Catalyst Media Server Quick Start Guide

Created by Matt Mills
matt@lightingprogrammer.com
www.lightingprogrammer.com

Several things inspired this quick start guide, the first being the number of calls I receive about the basic setup of the Catalyst. Another is that I realized after nearly 10 years of using the Catalyst that there really is not a good, plain-English manual written for it. The intent of this quick start guide is to help get you up and running and creating looks with the Catalyst Media Server quickly. This guide barely scratches the surface of what the Catalyst is truly capable of, however I hope that it will make you comfortable enough so that you explore some of the more advanced features available. The examples shown in this quick start guide are taken from the standard configuration of all my Catalyst systems. So…enough of all that, lets get into it!

First Things First

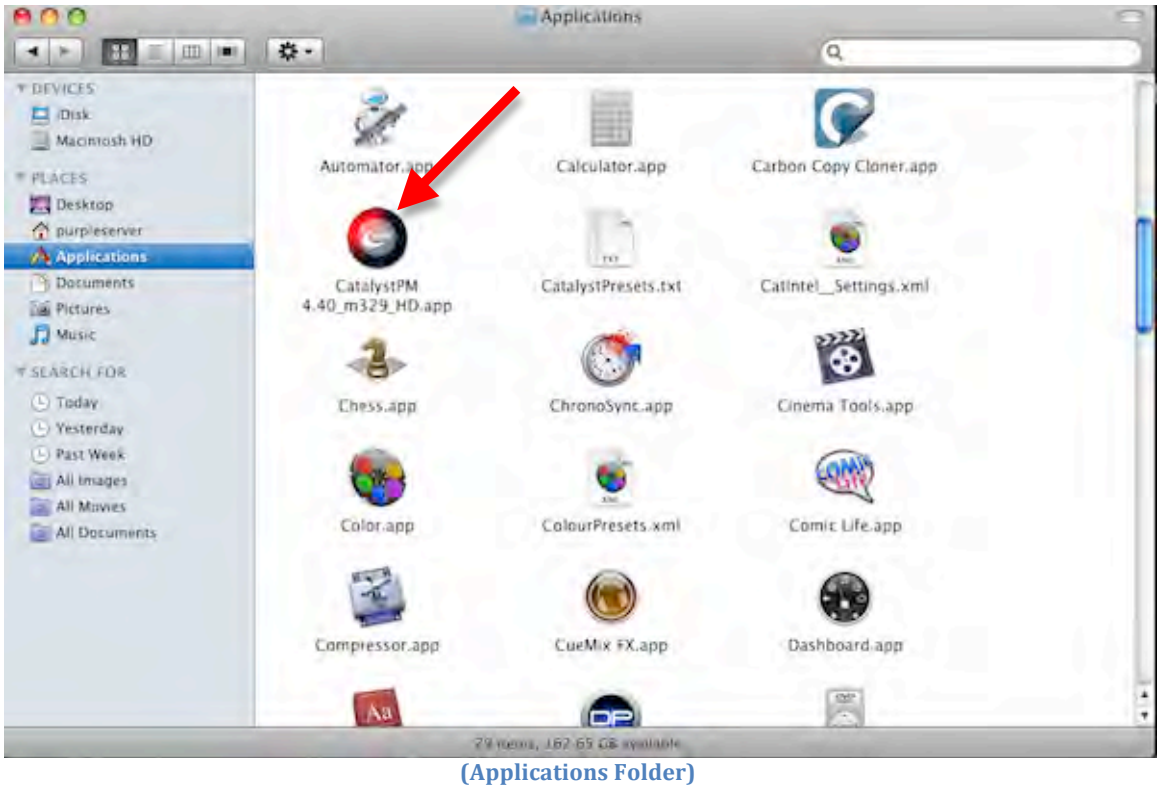
The very first thing to do is look at the Catalyst you have rented, from whatever company you have gotten it from (hopefully from me), and see how it is configured. The main thing is the back of the Mac Pro where the DVI outputs are located because you need to know where the DVI Output 1 (DVI 1) and DVI Output 2 (DVI 2) will go. The standard way I send out all of my Catalysts is: DVI 1 to a monitor where you will view what is actually being played on each layer and DVI 2 will be sent to your video display, and by video display I mean LED wall, projector, etc.

(DVI Output 1 and DVI Output 2)

Configuring The Catalyst

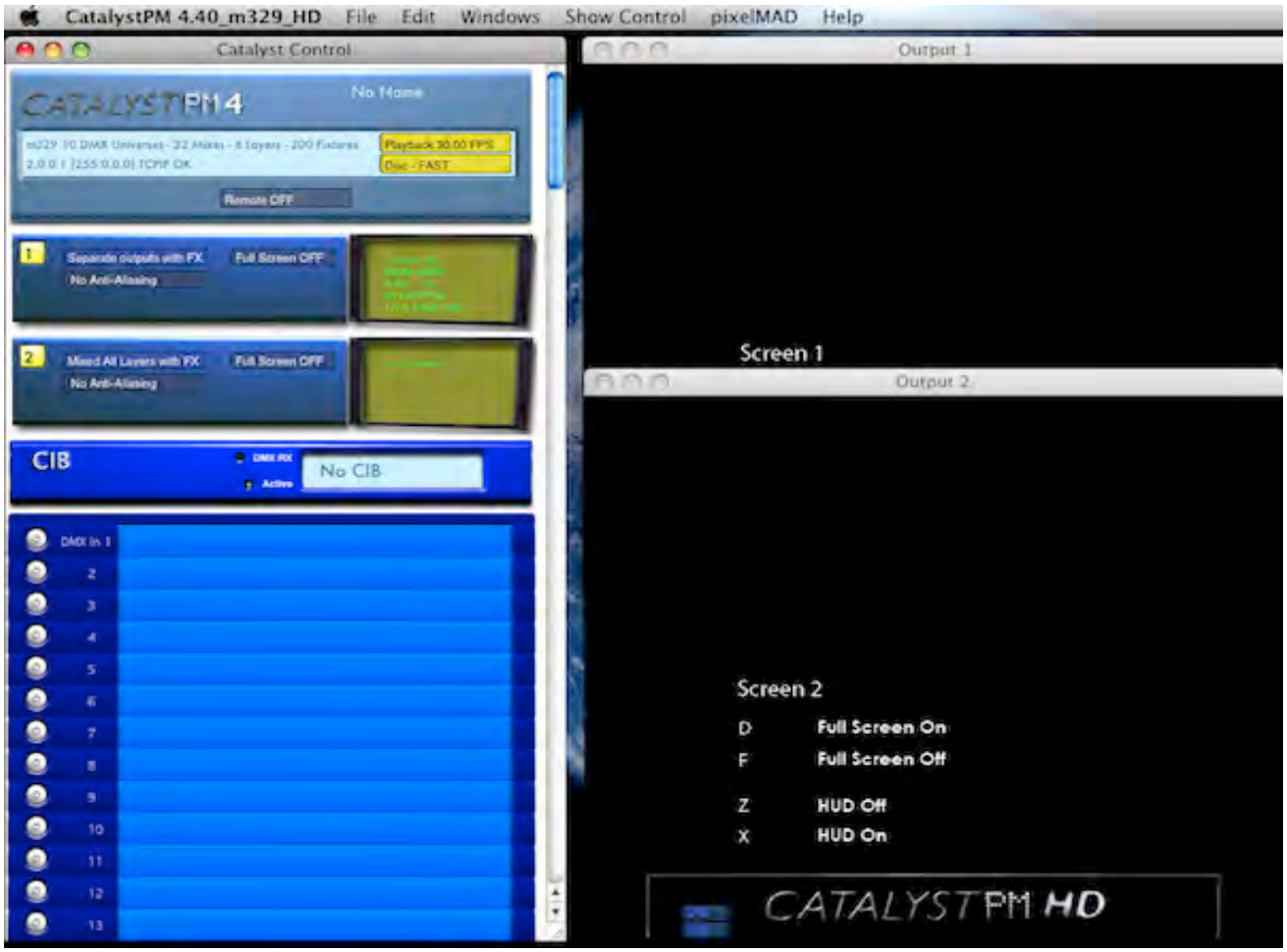
Once you know where your outputs are going, turn it on. If the Catalyst does not automatically boot up, look at the Dock on the bottom of the screen. There should be an icon for it there. If not, it could be on the desktop somewhere or in the Applications folder. Wherever it may be, start up the Catalyst software.

(Dock)



(Applications Folder)

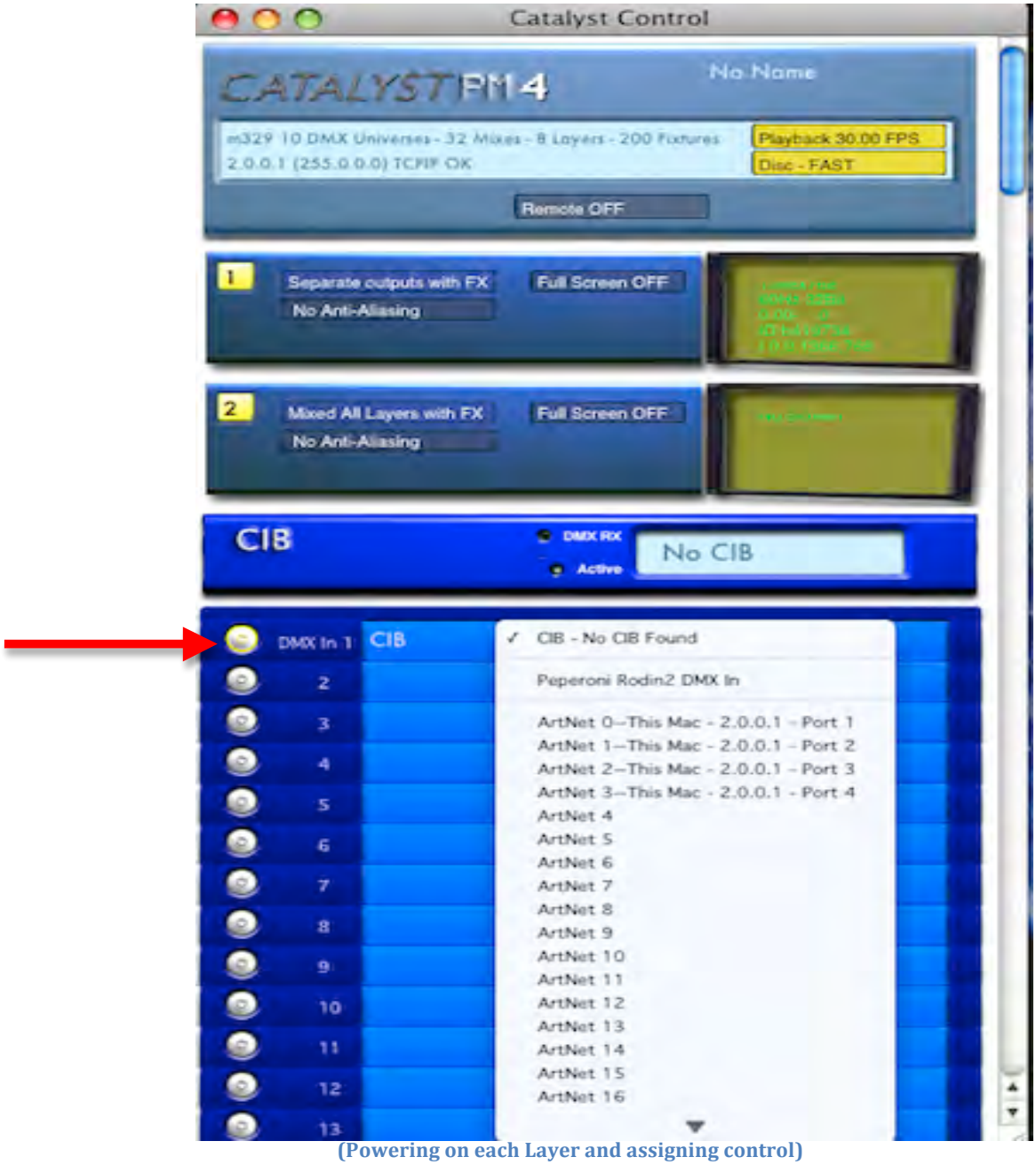
Once the Catalyst program opens, you should be looking at a screen like this:



If you are looking at a blank screen, you may be in Full Screen mode. Press “S” on the keyboard to get out of Full Screen mode. Toggling “A” and “S” will take you in and out of Full Screen mode.

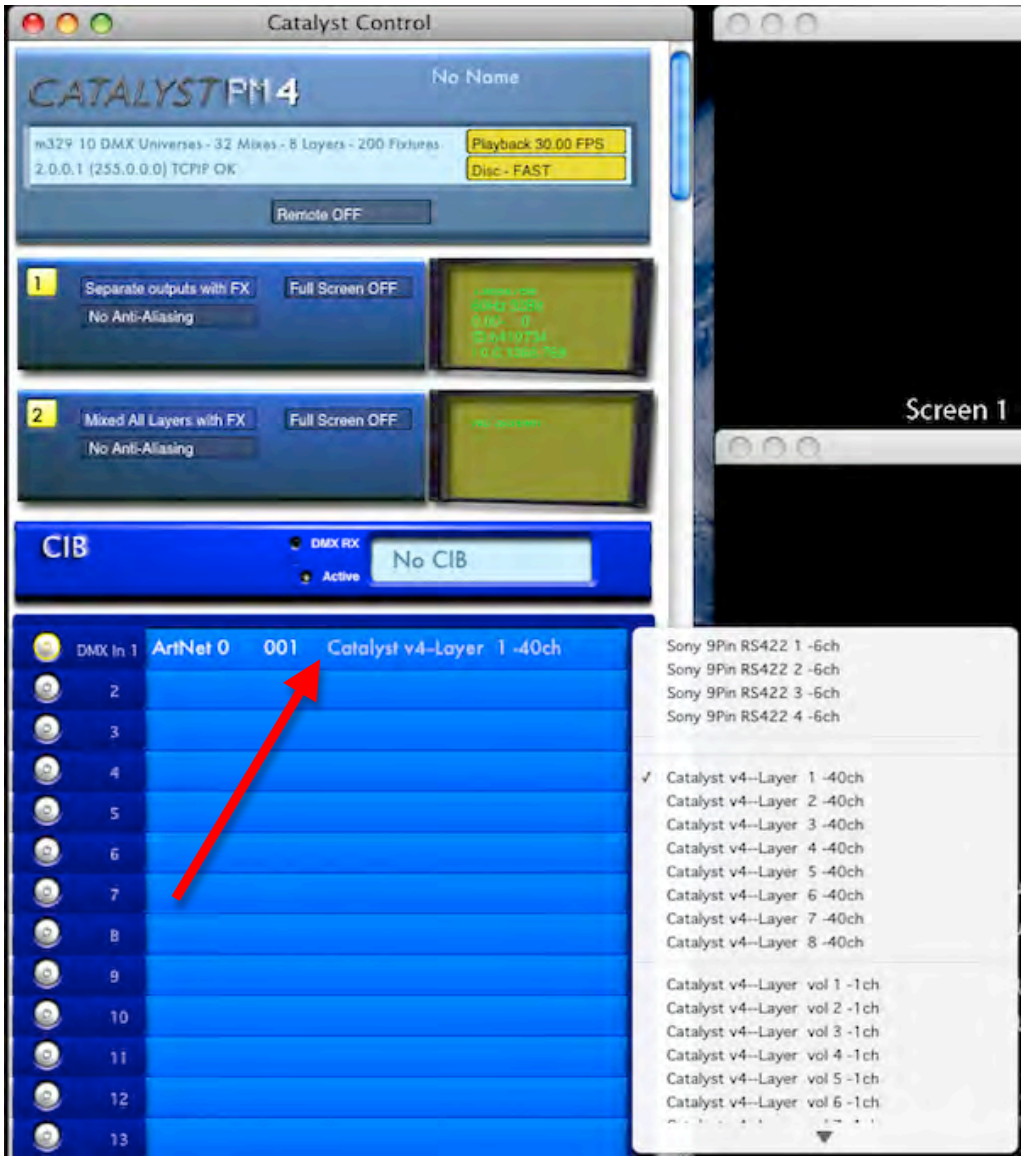
Configure the Catalyst Control

On this screen you will tell the Catalyst how many layers you are going to use and the address of each of those layers. First, click on the power button of each layer you want to use. Next, tell each layer how it will be controlled (in this example we are using Artnet). Select Artnet and which Artnet universe (this example uses Artnet universe 0, which is actually DMX universe 1).



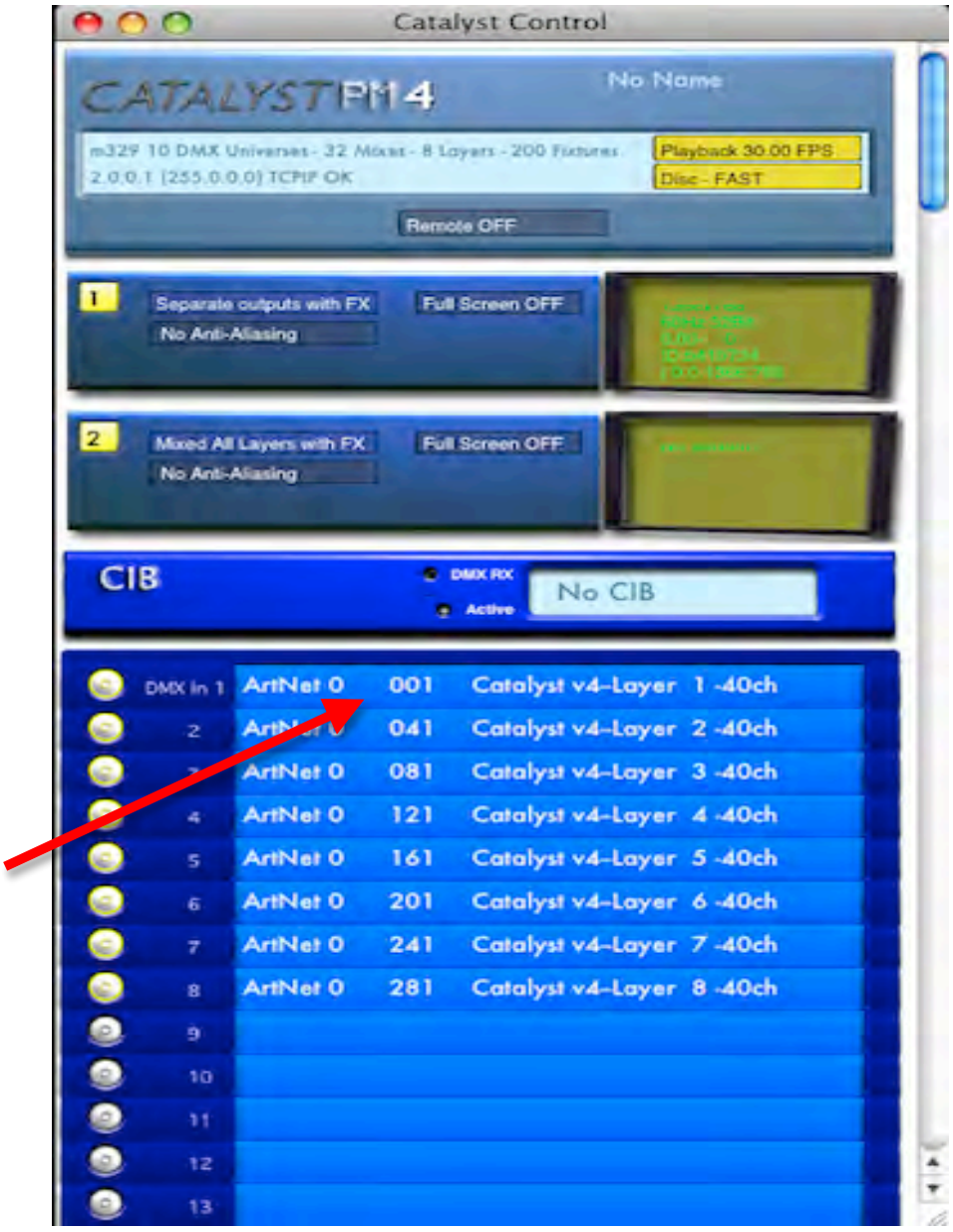
(Powering on each Layer and assigning control)

Next, tell each layer what it is, i.e. Catalyst Layer 1, Catalyst Layer 2, etc.



(Setting Layer information)

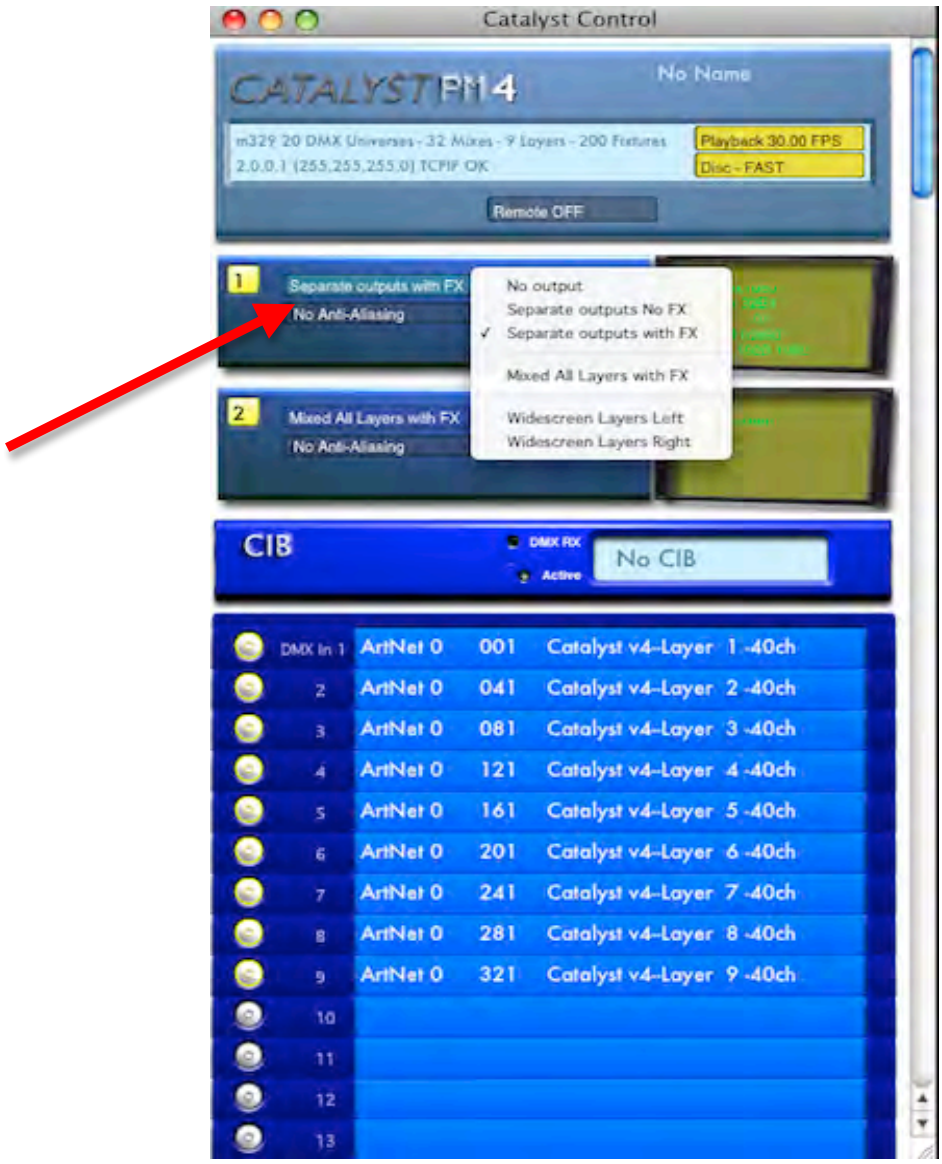
Now give each layer a DMX address. Each Catalyst Layer uses 40 DMX channels, so if you were starting at DMX 1 then Layer 1 would be DMX 1, Layer 2 would be DMX 41, Layer 3 would be DMX 81, Layer 4 would be DMX 121 and so on.



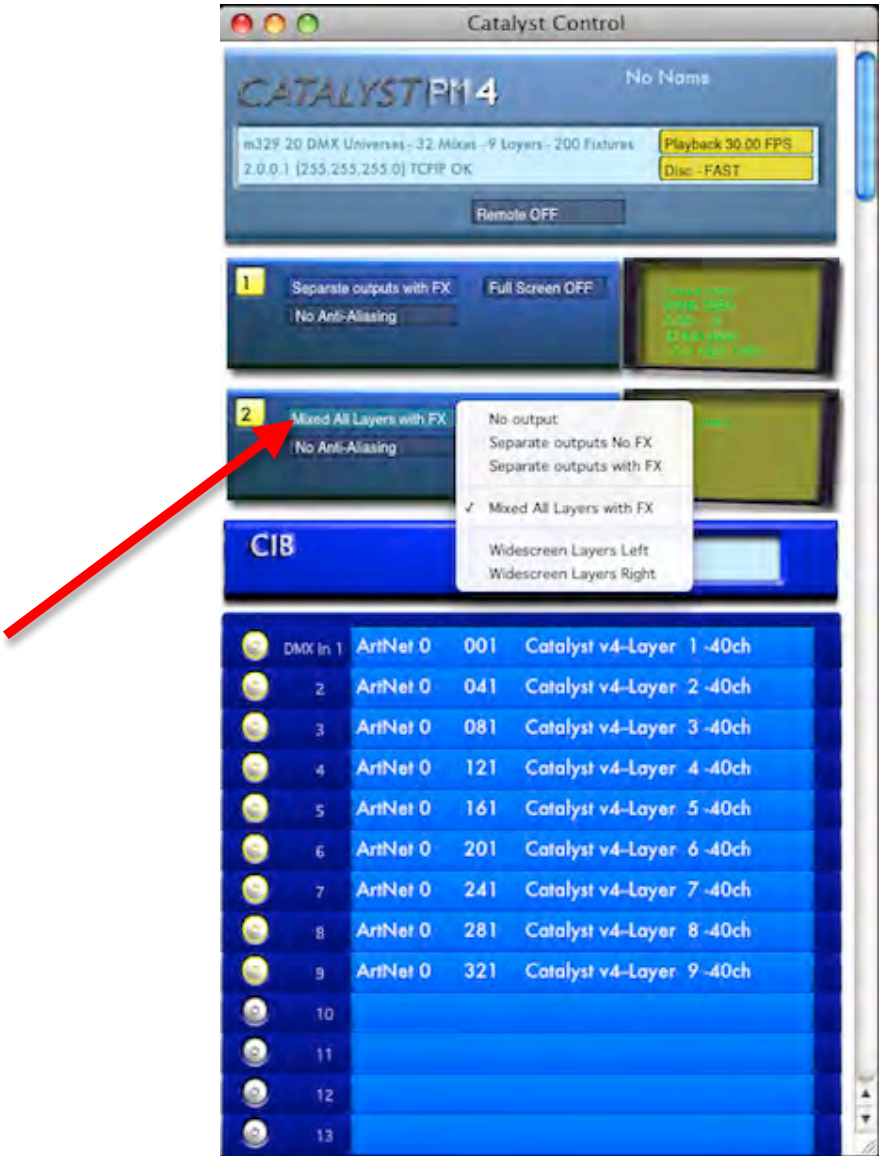
(Setting DMX Address info)

Configure the Outputs

Now tell each screen how it will output. In this example, Screen 1 will be a monitor to view all of your layers and screen 2 will actually be the output to your video display. For Output 1, select “Separate outputs with FX.” For Output 2, select “Mixed All Layers with FX.”



(Configuring Output 1)



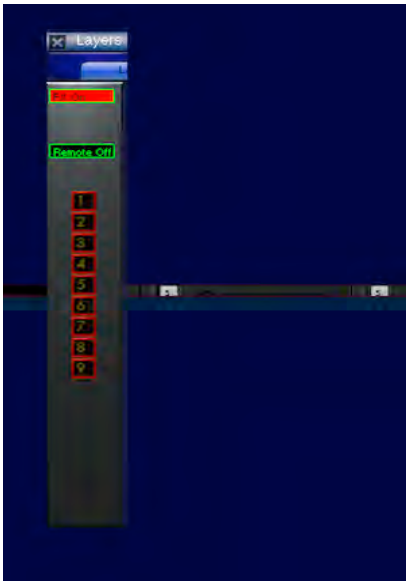
(Configuring Output 2)

Configure the Layers

Now that you have the Layers, Control and DMX Addressing sorted out, it is time to tell each layer what output they will be assigned to. Press "A" on the keyboard. This will put you in Full Screen mode. The screen should be blank. Press "Q" on the keyboard to bring up the HUD (Heads Up Display) and it should look like this…

(Layers Screen on monitor with HUD on)

Click on the Layers tab and you should see this on your screen…

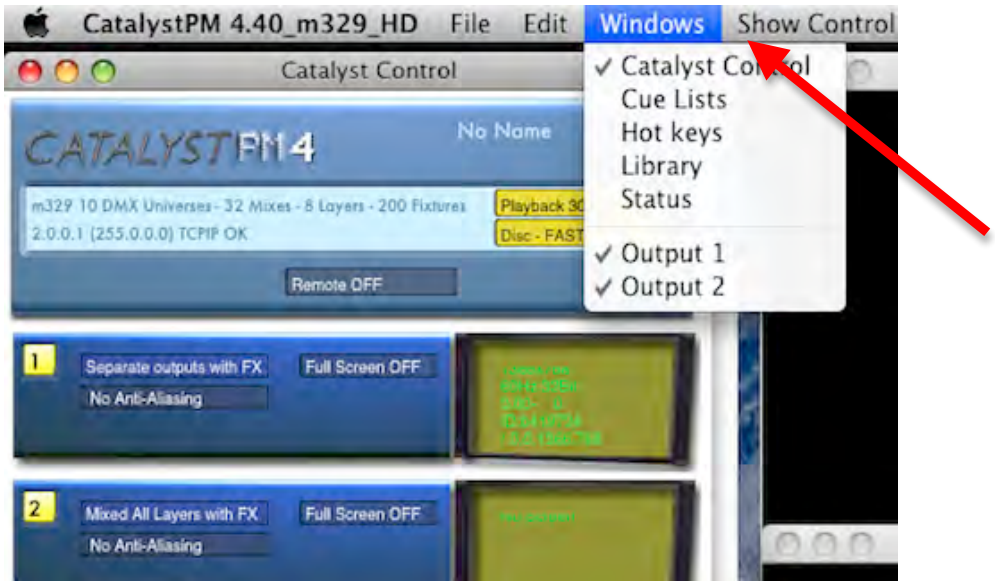


You will see a list of numbers with a square around each of them. These represent the layers you have at your disposal. Make sure the ones you intend to use are selected. Click on each of them (they will turn yellow when selected) and you will notice your layers being added to the right.

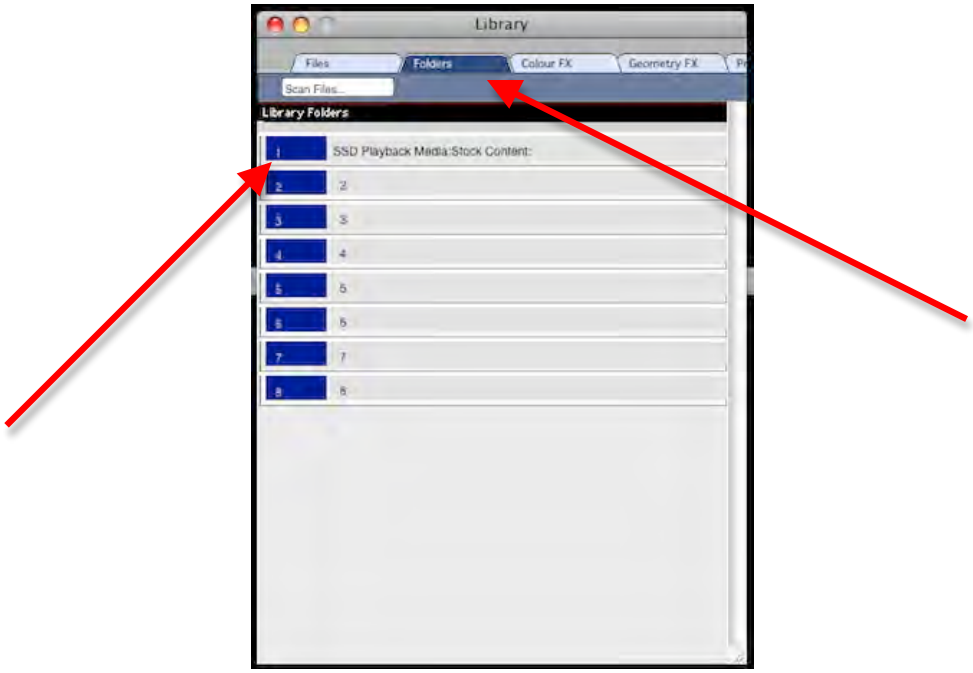
To the right of the layers you just highlighted, you will see all of the layers you just turned on. Make sure each one has Outputs 1 and 2 turned on. When they are on, they will be yellow. At this point make sure that if there are layers you are not using, the Outputs are turned off. Once you have finished, press "W" on the keyboard. This will turn off the HUD. ("Q" and "W" toggle the HUD on and off)

Lets Find Your Content

Now that you have things configured, you need to tell the Catalyst where your content is located. Typically, a Catalyst will come with some pre-loaded content, so you will need to locate this folder. If you have your own custom content, you may want to add your stuff to this existing folder, but make sure that none of your folders are numbered the same as the existing folders. To tell the Catalyst where all the content is, go back to the setup screen (press "S" on the keyboard to come out of full screen). At the top of the screen you will see the Windows tab.



Click it and select "Library". A window like this will pop up…



Select your content library and then click Scan Files. Right now, the Catalyst is going through the folders and recognizing all of the content in those folders. You only have to do this once, but keep in mind that every time you add content you will have to tell the Catalyst to scan the files again or it will not find the new ones. Now that all of that is done, the Catalyst should be ready to go. Make sure you are in Full Screen mode for both outputs. For Output 1, your monitor, "A" and "S" will toggle Full Screen on and off. For Output 2, your video display, "D" and "F" will toggle Full Screen on and off.

A Quick Note About Content

This is taken directly from the Catalyst manual regarding custom content creation…

Catalyst file formats

Catalyst is based on Quicktime playback - but it does not support every codec/format.
Catalyst will playback files in the following formats - However, the best movie format is 'Apple Intermediate Codec'
Apple Intermediate Codes - good all round use, especially for HD

Others:
DV PAL
DV NTSC
Photo JPEG
Pro-res
Animation Codec - support transparency

Still Images:
Jpeg
PSD
PNG - Supports transparency
TIFF - Supports Transparency

Current maximum file size is 4480 x 2600 - which can accommodate RED content.
(File Size is not a fixed limit - but is is kept small enough so it doesn't break old computers... Contact us if your requirements exceed this size)

When using an SSD, you should not expect to obtain more than 4-8 layers of HD in Apple Intermediate Codec - depending upon the spec of your system, content, codec, data rates, frame rate etc (Newer 2010/11 - are better performance)
If using SD footage, you will be able to use more layers, depending upon the Mac specifications.
Any live footage should be de-interlaced

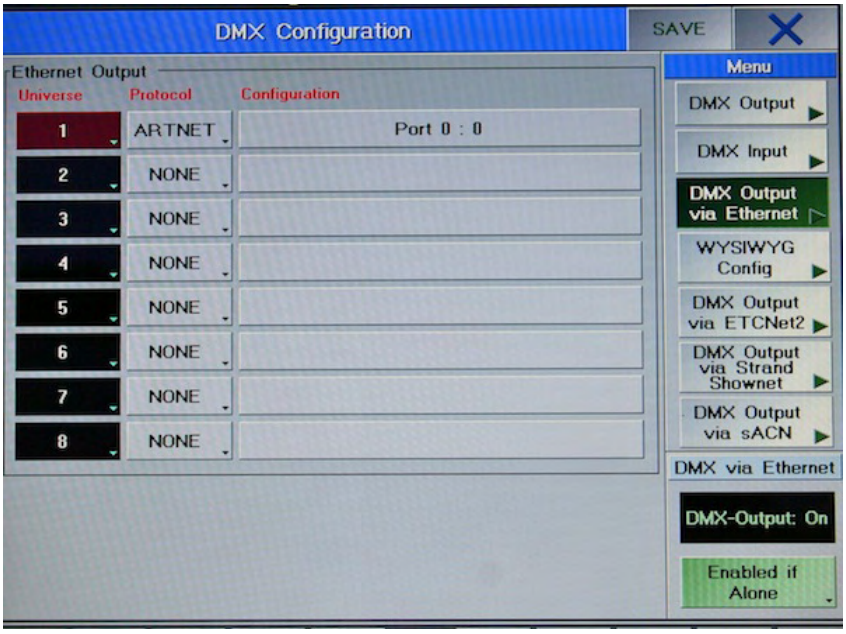
Catalyst supports alpha transparency natively. Transparency can also be achieved with the use of transparent black or white or mask colour effects.

Numbering
Catalyst uses folder and file numbering to determine content playback
each folder should have a 3 digit prefix (i.e. 001) plus a name (001-252)
each file should have a 3 digit prefix (i.e. 001) plus a name (001-255)
e.g:
001 Folder 1
001 File one
002 File two
etc...

Console Patching

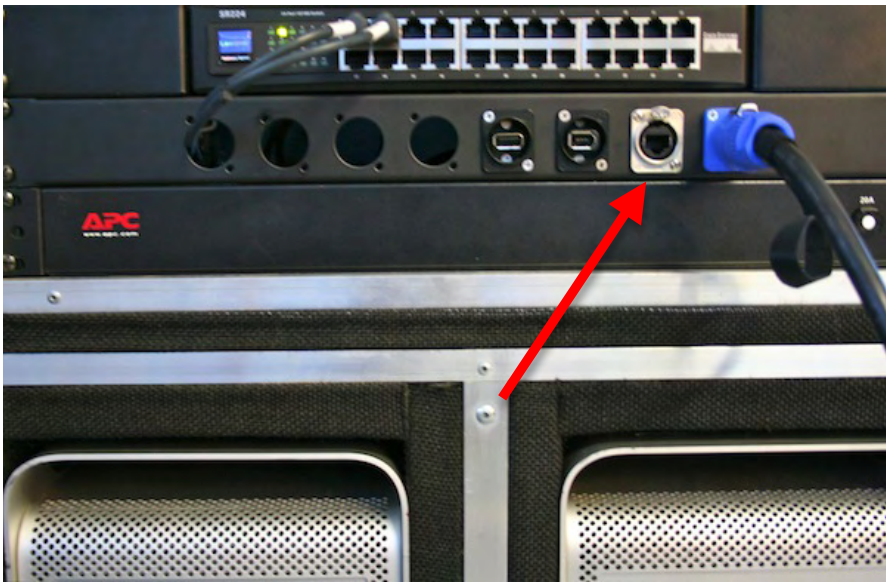
This example uses a Grand MA 1 as the console. First patch in however many Catalyst Layers you are going to use, just like you would if it were a lighting fixture. For numbering, I prefer fixture numbers and layer numbers to be the same, as it's one less thing to confuse me. Then address them (1, 41, 81, 121, etc.).

In this example we are controlling the Catalyst via Artnet and will have to configure the DMX output accordingly. Go to Tools, DMX via Ethernet, and configure universe 1 to Artnet Protocol 0,0. This tells the Grand MA that universe 1, where we patched the Catalyst Layers on the console, is to output Artnet.

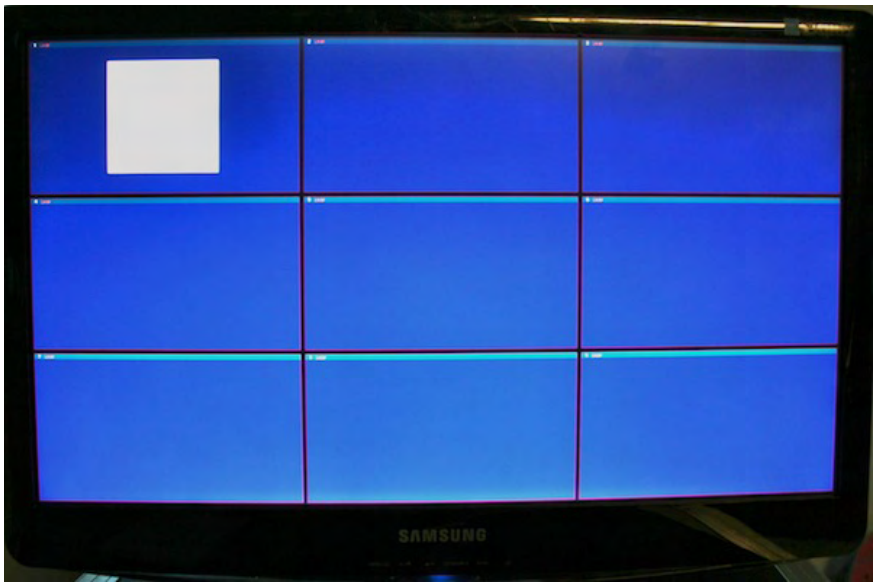


Connecting the Console to the Catalyst

Connect the lighting console to the Catalyst via Ethernet cable. You will go from the console, in to the network hub, out of the network hub and in to the Catalyst. This is the basic connection for getting Artnet into the Catalyst. All of my Catalysts have the Artnet input on the front panel.



At this point you should be able to start bringing up clips from the console. Make sure the Catalyst is in Full Screen mode on both outputs ("A" and "F" on the keyboard). Select fixture 1 (which is actually layer 1) on the lighting console and bring it to full. Your screen should look like this…



(Layer 1 at full, no content selected yet)

Now go to the media library encoder on the console and scroll to a content folder. Then go to the clip parameter encoder and scroll to a clip. That's it! You are now off and running on the Catalyst. You should be seeing content from the different folders playing.

A Few Other Things

As a general rule, my opinion is that once the media leaves my DVI output 2, and I can prove that it is working by seeing it on the monitor, it is then the responsibility of the Video Departments to get it up on the video display. I have also found that the more I can tell the video company what I intend to do with the Catalyst ahead of time, the better. This allows them to bring the necessary equipment to get the job done the first time instead of a bunch of costly overnight shipping to get things right. I have also found that many times the video company will want to put a very cool product in the Catalyst rack called an Image Pro. This is the Swiss Army Knife of the video world and will take the DVI signal from output 2 (in this example) and convert it to whatever signal format the video company sees fit to get the job done.

In summary, the Catalyst can be configured many, many ways to meet the demands of almost any show. This is just a basic way to set it up to get things started. I created this guide to, hopefully, get a little free promotion for myself as well. I am a freelance LD/Programmer that stumbled into the video side of things about 10 years ago. During that time I embraced media server technology and decided to make an investment in it. I own several Catalyst Media Server systems and have been renting them for several years. This guide is based on my standard Catalyst setup.

Please feel free to have a look at some Catalyst resources that are also available on my website www.lightingprogrammer.com. Thanks for checking out this quick-start guide, I hope it has been helpful to you.

(A few of my Catalyst systems)