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Analogue Clock (v2) for Crestron Smart Graphics

Revision: 2.0
Date: 29 January 2015

Summary

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

The purpose of this control is to provide an attractive analogue clock function for touch panels.

The key features of the control are as follows:

- Automatically show panel's local time, or drive any 12 hour format time from a control system.
- Fully theme-able using either Ultamation's Theme Creator or Crestron Studio
- Optional "glass" layer overlay
- Provide fixed minute offsets for alternative time zones
- Show/hide the seconds hand (set at design time)
- Enable/Disable shadows on hands (fixed at 135 deg) (set at design time)
- Hands animate between times when driven from the control system (can be disabled)
- Not a SmartObject™ – Hour/Min/Sec analogue joins can be anywhere you like, and no CEDs to worry about.

Please note that this control is only available for Crestron Core3 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 Core3 UI custom controls before placing an order for this control.

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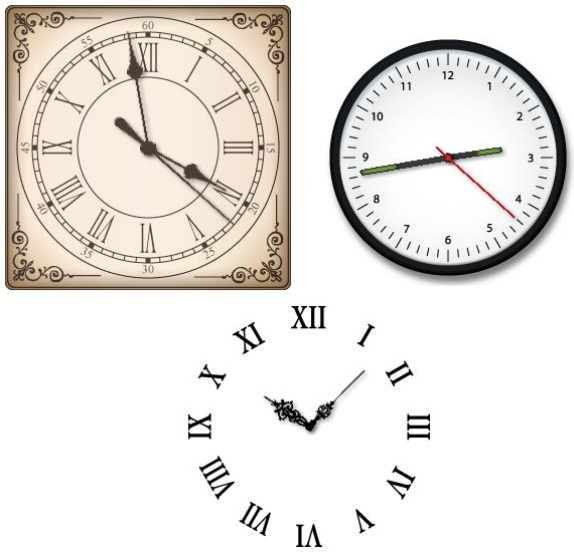
Programming Notes (VisionTools Pro-e)

Use of the Analogue Clock (v2) 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 Analogue Clock v2 object on to the page.

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

Design Time Properties

Property	Purpose
Clock Style	You must first be using a theme that includes a style for the Analogue Clock v2 control. Once one or more styles have been defined and associated with the Analogue Clock v2 control, you can then select which of these styles to use to render the clock face and hands.
Use Panel Time	A Boolean property – if ticked, the clock will take it's time from the panel's clock. If not ticked, the clock will display the time according to the three analogue values (see below) driven by the control system.
Local Offset (min)	Positive or negative number of seconds to add or subtract from the current panel time. This value has no impact if the clock is driven by the control system.
Display Seconds	A Boolean property – if ticked, the seconds hand will be displayed. If not, then it won't.
Hand Shadows	A Boolean property – if ticked, the hands (but not the face or glass layers) will be rendered with a subtle drop shadow.
Tween	A Boolean property – if ticked, then the hands will animate (tween) between changes sent by the control system. This has no effect if "Use Panel Time" is ticked.
Hours/Min/Sec Join	Three analogue join values used to drive the clock from a control system. These are split into three separate values as a single analogue value doesn't have the sufficient cardinality to represent hours, minutes AND seconds for a whole day. A time value can easily be split into its component parts in the control system programming using the DIVMOD symbol.

Theming Information

Initial Import

1. Ensuring you have "Show hidden files and folders" enabled in Windows Explorer, go to C:\ProgramData\Crestron\Core3\UserCtrls\Controls
2. Expand the control .zip file, containing the .c3c file 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.

Image Manifest

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

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Style Builder Information

The Analogue Clock v2 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.

The style should normally be given a "Stretch Aspect" scaling mode.

Image Index	Description
1	The clock face
2	The hour hand: A transparent PNG with the hand drawn with its point of rotation in the centre.
3	The minute hand: A transparent PNG with the hand drawn with its point of rotation in the centre.
4	The second hand: A transparent PNG with the hand drawn with its point of rotation in the centre.
5	OPTIONAL: a mask, semi-transparent or translucent image to be applied over the top of the clock face. If the style includes this image state, it will be drawn over the other layer without any rotation. If the style doesn't have a 5th state, this layer will not be drawn.

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Examples:
A large residential system with multiple processors and touch panel types is a SINGLE PROJECT.
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