



Element Console Programming

Level 1: Essentials

Workbook

V2.6.0 Rev. B

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Purpose of the Class

The Essentials class will provide an overview of the console and programming for conventional 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 amazing console.

LEARNING OBJECTIVES:

After completing the class, one should be able to:

- Identify key elements of the console user interface and navigation
- Manage show files (save, edit, delete)
- Patch conventional and multi-parameter fixtures
- Work with channels in Live mode
- Record, select, and delete groups
- Record, play, and delete a basic cue
- Record to, load, and clear submasters
- Create step-based effects
- Understand the basics of working with a multi-parameter device (introductory concepts)

WORKBOOK SYNTAX ANNOTATION

- **Bold** Browser menus
- **[Brackets]** Face panel buttons
- **{Braces}** Softkeys and direct selects
- **<Angle brackets>** Optional keys or command line text
- **[Next] & [Last]** Keys to be pressed & held simultaneously
- **Play Icon** Link to video on ETC's YouTube Channel – ETCVideoLibrary



HELP

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

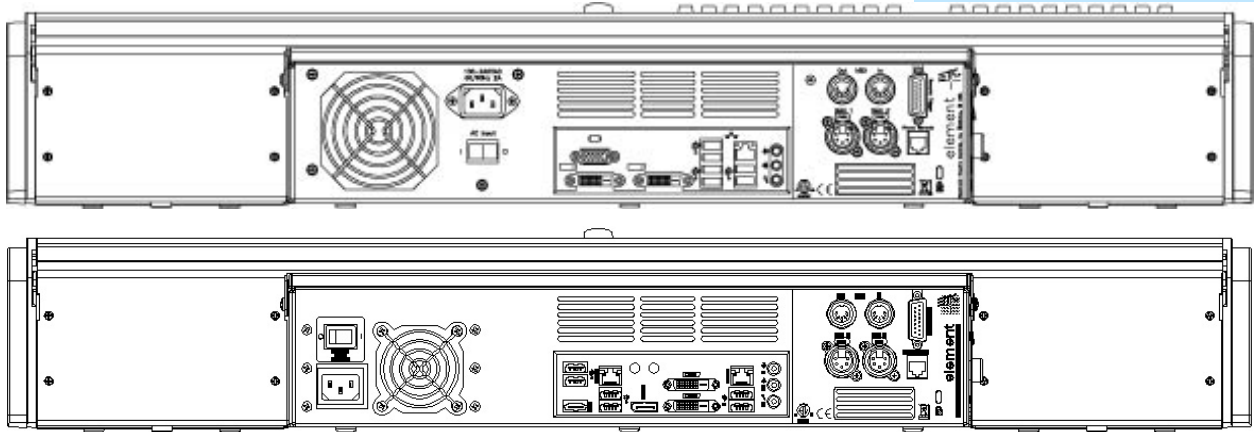
- the name of the key
- a description of what the key enables you to do
- syntax examples for using the key (if applicable)

As with hard keys, the "press and hold [Help]" action can be also used with softkeys and clickable buttons

Getting Acquainted

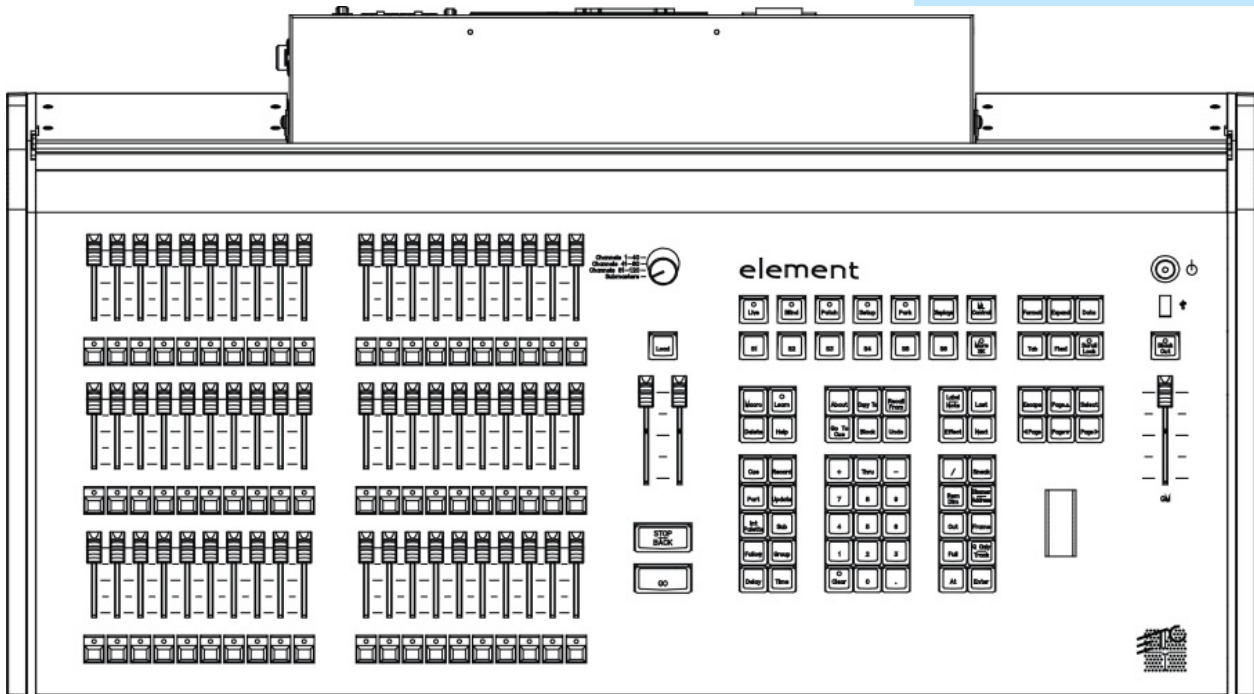
EXPLORING THE BACK OF THE CONSOLE

Fan, power switch, Video outputs, USB, Network, Audio, DMX Outputs, MIDI, Phone Remote, Remote Macro/Trigger, Worklight connector and dimmer



EXPLORING THE FRONT OF THE CONSOLE

Faders (40 or 60), Fader Position Switch, Main Fader Playback, Keypad (targets, numeric, level setting), Level wheel, Display & Navigation keys, Power switch, USB Port, Grandmaster & Blackout





LIVE AND BLIND DISPLAYS

PRIMARY LIVE SCREEN (CHANNEL DISPLAY)

- Summary (Live Channels) or Live Table view
- Selected cue line – displays details of current cue
- Command line
- Fader ribbon – shows state of the faders
- **[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
- **[Scroll Lock]** – when on, scrolls one line at a time
- Press and hold **[Data]** shows absolute data values behind any referenced data. Also **[Data][Data]** will lock the data view, **[Data][Data]** again unlocks

BLIND

- Note the command line color change!
- Note the background change!
- Note the change at the top of the display
- **[Next]** and **[Last]** to preview cues or target
- **[Format]** for summary, table view or spreadsheet in Blind
- When in Blind, Record is not required – changes are stored when the command line is terminated.



FLEXICHANNEL MODE

[Live] Hit [Go] once, then [1] [Thru] [3] [Full] [Enter], and [21] [Thru] [26] [At] [80] [Enter]

In Live, Flexi allows you to view only channels meeting a certain criteria, therefore removing unwanted data from view. Explore Flexi in other displays as there are many options depending on where you are located in the console.

Press [Flexi]

- **Patched channels**
- **Manual channels** – selected channels and/or any channels with manual data (red data)
- **Show channels** – any channels currently active and/ or 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
- **Selected channels** – the channels selected on the command line
- **View Channels** – state does not exist until channels selected – with selected channels, hold **[Flexi]** and press **{View Channels}**.

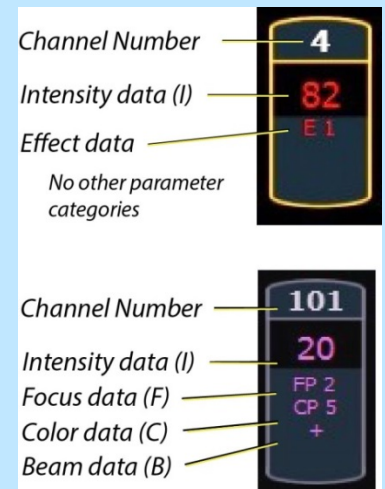
To include channels not in the current flexi mode, use **[Thru] [Thru]**.

In Flexi Patched Channels: [16] [Thru] [21] [Enter]

[Clear] then [16] [Thru] [Thru] [21] [Enter]

To quickly move to different flexi modes:

Hold [Flexi] and use the softkeys



set some levels

changes to next Flexi display

see only patched channels in range

see all channels in range

display options appear as softkeys



PLAYBACK STATUS DISPLAY (PSD OR CUE LIST):

- **[Page▲]** or **[Page▼]** – scrolls the cue list up and down a full page
- **[Scroll Lock]** – when on, scrolls one line at a time
- **[Next]** or **[Last]** - moves up and down through the cue list
- If in another tab, **[Shift]&[Page▲]** or **[Page▼]** will page up and down in the PSD without needing to pull focus to that tab
- Lower right corner – softkey display – bottom, white is current page; top, gray is other page. Toggle with **[More Softkeys]**



CENTRAL INFORMATION AREA (CIA)

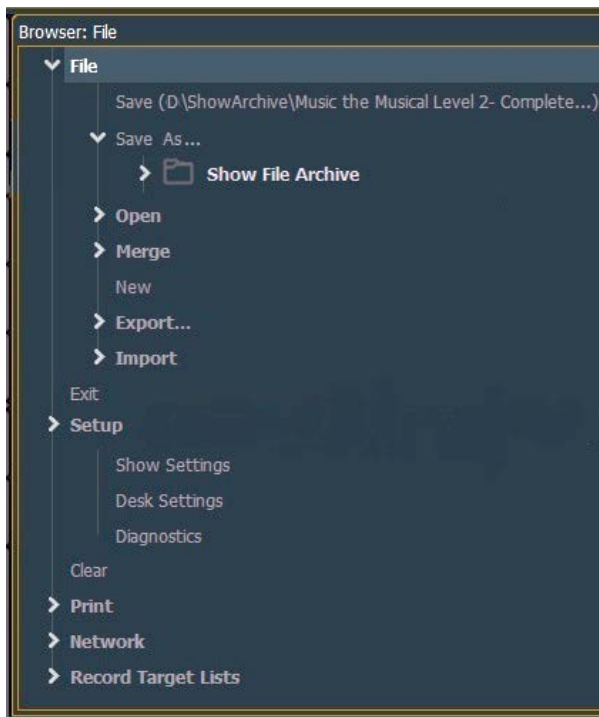
The default view is the parameter display and the browser. A number of different tools can be posted to the CIA.

- **[Displays]** will always draw focus to the item set as favorite
- Collapse and expand the CIA by pressing **[Displays]** again or using the triangle (Δ, ▽)
- Double tap **[Displays]** will always bring up the browser.
- Use the **Lock** to prevent the CIA from being collapsed

BROWSER

Numerous functions including saving a show, opening a show, changing settings, clearing targets, print function and viewing record target lists.

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



BROWSER COLOR

CODING:

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

DISPLAY MANAGEMENT TOOLS

Several display management tools make the layout of your screens more efficient as your programming skills advance.



DISPLAY TAB NAVIGATION

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

OPEN DISPLAYS USING DOUBLE PRESS

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

OR USING {+} SIGN OR ADD-A-TAB

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

TO MOVE DISPLAYS

Hold [Tab] and use the page left and page right keys

TO OPEN OR NAVIGATE TO DISPLAYS

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

Hold [Tab] & press [#] of specific display

Press [Live] or [Blind]

TO CLOSE DISPLAYS

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

Or right click on a specific tab

Right Click on a Tab:

- o {Close Tab}
- o {Replace Tab} – replace tab with a different tab
- o {Close All Tabs But This}
- o {Close All Tabs}
- o {Lock Frame} – prevents other tabs from being moved to screen

Note: Live/Blind display is Tab 1. Playback Status display is Tab 2. Neither can ever be closed.

CLOSE ALL TABS

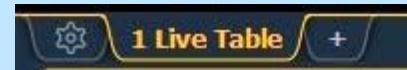
Hold [Shift] & press [Tab]

Hold [Shift] & press [Tab] [Tab]

Or click on the Gear tab

Gear Tab Options:

- o {Close Tab}
- o {Replace Tab} – replace tab with a different tab
- o {Close All Tabs But This}
- o {Close All Tabs}
- o {Lock Frame} – prevents other tabs from being moved to screen
- o {Open New Tabs in this Frame}



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

opens the home screen or display and control options

to move the active display from one monitor to another

to change focus from open display to the next open display

to open/select/highlight a specific display by number

to instantly bring Live/Blind into focus

to close any tab display

to see tab options

to close all tabs on a single screen

to close all tabs but tabs 1 and 2 on all screens

to see additional tab options



DISPLAY LAYOUTS AND WORKSPACES

DISPLAY TOOLS

Press the icon in upper left hand corner of the display

Layout options give the ability to select different ways to split the screen. A screen can have up to four frames in its layout. Frames can have multiple tabs open.

Select the split screen or side-by-side layout

Press the Displays Tool icon again

In the Options area, select the first icon to resize the frames

Use the arrows to choose how large or small the frame will be

Tap anywhere on the screen to exit frame sizing

FIXED TAB NUMBERING

All Display and Control tabs have fixed tab numbering. Patch will always be 12, Group List, 17. When you press **[Tab]** repeatedly, focus moves numerically through all open tabs on active workspaces.

Hold [Tab] & press [4]

Hold [Tab] & press [4.2]

WORKSPACES

A workspace might be made up of multiple frames with a selection of tabs that are task-specific. For each monitor, you can have up to three workspaces.

Use **[Tab]&[Page▲]** or **[Tab]&[Page▼]** to scroll through the workspaces on all monitors.

RESET OPTIONS

The Display Controls Screen also offers options for opening and closing tabs as well as resizing and resetting the monitor(s).

- Open New Tabs On This Monitor – redirects to the Home...
- **Resize Frames In This Workspace** - opens resizing tools between frames of the workspace to adjust sizing as needed.
- **Monitor Mapping** - ability to configure your external monitor arrangement (internal displays cannot be renumbered)
- **Close All Tabs In This Workspace** - close all of the tabs in the active workspace on this monitor only.
- **Reset This Workspace** - closes all of the tabs and frames and resets the layout for the active workspace to a single frame displaying the Home Screen
- **Reset ALL Monitors & Workspaces** - closes all of the tabs and frames on *all* monitors, resets all layouts to a single frame, and returns their workspaces to the Home Screen

After playing, use the Reset ALL Monitors & Workspaces icon



moves focus to or opens a specified tab

opens a secondary tab



close all of the tabs and frames on *all* monitors

Getting the Lights On

A new show will always default to a “1-to-1” patch. Since the show starts off patched, you can begin bringing up levels immediately.



SETTING LEVELS WITH CHANNEL FADERS

FADER MODE SWITCH

Use the **Fader Mode Switch** to change the channels the faders will control. The first 120 channels can be controlled via the faders. Channel 121 and above must be controlled from the keypad.

Set the switch to Channels 1 - 40.

first two rows control channels 1 - 40

Raise or lower the faders to control channels 1 - 40.

Leave at least one fader up at a level

FADER STATUS BAR

Notice the **Fader Status Bar** or display across the bottom of one of your displays. As you change the Fader Mode Switch, the Fader bar switches as well. The Status bar displays:

- Channel or sub number
- Channel or sub label
- Current level both by percentage and by level bar (on left)
- Arrows - show direction to move faders to match previous positions

| | | | | | | | | | |
|-------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| Ch 1 dsr FL | Ch 2 usc FL | Ch 3 dsl FL | Ch 4 4 FL | Ch 5 5 75% | Ch 6 6 75% | Ch 7 7 75% | Ch 8 8 75% | Ch 9 9 50% | Ch 10 10 50% |
| Ch 21 21 0% | Ch 22 22 0% | Ch 23 23 0% | Ch 24 24 0% | Ch 25 25 0% | Ch 26 26 0% | Ch 27 27 0% | Ch 28 28 0% | Ch 29 29 0% | Ch 30 30 0% |
| S 41 specials 50% | S 42 | S 43 | S 44 | S 45 | S 46 | S 47 | S 48 | S 49 | S 50 |

Set the switch to Channels 41 - 80.

first two rows control channels 41 - 80

Notice the yellow arrow on the fader(s) that you left at a level

Lower the fader(s) to zero and then fade up again

to take control of the new channel

TO CHANGE LEVELS SET AT PREVIOUS POSITIONS

Set the switch back to the appropriate mode

first two rows control channels 41 - 80

Raise or lower the fader(s) to meet the level of the channel

to take control of the new channel

Raise or lower the fader(s)

to set a new level

You could also set a new level by using the keypad or clear the levels using **[Clear]** **[Sneak]** **[Enter]**.

Patch

Press **[Patch]**, or **[Displays] {S3 - Patch}** to get to the Patch display. Can also double tap **[Dimmer/Address]** or use **Add-a-Tab**. By default, patch is displayed in a channel view. You can change the display to sort by address by pressing **[Format]**.



PATCH BY CHANNEL

| | |
|---|---|
| [201] [At] [250] [Enter] | selects channel 201 and patches address 250 to it |
| [202] [At] [617] [Enter] | selects channel 202 and patches the address 617 to it |
| [203] [At] [2] [/] [106] [Enter] | selects channel 203 and patches the 2 nd universe address 106 to it |
| Press [Data] | displays all 3 channels in output address style. Note mode in left corner |
| Press [Data] again | displays all 3 channels in port/offset style. Note mode again in left corner |
| Press [Data] again | returns to how it was originally entered |

RANGE PATCHING

| | |
|---|--|
| [204] [Thru] [210] [At] [251] [Enter] | selects channel 204 thru 210 and patches address 251 thru 257 to them |
| [211] [At] [270] [Thru] [275] [Enter] | selects channel 211, patches addresses 270 thru 275 to it, creates parts |
| [212] [Thru] [220] [At] [431] {Offset} [3] [Enter] | allows for a three-cell cyclight patch |



CLEAR VS. UNPATCH VS. DELETE

| | |
|--|---|
| [201] [At] [0] [Enter] [Enter] or [201] [At] [Enter] [Enter] | removes the address, leaves type, etc. |
| [202] {Unpatch} [Enter] [Enter] | restores to default properties – removes address, type, label, etc. |
| [Delete] [203] [Enter] [Enter] | deletes the whole channel from show |
| [Live] and look at the Channel View (No Flexi) | |



UNDO

| | |
|--|-------------------------------|
| [Undo], see the command history in the CIA [Enter] | restores channel 203 |
| [Undo], page up to "Channel 201 Address 0" [Enter] | restores channels 201 and 202 |
| Only one opportunity to do a {Redo}. Command History is cleared after a save. | |



PATCH BY ADDRESS

| | |
|--|---|
| Back in {Patch}, press [Format] to switch to 'By Address' | a toggle function – address or channel |
| [460] [At] [225] [Enter] | selects one address, 460, and patches it to channel 225 – note command line |
| [461] [Thru] [465] [At] [230] [Enter] | selects a range of addresses and patches them to one channel (parts) |



PATCH A MULTI-PARAMETER DEVICE

Back in {Patch} - By Channel Format

[241] [Thru] [246] [Enter]

selects the channels

Click on {Type} in the CIA area

notice two softkeys: {Favorites} {Manfctr}

Click on {Manfctr}

2 left columns show manufacturers; right columns fill with their devices

Find {Martin} in left columns, and {Mac 250 Wash 16B} in right

notice Mac 250 Wash in blue – multiple modes available

Select {Mac 250 Wash 16B} for standard 16B mode

fixture placed on the command line after channels

[At] [2] [/] [411] [Enter]

patches all four fixtures with a starting address in universe 2

[At] [2] [/] [411] {Offset} [15] [Enter] [Enter]

now look at the addresses

PATCH A COMPOUND FIXTURE

A compound fixture is a fixture that is made up of more than one device - a fixture with several accessories (such as a fixture with a color scroller, a gobo rotator, and so on).

[247] [Thru] [250] [At] [2] [/] [111] [Enter]

patches the first part of channels - the dimmer

[Part] [2] [Enter]

creates a part 2 for selected channels

{Type}, {Manfctr}, {Generic}, find {Scroller}

makes part 2 a generic scroller giving the channel a color parameter

[At] [2] [/] [121] [Enter]

gives a starting address for all the part 2's

[Part] [3] [Enter]

creates a part 3 for selected channels

{Type}, {Search}, Rosco Gobo Rotator and click on the result

makes part 3 a gobo rotator giving the channel a beam parameter

[At] [2] [/] [131] [Enter]

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

steps through all patched channels

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

steps through DMX addresses

[Clear] to clear the command line

to end the channel check

SAVE SHOWFILE

[Browser], File > Save or Save As > Showfile Archives > {OK}.

Press [Label] to clear "Show File". Type a show name, then [Enter].

QUICK SAVE: HOLD [SHIFT] AND TAP [UPDATE].

Working with Channels



SET CHANNELS IN LIVE

[Live] if you are not already there

[1] [+] [3] [At] [5] [Enter]

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

[31] [Thru] [45] [-] [37] [-] [39] [At] [65] [Enter]

using minus for individual channels

[51] [Thru] [56] [Full] [Enter]

using Full without [at]

[57] [Thru] [61] [Full] [Full]

another way to get Full

[62] [Thru] [67] [At] [At]

user-definable Level – change in Setup

[11] [+] [12] <Enter> level wheel

proportional control

[21] [At] [50] [Enter] then [Shift]&[+], [Shift]&[-]

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

[23] [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 current levels, adds 400%

[51] [Thru] [67] [Out]

self-terminating

[51] [Thru] [67] [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 IN LIVE

Offset aids in channel selection, many offset options are available.

[31] [Thru] [45] {Offset} {Even} [At] [80] [Enter]

selects even channels

[51] [Thru] [67] {Offset} [3] [At] [75] [Enter]

selects an offset of every third channel



SNEAK

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

[3] [Sneak] [Enter]

restores channel to background state using default sneak time

[Clear] [Sneak] [Enter]

restores all manual levels to background states (Clear empties the command line)

[1] [Thru] [9] [At] [5] [Sneak] [Enter]

brings channel to level in default time

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

brings channel to level in 3 seconds

[9] [Full] [Sneak] [0] [Enter]

brings channels to full instantly

FLASH

[2] {Flash} then [Next]...{Last} [Clear] to stop

channel bumps from 15% to full and back till command line is cleared

[2] [Shift] [&] [Full] [Shift] [&] [Out]

on or off while held

Groups



RECORDING GROUPS IN [LIVE]

[Clear] [Sneak] [Enter]

[4] [Thru] [9] [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

[1] + [4] + [2] + [5] + [3] [Record] [Group] [30] [Enter]

records the selected channels to group 30

WORKING WITH A GROUP

[Group] [1] [At] [Full] [Enter]

brings group 1's channels to Full

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

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

[Clear] {Select Last} [At] [30] [Thru] [Full] [Enter]

reselects the whole group and fans intensity across the range



GROUP LIST IN BLIND

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

opens a list of all groups recorded

CREATE A GROUP

[Group] [3] [Enter] [27] [Thru] [30] [Enter] [Label] Extras [Enter]

creates group 3 in the Group List

EDIT A GROUP

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

adds or deletes channel to a group

[Group] [1] [Enter] [2] {Insert Before} [8] [Enter]

watch softkeys for additional options

DELETING GROUPS

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

deletes group 1 (2nd enter to confirm)

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

deletes groups 2 and 3

Will still have Group 30 for later use

Group Exercise - Create the following groups:

| Group # | Label | Channels |
|---------|--------------|---------------|
| 1 | Specials | 1 thru 3 |
| 2 | Band | 4 thru 9 |
| 3 | Blue Sides | 11 + 12 |
| 4 | Pink Sides | 13 + 14 |
| 5 | Yellow Sides | 15 + 16 |
| 6 | Texture | 21 thru 26 |
| 7 | Top Lights | 31 thru 45 |
| 8 | LED Cyc | 51 thru 67 |
| 11 | Robin 300 | 101 thru 106 |
| 12 | VL3500s | 111 thru 115 |
| 30 | Effect 1 | 1, 4, 2, 5, 3 |

NO GROUP 9 OR 10!

Non-Intensity Parameters



NON-INTENSITY PARAMETER CONTROL (IFCB)

[Live] if you are not already there [Clear] [Sneak] [Enter]

FOUR MAJOR PARAMETER CATEGORIES (IFCB):

- **I = Intensity** . . . Intensity
- **F = Focus** . . . Pan and Tilt
- **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, etc.
 - **Shutter** - includes all of the framing parameters



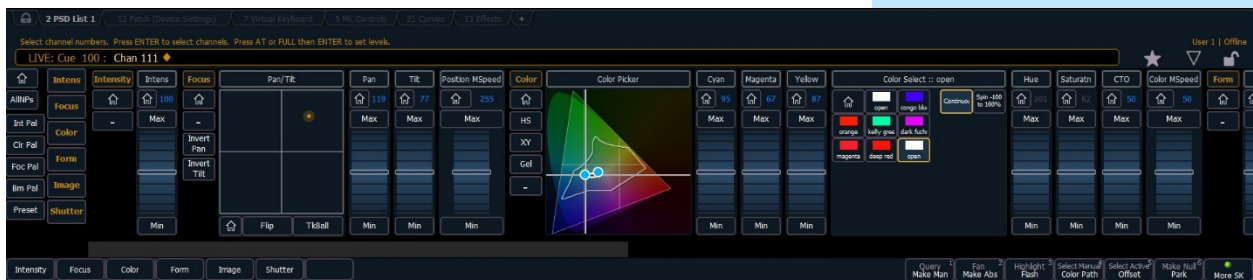
ML CONTROLS

Press [ML Control]

to open display in the CIA area

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

to open display in tab



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** allows you to home a specific parameter or attribute of a parameter.
- **Virtual encoders** (Click and hold close to the center line for slow movement, further away for faster movement.)
- **Color picker** and **gel picker**
- **Scroll bar** – multiple rows of parameter will now display and you can scroll either horizontally or vertically depending on the frame



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

ML CONTROL POPUP

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

to open the ML popup window



COLOR CONTROLS

COLOR CONTROL WITH SCROLLERS

[Group] [6] [Full] [Enter]

- Press **[Frame] [5] [Enter]** – advances scroller to fifth frame of scroll
- In ML Controls, click on a different scroller color tile
- Tap the header **{Color}** or the header **{Scroller}** – puts either on the command line – then press **[11]** for frame 11 and **[Enter]**
- Go to **[Displays]** for the CIA – tap the scroller tile on the left side of the CIA – then press **[9]** for frame 9 and **[Enter]**
- Under Color, tap **{Home}** to take the scroller back to its starting frame

COLOR CONTROL WITH LEDs

[Clear] [Sneak] [Enter] [Group] [8] [Full] [Enter]

In ML Controls, dial the encoders

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

Tap the 'Green' header on the touchscreen, then **[50] [Enter]**

Select a color using the Color Picker

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

COLOR PICKER

Press **[Displays]** and select **{Color Picker}** from the softkeys to open in the CIA or click on **Add-a-Tab** (the **{+}** sign) to add a new display tab.

- When first opened, the CIE XY color space and the gel picker will open by default.
- A white line represents the limit of a fixtures color capabilities. With multiple fixture types selected, the line is still displayed, but adapts based on fixtures selected.

GEL PICKER

Within the color picker, you will also see a column of buttons down the center with a scroll bar. Using these buttons, you are able to select a specific gel manufacturer and a specific color.

- 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] [8] {Home, ⌂} [Enter]

Tap **{1 Apollo}**, then find **{AP1950}** - a green

Tap **{5 Rosco Roscolux}**, then find **{R027}** - a red

[Group] [8] {Color} tile and **[5] [/] [339] [Enter]**

Or can do [Group] [8] [At] **[5] [/] [339] [Enter]**

Scroll down the column to **{Standard Colors}**, pick 1 or 2



notice all colors at 100%

easy to use two hands for color mixing

leaves a nice red cyc

adds 50% of green into cyc



watch cyc change color

watch cyc change color

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

Cues



RECORD A CUE

| | |
|--|---|
| [Clear] [Sneak] [Enter] [Group] [1] [Full] [Enter] | set levels for specials |
| [Record] <Cue> [1] [Enter] | stores cue 1 – note channels turn blue |
| [Group] [2] [-] [8] [-] [9] [At] [80] [Enter] | adds additional lights to look |
| [Record] [2] [Enter] | stores cue 2 – note channels colors |
| [1] [+] [3] [Out] [21] [Thru] [26] [At] [50] [Enter] | levels going up and down in cue |
| [Record] [Next] [Enter] * | stores next cue (3) – note channel colors |
| * When you use [Record] [Next] , remember what cue number you are on. If Cue 1, then Next = 2. If Cue 2.7, then Next = 2.8. If Cue 2.11, then Next = 2.12 | |



RECORD WITH TIME

| | |
|---|---|
| [Clear] {Select Last} [Out], [Group] [7] [Full] [Enter] | selects channels that had been used |
| [Record] [4] [Time] [4] [Enter] | stores cue 4 with 4 second up/down time |
| [21] [Thru] [26] [Full] [RemDim] [Enter] | set levels using [Remainder Dim] |
| [Record] [5] [Time] [3] [Time] [7] [Enter] or [Time] [3] [/] [7] [Enter] | specifies split up/down times |

RECORD WITH TIME AND LABEL

| | |
|--|--|
| [Group] [8] [Full] [Full], make blue, [2] [+] [11] [+] [12] [Full] [Full] [1] [Thru] [7] [-] [2] [At] [50] [Enter] [21] [Thru] [26] [Out] | set levels and colors using basic encoders |
| [Record] [6] [Time] [2] [/] [4] [Label] Blue [Enter] | stores cue, timing and label |
| [Clear] {Select Active} [Out] | takes active channels' intensities out |
| [Record] [7] [Time] [0] [Label] Blackout [Enter] | stores cue, timing and label |
| [1] [Thru] [3] [Full] [Enter] | creates new cue after blackout |
| [Record] [8] [Time] [2] [Enter] | stores cue, timing and label |



DELETE A CUE

| | |
|---|---------------|
| [Delete] <Cue> [8] [Enter] [Enter] again to confirm | deletes a cue |
|---|---------------|

Notice Cue 8 is still on stage although it was just deleted

| | |
|--|----------------------------------|
| [Goto Cue] [7] [Enter] or just [Goto Cue] [Enter]. | to refresh the master fader pair |
|--|----------------------------------|

NOW...RUN THE CUES!

Playback



BASIC PLAYBACK

| | |
|---|---|
| [Go To Cue] [Out] [Enter] | resets the cue list to the top |
| Press [Go] | executes the pending cue |
| Press [Stop/Back] while a cue is running | fader activity is instantly stopped mid-transition (paused) |
| Press [Stop/Back] again | if cue stopped or complete, will play the previous cue |
| [Go] after [Stop/Back] | resumes the current cue |

[Back] uses default timing established in Setup.

CONTROLLING PLAYBACK MANUALLY

By default, the main playback fader pair should be at the top of the run before pressing **[Go]** to play cues back as recorded.

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]**.



GO TO CUE

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

| | |
|----------------------------------|---|
| [Go To Cue] [Out] [Enter] | sets <u>all values</u> to home and resets the <u>cue list</u> to the top of the list |
| [Go To Cue] [0] [Enter] | sets all current <u>intensity</u> values to zero and resets the cue list to the top of the list, with the first cue pending |

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 |
| [Go To Cue] [4] [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] [Load] and then press [Go] | loads a specific cue into pending status on the main playback faders |
|--|--|

ADDITIONAL CUE TIMING



CUE DELAY

| | |
|---|--|
| [Go To Cue] [Out] [Enter] | start with a clean stage |
| [3] [+] [13] [+] [14] [Full] [Full], [51] [Thru] [67] [At] [Full], in pink | set levels |
| [Record] [9] [Delay] [3] [Label] Pink [Enter] | stores cue with a 3 second delay on intensity |
| [1] [+] [23] [Full] [Rem Dim] [Enter] | set levels |
| [Record] [10] [Delay] [Delay] [4] [Enter] or [Delay] [/] [4] [Enter] | records cue with a 4 second delay on just the down time |
| [23] [Out] [51] [Thru] [67] [Full] [Enter] and in yellow [21] [Thru] [26] [Full] [Enter] [Frame] [2] [Enter] | set levels - lots of yellow |
| [Record] [11] [Time] [3] {Color} [Delay] [7] [Label] Yellow [Enter] | records cue with a 3 second upfade, and a 7 second delay on the color change |
| [Go To Cue] [7] [Enter] and press [Go], play thru the cues | watch for the different delays |

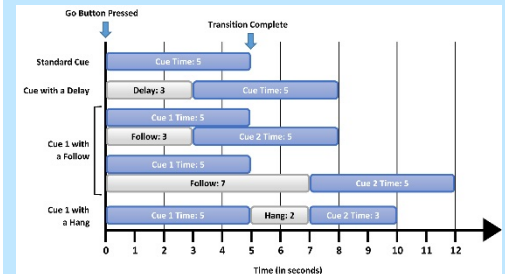


CUE FOLLOW/HANG (AUTO-FOLLOWS)

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] [1] [Thru] [3] [Time] [3] [Enter] | Change timing for faster playback |
| [Cue] [1] {Follow/Hang} [3] [Enter] | records cue with a follow time of 3 seconds |
| [Go To Cue] [Out] [Enter] and press [Go] | watch the cue |
| [Cue] [2] [Shift]&[Delay] [5] [Enter] | records cue with a follow time of 5 seconds |
| [Cue] [3] [Shift]&[Delay] [Delay] [3] [Enter] | records cue with a hang time of 3 seconds |
| [Go To Cue] [Out] [Enter] and press [Go] | watch the cues play |



CUE LINK/LOOP

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

Loop is a sequence of linked cues that plays a certain number of times.

| | |
|--|---|
| [Cue] [4] {Link/Loop} [1] {Follow/Hang} [2] [Enter] | links to cue 1 from cue 4 with a 2 second follow time |
| [Cue] [4] {Link/Loop} {Link/Loop} [4] [Enter] | have it loop 4 times |
| [Go To Cue] [Out] [Enter] and press [Go] | watch the sequence – notice loop count |
| Press [Go] at any time after first loop and will play cue 5 | |
| To indefinitely loop {Link/Loop} {Link/Loop} [0] [Enter] | loops the sequence indefinitely |
| [Cue] [4] {Link/Loop} [Enter] | to remove links <u>and</u> loops |

TRACK/CUE ONLY/BLOCK

Element is a tracking style console which means that just moves or changes are stored in each cue and played back.

[Blind], [Format]

to go to the spreadsheet view

TRACK

[Cue] [1] [Enter] [8] [At] [80] [Enter]

adds channel and tracks it all the way through all the cues

CUE ONLY

[Cue] [1] [Enter] [9] [At] [40] [Q Only/Track] [Enter]

adds channel 9 to cue 1 and inserts a move to zero in Cue 2

[Cue] [1] [Thru] [3] [Enter] [9] [At] [40] [Enter] [Undo]

creates a move in the first cue and tracks through all cues

[Cue] [1] [Thru] [3] [Enter] [9] [At] [40] [Q Only/Track] [Enter]

modifies the three cues and inserts a move to zero in Cue 3

[Cue] [8] [Enter] Please confirm. [Enter]

creates a new cue that channel 8 tracks through

BLOCK

A block is an editing tool that prohibits changes upstream from tracking into the blocked cue/data.

[Cue] [7] [Block] [Enter]

Channel 8 & 9 are white - blocked

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

[Cue] [1] [Enter] [10] [At] [80] [Enter]

adds channel to cue and tracks it till it reaches the block

AUTOBLOCK

Autoblock will protect a move when a level upstream is matched.

[Cue] [1] [Enter] [4] [At] [80] [Enter]

Autoblock created in cue 2 - white

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

CLEAR AN AUTOBLOCK

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

clears an autoblock

An alternative is to use the **[Block] [Enter] [Block] [Enter]** syntax.

[CHECK OUT THE BOBBLEHEAD FRED VIDEO THAT HELPS TO EXPLAIN THE DIFFERENCE IN STYLE OF OPERATION BETWEEN TRACKING AND PRESET CONSOLES AND THEIR ORIGINS.](#)



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]

[15] [At] [50] [Enter]

makes a changes to an existing cue

[Update] Notice default Make Absolute style [Enter]

change is now stored in cue

[Blind] Spreadsheet view

See how channel 15 turned on in cue 2 and tracked till the block in cue 7.

UPDATE CUE ONLY

To prevent or limit the tracking function

[Live] [16] [At] [75] [Enter]

makes another change in the cue

[Update] [Cue Only] [Enter]

records without tracking

[Blind] Spreadsheet view

note changes for channel 16

See how channel 16 turned on in cue 2 and turned off in cue 3.

MOVE INSTRUCTIONS

Other existing move instructions will also stop values from tracking through.

See how channels 11 and 12 turn on to full in cue 6.

note the move instruction in cue 6

[Live] [11] [+] [12] [At] [40] [Enter]

makes another change in the cue

[Update] [Enter]

records allowing tracking

[Blind] Spreadsheet view

note changes for channels 11 and 12

See how channels 11 and 12 turned on in cue 2 and moved to full in cue 6.

Submasters



RECORD A SUBMASTER IN LIVE

[Go To Cue] [Out] [Enter]

start with a clean stage

[Group] [1] [At] [Full] [Enter]

set levels

[Record] [Sub] [1] [Enter]

records the current stage state to sub 1

Note: You can use this syntax even if the Fader mode Switch is set to any channel mode.

SUBMASTER SWITCH

Set the Fader Mode Switch to Submaster mode

notice green LED on first fader, top row

[Clear] [Sneak] [Enter] and slide the fader up/down

yellow levels mean control by sub

Notice the Fader Status bar or display across the bottom of the Playback Status screen has changed to yellow. You will also see the following when the switch is in submaster mode:

- Submaster number
- Current level as well as a level bar on side
- Submaster label (if any)
- Inhibitive flag (if any)
- I-Master flag (I.M. - if any)

[Group] [8] [Full] [Enter], in Blue, [2] [+] [11] [+] [12] [Full] [Enter]

set levels

[Record], then press the bump button of the next fader

records the current stage state to fader

[Clear] [Sneak] [Enter] and slide the fader up/down

clear manual values and run fader

[Recall From] [Cue] [9] [Enter]

set levels

[Record] [Sub] [3] [Label] Pink [Enter]

from the command line...with a label

[Clear] [Sneak] [Enter] and slide the fader up/down

clear manual values and run fader



CREATE A SUBMASTER IN BLIND

[Blind] [Sub] [31] [Enter] [21] [Thru] [26] [Full] [Enter]

records values to sub – in Blind

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



COMMAND LINE CONTROL OF SUBMASTERS

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

brings sub to 50% or to Full

Notice the blinking LED on the submaster button, indicating that the fader does not match that value. In the Fader Display, the arrow shows you which direction to move the fader to match the value and take control

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

sneaks sub to 85% in default sneak time

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

takes sub out regardless of fader position



CHANGE FADER PAGES

There are multiple pages of submasters – up to 1000 submasters total.

On an Element 40, there are 25 pages of submasters.

On an Element 60, there are 17 pages of submasters.

| | | |
|---|-----------------------------------|--|
| [Clear] | Press and hold {Page Subs} | shows page numbers in fader status display |
| Press the bump button of the next fader (page 2) | | |
| <i>* Current page bump button will be flashing till you select the new page</i> | | |
| [Clear] [Sneak] [Enter] and slide fader up - leave it up | | view sub levels |
| Hold {Page Subs} and press bump button of page 1 | | go back to page 1 |
| Notice the flashing LED and the small arrow on the fader status display | | |
| Slide the fader down to match levels of fader on page 1 | | notice sub 101 levels are still there |



DELETE SUBMASTERS

| | |
|--|----------------------------------|
| [Delete] [Sub] [3] [Enter] [Enter] | deletes the contents of sub 3 |
| [Delete] [Sub] [1] [Thru] [Enter] [Enter] | deletes the contents of all subs |

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



TIMING ON SUBMASTERS

Changes can be done in Live or in Sub List. Uses bump button as the GO.

| | |
|--|--|
| Press and hold {Page Subs} and press page 1 | back to page 1 |
| [Sub] [1] [Time] [3] [Time] [4] [Time] [3] [Enter] | adds a 3 sec upfade, 4 sec dwell and 3 sec down fade |
| Press the bump button of fader 1 just once | fades up, dwells, then fades down |
| HOLD | |
| [Sub] [1] [Time] [Time] {Hold} [Enter] | changes the dwell time to 'hold' |
| Can also just type [Sub] [1] {Hold} [Enter] | another way to add a 'hold' time |
| Press the bump button to start the upfade | fades up, holds indefinitely |
| <i>Notice the bump button LED flashing to show that levels are held.</i> | |
| Press the bump button to start the downfade | fades down |
| RESTORE TO DEFAULT TIME | |
| [Sub] [1] [Time] [Enter] | resets to default times (0/Man/0) |



SUBMASTER LIST

[Sub] [Sub] or Add-a-Tab (the {+} sign) (Tab 15)

opens the submaster list

PERCENT (%) - shows the current level in Live of each submaster.

LABEL

[Sub] [1] [Label] Specials [Enter]

displayed in List as well as Sub display

MODE: ADDITIVE OR INHIBITIVE

Additive contributes levels to the stage. **Inhibitive** prevents levels from contributing to the stage, like a mini grand master for specific channels.

[Sub] [1] {Inhibitive},

Push fader to Full

makes sub 1 an inhibitive sub

In the fader ribbon, sub 1 has turned red and is at Full. Its LED is blinking. Move the fader up to match level and take control.

Live: [Go To Cue] [1] [Enter]

runs the cue with specials

Slowly bring the fader out.

Push fader to Full

specials go out - notice small 'I' in channel display

Notice the small yellow 'I' to indicate that those values are inhibited.

[Go To Cue] [Out] [Enter]



MASTER: PROPORTIONAL OR INTENSITY MASTER

Proportional submasters control all contents of the submaster (intensity and non-intensity parameters). (DEFAULT)

[Group] [11] [Full] [Full], tilt up on cyc

[Record] [Sub] [10] [Enter]

[Clear] [Sneak] [Enter]

records sub and clears manual values

Then bring fader up, see live changes, and bring fader down

shows proportional control of contents

Intensity masters control intensity only. The bump button is used to preset (mark and unmark) non-intensity parameters.

[Sub] [10] {Properties}, under Master, {Int}

toggles the submaster to I-Master

With fader down, press the bottom bump button, LED flashes

marks the non-intensity parameters

Bring fader up

now shows Intensity control only

Bring fader down and tap bottom bump button

Unmarks (resets) non-intensity parameters

If the bump button is not pressed, when the fader is moved, non-intensity parameters mark as fast as possible. When fader is brought down, doesn't release the parameters. Must hit the bump button again.

Or [Sub] [10] {Properties}, under Stomp, {Unmark 0}

contents unmarked (released) when the fader reaches 0%.



EXCLUDE

Another property is **Exclude**. There are 4 options: the most common is **{Rec}** which is similar to **[Record] [-] [Sub]**.

[Sub] [2] {Properties}, under Exclude, {Rec}

contents will not be stored in any record targets



Park

Park locks the value of a channel or address.

- It cannot be changed by any console operation. It can't be affected by subs, playbacks, Grand Master or Blackout key.
- Parked values won't be recorded.

PARK IN LIVE

| | |
|--|--|
| [1] [At] [50] {Park} [Enter] | parks channel at 50% |
| [101] {Park} [Enter] | parks all parameters at current levels |
| [102] [Intensity] {Park} [Enter] | parks just intensity of the channel at its current level |
| [Address/Patch] [31] [At] [75] {Park} [Enter] | parks address at 75% |

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

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

TO CLEAR A PARK COMMAND IN LIVE:

| | |
|--|-----------------------------|
| [1] {Park} [Enter] ...[Enter] | unparks specified channel |
| {Park} [Enter] ...[Enter] | clears all parked channels |
| [Address/Patch] {Park} [Enter] ...[Enter] | clears all parked addresses |

PARK DISPLAY (BLIND)

| | |
|--|------------------------|
| [Park] <i>display button</i> or Add-a-Tab (the {+} sign) (Tab 20) | opens the Park display |
| [2] [At] [85] [Enter] | parks channel at 85% |
| [Address/Patch] [32] [At] [75] [Enter] | parks address at 75% |

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

TO CLEAR A PARK COMMAND IN BLIND:

| | |
|-------------------------------------|------------------------------------|
| [2] [At] [Enter] ... [Clear] | unparks channel and clears display |
| {Address} [32] [At] [Enter] | unparks an address |



Setup

[Setup] *display button* or click in Browser, on Setup. Two major areas are:

- Show
- Desk

SHOW – SPECIFIC TO THE CURRENT SHOW FILE – STAYS WITH SHOW

These settings are shared on all consoles on the network.

- **Show Settings** Number of Channels, Dimmer Doubler Offset, Partitioned Control, Home Preset, Mark Time, Startup and Shutdown Macros, Create Virtual HSB, Preheat Time, Popup Magic Sheet and Popup Navigation Lock.
- **Cue Settings** Cue Default Times
- **Show Control** SMPTE, MIDI, MSC, Analog/Serial, UDP, OSC
- **Partitions** Channel Partitions for multi-user setups

DESK – SPECIFIC TO THE DESK/HARDWARE – STAYS WITH DESK

These settings are for each independent console – the hardware.

- **Record Defaults** Auto Playback, Track Mode, Record/Delete Confirm, Update Modes
- **Manual Control** Manual Times, Preserve Blind Cue, Level, Plus/Minus %, Highlight/Lowligh Presets, Highlight RemDim, Live RemDim Level, Sneak, Back, Go To Cue and Timing Disable Times
- **Face Panel** Sounds, Encoders Adjustments– Percent or Degrees Per Revolution
- **Face Panel Keypad** Auto Repeat settings, Blackout and Grandmaster Disable, Spacebar [Go] Enable, Hide Mouse
- **Displays** Direct Select Double Click, User ID, Cell Editing, Show Ref Labels, Display Fader Ribbon and Display Help Prompts
- **PDF File Settings** Orientation and Paper Type settings
- **Brightness Settings** Direct Select Brightness and Desk Lamp Control
- **RFR Settings** Allow RFR Connections, Visible to iRFR
- **Trackball Settings** Adjustments for Trackball

An Intro to Effects

Three main types of effects: Step-based, Absolute and Relative.

[Effect] [Effect]

opens the effects list

CREATING STEP-BASED EFFECTS

[Effect] [1] [Enter]

creates a new effect number

<Type> {Step-based}

assigns the effect as a step effect

{Step} [1] [Thru] [5] [Enter] [Enter]

defines the number of steps

[Page▶] to the Channel column

[Group] [30] [Enter]

specifies the channels or group to be used

Intensity is assumed unless another parameter is specified

RUN THE EFFECT

[Live] [Group] [30] [Effect] [1] [Enter]

applies effect created to selected group

If in Live Table View, press and hold [Data]

to view levels as effect is running

EFFECT ATTRIBUTES

With the effect running, you can play with various attributes of the effect to see how they alter your effect.

[Effect] [Effect]

opens the effects list

{Cycle Time} [3] [Enter] or dial the encoder to adjust cycle time

resets overall effect time/speed

Click on {Attributes}

opens table of various attributes

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

STEP EDITING

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

RECORD THE EFFECT IN A CUE

[Record] [20] [Enter]

records the effect in cue 20

MULTIPLE WAYS TO STOP AN EFFECT

[1] [Thru] [5] [Effect] [Enter]

one way to stop the effect

{Fader Controls} {Stop Effect} [1] [Enter]

stops the specified running effect

{Fader Controls} {Stop Effect} [Enter]

stops all running effects



A SIMPLE COLOR EFFECT

USING A PRE-PROGRAMMED COLOR EFFECT

[Live]

[Group] [8] [Full] [Enter], make it blue

sets starting levels

[Group] [8] [Effect] [917] [Enter]

applies existing effect to selected channels

Effect 917 is a Rainbow Effect for RGB fixtures.

FUN WITH THE COLOR PICKER

Visually see the effect running in the blue area.

[Displays] {S2 -Color Picker}

opens the color picker

Click on various colors in the color picker

watch cyc change colors

STOPPING AN EFFECT

[Live] [Group] [8] [Effect] [Enter] or just [Sneak] [Enter]

stops effect from running

OR [Effect] [917] [At] [Enter]

stops effect 917

OR [Group] [8] [Effect] [At] [Enter]

stops all effects on selected channels

OR [Fader Control] {Stop Effect} [Enter]

stops all effects

PREPROGRAMMED EFFECTS

[Effect] [Effect]

opens the effects list

Effects 901 through 918 are preprogrammed effects.

All preprogrammed effects can be edited. You can copy the effect into a new effect and edit in the new effect. Or you can edit the existing effect. If you want to get back to the default effect, simply delete the effect.



BPM – BEATS PER MINUTE AND TAP RATE

For step-based and absolute effects, you can set the beats per minute (BPM). For step-based effects, BPM affects the step times and for absolute effects, this affects the time/dwell.

| | |
|---|--|
| [Live] | jump back into Live |
| [1] [Thru] [5] [Effect] [1] [Enter] | runs effect 1 on the selected channels |
| OR from a clear command line, [Recall From] [Effect] [1] [Enter] | runs effect 1 on all of the channels originally used in creation |

DIRECTLY SETTING BPM

Done in Blind, changes applied immediately to all instances of this effect.

| | |
|--|-----------------------------------|
| [Effect] [Effect] [Effect] [1] should be on command line | make sure you are in Effect 1 |
| Softkey {BPM} [200] | sets the BPM of the effect to 200 |

Notice BPM is posted in the Effect Editor to the far right of the Effect number. Also notice changes to Step times and Cycle time.

| | |
|---------------------------------|-----------------|
| {Cycle Time} [2] [Enter] | removes the BPM |
|---------------------------------|-----------------|

LEARNING BPM OR TAP RATE

Done in Live, changes will need to be recorded.

| | |
|--|---|
| [Live] [Clear] [Sneak] [Enter] | jump back into Live |
| [Group] [30] [Full] [Enter] [Effect] [1] [Enter] | runs effect 1 on the selected channels |
| [Clear] | to clear the command line |
| [Effect] [1] [Learn] [Time] [Enter] | opens the effect editor display |
| [Enter] [Enter] [Enter] | averages the timing or tap rate of the last three hits of Enter |
| [Learn] | stops the Learn mode or averaging |

Notice the red BPM to the far right of the Effect number.

| | |
|--|--|
| [Record] <Cue> [21] [Enter] | records effect in cue, currently rerecords the effect with the BPM as well |
|--|--|

Important Concepts

Eos family consoles are Tracking Move-Fade systems.

TRACKING VS. CUE ONLY

Eos family consoles are tracking by default. This means two things. First, tracking relates to how cue lists are created. Once data is in a cue list, it will remain a part of that cue list, at its original setting, and track forward through subsequent cues, until a new instruction is provided.

Secondly, tracking relates to how changes to cue data are handled. Unless otherwise instructed by a Cue Only command, changes to a parameter in a cue will track forward through the cue list until a move instruction (or block command) is encountered. It is possible to change the default setting of the console to "Cue Only". This prevents changes from tracking forward into subsequent cues, unless overridden with a track instruction.

The console also has a [Cue Only/Track] button that allows the user to record or update a cue as an exception to the default setting. Therefore, if the console is set to Tracking, the button acts as Cue Only. If console is set to Cue Only, it behaves as a Track button.

EXAMPLE: IN BLIND > SPREADSHEET

| | |
|--|--|
| [Cue] [1] [Thru] {Thru} [5] [Enter] [Enter] | creates cues 1 - 5 |
| [Cue] [1] [Enter] | selects cue 1 |
| [1] [Thru] [4] [Full] [Enter] | see channels fill through subsequent cues |
| [Cue] [3] [Enter] | selects cue 3 |
| [1] [+] [2] [At] [50] [Enter] | see channel levels change in that cue and track on |
| [Cue] [4] [Enter] | selects cue 4 |
| [3] [+] [4] [At] [50] [Cue Only] [Enter] | see channel levels change in that cue only |

MOVE FADE

Move Fade is a lighting control concept that determines how cues are played back. Eos family consoles adhere to this philosophy. In a Move Fade system, parameters do not change from their current setting until they are provided a move instruction in a cue or are given a new instruction manually.

For example, in cue 1, channel 1 has been given an intensity value of 50%. This value does not change until cue 20, where channel 1 is moved to 100%. Therefore, channel 1 has a tracked intensity value of 50% in cues 2-19. If the user applies a manual intensity value of 25% while sitting in cue 5 (for example), that channel will stay at 25% until Cue 20 is played back - because 20 is the next cue in which channel 1 has a move instruction. The original intensity of 50% will not be reapplied in subsequent cues unless the cue is asserted or run out of sequence via go to cue or by loading the cue into pending manually.

HTP vs. LTP

HTP (Highest-Takes-Precedence) and LTP (Latest-Takes-Precedence) are terms used to define the output of a channel parameter that is receiving data from multiple sources. In HTP, the highest level of all sources will be output to the rig. In LTP, the most recent level received will be output. Cue lists and submasters can operate as HTP or LTP for intensity parameters only. Non-intensity parameters (NPs) are always LTP. The console's default cue list setting for intensity is LTP. The default submaster setting for intensity is HTP.

HTP

HTP is only applicable to the intensity of a channel. HTP channels will output the level that is the highest of all control inputs. As control inputs are removed (some of the submasters are brought down to zero), the console will adjust the channel level, if required, to the highest remaining level.

LTP

LTP is applicable to any parameter of any channel. LTP output is based on the most recent move instruction provided to the channel parameter. Any new values sent will supersede any previous values, regardless of the level supplied. The console determines the LTP value for a channel, which is overridden by any HTP input values that are higher than the LTP instruction. This is then finally modified by manual override.

BLOCK

Block is a Recording/Updating function - it defines how changes will track (or not) through the cue list. An important concept to remember is that blocking impacts editing functions only. It has no impact on cue playback. In Element, block does impact playback, as it also acts as an assert.

A cue level block causes all tracked values in the cue to be treated as move instructions, which prohibits any data changes from tracking into the cue. Blocks can also be applied to a channel or a channel parameter.

Eos family consoles also support an "auto-block" function. For example, in cue 5 you set channel 1 to 50%. It is stored as a move instruction. Then, you later go back to an earlier cue and set channel 1 to 50% and it tracks forward to cue 5. Channel 1 will be "auto-blocked" in cue 5. Even though it is now at the same value as the previous cue, the original concept of a move instruction is maintained. Auto blocks are indicated with an underscore in the cue data.

NOTE: ALWAYS, ALWAYS, ALWAYS BLOCK YOUR BLACKOUT CUES!

HOW ELEMENT COMPARES TO THE OTHER EOS FAMILY CONSOLES

As of version 2.6 software:

SYSTEM

- 250 or 500 channel Max
- 1024 Output Max
- 40 or 60 pageable faders assigned as fixed submasters or channels
- No External Fader Wings
- No encoders – use ML Controls or OSC devices
- Can use an Element/ETCnomad (including Puck) as Backup to another Element. Must be in Element mode on ETCnomad.
- Single user client, all sharing a command line. Must be in Element mode and on an Element or ETCnomad device.
- Snapshots limited to displays

PLAYBACK

- Single cue list – no multiple cue lists
- Block is both Assert and Block
- No palettes on faders

CONTROL AND DATA MANAGEMENT

- No Reference Mark – AutoMark only which is always enabled except on a Cue by Cue basis.
- No Capture

MOVING A SHOW FILE FROM EOS TO ELEMENT

- Reference Marks become AutoMark
- Maintains Cue List 1. Other Cue Lists will be removed
- Submaster mapping becomes 1 to 1

Note that the show file that you open on Element is not changed when opened. The show file is loaded into persistent storage, and that copy is changed. Data that is removed or changed will affect the show in persistent memory and any subsequent saves of that show file.

Appendix 1 – Level 1 Channel Hookup

| Channel | Universe | Address | Manufacturer | Type | Focus/Notes |
|---------|----------|------------|--------------|-----------------------|---------------------------|
| 1 | 1 | 1 | Generic | Dimmer | Special - DSR Desk |
| 2 | 1 | 2 | Generic | Dimmer | Special - USC Solo |
| 3 | 1 | 3 | Generic | Dimmer | Special - DSL Study |
| 4 | 1 | 4 | Generic | Dimmer | Special - Piano |
| 5 | 1 | 33 | Generic | Dimmer | Special - Drums |
| 6 | 1 | 31 | Generic | Dimmer | Special - Vocals |
| 7 | 1 | 32 | Generic | Dimmer | Special - Guitar |
| 8 | 1 | 35 | Generic | Dimmer | Special - Piano Top Light |
| 9 | 1 | 34 | Generic | Dimmer | Special - Drums Top Light |
| 11 | 1 | 5, 6, 7 | Generic | Dimmer | High Side SR - Blue |
| 12 | 1 | 8, 9, 10 | Generic | Dimmer | High Side SL - Blue |
| 13 | 1 | 11, 12, 13 | Generic | Dimmer | High Side SR - Pink |
| 14 | 1 | 14, 15, 16 | Generic | Dimmer | High Side SL - Pink |
| 15 | 1 | 17, 18, 19 | Generic | Dimmer | High Side SR - Yellow |
| 16 | 1 | 20, 21, 22 | Generic | Dimmer | High Side SL - Yellow |
| 21 | 1 | 23 | Generic | Dimmer | Texture Wash |
| 21 P2 | 1 | 71 | Generic | Scroller | Scroller w/ custom load |
| 22 | 1 | 24 | Generic | Dimmer | Texture Wash |
| 22 P2 | 1 | 72 | Generic | Scroller | Scroller w/ custom load |
| 23 | 1 | 25 | Generic | Dimmer | Texture Wash |
| 23 P2 | 1 | 73 | Generic | Scroller | Scroller w/ custom load |
| 24 | 1 | 26 | Generic | Dimmer | Texture Wash |
| 24 P2 | 1 | 74 | Generic | Scroller | Scroller w/ custom load |
| 25 | 1 | 27 | Generic | Dimmer | Texture Wash |
| 25 P2 | 1 | 75 | Generic | Scroller | Scroller w/ custom load |
| 26 | 1 | 28 | Generic | Dimmer | Texture Wash |
| 26 P2 | 1 | 76 | Generic | Scroller | Scroller w/ custom load |
| 31 | 1 | 101 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 32 | 1 | 110 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 33 | 1 | 119 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 34 | 1 | 128 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 35 | 1 | 137 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 36 | 1 | 146 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 37 | 1 | 155 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 38 | 1 | 164 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 39 | 1 | 173 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 40 | 1 | 182 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 41 | 1 | 191 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 42 | 1 | 200 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 43 | 1 | 209 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 44 | 1 | 218 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |
| 45 | 1 | 227 | ETC Fixtures | D40 Lustr+ Direct Str | Top Light |

| Channel | Universe | Address | Manufacturer | Type | Focus/Notes |
|---------|----------|---------|------------------------|---------------------------|-------------|
| 51 | 2 | 52 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 52 | 2 | 55 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 53 | 2 | 58 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 54 | 2 | 61 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 55 | 2 | 64 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 56 | 2 | 67 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 57 | 2 | 70 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 58 | 2 | 73 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 59 | 2 | 76 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 60 | 2 | 79 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 61 | 2 | 82 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 62 | 2 | 85 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 63 | 2 | 88 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 64 | 2 | 91 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 65 | 2 | 94 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 66 | 2 | 97 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| 67 | 2 | 100 | Philips Color Kinetics | ColorBlast 12 | Cyc Top |
| | | | | | |
| 101 | 1 | 301 * | Robe | Robin 300 LEDWash – M3 | |
| 102 | 1 | 321 | Robe | Robin 300 LEDWash – M3 | |
| 103 | 1 | 341 | Robe | Robin 300 LEDWash – M3 | |
| 104 | 1 | 361 | Robe | Robin 300 LEDWash – M3 | |
| 105 | 1 | 381 | Robe | Robin 300 LEDWash – M3 | |
| 106 | 1 | 401 | Robe | Robin 300 LEDWash – M3 | |
| | | | | | |
| 111 | 3 | 1 | VariLite | VL3500 Spot – VL3500 Spot | FOH |
| 112 | 3 | 32 | VariLite | VL3500 Spot – VL3500 Spot | FOH |
| 113 | 3 | 63 | VariLite | VL3500 Spot – VL3500 Spot | FOH |
| 114 | 3 | 94 | VariLite | VL3500 Spot – VL3500 Spot | FOH |
| 115 | 3 | 125 | VariLite | VL3500 Spot – VL3500 Spot | FOH |


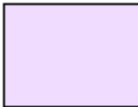
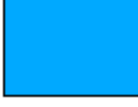
* Think Offset!!

Appendix 2 – Level 2 Hookup Additions

| Channel | Universe | Address | Manufacturer | Type | Focus/Notes |
|---------|----------|---------|------------------------|----------------------------|-------------|
| 71 | 2 | 1 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 72 | 2 | 4 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 73 | 2 | 7 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 74 | 2 | 10 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 75 | 2 | 13 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 76 | 2 | 16 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 77 | 2 | 19 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 78 | 2 | 22 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 79 | 2 | 25 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 80 | 2 | 28 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 81 | 2 | 31 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 82 | 2 | 34 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 83 | 2 | 37 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 84 | 2 | 40 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 85 | 2 | 43 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 86 | 2 | 46 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| 87 | 2 | 49 | Philips Color Kinetics | ColorBlast 12 | Cyc Bottom |
| | | | | | |
| 121 | 2 | 351 | VariLite | VL2000 Wash – Enhanced 16B | Over-stage |
| 122 | 2 | 366 | VariLite | VL2000 Wash – Enhanced 16B | Over-stage |
| 123 | 2 | 381 | VariLite | VL2000 Wash – Enhanced 16B | Over-stage |
| 124 | 2 | 396 | VariLite | VL2000 Wash – Enhanced 16B | Over-stage |
| | | | | | |
| 131 | 2 | 201 | Martin | Mac 700 Profile – Ext | Over-stage |
| 132 | 2 | 232 | Martin | Mac 700 Profile – Ext | Over-stage |
| 133 | 2 | 263 | Martin | Mac 700 Profile – Ext | Over-stage |
| 134 | 2 | 294 | Martin | Mac 700 Profile – Ext | Over-stage |

Appendix 3 – Scroll Setup

Generic Scrolls (Channels 21 – 26)

| | | |
|----|-------------------------|---|
| 1 | Open Frame |  |
| 2 | R10 – Medium Yellow |  |
| 3 | R27 – Medium Red |  |
| 4 | R339 – Broadway Pink |  |
| 5 | R351 – Lavender Mist |  |
| 6 | R359 – Medium Violet |  |
| 7 | R370 – Italian Blue |  |
| 8 | R38 – Light Rose |  |
| 9 | R65 – Daylight Blue |  |
| 10 | R85 – Deep Blue |  |
| 11 | R90 – Dark Yellow Green |  |

Appendix 4 – Show File Data

The following Groups, Palettes and Presets are included in the show file:

| Group # | Label | Channels |
|---------|------------------------------------|------------------------|
| 1 | Specials | 1 thru 3 |
| 2 | Band | 4 thru 9 |
| 3 | Blue Sides | 11 + 12 |
| 4 | Pink Sides | 13 + 14 |
| 5 | Yellow Sides | 15 + 16 |
| 6 | Texture | 21 thru 26 |
| 7 | Top Lights | 31 thru 45 |
| 8 | LED Cyc Top | 51 thru 67 |
| 9 | LED Cyc Bottom | 71 thru 87 |
| | | |
| 11 | Robin 300s | 101 thru 106 |
| 12 | VL3500s | 111 thru 115 |
| 13 | VL2000s | 121 thru 124 |
| 14 | Mac 700s | 131 thru 134 |
| | | |
| 16 | All movers | G11 thru G14 |
| | | |
| 20 | Cyc In | Cyc In |
| 21 | Cyc Out | Cyc Out |
| | | |
| 25 | CP Group | G7 + G8 + G11 thru G14 |
| | | |
| 30 | Area lights in a cross-stage order | 1, 4, 2, 5, 3 |

| Color Palette # | Label | Groups Used |
|------------------|-----------------------------|-------------|
| 1 | Red | G25 |
| 2 | Orange | G25 |
| 3 | Yellow | G25 |
| 4 | Green | G25 |
| 5 | Light Blue | G25 |
| 6 | Dark Blue | G25 |
| 7 | Magenta | G25 |
| Focus Palettes # | Label | |
| 1 | DSR Desk | G12 |
| 2 | USC Solo | G12 |
| 3 | DSL Study | G12 |
| 4 | Vocals (USR Platform) | G12 |
| 5 | Guitar (USL Platform) | G12 |
| Beam Palettes # | Label | |
| 1 | All Beam parameters | G12 |
| 2 | Just Gobo Select | G12 |
| 3 | Just Zoom | G12 |
| Preset # | Label | |
| 1 | USC Red (Solo In Color) | G12 |
| 5 | Movers – Intensity | G12 |
| 6 | Movers – Intensity and Beam | G12 |

Appendix 5 – Channel Display Color Conventions



CHANNEL DISPLAY COLOR CONVENTIONS

CHANNEL OR PARAMETER LEVELS

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

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

CHANNEL NUMBERS/CHANNEL HEADERS

- White # Selected channel number
- Gray # Unpatched channel number
- No graphic Deleted channel
- Bright White # Channel is parked
- Gold # Channel is captured (with a 'C')
- Gold outline Selected channel on your command line

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



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