

Master Colors

HVC Color Composer, Photoshop Plug-in for Mac Online Manual

Use this manual to familiarize yourself with the basics of HVC Color Composer. Read through the topics here beginning with the overview, or view the [FAQs for this product](#).

[View this page for help with program installation.](#)

1. Overview: what am I adding to Photoshop?

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What are you adding to Photoshop with HVC Color Composer? This product is an enhanced version of Photoshop's color picker. You can switch between this enhanced color picker and Photoshop's basic color picker any time you want through Photoshop's preferences. (see [program installation](#) notes to find out how to do this)

The HVC Color Composer has all of the features as the Photoshop color picker, in the same basic layout, so it will be completely familiar to any Photoshop user while still offering the advantages. You open the color picker the same way you always do in Photoshop. Just click the foreground color swatch, either one of them, shown here: (see Figure 1.1)

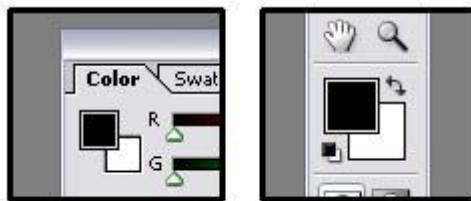


Figure 1.1

Now on to what's new. The biggest addition to the picker is the Master Colors Perceptual HVC Space. This is a new color space; resting along side the other spaces accessible through Photoshop (see Figure 1.2 below). You'll notice off to the right, the H, V, and C radio buttons are placed, similar to the other 3-axis spaces. Just click one of the radio buttons to begin using the HVC space to select colors.

Standard Photoshop
Color Spaces

Master Colors
Perceptual HVC
Space

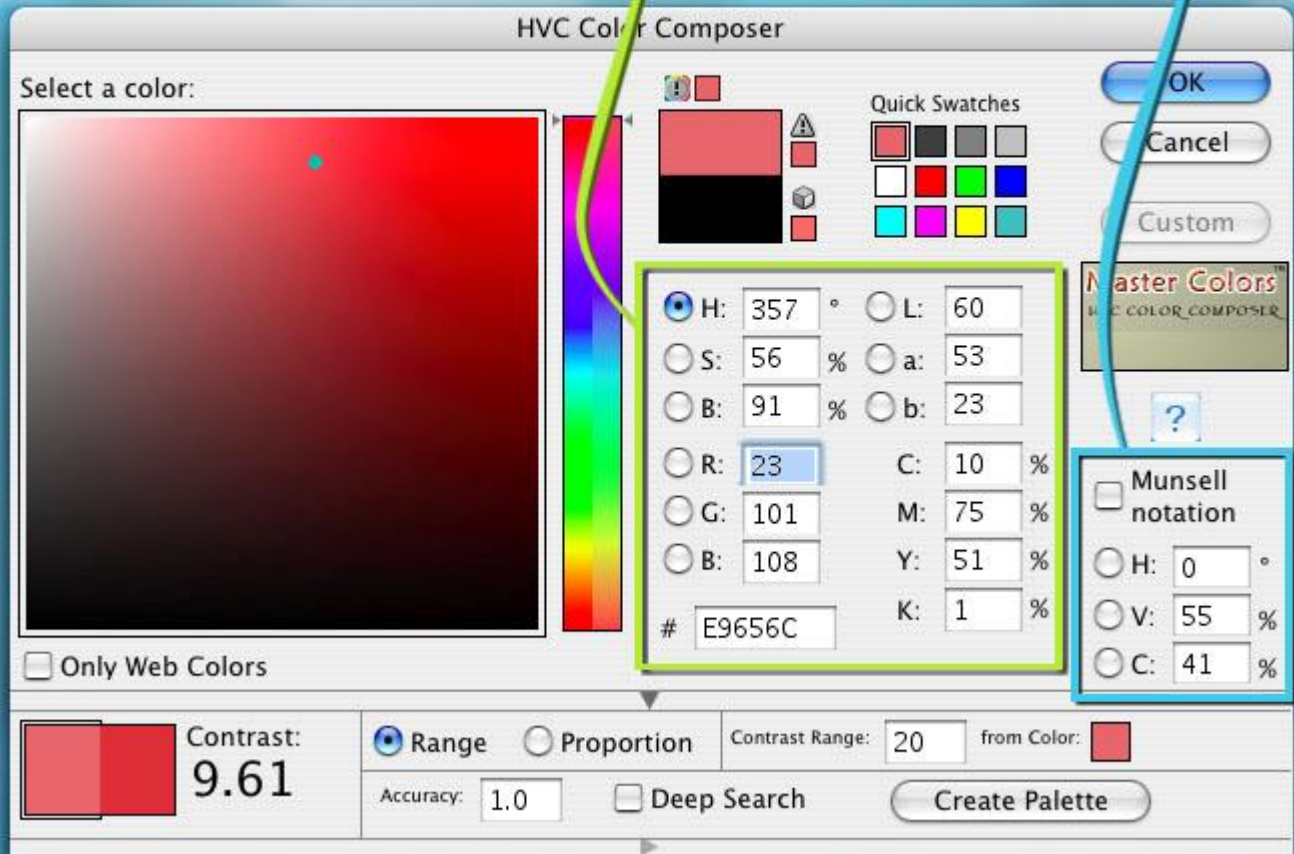


Figure 1.2

HVC (Hue, Value, and Chroma) is a far more intuitive, perceptually-oriented space than the others available in Photoshop. Spaces like RGB are just not suited for creative use. The human mind is not accustomed to considering color in quantities of red, green and blue light. There are many visual distortions in RGB as well. HSB (just a reorganization of RGB) is a bit better for navigating through colors, but suffers from the same visual distortions. CMYK, Lab, both have their uses, but accommodating the creative process is not one of them. HVC provides fully distortion-free clarity to color selection, and this clarity is now available inside your copy of Photoshop.

You'll notice by clicking the "H" (Hue) radio button, we view the HVC space by hue slices, and navigate the hue axis with the vertical slider (see figure 1.3 below). The logic is exactly the same in the basic Photoshop

color picker.

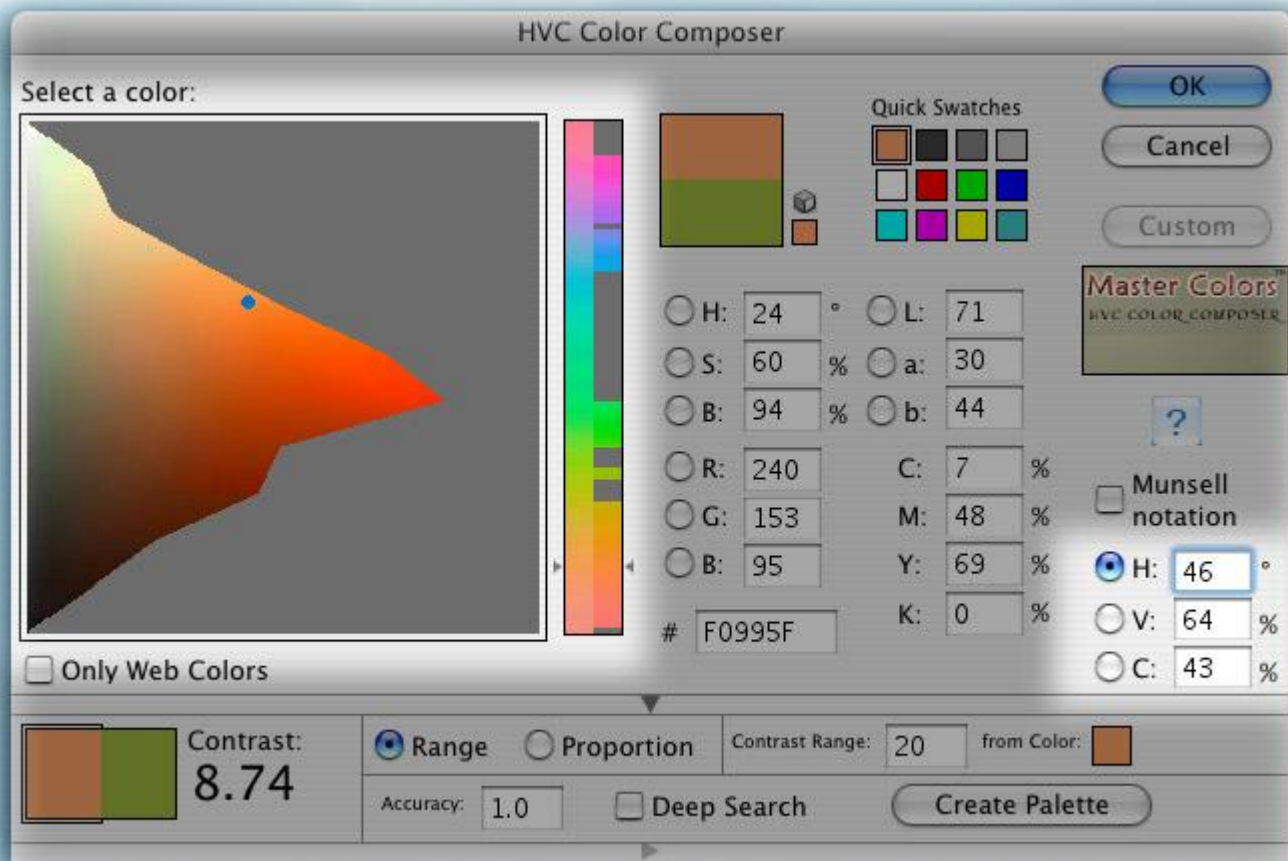


Figure 1.3

By clicking the "V" (Value) radio, we view HVC by value slices (see Figure 1.4 below). Value is a color lightness property. With this, we view all colors of a certain lightness at once.

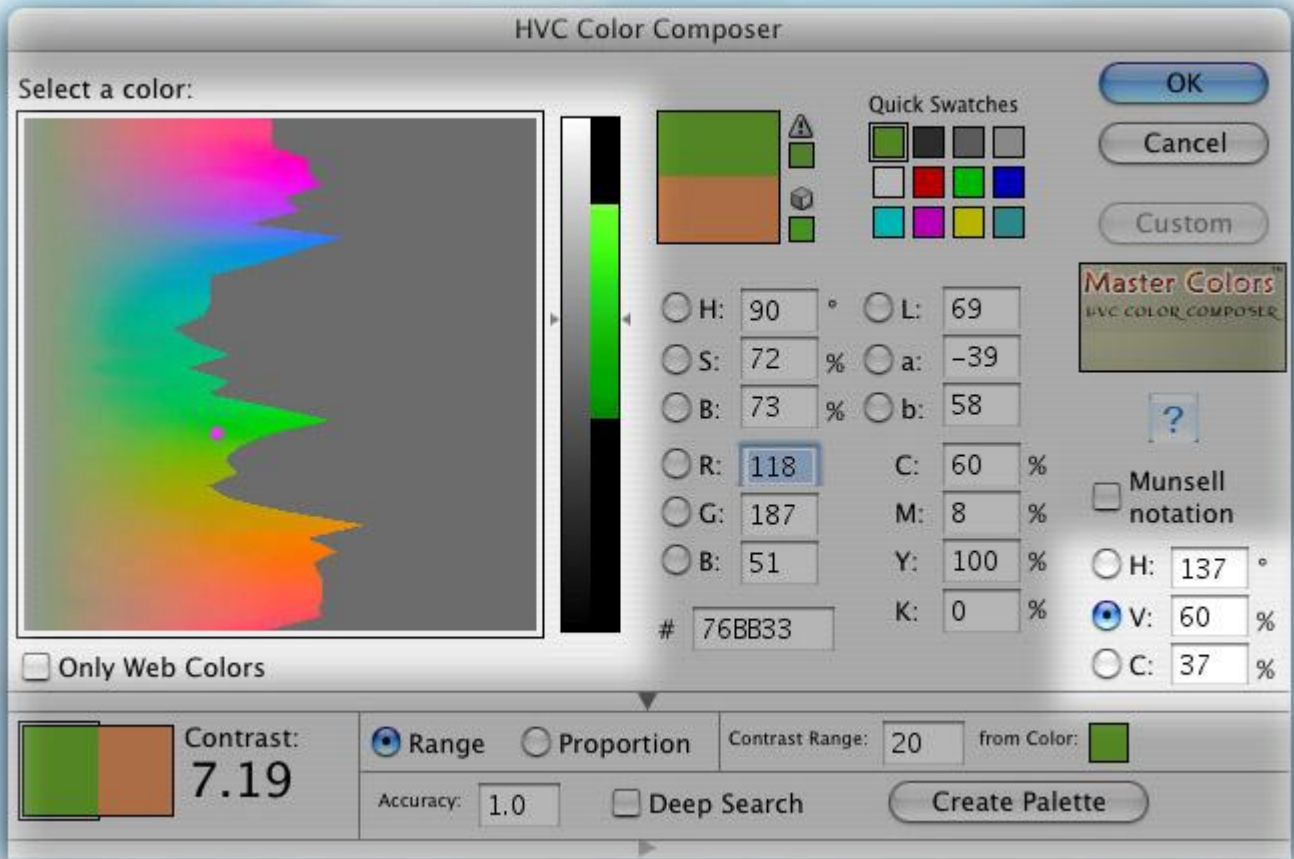


Figure 1.4

And the "C" (Chroma) radio button is selected (see Figure 1.5 below). We view all colors of a certain intensity at once.

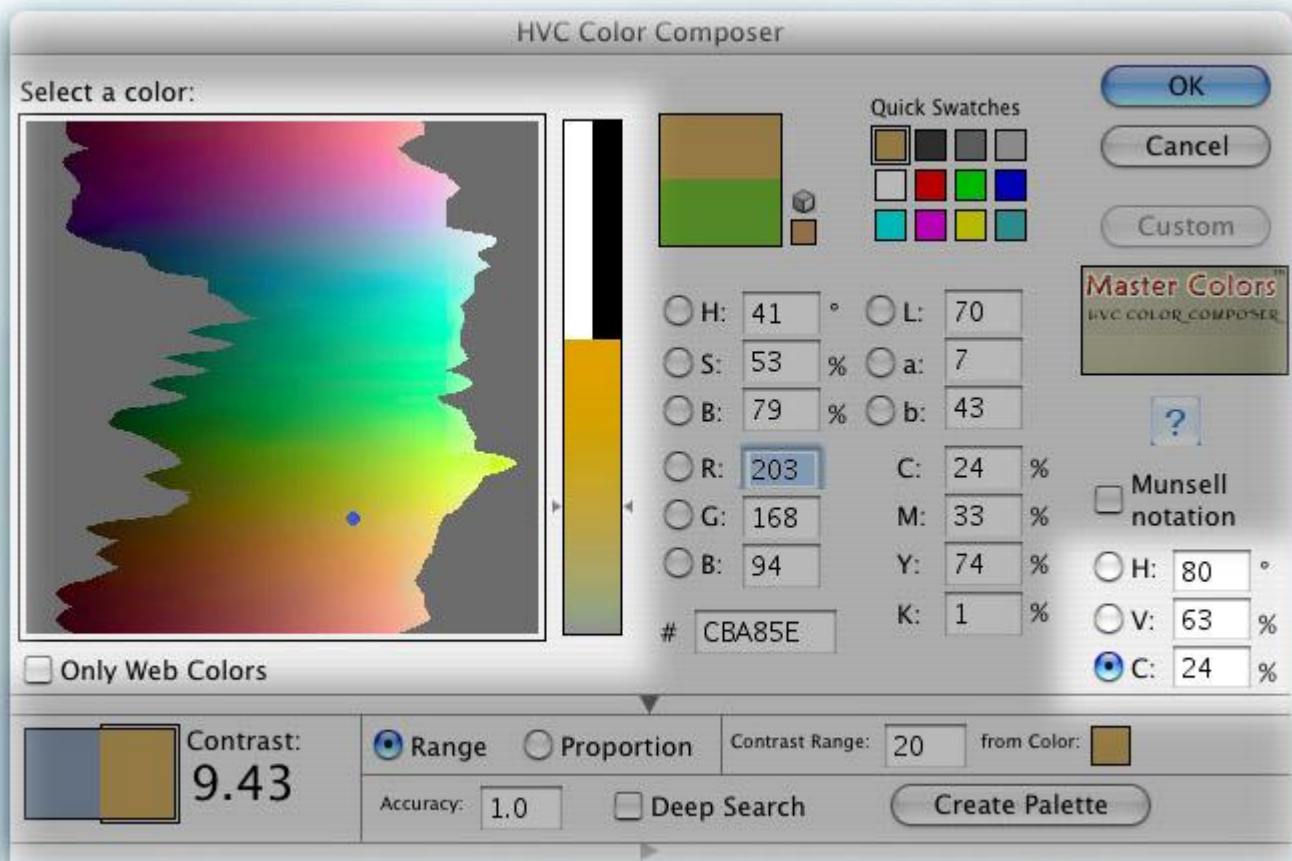


Figure 1.5

Creating Palettes

Aside from navigating through the HVC space and using it to pick colors, there is another important feature of HVC Color Composer. It gives you the ability to generate dynamic palettes based on color contrast relationships. The basic idea is:

1. You pick one or two colors.
2. You set parameters for a palette search, i.e. choose a contrast number.
3. Click "Create Palette".

The resulting palette contains only colors that have that relationship from your one or two colors. In other words, if you pick a contrast, all the colors will have that contrast value when placed next to your original color. (see Figure 1.6 below)

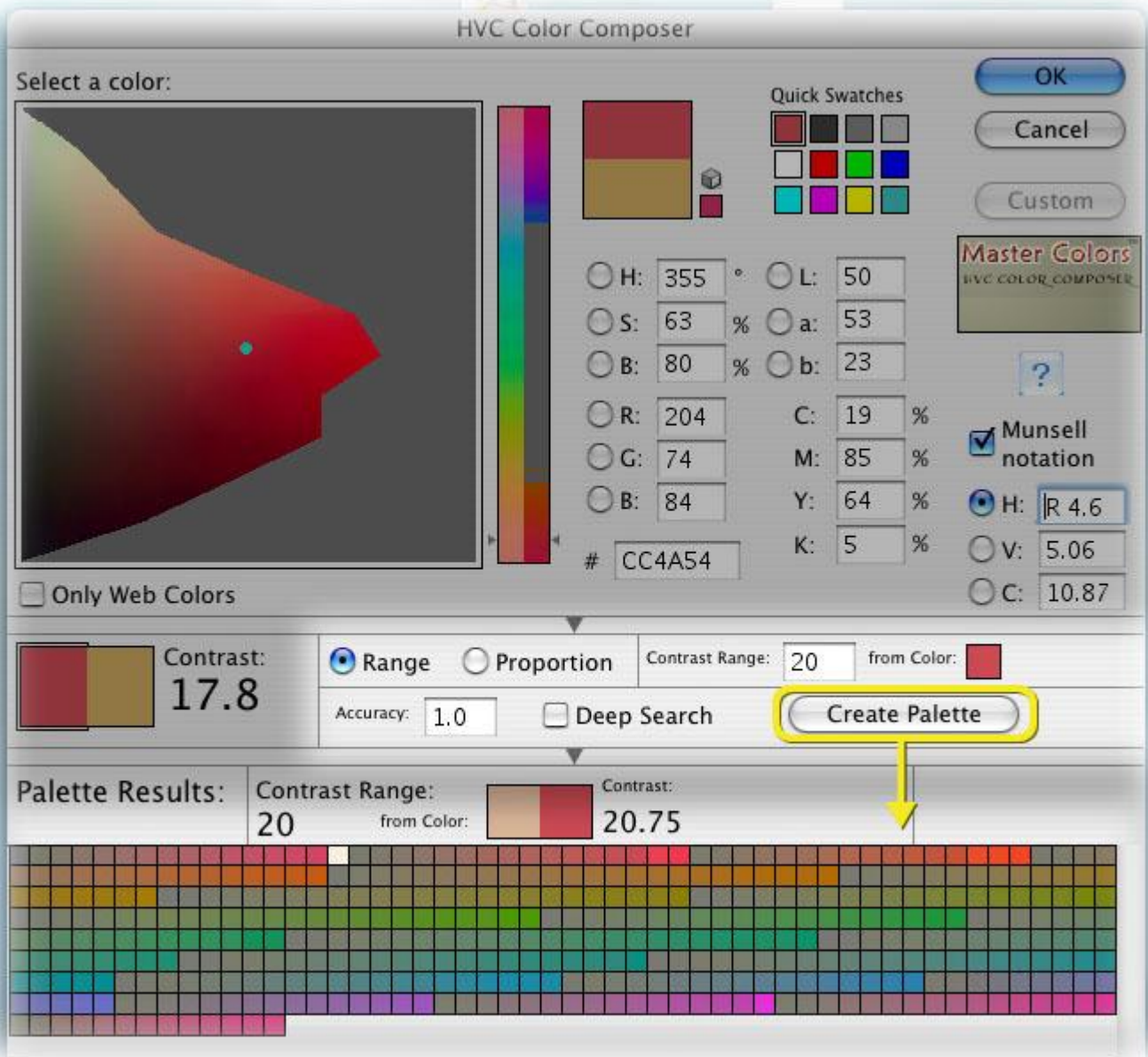


Figure 1.6

The palettes that are generated are very unique, vibrant, interesting arrays of color that you would not be able to find using any other methods, not even by flipping through professional design swatch or palette books. Yet, the palettes have actual significance to your own work. You set the parameters, you chose the starting colors, and now you know the exact relationship between your colors of importance and all the palette colors. There is rhyme and reason to the palette's existence. It fits into a game plan, a greater vision of color selection for your personal work. That's something a static, prefab palette could never accomplish.

View the next topic: [2. Using the color spaces](#)

Master Colors

Using the color spaces

Understanding a few basics on the nature of the HVC space, and how to operate within it, will help you a great deal with using this program and making color selection decisions altogether. In the [overview page](#), you saw that just like with other color spaces in Photoshop's color picker, you can choose which axis to control when viewing HVC slices, by clicking the radio buttons next to the HVC boxes, shown here.

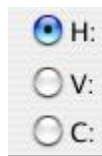


Figure 2.1

And that the three configurations give you access to the types of HVC slices shown below (see Figure 2.2).

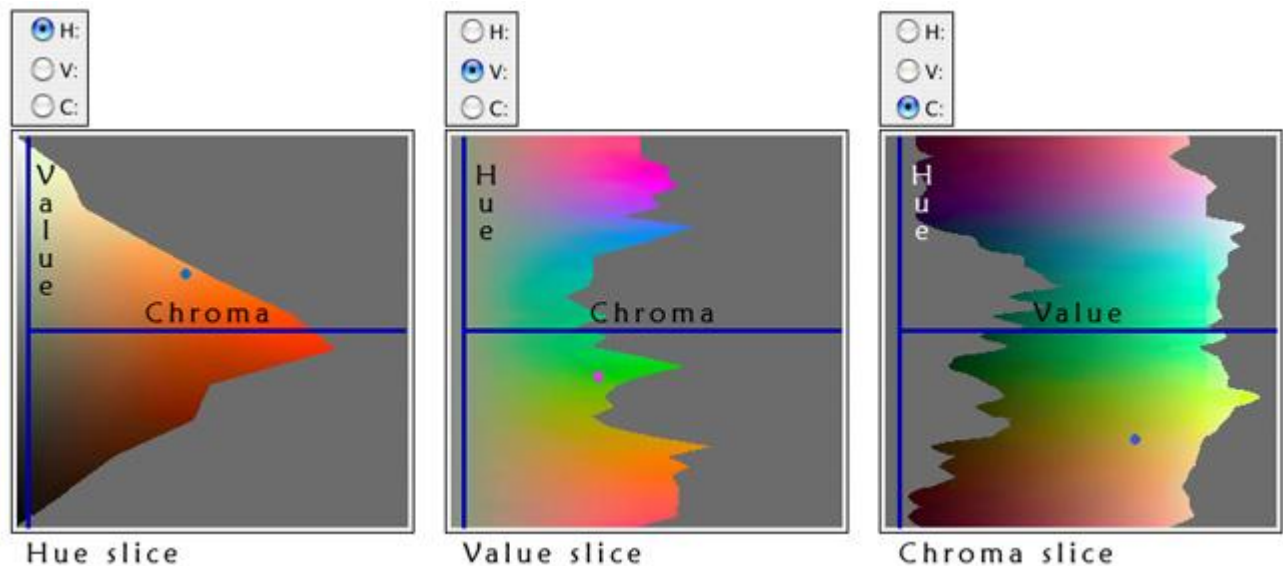


Figure 2.2

These diagrams show for each setting, what qualities are indicated by the horizontal and vertical directions. Notice the variation in the shape of the color space. For instance, when looking at a hue slice, the peak (maximum chroma) generally occurs in the middle (mid value). Whereas the top and bottom (white and black) are always at 0% chroma.

The variation in shape is due to the fact that not every hue at every value level will have a fully saturated chroma level. The hue peaks are as saturated as a color can be for that hue (and even then, not many peaks are even near 100% chroma). The less saturated colors progress on an interesting contour, according to their true visual properties, until

reaching white and black.

This is part of the true power of the HVC space. Geometric simplicity is sacrificed for visual accuracy. Every color's position in the space is dictated by its precise visual properties.

But this means it's possible to select outside the boundaries of HVC (see Figure 2.3 below. Notice how a position that is valid in one hue may not be valid in another.

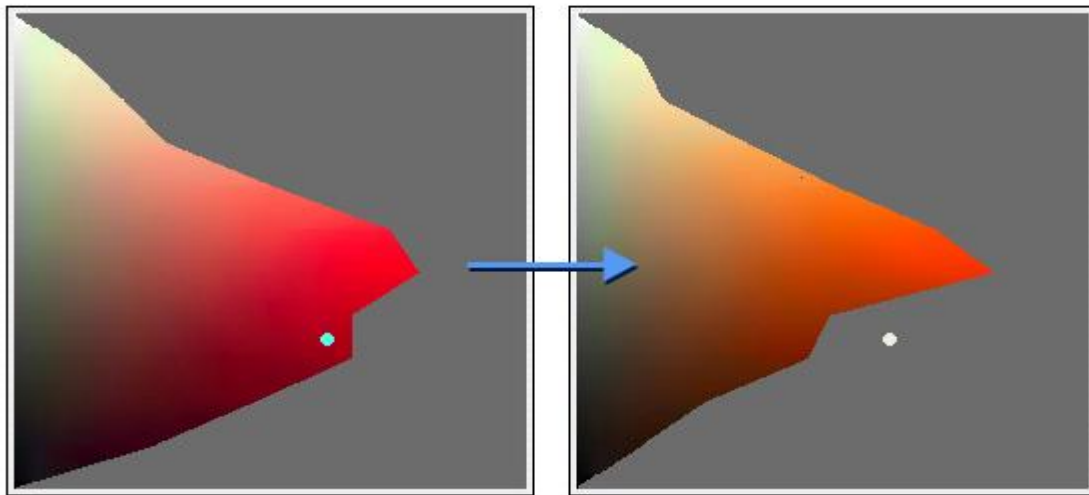


Figure 2.3

When the hue was changed, the boundary receded, but the value and chroma (vertical and horizontal) position of the selected color remained the same. The result is an invalid HVC (which defaults to white). **To select the nearest in-bounds color, click the HVC Out-of-Gamut Flag** (see Figure 2.4 below). The flag appears whenever you select a color outside the HVC gamut.

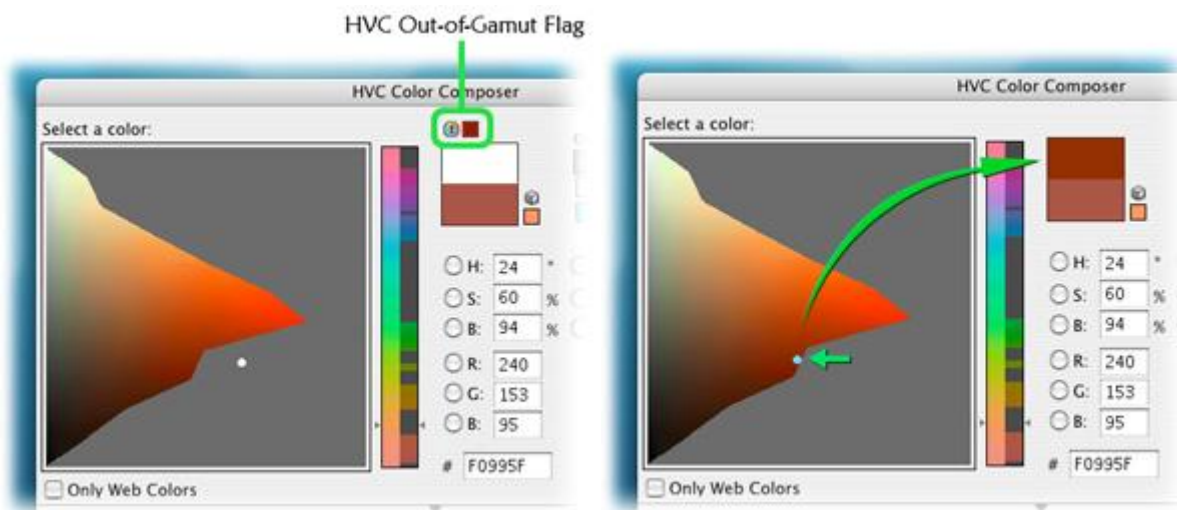


Figure 2.4

Split Slider

As an added convenience, the color picker features a "split slider" (see Figure 2.5 below). On the left side of the slider is an unchanging gradation, showing you the general range of the active axis (hue, value, etc). On the right side is a gradation showing the range for that axis (e.g.), given the current position of the other two (e.g. value and chroma). So the right side depends on the selected color, and changes as you pick new colors. It also shows positions on the axis where the colors are outside the HVC bounds.

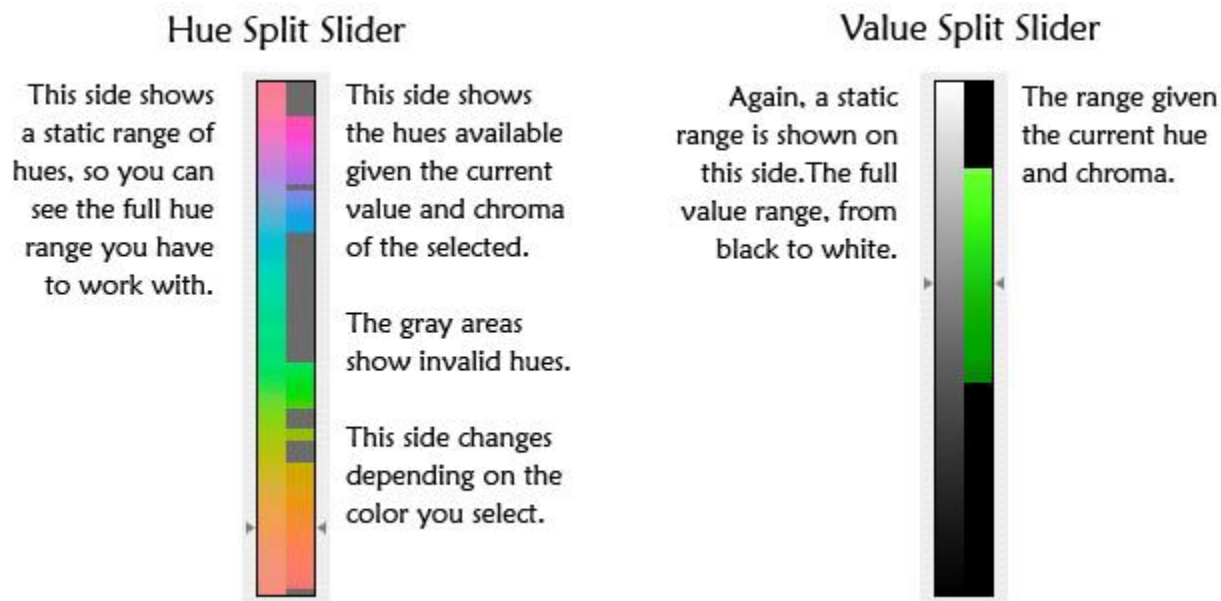


Figure 2.5

Other Color Spaces

All the other color spaces standard to Photoshop are included: HSB, RGB, Lab, and CMYK. Activate these the same way you activate HVC for selection: click one of the radio buttons next to the space and particular axis you want to view. The other spaces benefit from the split slider as well. And just as with the standard color picker, if you select a color using one space, the numbers for that color in the other color space text boxes are automatically shown (see

Figure 2.6 below).

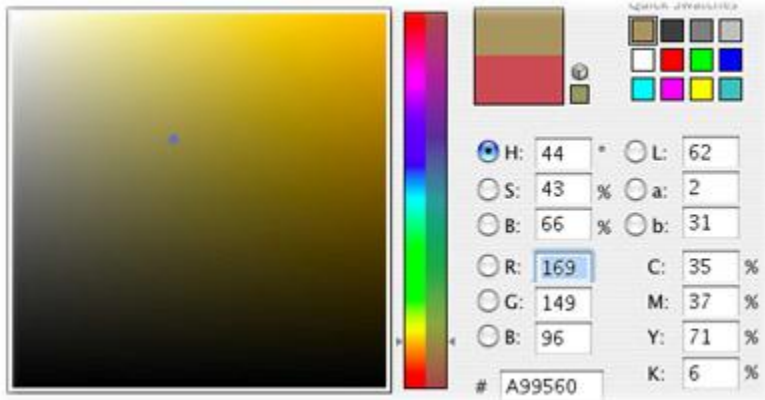


Figure 2.6

View the next topic: [3. Measuring contrast](#)

Master Colors

3. Measuring contrast

An important and convenient feature of the HVC Color Composer is the Contrast Measurement Utility. It looks like this (see Figure 3.1 below), appearing just below the color space visualization:



Figure 3.1

To get a precise measurement of the contrast between any two colors, first click one of the swatches, and then pick any color. Then click the other swatch, and pick another color. You can see the contrast between the two colors (see Figure 3.2 below, the strength of the line separating both colors), and the contrast measurement appears next to them.

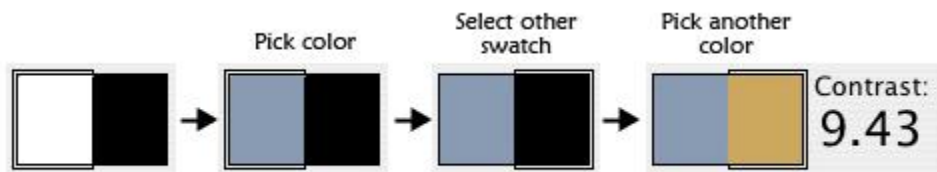


Figure 3.2

Note, if you ever want to retrieve a color from one of the swatches (pick that color again), simply double-click the swatch.

Contrast can be measured very precisely, more so than with any other tool, because of the accurate nature of HVC. To

understand what it means to measure contrast, consider measuring color difference on a grayscale, like a ruler (see Figure 3.3 below). It becomes a trivial matter, because you are only dealing with one axis. But using this tool, we can measure contrast just as accurately between **any two colors, on any axis of HVC, no matter how they differ**. Two colors can differ by all three qualities, hue, value, and chroma, yet we can know their precise relationship.

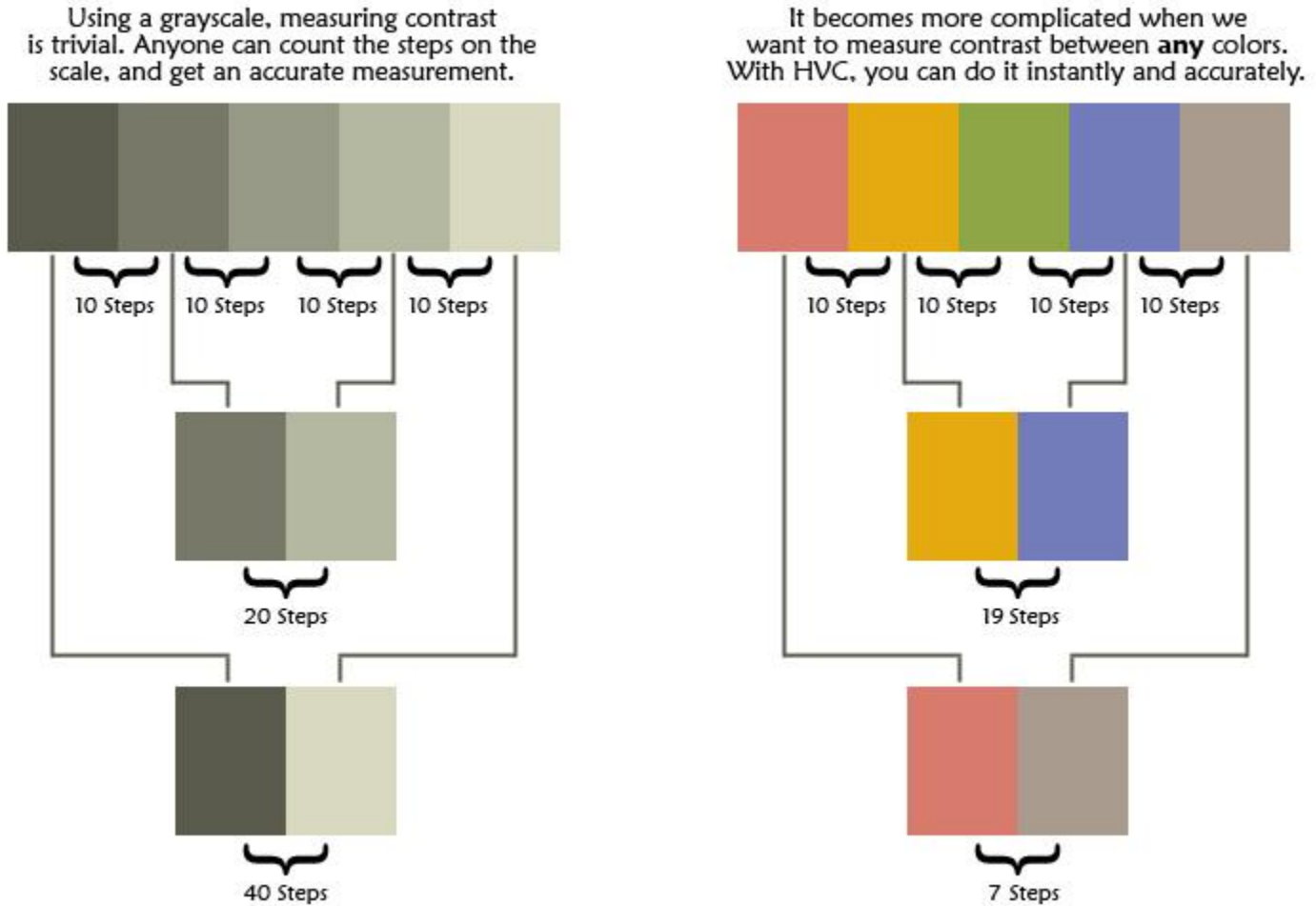


Figure 3.3

Measuring contrast accurately has great potential for improving your color selection. Understanding the visual relationships between your colors is the key to making better decisions. As you'll see soon, this is the basis for creating dynamic palettes with this program.

View the next topic: [4. Creating palettes](#)

Master Colors

4. Creating palettes

With the HVC Color Composer, you can instantly generate very dynamic palettes inside the color picker. The palettes are generated based on color relationships that you specify, so the palettes will have relevance to your work, unlike prefab palettes.

To create a palette:

1. Set the search mode.

First, you should decide what search mode you would like to use. The two modes are **Range** and **Proportion**. Switching between modes changes the set of parameters you are working with. To switch between modes, click the radio buttons next to "Range" or "Proportion" (see Figure 4.1 below, center-top).



Figure 4.1

Range mode: When Range mode is active, you select **one** target color, and **specify a contrast range**. Then, all the colors in the resulting palette will be **approximately that contrast range from the target color**. In other words, all colors in the palette will have the same contrast from the target color.

Proportion mode: When Proportion mode is selected, you select **two** target colors, and **specify a proportion (a ratio)**. All the colors in the resulting palette will be **approximately the same contrast from both target colors**.

2. Select target color(s).

In Range mode:

When creating palettes in Range mode, you only need to pick one target color. Simply pick a color, from anywhere in the color picker (either in the color space visualization, or from an existing palette).

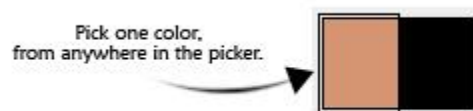


Figure 4.2

In Proportion mode:

In this mode, you pick two target colors (see Figure 4.3 below). Pick the first color by selecting any color. Then, click the other contrast swatch (see figure 4.3 below). Now select another color. The two contrast swatches now hold both of your target colors.

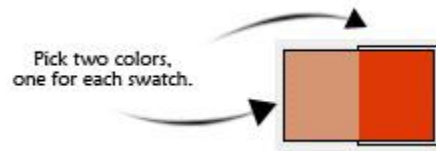


Figure 4.3

3. Set palette search parameters.

There are different search parameters to set depending on which mode you have selected.

In Range mode:

Specify a **Contrast Range** in the provided text box (see Figure 4.4 below upper-right). Every color in the resulting palette will be this contrast from the target color. For instance, if the Contrast Range is 20, all palette colors will be 20 contrast steps from the target color.



Figure 4.4

In Proportion Mode:

Specify a **Proportion** in the provided text box, by typing it, or by using the reveal-slider next to it (see Figure 4.5 below, upper-right). Proportions must have the format 1:N, with N between 1 and 5. Every color in the palette will have that contrast proportion between the two target colors. For instance, if the proportion is 1:1, then palette colors will have the same contrast from either color. If it is 1:2, they would be twice the contrast from one target color as they are from the other, and so on.



Figure 4.5

4. Set palette options.

No matter which mode you're using, you can set the **accuracy** and **depth** quantities (see Figure 4.6 below, lower-center). Enter the numbers in manuals or use the reveal-sliders next to the text boxes.



Figure 4.6

Accuracy: This dictates how close a color has to be to the parameters you've set before it is accepted into the palette. For instance, if in Range mode, with a range of 20, and an accuracy of 1.0, then all colors in the palette will be between 19 and 21 contrast steps from the target color.

Depth: This dictates how extensive the palette will be. Whatever level of depth you choose, the resulting palette will contain the same basic colors. But palettes with high depth will have a much longer list of more nuanced colors.

5. Create the palette.

Click the **Create Palette** button (see figure 4.7 below). The palette will appear beneath, in the palette segment.

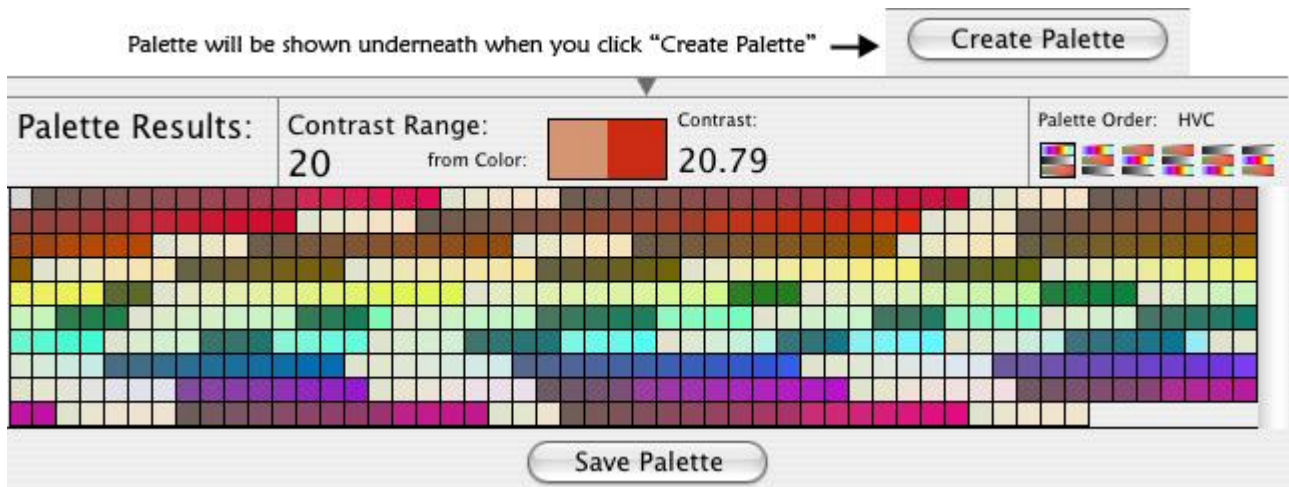


Figure 4.7

6. Pick colors from the palette.

To pick a color from the palette, simply click on it, or drag on it. The color will be loaded into the foreground swatch of the color picker (see Figure 4.8 below), which can then be used in Photoshop when you click "OK".

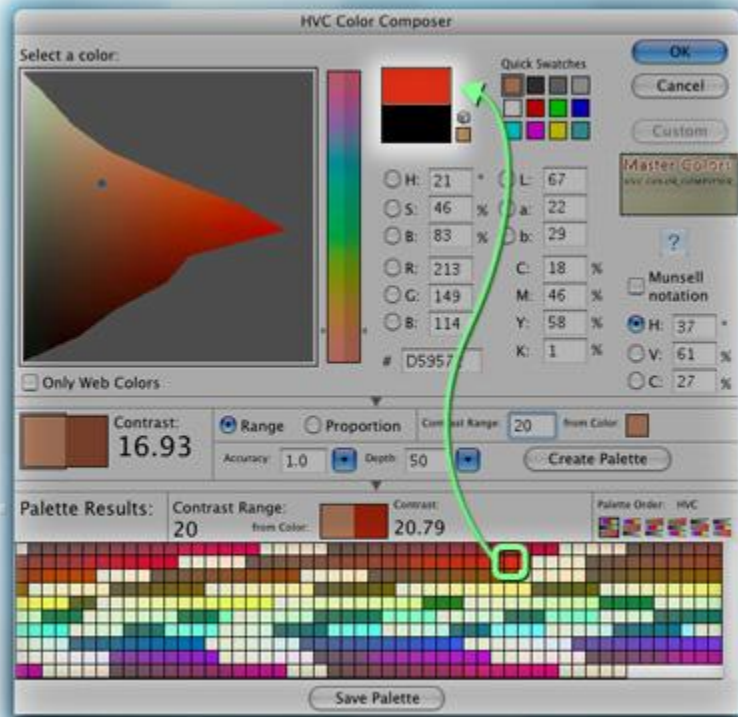


Figure 4.8

Note that when the palette is created, just above the palette is displayed some of the information used to generate the palette, such as the target color(s), and the range or proportion used. The display is different depending on the search mode used.

In Range Mode:

The contrast range you specified is shown, (see Figure 4.9 below) as well as the target color. Next to the target color is the color you have currently selected from the palette. This way, you can see the contrast from the target color, as well as the number of contrast steps from the target color, shown right next to the swatches. At any time, you can click these swatches to select those colors.

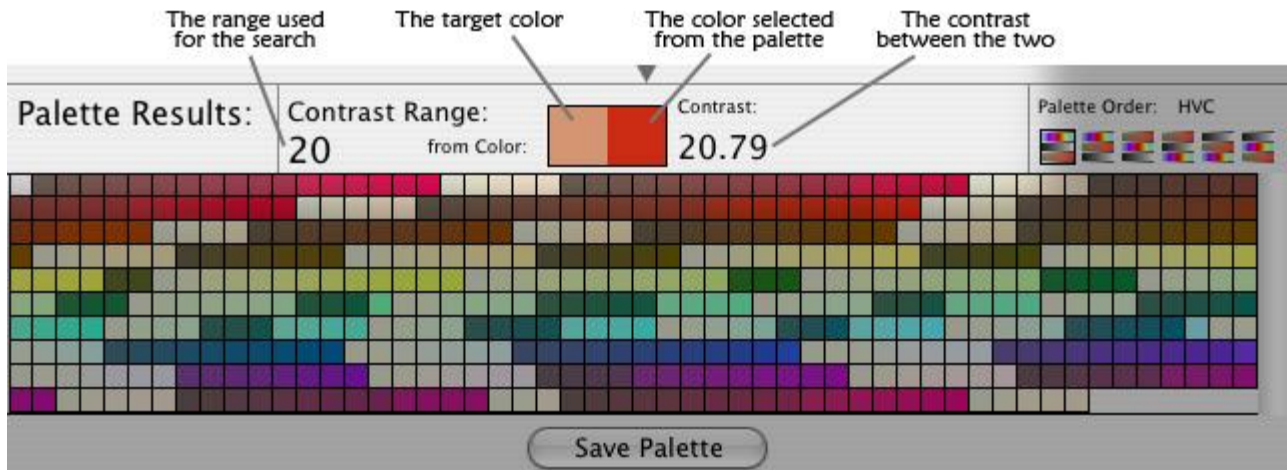


Figure 4.9

In Proportion Mode:

The proportion is shown, (see figure 4.10 below) along with both target colors you chose. The currently selected palette color is also shown next to both of these colors, along with its contrast measurement from both colors. These swatches can be clicked to select the colors they contain as well.

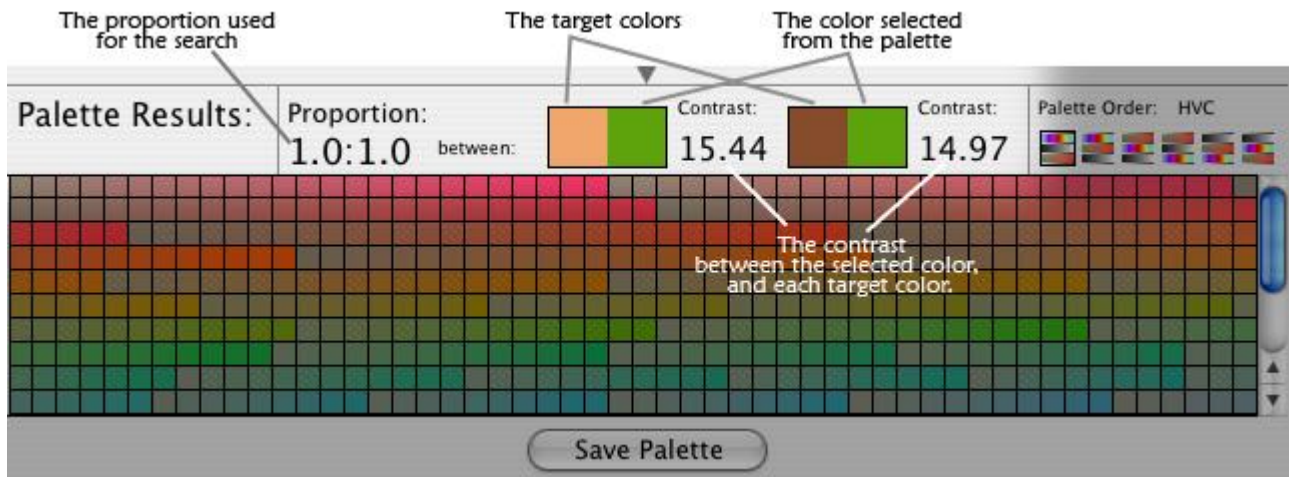


Figure 4.10

Sorting palettes:

The colors in the current palette can be sorted in six different permutations, to give you a different look and organization to those colors (see figure 4.11 through 4.15 below). Click on one of the six sorting buttons.

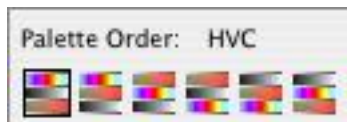


Figure 4.11

Some examples of one palette appearing in a few different sort modes:

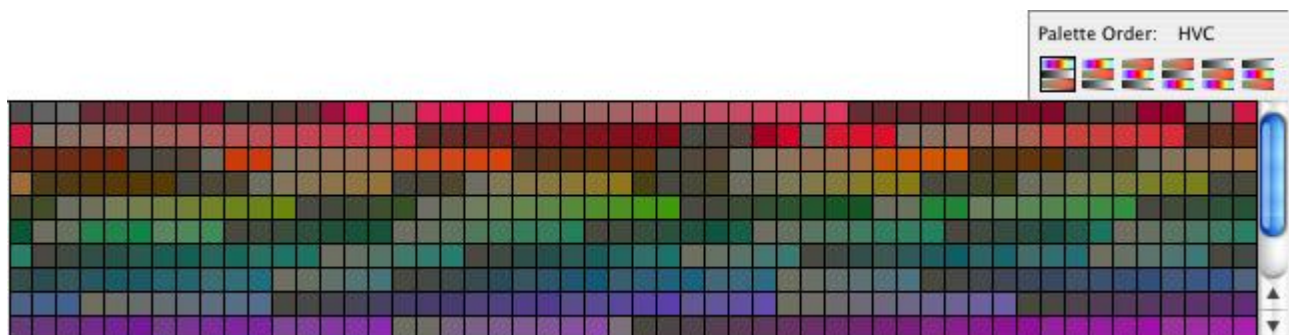


Figure 4.12

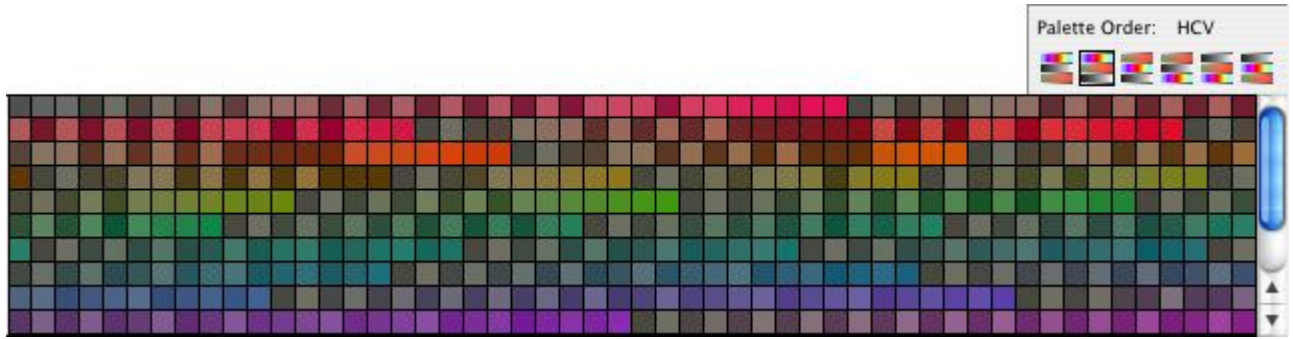


Figure 4.13

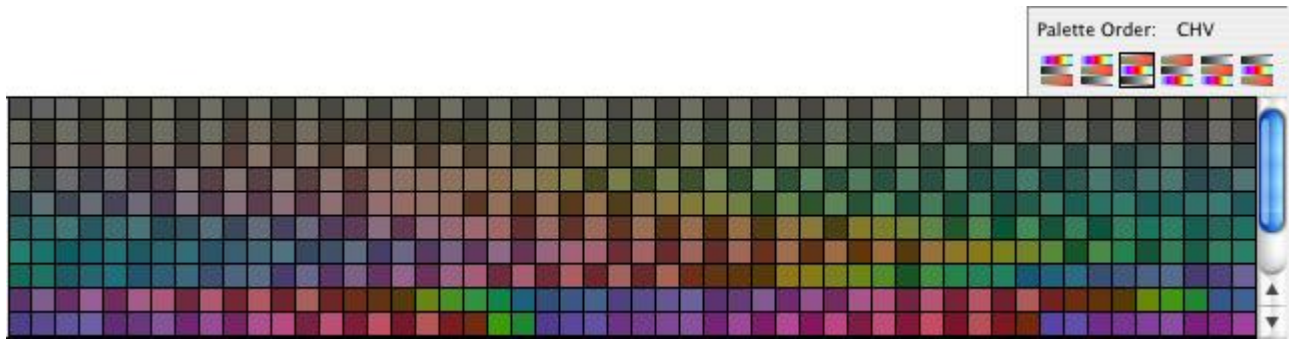


Figure 4.14

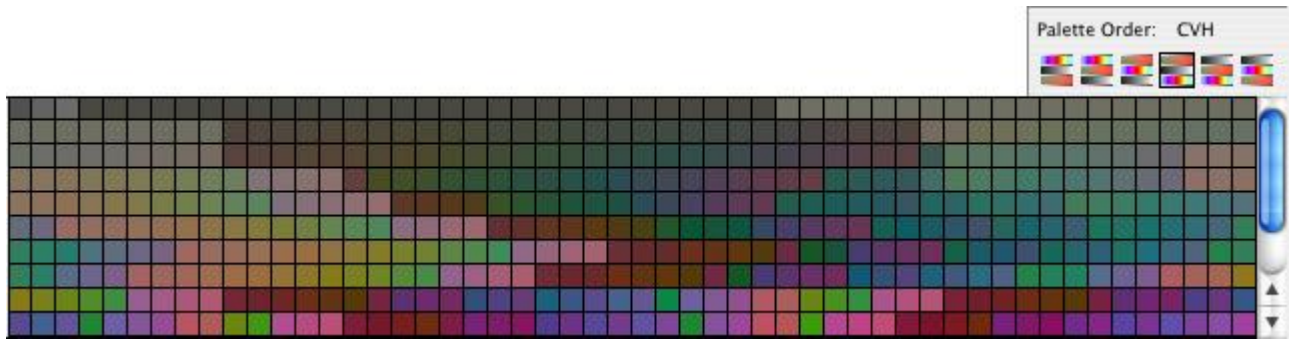


Figure 4.15

View the next topic: [5. Saving and using palettes](#)

Master Colors

5. Saving and using palettes

Once you have created a palette, you can use it to pick colors from within the color picker. But if you'd like to have access to them outside of the color picker, you can always save your palettes in the Photoshop palette file format. To save the current palette, click the "Save Palette" button beneath the palette (see Figure 5.1 below).



Figure 5.1

This will open a save prompt. Give your palette file a name (make sure you keep the ".aco" extension at the end), and click "Save". Make sure you have noted where you saved it.

To open your palette in Photoshop, make sure the "Swatches" window is visible. If you don't see it, in the menu, go to Window->Swatches. Click on the arrow on the upper-right corner of the window, and click on "Replace swatches." (see Figure 5.2 below)

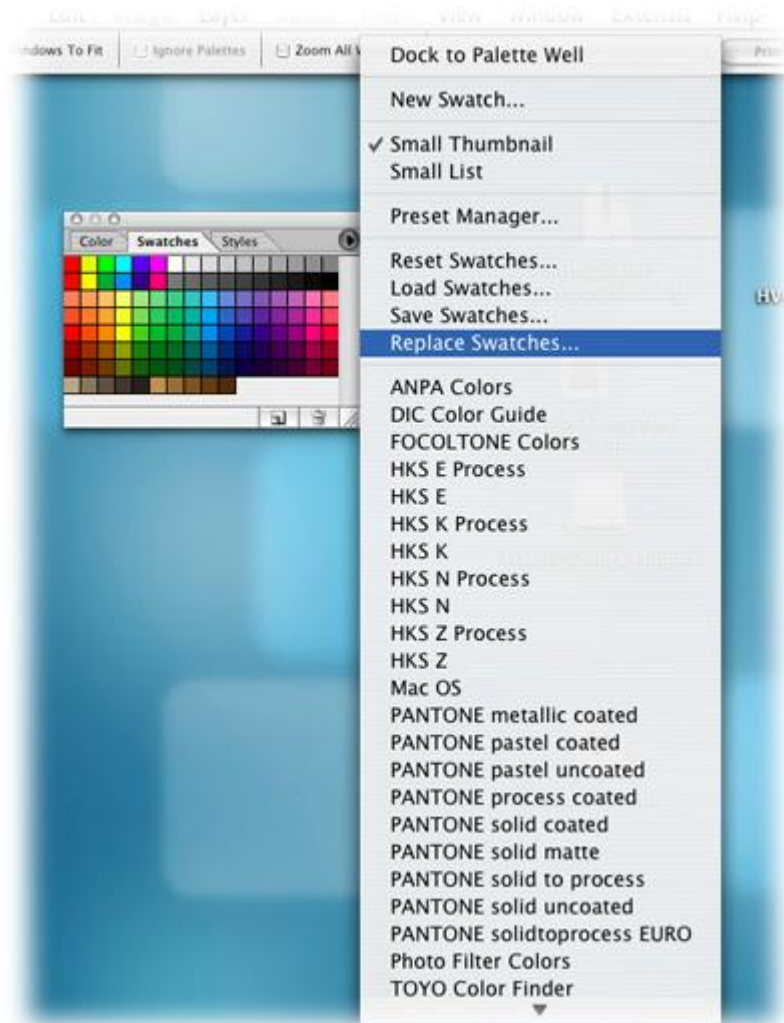


Figure 5.2

This will display an open file prompt. Find and open the palette file you just saved. That palette will then be loaded into the Swatches window.

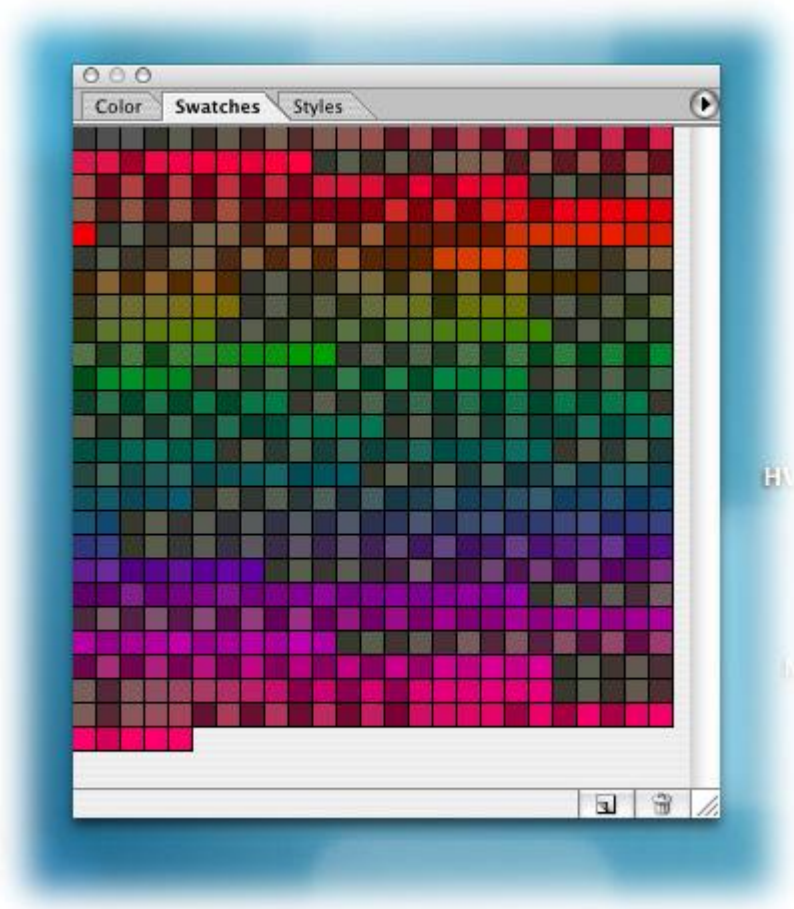


Figure 5.3

Now you can select your palette colors directly from the swatches, and quickly apply them to your work.

View the next topic: Back to [Overview](#).