Creating and Editing HMI Screens

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Begin in Program View. Click to highlight the module whose HMI you wish to edit or create. Click the "HMI Edit" tab. The HMI for that module will appear. If no HMI has been created yet, a blank window titled "New Name" will appear. Inside this new window you have a special Right Click menu with the following entries:

Insert *(Ctrl Insert)*

This function allows you to insert an HMI object. Once Insert is selected, a window will ask you to caption the object and choose from a drop-down list to select the type of object. Once an object is inserted, click to select the object. (The selected object is marked by a yellow border.) Double-clicking an object will bring up its configuration parameters.

Copy *(Ctrl C)*

This function creates a new object identical to the one selected. A copy of the original object will appear on top of the first. Use "Drag" to position the objects.

Delete *(Ctrl Delete)*

This function deletes the currently selected HMI object.

Mark *(Ctrl M)*

This function is required before Move will work. Click to select an object, then select Mark from the right click menu. The object will have a green border indicating it is marked. After a Move the marked object will be on top of the Moved object. In other words, you are moving the selected Move object behind the marked object. This is changing the Z order. Mark and Move have nothing to do with changing the object's X, Y position on the screen.

Move *(Ctrl V)*

This function allows you to move an object behind the marked object. After a Mark operation on one object, click to select a second object and execute a Move.

Window Properties (Ctrl *W)*

This function applies to the background HMI window. Selecting Window Properties allows you to set the title to appear at the top of the window and to select the background color. The window size coordinates are displayed and you can explicitly set the window size but you can also set the size after you detach the window with drag and resize.

To use the color wheel, drag the "color selector circle" to the desired position on the color wheel. Use the slider below the color wheel to darken or lighten your color. The "Color ID"

displays your selected color as a six digit hex number in HTML color format. This number is useful for setting other objects and windows to the same color after a selection has been made the first time.

Click to check "Limit colors" for optimum performance with 256 color or monochrome displays. Normally the three colors red, green and blue can each take on 1 of 256 different values thus giving 256 X 256 X 256 = 16,777,216 different colors. If "Limit colors" is enabled only 6 different values (00, 33, 66, 99, CC and FF) are allowed for red, green and blue. This gives 6 X 6 X 6 = 216 different colors (or shades of gray). Some important numbers are 000000 Black, 0000FF Dark blue, 00FF00 Green, 00FFFF Light blue, FF0000 Red, FF00FF Magenta, FFFF00 Yellow, FFFFFF White.

Lock HMI

To prevent accidentally copying, moving, deleting or resizing HMI objects the HMI editing locks the ability to perform these functions unless explicitly unlocked. Click to toggle between modes of locked or unlocked. You may also click the padlock ICON in the upper right to toggle the state of the lock.

Capture Object

Often you would like to capture the attributes of an HMI object and then be able to update other objects with these parameters. Click to to select an object. Then select this function to write the selected objects parameters to the template.

Setup Template

Select this function to manually set the parameters in the template. Note also that you can select which parameters are used for update as you "touch" other HMI objects. For instance, if you just want to set the background colors of a group of objects to that of the template, make sure the "Color ID" is correct and that only the "Back Color" selection box is checked. Now each time you select and touch an HMI object the background color is set to this template value.

Touch Object

Once your template is set as described above, click to select an object and then select this function. All the settings of the enable attributes in the template will then be transferred to the selected object.

Locate Variable

This operation allows you to find HMI objects that contain your entered variable name. After you enter a name (or select from the drop down list with a right click) and click OK the next HMI object in Z order will be displayed that contains this selected variable. You may repeat to find the next object.

This function is handy when trying to locate where a variable has been used.

Operation Toggles

The following three functions (Resize, Magnetize and Detach) are toggles. When enabled there is a check mark next to the item. You may click the item in the drop down list or enter the shortcut key to toggle between enabling and disabling the function.

Resize

When enabled you may use your mouse (or arrow keys) to resize the selected object. Disabling Resize prevents you from accidentally resizing objects while you perform other operations. If Resize is enabled, Dragging of the object position is automatically disabled.

Magnetize

This function causes all objects on the selected frame to stick to the frame for Moving, Copying and Deleting. Magnetize makes these three functions operate on the group of objects rather than each individual object. An object's upper left corner must be on top of the frame for magnetize to take affect. Objects underneath the frame are not affected. When copying a frame the new copy will be to the right of the original. Be sure there are no objects that this new copy will overlap with!

Detach

When enabled this function detaches the window from the HMI Edit frame. This is how the Window will look when a user is viewing the screen. You may drag the window to the desired location on your screen and resize as necessary. Disabling causes the window to reattach to the HMI Edit frame. If you move the window location, when you re-attach or change tabs you will be asked if you want to save this new position.

Grid Snap Size

When positioning HMI objects on the screen it is convenient to set a pixel grid snap interval. This allows objects to snap to the nearest grid interval. Enter a value in pixels. If you were to enter 5, then when positioning objects, they will only be placed at intervals of 5 pixels.

View as HTML

This function allows you to create an HTML file that lists the configuration of the HMI window. This file contains the parameter configurations for the HMI window properties and all HMI objects.

This file can be used for archival documentation purposes. It can also be opened in a text editor to quickly find parameters of interest with a character search function. Actual editing must be done on the ICON with the above described functions (there is no way to edit the HTML file and send the changes back to the ICON). This is simply a tool for you to rapidly scan the entire configuration for items of interest.