

Vectorscope



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Though generally not considered as 'mission critical' during shooting as exposure scopes such as Waveform & Histogram, the **Vectorscope** plots the **chromaticity**, or the **hue + saturation** of your image onto a **color wheel** so you can help gauge **complimentary color**, ensure **skin tones** are being colorized properly, to visualize how overall scene color is being placed, and where potential adjustments may need to be made in general.

Vectorscopes are also used in Broadcast to make sure that the colors of the footage are exact. Vectorscopes will have a target for each zone. The idea would be if shooting a pure sample (such as a color or macbeth card) that the targets would be hit. You will see vector scopes used in post production to be sure that the colors from shot to shot will match.



Vectorscope - Settings

Access Vectorscope tool settings menu by navigating right or pressing the right arrow when Vectorscope is highlighted in the tool list.

On

Toggles Vectorscope Off/On. This can be done on the Tool Bar by selecting the tool. Active tools are Green, while inactive tools are Grey.

Size

Adjust the size of the Vectorscope for best view-ability.
The size ranges from 20 to 60. At 60, the scope takes up about 2 quadrants of a 3x3 grid.

Location

Arrange the Vectorscope on-screen using various pre-set locations.

There are 9 positions:

TOP - Left, Center, Right

MIDDLE - Left, Center, Right

BOTTOM - Left, Center, Right

Opacity

Set the transparency/opacity of the black background and Vectorscope graticule/graph.

Show Skintone

Displays a skin-tone line/taget directly on the Vectorscope to indicate where to place skin color during lighting to achieve a neutral, natural result.



Vectorscope - Quick Start

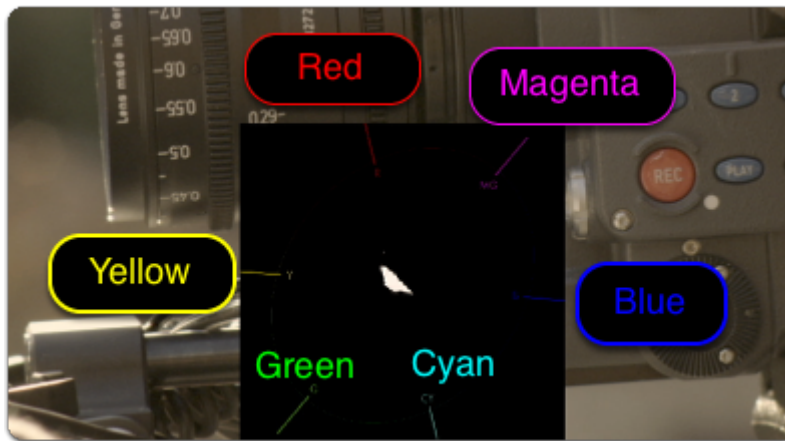
In this section we will add a Vectorscope to a page and use it to light a scene with complimentary colors.

'Add New Tool' Navigate to **Scopes > Vectorscope** and select the '+' to add it to the current page.



A **Vectorscope** appears at the bottom of the image. The '**blob**' is largely contained in the **center** of the graticule/crosshairs which means the colors of the current image are **not very saturated** (which is especially true as this footage is using log-based gamma).

The Vectorscope represents saturation as **distance** from the **center** of the circle, and **hue** as the **angle** around it.



If we **apply a LUT** to this page, the Vectorscope reacts by **expanding** its plotted area. The scope confirms that we are viewing a more heavily saturated image after applying the look.



no LUT

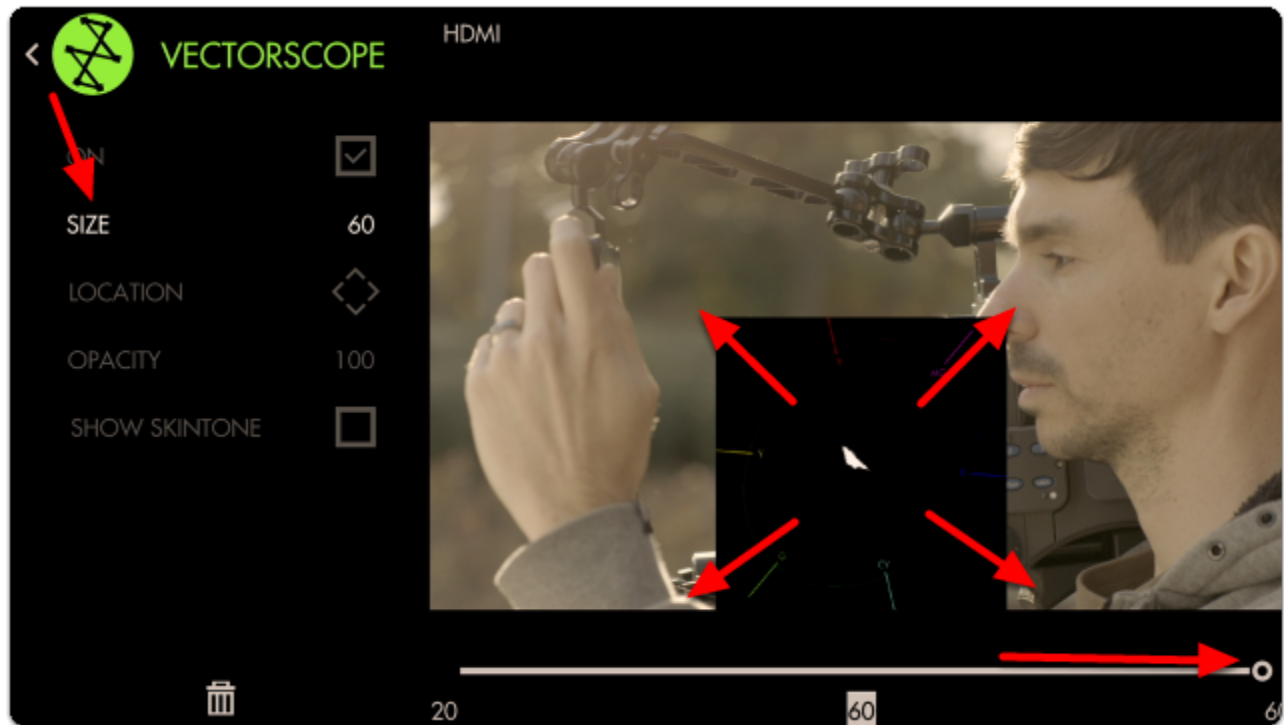


LUT applied



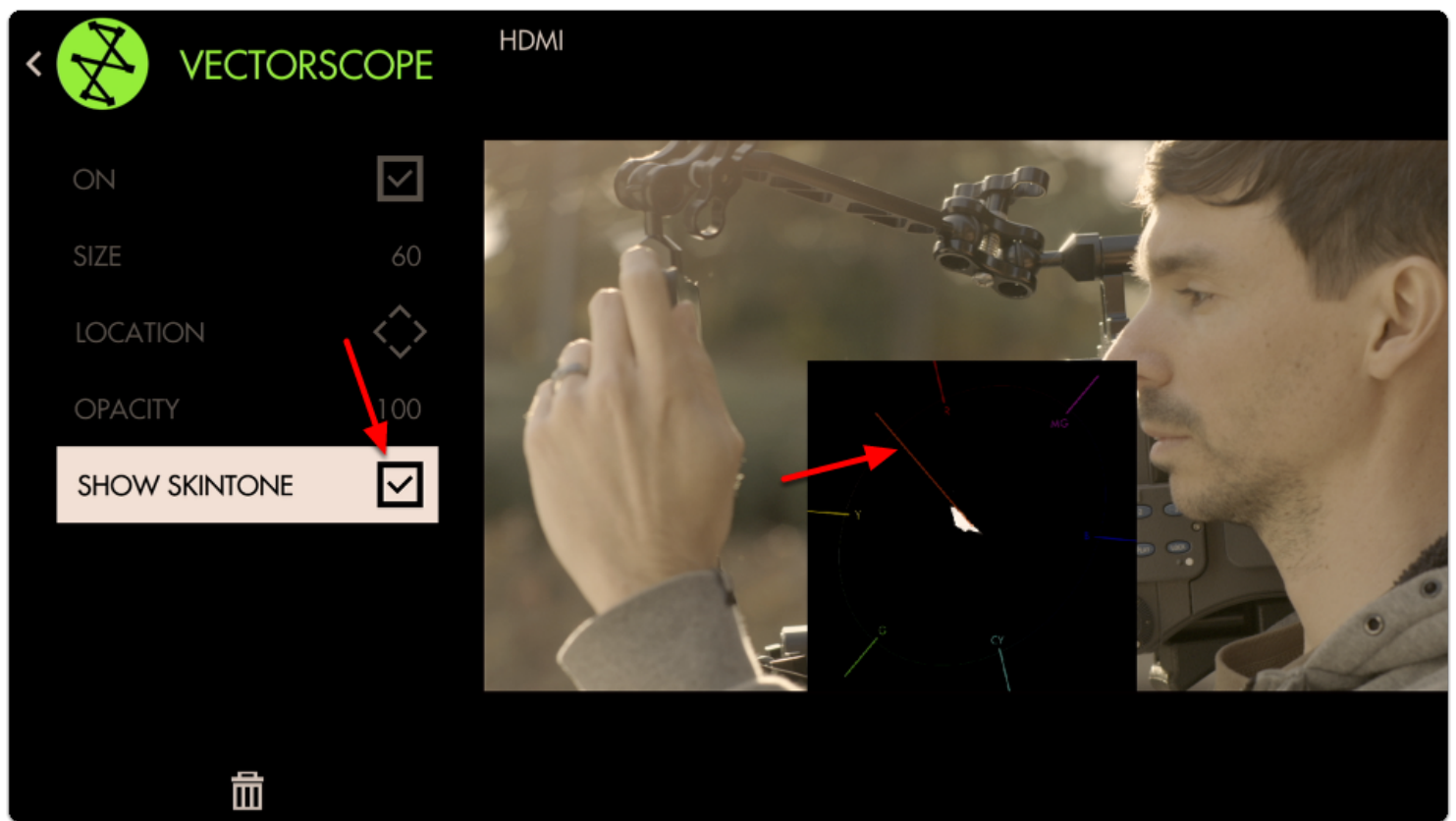
💡 The Vectorscope uses the same layout as a **color wheel** and therefore principles of **color theory** apply - for example we can achieve **complimentary** colors by ensuring our scene plots to the graph on **exactly opposing sides**. Perhaps the most common example of this is the famous/infamous 'teal/orange' look popularized in Hollywood where skin is orange and nearly everything else gets colorized as teal.

We can **edit** some settings by **navigating right** or **tapping the right arrow** when 'Vectorscope' is highlighted in the toolbar.



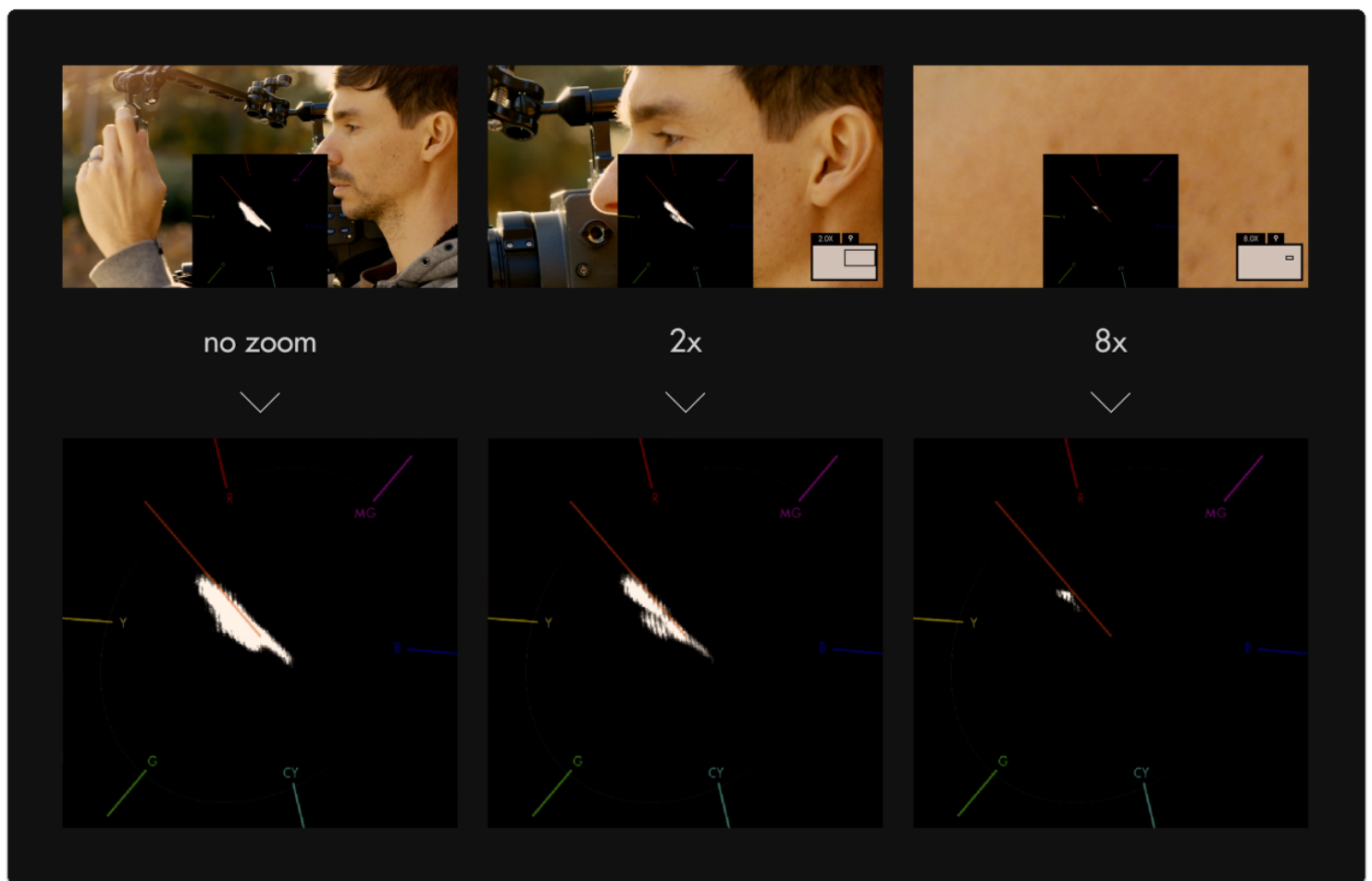
You can adjust the **SIZE** of the graph for better visibility. At this stage feel free to use [Size & Position](#) or [Crop & Scale](#) to **arrange** the image and scope so that they **don't overlap**.

Next let's enable **SHOW SKINTONE** - this provides a line on the graph for where to keep skintone hues for the most natural result under neutral lighting.



Because the **entire image** is being plotted to the graph all at once, we can check the status of individual areas by using **Pixel Zoom** in combination with the **Vectorscope** for **spot meter** functionality!

Press up on the joystick or **pinch-to-zoom** on touchscreens while the scope is activated to see its effect.



Zooming into an area consisting of **only** skin tones reveals the **exact hue** in which they plot - the result is **slightly** toward the **yellow** side - this is the result of a golden reflector which was used to bounce light onto the face. If we had used a silver reflector, the facial tones would rest precisely on the **skin tone line**.