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Colour Pot Smart Object for Crestron Smart Graphics

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Summary

This datasheet relates to Ultamation's Colour Pot Smart Graphics Control for Crestron control systems with GUIs that support Smart Graphics custom objects.

The purpose of this control is to provide an interactive display of colour selection which is particularly useful in situations where the system offers user-selectable RGB lighting.

The key features of the control are as follows:

- Fully theme-able using either Ultamation's Theme Creator or Crestron Studio
- The control operates in two modes
    - as a colour feedback representation; for example, to show the actual colour represented by three sliders (red, green & blue)
    - as a colour picker; for example, to present a palette of selectable colours for the user to choose from.
- The pot is built up from two visual elements providing a static background, plus a variable colour "swatch". These are standard images, so the colour pot can take any design you choose!

Please note that this control is only available for Crestron Smart Graphics UI capable touch panels, as applications for mobile devices do not allow for custom controls to be used. Please ensure that the panel you plan to use supports Smart Graphics UI custom controls before placing an order for this control.

Installation

1. Ensuring you have "Show hidden files and folders" enabled in Windows Explorer, go to C:\ProgramData\Crestron\Core3\UserCtrls\Controls
2. Copy the control (the file with the .c3c extension) into this folder. Note that Crestron Studio and VTPro will only pick up new controls at start-up. If either program is open, restart it to see new controls.
3. VTPro and Studio will show the control, under the Ultamation group. Use the control as you would any other Smart Graphics control.
4. A step-by-step guide in creating a Theme for this control is beyond the scope of this datasheet, however, we have provided details of the structure of the necessary styles so that themes can easily be created. We have provided a zip file containing a all the images required to theme the three clocks shown opposite – these images will need to be imported into your chosen theme creation application.
   Ultamation recommend using our Theme Creator product for the best Theme Creation experience.

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IMPORTANT NOTICE on WORKING COLOUR POTS!

Using any of the default themes will not yield an attractive colour pot. You MUST first modify an existing theme to add the necessary images to a style, and then assign that style to the colour pot control that will be present in Studio or Theme Creator after you've installed the .c3c file.

Programming Notes (VisionTools Pro-e)

Use of the Colour Pot smart object requires a Smart Graphics capable panel. This control will not operate on older panels and cannot be uploaded to iOS/Android panels.

To begin using this control, place the .c3c file in your Core3 user controls folder (default is C:\ProgramData\Crestron\Core3\UserCtrls\controls):

Once this file exists in your user controls folder, start VisionTools Pro-e (restarting it if you already have it open) and open the Smart Graphics controls browser. From this Window, drag the Colour Pot object on to the page.

Version Information

This control has been compiled and tested under:

Smart Graphics SDK version:	2.04
Smart Graphics Controls Release:	2.04.02.05
VTPro-e:	5.6.06

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Design Time Properties

In VisionTools Pro-e, the object has the following properties:

Design Time Properties

Property	Purpose
Colour Pot Style	You must first be using a theme that includes a style for the Colour Pot control. Once one or more styles have been defined and associated with the Colour Pot control, you can then select which of these styles to use to render the pot background and swatch.
Store Duration	Interactive mode only: The time in milliseconds for the "press and hold" function of the colour pot to update the input colour values and signal the control system to store the values (if required) in RAM.
Feedback Mode	A Boolean property – if ticked, the pot will operate purely as a colour feedback control. User interaction is disabled and the pot will automatically update whenever the RGB input values driven by the control system change.

Programming

In SIMPL, the object's CED file exposes the following:

Smart Object Properties – Interactive Mode

Property	Type	Purpose
Update	Digital In	On a rising edge, the colour pot will read the current input RGB values and update the colour pot colour
Store	Digital Out	If the colour pot is touched for more than the time specified in the "Store Duration" property, this output will pulse, and the current input of the RGB values will also be read and the colour updated. This signal might be tied to the store of an ARAM symbol.
Recall	Digital Out	If the colour pot is touched for less than the time specified in the "Store Duration" property, this output will pulse. This might then drive the control system logic to send the stored RGB values to a DMX light fixture.
Red	Analogue In	The red component of the colour (see above)
Green	Analogue In	The green component of the colour (see above)
Blue	Analogue In	The blue component of the colour (see above)

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Smart Object Properties – Feedback Mode

Property	Type	Purpose
Store	Digital In	No function
	Digital Out	No function
Red	Analogue In	The red component of the colour to show
Green	Analogue In	The green component of the colour to show
Blue	Analogue In	The blue component of the colour to show

Programming note:
The control does not itself store the RGB values. This is because the panel may destroy the control when it is not in view to conserve panel memory. Instead, you must manage the persistence of the colour values in your program. An example program is provided to show how this can be achieved, though this only presents one way – there are many ways to accomplish the same result.

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Theming Information

Image Manifest

We have included a basic image pack to allow you to use the control without having to draw your own graphics assets.

Style Builder Information

The Colour Pot uses a single style to define the visual appearance. Multiple instances of the control can use different styles if you wish.

A "style" can be thought of as a wrapper for a number of visual "states" or bitmaps. Each style must conform to the following state list in order to render correctly. Every bitmap used in the style should use the same dimensions (width/height) in order to render correctly.

Image Index	Description
1	The colour pot background
2	The colour pot "swatch". This should be an RGB bitmap with alpha channel, though we recommend the image be confined to greyscale in order to take the colour tint correctly. 100% white areas will take on the appropriate colour faithfully, while grey areas will take on a darker tone of the colour. Black will always be black. This bitmap should include an alpha channel so that any area where you wish the background to show through should be left transparent.

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