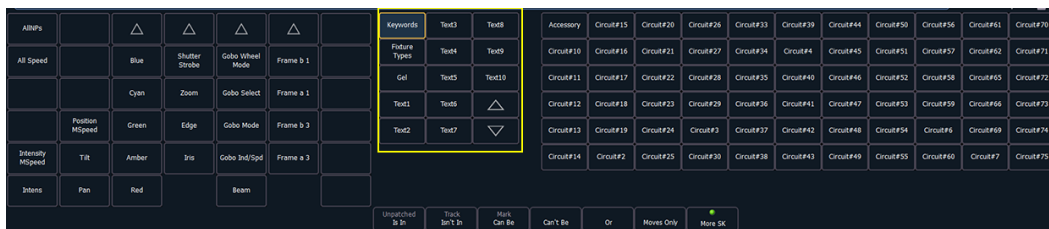


Welcome

This document is supplemental to information in the Eos Titanium, Eos, and Gio v2.0 Operations Manual, Ion v2.0 Operations Manual, and Element v2.1 User Manual, and should be used in conjunction with it.

Additions to Query

Query now has the following buttons:



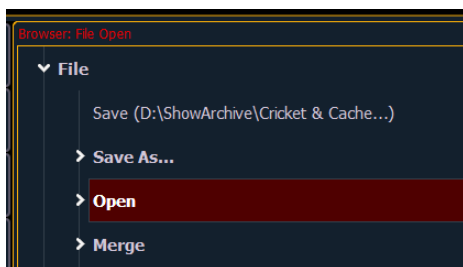
- » **{Keywords}** - displays buttons for all the text used in the text 1-10 fields and for all of the default keywords in Patch.
- » **{Fixture Types}** - displays buttons for all of the fixture types used in the current show file.
- » **{Gel}** - displays all of the gels used in the current show file.
- » **{Text 1} - {Text 10}** - displays only the text used in that text field.
- » **Up and Down Arrows** - allows paging of the lists.

See also [Renaming Text Fields in Patch \(page 17\)](#) for more information.

Browser Color Coding

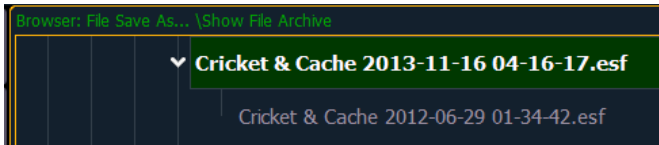
The following color coding for selected items has been added to the browser:

- » Save - green
- » Save As - green
- » Open - red
- » Merge - yellow
- » New -red
- » Clear -red

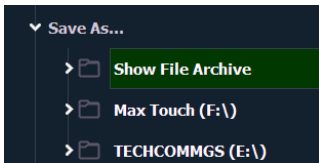


Additional Browser Changes

Previous versions of a showfile will be displayed in dark gray text. To see previous versions of a showfile, you must click on the arrow to the left of the showfile name or use **[Page ▶]**.



File folders now display with a folder icon beside their name.



Channels in Use

A Channels in Use display has been added. It displays the following information for each channel:

- » Number of cue lists the channel appears in.
- » Number of cues the channel appears in.
- » Number of cue moves from zero.
- » Number of submasters that channel appears in.
- » Maximum channel level

To open the Channels in Use display, click on the **{CIU}** icon in the home screen or press **[Tab] + [3][2]**.



Playback Status Display FX Column

Effects are no longer displayed in the External Links column, instead they will be shown in the FX column.

List 1		Timing																				
Cue	Int Up	Int Down	Focus	Color	Beam	Dur	M	B	A	P	A	M	F	V	Fw/Hg	Link	Loop	Curve	Rate	Label	FX	Ext Links
1		5	5	5	5	2.5							L						200		1	Q6 / 1
2		4	8			8							b		2/1					scene1		

Editing Labels

The page arrow keys on the console or an external alphanumeric keyboard can be used to move the cursor within a label to aid in editing.

- » **[Page ▲]** - takes the cursor to the beginning of the label.
- » **[Page ▼]** - takes the cursor to the end of the label.
- » **[Page ◀]** - moves the cursor to the left.
- » **[Page ▶]** - moves the cursor to the right.

Virtual Keyboard

The virtual keyboard displays the alphanumeric keyboard shortcut for that hardkey in the lower right hand corner.

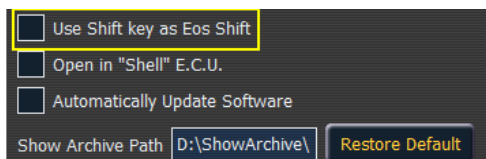
The abbreviations are:

- » **Ca** - CTRL + ALT
- » **S** - SHIFT
- » **C** - CTRL
- » **A** - ALT



Use Shift As Eos Shift

In the ECU, **{Use Shift as Eos Shift}** allows the SHIFT key on an alphanumeric keyboard to be used as the console's **[Shift]** key. If not selected, the Z key on an alphanumeric keyboard will function as the **[Shift]** key.



Note: With 2.3, the Hotkey mapping has changed. Please see [Eos Family Hotkeys \(page 22\)](#) and [Element Hotkeys \(page 24\)](#).

Effect Attributes

Two new effect attributes are now available that affect how effects run.

Those attributes are:

- » **Continuous Run** - the effect will keep running until there is a stop effect command. By default, **{Continuous Run}** is disabled for all step and absolute effects. It is enabled by default for relative effects. See [Stop Effects on page 5](#) for more information.
- » **Repeat on Go** - previously, effects with a duration or number of cycles would re-fire when a new cue was recorded. Now effects will not restart unless **{Repeat on Go}** is used.

When an effect with duration is running in a cue, the effect will display in light blue while it is running and dark blue when it has finished. This is only displayed in the Live Summary View.



Light Blue When Effect is Running	Dark Blue When Effect has Finished
--	---

Effect Background Value Modification

For Step and Absolute effects, you can use **[+]**, **[-]**, and **[/]** to adjust the background value .



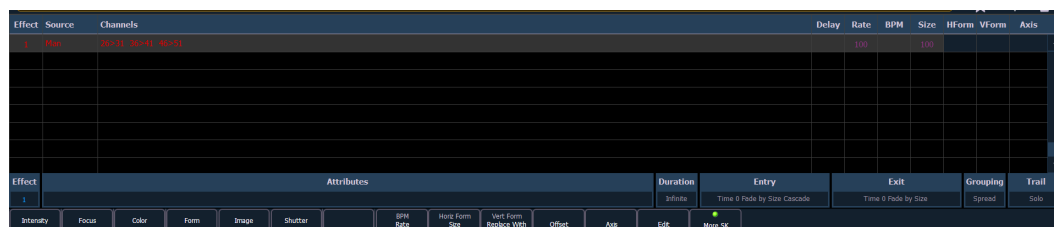
Note: When using **[-]**, you will need to preface the command with **[+]** if you want to remove from the current value.

For Example:

- » Effect 1 is a step effect with the on state set to 100 and the off state set to - 50% for all steps. To set the step off state to -50%, you would use the following syntax **[Effect][1] [Step] [1] {Offstate} [+] [-] [/] [5] <0> [Enter]**. If the channels in the effect have a background value of 50, the off state for each step would be 25.
- » Effect 2 is an absolute effect. To set a level at + 20 of the background, you would use the following syntax, **[Effect][2] {Action} [1] {Level} [+] [2]<0> [Enter]**. If the channels in the effect have a background value of 50, the level 1 in the effect would be at 70.

Effect Status Display

The properties of an effect that can be modified at a cue or sub level have been extended. The new properties are displayed at the bottom of the Effect Status display and in the channel effects screen (which is access by pressing **[Shift] + [Effect]**).



Several color indicators are used in the Effect Status Display. Those colors and their meanings are:

- » Grey - property is drawn directly from the effect.
- » Red - property has been manually modified but not stored.
- » Blue - property is an override to the saved effect.
- » Magenta - property is tracking from a previous cue.

From the Effect Attribute Override display, you can access most of the same properties as those found in the Effect Editor. This display allows you to make modifications to properties, and store those modifications in a cue or submaster. Click on a column to make changes from a list of available options.



A new effect attribute, **{Restart Effect}**, has been added that can only be accessed from this display. When enabled, **{Restart Effect}** will cause an effect to restart whenever the cue is fired. This attribute is applied to the cue that the effect is stored in and not in the effect itself.



Note: **{Repeat on Go}** is similar to **{Restart Effect}** but it is applied to the effect. For more information on **{Repeat on Go}**, see [Effect Attributes on page 3](#).

Effects In Presets

Effects can be stored in a preset, and those presets can be used to create submasters and cues. However, the effect's data is only copied to the submaster or cue, it is no longer referenced through the preset.



Note: If used with submasters and cues, the data is not referenced. So if changes are made to the effect in the preset, the effect saved to the submasters and cues will remain unchanged.

The preset list display has a new column for effects.

Query and Group Effect

You can use **[Query] [Effect] [n]**, **[Query] [Effect]**, and **[Group] [Effect] [n]** to select the channels currently running in the selected effect.

Using **[Query]** will select the channels in numeric order. **[Group]** will select the channels in the order that they were originally selected.

[Query] [Effect] will select all channels currently running effects.

For Example:

» **[3][1] + [2][6] + [3][0] + [2][7] + [2][9] + [2][8] [Effect] [1] [Enter]**

Using **[Query] [Effect] [1]** will select the channels currently running effect 1. Using **[Next]**, the channels will be selected in numeric order starting with channel 26.

Using **[Group] [Effect] [1]** will select the channels currently running effect 1. However, pressing **[Next]**, the channels will be selected in the order they were originally selected. In this example, channel 31 would be first, then channel 26.



Note: **[Group] [Effect] [n]** was previously used as an alternate to **[Recall From]**. This is no longer the case.

Replace With

{Replace With} allows you to replace an effect with another one. All overrides will be preserved.

» **[Effect] [1] {Replace With} <Effect> [2]** - all channels that were running effect 1 will now be running effect 2.

Size for Step and Absolute Effects

Size is now an option for Step and Absolute effects.

For Example:

Effect 1 is a step effect with the On State set to 50 and the Off State set to 10. If Size is set to 50, the On State will be set to 50% of 50 and the Off State will be 50% of 10. So On would be 25 and Off would be 5.

Stop Effects

A **[Stop Effect]/{Stop Effect}** command can now be assigned to a list of channels in a cue without an effect tracking into it or to a list of channels in a submaster.

- » **<channel> [1] [Stop Effect]/{Stop Effect} [Enter]** - will create a stop effect instruction for all selected parameters, if there isn't an effect running on any of the parameters.
- » **<channel> [1] [Effect] [Enter]** - will only stop the currently running effect.
- » **[Effect] [0] [Enter]** - will place a stop all flag.

Manual Control of Non-Intensity Parameters

On Element, non-intensity parameters can now be set by using either the ML Controls or the buttons in the central information area (CIA).

Parameter Display

The parameter display in the CIA is populated with only those parameters that are found in the patched devices. As channels are selected, the parameter display will change to show only parameters relevant to the selected channels.

The parameters are divided into the following categories: Intensity, Focus, Color and Beam. Each parameter category is represented with buttons in the parameter tiles. These buttons allow you to select the entire collection of all parameters within that category. You can also select a single parameter from a category using that parameter's touchbutton in the parameter display.



Within the CIA, in the upper left corner, notice the **{All NPs}** button. When pressed, this collects all non-intensity parameters for further editing.

Some examples of using parameter touchbuttons are:

- » **[1] {Iris} [5] [Enter]** - Places the iris parameter of channel 1 at 50%.
- » **[Group] [4] {Zoom} {Edge} [Out] [Enter]** - Sends any zoom and edge values for all fixtures in group 4 to 0%.
- » **[1] [Thru] [3] {All Speed} [At] [2][5][Enter]** - Sets all the available speed parameters for channels 1 through 3 to 25.

Setting Parameters with the Keypad

When the CIA is placed in parameter mode, all parameters of selected channels may be given numeric values through the keypad.

When no channels are selected, the CIA shows all of the parameters that are available in the lighting system. When channels are selected, the CIA condenses to show only the parameters that are appropriate to the selection set. If channels are selected that have different device types, such as spot and wash lights, the CIA will show all of the available parameters. Parameters that are not available to all channels are grayed out.

Using **[At] [/] [/]** will place the direct DMX value on the command line. For example, **[1] [At] [/] [/] [2][3][9] [Enter]** would put channel 1 at DMX value 239.

The following examples illustrate how to set parameter values with the keypad:

- » **[5] {Iris} [5] {Zoom} [6] [5] {Edge} [5] [Enter]** - sets channel 5 to an iris value of 50%, a zoom value of 65%, and an edge value of 50%.

Adjusting Parameters Using + and -

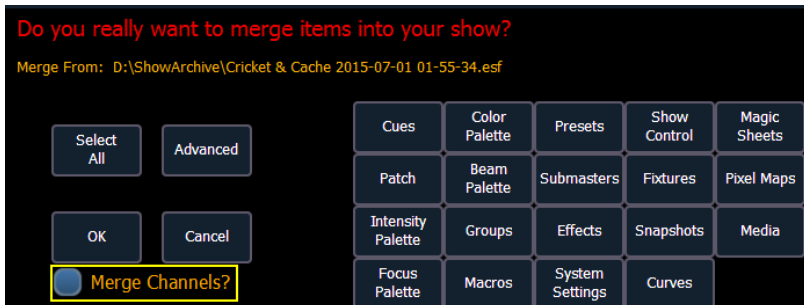
[+] and **[-]** can be used to adjust parameters from the command line. When using **[-]**, you will need to preface the command with **[+]** if you want to remove from the current value.

For Example:

- » [Channel List] {Pan} [1][0] - sets to 10 degrees.
- » [Channel List] {Pan} [+] [1][0] - adds 10 degrees.
- » [Channel List] {Pan} [-] [1][0] - sets to -10 degrees.
- » [Channel List] {Pan} [+] [-] [1][0] - removes 10 degrees.

Partial Show File Channel Merge

A new option has been added to Merge.



When Merge Channels is selected, channels from cues, submasters, groups, and other channel targets will be added to any existing channel targets of that same type.

With Merge Channels not selected, those channels will override any existing channels in the channel targets of the same type.

For Example:

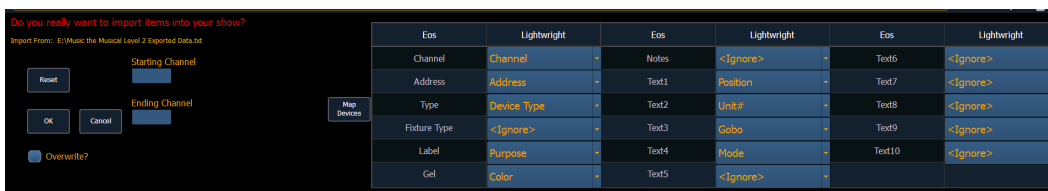
In a show file 1, group 1 has channels 1 through 5. In show file 2, group 1 had channels 6-10. With Merge Channels and Groups selected for the merge, show file 2's group 1 will merge with show file 1's group 1. Group 1 will then have channels 1-10. If Merge Channels was not selected, group 1 would just have channels 6-10.



Note: It is important to remember that if the same channels exist in both show files, the data merging in will override the existing data for those channels.

Lightwright Import

Several changes were made to importing Lightwright files. Once a file has been selected for import, you will now have options for importing.



Merge and Overwrite

You can select to either merge the data with the current show file, or to overwrite the data in the current file. To do this, check the **{Overwrite}** box. Leaving this box unchecked will merge the data.

Starting and Ending Channel

You can select starting and ending channels for the import.

Mapping

You can map Eos patch fields to fields in the Lightwright file. Channel and Address must be mapped for the file import to work. Any other field can be set to ignore if desired. Once a Lightwright field has been mapped, it will display in grey in the dropdown menu. However, greyed out options can be selected again for placement in multiple fields.

Eos	Lightwright	Eos	Lightwright	Eos	Lightwright
Channel	Channel	Notes	<Ignore>	Text6	<Ignore>
Address	Address	"When, What, and Who Changed"	<Ignore>		
Type	Device Type	Accessory			
Fixture Type	<Ignore>	Address			
Label	Purpose	Bot			
Gel	Color	Channel			
		Circuit Name			
		Circuit Name & Circuit#			
		Circuit#			
		Color			

The text fields in the Patch display and database will rename based off of the Lightwright imported fields. See [Renaming Text Fields in Patch on page 17](#) for more information.



Note: Eos 2.3 does not currently support multiple gels per fixture from Lightwright.

Address Formats

Eos will accept multiple address formats for importing. Examples of those formats are **2/3**, **2.3**, **2,3**, **2-3**. Eos will convert all formats to n/n.

Device Mapping

Devices can also be mapped. Click **{Map Devices}** to open the following display.

Lightwright	Eos	Mapping	Link Devices	Unlink Devices
Device		Other		
ETC Selador Desire D60 Lustr Light	<ul style="list-style-type: none"> <input type="checkbox"/> D60 DLght <input type="checkbox"/> D60 Fire <input type="checkbox"/> D60 Ice <input type="checkbox"/> D60 Lustr+ <input type="checkbox"/> D60 Studio <input type="checkbox"/> D60 Tungs <input type="checkbox"/> D60 Vivid <input type="checkbox"/> Lustr <input type="checkbox"/> Paletta <input type="checkbox"/> Pearl <input type="checkbox"/> Revolution Original 	<ul style="list-style-type: none"> Color Kinetics ColorBlast 12 -> ColorBlast 12 Cyc Electric -> Cyc Flood Martin Mac 700 Profile -> Mac 700 Profile Ext Robe Robin 300 LED Wash M3 -> Robin 300... S4 10° -> Dimmer Source Four 19° -> Profile Source Four 26° -> Profile Source Four 36° -> Profile Source Four Par WFL -> Parcan VL2000 Wash -> VL2000 Wash Enhanced 16... 		

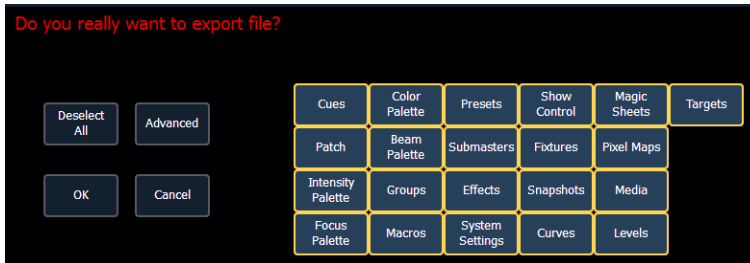
Select the Lightwright device and the match from the Eos column. Multiple Lightwright devices can be selected at a time. Then click **{Link Devices}**. The link will appear in the Mapping column. To unlink a device, select it from the Mapping column, and then press **{Unlink Device}**.

Device mapping and import fields are saved with the show file.

MLA Added to Export Menu

An option for exporting to Moving Light Assistant (MLA) has been added to the Export menu, **Displays>File>Export>Moving Light Assistant**.

This will open the export screen in the CIA. From this screen, you can choose which aspects of the show file you want to export. By default all aspects are selected and will be exported. To withhold any show aspects from exporting, simply deselect them in the CIA by clicking on the respective button. Deselected show aspects will appear in black.



You can also choose to export specific portions of show aspects. To select this information, press the **{Advanced}** button. In the Advanced screen, all aspects are deselected (black) by default.

To stop the show file from being saved for export, press the **{Cancel}** button. If you are ready to save, press **{Ok}**. You will be prompted to name the file. A .csv file will be created.

Adding to the Current DMX Value

It is possible to set a channel's parameter levels with the DMX value by using **[/][/]**, which posts DMX to the command line.

» **[1] {Pan} [/][/] [2][5] [Enter]**

You can add or subtract from the DMX value by using **[+]** or **[-]**.

» **[1] {Pan} [/][/] [+][5] [Enter]**

» **[1] {Pan} [/][/] [-][7][5] [Enter]**

Discrete Time as a Percentage

Discrete times can be entered as a percentage of the cue time.

» **[2] [Time] [/] [5] [Enter]** sets the time for channel 2 to 50% of the cue time.

» **[2] [Focus] [/] [7][5] [Enter]** - sets the focus category time to 75%.

Most Recently Activated Cue

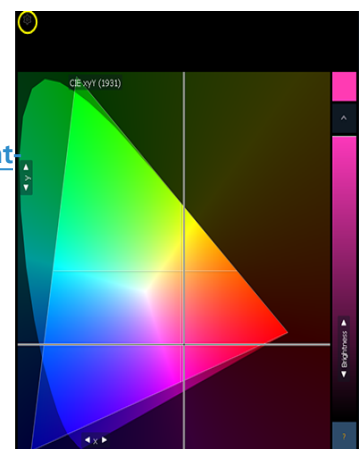
Use **[Cue] [n] [/] [Enter]** to select the most recently activated cue from that cuelist. If there is no active cue from that list, the first cue in the cuelist will be used.

Color Overview

In version 2.3, you will notice several major changes to working with color. These changes allow for a more complete control of color.

With the color picker open, you now have the choice between six different [Color Spaces \(page 10\)](#), a [Gel Picker \(page 11\)](#), [Color Path \(page 13\)](#), [Tinting Tools \(page 13\)](#), and [Spectrum Tools \(page 14\)](#).

These options are found by clicking on the display configuration tool (the gear icon) in the upper left corner of the color picker display.



Color Spaces

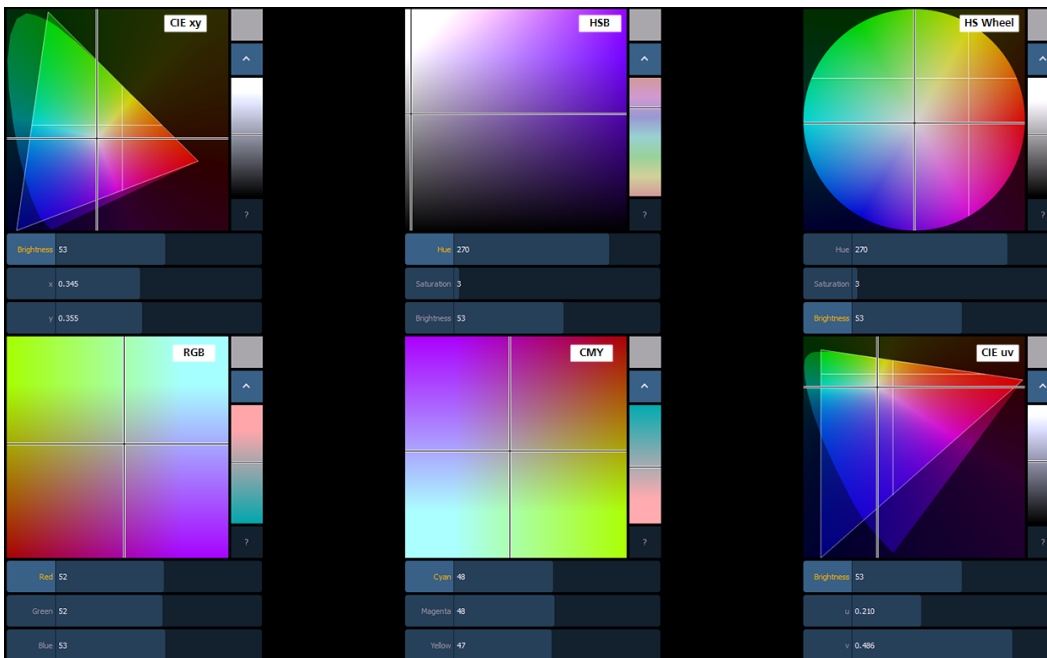
There are six color spaces that you can choose to work in. All of these spaces are connected. So it doesn't matter which space you wish to work in, the console will translate the information to work with your fixtures.

When the color picker is first opened, the CIE xy color space and the gel picker will open by default. You can select other color spaces and tools by clicking on the display configuration tool (the gear icon) in the upper left corner of the color picker display.



Note: Multiple color picker tabs with different color spaces can be opened at the same time. Multiple color spaces can be opened on the same tab.

The available color spaces are:



Note: When a fixture is in HS mode, the brightness control is not provided. Intensity controls the brightness.

For the CIE xy (CIE 1931) and CIE uv (CIE 1976), the triangle represents the RGB space as defined by the PLASA standard E1.54. Fixtures that comply to that standard can achieve any color within the triangle. The cone represents the color spectrum that we can see.

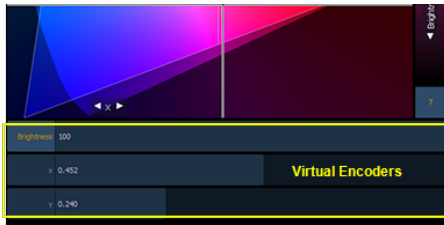
Controls

Each color space has three virtual encoders, a vertical encoder, a **{?}** button, and a **{^}** button.

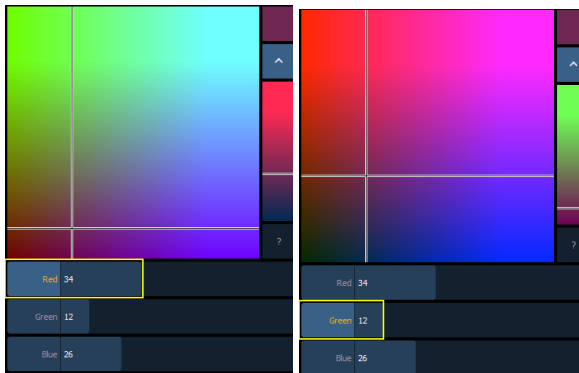
The encoders will change based on the color space selected. Double tapping in a virtual encoder will cause it to jump to the location of your finger. Pressing and holding will cause the encoder to fade toward your finger.

Tapping anywhere in the color space will cause the crosshair to move to that location. Press and hold, then move your finger to fade the crosshair toward that location.

The **{^}** button will create the brightest version of the selected color. Press the **{?}** button to display labels on all of the controls.



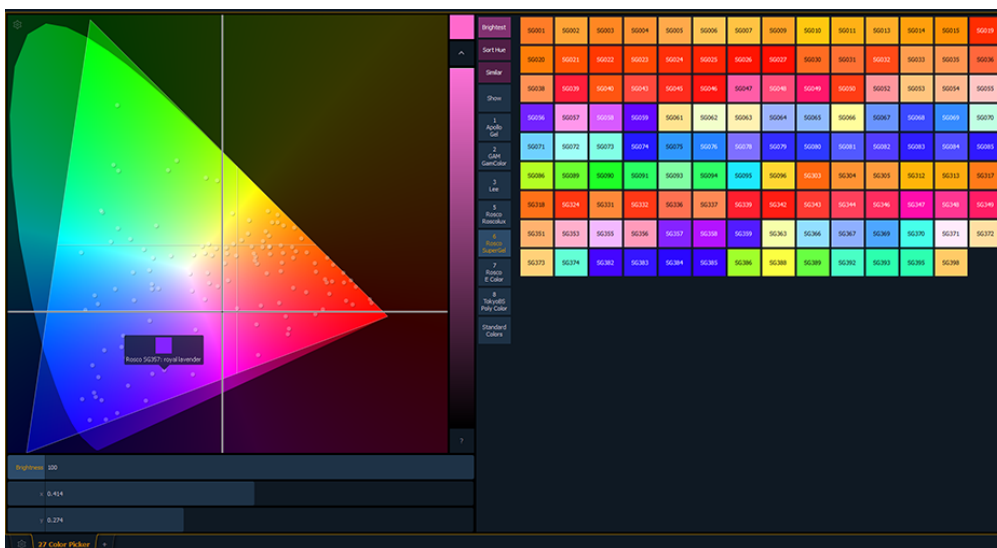
For the RGB and CMY color spaces, you can change which color control is on the vertical encoder. Touch the label of the virtual encoder to change which color control is located on the vertical encoder. In the following graphics, Red is on the vertical encoder in the first one and green is on the vertical encoder in the second one. This is also indicated by the highlighted encoder name.



For the HS Wheel and HSB color spaces, the vertical encoder is always brightness.

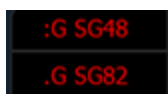
Gel Picker

Several changes have been made to the gel picker for working with the new [Color Spaces \(page 10\)](#). When the gel picker is opened up with a color space, there will be dots displayed on the color space. These dots represent the gels in the currently selected gel book. Hovering over a dot with a mouse will display the gel's name and a color swatch.



The following buttons are also available:

- » **{Brightest}** - determines the color match used. This is helpful when working with fixtures that have more than three color components, such as RGBA, RGBWm or ETC's fixtures. Pressing **{Brightest}** or **{Shift} +a** gel from the picker will cycle through the three modes.
 - » **{Brightest}** - matches to the brightest match of that chromaticity.
 - » **{Spectral}** - matches to the best spectral match chromaticity. However, this mode can remove a lot of the intensity. This is based off of a 575w long life Source Four[®].
 - » **{Hybrid}** - halfway between the brightest and the best spectral match.



In the channel display, a single dot shows best spectral match, 2 dots indicates hybrid, and no dot shows brightest.

- » **{Sort Hue}** - takes the selected gel library and sorts it by hue instead of by gel number.
- » **{Similar}** - will show gels that are in the same selected area of the color picker. Only gels in the same selected gel book will display. You can switch to another gel book though to discover gels in that area.
- » **{Show}** - displays all of the static gels in the show file. This populates from Patch.
- » **{Standard Colors}** - shows a range of White Point from 2700K to 6500K. Also shown are colors located around the triangle and variations of those colors at 25% increments.

Spectral	2700 K	2800 K	2900 K	3000 K	3100 K	3200 K	3300 K	3400 K	3500 K	3600 K	3700 K	3800 K	3900 K	4000 K
Sort Hue	4100 K	4200 K	4300 K	4400 K	4500 K	4600 K	4700 K	4800 K	4900 K	5000 K	5100 K	5200 K	5300 K	5400 K
Similar	5500 K	5600 K	5700 K	5800 K	5900 K	6000 K	6100 K	6200 K	6300 K	6400 K	6500 K	White	Red	Red 75%
Show	Red 50%	Red 25%	Orange	Orange 75%	Orange 50%	Orange 25%	Yellow	Yellow 75%	Yellow 50%	Yellow 25%	Lime	Lime 75%	Lime 50%	Lime 25%
1 Apollo Gel	Green	Green 75%	Green 50%	Green 25%	Mint	Mint 75%	Mint 50%	Mint 25%	Cyan	Cyan 75%	Cyan 50%	Cyan 25%	Azure	Azure 75%
2 Gold CamColor	Azure 50%	Azure 25%	Blue	Blue 75%	Blue 50%	Blue 25%	Purple	Purple 75%	Purple 50%	Purple 25%	Magenta	Magenta 75%	Magenta 50%	Magenta 25%
3 Lee	Pink	Pink 75%	Pink 50%	Pink 25%										
5 Rosco RoscoLux														
6 Rosco SuperGel														
7 Rosco Z Color														
8 Rosco Poly Color														
Standard Colors														

How the Gel Picker Affects Scroller and Color Wheel

When possible the Gel Picker will select the closest gel as defined in a scroller or color wheel.



Note: Some devices contain manufacturer specified gel mixes, and will only allow selection from the Gel Picker of the exact gels in their list.

In previous versions when using the Gel Picker, the channel display would show the gel. Now the channel display shows the frame number and the corresponding label that is defined for that frame.

Tinting Tools

The Tinting Tools option is found by clicking on the display configuration tool (the gear icon) in the upper left corner of the color picker display.

Tint allows you to easily adjust color regardless of the color space that you're working in.

You can increase or decrease the saturation and brightness. You can make a color warmer or cooler, and you can add or remove colors.



Color Path



Note: In version 2.3, color path is only applicable for additive mixing systems.

Color Path is a new option for controlling color fades between cues. By default, color fades happen in the native space of the fixture. If you want a fade that resembles a fade in a different color space, you can do that using color paths. There are eight preprogrammed color paths, and you can also record your own. Up to 1000 color paths are supported.

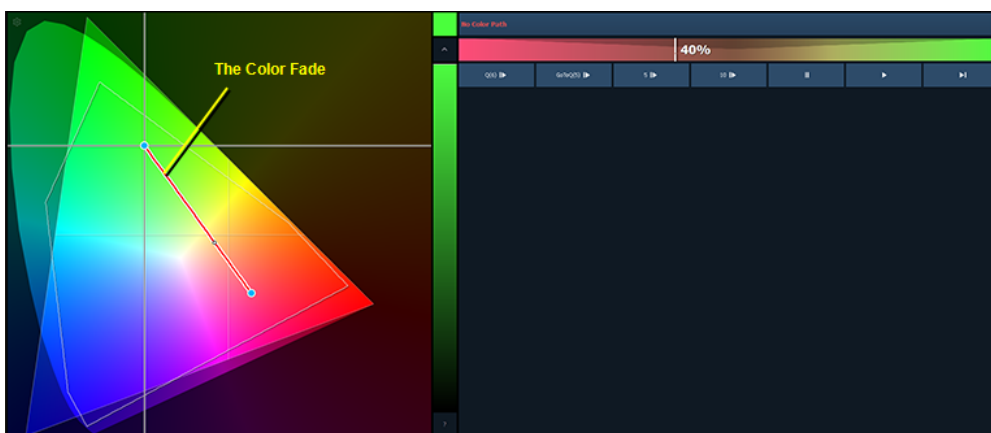
To open the color path display, click on the gear icon in the color picker display and select Fade. To open the color path list display, press **[Path] [Path]** or by pressing the **{Color Path}** icon in the home screen.

Color paths are selected either by clicking on the drop down above the color path or by using **[Path] / {Color Path} [n]**. Ion and Element users will need to use the **{Color Path}** softkey.


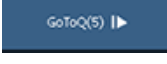







Note: Channels involved in the fade have to be selected before you can choose or modify a color path.

The color path display has a drop down list of the available paths, a color path preview bar, and control buttons. An indication line will display on the color space to show the color fade.

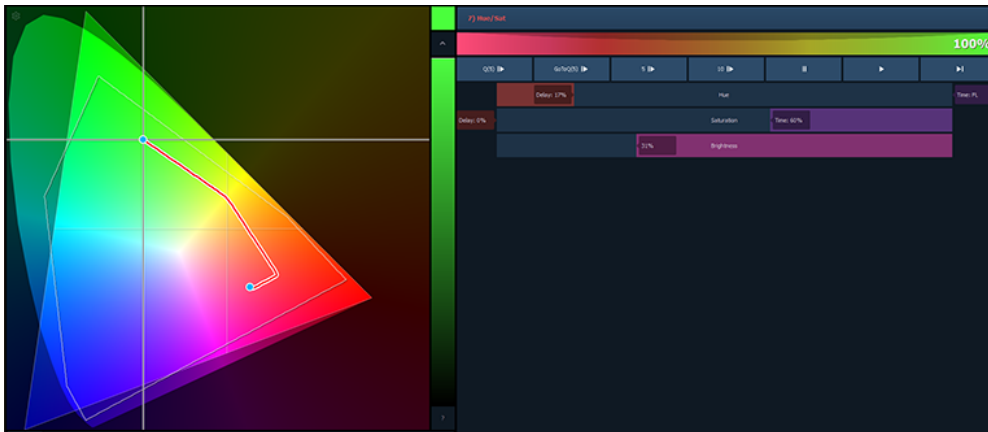


Available control buttons are:

- »  - replays the color fade using the cue time.
- »  - replays the color fade using the Go to Cue time from Setup.
- »  - replays the color fade in five seconds.
- »  - replays the color fade in ten seconds.
- »  - pauses the color fade.
- »  - plays / resumes the color fade.
- »  - skips to the end of the color fade.

You can also click on the color path preview bar to scrub to any point along the fade.

Additional controls may be available based on the color path selected. For example, Color Path 7 has additional controls for Hue, Saturation, and Brightness. You can move those controls to adjust the fade, and you'll see a representation of those changes in both the color path preview bar and in the color space.



Changes can be stored in the destination cue as absolute data by using **[Update]** or **[Record]**. When there's a change to the color path information, a red c will display next to the channel number and the color path's

name will display in red in the color path display. When that data has been saved, a blue c will display. The color path's name will also display in blue in the color path display.



You can save changes to a new color path by using **[Record] [Path] / {Color Path} [n]**. That data will then be referenced, and any changes made to that path will be used anytime that path is used. Press **[Shift] + [Path] / {Color Path}** to see the values behind the referenced data.

See [\[About\] Color Path on page 16](#) and [Color Path in Patch Attributes on page 17](#) for more information.

Spectrum Tools

The Spectrum option is found by clicking on the display configuration tool (the gear icon) in the upper left corner of the color picker display.

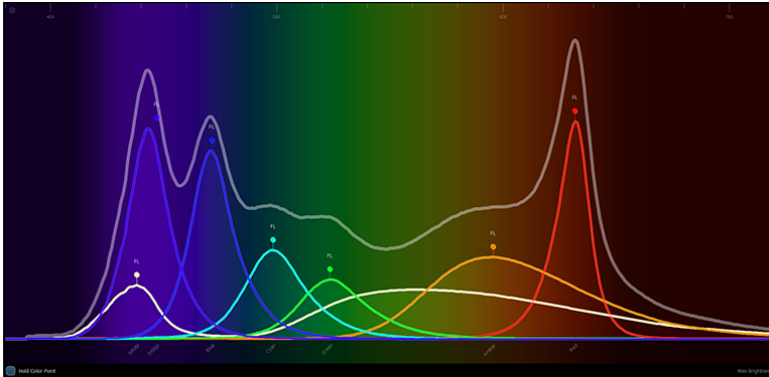
This option displays all the color parameters across the color spectrum, and allows for individual control of each parameter. Press a color point to move it.

This display is a good visual of what the fixture is outputting.

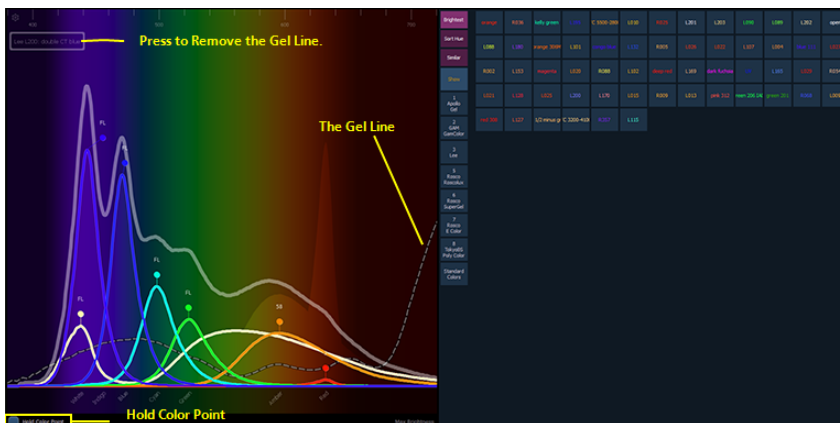
The following screenshot shows a 7 color fixture. This display will change based on the type of fixture being used.



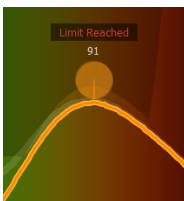
Note: The grey line shows the composite color of the fixture. If multiple fixtures are selected, the grey line represents the first channel selected.



With the [Gel Picker \(page 11\)](#) open and a gel selected, a dotted line will appear in the Spectrum display. That line represents the selected gel.



{Hold Color Point} allows you to adjust individual emitters and the other emitters will automatically adjust to hold the color selected. If an emitter has been adjusted too far, a Limit Reached warning will appear. This can only be used with fixtures that have more than three color parameters.



If you are working outside of this display, holding down **[Color]** while adjusting the encoders will cause Hold Color Point behavior.

Encoder Softkeys

If you press the encoder for any parameter, the softkeys change to display options relevant to that parameter. These may include **{Home}**, **{Last}** and **{Next}**, or **{Min}** and **{Max}**, and depending on the type of parameter, a **{Mode}** or **{Calibrate}** button.

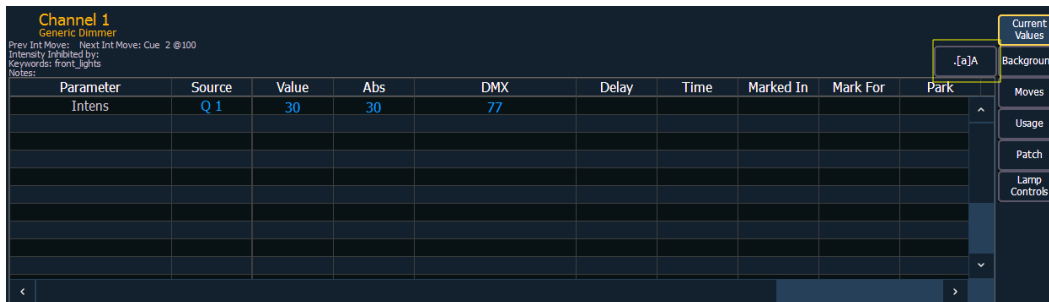
Previously this behavior was only available on Ion. Now this is available on Eos, Eos Ti, Gio consoles and the Eos Programming Wing.

[Shift] + [At], [Shift] + [Enter], and [Select Last]

[Shift] + [At], [Shift] + [Enter], and [Select Last] can now be used to loop through commands five times.

Zoom Added to About

A zoom button has been added to the About display. There are three zoom sizes: small, medium, & large. Medium is the default size. Press **{.a[A]}** to zoom.



[About] Color Path

The following information will be displayed when a color path is selected:

- » The color path number
- » Label (if any)
- » Channels that use the color path
- » Cues that have moves that use the color path
- » Number of cue lists the color path is used in

See [Color Path on page 13](#) for more information.

[About] Submaster

The following information will be displayed when a submaster is selected:

- » The submaster number
- » Label (if any)
- » Current value
- » Mode (additive, inhibitive, or effectsub)
- » Fader (proportional or intensity master)
- » HTP or LTP
- » Exclusive
- » Priority
- » Timing
- » Fader Pages
- » Channels in Submaster
- » Effects assigned

Color Path in Patch Attributes

A default [Color Path \(page 13\)](#) can be assigned at the channel level in Patch. That color path will be used for all of that channel's color fades unless overridden at the cue level. Submasters and manual transitions that use that channel will use the default color path as well.

While in Patch, **[1] [Path]/{Color Path} [2] [Enter]** will assign color path 2 to channel 1. Ion and Element users will need to use the **{Color Path}** softkey. You can also go to **Patch>Attributes>Color Path** to place color path on the command line.

See also [Color Path on page 13](#) and [\[About\] Color Path on page 16](#) for more information.

Fixture Lists in Library

The fixture lists in the library are now ordered alphanumerically.

For example, the following fixtures are listed first in alphabetical order and then ordered numerically.

Element Labs	AR5 Diffusion SA16 8	AR250C
Eliminator	AR5 Douser SA16 8	AR500 Diffusion SA8 4
Elite	AR50 Diffusion SA16 8	AR500 Douser SA8 4
Elumen8	AR50 Douser SA16 8	
ETC Arch	AR250	
>>	<<	>>

Gel Field

The Gel field in the Patch Database display automatically populates with the gel selected from the [Gel Picker \(page 11\)](#). The gel information will show up in two places in the Patch Database.

Notes	Text1 front lights	Text6
	Text2	Text7
	Text3	Text8
	Text4	Text9
Gel AP7450	Text5	Text10

Chan	Address	Type	Label	Text1	Text2	Text3	Text4	Gel	Default
1	350	Dimmer		front lights				AP7450	Luminaire Incandescent

This field is available for use with the **[Query]** function. See [Additions to Query on page 1](#) for more information.

Renaming Text Fields in Patch

In the **{Database}** page in Patch, you can now rename the text fields. By default, the text fields are named **{Text 1}** through **{Text 10}**.

» **{Text 1} [Label] <Position>** will rename the text 1 field to Position.

Notes	Position front lights	Text6
	Text2	Text7
	Text3	Text8
	Text4	Text9
Gel	Text5	Text10
		New Keyword

Text fields 1 through 4 display in the Patch display. Renaming those fields will rename the columns associated with them in the Patch display.

Chan	Address	Type	Label	Position	Text2
1	350	Dimmer		front lights	
2	351	Dimmer		front lights	

See also: [Additions to Query on page 1](#), [Gel Field on page 17](#), and [Lightwright Import on page 7](#)

Warning with Out of Sync Fixture Libraries

For multiconsole systems, all devices have to use the same fixture library. If the fixture library is different between devices, a warning will be displayed on the device trying to connect to the system.

Updating a Fixture Definition Warning

When updating a fixture definition in Patch, a warning message now includes what changes will be made to the fixture by updating it.

By Type Presets

By Type presets are created with 'default' channels which contain values that can be assigned to any other channel within the same fixture type. By Type presets can also contain discrete channel values.

By Type presets will display a 'T' in the lower corner of the direct selects. A '+' will display after the 'T' if there are channels stored with discrete data.

Using By Type Presets

Storing a By Type Preset

If **{By Type}** is used when recording, the lowest number channel of each fixture type will be the default channel. Generally, when storing by type presets, you will want only one channel of each fixture type in use. Any additional channels in that fixture type will be recorded with discrete data.

- » **[1] [Thru] [6] [Record] [Preset] [1] {By Type} [Enter]** - Channels 1 through 6 are saved to Preset 1. Channels 1 through 6 are of the same fixture type. Channel 1 will be the default channel, and channels 2 through 6 will be saved with discrete data.
- » **[1] [Thru] [6] [Record] [Preset] [1] [Enter]** - If a by type preset is rerecorded without using the **{By Type}** softkey and the default channel is included in the record, the default channel's level will change and all other changes will be discrete.
- » **[1] [Thru] [5] [Record] {Intensity Palette 1} {Discrete} [Enter]** - If a default channel is included in a record where **{Discrete}** is used and another channel is tracking it, the default channel will be changed to having discrete data and the lowest numbered tracking channel will become the new default channel. All other channels in the record will also have discrete data.

Editing By Type Presets in Blind

In Blind, the default channel's levels will display in blue, discrete data for the other channels will display in white, and any channels that are using the default channel value will display in magenta.

Ch	Intens	Intensity MSpeed	Pan	Tilt	Position MSpeed	Cyan	Magenta	Yellow	Color Select	Color Wheel Mode
71	FL	0	0	0	0	67	56	34	F1-	25
72	FL	0	0	0	0	67	56	61	F1-	25
73	FL	0	0	0	0	67	56	34	F1-	25
74	FL	0	0	0	0	67	56	34	F1-	25
75	FL	0	0	0	0	67	56	34	F1-	25
76	FL	0	0	0	0	67	56	34	F1-	25

Softkeys available for editing presets in blind are **{By Type}**, **{Discrete}**, and **{Cleanup}**.

- » **[3] {By Type} [Enter]** - makes channel 3 the new default channel for that device type. If another channel for that type was the default channel, its data will now be discrete.
- » **[1] [0] [Thru] [2] [0] {Discrete} [Enter]** - changes the levels for channels 10 through 20 to discrete. If any of those channels are default, the lowest numbered tracking channel will become the new default channel.
- » **[5] [Thru] [8] [At] [Enter]** - removes the discrete data for channels 5 through 8. They will now use the default channel's values.
- » **[Preset] [2] {Discrete} [Enter]** - changes all tracking and default channels to discrete.
- » **[Preset] [5] {By Type} [Enter]** - makes the first channel of each device type a default channel.
- » **[Preset] [3] {Cleanup} [Enter]** - converts presets created in earlier versions of Eos Family software to by type presets. This command will use the first channel of each type as the default, and allow other channels of the same type to use that value upon recall.

{Make Null} can be used with by type preset when you wish to withhold a channel from responding to a by type preset recall. The data will still display but will be in gray with a "N".

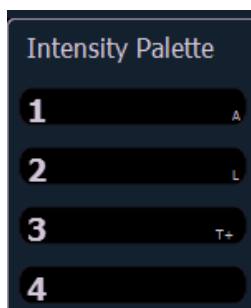
Updating By Type Presets

Pressing **{By Type}** after an **[Update]** command, with a channel tracking but no default channel included in the update, will cause the lowest numbered tracking channel's level to be updated into the default channel. The tracking channel will remain tracking. This means that when updating a default value in a by type preset, you don't need to know the default channel number.

When a default channel is included in an **[Update]** command without using **{By Type}** and another channel is tracking it, the default channel's data will be changed to discrete. The lowest numbered tracking channel will then become the new default channel. Any other updated channels will be made discrete.

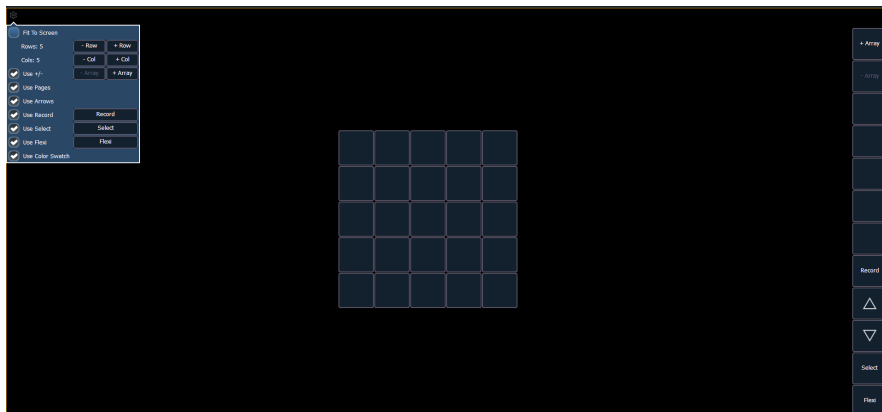
Indicators in Palette and Preset List Displays

Indicators for absolute (A), locked (L), and by type (T+) have been added to the palette and preset displays. These indicators display to the right of the palette or preset number.



Configuration Menu

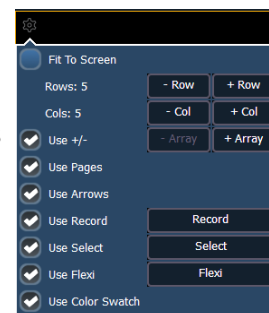
In the direct select x25 tab, a configuration menu button is located in the top left corner.



Menu Options

The following options are available in the Configuration Menu:

- » **Fit to Screen** - when selected, the direct selects will fill the screen as much as possible.
- » **Rows** - allows you to select the number of rows in the arrays.
- » **Columns** - allows you to select the number of columns in the array.
- » **Use Buttons** - selecting the checkbox for these buttons will allow them to display on the direct select screen. With or without the checkbox selected, you can use the buttons to the right of the checkboxes to recall the function.
 - » **Use +/-** - displays the **{+ Array} {- Array}** buttons.
 - » **Use Pages** - displays the page # buttons. There is not a way to select a page # from the configuration menu.
 - » **Use Arrows** - displays the page up and down arrows.
 - » **Use Record** - displays the **{Record}** button.
 - » **Use Select** - displays the **{Select}** button.
 - » **Use Flexi** - displays the **{Flexi}** button.
 - » **Use Color Swatch** - displays a round color swatch in the lower left corner of a color palette direct select.



By default all options except for Fit to Screen are enabled.

Color Swatch

In the Direct Select [Configuration Menu \(page 19\)](#), there is an option to **{Use Color Swatch}**. When selected, a round color swatch will appear in the lower left corner of a color palette direct select.

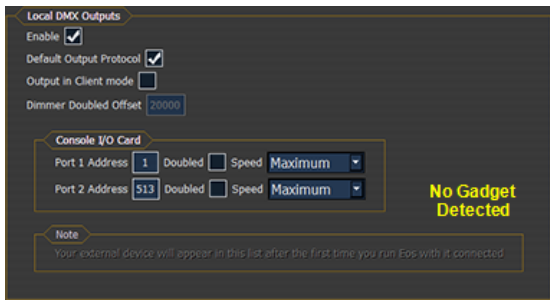


Gadget Settings

In the **ECU>Settings>Local I/O**, settings are available for Gadget. From this screen, you can configure the port address, enable Doubled, and set the port speed. Multiple Gadgets will appear in separate boxes and can be identified by their serial numbers.



Note: With a Gadget connected, you will need to go into the main Eos application first before the Gadget will display in the ECU.



Gadget Support

Eos can now support multiple Gadgets at the same time.



Note: There is a limit of four outputs.

Programming Wing Settings

In the **ECU>Settings>Local I/O**, settings are available for the Eos Programming Wing. Please see the Eos Programming Wing Setup Guide for more information.

Mini Encoder Display

A mini encoder display will display when an Eos Programming Wing is connected to ETCnomad.



Softkeys

For the Eos Programming Wing, you can hold down **[More SK] + Encoder Category Button** to access the second page of softkeys.

For Example

With a channel on the command line, pressing **[More SK] + [Intensity]** will post Make Manual on the command line.

This also works with Gio.

Encoder Paging

On ETCnomad, while holding down **CTRL+ALT+**, you can press one of the encoder category buttons to change the page.



Eos Family Hotkeys

To enable Eos functions on Mac Function keys:

- » Open Systems Preferences
- » Go into the Keyboard section
- » Enable the “Use all F1, F2, etc... keys as standard function keys” setting.



Note: Some international keyboards require “Use Shift Key as Eos Shift” to be disabled in the General section of the ECU Settings. Use Z as shift to access shortcut functions in these cases.

Console Key	PC	Console Key	PC	Console Key	PC
Shortcut List	;	Capture	Control Alt P	Focus Palette	Alt F
	?	CIA Hide	F5	Follow/Hang	Shift D
0	0	Clear	Backspace		Control Alt D
1	1	Clear Command Line	Shift Backspace	Format	F4
2	2	Color Filter	Control C		Control 4
3	3	Color Palette	Alt C	(Scroller) Frame	Control Alt C
4	4	Copy To	C	Freeze	Control Alt F
5	5	Cue	Q	Full	F
6	6	Cue Only/Track	X	Go	Spacebar
7	7	Data	Control D	Go To Cue	Control G
8	8	Data Mode	Control Shift D	Go to Cue Zero	Control Alt G
9	9	Delay	D	Group	G
. (decimal)	. (decimal)	Delete	Delete	Help	Alt /
- (minus)	- (minus)	Delete (Mac)	Fn Delete	Highlight	\
+ (plus)	=	Displays	F9		Control Alt H
	+		Control 9	Home	Home
+%	Shift =	Effect	Alt E		Control H
	Control Alt =	Effects Softkeys	Alt Shift E	Home (Mac)	Fn Left Arrow
+% (Mac)	Shift Fn Up Arrow	Encoder Display (Gio)	Control Alt \	Intensity Block	Shift B
-%	Shift -	Encoder Page Color^	Control Alt [Control Alt B
	Control Alt -	Encoder Page Focus^	Control Alt ,	Intensity Filter	Control I
-% (Mac)	Shift Fn Down Arrow	Encoder Page Form^	Control Alt]	Intensity Palette	Alt I
/	/	Encoder Page Image^	Control Alt ;	Label/ Note	L
About	Y	Encoder Page Intensity^	Alt .	Last	Page Up
Address/Dimmer	Alt A	Encoder Page Shutter^	Alt ,		Control ,
All NPs	Control N	Enter	Enter	Last (Mac)	Fn Up Arrow
Assert	Control W	Escape	Escape	Learn	Alt L
Assert (Playback)	Control Alt A	Expand	F5	Level	V
At	A		Control 5	Live	F1
	@	Fader Pages	Control P		Control 1
	*			Load	Control Alt L
Beam Filter	Control B	Fader Independent	Shift I	Macro	M
Beam Palette	Alt B	Fan	W	Macro 801 *	Control Alt 1
Blind	F2	FlexiChannel	F3	Macro 802 *	Control Alt 2
	Control 2		Control 3	Macro 803 *	Control Alt 3
Block	B	Focus Filter	Control F	Macro 804 *	Control Alt 4

Console Key	PC	Console Key	PC	Console Key	PC
Macro 805*	Control Alt 5	Record	R	Thru	T
Macro 806*	Control Alt 6	RecordOnly	Control R	Undo	Control X
Macro 807*	Control Alt 7	Release	Control Alt S	Update	U
Macro 808*	Control Alt 8	Rem Dim	H	Virtual Keyboard	Control K
Macro 809*	Control Alt 9	Scroll Lock	F6		
Macro 810*	Control Alt 10		Control 6	Shell Shortcut	
Magic Sheet	Alt M	Select	Control Enter	Shell Key	PC
Manual Override	Control Alt M	Select Active	Control A	0	0
	Control Alt N	Select Last	Control L	1	1
Mirror, Start	Alt F1	Select Manual	Control M	2	2
Mirror, Stop	Alt F2	Setup	Alt S	3	3
ML Controls	F7	Shift	Z	4	4
	Control 7	Snapshot	Control S	5	5
More Softkeys	Alt 7	Sneak	N	6	6
Next	Page Down	Softkey 1	Alt 1	7	7
	Control .	Softkey 2	Alt 2	8	8
Next (Mac)	Fn Down Arrow	Softkey 3	Alt 3	9	9
Off	Control Alt O	Softkey 4	Alt 4	. (decimal)	. (decimal)
Offset	Control O	Softkey 5	Alt 5	- (minus)	- (minus)
Out	O	Softkey 6	Alt 6	+ (plus)	=
Page Left	Left Arrow	Spacebar Disable	Alt G	/	/
Page Right	Right Arrow	Stop/Back	Control Spacebar	Arrow, Down	Arrow, Down
Page Up	Up Arrow	Stop Effect	Control Alt E	Arrow, Left	Arrow, Left
Page Down	Down Arrow		Control Alt K	Arrow, Right	Arrow, Right
Park	Alt K	Submaster	S	Arrow, Up	Arrow, Up
Part	P	Tab	Tab	Back	Esc
Patch	;;	Time	I	Clear	Backspace
Path	Control Alt W	Time (Displays)	Shift I	Delete	Delete
Pixelmap	Alt X		Control Alt I	Enter	Enter
Preset	Alt P	Timing Disable	Control Alt T	Escape	Esc
Query	Control Q	Toggle Hotkeys	F8	Select	Return
Rate	Control Alt R		Control 8		
Recall From	E	Trace	J		

*Some Shortcut Key combinations are not available on all physical keyboard layouts.

^Alternatively use Encoder Display + category to change the encoder pages.

Element Hotkeys

To enable Eos functions on Mac Function keys:

- » Open Systems Preferences
- » Go into the Keyboard section
- » Enable the “Use all F1, F2, etc... keys as standard function keys” setting.



Note: Some international keyboards require “Use Shift Key as Eos Shift” to be disabled in the General section of the ECU Settings. Use Z as shift to access shortcut functions in these cases.

Console Key	PC	Console Key	PC	Console Key	PC
Shortcut List	;	Clear	Backspace	Home	Home
	?	Clear Command Line	Shift Backspace		Control H
0	0	Color Filter	Control C	Home (Mac)	Fn Left Arrow
1	1	Color Palette	Alt C	Intensity Filter	Control I
2	2	Copy To	C	Intensity Palette	Alt I
3	3	Cue	Q	Label/ Note	L
4	4	Cue Only/Track	X	Last	Page Up
5	5	Data	Control D		Control ,
6	6	Data Mode	Control Shift D	Last (Mac)	Fn Up Arrow
7	7	Delay	D	Learn	Alt L
8	8	Delete	Delete	Level	V
9	9	Delete (Mac)	Fn Delete	Live	F1
. (decimal)	. (decimal)	Displays	F9		Control 1
- (minus)	- (minus)		Control 9	Load	Control Alt L
+ (plus)	=	Effect	Alt E	Macro	M
	+	Effects Softkeys	Alt Shift E	Macro 801*	Control Alt 1
+%	Shift =	Enter	Enter	Macro 802*	Control Alt 2
	Control.Alt =	Escape	Escape	Macro 803*	Control Alt 3
+% (Mac)	Shift Fn Up Arrow	Expand	F5	Macro 804*	Control Alt 4
-%	Shift -		Control 5	Macro 805*	Control Alt 5
	Control Alt -	FlexiChannel	F3	Macro 806*	Control Alt 6
-% (Mac)	Shift Fn Down Arrow		Control 3	Macro 807*	Control Alt 7
/	/	Focus Filter	Control F	Macro 808*	Control Alt 8
About	Y	Focus Palette	Alt F	Macro 809*	Control Alt 9
Address/Dimmer	Alt A	Follow	Shift D	Macro 810*	Control Alt 10
All NPs	Control N		Control Alt D	Magic Sheet	Alt M
At	A	Format	F4	Manual Override	Control Alt M
	@		Control 4		Control Alt N
	*	(Scroller) Frame	Control Alt C	Mirror, Start	Alt F1
Beam Filter	Control B			Mirror, Stop	Alt F2
Beam Palette	Alt B	Full	F	ML Controls	F7
Blind	F2	Go	Spacebar		Control 7
	Control 2	Go To Cue	Control G	More Softkeys	Alt 7
Block	B	Go to Cue Zero	Control Alt G	Next	Page Down
Capture	Control Alt P	Group	G		Control .
CIA Hide	F5	Help	Alt /	Next (Mac)	Fn Down Arrow

Console Key	PC	Console Key	PC
Offset	Control O	Timing Disable	Control Alt T
Out	O	Toggle Hotkeys	F8
Page Left	Left Arrow		Control 8
Page Right	Right Arrow	Thru	T
Page Up	Up Arrow	Undo	Control X
Page Down	Down Arrow	Update	U
Park	Alt K	Virtual Keyboard	Control K
Part	P		
Patch	;;		
Path	Control Alt W	Shell Shortcut	
Rate	Control Alt R	Shell Key	PC
Recall From	E	0	0
Record	R	1	1
RecordOnly	Control R	2	2
Release	Control Alt S	3	3
Rem Dim	H	4	4
Scroll Lock	F6	5	5
	Control 6	6	6
Select	Control Enter	7	7
Select Active	Control A	8	8
Select Last	Control L	9	9
Select Manual	Control M	. (decimal)	. (decimal)
Setup	Alt S	- (minus)	- (minus)
Shift	Z	+ (plus)	=
Snapshot	Control S	/	/
Sneak	N	Arrow, Down	Arrow, Down
Softkey 1	Alt 1	Arrow, Left	Arrow, Left
Softkey 2	Alt 2	Arrow, Right	Arrow, Right
Softkey 3	Alt 3	Arrow, Up	Arrow, Up
Softkey 4	Alt 4	Back	Esc
Softkey 5	Alt 5	Clear	Backspace
Softkey 6	Alt 6	Delete	Delete
Spacebar Disable	Alt G	Enter	Enter
Stop/Back	Control Spacebar	Escape	Esc
Stop Effect	Control Alt E	Select	Return
	Control Alt K		
Submaster	S		
Tab	Tab		
Time	I		

*Some Shortcut Key combinations are not available on all physical keyboard layouts.

^Alternatively use Encoder Display + category to change the encoder pages.



The following information is new for version 2.2.0. This document is supplemental to and should be used in conjunction with information in the Eos Titanium, Eos, and Gio v2.0 Operations Manual, Ion v2.0 Operations Manual, and the Element v2.1.0 User Manual..



CAUTION: *If you choose to update fixture definitions in your existing show files after upgrading to version 2.2, it is recommended that you verify that your show plays back as expected. Changes have been made to the fixture library to make fixtures in future shows easier to control, however, these changes will impact existing shows after you manually update fixture definitions. For more information, see [Changes to Fixtures on page 16](#)*

Display Management Tools

One of the most significant improvements to the Eos family in this software release are the enhanced display management tools. The software provides improved capabilities for opening and navigating displays and control tools.

Increasing the depth of individual displays, this software introduces the ability to have one of three different workspaces active on individual monitors, as well as to have up to four areas (called frames) in use in any workspace. Each frame can hold multiple tabs.

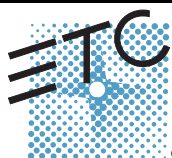
Display Controls Menu Button

Workspaces



Monitors

Any physical monitor or touchscreen device connected to your console. The integral touchscreens on Eos Ti are examples of monitors as are external monitors used with any of the Eos Family consoles.



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 Web: www.etconnect.com ■ QSF 4.1.9.1 ■ Copyright © 2014 ETC. All Rights Reserved. ■ Product information and specifications subject to change.
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Workspaces

Further expanding your monitor capabilities, workspaces have been added to offer independent display control on all of your connected monitors. Every monitor can have up to three workspaces, identified by the workspace icons in the upper left corner of any monitor (including any integrated touchscreens with your console).

You can use **[Tab] + [Page ▲]** and **[Tab] + [Page ▼]** to cycle through the workspaces. This will increment or decrement the current workspace and will then force all of the other workspaces to match the current workspace's number (1, 2, or 3). This is so you can quickly step through the workspaces.

Workspaces 1, 2, and 3

These three monitor icons are used to switch between each monitor's available workspaces. Each can be set up to include any of the desired layout, displays, and controls options offered on the Home Screen ([page 4](#)) or the Display Controls Screen ([page 6](#)).

Frames

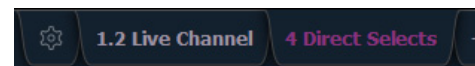
Each workspace can have up to four frames in its layout. The number of frames in a workspace layout is determined by choosing from the Layout Options ([page 4](#)) offered in the Home Screen ([page 4](#)) or the Monitor Options Screen ([page 6](#)).

Tabs

Any frame can have multiple tabs open. Tabs are now broken down into two categories: Control and Display. Control tabs (see [page 6](#) for a list of tabs) are the virtual control options that were formerly available in the browser, such as the color picker and the virtual keyboard. Display tabs (see [page 5](#) for a list of tabs) are the various displays available on the console, such as the playback status display and the park display.

You can open or close tabs using the Display Icons ([page 5](#)), Control Icons ([page 6](#)), or all of the methods used in previous versions of software. Pressing **[Shift] + [Tab]** once will clear all tabs on the selected monitor but tabs in locked frames will remain. Pressing **[Shift] + [Tab]** twice will clear all tabs on all monitors but tabs in locked frames will remain. Pressing **[Shift] + [Tab]** a third time will clear all tabs on all monitors including those in locked frames.

White text in the tab indicates a Display Tab, and magenta text indicates a Control Tab.



All Display and Control Tabs have fixed tab numbering under which they open (for example, "Live" opens under Tab 1, "Patch" under Tab 12, and "Color Picker" under Tab 27). These numbers are identified on the Home Screen in each icon and in the following table. For multiple instances of the same display, the tab number will be followed with a decimal number. Additional tabs will start their numbering with n.2. When you press **[Tab]**, active focus will move numerically through all open tabs on active workspaces.



Note:

Using just the **[Tab]** key to cycle through tabs will skip over any Control Tabs in locked frames. Pressing **[Tab] [n]** will select the tab regardless of if it is in a locked frame or not.

This table lists the tab number for each of the Control and Display tabs.

1	Channels	11	Show Control List	21	Curve List	31	Lamp Controls
2	Playback Status Display	12	Patch	22	Intensity Palettes	99	Diagnostics
3	Magic Sheet Display	13	Effect List	23	Focus Palettes		
4	Direct Selects	14	Magic Sheet List	24	Color Palettes		
5	ML Controls	15	Submaster List	25	Beam Palettes		
6	Effect Status	16	Cue List Index	26	Preset List		
7	Virtual Keyboard	17	Group List	27	Color Picker		
8	Effect Channels	18	Macro List	28	Virtual Faders		
9	Pixel Map List	19	Snapshot List	29	About		
10	Pixel Map Preview	20	Park	30	Command History		

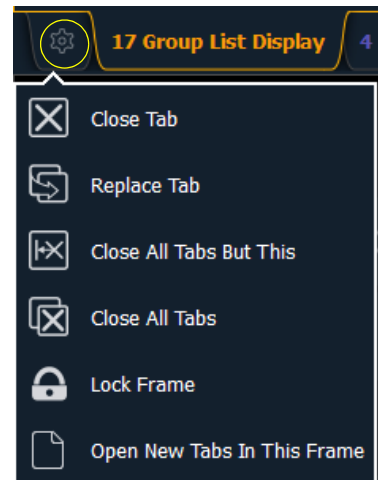
Focus Rules for Control and Display Tabs

Single clicking on a Controls Tab will bring it to the front of the frame but will not move focus to that tab unless the tab's frame already has focus. Double clicking on a Controls Tab will bring it to the front and grab focus. Single clicking on a Display Tab will bring it to the front and grab focus.

Tab Tools

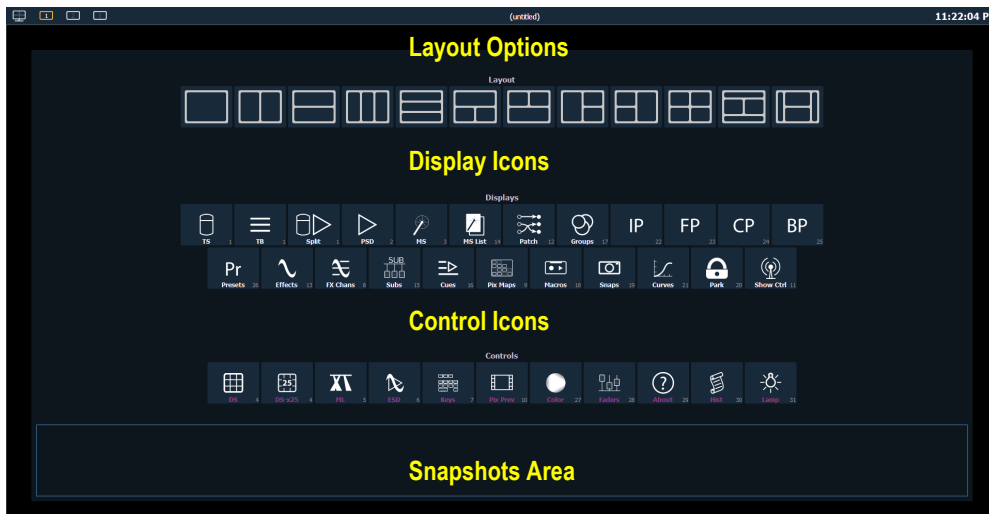
Every frame has a tab tools menu in the lower left corner of the frame. Selecting this menu icon will open the tab tools menu, which provides options for opening and closing tabs in that frame. You can left click with a mouse or double tap a tab in focus to also see this menu. Most options are self-explanatory with the following exceptions:

- “Replace Tab” allows you to close the current tab and choose from the Home Screen which display to replace it with. Pressing escape will return you to the previously selected tab.
- “Lock Frame” prevents any additional tabs from being opened in the selected frame.
- “Open New Tabs In This Frame” specifies that any new tabs opened will automatically open in the specified frame. Only one frame can have this option selected at a time.



Home Screen

Upon start up or creation of a new show file, any connected monitor that is not already displaying the Live or Playback Status Displays will show the Display Management Home Screen.



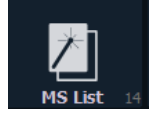
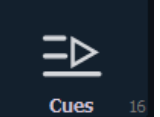
This screen consists of four general areas, each offering different display-related options.

Layout Options

These tools offer you greater flexibility in the number of tabs you can view in any given workspace. A workspace can have up to four frames. Selecting a layout icon will assign the frame layout identified in the icon. Once a layout is assigned, you can select which displays and controls will be in which frames.

Display Icons

The following displays can be selected, and they will open in a new tab in the selected frame:

Channel (Tombstones)  TS 1	Channel (Table)  TB 1	Split Channel  Split 1	Playback Status Display  PSD 2	Magic Sheet Display  MS 3	Magic Sheet List  MS List 14
Patch  Patch 12	Groups  Groups 17	Intensity Palettes  IP 22	Focus Palettes  FP 23	Color Palettes  CP 24	Beam Palettes  BP 25
Presets  Presets 26	Effects  Effects 13	Effect Channels  FX Chans 8	Submasters  Subs 15	Cue List  Cues 16	Pixel Maps  Pix Maps 9
Macros  Macros 18	Snapshots  Snaps 19	Curves  Curves 21	Park  Park 20	Show Control  Show Ctrl 11	

The following displays can have multiple instances open:

- Channel (Tombstone)
- Channel (Table)
- Split Channel
- Playback Status Display
- Magic Sheet Display
- Effect Channels
- Park

For multiple instances of the same display, the tab number will be followed with a decimal number. Additional tabs will start their numbering with n.2. If you have only one instance, there will be no decimal number.

Control Icons

The virtual controls that were located in the browser are now part of the home screen. You can select from the following list of virtual controls, and they will open in a new tab in the selected frame:

Direct Selects Classic  DS 4	Direct Selects x25  DS-x25 4	ML Controls  ML 5	Effect Status  ESD 6	Virtual Keyboard  Keys 7	Pixel Map Preview  Pix Prev 10
Color Picker  Color 27	Fader Module  Faders 28	About  About 29	Command History  Hist 30	Lamp Controls  Lamp 31	

Snapshots

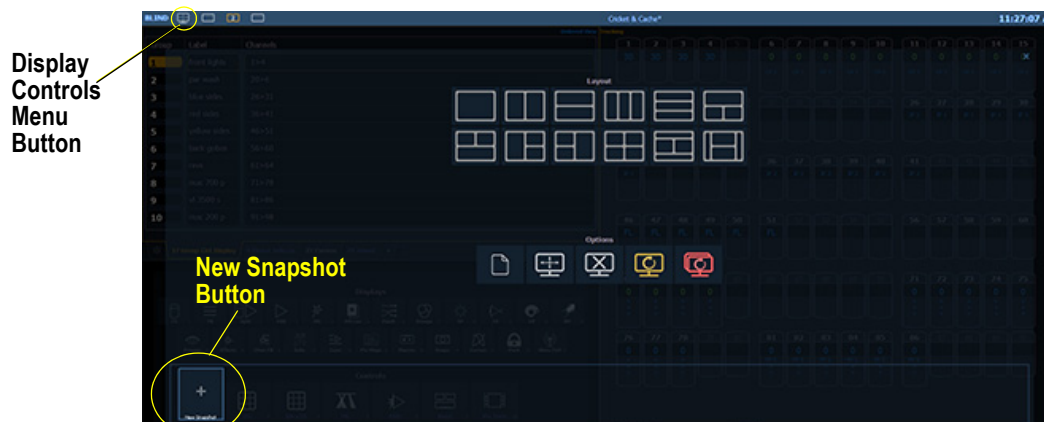
The snapshots displayed here are single monitor-only snapshots recorded for the visible workspace. These snapshots can be recalled from any selected monitor from the Home Screen or the Display Controls menu screen. You can recall a monitor-only snapshot from the command line by using the syntax **[Snapshot] [n] [Enter]**. When recalled from the command line, the selected snapshot will only affect the monitor from which it was originally recorded.

To record a monitor-only snapshot, press the **{New Snapshot}** button on the Display Controls menu screen. **[Delete] [Snapshot] [n] [Enter] [Enter]** will delete a monitor-only snapshot.

All snapshots can be viewed on the snapshot list display, which can be opened by pressing **[Snapshot] [Snapshot]** or from the home screen.

Display Controls Screen

Selecting the display controls icon will grant you access to the [Layout Options](#) previously described. Choose the layout icon for the arrangement and number of frames you want to use on the monitor.



This screen also offers options for opening and closing tabs as well as resizing and resetting the monitor(s). The icons are:

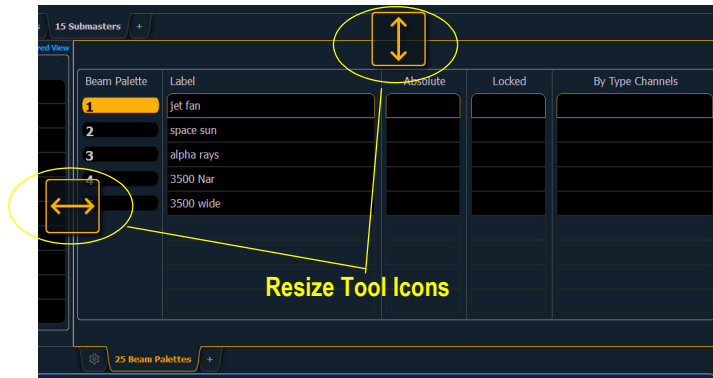
Open New Tabs On This Monitor

Select this icon to redirect to the [Home Screen](#) where you can open new tabs using the Display and Controls icons.



Resize Frames In This Workspace

Select this icon to resize frames in any of the workspaces on the monitor. After selecting, resizing tools will appear between frames of the workspace and you can select and drag the resize tool icons to adjust sizing as needed.



Close All Tabs In This Workspace

Select this icon to close all of the tabs in the active workspace on this monitor only.



Reset This Display

This icon will close all of the tabs and frames and will reset the layout for the active workspace to a single frame displaying the Home Screen, from which you can select new tabs to open.



Reset All Displays

This icon will close all of the tabs and frames on *all* monitors, reset all layouts to a single frame, and return their workspaces to the Home Screen, from which you can select new tabs to open.



Changes to Displays

Blind Indicators

The blind indicators have changed with version 2.2. Now while in blind, the background color of the displays will be blue, the title bar will be bright blue, and the word “Blind” will display in the top left corner of each monitor. You can click on “Blind” to go back to live.

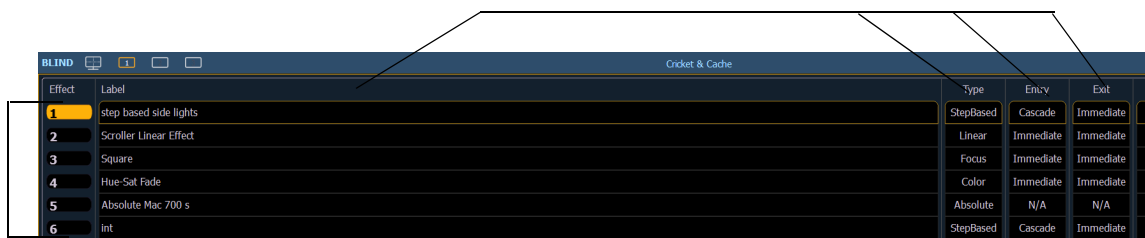


Clickable Support to Displays

Several displays are more interactive now with click supported cells. Clicking on a row header will select and place it on the command line. You can click on multiple row headers to select a range of items. Double-clicking a row header will select that row and deselect any other rows. Clicking on a column header will place that action on the command line. You can click on multiple column actions that can be combined, such as cue times, to place those on the command line.

Column Headers

Row Headers



The following displays have added clickable support:

- Show Control List
- Cue List
- Playback Status Display
- Palette Lists
- Sub List
- Preset List
- Effect List
- Group List
- Snapshot List
- Curve List
- Partition List
- Pixel Map List
- Magic Sheet List
- Park Address List

- Patch Display
- Spreadsheet Display
- Macro List

Displaying Fader Pages with Content

When using **[Fader Page]** or **[Shift]+ [Fader Page]**, the displayed page will jump to the next page with content, and then to the next incremental page before skipping to the next page with content.

For example, pages 1-3 and page 11 have content. If on page 2 you press **[Fader Page]**, you will see pages 3 then 4 then 11 then 12 displayed. After page 12, you will jump back to page 1.

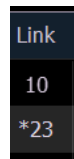
When on page 11, as you press **[Shift]+ [Fader Page]** you will see page 10 then page 3.

Playback Fader/Page Displayed in Cue List Index

Previously only the playback fader's ID displayed in the cue list index. Now the page and fader number display after the playback ID.

Links to Non-existent Cues

When a cue is linked to a non-existent cue, a "*" will display next to the cue number in the link column of the playback status display and the cue list index.



Beam Subcategories Rearranged

The order of beam parameters has changed from (Shutters, Image, Form) to (Form, Image, Shutters). This change impacts the live/blind displays, ML controls, the fixture editor parameter list, and the parameter tiles in the CIA. This change does not affect the physical keycaps.

Virtual Media Server Crossfade

The Virtual Media Server crossfade parameter level will display in subscript beside the intensity.



Element Playback Status Display

Scrolling with a mouse is now enabled for the Playback Status Display on Element. This behavior was already available on the other Eos Family consoles.

Changes to Direct Selects

There are now two different direct select modes: direct selects classic and direct selects x25.

Direct Selects Classic

In classic mode, you have two options, fit to screen and classic layout, that were first made available in version 2.1. You can change between fit to screen and classic layout by toggling the **{Classic/Fit}** button.

A couple of new options have been added for version 2.2:

- A **{1x/2x}** button allows you to toggle the direct selects to show one bank of 5 rows or two banks of 5 rows.
- A **{Record}** button has been added that posts Record to the command line.

Direct Selects x25

The Direct Selects x 25 mode displays only a single category of direct selects at a time.



By using the **{+25}** and **{-25}** buttons, you can change the number of available buttons in increments of 25. You can select a page of direct selects by using the page access buttons or by using the page up and down buttons. The **{Select}** and **{Flexi}** buttons work the same as in previous software versions.

Changes to About

The number of patched channels and number of cues have been added to the default **[About]** display. The number of cues is a count across all cue lists. Multipart cues are only counted once. To see this display, press **[About]** when the command line is clear.

About Palette/Preset

A **{Usage}** button has been added to the About Palettes and About Presets displays.

{Usage} displays the following information about palettes and presets:

- Number of cues that move
- List of channels that use the palette/preset in a cue
- List of channels stored in the palette/preset that are not used in a cue
- List of cues in which the palette/preset have a move instruction
- List of effects that use the palette/preset

About Macro

An **[About]** Macro display has been added. This display shows a list of cues that will execute a selected macro. To view this display, you must be in the Macro Editor Display. While in that display, press **[About]** and then select the macro by using a mouse or touchscreen.

About Cuelist

Cue List 7		
Proportional, LTP Active Cues: 2 Num Of Cues: 17 First Cue: 1 Last Cue: 17 Partition Running On Master Playback		
Channels	Channels > 0	Channels = 0
6>20 26>31 36>41 46>51 61>64 71>78	6>20 26>31 36>41 46>51 71>78 81>86	61>64
81>86 91>98	91>98	

The following information will be displayed when a cue list is selected:

- Cue List Attributes

- Active Cue
- The number of cues in the list (Multipart cues are only counted once)
- First cue in the list
- Last cue in the list
- Partition
- Playback number and physical fader location of the cue list
- Channels currently controlled in live by the cue list
- Channels with any intensities above 0 in the cue list
- Channels with Parameters stored in the cue list but no intensities

Changes to User Interface

Changes to Snapshots

The following changes have been made to the snapshot screen (**[Snapshot]** **[Snapshot]**):

- The **{Faders}** button is no longer selected by default.
- A **{Visible Workspaces}** button has been added to snapshot only the visible workspaces.
- An **{All Workspaces}** button has been added to quickly include all workspaces, including those not visible at the time of recording.
- Direct selects is no longer a separate option.

See [Snapshots on page 6](#) for information on single monitor snapshots.

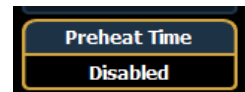
Snapshots Added to Element

Snapshot functionality has been added to the Element console with the addition of a **{Snapshot}** softkey. You can now store all of the monitor configurations for your Element console. All displays are automatically included in all snapshots.

Changes to Setup

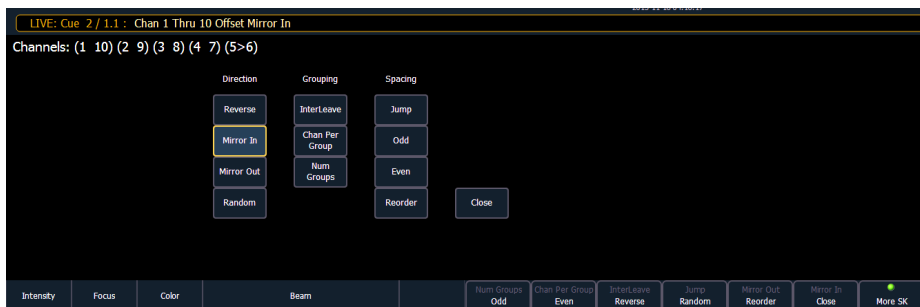
Default Preheat Time

An option for default preheat time has been added to **Setup>ShowSettings**. If this option is disabled, the cue's up intensity time will be used when preheating. The default setting is "Disabled".



Changes to Channel Distribution

When **{Offset}** is pressed, a new channel distribution display will open.



The following options are available as extensions of **{Offset}**. Previously only **{Reverse}**, **{Random}**, **{Odd}**, **{Even}**, and **{Reorder}** were available. Options can be used together. These extensions can be used to create subgroups. For more information on subgroups, please see the Eos Family v2.0.1 Operations Manual Supplement.

Direction

- **{Reverse}** creates a group with the channels in the reverse order that they were selected in.
- **{Mirror In}** creates subgroups of channels that mirror inward.
 - **[1] [Thru] [8] {Mirror In} [Enter]** would create 4 subgroups in this order: (1,8) (2,7) (3,6) (4,5).

Ch 1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6	Ch 7	Ch 8
X							X
	X					X	
		X			X		
			X	X			

- **{Mirror Out}** creates subgroups of channels that mirror outward.
 - **[1] [Thru] [8] {Mirror Out} [Enter]** would create 4 subgroups in this order: (4,5) (3,6) (2,7) (1,8).

Ch 1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6	Ch 7	Ch 8
			X	X			
		X			X		
	X					X	
X							X

- **{Random}** creates a random order to the channels.

Grouping

- **{Chan Per Group}** creates a specified cluster of channels.
 - **[1] [Thru] [1][2]{Chan Per Group} [3] [Enter]** would create these 4 subgroups of 3 channels each: (1,2,3) (4,5,6) (7,8,9) (10,11,12).
- **{InterLeave}** creates a number of distributed sets of channels, that are not clustered together.
 - **[1] [Thru] [1][2]{Chan Per Group} [4] {InterLeave} [Enter]** would create these 4 subgroups: (1,4,7,10) (2,5,8,11) (3,6,9,12).
 - **[1] [Thru] [5] [+] [1][1] [Thru] [1][5] [+] [2][1] [Thru] [2][5] {Chan Per Group} [3] {InterLeave} [Enter]** would create these 5 subgroups: (1,11,21) (2,12,22) (3,13,23) (4,14,24) (5,15,25).
- **{Num Groups}** creates a specified number of subgroups.
 - **[1] [Thru] [1][2]{Num Groups} [3] [Enter]** would create these 3 subgroups: (1,2,3,4) (5,6,7,8) (9,10,11,12).

Spacing

- **{Jump}** is used to skip over a specified number of channels.
 - **[1] [Thru] [1][2]{Chan Per Group} [3] {Jump} [1] [Enter]** would create these 3 subgroups of 3 channels each: (1,2,3) (5,6,7) (9,10,11). Channels 4, 8, and 12 will be jumped over and will not be in the subgroups.
- **{Odd}** selects only the odd numbered channels.
- **{Even}** selects only the even numbered channels.
- **{Reorder}** is used to reorder the channels of a group into numeric order.

{Offset} Button Added to Some Displays

Submaster, palette, and preset blind views now all include an **{Offset}** button. Step-based effects have an **{Offset}** button now as well.

Changes to Effects

Effect Channel Display

The ability to override certain effect properties per channel at the cue level has been added.

The effect channel display has been added for this. To open this display, press **[Shift] + [Effect]** or select the effect channel icon from the display management home screen, see [Display Icons on page 5](#).



Effect	Channel	Rate	BPM	Size	Axis	HForm	VForm
E 1	26	50					
	27						
	28						
	29						
	30	50					
	31						
	36	50					
	37						
	38						
	39						
	40	50					
	41						
	46	50					
	47						
	48						
	49						
	50	50					
	51						

The following properties can be overridden:

- Rate
- BPM
- Size (Relative Effects Only)
- H Form (Focus Effects Only)
- V Form (Focus Effects Only)
- Axis (Focus Effects Only)



Note:

To add a channel level override, first you will need to be in the Effect Channel display with the effect running. The effect status display also needs to be open. To learn how to apply an effect, please see the *Apply an Existing Effect* section of the *Creating and Using Effects* chapter of your console's manual.

[2][6]<Effect><1>{Rate}[6][Enter] - to change the rate for just channel 26. With the effect running, the console will default to the running effect number. You may need to select the effect first (**[Effect] [n] [Enter]**). This will open the effect status display, and you will have access to the effect softkeys.

In the effect status display, an “+” will display by any effect property that has a channel level override.

You can then store these channel overrides in a cue by using **[Record]** or **[Update]**.

BPM as a Cue Level Override

BPM can be applied to an effect or individual channels as only a cue level override in live and blind. As a cue level override, the effect step/action times will not be affected.



Note: *The effect editor cannot be open when applying a cue level override. The effect status display does need to be open though. You can open the effect status display from the home screen or by pressing [Effect] while in live.*

With an effect recorded into a cue and playing back in live, **[Effect] [1] {BPM} [3][0] [Enter]** will change the BPM of the effect running. This change will happen immediately but the step or action times will not change. You can see the BPM value, which will be in red, in the Effect Status display.

When the cue is updated or recorded with the new BPM, an “*” will appear next to the effect number in the Ext Links column of the PSD and the cue list. The BPM value in the effect status display will now be displayed in blue.

[1] [Effect] [1] {BPM} [3][0] [Enter] will only change the BPM for channel 1. A “+” will display in the BPM column of the effect status display, and the BPM will display in red in the effect channel display.

Once the cue is updated or recorded, the BPM will display in blue in the effect channel display. The “+” will still be displayed in the effect status display, and an “*” will appear next to the effect number in the Ext Links column of the PSD and the cue list.

BPM Impacts All Times of a Step-based Effect

Applying BPM to a Step based effect will now override all timing in the effect. Previously BPM only impacted the step times. Now the Step, In, Dwell, and Decay times are all affected.

Step/Action Selection

If an effect step/action is on the command line or indicated in the blue text to the left of the command line, entering a number on the command line will default to selecting a step/action for the previous selected effect.

If no step/action is displayed, the command line will default to effect number.

Effect List Navigation

Using the **[Next]/ [Last]** keys will now only move between effects in the effect list display. To navigate the effect editor, you will need to use the page arrow keys.

Confirming Effects changes

When using **[Page ▼]** to create a new effect step/action in the Effects Editor display, you will first be asked to confirm the new step/action number before continuing. This is to prevent new step/action from being created by mistake. To bypass this confirmation, you can hold down **[Shift]** while using **[Page ▼]** or enter the step/action number manually.

Changes to the ECU

Client Mode Consoles

Consoles in client or backup mode now by default will not output on their local DMX ports. This option is found at **ECU>Settings>Local I/O**. Click on **{Output Local DMX in Client mode}** to enable the ability to output.

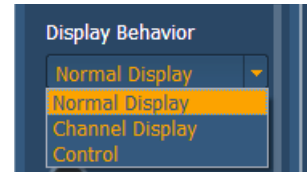
24 Hour Format Clock Added

In the **ECU>Settings>General**, an option has been added to display the clock in the 24 hour format.

Changes to Magic Sheets

Display Behavior

In the Background Settings tab of the magic sheet editing tools, there is a new option for display behavior. This option was added to go along with the new focus rules for display and control tabs. See [Focus Rules for Control and Display Tabs on page 3](#) for more information.



The following display behaviors are now available:

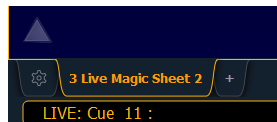
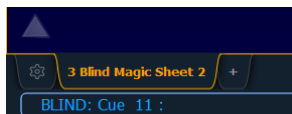
- **Normal Display** - The display will behave the same as a Display Tab.
- **Channel Display** - This mode uses the following rules:
 - When focus is drawn to the playback status display, a magic sheet channel display will be brought to the front.
 - Using **[Shift] + [Live]** cycles through the magic sheet channel displays.
 - Pressing **[Live]** or bringing a Live tab into focus will restore your last focused magic sheet channel display.
 - Magic sheet channel displays in the locked frame will not be skipped when using the **[Tab]** key to cycle through tabs.
- **Control** - The display will behave the same as a Controls Tab.

Changes to Background Settings

You can now select live and blind backgrounds for magic sheets. These backgrounds can either use a solid color, gradient of two colors, or an image. One of these backgrounds will be used when editing a magic sheet. Select the **{Use While Editing}** button to use either the live or blind background.

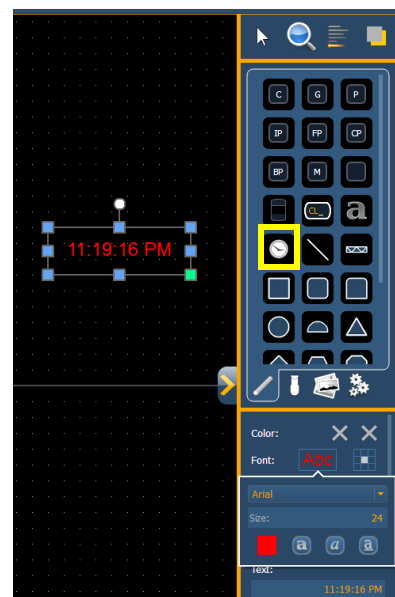
Live and Blind Indicators

Magic Sheets now indicate Live or Blind on their tab.



Clock

A clock has been added to the MS Object Library. You can now add a clock to any magic sheet. By using the MS Object properties, you can edit the color, font, and size of the clock.



Changes to Fixtures

Changes have been made to the fixture library in version 2.2 to make fixtures easier to control. These changes affect the fixture definitions.

These changes include:

- More mode parameters for complex fixtures
- More calibrated ranges
 - For example, DMX ranges are calibrated in real units (25 to 50 Hz or 5 to 20 RPM) instead of their absolute DMX values.
- Changes to the index type parameters
 - For example, some index parameters that used to be 0-360 degrees are now -180-180 degrees.

Pixel Mapping Installer Update

Eos Family v2.2 includes an enhancement for operating file system support for Nomad systems running on a PC or Macintosh. This changes the default location for storing show files and media to the main "User" documents location of the system; **[Windows Drive]:\Users\<<Your User Name>>\My Documents\ETC\Eos** for Windows 7 & 8, **~/Documents/ETC/Eos** on Mac platforms.

An update to the Eos Family Pixel Mapping Installer is available (v1.0.1). You may obtain this release of software by downloading it from the Downloads section of the ETC website, www.etcconnect.com. First time Nomad installs of Eos Family v2.2 should use Eos Family Pixel Mapping Installer v1.0.1. This is not required for upgrades to Eos Family v2.2, but it is recommended.

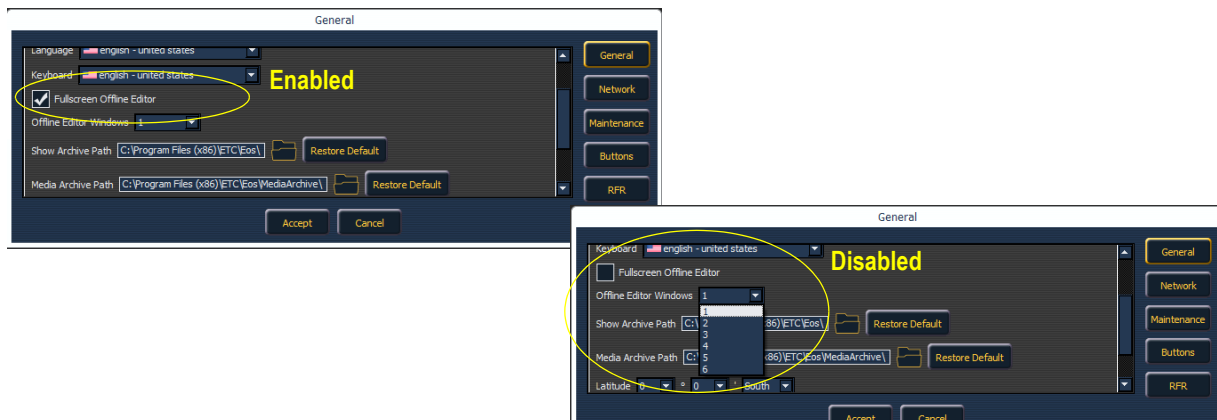


Note: For consoles updating from v1.9.2 or earlier, it is recommended that you install pixel map installer v1.0.1



Note: Please be sure to check your media archive location in **ECU>Settings>General>Media Archive Path** to ensure proper configuration. Restoring defaults will use the updated locations configured by Eos v2.2 and the v1.0.1 pixel map installer.

ECU Change for Nomad



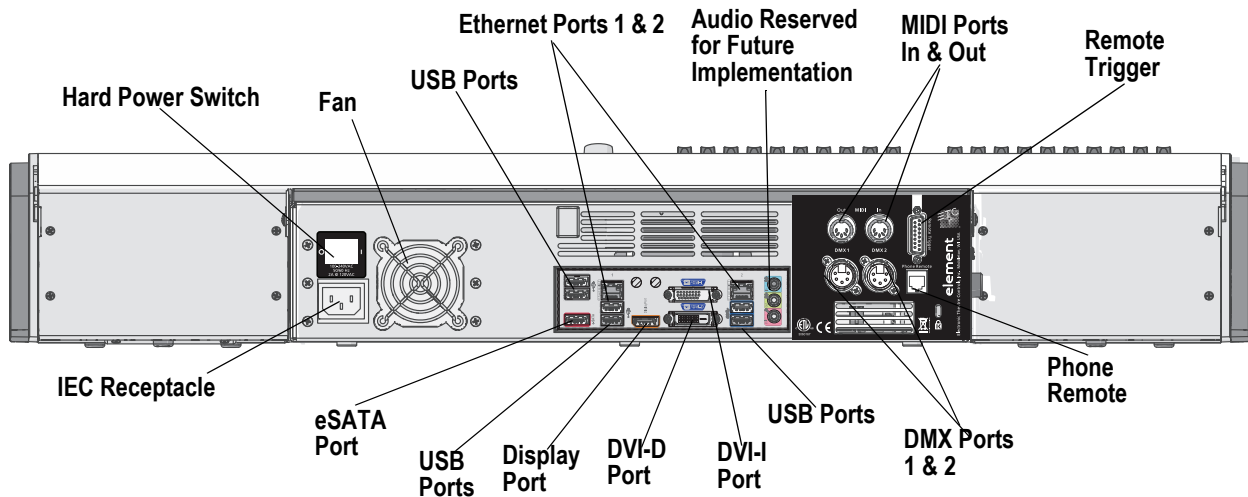
For Nomad, a new option has been added to the ECU to allow Fullscreen Offline Editor mode. Instead of separate windows, the displays will be fullscreen.

With this mode disabled, you can choose up to six windows to display. Fullscreen Offline Editor mode is enabled by default.

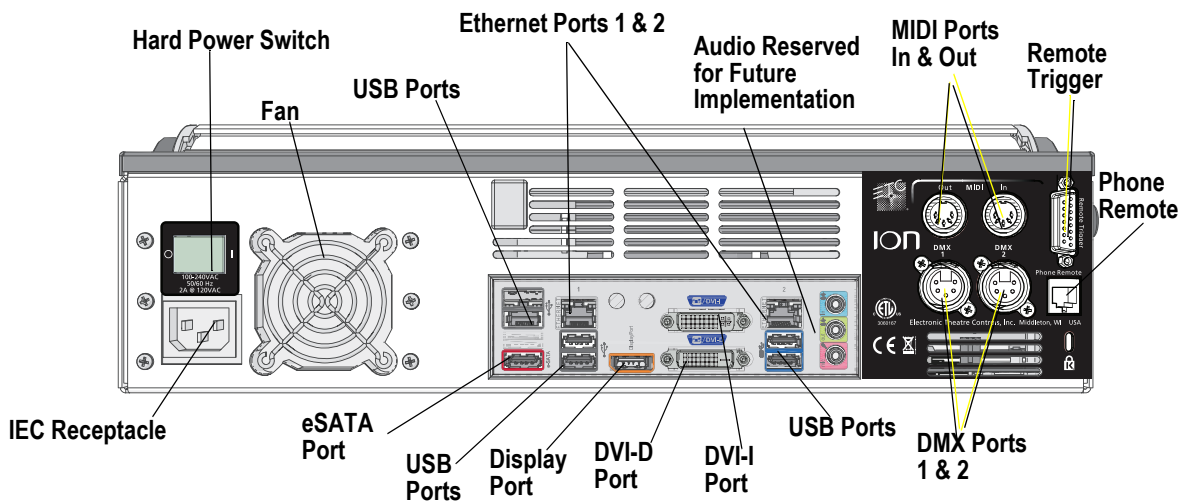
Hardware Changes

Element and Ion are now shipping with Windows 7 and a revised motherboard/SSHD.

Element



Ion



Ion & Element support up to 2 monitors using the following combinations:			
Signal Type / Physical Port	Display Port	DVI	VGA
Display Port	Yes	Yes with Adapter	Yes with Active Adapter
DVI-I Port	No	Yes	Yes with Adapter
DVI-D Port	No	Yes	No

Multitouch monitors need to be Windows 7 or 8 Compatible.



The following information is new for version 2.1.0. This document is supplemental to information in the Eos Titanium, Eos, and Gio v2.0 Operations Manual, and Ion v2.0 Operations Manual, and should be used in conjunction with it. For Element users, the Element User Manual has been updated for version 2.1.0.

Eos Ti

Eos Ti consoles cannot automatically update the software on other devices running software versions prior to 2.1.0. Once those units are updated to version 2.1.0, Eos Ti consoles will be able to auto update all system devices via the update setting in the ECU.

System Overview Change

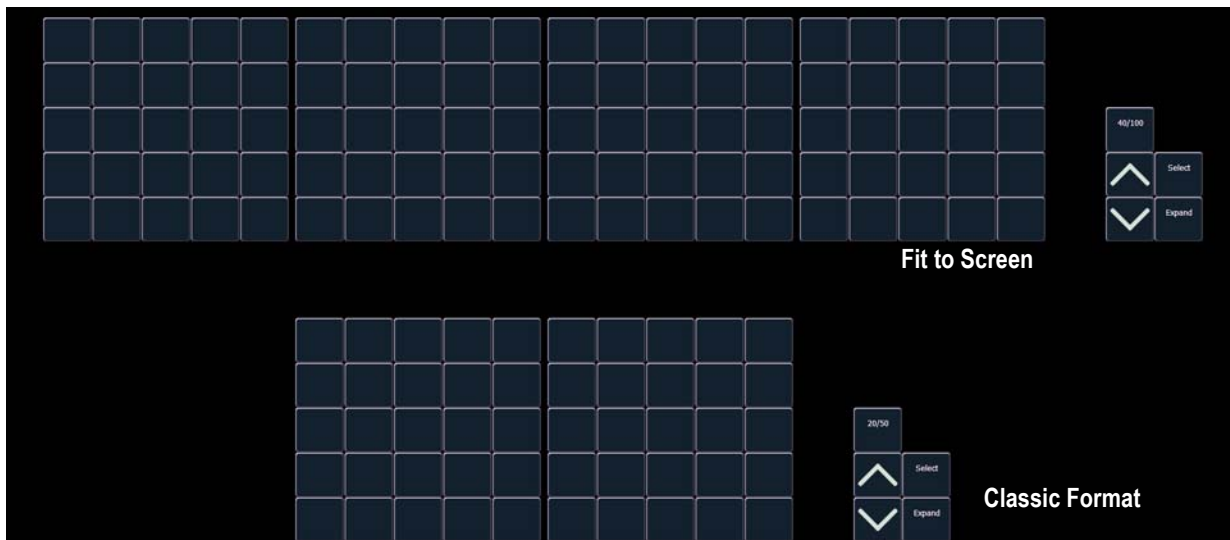
Channel Counts

The maximum number of allowed channels that can be defined in patch has increased from 10,000 to 16,000, (can be any number from 1 to 99,999). This change impacts Eos Ti, Eos, Gio, and Ion.

System Basics Changes

Direct Selects

There are two options for opening the direct select modules, which are Fit to Screen and Classic Layout. Fit to Screen is designed for wide format displays. For standard size monitors, use the Classic Layout. The following example shows both options on a wide format display:

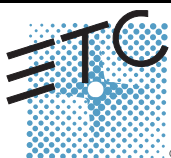


[Shift] + Direct Select

Selecting record targets from direct selects will terminate the command line. To post a control to the command line without terminating it, hold down **[Shift]** while pressing the direct select. This allows multiple commands to be selected and executed at once, and an optional sneak time to be entered.

Modifying a Terminated Channel Selection

It is possible to add or remove channels from a previously terminated command line. You will need to first press **[+]** or **[-]** and then you can add to or remove from your current channel selection. This includes selecting channels from the direct selects, summary view, and Magic Sheets.



Grandmaster/Blackout

If a grandmaster is set to a value other than 100%, a grandmaster button with the set value will be shown at the top of each display. If blackout is currently on, a blackout button will be shown at the top of the displays. Clicking on either button will open a new display which will allow you to turn off blackout and set the grandmaster to a different level.

Grandmaster 10%

BLACKOUT

Select grandmaster level / blackout:
10%

7	8	9
4	5	6
1	2	3
Clear	0	Enter

Blackout
Full
Close

Managing Show Files Change

Show File Advisory

If the loaded show file exceeds the console's output capacity, an advisory will display in the CIA. You will need to dismiss the advisory by pressing **{Ok}** before continuing. To see the capacity of the console, press **[About]**.

Setup Changes

High Contrast Display

By default, High Contrast Display is now enabled in **Setup>Desk>Displays**.

100 Channel Display

Additional options have been added to 100 Channel Display in Setup, **Setup>Desk>Displays**, to help accommodate different display dimensions.

You can select to have this option disabled, display the channels in 4 rows of 25 (4x25), or 5 rows of 20 (5x20), depending on the dimensions of your displays. The default for this setting is "Disabled."

Encoder Acceleration on Eos and Ion

Encoder Acceleration has been removed from Eos and Ion, which matches the behavior of the Eos Ti and Gio encoders.

In **Setup>Desk>Face Panel>Encoders**, there are two options available: **{Degrees Per Revolution}**, which is for the pan & tilt encoders, and **{Percent Per Revolution}**, which is for the other encoders. When a pan or tilt encoder is moved one revolution, the parameter will change by as many degrees as defined in Setup. The default is 30. When any other encoder is moved one revolution, the parameter will change by the set percentage of its entire range. The default is 35.

The settings for **{Encoder Degrees Per Revolution}** and **{Encoder Percent Per Revolution}** are stored with the show file. Starting a new file will reset the two settings to their default values.



Note: *On Eos, toggling an encoder no longer works to place it into fine mode. On both Eos and Ion, hold down **[Shift]** while moving the encoder for fine control. Releasing the **[Shift]** key will restore the encoder to its default mode*

Removing Virtual Hue and Saturation Parameters

In **Setup>Show>Show Settings**, an option, **{Create Virtual HSB}**, has been added, which allows you to disable creation of virtual hue and saturation parameters. This option is “Enabled” by default.

When Virtual HSB controls are disabled, the hue and saturation columns will not display in Table view. You will not be able to record just the Hue or Saturation values into a cue, submaster, preset, or palette, and you cannot apply an effect to Hue and Saturation. You will still be able to control Hue and Saturation from the encoders, ML Controls, Color Picker, and the command line.

Fan Change

Using Subgroups with Fan

Subgroups can be used with the Fan feature. Channels in the same subgroup will act as a single channel when fanned.

For Example:

Group 1 is made up of channels 120 thru 130. Channels 120 thru 123 are one subgroup, channels 124 thru 126 are not in any subgroup, and channels 125 thru 130 are another subgroup.

- **[Group] [1] [Fan] [Enter]**

Selects group 1 and puts it into fan mode. Rolling up the level wheel creates the following result. Channels 120 thru 123 share an intensity, channels 124 thru 126 each have different intensities, and channels 127 thru 130 share an intensity.

120	121	122	123	124	125	126	127	128	129	130
0	0	0	0	28	55	82	FL	FL	FL	FL

Submaster and Patch Changes

GM Exempt and Intensity Master

For channels that have been set to GM Exempt in Patch, Intensity Master control will not impact the intensity of those channels.

[Query] {Unpatched}

To quickly delete channels without addresses in the Patch display, you can use the command **[Query] {Unpatched} [Delete]**. This will post to the command line all channels without addresses. By pressing **[Enter][Enter]** you will delete them.

Ion users will need to press **[Shift] + [Select Last]** to access the **{Query}** softkey in Patch.

[About] Changes

In the default About display, a new field has been added called Parameters. This field references the number of parameters that have been defined in patch. This includes parameters that have been patched to output addresses and those that have not. The field below Parameters, Addresses, only calculates the number of addresses that have been used in patch (which counts toward available outputs). The Parameters field is useful as even unpatched, but defined, parameters must be displayed and calculated in the fade engine. If you are running a large show, it is helpful to delete defined, but unpatched channels. This is where the **[Query] {Unpatched}** command is helpful.

For Example:



About Cue

In the About Cue display, three new columns that show channel moves have been added. Those columns are intensity moves, live NPs moves, and dark NPs moves.

Effects Changes

Preprogrammed Rainbow Effects

Two new preprogrammed effects have been added to the effect list. Effect 917 is a Rainbow RGB effect, and effect 918 is a Rainbow CMY effect. These effects are for a rainbow on native color parameters that will fade hue from 0 to 360 with saturation at full, when the parameters are at their default levels. 0 is the default for CMY, and Full is the default for RGB.

Focus Effects

When adjusting the form of a focus effect, you can hold down **[Shift]** while using the horizontal encoder to change the vertical form.

Beats Per Minute/ Tap Rate

For step-based and absolute effects, you can set a beats per minute (BPM). For step-based effects, BPM affects the step times and for absolute effects, this affects the time/dwell. Note that BPM impacts the effect directly. It is not currently available as a cue level override.

There are two different ways for assigning BPM to effects:

Directly setting BPM

If you know the BPM, you can assign that directly to the effect by using the **{BPM}** softkey, which is available when in the effect editor display.

- **[Effect] [1] {BPM} [1][9][0] [Enter]** - sets the BPM of effect 1 to 190. The step times will be adjusted for step-based effects, or the time/dwell will be adjusted for absolute effects.

The BPM will display on the right side of the effect editor beside the effect number/label. Editing the cycle time, the step time for a step-based effect, or the time/dwell for an absolute effect will remove the BPM.

Learning BPM

If you don't know the desired BPM, you can learn the BPM.

From Live, with the effect running:

- **[Effect] [1] [Learn] [Time]** - posts Effect 1 Learn Time Sample BPM to the command line, and opens the effect editor display.

While in this mode, press **[Enter]** to establish the BPM. The console will use an average of the last four times you press **[Enter]** in this mode to calculate the BPM. Pressing **[Learn]** again will stop this mode.

In this mode, every time the BPM changes, a live running effect will be modified accordingly without stopping.

Learning Discrete Step Time

In learning discrete step time mode, every time you press **[Enter]**, the time since the last press of **[Enter]** is used to set the next step's step time for a step-based effect, or the next step's fade/dwell time of an absolute effect.

- **[Effect] [1] [Learn] [Time] [Time]** - posts Effect 1 Learn Time Discrete Steps to the command line, and opens the effect editor display.

Pressing **[Learn]** again will stop this mode.

Instead of pressing **[Enter]**, you can press **[At]** while in this mode to add new steps to the end of the effect. Pressing **[Enter]** will send you back to the first step in the effect.

Magic Sheet Changes

Address as Target Type

Address is now an available target for magic sheet objects.

Address Added to List of Fields

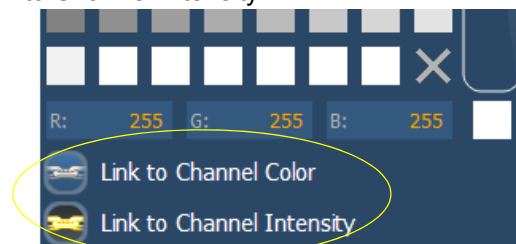
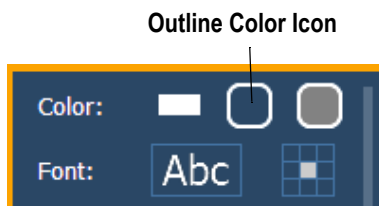
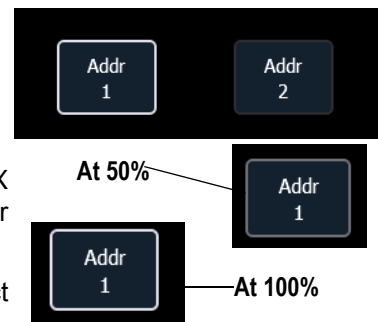
Address has been added to the list of fields that can be displayed around an object.

Address Object Color

An address object, with its outline color set to Link to Channel Color, will have a white outline if the address is patched, or a dark outline if the address is unpatched.

If the address object's outline color is set to Link to Channel Intensity, the brightness of the outline color will be tied to the DMX level of the address. The higher that the DMX value is the brighter the outline color will be.

To set the outline color to Link to Channel Color or Intensity, select the outline color icon in the color section of MS Object Properties. Then select either Link to Channel Color or Link to Channel Intensity.



Fixture Symbols

Additional fixture symbols can be imported. The symbol must be saved as a .svg image file, and needs to be tagged properly. These tags can be linked to the channel's color, intensity or both.

The outline section needs to be tagged as etc_symbol_outline0, etc_symbol_outline, and/or etc_symbol_outline2. The base section needs to be tagged as etc_symbol_base0, etc_symbol_base, and/or etc_symbol_base2. Tags can be layered, and they will render in the order listed below:

- **etc_symbol_base0** - uses fill color intensity link (not color)
- **etc_symbol_base** - uses fill color and intensity link
- **etc_symbol_base2** - uses fill color intensity link (not color)
- **etc_symbol_outline0** - uses outline intensity link (not color)
- **etc_symbol_outline** - uses outline color and intensity link
- **etc_symbol_outline2** - uses outline intensity link (not color)

Tags that only link to intensity will cause the base or outline to dim based on the channel's intensity.

The edits to the tags in the .svg file can be made in any text editor program, such as Notepad, or in a .SVG editor program, such as Inkscape.

ECU Changes

Enable Sensor/ FDX3000 Feedback

Clicking in the enable box will allow your console to receive feedback over the network from a CEM+, a CEM3, or FDX3000. This option is "Enabled" by default.

Enable FDX2000 Feedback

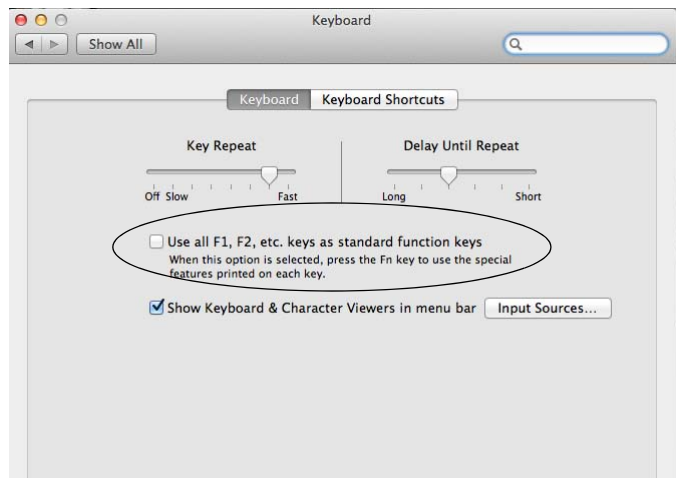
Clicking in the enable box will allow your console to receive FDX2000 dimmer feedback over the network.

Client Software Change

Using Offline or Client with Mac Laptops

When using a Mac laptop or wireless keyboard with the Mac functions mapped to the F1-F12 keys, Eos offline/client functions are not executable. The Mac functions must first be disabled before Eos offline/client functions will work:

- Step 1: Open **System Preferences** on your computer.
- Step 2: Open the **Keyboard** section.
- Step 3: Enable **Use all F1, F2, etc. keys as standard function keys** by clicking in the box.



ETC® Supplement

Eos Family v2.0.1 Supplement to Operations Manual



The following information is new for version 2.0.1. This document is supplemental to information in the Eos Titanium, Eos, and Gio v2.0 Operations Manual, Ion v2.0 Operations Manual, and Element v2.0 User Manual, and should be used in conjunction with it.

Display Changes

Changes in this section impact the System Basics chapter and the Facepanel Shortcuts appendix.

Latching Data and Time

[Data] Key

Pressing and holding **[Data]** allows you to view the values behind any referenced or marked data. **[Data]** exposes the next lower reference level. So if you view a palette reference and press **[Data]**, the absolute data will be displayed instead. If you are viewing a preset, absolute or palette data will be displayed, depending on what is contained in the preset.

On Eos Ti, Eos, Gio, and Ion, you can lock this mode by pressing **[Shift] + [Data]**. When in display reference values mode, “Data Latched” will display in the upper left of the live display and the **[Data]** key will be lit in green on Eos Ti and Gio. To exit this mode, press **[Shift] + [Data]** again.

[Time] Key

Pressing and holding the **[Time]** (the one by **[Data]** on Eos Ti, Eos, and Gio) allows you to view discrete timing data behind any channel parameter. **[Time]** exposes channel or parameter specific timing for any channels in the current cue. The first value is the delay time. If “--” is displayed, there is no delay. The value to the right of the / is the transition time.

On Eos Ti, Eos, and Gio, you can lock this mode by pressing **[Shift] + [Time]**. When in display time mode, “Timing Latched” will display in the upper left of the live display and the **[Time]** key will be lit in green on Eos Ti and Gio. To exit this mode, press **[Shift] + [Time]** again.

On Ion, you can lock this mode by pressing **[Shift] + [Time] [Time]**. To exit this mode, press **[Shift] + [Time]**.

Category Time in PSD

When the **{PSD Time Countdown}** setup option (**Setup> Desk> Displays**) is enabled, each category time will individually turn gold when that timing has completed.



Manual Control Changes

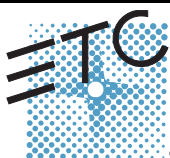
Changes in this section impact the Basic Manual Control or the Advanced Manual Control chapter.

Rem Dim /

Rem Dim levels can either be an absolute value, such as Full or 50%, or a proportional value, which would set the levels to a percentage value of their current levels. To use a proportional value, press **[/]** before entering the percentage value.

For Example:

Assume that channels 1 through 10 are selected and set to an intensity level of 60. Select channel 1 and dim the remaining channels.



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- **[1] [Rem Dim] [/] [5][0] [Enter]**

Channels 2 through 10 will be dimmed to 30.

Highlight Rem Dim

To temporarily override the **{Highlight Rem Dim}** option in Setup, you can use either of the following syntax examples:

- **[channel list] [Highlight] [Rem Dim] [#] [Enter]**
- **[channel list] [Highlight] [Rem Dim] [/] [#] [Enter]**

[-] [Select Manual] / [Select Active]

[-] [Select Manual] or **[-] [Select Active]** can be used to modify channel selections. Using **[-] [Select Manual]** will select all of the channels in the list except those that have manual data. Using **[-] [Select Active]** will select all of the channels in the list except those that are active.

- **[1] [Thru] [2] [0] [-] [Select Manual] [Enter]** - selects channels 1 through 20 except any channels that currently have manual data.

[1] [Thru] [2] [0] [-] [Select Active] [Enter] - selects channels 1 through 20 except any channels that are currently active.

[Undo] [Undo] [Enter]

Pressing **[Undo] [Undo]** will scroll to the most recent undo-able command in the command history display. To undo the command, press **[Enter]**.

Capture Latch

Previously Capture Latch would be enabled for all users when it was enabled by one user. Now Capture Latch works on a user by user basis. For more information on using Capture Latch, see the Using **[Capture]** section of the Advanced Manual Control chapter.

Recording and Playback Changes

Changes in this section impact the Cue Playback, Storing and Using Submasters, or Using Partitioned Control chapters.

Loading a Cue with Temporary Time

A cue can be loaded with a temporary time.

- **[Cue] [3] [Time] [6] [Load]** - loads cue 3 with the manual time of 6.



Note:

For multipart cues, the temporary time will be applied to the entire cue, not just the part on the command line.

For cues with discrete timing, its parameters will use the temporary time instead of the assigned discrete timing.

Submasters

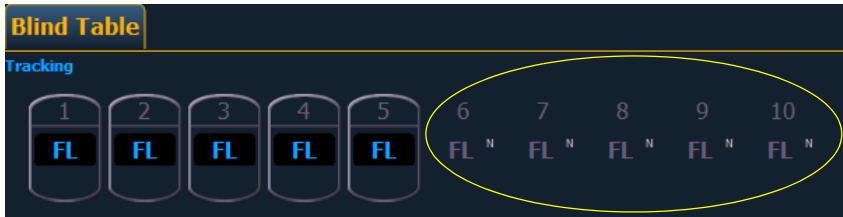
The number of submasters has increased to 999. The number of fader pages available is still 30, which means that there is still a limit of 300 submasters being used with physical faders at a time.

Partitions on Cue Lists

A partition may be assigned to a cue list. If a partition has already been applied to a cue list, any channels not in the cue list's partition will not be included in cues when they stored or replayed.

Any data for a cue list that already existed before a partition is applied, will be maintained, including data for channels not included in the partition. If data existed before the partition was assigned, in

blind, channels that are not in the partition will display without a channel graphic, any levels will be in gray, and a small superscript N will display with it.



Channels that were initially saved in the cue list but are not in the currently assigned partition

Assigned partitions will display in the external links column in the cue list index.

To assign a partition to a cue list:

- **[Cue] [n] [/] {Partition} [n] [Enter]**

To remove a partition from a cue list:

- **[Cue] [n] [/] {Partition} [Enter]**

Working with a Single Cue List Changes

Changes in this section applies to the Working with a Single Cue List chapter.

Auto-block Cleanup

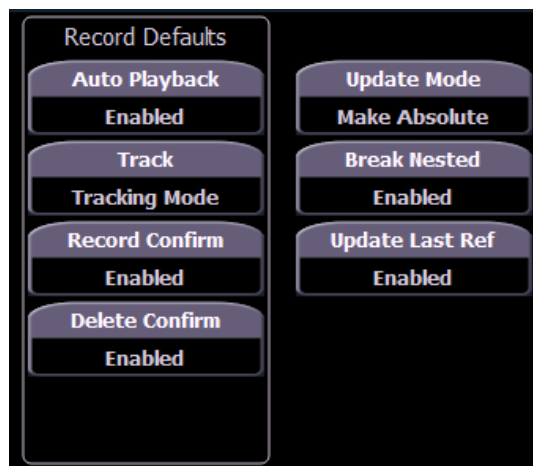
Cues that have auto-blocks will display a underscored b in the PSD. **{Autoblock Clean}** is used to remove all auto-blocks from a single cue, cue range or entire cue list. **{Autoblock Clean}** is a softkey that will be posted when a cue list and/or cue number are on the command line in the Cue List Index, Live, and Blind. A range of cues or a cue list can be specified with this command.

For Example:

- **[Cue] [1] [/] {Autoblock Clean} [Enter]** - clears all auto-blocks from cue list 1. Only blocks displayed with the white underscore are removed. If the **[Block]** key was previously used, this command will not unblock it.
- **[Cue][1] [/] [1][0] [Thru] [1][0][0] {Autoblock Clean} [Enter]** - clears the auto-blocks just from cues 10 through 100 of cue list 1.

Default Update Modes

The default Update modes have changed. Eos defaults to Make Absolute for the **{Update Mode}**, with **{Break Nested}** and **{Update Last Ref}** enabled.



Default Update Setup Options

Timing Disable

This change affects the Setup and Cue Playback chapters.

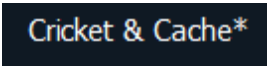
You can assign a separate time value for **[Timing Disable]** in **Setup> Desk> Manual Control> Default Times> Timing Disable**. When a fader has been set to timing disable mode, cues will use the time set in Setup. The default time is 0.

[Shift] + [Go] and [Shift] + [Back]

[Shift] + [Go] and **[Shift] + [Back]** can be used to cut to the next cue in the same way as **[Timing Disable] + [Go]** and **[Timing Disable] + [Back]**.

Show File

An indicator has been added to show when a show file has been modified but not saved. An asterisk (*) will display beside the show file name.



Mirror Mode

This change affects the Mirror Mode section of the Multi-console and Synchronized Backup chapter.

A device that is currently in mirror mode can select which user number it is mirroring by using the alphanumeric keyboard shortcut **M + #** (# being the user number). **M + ESCAPE** can be used to leave mirror mode.



Note:

If a device is not currently in mirror mode, pressing M on an alphanumeric keyboard will post Mark to the command line.

Collapsing PSD Columns

This change affects the Playback Status Display section of the System Basics chapter.

To collapse a column in the Playback Status Display, press **[Escape]** while clicking on the column you want to collapse. Press **[Shift] + [Select]** to bring back all of the collapsed columns.

Magic Sheets on Direct Selects

Magic Sheets can now be accessed from the direct selects. Clicking on a magic sheet direct select will open the Magic Sheet tab and display the selected magic sheet. Pressing a different magic sheet direct select will change the displayed sheet.

Using Park Changes

Changes in this section impact the Using Park chapter.

Recall From Park

You can use **[Recall From] [Park]** to set a channel or parameter to the same level as the current park value.

For Example:

Let's assume that channels 1 through 5 are parked at 55. To recall that level to channels in live or blind, use the following syntax:

- **[1] [Thru] [1][5] [Recall From] [Park] [Enter]**

Channels 1 through 5 will be set to 55 and channels 6 through 15 will be unaffected.



Note:

This does not release the Park buffer.

[Thru][Thru] in Park

When parking a range of addresses in Park, using **[Thru]** will only park the intensities. If you want to park all of the addresses and parameters within the selected range, you will need to use **[Thru] [Thru]**.

Patch Changes

Changes in this section impact the Patch chapter.

{Swap} in Patch

Additional options have been added to **{Swap}** in Patch.

- **{Swap}** - swaps only the patched address
- **{Swap} {Plus Show}** - swaps all show and patch data
- **{Swap} {Only Show}** - swaps only the show data and not patch data
- **{Swap} {Plus Patch}** - swaps addresses and patch data but not show data

Fixture Editor Parameters

The fixture editor parameters list is now displayed in alphabetical order.

[Thru] [Thru]

This change applies to the Multipart Cues chapter.

[Thru] [Thru] can be used in blind to create multiple cue parts in a range. For example, **[Cue] [1] [Part] [1] [Thru] [Thru] [4] [Enter]** will create parts 1 through 4. If you were to use just **[Thru]** instead of **[Thru] [Thru]** in that example you would create parts 1 and 4.

Subgroups

This change applies to the Using Groups chapter.

You can create subsets of channels within a group by using **[Shift] + [/]**. **[Shift] + [/]** will create parentheses. These subsets of channels or subgroups are treated as a single channel in the following ways:

- When applying absolute or relative effects from live, the subgroups are treated as a single channel by the effect.
- When setting a range of step's channels on a step based effect, the subgroup will not be spread out amongst multiple steps.
- When the group is selected and next/last is pressed, each subgroup is traversed.
- When a group has subgroups, **{Reverse}**, **{Reorder}**, and **{Random}** in the group editor will affect the subgroups instead of the channels in each subgroup. **{Reorder}** will order the groups based on the first channel in each group.

Subgroups can be created either in the group list or live.

Group List Display		Subgroups
Group	Label	Channels
1		(1>2) (3) (4) (5) (6>7)

To create a subgroup in live:

- **[Shift] + [/] [1] [Thru] [4] [Shift] + [/] [Record] [Group] [2] [Enter]**

To create a subgroup in the group list index:

- **[Group] [2] [Enter] [Shift] + [/] [1] [Thru] [4] [Shift] + [/] [Enter]**



Note: *Fan is not currently supported with Subgroups.*

Managing Show Files Changes

Changes in this section impact the Managing Show Files chapter.

Importing Custom Gobo Images

Custom gobo images can be imported by going to **Browser> Import> Gobo Images** and selecting an image file or folder. If a folder is selected, all image files within the folder will be imported. All standard image files are supported with the exception of .svg files.

Imported gobo images can be deleted by going into **Browser> Import> Gobo Images> Imported Gobos**, selecting the image, and pressing **[Delete] [Enter]**.

Imported Media and Partial Show Open/Merge

A new tile, **{Media}** has been added to the Partial Show Opening and Merge displays. Media is imported gobo and magic sheet images.



Note: *Media will be included by default when you select Patch, Fixtures, or Magic Sheets.*

Virtual Media Server

Changes in this section impact the Virtual Media Server chapter.

Number of Pixel Maps

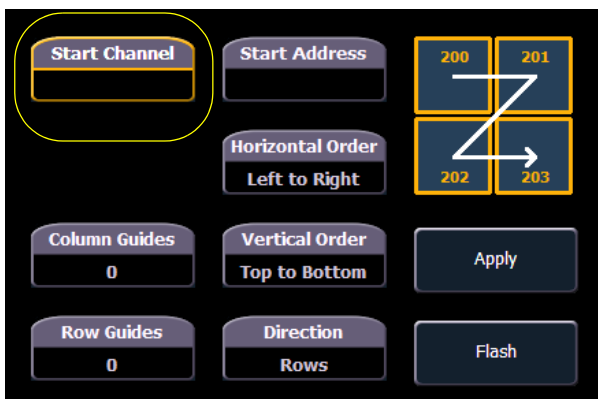
The number of pixel maps per show file is now 40. Previously it was limited to 10 maps.

{Flash}

The **{Flash}** softkey is available in the Pixel Map Editor display. **{Flash}** works the same as it does in Live. See the section on Flash in the Basic Manual Control chapter for more information.

Patch by Channel

An option for setting the starting channel has been added to the Edit display for mapping channel-based pixels.



- When either **{Starting Channel}** or **{Starting Address}** is selected, both fields will be cleared.
- Address-based pixels can not overlap with channel-based pixels. This includes the entire DMX fixture footprint.
- If using **{Starting Channel}**, any overlapping channel-based pixels will be removed and any overlapping address-based fixtures will be unpatched.
- If using **{Starting Address}**, any overlapping address-based pixels will be removed and any overlapping channel-based fixtures will be unpatched.
- When the **[Data]** key is latched, the address for channel-based pixels will display.
- When **[Format]** is pressed, the address will toggle between port/offset and address number.

Park and Address Check

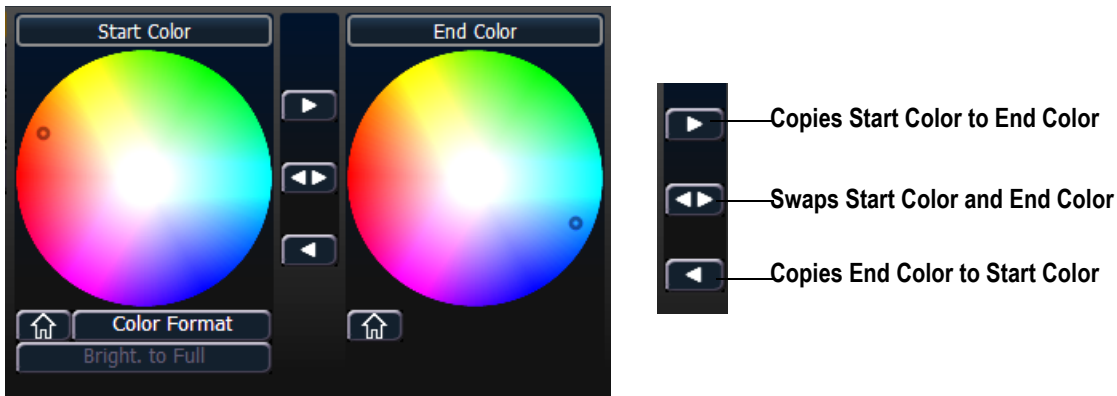
You can use Park and Address Check for Virtual Media Server outputs.

Color Picker

A second color picker has been added for virtual effect layers. The second color picker will be labeled as End Color and will control RGB2.

Copying Color

You can copy or swap a color between the two color pickers using the buttons located between the two color pickers.



FDX Dimmer Feedback

ECU Settings

Changes in this section impact the ECU appendix.

FDX Feedback

Clicking in the enable box will allow Eos to receive FDX dimmer feedback over the network.

Broadcast Type

- Directed Broadcast - Broadcast packets are directed to a subnet based on the IP address and subnet mask of the sender.
- Limited Broadcast - The limited broadcast address is 255.255.255.255. It is limited because routers will never forward datagrams with that destination address. This means that datagrams with the limited broadcast address are confined to the particular network segment on which they originate.

About System

Changes in this section impact the About chapter.

Clicking on a FDX rack in the **{About System}** list will open the About Rack display, which shows the following information about the rack:

- Rack number
- Rack Type
- Phase A,B,C Voltages
- Frequency
- System Number
- IP Address
- Software Version

Device List

For information about FDX Dimmer feedback, see the Device List section in the Patch chapter.