User Manual

Version 1.0

Documentation for WebColorPicker

WebColorPicker©
for Mac OS X

OS X color picker plugin
for HTML, CSS and other programming languages
with hexadecimal support

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This manual designed and created with EazyDraw.

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Chapter

1 Welcome To WebColorPicker

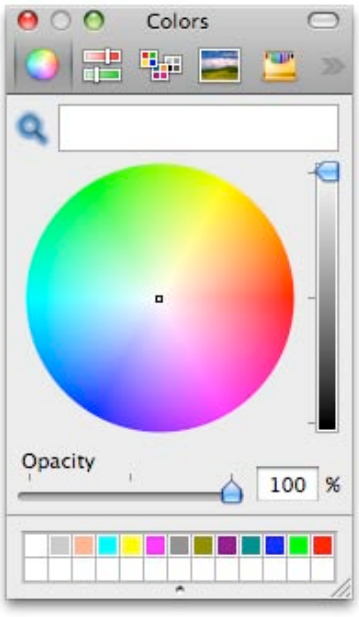
Getting Started

Thank you for selecting WebColorPicker, a color picker plugin designed especially for web designers and software developers using Mac OS X.

If you have used an earlier version of WebColorPicker, we recommend that you read the README file provided with your downloaded disk image. This documentation will highlight recent developments or contemporary installation instructions. This printed manual is designed for assisting those new to WebColorPicker or the use of hexadecimal color specifications in HTML and CSS documents, and those in need of detailed reference information.

What Is WebColorPicker

WebColorPicker is a plugin addition for the Mac OS X operating system. Once installed it is accessed from the main OS X color selection panel (usually recognized on OS X by the colorful "color wheel"); it is available for integrated use with any OS X application that uses the system wide color selection panel. At the time of this writing (circa Leopard) Apple provides 5 color pickers, the "color wheel" and 4 others.



The Apple standard color selection mechanisms are not particularly appropriate for those doing web design with HTML or Cascading Style Sheets (CSS). Software developers often need to programatically specify colors using declarative statements. WebColorPicker provides several features to enhance the color selection, specification and inspection process for these situations.

At the core, WebColorPicker supports inspection and setting of colors as HTML color codes which use Hexadecimal doublets to specify Red, Green, and Blue additive color components. Paste "in" a color code from a text editor to see the color. Pick a color with a mouse click then paste a ready to use color code into the html or software source code.

In the extreme, WebColorPicker has quite a few tricks that a professional web designer or software engineer can incorporate into a work flow to save keystrokes and improve productivity. WebColorPicker understands CSS shortcuts (#333 -> #333333), and manages defined scope color lists like "web-safe" or "SVG Keyword."

WebColorPicker was originally designed to be used with EazyDraw. Web design professionals (and amateurs) requested the ability to input hex color codes - something they need to do frequently. The OS X color picker system supports rgb color component specification but not in the hexadecimal form. Hence, EazyDraw users (and the EazyDraw developer) were required to have the calculator and various handwritten crib-sheets when working with source code that presents colored graphic objects. As the new color picker was implemented, it immediately became an "always open" palette for graphic design and software development projects. This led to the independent packaging as a general use color picker plugin.

Capabilities

The fundamental capability of WebColorPicker is to be able to input and visualize formatted color specification text fragments. For example, paste "#ffa500" into WebColorPicker and immediately see that it is orange. In a complimentary respect, using the SVG color list click on a orange color swatch and paste the color code into a text based source code file.

To facilitate this basic operation WebColorPicker provides 3 different color selection views to conveniently visualize different defined color spaces available to source code developers and web designer on OS X. These are Hex Sliders, Palette, and Cube.

Hex Slider View

The Slider View provides six sliders that allow convenient (no typing) specification of the six hex digits that define a unique color code. Each slider will respond to a click, or a click and drag setting the corresponding hex numeric value. The specified color is automatically computed and entered in multiple ways: as a hex code, as an rgb code (rgb(255, 165, 0);) a color swatch, and optionally a code snippet. Any of these, the actual color or the text, can then be dragged to any open document or drawing. The color defined by the sliders is a precise hex color with no residual leakage into the full 32 bit millions of colors color space, which may be important in some situations.

To use as an inspector select a color on a drawing or document and immediately see the three hex components. The components are visualized by the quantized positions of the sliders and the hex numeric values displayed. If the color is not precisely a hex color the numeric values are shown in red with the residual accessible as a tool-tip.

A shift-click will "tie" the two sliders to work in unison, creating the common shortcut color codes with doublet hex digits, for example, #333333 or #cccccc. This is a more conventional shorthand than completing with zeros for the least significant hex digits (#666666 instead of #606060).

Palette View

The OS X operating system provides support for Color Lists. These are defined tables of specific colors, in comparison with a continuous spectrum of rgb colors specified as 3 floating point fractions. The Palette mode displays color swatches for each color of an OS X color list. Simply click on the swatch to see the exact hex components, the name assigned to the color, the color itself, the hex and rgb html code text, and optionally a code snippet.

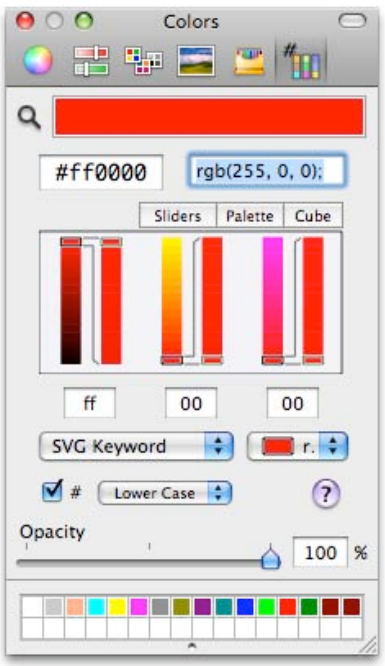
A popup menu with color indicators is provided to inspect the color list and to select individual colors.

The WebColorPicker ships with 3 color lists that are useful for web design, they are:

Browser Safe (sometimes called Web Safe),

CSS Keyword.

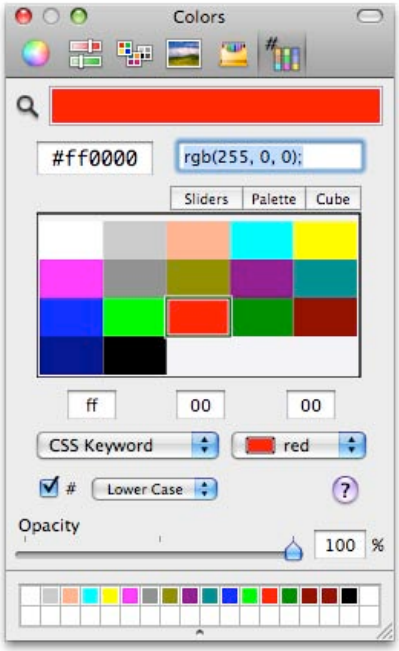
SVG Keyword.

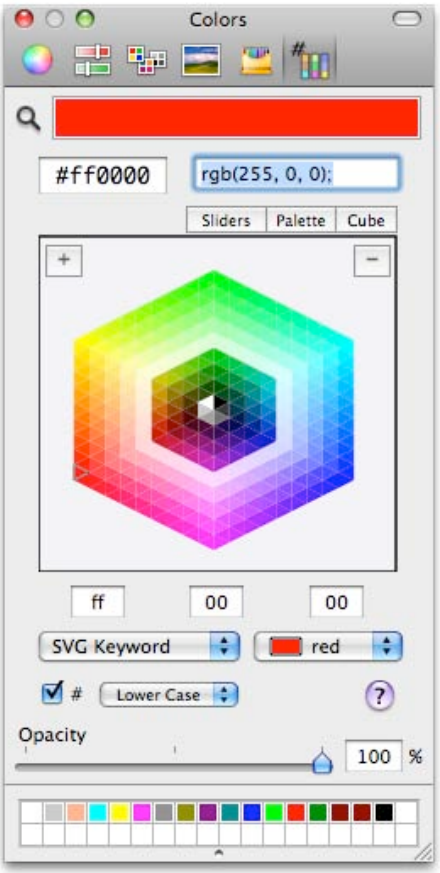


These are automatically generated and installed on OS X the first time the Color Picker panel is accessed. Once installed, they are available for use with any application, any other color picker, and naturally, WebColorPicker's Palette view.

WebColorPicker's Palette view will support any color list installed on OS X, more specifically, any "solid-colors" color list. Pattern color lists are detected and prevented from access since they are not defined for the required rgb color space. So you may easily incorporate specific color lists that might be defined for an individual web design project. This is a valuable technique when it is desired to limit a design to a small set of standardized colors.

Autocompletion of text entry is supported for the rgb text entry field. For example, typing orange will select the color from the color list and define the color codes ready for copy and paste without typing any hex codes. Naturally this has the added advantage of avoiding numeric typing errors.





Color Cube

The color cube is a web-designers version of the continuous color wheel. It is a cube visualization of the discrete 256x256x256 color space use for html, CSS, and various programming languages. The number of colors shown is adjustable from a ring size of 8 colors up to a ring size of 16 colors. As described with the other two views, full bi-directional support to and from text editors or graphic design applications is supported.

Applications

Color Pickers are used to select colors for graphic and text objects in OS X. Normally they are used in a direct fashion, the target object is selected, a color well is enabled and a color indicated on the color picker. Then this color is communicated to the primary application and the the target object assumes the defined color. In some instances the color picker is used as detailed inspector, but normally inspection consists of a simple visualization of the color in the primary color swatch.

WebColorPicker may be used in this same manner, the user interface is fully consistent with the functionality and use of color picker plugins on OS X. WebColorPicker provides added capability in the inspection and application of colors defined in the precise numerical coded fashion used to specify colors in HTML and Cascading Style Sheet (CSS) source text documents. The added alpha-numeric input fields found on the WebColorPicker are designed to assist designers working with these source code documents.

The above application will be of primary interest to professional designers working in the field of web page design. The compact numerical nature of the WebColorPicker interface is a useful compliment to the default Color Pickers provided with OS X.

Software developers working on iPhone applications will find the hex and rgb color code capabilities of WebColorPicker useful as well. Inspect and select a proper browser compatible color with one of the visualization views and obtain a "typo" free text code snippet that is ready to paste directly into application source code.

There is specific support for several software languages including ObjectiveC and Java. In a similar fashion WebColorPicker will prepare a defining color declaration statement for instantiating the target object in RGB color space.

If some of the above jargon has no meaning to you, don't worry, these details are available for the professional in the appropriate fields, but the added complexity is minimal and not in the way for normal occasional use. Many will find this small utility useful because of the ease of use of the sliders or the aesthetic appeal of the color cube.

Chapter

2

Installing WebColorPicker

Drag and Drop Install

If you are familiar with the phrase "drag and drop install" and the OS X operating system, the paragraph below will be all that is needed of this chapter. If you are less experienced, then the details will probably be interesting learning and will prove relevant for better understanding of your computer and the installation of plugins in the future.

Color Panel Plugin

WebColorPicker is provided as a Bundle Plugin for the OS X system wide color panel. Place the WebColorPicker bundle in the "Color Pickers folder" in either the System Library location (/Library/ColorPickers) or a specific local user library (~/Library/ColorPickers). Apple does not want the third party plugin placed in "their" "Color Pickers" folder (/System/Library/ColorPickers/) but we have seen no problems in operating in this manner. For an application to access the color picker you must quit and re-start the application after placement of the WebColorPicker bundle. There is no need to re-boot the system, only a quit and restart is needed. To remove the bundle, all applications using the color picker plugin must quit.

Entering License

WebColorPicker is a share-ware application. It is not required to pay and obtain a license in order to use the plugin. An unlicensed copy of WebColorPicker is not hindered or limited in any fashion, all features and capabilities are available in the unlicensed mode. Unlicensed copies will present a share-ware notification panel with each initial launch. This notification sequence is removed for licensed users.

A purchased license is a small alphanumeric code. The code is case sensitive. Enter the code by clicking the Settings button found at the lower section of the WebColorPicker section of the main system color selection panel. See chapter 03 for instructions for accessing the WebColorPicker panel, a host application is required as WebColorPicker is plugin, not a standalone application. Double clicking the WebColorPicker bundle (in the Color Pickers folder) will not launch WebColorPicker.

Preferences File

When WebColorPicker is launched for the first time, a preferences file is created to save persistent settings that are maintained when you quit and return to WebColorPicker. This file is saved in your OS X Applications Support folder that is found in the Home Library folder. This file is in a folder called webColorPicker. Note that since WebColorPicker is a plug-in and not a primary application, the preferences and settings are located in the Applications Support folder rather than the primary Preferences folder. Settings for WebColorPicker will be the same for all applications that use the color picker. The name of the settings file is: Settings.plist.

The plist file is a text file; it may be viewed with any text editor. The text is formated according to XML design conventions and more particularly as OS X property list. Property Lists are made up of arrays and dictionaries. The values are self-documenting with descriptive English language names and values. If you have installed OS X's development tools there is an application called "Property List Editor" that may be used to view or edit the contents of the file.

It is, as you might expect, not advisable to edit or change the contents of the preferences file. It is very easy to damage the file with a simple text editor and this should be avoided. If the Property List Editor is used, the base file format is safe from damage and WebColorPicker would likely be able to work through any errors introduced in this fashion.

Full documentation for the Preferences File is covered in Chapter 06.

Color Files

WebColorPicker installs three color list files. These are placed in Home Library Colors folder. The files end with the extension "clr." The format is an OS X system defined format used for storing lists of colors.

These color lists are installed the first time WebColorPicker is accessed. The actual WebColorPicker panel needs to be selected from the system color panel to cause the initial access. The color lists created are used to provide three standard color lists that are useful for web design and software development.

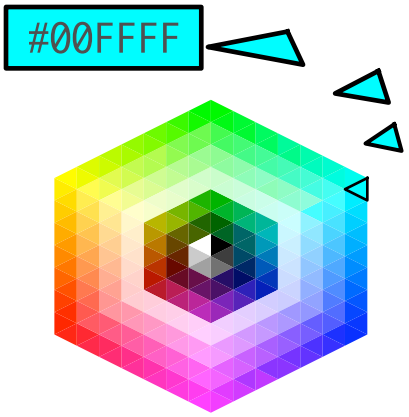
The color lists installed are named, "CSS Keyword", "Browser Safe", and "SVG Keyword." Named color lists are not required by the WebColorPicker, and many web design projects will not require strict use of these standard colors. Indeed their use is more a historical note at this time as modern web browsers and operating systems do not require limiting colors to a small defined set of acceptable colors. But the color names used in a color list can be helpful and WebColorPicker provides autocompletion that keys off color names present in a color list.

The clr files created by WebColorPicker are available as OS X standard colors to any OS X application that uses the system color picker palette technology. You will see these color lists and their colors with any color panel plugin that works with color lists.

Note, normally one uses the "color wheel" for picking colors. There is an Apple provided color picker for managing the "color list" mode. There you will see the color lists created by WebColorPicker. All standards are followed carefully for creating these publicly available clr files. Problems can arise if other applications are not fully up-to-date with the standards. In particular some older applications do not support transparency and problems can arise, but these are rare now that OS X and most available applications have matured to support the modern standards including the support of transparency. Check the documentation and support resources for the other application if problems arises.

Plugin Bundle

The WebColorPicker bundle is represented in the Mac OS X finder with the icon shown to the right. To activate and use WebColorPicker this Bundle is placed in the "Color Pickers" folder. This is a "magic" folder and placement in this specific location is required.



This design makes it easy to uninstall WebColorPicker, simply remove the bundle from your system. The actual binary image (program) and all the necessary associated files and resources are hidden from view and lumped into this single bundled entity.

If you are interested, you can investigate the contents of the plugin bundle, select the WebColorPicker bundle in the finder, control click and access the provided popup menu - select "Show Contents." Then you will see that the plugin bundle is actually just another folder. If you investigate these hidden folders you'll find the actual binary module.

Uninstall Checklist

Since WebColorPicker is a drag-and-drop bundled plugin, uninstall is trivial, just move the WebColorPicker bundle to the trash and empty trash. There are a few other files created by WebColorPicker; they are passive. They should not interfere with your system or any other application on OS X. The .clr files are public and designed to be used by other OS X applications. You may remove them if you wish or if they are causing problems for the color picking actions of another application.

Here is a full list of all files automatically created by WebColorPicker. The "~' sign, means "your home folder or directory", a unix convention.

WebColorPicker Bundle
~/Library/Preferences/com.dekorra.EazyDraw.plist
~/Library/Application Support/com.eazydraw.webcolorpicker.plist
~/Library/Colors/SVG Keyword.clr
~/Library/Colors/Browser Safe.clr
~/Library/Colors/CSS Keyword.clr

Upgrading WebColorPicker

The fact that this is a system wide plug-in means that all applications that are using the plug-in need to quit before the old plugin may be removed or replaced. With this caveat upgrading is a simple process of replacing the old plugin with the new one.

The best way to determine if it is safe to remove the old plugin is to move it to the trash and execute the menu command Empty Trash. If an application is using the plug-in, OS X will give warning and not allow the bundle to delete. In this case you will need to investigate further and try to determine the locking application that is running and using the plugin. In a worst case it may be necessary to re-boot the system and then move the plugin to the trash immediately after booting up.

Note that an application may have access to the system color picker even if you are not actively using the color picker. Many applications will load and access the color panel at launch time, or soon thereafter. In this case it may be *in use* even if it is not open and on the desktop.

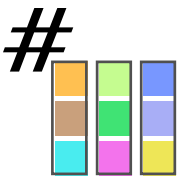
Once the old bundle is successfully removed to the trash, the new upgraded version is installed by simply placing it in the "Color Pickers" folder then launching a hosting application that presents the system color panel.

Chapter

3

Color Panel

Accessing WebColorPicker



WebColorPicker is a plugin for your main system color panel. In order to access or use WebColorPicker you need to open the system color panel from a hosting application. Hopefully your application's technology base is new enough and provides support for the OS X color panel. If an application's base technology was ported from OS 9 or another operating system it might not integrate with the OS X color technology and you may need to use another application to "host" the color panel.

Host Application

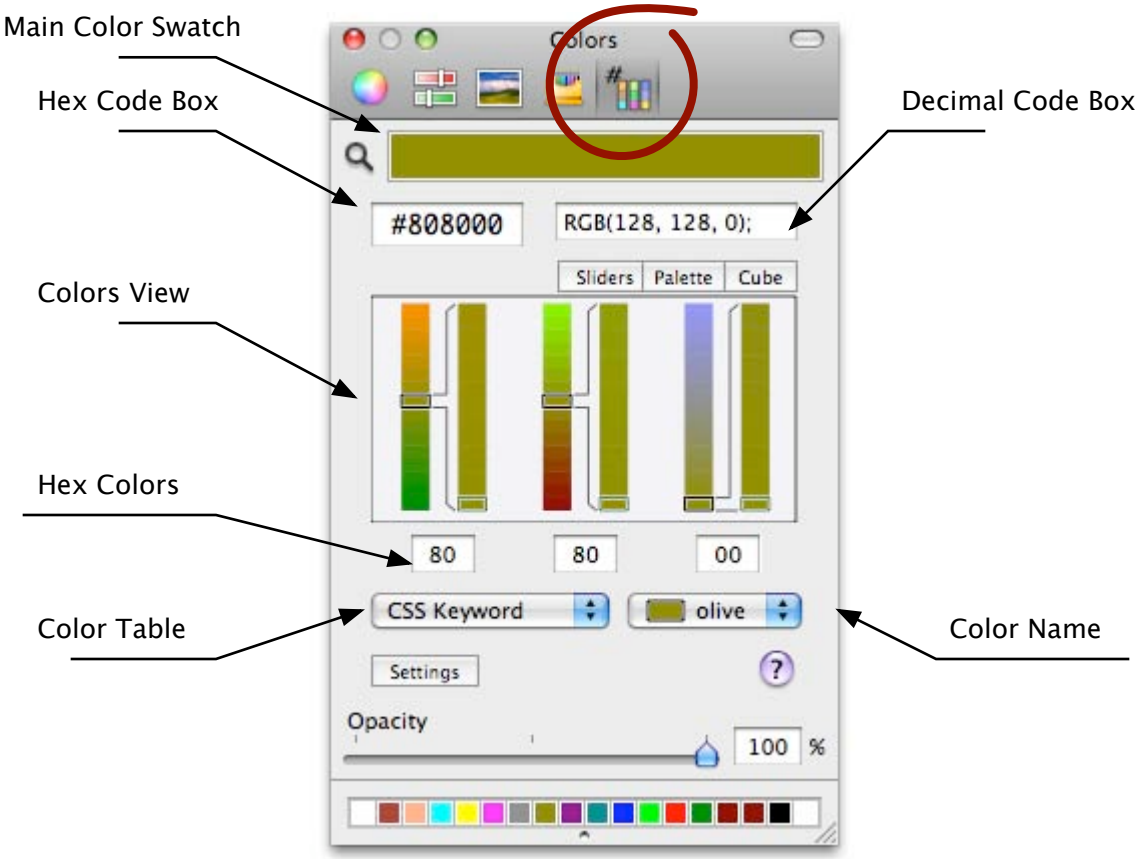
Text Edit is always available to act as a host. It is based on the latest OS X technology. With Text Edit the color panel is opened from the Format main menu, Font submenu, Show Colors command.

EazyDraw is another modern "cocoa" app which supports the OS X system color panel. With EazyDraw open the color panel by clicking on any color well, there is one on the Color and Style panel accessed from the top of the Tools main menu.

If your application does not directly support the system color panel you should still be able to drag and drop or copy and paste to your application's documents or drawings using WebColorPicker with one of these applications acting as an intermediate host.

WebColorPicker Icon

WebColorPicker will be only one of the color pickers found on your system color panel. WebColorPicker has a specific job to do, it is not intended to be a complete color selection solution. Each color panel is accessed by clicking on the corresponding icon in the System Color Panel's mini-toolbar found at the top of the panel. WebColorPicker's icon is



shown and circled on color panel image above. Click the WebColorPicker icon to explore the three views used for managing color codes with WebColorPicker.

Fixed Panel Elements

There are three forms for the main Color Views area. Immediately above and below this area are other elements of the WebColorPicker which are common for all three color viewing modes. Refer to the figure above to associate names with user interface elements.

Hex Code Text Box

A Hex Color Code is a hexadecimal triplet representing the colors red, green and blue. A color is formed by adding the corresponding amounts of red green and blue. Each color component is defined over an unsigned integer range of 0 to 255 decimal. This range of integers can be represented by two hexadecimal numbers (which we will call hexadecimal digits). A single hexadecimal digit covers a range of 0 to 15 using decimal numbers for the range 0 through 9 and the letters A through F to represent the numbers 10 through 15.

The most widely used capability of WebColorPicker is to specify and inspect the hex color codes used with HTML and CSS source files. This value is shown top left of the WebColorPicker view, right below the main panel color swatch. The value shown in this field is a hexadecimal number, 6 hex digits long. The value may be preceded by a "pound" sign, the setting for this is found on the Settings view. The "pound" sign is a flag in html to indicate a hexadecimal number follows.

If a color is selected in any fashion the hex code for the color is shown in the Hex Code Box. In a nearly absolute sense the code will correspond exactly to the color showing right above it in the Main Color Swatch. Naturally a color may be selected by clicking on a color in the WebColorPicker color selection view, but the actual hosting application has primary control over which color is present in the Main Color Swatch.

The HexCodeBox accepts text input. When a new hex code is entered WebColorPicker will select the corresponding color and display it in some fashion in the color viewing area. And the entered color is sent to the hosting application.

Note a color that is entered (either by clicking on a color or entering a hex code) is not actually placed in the Main Color Swatch, at least not by the WebColorPicker. The color is sent to the hosting application, the main intent of your actions are to apply a color to something in the hosting application. Then the hosting application will place "a color" in the Main Color Swatch. Note that the hosting application may actually send back a different color, there is no guarantee that it will accept the color selected without modification.

Having explained these operating details, in most cases the operation is straight-forward and a selected color is simply applied to the target object in the hosting application and ends up in the Main Color Swatch with the expected corresponding hex code shown in the Hex Code Box.

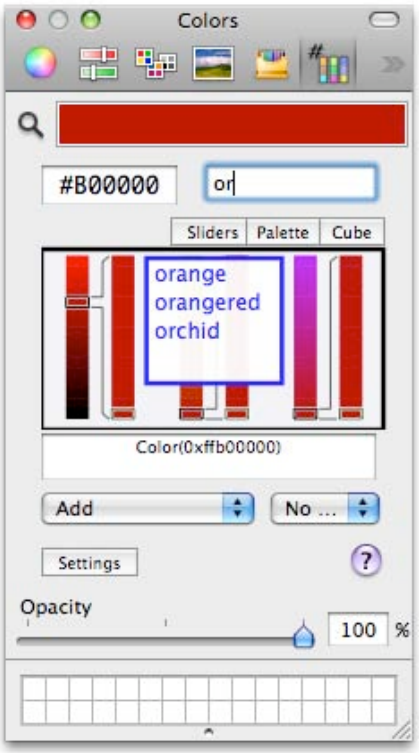
Entry errors for hex code values are handled intelligently while complying with the strict 6-hex-digit format. Missing values are not set to zero, they are in general expanded by duplication of least significant digits. For example a 3 hex digit short cut entry is allowed, the 3 values entered are expanded to 6 by duplication. For example, enter 369 and the value is expanded to 336699. If there is no logical expansion for an otherwise erroneous input, an error message is flashed over the color view and the previous value is retained.

Decimal Code Box

The Decimal Code Box is found to the right of the Hex Code Box. This field displays the same color (Main Color Swatch, Hex Code Box, and color view as explained above) in the CSS RGB color code format. It is convenient when CSS codes are not needed because it shows the hex color pair values in decimal notation, kind of an on-the-fly hex / decimal crib sheet.

The Decimal Code box is available for copy to system pasteboard. This can be used to save typing CSS color specifiers. Pick a color, select the Decimal Code text in the text box, do Copy then paste into the source code file.

The Decimal Code box accepts CSS color specifiers as well. The parser is not elaborate but if the format is reasonably similar to the CSS specifier format the decimal colors are located and fed into the host application. Results are then re-formatted to the strict CSS format.

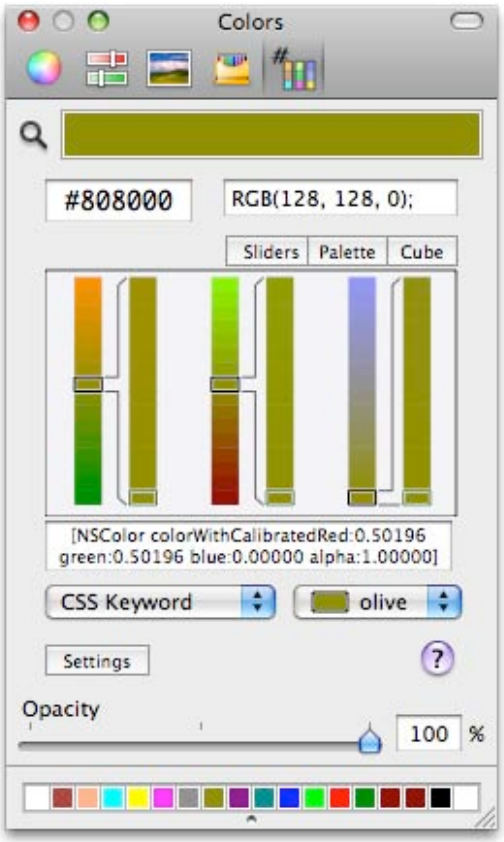


Named Colors

The Decimal Code Box accepts input of named colors as well as rgb CSS color specification statements. The names recognized in this field are names from the selected color list, which is shown immediately below the color selection view. The field provides auto completion for typed entries. If matches are found in the color list, the completed available colors are shown in a flash up temporary right below the entry, on the color selection view. The names are provided there as clues for continued typing.

If a complete color name, one that matches a name in the selected color list, is entered the RGB field is completed with the corresponding RGB decimal code in CSS format. The color is accepted by typing "return."

Hex Color Components



Below the color inspection view, there are 3 hex fields; each providing inspection and input for a pair of hex digits. They inspect and define the Red, Green and Blue components in order from left to right.

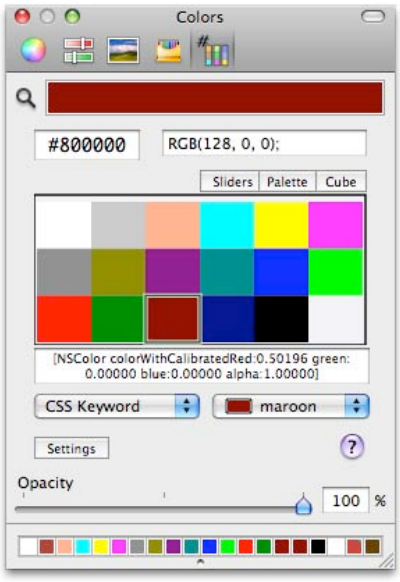
Each field will accept hex values. Error handling is as described above with single digit entry expanded by duplication. This means that to enter a value such as "FF" it is sufficient to enter only "F." Explicit errors are flagged with a flash message and the previous entry is maintained.

The Hex Colors fields will indicate in Red when the color presenting in the Main Color Swatch has round off residuals for the associated color component. The details provided above can explain how this can happen. Keep in mind that there are many ways to specify a color and the number of possible colors is greater than the number of colors that the 3 pairs of hex digits can represent. For example, if you click on the Color Panel's Color Wheel, the point clicked is not likely to match with one of the specific hex colors. In this situation WebColorPicker shows the actual color and the hex code closest to that color. Normally you will not be able to distinguish the slight difference in shade between the actual exact hex color and the more precisely defined color. But what happens to the two distinct colors in subsequent processing is difficult to predict. So WebColorPicker indicates this small difference by showing the value of the corresponding hex pair in red.

The "tool tip" (the pop-up yellow note that appears when the mouse is hovered over a text field) will indicate the Hex pair's decimal value and show the residual (remainder) if the hex pair does not exactly match the selected color.

Code Snippet Field

The Hex Colors fields may be replaced with a Code Snippet field. The change is made by clicking Settings and checking the Code Snippet checkbox. The panel to the right shows selecting the Code Snippet mode. It is a two step process, the check box will cause Hex Codes to be replaced with Code Snippet. Then the actual format for the code snippet is selected from the popup menu named "Code."



A Code Snippet is used to automatically create a line of software code that can be used as a color specification or instantiation statement in a particular programming language. If this is not making any sense to the reader – just skip the section as this capability likely does not apply. If on the other hand you make a living writing software you probably have already figured it out and can skip this section as well. For completeness we shall continue.

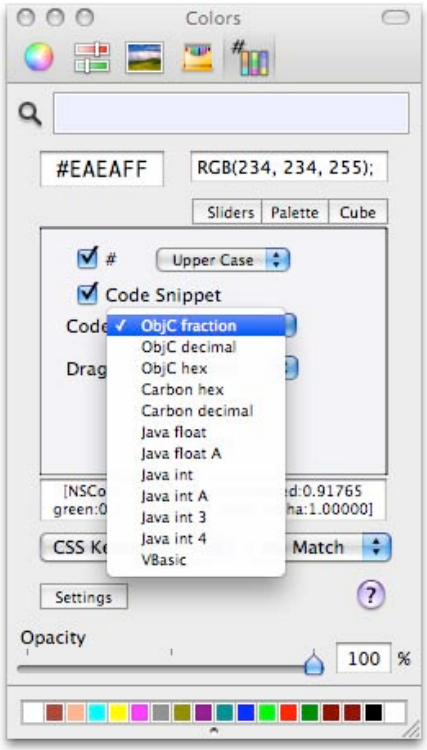
The Code popup menu, accessed by clicking Settings, determines the format of the Code Snippet. There are selections for different programming languages and different forms for each language. Inspection is the best way to determine the meanings of each selection, changes are reflected immediately in the Code Snippet text box.

Formats for code snippets may be modified or new ones added using a text editor or the OS X utility application Property List Editor. Each entry in the Code popup menu is defined by a dictionary with three strings located in the WebColorPicker Settings file found in the Applications

Support folder (~/Library/Application Support/WebColorPicker/Settings.plist). See chapter 06 for detailed specifications.

The Code Snippet will reflect the current color. The text field is selectable so the line of code may be copied from the text box and pasted directly into source code.

It is more likely that you will want to drag a code snippet directly from the color view to the code. This is enabled on the settings panel by specifying Code Snippet for the "Drag" selection. This can be important if your text editor is accepting colored text. If you copy and paste is possible that the host application will paste colored text into your code, normally an undesirable situation. When a code snippet is "dragged" from the color view WebColorPicker momentarily resets the color panel's color back to black during the drag operation so the pasted code snippet will not be inadvertently colored.



Color Lists

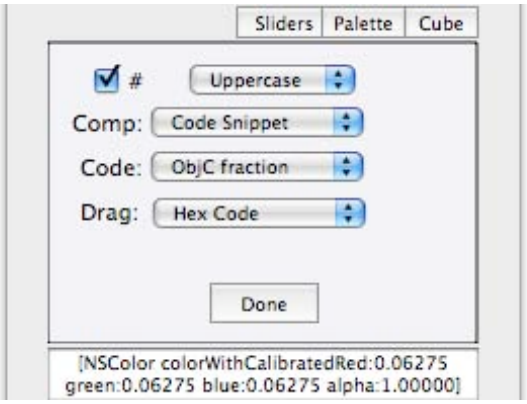
Below the Hex Colors / Code Snippet area are the Color List popup and associated Color Name popup menus. These allow WebColorPicker to work with OS X Color Lists. Color lists are saved in the user library hierarchy in a folder named Colors (~/Library/Colors). WebColorPicker installs three color lists that are useful for web and software design activities. Every color list has a name. Three provided with WebColorPicker are: Browser Safe (often called Web Safe), CSS Keyword, and SVG Keyword.

The SVG Keyword list provides defined color names that are supported by all major browsers.

Every color in a Color List has a unique name. The two keyword color lists use names defined by published standards in use in web and browser design. The Browser Safe list is named according to the hex codes which is a common practice among web designers.

Only one Color List is active for the WebColorPicker. The colors in this active list are compared with a color selected in WebColorPickers color view (or by an activity in the host application), a match or close matches are shown in the Color Name popup menu.

Since a color list is a rather small set of colors, it is common that there is no matching color in the color list. In some cases, there may be one or more colors that are "close." The Color Name menu will indicate these various states by showing a color or declaring "no match." If a color is similar but does not match, the name of the color is shown and an asterisk is used to indicate that it is not an exact match.



Settings

The Settings button replaces the color selection view with a small panel that manages a few preferences settings used by WebColorPicker. The parameters are rather limited in keeping with the focused scope of WebColorPicker. Selections here are automatically persistent. They will apply for all color panels that use WebColorPicker and they will apply when applications are closed and restarted at a later time. The values are saved in a Settings file in the Applications Support folder (~/Library/Applications Support/WebColorPicker/Settings.plist), see Chapter 6 for details.

The top check box identified by a "pound" sign is used to include a pound sign in the main Hex Code Box text. When checked the pound sign is included. This "pound" sign character is a key in HTML coding that signifies a hexadecimal number. It is a user preference to include this in the text provided by WebColorPicker.

WebColorPicker can work with upper case or lower case hex alpha letters (a, b, c, d, e, f or A, B, C, D, E, F). The popup menu next to the "pound" sign checkbox controls this choice.

The Code Snippet and Code Popup menu were discussed above, they control the presentation of a Code Snippet or the individual RGB hex codes below the color selection view.

Comp(ent)

The Comp parameter determines what is shown in the text/numeric field(s) just below the color selection view. The possible values are Hex, Integer, Fraction and Code Snippet. The default and most common selection will be the Hex value, this displays each component as a two digit hexadecimal number over the range 0 to FF.

Integer selection will display each component as a decimal number over the range of 0 to 255. Zero means "none" of the designated color and 255 means full maximum saturation of the corresponding color component.

Fraction selection will display each component on a scale of 0.00 to 1.00. For example a value of 0.33 red would be a "dark" red corresponding to a Hex value of 55.

Code Snippet will replace the 3 component numeric fields with one large text field to hold the full code snippet as defined by the selection of the "Code" popup menu selection.

Each of the fields display values as defined by the Comp selection and each field will accept input in define format. So for example entering "FF" when in the integer mode is an error input.

Drag

The Drag setting determines what form a Drag operation from WebColorPicker's color selection view will take. The possibilities are: Color, Hex Code, RGB (CSS) code, or Code Snippet. It is possible to drag a color from the color view to other windows and objects that are visible on the desk top. Normally a drag operation would start from the color view and proceed to another window of the host application. For example, with EazyDraw as a host application you can drag a color to a shape and apply it as a fill for a target shape. Since it is possible to drag a color as a color from the main color panel color swatch (at the top of the panel) it is not so interesting to also drag a color from the Color View.

When working on coding projects, it is useful to drag a text color code from the color selection view to a text window where one is writing or editing source code. Set the Drag selection to one of the code settings for this mode of operation. Then the color panel will provide both useful forms of the drag operation. Drag a color as a color from the top color swatch and drag a color as a code from the WebColorPicker color selection view.

Resize

The Color Panel is a re-sizable panel. So it is possible that all the settings may not be visible if the panel is adjusted to a smaller format. Rather than simply making the panel larger which can be annoying WebColorPicker omits the bottom most parameters and shows a "red arrow indicator" to signify that some parameters are not available for the current view size. Resize the window if access is needed to one of these hidden parameters.

Help Button

The small Question Mark button will bring up this manual. Click it to access operation instructions for WebColorPicker.

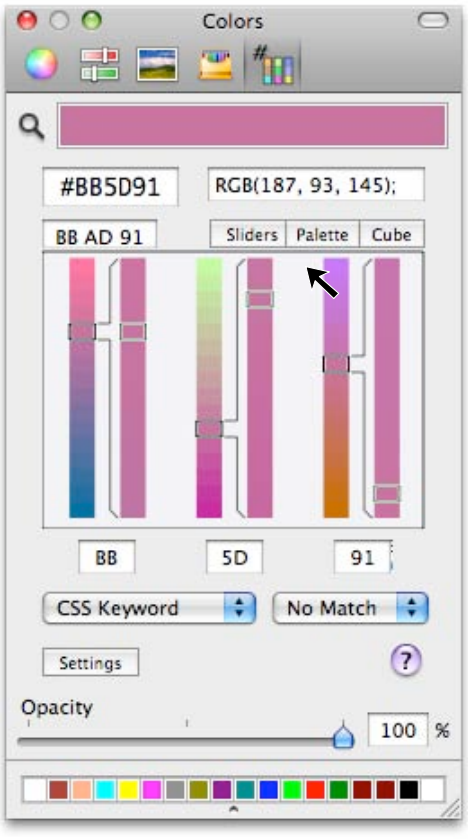
Chapter

4

Color Selection View

Color Selection View

WebColorPicker provides 3 views for inspecting and selecting colors. Each provides a different viewing format for visualizing the finite set of colors available when working with Red, Green, Blue hex codes. The 3 buttons to the right and immediately above the color selection view are used to switch between these three visualization modes: Sliders, Palette, and Cube.



Hex Sliders

The Hex Sliders provide basic inspection, visualization, and input of hex color codes.

There are 3 pairs of colored sliders, one each for Red, Green, and Blue component values organized in order from left to right. The left slider of each pair corresponds to the high order hex digit of the individual hex digit pair and the right slider corresponds to the least significant hex digit of the pair.

The actual hex digits are shown directly below the view when the Code Snippet mode is not in use, see above for details on this topic. Each hex slider has 16 discrete steps laid out vertically; mapping to the 16 possible values for a hex digit. Click on a slider to set the corresponding hex digit to a desired value.

Values may be specified by clicking on a slider or entering a hex code in the text fields found beneath each slider pair.

The cursor is "live" when moved over the color view area. When the cursor is over a color the resulting hex code is shown in the live cursor field found just above on the right side of the color selection view. The live values are only shown in the cursor read out box; it takes a click on the view to set a color.

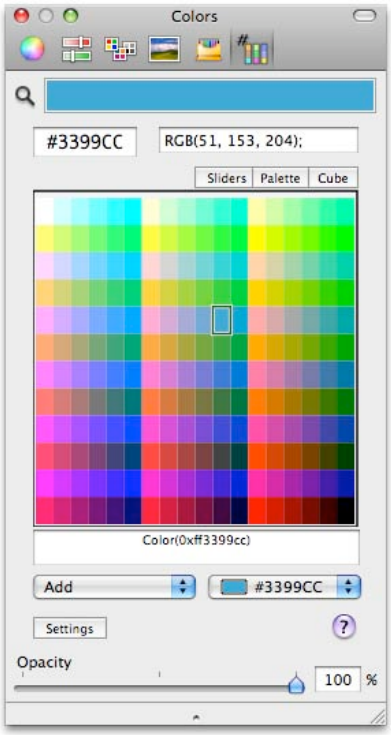
If a color is selected in the host application, the corresponding hex values are shown in the hex numeric fields and the slider indicators are moved to the corresponding hex digit positions.

A Shift-Click of a high order hex digit slider will move both sliders of the pair to the clicked position; this in keeping with the HTML and CSS shorthand notation.

The sliders colors interact with any and all settings, showing the range applicable to each hex digit. Notice that the least significant digits of each pair provide a very slight range of color variation.

Palette (Color Lists)

The Palette view shows a color swatch for each color of a Color List. Color Lists are special OS X files that contain a palette of distinct colors each identified by a unique (to the list) name. These files have the system file name extension ".clr". The color list files are found in the special folder named "Colors" in the user Library file hierarchy (~/Library/Colors/).



The operating system uses color lists is to manage Patterns which are special kinds of Colors used by the OS X graphics and imaging technology. This means there are two distinct categories of color lists - pattern colors and solid colors. WebColorPicker works only with solid colors. For this reason, the only color lists shown and managed by this view are color lists which contain only solid colors. A list with just a single pattern color is not shown.

The menu has commands for adding and removing color lists from the menu. Initially WebColorPicker shows only the 3 color lists that ship with WebColorPicker. Use these commands to use other color lists and customize the menu selections.

Web Color Palettes

WebColorPicker creates and installs 3 color palettes that are sometimes useful for web design projects. The names of these 3 are: Browser Safe, CSS Keyword, and SVG Keyword. These are created the first time WebColorPicker is accessed. The color palettes are placed in the Colors folder as explained above. They are then available for all applications and color tools on OS X.

Browser Safe

The Browser Safe list, sometimes called Web Safe Colors, is a set of 216 colors that are commonly considered to be the "web-safe" color palette. These are a set of colors that are likely to be shown without dithering on systems using only 256 colors. These were useful in the early days of computing. The use of these "web-safe" colors is no longer critical especially if the viewing audience is primarily Mac based. The historical use of the colors have made them familiar to web designers and often found in existing web designs. Their use today is primarily is concert with this familiarity.

This palette is a good general set of colors and shades spanning the rgb spectrum.

CSS Keyword

The CSS Keyword palette is a smaller set of colors identified with standardized names. It is handy when needed for CSS coding projects or for design projects that should be limited to a very few colors, such as GIF graphic design.

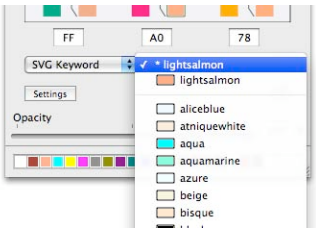
SVG Keyword

The SVG Keyword palette is not in wide use but does offer a good selection of defining color names. It is handy for finding colors according to artistic names with quantized hex code specificity.

Color Names

The Color Name popup menu provides a menu method for selecting a color. It will also show a color name when a selected (the color in the Main Color Swatch) color matches a color in the current color list. If a color does specifically match one of the palette colors the matching color is outlined in the color selection view and automatically selected and displayed with name in the Color Name popup menu. If the selected color is "close" to a color in the color list the name is shown in the popup menu with an asterisk to indicate "close but not exact" match. In this latter case the popup menu will have the matching color moved to the top of the menu for convenient selection.

These color names are used in the CSS/RGB Decimal text field for identification and autocompletion. Typing the name of a color present in the selected color list will set the selected color accordingly.

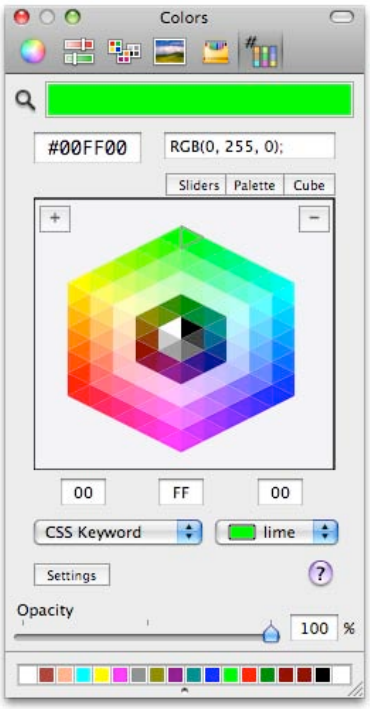


Close Matches

The color selection view shows exact matches to specific color list colors with a black outlining rectangle. Close matches are indicated with red outlines. This provides a method to select a palette specific color that is close to to a color selected from the continuum.

Notice that there is a different meaning for the red "close match" indicating rectangles shown on the color view and the red text used in the hex colors values. The red text means that the selected color does not match any hex code and the red indicating rectangles indicate that a selected color, which may be an exact hex code, does not match a color in the selected color list.

Color Cube



The third color selection view is a color cube arrangement. It is selected by clicking the "Cube" button just above and to the right of the color selection view.

The Color Cube is a variation on the Color Wheel. It is rotated to provide red to the left, green in the center, and blue to the right in keeping with the rgb convention of web color codes. The color cube is "quantized" to show only the colors corresponding to exact hex codes. It is further quantized to allow selection from a reduced set of specific hex code colors. And it is has a scheme to vary saturation (brightness and darkness) along the rings of the cube. This allows the inner rings to display the more saturated colors that need fewer shades.

The colors presented in the cube are all computed; they are not derived from the selected color table. Only the Palette view derives the visualized color swatches directly from the color table.

Each color swatch of the color cube is a triangle. A color is selected by clicking on one of these triangles. If a selected color matches one of the color cube colors, the corresponding triangle color swatch is indicated with a black border.

Number of Rings

The number of colors presented by the cube may be changed by clicking the plus or minus buttons found near the top corners of the color selection view. The cube may go down to 7 colors on a side and up to 15 colors per side.

The cube is always quantized to exact hex code colors.

Chapter

5

Color Wells

Color Wells

This chapter is a general discussion of the use of color wells with the Mac OS X operating system. The topics discussed here do not relate specifically to WebColorPicker. If you are experienced with inspection and specification of colors on OS X, there will be no need to study this chapter.

The OS X system color panel, which has been the topic of this manual, is often used in conjunction with a color well (see the figure on the next page) to change and inspect a color attribute. This chapter will discuss general behavior that a user can expect when using color wells on OS X. We will use EazyDraw as an example host application, but the actions described are common to several modern OS X applications that follow Apple's guidelines for color selection.

A single host application may have more than one color well. Typically a single application will have several color wells. For example, one color well may select text color and another will specify document background color. All of these color wells will abide with the same general principles.

A single color panel is used for all color changes and selections. In summary, the organization is a host application with several color wells, working with one color panel that has a specific color picker in use. All color wells and perhaps other attributes such as text (font) color may be used with the single color panel. The panel shows the current color in the Main Color Swatch at the top of the panel; use this visual clue to confirm the object of actions for the color panel.

Active Color Well

For the palette shown below, the Fill color well (top one on the left palette) is the active color well. The Color Picker on the right is reflecting the state of the Fill color. Notice that the active color well has a darker border. The Outline color well has light border and is NOT active in the snap shot below. The Stroke color is not shown on the Color Panel's main color swatch.

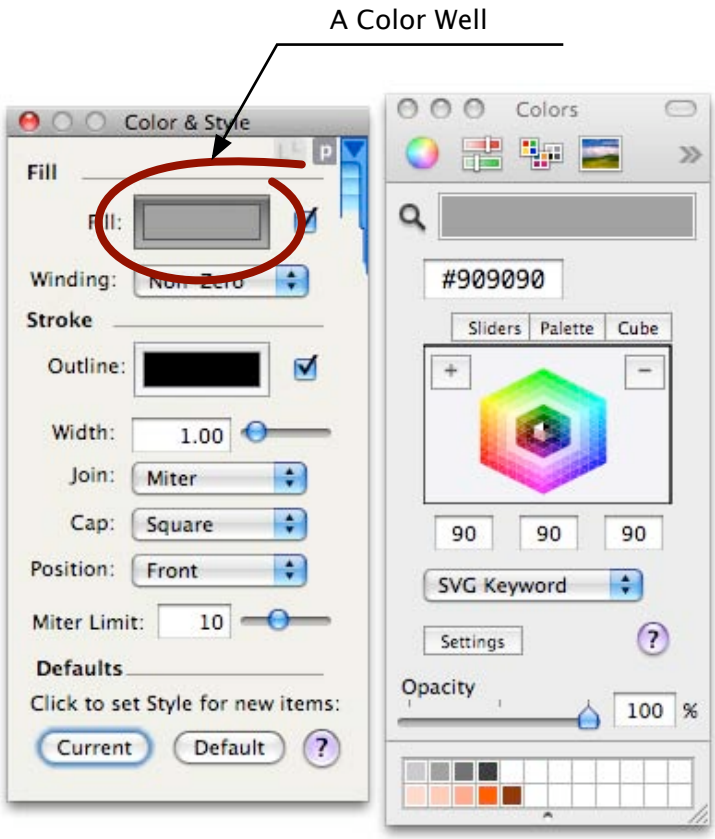
It is important to learn to notice the change in appearance of a Color Well when it is active and connected to the Color Panel and corresponding Color Picker. Only one Color Well is active at any given time. The active color well has a darker border to indicate its state.

Deactivate a color well by clicking it when it is active. This means it is possible that no color well is active. This can be confusing, as changes to the color are not reflected anywhere in the host application. This is useful for making up new colors or experimenting with colors without modifying your work in the host application.

There are many ways to choose colors, the buttons at the top of the Color panel are used to select the color picker method.

Color Panel Toolbar

Notice that these "buttons" are part of a normal OS X window toolbar. Toolbars can be hidden or exposed, the state is controlled by the OS X standard toolbar exposure button found at the very top right of the panel. If no buttons are seen on your system color panel, click this button to make them active.



Opacity

The Opacity slider and numeric entry field, near the bottom of the color panel, allows transparency to be applied to a color. Transparency is applied to colored attribute by specifying a color with transparency. When transparency is in effect the associated color well will draw both the master opaque color and the transparent color over white with a diagonal separator.

There are several other terms for Opacity. In some cases it is called Transparency. A common nomenclature is to refer to Opacity or Transparency as the "Alpha" channel, or colors with Alpha. In Objective C the term used for opacity is Alpha.

Simple hex color codes used for HTML or CSS source code do not use opacity so the opacity or alpha value of any color has no impact on the primary hex code or RGB color specifiers found just above the WebColorPicker's color selection view.

Alpha values are used with several of the language constructs supported in the Code Snippet field (see chapter 03). Opacity values generated on the color panel or inspected values from the host application's target attributes are sampled and provided in the appropriate fields of code snippets that accept or expect alpha channel specification.

Color Spaces

Mac OS X and other modern computing systems support several methods for specifying colors. WebColorPicker works with Reds, Greens, and Blues (and alpha as described above). These are called RGB colors (RGBA when alpha channel is used). Examples of two other color spaces are Cyan-Magenta-Yellow-Black (CMYK) and pattern colors. Pattern colors were mentioned earlier when discussing color lists. We note that these other color spaces will not work with WebColorPicker as elements of this user interface are designed explicitly for reds, greens and blues.

When non-RGB colors are in use a small darkened triangle is shown in the upper right hand corner of any color well containing a non-RGB color. The presence of this mark indicates that the color is not RGB. WebColorPicker will try to convert a non-RGB color to corresponding rgb components.

Note that the RGB color space will not be able to represent all colors that may be possible in another color space. Therefore a conversion may not be possible or the conversion may result in a noticeable change in shade and hue of a color. This issue is different than the limitation of 6 digit hex codes when representing an rgb color. The residual errors using hex code specifiers result in generally small hue and shade differences that are barely perceptible. In contrast, a CMYK color converted to RGB may be a different shade noticeable in any situation.

When a color is set from an action in WebColorPicker, the color sent to the host application will always be an RGB color, or RGBA color in the case of code snippet transfer. If the host application's target attribute does not accept RGB colors results may become confusing and ill-defined.

Color Swatches

The small boxes at the bottom of the Color Picker panel are color receptacles or swatches. You may drag and drop to and from these swatches. They are convenient places to hold a set of colors being used in a drawing. If you enlarge the width of the color panel more swatches are provided. There is a small slider button that is used to enlarge or hide these color swatches.

Color swatches are saved in a normal color list (*.clr) file in the Colors folder. The storage of these color lists was discussed in chapter 02.

Chapter

6 Settings File

Settings File

This chapter provides detailed description of the contents of the Settings property list dictionary for WebColorPicker. The information in this chapter is not required for normal use of the WebColorPicker. This would only be of interest for users needing to make advanced configuration changes for WebColorPicker.

The Settings file is found in the Applications Support folder in the user Library hierarchy (~/Library/Application Support/WebColorPicker/Settings.plist). The file is a plain text file and may be manipulated with a text editor or with the Property List Editor utility provided as part of the OS X developer tools.

If a text editor is used to make changes to the file, care must be taken not to compromise the property list structure of the file. Corruption could cause host applications to crash and fail to launch. It is advised to use the Property List Editor to make changes to the Settings file. If the Property List Editor is used, the core integrity of the file structure will remain stable and errors in this case would not likely cause problems when read by WebColorPicker.

If corruption does happen and applications fail to launch, remove the Settings file from the WebColorPicker folder and re-launch corresponding applications. If WebColorPicker is launched without a Settings file, one is created with Factory Default conditions.

plist Elements

The Settings file contains a dictionary of xml elements consisting of arrays strings and sub-dictionaries. These are accessed by keys. The keys are descriptive and self-documenting. The corresponding elements should be clear as to their use and meaning. A few of these elements are more complex, for these documentation is provided below.

CreateColorLists

WebColorPicker provides three color lists for use with WebColorPicker and by other applications and color interface elements available on the installed system. These are installed in the Colors folder of the user's home Library folder (~/Library/Colors). The color lists are created, initiated, and written to this folder at first launch of WebColorPicker.

They are re-created if they are removed and WebColorPicker quits and is re-started.

Since this is a public system folder, there may be a rare instance where these color tables are not desired. To "turn off" this behavior set the CreateColorLists string to "NO." This disabling option is only available by direct manipulation of the Settings.plist file as described here; there is no element for this in the user interface.

CodeSnippets

This element is an array of dictionaries. These are an available resource element that can allow an experienced user to add or modify the format of Code Snippets that are managed by WebColorPicker. The description of the use of Code Snippets above should be read and understood before reading the following documentation.

Note that Code Snippets need to be enabled at least once in the WebColorPicker user interface to trigger creation of the CodeSnippets dictionary. The dictionary should be created before additions are made; this will provide a precise template to follow in the formatting of additions to the dictionary.

Each Code Snippet format has a dictionary entry of three elements each with a defined key. To add a new Code Snippet format a new dictionary with the proper form of three elements with the required defined three keys. These are now defined.

KEY: NameSnippet

The NameSnippet key identifies a string. The string is the name that will appear in the Code popup menu on WebColorPicker's settings view. The name should be descriptive and should be unique with respect to all other Code Snippet entries.

KEY: FormatSnippet

The FormatSnippet key identifies a string. The string is a C - unix (or ObjectiveC) format string that is used as a template into which a defined list (see next key) of argument values is substituted. When WebColorPicker is running and a Code Snippet is generated this exact format string is used with the "stringWIthFormat:" Objective C function call. Complete precise documentation can be accessed from Apple's web site, a google of the function call will provide access to the documentation for those not familiar with the use of formatted strings and associated argument variables.

KEY: VarsSnippet

The VarsSnippet key identifies a string that is itself a key which will define one of a few forms of arguments that are provided as the arguments to compiled stringWithFormat statement. The possible values are tabulated and defined below.

The entries defined below are the only allowed arrangement of color arguments available. If another variation is needed please contact WebColorPicker support at WebColorPicker.com and the addition can be integrated into the next release.

rgbFixed

The arguments are 3 integers, 32 bits each. They correspond to red, green and blue components on a scale of 0 to 255. 0 being "dark", 255 associated with full saturation of the corresponding color.

rgbFloats

The arguments are 3 floating point numbers, 32 bits, not doubles. They correspond to red, green and blue components on a scale of 0.0 to 1.0. 0.0 being "dark", 1.0 associated with full saturation of the corresponding color.

rgbFixedAlphaFloat

The arguments are 3 integers, 32 bits each and one floating point number 32 bits (not double). The integers correspond to red, green and blue components on a scale of 0 to 255. 0 being "dark", 255 associated with full saturation of the corresponding color. The floating point number corresponds to the value of the alpha channel opacity value (explained above), Zero corresponds to fully transparent and 1.0 corresponds to fully opaque color.

rgbsFloats

The arguments are 4 floating point numbers, 32 bits each, not doubles. They correspond to red, green, blue, and alpha components on a scale of 0.0 to 1.0. 0.0 being "dark", 1.0 associated with full saturation of the corresponding color. For the alpha value zero corresponds to fully transparent and 1.0 corresponds to fully opaque color.

rgbPackedInt

The argument is a single integer of 32 bits. The rgb values on a scale of 0 to 255 are packed into the low order 6 hex digits. Red component stored in bits 23 through 16, green in bits 15 through 8, blue in bits 7 through 0.

rgbaPackedInt

The argument is a single integer of 32 bits containing red, green, blue, and alpha channel information. The rgb values on a scale of 0 to 255 are packed into the least significant 6 hex digits. Red component stored in bits 23 through 16, green in bits 15 through 8, blue in bits 7 through 0. The Alpha channel value is stored in bits 31 through 24. Values are naturally unsigned. This is the format used in the Java language Color(...) function call.