FeneTech® Best Practice

Display Objects Window Color and Paint (BP0210)

Revision	Date	Description of Change	Revised By
A	08/19/2024	Initial Document	NL
B	8/26/2024	Hardware Color Section Added	NL

Introduction

The purpose of this document is to explain the base functionality and setup required for colors within Window Display Objects. Specifically, this is in reference to the base setup for frame and grid colors, along with an **OPTIONAL** custom hardware color setup for display objects.

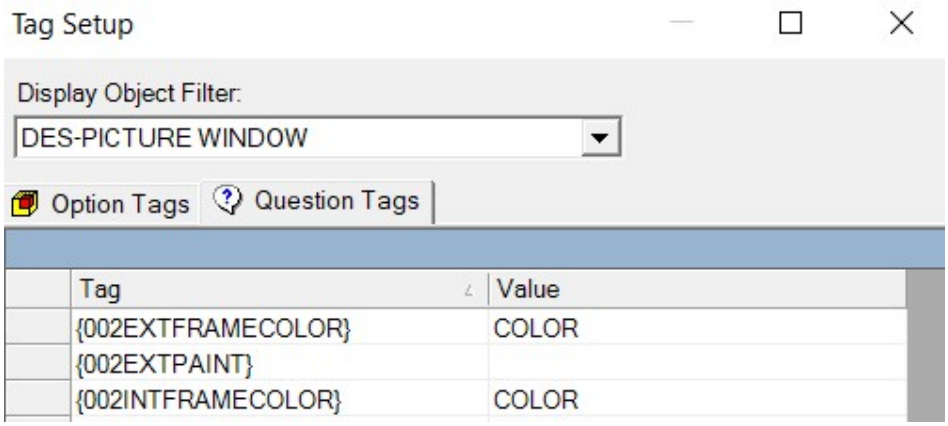
For setting up/copying Display Objects outside of color (or syncing them from one database to another), please refer to BP0094-Display Objects - Copying Objects and Object Components.docx for more information.

Using

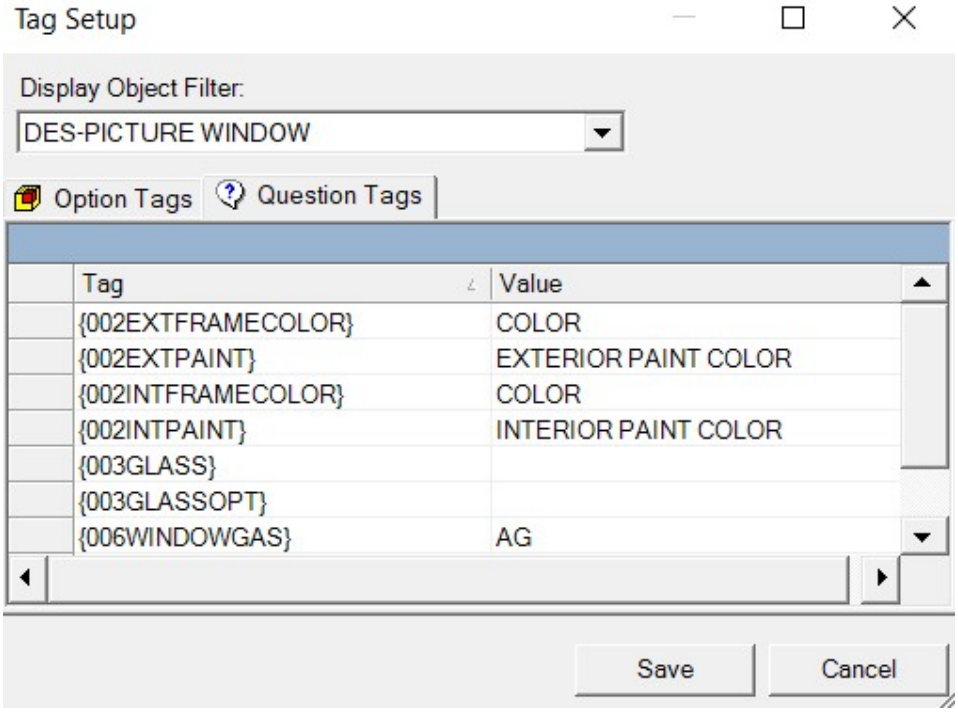
Past version 12.0, there is infrastructure setup to be able to define Window Frame and Grid Color for the Display Object. Specifically, one can define unique colors for the exterior color and paint, interior color and paint, and grid color.

Tags

For Display Object Colors, start by setting the Question Tags for {002EXTFRAMECOLOR} and {002INTFRAMECOLOR} to the COLOR question that you have in the option structure. In the example below, there is one question that determines the interior and exterior color



Whereas for Paint, {002EXTPAINT} AND {002INTPAINT} are the required question tags. These need to be set to the paint questions in the option structure. An example of this is shown below.

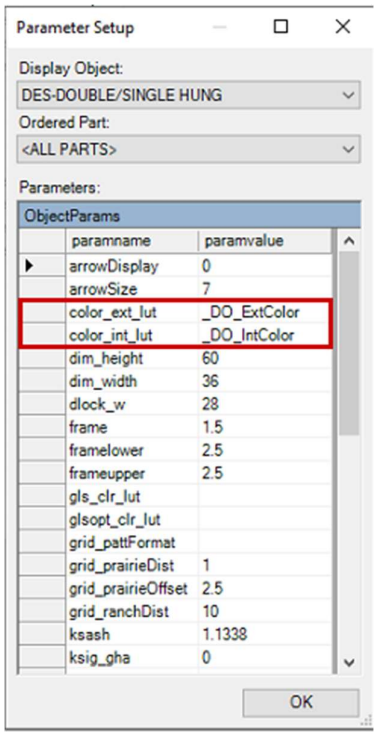


Lookup Table Setup

The method of referring to the color/paint lookup tables' is within the below portion of the initialize script, which comes from the base DES-DOUBLE/SINGLE HUNG (20003) Display Object. The code looks to see if the lookup table exists AND to see if the color/paint has a corresponding color within the correct cell of the table:

```
'Colors Options From a Lookup Table
If GroupExists("{002EXTFRAMECOLOR}") And OV = 2 And (Param("color_ext_lut")) <> "" Then
    If TableLookup(Param("color_ext_lut"), "Colorv", GroupKey("{002EXTFRAMECOLOR}")) <> "" Then
        UserDef("Colorv") = TableLookup(Param("color_ext_lut"), "Colorv", GroupKey("{002EXTFRAMECOLOR}"))
        UserDef("Colorh") = TableLookup(Param("color_ext_lut"), "Colorh", GroupKey("{002EXTFRAMECOLOR}"))
        UserDef("ColorStyle") = TableLookup(Param("color_ext_lut"), "ColorStyle", GroupKey("{002EXTFRAMECOLOR}"))
        UserDef("GridColor") = TableLookup(Param("color_ext_lut"), "DefaultGridColor", GroupKey("{002EXTFRAMECOLOR}"))
        UserDef("KSGridColor") = TableLookup(Param("color_ext_lut"), "DefaultGridColor", GroupKey("{002EXTFRAMECOLOR}"))
        UserDef("LSGridColor") = TableLookup(Param("color_ext_lut"), "DefaultGridColor", GroupKey("{002EXTFRAMECOLOR}"))
    End If
ElseIf GroupExists("{002INTFRAMECOLOR}") And OV = 1 And (Param("color_int_lut")) <> "" Then
    If  TableLookup(Param("color_int_lut"), "Colorv", GroupKey("{002INTFRAMECOLOR}")) <> "" Then
        UserDef("Colorv") = TableLookup(Param("color_int_lut"), "Colorv", GroupKey("{002INTFRAMECOLOR}"))
        UserDef("Colorh") = TableLookup(Param("color_int_lut"), "Colorh", GroupKey("{002INTFRAMECOLOR}"))
        UserDef("ColorStyle") = TableLookup(Param("color_int_lut"), "ColorStyle", GroupKey("{002INTFRAMECOLOR}"))
        UserDef("GridColor") = TableLookup(Param("color_int_lut"), "DefaultGridColor", GroupKey("{002INTFRAMECOLOR}"))
        UserDef("KSGridColor") = TableLookup(Param("color_int_lut"), "DefaultGridColor", GroupKey("{002INTFRAMECOLOR}"))
        UserDef("LSGridColor") = TableLookup(Param("color_int_lut"), "DefaultGridColor", GroupKey("{002INTFRAMECOLOR}"))
    End If
End If
```

The most important parts of the above code are the references to the **color_ext_lut** and **color_int_lut** params. These params hold the name of the Lookup Tables that define the exterior and interior color on the Display Object. To define these parameters in the Display Object menu, go to the top left corner under **Setup -> Params,** then enter in the names of the respective Lookup Tables for the colors in the paramvalue field for the 2 params in question:



Using those exact Lookup Table names, the next step will be to create the Tables from the Lookup Table menu under **Setup -> Products -> Lookup Tables**.

Exterior Color Lookup Table Example:

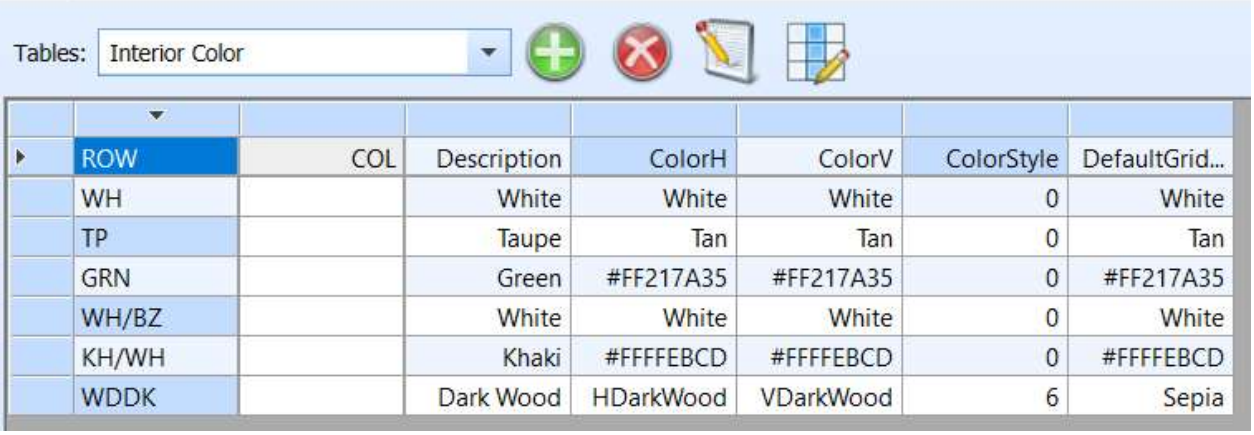
Lookup Tables

Tables: Exterior Color

ROW	COL	Description	Colorh	Colorv	ColorStyle	DefaultGridColor
WH		White	White	White	0	White
TP		Taupe	Tan	Tan	0	Tan
GRN		Green	#FF217A35	#FF217A35	0	#FF217A35
WH/BZ		Bronze	Bronze	Bronze	0	Bronze
KH/WH		White	White	White	0	White
WDDK		Dark Wood	HDarkWood	VDarkWood	6	Sepia

Interior Color Lookup Table Example:

Lookup Tables



ROW	COL	Description	ColorH	ColorV	ColorStyle	DefaultGrid...
WH		White	White	White	0	White
TP		Taupe	Tan	Tan	0	Tan
GRN		Green	#FF217A35	#FF217A35	0	#FF217A35
WH/BZ		White	White	White	0	White
KH/WH		Khaki	#FFFFEBCD	#FFFFEBCD	0	#FFFFEBCD
WDDK		Dark Wood	HDarkWood	VDarkWood	6	Sepia

The Y axis represents the Color Option Codes selected in the Option Wizard, which link the Display Object to the Orderable Part's Option Wizard. Make sure your option key is the same as your option code in the option code setup screen.

The X Axis in the lookup table plays a part when assigning the correct color to the Display Object. Below are the detailed descriptions of each column:

- Description – This is your description of the option code. This does NOT have to be the same information that is in the ColorH and ColorV columns. This is simply informational.
- Colorh – This is the HTML color, HEX code or image name for the horizontal frame and sash pieces of the display object. See the Available Colors section for more information.
- Colorv - This is the HTML color, HEX code or image name for the vertical frame and sash pieces of the display object. See the Available Colors section for more information.
- ColorStyle – Determines the style of the color/image that is used. See the Color Style section for more information.
- DefaultGridColor – If grids are selected in the option structure, this is what determines the default grid color.

Available Colors

There are three main ways to add colors into the lookup tables: using one of the preset colors in the software, adding in the color's hex code, or uploading and using the name of an image.

Uploading Images:

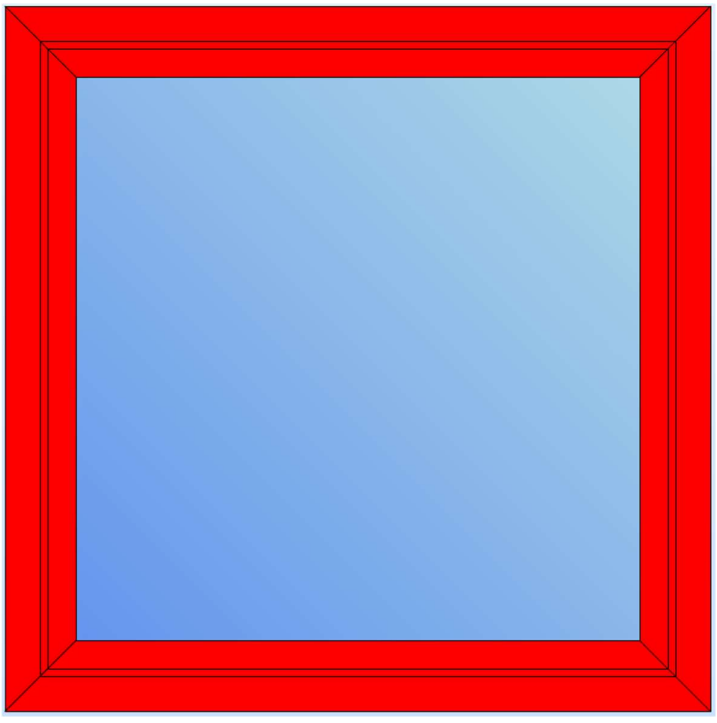
Within Fenevision, images with most common file types (.JPEG, .PNG, etc.) can be uploaded to add colors to display objects and lookup tables. Additionally, this can be configured within (Setup > Products > Display objects > Display Objects Setup > Images). Within Image Setup you can view all uploaded images on the current product category and add images from your computer to the desired display object. Below is an example with the uploaded image having a name, description, and thumbnail.

Adding Hex Codes:

In the FeneVision Software, color hex codes can be used to implement a color that is not available within the list of built in colors. However, when using hex codes, the software requires a prefix to be added to the beginning of the code (after the # sign). This prefix represents the degree of transparency that the color will be when it shows on the Display Object, where the scale goes from 00 (transparent) to FF (100% opaque). Below is an example that uses the hex code for Red (#FF0000) to show what happens when 3 different prefixes are used.

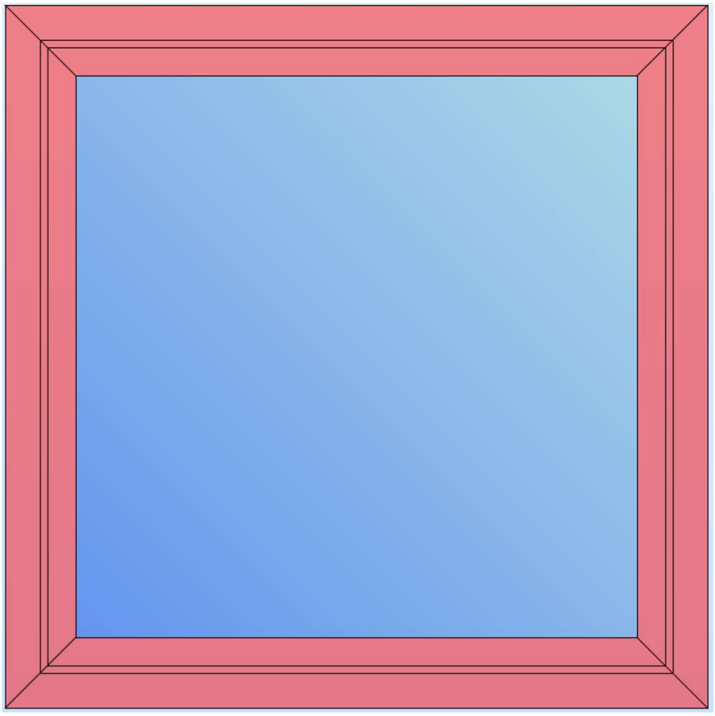
Hex Code Examples:

#FFFF0000

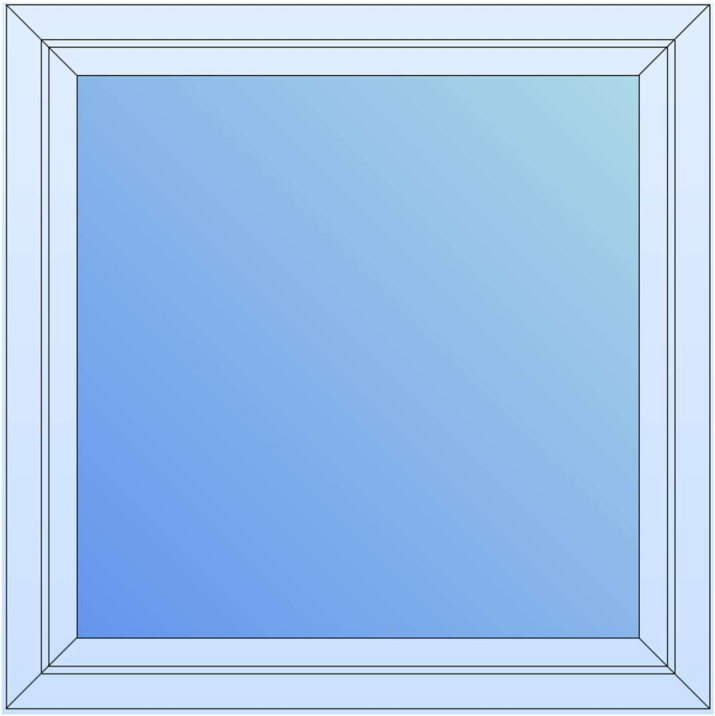


FeneTech® Best Practice

#77FF0000



#00FF0000



Using Preset Colors:

As mentioned, there are certain colors that are in the system by default that can be used. The table below outlines all colors that can be used in the software. See the System Colors.xlsx document for the corresponding hex codes for each color.

ActiveBorder	DarkSalmon	LightCoral	PaleTurquoise
ActiveCaption	DarkSeaGreen	LightCyan	PaleVioletRed
ActiveCaptionText	DarkSlateBlue	LightGoldenrodYellow	PapayaWhip
AliceBlue	DarkSlateGray	LightGray	PeachPuff
AntiqueWhite	DarkTurquoise	LightGreen	Peru
AppWorkspace	DarkViolet	LightPink	Pink
Aqua	DeepPink	LightSalmon	Plum
Aquamarine	DeepSkyBlue	LightSeaGreen	PowderBlue
Azure	Desktop	LightSkyBlue	Purple
Beige	DimGray	LightSlateGray	Red
Bisque	DodgerBlue	LightSteelBlue	RosyBrown
Black	Firebrick	LightYellow	RoyalBlue
BlanchedAlmond	FloralWhite	Lime	SaddleBrown
Blue	ForestGreen	LimeGreen	Salmon
BlueViolet	Fuchsia	Linen	SandyBrown
Brown	Gainsboro	Magenta	ScrollBar
BurlyWood	GhostWhite	Maroon	SeaGreen
CadetBlue	Gold	MediumAquamarine	SeaShell
Chartreuse	Goldenrod	MediumBlue	Sienna
Chocolate	Gray	MediumOrchid	Silver
Control	GrayText	MediumPurple	SkyBlue
ControlDark	Green	MediumSeaGreen	SlateBlue
ControlDarkDark	GreenYellow	MediumSlateBlue	SlateGray
ControlLight	Highlight	MediumSpringGreen	Snow
ControlLightLight	HighlightText	MediumTurquoise	SpringGreen
ControlText	Honeydew	MediumVioletRed	SteelBlue
Coral	HotPink	Menu	Tan
CornflowerBlue	HotTrack	MenuText	Teal
Cornsilk	InactiveBorder	MidnightBlue	Thistle
Crimson	InactiveCaption	MintCream	Tomato
Cyan	InactiveCaptionText	MistyRose	Transparent
DarkBlue	IndianRed	Moccasin	Turquoise
DarkCyan	Indigo	NavajoWhite	Violet
DarkGoldenrod	Info	Navy	Wheat
DarkGray	InfoText	OldLace	White
DarkGreen	Ivory	Olive	WhiteSmoke
DarkKhaki	Khaki	OliveDrab	Window
DarkMagenta	Lavender	Orange	WindowFrame

DarkOliveGreen	LavenderBlush	OrangeRed	WindowText
DarkOrange	LawnGreen	Orchid	Yellow
DarkOrchid	LemonChiffon	PaleGoldenrod	YellowGreen
DarkRed	LightBlue	PaleGreen	

Color Style

The color style (known as the Fill Style in old documentation) is the "type" of fill that is used within the Lookup Table. The popular color styles used are 0 for when the fill is a regular solid color, and 6 for when an uploaded image is used from the Display Object Image's Menu. However, depending on the situation, there are other color styles available from 1 to 152, which are listed in the next 2 tables.

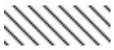
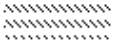
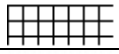
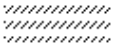
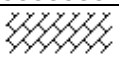
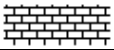
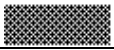
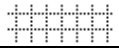
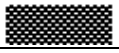
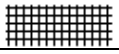
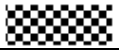
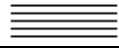
If a Fill Pattern was specified, the value of primary fill color will be used as the foreground color of the pattern. In black and white mode, the foreground color will always be black.

If applicable, enter the brush used as a secondary fill color, which is supported by the following fill styles.

- If a gradient fill style was specified, enter the brush used to fill the sub-component. The secondary fill color can be a static value or script that returns the desired gradient color. The gradient fill will start at the color defined in primary fill color and shade to the color defined as the secondary fill color.
- If a fill pattern was specified, the value of the secondary fill color will be used as the background color of the pattern. In black and white mode, the background color will always be white.

Color style	Description
0	Solid Fill (default)
1	Horizontal Gradient Fill
2	Vertical Gradient Fill
3	Forward Diagonal Gradient Fill
4	Backward Diagonal Gradient Fill
5	Tile Image
6	Stretch Image
7	Tile Flip Image
100-152	Fill Pattern (See Fill Patterns table on the next page)

Fill Patterns:

#	Pattern	Description	#	Pattern	Description
100		Horizontal	127		NarrowHorizontal
101		Vertical	128		DarkVertical
102		ForwardDiagonal	129		DarkHorizontal
103		BackwardDiagonal	130		DashedDownwardDiagonal
104		LargeGrid	131		DashedUpwardDiagonal
105		DiagonalCross	132		DashedHorizontal
106		Percent05	133		DashedVertical
107		Percent10	134		SmallConfetti
108		Percent20	135		LargeConfetti
109		Percent25	136		ZigZag
110		Percent30	137		Wave
111		Percent40	138		DiagonalBrick
112		Percent50	139		HorizontalBrick
113		Percent60	140		Weave
114		Percent70	141		Plaid
115		Percent75	142		Divot
116		Percent80	143		DottedGrid
117		Percent90	144		DottedDiamond
118		LightDownwardDiagonal	145		Shingle
119		LightUpwardDiagonal	146		Trellis
120		DarkDownwardDiagonal	147		Sphere
121		DarkUpwardDiagonal	148		SmallGrid
122		WideDownwardDiagonal	149		SmallCheckerBoard
123		WideUpwardDiagonal	150		LargeCheckerBoard
124		LightVertical	151		OutlinedDiamond
125		LightHorizontal	152		SolidDiamond
126		NarrowVertical			

Hardware Color Lookup Table (OPTIONAL)

Some window customers offer hardware colors that are a completely different (or slightly different) list than the regular window Color/Paint. Other times, the list is very similar to the window colors, but in both cases, it would be an improvement to have the hardware's color show on the Display Object.

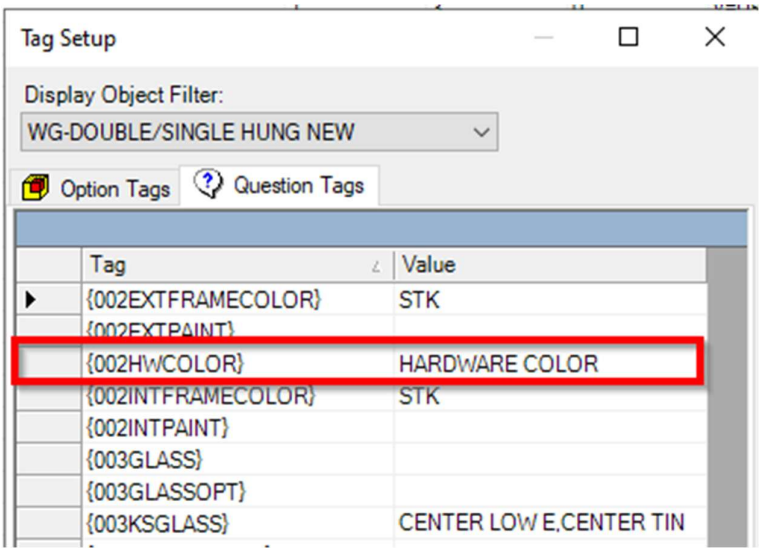
The below sections outline an example of the steps required to implement hardware color for a DES-DOUBLE/SINGLE HUNG Display Object, where two balances and one lock appears on the window:

1. **Initialize block of code required to get this working:**
    a. Within the initialize script for the DO, place the following code near the code for the regular color/paint lookup tables from the above sections.

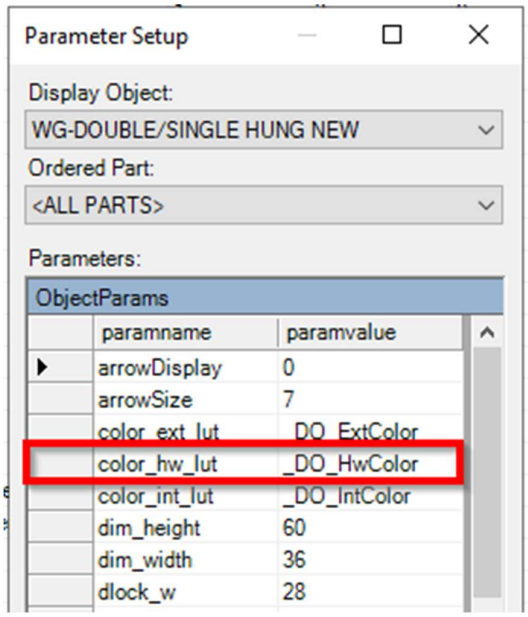
```
UserDef("Hardware") ="white"

If GroupExists("{002HWCOLOR}") And OV = 1 And (Param("color_hw_lut")) <> "" Then
If GroupKey("{002HWCOLOR}") = "MWC" Then 'Matching window color (MWC is the Option Key)
UserDef("Hardware") = UserDef("Colorv")
ElseIf TableLookup(Param("color_hw_lut"), "Color", GroupKey("{002HWCOLOR}")) <> "" Then
UserDef("Hardware") = TableLookup(Param("color_hw_lut"), "Color", GroupKey("{002HWCOLOR}"))
End If
End If
```

2. **Tag:**
   a. After adding the code into the Initialize script, enter the Hardware's color question from the Option Structure of the part that is using this DO:



3. **Parameter:**
   a. Next, add the expected name of the lookup table within the Parameter Setup menu:



4. **Lookup Table:**
   a. Finally, create the lookup table for the hardware colors. This design is simpler than the base method of color/paint since there is only one Color column that is needed. However, each option code needs to be entered in for the rows (same as the base lookup table structure).

Table: _DO_HwColor

ROW	COL	Description	Color
WHT		White - (Match Window Color)	White
TAN		Tan- (Match Window Color)	Tan
WHH		White	White
TNW		Tan	Tan
BRW		Bronze	SaddleBrown
CLW		Clay	DarkGray
NKW		Nickel	Silver