



Eos Family Console Programming

Level 2: Enhanced

Workbook

V3.3B

www.etconnect.com/education

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Purpose of the Class

This class will provide a more in-depth look at basic operations and working with multi-parameter devices on an Eos family console.

LEARNING OBJECTIVES:

After completing this class, one should be able to:

- Edit device attributes
- Understand display layouts and workspaces
- Record and recall Snapshots
- Create more elaborate Groups
- Be more effective using Submaster properties
- Record and recall Palettes and Presets
- Set up and use Direct Selects
- Understand and use Update, Auto-Mark, and other cue attributes
- Take advantage of Discrete Timing and Multipart cues
- Create and use Relative and Absolute Effects
- Feel comfortable with configuration and test functions in the Shell
- Create and use a basic Magic Sheet

SYNTAX ANNOTATION

- | | |
|---------------------------------|--|
| • Bold | Browser menus |
| • [Brackets] | Face panel buttons |
| • {Braces} | Softkeys or buttons on touchscreen |
| • <Angle brackets> | Optional keys |
| • [Next] & [Last] | Press & hold simultaneously |
| • «Direct Selects» | 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 the manual is not available on Windows XP devices but is available as a download from the web site.



Overview of the Shell

Referred to as the Eos Configuration Utility (ECU) in the manual, this area is used for both system configuration and performing basic level test functions.

[Displays], in Browser, {Exit} {Ok}. Don't forget to save first!

to exit to Shell

Note: When you exit to the shell, the console will stop outputting to the rig (No DMX!!).

STARTING SCREEN

PRIMARY OR BACKUP

Primary is a mode for using a single console on a network where the primary output of data is from that single console. **Backup** requires a primary console to be online to synchronize.

CLIENT OR OFFLINE

A **Client** console acts as an extension of the primary console, more like a remote controller, remote video station, or an expensive keyboard for a system. Whereas **Offline** mode puts the software in a state where there is no network activity, no control, and no connections to other consoles or any other network devices.

POWER OFF

Power Off will shut down the Eos console after confirmation.

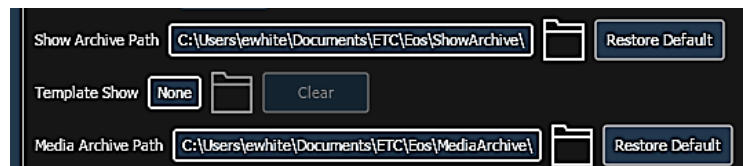
SHELL SETTINGS

Select {Settings} when buttons are highlighted

- **General** Device Name, 24 Hour Clock*, Use Shift Key as Eos Shift, Template Show, Software Update
* Time can now be reset without going to the shell

TEMPLATE SHOW FILE

A template show file can be assigned in the Shell via **Settings > General**.



When a show file is assigned as a template, Eos will create a copy of the file in the Templates folder to be used as the default starting point for any new show files. An option will appear in the Browser under **File > New** called **New From Template**. A blank show file can always be created with **File > New**.



MONITOR ARRANGEMENT

The selected monitor will display in yellow. Monitors can be dragged to any of the surrounding black boxes to mimic the actual monitor layout.

- **{Calibrate}** and **{Reset Calibration}** for internal touchscreens
- **{Enabled}** - When checked, the monitor is available for use. It will be checked for any monitors the console recognizes.
- **{Primary}** - selects which monitor will display the Eos Configuration Utility and Central Information Area (CIA)
- **{Resolution}**, **{Color Depth}**, **{Refresh Rate}** and **{Orientation}** will help configure the monitors appropriately.
- **{Identify}** - displays the video port numbers that your monitors are connected to on the monitors to confirm where placed.
- **{Configure Touchscreens}** and **{ELO Settings}** for external touchscreens

- **Network** Device Network settings, Allowed Outputs, Interface Protocols (MultiConsole, Sensor/FDX3000 Feedback, RDM), Legacy Settings – Output Protocols (sACN, ArtNet, Local DMX)
- **Maintenance** Deep Clear, Save Logs, Backup/Restore Show Archive, Peripheral Tests, Upgrade I/O Firmware

SAVE LOGS

Logs are useful tools for diagnosing issues. If you experience software problems with your system, sending log files to ETC Technical Services helps us isolate the issue.

Log files can be generated by clicking on the **{Save Logs}** button here or from within the show file by going to **Displays > File > Export**.

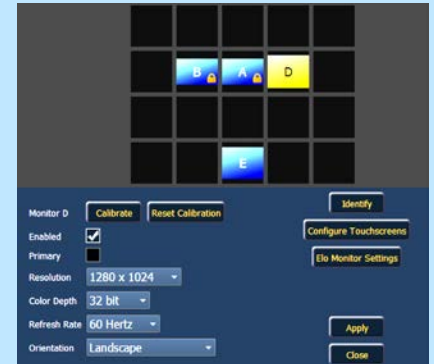
When complete, email the zip file to eos@etcconnect.com.

- **Buttons** RPU Button Setup, Console Face panel Buttons
- **RFR** USB RFR Channel and Network ID

When finished reviewing the Shell:

{Accept} to exit back to the starting screen

{Primary}



to exit back to the starting screen

to go back into the console



Device Attributes

Start in same show file as day before or in Level 1 Complete file.
Double hit **[Address/Patch]** to get to the Patch display.

In Patch, {Attributes} on the left-hand side of the CIA display

opens the Attributes module

{PREHEAT}

Preheat is used to specify an intensity value to heat the channel to before it comes on. When a Preheat flag is applied to a cue, any channels that are fading from zero to an active intensity and have been assigned a preheat value in Patch will preheat in the immediately preceding cue. This is a **two-step function**. You must set the preheat level in Patch and then add the Preheat flag to the cue in Live.

{PROPORTION}

Proportion is a mathematical modifier for recorded levels or intensities only. This value is set numerically in a range of 0% to 200%. For example,

{CURVE} & {FAN CURVE}

A curve affects how a fade happens over time.

[Displays] {Curves} or Add-a-Tab (the {+} sign) - #21

to view pre-programmed curves

[Next]...[Next]...[Next]...

to step through the curves

If a default curve is modified, delete the curve to restore the default.

The control input is the level that the console is telling the fixture to go to. The output is the actual value that is being output via DMX.

Note: Curve 909 (Hot Patch) is a great way to have relays powering moving lights and LEDs. The channel will always be on when the console is on.

Back in Patch:

{LD FLAGS} – A TOGGLE PER CHANNEL

By default, Live and Dark flags are enabled. If there is a Live or Dark move, an 'L' or 'D' will be displayed in the move flags (MV) column in the PSD. This can be disabled on a channel-per-channel basis.

{SHUTTER ORDER}

Opens a window and allows you to invert the shutter order or rotate the order using arrow buttons. It can be set on a per-fixture basis, so if hung sideways, can still have the shutters line up and work the way you want them to.

[Group] [5] [Enter]

{GM EXEMPT} – A TOGGLE PER CHANNEL

A toggle state, if selected, channels are exempt from a Grandmaster fader or Blackout button, **[Rem Dim]**, and Intensity Master operations.

{INVERT PAN OR TILT}

A moving light attribute is used to invert the output of pan, tilt, or both.

[Live], [Group] [7] [Full] [Enter], tilt them up and pan

note how they move – all together

Back in Patch: [Group] [7] {Offset} [2] {Invert Pan} {Invert Tilt}

inverts the output of the pan and tilt parameters

Back to [Live]: [Group] [7] [Enter]. Tilt, then pan

note how they move now

On Apex consoles, **[Offset]** is a hard key (button).

USING INVERT TO SET UP ENCODERS

To make sure your encoders work the same way your eyes do. Dial left, lights move left; dial right, move right.

**[Group] [5] [Full] [RemDim] [Enter], tilt them up on stage,
turn Pan encoder to right**

note how they move opposite of encoder

Back in Patch: [Group] [5] {Attributes} {Invert Pan}

inverts the output of the pan parameter

Back to [Live]: [Select Last] [Enter], and pan

note how they move now

NOTE: INVERTING PAN & TILT SHOULD BE DONE BEFORE YOU START CUEING YOUR SHOW, OTHERWISE EVERY CUE THAT HAS ALREADY BEEN WRITTEN WILL BE AFFECTED BY THESE CHANGES.

Back in Patch:

{SWAP P/T}

A moving light attribute is used to exchange pan and tilt levels, such as when a fixture is hung sideways on a boom. Pan becomes Tilt and Tilt becomes Pan.

{COLOR PATH}

A default Color Path can be assigned at the channel level in Patch. That color path will be used for all that channel's color fades unless overridden at the cue level. *(More on Color Paths in Level 4)*

{INVERT RACK}

When disabled, an encoder will move the shutter frame assembly from the right. When enabled, the frame assembly will move from the left.



INDEXED PARAMETERS

CREATING A NEW CUSTOM SCROLL OR WHEEL

Function keys are on the lower left side of the monitor, either mouse or touch selected. They change depending on device editing.

- **{Clear}** - clears the current wheel selection
- **{New}** - to create a new scroll or wheel
- **{Copy}** - copy an existing and then modify
- **{Edit}** - opens the editor to modify
- **{Delete}** - removes the selected device

SCROLLER EXERCISE - SEE APPENDIX 1 (P. 47)

In Patch, [151] [Thru] [158] [Part] [2] [Enter]

In Attributes (far left), under Scrollers/Wheels (right), {Scroller}

Press {New} on lower left side of display

{new wheel#1} appears in list

[Label], [Label] to clear, then type 'Training' [Enter]

labels the new scroll

Press {Edit} softkey on lower left side of display, then {Insert}

available color selections displayed

Press {Open Frame} softkey on lower left side of display

display returns to the new wheel frame list and adds 'Generic open open'

Select next gray box under 'C/G'

available color selections displayed

In the left two columns, find {Rosco}, then in the next two columns, (the subcategory) find {Roscolux}, and then {R010}

returns to the frame list and adds color

Under Name, press 'New' in the next box. Type [5] [/] [27] [Enter]

another way to add color to the scroll

Now complete the scroll in Appendix 1 of the workbook

When the last frame has been entered, press {Done}!!

completes the scroll, applies to fixture

[Live], [Group] [10] [Full] [Rem Dim] [Enter]

use the encoder to flip through frames

Check the frames in the Encoder Display or ML Controls

[Home] [Enter]

NOTE: When creating a gobo wheel: after pressing the gray box in the C/G list, make sure that {Gobo} is selected.

OTHER INDEXED PARAMETERS

Back in Patch, [101] [Enter] {Attributes}

selects channel and opens the Wheel Picker in the CIA for wheel selection

{Color Select} (Default HES Color Wheel 38)

used to change the dichroics loaded in a color wheel for a moving light.

{Gobo Select} or {Gobo Select 2} (HES Gobo Wheel 37 & 39)

used to change the gobo wheel loaded in a moving light

{Beam FX Select} (Acme Effect Wheel 3)

{Animation Select} (HES Effect Wheel 14)



Display Layouts and Workspaces

Upon start up or creation of a new show file, any connected monitor that is not already displaying the Live (Tab 1) or Playback Status Displays (Tab 2) will show a blank screen. This screen will also display when a new tab is opened.

WORKSPACE LAYOUT MENU

Click on the large + sign or press the monitor icon in upper left-hand corner of the display



Layout options are basically different ways to split the screen. A workspace can have up to sixteen frames. Each frame can have multiple tabs open.

Click on the 2 x 2 or 4 Frames option (2nd row, 2nd one)

Click on the monitor icon in the upper left again (first one)

Click on Resize Frames in this Workspace

RESIZE FRAMES IN THIS WORKSPACE

Allows you to freely resize and edit the frames in any of the workspaces on the monitor. The grid includes the following tools:



Adds a horizontal split, dividing the frame horizontally into upper and lower rows.

Inserts a vertical split, dividing the frame vertically into left and right columns.

Drag left or right to freely **adjust the width** of the frames. Double press to reset to the default horizontal size.

Drag up or down to freely **adjust the height** of the frames. Double press to reset to the default vertical size.

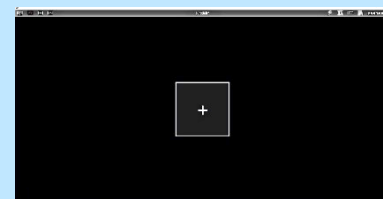
Eliminates a split by closing the frame to the right and **merging** its contents into the frame to the left.

Eliminates a split by closing the frame below and **merging** its contents into the frame above.

Frames of the same size can be freely merged without altering the rest of the grid. Smaller frames can be merged with larger frames, but this may alter adjacent splits. A larger frame will absorb any smaller frames it is merged towards.

The grid is limited to a maximum of three splits in either direction, for up to 16 total frames per monitor/workspace.

After playing, use the Reset all Monitors and Workspaces icon



Play with the tools!



close all the tabs and frames on all monitors

WORKSPACES

A workspace is made up of multiple frames, each with its own tabs. For each monitor, you can have up to three workspaces.

Press the box icon numbered 2 in the upper left-hand corner of the display

to opens workspace 2

Click on the large gray + and add the Submaster List (Tab 15)

Hold [Tab] & press [Page ▲] or [Page ▼]

to change workspaces **across all monitors**

Note: This key combination will only switch into workspaces with open tabs.

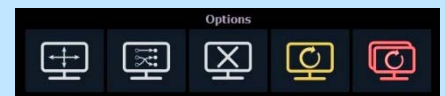
OPTIONS

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

- **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 the tabs in the active workspace on this monitor only.
- **Reset This Workspace** - closes all 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 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 and Workspaces icon

closes all the tabs and frames on *all* monitors





Snapshots

Snapshots store layouts so that you can recall them quickly. They are stored in the show file, can be recalled on any device on the network.

RECORDING SNAPSHOTS

In [Live], be in Table View, and in Flexi - Patched Channels on one monitor and have the PSD & CIA on the other

[Record] [{Snapshot}] [1] [Enter]

records the snapshot



In the upper left-hand corner, press the display controls icon



Select the side-by-side layout

Highlight the PSD display on the right monitor.

move the PSD tab onto the same monitor as the Live display

Hold [Tab] and press [Page ►] or [Page ◀]

Press display controls icon in upper left-hand corner of right monitor

the monitor with the CIA

Select the side-by-side layout

Select the Direct Selects display on the left side, Groups for the type

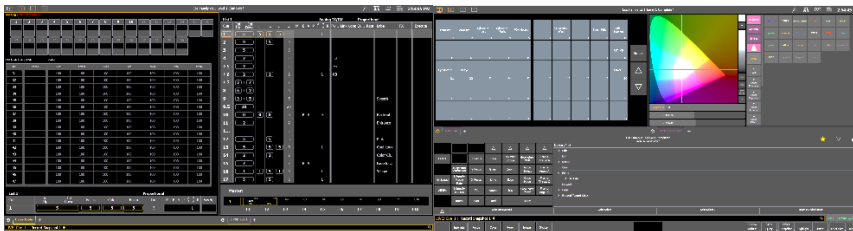
3rd column, 4th one down [Tab 4]

Select the Color Picker on the right side

3rd column, 2nd one down [Tab 27]

[Record] [{Snapshot}] [2] [Label] Color Picker [Enter]

records the snapshot



RECALLING SNAPSHOT

[{Snapshot}] [1] [Enter]

recalls the content of snapshot 1.

[{Snapshot}] [2] [Enter]

recalls the content of snapshot 2.

NOTE: When recalling snapshot, the command does not appear on the command line, it appears above the command line (red text)!

Use Snapshot Quick Access Tool (pop-up icon) to select Snapshot 1

recalls the content of snapshot 1.



[{Snapshot}] [{Snapshot}]

opens the Snapshot list

Groups



SUB-GROUPS

You can create subsets of channels within a group that are treated as a single channel in group/channel selection and in effects.

[Group] [Group] [Group] [103] [Enter]

creates group 103

**[Shift]&[/] [51] [Thru] [53] [Shift]&[/] [Shift]&[/] [54] [Thru] [56] [Shift]&[/]
[Shift]&[/] [57] [Thru] [59] [Shift]&[/] [Shift]&[/] [60] [Thru] [62] [Enter]**

puts sidelights in sub-groups

[Shift]& [/] [/] will close one set of parentheses and open the next.

[Enter] on the command line will close the parentheses. Last [Shift]& [/] not needed.

[Label] Left Hi Sides [Enter]

Back in Live, [Clear] [Sneak] [Enter]

[Group] [103] [Full] {ChanCheck} [Enter] [Next]...

does a channel check with sub-groups

Each set of three channels is treated as one channel in the channel check.

[Clear]

**[Shift]&[/] [Group] [5] [Shift]&[/] [Shift]&[/] [Group] [7] [Shift]&[/] [Record]
[Group] [23] [Label] Movers [Enter]**

creates sub-groups of movers in Live



CREATE GROUPS USING OFFSET

Using Offset to create groups is a quick way to reorder channels as well as create sub-groups more easily. On Apex consoles, **[Offset]** is a hard key (button).

[Clear] [Sneak] [Enter]

**[301] [Thru] [312] {Offset} {Mirror Out} [Record] [Group] [101] [Label] Cyc
Mirror Out [Enter]**

Offset graphic displayed in CIA area

[Group] [Group]

Back in the Group List

[Group] [101] [Copy To] [Group] [102] [Enter]

{Reverse} [Enter]

Reverse is a softkey option

[Label] Cyc Mirror In [Enter]

[Live] [Group] [101] [Full] [Thru] [10] [Enter]

Notice cyc is brightest in center

[Group] [102] [Full] [Thru] [10] [Enter]

Notice cyc is dim in center

[Clear] [Sneak] [Enter]

CREATING A QUICK INTENSITY EFFECT

[Effect] [Effect] [Effect] [99] [Enter] <Type> {Absolute}

Leave as the default

In Live, [Group] [101] [Full] [Enter], [Effect] [99] [Enter]

Mirror out Intensity Effect

[Group] [102] [Effect] [99] [Enter]

Mirror in Intensity Effect

[Clear] [Sneak] [Enter]

ADDITIONAL OFFSET MODIFIERS

[71] [Thru] [82] {Offset}**{Chan per Group} [3] ... [Clear] Then [5] ... [Clear] Then [4]****{Interleave}...[Clear]****{Jump} [3]****[Shift]&[Clear]****[31] [Thru] [50] {Offset} {Mirror Out} {Chan Per Group} [4] {Interleave} [Record] [Group] [104] [Enter]**

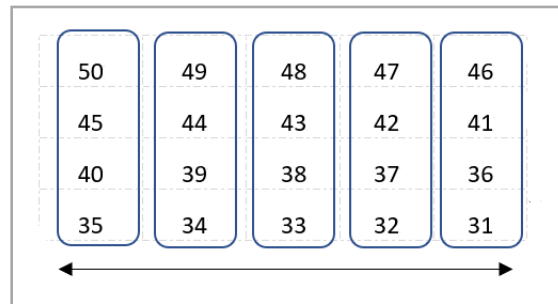
Watch graphic in CIA for differences

Reorders the subgroups so they are not sequential

Notice the gap between the subgroups

Clears the command line

Watch graphic in CIA as you build



Result:

[Group] [104] [Full] {Chan Check} [Enter]... [Next]... [Next]... [Next]

Watch the viz to see sub-groups

GROUP LIST

All Groups should be in the show after the previous exercises.

If not labeled, take a moment and do so.

Group #	Label	Channels
1	Frontlight	1 > 10
2	Downlight	31 > 50
3	High Sides – Left	51 > 62
4	High Sides – Right	71 > 82
5	FOH Movers	101 > 105
7	OS Mover Wash	121 > 128
9	Side Mids	141 > 148
10	Side Scrollers	151 > 158
20	Cyc Top	301 > 312
21	Cyc Bottom	351 > 362
22	All Cyc	301 > 312 351 > 362
23	All Movers	(101 > 105) (121 > 128)
30	Effect 1	34, 31, 33, 35, 32
101	Cyc Mirror Out	(306 > 307) (305 308) (304 309) (303 310) (302 311) (301 312)
102	Cyc Mirror In	(301 312) (302 311) (303 310) (304 309) (305 308) (306 > 307)
103	Left Hi Sides	(51 > 53) (54 > 56) (57 > 59) (60 > 62)
104	Offset Subgroup	(33 38 43 48) (32 37 42 47 34 39 44 49) (31 36 41 46 35 40 45 50)

Note: Ctrl-J on the alphanumeric keyboard does a carriage return in Labels



Submaster Properties

TIMING ON SUBMASTERS

Changes can be made in Live or in Sub List. The Sub bump button is Go.

Be in Snapshot 1

[Live] [Sub] [1] [Time] [3] [Time] [4] [Time] [3] [Enter]

adds a 3 sec upfade, dwells for 4 sec and 3 sec downfade

Press the bump button of fader 1 just once

fades up, holds, then fades down

HOLD

[Sub] [1] {Hold} [Enter]

changes the dwell time to 'hold'

Press the bump button to start the upfade

fades up, holds indefinitely, LED flashes

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

Notice this is a Blind display, but Submasters are always Live.

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

opens the submaster list - use the softkeys for selection and editing

{EDIT}

[Sub] [1] {Edit} [10] [Full] [Enter]

add a channel into this sub in Blind

[Sub] [Sub]

back to Submaster List

PERCENT (%)

The list shows the current level in Live of each submaster.

FADER

The list shows the location of the submaster – page / fader number.

MODES

Additive (contributes to the live output) is the default.

Inhibitive (limits live output) restricts the values as the fader comes down, like a mini grand master for the contents of the sub.



[Sub] [1], under Mode, {Inhibitive}

makes sub 1 an inhibitive sub, LED turns red

Push Fader 1 up if on non-motorized hardware

{Edit} to be in Blind

notice the 'INs' as channel values

[Live], [Go To Cue] [4] [Enter]

runs the cue

Slowly bring the fader out

channels go out - notice small yellow 'I' in channel display

Bring the fader back up

leave up for duration of class

[Go To Cue] [Out] [Enter]

FOH INHIBITIVE SUB

A good example of using an Inhibitive Submaster is for FOH lights on main curtain - would never use as an additive – great for multiple curtain calls

[Group] [1] [+] [Group] [5] [Full] [Enter]

**[Select Last] [-] {All NPs} [Record] [Sub] [3] [Label] FOH Inhib [Enter]
[Load] to fader 3**

NPs stands for non-intensity parameters. Button is in the CIA on the far left side

[Sub] [3], {Properties}, under Mode, {Inhibitive}

Bring fader up

select only intensity for channels, record and load the sub

FOH lights on main curtain - would never use as an additive – curtain calls

for rest of class!



MASTER: PROPORTIONAL OR INTENSITY MASTER

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

[Clear] [Sneak] [Enter]

go to a blank stage

[Group] [5] [Full] [Full], tilt up on cyc

[Record] [Sub] [10] [Enter], Load to fader 10, [Clear] [Sneak] [Enter]

records sub and clears manual values

Then bring fader up, see live changes Bring fader down!

shows proportional control of contents

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

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

toggles the submaster to an I-Master

With fader down, press the bottom bump button, its 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

EXAMPLE WITH LED COLOR

[Group] [20] [Full] [Full], make them blue

[Record] [Sub] [11] [Enter], load to fader 9, [Clear] [Sneak] [Enter]

records sub and clears manual values

[Sub] [11], {Properties} under Master, {Int}

toggles the submaster to an I-Master

Press the bump button, bring fader up and down

only see color as fades up

If the bump button is not pressed, when the fader hits 1%, the non-intensity parameters mark quickly. The rest of the fade is intensity only. An option in Properties called **Unmark 0** releases the non-intensity parameters of the submaster when the fader reaches 0%.

Then bring fader 9 up slowly and down , if flashing, hit Bump Button

see the live change, watch the RGB values



EXCLUSIONS OR EXCLUDE

Another property is **Exclusions/Exclude. {Record}**, where its output is not recorded into any other record target, then **{Solo}**, **{Inhib}**, and **{GM}**.

[Sub] [10], {Properties}, under Exclude, {Record}

contents will not be stored in any record targets

Think about Houselights on a Sub that is set to Exclude from Record.



Syntax / Command Line Filtering

EXPECTED SYNTAX

The command line expects instructions to be entered in a specific structure, or syntax:

Channel Selection and/or Categories & Parameters →→ Modifiers and/or Action

Channel or Target Selection	Categories & Parameters	Modifiers	Action
Chan 1			At Full
Group 6	Color		Record Preset 4
Group 6	Cyan		At /50
Chan 101	Image	- Gobo Select	Sneak Enter

You don't have to use something from every column each time, but you must enter it in this order.

USING SNEAK

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

set levels

[101] [Sneak] [Enter]

sneaks all parameters including intensity back to default

[102] [Shift]&[Focus], [Shift]&[Color], [Shift]&[Beam]* [Sneak] [Enter]

everything but intensity sneaks

** To put Beam on the command line, double hit Form, Image, or Shutter.*

[103] [-] [Shift]&[Intensity] [Sneak] [Enter]

same as 102 but stating the exception

[104] [Shift]&[Beam] [-] {Gobo Select} [Sneak] [Enter]

everything in Beam category except Gobo Select sneaks

Command Line filtering lets us be as broad or as specific as we need to be when we are modifying or storing information.



COPY TO AND RECALL FROM

[Copy To] takes the information from here and puts it over there.

[101] [Thru] [104] [Sneak] [Enter]

leaves 105 on stage

[105] [Copy To] [101] [Thru] [104] [Enter]

copies all values to other channels

[102] [Thru] [105] [-] [Shift]&[Intensity] [Shift]&[Focus] [Sneak] [Enter]

resets most values to background state

Another option is to use **[Sneak] [Sneak]** which will take all the non-intensity parameters to their background level or out. It is a self-terminating command.

[Recall From] takes the information from over there and brings it here.

[102] [Thru] [105] [Recall From] [101] [Enter]

pulls info from 101 and pulls into selected channels

[Select Last] [Home] [Enter]

resets the values to default

[101] [Shift]&[Intensity], [Shift]&[Focus], [Shift]&[Color] [Copy to] [103] [Enter]

copies intensity, focus & color but not beam

Copy To and Recall From also works between targets. Channel information can be recalled from other cues or palettes that are not currently live.

Palettes

Palettes are building blocks for programming. There are four types of palettes that correspond with the four data categories – **Intensity**, **Focus**, **Color**, and **Beam**. These record targets quickly recall stored data. Palettes can only contain information from within their category. For example, color palettes can only store color information – they cannot contain intensity, focus, or beam data.

It is important to remember: Palettes are referenced data. Changes to palettes will affect any place where the palette is stored: presets, cues...



COLOR PALETTES

[Snapshot] [2] [Enter] [Clear] [Sneak] [Enter]	clears the stage
[Group] [2] [Thru] [9] [+] [Group] [22] [Record] [Group] [99] [Enter]	sets up a group for use with color palettes
[Group] [99] [Full] [Enter] {Color Picker} and select a red	notice not all the same
[Group] [99] [Record] [Color Palette] [1] [Label] Red [Enter]	records Color Palette 1
[Clear] [Sneak] [Enter]	
[Group] [2] [Full] [Enter] [Color Palette] [1] [Enter]	the downlights go to red
[Group] [99] [Full] [Enter] {Color Picker} and select an orange	
[Select Last] [Record] [Color Palette] [Next] [Label] Orange [Enter]	records Color Palette 2

COLOR PALETTE EXERCISE

Record five more Color Palettes using Group 99:

CP1	Red
CP2	Orange
CP3	Yellow
CP4	Green
CP5	Lt blue
CP6	Dk blue
CP7	Magenta

When done...

[Group] [22] [Full] [Enter] [Color Palette] [1] [Thru] [7] [Enter]
[301] [Thru] [312] [Rem Dim] [Enter] [Color Palette] [1] [+] [6] [Enter]

LABELS

To display labels or values:

- Per Tab, press the **Gear** tab and check **Show Reference Labels**
- Per Device, in Setup > Device > Displays > enable Show Ref Labels
- **[Data]** – if in an active cue, displays background level data
- **[About]&[Label]** – toggles the display between referenced labels and target numbers.
- **[About]&[Label] [Label]** – double press to lock reference labels on. Press **[About] & [Label]** again to unlock.



FOCUS PALETTES

[Clear] [Sneak] [Enter]	
[Group] [5] [Full] [Enter] and tilt up on stage	brings up FOH lights
[Next]...[Next] and focus each light on the Guitar Player	
[Select Last] [Record] [Focus Palette] [1] [Label] Guitar [Enter]	records Focus Palette 1
[Clear] [Sneak] [Enter]	
[103] [Full] [Full] [Focus Palette] [1] [Enter]	The test – did the light go to the guitar player?

Remember, to view reference labels, right click or tap on the display tab, select the bottom option, and then check the Show Reference Labels option.

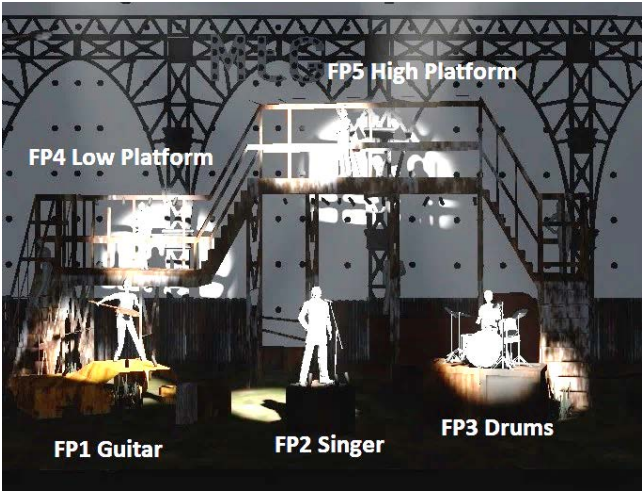
FOCUS PALETTE EXERCISE

Record four more Focus Palettes using Group 5:

FP1	Guitar (SR)
FP2	Singer (CS)
FP3	Drums (SL)
FP4	Low Platform (USR Platform) <i>behind guitarist</i>
FP5	High Platform (USL Platform)

WHEN DONE...

[Group] [5] [Full] [Enter] [Focus Palette] [1] [Thru] [5] [Enter]	fans the lights across all 5 palettes
OR [Group] [5] [Focus Palette] [3] [+] [4] [Enter]	fans lights from palette 3 to 4 in a line





BEAM PALETTES

Be in Snapshot 1 [Page ►] to see Beam parameters	make sure you are in Live Table View
[Clear] [Sneak] [Enter] [Group] [5] [Full] [Enter] Tilt on stage	put lights back on stage
{Form}, {Zoom} [26] [Enter] {Image}, {Gobo Select} {Bars 2}	zoom fixtures and in bars gobo
Make it sharp	
[Select Last] [Record] [Beam Palette] [1] [Enter]	records BP info for all beam parameters
Notice that all parameters in the Beam category have been recorded into the Beam Palette (BP1). Not just zoom and gobo select.	
USING COMMAND LINE FILTERING	
[Select Last] [Shift]&[Image] [Record] [Beam Palette] [2] [Enter]	records image category only
[Page ►] to see Beam parameters	see that just parameters from Image category are stored in BP2
[Blind], [Format] to table view,	
[Beam Palette] [1] [Enter] [Group] [5] [Enter], [Page ►]	see that BP stored data in all parameters
[Shift]&[Next] to see Beam palette 2	only see data for image parameters
<i>When applying BP2, any form or shutter parameter values will not be overridden, since there are no form or shutter values stored in that BP.</i>	
[Live]	
[Group] [5] {Gobo Select} [Record] [Beam Palette] [3] [Label] Bars [Enter]	see that only Gobo Select is recorded in BP3, "Bars" shows up as label
[Group] [5] {Zoom} [Record] [Beam Palette] [4] [Label] 26 deg [Enter]	see that only Zoom is recorded in BP4, "26 deg" shows up as label



INTENSITY PALETTES

[Clear] [Sneak] [Enter] [1] [Thru] [Full] [Full]	set levels, notice 1 Thru Full selects all channels in your current flexi state
<i>Don't recommend doing this in a real theater!</i>	
[Record] [Intensity Palette] [1] [Label] 100% [Enter]	records active channels at 100% in IP1
<i>After [Label], press [Full] to insert Full as the label.</i>	
[Clear] [Sneak] [Enter]	
[Group] [101] [At] [Full] [Thru] [0] [Enter]	set levels, fans the intensity of the cycs
[Select Last] [Record] [Intensity Palette] [2] [Label] Hot Center [Enter]	records active channels in Intensity Palette 2
[Clear] [Sneak] [Enter]	
[Group] [101] [Intensity Palette] [1] [Enter]	brings back the levels recorded in Intensity Palette 1 – cyc at 100%
[Intensity Palette] [2] [Enter]	brings back the levels recorded in Intensity Palette 2 – cyc at fanned values
Press & Hold [Data]	to see actual values in Intensity Palette 2 Data Latched at top of screen
If press [Data] [Data] will latch, [Data] again to unlatch	
[Clear] [Sneak] [Enter]	

Note: The command Recall From an Intensity Palette recalls only the values or absolute data from the palette.



PRESETS – ALL PALETTES

Presets can collect all data for a given channel (intensity, focus, color, and beam palettes as well as absolute data) rather than just one parameter type like with a palette.

[Clear] [Sneak] [Enter]	
[Group] [5] [IP1] [FP2] [CP1] [BP2] [Enter]	create look with referenced data
[Record] [Preset] [1] [Label] Singer Red [Enter]	records all parameter data for all channels and adds a label to preset 1
Press and hold [Data]	to view referenced palettes
[Group] [5] [FP1] [CP6] [Enter]	
Change focus manually - tilt down, then zoom out	Change the focus and zoom
[Select Last] [-] {Intensity} [Record] [Preset] [2] [Enter]	records cue with referenced data, but selective (without intensity)
Press and hold [Data]	Pan & Tilt have absolute data, color is still referenced



HOME PRESET

Home Presets are a quick way to redefine home values of any or all fixtures.

[Go To Cue] [Out] [Enter]	
[Group] [5] [Full] [Full], tilt up on stage	move the fixtures to a place where you want them to be at their home position
[Select Last] {Focus} [Record] [Preset] [999] [Label] Home [Enter]	create a preset for the home value
[Sneak] [0] [Enter]	clear the manual values
[Displays] {Setup} {System} {System}	go into setup
{Home Preset} Select Preset 999 from the drop-down menu	define the home preset that you created
[Live], [Group] [5] [Full] [Full]	bring the channels to full
<i>Group 5 hasn't had any move instructions since defining the home preset.</i>	
Pan & tilt the units, drop in some color	change the fixtures
[Select Last] [Home] [Enter]	channels go back to the new home.
<i>Pan and Tilt have gone to new home values and are no longer manual data.</i>	

ADD TO HOME PRESET

[Group] [99] [Full] [Enter]	bring all color changing fixtures to full
Using the color picker, {Standard Colors} {3500K}	change them to warm white
[Group] [99] [-] {Intensity} [Update] [Preset] [999] [Enter]	update this as their new home color
[Sneak] [0] [Enter]	clear the manual values
[Group] [2] [Full] [Full]	notice the warmer color
<i>A Home command will use data stored in the home preset. If there is no data stored for a parameter or channel, it will use the console's default home values for that parameter.</i>	



Direct Selects

Still in Snapshot 1, on the right monitor, collapse the CIA

Select Add-a-Tab (the {+} sign), select the DS Direct Select Module (Tab 4)

opens Direct Select display

DIRECT SELECT LAYOUT

When open, there are two banks of targets.

Select {Groups} on top and {Color Palettes} on bottom

To scroll through more Direct Selects, use the {Δ} {▽} buttons.

To change the Direct Select type, press the {Select} button. Please note that it may have the current target type label instead of the word 'Select'.

{Expand} opens the bank to a full screen of direct selects and displays the century and millennial buttons that allow you to jump to pages in the hundreds and thousands.

TO ACCESS THE CONFIGURATION MENU FOR THE DIRECT SELECT DISPLAY:

Press the Gear tab all the way to the left

Can also right click or double-left click on the tab!

CONFIGURATION MENU OPTIONS

of Banks – enter the number of different target banks desired

Current Bank – which bank are you editing

Layout – select banks of 25, 50, 100, or 200

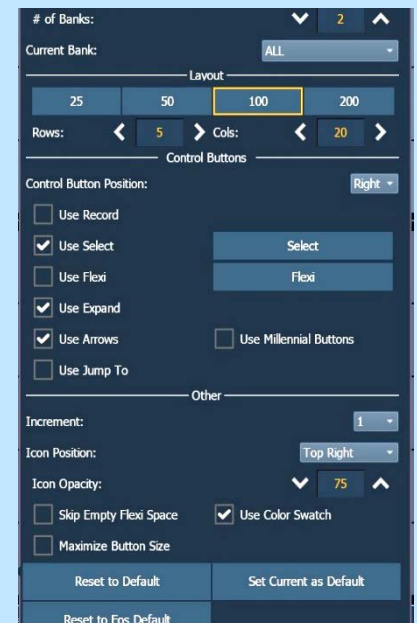
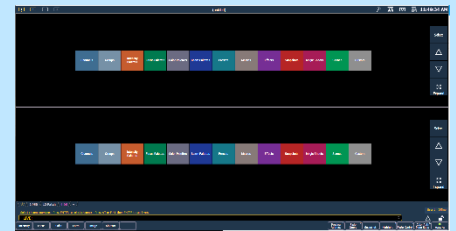
– **Custom Rows/Columns** – can add rows or columns

Control Buttons – select which buttons are displayed on the screen

- **Position** – where do you want to place the control buttons
- **Use Record** – displays the {Record} button on the display
- **Use Select** – displays the {Select} button on screen, may have the current target type label instead of the word 'Select'
- **Use Flexi** – {Flexi} button on screen
- **Use Expand** – displays the {Expand} button on screen
- **Use Arrows** – displays the page up and down arrows
- **Use Jump To** – displays {Jump To} button – use to jump to pages in same list or different list
- **Use Millennial Buttons** – displays the 100/1000 target buttons
- **Select** – to change the Direct Select target from this window
- **Flexi** – toggles the Flexi state on and off from this window

Other

- **Increment** – display targets by whole number, 10ths or 100ths
- **Icon Position** – drop down menu – location of icon on the tile
- **Icon Opacity** – configures transparency of the image – lower levels allow the label to be more visible in front of the image
- **Skip Empty Flexi Space** – shows a visual break instead of a full button space between recorded targets
- **Use Color Swatch** – displays a color tag that previews the color recorded in the Color Palette, based on highest channel's color
- **Maximize Button Size** – like Fit to Screen – depending on layout, allows buttons to expand to fill the screen



ICONS

You can apply and view Direct Select icons to associate images with your targets. Go to the target's list to apply the images.

[Group] [Group]

To open the Group List

Select Group 3, press the {Icon} softkey or click in the Icon column

Hi Side Left group

Click the "Import" icon to the far right next to Organize



Double click "Stock Icons"

Double click "Directional Arrows" folder

Double click on "Arrow Right"

It now appears in the folder list

Choose it from the folder list and make outline and fill white

Lower right, below import

Select Group 4, press the {Icon} softkey or click in the Icon column

Hi Side Right group

Click the "Import" icon

Double click the "Arrow Left"

It now appears in the list

Choose it from the list and make outline and fill white

Lower right, below import

[Live], on the Direct Select tab

Notice these icons are displayed

In the Direct Select gear settings – try Icon Position as top center, bottom left, then center

Note that center fills the whole square

Change Opacity to 100, change it to 50

Change back to Top Center, Opacity 100

DEFAULTS

You can save your settings as a default state.

- **Set Current as Default** – uses the current settings to create a default state.
- **Reset to Default** – restores the settings to the default state.
- **Reset to Eos Default** – restores settings to Eos factory defaults.

SELECTION INDICATION

Note that with Group Direct Selects, any Direct Select containing channels within the current command line selection will highlight.

[Live] [31] [Enter]

Groups 2 + 30 are highlighted as each contains the selection of channel 31

[31] [+] [51] [Enter]

Groups 2, 3, + 30 are partially highlighted as each contains part of the selection

ANOTHER SNAPSHOT

On the right monitor, open the CIA

Create two frames, side by side

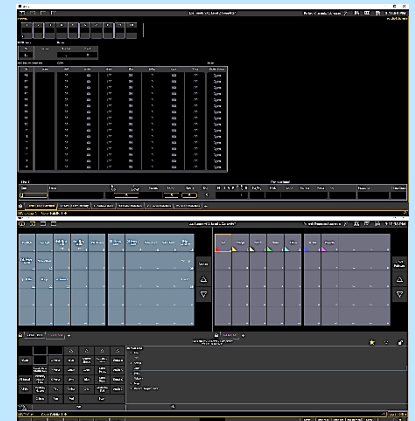
Change the existing Direct Select tab on left from 2 banks to 1 bank

Select Groups

On the new frame on right, open another Direct Select tab

Select Color Palettes

[Record] [{Snapshot}] [3] [Label] Programming [Enter]





APEX TARGET KEYS AND KEYPAD TOUCHSCREEN

TARGET KEYS

The number of Target Keys on the Apex console will depend on the model. The APEX 5 console has 2 banks of 10 target keys while the larger models, the Apex 10 and the Apex 20 have 4 banks and 5 banks respectively.

Target keys are OLED buttons that can be populated with existing Direct Selects.

TARGET KEY EDITOR

Hold down [Displays]

{Edit} appears on each of Target key bank

Press {Edit} on Bank 1

a pop-up appears in the CIA

To change the target type, like Direct Select editing, the current Target Type is displayed on the far-right top button.

Press the target type and select {Focus Palettes}

Focus Palettes are populated on Target key bank 1

ARROW MODES

A drop down menu is used to select Both Top, Both Bottom, Both Split, Next Only Top or Bottom, or Hide them completely, allowing use of all 10 keys for targets.

Using Arrow Mode, hide the arrows on Bank 1

Hold down [Displays] and press {Edit} on Bank 2, select {Color Palettes}

Bank 2 Target keys are populated with the Color Palettes

Using Arrow Mode to hide the arrows

If arrows are hidden, you can hold [Displays] and get temporary navigation arrows.

STARTING TARGET NUMBER

Select {Color Palette 5} (Lt Blue)

it becomes the first target on the bank

Select {Color Palette 1} (Red)

to reset the first target

USING TARGET KEYS

Using Target keys is exactly like using Direct Selects on a touchscreen except there is a physical button.

[Select Last] or [101] [Thru] [105] [Enter]

select channels

Press the various Target keys – Focus and Color Palettes

appears on command line

ICONS

If using icons associated with your targets, in the Editor, you can change how they are displayed on the Target key independently of how they are displayed on the Direct Selects.

NOTE: If you want them to be large, select {Icon Center} and the icon will fill the Target key.

!! Target Key Mapping is stored in Snapshots! Remember to Record !!

Each bank has a unique number, up to 5. The bank numbers are like monitor numbers and mapping. When the show file is opened on a different console, Bank 1 in the show file is going to be populated on Bank 1 of the new console.

KEYPAD TOUCH SCREEN

The keypad touchscreen is right above the keypad and serves several functions. Across the bottom of the screen are the standard softkeys. They are also accessible on other monitors. Apex also has physical keys labeled SK1 through SK6 plus a More SK button for paging the softkeys.



The other function of the Keypad Touchscreen is to display a Magic Sheet or Custom Direct Selects.

The keypad touchscreen is a haptic touchscreen which sort of bridges the gap between buttons and a touch screen. The screen does not react to a light touch, but when a button is held down or given a deep press, it reacts with a ‘thunk’. This allows for customization of a touchscreen but still allows the programmer to keep their eyes on the stage while waiting to engage a button.

The level of haptic feedback can be changed in Setup or even disabled completely. (Setup, Device Settings, Face Panel, Haptics tab)

MAGIC SHEETS OR CUSTOM DIRECT SELECTS

Selecting what is displayed above the softkeys is simple.

On the keypad touchscreen, press the small gear near Softkey 6 (far right) this is the Setup button

Select {Custom DS} or {Magic Sheet} screen is populated with targets

Select the desired target screen remaps to the selected target

Custom Direct Selects are covered in Level 3. They are a way to combine target types in one frame.



Write Cues with Palettes

USING THE COMMAND LINE

Recall Snapshot 1

[Go To Cue] [27] [Enter]	(Last cue recorded in Level 1 class)
[Group] [3] [Full] [Enter] [Color Palette] [7] [Enter]	
[102] [+] [105] [Full] [Enter] [Focus Palette] [1] [Enter]	Lights on Guitar player
[101] [+] [104] [Full] [Enter] [Focus Palette] [3] [Enter]	Lights on Drummer
[Group] [5] [Select Active] [-] {Intensity} [-] {Focus} [Home] [Enter]	removes Color and Beam parameters
[Record] [Next] {Color} [Time] [1] [Enter]	(28)

USING DIRECT SELECTS AND THE COMMAND LINE

Recall Snapshot 3

Touch «Side Mids», [Full] [Full], «Lt Blue» (G9) (CP5)	
Touch «High Sides – Left» and «Orange» (G3) (CP2)	
Touch «Cyc Top» and «Dk Blue» (G20) (CP6)	
[Record] [29] [Time] [3] [Enter]	(29)
[Group] [102], hold [Shift] & touch «Red», release [Shift], touch «Dk Blue»	command line shows Color Palette 1 + 6
Holding [Shift] and pressing a Direct Select will leave the command line unterminated so another command can be added.	
[103] [Full] [Enter] [Focus Palette] [2] [Enter] (Singer)	
[Select Last] [-] {Intensity} [-] {Focus} [Home] [Enter]	removes beam parameters
Touch «FOH Movers» [-] [103] [Out] (G5)	takes out group with an exception
Touch «High Sides – Right» [Full] [Full] (G4)	
{Color} [Recall From] «High Sides – Left» (G3)	brings color in from the other group
[Record] [30] [Time] [2] [/] [7] {Color} [Time] [3] [Enter]	(30)

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 - MAKE ABSOLUTE

Sometimes we want to make a change to a palette in one cue and not change the palette itself. This is the default way that update works – it's called Make Absolute, and stores changes directly to the cue rather than to the palette. This is useful if you need to make a one-time change to your palette data – for example, if a chair moves from one location to another for one moment in the show, you can simply update the cue for that singular moment.

Be in Snapshot 1

[Go To Cue] [28] [Enter] and be in Live Table View

[102] [+] [105] [Enter]

Tilt them downstage a bit

[Update] Notice default Make Absolute style [Enter]

the guitar player is doing this part from the floor

makes a manual change to the channels – note the red Rs in the table view

absolute data is now stored in cue

Notice that 102 and 105 now have absolute data, no longer references a focus palette

UPDATE A PALETTE

Other times, we want to update the palette itself. Be aware that when you update a palette, every place in your show that uses that palette will also be changed. This is useful if the idea behind the palette has changed – for example, if the chair is now two feet away from its original location for the entire show. You can update the chair focus palette and now every place in your show that references that palette will also be changed.

[104] [Enter], tilt down a bit and pan a little

[Update] [Focus Palette] [3] [Enter]

[Go To Cue] [Enter]

make a change - note the red R's

changes stored in FP3, but still manual (red) in 'old' cue 28 on stage

refreshes the cue

The console defaults to make absolute, meaning that any changes you make to palettes will be stored only in the cue and will not affect the palette as a whole. If you want to update the palette, you need to specifically call it out on the command line.



Auto-Mark

MARKS IN GENERAL

A Mark automates the process of presetting non-intensity parameters to their required state in a cue, prior to fading intensity up. All move info about marked fixtures is stored in the reference or source cue.

AUTO-MARK

A system default setting that is turned on or off at a global level.

When AutoMark is enabled, non-intensity parameter transitions will occur in the cue *immediately preceding* the cue in which the changes are stored, if intensity in that preceding cue is zero or moving to zero. Marked cues are indicated by an "M" in the Flags column of the playback status display.

In [Live], Look at the PSD/Cue List	Live moves displayed with 'L' flag
[Go To Cue] [30] [Enter]	
[121] [Full] [Enter], tilt/pan the fixture onto the singer, [At] [5/385] [Enter]	(If strobing, [Home] and then refocus)
[Record] [31] [Enter]	(31)
Press [Back] and then press [▶] (Go)	notice live move
[Displays] {Setup} {System} {Cue Settings}	
Click on {Auto-Mark} <Enabled> and watch the cue list	now see 'M' flags and a few 'D' flags, but notice all the 'L' flags are gone
[Live], [Go To Cue] [28] [Enter]	
[▶] (Go) on Cue 29	notice Q30 in green on Ch. 103
[▶] (Go) on Cue 30 – watch Ch. 121 marking	intensity of Ch. 121 says Mk and non-intensity parameters show Q31 in green
[▶] (Go) on Cue 31	no live move this time

NOTE If you begin programming with Auto-Mark enabled, and then disable the feature, all the Auto-Marks in the show are converted to referenced marks.

ALLOW A LIVE MOVE

When you want to see a live move on stage, but AutoMark is enabled, you can disable AutoMark for an individual cue.

[Cue] [31] {AutoMark Off} [Enter]	notice the 'D' in the Flags column and L for Live move is back
[Go To Cue] [29] [Enter]	
[▶] (Go) on Cue 30	notice no marking
[▶] (Go) on Cue 31	watch the live move

Go ahead and leave AutoMark on for the rest of the class.



Cue Attributes

CUE SOFTKEYS

When **[Cue]** is pressed, a softkey **{Attributes}** (S1) is displayed. When **{Attributes}** is pressed, several new softkeys appear.

SCENE

Scenes are a cue organization tool that provides a visual identifier for breaks in the show. Scenes allow for quick cue list navigation without needing to remember a cue.

CREATING A SCENE BREAK

Using Snapshot pop-up, recall Snapshot 1

[Cue] [1] {Attributes} {Scene}

The virtual alphanumeric keyboard opens: Act 1 [Enter] adds a Scene marker to cue 1

SCENE END

[Cue] [10] {Attributes} {More SK} {Scene End} [Enter] adds an End of Scene marker to cue 10

CUE RANGE SCENE

[Cue] [11] [Thru] [14] {Attributes} {Scene} Act 2 [Enter] adds a Scene marker above cue 11 and an End of scene marker after cue 14

Notice the line above Cue 11 and below Cue 14

[Cue] [15] [Thru] [17] {Attributes} {Scene} Act 3 [Enter] adds a Scene marker above cue 15 and an End of scene marker after cue 17

Notice as you page up and down on the cue list (PSD), the scene break will stay locked as long the cue list is in that scene. Brackets around the label indicate that the cue at the top of the screen is not the first cue in that scene.

NAVIGATION TO SCENE

[Go To Cue] {Scenes}* {Act 2} [Enter] goes to cue at the top of that scene

* The CIA opens and shows all the different scene breaks created.

UPDATING A SCENE

The **{Scene End}** softkey can also be used when updating the cues in a scene. For example, **[Update] <Cue> [5] [Thru] {Scene End}** will put the last cue of that scene on the command line.

Don't forget to add **[Q Only/Track]** to stop tracking if needed!

REMOVE A SCENE BREAK

[Cue] [11] {Attributes} {Scene} [Label] [Enter] to remove a scene

[Cue] [14] {Attributes} {More SK} {Scene End} [Enter] to remove a scene end

SCENES IN DIRECT SELECTS

Add-a-Tab (the {+} sign), select Direct Selects (Tab 4), choose Scenes open a Direct Select Tab

[Go To Cue] «Act 1» - self-terminating use DS to navigate to scenes

As with all Direct Selects, if don't want it to terminate, can press [Shift] & «DS»

NOTES

Cues can have notes attached to them. This is more of a long form phrase instead of a label which is generally a short reminder of what a cue is doing.

[Cue] [11] {Attribute} {Notes} Come back and fix red in cyc [Enter]

to add a note

Can also do [Cue] [11] [Shift] & [Label]

will post notes on command line and open virtual keyboard

Notice in the label field of the PSD, a little plus (+) mark has appeared. Hover over that label field to see the note as a floating dialog box. OR click on the display gear, and under Reorder Columns, check Notes.

Note: To see pending cue notes, both Display Cue Notes and Display Pending Cue Notes should be checked in the gear options.

CUE ALERTS

Eos can learn the time between manual [Go] commands and, in future runs, display a cue alert timer counting down to the next expected [Go]. The cue alert timer is informational only and is not a follow time.

Click on the gear on the far left of the tabs or double click on the PSD tab

to open the PSD Configuration menu

On the right-hand side, bottom, click on Alert Time (Alert)

enables the Alert column

Click outside of the PSD menu

closes the PSD Configuration menu

[Go To Cue] [1] [Enter]

resets the cue list to cue 1

LEARNING ALERTS

[Live] [Learn] {Learn Alert Time}

"Learning Alerts After GO" appears above the command line

▶ (Go) into cue 2

notice countdown time in red in Alert column

▶ (Go) into cue 3

the time is stored and the process repeats

[Learn]

to stop learning alert timings

[Go To Cue] [1] [Enter]

resets the cue list to cue 1

▶ (Go)

notice countdown time in red in Alert column

When the countdown is below 5 seconds, the alert time will change to gold, and an alert advisory sound will play if enabled.

The sound is enabled and adjusted in volume in Setup > Device > Face Panel > Sounds. The Ion Xe needs speakers plugged into the console. The Gio, Ti, and Apex consoles all have speakers.

When the countdown reaches 0, the time will change to green and display until the next manual [Go].

Instead of learning an Alert, the time can simply be entered directly.

[Cue] [1] {Alert Time} [15] [Enter]

adds an Alert Time to a cue

[Cue] [1] {Alert Time} [Enter]

removes the Alert Time



PLAYBACK STATUS DISPLAY (PSD) CONFIGURATION MENU

The following options are available in the PSD Configuration Menu:

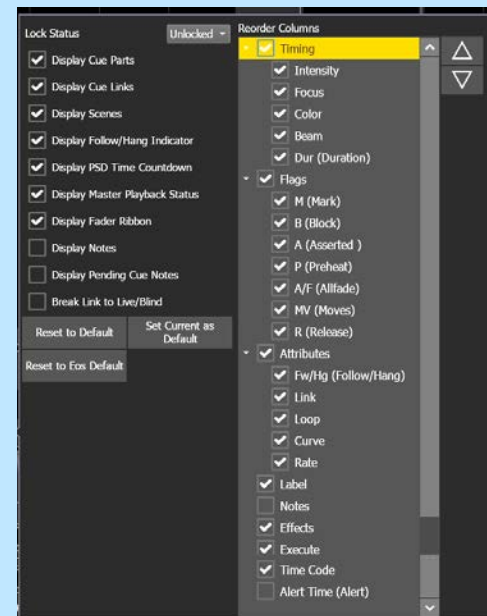
On the left side, (Lock Status)

- **Lock Status** – allows you to lock the PSD to a certain cue list.
- **Display Cue Parts** – displays the individual parts of a part cue. When not enabled, the number of parts for that cue will display as a superscript number beside the cue's number.
- **Display Cue Links** – displays the Link/Loop information.
- **Display Scenes** – displays cue scene information.
- **Display Follow/Hang Indicator** – displays the Follow/ Hang arrow indicator before the cue number of any cue that will be triggered by a follow or hang.
- **Display PSD Time Countdown** – displays the cue category times countdown in the PSD as a cue is fading.
- **Display Master Playback Status** – displays the current cue's status information. Current and pending cue status
- **Display Fader Ribbon** – displays the fader ribbon, which shows the current fader page under the Master Playback Status.
- **Display Notes** – displays the Cue Notes in a horizontal bar at the bottom of the PSD.
- **Display Pending Cue Notes** – displays the Cue Notes for the pending cue in a horizontal bar at the bottom of the PSD.
- **Break Link to Live/Blind** – When selecting the Live/ Blind display, the PSD will also come into view if it is currently hidden. This option allows you to break the link between the PSD and the Live/ Blind displays so that the PSD will no longer come into view when selecting Live/ Blind.
- **Set Current as Default** – uses the current settings to create a default state for all other instances of the PSD.
- **Reset to Default** – returns the settings to the default state that you created.
- **Reset to Eos Default** – returns all settings to the Eos defaults.

On the **Reorder Columns** side, you can choose what data is displayed and what order it displays in. By default, all columns except Notes and Alert Times will be displayed. The check boxes disable or enable the data. Click on the name and use the arrow keys (above right) to move columns.

Feel free to set up the PSD the way that you prefer.

[Record] [{Snapshot}] [1] [Enter] [Enter]



Move Labels up to the top – will appear next to cue number

to re-record Snapshot 1



DISCRETE TIMING

Timing can be applied directly at a channel or parameter level.

DISCRETE CHANNEL TIMING

[Live], [Go To Cue] [31] [Enter] if not already there

[Select Active] [Out]

fastest way to a blackout

[Record] [Next] [Time] [3] [Block] [Assert] [Label] Fade to Black [Enter]

records fade to black with block, assert, and label (32)

[103] [Time] [10] [Enter]* [Update] [Enter]

records time for channel 103 only in cue 32

** Notice the small red "t" displayed on the channel. Reminder – manual data! When updated, the "t" becomes blue. A '+' is also displayed on the cue in the PSD.*

Hold the Timing Displays button, **[Time]**, (right hand side of the board) or hold **[About]&[Time]** to see the time displayed on the channel. It is displayed as 'D/T' where D is the Delay time and T is the Channel Time.

[■] (Stop/Back) to cue 31 [▶] (Go) and watch the timing

watch channel 103 take 10 secs. to fade out

Hold [Flexi] and press [Time] in the CIA

Only channels with discrete timing are displayed

[{Snapshot}] [1] [Enter]

To restore to the previous Flexi state



DISCRETE TIMING BY RANGE

[Group] [20] [Full] [Enter], [Color Palette] [4] [Enter]

set level of cyc full in green

[Record] [Next] [Enter]

records next cue (33)

[Group] [20] [Time] [1] [Thru] [15] [Enter] [Update] [Enter]

adds a distributed timing of 1 to 15 secs across the channel list, blue "t" and '+'

[■] (Stop/Back) and hit [▶] (Go)

watch the fade

Fan Time of 0 thru 15 – the fades start all at the same time but complete at different times.

DISCRETE TIMING WITH DELAY

[Group] [101] [At] [50] [Enter], [Color Palette] [6] [Enter]

set level of cyc full in blue

[Select Last] [Delay] [0] [Thru] [3] [Enter]

adds a delay timing of 0 to 3 secs, blue "t" and '+' in Time column

[Record] [Next] [Time] [2] [Enter]

records next cue (34)

[■] (Stop/Back) and hit [▶] (Go)

watch the fade



DISCRETE TIMING BY PARAMETER

[Group] [5] [Full] [Enter] [Record] [35] [Enter]

set levels and records cue (35)

[Select Last] [Focus Palette] [5] [Enter]

[Select Last] {Tilt} [Delay] [5] [Enter]

adds a delay of 5 sec to tilt

[Record] [36] [Enter]

records next cue (36)

[■] (Stop/Back) and hit [▶] (Go)

watch the fade



CLEAR DISCRETE TIMING

[Group] [5] [Delay] [Enter] [Update] [Enter]

removes the discrete timing and the '+'

** Notice the + on Focus time has gone away and the duration is reset.*



Multipart Cues

Multipart cues can be used to organize channels and affect their playback attributes and timing as a group. A cue can have up to 20 parts.

MAKE A MULTIPART CUE FROM AN EXISTING CUE IN BLIND

[Live] [Go To Cue] [36] [Enter]	
[Group] [3] [Full] [Full] {Color} [Home] [Enter]	put channels at full, set to warm white
[Record] [37] [Enter]	creates cue 37
[Blind], [Format] to Spreadsheet view Hold [Shift]&[Format] to hide non-intensity parameters	switch to Spreadsheet View
[51] [Thru] [53] [Part] [2] [Enter] [Enter]	moves channels into Part 2 – 2 nd Enter to confirm the break into parts
[54] [Thru] [56] [Part] [3] [Enter] [Time] [3] [Enter]	moves channels into new part with time
[57] [Thru] [59] [Part] [4] [Enter] [Time] [4] [Enter] [Label] US [Enter]	moves channels into another part with time and label

MAKE A MULTIPART CUE FROM AN EXISTING CUE IN LIVE

[Live] [Go To Cue] [2] [Enter]	
[Group] [2] [At] [Full] [Enter] make them Magenta (CP7)	
[Update] [Enter] [▶] (Go) on Cue 3	
[102] [Full] [Enter] put them on the drums in Light Blue (FP3) (CP5)	
[Select Last] [Record] [Part] [2] [Time] [1] [Enter] [Enter]	moves selected channels to part 2, all data that has not moved is in part 1
[Group] [2] [Enter] and make them orange (CP2)	takes only the color parameters of the channels and moves them into part 3
[Select Last] {Color} [Record] [Part] [3] [Delay] [5] [Enter] [Enter]	moves selected channels to part 3
[Clear], press [Last] to see parts in PSD	

CHANGE ATTRIBUTES OF A MULTIPART CUE

[Cue] [3] [Time] [6] [Enter]	not specifying a part assumes part 1
[Part] [2] [Time] [3] [Label] Drums [Enter]	changes the fade time for the channels in part 2 to a time of 3 and labels part
[Go To Cue] [2] [Enter] [▶] (Go) on cue 3	run cue, watch the fade times.

[Delete] <Cue> [3] [Part] [3] [Enter] [Enter] deletes part 3 of cue 3. When you delete parts of a multipart cue, any move instructions in the deleted part are moved to the first available part.

MULTIPART CUES BEST PRACTICES

- Unlike discrete timing, Multipart cues show all their timing information on the surface and can have labels. This makes complex timing changes easier to identify and track.
- Use parts to group like-types of data together – all channels that are marking, for example.
- Display Cue Parts can be toggled on or off in the PSD Configuration menu.
- Effects will always be in Part 1. They cannot be put in another part.

Remember: You can't change the same parameter of a channel twice in one cue.



Effects

WORKING WITH A PRE-PROGRAMMED EFFECT

Effects 901 – 918 are preprogrammed effects

[Live], [Go To Cue] [Out] [Enter], [Group] [5] [Full] [Enter], [FP2] [Enter]

[Group] [5] [Effect] [901] [Enter]

EFFECT PROPERTIES

[Effect] [Effect]

to open the Effects Editor

Effect properties include: {Type}, {Scale}, {Cycle Time}, {Duration/Cycle}, {Parameters}, {Attributes} as well as {Entry} & {Exit} methods, {Time}, {Grouping} and {Trail}.

ENCODERS

{Axis} – Rotates the shape (Watch the graph as well)

{Horizontal} – (Default), tap encoder for vertical option

{Scale} - Size (default 25)

{Cycle Time} – Speed of the effect

Use the encoders. Watch both the viz and graph on the display

ATTRIBUTES

{Grouping} determines how channels currently running the effect will be distributed throughout the pattern. Grouping defaults to **{Spread}**. Every light runs individually, based on the channel order, cycle time, and trail times. A grouping of 2 means every other light will move together. Grouping of three means every third light, and so on.

Click on 1 and press [Enter].
Watch the effect.
Click on 2, 6, 32,...

TRAIL

{Trail} determines how fixtures follow each other through the effect; it is a percentage of the cycle time. Trail can be any value from 0-200%, even, or solo. The default is Even.

- **{Even}** – the fixtures are distributed evenly throughout the path. This is calculated by dividing the cycle time of the effect by the number of channels. Will put Trail 0 on the command line.
- **{Solo}** – puts Trail 100 on the command line, requires an [Enter]. The first fixture executes the entire path. Then the second fixture does,...
- **{10%} - {90%}** – when the first fixture is 10% through the effect, the second fixture will start the effect. Therefore, the fixtures will trail n% behind each other, as a percentage of the cycle time.

STOPPING AN EFFECT

[Live] [Group] [5] [Out]

takes out intensity, but effect still running

[Group] [5] [Effect] [Enter]

stops the effect on selected channels

OR [Effect] [901] [At] [Enter]

stops selected effect

OR [Stop Effect] [Enter]

stops all effects

On Apex consoles, **[Shift]&[Effect]** is the Stop Effect Command. Also **[Effect] [#] [At]** will post Stop Effect on the command line.



COPY AN EFFECT

You can copy effects to another effect location and modify them from there. This will leave the original effect untouched.

[Effect] [Effect]

[Effect] [901] [Copy To] [2] [Enter]

copies the effect to a new number

[Label] [Label] Modified Circle [Enter]

can also label the new effect

DELETE AN EFFECT

[Delete] [Effect] [2] [Enter] [Enter]

deletes the effect

If you delete one of the default effects (901 through 918), that effect will return to its default values.

[Delete] [Effect] [901] [Enter] [Enter]

deletes the effect - in this case, returning it to its default values



CREATE A RELATIVE EFFECT

Relative effects are mathematical based effects that can run on any fixtures that have similar parameters. A focus effect runs on any fixtures that have pan and tilt parameters.

FOCUS EFFECT

[Effect] [Effect]

[Effect] [2] [Enter] {Focus}

creates a new focus effect

Graph: X is Pan; Y is Tilt; center is where the light is focused.

{Edit}, then {Clear All}, on the grid, left click & drag to create a closed path

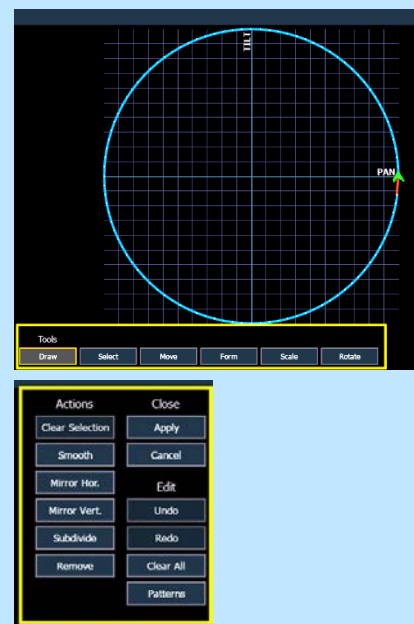
draw something – a heart, clover

The following **Tools** are also available to edit the curve:

- **Draw** – draw lines for linear effects or append points to focus effects
- **Select** – select points of the curve (if none selected, all are changed)
- **Move** – move selected points, can also phase-shift the curve of linear effects in steps of 30 degree
- **Form** – scale linear effects on y-axis and focus effect separately on x- and y-axis
- **Scale** – increase or decrease overall size of the effect on both axis
- **Rotate** – rotate focus effects around center of the selected points

The following **Actions** are available when editing the curve:

- **Clear Selection** – removes selected points and defaults to all points
- **Smooth** – smooths the selected points
- **Mirror Hor. /Vert.** – mirrors the curve
- **Subdivide** – adds one point on each selected segment (useful to move that point or change the behavior of smooth)
- **Remove** – removes the selected points
- **Undo** – undoes the last operation
- **Redo** – redoes the last operation



Don't forget to hit {Apply!} {Grouping} {1} [Enter]

easier to see them all move as one

[Live] [Group] [5] [Full] [Enter] [FP2] [Enter] [Effect] [2] [Enter]

if not already there



CREATE A LINEAR EFFECT

A linear effect does not have to be parameter specific. Rather it can simply be a reference to a linear diagram which can be applied to any parameter.

[Effect] [Effect]

[Effect] [12] [Enter] {Linear}, {Edit}, {Patterns}

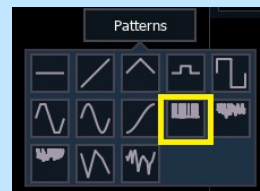
creates a new linear effect

Select the NTX Flicker Pattern

in patterns, 2nd row, 4th one

The tools are slightly different for a linear effect:

- **Draw** – draw a new line for linear effects or append points to focus effects
- **Select** – select points of the curve (if no points are selected, all are changed)
- **Move** – move selected points, can also phase-shift the curve of linear effects in steps of 30 degree (only if there is no partial selection)
- **Form** – scale linear effects on y-axis and focus effect separately on x- and y-axis
- **Gamma** – apply a log function to the curve (linear effects only)



Don't forget to hit {Apply}!

[Live], [Group] [5] [Home] [Enter] [At] [50] [Enter], [Effect] [12] [Enter]

[Effect] [Enter]

to stop effect

[Effect] [Effect]

{Duration} [3] [Enter]

Short flash – maybe a lightning effect

[Live], [Group] [5] [Effect] [12] [Enter]

[Clear] [Sneak] [Enter]

COLOR EFFECT

Color effects impact only color parameters. Like Focus Effects, they default to a circle pattern, with hue and saturation offsets. The **{Parameters}** key within the Effects Editor displays the various color mechanisms used in any patched channels.



CREATE AN ABSOLUTE EFFECT

Absolute effects are like step-based effects in that they contain a series of sequential actions. However, unlike step-based effects, absolute effects can be applied to any fixture that contains the parameter(s) specified in the effect. For example, an absolute effect that affects intensity can be applied to virtually any fixture; an absolute effect with color palettes as actions can be applied to any fixtures that have data stored in those color palettes.

WITH COLOR

[Effect] [Effect] [Effect] [3] [Enter]	creates a new effect
<Type> {Absolute}	selects Absolute and changes display
{Action} [1] [Thru] [7] [Enter] [Enter]	creates 7 actions
[Page▶] to {Level} column,	
[Color Palette] [1] [Thru] [7] [Enter]	enters CP1 – 7 into the 7 actions
[Live] [Group] [2] [Full] [Rem Dim] [Enter] [Effect] [3] [Enter]	plays effect across downlights
[Group] [9] [Full] [Enter] [Effect] [3] [Enter]	effect runs on sidelights
[Group] [101] [Full] [Rem Dim] [Enter]	brings up the cyc
[Effect] [3] [Enter]	plays effect running out from center
[Group] [102] [Effect] [3] [Enter]	plays effect running in toward center
Watch the effect on the color picker display too! Play with grouping on this effect – note that a grouping of 1 will do a solid color change of the whole cyc.	
[Clear] [Sneak] [Enter]	



WITH INTENSITY

[Effect] [Effect]	
[Effect] [4] [Enter]	creates a new effect
<Type> {Absolute}	selects Absolute
Check out the default Absolute effect - intensity based Action 1 = 0 and Action 2 = Background (Bkgrd)	[At] [Enter] puts Bkgrd in the Action
[Live], [Go To Cue] [7] [Enter]	bring up a cue onstage
[Select Active] [Effect] [4] [Enter]	replays the effect on the cue levels
[Effect] [Effect]	
Change Action 1 = Full and leave Action 2 = Background (Bkgrd)	see how the effect has changed
[Live] [Go to Cue] [Out] [Enter]	clears effect and cue



WRITING EFFECTS INTO CUES

[Go To Cue] [37] [Enter]

[Group] [3] [Effect] [3] [Enter] [Record] [37.1] [Enter]

effect number shown in FX on PSD (37.1)

[Group] [5] [Effect] [901] [Enter] [Record] [Next] [Enter]

see how the effect has changed (37.2)

[Group] [5] [Focus Palette] [1] [Enter]

[Group] [3] [Stop Effect] [Enter] [Record] [Next] [Enter]

clears effect and records cue (37.3)

[Go To Cue] [37] [Enter] and run the cues

[Go To Cue] [Out] [Enter]



About "About"

"About" displays detailed information for nearly every target type.

[Shift]&[Clear] [About]

on a clear command line, About shows information about the current device

In the CIA, **[About]** Device displays the following information:

- System address count
- Software version
- Fixture library version
- Copyright & Licensing notifications
- Device name
- Assigned as (Primary/Backup/Client/Offline)
- User ID
- Priority (ACN and Net2)
- Networks – multiple networks and IPs listed
- Defined Parameters
- Number of patched addresses
- Number of unpatched defined parameters
- Number of patched channels
- Number of cues
- Allowed output addresses

In the center (left), {Session}.

shows Devices types, status, and address

This display shows status information and IP address for any devices.101

{Processors}

shows processor status and universes

This display shows status information and IP address as well as universes and load information for any processors connected to the system.

{What's New}

A QR code for latest software, libraires and assets as well as a quick link to the Manual (Tab 100).

Please note that the manual is not available on Windows XP devices but is available as a download from the web site.

[101] [Enter]

lots of information about the channel

Current values, Background, Moves, Usage, Patch, Fixture Notes and Lamp Controls

To exit, press [About] again or [Displays]

to bring back CIA/Browser



Magic Sheets

Magic Sheets is a tool that allows you to create a custom layout to display and to interact with your console functions in different ways.

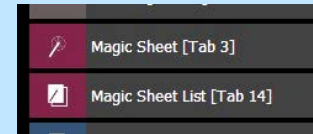
OPEN A NEW OR BLANK MAGIC SHEET

Use Add-a-Tab (the {+} sign) and select the magic wand (Tab 3)

Double click on or touch "New Magic Sheet"

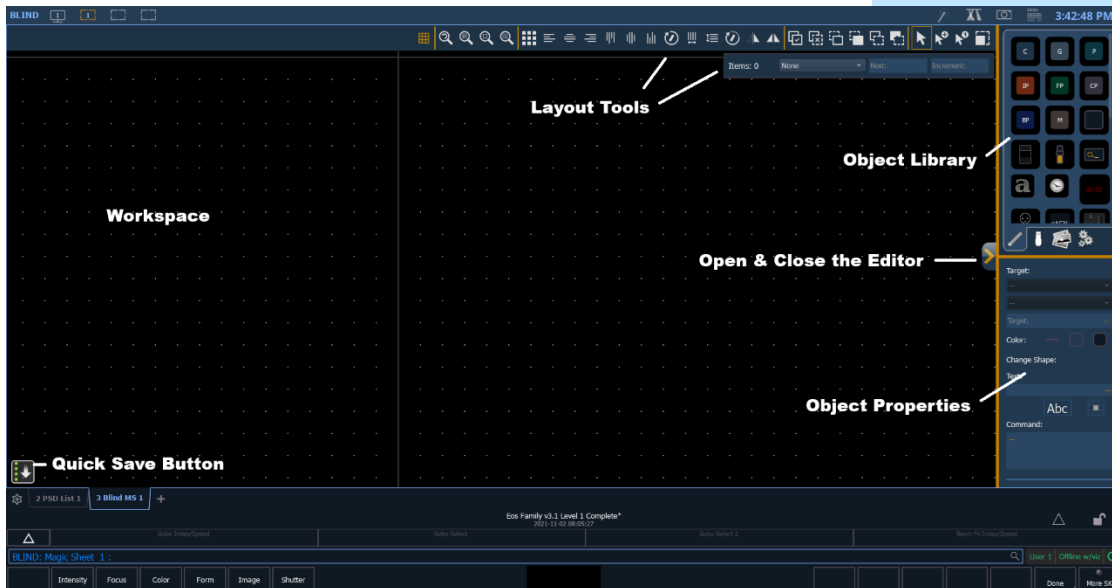
OR

[Displays] {Magic Sheet} [1] [Enter]



GETTING STARTED

Notice you are in Blind with the Editor open. The Editor button (< or >) on the right-hand side of the magic sheet display will open or close the editing tools. When the Editor is closed, you are back in Live.



MOUSE NAVIGATION TOOLS

Use your mouse wheel

to zoom in and out

Right click and hold

to pan or drag the display

QUICK SAVE – CREATING RESTORE POINTS

Clicking on the {Quick Save} button allows you to save a restore point for the magic sheet you are working on. Once saved, a green check mark will temporarily appear next to the {Quick Save} button. This creates a restore point allowing you to undo back to that point.

NOTE: If no restore points are saved, [Undo] [Enter] deletes the magic sheet.

Closing and re-opening your Editor will also create an undo restore point.



PLACE AN OBJECT

We are going to make a Magic Sheet that looks something like this:



(Larger version on page 48)

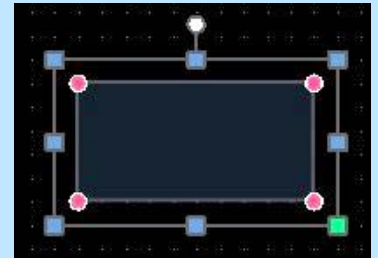
SIMPLE TOOLS

Click in the Object Library on the rectangle 8th row, middle

Drop it on the worksheet

- Green Handle for proportional stretch
- Blue handles for edge stretch
- White dot handle for rotate
- Pink handles for individual point move

Leave as a rectangle, stretch it to be double the width as the height



TARGET ASSIGNMENT

In the Object Properties, click on the drop down menu under Target:

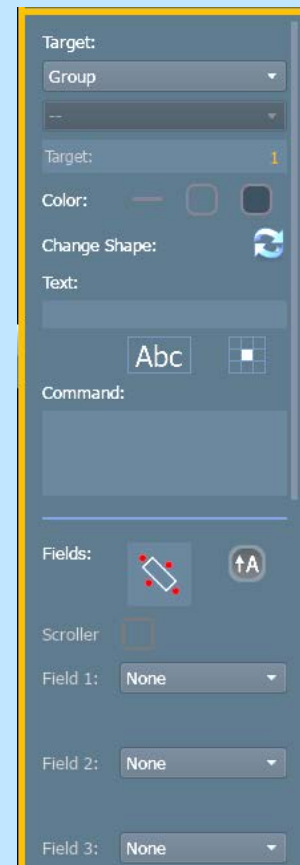
• Address	• Beam Palette	• Channel (default)
• Channel (By Address)	• Color Palette	• Cue
• Cue Active	• Cue Pending	• Effect
• Fader	• Focus Palette	• Group
• Intensity Palette	• Macro	• Magic Sheet
• Pixel Map	• Preset	• Response IO Relay
• Scene	• Snapshot	• Submaster
• User		
• Console Button – second field, drop down of all console buttons		
• Softkey – second field, drop down of softkeys 1 - 6, including More Softkeys		
• Command – write command in command field, label in text field		
• Zoom - when clicked, the view will zoom in to show all objects within that object's group.		
• Selection - when clicked, all other objects within that object's group will be selected.		

Make the target 'Group' and the target number 1

COLOR PROPERTIES

- Outline line weight
- Outline color
- Object fill color
 - Brightness (saturation) bar on right side
 - X is no fill or clear

Select a line weight and a fill color



{Change Shape} allows you to quickly change the object shape without having to drag a new object in or redo all the properties.

FIELD SELECTION

Up to six different fields of information can be displayed. Field options are context sensitive based on the object.

- None
- Target ID
- Target Name
- Label
- Icon

- **Abc or Font icon** - adjust the font type, size, color, style (bold, italic)
- **Alignment icon** - position of the field

Make Field 1 the Target Name, Field 2 the Target ID, and Field 3 Label

The object might look something like the image to the right.

With the Group object selected, CTRL+C and CTRL+V

Select the new Group object, CTRL+X or [Delete]



to copy and paste

to remove

Below the Fields is a check box for Interactivity as well as displays of Position, Size and Rotation

- **Interactive** – toggles on or off. Objects set to not-interactive cannot be selected and will only display information.

CREATE AN ARRAY

You can create multiple of the same type of object quickly, using the Array tools.

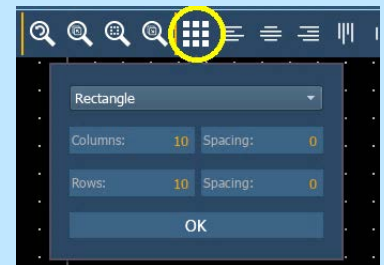
Select the original Group object

Click on the Array icon

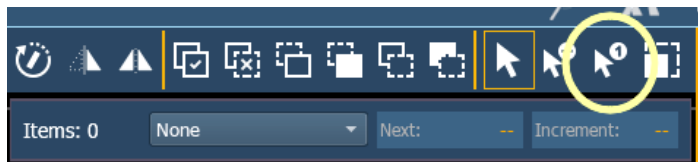
Leave as a Rectangle, drop down shows circle option as well

Change the number of columns to 2, rows to 5, and spacing to 15 on both

Click OK



AUTO-NUMBER



Click on the Renum Tool

Target should be Group and Next = 2, Increment = 1

The first object should still be 1, so click on each of the other objects across the first row, and then the second row, to renumber the groups

Note that the pointer will display the target that will be assigned on the next click.

Don't forget to hit Done!

Back on Layout Toolbar, change back to Normal pointer (simple arrow)

QUICK TOOL MENU

Right click on the Magic Sheet while in Editor mode

- Cut and Copy
- Paste Renumber
- Paste Duplicate
- Renumber by Click
- Renumber in item
- Group or Ungroup
- Bring Forward or Send Backward
- Clear Selection
- Grid Toggle

INSERTING CHANNEL OBJECTS

Click on the Fixtures Library tab

Select the Moving Wash – 3rd down on left side, drop it on the workspace

Rotate it to face upstage

Make the target as 'Channel' and the target number as 101

On Field 1, Target ID, select Georgia as the Font and make the Font Size 25

You can also choose a color for the font. Be aware that some fields use system colors like Channel Intensity levels so those will override any colors that are selected. There are also options for Bold, Italic or Underline.

On Field 2, Intensity, set the Justification (Checkerboard icon) to behind the fixture (Top Center)

Change font size to 25

Remove Field 3 data – select None

Click on the Object Fill Color icon

Click on both 'Link to Target Color' and 'Link to Target Intensity'

With the fixture selected, copy, and paste it 4 more times

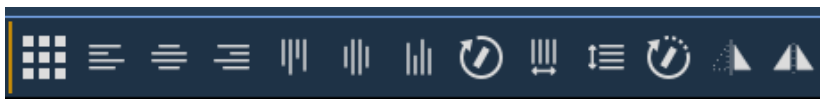
Click on the Renumber Tool

Target should be Channel and Next = 102, Increment = 1

Renumber the 4 new fixtures and don't forget to hit Done!

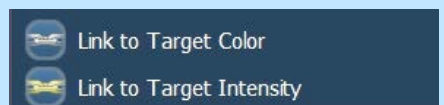
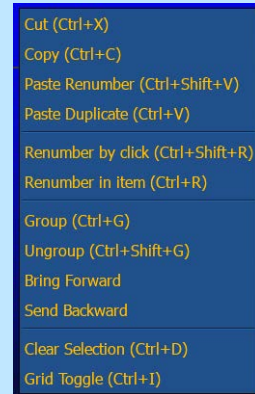
Move an end fixture farther away from the rest

Select all 5 fixtures



Using the Align Tools, align Middle and then Distribute Horizontally

{Quick Save}!!



Make sure you see the green checkmark!!

FLIP

Add a Channel object, copy and paste it 3 more times

to copy and paste (CTRL+C & CTRL+V)

Move them into a horizontal line

Select all 4

Click on Flip in the tool bar next to Mirror



popup appears, new position is previewed

Select {Accept Flip} to apply or {Cancel Flip} to close without changing

Can flip the objects horizontally or vertically

Flip Text Position is selected by default

to keep text upright when flipping

Flip Target Field Positions is also selected by default

to keep field positions upright

{Cancel Flip} and delete the objects



INSERTING PALETTE OBJECTS

Click in the Images Library, then click on Import Image icon



Images can be imported into magic sheets for two different purposes: background images or as objects.

- **[Gobos]** – a direct link to the console gobo library, populates based on the fixtures patched in the show
- Accepted image formats: .bmp, .gif, .ico, .jpg, .pbm, .pgm, .png, .ppm, .svg, .svgz, .tga, .tiff, .xbm, and .xpm. (max 1920 x 1920)

Select the [Gobos] folder, double click the HES Gobo Wheel 37 Fracture

to add the gobo to the Image Library

Click on it and drop it in the Magic Sheet in the bottom left corner

Make the target 'Beam Palette' and target number is 5

to create a new Beam Palette 5

BACKGROUND SETTINGS

Click on the fourth tab (Gears) for the Background Settings

- **Interactive** - toggles interactivity on or off for the entire magic sheet. If toggled on, all objects respect their per-object settings. If off, no objects will be interactive, regardless of their settings.
- **High Quality** – Checked by default. If unchecked, optimizations will be made to the graphics, which may improve performance and reduce lag, but at the expense of image quality.

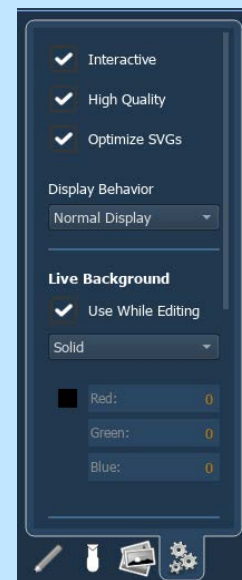
Display Behavior is similar to tab behaviors. The options are Normal, Channel, or Control

Live and Blind Backgrounds allows you to create different backgrounds to be used for Live and Blind Magic Sheets.

- **Solid** – use Red, Green, and Blue values to select a color or click on the small black square next to 'Red' to open a color picker,
- **Gradient** – select top and bottom colors and display will scale between the two colors
- **Image** – click on the image icon to select a background image, set width, height and opacity, options for inverted or normal
 - Currently accepts image files: jpg, tif, bmp, png

Select Gradient in the pull-down menu

Choose a top color and a bottom color



LET'S ADD OTHER OBJECTS

Back in the Objects Library, select the Color Palette Object – 2nd down on the right – and add it to the Magic Sheet below the fixtures

Stretch it out a bit longer

Make Field 1 the Label and set font size to 20, and leave other fields empty

Under Color Fill, Link to Target Color

uses color of highest channel in Palette

Create a rectangle array of 7 columns, 1 row with 25px spacing

Select all 7 Color Palettes, then make the Field 1 text 20pt and black

Select a Square object, stretch it a bit, maybe rotate it

Target should be Focus Palette and Target number is 1

Fields should be Target Name, then Target ID and third the Label

Copy and paste 4 more times and arrange like stage focus areas

Remember the Direct Select icons we added to a couple of our Groups? We can display those on our Magic Sheets as well.

Select all 10 Group rectangles.

In Field 4, change it to Icon. Leave it centered. Close the Editor

to see the icons on Groups 3 and 4.

Reopen the editor. Font size on Field 4 adjusts the size of the Icon.

Note that all the rectangles show the Icon symbol, but when we closed the Editor, we only see 2 icons – only two groups have icons assigned to them.

Click in the Object Library, scroll down and select the arrow

Add it to the Magic Sheet next to the beam palette

puts gobo in the Image Library

Using the pink dots to flare out the tail, white line and white fill

No properties just yet

{Quick Save}!!

CONSOLE BUTTONS

Add a Square Object, make it a bit bigger

In the Target drop down, towards the bottom, select 'Console Button'

Drop down menu below Target says None. Find 'Full'

Change Field 1 to Target Name

Add 2 more console buttons: 'Rem Dim' and 'Enter'

use Ctrl-C and Ctrl-V again

HOW IT WORKS IN LIVE

Close the Editor

*Notice all the labels are visible and the FOH lights are dark because they have no level.
Also, the Color palettes automatically take the color that is stored in them*

Use the Magic Sheet now to do the following:

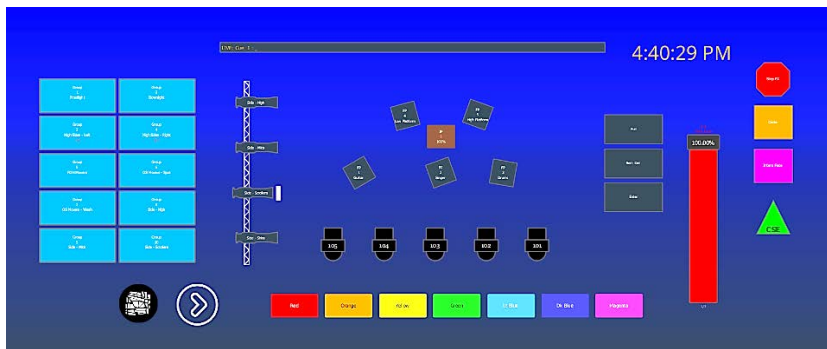
Click on [Group 5] (FOH Movers) [Full] [Enter]

Click on the Color Palette objects - [Red] [Orange] [Lt. Blue]

Click on [Singer] (FP2)

Roll down intensity wheel

The magic sheet might look like this:



now in Live

to bring FOH Movers up

changes color of fixtures – also notice channel objects are changing color

channel objects slowly fade to black.

(Larger version on page 48)



MAGIC SHEET NAVIGATION

MULTI-TOUCH GESTURES

The following multi-touch gestures can be used with an external multi-touch touchscreen or the onboard monitors on other Eos family consoles.

- **Scroll** – touch with two fingers to move around the page.
- **Zoom In** – touch with two fingers and then move your fingers away from each other.
- **Zoom Out** – touch with two fingers and then move your fingers toward each other.
- **Zoom to All** – double tap with two fingers.
- **Open Magic Sheet Browser** – tap with three fingers.

DISPLAY TOOLS

Right click or tap on the Magic Sheet tab





to see configuration settings

You can also click on the Gear tab for the same options.

- **< ■ Add View >** – for each magic sheet, multiple views may be created, then < and > allow for scrolling through the views.
- **Save Screenshot** – saves a png image of magic sheet to a USB
- **Magic Sheet Browser** – opens a filmstrip view of magic strips to scroll through.
- **Lock / Unlock** – locks the magic sheet so it cannot be zoomed or panned. also hides the edit chevron (to edit must unlock)
- **Zoom to All** – zooms to show all objects on magic sheet
- **Zoom to Selection** – zooms to show all selected objects
- **Center to Selection** – centers the display on the selected objects without changing the zoom
- **Show Reference Labels** - labels displayed rather than target number
- **Limited Expand Mode** - also known as Full Screen Mode – hides the edit chevron but also suppresses the rest of the user interface.
 - Upper right corner – 3 dots flashing – console is operational
 - [Shift]&[Displays] take you back
 - Also, can {Disable Keyboard Input} and {Lock Fader Page}

Appendix 1 – Scroll Setup

Generic Scrollers (Channels 151 – 158)

1	Open Frame	
2	R010 – Medium Yellow	
3	R027 – Medium Red	
4	R339 – Broadway Pink	
5	R351 – Lavender Mist	
6	R359 – Medium Violet	
7	R370 – Italian Blue	
8	R038 – Light Rose	
9	R065 – Daylight Blue	
10	R085 – Deep Blue	
11	R090 – Dark Yellow Green	

DON'T FORGET TO HIT DONE WHEN FINISHED!

Appendix 3 – PSD Flags

Flags can be applied to cues to change specific behaviors. Flags can be set for “Mark - M”, “Block - B”, “Assert - A”, “Preheat - P”, “AllFade - AF” and “Moves - MV.”



M - Mark (Auto Mark Disabled)		
	m	A cue that has been set as a Mark cue but has nothing marking in it.
	M	A cue that has been set as a Mark cue and has channels marking in it.
	R	A Reference cue, which stores move instructions for channels that are being marked in a previous Mark cue.
	+	A cue that is both a Mark cue (with or without marking channels) AND a Reference cue.
	x	A broken Mark. Always appears in the cue directly before a Reference. A Mark gets broken when the channels become Active between their Mark cue and their Reference cue. When a Mark is broken, the software will use Auto Mark behavior to try to get the parameters marked in the cue immediately preceding the Reference cue.
M - Mark (Auto Mark Enabled)		
	M	A cue that the software is using for an Auto Mark and has channels marking in it. The 'M' always appears in the cue directly before the Reference (which is not indicated when Auto Mark is enabled).
	D	A cue where Auto Marks have been disabled, allowing live moves.
B - Block		
	B	Cue-Level Block
	b	Discrete channel/parameter Blocks are present
	b	Auto-Blocks are present
	I	Intensity Block
A - Assert		
	A	Cue-Level Assert
	a	Discrete channel/parameter Asserts are present
P - Preheat		
	P	A cue that is set for Preheating. The cue before it will use each channel's preheat value from patch.
AF - All Fade		
	*	Plays the cue in an All-Fade mode, which sends any intensities that are not owned by the cue to zero.
MV - Moves		
	D	A cue with Dark Moves. There are channels that have an intensity of zero and non-intensity moves stored in this cue. This is where you might want to delete unnecessary moves.
	L	A cue with Live Moves. There are channels that have an intensity of zero stored in the previous cue, and an intensity above zero and non-intensity moves stored in this cue. This is where you might want to Mark channels to a previous cue.
	+	A cue where both Dark Moves and Live Moves are present.
R - Release		
	R	Like Make Null, but releases data to a background state or out. Tracks through until removed or a move instruction happens.

Helpful Support and Training Links



ETC Support Website

All the support and training resources you might need in one handy place



ETC Technical Support

Contact our 24/7 technical support team to help troubleshoot your ETC gear



Community – ETC Consoles

Hop on the ETC forums to ask the user community your questions about Eos



Video Tutorials – Eos Family

Experience hands-on Eos training anywhere, anytime with the series of videos and workbooks



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Get quick answers to your technical questions with support articles created by ETC experts



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Find in-person training opportunities near you, as well as other learning resources



ETC Search Manuals

Search for manuals, datasheets, release notes, and more on the ETC website



ETC LearningStage

Take part in a variety of online training courses for technicians and operators



ETC Custom Training

ETC offer multiple custom training options to fit your needs



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