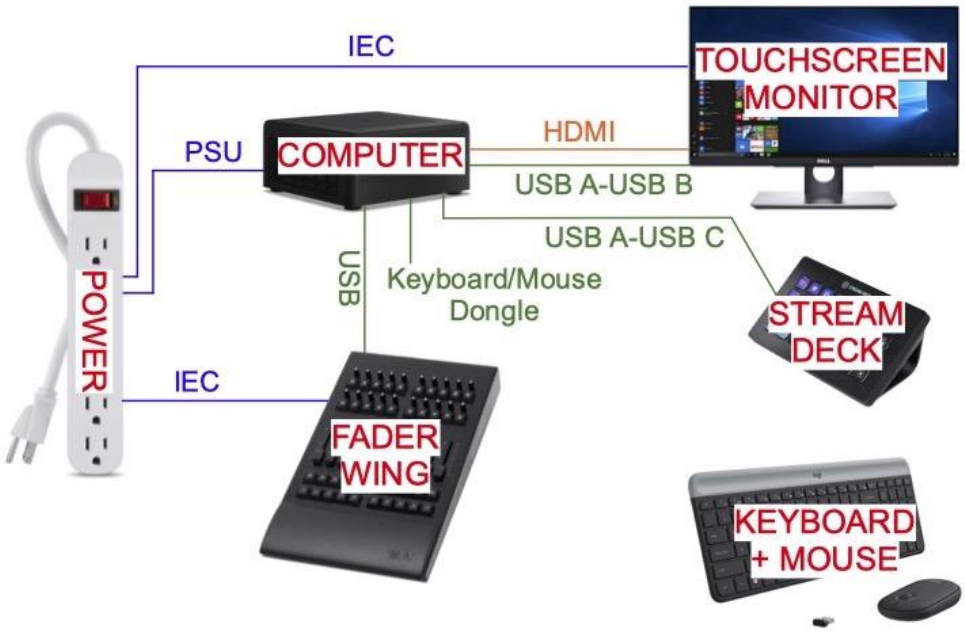
GOT LIGHT MA3 MANUAL

Edited: 3/15/2023

SET UP BOARD

COMMAND WING

FADER WING

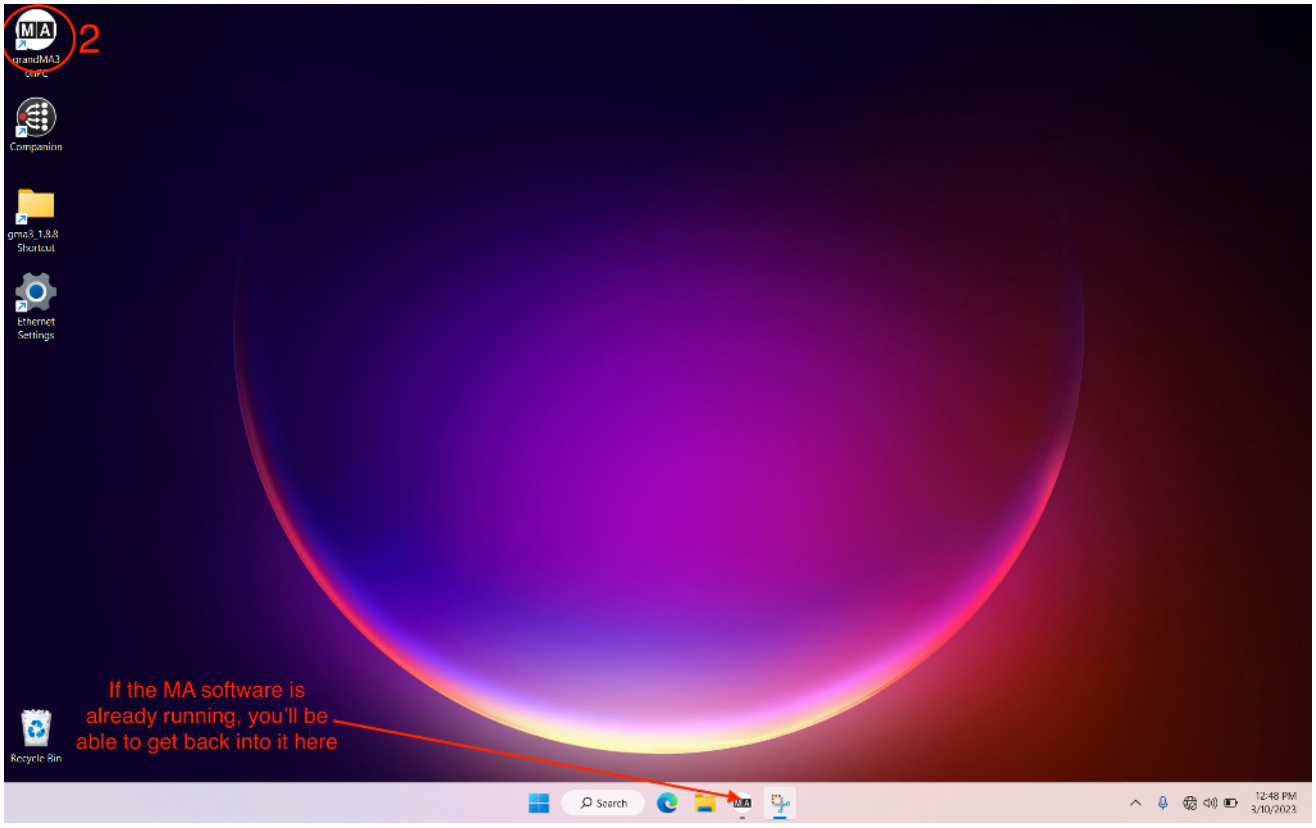


NODE KIT

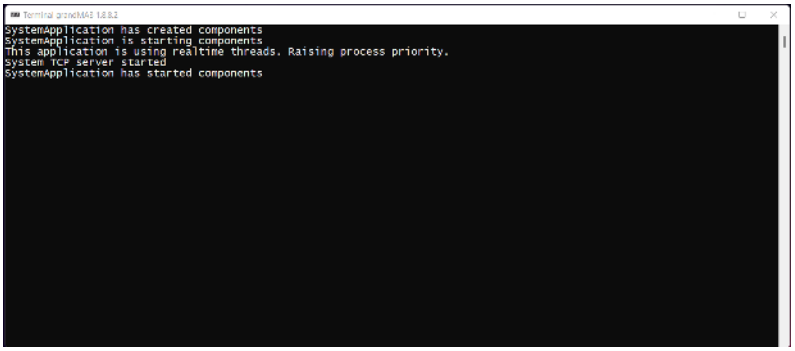
TURNING THE BOARD ON AND OFF

Turning on the board

1) Boot up the computer. The password for all the MA machines is Gotlight211!



2) Double click on the GrandMA3 icon on the desktop



3) You'll get a terminal screen. Be patient! The software will load after a minute.
4) The MA software will load to whatever the last show state you were running - this includes any cues or levels that were up

Turning off the board

1) Click the little arrow on the left side of the screen to bring up the side bar
2) Click the power symbol at the top left
3) Click the power symbol in the small pop-up menu
4) You will get a popup asking if you really want to shut down. Click OK
5) If you have any unsaved changes to your show file, the board will ask if you want to save. It's probably a good idea to say yes
6) Shut down the computer normally

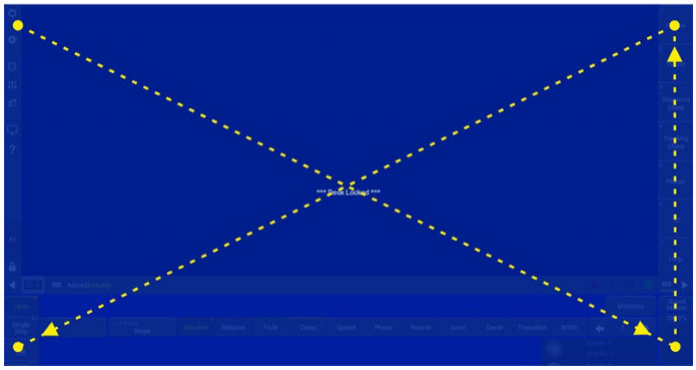
Notice from this same menu that you can also reboot the software, using the little circular arrow button

Locking the board

You can also lock the board so that nobody else can mess with it. To do so, press the little lock icon on the Shutdown Menu.

The screen will turn blue and say ***Desk Locked***

To unlock, do one of the following:



- On a physical board, press MA+MA+Pause
- On a keyboard - press pause
- On a keyboard - press F9
- On the screen - click the upper left corner, lower right corner, upper right corner, lower left corner

SAVING AND LOADING SHOWS

GOT LIGHT BEST PRACTICE!

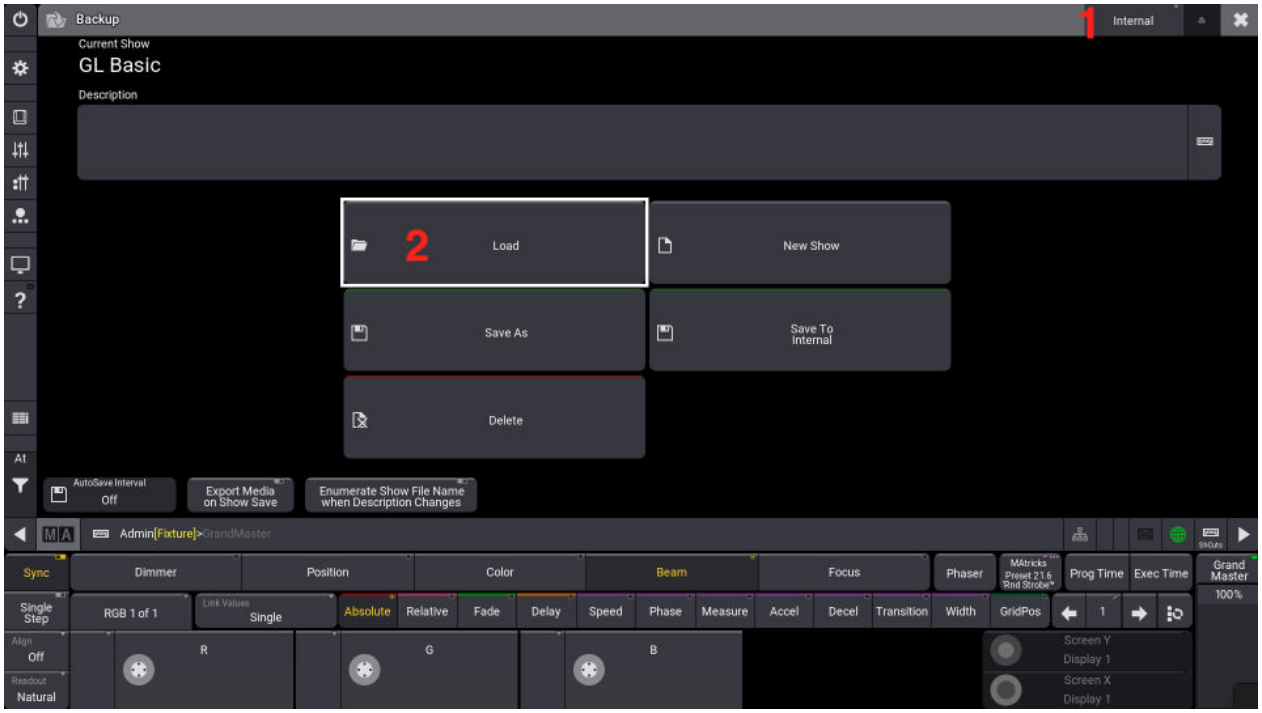
Before starting any programming, load the "GL Basic" file from either the harddrive or the USB stick

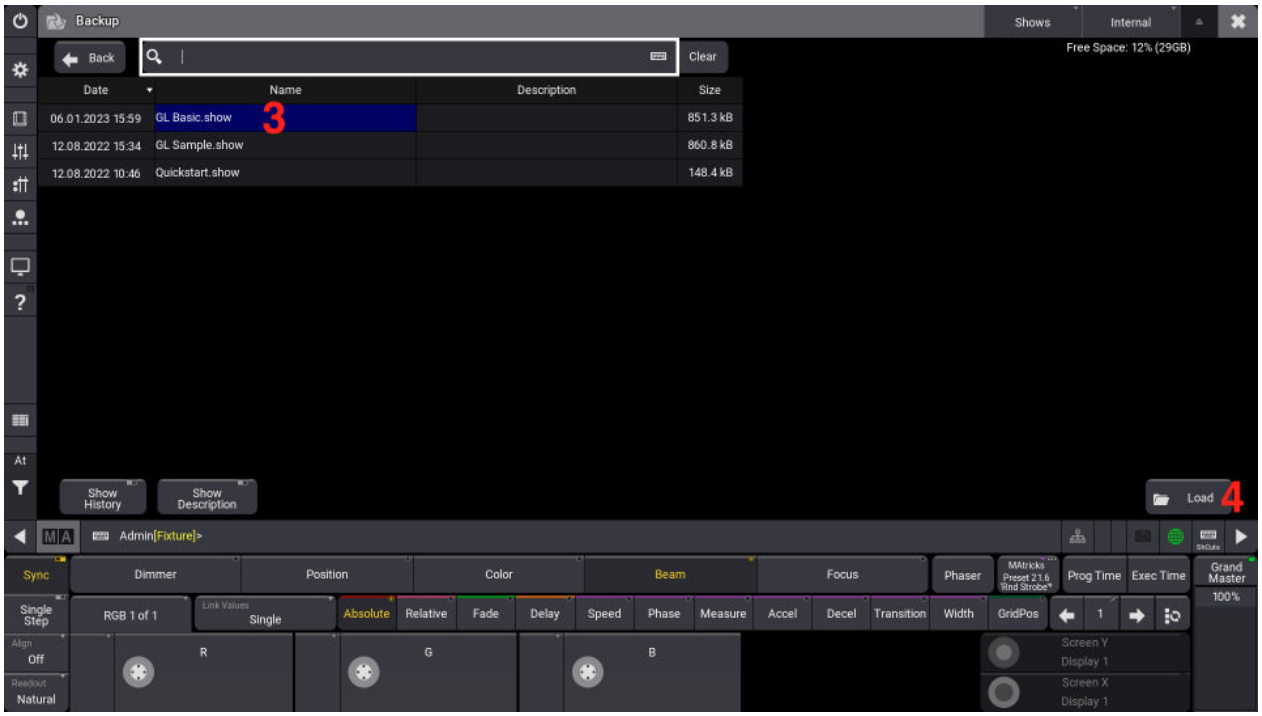
Save immediately as a new show on the harddrive, using the name of your current show

Getting to the saving/loading screen

1) Press the little arrow at the bottom left to bring up the side bar
2) Press the cog icon to open the menu
3) Click on Backup

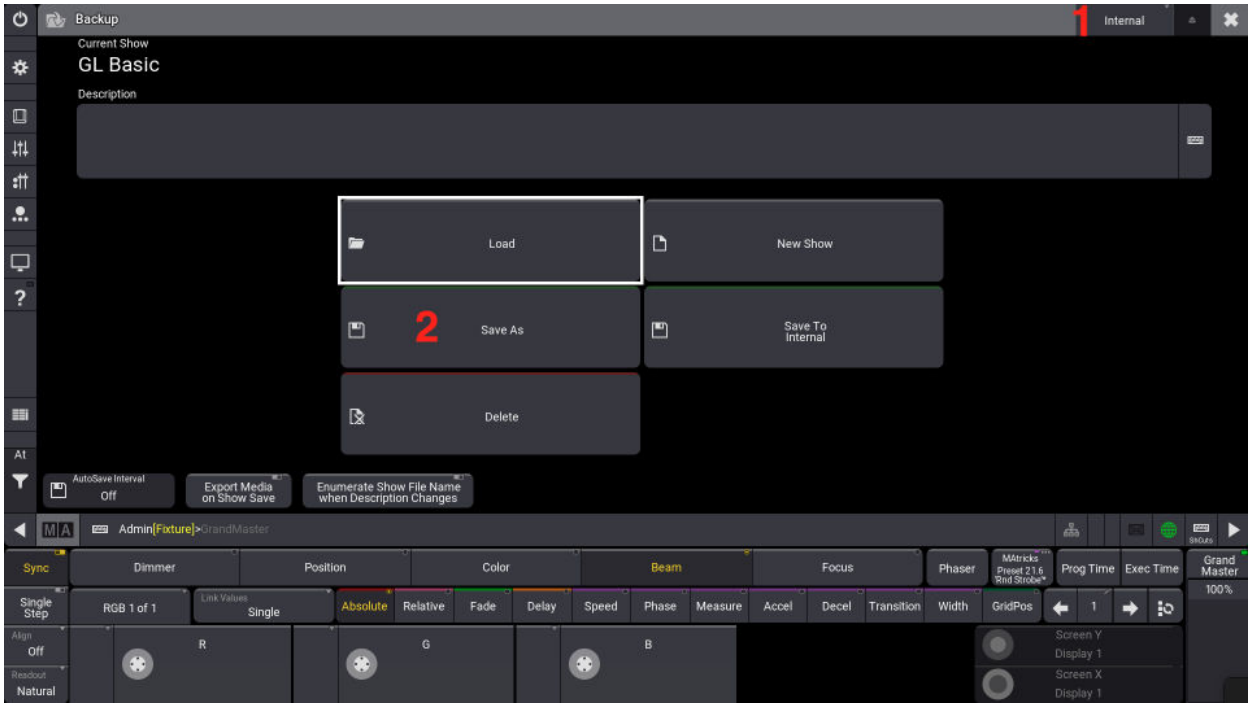
Loading a show file

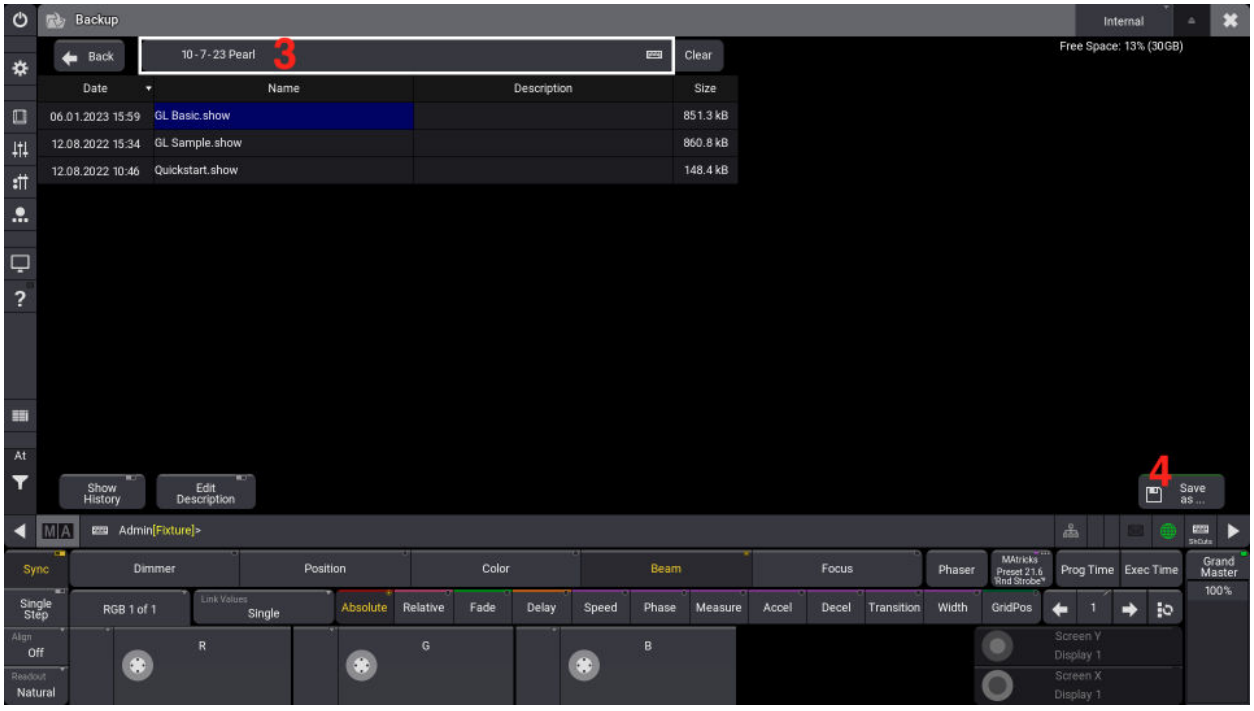


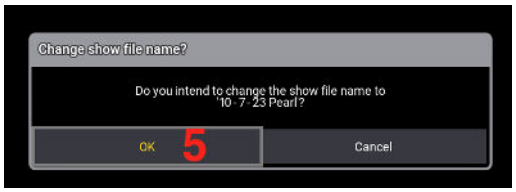


1) You can toggle between the computer's internal hard drive and an external drive using the menu in the upper right hand corner
2) Press Load
3) Select the show you want to load
4) Press the Load button in the bottom right.

Saving a new show file







1) You can toggle between the computer's internal hard drive and an external drive using the menu in the upper right hand corner
2) Press Save As
3) Enter the new show name at the top
4) Press the Save As button in the bottom right
5) Click OK in the popup window

Saving a current show file

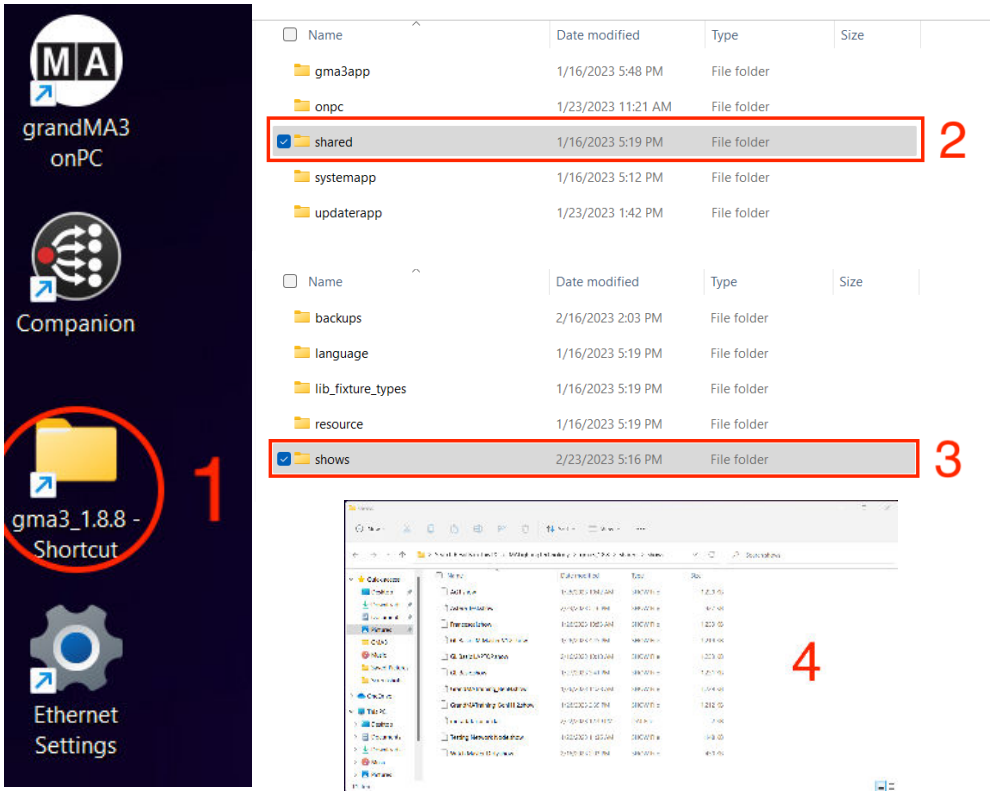
There are three ways to save a show to the current show file

- Through the backup menu, as above
- By typing “sa” in the command line, and pressing the enter key
- By using the Quick Save button:

1) Click the little arrow at left to open the side bar
2) Click the cog icon
3) Click Quick Save

MA Folder Hierarchy

The MA looks in a specific folder on your computer (or in a flash drive) for shows to load. This is important to know if you are ever emailed a show or download one, or if you need to otherwise transfer shows from computer to computer. Here’s where the show files live:



1) Find the folder called “gma3_#.#.#.#” (on a thumb drive this is just called “grandMA3”) The #’s are the version number of your current MA software. On the GL MA computers, this folder is just on the desktop, but you might need to dig a bit on a different computer.
2) “Shared”
3) “Shows”
4) You’lll see all the MA shows currently saved on this computer (or thumb drive). From here you can add additional shows, plus delete or rename existing ones

INTRO TO BOARD INTERFACE

Views

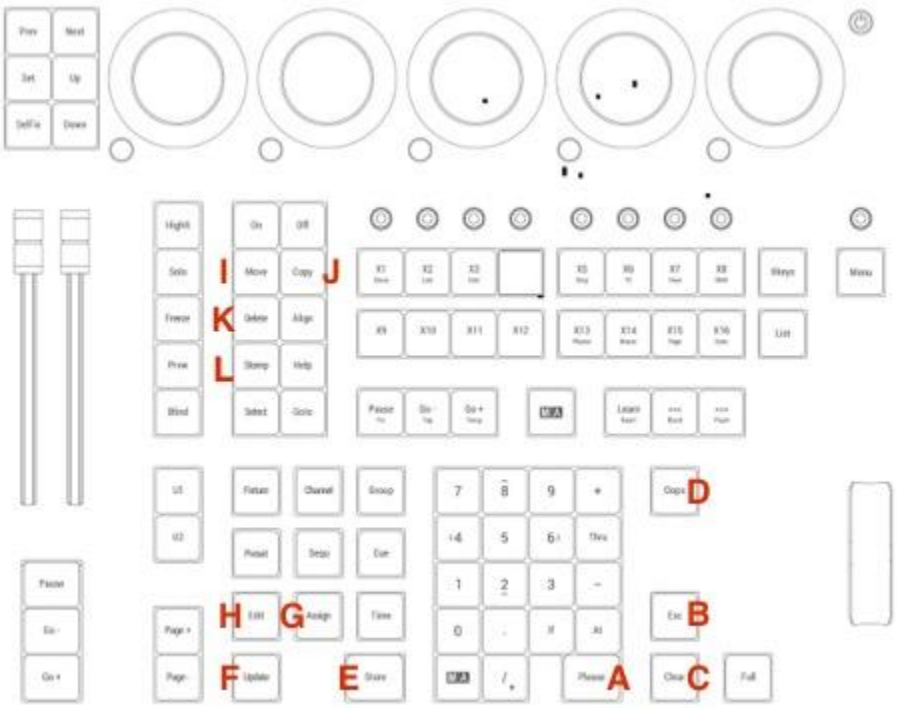
Here is what the GL Basic show will look like when you open it:

A. List of groups - see page 23
B. Virtual faders - see page 27
C. List of cue sequences - see page 28
D. List of color presets - see page 24
E. List of pre-programmed effects that can be applied to lights, the same as colors can
F. Color picker - see page 25
G. Fixture sheet, where you will see all your patched instruments and their current level, color, etc
H. Macros - Macros are shortcuts to one or multiple command line actions. The GL Basic file is preset with some common button actions on macros. If you are working with the Command Wing, or with a Stream Deck, these macros are redundant. See page 34 for info on editing the screen view
I. Virtual encoders - used with moving lights
J. Command Line, where you will type in instructions (using a combo of the keyboard, Command Wing, and/or Stream Deck)
K. Toggle keyboard shortcuts on and off. **This will be yellow when turned on**
L. This arrow opens the view selector, below. Views are basically saved screen layouts. Again, it saves space to keep it closed. See page 34 for editing and storing views
M. This arrow opens the control bar, below. If you aren't actively using the menu, keeping it closed saves screen space

i) Opens the Shutdown Menu - see page 4
ii) Opens the Main Menu
iii) Opens a virtual version of the MA board interface - see the next page for what that looks like
iv) Opens the Master Controls. For the scope of this manual, please ignore it
v) Opens a larger version of the virtual faders
vi) Opens the Custom Masters. For the scope of this manual, please ignore it
vii) Allows you to open a new MA window on the computer - useful for when you are using multiple screens
viii) Toggles the help button (this is also a physical button on the Command Wing). Press once to get “Help” added to the command line - after which you can enter a topic you need help with, and it will take you to the manual. Press this button twice to go straight to the manual
ix) Toggles the view for the lower portion of the screen.
x) Opens the At Menu, which has copies of some common buttons.
xi) Press this to go to the Home view - this is the view you are seeing now!
xii) Press this to go to the Sequence view - see page 31
xiii) Press this to go to the Phaser editor (Phasers are the MA word for effects)
xiv) Press this to get to a 3D view of the stage (Note: if you aren’t importing from Vectorworks, this takes some setting up that is beyond the scope of this manual).
xv) Press this to go to the MA manual

Buttons

The layout of a physical MA board looks something like this:



Some useful buttons are highlighted here - the GL Basic file has macros that mimic these buttons.

A) Please - This is the same as enter, used to send a command to the board. When working without a physical console, use the keyboard's Enter key.
B) Esc - Will clear out all text in your Command Line, AND will get you out of any screen that you don't want to be in. **If you see a green outline around windows, press Esc to get out.** When working without a physical console, use the keyboard's Esc key.
C) Clear - Clears out the programmer - see page 22
D) Oops - This is the undo button. It can undo up to 100 commands back. **Be careful! When working with keyboard shortcuts on, the Backspace button acts as Oops.** Additionally, the Oops button itself acts as a backspace when typing in the Command Line.
E) Store - Records values for a cue, a preset, or anything else.
F) Update - Updates a cue, preset, etc. When you press this, you will see indicated on screen what can be updated
G) Assign - Used to assign parameters to different objects. Most relevant for us, it can be used to assign a sequence to a fader, by clicking Assign (sequence in question) (fader in question)
H) Edit - Used to edit a pre-existing object. Double click to get EditSetting - which, as the name suggests, can be used to edit the settings of windows, sequence, faders, and everything else
I) Move - Used to move objects. For example, to move a color preset tile to an empty tile, click Move (preset in question) (empty tile in question)
J) Copy - Copies an object, same as the Move button
K) Delete - Used to delete objects, including cues, patched fixtures, windows, etc. Press Delete (object in question)
L) Stomp - Clears out any running effects. Select the fixtures with the effect, and then press Stomp Enter.

In general, when we are giving the board a command, we use the syntax "Action" "Object" "Destination". So we would stay "Assign Sequence 1 at Encoder 201", or "Move Preset 4.1 at preset 4.2"

Gestures

There are also some useful gestures that utilize the touchscreen:

Zoom:

Tap the screen using two finger and move them apart or towards each other

Resize a window:

1) Tap and hold the title bar or title field of a window
2) Tap where on the screen you want the size to change to match
3) Release both fingers

Scroll within a window:

Use two fingers to scroll within a window

Scroll within the screen as a whole:

Use three finger to scroll thru the screen as a whole

Drag a window to a new position:

1) Tap and hold the window with one finger
2) Move the window to the desired position
3) Release

Edit an object:

1) Tap the desired object
2) Tap with two fingers somewhere else in the same window

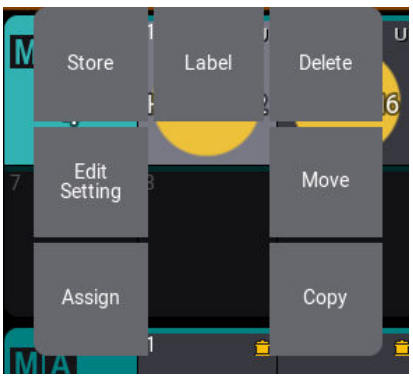
Select multiple cells in a spreadsheet (such as ones found in Patch, cue lists, etc):

1) Tap and hold the first cell
2) Drag down through all desired cell

Swipeys:

Swipeys are a quick way to access commonly used commands.

1) To access a Swipey, hold down on an object (for example, a color preset or a sequence)
2) Swipe in any direction. The Swipey (pictured) will pop up
3) With your finger still held down, go to the command that you want, and then release.



PATCHING

What is Patching

To understand patching, you will need to understand two concepts: *Addresses* and *Fixture ID's*

- An *Address* (also called a *DMX Address*, or a *DMX channel*, or sometimes just *DMX*) is a number between 1 and 512 that is assigned to each lighting fixture. This is like an ID number that the lightboard uses to identify each individual light and control it separately.
    - Typically, each light is programmed with its address before it reaches the field.
    - Often, we will have multiple lights sharing the same address. This means that they will all be controlled by the lightboard as a group - if one turns on, they all do. This is used a lot for systems of uplights that are all going to be at the same brightness and color.
    - Most of our lights have several addresses - this is because they have several attributes that can be controlled (i.e. intensity, red LED diode, green LED diode, blue LED diode, etc.) Each attribute needs its own address so that the lightboard can control it independently. What these attributes are and which address they respond to is determined by the *Mode* that the light is in
        - In this case, we would say that the Address of a light is the address assigned to its first attribute. For example, if a hex is in HSI mode, it uses 3 addresses - one for hue, one for saturation, one for intensity, in that order. If we assign the hex to address 101, that means that hue is assigned to address 101, saturation is 102, and intensity is 103. If we have a second hex, we would address it to 104, so as not to overlap any addresses
    - A *Universe* is a set of 512 addresses (this number is determined by how many individual bits of data a DMX cable can transmit). For large shows, you will start seeing lights separated into multiple universes - for each universe, a separate physical line of DMX has to be run to those lights from the board.
        - You can have, as an example, one light that is in universe 1 address 1, and another light that is in universe 2 address 1. These addresses are not overlapping.
- A *Fixture ID* (or *FID*, also called a *Channel*) is the number that you refer to each light as when using the board. This is to make it easier on the board op to systematize and remember which light is which.
    - Typically, addresses are assigned based on the light's physical location, but this might not be the most logical way for a board op to think about it.
        - For example, let's say we have 3 Lustrs - the first one is universe 1 address 1, the second one is universe 1 address 16, and the third one is universe 2 address 101.
            - We don't want to type "1/1 + 1/16 + 2/101" every time we want to grab those three lights - plus that is hard to remember
            - A fixture ID allows us to essentially re-name those lights - we can call them FID 1 thru 3, which is way simpler.

Patching then is the process where we assign the Address of each lighting fixture to the Fixture ID that we want it to have.

- So in the above Lustr example, we would patch universe 1 address 1 to FID 1, universe 1 address 16 to FID 2, and universe 2 address 101 to FID 3.
- Then when we need to select those Lustrs, we can simply type "1 thru 3"

Patching on the MA

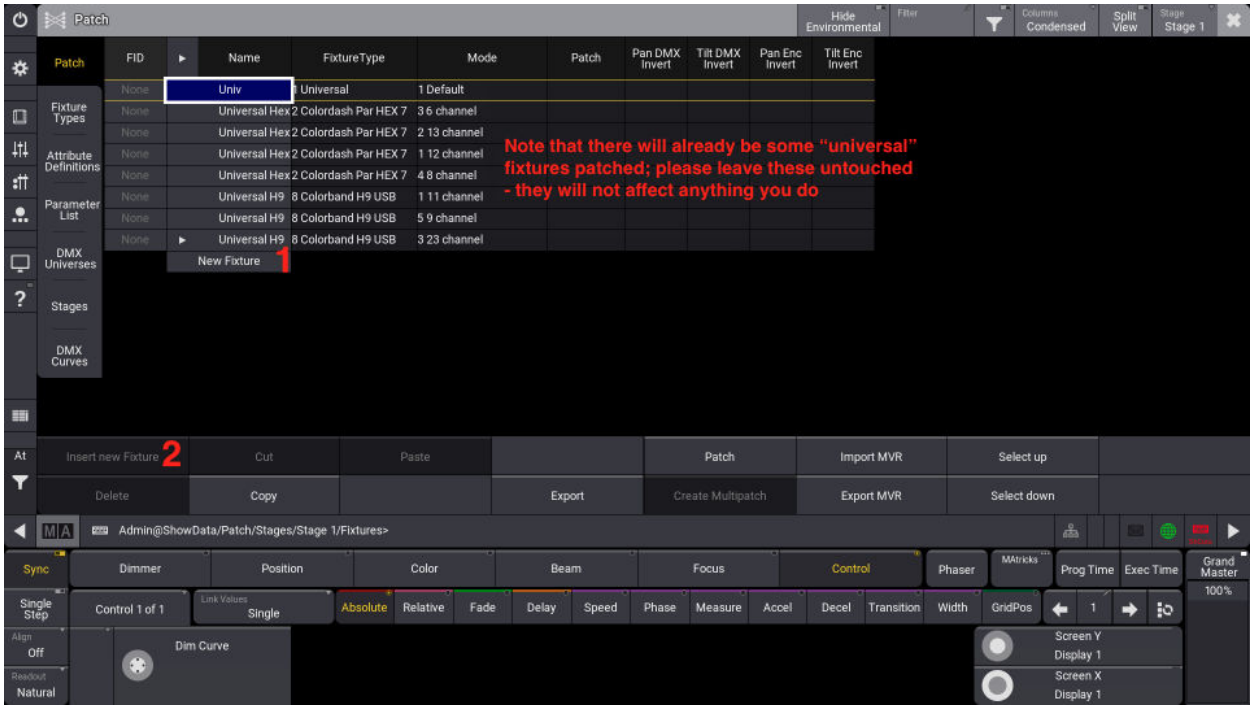
For this manual, we will be using a small sample Pearl show, found at the end of this document.

Getting to the patch

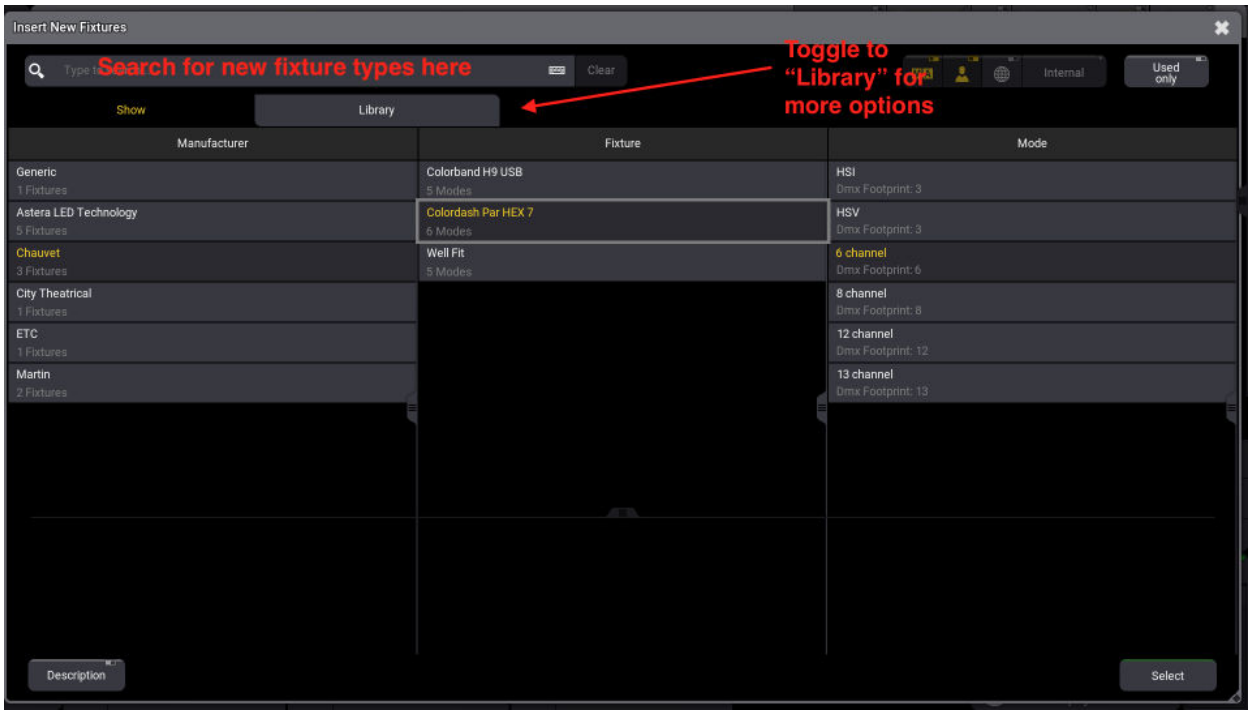
1) Press the little arrow at the bottom left to bring up the side bar
2) Press the cog icon to open the menu
3) Click on Patch

Patching instruments

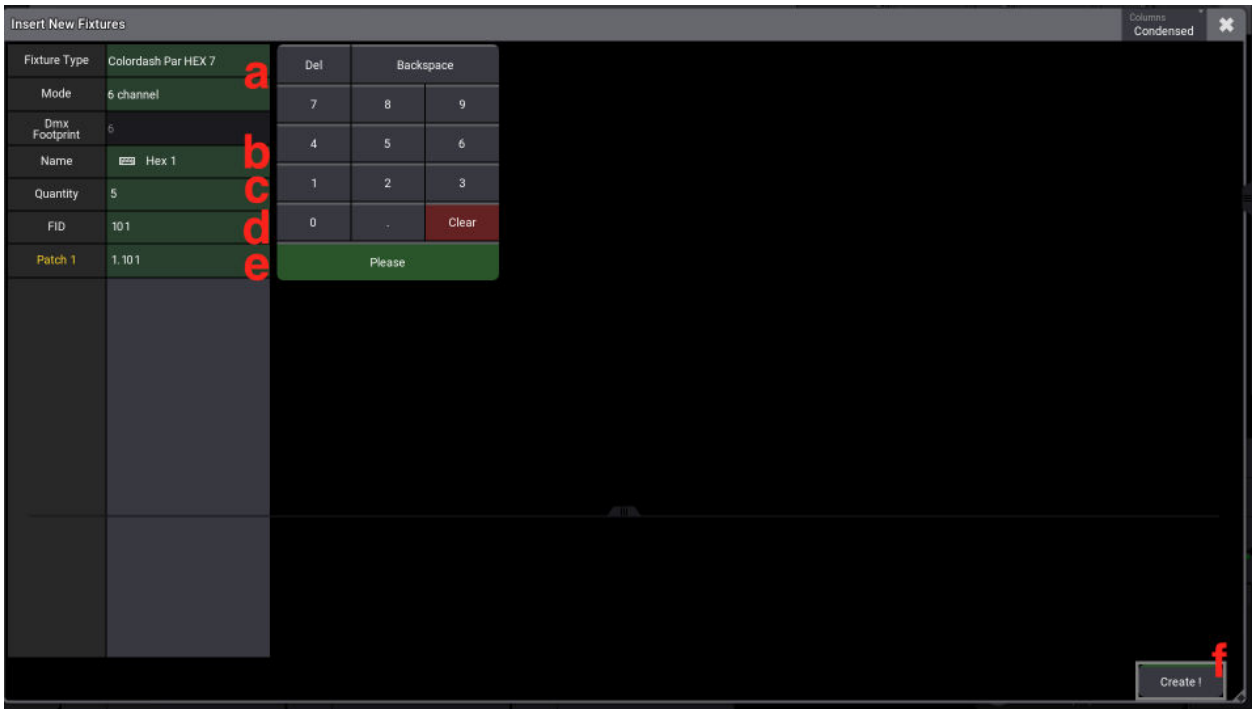
This lightboard is designed to patch systems of instruments all at once. In our sample Pearl show, we have (5) channels of Hexes in 6 channel mode, and, crucially, they are all addressed sequentially (101, 107, 113, 119, 125). That means we can do the following:



1) Highlight New Fixture
2) Click Insert new Fixture at the bottom left

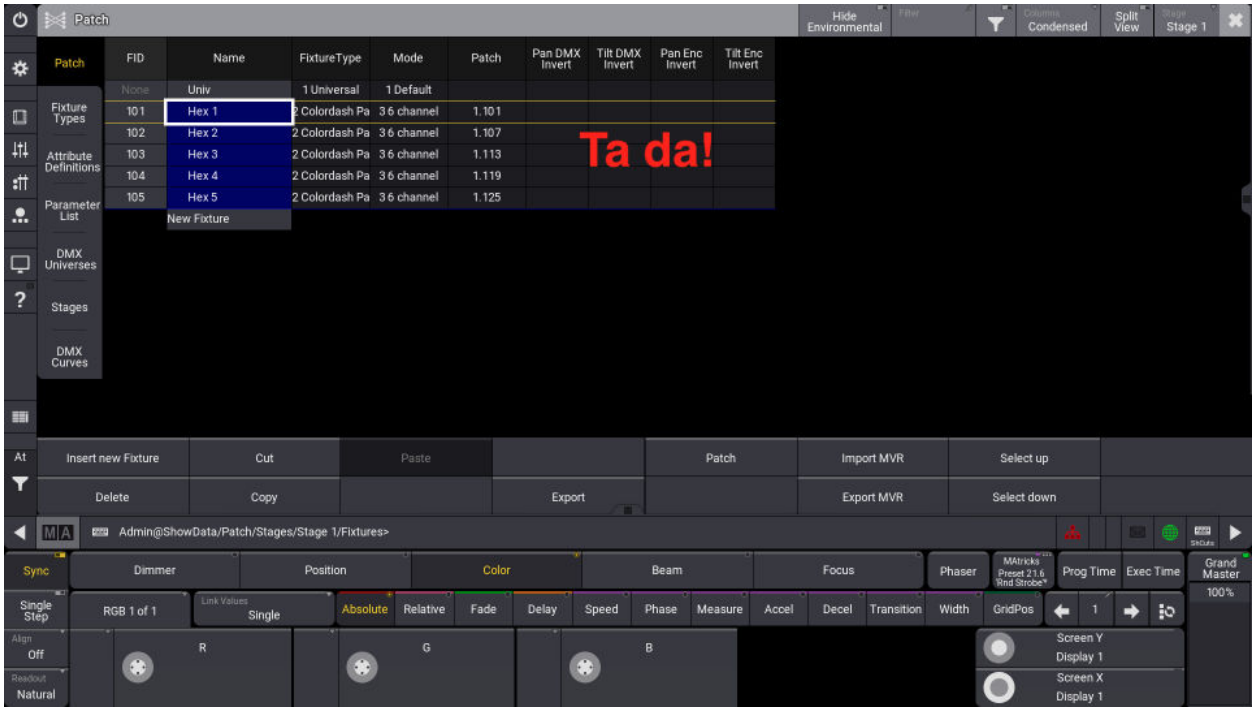


3) You will see a list of show-specific fixture types. All of Got Light's inventory, plus some things we use frequently, are listed here. To find more fixture types, click on Library at the top. There's a lot of pre-loaded options - you can use the search bar to quickly find what you are looking for. Once you find the correct fixture, select it and choose the mode. For this example, we select Chauvet >Colordash Par Hex 7 > 6 channel.

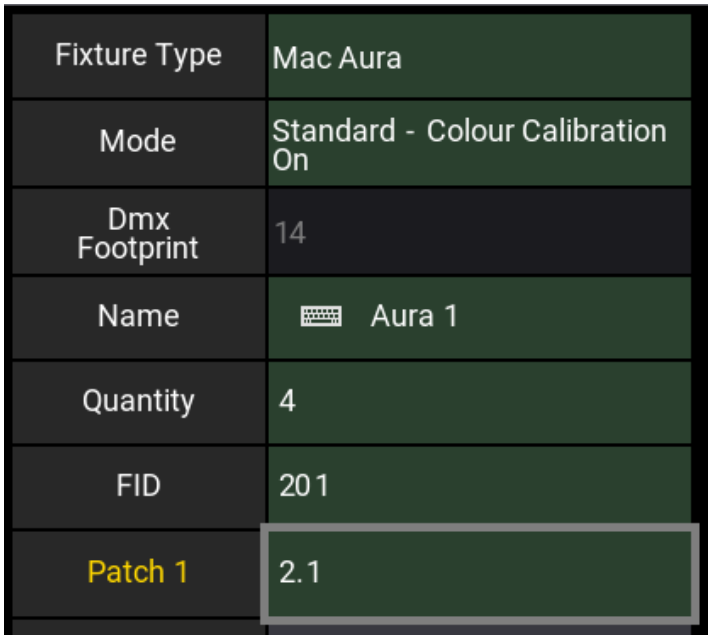


4) You will get a new window with info to fill out. Click on each square to edit the value. You can use the computer keyboard or the onscreen keyboard.
    a) Fixture Type, Mode, and DMX Footprint are automatically filled
    b) Name - you can put in an instrument name or not. For example, if you enter “Hex” into this field, all instruments you are about to patch will be labeled Hex. If you put “Hex 1”, they will auto number themselves as Hex 1, Hex 2, Hex 3, etc
    c) Quantity - This is how many instruments of this kind you are patching now. For this example, we are patching 5 channels of hexes, so I enter “5”
    d) FID - This stands for “Fixture ID”, and it is the same as Channel on many other boards. It’s the number you will use to refer to these instruments when you are programming. Enter the first FID you want to use. Here, we will call the hexes fixtures 101 through 105, so I enter “101”.
    e) Patch 1- This is the DMX address. The first number (before the period) is the DMX universe, the second number is the address. Enter the first address in the system - here it is 101.
    f) Press the Create! button at the bottom right

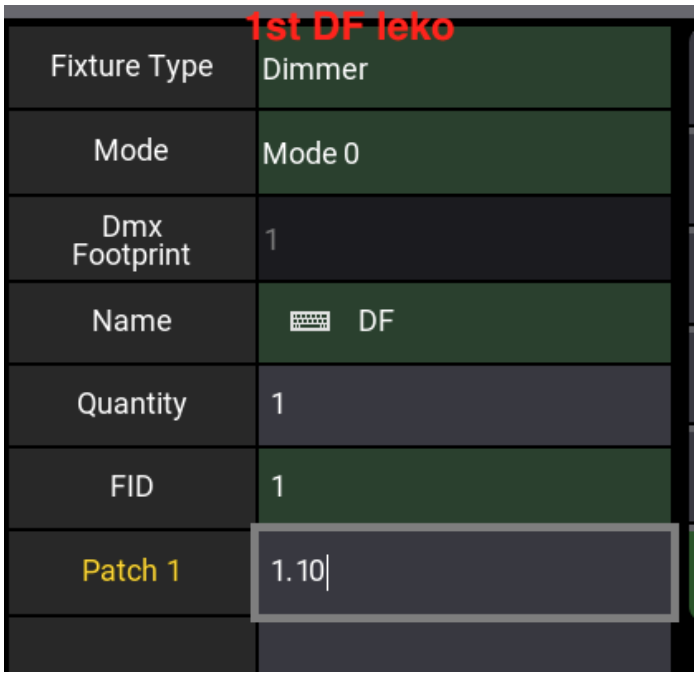
5) You will be brought back to the main patch screen. Notice that this created 5 Hex fixtures, with FID's 101 onwards, starting at DMX 101, and that it automatically skipped 6 DMX addresses per fixture.



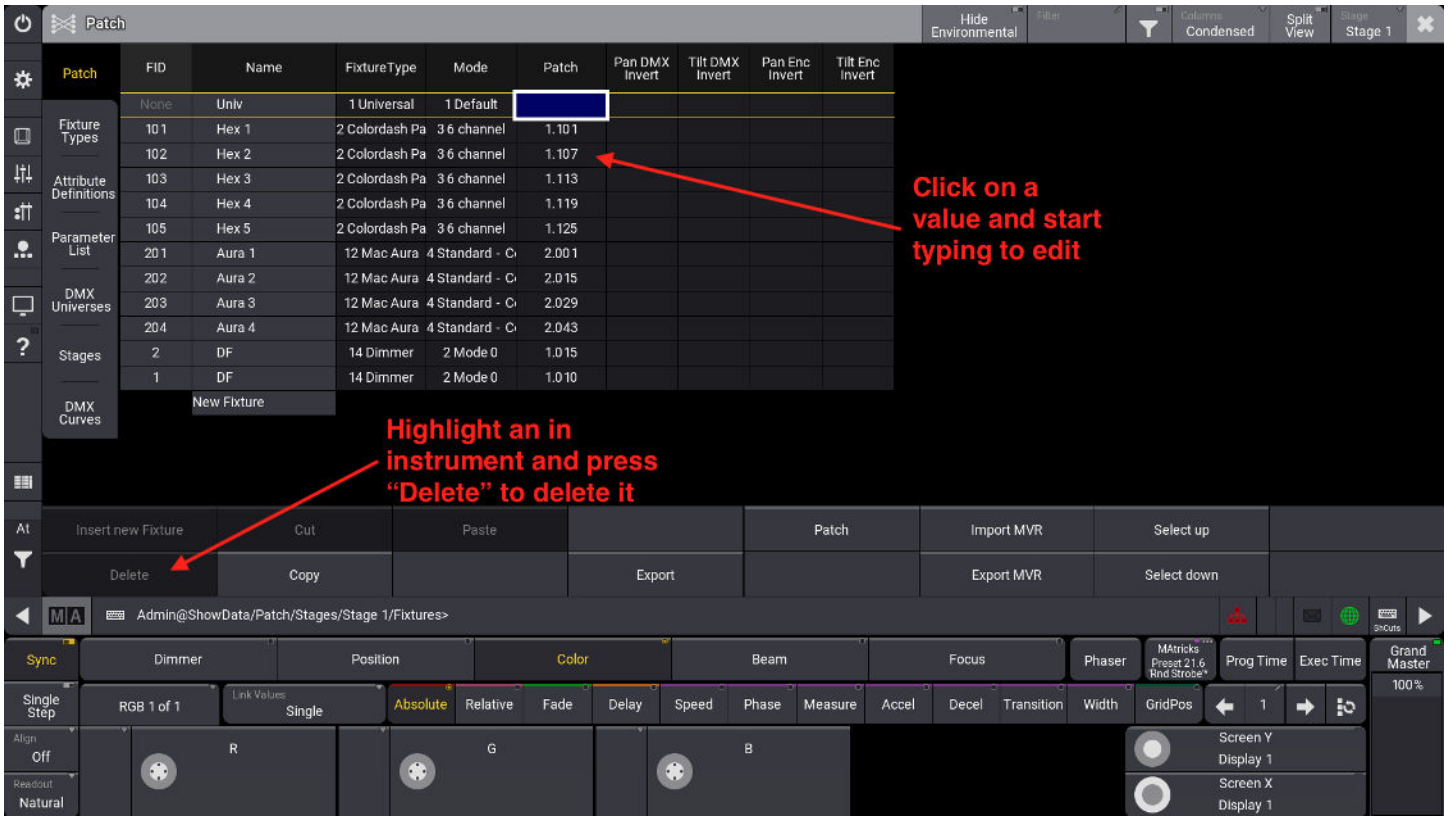
To patch the Auras for our sample show, we do the same thing. Notice though that they are in DMX universe 2. This is the patch info for those:



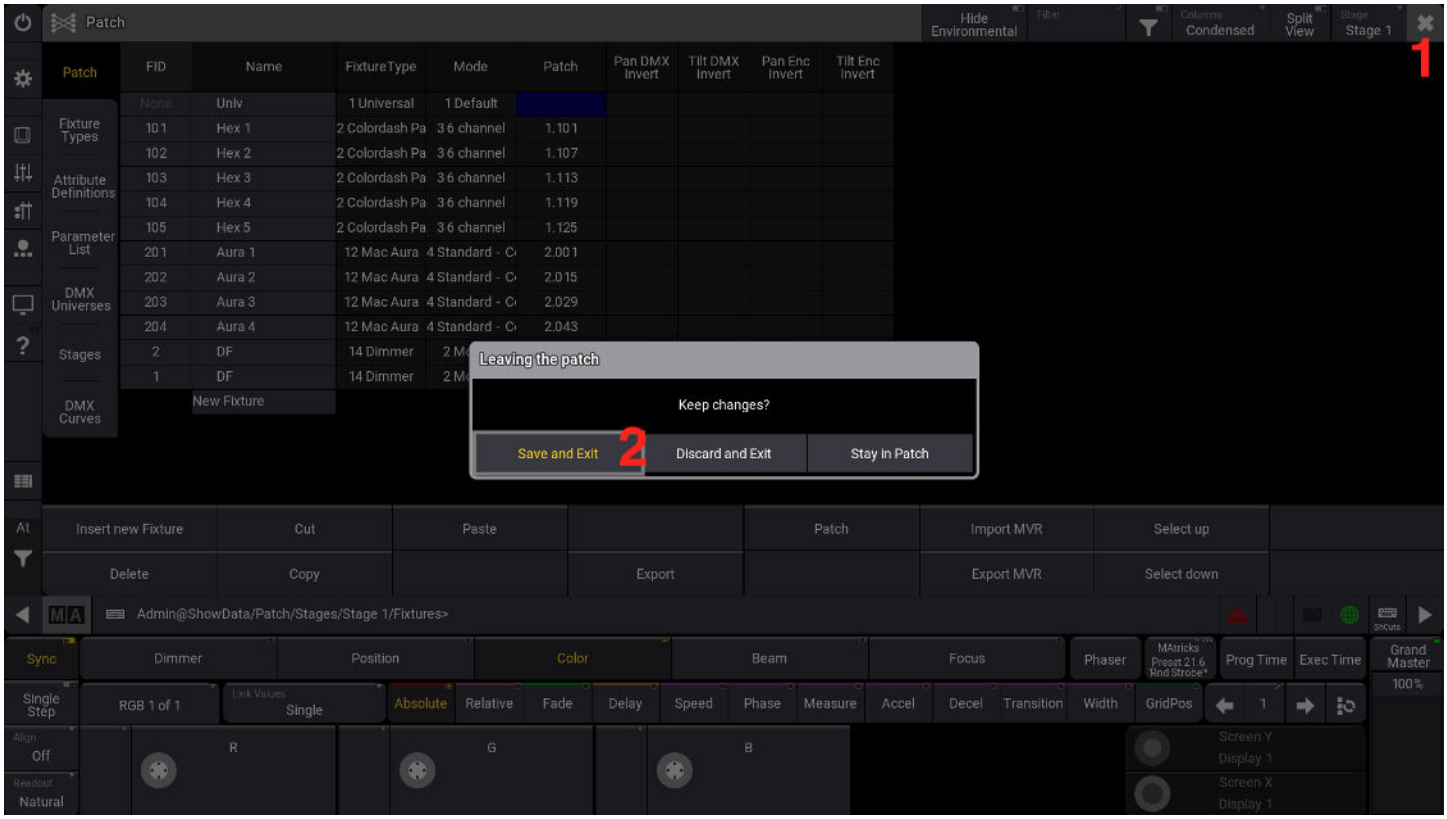
To patch the lekos, we have to do them individually, since their DMX addresses (10 and 15) are not in sequence. Below is how we patch each leko. **Note that for all lekos, pars, and other conventional fixtures, we use Generic > Dimmer > Mode 0 as the fixture type**



Here's our fully patched show. From this screen, we can edit Names, FID's, and addresses, as well as delete unneeded instruments.



Exiting the patch



1) Press X at the top right of the screen
2) Press Save and Exit

TURNING ON LIGHTS

All the lights that have been patched are visible in the Fixture Sheet, along with all their current settings (intensity, color, etc):

Turning on lights

Type the following into the command line “<FIXTURE ID> at <PERCENTAGE> Enter”

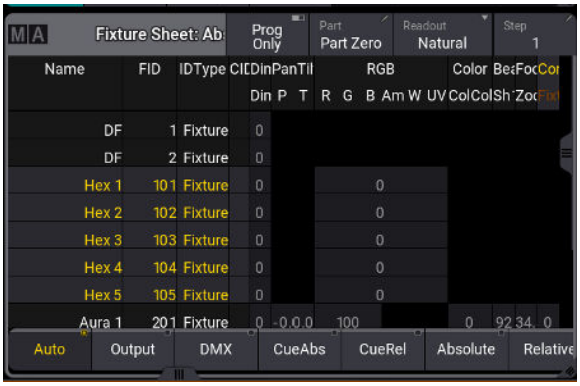
So, to put fixture 1 at full, we type: “1 at Full Enter”
Alternatively, we can type “1” and then press the At Full button

To put fixture 1 at 75% intensity, we type “1 at 75 Enter”

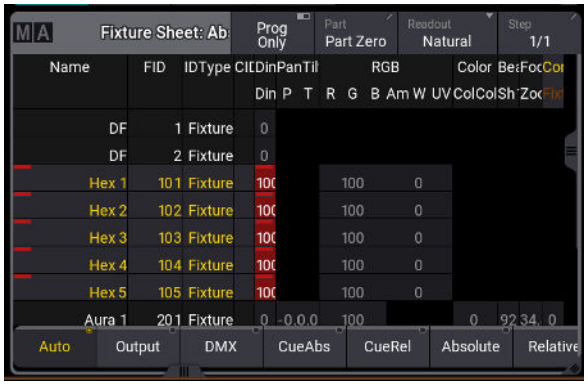
To put fixture 1 and 2 at 75% intensity, we type “1 + 2 at 75 Enter”

To put fixture 101 thru 105 at 50% intensity, we type “101 thru 105 at 50 Enter”

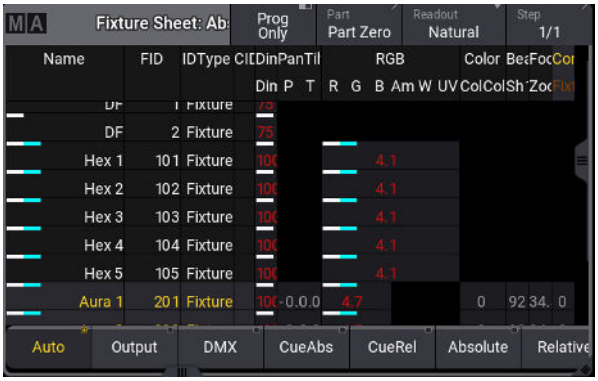
Fixture Sheet colors



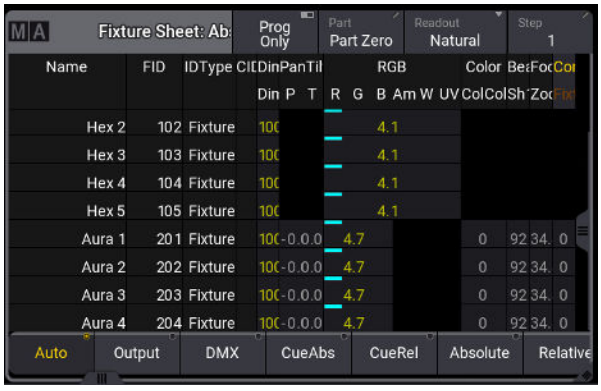
- If lights in the fixture sheet are yellow, that indicates that they are currently selected. Anything you do now (change an intensity, change a color, etc) will affect these lights

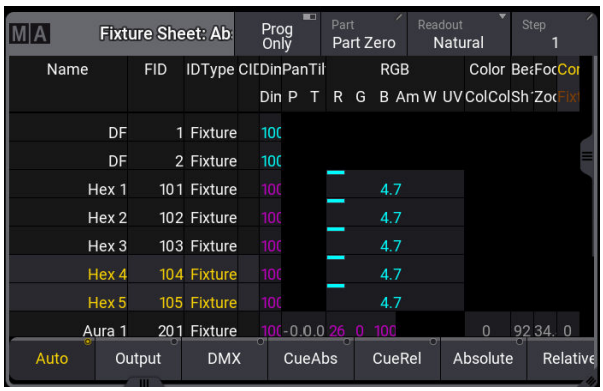


- If lights have red boxed values and a red bar, that means that they have storable information. If you store or update a cue (see next section), all red values will be recorded into that cue



- If you see red values without a box and with no red bar, that means that values have been entered manually (i.e. by you entering commands via the command line, or by using presets or encoders), but that they are not storable (meaning they will NOT be recorded into a cue if you try to store one). To make values storable again, select the relevant fixtures and press Enter



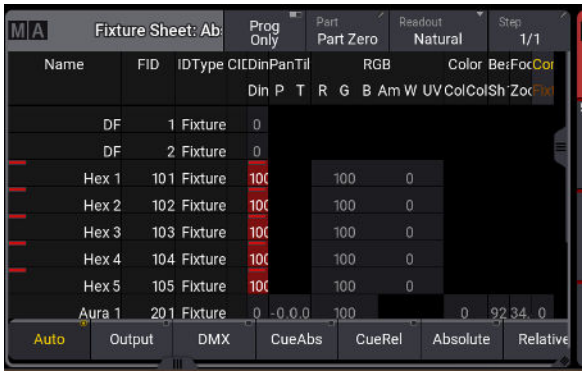


- If you see yellow, blue or purple values, that means that these are from a cue that is currently on (see page 28)

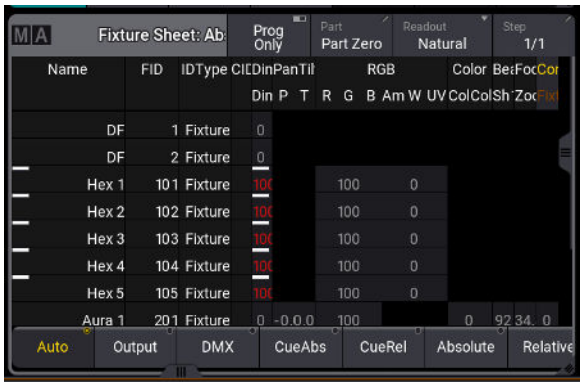
The Clear Button

The Clear button is used to clear out instrument selections and manual values (i.e. values that you type into the Command Line or that are selected via presets). You will use it a lot while programming, BUT please be careful - if you press it too many times, you run the danger of turning off some or all of your lights. Much safer buttons to use are the Esc button, will will clear out your Command Line if you make a mistake, and the Oops button, which will act as a backspace for your Command Line.

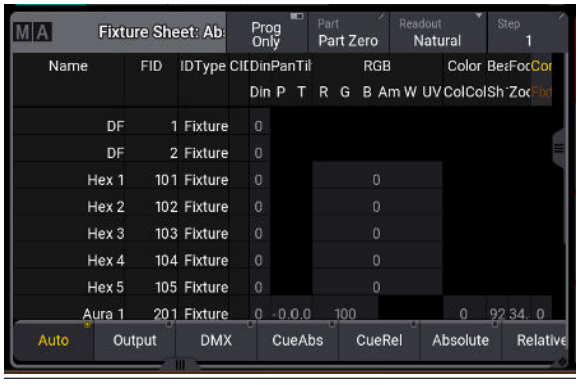
- Clicking the Clear button once will deselect all fixtures. Notice that values can still be recordable



- Clicking the Clear button a second time will make everything non-recordable. Not that fixtures are still on



- Clicking the Clear button a third time will turn off all lights, and clear out any color or other data. THIS WILL NOT TURN OFF VALUES COMING FROM RECORDED CUES (see page 28)



CREATING GROUPS

A group is a collection of lighting fixtures that can be grabbed and changed all at once.

So, to add all of our hexes (which have fixture ID's 101-105) into a group, we do the following:

1) In the command line, type "101 thru 105 enter". This selects all the hexes - notice that they turn yellow in the fixture sheet
2) Press Store
3) Click on an empty square in the Groups pool. This will create your new group
4) To label your group - use the Swipey, right click on the group, or use the Label button

Now, if we click on the Hexes group, and click At Full, all the hexes will turn on at the same time. We can also use this to change all the hexes to the same color, or add effects to them (see next section).

To create a second group:
Press Clear Clear Clear to clear out all information, and repeat steps 1-4

CHANGING AND STORING COLORS

Please note that all colors might look slightly different across different types of instruments

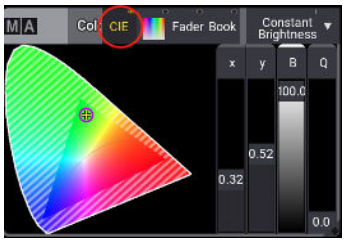
Changing colors using Color Presets

The GL Basic show comes pre-loaded with some of our most frequently used hexed recipes. To use one:

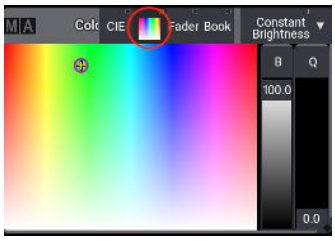
1) Turn on your lights as described above. Here, I pressed the Hexes group, and then the At Full macro
2) Click on the color preset that you want to use

Changing colors with the Color Picker

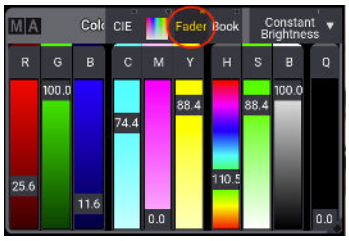
1) Turn on your lights.
2) Choose a color in the color picker. There are 4 different ways to do this:



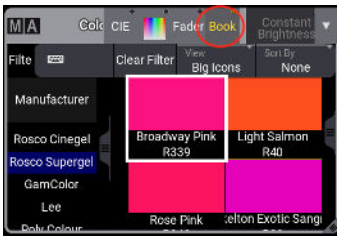
Color wheel



Spectrum



Manually
(good for fine adjustments)



By gel color
(note: these are approximate)

Storing new Color Presets

To store a new preset to use later, choose your new color as described above. Then:

3) Press Store
4) Click on an empty square in the Color Presets window
5) To label - use the Swipey, right click on the preset, or use the Label button

WRITING AND RUNNING SEQUENCES

Faders

The GL Basic show comes with 10 virtual faders on the home screen:

The virtual faders correspond to the faders on a lightboard, as well as the row of knobs above them. If you have the Fader Wing or the Command Wing, you can use the physical faders instead.

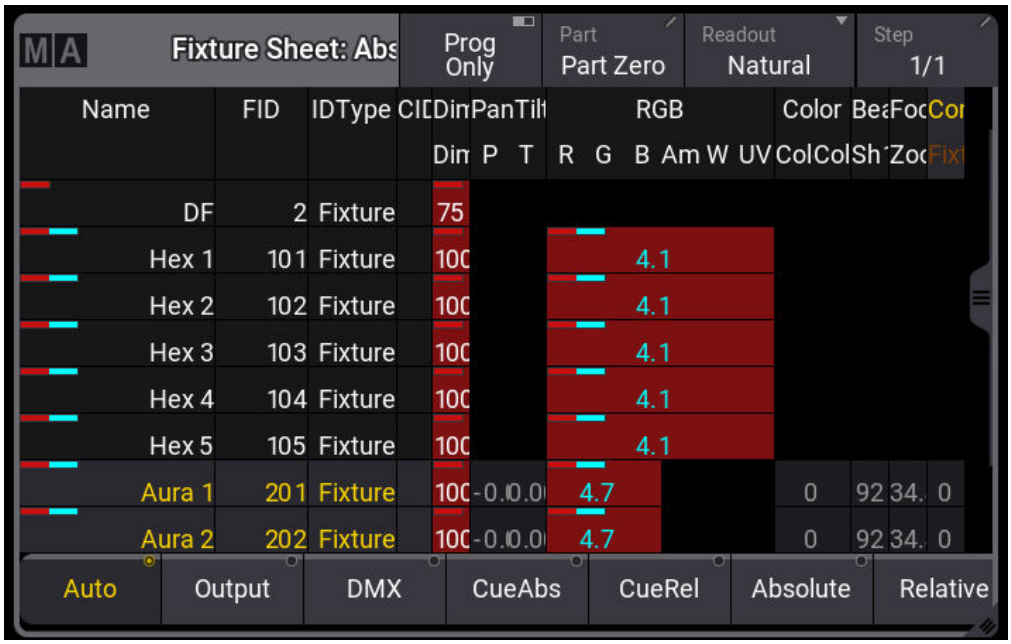
Cues and Sequences

A cue is a saved lighting look - it can store intensity, color, effect, focus position, or any other data that can be applied to a light.

A sequence is an ordered list of cues. It can contain just one cue, or multiple.

Recording a sequence

First, put all your lights where you want them to be in your first cue. In this example, I have my DF lights at 75%, my Hexes at full and in color preset 1 (R02x2), and my Auras at full and in color preset 7 (R339):



Notice that all the lights I'm using have a red bar, and all the intensity and color values I changed are also in a red box - this indicates that these values are storable.

Next, I do the following to turn this into the first cue of a sequence:

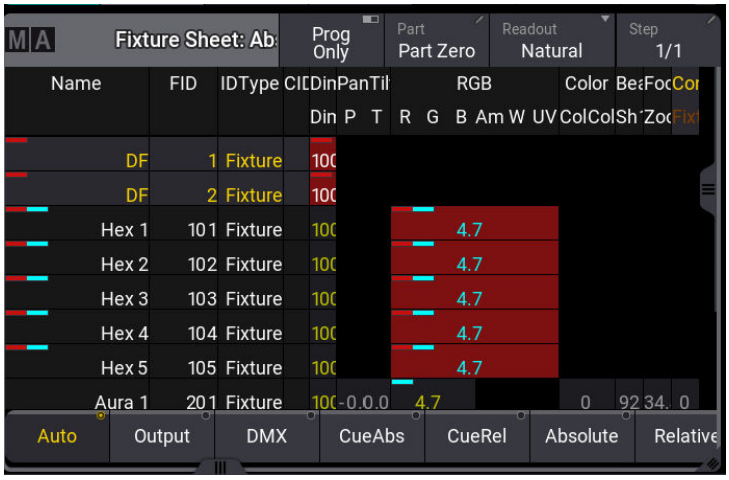
1) Press the Store button
2) Click the empty square beneath the fader that you want to assign the sequence to. On a physical board, you can press the button below the fader. Notice that this will automatically make a new sequence, which you can see in the window below the faders.
3) To label the sequence - use the Swipey or the Label button

Notice the red bars on the fixture sheet have disappeared, indicating that the values are no longer controllable. They are however still red, meaning that they have been entered manually. Press Clear Clear Clear to get them to turn yellow, meaning that all values are coming from the cue.

Now, if we run the fader up and down, you will see the values in the fixture sheet turn on and off.

Recording subsequent cues in a sequence

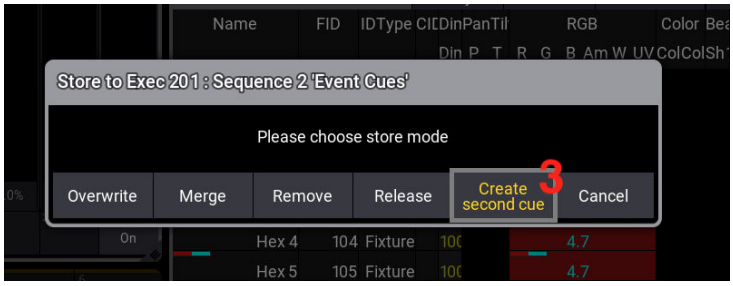
First, set the lights to their new look. Here I took the DF units to full, and changed the color on the hexes - notice that the changes are in red boxes:



Then:

1) Press Store
2) Press the Go+ button underneath the same fader that we have been using (or the button under the fader if you are working with a Wing)

3) The first time you do this, you will get a pop-up. Click Create second cue (after this, a new cue will be created automatically every time you repeat this process)



Editing times and labels of cues

1) Go to the little arrow at the right side to bring up the side bar
2) Click on the Sequence view. This will take you to a new view with a Sequence sheet window at the top
3) To change the label on a cue - Click on the "Name" field and start typing
4) + 5) To change fade-in time on a cue - scroll over until you see the "Cue Fade" field. Click on it, and type in a new fade time.

Playing a sequence

Once you have several cues in your sequence, you can play through them by pressing the Go+ button under the relevant fader. This will run all your cues in order.

Make sure that the fader is at full for this to work!

To get out of the sequence, simply bring your fader to zero.

Using sequences to put lights on a fader

We can also put individual or groups of lights on a fader, to mimic a Colorsource or Leppy board. We do this by making sequences with one cue each.

So, let's say I want to put all my hexes on the 5th fader. I would do the following:

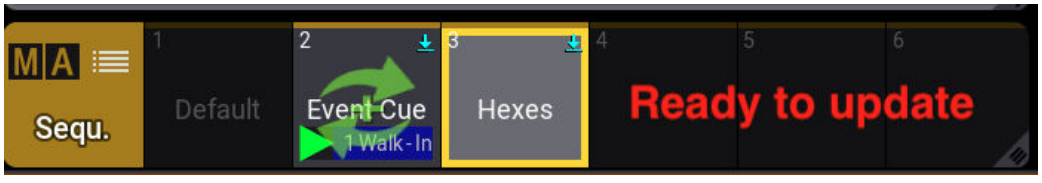
1) Put all my hexes at full. DO NOT DO ANYTHING ELSE WITH THEM - we want this sequence to just affect the intensity of the lights
2) Press Store
3) Press the blank box beneath my target fader. A new sequence will appear in the sequence pool.
4) I can label this sequences "Hexes", which will then also label the fader.

Now, running this fader up and down will run the hex intensity up and down. We can repeat this with other lights to make multiple intensity faders.

Editing a cue

To edit a cue:

1) Go to the cue in question by using the Go+ button
2) Make whatever changes you need.
3) Press the Update button. A green arrow will appear on the sequence in question.



4) Press Enter

Editing a cue midshow

To smoothly edit your current cue in the middle of a show, do the following:

1) Take the Blind fader up to full. This means that anything you do now will not happen in real life
2) Make whatever changes you need

3) SLOWLY bring the blink fader back down. This will fade in all the changes you have made.
4) Click Update, and then Enter
5) Click Clear Clear Clear to get back to cue control only

EDITING AND STORING VIEWS

Editing a view

All views on the MA are completely customizable.

To get rid of a window:

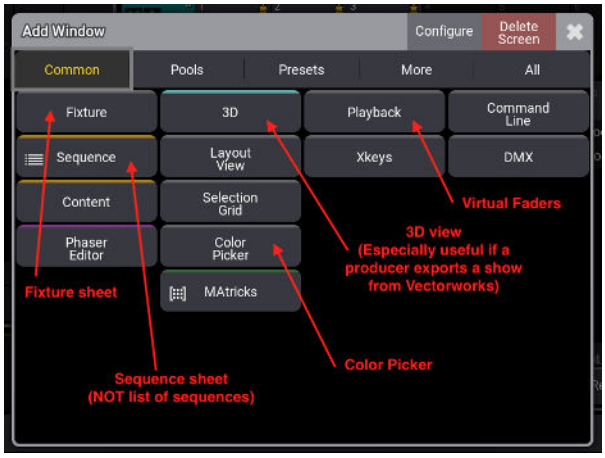
1) Click Delete
2) Click on the header of the window you want to delete. It will disappear, leaving an empty space

To move a window and resize:

1) To move a window - click and drag it into an empty space
2) To resize a window - drag the tab at the bottom right of the window to the size that you want

To add a new window:

1) Click on an empty space. A list of available windows will appear. Here are your options:

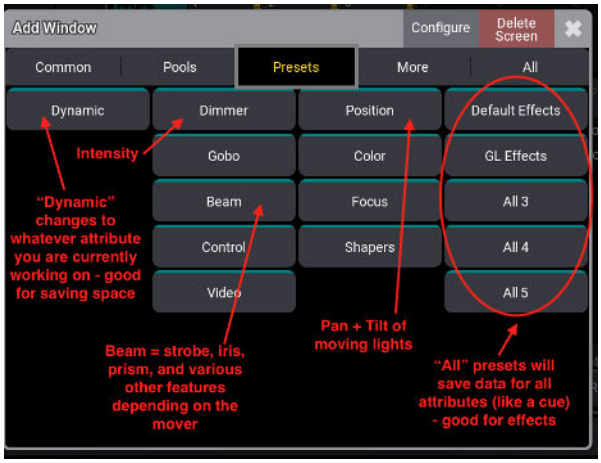


COMMON

Misc. commonly used windows

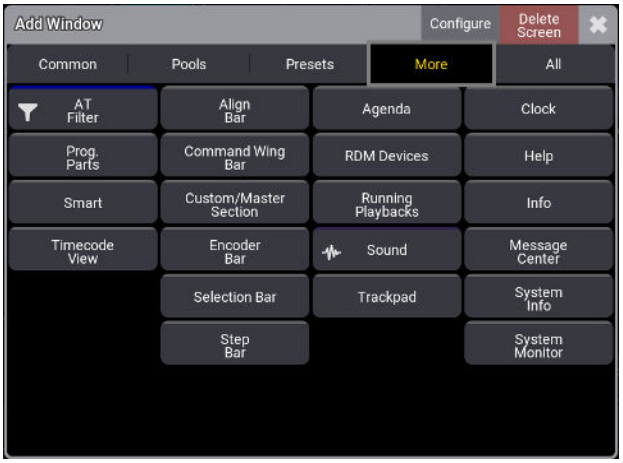
POOLS

Pools are lists of things - like our group or sequence list



PRESETS

Presets are saved recordings of different lighting attributes - like our color presets



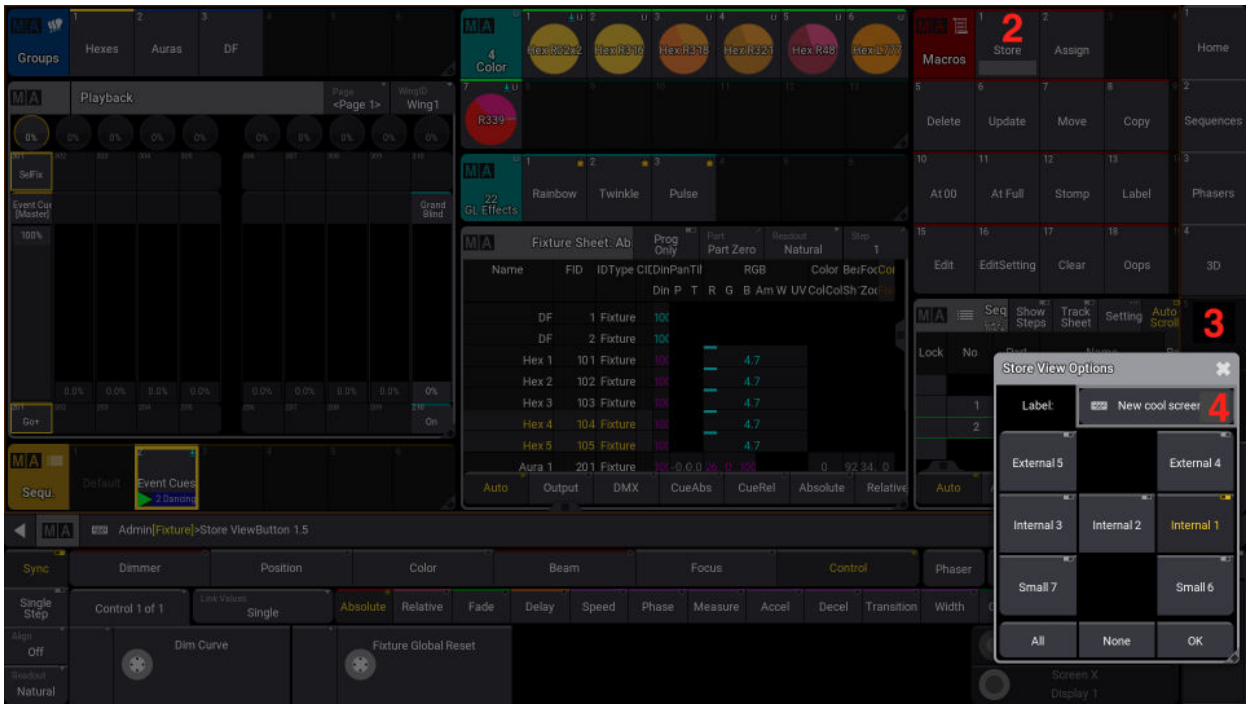
MORE

Misc. rarely used windows

2) Select the type of window you want. It will appear where you clicked previously.

Storing a view

Once you change a view, you'll need to store it for it to be saved. To do that:



1) Click on the little arrow at the bottom right to bring up the side bar
2) Click Store
3) Click on a blank view tile. Alternatively, you can click on a pre-existing view to record over it.
4) Enter a name for the new view and press Enter

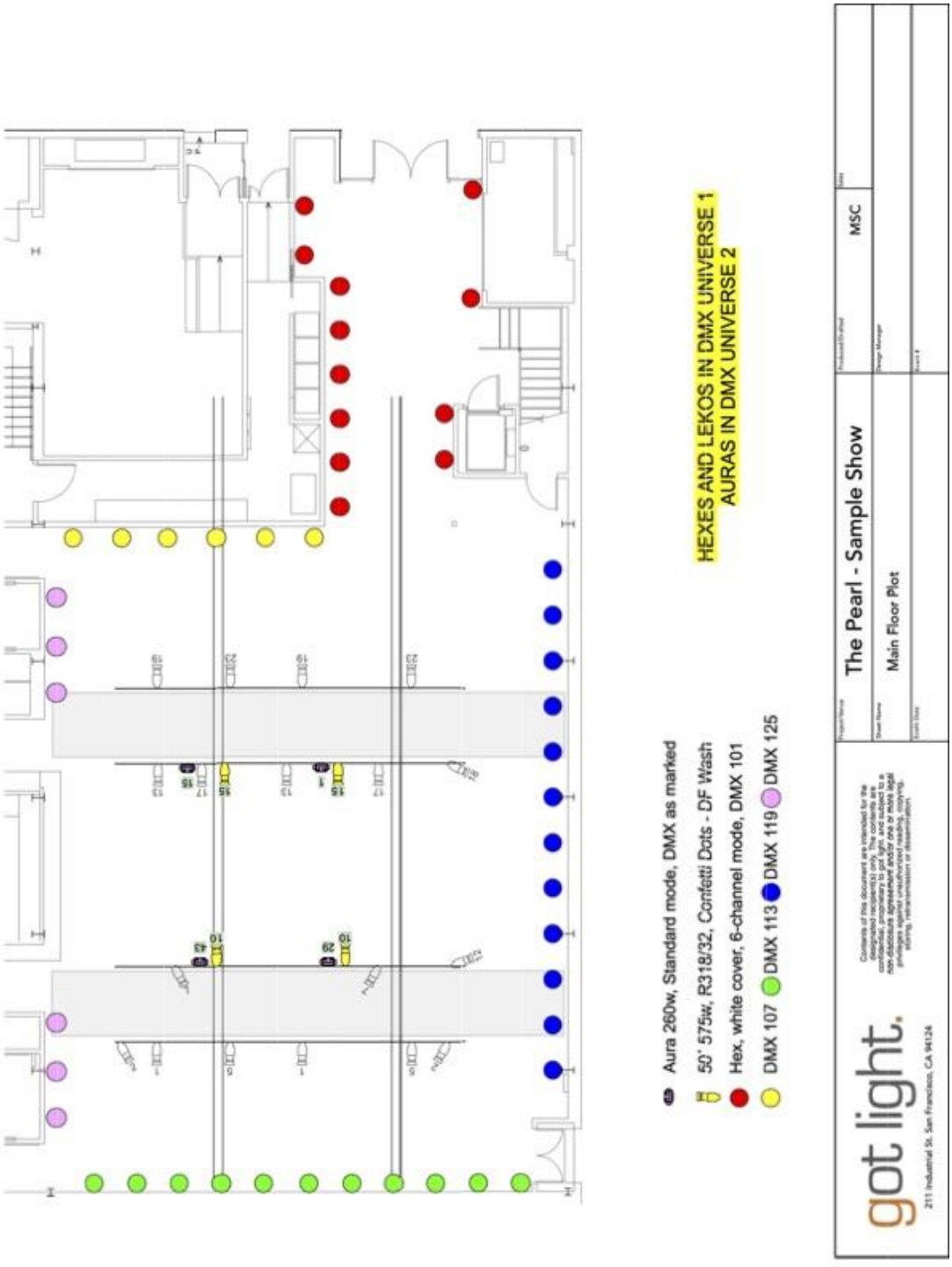
Getting a blank view

To start a view completely from scratch:

1) Click on the little arrow at the bottom left to bring up the side bar
2) Click on the cog icon
3) Click Delete This Screen. You will be given a completely blank view:

Note that this does not actually delete any previously saved views - you can still go to the view menu on the right to get them.

SAMPLE PEARL SHOW



List Of Keyboard Shortcuts

Previous	Left		On	Ctrl+O		Edit	E
Next	Right		Off	O		Assign	Alt+A
Up	Up		Move	Ctrl+M		Time	Ctrl+T
Down	Down		Copy	Ctrl+C		Update	U
Set	Q		Delete	Ctrl+D		Store	S
Select Fixture	Ctrl+Alt+F		Align	Ctrl+A			
			Stomp	Ctrl+T		+	Equal
Highlight	H		Help	Ctrl+Alt+H		-	Minus
Solo	Ctrl+Alt+S		Select	Ctrl+S		Thru	T
Freeze	Alt+F		Goto	Alt+G		At	A
Preview	Ctrl+Alt+P					Full	Ctrl+F
Blind	B		Fixture	F			
			Channel	C		Oops	Ctrl+Z
Page +	PageUp		Group	G		Esc	Esc key
Page -	PageDown		Preset	P		Clear	Delete key
			Sequence	Alt+S		Please	Enter key
Pause	Ctrl+P		Cue	Alt+C			
Go -	Ctrl+Alt+G						
Go +	Ctrl+G						


Previous Step
Left
Next Step
Right
Step Toggle
O
Up
Up
SelFix
Ctrl+Alt+F
Down
Down
Lowlight
H
Solo
Ctrl+Alt+S
Freeze
Alt+F
Prvw
Ctrl+Alt+P
Blind
B
Xkeys
Comma
Page +
PageUp
Clone
F1
F2
Grid
F3
Layout
F4
Step
F5
Timecode
F6
View
F7
DMXUniverse
F8
Page -
PageDown
menu PhaserEd
Macro
Page
Exec
ListRef
L
Fix
Ctrl+P
Top
Ctrl+Alt+G
Temp
Ctrl+G
MA
Rate1
Ctrl+L
Black
LeftBracket
Flash
RightBracket


Menu
F12
On
Ctrl+O
Off
O
Move
Ctrl+M
Cut
Ctrl+C
Delete
Ctrl+D
AlignTransition
Ctrl+A
Stomp
Alt+T
Help
Ctrl+Alt+H
Select
Ctrl+S
Goto
Alt+G
FixtureType
F
Chan.
C
Group
G
7
7
Up
8
9
9
+
Equal
Oops
Ctrl+Z
FeatureGroup
P
Sequ.
Alt+S
Programmer
Alt+C
Left
4
Enter
5
Right
6
Thru
T
Edit
E
Assign
Alt+A
Time
Ctrl+T
1
1
Down
2
3
3
-
Minus
ESC
Escape
0
0
Default
Period
If
I
Integrate
A
Cook
U
Record
R
MA
*
Slash
Please
Enter
Clear
Delete
Full
Ctrl+F