
ComponentOne

ColorPicker for WPF

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Table of Contents

ComponentOne ColorPicker for WPF Overview	1
Help with ComponentOne Studio for WPF	1
Key Features	1
ColorPicker for WPF Quick Start	5
Step 1 of 4: Setting up the Application.....	5
Step 2 of 4: Adding C1ColorPicker Controls	6
Step 3 of 4: Adding Code to the Application	7
Step 4 of 4: Running the Application.....	8
Working with ColorPicker for WPF	11
Basic Properties.....	11
Basic Events	12
ColorPicker Mode.....	12
Basic ColorPicker Mode.....	12
Advanced ColorPicker Mode	13
Additional Controls	14
C1SpectrumColorPicker.....	14
C1HexColorBox.....	15
C1CheckeredBorder	16
Available ColorPicker Palettes.....	16
Recent Colors.....	18
Drop-Down Direction.....	18
ColorPicker Layout and Appearance	18
Layout in a Panel	19
ColorPicker Appearance Properties	19
Color Properties.....	19
Alignment Properties.....	19
Border Properties.....	20
Size Properties	20
ComponentOne ClearStyle Technology	20
How ClearStyle Works.....	21

ClearStyle Properties	21
ColorPicker Templates.....	21
ColorPicker Styles	22
ColorPicker Template Parts	22
ColorPicker Visual States.....	24
XAML Elements.....	25
ColorPicker for WPF Samples.....	27
ColorPicker for WPF Task-Based Help	27
Setting the Palette.....	27
Creating a Custom Palette	28
Changing the Background Color.....	30
Changing the Drop-Down Window Direction	31
Hiding Recent Colors.....	32

ComponentOne ColorPicker for WPF Overview

ComponentOne ColorPicker™ for WPF is a color input editor that provides a rich, interactive color selection interface. Users can select colors from professionally designed palettes or custom colors that you have chosen.

You can choose to include a basic color palette with preselected and standard colors, an advanced palette that users can use to completely customize their color selection, or both! **ColorPicker for WPF** even includes transparency, hexadecimal color, and RGB and HLS color model support to provide a rich visual color input interface.

For a list of the latest features added to **ComponentOne Studio for WPF**, visit [What's New in Studio for WPF](#).



Getting Started

Get started with the following topics:

- [Key Features](#) (page 1)
- [Quick Start](#) (page 5)
- [Task-Based Help](#) (page 27)

Help with ComponentOne Studio for WPF

Getting Started

For information on installing **ComponentOne Studio for WPF**, licensing, technical support, namespaces and creating a project with the control, please visit [Getting Started with Studio for WPF](#).

What's New

For a list of the latest features added to **ComponentOne Studio for WPF**, visit [What's New in Studio for WPF](#).

Key Features

ComponentOne ColorPicker for WPF allows you to create customized, rich applications. Make the most of **ColorPicker for WPF** by taking advantage of the following key features:

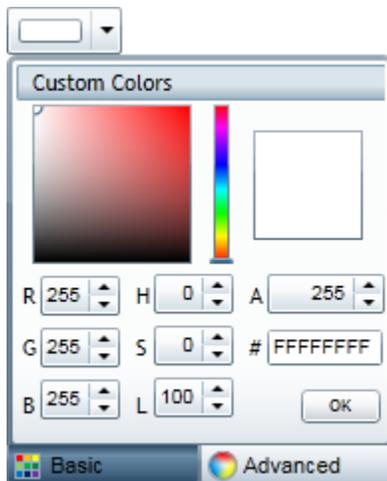
- **Select from 20+ Predefined Professionally Designed Palettes**

ColorPicker contains over 20 predefined color palettes that match the themes used in Microsoft Office. The colors in each palette go well together and can be used to create applications with a polished, professional appearance.



- **Built-in Color Editor for Custom Colors**

ColorPicker includes a color editor. This editor allows end-users to create colors that are not on the current palette using the RGB or HLS color models and including support for transparency.

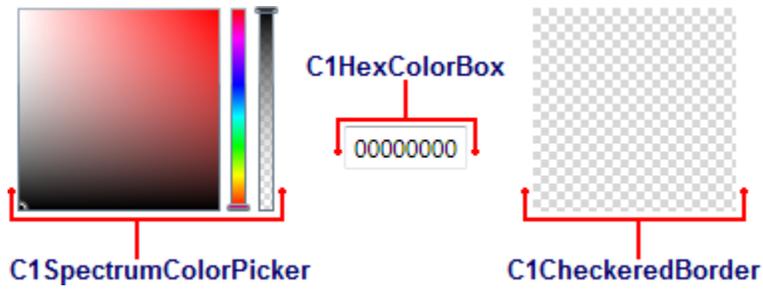


- **Different Views**

C1ColorPicker supports both simple and advanced views for color selection.

- **Composable Parts**

Each of the parts of the control can be used independently of the **C1ColorPicker** to create your custom controls. The **C1SpectrumColorPicker** control allows access to just the advanced color picking functionality of the **C1ColorPicker** control, the **C1HexColorBox** control provides data validation for hexadecimal code entries, and the **C1CheckedBorder** provides a simple way to display colors with transparencies.



- **Create Your Own Custom Palette**

If the available color palettes do not work for your application, you can create your own custom color palette. At run time, users can even be limited to selecting colors only from your chosen color palette.

ColorPicker for WPF Quick Start

The following quick start guide is intended to get you up and running with **ColorPicker for WPF**. In this quick start you'll start in Visual Studio and create a new project, add **ColorPicker for WPF** controls to your application, and customize the appearance and behavior of the controls.

You will create a simple project using two **C1ColorPicker** controls and a standard **Rectangle** control. The **C1ColorPicker** controls will control a gradient that is applied to the **Rectangle**, so that choosing colors at run time will change the colors of the gradient – letting you explore the possibilities of using **ColorPicker for WPF**.

Step 1 of 4: Setting up the Application

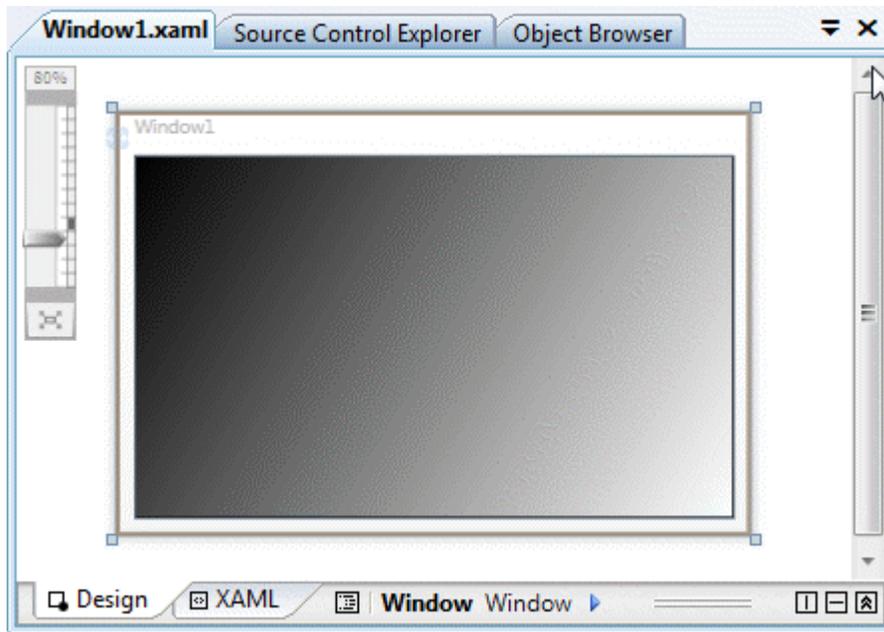
In this step you'll begin in Visual Studio to create a WPF application using **ColorPicker for WPF**. When you add a **C1ColorPicker** control to your application, you'll have a complete, functional color input selector.

To set up your project and add a **C1ColorPicker** control to your application, complete the following steps:

1. Create a new WPF project in Visual Studio.
2. Navigate to the Toolbox and double-click the **Rectangle** icon to add the standard control to the **Grid**.
3. Resize the window, and resize the rectangle to fill the window.
4. Switch to XAML view and add a **Fill** to the `<Rectangle>` tag so it appears similar to the following:

```
<Rectangle Name="Rectangle1" Stroke="Black">
  <Rectangle.Fill>
    <LinearGradientBrush x:Name="colors">
      <GradientStop x:Name="col1" Color="Black" Offset="0" />
      <GradientStop x:Name="col2" Color="White" Offset="1" />
    </LinearGradientBrush>
  </Rectangle.Fill>
</Rectangle>
```

This will add a black and white linear gradient fill to the rectangle. The design view of the page should now look similar to the following image:



You've successfully created a WPF application and customized the **Rectangle** control. In the next step you'll add and customize **C1ColorPicker** controls.

Step 2 of 4: Adding C1ColorPicker Controls

In the previous step you created a new project and added a **Rectangle** control with a gradient to the application. In this step you'll continue by adding **C1ColorPicker** controls that will control the gradient fill in the **Rectangle**.

Complete the following steps:

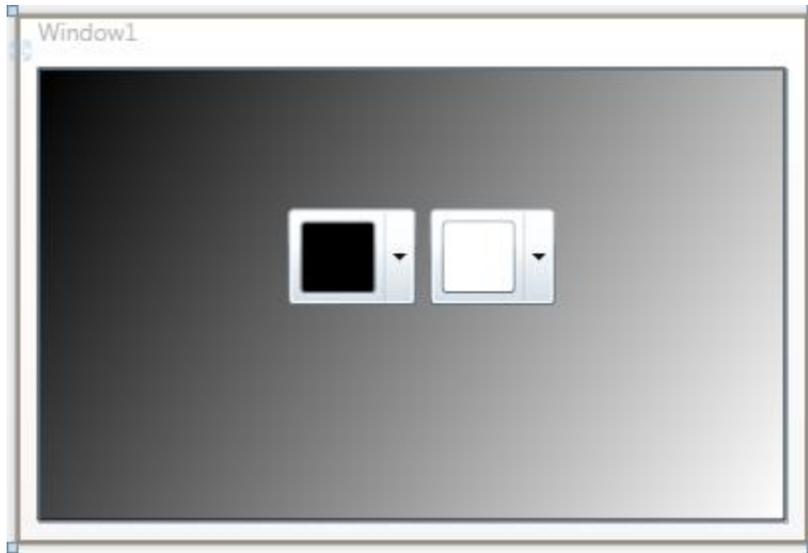
1. In Design view, click on the Rectangle to select it and navigate to the Visual Studio Toolbox.
2. In the Toolbox, locate and double-click the **C1ColorPicker** icon twice add two controls to the form.
3. Resize and position the two **C1ColorPicker** controls, so that they appear in the middle of the rectangle.
4. Click once on the first **C1ColorPicker** control, **C1ColorPicker1**, in Design view, navigate to the Properties window, and set the following properties:
 - Set **DropDownDirection** to **AboveOrBelow** to control how the control opens.
 - Set the **Mode** to **Advanced** so only the advanced color picker appears.
 - Set the **SelectedColor** to **Black** (or "#FF000000").

The XAML will appear similar to the following:

```
<c1ext:C1ColorPicker Margin="125,70,185,107.5" Name="C1ColorPicker1"
xmlns:c1="http://schemas.componentone.com/winfx/2006/xaml"
DropDownDirection="AboveOrBelow" Mode="Advanced" SelectedBrush="Black" />
```

You'll leave the second **C1ColorPicker** control set to the default values.

The page's Design view should now look similar to the following image:



You've successfully set up your application's user interface, but if you run your application right now the color pickers will do nothing if you select a color. In the next step you'll add code to your application to add functionality to the controls.

Step 3 of 4: Adding Code to the Application

In the previous steps you set up the application's user interface and added controls to your application. In this step you'll add code to your application to finalize it.

Complete the following steps:

1. Click once on the first **C1ColorPicker** control (**C1ColorPicker1**) to select it.
2. In the Properties window, click the lightning bolt **Events** icon to view control events.
3. Double-click in the text box next to the **SelectedColorChanged** event to switch to Code view and create the event handler.
4. In Code view, add the following import statements to the top of the page:

- Visual Basic

```
Imports C1.WPF
Imports C1.WPF.Extended
```

- C#

```
using C1.WPF;
using C1.WPF.Extended;
```

5. Add the following code just after the page's constructor to update the gradient values:

- Visual Basic

```
Private Sub UpdateGradient()
    If C1ColorPicker1 IsNot Nothing And C1ColorPicker2 IsNot Nothing
    Then
        Me.col1.Color = Me.C1ColorPicker1.SelectedColor
        Me.col2.Color = Me.C1ColorPicker2.SelectedColor
    End If
End Sub
```

- C#

```

void UpdateGradient()
{
    if (c1ColorPicker1 != null & c1ColorPicker2 != null)
    {
        this.col1.Color = this.c1ColorPicker1.SelectedColor;
        this.col2.Color = this.c1ColorPicker2.SelectedColor;
    }
}

```

6. Add code to the **C1ColorPicker1_SelectedColorChanged** event handler so that it appears like the following:

- Visual Basic

```

Private Sub C1ColorPicker1_SelectedColorChanged(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
C1ColorPicker1.SelectedColorChanged
    UpdateGradient()
End Sub

```

- C#

```

private void c1ColorPicker1_SelectedColorChanged(object sender,
C1.WPF.PropertyChangedEventArgs<System.Windows.Media.Color> e)
{
    UpdateGradient();
}

```

7. Return to Design view.
8. Click once on the second **C1ColorPicker** control (**C1ColorPicker2**) to select it.
9. In the Properties window, double-click in the text box next to the **SelectedColorChanged** event to switch to Code view and create the event handler (you may need to click the lightning bolt **Events** icon to view control events if events are not listed).
10. Add code to the **C1ColorPicker_SelectedColorChanged** event handler so that it appears like the following:

- Visual Basic

```

Private Sub C1ColorPicker2_SelectedColorChanged(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
c1cp1.SelectedColorChanged
    UpdateGradient()
End Sub

```

- C#

```

private void c1ColorPicker2_SelectedColorChanged(object sender,
C1.WPF.PropertyChangedEventArgs<System.Windows.Media.Color> e)
{
    UpdateGradient();
}

```

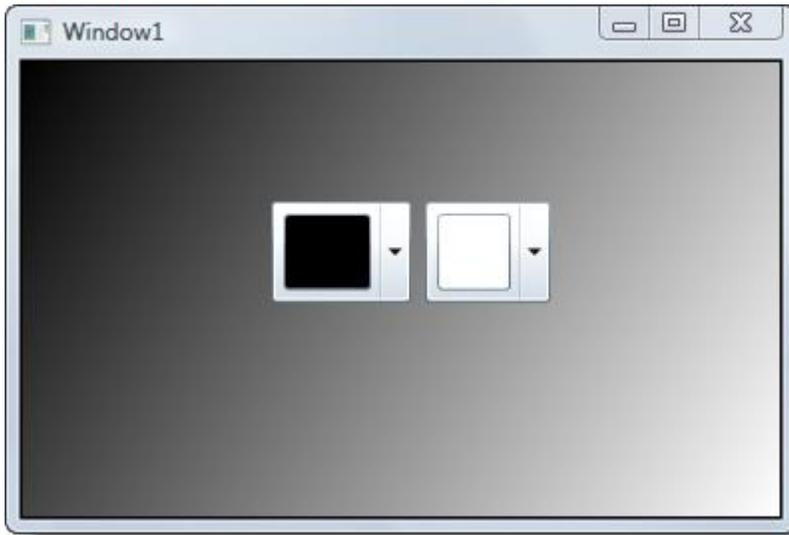
In this step you completed adding code to your application. In the next step you'll run the application and observe run-time interactions.

Step 4 of 4: Running the Application

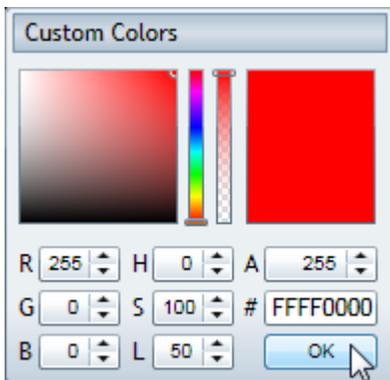
Now that you've created a WPF application and customized the application's appearance and behavior, the only thing left to do is run your application. To run your application and observe **ColorPicker for WPF's** run-time behavior, complete the following steps:

1. From the **Debug** menu, select **Start Debugging** to view how your application will appear at run time.

The application will appear similar to the following:



2. Click the drop-down arrow in the left color picker. Notice that the window opens above the drop-down box and that only the advanced mode is visible – this reflects the changes you made to the control. In advanced mode, users can specify any color and can use multiple methods of selecting a color.
3. Choose a color, for example **Red**, and click **OK**:



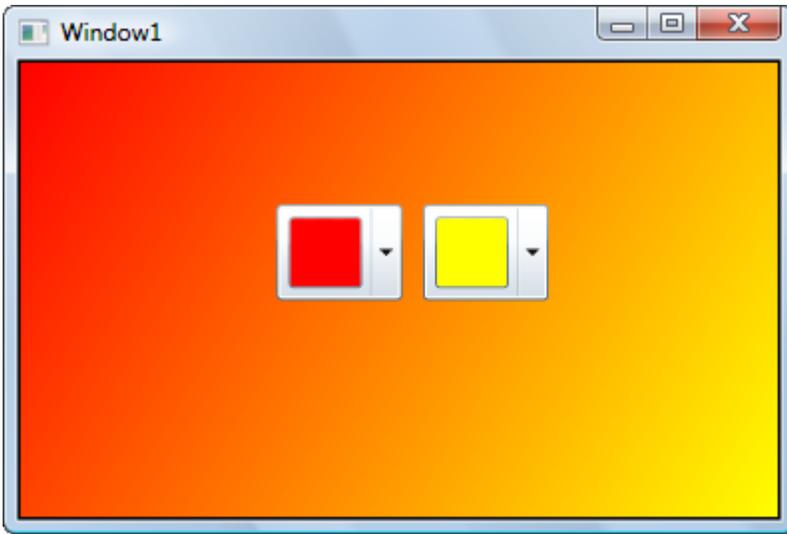
Notice that the control's selected color and the rectangle's gradient changes to reflect your color choice.

4. Click the drop-down arrow in the right color picker.



Notice that the **Basic** tab is visible (default). This tab displays **Palette Colors**, **Standard Colors**, and **Recent Colors**. You can pick any color and can also switch to the **Advanced** tab to pick a custom color. Note that the currently selected color is highlighted with a red border.

5. Pick a color, for example **Yellow**. The selected color will change and the background gradient of the rectangle will change to match your selection:

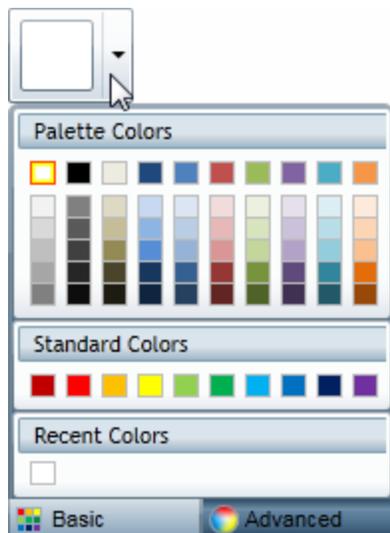


Congratulations! You've completed the **ColorPicker for WPF** quick start and created a simple WPF application, added and customized **ColorPicker for WPF** controls, and viewed some of the run-time capabilities of the controls.

Working with ColorPicker for WPF

ComponentOne ColorPicker for WPF includes the `C1ColorPicker` control, a simple color selection control that lets users select colors from professionally designed palettes or your own custom colors. When you add the `C1ColorPicker` control to a XAML window, it exists as a complete color selection control that you can further customize.

The control's default interface looks similar to the following image:



For a description of the parts of the `C1ColorPicker` control, see the [Basic ColorPicker Mode](#) (page 12) and [Advanced ColorPicker Mode](#) (page 13) topics.

Basic Properties

ComponentOne ColorPicker for WPF includes several properties that allow you to set the functionality of the control. Some of the more important properties are listed below. Note that you can see [ColorPicker Appearance Properties](#) (page 19) for more information about properties that control appearance.

The following properties let you customize the `C1ColorPicker` control:

Property	Description
<code>DropDownDirection</code>	Specifies the expand direction of the control drop-down arrow.
<code>IsDropDownOpen</code>	Opens or closes the control drop-down box.
<code>Mode</code>	Indicates the mode of the color picker. Options include Basic , Advanced , and Both (default).
<code>Palette</code>	Gets/sets the palette to be used.
<code>SelectedBrush</code>	Gets the currently selected color as a Brush .
<code>SelectedColor</code>	Gets/sets the currently selected color.
<code>ShowAlphaChannel</code>	Gets/sets whether the user can change the alpha channel (transparency value).

ShowRecentColors	Indicates if recently picked colors should be shown.
------------------	--

Basic Events

ComponentOne ColorPicker for WPF includes several events that allow you to set interaction and customize the control. Some of the more important events are listed below.

The following events let you customize the C1ColorPicker control:

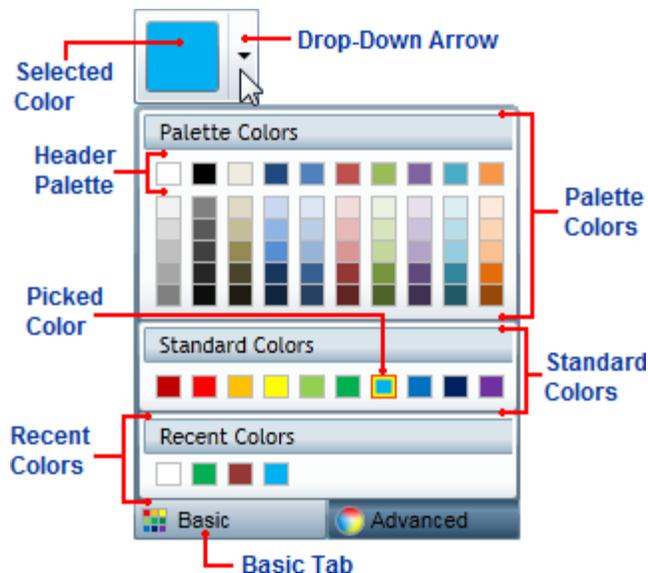
Event	Description
IsDropDownOpenChanged	Event raised when the IsDropDownOpen property has changed.
IsMouseOverChanged	Event raised when the IsMouseOver property has changed.
SelectedColorChanged	Event raised when the SelectedColor property has changed.

ColorPicker Mode

The Mode property indicates if users should choose from a preselected palette of colors and/or if they can pick their own. Options include **Basic**, **Advanced**, and **Both**. By default, Mode is set to **Both** and both the **Basic** and **Advanced** tabs are visible. The following topics describe the two available tabs.

Basic ColorPicker Mode

By default, the **C1ColorPicker** control will open with the **Basic** tab open when the control's drop-down arrow is clicked. The **Basic** tab appears similar to the following image:



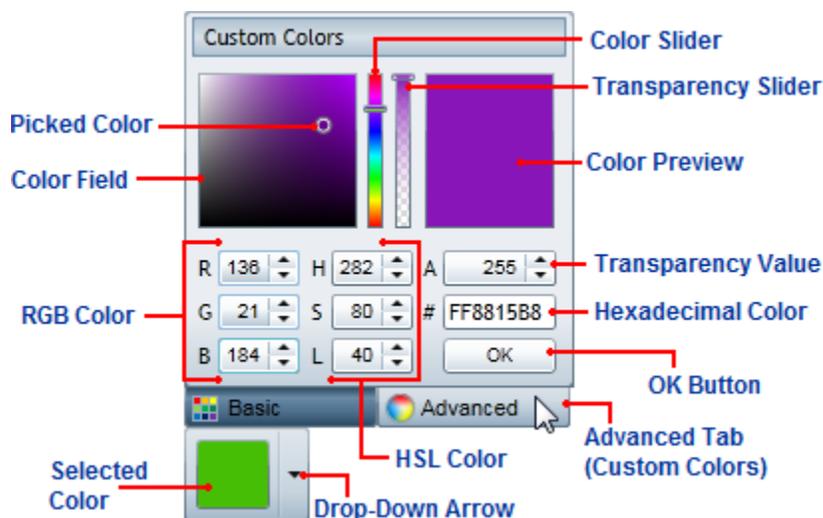
The **Basic** tab includes the following options/sections:

- **Drop-Down Arrow:** Click the drop-down arrow to open the C1ColorPicker control's window. See [Drop-Down Direction](#) (page 18) for information about setting where the drop-down window appears.
- **Basic Tab:** Click the **Basic** tab to access pre-selected colors at run time. Click the **Advanced** tab to choose a custom color. The Mode property must be set to **Basic** or **Both** for the **Basic** tab to be visible.

- **Selected Color:** The currently selected color will appear in the color picker's window.
- **Picked Color:** The currently picked color will appear with a red border in the list of colors.
- **Palette Colors:** Palette colors reflect the currently selected color palette. You can choose a palette by setting the Palette property.
- **Header Palette:** These colors are the basic colors of the palette – the expanded list of palette colors are typically variations of these basic colors.
- **Standard Colors:** Lists ten standard colors. These colors include a dark brick red, red, orange, yellow, light green, green, sky blue, blue, navy blue, and purple.
- **Recent Colors:** Lists up to ten recently selected colors. By default this section is visible, but you can choose to hide recent colors by setting the ShowRecentColors property to **False**. See [Recent Colors](#) (page 18) for more information.

Advanced ColorPicker Mode

By default, the **CIColorPicker** control will open with the **Advanced** tab available when the control's drop-down arrow is clicked. The **Basic** tab appears by default, but the **Advanced** view can be selected by clicking the **Advanced** at the bottom of the control. The **Advanced** view appears similar to the following image:



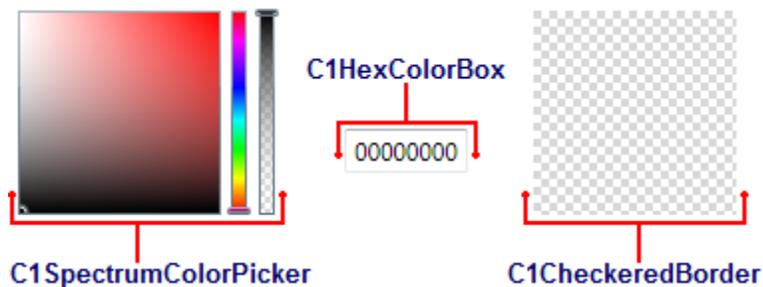
The **Advanced** tab includes the following options/sections:

- **Color Field/Picked Color:** The **Color Field** lets you choose a tone in a color's range. The **Picked Color** indicates the currently selected color. Move the **Color Slider** to pick a general color family and then fine tune the color selection in the **Color Field**.
- **Color Slider:** This slider lets you choose from the color spectrum. Move the **Color Slider** to pick a general color and then fine tune the color selection in the **Color Field**.
- **Transparency Slider:** This slider lets you set the color's transparency. You can choose to make the color opaque or partially or completely transparent. Move the **Transparency Slider** to pick a transparency and note that the number in the **Transparency Value** box changes as well. This slider is only visible when the ShowAlphaChannel property is set to **True** (default)
- **Color Preview:** Preview the color you are currently choosing. Once you are satisfied with the color choice, click the **OK** button to close the drop-down box and set the color as the **Selected Color**.

- **Transparency Value:** This box lets you set the color's transparency. You can set the Transparency to a number between **0**, which is completely transparent, and **255**, which is completely opaque (default). When the ShowAlphaChannel property is set to **False** this box appears grayed out.
- **RGB Color:** These three numeric boxes let you choose a color using the Red Green Blue (RGB) color model.
- **HSL Color:** These three numeric boxes let you choose a color using the Hue Saturation Lightness (HSL) color model.
- **Hexadecimal Color:** If eight digits are visible, the first two digits represent the color's transparency ranging from FF (opaque) to 00 (transparent) and the last six digits represent standard hexadecimal color selection. Note that if the ShowAlphaChannel property is set to **False**, only the last six digits will be visible (no transparency value). For more information about hexadecimal color selection, see [w3schools](http://w3schools.com).
- **OK Button:** Once you are satisfied with the color choice, click the **OK** button to close the drop-down box and set the color as the **Selected Color**.
- **Selected Color:** The currently selected color will appear in the color picker's window.
- **Drop-Down Arrow:** Click the drop-down arrow to open the C1ColorPicker control's window. See [Drop-Down Direction](#) (page 18) for information about setting where the drop-down window appears.
- **Advanced Tab:** Click the **Advanced** tab to choose a custom color at run time. Click the **Basic** tab to view pre-selected colors. The Mode property must be set to **Advanced** or **Both** for the **Advanced** tab to be visible.

Additional Controls

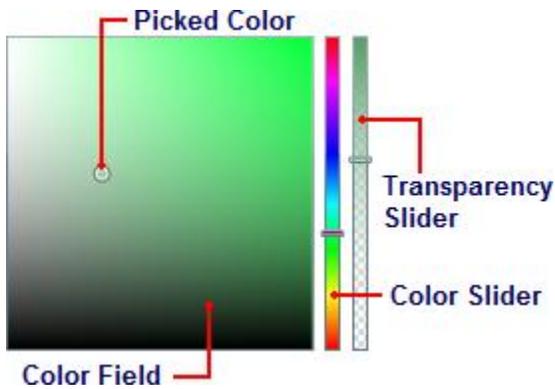
In addition to the full-featured C1ColorPicker control, **ColorPicker for WPF** includes parts of the C1ColorPicker control, that allow you to customize color picking in your application:



The [C1SpectrumColorPicker](#) control allows access to just the advanced color picking functionality of the C1ColorPicker control, the [C1HexColorBox](#) control provides data validation for hexadecimal code entries, and the [C1CheckedRedBorder](#) provides a simple way to display colors with transparencies. The following topics describe these parts.

C1SpectrumColorPicker

The C1SpectrumColorPicker control allows access to just the advanced color picking functionality of the C1ColorPicker control. The C1SpectrumColorPicker control appears similar to the following image:



The C1SpectrumColorPicker control includes the following options/sections:

- **Color Field/Picked Color:** The **Color Field** lets you choose a tone in a color's range. The **Picked Color** indicates the currently selected color. Move the **Color Slider** to pick a general color family and then fine tune the color selection in the **Color Field**.
- **Color Slider:** This slider lets you choose from the color spectrum. Move the **Color Slider** to pick a general color and then fine tune the color selection in the **Color Field**.
- **Transparency Slider:** This slider lets you set the color's transparency. You can choose to make the color opaque or partially or completely transparent. Move the **Transparency Slider** to pick a transparency. This slider is only visible when the ShowAlphaChannel property is set to **True** (default)

C1HexColorBox

The C1HexColorBox control provides data validation for hexadecimal code entries. For example the basic C1HexColorBox control appears similar to the following image:

A0FFF700

The C1HexColorBox control appears similar to a regular text box. By default, the C1HexColorBox control appears with eight digits. If eight digits are visible, the first two digits represent the color's transparency ranging from FF (opaque) to 00 (transparent) and the last six digits represent standard hexadecimal color selection. For more information about hexadecimal color selection, see [w3schools](http://w3schools.com).

Note that if the ShowAlphaChannel property is set to **False**, only the last six digits will be visible (no transparency value will be included):

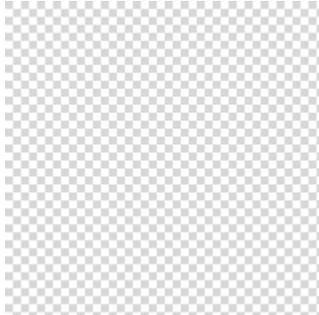
D45656

You can also, if you choose, choose to display a '#' symbol to the start of the C1HexColorBox control by setting the ShowSharpPrefix property to **True**:

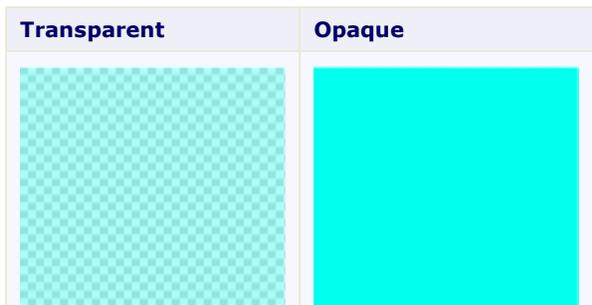
#0F00C48E

C1CheckedBorder

The C1CheckedBorder control provides a simple way to display colors with set alpha values so you can display colors with varying transparencies. By default, the control appears similar to the following image:



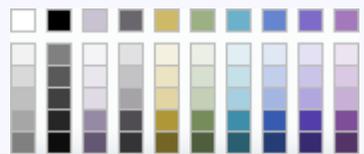
The C1CheckedBorder control supports both transparent and opaque color values:

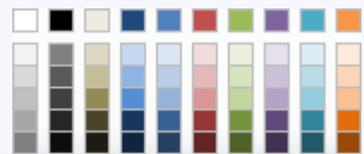
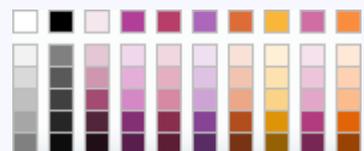


Available ColorPicker Palettes

ColorPicker for WPF includes over 20 predefined color palettes that match the themes used in Microsoft Office. The colors in each palette go well together and can be used to create applications with a polished, professional appearance. To change the color palette, you can set the Palette property. For more information, see [Setting the Palette](#) (page 27).

The following built-in palettes are available:

Name	Palette
Apex	
Aspect	

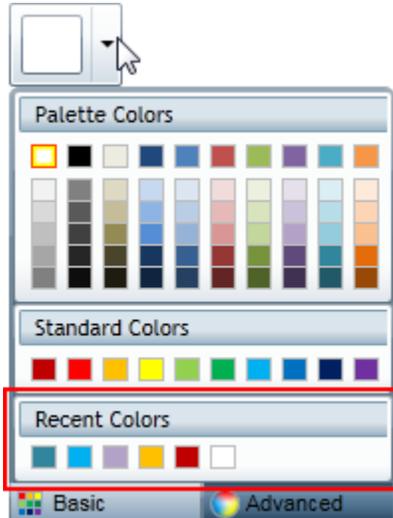
Name	Palette
Office	
Opulent	

Civic	
Concourse	
Default	
Equity	
Flow	
Foundry	
GrayScale	
Median	
Metro	
Module	

Oriel	
Origin	
Paper	
Solstice	
Standard	
Technic	
Trek	
Urban	
Verve	

Recent Colors

By default, when the user views the C1ColorPicker control's **Basic** tab at run time, along with the selected color palette and the standard color palette, the tab includes a section that lists recently picked colors:



If you choose, you can turn the display of recent colors off. The `ShowRecentColors` property sets whether or not these colors are displayed. For more information and an example, see [Hiding Recent Colors](#) (page 32).

Drop-Down Direction

By default, when the user clicks the C1ColorPicker control's drop-down arrow at run-time the color picker will appear below the control, and, if that is not possible, above the control. However, you can customize where you would like the color picker to appear by setting the `DropDownDirection` property.

You can set the `DropDownDirection` property to one of the following options:

Event	Description
BelowOrAbove (default)	Tries to open the drop-down C1ComboBox below the header. If it is not possible tries to open above it.
AboveOrBelow	Tries to open the drop-down C1ComboBox above the header. If it is not possible tries to open below it.
ForceBelow	Forces the drop-down C1ComboBox to open below the header.
ForceAbove	Forces the C1ComboBox content to open above the header.

For more information and an example, see [Changing the Drop-Down Window Direction](#) (page 31).

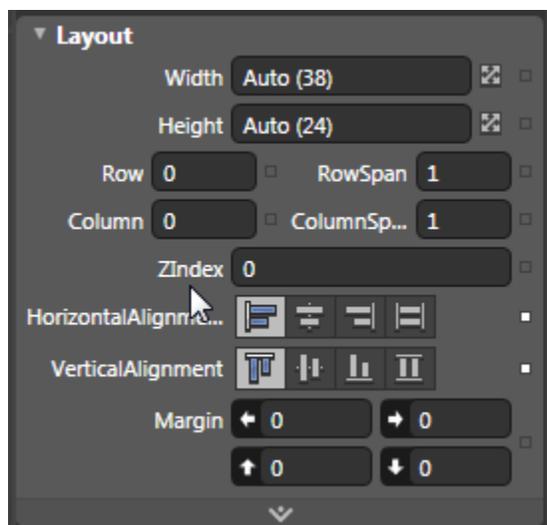
ColorPicker Layout and Appearance

The following topics detail how to customize the C1ColorPicker control's layout and appearance. You can use built-in layout options to lay your controls out in panels such as Grids or Canvases. Themes allow you to

customize the appearance of the grid and take advantage of WPF's XAML-based styling. You can also use templates to format and lay out the control and to customize the control's actions.

Layout in a Panel

You can easily lay out the C1ColorPicker and other controls in your WPF application, using the attached layout properties. For example, you can lay out your control in a **Grid** panel with its **Row**, **ColumnSpan**, and **RowSpan** properties and in a **Canvas** panel with its **Left** and **Top** properties. For example, the C1ColorPicker control includes the following **Layout** properties when located within a **Grid** panel:



You can change the sizing, alignment, and location of the C1ColorPicker control within the **Grid** panel.

ColorPicker Appearance Properties

ComponentOne ColorPicker for WPF includes several properties that allow you to customize the appearance of the control. You can change the color, border, and height of the control. The following topics describe some of these appearance properties.

Color Properties

The following properties let you customize the colors used in the control itself:

Property	Description
Background	Gets or sets a brush that describes the background of a control. This is a dependency property.
Foreground	Gets or sets a brush that describes the foreground color. This is a dependency property.

Alignment Properties

The following properties let you customize the control's alignment:

Property	Description
HorizontalAlignment	Gets or sets the horizontal alignment characteristics applied to this element when it is composed within a parent element, such as a panel or items control. This is a dependency property.
VerticalAlignment	Gets or sets the vertical alignment characteristics applied to this element when it is composed within a parent element such as a panel or items control. This is a dependency property.

Border Properties

The following properties let you customize the control's border:

Property	Description
BorderBrush	Gets or sets a brush that describes the border background of a control. This is a dependency property.
BorderThickness	Gets or sets the border thickness of a control. This is a dependency property.

Size Properties

The following properties let you customize the size of the **CIColorPicker** control:

Property	Description
Height	Gets or sets the suggested height of the element. This is a dependency property.
MaxHeight	Gets or sets the maximum height constraint of the element. This is a dependency property.
MaxWidth	Gets or sets the maximum width constraint of the element. This is a dependency property.
MinHeight	Gets or sets the minimum height constraint of the element. This is a dependency property.
MinWidth	Gets or sets the minimum width constraint of the element. This is a dependency property.
Width	Gets or sets the width of the element. This is a dependency property.

ComponentOne ClearStyle Technology

ComponentOne ClearStyle™ technology is a new, quick and easy approach to providing Silverlight and WPF control styling. ClearStyle allows you to create a custom style for a control without having to deal with the hassle of XAML templates and style resources.

Currently, to add a theme to all standard WPF controls, you must create a style resource template. In Microsoft Visual Studio this process can be difficult; this is why Microsoft introduced Expression Blend to make the task a bit easier. Having to jump between two environments can be a bit challenging to developers who are not familiar with Blend or do not have the time to learn it. You could hire a designer, but that can complicate things when your designer and your developers are sharing XAML files.

That's where ClearStyle comes in. With ClearStyle the styling capabilities are brought to you in Visual Studio in the most intuitive manner possible. In most situations you just want to make simple styling changes to the controls in your application so this process should be simple. For example, if you just want to change the row color of your data grid this should be as simple as setting one property. You shouldn't have to create a full and complicated-looking template just to simply change a few colors.

How ClearStyle Works

Each key piece of the control's style is surfaced as a simple color property. This leads to a unique set of style properties for each control. For example, a **Gauge** has **PointerFill** and **PointerStroke** properties, whereas a **DataGrid** has **SelectedBrush** and **MouseOverBrush** for rows.

Let's say you have a control on your form that does not support ClearStyle. You can take the XAML resource created by ClearStyle and use it to help mold other controls on your form to match (such as grabbing exact colors). Or let's say you'd like to override part of a style set with ClearStyle (such as your own custom scrollbar). This is also possible because ClearStyle can be extended and you can override the style where desired.

ClearStyle is intended to be a solution to quick and easy style modification but you're still free to do it the old fashioned way with ComponentOne's controls to get the exact style needed. ClearStyle does not interfere with those less common situations where a full custom design is required.

ClearStyle Properties

The following table lists all of the ClearStyle-supported properties in the C1ColorPicker control as well as a description of the property:

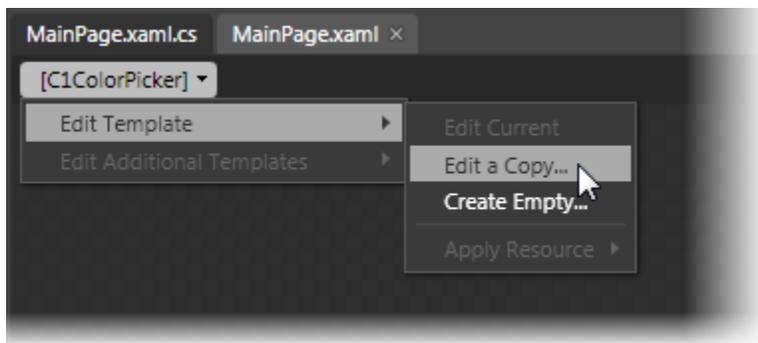
Property	Description
Background	Gets or sets a brush that describes the background of a control. The default Background color is LightBlue.
FocusBrush	A brush used to define the appearance of the control, when the control is in focus.
MouseOverBrush	A brush used to define the appearance of the control, when the control is in moused over.
PressedBrush	A brush used to define the appearance of the control, when the control is selected.

ColorPicker Templates

One of the main advantages to using a WPF control is that controls are "lookless" with a fully customizable user interface. Just as you design your own user interface (UI), or look and feel, for WPF applications, you can provide your own UI for data managed by **ComponentOne ColorPicker for WPF**. Extensible Application Markup Language (XAML; pronounced "Zammel"), an XML-based declarative language, offers a simple approach to designing your UI without having to write code.

Accessing Templates

You can access templates in Microsoft Expression Blend by selecting the C1ColorPicker control and, in the menu, selecting **Edit Control Parts (Templates)**. Select **Edit a Copy** to create an editable copy of the current template or **Create Empty**, to create a new blank template.



Note: If you create a new template through the menu, the template will automatically be linked to that template's property. If you manually create a template in XAML you will have to link the appropriate template property to the template you've created.

Note that you can use the [Template](#) property to customize the template.

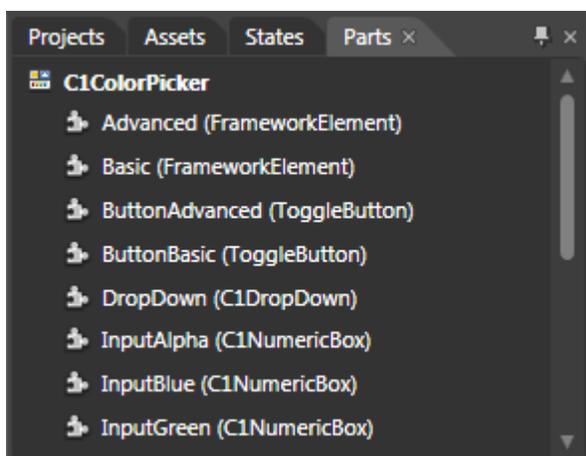
ColorPicker Styles

ComponentOne ColorPicker for WPF's C1ColorPicker control provides several style properties that you can use to change the appearance of the control. Some of the included styles are described in the table below:

Style	Description
ColorContainerStyle	Sets/gets the style of the ItemsControl used to show a section of colors (that is recent colors).
FontStyle	Gets or sets the font style. This is a dependency property.
Style	Gets or sets the style used by this element when it is rendered. This is a dependency property.

ColorPicker Template Parts

In Microsoft Expression Blend, you can view and edit template parts by creating a new template (for example, click the **C1ColorPicker** control to select it and choose **Object | Edit Template | Edit a Copy**). Once you've created a new template, the parts of the template will appear in the **Parts** window:



Note that you may have to select the **ControlTemplate** for its parts to be visible in the **Parts** window.

In the **Parts** window, you can double-click any element to create that part in the template. Once you have done so, the part will appear in the template and the element's icon in the **Parts** window will change to indicate selection:



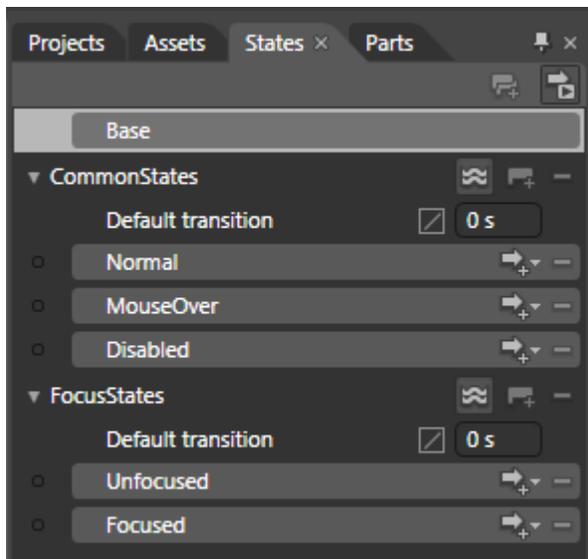
Template parts available in the **C1ColorPicker** control include:

Name	Type	Description
Advanced	FrameworkElement	Provides a framework of common APIs for objects that participate in WPF layout. Also defines APIs related to data binding, object tree, and object lifetime feature areas in WPF.
Basic	FrameworkElement	Provides a framework of common APIs for objects that participate in WPF layout. Also defines APIs related to data binding, object tree, and object lifetime feature areas in WPF.
ButtonAdvanced	ToggleButton	Base class for controls that can switch states, such as CheckBox and RadioButton .
ButtonBasic	ToggleButton	Base class for controls that can switch states, such as CheckBox and RadioButton .
DropDown	Grid	Defines a flexible grid area that consists of columns and rows.
InputAlpha	C1NumericBox	The C1NumericBox control is a numeric editor that allows you to display and edit numeric values in many formats.
InputBlue	C1NumericBox	The C1NumericBox control is a numeric editor that allows you to display and edit numeric values in many formats.
InputGreen	C1NumericBox	The C1NumericBox control is a numeric editor that allows you to display and edit numeric values in many formats.
InputHue	C1NumericBox	The C1NumericBox control is a numeric editor that allows you to display and edit numeric values in many formats.
InputLuminance	C1NumericBox	The C1NumericBox control is a numeric editor that allows you to display and edit numeric values in many formats.
InputRed	C1NumericBox	The C1NumericBox control is a numeric editor that allows you to display and edit numeric values in many formats.
InputSaturation	C1NumericBox	The C1NumericBox control is a numeric editor that allows you to display and edit numeric values in many formats.
InputWeb	TextBox	Represents a control that can be used to display single-format, multi-line text.
OkButton	Button	Represents a button control.
Preview	Rectangle	Draws a rectangle shape, which can have a stroke

		and a fill.
RecentColors	Grid	Defines a flexible grid area that consists of columns and rows.
RecentColorsHeader	FrameworkElement	Provides a framework of common APIs for objects that participate in WPF layout. Also defines APIs related to data binding, object tree, and object lifetime feature areas in WPF.
Root	FrameworkElement	Provides a framework of common APIs for objects that participate in WPF layout. Also defines APIs related to data binding, object tree, and object lifetime feature areas in WPF.
Spectrum	C1SpectrumColorPicker	Represents a sliding color picker.
StandardColors	Grid	Defines a flexible grid area that consists of columns and rows.
ThemeColorsHeader	Grid	Defines a flexible grid area that consists of columns and rows.
ThemeColorsValues	Grid	Defines a flexible grid area that consists of columns and rows.

ColorPicker Visual States

In Microsoft Expression Blend, you can add custom states and state groups to define a different appearance for each state of your user control – for example, the visual state of the control could change on mouse over. You can view and edit visual states by creating a new template and [adding a new template part](#) (page 22). Once you've done so the available visual states for that part will be visible in the **Visual States** window:



Common states include **Normal** for the normal appearance of the item, **MouseOver** for the item on mouse over, and **Disabled** for when the item is not enabled. Focus states include **Unfocused** for when the item is not in focus and **Focused** when the item is in focus.

XAML Elements

Several auxiliary XAML elements are installed with **ComponentOne ColorPicker for WPF**. These elements include templates and themes and are located in the **ColorPicker for WPF** installation directory. You can incorporate these elements into your project, for example, to create your own theme based on the default theme.

Included Auxiliary XAML Elements

The following auxiliary XAML element is included with **ColorPicker for WPF**:

Element	Folder	Description
generic.xaml	XAML	Specifies the templates for different styles and the initial style of the control.

ColorPicker for WPF Samples

Please be advised that this ComponentOne software tool is accompanied by various sample projects and/or demos, which may make use of other ComponentOne development tools included with the ComponentOne Studios. Samples can be accessed from the **ComponentOne Studio for WPF ControlExplorer**. To view samples, on your desktop, click the **Start** button and then click **All Programs | ComponentOne | Studio for WPF | Samples | WPF ControlExplorer**.

C# Samples

The following C# sample is included:

Sample	Description
ControlExplorer	The ColorPicker page in the ControlExplorer sample demonstrates how to customize the C1ColorPicker control.

ColorPicker for WPF Task-Based Help

The task-based help assumes that you are familiar with programming in Visual Studio .NET and know how to use the C1ColorPicker control in general. If you are unfamiliar with the **ComponentOne ColorPicker for WPF** product, please see the [ColorPicker for WPF Quick Start](#) (page 5) first.

Each topic in this section provides a solution for specific tasks using the **ComponentOne ColorPicker for WPF** product.

Each task-based help topic also assumes that you have created a new WPF project.

Setting the Palette

ColorPicker for WPF includes over 20 predefined color palettes that match the themes used in Microsoft Office. For more information about palette choices, see [Available ColorPicker Palettes](#) (page 16). To change the color palette, you can set the Palette property.

To set the Palette property, complete the following steps:

1. Navigate to the Toolbox and double-click the Button icon to add the control to the project.
2. Resize and reposition the Button on the form.
3. Navigate to the Properties window and set the button's **Content** property to "Change Palette".
4. Double-click the button to switch to Code view and create the **Button_Click** event handler.
5. Add code for the **Button_Click** event handler, so it appears like the following:

- Visual Basic

```
Private Sub Button1_Click(ByVal sender as Object, ByVal e as
System.Windows.RoutedEventArgs)
    ' Set the color palette.
    Me.C1ColorPicker.Palette =
ColorPalette.GetColorPalette(Office2007ColorTheme.GrayScale)
End Sub
```

- C#

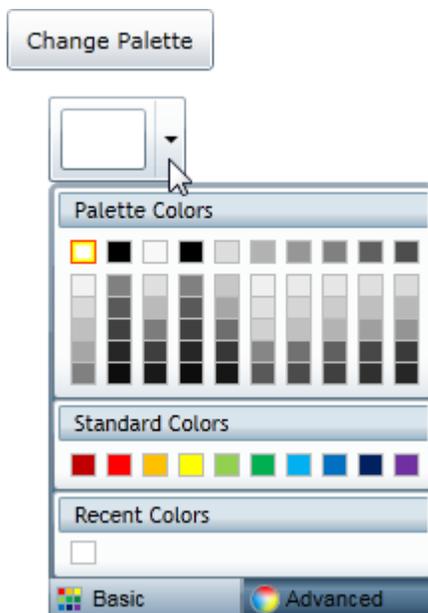
```
private void button1_Click(object sender,
System.Windows.RoutedEventArgs e)
{
    // Change color palette.
    this.c1ColorPicker.Palette =
ColorPalette.GetColorPalette(Office2007ColorTheme.GrayScale);
}
```

The **C1ColorPicker**'s color palette will now change to grayscale when the button is clicked.

Run the application and observe:

Observe the following:

1. Click the C1ColorPicker control's drop-down arrow and notice that the default palette appears.
2. Click the **Change Palette** button and click the C1ColorPicker control's drop-down arrow once again. Notice that a grayscale palette appears:



Creating a Custom Palette

ColorPicker for WPF includes over 20 predefined color palettes that match the themes used in Microsoft Office, but if you choose you can create your own custom color palette rather than using a predefined one. In the following steps you'll create a custom palette, and when a button is pressed, apply that palette to the C1ColorPicker control.

To create a custom palette, complete the following steps:

1. Navigate to the Toolbox and double-click the Button icon to add the control to the project.
2. Resize and reposition the Button on the form.
3. Navigate to the Properties window and set the button's **Content** property to "Change Palette".
4. Double-click the button to switch to Code view and create the **Button_Click** event handler.
5. Add code for the **Button_Click** event handler, so it appears like the following:
 - Visual Basic

```

Private Sub Button1_Click(ByVal sender as Object, ByVal e as
System.Windows.RoutedEventArgs)
    ' Set the color palette.
    Dim cp1 as New ColorPalette("Pittsburgh")
    cp1.Clear()
    cp1.Add(Color.FromArgb(255, 0, 0, 0))
    cp1.Add(Color.FromArgb(255, 99, 107, 112))
    cp1.Add(Color.FromArgb(255, 255, 255, 255))
    cp1.Add(Color.FromArgb(255, 247, 181, 18))
    cp1.Add(Color.FromArgb(255, 253, 200, 47))
    cp1.Add(Color.FromArgb(255, 43, 41, 38))
    cp1.Add(Color.FromArgb(255, 149, 123, 77))
    cp1.Add(Color.FromArgb(255, 209, 201, 157))
    cp1.Add(Color.FromArgb(255, 0, 33, 71))
    cp1.Add(Color.FromArgb(255, 99, 177, 229))
    c1ColorPicker1.Palette = cp1
End Sub

```

- **C#**

```

private void button1_Click(object sender,
System.Windows.RoutedEventArgs e)
{
    // Set the color palette.
    ColorPalette cp1 = new ColorPalette("Pittsburgh");
    cp1.Clear();
    cp1.Add(Color.FromArgb(255, 0, 0, 0));
    cp1.Add(Color.FromArgb(255, 99, 107, 112));
    cp1.Add(Color.FromArgb(255, 255, 255, 255));
    cp1.Add(Color.FromArgb(255, 247, 181, 18));
    cp1.Add(Color.FromArgb(255, 253, 200, 47));
    cp1.Add(Color.FromArgb(255, 43, 41, 38));
    cp1.Add(Color.FromArgb(255, 149, 123, 77));
    cp1.Add(Color.FromArgb(255, 209, 201, 157));
    cp1.Add(Color.FromArgb(255, 0, 33, 71));
    cp1.Add(Color.FromArgb(255, 99, 177, 229));
    c1ColorPicker1.Palette = cp1;
}

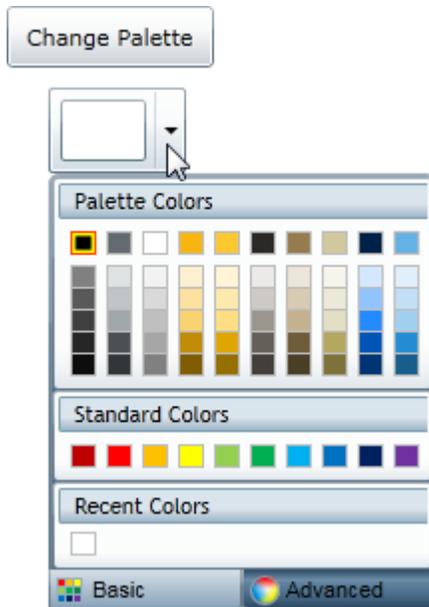
```

The **ColorPicker**'s color palette will now change to a custom palette when the button is clicked.

Run the application and observe:

Observe the following:

1. Click the C1ColorPicker control's drop-down arrow, and notice that the default palette appears.
2. Click the **Change Palette** button and click the C1ColorPicker control's drop-down arrow once again. Notice that the custom palette appears:



Changing the Background Color

The **Background** property gets or sets the value of the C1ColorPicker control's background color. By default the C1ColorPicker control starts with the **Background** property unset, but you can customize this at design time, in XAML, and in code.

At Design Time in Blend

To set the **Background** property at run time, complete the following steps:

1. Click the C1ColorPicker control once to select it.
2. Navigate to the Properties window, and click the **Background** drop-down arrow, and choose **Red** or another color in the color picker.

In XAML

For example, to set the **Background** property to **Red** add `Background="Red"` to the `<c1: C1ColorPicker>` tag so that it appears similar to the following:

```
<c1:C1ColorPicker Name="C1ColorPicker1" Margin="296,98,273,0" Height="45"
  VerticalAlignment="Top" Background="Red"/>
```

In Code

For example, to set the **Background** property to **Red**, add the following code to your project:

- Visual Basic


```
Me.C1ColorPicker1.Background = System.Windows.Media.Brushes.Red
```
- C#


```
this.c1ColorPicker1.Background = System.Windows.Media.Brushes.Red;
```

Run the application and observe:

The background of the C1ColorPicker control will appear red:



Changing the Drop-Down Window Direction

By default, when the user clicks the `C1ColorPicker` control's drop-down arrow at run-time the color picker will appear below the control, and if that is not possible, above the control. However, you can customize where you would like the color picker to appear. For more information about the drop-down arrow direction, see [Drop-Down Direction](#) (page 18).

At Design Time in Blend

To change the drop-down window direction at run time, complete the following steps:

1. Click the `C1ColorPicker` control once to select it.
2. Navigate to the Properties window and click the `DropDownDirection` drop-down arrow.
3. Choose an option, for example **ForceAbove**.

This will set the `DropDownDirection` property to the option you chose.

In XAML

For example, change the drop-down window direction add `DropDownDirection="ForceAbove"` to the `<c1:C1ColorPicker>` tag so that it appears similar to the following:

```
<c1:C1ColorPicker Name="C1ColorPicker1" Margin="296,98,273,0" Height="45" VerticalAlignment="Top" DropDownDirection="ForceAbove"/>
```

In Code

For example, to change the drop-down window direction, add the following code to your project:

- Visual Basic

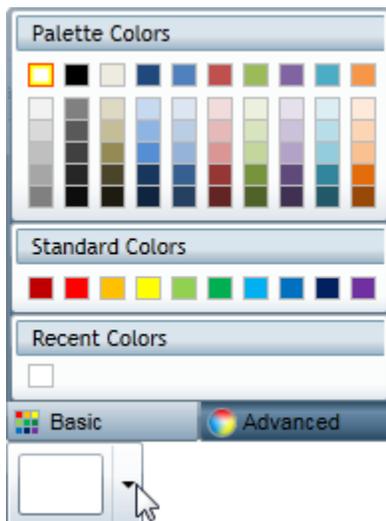
```
Me.C1ColorPicker1.DropDownDirection = DropDownDirection.ForceAbove
```
- C#

```
this.c1ColorPicker1.DropDownDirection = DropDownDirection.ForceAbove;
```

This will set the `DropDownDirection` property to **ForceAbove**.

Run the application and observe:

When you click the `C1ColorPicker` control's drop-down arrow, the drop down window will appear above the control:



Hiding Recent Colors

By default the C1ColorPicker control displays recent colors in the **Basic** tab of the color picker window. For more information, see [Recent Colors](#) (page 18). If you choose, you prevent recent colors from being displayed at design time, in XAML, and in code.

At Design Time in Blend

To prevent recent colors from being displayed at run time, complete the following steps:

1. Click the C1ColorPicker control once to select it.
2. Navigate to the Properties window.
3. Locate the **ShowRecentColors** property and set it to **False**.

In XAML

To prevent recent colors from being displayed add `ShowRecentColors="False"` to the `<c1:C1ColorPicker>` tag so that it appears similar to the following:

```
<c1:C1ColorPicker Name="C1ColorPicker1" Margin="296,98,273,0" Height="45"
  VerticalAlignment="Top" ShowRecentColors="False" />
```

In Code

To prevent recent colors from being displayed, add the following code to your project:

- Visual Basic

```
Me.C1ColorPicker1.ShowRecentColors = False
```

- C#

```
this.c1ColorPicker1.ShowRecentColors = false;
```

Run the application and observe:

When you click the C1ColorPicker control's drop-down arrow, observe that recent colors are not displayed on the Basic tab:

