

ezImageX2 User's Guide

Version 1.0

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Document Revision Table		
Revision	Date	Description
A	February 5, 2015	Initial version.

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Introduction

The ezImageX2 software lets you measure, annotate and analyze microscopy images with just a few clicks. The ezImageX2 tools support image capture, viewing, geometry/metrology, annotation, image processing and manipulation, as well as reporting tools to create documents with raw data and accompanying images.

Hardware and Software Requirements

Aventools' ezImageX2 software has the following hardware and software requirements:

- Microsoft Windows 7/8 (32 or 64 bit)
- Graphics card capable of minimum 24 bit color (recommended is 1024x768 pixels at True Color (32 Bit))
- 256 Megabytes Physical Memory
- Free Hard Disk Space: 5GB to store images

This chapter describes how to install the Aventools' ezImageX2 software and a digital microscope such as the Mighty Scope 5.0 M.

Installing the Software

This section describes how to install the ezImageX2 software.



How to Install the ezImageX2 Software

To install the ezImage2 software, proceed as follows:

1. Insert the ezImageX2 CD into your CD/DVD drive on your computer.
2. Run the ezImageX2WIN.exe or ezImageWIN which is a self-extracting zip file.
3. If there are any camera drivers on the CD install those – typically this is not the case the software assumes the camera is supporting the Microsoft direct show.
4. Once installed, the software will run for 30 days until a license is entered.

There is a prompt in the About box to visit the website and request a license. This will request an email address for the product id. Press the **Copy** button to copy the product id and once the email is received, paste in the license from the Clipboard by clicking the **Set** button. **NOTE:** The About box can also be displayed by clicking the **Logo** button on the toolbar.

Configuring the Hardware and Software

This section describes how to configure your camera and the ezImageX2 software.

IMPORTANT: Point the software to look at camera to be used. If the user has a webcam or other camera attached to the computer, Windows will rank that above the camera to be used with the software.



How to Point the Software to an Installed Camera

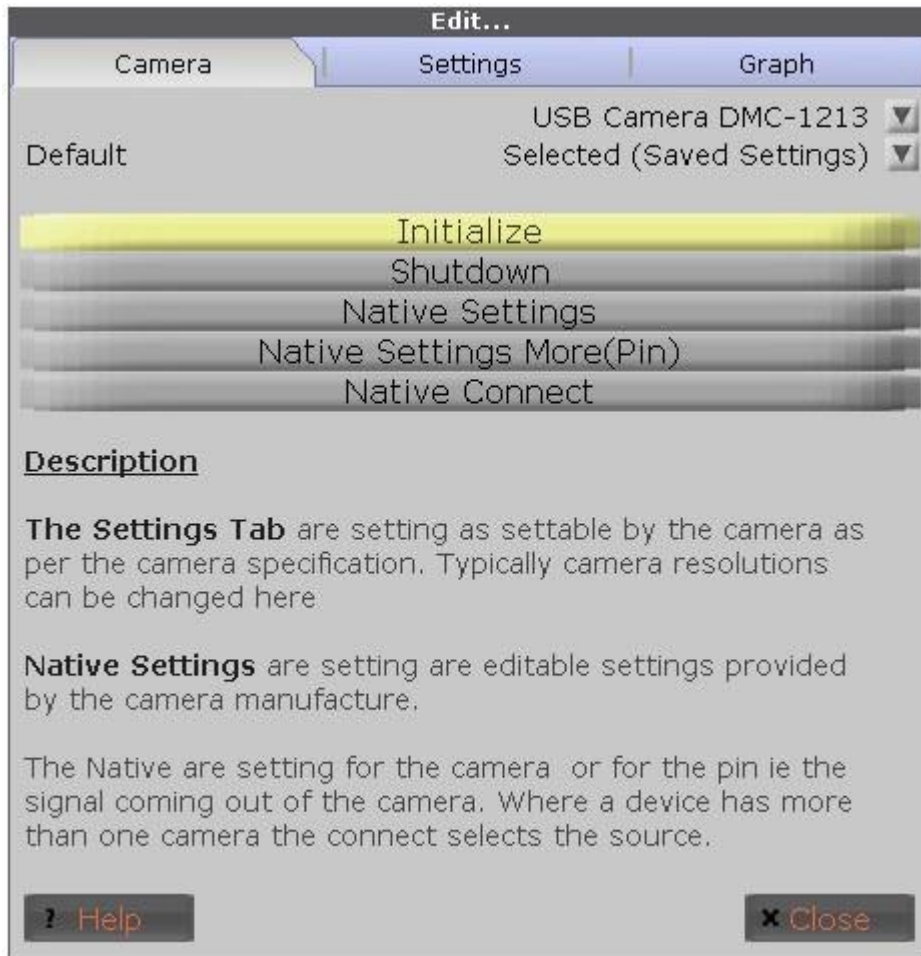
To point the software to an installed camera, proceed as follows:

- 1) Click the **Edit** button on the Upper Bar.

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The **Edit..** window is displayed:



- 2) Select the desired camera. (ezImage2 can recognize two cameras).
- 3) Click the **Selected (Saved Settings)** option.



- 4) Click the **Apply** button.
- 5) Go to the **Edit** button.
- 6) Click on the **Settings** tab.



- 7) Set the **Camera Mode** option to Mixed. This allows you to make the screen capture using the software OR the image grab button on the camera.
- 8) Set the **Video Resolution** option. Make sure you use one of the resolutions with MJPG (Video). It is recommended that you use 1024x768.
- 9) Set the **Photo Resolution** option. Make sure you use one of the resolutions with MJPG (Video). You can use a higher resolution than 1024x768 for this setting.
- 10) Click the **Apply** button.
- 11) Click the **Save Workspace** button. This saves the current settings and ensures they are in effect each time you use the software.

Navigating the ezImageX2 Software

This section describes the Main Window and the buttons that allow you to use the ezImageX2 software.

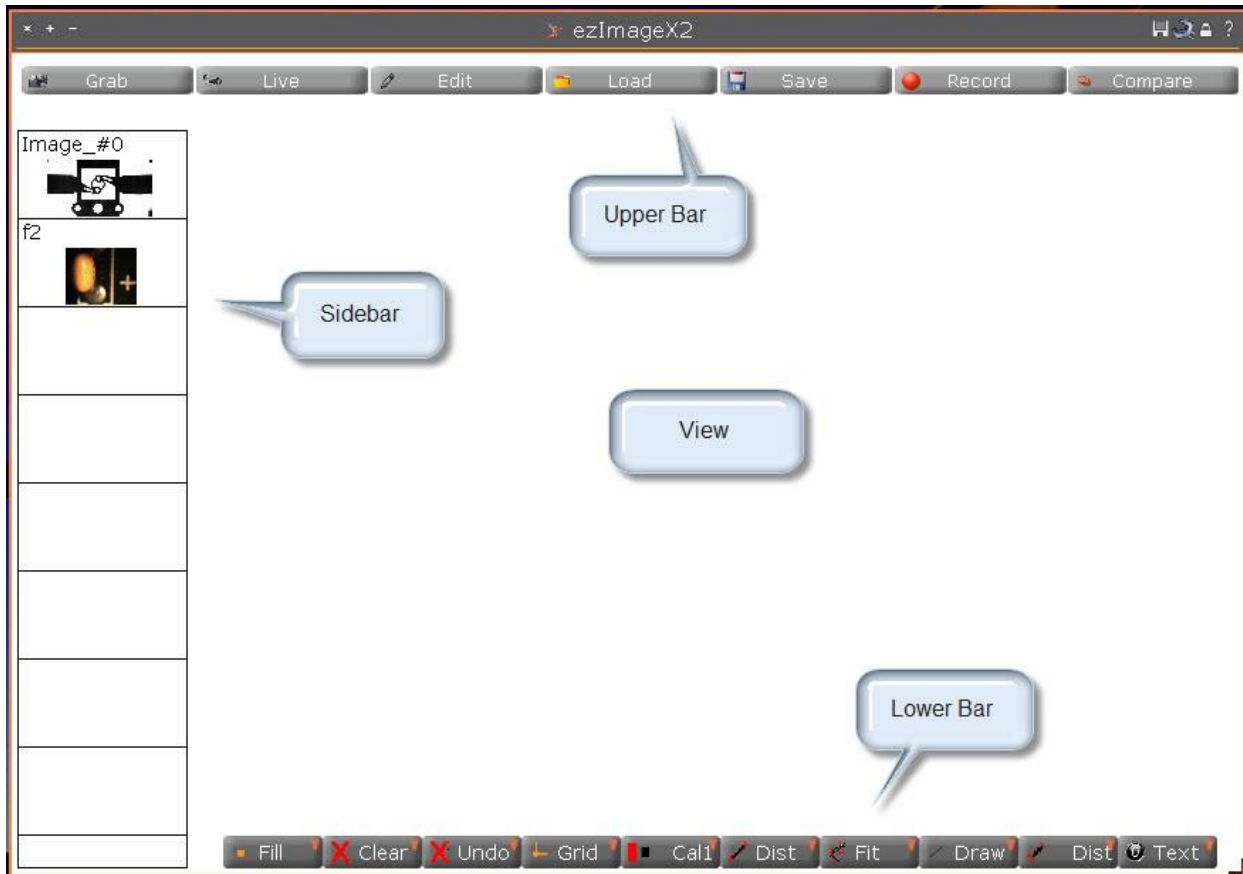
The Main Window

Once you have installed the software, the **Main Window** is displayed when you double-click the ezImageX2 icon on your Desktop. The sections of the **Main Window** are:




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- Upper Bar - the buttons on the Upper Bar are used to control camera settings and actions.
- Sidebar – the Sidebar displays thumbnails of recent images.
- View – the area where the item or image to be examined is visible.
- Lower Bar - the buttons on the Lower Bar are used to manipulate the image.









Upper Bar:





Button	Description
 Grab	This button allows you to “grab” a snapshot of the live display. This is useful when you need to take a measurement or add text to the image.
 Live	This button displays a live version of what the camera sees. The ezImageX2 software lets you view one or two cameras simultaneously.
 Edit	This button allows you edit the camera settings. This allows adjustments to a camera’s factory-installed “native settings” – the suggested default modes, which generally don’t need to change. If your camera’s manufacturer lets native settings be changed, a menu of choices will appear automatically when this button is activated. Advanced users can alter gain, brightness, contrast, saturation, sharpness, hue, gamma, white balance, exposure and video settings.

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Button	Description
	This button allows you to load a previously saved image. You can Browse to the folder where the image is located. (NOTE: You can also load an existing image by dragging it from the Sidebar).
	This button allows you to save a live or previously saved image.
	This button allows you to record a video for playback in the future.
	This button allows you compare a Live view and an image, two Live views (two cameras required), or two images side by side. Click on the XXX button to make either the left or right section of the view active. Click the Compare button a second time to exit that feature.

Lower Bar:

Button	Description
	This button allows you to zoom in and out on the view. The three sizes are: <ul style="list-style-type: none"> • 1:1 (original image size) • Zoom (zoom in on enlarged area) • Area (zooms to full viewing area)
	This button allows you to clear any changes on the viewed image.
	This button allows you to undo the previous change, much like the Undo feature in Microsoft Word or Excel.
	This button allows you display different grids to make it easier to view items in the view. The grids are: <ul style="list-style-type: none"> • Lower Corner • Middle • Calibration Center • Full
	This button allows you to calibrate the camera. The settings for the calibration are: <ul style="list-style-type: none"> • CAL1 (editable) • CAL2 (editable) • None The unit stores two calibrations.
	This button allows you to measure a selected distance.

Button	Description
	This button allows you to select for a diameter or other geometric measurement.
	This button allows you to draw objects, such as a line, point, or circle.
	This button allows you to measure a selected distance between geometries.
	This button allows you to enter text onto the view.

The Title Bar



The Title Bar icons allow you to perform different software functions. These functions are:

- Closing the software
- Toggling the size of the **Main Window** between the smaller default size and full screen.
- Minimizing the ezImageX2 software so that other open applications or the Desktop are visible.
- Saving the Workspace so that it retains any changes you have made to the workspace.
- Editing Parameters of the software such as the default language, font name and size, and the window size.
- Locking or Unlocking the software with a password.
- Accessing the online help.



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Introduction

This chapter describes how to use the ezImageX2 software.

How To Steps



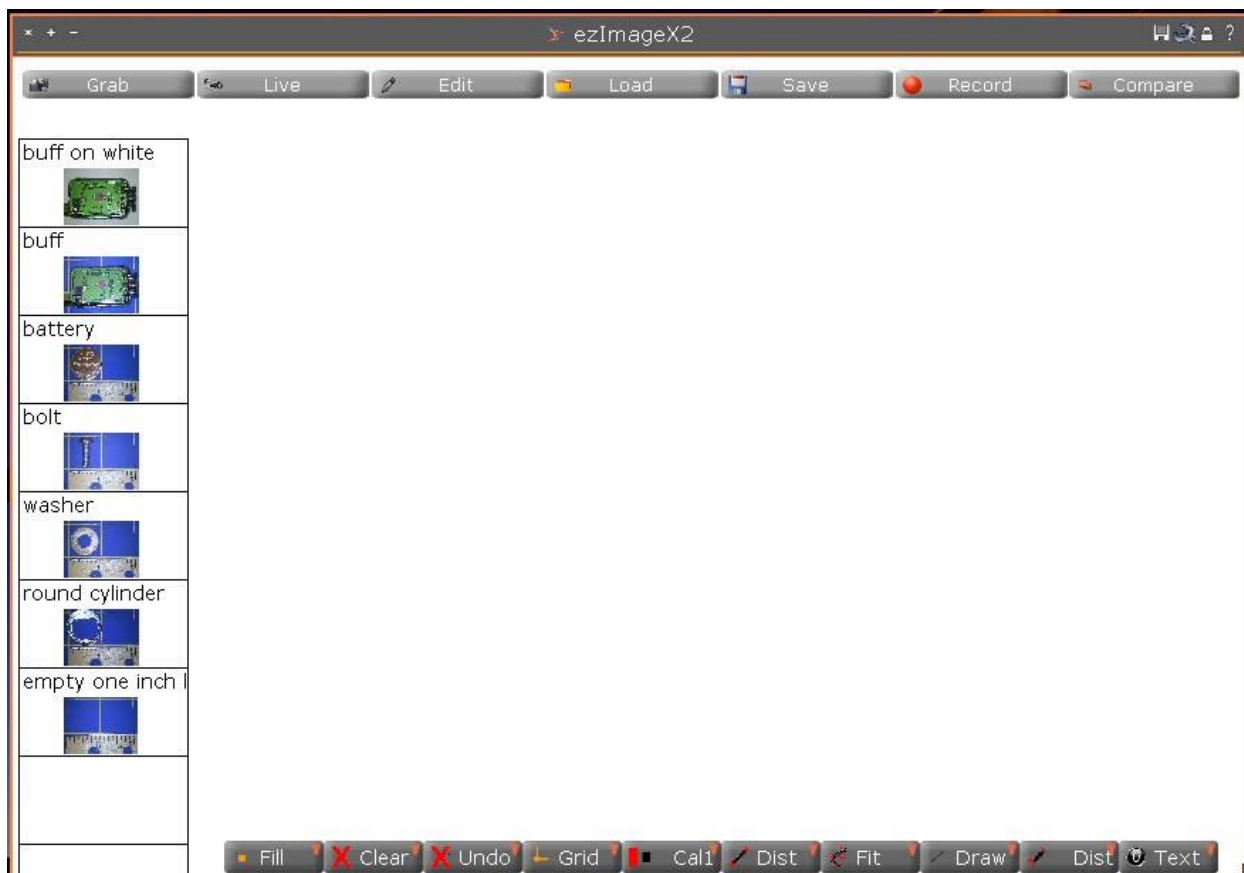
How to Open the ezImageX2 software

To open the software, proceed as follows:

1. Double-click the ezImageX2 icon on your desktop.



2. The **Main Window** is displayed:



How to Grab a Live Image

To grab a live image, proceed as follows:

10-

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1. Click the **Live** button to activate the live view mode. The **View** area of the software is now live, with the camera being active.
2. Position the object to be photographed in the **View** area.
3. Click the **Grab** button; the Live view changes to show the photographed object. A sample image is displayed below:



NOTE: The objects used as samples in this User Guide were placed on a blue grid of one-inch squares.



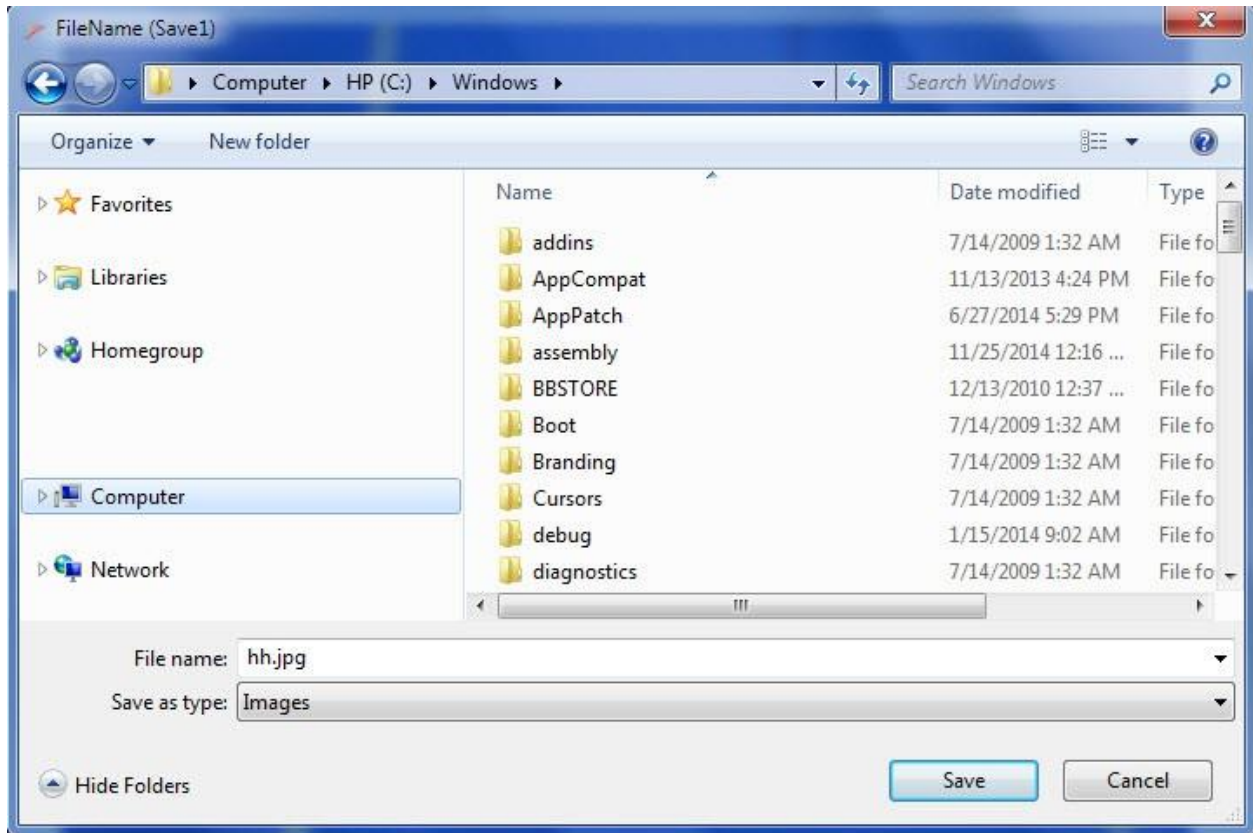
How to Save an Image

To save an image, proceed as follows:

1. Display an image in the **View** area.
2. Click the **Save** button. A window similar to the one below is displayed:

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3. Navigate to the location where you wish to save the image.
4. Click the **Save** button to save the image or the **Cancel** button to cancel saving the image.

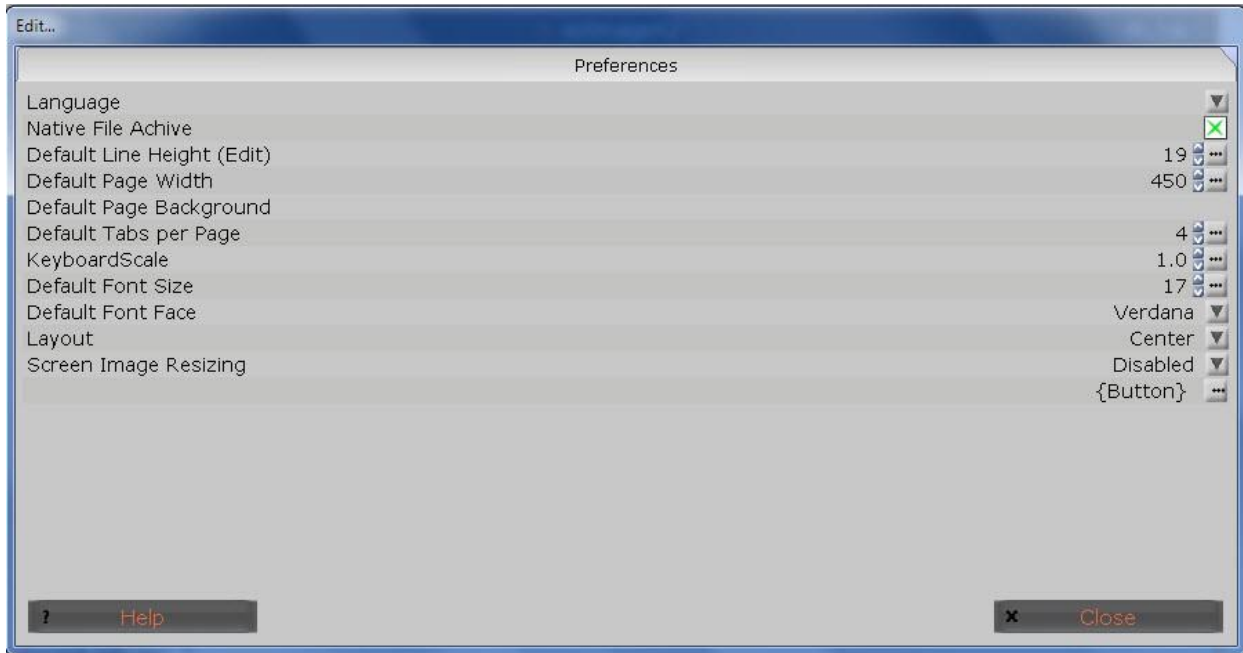


How to Edit the Software Parameters

To edit the software settings, proceed as follows:

1. Click the **Edit Parameters** icon in the upper right corner of the Main Window. The **Preferences** window is displayed:

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2. Enter the desired changes. See the table below for descriptions of the fields.
3. Click the **Apply** button to save the changes, or the **Cancel** button to cancel the changes.

Field	Description
Language	Allows you to select the language used, from a drop-down list.
Native File Archive	Allows you to toggle between archiving the native file or not.
Default Line Height (Edit)	Allows you to set the default value for the line height.
Default Page Width	Allows you to set the default value for the page width.
Default Page Background	Allows you to set the default color for the page background. You can select a color from the Color Wheel or enter RGBA values.
Default Tabs per Page	Allows you to set the default values for the tabs on a page.
Keyboard Scale	Allows you to set the default value for the keyboard.
Default Font Size	Allows you to set the default value for the size of the font.
Default Font Face	Allows you to set the default font name from a drop-down list.
Layout	Allows you to set the default value for the layout from a drop-down list, such as Left , Center , or Right .
Screen Image Resizing	Allows you to set the default value for the size of the ezImageX2 window from a drop-down list.
{Button}	Allows you to set the default values for buttons. See the "How to Set Button Preferences" section for more information.



How to Load a Saved Image

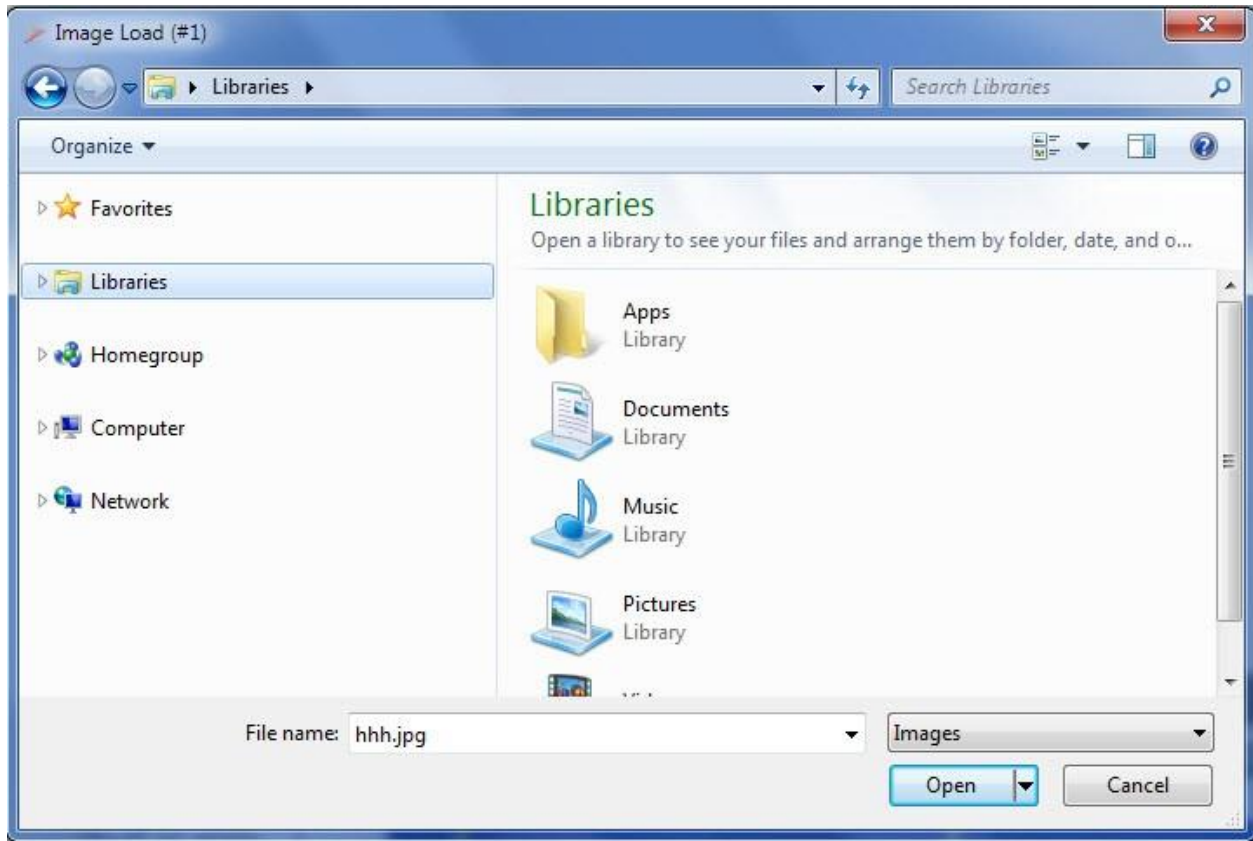
To load a saved image, proceed as follows:

Drag an image from the **Sidebar** onto the **View** area.

Or,

1. Click the **Load** button. A window similar to the one below is displayed:

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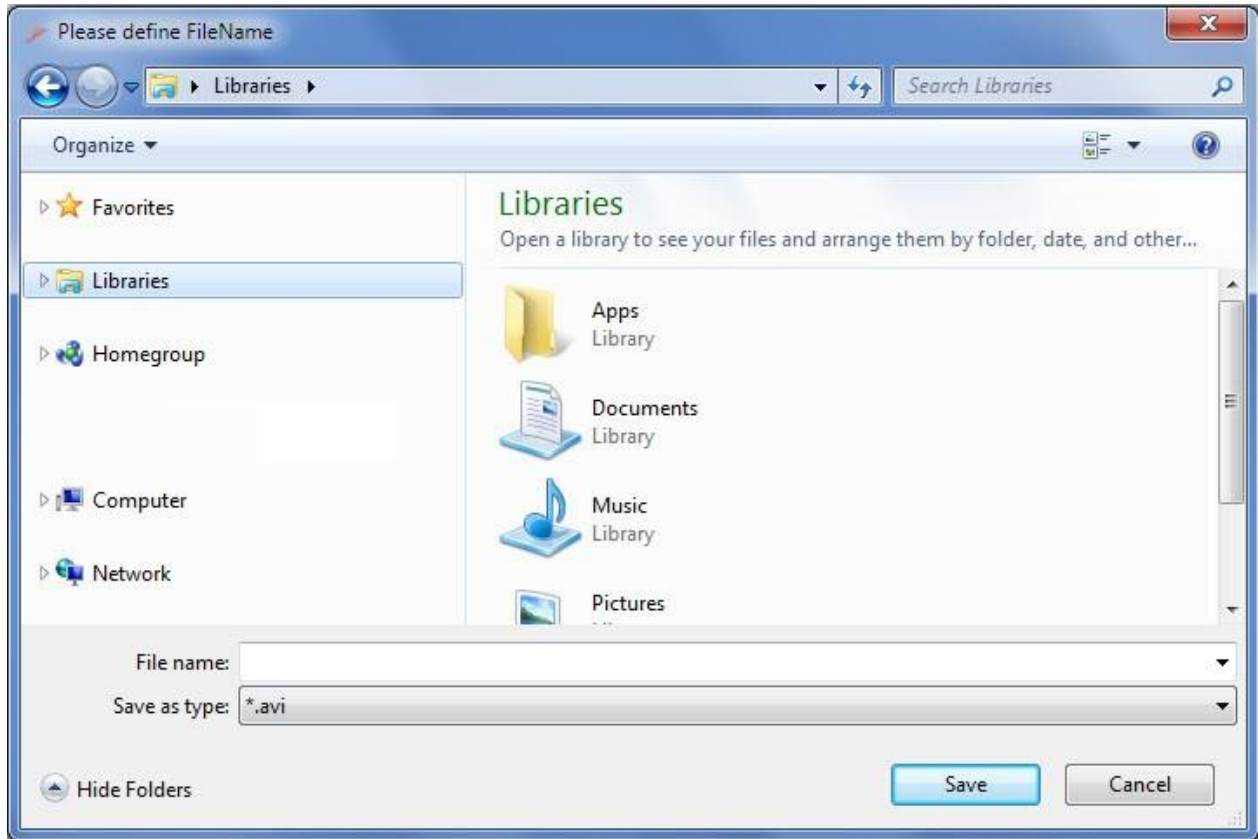
2. Navigate to the location where the image you wish to open is located.
3. Select the file name and click the **Open** button to open the image or the **Cancel** button to cancel opening the image. The image is displayed in the **View** area.



How to Record a Video

To record a video, proceed as follows:

1. Click the **Live** button to activate the live view mode. The **View** area of the software is now live, with the camera being active.
2. Position the object to be photographed in the **View** area.
3. Click the **Record** button. The light on the button changes from red to green.
4. When you are finished recording, click the **Record** button again. A window similar to the one below is displayed:



5. Navigate to the location where you wish to save the video (.avi format).
6. Enter a file name and click the **Save** button to save the video, or the **Cancel** button to cancel saving the video.



How to Compare Two Items (Live or Saved)

NOTE: You can compare a Live view and an image, two Live views (two cameras required), or two images side by side. The steps below describe how to view a Live view and a saved image. Other types of comparisons are done in a similar manner.

To compare two items, proceed as follows:

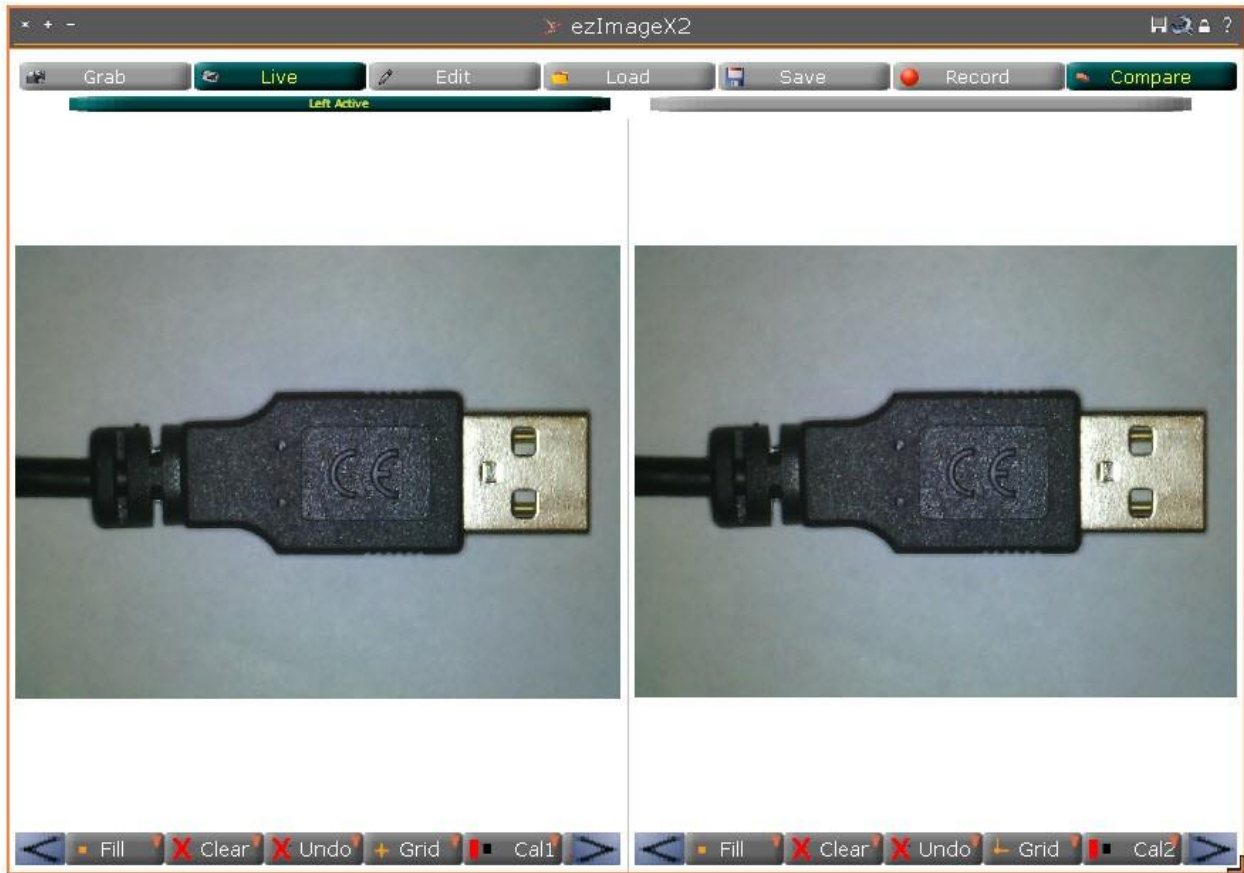
1. Click the **Live** button to activate the live view mode. The **View** area of the software is now live, with the camera being active.
2. Position the object to be photographed in the **View** area.

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3. Click the **Compare** button. Two versions of the **Live** view are displayed:

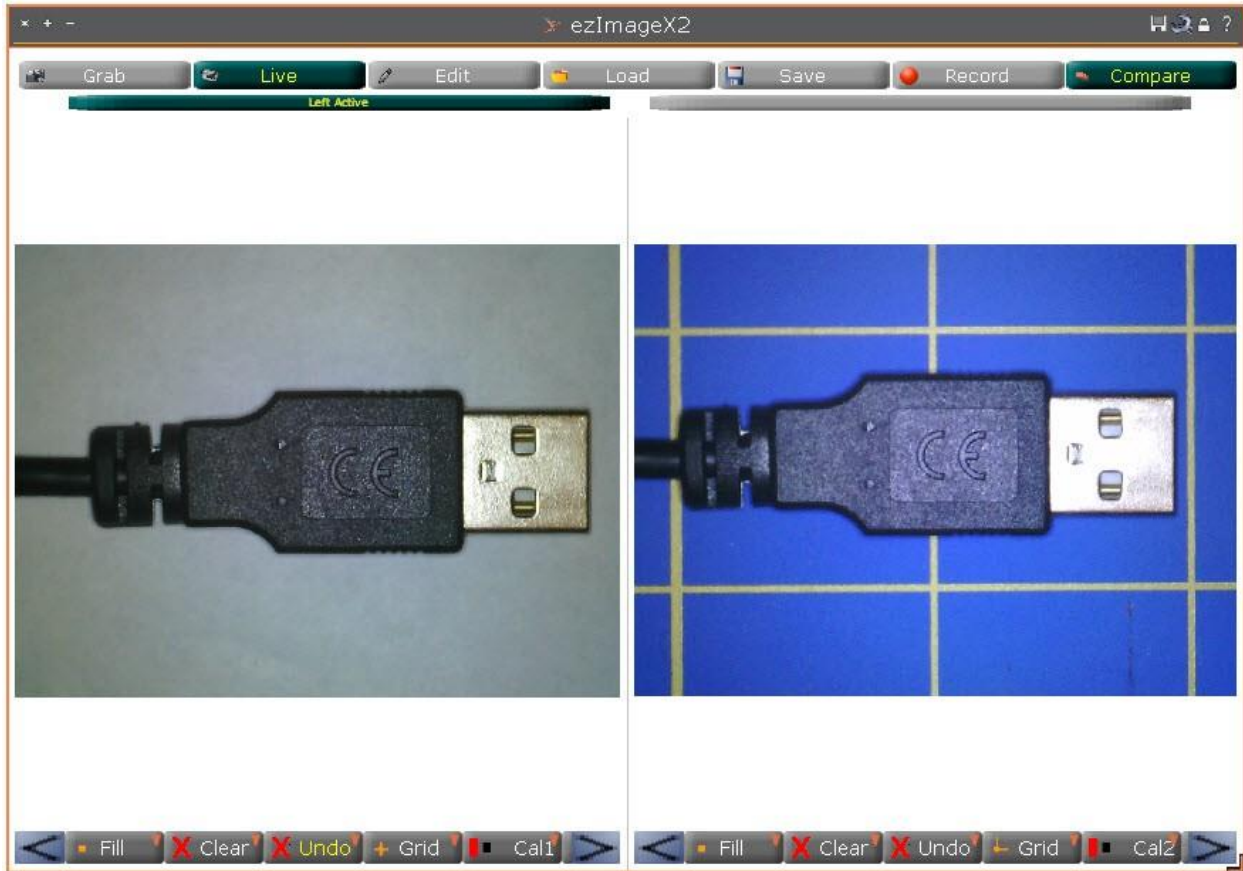
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4. Open an existing image. A window similar to the one below is displayed:

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5. You can then compare the **Live** view versus a saved image.

Notice that in **Compare** mode, each object being compared has its own set of **Lower Bar** buttons as well as an **Active/Inactive** button below the **Upper Bar**. In the example above, the left object is active. Simply click on the Left or Right **Active/Inactive** button to make that object active.



How to Zoom the View Area

To zoom in or out, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Click the **Fill** button to toggle through the three different view modes:

Area View Mode:



Zoom View Mode:



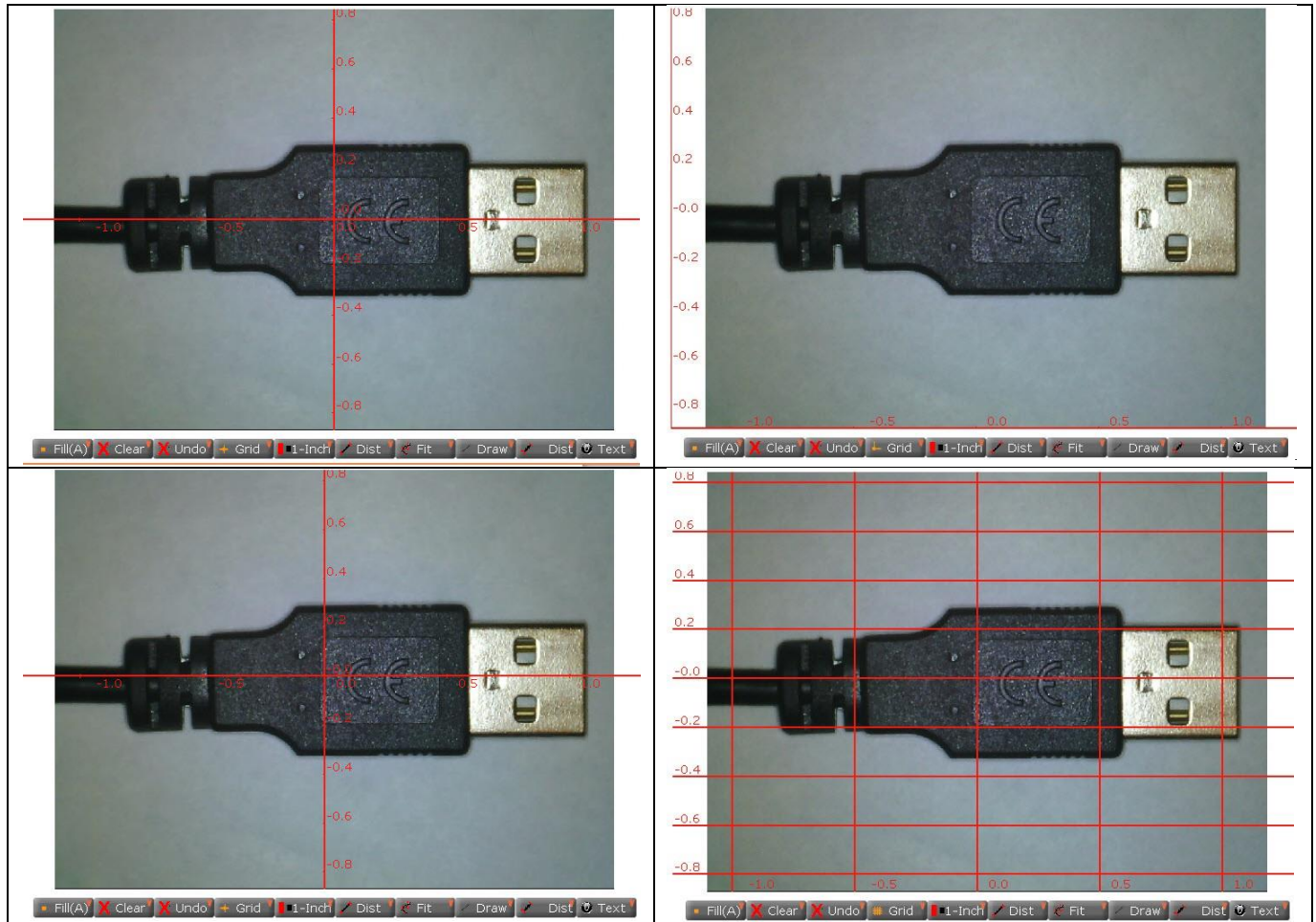
1:1 View Mode:



How to Display a Grid

To display a grid, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Click the **Grid** button to toggle through the four different view modes:



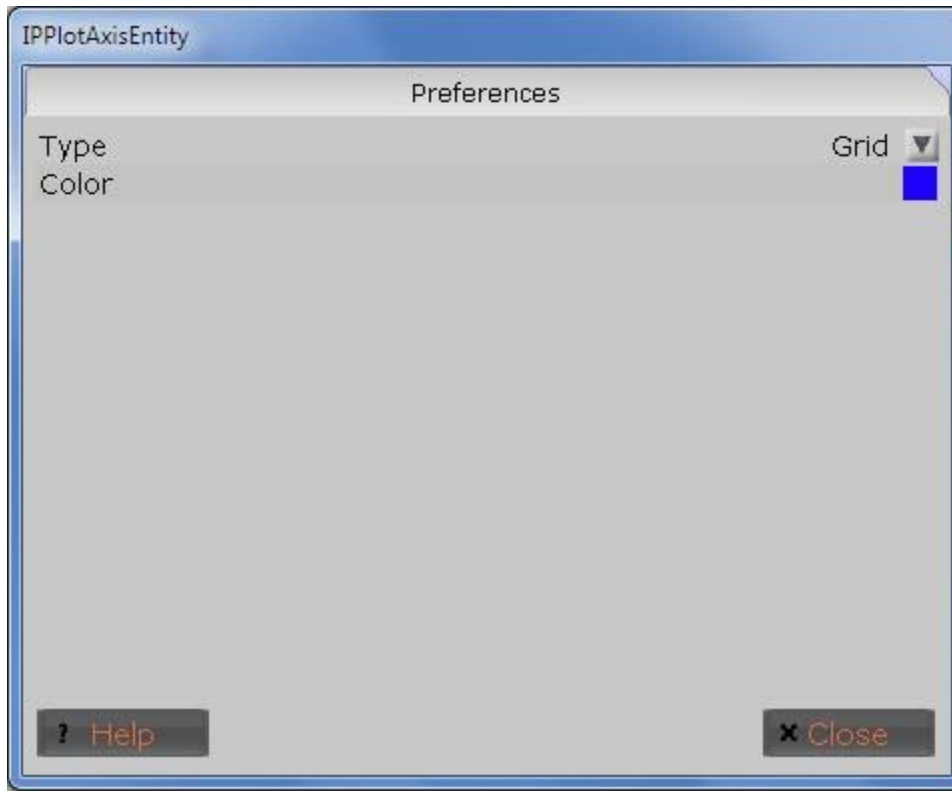
3. Continue to toggle through the grid options until you display the desired pattern; the last option removes the grid.



How to Set Grid Preferences

To set grid preferences, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Right-click on the **Grid** button and select the **Edit** option from the context menu. The following window is displayed:



3. Enter the desired changes. See the table below for descriptions of the fields.
4. Click the **Apply** button to accept the Grid settings, or the **Cancel** button to cancel the changes.

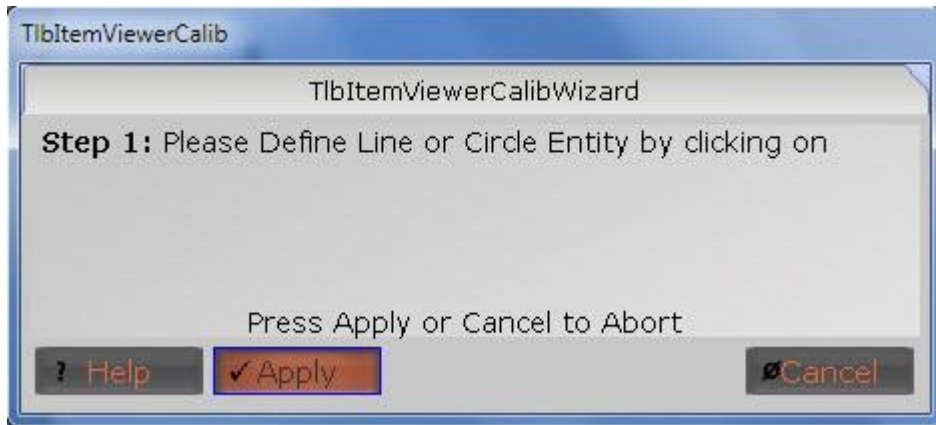
Field	Description
Grid	Allows you to set the type of grid. The values are: Axis, Center, Origin, and Grid.
Color	Allows you to set the default color for the grid. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.



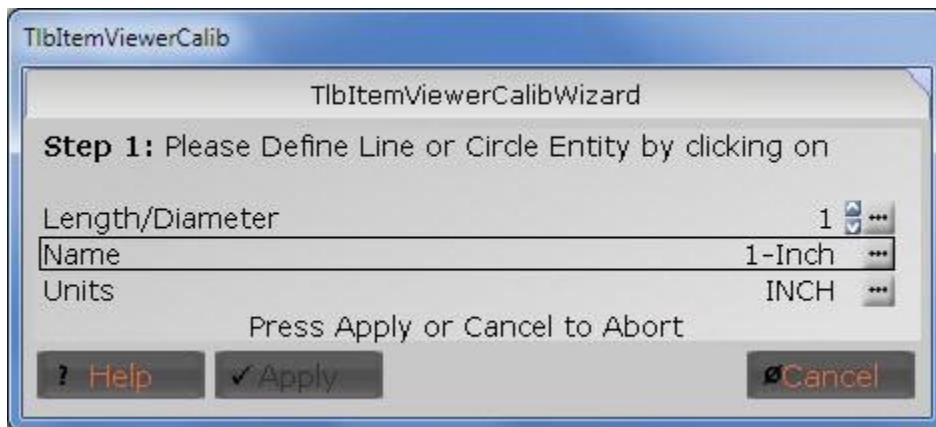
How to Set Calibration

To set the calibration, proceed as follows:

1. Either display an object in the **View** area, or open an existing image with a known unit of measure. For example, you can calibrate using a ruler.
2. Right-click on the **Cal1** button. (**NOTE:** You can customize much of the ezImageX2 interface, such as button names. See the "How to Set Button Preferences" section for more information. The **Calibration Wizard** is displayed:



3. You can define a line or circle by clicking on two points in the **View** area. In this example, a one inch line was drawn on a ruler and the Cal1 was defined as follows:



4. Enter the desired changes. See the table below for descriptions of the fields.
5. Click the **Apply** button to finish the calibration, or the **Cancel** button to cancel the calibration.
6. (Optional) Click the **Save the Workspace** icon in the upper right corner of the Main Window to maintain the calibration for future sessions.

NOTE: Changing the zoom level of the **View** area will eliminate the new calibration.

Field	Description
Length/Diameter	Allows you to enter the length of a line or the diameter of a circle.
Name	Allows you to rename the Cal1 button.
Units	Allows you to enter a unit of measure, such as inches or millimeters.

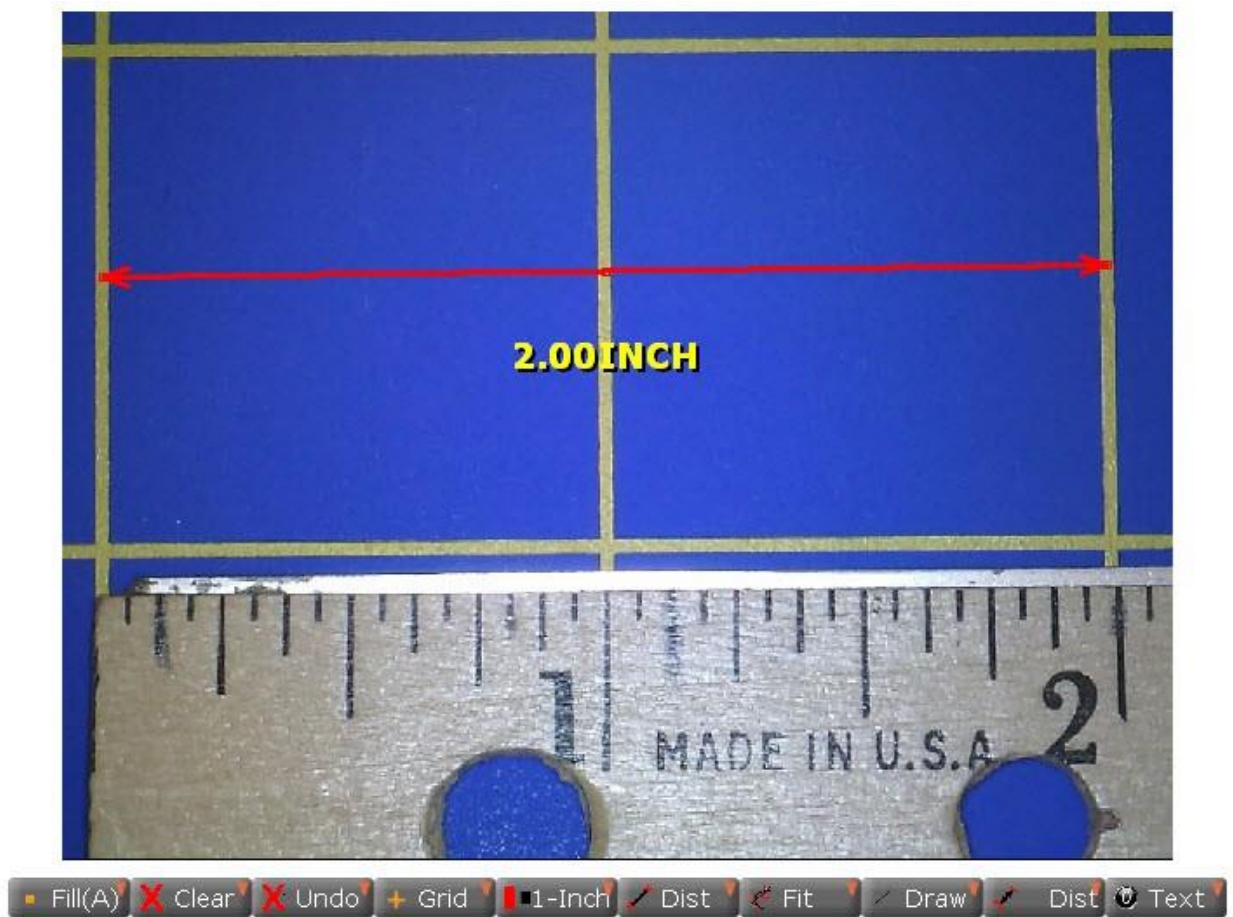
NOTE: You can set the Calibration2 value in the same manner.



How to Determine Distances

To determine distances, once you have made a calibration, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Click the **Distance** button.
3. Click once on the starting point and once on the ending point of a line. In this example, a line was drawn which resulted in a measurement of two inches:



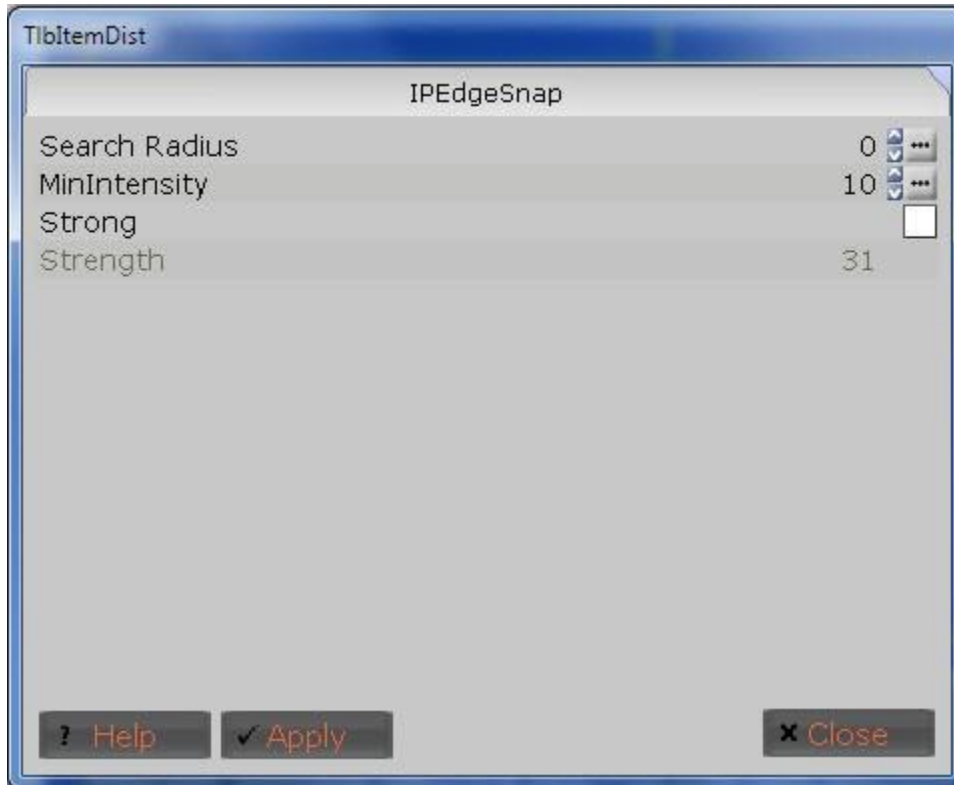
How to Find an Edge or Corner

The Edge Snap tool assists the user in finding edges. When the tool is used a point "" appears that the user can manipulate and drag to a nearby edge. Depending on how the parameters are set, the snap tool will "snap" or find the nearest edge to where the user dropped and clicked the point.

To find an edge or corner, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. To edit the setting of the Snap tool, right-click on the **Distance** button. A drop down menu will appear; select **Snap**. This will display the Edge Snap's property page. The settings found within this Properties page will set how exact the point will come to the edge.

The following window is displayed:



3. Enter the desired changes. See the table below for descriptions of the fields.
4. Click the **Apply** button to accept the Snap settings, or the **Cancel** button to cancel the changes.

Field	Description
Search Radius	This will set in pixels the radius of the circle defining the area the tool will search, for the edge from where the user drops the point.
Min Intensity	The number set here is the minimum intensity of the edge that the tool will allow to be an image. So, if the min intensity is set to 10, then the edge must have at least 10 grade level differences to be an edge that the tool will find.
Strong	If this is checked, the tool will find "Sobel" edges; if it is not checked the edges it will find are "Roberts" edges. The main user difference between the Sobel and the Roberts edges is that the Sobel is more sensitive to finding edges (meaning it may be able to find edges that the Roberts edge cannot). The actual difference between the two is the mathematical formula used to find the edge.
Strength	Once the tool is run, a number will appear here to indicate the strength of the edge.



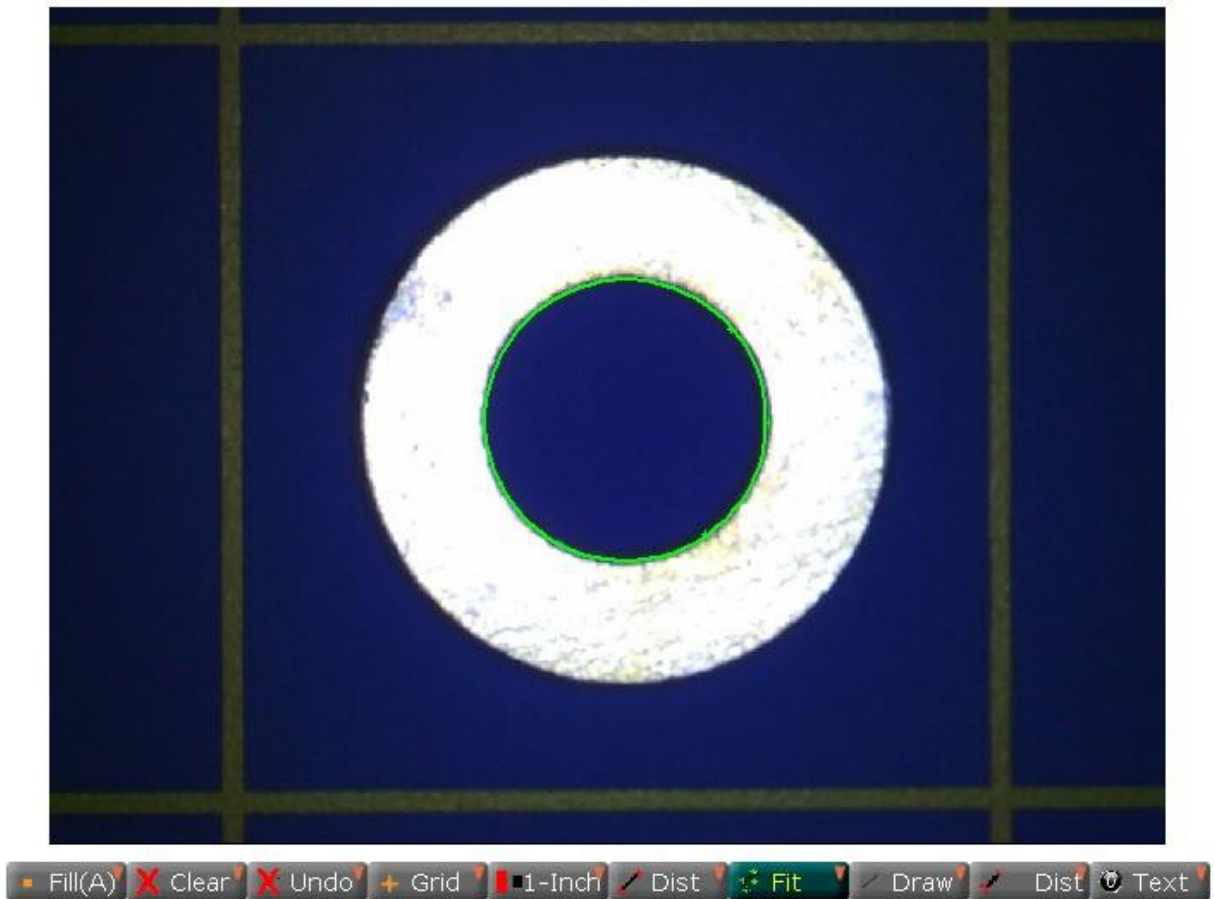
How to Determine Diameters and Best Fit Lines

To determine a geometric measurement, proceed as follows:

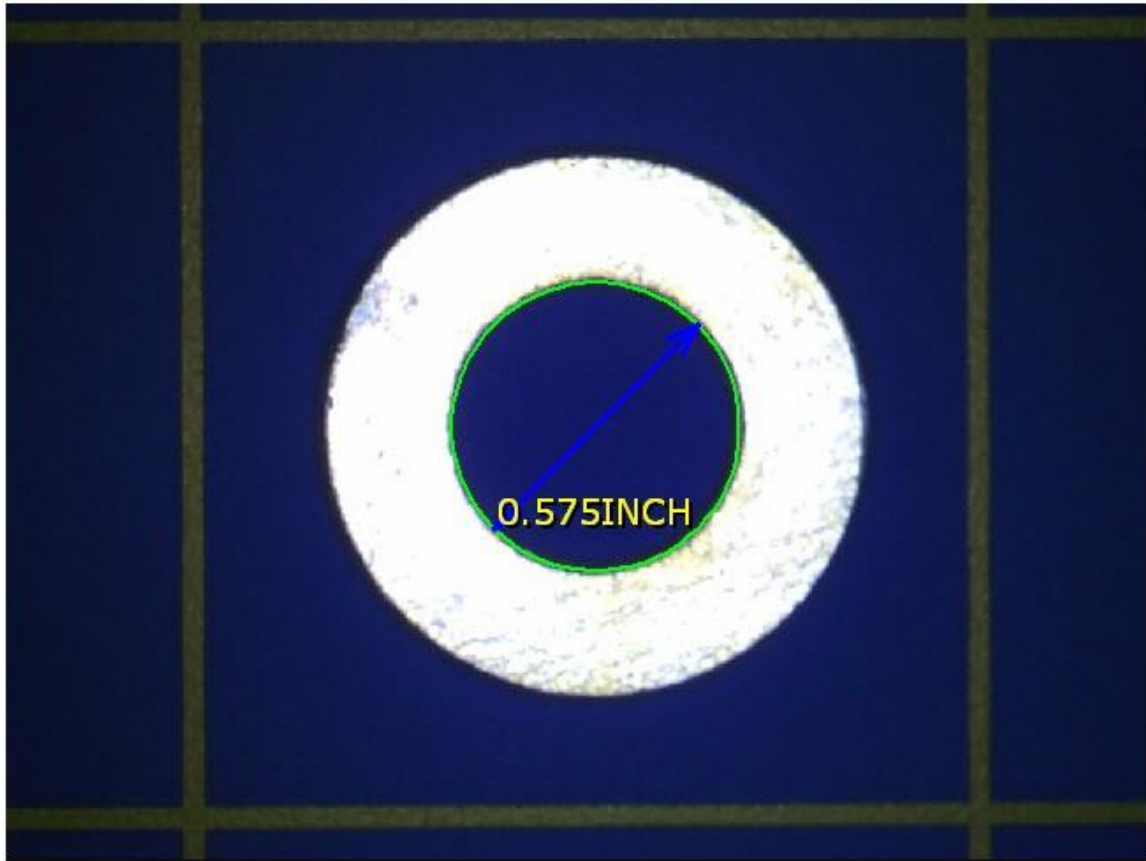
1. Either display an object in the **View** area, or open an existing image.
2. Click the **Fit** button.

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3. Select a minimum of three points around the diameter of the circular area. In the example below, the software draws a circle for the inside diameter of a washer.



4. If you wish, you can take a calibrated measurement of the diameter. Click the **Distance** (between geometries) button; the cursor changes to a hand symbol.
5. Click anywhere on the selected diameter; the diameter is calculated and displayed as in the example below:



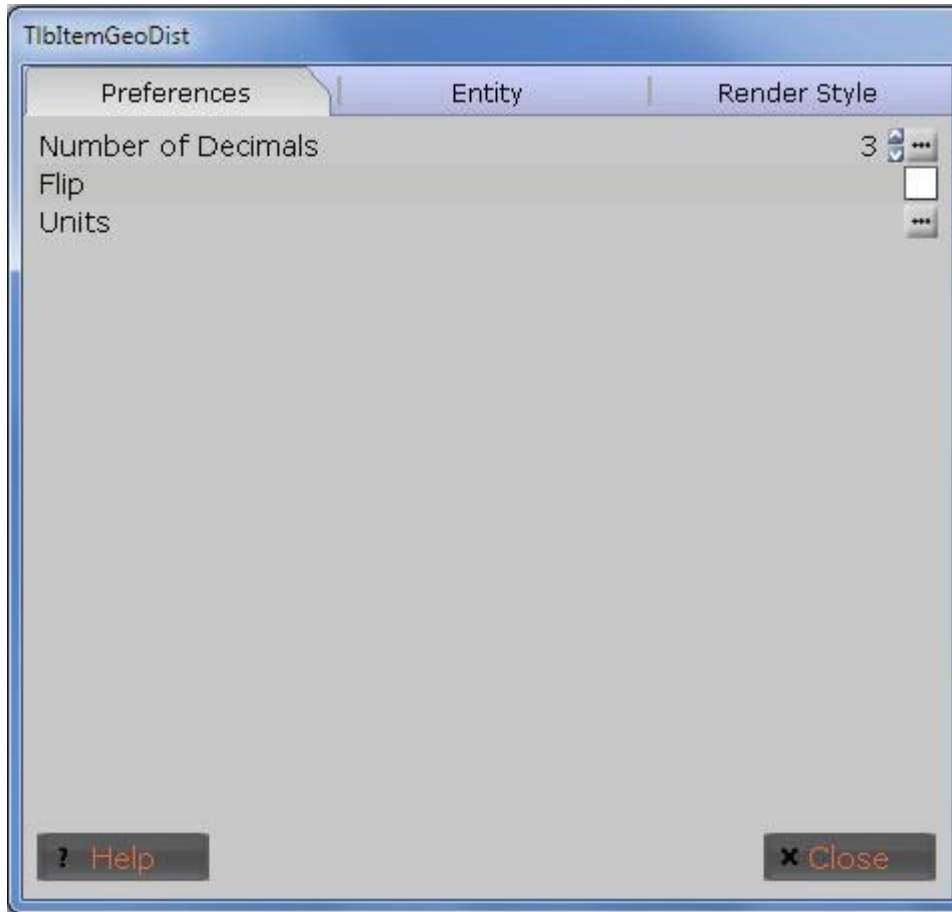
NOTE: Right-clicking on the Fit button will allow you to select: Auto, Line, Circle, Profile, and Spline.



How to Set Geometric Preferences

To set geometric preferences, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Right-click on the **Distance** button (between geometries) and select the **Edit** option from the context menu. The following tabs are displayed:

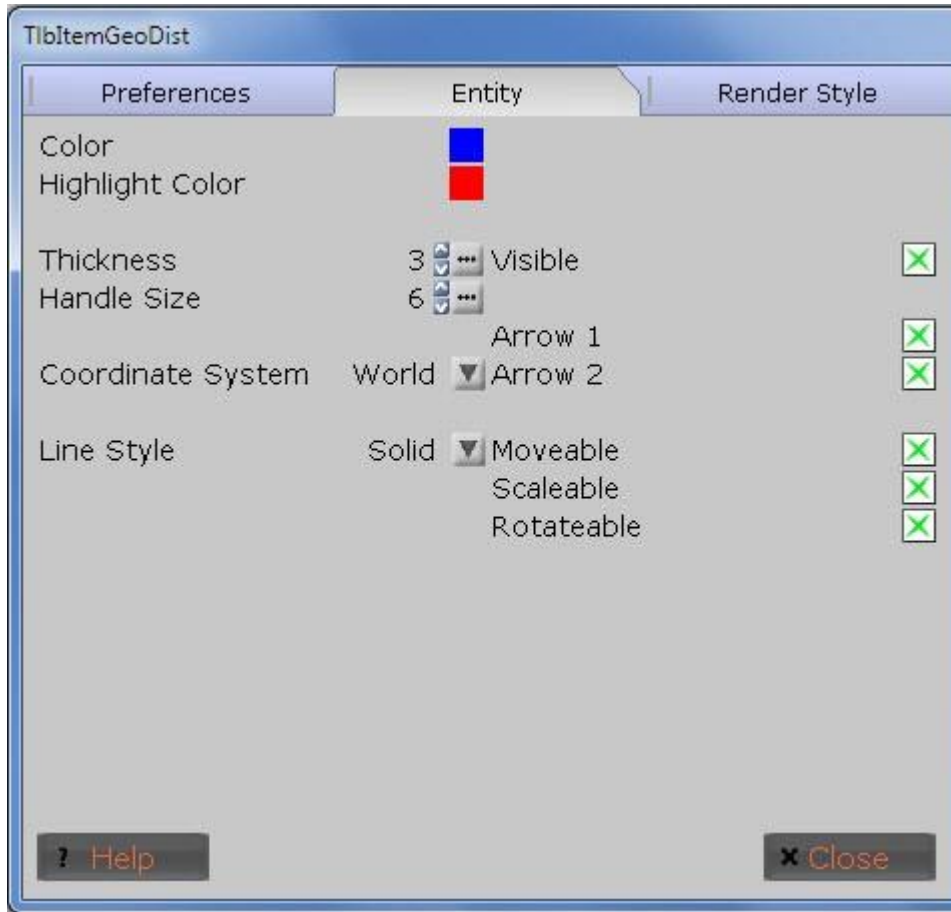


3. Enter the desired changes. See the tables below for descriptions of the fields.
4. Click the **Apply** button to save the changes, or the **Cancel** button to cancel the changes.

Preferences Tab:

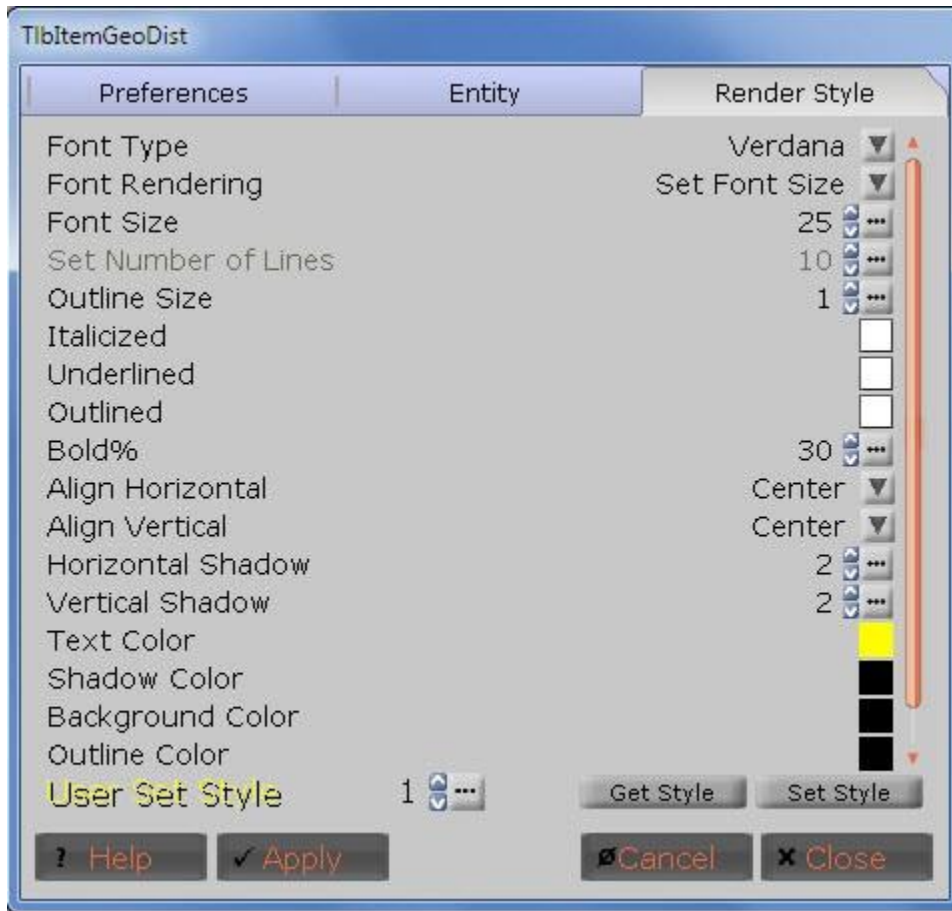
Field	Description
Number of Decimals	Allows you to set the number of decimals to be displayed.
Units	Allows you to enter a unit of measure, such as inches or millimeters.

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Entity Tab:

Field	Description
Color	Allows you to set the color of the object. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Highlight Color	Allows you to set the color of a highlighted object. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Thickness	Allows you to set the thickness of the object.
Handle Size	Allows you to set the size of the handles used to resize an object.
Coordinate System	Allows you to set the type of coordinate system used. The values are: Image, World, Percent, Screen, and PercentCIF.
Line Style	Allows you to set type of style used for the object. The values are: None, Solid, Dash, Dot, DashDot, DashDotDot.
Visible	Allows you to toggle between visible and hidden.
Moveable	Allows you to toggle between being able to move a text box or not.
Scaleable	Allows you to toggle between being able to scale a text box or not.
Rotateable	Allows you to toggle between being able to rotate a text box or not.



Render Style Tab:

Field	Description
Font Type	Allows you to set the default font name from a drop-down list.
Font Rendering	Allows you to set the default font rendering from a drop-down list. The values are: Set Font Size, Set Number of Lines, Fit to Fill Text, and Fit to Fill on Overflow.
Font Size	Allows you to set the default value for the size of the font.
Set Number of Lines	Allows you to set the default number of lines.
Outline Size	Allows you to set the default size of the outline of the text.
Italicized	Allows you to toggle between the text being italicized or not.
Underlined	Allows you to toggle between the text being underlined or not.
Outlined	Allows you to toggle between the text being outlined or not.
Bold%	Allows you to set the boldness of the text as a percentage.
Align Horizontal	Allows you to set the horizontal alignment from a drop-down list. The values are Left, Center, and Right (justified).
Align Vertical	Allows you to set the vertical alignment from a drop-down list. The values are Bottom, Center, and Top.
Horizontal Shadow	Allows you to set the shadow that appears horizontally on the text. Negative values move the shadow to the left of the text; positive values move the shadow to the right of the text. If you desire no shadow, enter a value of zero.
Vertical Shadow	Allows you to set the shadow that appears vertically on the text. Negative values move the shadow above the text; positive values move the shadow below the text. If you desire no shadow, enter a value of zero.

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Field	Description
Text Color	Allows you to set the default color for the text. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Shadow Color	Allows you to set the default color for the shadow. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Background Color	Allows you to set the default color for the background. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Outline Color	Allows you to set the default color for the outline. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
User Set Style	Allows you to view any saved user styles.

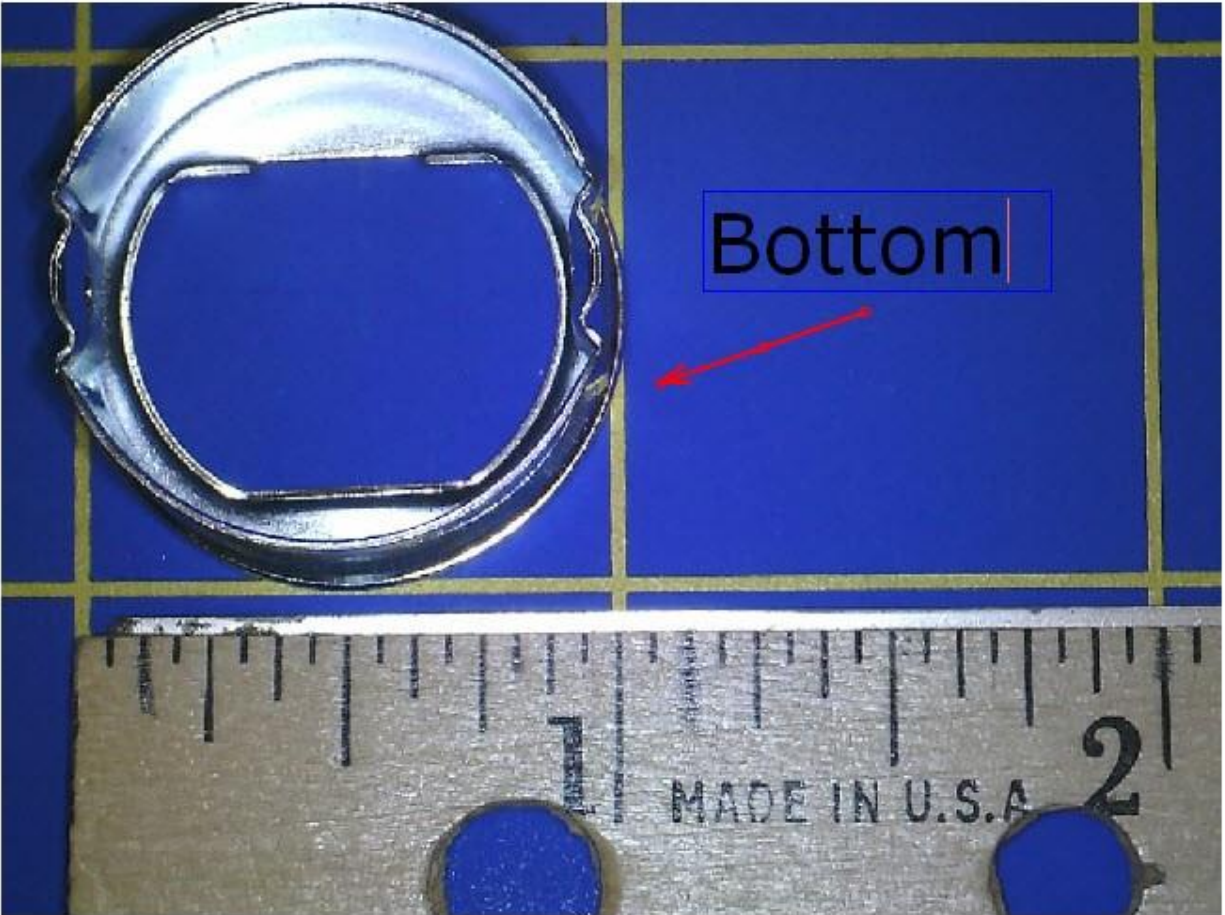
Button	Description
Get Style	Allows you to retrieve a user style with custom settings that was previously saved.
Set Style	Allows you to set a user style with custom settings.



How to Clear

To clear all actions on the current **View** area, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Complete an action such as drawing a line or entering text. A sample image is displayed below:



3. To clear all actions, click the **Clear** button. (**NOTE:** To clear *just* the last action, use the **Undo** button).



How to Undo

To undo the last action, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Complete an action such as drawing a line or entering text.
3. To clear *just* the last action, click the **Undo** button. (**NOTE:** To clear *all* the actions, use the **Clear** button).



How to Lock/Unlock the Software with a Password

To lock or unlock the software, proceed as follows:

1. Click the **Lock/Unlock** icon in the upper right corner of the Main Window. The **Password** window is displayed:



2. Enter a password and click the **Ent(er)** key. To cancel the action, click the **Escape** button on your computer keyboard.



How to Add Text to an Image

To add text to an image, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Click the **Text** button. A text box appears on the **View** area.
3. Enter the desired text. You can resize the text box (and the text also resizes), and move it to the desired position.

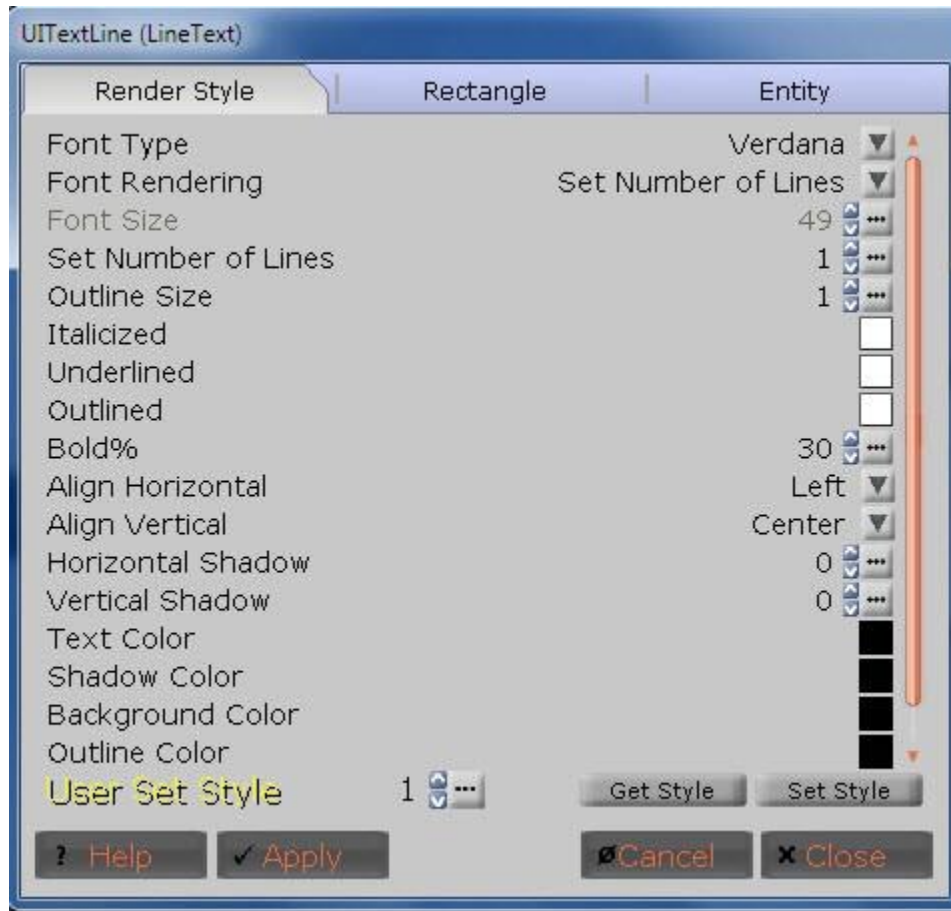
NOTE: See the "How to Set Text Parameters" section for more information.



How to Set Text Parameters

To set text parameters, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Click the **Text** button. A text box appears on the **View** area.
3. Right-click on the text box and select the **Edit** option from the context menu. The following window is displayed:



4. Enter the desired changes. See the tables below for descriptions of the fields.
5. Click the **Apply** button to save the changes, or the **Cancel** button to cancel the changes.

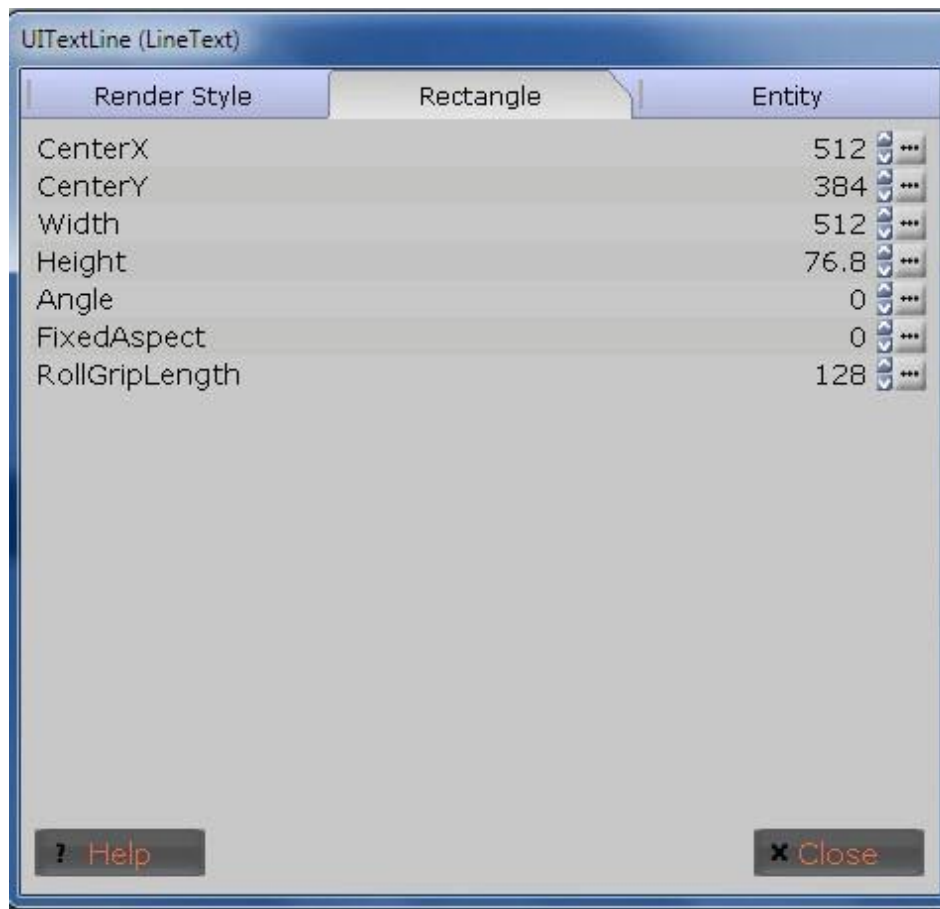
Render Style Tab:

Field	Description
Font Type	Allows you to set the default font name from a drop-down list.
Font Rendering	Allows you to set the default font rendering from a drop-down list. The values are: Set Font Size, Set Number of Lines, Fit to Fill Text, and Fit to Fill on Overflow.
Font Size	Allows you to set the default value for the size of the font.
Set Number of Lines	Allows you to set the default number of lines.
Outline Size	Allows you to set the default size of the outline of the text.
Italicized	Allows you to toggle between the text being italicized or not.
Underlined	Allows you to toggle between the text being underlined or not.
Outlined	Allows you to toggle between the text being outlined or not.
Bold%	Allows you to set the boldness of the text as a percentage.
Align Horizontal	Allows you to set the horizontal alignment from a drop-down list. The values are Left, Center, and Right (justified).
Align Vertical	Allows you to set the vertical alignment from a drop-down list. The values are Bottom, Center, and Top.
Horizontal Shadow	Allows you to set the shadow that appears horizontally on the text. Negative values move the shadow to the left of the text; positive values move the shadow to the right of the text. If you desire no shadow, enter a value of zero.
Vertical Shadow	Allows you to set the shadow that appears vertically on the text.

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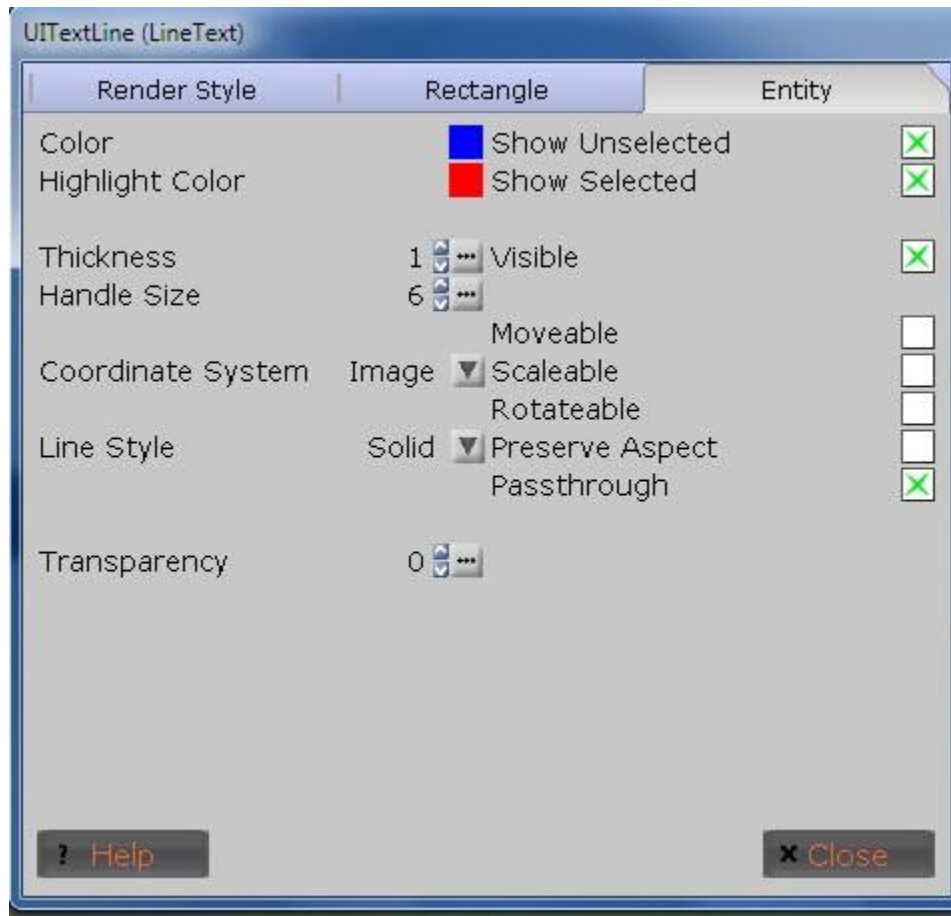
Field	Description
	Negative values move the shadow above the text; positive values move the shadow below the text. If you desire no shadow, enter a value of zero.
Text Color	Allows you to set the default color for the text. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Shadow Color	Allows you to set the default color for the shadow. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Background Color	Allows you to set the default color for the background. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Outline Color	Allows you to set the default color for the outline. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
User Set Style	Allows you to view any saved user styles.

Button	Description
Get Style	Allows you to retrieve a user style with custom settings that was previously saved.
Set Style	Allows you to set a user style with custom settings.



Rectangle Tab:

Field	Description
Center X	Allows you to set the center X value for the text box.
Center Y	Allows you to set the center Y value for the text box.
Width	Allows you to set width of the text box.
Height	Allows you to set height of the text box.
Angle	Allows you to set the angle at which the text box is displayed. A value of 45 displays the text box at a 45 degree angle.
Fixed Aspect	Allows you to set the fixed aspect ratio of the text box.
Roll Grip Length	Allows you to set the ration handle extent/length.



Entity Tab:

Field	Description
Color	Allows you to set the color of the text box. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Highlight Color	Allows you to set the color of a highlighted text box. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Thickness	Allows you to set the thickness of the text box borders.
Handle Size	Allows you to set the size of the handles used to resize a text box.
Coordinate System	Allows you to set the type of coordinate system used. The values are: Image, World, Percent, Screen, and PercentCIF.
Line Style	Allows you to set type of style used for the text box border. The values

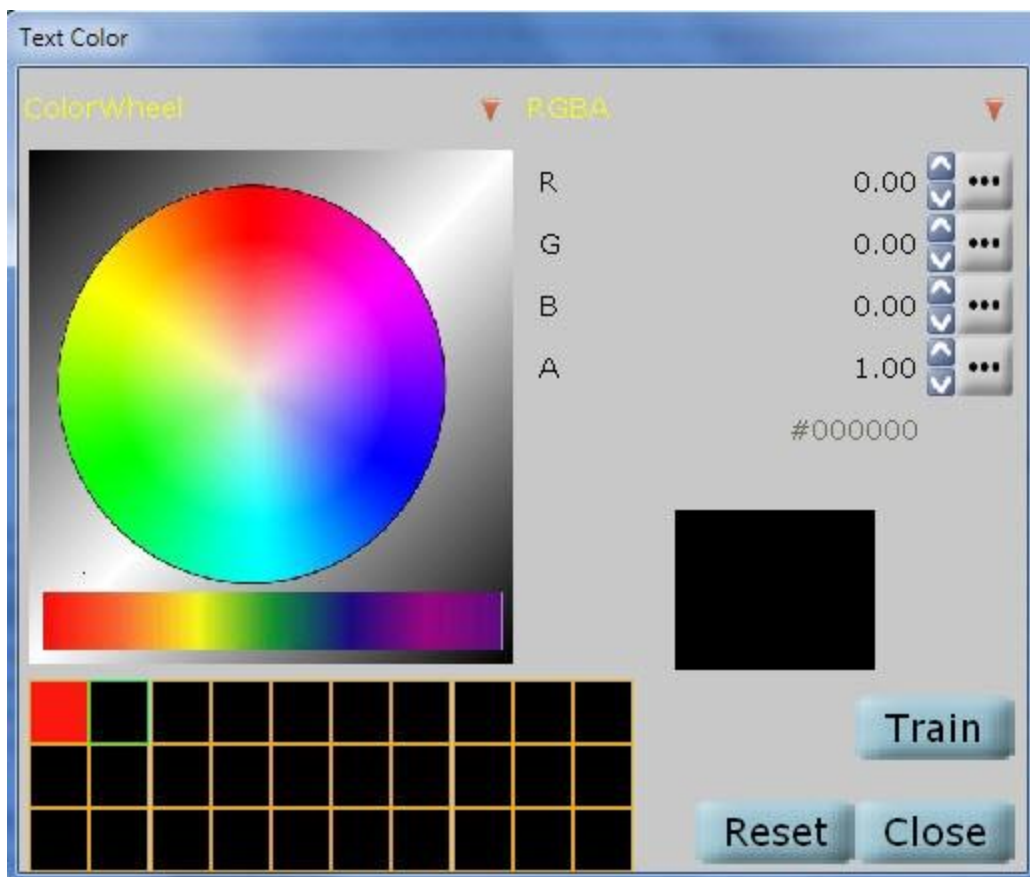
Field	Description
	are: None, Solid, Dash, Dot, DashDot, DashDotDot.
Transparency	Allows you to set transparency level of the text box.
Show Unselected	Allows you to toggle between showing unselected text or not.
Show Selected	Allows you to toggle between showing selected text or not.
Visible	Allows you to toggle between visible and hidden.
Moveable	Allows you to toggle between being able to move a text box or not.
Scaleable	Allows you to toggle between being able to scale a text box or not.
Rotateable	Allows you to toggle between being able to rotate a text box or not.
Preserve Aspect	Allows you to toggle between preserving the aspect ratio or not.
Passthrough	Currently not used.



How to Set Colors

To set colors, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. If you need to change the color in a preferences window such as Text Color, click the Color field. The **Color Wheel** window is displayed:



3. You can select a color from the Color Wheel or enter RGBA values.
4. Click the **Train** button to save the custom color, or click the **Reset** button to cancel.
5. Click the **Close** button to close the window.



How to Get Help

To get help, proceed as follows:

1. Click the **Help** icon in the upper right corner of the Main Window.

Or,

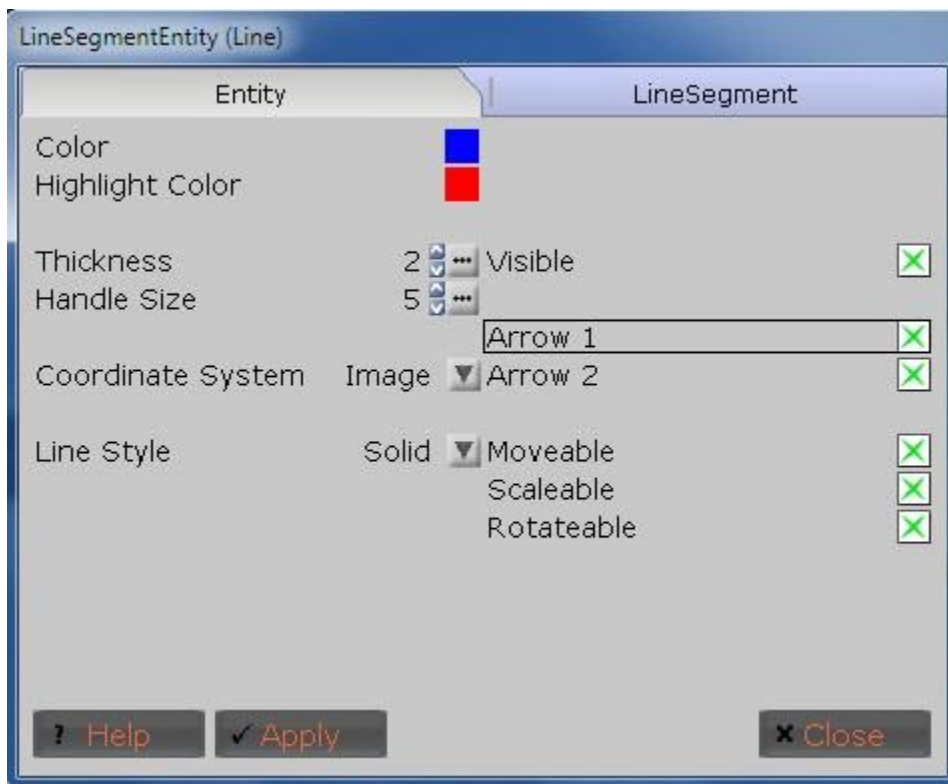
2. Click the **Help** button when it is displayed on a window.



How to Set Line, Point, or Circle Preferences

To set preferences for a line, point, or circle, proceed as follows:

1. Either display an object in the **View** area, or open an existing image.
2. Select a line, point or circle to draw by right-clicking on the **Draw** button.
3. Draw the object.
4. Right-click on the object and select the **Edit** option from the context menu. The following window is displayed (**NOTE:** The tabs and fields below are for line preferences. The preferences for a point or circle are similar):



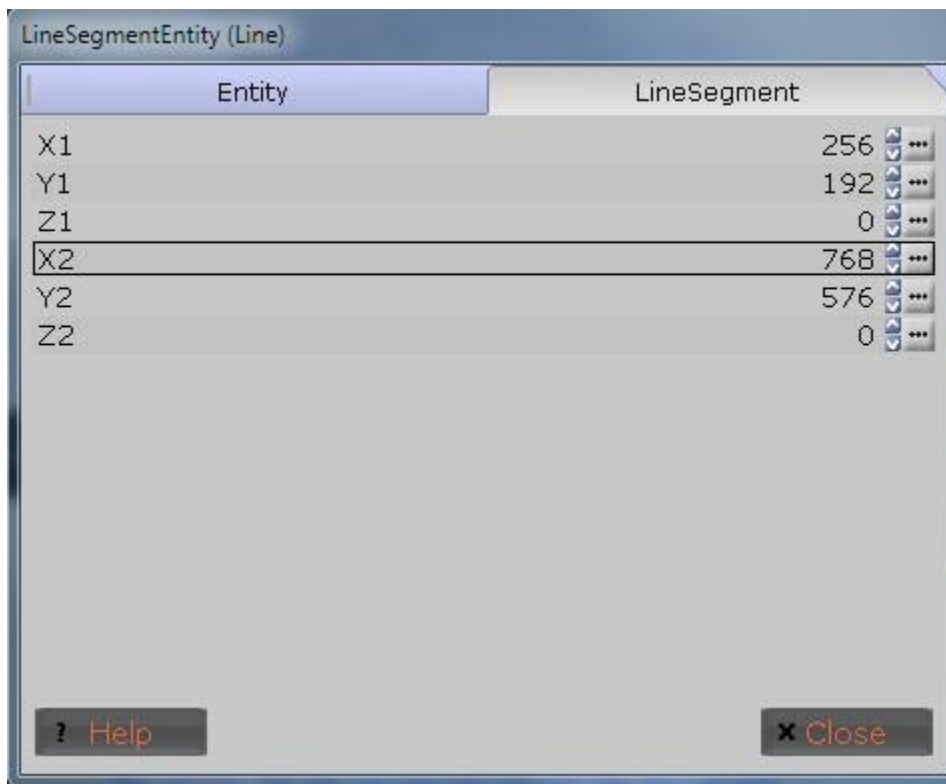
5. Enter the desired changes. See the tables below for descriptions of the fields.
6. Click the **Apply** button to save the changes, or the **Cancel** button to cancel the changes.

Entity Tab:

Field	Description
Color	Allows you to set the color of the line. You can select a color from the

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Field	Description
	Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Highlight Color	Allows you to set the color of a highlighted line. You can select a color from the Color Wheel or enter RGBA values. See the "How to Set Colors" section for more information.
Thickness	Allows you to set the thickness of the line.
Handle Size	Allows you to set the size of the handles used to resize a line.
Coordinate System	Allows you to set the type of coordinate system used. The values are: Image, World, Percent, Screen, and PercentCIF.
Line Style	Allows you to set type of style used for the line. The values are: None, Solid, Dash, Dot, DashDot, DashDotDot.
Visible	Allows you to toggle between visible and hidden.
Arrow 1	Allows you to toggle between using Arrow 1 or not.
Arrow 2	Allows you to toggle between using Arrow 2 or not.
Moveable	Allows you to toggle between being able to move a line or not.
Scaleable	Allows you to toggle between being able to scale a line or not.
Rotateable	Allows you to toggle between being able to rotate a line or not.



Line Segment Tab:

Field	Description
X1	Allows you to set the X coordinate for Arrow 1.
Y1	Allows you to set the Y coordinate for Arrow 1.
Z1	Allows you to set the Z coordinate for Arrow 1.
X2	Allows you to set the X coordinate for Arrow 2.
Y2	Allows you to set the Y coordinate for Arrow 2.
Z2	Allows you to set the Z coordinate for Arrow 2.