

OUTSTANDING TEACHING, LEARNING AND ASSESSMENT TECHNICAL SKILLS NATIONAL PROGRAMME

Master Technician Handout for Learners
Created by: Aron Randhawa

Colour Grading Activity

Learning outcomes:

- Understand the on-set role and responsibilities of a Digital Imaging Technician (DIT)
- Examine an on-set DIT equipment setup by acknowledging each piece of gear and its purpose
- Explore the fundamental tools for colour grading in Davinci Resolve and how to convert Log Camera footage
- Experiment colour grading your own piece of work using the skills acquired in today's session such as colour wheels, scopes, colour selection, masking and tracking

Resources required:

- Computer running Macintosh OS X with Video Output
- Davinci Resolve 12 Colour Grading Suite
- Test Footage Clips

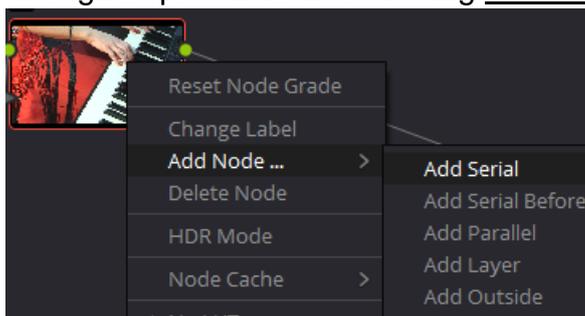
Task 1 – Launching Resolve and selecting footage

- 1) Download the sample footage folder from your college network
- 2) Open 'Davinci Resolve' from the *Finder>Applications* destination
- 3) Select *New Project* at the bottom-right corner and give your project a title
- 4) Double-click on your new project in the Menu
- 5) Click *File>Import* and select the test footage in its downloaded destination (make sure the folder has been unzipped before importing)
- 6) Select the *Edit* icon as the bottom of the software
- 7) Drag and drop a desired test clip from the left side panel into the editing timeline
- 8) Select the *Colour* icon as the bottom of the software

You have now successfully imported footage into Resolve and are ready to commence alterations via Colour Correction and Grading

Task 2 – Basic Colour Correction

- 1) Before adjusting any aspects of the footage, it is important to *Create a New Node*. This is similar to making a 'new layer' and ensures it is easy to backtrack your work. You can do this by holding left-click on the thumbnail on the right-top corner and selecting *Add Node...>Add Serial*



- 2) All the test footage presented today has been shot in 'Log' for maximum quality retention. It must first be converted back to a natural colour space using Colour Correction. Open the scope panel by selecting the Graph Icon at the right-bottom corner of the screen followed by the Full Screen icon.



- 3) Reduce the Lift (shadows) and increase the Gain (highlights) of the image while observing the Luminosity scope in the right-top corner. Ensure the waveform does not clip while you apply the desired contrast.

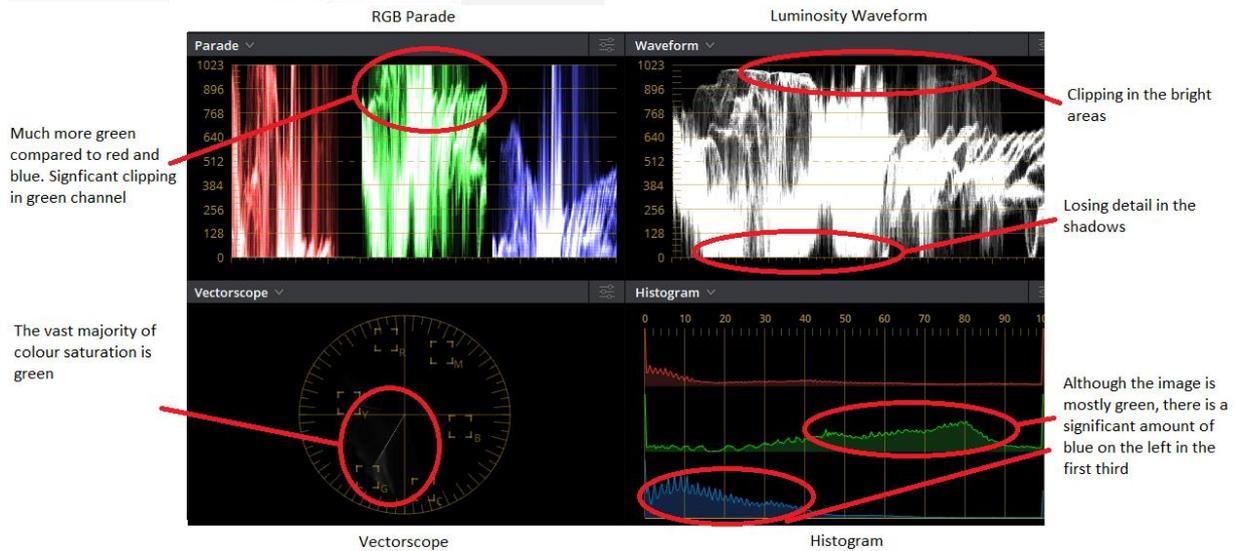


- 4) Increase the overall saturation of the image to the desired about using the numerical value at the bottom of the colour wheels.

Task 3 – Basic Colour Grading

In this task we will be using the 4 main colour wheels to apply a creative colour grade of your choosing. This can be used to enhance the mood, feel and creative direction of the image.

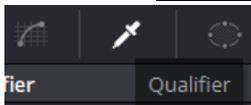
- 1) Once colour correction is completed, Create a New Node once again by holding left-click on your current thumbnail on the right-top corner and selecting Add Node...>Add Serial. This will separate any of your grading alterations from the previously applied colour correction in Task 2.
- 2) Use a combination of the Lift (shadows), Gamma (mid-tones), Gain (highlights) and Offset (overall) colour wheels to create the desired look of your grade. Remember both the colour hue and brightness can be adjusted for each wheel.
- 3) Ensure you are monitoring the results of your alterations with the four video scopes. Make sure no peaking is occurring in the Luminosity chart. Is your image balanced or does the RGB parade reflect a bias towards one colour? How saturated are your colours on the Vector Scope?



Task 4 – Colour Selection Tool

Sometimes you may only want to apply grading to a specific colour. For example, adjusting the saturation of the sky or changing/isolating the colour of someone's clothes. This can be done using the Qualifier Selection Tool

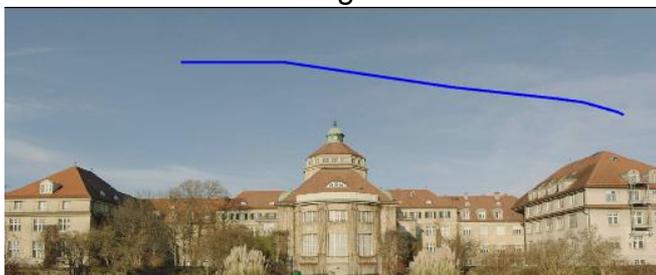
- 1) In the colour mode, Create a New Node once again by holding left-click on your current thumbnail on the right-top corner and selecting Add Node...>Add Serial.
- 2) Select the Qualifier Tool icon just above the curves chart



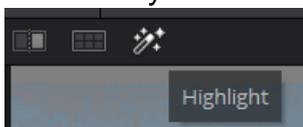
- 3) Enable 3D Mode in the top-right corner of the Qualifier window



- 4) Draw a line across the coloured area you would like to select. Resolve will then calculate an average selection of this selection



- 5) Click on the Highlight icon on the left-top corner of your video preview. This will visually illustrate which colour pixels have been selected.



- Adjust both the Clean Black and Clean White values in the Qualifier window to ensure the selection is as clean as possible

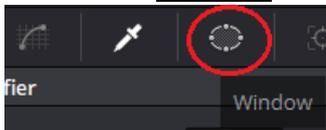


- Continue to adjust the footage using the colour wheels, saturation and curves tools. You will notice that on this node, it will only effect the colour selected area

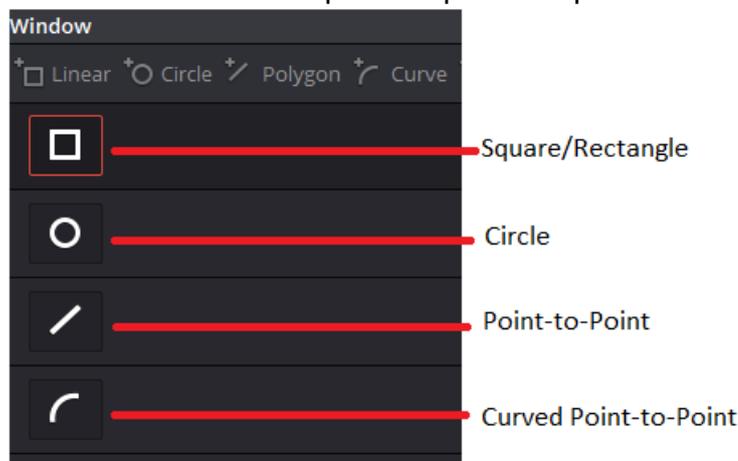
Task 5 – Image Masking Tool

Masking is a very powerful tool in Resolve that restricts any colour changes in a node to a specific area. This can be used to grade certain areas of a scene, isolate the range effected by the Qualifier tool or even create visual effects such as sunlight rays.

- In the colour mode, Create a New Node once again by holding left-click on your current thumbnail on the right-top corner and selecting Add Node...>Add Serial.
- Select the Window tool next to the Curves and Qualifier icons



- Select the type of shape you would like the mask to be. It could be a simple box/circle or a manual point-to-point shape



- Draw the mask shape you would like to apply onto your image. Each point of the shape can be manually positioned as well as its rotation and size.

- 5) The red dots around the mask allow you to control how much you would like the mask to feather/blend with the background image. This is very useful when creating artificial light beams



- 6) Continue to adjust the footage using the colour wheels, saturation and curves tools. You will notice that on this node, it will only effect the colour/brightness within your manually created mask

Task 6 – Tracking Tool

Resolve has one of the most advanced tracking tools in the industry. When used correctly, it can create ultra-realistic lighting effects in post. It is especially useful for tracking people's faces to apply extra lighting or adjust skin tones.

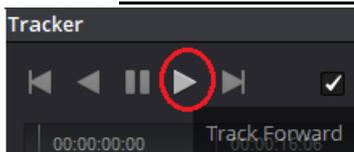
- 1) In the colour mode, Create a New Node once again by holding left-click on your current thumbnail on the right-top corner and selecting Add Node...>Add Serial.
- 2) In order to use the tracking tool, you must create a mask. Follow the in Task 5 to manually select your tracking object using the Window Tool. Circles or spheres are great for tracking faces. Remember to add feathering to your masks using the red dots to help make it realistic. The tracking tool should be used in the same node as your mask
- 3) Select the Tracker tool next to the Curves, Qualifier and Window icons



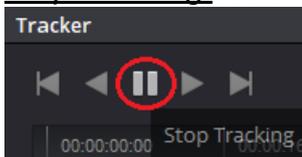
- 4) Ensure that the masked area is accurately in line with the object you require tracking



- 5) Click the Track Forward playback button to initialise the motion tracking. Resolve will then begin creating key-frames to follow the object. You can also use the Track Backwards function if it works better with your footage



- 6) Once the selection of the clip you wish to be tracked in completed. Select the Stop Tracking button



- 7) Tracking of the object has now completed. If results are not as smooth as expected, try adjusting the size of your mask and reapplying the tracker
- 8) Continue to adjust the footage using the colour wheels, saturation and curves tools. You will notice that on this node, it will only effect the colour/brightness of your manually tracked object

Task 7 – Colour Grading Exploration

You have now acquired a range of skills within the Davinci Resolve Suite including Colour Wheels, Scopes, Colour Selection, Masking and Tracking Tools. Feel free to import your own projects/footage into the software and explore using these tools to enhance your work. You can also import entire project edits from Adobe Premiere and Final Cut into Resolve, please ask for further details on how to do this.

Congratulations, you now know how to use Davinci Resolve to colour correct, grade and visually enhance your footage! With great power comes great responsibility