

## Notes from Davinci Resolve with Kate Izor

### *A Color Grading Application*

To correct over/under exposure

To balance Shots from various cameras, time of day, locations

To alter light, draw attention to subjects/products/action and create depth

To grade/ create looks, style

To export to NLE

A first light is the first step of color grading...balancing and matching shots. Have to select a shot to match to.

Correct like clips first.

Review grades under proper conditions: A broadcast monitor (Panasonic OLED?)

Needed: setup

:software: Davinci Resolve speedgrade

Calibrated monitor FSI2461

Tangent wave, Wacom tablet

Neutral work environment

Three button mouse

What you want: an additional monitor

Grading surface/control panel

Projector/giant monitor

Coffee bar and ergo seating

Issac Newton 1643-1727...

White light divides into range...cheese block image

Additive RGB together = white

Subtractive color: cyan magenta and yellow...together =black...opposites, complementary, adjacent complimentary,

Analysis and balancing

The waveform in Resolve goes from 0-1023 which is 3x 256 for one channel

The parade separates color

Resolve is a 32 bit color space

A gradient in B+W shows Waveform as a line lower left to upper right

Parade shows same curves in all colors

A step scale shows stair steps...in all

Color Wheel correctors:

Lift	Gamma	Gain	Offset
Shadow	midtone	highlight	readjust relationship

Amount of contrast impacts saturation.  
Color impacts skin tone  
Green gray/red scarf...show  
Color contrast can create depth

Focal Point, Brightness, Contrast, color  
Alexis van Hurkman Color Correction Handbook 2<sup>nd</sup> edition  
Emotional Perception:  
Red: Danger Hot Romantic  
Blue: Cool Calm, Sad,  
Green: Sick Envy Cheap Light, wealth  
Eg: Alfred Grups by Arnold Newman 1963? Nazi...lighting from side...  
True Detective Vod Locker  
Boardwalk Empire, shot in Greenpoint NY

Communicates Idea,  
Uses Math  
Perception: color theory = grading

A BIT is a binary digit  
 $2 = 0,1$  (b + w) 256  
 $2^2 = 00,01,10,11$   
 $2^8 = 00000000, \text{etc.}, 256 \times 3 \text{ channels} \dots 16.7 \text{ million } 8\text{bit}$   
 $2^{24} = x3 \text{ channels} = \text{trillions}$   
32 bit is working space in Resolve

#### **MEDIA WINDOW: FIRST BUTTON ON BOTTOM LEFT:**

***1a. Watch entire project several times to get to know it.***

***1. First step: If you are given edited version of project need to break apart clips.***

Ask for version without effects or transitions.

#### **SCENE DETECTION:**

Navigate in upper left window to location of files.

Right Click on Clip PRIOR to adding to media pool.

*In Scene Detection palette:*

Click START in upper left of palette.

Resolve will automate where cuts appear...go to each green line to confirm.

Add or subtract with bottom left + or -.

Lower or raise magenta line to include or exclude cuts. (especially on dissolves),

Then click "Add to media pool" in lower right.

The first clip in the media pool sets the frame rate...if you say 'yes'. If TL is different.

Clips must be in media pool to use in timeline.

## TIMELINE WINDOW: SECOND BUTTON FROM LEFT ON BOTTOM

### CREATE TIMELINE:

File/New Timeline, name (you should know the framerate of clips)

Click on Media pool and put in list view, in order,

Then select all clips ( unless a reference clip or other)

Drag to new timeline.

## COLOR WINDOW: MIDDLE BUTTON ON BOTTOM

Clips will appear in small timeline in middle of interface.

Upper left is viewer for each clip clicked.

Lower left options include Primary and Log views of color adjustments for each clip.

Open View Scopes: Short Cut:

### **GLOBAL COLOR ADJUSTMENT:**

Start with primaries: and watching “parade” and vectorscope”...

Basic adjustment:

Start with Gamma or Offset to even out three colors based on overall look...

*(if mostly skin or desert, blue would naturally be lower to show more yellow...)*

LIFT adjust the darks. Adjust color to even out and then lower lumi wheel.

Drag down until the lower edge kisses “0” in parade view.

GAIN adjusts the highlights. Adjust Color then lumi wheel

GAMMA adjusts the middle, Adjust Color then lumi wheel, tends to protect white and black.

CONTRAST(below wheels) and

PIVOT change center of contrast.

OFFSET will actively clip white and black so be careful.

*Double clicking on the word “contrast, etc, resets.*

### **LOG colors**

Shadow, midtone, highlight....have a narrower range than primaries and can overdo it. For footage that is shot flat (like raw). Can also shoot log on 7D...

Often set contrast in primaries and color in log.

Luminance degrades quickly.

To view in full screen versions: Shift+F, Opt+F, Cmd+F

### **NODES:**

A node will appear with each clip

Do basic balancing on first (or second) node.

Add a node for other corrections: second node a wash or style

Third node local color.

A rainbow appears below a thumbnail to show it has been adjusted.

Serial Node: Opt+S

Shift+S: adds before that node

Cmd+D turns that node off/on

Opt+D turns all nodes off/on

RightClick to add relabel  
Cmd+Home resets

Can also use YRGB bars instead of color wheels.

Opt Slide= luminance  
If all RGB are up= neutrals

Luma Mix combines with original and new settings ...only works with Luma Adjustment  
In bar mode can double click to reset one bar.

### **Power Windows** (rotoshapes)

Pink dot-line feathers, blue sizes, center anchors, handle stretches.

Curved line creates Bezier

Thin rectangle you can add points to

Box to right of shape inverts, circle in box creates mask?

Use Shift+H to see or hide mask in Viewer.

Opt+O to create "outside" node

Yellow circles allow visual info to flow from one node to another

Blue triangles connect side nodes like layer and parallel.

Chosen power window shape layer allows use of softness in bottom left box.

Shift+cmd+W=Scopes

RightClick Viewer=Scopes

Hide powerwindow: left button below viewer.

Can add iterations of powerwindows by selecting another below.

Can add more than one in a node, but all will be same color adjustment or inverted.

Can undo only during this session of software.

Original Memory means the last time the clip was opened. Shft+opt+O

Previous time clip was opened is Shft+opt+P

To Copy Grading from one to another:

1. Can copy a still image while in viewer opt+cmd+G
2. RtClick/ node graph window....apply all to clip selected or center ball click.
3. Clear: multi: cmd+home.

White Balance:

Daylight 5600-9000

Shade + clouds blueish

Fluorescent? 4000?

Tungsten 3200K

AWB kills ambient light.

Custom, read or set off of a gray card, white can blow out.

Match Method:

1. Eyes
2. Scopes
3. Save Gallery Still and compare or use timeline method...
  - a. Select clip in color thumbnail timeline that you want to change like another.????
  - b. Select graded clip you desire to match it to????
  - c. Center ball click on that clip gallery image or graded clip
  - d. Right click on viewer chose: *reference mode* and either *gallery or timeline* depending on still or timeline option. Sometimes have to go off and on this setting to get to work.
  - e. Cmd+w enables wipe, use mouse to slide
  - f. If you have to you can temporarily delete first node to do this ???
  - g. Can append node graph???

Qualifier: eyedropper:

1. Click and drag over image to affect it...
2. Can right click and set to read out RGB values...very useful for determining balance in whites and blacks

Parallel node Opt+P...appears after other nodes it works with and shows result of combining two adjustment nodes...could be called the compositor...blends the adjustments. If you delete the parallel it breaks the structure. Generally used with a section of a frame like a power window or key.

Layer Node: Opt+L like parallel appears to the right of adjustment nodes it affects. This time, the adjustment on the bottom is layered on top of the image in the viewer. Opposite of photoshop layers. Can also pull from other nodes, even the first one. This can be particularly helpful when you have to keep a specific color like Coca-Cola symbol.

Key Mixer: Rt click bkgd...add key mixer note Rt Click to add an input if you need more. A key shows a black and white rendition of the masks.

How to find a missing folder:

Usually it says media is missing but might just be black.

Highlight all clips, Rt click reveal in finder and record path...Rt click to Change Source Folder in media window

Change from \_\_\_\_\_

Change to \_\_\_\_\_locate/open/change.

Node sequencing:

1. balance, big color shifts use offset ...less use lift
2. contrast, pivot (relabel nodes)
3. change skin tone with gamma, can use windows or keys
4. can use blur or radius on selections.

### Tracking:

- Draw with power window a selection ..make as tight as possible
- Select pan tilt zoom or rotate or all to track
- Choose the whole clip at first, frame if tricky
- When you use frame you can adjust the window and don't have to add keyframes can just move through clip....CLIP setting stays same shape throughout?
- You might use circle with two dots to connect one point to another to avoid an interruption in the image like object going in front of it.
- Analyze forward and bkwd of that point.
- Turn off extra nodes, decide what node is best to track on?
- Can copy and paste track info.
- Can also use to stabilize...but to track make sure upper right button says window, not stabilize.

Click and drag with center ball to move image around.

### Roundtripping:

In premiere,

- Export reference file

Export FCP XML

In Resolve: File / Import XML

- Auto set project settings is helpful

- Auto Set import source clips media

- Ignore file extension when matching (to use when going offline to online)

- Mixed Frame Rate...Check FCP if using others leave as Resolve.

- Save Project

Can Right Click add as off line ref clip...have to link to timeline sequence list...rt clk on sequence.

### Color Module

- Rt click on viewer to show ref clip wipe

Can rt click thumb on track say update all thumbs.

Node box/ track mode/ will apply to all clips

### Deliver Module:

Presets easy set up

- \_\_Footage comes from FCP XML rd trip

- \_\_Or use if footage starts in resolve....exp to FCP

Output: Render as

- \_\_individual source clips

- \_\_single clip

Render to QT

- \_\_!Force Sizing and Debayer

if you say :Enable flat pass...it exports without the grading.

Can Rt Click to show unrendered files and it will substitute in premiere?

Don't click Disabled track

Upper button of two bars selects all in TL

\_\_\_ **Output** disable sizing IF YOU LEAVE UNCHECKED bakes in changes...so you start with parameters diff from original in edit NLE

Then File/Export/Export XML

When importing XML, use sizing info.

Render Settings: Advanced: check all: Disable edit input

Force sizing to HQ

Force Debayer res to HQ

### **Gallery:**

Can store stills from projects as "looks"

Save in powergrade folder and will be available in all projects.

Work around wipe/gallery problem: Right Click on Viewer

Select: Wipe on Timeline

Shot Rt Click on another clip

TL click on clip you want to compare TO

Rt Click on another clip say wipe TL clip

Will show wipe in viewer.

### **Curves:**

Left side is output, bottom is input. If you raise curve, you are taking one value and raising it, making it lighter. When you pivot it takes a typical contrast curve and slides it up or down the angle.

Anytime you lighten or darken you are losing saturation and contrast.

Rt Click to remove points.

Shift Click plots easier

If you look long enough at neutralish tones you will believe they are neutral.

Softness in the curves palette helps recover highlights

Bad options; Side sliders on second module and hue v lum.

High and low soft are good.

Toggle between a few clips by flagging clips that are similar and then right clicking and saying :  
Show these flags. Arrows move up down clip to clip, left right frame to frame.