Element 2 Console Programming

Level 1: Essentials

Workbook

V2.9 Rev A

www.etcconnect.com/education

Table of Contents:

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.
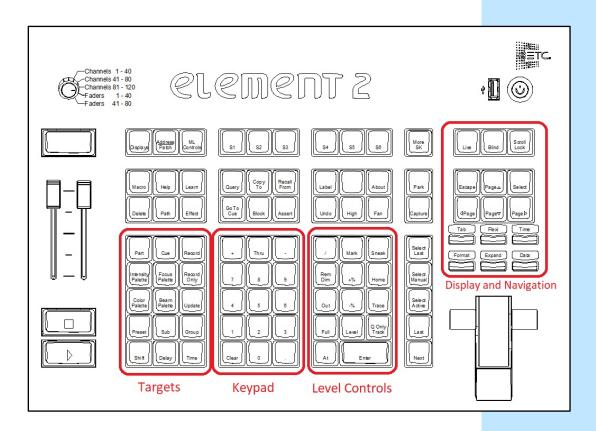
Hardware Overview

EXPLORING THE BACK OF THE CONSOLES

- Hard Power Switch with IEC Receptacle - power cable included
- Motherboard – Windows7 embedded, support for multi-point touchscreens
    - Two video connections are Display Port connections
    - Four USB multipurpose ports
    - Two individually configurable Ethernet ports
- Four DMX/RDM ports
- Remote trigger/ contact inputs via D-Sub connector
- One 3-pin XLR for desk work lights, dimmer control through software

EXPLORING THE FRONT OF THE CONSOLE

- Forty 45mm faders x 100 pages for configurable faders
- One Fader Mode Switch to change between channels and faders
- Master Playback crossfade pair with 100mm motorized faders, ▶ Go, ■ Stop/Back and Master (Load) buttons
- Keypad area - divided into three sections: targets, numeric keypad, and level controls
- Navigation keypad - Live and Blind displays, format, paging, and navigation within displays
- Level Wheel
- Soft Power Switch - used to power up the console
- USB Port - primarily to connect any USB storage device

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.

The LEDs on the fader buttons will be **red** to indicate channel control or **green** for fader control.

Set the switch to Channels 1 - 40.	first two rows control channels 1 - 40
Raise or lower a few 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 fader number
• Fader label in Fader Mode
• Current level both by percentage and by level bar (on left)
• Arrows - show direction to move faders to match previous positions

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) according to the arrow	to meet the level and 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

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

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

RANGE PATCHING

[604] [Thru] [610] [At] [101] [Enter]	selects a range of channels and patches addresses sequentially from first one
[611] [At] [108] [Thru] [111] [Enter]	selects channel, patches a range of addresses to it, creating parts
[612] [Thru] [620] [At] [201] [More SK] {S5 Offset} [3] [Enter]	allows for a three-cell cyclight patch

CLEAR VS. UNPATCH VS. DELETE

[601] [At] [Enter] [Enter]	removes the address, leaves type, etc.
[602] [More SK] {S6 Unpatch} [Enter] [Enter]	restores to default properties – removes address, type, label, etc.
[Delete] [603] [Enter] [Enter]	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.

[Undo] , select last three commands, [Enter]	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

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

PATCH A MULTI-PARAMETER DEVICE

[651] [Thru] [656] [Enter]	selects the channels for 6 fixtures
Click on {Type} in the lower right hand corner of display	notice softkeys {Show}, {Manfctr}, {Search} and {Edit} on left side of monitor
Click on {Manfctr}	left columns are manufacturers; right side are their devices
Find {High End} in left columns, and then {SolaFrame Theatre [47]}	notice SolaFrame Theatre in blue – multiple modes available
If a fixture has multiple modes or types, it will display in blue text.	
Select {SolaFrame Theatre [47]} again for standard mode	fixture placed on the command line after channels
[At] [7] [/] [1] [Enter]	patches all six fixtures with a starting address in universe 7
[At] [7] [/] [1] [More SK] {S5 Offset} [50] [Enter] [Enter]	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.

[641] [Thru] [645] [At] [41] [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] [/] [151] [Enter]	gives a starting address for all the part 2's
[Part] [3] [Enter] [Type]	creates a part 3 for selected channels
{Search} Gobo Rotator and double click on Rosco Gobo Rotator [2]	makes part 3 a gobo rotator giving the channel a beam parameter
[At] [2] [/] [161] [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. Select **Continue without saving**. Are you sure? **[Enter]** or click 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	quickly steps through all patched channels at 100%
[1] [Full] {S5 Chan Check} [Enter] then [Next] … [Next] … [Last] …	
Channel check automatically skips unpatched channels.	
[Address] [1] [Full] [Enter] then [Next] … [Next] … [Last] …	same as channel check but with output addresses
Press [Clear]	to exit Channel Check mode

SAVE SHOW

To save the show you are working on:

[Displays] then 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}.	
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] {S5 Offset}	
{S2 Even} or on the touchscreen	see preview below command line
[At] [80] [Enter]	
[31] [Thru] [50] [Out]	
[31] [Thru] [50] {S5 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 DISPLAYS

PRIMARY LIVE SCREEN (CHANNEL DISPLAY)

- Summary (Live Channels) or Live Table view
- Selected cue detail line
- 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
- **[Scroll Lock]** – when on, scrolls one line at a time

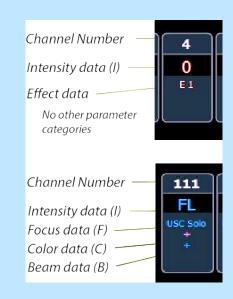 **[1] [Thru] [10] [Enter] and scroll the level wheel**

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

BLIND CHANNEL DISPLAY

Blind allows us to look at what is recorded that isn't actually on stage (Live). When in Blind, the data displayed represents data from the record target you choose to view (cues, presets, palettes, and so on). When you edit data in Blind, changes will not automatically appear on stage, since the data you are modifying is not live.

- Note the command line color change!
- Note the background 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, <u>**Record is not required**</u> – changes are stored when the command line is terminated.

Channel Number — **4**
Intensity data (I) — **0**
Effect data — E 1
  No other parameter categories

Channel Number — **111**
Intensity data (I) — **FL**
Focus data (F) — USC Solo
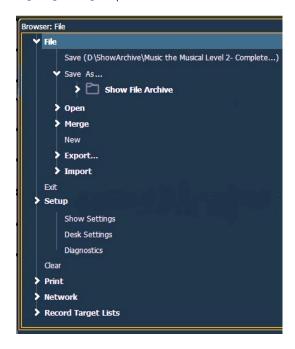*Color data (C)* — +
Beam data (B) — +

▶

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 (△,▽)

- 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

```
Browser: File
 ⌄ File
       Save (D:\ShowArchive\Music the Musical Level 2- Complete...)
     ⌄ Save As...
         ⟩ 🗀 Show File Archive
     ⟩ Open
     ⟩ Merge
       New
     ⟩ Export...
     ⟩ Import
   Exit
 ⟩ Setup
       Show Settings
       Desk Settings
       Diagnostics
   Clear
 ⟩ Print
 ⟩ Network
 ⟩ Record Target Lists
```

▶ TAB NAVIGATION

Tabs are broken down into two categories: Display and Control. **Display tabs** are primarily to show information, such as the Live, Blind, and the playback status display. **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 the page left and page right keys	to move the active display from one monitor to another
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] {S5 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 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 (2nd 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]	records the current stage state to sub 1 and loads it on the fader
[Clear] [Sneak] [Enter]	
Set the switch to Faders 1 - 40. Run fader 4 up and down.	notice LED on Sub 1 is Green
[51] [Thru] [53] [At] [40] [Enter], [54] [Thru] [56] [At] [70] [Enter], [57] [Thru] [59] [At] [Full] [Enter]	
[Record], then press the bottom bump button on the next fader	loads the fader with the submaster, LED turns green
[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
Notice Sub 31 fader button is now green.	

COMMAND LINE CONTROL OF SUBMASTERS

[Live] [Sub] [31] [At] [50] [Enter]	brings sub to a level of 38 (50% of 75)
Notice LED on Sub 31 button is now flashing and small yellow arrow is displayed on the fader status display.	
[Sub] [31] [At] [85] [Sneak] [Enter]	will sneak sub to 64 in default sneak time
[Sub] [31] [Out] [Enter]	takes sub out regardless of fader position, LED stops flashing

CHANGE FADER PAGES

Fader pages are set up in increments of 40. There are 20 pages of 40.

From a clear command line, press and hold {S6 Page Subs}	shows page numbers in fader status display, bump buttons light up green
press bottom bump button of page 3 to go to that page.	
Current page bump button will be flashing till you select the new page	
[31] [Thru] [35] [Full] [Enter]	
[Record], then press the bump button on the first fader	stores sub 81
[Clear] [Sneak] [Enter] and slide fader up - leave it up	view sub levels
Hold {S6 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 81 levels are still there

UNLOAD FADERS

If a submaster already occupies the fader, that fader must be cleared before another submaster can be loaded.

Press and hold {S6 Page Subs} and press bump button of page 3	
Press and hold [Shift] and press both top and bottom bump buttons of the fader to clear sub 81	cleared from the fader but sub 81 still exists
Go back to page 1	

DELETE SUBMASTERS

[Delete] [Sub] [31] [Enter] [Enter]	deletes sub 31
[Delete] [Sub] [1] [Thru] [Enter] Do not hit [Enter] again.	would delete 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

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

▶ RECORD CUES WITH TIME

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

* {Select Last} is a soft key on Element Classic, from a clear command line.

RECORD WITH TIME AND LABEL

[32] [Thru] [34] [At] [50] [Enter], [33] [+%] [+%] [+%] **[41] [Thru] [50] [At] [25] [Enter], [3] [Full] [Full]**	set levels, [+%] is also [Shift]&[+]
[Record] [Next] [Time] [3] [/] [5] [Label] Speech [Enter]	stores cue, timing and label (9)
[Select Active]* [Out]	takes all active channels' intensities out
[Record] [10] [Time] [0] [Label] Blackout [Enter]	stores cue, timing and label (10)
[1] [+] [3] [+] [6] [Full] [Enter], [Group] [2] [At] [25] [Enter]	sets levels for new cue after blackout
[Record] [11] [Time] [2] [Enter]	stores cue and timing (11)
[10] [Full] [Enter]	sets levels for new cue
[Record] [11] [.] [5] [Enter]	stores a point cue (11.5)

* {Select Active} is a soft key on Element Classic, from a clear command line.

DELETE CUES

[Delete] [Cue] [11] [.] [5] [Enter] [Enter]	deletes a cue, does not renumber

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

[Go To Cue] [Enter]	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.

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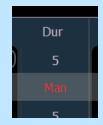
To manually take control of the intensity fade from the beginning of the cue, set the sliders at the bottom of the run before you press **[▶] (Go)**.

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 <u>all values</u> to home and resets <u>all cue lists</u> active on faders to top of the list
[Go To Cue] [0] [Enter]	sets all current <u>intensity</u> 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
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. **Orange** – Level is owned by live playback White – Level is blocked Yellow – Level is set by Submaster

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

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 that channel 2 is at 35 in Cue 2

[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 "<u>b</u>".

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.
* *{Assert} is a soft key on Element Classic*

[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 of 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]	channel selection on command line
Lower right hand corner of CIA area – {Lamp Controls}	
[Group] [7] [Enter]	note different lamp controls
[About] again	will clear the About display

ML Controls

ML Controls is a display tool for controlling the non-intensity parameters (NPs) of multiple parameter devices (LEDs, Moving Lights,…)

[Clear] [Sneak] [Enter]	
[ML Controls]	opens a smaller display in the CIA area
Add-a-Tab (the {+} sign) , select ML Controls (Tab #5)	opens a full tab sized display

Navigation and Operation Features

- **Category shortcut buttons** 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. If multiple fixture types are selected, all parameters combined are shown.

[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.

COLOR CONTROLS

COLOR CONTROL WITH SCROLLERS

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

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

  In Element Classic, can press [Frame] [5] [Enter] – advances scroller to fifth frame.

- Under Color, tap **{⌂}** (Home) to take the scroller back to its starting frame

COLOR CONTROL WITH LEDS

[Clear] [Sneak] [Enter] [Group] [8] [Full] [Enter]	notice all colors at 100%
In ML Controls, dial the encoders	easy to use two hands for color mixing
In Blue, press {Min}; Green, press {Min}; Red, press {Max}	leaves a nice red cyc
Tap the 'Green' header on the touchscreen, then [50] [Enter]	adds 50% of green into cyc
Select a color using the Color Picker	

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.

• The console will put a fixture in the color as close as possible to the selection.

• 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*

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	set levels
[101] [Home] [Enter]	homes all non-intensity data for channel
[102] [Shift]&[Focus] [Home] [Enter]	homes just the focus data for channel
[103] [Shift]&[Form] [Home] [Enter]	homes just the sub-category form (zoom)
[104] {Gobo Select} [Home] [Enter]	homes just the gobo for channel

> * *On Element Classic, one would use the Home icon ⌂ in ML Controls for each category, sub-category or parameter*
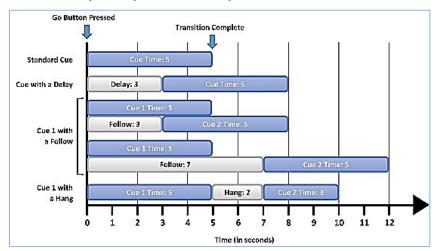
Additional Cue Features

▶

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)

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

Command	Description
[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.

Command	Description
[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] [Format]	to go to 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] [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

On Element Classic, there is a Park display button to open the Park Display.
For command line syntax, there is a Park softkey.

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.	

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

On an Element Classic, there is a [Setup] display button on the top row.

SYSTEM – SPECIFIC TO THE CURRENT SHOW FILE – 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, Home Preset, System Startup and Shutdown Macros
• **Cue Settings**	Mark Time, Preheat Time, Cue Default Times
• **Show Control**	SMPTE, MIDI, Contacts, OSC, and String UDP
• **Output**	Local DMX Outputs (restart required)
• **Remotes**	Allow Remotes access to the system
• **Partitions**	Partitioned Control Enable, Channel Partitions for multi-user setups
• **Users**	User Settings: User ID,
• **Recall User Settings**	restore settings from show file

USER – SPECIFIC TO THE USER – STORED IN SHOW FILE

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

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
• **Displays**	Show Ref Labels, In-Cell Editing and Direct Select Double Click
• **Brightness Settings**	Brightness & Contrast for console backlit buttons and Desk Lamp Control as well as Direct Select Brightness
• **PDF File Settings**	Orientation and Paper Type settings
• **Recall Device Settings**	Restore settings from show file

▶ Introduction to Effects

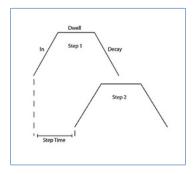### CREATING A STEP-BASED EFFECT

[Live] [Go to Cue] [Out] [Enter]	start with a clear stage
[Effect] [Effect] or Add-a-Tab (the {+} sign)	opens the effects list
[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 Channels column	
[Group] [30] [Enter]	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

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

EFFECT ATTRIBUTES

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

[Effect] [Effect]	opens the effects list
{Cycle Time} [2] [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, Bounce, Build, Positive, Negative,** and **Random Group** or **Random Rate**.

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

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

▶ A SIMPLE COLOR EFFECT

Effects 901 through 918 are preprogrammed effects

USING A PRE-PROGRAMMED COLOR EFFECT

[Go To Cue] [Out] [Enter]	
[Group] [20] [Full] [Enter]	sets starting levels
[Select Last] [Effect] [917] [Enter]	applies existing effect to selected channels

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.

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

STOPPING AN EFFECT

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

MULTIPLE WAYS TO STOP AN EFFECT

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

Additional Cue Writing Exercise

RECORD CUES WITH COLOR

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

RECORD CUES WITH FOCUS & FORM

[121] [Thru] [128] {S5 Offset} {Odd} [Full] [Enter]	set levels, focus fixtures, set zoom level, select color
[Next] to select Ch. 121	
Use encoders to pan/tilt fixture onto lead singer on box	
[Next] to select Ch. 123 focus onto lead singer on box	
[Next] to select Ch. 125 focus onto drummer	
[Next] to select Ch. 127 focus onto drummer	
[Select Last] {Zoom} [19] [Enter],	
Make them yellow using Standard Colors	
[Record] [16] [Time] [1] [Shift]&[Color] [Time] [5] [Label] Yellow [Enter]	stores cue 16 with a 1 second intensity time and a 5 second color time
[Group] [2] [At] [50] [Rem Dem] [Enter]	set levels
Using Standard Colors, set to 3500K	set as a warm white color
[Record] [17] [Enter]	stores cue 17

RECORD CUES WITH FOCUS, FORM AND IMAGE

[Group] [5] [Full] [Full], [Focus], use encoder to tilt them on stage	set levels, pan just off proscenium
{Zoom} [26] [Enter]	
[Image], use Gobo Select encoder to select Fracture (gobo 3)	
[Form], use Edge encoder to make gobo sharp	
[Image], use Gobo Index/Speed Mode encoder to select {Rot+}	
and use the encoder to make them rotate (to about 75)	
[Select Last] {S5 Offset} {Even} and set Gobo Index/Speed Mode to {Rot-}	
[Select Last] [Select Last] [Enter], make yellow using Std Colors	cycles through the last 5 command lines
[Record] [Next] [Enter]	records cue 18
[Go To Cue] [11.5] [Enter]	reset to top of cue list and home all non-intensity properties
[▶] (Go), [Shift]&[▶] (Go) to Cue 15	use Timing Disable function to step through cues
[▶] (Go) to play through the new cues	
[Go To Cue] [Out] [Enter]	

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+ [8]	Direct Str [9]	Downlight - A
32	1	310	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - B
33	1	319	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - C
34	1	328	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - D
35	1	337	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - E
36	1	346	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - F
37	1	355	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - G
38	1	364	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - H
39	1	373	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - I (eye)
40	1	382	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - J
41	1	391	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - K
42	1	400	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - L (ell)
43	1	409	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - M
44	1	418	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - N
45	1	427	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - O (oh)
46	1	436	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - P
47	1	445	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - Q
48	1	454	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight – R
49	1	463	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight – S
50	1	472	ETC Fixtures	ETC D60 Lustr+ [8]	Direct Str [9]	Downlight - T
51	2	1	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 1 → Left
52	2	7	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 1 → Mid
53	2	13	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 1 → Right
54	2	19	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 2 → Left
55	2	25	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 2 → Mid
56	2	31	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 2 → Right
57	2	37	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 3 → Left
58	2	43	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 3 → Mid
59	2	49	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 3 → Right
60	2	55	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 4 → Left
61	2	61	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 4 → Mid
62	2	67	ETC Fixtures	ColorSource SPOT [1]	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 [1]	Direct [6]	Hi Side Tx - Ln 1 ← Right
72	2	79	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 1 ← Mid
73	2	85	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 1 ← Left
74	2	91	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 2 ← Right
75	2	97	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 2 ← Mid
76	2	103	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 2 ← Left
77	2	109	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 3 ← Right
78	2	115	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 3 ← Mid
79	2	121	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 3 ← Left
80	2	127	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 4 ← Right
81	2	133	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 4 ← Mid
82	2	139	ETC Fixtures	ColorSource SPOT [1]	Direct [6]	Hi Side Tx - Ln 4 ← Left
101	2	201*	High End Systems	SolaFrame Theatre [47]	SolaFrame Theatre [47]	FOH Mover - Spot
102	2	251	High End Systems	SolaFrame Theatre [47]	SolaFrame Theatre [47]	FOH Mover - Spot
103	2	301	High End Systems	SolaFrame Theatre [47]	SolaFrame Theatre [47]	FOH Mover - Spot
104	2	351	High End Systems	SolaFrame Theatre [47]	SolaFrame Theatre [47]	FOH Mover - Spot
105	2	401	High End Systems	SolaFrame Theatre [47]	SolaFrame Theatre [47]	FOH Mover - Spot
		* Think Offset!				
121	4	1	High End Systems	SolaWash 2000 [36]	SolaWash 2000 [36]	Overstage Mover - Wash
122	4	37	High End Systems	SolaWash 2000 [36]	SolaWash 2000 [36]	Overstage Mover - Wash
123	4	73	High End Systems	SolaWash 2000 [36]	SolaWash 2000 [36]	Overstage Mover - Wash
124	4	109	High End Systems	SolaWash 2000 [36]	SolaWash 2000 [36]	Overstage Mover - Wash
125	4	145	High End Systems	SolaWash 2000 [36]	SolaWash 2000 [36]	Overstage Mover - Wash
126	4	181	High End Systems	SolaWash 2000 [36]	SolaWash 2000 [36]	Overstage Mover - Wash
127	4	217	High End Systems	SolaWash 2000 [36]	SolaWash 2000 [36]	Overstage Mover - Wash
128	4	253	High End Systems	SolaWash 2000 [36]	SolaWash 2000 [36]	Overstage Mover - Wash
141	5	73	ETC Fixtures	S4 LED S2 Lustr [8]	Direct Str [9]	Side - Mid
142	5	82	ETC Fixtures	S4 LED S2 Lustr [8]	Direct Str [9]	Side - Mid
143	5	91	ETC Fixtures	S4 LED S2 Lustr [8]	Direct Str [9]	Side - Mid
144	5	100	ETC Fixtures	S4 LED S2 Lustr [8]	Direct Str [9]	Side - Mid
145	5	109	ETC Fixtures	S4 LED S2 Lustr [8]	Direct Str [9]	Side - Mid
146	5	118	ETC Fixtures	S4 LED S2 Lustr [8]	Direct Str [9]	Side - Mid
147	5	127	ETC Fixtures	S4 LED S2 Lustr [8]	Direct Str [9]	Side - Mid
148	5	136	ETC Fixtures	S4 LED S2 Lustr [8]	Direct Str [9]	Side - Mid

+ End of range +

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