



# EBPro Quick Start Guide

Your Industrial Control Solutions Source

[www.maplesystems.com](http://www.maplesystems.com)



For use as the following:

- Evaluation Tool for Prospective Users
- Introductory Guide for New Customers

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**TECHNICAL SUPPORT:** This manual is designed to provide the necessary information for trouble-free installation and operation of the EBPro Software. If you need assistance, please contact Maple Systems:

- Phone: 425-745-3229
- Email: [support@maplesystems.com](mailto:support@maplesystems.com)
- Web: [www.maplesystems.com](http://www.maplesystems.com)

## Introduction

Welcome to Maple Systems and EBPro, our easy to use configuration software for our line of HMIs, cMTs, and RMIs. This guide will give a brief introduction to what is possible with EBPro using a short project that familiarizes you with the basic elements necessary to start programming in EBPro.

If you are still deciding on which manufacturer or product line will best suit your needs, then follow this guide to experience just how easy it is to produce high quality interfaces with EBPro. If you are already a Maple Systems customer and need to begin working with your new software, use this guide as a starting point. After you have run through the Quick Start Project, use the guide as a reference when building your own projects.

The following flow chart lays out how to build the Quick Start Project in EBPro. The project is broken into simple logical steps to make it easier to step back into if you need to step away and to make it easier to reference later when you are building your own projects.

**Part 1: Install EBPro**  
Page 5

**Part 1:** Provides the necessary tool to create an HMI project by downloading and installing EBPro.

**Part 2: Create a Project**  
Page 6

**Part 2:** Lays the foundation for exploring the software by creating a new project in EBPro and saving it to the PC.

**Part 3: Create Windows**  
Page 9

**Part 3:** Introduces the structure EBPro uses to organize and construct an HMI project: multiple windows.

**Part 4: Create Objects**  
Page 15

**Part 4:** Builds and configures the fundamental building blocks of an automation interface; the inputs, displays, and visual elements that create function from form.

**Part 5: Simulate**  
Page 38

**Part 5:** Explores one of the powerful features of EBPro, the offline simulator.

The Quick Start Project uses an imaginary brewery as a setting. When complete it will have a main screen to which the project opens and a detail screen for one of the kettles to which the user can navigate. On the detail page the operator can input process set points and see current sensor readings displayed.

This is how the Quick Start Project will appear when complete:



Main Screen



Detail Screen

## Conventions

Human machine interfaces (HMIs) are one way for human operators to interact with control systems. The most common central processing unit (CPU) in modern control systems is the programmable logic controller (PLC). PLCs control electromechanical systems through the input and output (I/O) of electrical signals. Since the physical signals in control systems can be broadly categorized as analog or digital, it is helpful to think of the virtual program variables in the same categories.

Digital devices, as well as the internal variables associated with them, have only two states; on and off. Depending on the manufacturer or software package, this type of variable is also called a Boolean, discrete, binary, or bit. Bit is a reference to the single bit of computer memory necessary to hold the value of a digital variable.

Analog devices, as well as the internal variables associated with them, have many possible states. Depending on the manufacturer or software package, this type of variable is also called a value, non-binary, register, or word. Register is a reference to the memory slot defined in the program to hold the value of the variable. Word is a reference to the most common data type for analog variables, the 16-bit word. Analog variables can be stored in memory registers of various sizes depending on the type, or size, of the data including: integer, word, double word, unsigned long, etc.

Since EBPro is used to program HMIs, it uses the term "input" when referring to the user giving information to the system. Examples include the user pressing a button to change the state of a bit or typing a value into a keypad to define a process set point. When referring to output from the HMI to the user, EBPro uses the term "display." Examples include displaying the state of a bit with a lamp that appears on or off, or displaying a process value from a sensor either with digital text or a graphical representation.

The Quick Start Project includes the following elements:

- Analog inputs: Used here for temperature and level settings with the EBPro element “**Numeric Input.**”
- Digital inputs: Used for starting and stopping the batch with the EBPro element “**Set Bit.**”
- Analog displays: Shown as graphic representations of temperature and tank level, also as dynamic text showing time. In this project the graphical representation is done with the EBPro element “**Bar Graph.**” The system time is shown using the EBPro element “**Date/Time.**”
- Digital display: As a lamp showing the batch as on or off using the EBPro element “**Bit Lamp.**”

EBPro includes many other programming elements for inputting and displaying variables, as well as more advanced operations such as alarming, data logging, trend displays, and animated display elements. To enable you to get started quickly, this project will only cover the basic elements necessary for process control.

When you’ve finished this guide, you’ll know how EBPro and Maple Systems can fulfill your automation needs. You’ll be ready to build your own dynamic interfaces that will deliver the operational effectiveness and added value your customers demand.

## PART 1: INSTALL EBPro

### Part 1: Install EBPro

This section will guide you through the steps to install EBPro onto your computer so you can begin to explore the software.

For more information on installing EBPro see the EBPro Programming Manual (EPM).

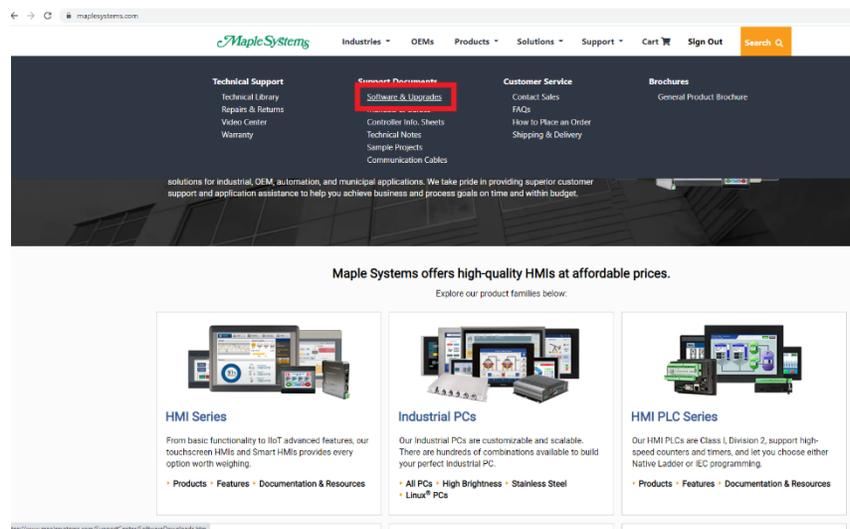
### Chapter: Introduction.

#### Install from Web

#### Download Files

Download the installation file for the free Full version of EBPro, and the Quick Start Files, from the Maple website.

1. Go to Maple Systems website <https://www.maplesystems.com/>
2. Go to **Technical Support->Software Downloads & Upgrades.**  
<https://www.maplesystems.com/supportcenter/softwaredownloads.htm>
3. Download the **EBPro Full Version** software.
4. Downloading from the Maple website requires a free account.
5. Selecting the download will bring up the log in page unless the user is already logged in.
6. Register and create an account or login to an existing account.
7. Download the **EBPro Full Version.**



## Install EBPro

After downloading the installation file, run the install utility.

1. Locate the downloaded file **EBProSetup.exe**. If you use the default download folder option in Windows the file will be in: **C:\Users\\*\*\*your username\*\*\*\Downloads**.
2. Double click the file to run the program.
3. Follow the prompts from the installer to choose the install location and complete installation.

**LOGIN OR REGISTER** ✕

Some content is locked and requires login or registration to view.  
Login or Register as a new user below to gain access to the locked content.

**LOGIN**

Email Address

Password

[Forgot Password?](#)

**REGISTER**

You must register to view locked content. Click the button below to visit the Registration Page.

**NEED ADDITIONAL ASSISTANCE?**  
Please call us at (425) 745-3229 or email us at [registration@maplesystems.com](mailto:registration@maplesystems.com) You can also visit our Contact page to send us a message, we will get back to you as soon as possible.  
*At Maple Systems, we care about your privacy. The information gathered will NOT be shared, given or sold to any third party. Our website uses cookies to provide you with best service. By using our site, you consent to the use of cookies.*

## Download and Install Quick Start Files

1. Go to Maple Systems website:  
**Technical Support->Sample Projects->Quick start Guide project files.**
2. **Quick Start Guide Project Files** (Works for both EZware and EBPro software) - This zip file contains all of the Quick Start Guide project files you'll need to get started.
3. After downloading QuickStart.zip, unzip the files and place them in the proper location.
4. Locate the downloaded file **QuickStart.zip**, right click on the file and select **Extract All**.

maplesystems.com/supportcenter/sampleprojects.htm			
	screen.		
Quick Start Guide Project Files	Project files referenced in the EBPro Quick Start Guide. Zip file contains Quick Start EX.zip and picture and group library files.	<a href="#">QuickStartFiles.zip</a>	Zip file contains Quick Start Ex.zip and two library files. EBPro v6.00.01.220

5. The **Extract Compressed (Zipped) Folders** dialog opens. Select the location to extract the files to and click **Extract**.
6. Locate the three extracted files; **Quick Start Ex.emtp**, **Quick Start.flb**, and **Quick Start.glb**. If you use the default download and extract folder options in Windows the files will be in:  
**C:\Users\\*\*\*your username\*\*\*\Downloads**.

Part 1 complete, you have the software and support files installed and are ready to go. Part 2 will walk you through creating your first project.

## Part 2: Create a Project

### Part 2: Create a Project

This section guides you through creating a project, exploring the interface, and saving your new project. When Part 2 is complete you will have a new project saved on your PC, ready to configure, and you will have a basic understanding of the layout of the interface so you know where to look to follow the instructions in later sections. For more information on creating a project, see chapter 3 EB pro manual: Creating an EBPro project.

#### Starting EBPro

1. From the Windows Task Bar, click the **Start** button, select **All Programs > Maple Systems > EBPro**

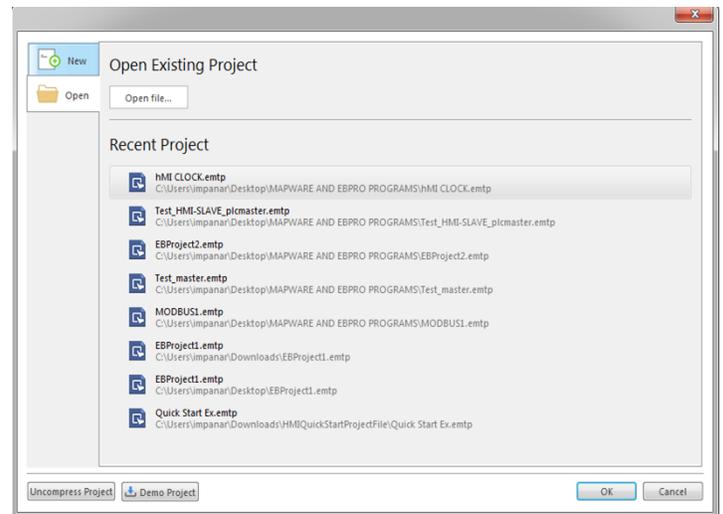
*The full path of the file installed in the default location is:*

**C:\MapleSystems\EBPro\EBPro.exe**

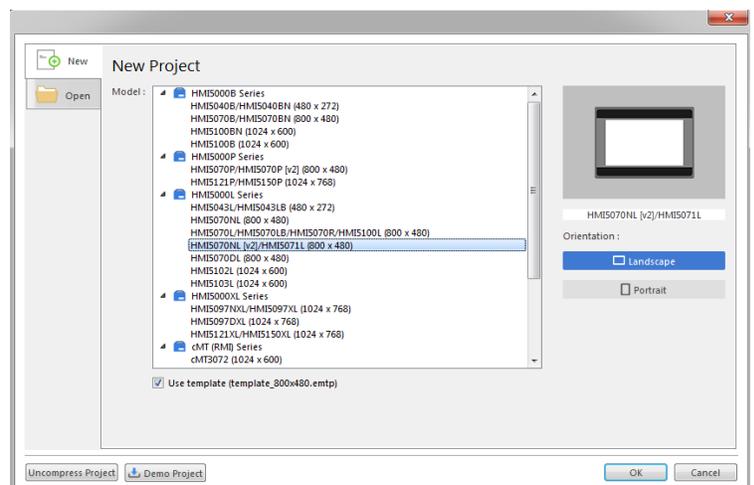
*If another location was chosen the path will be:*

**\*\*\Maple Systems\EBPro\EBPro.exe**

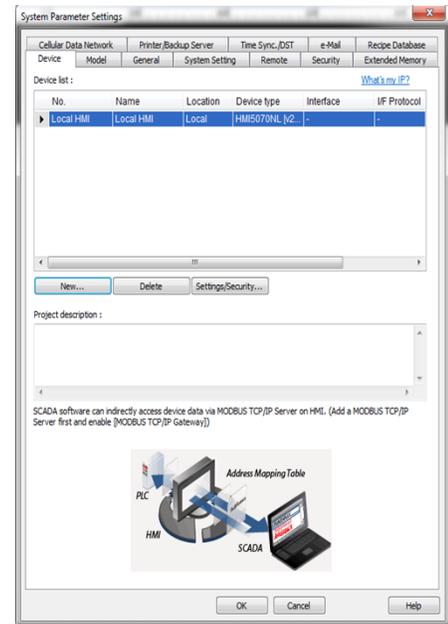
2. The **EBPro** dialog box appears.
  - Select **New**



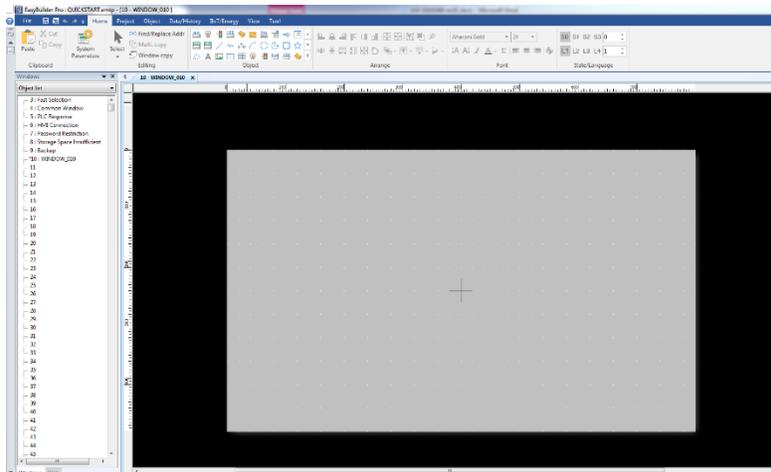
3. Select the HMI model to use in the project.
  - Choose **HMI5121P/HMI5150P (1024x768)**.
  - Select **Landscape** display mode.
  - Check the **Use template** checkbox.
  - Click **OK**.



4. The **System Parameter Settings** window opens next. No more devices will be added and the default settings will be used for the Quick Start Project.
  - Click **OK** to accept the settings.
  - For more information, refer EBPro Manual chapter 5: System Parameter Settings.



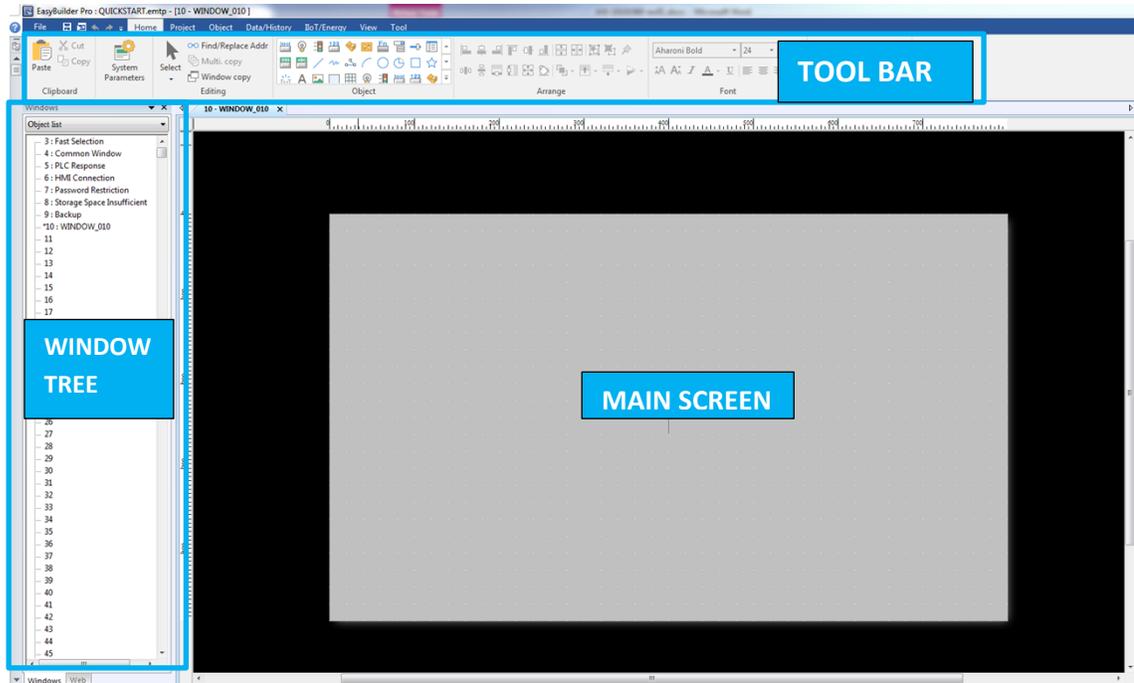
A blank project has been created and is ready for configuration. It should look like this:



## EBPro Interface

The EBPro interface default configuration uses three main regions:

- Region 1, at the top, is referred to as the **Menu Area**. The **Menu Area** includes the top menu bar and ribbon is the default area where ribbon options are selected.
- Region 2, on the left, is referred to as the **Window Tree**. The **Window Tree** has multiple tabs and display options to show the windows in the project, which objects exist on those windows, and to which addresses those objects are linked.
- Region 3, on the right, is referred to as the **Main Screen**. The **Main Screen** is where most of the work is done within EBPro. All currently open windows are displayed in the **Main Screen** and most placements and modification of objects is initiated here.



## Saving the Project

Before making any changes, save the project. From the top menu bar select **File** -> **Save As**. The **Save As** dialog opens.

1. Navigate to **C:\MapleSystems\EBPro\project**.
2. Name the project **Quick Start**.
3. Click **Save**.
4. Save frequently to protect completed work.

With Part 2 complete, you now have a new project created and saved on your PC. You now know how to create your own projects when you are ready, and you've been introduced to the basic layout of the interface so you can follow the instructions in the following sections of this Quick Start Guide or in the EBPro Programming Manual. Part 3 will walk you through creating new windows and adding buttons for the operator to navigate between them.

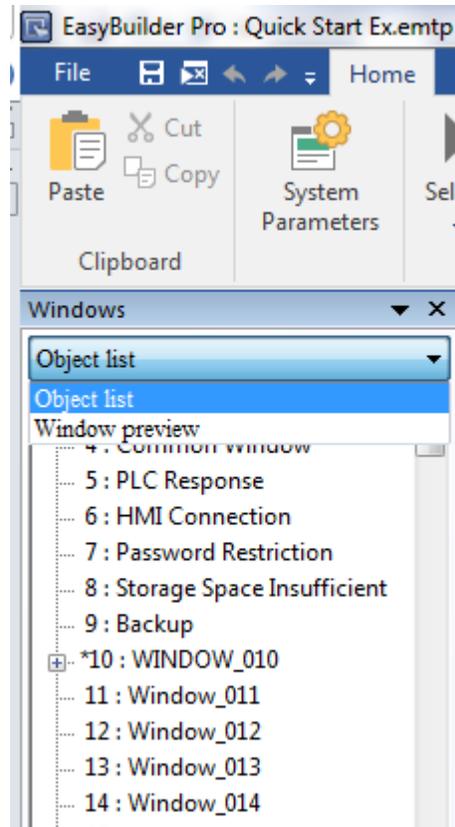
## Part 3: Create Windows

### Part 3: Create Windows

Next the Quick Start Project introduces the user to the configuration structure in EBPro. EBPro lets you program on multiple windows that can display to the operator individually or stacked together as a single screen. The operators that use the interface can see any screen accessible to a user with their access level. They can jump between screens using buttons or be taken to different screens in response to system conditions. Stacking

multiple windows into a single operator accessible screen can simplify the design process. For example, create a single window with the company logo and colors made into an appealing border then set that as a background for all the other windows. This saves the time of adding the logo to each page directly. For more information on windows see the EBPro Programming Manual chapter: Creating Windows.

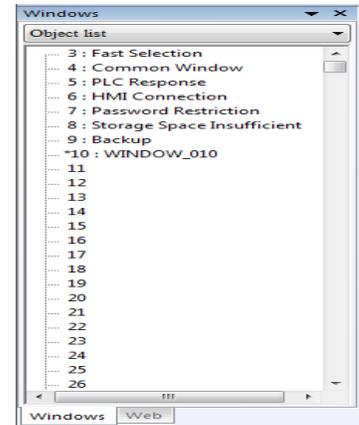
By the end of Part 3, the project will include three new windows and function keys to navigate between the operator accessible windows. It will look like this:



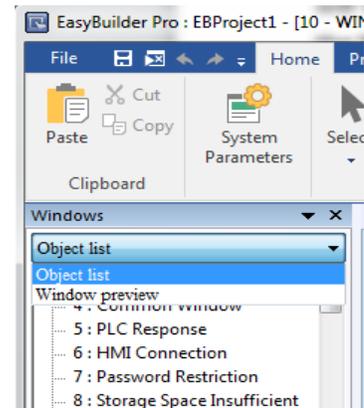
## New window

EBPro uses the term *window* to refer to the screens that can be displayed or programmed in the HMI. By default, EBPro uses Window 10 as the startup window that is displayed whenever the HMI powers up or reboots. When a project is created with the template file, it starts with the default window and a number of windows for specialty functions such as keyboards and error messages. The Quick Start Project will use five windows. One is a keypad that is included in the template; it will be used but not modified. The default window has already been created and will be modified in the project. Finally, three new windows will be created. One will be a detail page for the user to navigate to for more information and system control. The final two windows will have background images for the two operator accessible windows. Before creating new windows, change the **Window Tree** to the **Object List** view.

1. At the bottom left of the **Window Tree** select the **Windows** tab.

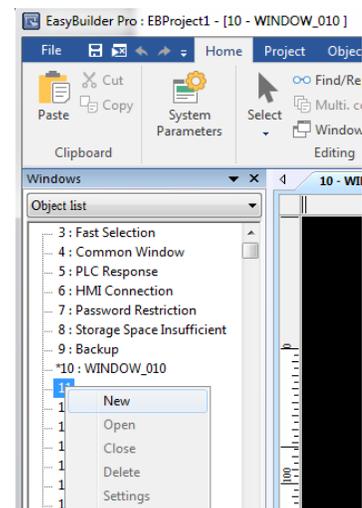


2. At the top of the **Window Tree**, the drop-down list shows **Window Preview** is the current view. Click the drop-down menu and select **Object List** to change the view.



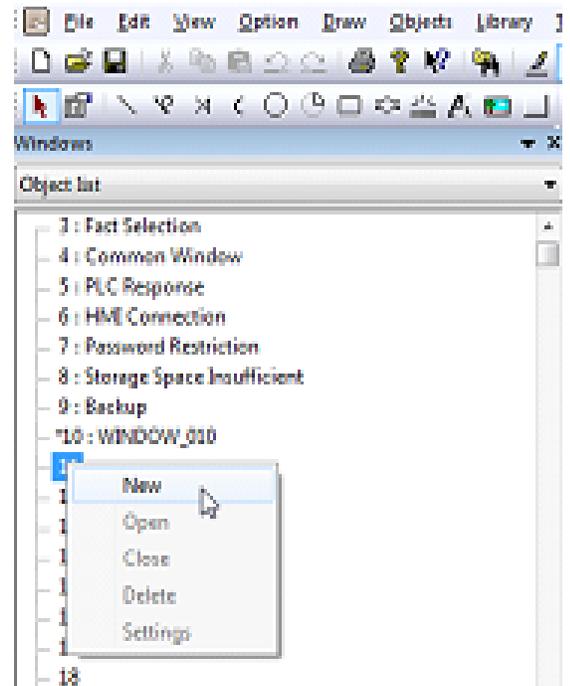
Now that the **Window Tree** is displaying the **Window** tab with the **Object List** option, three new windows will be added to the project. With the **Object List** selected the **Window Tree** displays a list of all the used and available windows in the project. Double clicking on any window will open it in the **Main Screen**.

1. Left click on **11** in the **Object List**. Right click and select **New**.
2. The **Window Settings** dialog opens. All settings will be left default for now. The default window names can be changed for easier reference, but this is not necessary in such a small project. Click **OK**.
3. Repeat steps 1 and 2 to create Windows 12 and 13.



**Navigating windows**

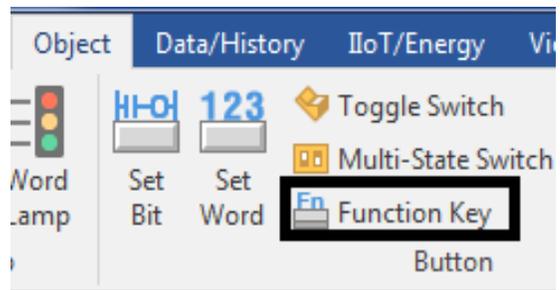
Now that the project includes multiple windows, the operator needs a way to navigate between them. **Function Key** objects will be added to the windows to switch between them. In EBPro, objects are the elements placed on the windows or created in the project to complete a task. Objects can be static, such as background images and fixed text, or dynamic, such as lights that change color to indicate the state of a bit. Some static objects, like basic shapes, can be drawn directly on the window, but most will use a visual element chosen from the libraries. There are three types of libraries that store visual elements. The **Shape Libraries** store vector graphics constructed of lines, curves, or polygons. New shapes can be created using the drawing tools under the **Draw** menu. The **Picture Libraries** store bitmap graphics and accept a range of file formats including .gif, .jpg, and .png. EBPro comes preloaded with numerous shape and picture libraries, as well as the tools to easily import new elements and create new libraries. The **Group Libraries** store objects constructed of multiple shapes and pictures.



1. Navigate to Window 10. Double click on Window 10 in the Object List or select the Window 10 tab at the top of the Main Screen if it is already open.

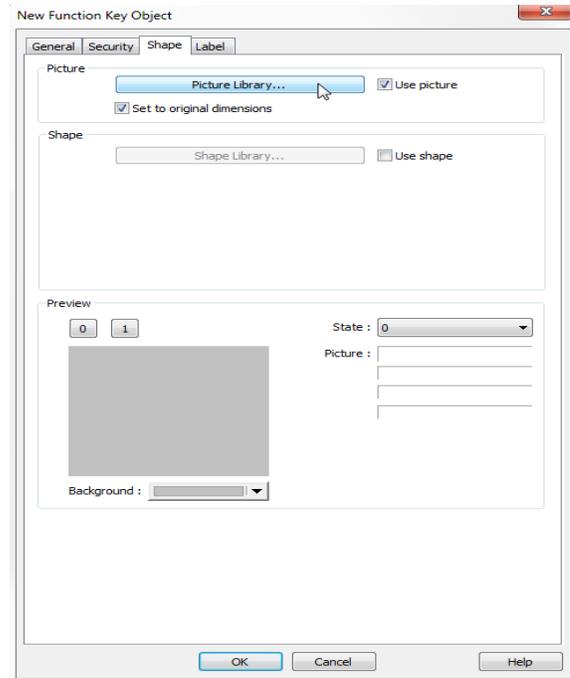
2. From the top menu bar select:

**Object -> Function Key.**

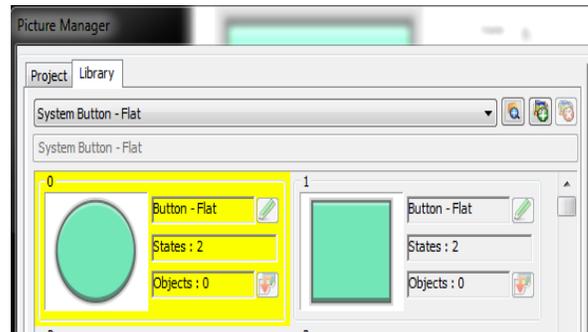


3. The New Function Key Object dialog appears. Click the **Comment** field on the **General** tab. Type **BREW** to identify the function key. Ensure Change full-screen window is selected. **Window no.** is where the window to be displayed by the function Key is selected. The drop-down list shows the number and name of all available windows. If it is not already selected, choose **11. Window\_011**

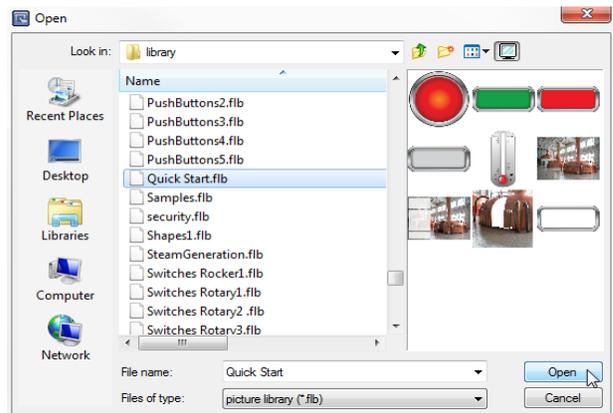
4. Select the **Shape** tab.
  - Uncheck Use Shape.
  - Check Use Picture.
  - Click **Picture Library** to open the **Picture Manager**  
And select the picture to use for the function key.



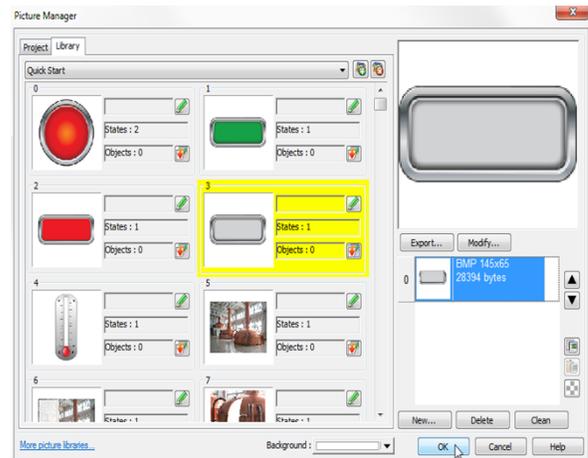
5. Select the **Library** tab in the **Picture Manager**.
  - Click **New Library** to attach a new library to the project.



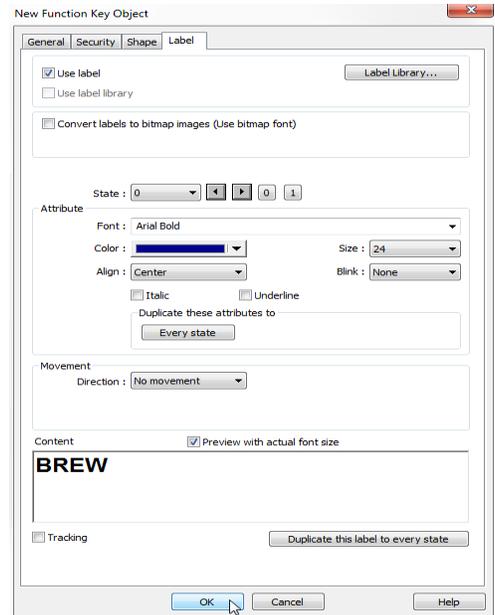
6. Browse to **Quick Start.flb**. (The default location for EBPro libraries is:  
C:\MapleSystems\EBPro\library\legacy)
  - Click **Open** to attach the library to the project.



7. In the **Quick Start** library select image **3**.
  - Click **OK** to select the grey button and return to the object properties dialog.

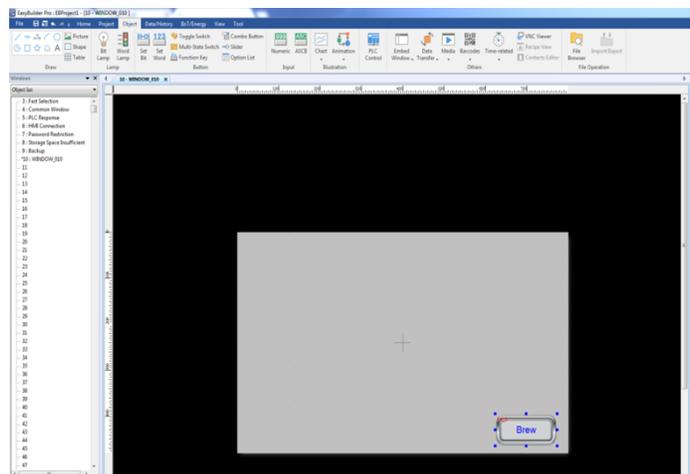


8. Now that the picture is selected change to the **Label** tab.
  - Check the **Use Label** checkbox.
  - Select **Arial Bold** for the **Font**.
  - Select **24** for the **Size**.
  - Select **Dark Blue** for the **Color**.
  - In **Content**, type **BREW**.
  - Click **OK**.



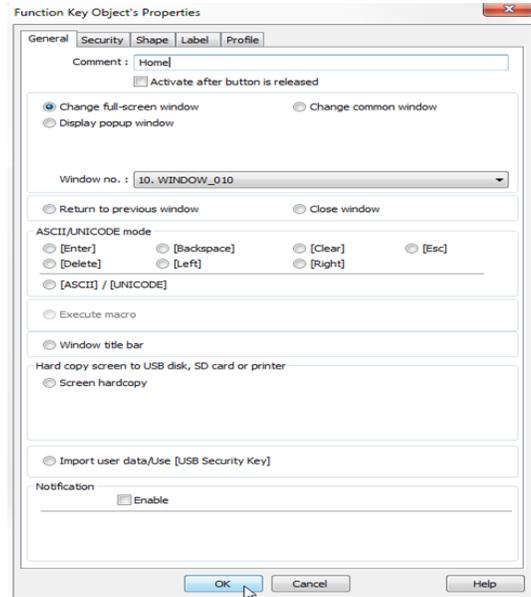
9. The object appears as a white outline on the window. Place it near the bottom right corner by left clicking. Once placed the object appears on the screen.

10. **Copy** the function key to **Window\_011**.
  - From **Window\_010** select the function key.
  - Press **ctrl + c**, or right click and select **Copy**.
  - Open **Window\_011** by double clicking **11: Window\_011** in the window tree object list.
  - Press **ctrl + v**, or right click and select **Paste**. By default, the new object gets the same position as the object copied.

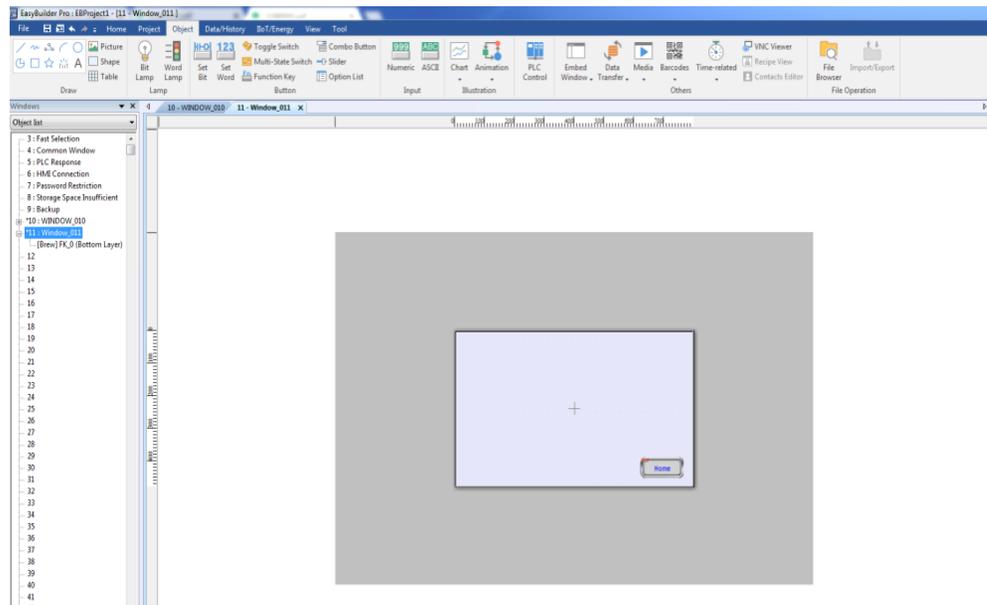


**11. Change the properties of the new button. To modify an object:**

- Double click on it.
- Or left click to select, and then right click to bring up the quick menu and select **Attribute**.
- On the General tab change Comment to Home.
- Ensure Window no. is set to **10. WINDOW\_010**.
- On the Label tab change the Content to HOME.
  - Click **OK**.



**12. The project should now look like this.**



With Part 3 complete, you should now understand how EBPro structures a project and how an operator can access the different windows that make up the project. You have also seen how to associate a library element to an object on the screen to quickly give it the visual effect integral to the modern user interface. Part 4 will continue by guiding you through creating the additional programming elements necessary to complete the Quick Start Project.

## Part 4: Create Objects

### Part 4: Create Objects

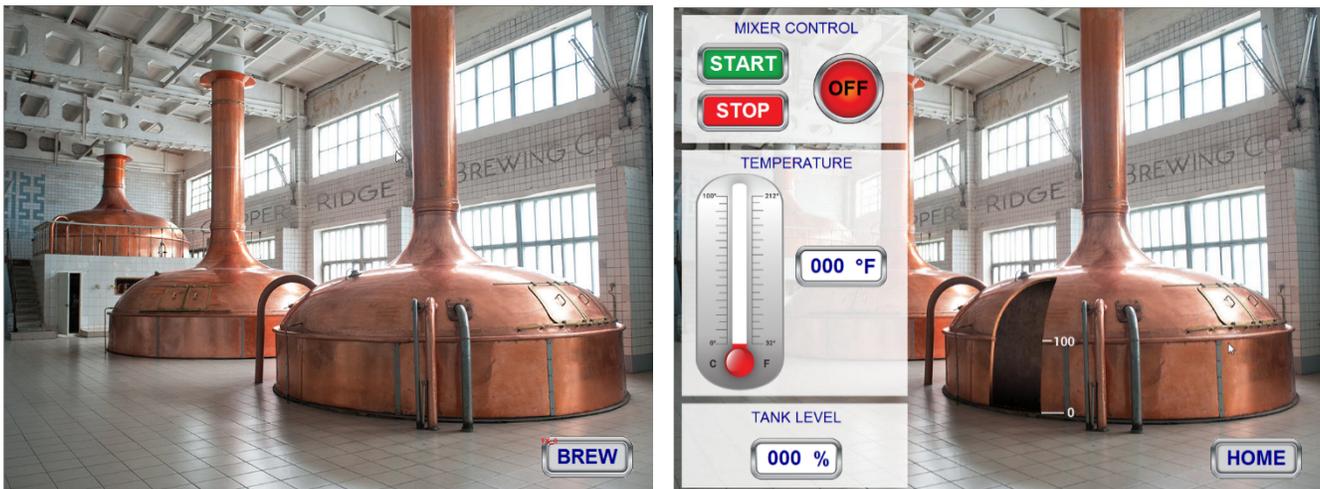
In this section you'll create the basic elements that your end user will see and interact with to control their system. The section is broken up into five sub-sections for easier organization. You will begin with the static elements such as text and images. The remaining four sub-sections cover the primary four functions of an HMI; digital input, digital display, analog input, and analog display.

You will create:

- **Numeric Input Objects** for the operator to enter set points for temperature and tank level.
- **Bar Graph Objects** will show the readings from the temperature and level sensors in a graphical form.
- A **Date/Time Object** will show the system time, as a digital clock, on the home page.
- **Set Bit Objects**, in the form of start and stop buttons, allow the user to turn the process on and off.
- A **Bit Lamp Object** using the image of a lamp with text will show the user the current state of the process.

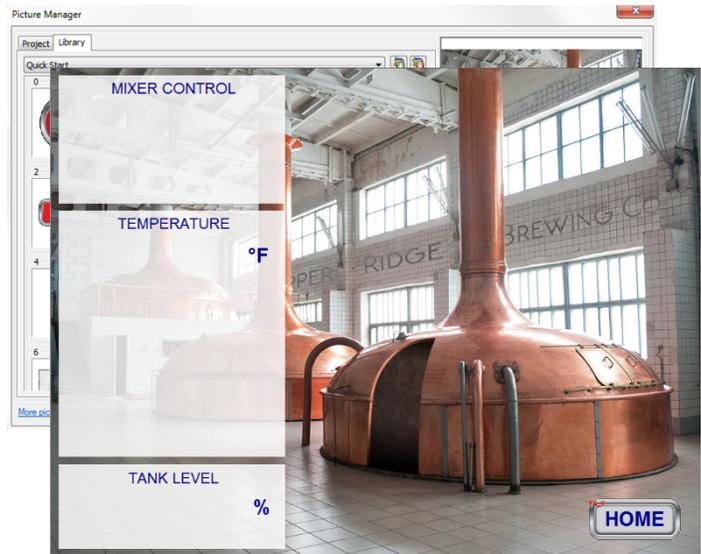
For more information on objects see the EBPro programming manual: [Using EBPro](#)

When Part 4 is complete, the project will be ready for simulation. The two operator accessible windows will look like this:



Static Elements

This sub-section will add text and background

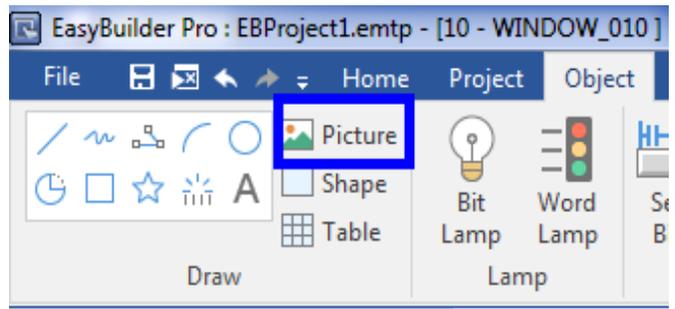


images, when it's done the project will look like this:

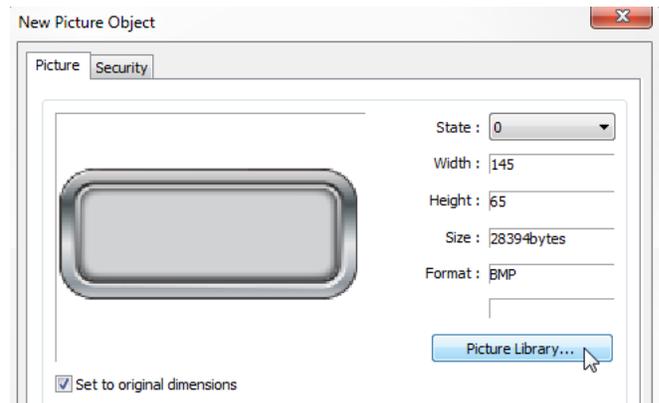
Windows 12 and 13 will have a static image covering the entire screen. Window 10 will use Window 12 as a background and the objects on Window 10 will appear in front of the background image. Window 11 will use Window 13 as a background.

1. Open **Window\_012**. Double click 12 in the **Object List**, or left click to select, then right click and select **Open**.

- From the top menu bar select **Object-> Picture**.

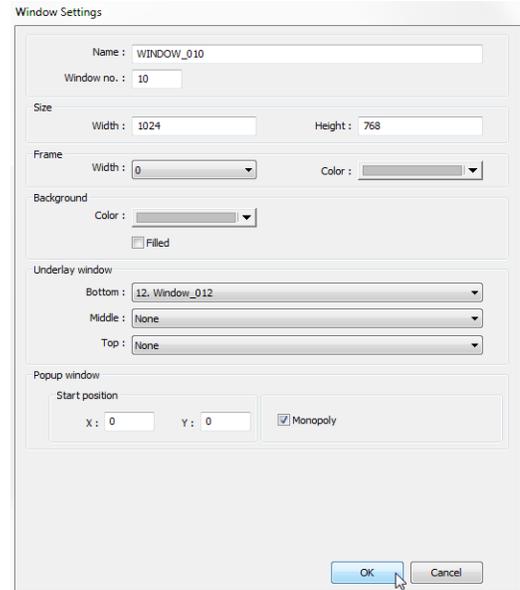


2. The **New Picture Object** dialog opens. Click **Picture Library...** to select the image to display.



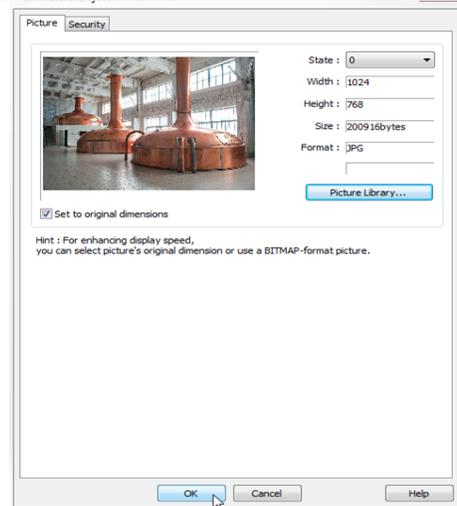
3. The Picture Manager opens.

- Browse to the **Quick Start.flb** library.
- Click **Open**.
- Select image **5**.
- Click **OK**.



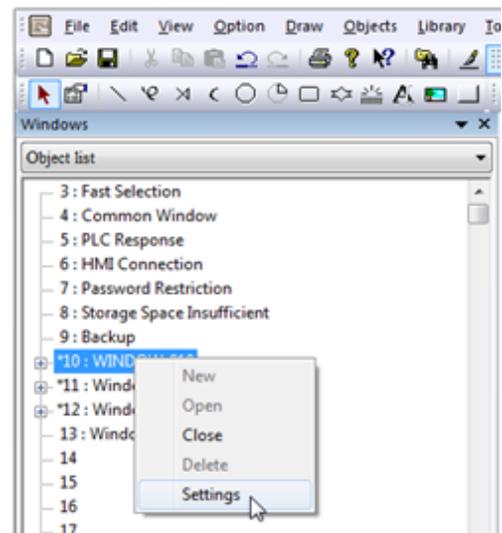
4. Make sure **Set to original dimensions** is checked.

- Click **OK**.
- Left click to place the image. The placement cannot be changed because the image is the same resolution as the screen.



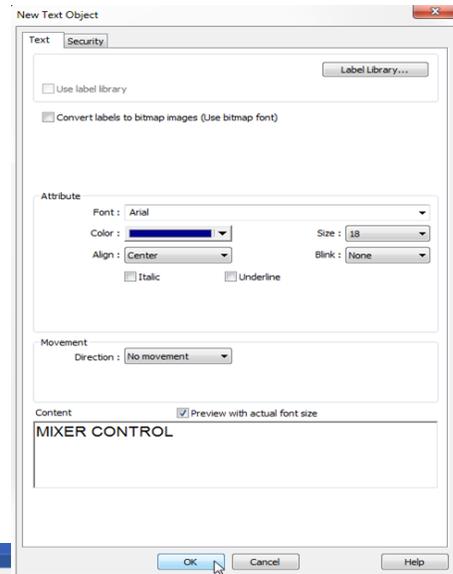
5. Repeat steps 1 through 4 to place image **6** from the **Quick Start** library on **Window\_013**. Image 6 looks like image 5 with a menu area on the left.

- In the Object List click on WINDOW\_010 to select it then right click to open the selection menu.
- Select **Settings**.

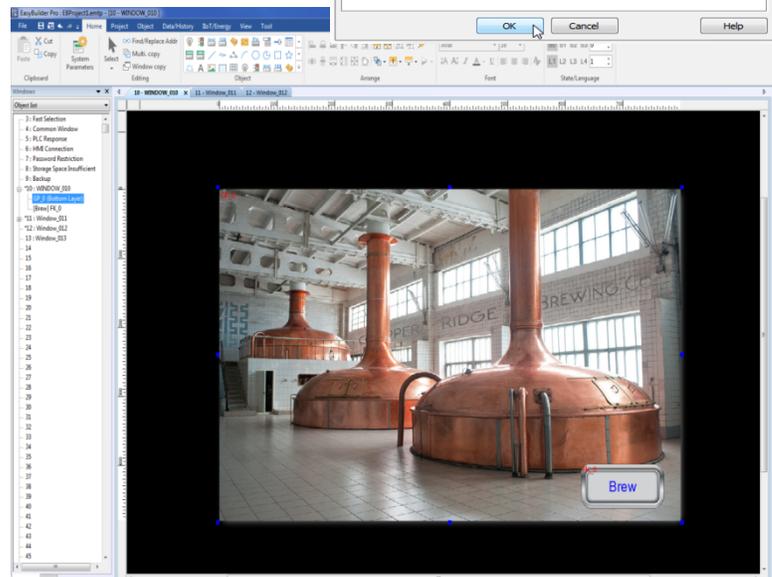


6. The **Window Settings** dialog opens.

- In the **Underlay** window section, use the drop-down menu to select **12. Window\_012**, for the **Bottom** underlay.
- Click **OK**.



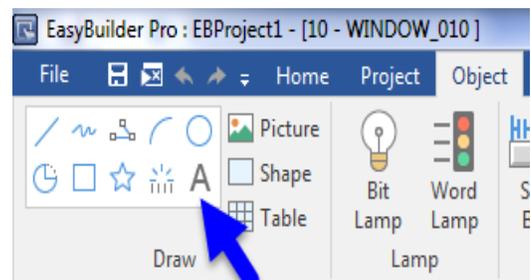
7. Window 10 should now look like this. It looks almost the same as Window 12, but with the previously added function key in front of the background image.



8. Repeat step 6 to select Window\_013 as the background for Window\_011.

9. Add text to Window 11. With Window 11 open, from the top menu bar, select

**Object -> Text (A).**



10. The New Text Object dialog opens.

- Change the **Font** to **Arial**.
- Change the **Size** to **18**.
  - Change the **Color** to **Dark Blue**.
  - Change the **Content** to **MIXER CONTROL**.
  - Click **OK** and place the text on Window 11 in the upper menu area.

11. To add additional text, repeat step 9 or copy and paste the existing text then double click the new text to change the properties. Window 11 will have the following text:

- TEMPERATURE: size 18.
- TANK LEVEL: size 18.
- °F: size 24, Arial Bold (the degree symbol, °, can be copied from a word processing program or created using the alt + number pad shortcut. Hold **Alt** then on the number pad type **0176**, then releases **Alt**).

12. Align and center the menu headings.

- Left click **MIXER CONTROL** to select the text, then while holding **CTRL** select **TEMPERATURE** then **TANK LEVEL**.
- With all three menu headings selected select **Edit -> Align -> Horiz. Center**.
- Now that the headings are aligned, with all three headings still selected use the arrow keys to center the headings in the menu area.

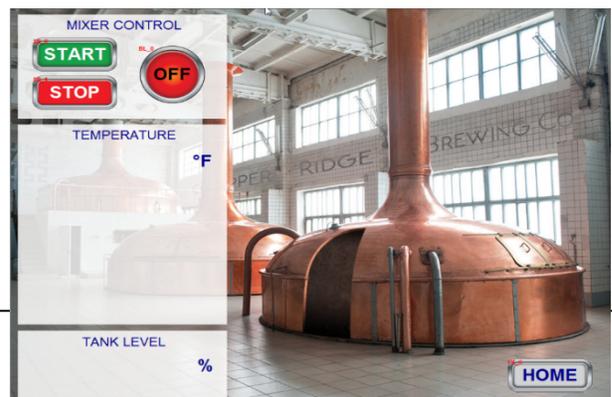
When using the **Align**, **Make Same Size**, or **Make Same Color** commands, EBPro uses the last selected object, denoted with red handles (  ) as the reference object and changes the other objects to match. In the image on the right, **TANK LEVEL** was selected last, so it is the reference object indicated by the red handles. **TEMPERATURE** and **MIXER CONTROL** are shifted to align with the horizontal center of **TANK LEVEL**.

With the Static Elements sub-section complete Windows 10 and 11 should look like this:



### Digital Inputs

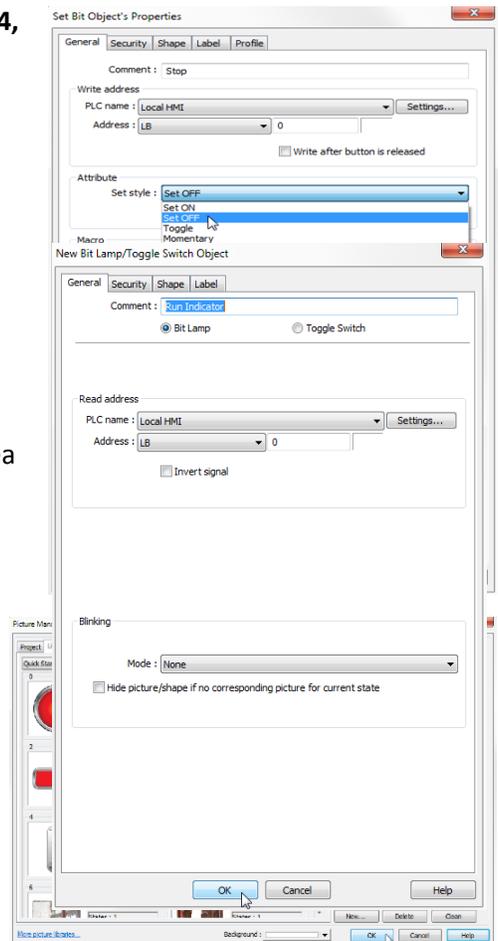
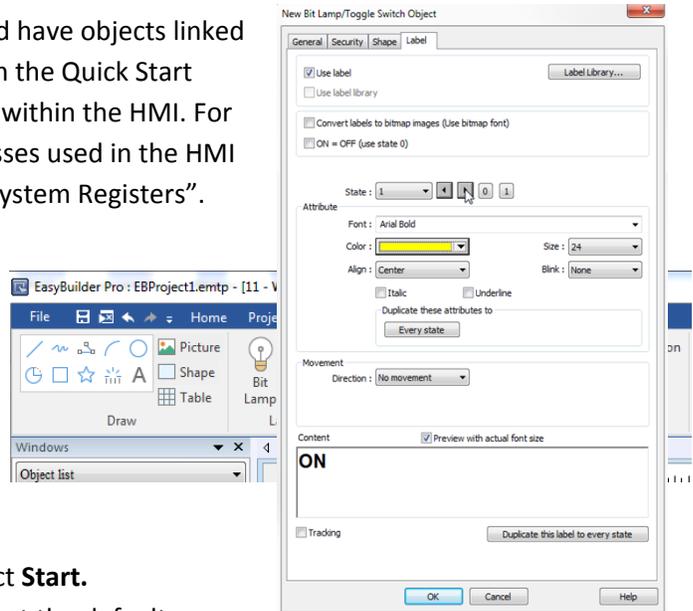
In this sub-section, two inputs will be added to the detail page for starting and stopping the batch. For this Quick Start, we will only deal with two variable types, local word (LW, analog variable stored in the HMI) and local bit (LB,



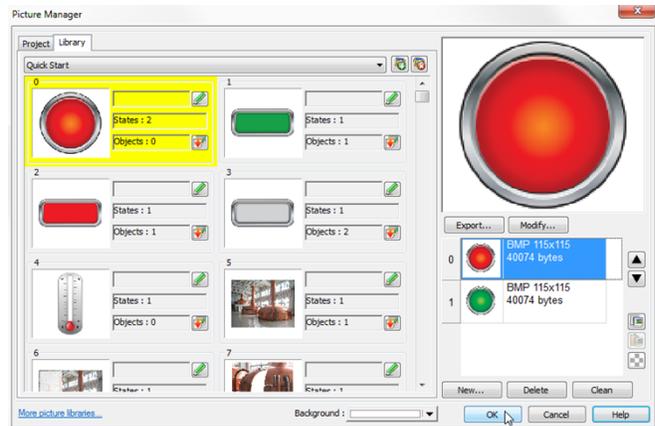
digital variable stored in the HMI). A live project would have objects linked to variables both locally and in a connected PLC, but in the Quick Start Project, elements will be linked directly to each other within the HMI. For more detailed information on specific memory addresses used in the HMI go to the EBPro Programming Manual chapter 22 – “System Registers”.

When the digital inputs and displays are complete the detail page, Window 11, will look like this:

1. Add a START button. With Window 11 open, from the top menu bar select  
**Object -> Button -> Set Bit**
2. The **New Set Bit Object** window opens.
  - In the **Comment** field, name the object **Start**.
  - The **Write Address** section will be left at the default address **LB-0**.
  - The Set Style will be left at the default **Set ON**.
3. Select the **Label** tab.
  - Check Use Label.
  - Set the label **attributes** to: **Font – Arial Bold, Size – 24, Color – White**.
  - Type **START** in the Content field.
  - Click **OK**
  - Left click and place
4. Right click, select **Attribute**. The **Picture Manager** opens.
  - Browse to the **Quick Start.flb** library.
  - Select image **1**, the green button.
  - Click **OK** to return to the object properties.
  - Click **OK**.
  - Resize as needed. Place the button in the top left menu area on Window 11.
5. Create another button by repeating step 1 or copy and paste the first button.
  - Place it directly underneath the start button.
6. Change the properties of the new button.
  - In the **Comment** field, change the name to **Stop**.
  - Change the **Set Style** to **Set OFF**.
  - On the **Label** tab, change the **Content** to **STOP**.



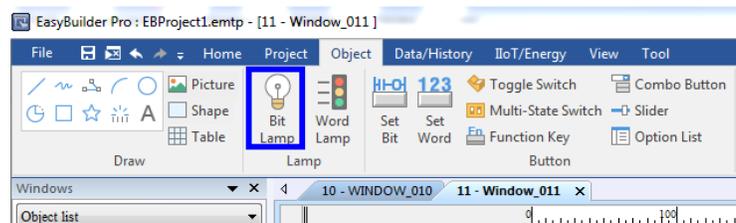
- Select button style **2**, the red button, from the **Quick Start** library.



### Digital Display

1. In this section a bit lamp will be added to show the state of the bit controlled by the input buttons.  
Add a digital display indicator light.  
From the top menu bar select

**Object -> Lamp -> Bit Lamp.**



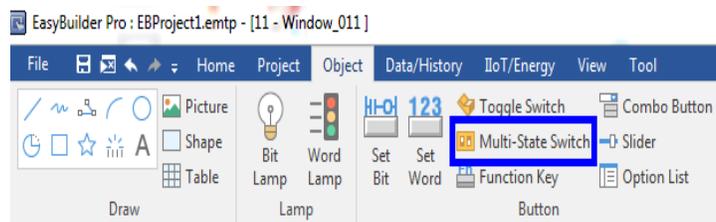
2. The New Bit Lamp / Toggle Switch Object opens.  
In the **Comment** field, name the object **Run Indicator**.  
The **Read Address** section will be left at the default address **LB-0** (this bit lamp will read the bit controlled by the two input buttons).  
On the Shape tab select Use Picture.  
Click **Picture Library** to browse to the desired image for the button.

3. The **Picture Manager** dialog opens.
  - Browse to the **Quick Start** library.
  - Select image **0**.
  - Notice on the right-hand side there is a preview of the two states of the image.
  - Click **OK** to select the image and return to the object dialog.

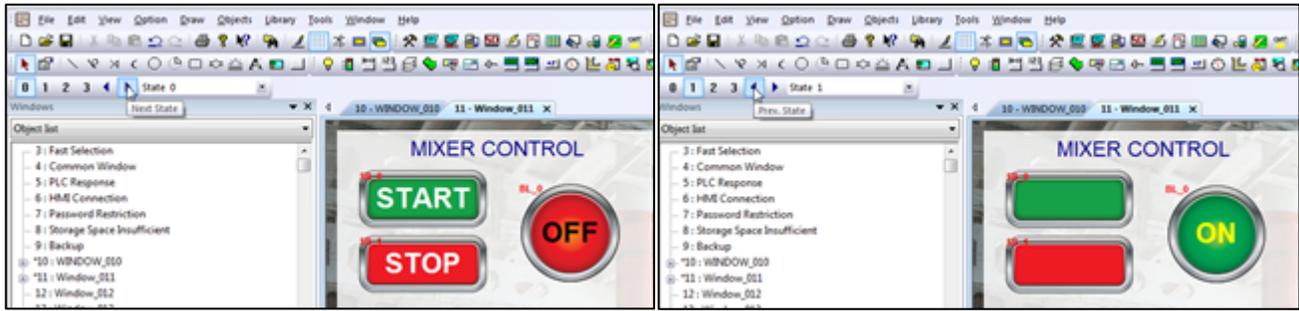
4. On the **Label** tab select **Use label**. This lamp will indicate two states so two labels will be used.
  - For **State 0** set the **Attributes** to: **Font – Arial Bold, Size – 24, Color – Black**.
  - Change the **Content** to **OFF**.
  - Change the **State** to **1** by using the arrow key, clicking the **1**, or by using the **State** drop down menu.
  - For **State 1** change the **Color** to **Yellow**.
  - Change the **Content** to **ON**.
  - Click **OK**.
  
5. To test the lamp to see how the two states appear click on **Home** and on the right side of the ribbon menu look for a section titled **“State/Language”**.
  - From **State/Language**, you can alternate between the first two states by clicking on **S0** and **S1**.
  - Click on **S0** to switch the state to **OFF**.
  - Click on **S1** to switch the state to **ON**.

(Ex. A digital variable used for run indication might be programmed to read “running,” for state 1, and “stopped,” for state 0. An analog variable might be programmed for a dozen different states to communicate the twelve different error codes read from that variable.)

6. Toggle the state of the window from **0** to **1** and back. Using the **State Toolbar**, switch the state by clicking the arrows left and right, clicking the number of the desired state, or using the drop-down menu to select the desired state. The drop-down menu is necessary for testing analog variables with more than 5 states.



The two states of the digital inputs and displays should look like this:



With the Digital Input and Digital Display sub-sections complete Window 11, the detail page, should now look like this:



**Analog Inputs**

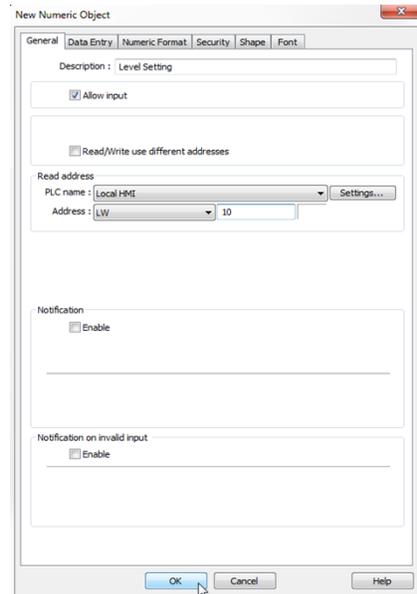
Setting the value of an analog variable from the HMI can happen in a variety of forms. Push buttons on the screen can change a variable to a specific value or increment the value up or down a set amount for each button push. A slider can vary an analog variable through any defined range. Another method is to directly input a desired value using a **Numeric Input**. The Quick Start Project uses two **Numeric Input Objects** that use a keypad. One is for the temperature set point and the other is the tank level setting. Each of these objects will use one of the pre-loaded keyboards built into the template file. When the user selects the field for input by clicking on it, a pop-up window will appear on the screen with the selected keypad for entering data. After the user enters the value, the keypad closes until called again. This saves valuable screen space and allows larger, easier to use keypads.

When the analog input sub-section is complete, Window 11 will look like the image on the right.

1. Add numeric inputs for setting the tank level and temperature. From the top menu bar select: **Object -> Numeric**

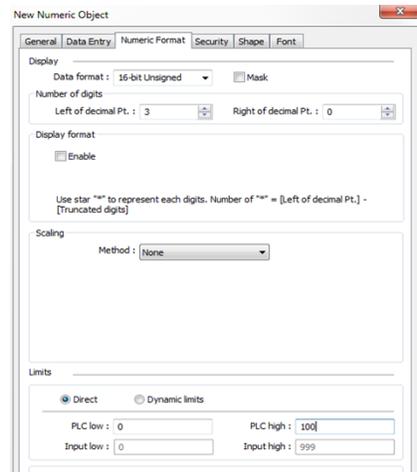


2. The **New Numeric Object** dialog appears.
  - In the **Description** field name the object **Level Setting**.
  - Ensure the **Allow Input** box is checked.
  - In the **Read Address** section, change the address to **LW-10**. Use the drop-down menu to select the variable type, **LW**, and then type **10** into the input field to select the variable address.



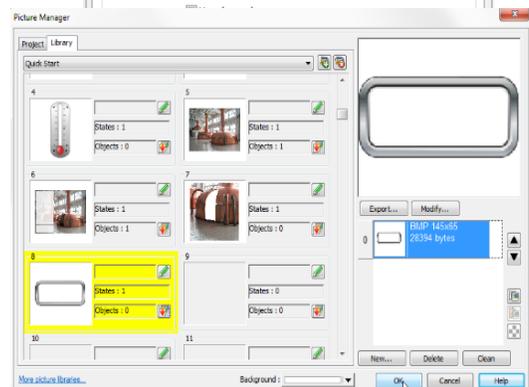
3. Select the **Data Entry** tab. In the Keyboard section set **Window no. to 50. Keypad 1 – Integer**.

4. Select the **Format** tab. In the **Number of Digits** section, change **Left of Decimal Pt.** to **3**
  - In the **Limits** section, change **'Device High'** to 100.



5. On the **Shape** tab, uncheck **Use shape**. Click **OK** to place the object on the screen.
  - Place it in the **Tank Level** menu area next to the % text.

6. Draw a picture and place it behind the **Level Setting** text to frame the input field.



- From the top menu bar select **Object -> Picture**, Click **Picture Library...** to select the image to display.

7. The **Picture Manager** dialog opens.

Browse to the **Quick Start** library.

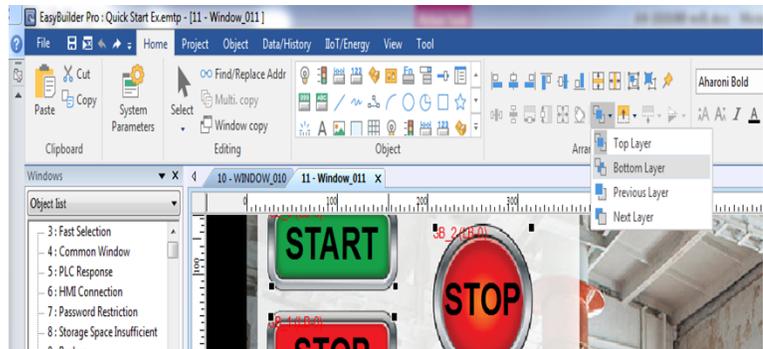
Select image **8**, the frame. Click **OK** to select the image and return to the object dialog.

- Make sure Set to original dimensions is checked. Click **OK** again and place the image on top of the **Level Setting** input text.

8. Change the layer of the newly placed frame so it is behind the input text.

- With the frame image selected, from the **Home** menu, under **Arrange**, select

**Layer -> Bottom Layer**



- Now the frame is behind the text, select the Level Setting and % text and use the directional arrow keys to center the text inside the frame.

9. Create another **Numeric Input Object** for the temperature setting by repeating steps 1 through 8, or by copying and pasting.

- In the **Description** field name the object **Temperature**.
- Ensure the **Allow Input** box is checked.
- In the **Read Address** section change the address to **LW-20**.



10. Select the **Format** tab.

- In the Number of Digits section, change **Left of Decimal Pt.** to **3**.
- In the **Limits** section, change '**Device High**' to **200** and '**Device Low**' to **100**.

11. Select the **Data Entry** tab.

- In the **Keyboard** section set **Window no.** to **50**. **Keypad 1 – Integer**.

12. Select the **Shape** tab.

- Ensure **Use Shape** is unchecked.

- Click **OK** to place the object on the screen.
  - Place it in the Temperature menu area next to the °F text.
13. Place a frame, **Quick Start** library image **8**, behind the input text.
  14. Center the Temperature input text and the °F text inside the frame. With the analog input sub-section complete, Window 11 should look like this:

## Analog Displays

Analog displays from the HMI to the operator can be text based or graphical. The numeric objects created in the last sub-section are dual function input and display, but these could be used for display only by unchecking the **Allow input** checkbox. This sub-section of the Quick Start Project creates three new data display objects. Two bar graphs for temperature and tank level will be added to Window 11. And a digital clock displaying the system



time will be added to the main page.

The tank level indicator will be built onto the background image using another library image and a bar graph. Once complete, it will be grouped together and stored in the group library for future use. The thermometer has already been built from text, drawings, and a bar graph and is stored in the group libraries.

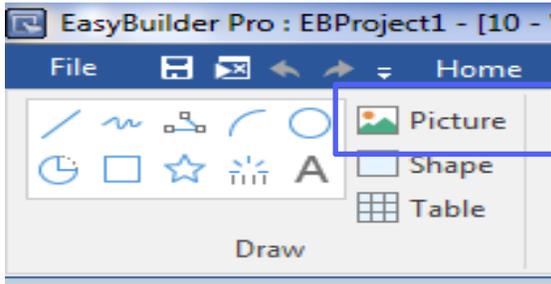
When this sub-section is complete, the project will be ready to simulate.

Sometimes it is convenient to work in a space not crowded with previous work. To build the tank level indicator a new blank page will temporarily be created as a work space. The tank level indicator will be built on the blank page and saved to the group library. Then the work page can be deleted.

1. Pick an unused window number and create a new blank page.
  - Right click on any unused window number and select **New**.

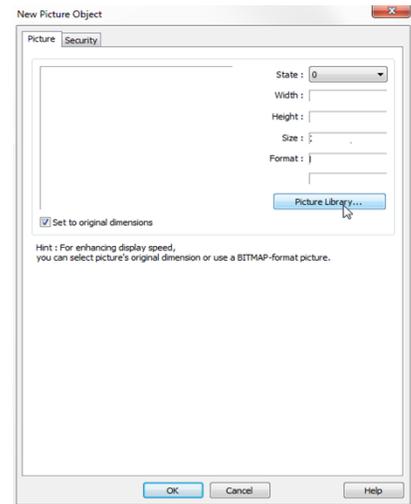
- If the new window has a background like Window 10 or 11, change the **Underlay** window back to **none** in the **Window Settings**.
- Double click the new window to open it in the main screen. A blank screen is now open as a workspace.

2. Place the image for the tank exterior. From the top menu bar select: **Object -> Picture**.



3. The **New Picture Object** window opens.

- Click the **Picture Library** button to open the **Picture Manager**.

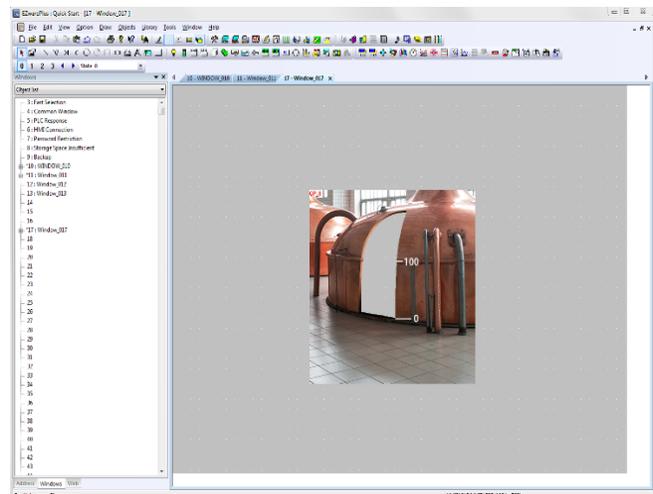
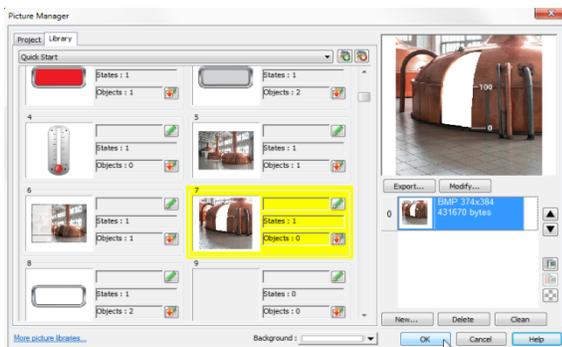


4. In the **Picture Manager** browse to the **Quick Start** library.

- Select image **7**, showing the tank exterior, with a breakout for the graph.
- Click **OK**
- Place the image in the center of the screen.
- Double click the picture to open the properties and check **Set to original dimensions** then click **OK**.

Once the image is placed it should look like this:

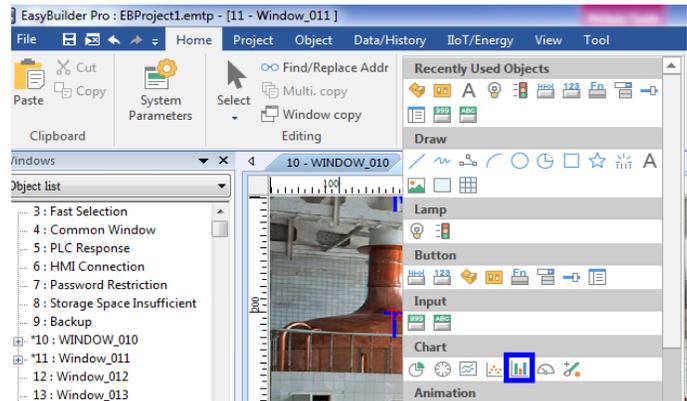
5. Next, create a bar graph to indicate the tank level. From the top menu bar select **Object -> Chart -> Bar Graph**.



6. This opens the **New Bar Graph Object**.

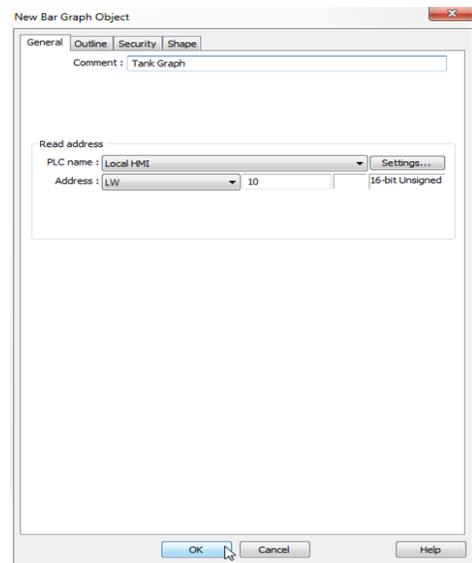
Select the **General** tab.

- In the **Comment** field change the name to **Tank Graph**.
- Change the **Read Address** to match the **Level Setting** input address used earlier, **LW-10**.



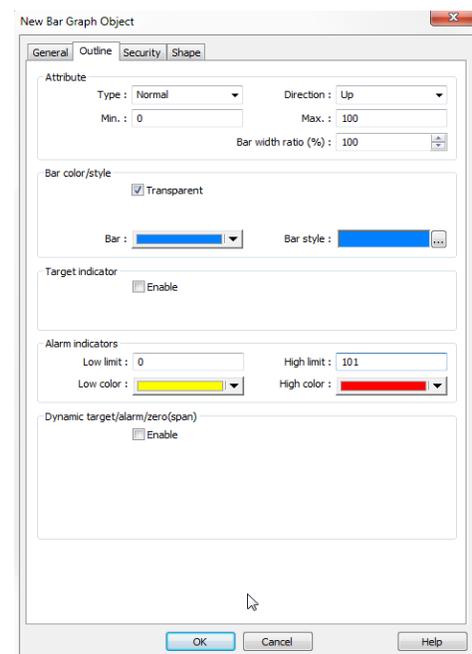
7. Select the **Range** tab.

- In the **Attribute** section, change **Max Value** to **100**.
- In the **Target Indicator** section, uncheck **Enable**.
- In the **Alarm Indicators** section, change **High Limit** to **101**.



8. Select the **Shape** tab.

- Uncheck **Use Shape**.
- Leave the rest of the settings default.

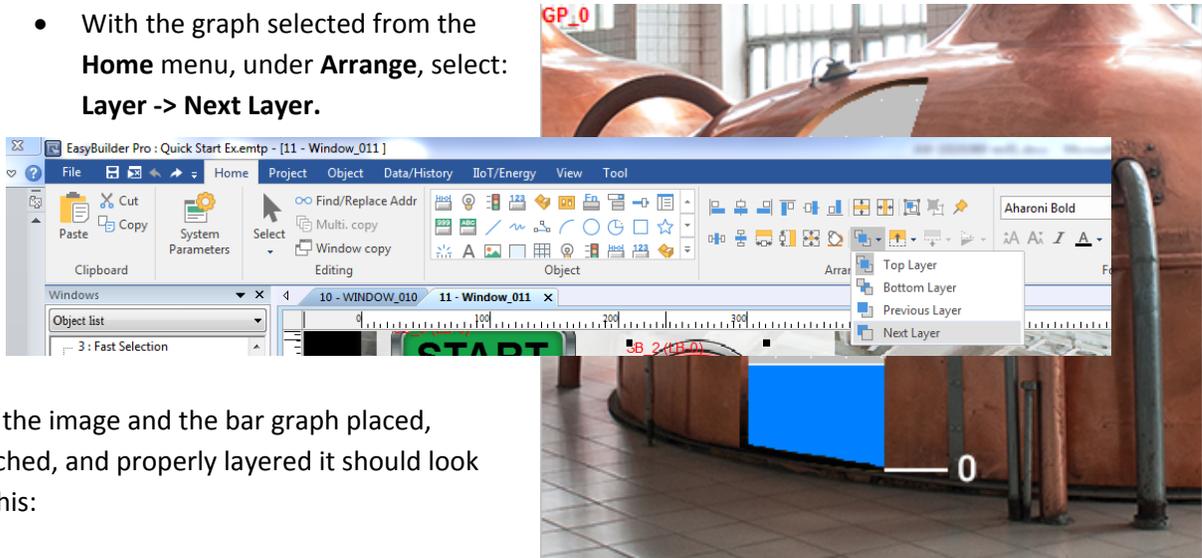


- Click **OK** and place the graph so the top right corner is aligned with the **100** mark on the right side of the tank breakout.

With the graph placed, the screen should look like this:

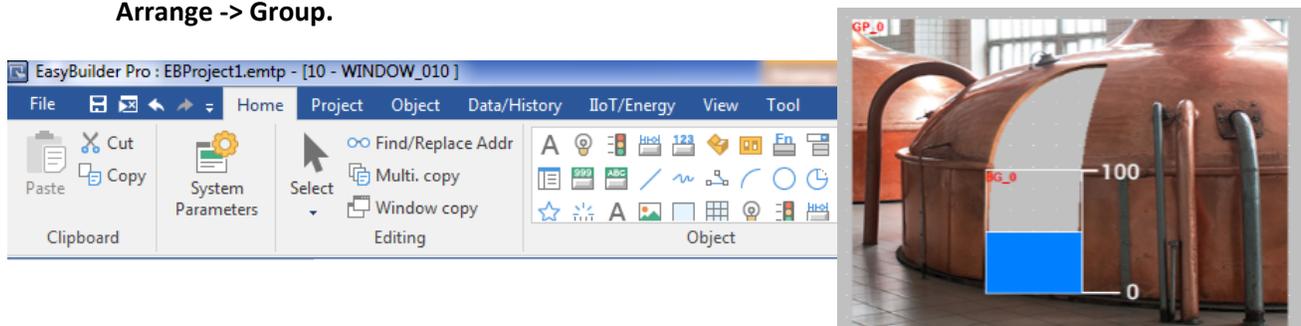
- Adjust the bar graph to cover the tank breakout. When an object is selected, it has eight sizing handles around the outer edge. Click and drag one of the sizing's handles to stretch the object. **Click and Hold** the bottom left sizing handle, and then drag it until the bottom of the graph aligns with the 0 mark on the right side of the tank breakout, and the left side of the graph completely covers the tank breakout.
- Change the layer so it is behind the tank exterior image.

- With the graph selected from the **Home** menu, under **Arrange**, select: **Layer -> Next Layer.**

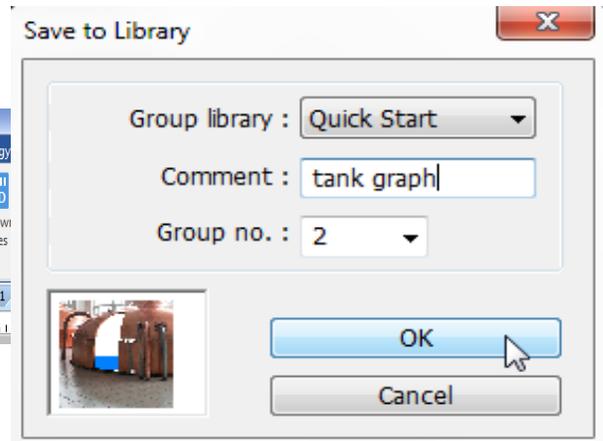


With the image and the bar graph placed, stretched, and properly layered it should look like this:

- Group the pieces together. Click and drag a selection box around the entire area or, from the **Home** menu, select **Select -> Select All Objects.** With all the pieces selected together, from the **Home** menu, select **Arrange -> Group.**



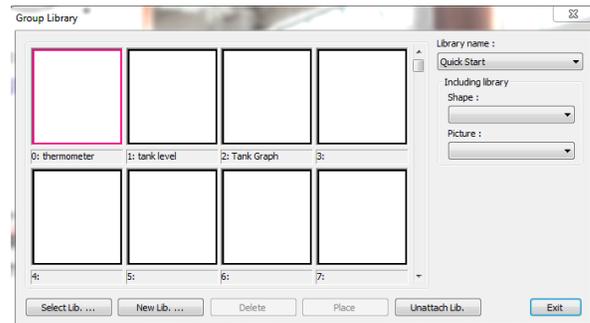
12. Open the **Group Library** dialog.  
From the top menu bar click on **Project -> Group**



13. This opens the **Group Library** dialog. Click **Select Lib...** and Navigate to `C:\MapleSystems\EBPro\library\legacy\quickstart.glb`

14. Now the library is attached to the project, save the tank level group to the library.
  - With the group selected, from the top menu bar, select **Project -> Group -> Save to Group**

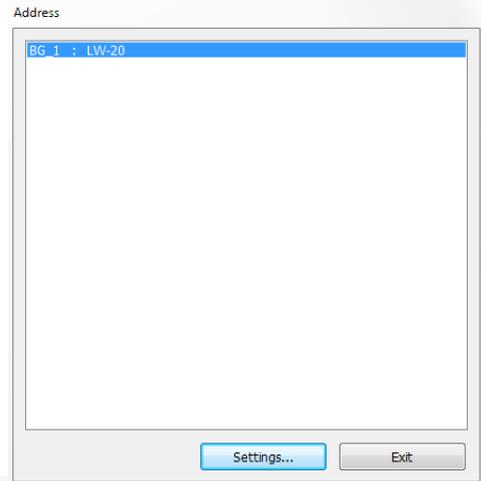
15. The **Save to Group** dialog opens.
  - Set the **Group library** to **Quick Start**.
  - In **Comment** enter **tank graph**.
  - Set **Group no.** to **2**.
  - Click **OK**. The new group is now shown in the selected spot in the library. It should look the



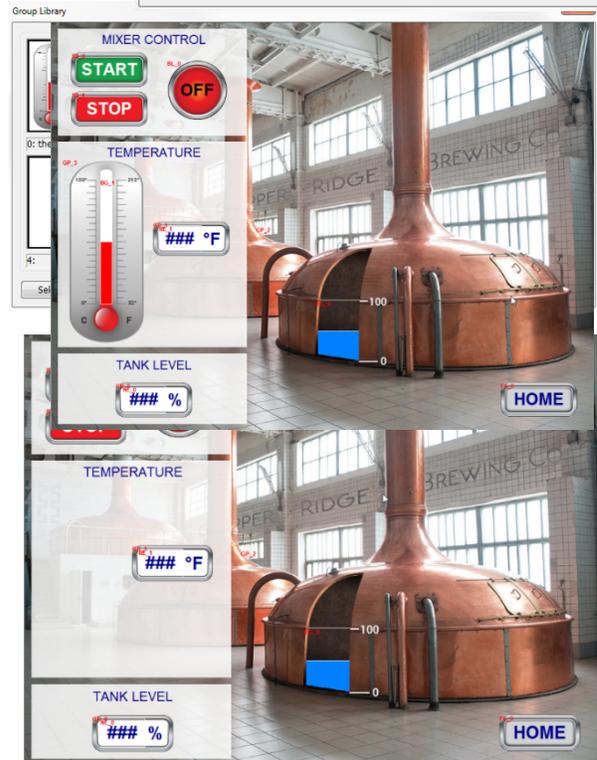
same as group 1.

Click **Exit** to close the **Group Library** dialog

16. Return to **Window 11** to place the newly created group.
  - From the top menu bar select **Project -> Group**
  - From the **Quick Start** library, select group **2: tank graph**.
  - Click **Place** and place the group on top of the tank background image.
  
17. Aligning the group perfectly is necessary to make the images match up.
  - Click and drag the group with the mouse to get it close to the correct position.
  - Then with the group selected, use the keyboard directional arrow keys to complete the alignment.
  - With alignment complete it should look like this:

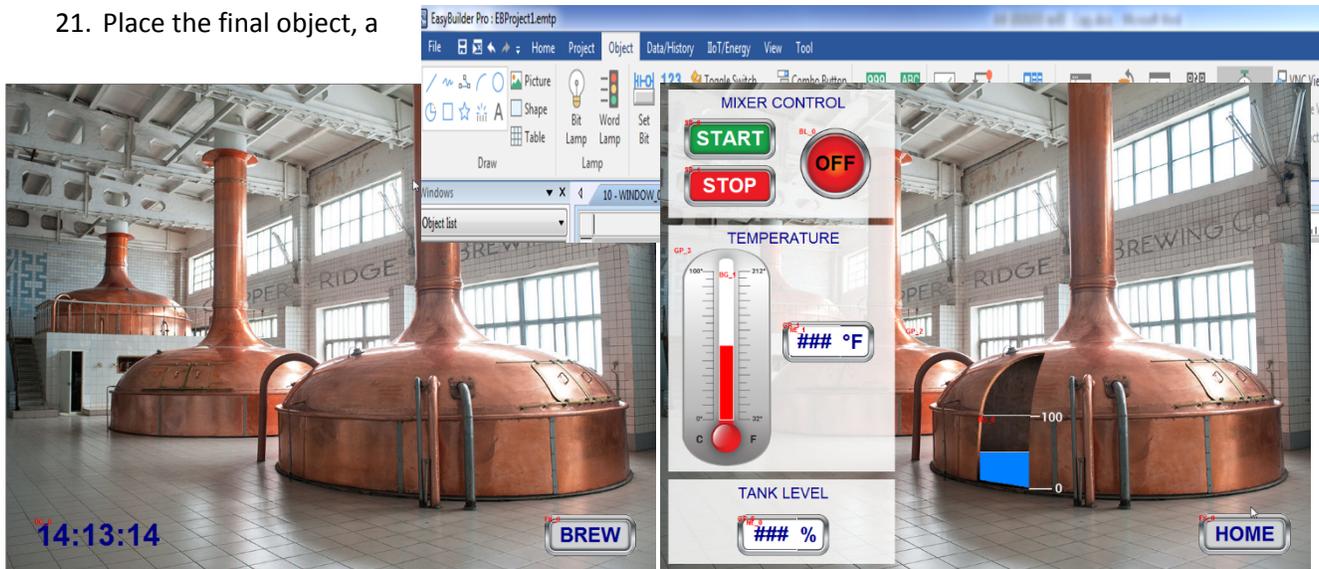


18. Place the previously created thermometer group into the project.
  - From the top menu bar select **Project -> Group**
  - From the **Quick Start** library, select group **0: thermometer**.
  - Click **Place**.
  - Place the group in the temperature section.
  - With the thermometer placed it should look like this:



19. Address the new thermometer to the correct variable.
  - Double clicking on a group brings up the **Address** dialog.
  - Select the piece of the group to modify, in this case the group only has one element to change: bar graph 1 (**BG\_1**), then click **Settings...**
  
20. This opens the **Bar Graph Object Properties** dialog.
  - Ensure the **Read address** is set to **LW-20**, the address used for the temperature input.
  - Click **OK**, to accept the changes.
  - Click **Exit** from the **Selected Objects** menu

21. Place the final object, a

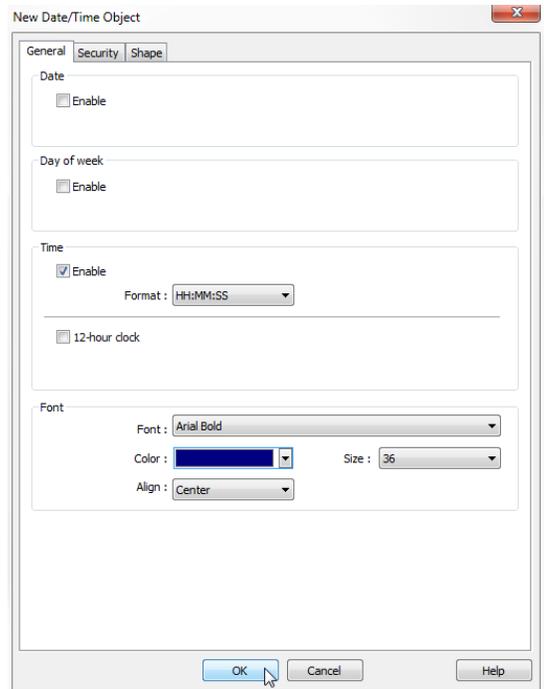


clock, on the main page.

- On **Window 10** from the top menu bar select **Object -> Time-Related -> Date/Time**

22. The **New Date/Time Object** dialog opens. Select the **General** tab.

- Uncheck **Enable** in the **Date** section.
- Uncheck **Enable** in the **Day of Week** section.
- Change the **Font** to **Arial Bold**.
- Change the **Size** to **36**.
- Change the **Color** to **Dark Blue**.



23. Select the **Shape** tab.

- Uncheck **Use Shape**.
- Click **OK**.
- Place the clock in the lower left of the screen.

The project is now complete and ready to simulate. Windows 10 and 11 should look like this:

With Part 4 complete, you now have the basic tools to create a beautiful and functional operator interface. You've created analog and digital inputs and displays so you can control and monitor any process variable. Now,

the only remaining step is to test the system and see it in action. In step 5, you will run the newly built interface through the simulator to see how it will appear to the end user.

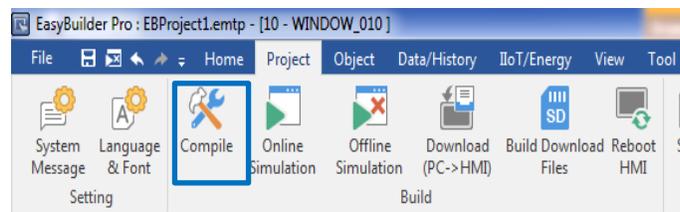
## Part 5: Simulate

### Part 5: Simulate

The ability to fully simulate and test a project from the configuration software accelerates the testing and revision process. To test the project function, or to see how different object settings will appear to the user, the project needs to be simulated. EBPro offers Online and Offline simulation. Online simulation connects the simulated HMI, in the PC, to a live PLC to test how the project will interact with the system. Offline simulation runs the simulated HMI, in the PC, without a PLC connection. The last part of the Quick Start Project is to complete testing in an offline simulation. For more information on simulating see the EPM chapter: Simulator Mode.

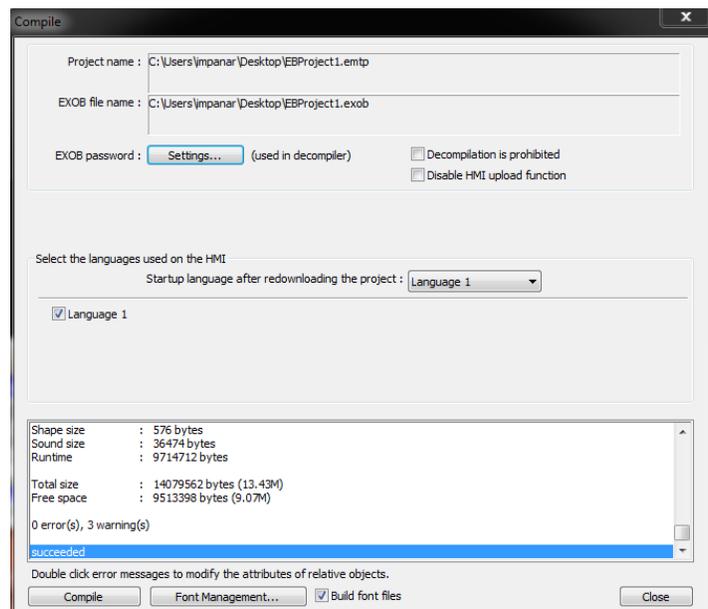
### Compile

1. Save the project.
2. From the **Project** menu bar, select **File -> Save**, or use the **Save icon**.
3. Compile the project. From the Project menu, select **Compile**.



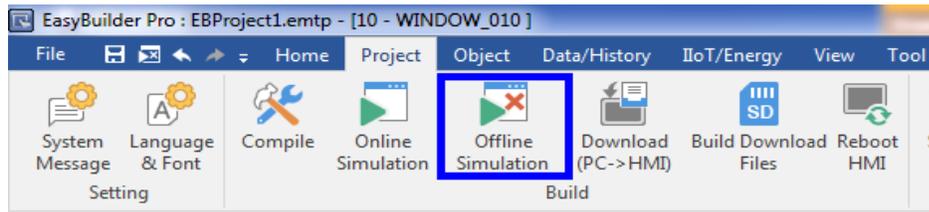
The **Compile** dialog opens.

- Click **Compile**. After the project has compiled a summary will show if any errors or warnings were generated.
- If the project compiles without error, click **Close**. (If any errors are encountered double clicking the error will bring up the properties for the object that caused the error. Go back to the section of the Quick Start Guide for that element to find the correct settings to fix the issue.)



### Simulate

1. Open the offline simulator. From the **Project** menu, select **Offline Simulation**.



2. The simulator opens to the startup window; in this case, Window 10. It should look like this:



3. Click **Brew** to go the detail page, Window 11. It should look like this:



4. Change variables to see the graphics react. Click on the temperature input to bring up the keypad.

Type **150** then **Enter**. The value in the input field will change and the thermometer now reads 150 as well.

Click on the level setting to bring up the keypad again.

Type **45** then **Enter**. The value in the input field changes and the tank level indicator shows the current level.

(Entering values within the range specified for the input in numeric limits will change the value. Attempting to enter a value outside the specified range will not change the current value.)



5. Click the start and stop buttons to see the run indicator lamp change state.

After the project has been completely tested, close simulation by clicking the **red X** at the top right of the simulation window or right click and select **Exit simulation**.



Thank you for taking the time to explore EBPro, and congratulations on completing the Quick Start Project. You have now seen how easy it is to create a visually appealing interface with EBPro. When it is time to build your own project, use this guide as a reference tool to help remind you where to find the necessary elements. If you need any further information about Maple Systems or the products we offer, please contact us and we will be happy to assist you.

## More information

Maple Systems delivers the industry's best value in control products. For us, "best value" means high quality products and outstanding service at a great price. In addition, all products are backed by an outstanding team and complimentary technical support.

### Contact Us:

Contact our automation experts today.

- **Phone:** 425-745-3229
- **Email:** [support@maplesystems.com](mailto:support@maplesystems.com)
- **Website:** <https://www.maplesystems.com>

### Program Information:

#### Help Files:

- From the **File** menu select **Help Topics**. The **How do I...** section includes instructions for common tasks.

#### EBPro Programming Manual:

- In the Help files: Help -> Manuals and PLC Connection Info -> Programming manual.
- From the **Start Menu: All Programs > Maple Systems > EBPro > Programming Manual**.
- Download from the Manuals page at:  
<https://www.maplesystems.com/SupportCenter/Manuals&Guides.htm> (login required).

#### Tech Notes:

- Get step by step guidance in building specific elements or solving common automation issues from our extensive library of technical notes at:  
<https://www.maplesystems.com/SupportCenter/TechnicalNotes.htm> (login required).

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## WARRANTY

A Warranty Statement is included with each unit at the time of purchase and is available at <https://www.maplesystems.com>.





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[www.maplesystems.com](http://www.maplesystems.com)



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