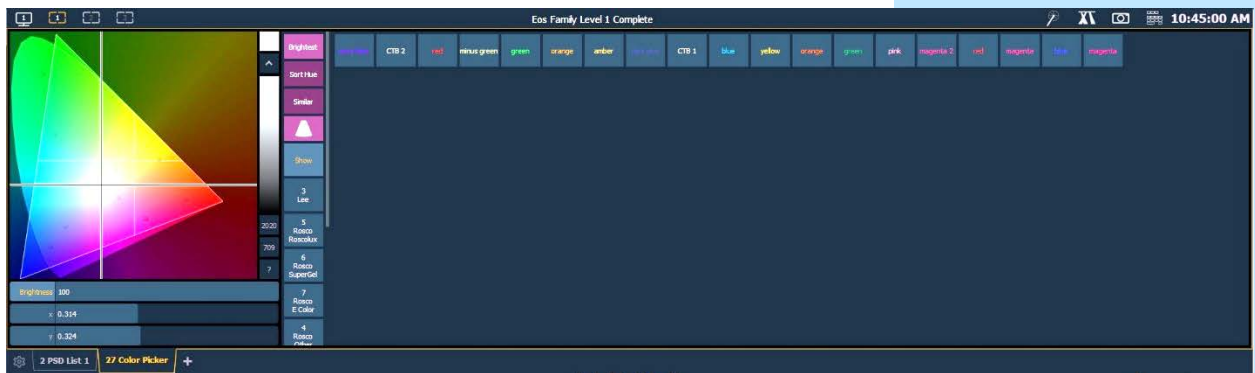
**Press the button in the center of 'Red' encoder, [75] [Enter]**

back to 75% red

*Keep in mind if you have the flatter encoders, the entire encoder is the button.*

## COLOR PICKER

**Click on Add-a-Tab (the {+} sign) , select Color Picker Control**



When first opened, the color picker breaks down into three areas: the CIE XY color space, the gel library, and then, when you select a gel library, it shows all of the gel swatches.

- Console will put fixture in the color as close as possible.
- A 'G' will appear in the channel display that means gel match
- Gel matches can be set from the command line also

**[Group] [3] [+] [Group] [4] [Home] [Enter]**

notice all colors at 100%

**Tap [3 Lee], then find {L116} - a green**

watch change color

**Tap [5 Rosco Roscolux], then find {R021} – an orange**

watch change color

**[Select Last] {Color} [5] [/] [381] [Enter] – a blue**

first # being the Gel library and second # being the gel number

**[At] [3] [/] [345] [Enter] – magenta**

use "At" instead of "Color" – works anywhere in Live

**Tap {Standard Colors}, then find {Red}**

**Tap {Purple 75%}**

**Tap {3500K}\***

*\* K stands for Kelvin – measurement of Color Temperature – low Kelvin values are warmer whites, higher Kelvin values are cooler whites*

## CONTROLLING A MOVER



### FOCUS

**[Clear] [Sneak] [Enter]**

**[Group] [5] [Full] [Enter] , then [Focus] and play with encoders**

notice all five fixtures move as a group

**Hold [Shift] while using the encoders**

puts the encoder in Fine mode

**Press [Next], tilt, [Next], tilt, [Next], tilt**

able to work with each light individually

**[Select Last] to reselect group and pan**

now back as a group

### FLIP

**{Flip}** is used to spin the unit into its exact same position, but from the other orientation (long path versus short path).

**[103] [Full] [RemDim] [Enter]**

selects one fixture

**Press {Flip} on Pan encoder**

and watch the fixture reset

**Press {Flip} again**

and watch the fixture reset back

*Flip results in a manual value. Don't forget to update if in a cue!*

### HOME

**Under Tilt, press {Home}**

returns parameter to 50/50 or Home position

### ALWAYS ANOTHER WAY TO DO THINGS

**Tap the encoder label on the touchscreen, {Tilt} [-50] [Enter]**

places the Tilt parameter at -50°

**[Displays], press the {Tilt} parameter tile, [Home] [Enter]**

... or homes the tilt parameter



### BEAM

Remember: Beam divided into sub-categories: **Form**, **Image**, and **Shutter**

**[Clear] [Sneak] [Enter]**

**[Group] [5] [Full] [Full] and tilt up on stage**

**Make sure that [Encoder Display] is enabled**

#### FORM - ZOOM

- Use the Zoom encoder
- Use the touchscreen buttons: **{Min}**, **{Max}**
- Tap the Zoom label on the touchscreen, **[35] [Enter]**  
*Note Zoom is in degrees. Look at the display.*
- Notice Shutter Strobe and its modes

#### IMAGE - GOBO SELECT

- Press **{Expand}** in the encoder display to see the thumbnail images of the gobos
- Use the Gobo Select encoder, default is indexed mode
- Tap the Gobo Select label on the touchscreen, use the encoder button or press the CIA Parameter tile, **{Gobo Select} [3] [Enter]**

#### FORM - EDGE

- Use the Edge encoder to make the gobo sharp

## IMAGE – GOBO INDEX/SPEED

- Default is in Index Mode – statically rotate the gobo
- **{Expand}** or **{Mode}** selects additional modes for the parameter such as index, rotate +/- or special effects.
- Encoder controls the speed of the gobo based on the mode selected

**[Select Last] [Shift]&[Image] [Image] [Home] [Enter]**

*To put Beam on the command line, hold [Shift] and double hit any Beam sub-category (Form, Image or Shutter).*

## SHUTTER

- Use the shutter encoders for Thrust and Angle
  - o mapped based on Shutter Order in Patch Attributes
  - o first page: A & C opposite pairs, second page: B & D
  - o roll Thrust A in a bit
- Tap the label and specify specific angle, **{Angle} [30] [Enter]**
- Use the touchscreen buttons: **{Home}, {Min}, {Max}**
- Touch the shutter graphic to open a tool to use touchscreen controls
  - o Notice the buttons for pairing shutters, invert shutters and to home thrust or angle
- **Frame Assembly** (3<sup>rd</sup> page) allows for rotation of the whole shutter assembly

## PAGING ENCODERS

**[Shutter], [Shutter], [Shutter] or [Shutter] & [3]**

Page number is displayed using dots in the category on the left side of the display

## HOME

**{Home}** or **{Home}** returns the selected target or its individual parameters to their default position.

**[Clear] [Sneak] [Enter]**

**[Group] [5] [Full] [Enter], tilt up on cyc, in orange, with gobo, zoom out, and make it sharp**

**[101] [Home] [Enter]****[102] [Shift]&[Focus] [Home] [Enter]****[103] [Shift]&[Form] [Home] [Enter]****[104] {Gobo Select} [Home] [Enter]**

removes the beam attributes

takes you to third page of shutter category – see Frame Assembly Encoder



set levels

homes all non-intensity data for channel

homes just the focus data for channel

homes just the sub-category form (zoom)

homes just the gobo for channel





# ML CONTROLS

There's always another way of doing things!

**[Clear] [Sneak] [Enter]**

**Click on Add-a-Tab (the {+} sign) , select ML Controls**



## Navigation and Operation Features

- Category shortcut keys on the left side to quickly access those controls
- Category and Parameter buttons will post to the command line
- Buttons to collapse or expand categories for yet more flexibility
- Home buttons allow you to reset a specific parameter or attribute of a parameter to its default setting.
- Virtual encoders - Click and hold close to the center line for slow movement, further away for faster movement or hover cursor over the encoder and use the mouse scroll wheel.
- Color picker and gel picker
- Scroll bar – multiple rows of parameters will now display and you can scroll either horizontally or vertically depending on the frame

The parameters displayed will change based on the device(s) selected.

**[1] [Enter]**

shows just the intensity wheel

**[151] [Enter]**

shows intensity and color – note scroller, gel picker

**[51] [Enter]**

shows intensity and color – note RGB&L wheels

**[101] [Enter]**

shows intensity, focus, color and beam

## ML Control Popup

**Click on the shortcut in the upper right hand side of the monitor.**

to open the ML popup window



Scroll bar along the bottom or use the category shortcut keys.

To close, simply touch or click anywhere off of the popup.



# Additional Cue Features

## CUE DELAY

Delay is a timing modifier that can be placed on cues which causes them to wait a specified time before beginning the fade.

**[Go To Cue] [6] [Enter]**

**[2] [+] [4] [+] [10] [Full] [Full]**

**[Group] [20] [Full] [Enter], make them pink**

set levels

**[Record] [21] [Label] Pink Cyc [Enter]**

records the cue (21)

**[Group] [1] [-] [4] [Out], [Group] [10] [Out]**

set levels

**[Record] [Next] [Delay] [3] [Enter]**

records cue with a delay (22)

*In the PSD, on cue 22, notice the small 3 in front of the cue time. Also notice the duration is 8 - the total of the delay and the cue time.*

**[Go To Cue] [21] [Enter] and press [▶] (Go)**

watch for delay countdown and then the 5 second cue countdown

**[Group] [10] [At] [50] [Enter] [Group] [1] [Out]**

set levels

**[Record] [22] [. ] [5] [Time] [2] [Delay] [3] [/] [5] [Enter]**

records cue with a delay on both the up and down times (22.5)

*Again, notice in the PSD, the small 3 and 5 in front of the cue up and down times. Also notice the duration is 7.*

**[Group] [10] [Out], [8] [At] [50] [Enter], [Group] [2] [At] [4] [Enter]**

set levels

**[Group] [20] [Enter], make them blue**

select the cyc and make them blue

**[Record] [23] [Time] [3] [/] [1] {Color} [Delay] [4] [Enter]**

records cue with an overall time and a color delay (23)

*Again, the small 4 in front of the color time.*

**[Go To Cue] [22] [Enter] and press [▶] (Go) on 22.5**

watch the delays on both the up and down fades

**Press [▶] (Go) to go into Cue 23**

watch the delay on just the color

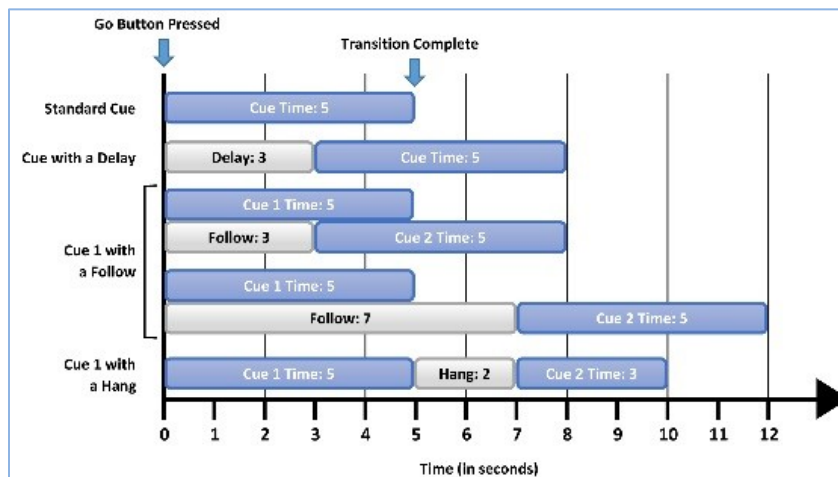


## CUE FOLLOW/HANG (AUTO-FOLLOWS)

An Autofollow is when one cue automatically activates the next cue. This can be achieved by assigning a Follow or a Hang to the cue that will initiate the trigger of the next cue in a specified time.

**Follow** time begins the moment the cue is executed (when the go button is pressed.) **Hang** is similar but doesn't start till the cue is complete.

**{Fw/Hg}** is a soft key; can also press **[Shift]&[Delay]** to access Follow and **[Shift]&[Delay][Delay]** to access Hang



**[Cue] [4] [Thru] [6] [Time] [2] [Enter]**

changes timing for faster playback

**[Cue] [4] {Follow/Hang} [3] [Enter]**

records cue with a follow time of 3 seconds

*Notice the F3 in the PSD to show you follow/hang cues, as well as the > in front of cue 5.*

**[Go To Cue] [3] [Enter] and press [▶] (Go)**

watch the cue

**[Cue] [5] [Shift]&[Delay] [5] [Enter]**

records cue with a follow time of 5 seconds

**[Cue] [6] [Shift]&[Delay] [Delay] [3] [Enter]**

records cue with a hang time of 3 seconds

**[Go To Cue] [3] [Enter] and press [▶] (Go)**

watch the cues play

To remove follow and hang times, simply type **[Cue] [#] {Fw/Hg} [Enter]**



## CUE LINK

Link allows cues to be run out-of-sequence.

**[Cue] [3] {Link/Loop} [7] [Enter]**

links to cue 7 from cue 3

**[Go To Cue] [1] [Enter] and press [▶] (Go)**

go into Cue 2

**Press [▶] (Go)**

go into Cue 3

**Press [▶] (Go)**

go into Cue 7 (the link causes the cue list to skip over 4, 5, and 6)

**[Cue] [3] {Link/Loop} [Enter]**

to remove link



# Update

Update is a 'save changes' tool. It only pertains to values that are red or modified – values that have been changed. Update saves manual changes back to targets such as cues, palettes, presets and submasters.

## UPDATE DEFAULT

**[Live] [Go To Cue] [2] [Enter]**

**[10] [At] [50] [Enter]**

makes a change to an existing cue

**[Group] [2] [Enter], make light blue**

**[Update] Notice default Make Absolute style [Enter]**

change is now stored in cue

**[Blind] Spreadsheet view**

**[10] [Enter]**

to clearly see channel 10

**See how channel 10 turns on in cue 2 and is tracked till the block**

**[Group] [2] [Enter]**

notice color values track just like intensities

*To see Color Information, hold [Data] and press [(Color)] – a toggle.*

## UPDATE CUE ONLY

**[Live] [51] [At] [75] [Enter]**

makes another change in the cue

**[Update] [Cue Only] [Enter]**

records without tracking

**[Blind] Spreadsheet view**

note changes for channel

**[51] [Enter]**

**See how channel 51 turns on in cue 2 and turns off in cue 3.**

## MOVE INSTRUCTIONS

Other move instructions will stop values from tracking through.

**See how channels 3 and 4 turn on to 75% in cue 4**

note the move instruction in cue 4

**[Live], still in Cue 2, [3] [+] [4] [At] [40] [Enter]**

makes another change in the cue

**[Update] [Enter]**

records allowing tracking

**[Blind]**

note changes for channels 3 and 4

**See how 3 & 4 turn on in cue 2 and move to 75% in cue 4**

In Blind, remember that changes are stored immediately. In Live, Update is the tool that we use to store information into existing targets such as cues.





# Park

Park locks the value of a channel or address.

- It cannot be changed by any console operation, including subs, playbacks, Grand Master or Blackout key.
- Parked values won't be recorded.
- You can park channels, addresses, categories and parameters

## PARK IN LIVE

### [Live]

**[4] [+] [6] [At] [50] [Park] [Enter]**

parks channel at 50%

Any parked channel has a small "P" visible on the channel icon.

Notice in the upper right corner of the display "Parked Channels."

**[Go To Cue] [9] [Enter]**

still shows cue values even though the park value is being output

**[127] [Park] [Enter]**

parks all parameters at current levels

**[121] [Shift]&[Color] [Park] [Enter]**

parks the intensity of the channel at its current level

**[Address] [5] [At] [75] [Park] [Enter]**

parks address at 75%

Notice the top of the display now say "Parked Channels/Addresses."

TO CLEAR PARKED VALUES IN LIVE:

**[4] [Park] [Enter] ...[Enter]**

unparks channel

**[Clear] [Park] [Enter] ...[Enter]**

unparks all parked channels

**[Address/Patch] [Park] [Enter] ...[Enter]**

unparks all parked addresses

## PARK DISPLAY (BLIND)

**[Park] [Park] or Add-a-Tab (the {+} sign)**

opens the Park display

**[2] [At] [85] [Enter]**

parks channel at 85%

**[Address/Patch] [34] [At] [75] [Enter]**

parks address at 75% - shows chan and parameter

Notice the Park key is not necessary for parking in Blind.

**[Format]** will change to Table view in Park to see parameters.

TO CLEAR PARKED VALUES IN BLIND:

**[2] [At] [Enter]**

unparks channel

**[Clear]**

removes the channel icon

**{Address} [34] [At] [Enter]**

unparks an address



# Setup

[Displays] {Setup} or click in Browser > Setup. The three areas are:

- **System Settings** – effects all users and how the show functions
- **User Settings** – specific to a user
- **Device Settings** – specific to a device or piece of hardware

## SYSTEM – ALL DEVICES IN SYSTEM – STORED IN SHOW FILE

These settings are shared on all consoles and users on the network.

- **System Settings** Number of Channels, Dimmer Doubler Offset, Create Virtual HSB, Display Colors in D65, Home Preset, Startup, Shutdown and Disconnect Macros
- **Cue Settings** Auto-Mark Enable, Mark Time, Preheat Time, Cue Default Times
- **Show Control** SMPTE, MIDI, Contacts, OSC, and String UDP
- **Output** Local DMX Outputs (restart required if change)
- **Remotes** Allow Remotes access to the system
- **Partitions** Partitioned Control Enable, Channel Partitions for multi-user setups
- **Users** User Settings: User ID, Augment Enable/Disable
- **Augment3d** Metric/Imperial, Device Enable, Status

## USER – SPECIFIC TO THE USER – STORED IN SHOW FILE

- **Record Defaults** Record Defaults: Track Mode, Record/Delete Confirm, Auto Playback, Update Defaults, Emergency Mark
- **Manual Control** Manual Times, Button Values: Level, Plus/Minus %, Live RemDim Level, Highlight: Hi-light and Lowlight Presets, Highlight RemDim, Default Times: Sneak, Go To Cue, Back, Assert, Off, Release and Timing Disable Times
- **Displays** Preserve Blind Cue, Popup Magic Sheet and Popup Navigation Lock

## DEVICE – SPECIFIC TO HARDWARE – BUT STORED IN SHOW FILE

- **Config** Visible to Remotes, Device Name
- **Face Panel** Encoders Adjustments: Percent or Degrees Per Revolution, Input Devices: Trackball settings, Spacebar [▶] (Go) Enable, Use Shift as Eos Shift, Hide Mouse, Auto Repeat settings, Sounds enable
- **Fader Wing Config** Layout and Identify
- **Displays** Show Ref Labels, In-Cell Editing and Direct Select Double Click and Default Display Sort Order
- **Brightness Settings** Brightness & Contrast for Subwing Display, Master for Light Levels, and Brightness for Direct Select Buttons
- **PDF Settings** Orientation and Paper Type settings
- **Recall Device Settings** Restore settings from show file

# Introduction to Effects

## CREATING A STEP-BASED EFFECT

<b>[Live] [Go to Cue] [Out] [Enter]</b>	start with a clear stage
<b>[Effect] [Effect] or Add-a-Tab (the {+} sign)</b>	opens the effects list
<b>[Effect] [1] [Enter]</b>	creates a new effect number
<b>&lt;Type&gt; {Step-based}</b>	assigns the effect as a step effect
<b>{Step} [1] [Thru] [5] [Enter] [Enter]</b>	defines the number of steps
<b>[Page▶] to the Channels column</b>	
<b>[Group] [30] [Enter]</b>	specifies the channels or group to be used in the order of the group

*Intensity is assumed unless another parameter is specified*

## RUN THE EFFECT

<b>[Live] [Group] [30] [Effect] [1] [Enter]</b>	runs the effect created on group 30
<b>If in Live Summary, press and hold [Data]</b>	to view levels as effect is running

## EFFECT ATTRIBUTES

Play with various attributes of the effect to see how they alter your effect.

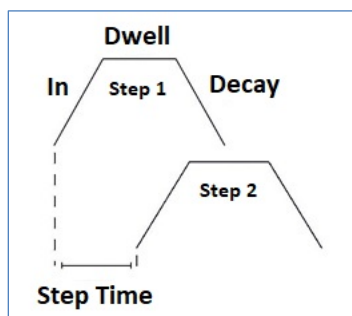
<b>[Effect] [Effect]</b>	opens the effects list
<b>{Cycle Time} [2] [Enter] or dial the encoder to adjust cycle time</b>	resets overall effect time/speed
<b>Click on {Attributes}</b>	opens table of various attributes

The basic behavior of the effect can include **Forward, Reverse, Bounce, Build, Positive, Negative, and Random Group** or **Random Rate**.

<b>{Random Rate} [100] [Thru] [200] [Enter]</b>	each cycle plays at a different rate with in the range, slower or faster
<b>{Random Rate} [Enter]</b>	to clear the random rate attribute
<b>{Negative}</b>	lights are on and turn off on a step-by-step basis
<b>{Positive}</b>	sets effect back to a positive effect
<b>[Clear]</b>	to return to the effects editor

## STEP EDITING

Remember you can edit steps individually. Just select the steps that you wish to change then press **[Page▶]** to access **Step Time, In Time, Dwell Time, Decay Time**, as well as the **On State** and **Off State** columns.



## RECORDING AN EFFECT TO A CUE

<b>[Live], [Go To Cue] [23] [Enter], [Group] [30] [Effect] [1] [Enter]</b>	reapply the effect
<b>[Record] [Cue] [24] [Enter]</b>	records the effect into the cue
<i>Notice the FX column on the Playback Status Display now shows Effect 1 in cue 24</i>	
<b>[Group] [30] [Effect] [Enter]</b>	stops the effect
<b>[Record] [Cue] [25] [Enter]</b>	
<b>[Go to Cue] [23] [Enter] and press [▶] (Go)... and [▶] (Go) again</b>	watch how the effect starts and stops



## A SIMPLE COLOR EFFECT

Effects 901 through 918 are preprogrammed effects

## USING A PRE-PROGRAMMED COLOR EFFECT

<b>[Go To Cue] [Out] [Enter]</b>	
<b>[Group] [20] [Full] [Enter]</b>	sets starting levels
<b>[Select Last] [Effect] [917] [Enter]</b>	applies existing effect to selected channels
<b>In the Encoder Display, take Amber to 0</b>	see the more saturated colors

Effect 917 is a Rainbow Chase for RGB fixtures. It is a **Relative effect** – executes in relation to where the lights are when the effect begins

## FUN WITH THE COLOR PICKER

Visually see the effect running in the blue area.

<b>[Displays] {S2 -Color Picker} or [Tab] [27]</b>	opens the color picker
<b>Click on various colors in the color picker</b>	watch cyc change colors
<b>In Standard Colors, {White}</b>	centers the effect to a white
<b>[Record] [Cue] [26] [Enter]</b>	records the effect into a cue (26)

## STOPPING AN EFFECT

<b>[Select Last] [Stop Effect] [Enter]</b>	stops effect from running on specified channels
<b>[Record] [Cue] [Next] [Enter]</b>	records the stop into a cue (27)

## MULTIPLE WAYS TO STOP AN EFFECT

<b>[1] [Thru] [5] [Effect] [Enter]</b>	stops the effect running on channels
<b>[Stop Effect] [1] [Enter]</b>	will stop the specified running effect
<b>[Stop Effect] [Enter]</b>	will stop all running effects
<b>[Sneak] [Enter]</b>	stops effect if manual data – not recorded

# Additional Cue Writing Exercise



## RECORD CUES WITH COLOR

<b>[Go To Cue] [Out] [Enter] [Cue] [21] [Block] [Enter]</b>	start with a clean stage
<b>[Group] [2] [Full] [Full], make them pink</b>	set levels
<b>[Record] [12] [Label] Pink [Enter]</b>	stores cue (12)
<b>[Select Last], make them cyan</b>	choose colors
<b>[Group] [3] [Full] [Full], make them blue</b>	choose colors
<b>[Group] [4] [Full] [Full], make them green</b>	choose colors
<b>[Group] [9] [Full] [Enter], make them green also</b>	choose colors
<b>[Record] [Next] [Label] Cool Look [Enter]</b>	records cue 13
<b>[Group] [4] [Out]</b>	set levels
<b>[Group] [2] [Enter], make them orange</b>	set levels
<b>[Record] [Next] [Time] [2] [Label] Color Change [Enter]</b>	records cue with a 2 second fade (14)
<b>[Select Active] [Out]</b>	takes lights out
<b>[Record] [15] [Time] [7] [Label] Fade to Black [Enter] [Block] [Assert] [Enter]</b>	records a fade to black with a 7 second fade (15)

## RECORD CUES WITH FOCUS & FORM

<b>[121] [Thru] [128] {Offset} {Odd} [Full] [Enter]</b>	set levels, focus fixtures, set zoom level, select color
<b>[Next] to select Ch. 121</b>	
<b>Use encoders to pan/tilt fixture onto lead singer on box</b>	
<b>[Next] to select Ch. 123 focus onto lead singer on box</b>	
<b>[Next] to select Ch. 125 focus onto drummer</b>	
<b>[Next] to select Ch. 127 focus onto drummer</b>	
<b>[Select Last] {Zoom} [19] [Enter],</b>	
<b>Make them yellow using Standard Colors</b>	
<b>[Record] [16] [Time] [1] [Shift]&amp;[Color] [Time] [5] [Label] Yellow [Enter]</b>	stores cue 16 with a 1 second intensity time and a 5 second color time
<b>[Group] [2] [At] [50] [Rem Dim] [Enter]</b>	set levels
<b>Using Standard Colors, set to 3500K</b>	set as a warm white color
<b>[Record] [17] [Enter]</b>	stores cue 17

## RECORD CUES WITH FOCUS, FORM AND IMAGE

<b>[Group] [5] [Full] [Full],</b>	set levels,
<b>[Focus], use encoder to tilt them on stage</b>	pan just off proscenium
<b>{Zoom} [26] [Enter]</b>	
<b>[Image], use Gobo Select encoder to select Fracture (gobo 3)</b>	
<b>[Form], use Edge encoder to make gobo sharp</b>	
<b>[Image], use Gobo Index/Speed Mode encoder to select {Rot+}</b> and use the encoder to make them rotate	watch the command line
<b>[Select Last] {Offset} {Even} set Gobo Index/Speed Mode to {Rot-}</b>	
<b>[Select Last] [Select Last] [Enter], make yellow using Std Colors</b>	cycles through the last 5 command lines
<b>[Record] [Next] [Enter]</b>	records cue 18
<b>[Go To Cue] [11.5] [Enter]</b>	reset to top of cue list and home all non-intensity properties
<b>[▶] (Go), [Shift]&amp;[▶] (Go) to Cue 15</b>	use Timing Disable function to step through cues
<b>[▶] (Go) to play through the new cues</b>	
<b>[Go To Cue] [Out] [Enter]</b>	

AND DON'T FORGET TO SAVE YOUR SHOW FILE!



# Appendix 1 – Channel Hookup

Chan	Univ / Address		Manufacturer	Fixture	Mode	Label
1	1	1	Generic	Dimmer	--	Frontlight - A
2	1	2	Generic	Dimmer	--	Frontlight - B
3	1	3	Generic	Dimmer	--	Frontlight - C
4	1	4	Generic	Dimmer	--	Frontlight - D
5	1	5	Generic	Dimmer	--	Frontlight - E
6	1	33	Generic	Dimmer	--	Frontlight - A
7	1	31	Generic	Dimmer	--	Frontlight - B
8	1	32	Generic	Dimmer	--	Frontlight - C
9	1	35	Generic	Dimmer	--	Frontlight - D
10	1	34	Generic	Dimmer	--	Frontlight - E
31	1	301	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - A
32	1	310	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - B
33	1	319	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - C
34	1	328	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - D
35	1	337	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - E
36	1	346	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - F
37	1	355	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - G
38	1	364	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - H
39	1	373	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - I (eye)
40	1	382	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - J
41	1	391	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - K
42	1	400	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - L (ell)
43	1	409	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - M
44	1	418	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - N
45	1	427	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - O (oh)
46	1	436	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - P
47	1	445	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - Q
48	1	454	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight – R
49	1	463	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight – S
50	1	472	ETC Fixtures	ETC D60 Lustr+	Direct Str [9]	Downlight - T
51	2	1	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 1 → Left
52	2	7	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 1 → Mid
53	2	13	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 1 → Right
54	2	19	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 2 → Left
55	2	25	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 2 → Mid
56	2	31	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 2 → Right
57	2	37	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 3 → Left
58	2	43	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 3 → Mid
59	2	49	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 3 → Right
60	2	55	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 4 → Left
61	2	61	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 4 → Mid
62	2	67	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 4 → Right

+ End of range +



Chan	Univ / Address		Manufacturer	Fixture	Mode	Label
71	2	73	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 1 ← Right
72	2	79	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 1 ← Mid
73	2	85	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 1 ← Left
74	2	91	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 2 ← Right
75	2	97	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 2 ← Mid
76	2	103	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 2 ← Left
77	2	109	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 3 ← Right
78	2	115	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 3 ← Mid
79	2	121	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 3 ← Left
80	2	127	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 4 ← Right
81	2	133	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 4 ← Mid
82	2	139	ETC Fixtures	ColorSource SPOT	Direct [6]	Hi Side Tx - Ln 4 ← Left
101	2	201*	High End Systems	SolaFrame Theatre	SolaFrame Theatre [47]	FOH Mover - Spot
102	2	251	High End Systems	SolaFrame Theatre	SolaFrame Theatre [47]	FOH Mover - Spot
103	2	301	High End Systems	SolaFrame Theatre	SolaFrame Theatre [47]	FOH Mover - Spot
104	2	351	High End Systems	SolaFrame Theatre	SolaFrame Theatre [47]	FOH Mover - Spot
105	2	401	High End Systems	SolaFrame Theatre	SolaFrame Theatre [47]	FOH Mover - Spot
		* Think Offset!				
121	4	1	High End Systems	SolaWash 2000	SolaWash 2000 [36]	Overstage Mover - Wash
122	4	37	High End Systems	SolaWash 2000	SolaWash 2000 [36]	Overstage Mover - Wash
123	4	73	High End Systems	SolaWash 2000	SolaWash 2000 [36]	Overstage Mover - Wash
124	4	109	High End Systems	SolaWash 2000	SolaWash 2000 [36]	Overstage Mover - Wash
125	4	145	High End Systems	SolaWash 2000	SolaWash 2000 [36]	Overstage Mover - Wash
126	4	181	High End Systems	SolaWash 2000	SolaWash 2000 [36]	Overstage Mover - Wash
127	4	217	High End Systems	SolaWash 2000	SolaWash 2000 [36]	Overstage Mover - Wash
128	4	253	High End Systems	SolaWash 2000	SolaWash 2000 [36]	Overstage Mover - Wash
141	5	73	ETC Fixtures	S4 LED S2 Lustr	Direct Str [9]	Side - Mid
142	5	82	ETC Fixtures	S4 LED S2 Lustr	Direct Str [9]	Side - Mid
143	5	91	ETC Fixtures	S4 LED S2 Lustr	Direct Str [9]	Side - Mid
144	5	100	ETC Fixtures	S4 LED S2 Lustr	Direct Str [9]	Side - Mid
145	5	109	ETC Fixtures	S4 LED S2 Lustr	Direct Str [9]	Side - Mid
146	5	118	ETC Fixtures	S4 LED S2 Lustr	Direct Str [9]	Side - Mid
147	5	127	ETC Fixtures	S4 LED S2 Lustr	Direct Str [9]	Side - Mid
148	5	136	ETC Fixtures	S4 LED S2 Lustr	Direct Str [9]	Side - Mid

+ End of range +

Chan	Univ / Address		Manufacturer	Fixture	Mode	Label
<b>151</b>	1	281	Generic	Dimmer	--	Side - Scroller
<b>151 P2</b>	1	291	Generic	Scroller	--	Side - Scroller
<b>152</b>	1	282	Generic	Dimmer	--	Side - Scroller
<b>152 P2</b>	1	292	Generic	Scroller	--	Side - Scroller
<b>153</b>	1	283	Generic	Dimmer	--	Side - Scroller
<b>153 P2</b>	1	293	Generic	Scroller	--	Side - Scroller
<b>154</b>	1	284	Generic	Dimmer	--	Side - Scroller
<b>154 P2</b>	1	294	Generic	Scroller	--	Side - Scroller
<b>155</b>	1	285	Generic	Dimmer	--	Side - Scroller
<b>155 P2</b>	1	295	Generic	Scroller	--	Side - Scroller
<b>156</b>	1	286	Generic	Dimmer	--	Side - Scroller
<b>156 P2</b>	1	296	Generic	Scroller	--	Side - Scroller
<b>157</b>	1	287	Generic	Dimmer	--	Side - Scroller
<b>157 P2</b>	1	297	Generic	Scroller	--	Side - Scroller
<b>158</b>	1	288	Generic	Dimmer	--	Side - Scroller
<b>158 P2</b>	1	298	Generic	Scroller	--	Side - Scroller
<b>301</b>	8	1	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>302</b>	8	25	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>303</b>	8	49	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>304</b>	8	73	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>305</b>	8	97	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>306</b>	8	121	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>307</b>	8	145	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>308</b>	8	169	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>309</b>	8	193	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>310</b>	8	217	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>311</b>	8	241	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>312</b>	8	265	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Top
<b>351</b>	9	1	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>352</b>	9	25	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>353</b>	9	49	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>354</b>	9	73	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>355</b>	9	97	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>356</b>	9	121	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>357</b>	9	145	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>358</b>	9	169	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>359</b>	9	193	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>360</b>	9	217	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>361</b>	9	241	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom
<b>362</b>	9	265	Chroma Q	Color Force II 72	RGBA x4 Off [24]	Cyc Bottom





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