

k



# COLOR STUDIO 2



## Contents

Introduction .....	3
Quick Start .....	3
Palette Manager .....	4
Color Wheel .....	4
Palette Import/Export.....	5
Conversion Tools.....	6
Compact Mode .....	6
Palette Inventory .....	6
Recolor Component.....	7
Scripting Support.....	8
Pixel Painter .....	9

## Introduction

Thank you for purchasing!

**Color Studio** is a simple yet powerful package for creating/editing sprites and color swatches inside Unity Editor. This asset works like an Editor Extension, bringing such features to Unity Editor. It allows you to:

- a) create appealing color palettes using a variety of tools integrated in an easy to use editor window,
- b) create or edit textures and sprites right into the Editor using a powerful Pixel Painter window,
- c) recolor gameobjects and sprites in editor and runtime.

With Color Studio you can leverage **color theory to create procedural color combinations that look nicely together.**

We hope you find the asset easy and fun to use. Feel free to contact us for any enquiry.

**Visit our Support Forum on <https://kronnect.com> for help and access to the latest beta releases.**

### Kronnect Technologies

Email: [contact@kronnect.com](mailto:contact@kronnect.com)

Support Forum: <https://www.kronnect.com/support>

## Quick Start

Color Studio includes two main tools, which can be accessed from the Unity top menu Window -> Color Studio:

- Palette Manager
- Pixel Painter

We recommend docking the window of the Palette Manager on the right side of the screen while docking the Pixel Painter on the same level than the Scene View or Game View.

Check this video for a quick overview: <https://youtu.be/DDCn1xDD2gc>

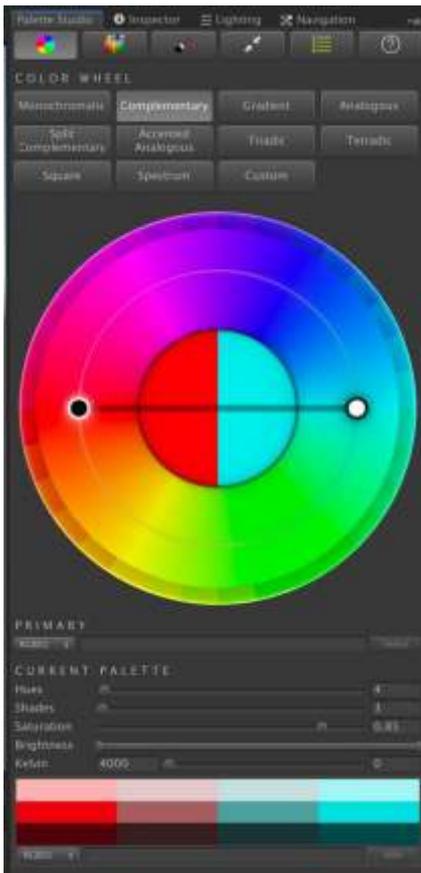
## Palette Manager

The Palette Manager or Palette Studio is the tool you use to create or modify custom swatches. A swatch is a collection of colors that can include hues and shades that you expose in the Unity Editor so you can use them with color pickers or other tools in order to keep a consistent color palette if your painting or design tasks.

The window presents 6 tabs:

- Color Wheel
- Palette Import/Export tools
- Conversion Tools
- Compact Mode
- Palette Inventory
- Credits & Info

### Color Wheel



The buttons on the top of this tab are color combination presets that follows color theory. Choose a color combination preset like (Monochromatic, Split Complementary, etc.) to automatically select corresponding colors.

On the big color wheel, you can click and drag the black or white dots to slide the desired hues of your palette. The palette will be shown at the bottom of this tab.

Tips:

- Hold Control key and click on the wheel to add custom colors to the palette.
- Double click on any custom color dot on the color wheel to remove it.
- You can add specific colors by RGB in the input box below the color wheel.
- Customize the palette increasing the hue count, shades count, saturation, brightness or white color balance (kelvin).
- Click on the palette to visualize its RGB value at the bottom of the window.

## Palette Import/Export



Use this tab to have a focused view on your current palette and save/load new palettes.

From this tab you can manually specify a primary color and the full palette will be computed based on the current color combination of the first tab (Color Wheel). For example, if the color combination in the Color Wheel is monochromatic, setting the primary color here to red (1,0,0) will create a red-based gradient.

You can customize the number of hues (columns) and shades (rows) of the palette, as well as tone the colors by changing the overall saturation, brightness and white color balance.

At the bottom of the palette, you can find tools to:

- Add specific colors using a color picker.
  - Create a new palette from scratch ("New" button)
  - Save changes or save the current palette as a new palette scriptable object. When you save your palette, it will be stored in your Unity project and you can use it later or using scripting (see Scripting support section).
  - Export LUT: this option will create a LUT that only contains the colors in the palette.
  - Generate Code: C# code will be printed in the console with the color codes in the palette.
  - Import ASE: let you import a palette in ASE format.
- Export Texture: exports a texture that contains the palette colors.

In Unity Editor, there're many places where you can pick a color using a color picker. You can pick your colors from this palette making it visible on the right side of the screen. You can also use the "Compact View" tab (4<sup>th</sup> tab of the window) so your palette is visible but occupies much less screen space.

## Conversion Tools



Use this tab to convert any color or texture so it matches your current palette:

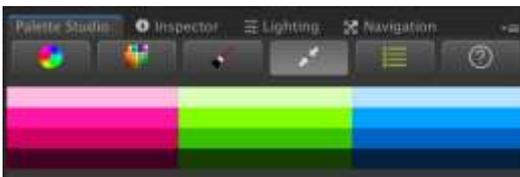
- Assign any gameobject to the "GameObject" field or assign any texture.
- Or choose a color using the color picker.

This tab will display the suggested color and let you convert the texture to the new colors.

The Match Mode dropdown let you specify what color-matching algorithm should be used. The RGB mode (default) computes the linear distance between the rgb values of the source and the nearest color in the palette. The HSL mode on the other hand uses the Hue, Saturation and Lightness of the colors. You can also use specific color channels only.

## Compact Mode

This tab just shows the current color palette using as less screen space as possible:



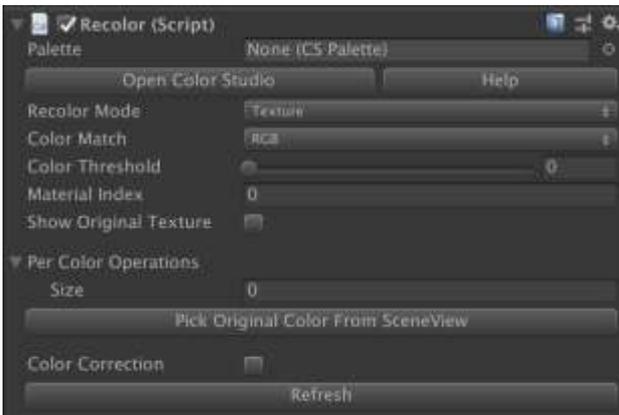
## Palette Inventory

This tab lists all palettes in your project:



## Recolor Component

The “Recolor” component is a script that you can add to any gameobject to change its colors at runtime. Just select your sprite or gameobject and add the “Recolor” script to it:



You can select an existing palette (created with the Palette Manager, check previous section) or apply custom or individual color modifications.

Note that original textures or materials won't be modified – they'll be instantiated before receiving the changes. Disable or remove “Recolor” script to restore the original materials or textures.

## Scripting Support

The asset provides scripting support so you can use your palettes and apply them in runtime from code. Particularly, the CSPalette class can be instantiated as follows:

```
// Create a palette which uses a split complementary design based on red color as
primary:
CSPalette palette = ScriptableObject.CreateInstance<CSPalette>();
palette.ConfigurePalette(ColorScheme.SplitComplementary, Color.red, splitAmount: 0.6f);

// Build chromatic colors
palette.BuildHueColors();

// Output the palette hue colors
for (int k=0;k<palette.colorsCount;k++) {
    Debug.Log(palette.colors[k]);
}

// Build palette colors (including shades)
palette.BuildPaletteColors();
for (int k=0;k<palette.colors.Length;k++) {
    Debug.Log(palette.colors[k]);
}
```

Other useful methods provided by the CSPalette class:

Texture2D ExportLUT()

Builds a LUT based on the current color palette.

Texture2D ExportTexture()

Builds a texture containing the color palette.

Color ApplyLUT(Color, LUT)

Transforms a color based on a given LUT.

Color GetNearestColor(Color, ColorMatchMode)

Returns the nearest color of the palette.

Color[] GetNearestColors(Color[] originalColors)

Returns the nearest colors of the palette.

Color[] GetNearestColors(Texture, ColorMatchMode, ...)

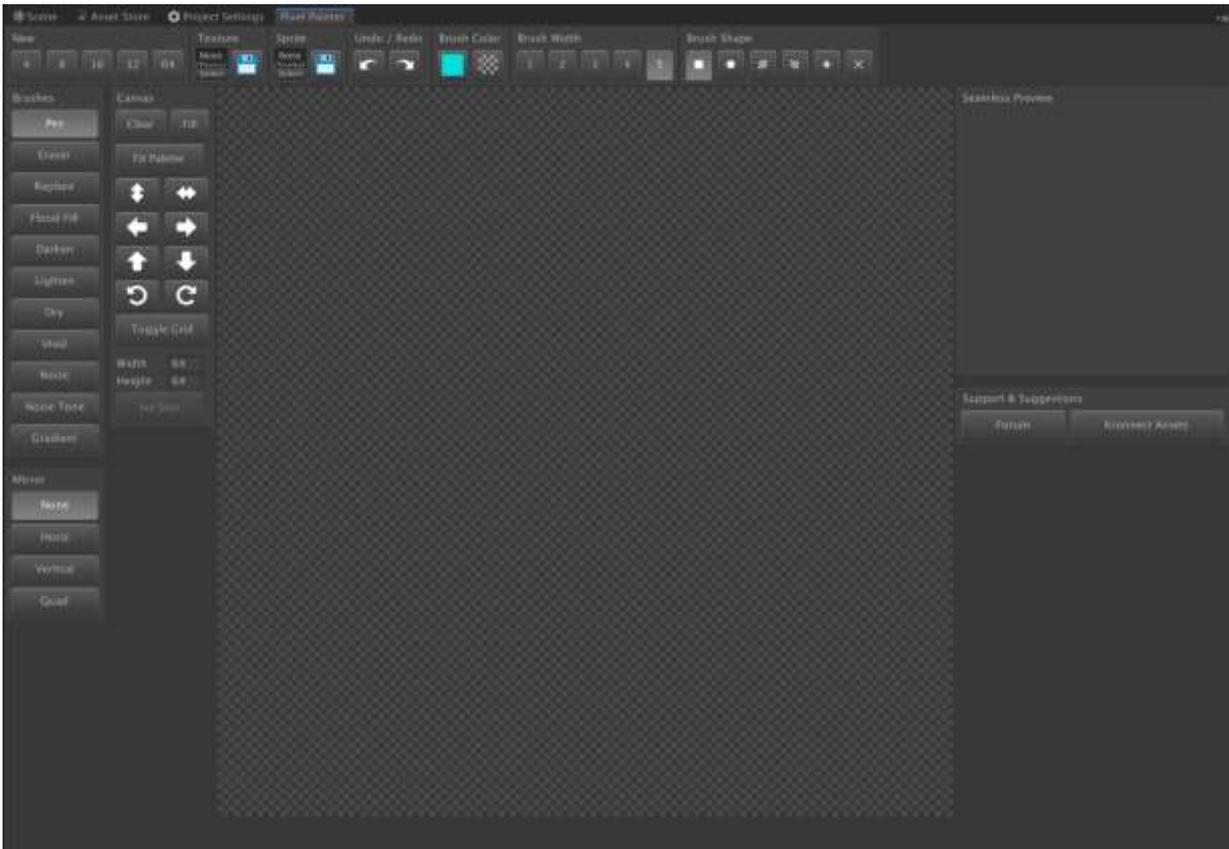
Returns the nearest colors of the texture colors based on the palette.

Texture2D GetNearestTexture(Texture, ColorMatchMode, ...)

Transforms the given texture based on the current palette.

## Pixel Painter

Open the Pixel Painter from the top Menu Editor Window -> Color Studio -> Pixel Painter.



The Pixel Painter uses an interface like other painting tools like MSPaint or Photoshop:

- On the left side of the window, you can find an array of painting tools like Pen, Eraser, Replace, Flood Fill, etc. as well as a Canvas section with options to clear the picture, displace/rotate it, configure a custom size, etc.
- On the top edge you will find options to quickly create a new sprite using popular sizes of 4, 8, 16, 32 or 64 size (or specify custom width/height in the canvas section) as well as options to load or save a texture or sprite (just drag & drop your texture or sprite inside these slots to load them) and custom properties for the active painting tool like brush width, shape, color, etc.
- On the center of the window you have the painting canvas:
  - o Left Click to paint a pixel using the currently selected color (we recommend to have Color Wheel of the Palette Manager opened and docked to the right side of the screen).
  - o Right Click to quickly select the color beneath the cursor.
- On the right side of the window, you can see a seamless preview of the sprite. This view is useful to verify if the sprite will not cause seams when it repeats (for example if you're drawing a terrain block).

Pixel Painter fully supports undo/redo operations.

To save your changes, just click the "Disk" icon on the top toolbar.