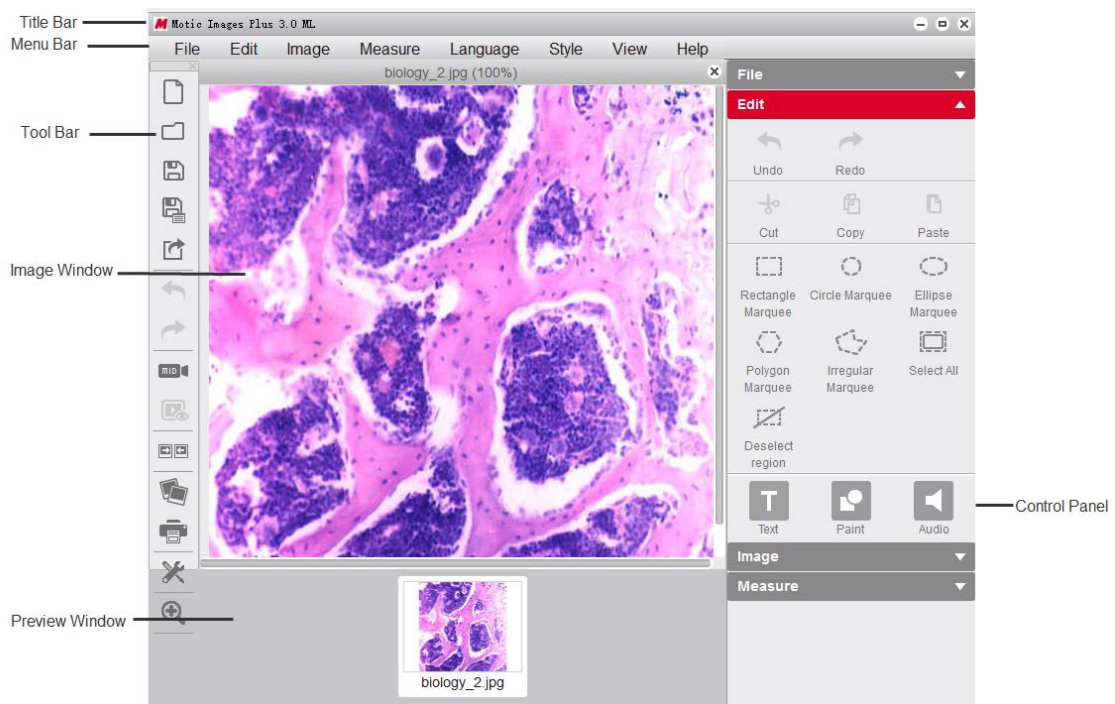


Reference

Welcome to Motic Images Plus 3.0 ML . Motic Images Plus 3.0 ML is multi-languages software offered by Motic China Group Co., Ltd. It is especially designed for individual users and provides advanced and easy-to-use functions for editing, analyzing and measuring images.

Here take the Motic Images Plus 3.0 ML software runs under Windows OS for example to introduce the software functions.

Opening Motic Images Plus 3.0 ML will display the following interface:



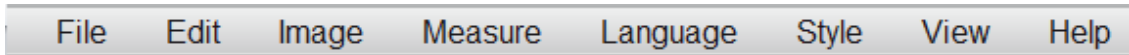
The interface is composed of the **Title Bar**, **Menu Bar**, **Tool Bar**, **Image Window**, **Control Panel**

Preview Window

Menus and Tools

Reference

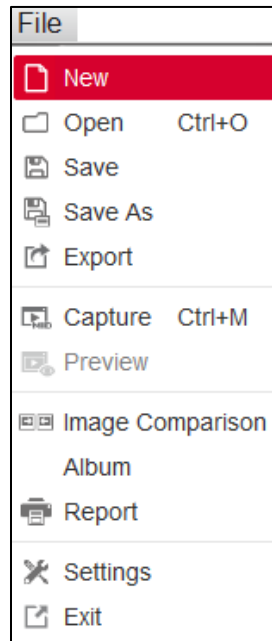
The **Menu Bar** includes the **File, Edit, Image, Measure, Language, Style, View** and **Help**. Click the buttons on the Menu Bar to display the corresponding tool bars.



File

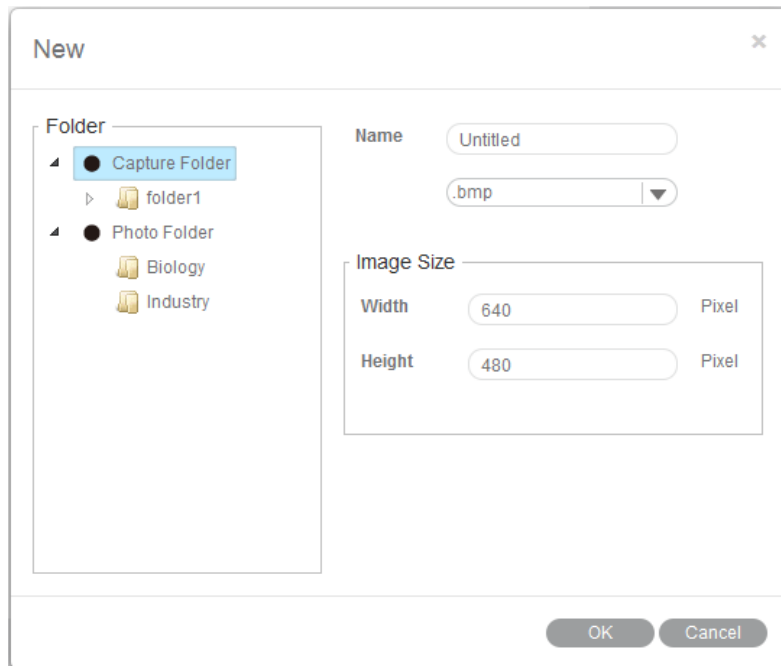
Introduction

The Menu includes the following commands: **New, Open, Save, Save As, Capture, Preview, Image Comparison, Album, Report, Settings** and **Exit**. Shown below is the corresponding tool bar:



New

The **New** command enables users to create new image files. Click the New button to bring up the following dialog box:



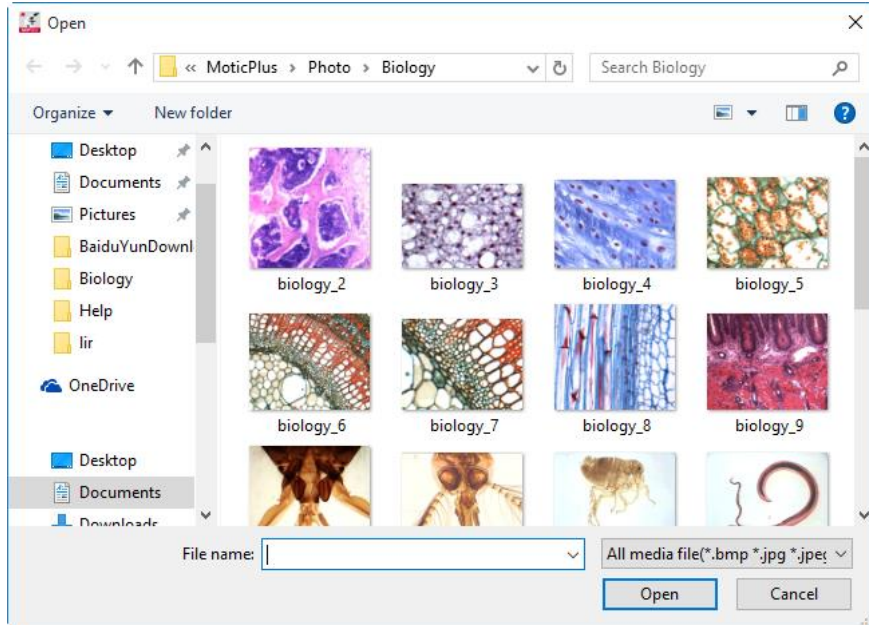
Select the format of the image file to be created from the drop down list located beside the Name input box.

Define the image size by filling in the width and height boxes with appropriate values.

With the Folder option, define the location where the new image file will be saved.

Open

The **Open** command allows users to open image files supported by the system. The following dialog box will display allowing users to select the desired files.

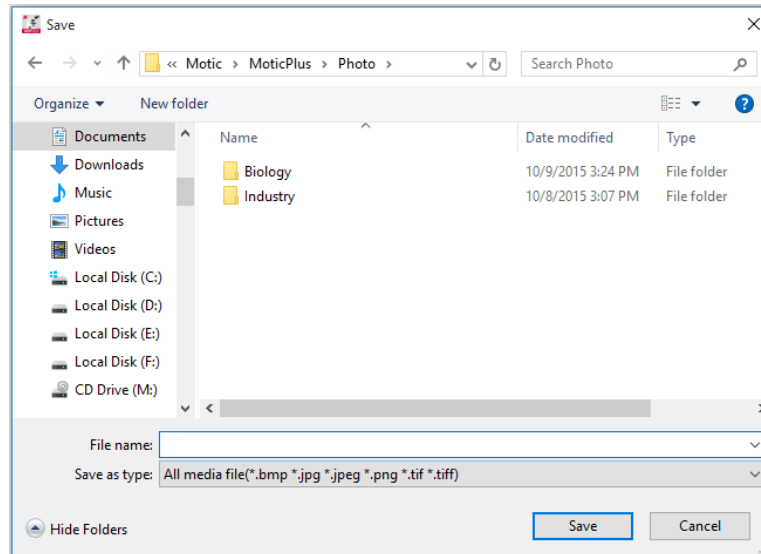


Save

The **Save** command allows users to save the current image in the selected format.

Save As

The **Save As** command provides another method for saving the current image. The following dialog box will display allowing users to save the image to a different destination and in a different format than its source.



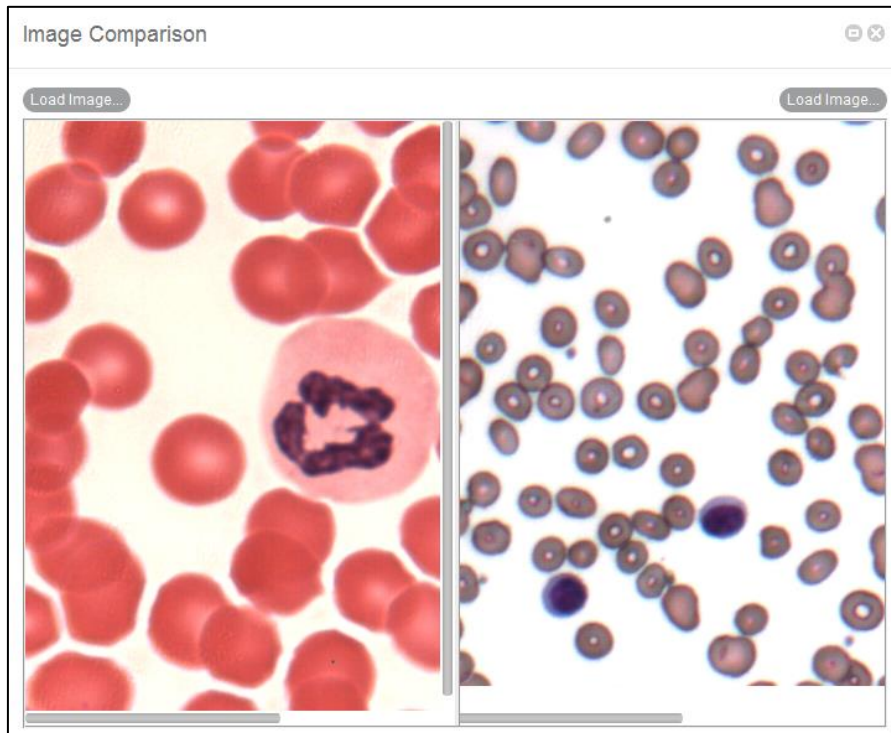
Capture

Selecting the **Capture** command will bring up the Motic Live Imaging Module (see module help guides for more) capture windows which enable users to capture images seen through the microscope connected to the computer.

Note: The capture device can be preset using **Setting** command of File menu or the **Setting** button on the File Toolbar.

Image Comparison

The **Image Comparison** command enables users to compare two images. Select this command to display a window composed of two frames into which two images may be placed side by side for comparison.



There are four ways to load the images for comparison:

1. Double click on either frame to load images from local disk for comparison.
2. Right click within either frame and select Load Image from the shortcut menu to load the desired images for comparison.

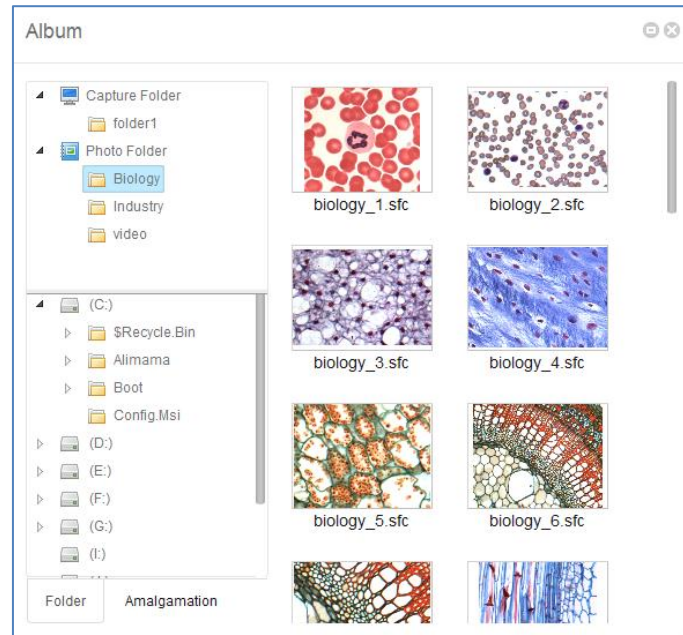
Load Image...

3. Images may also be dragged into either of the frames directly from the Album or Preview window.

4. Click "Load Image" button to import the selected image.

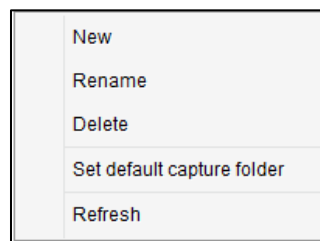
Album

The **Album** command allows users to open existing images from their files. It also enables image amalgamation. Click the Album button to bring up the following window:

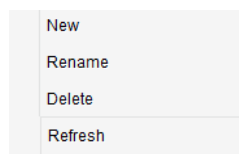


Select the desired files from the Folder panel on the left and preview the images in the preview window on the right.

The upper column of the Folder panel displays the Motic Images Plus 3.0 ML image folders, the images captured by Motic Images Plus 3.0 ML software will be saved here also.



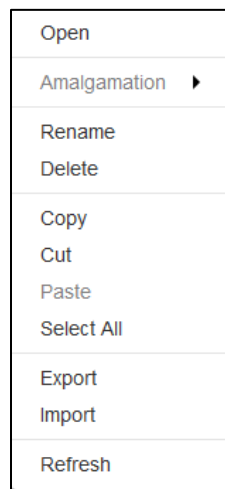
The lower column of the Folder tab displays the contents of the computer. Click the right mouse button in the upper column and lower column of the Folder panel to bring up the following popup menus



Double click on the desired image in the preview window to open it.

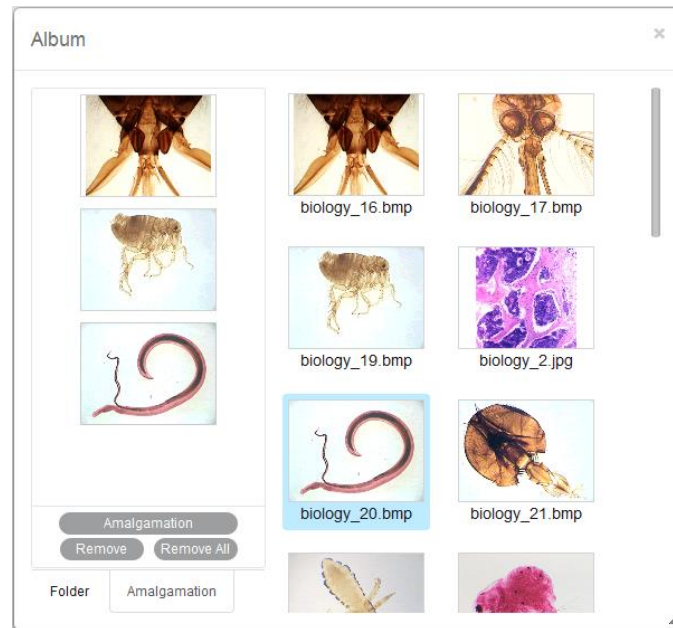
Click on the image and drag it into the Preview Window of the interface to open the image also.

Double click on the desired image in the preview window to open it. Users can also open an image by clicking the right mouse button to bring up the following popup menu and selecting the Open command.

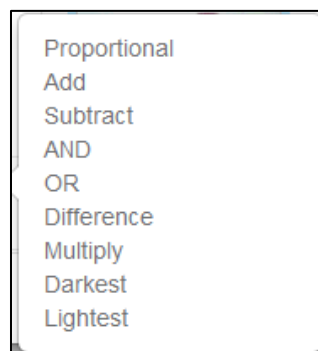


Popup menu functions

To amalgamate images, click the Amalgamation tab to display the following panel:



Select the desired images and drag them into the Amalgamation panel. Click the Amalgamation button and a popup menu listing various amalgamation methods will be displayed.



Select an amalgamation method and a dialog box will display to confirm the name of the resulting image.

Clicking the Remove button will remove the selected image, while clicking the Remove All button will remove all the selected images.

Users can also remove the selected image by clicking the right mouse button in the

Amalgamation panel to bring up the following popup menu and selecting the proper command.

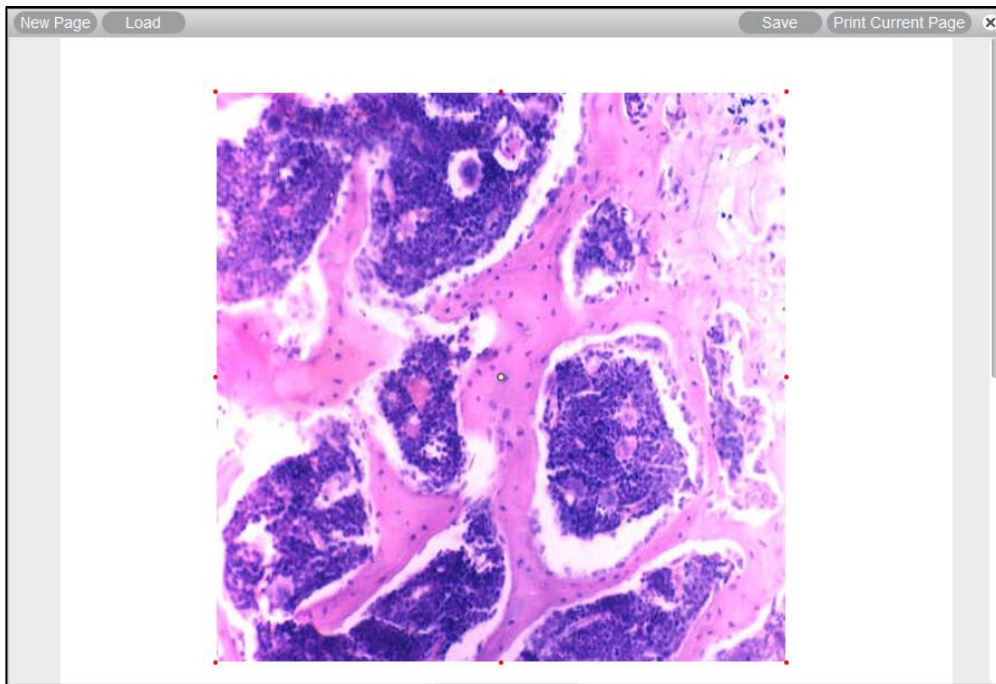



Users can also amalgamate images by selecting the desired images in the preview window, and then clicking the right mouse button to bring up a popup menu. From the popup menu select the Amalgamation command to display the list of amalgamation methods. Finally, select the desired method to amalgamate.

Report

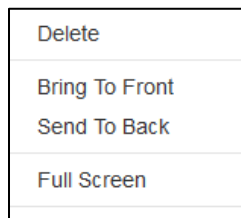
Introduction

The **Report** command allows users to create reports. With Report users are able to load images, input text into the report and print or export the report. The Report functions are located in the **tool bar** located at the bottom of the window.



Click the close button  located in the top right corner to close Motic Report.

Click the right mouse button in the Motic Report window to bring up the following popup menu:



Delete: This command is used to delete the selected contents.

Bring To Front: This command is used to bring the selected item to the top layer.

Send To Back: This command is used to send the selected item to the bottom layer.

Full Screen: This command is used to display the Motic Report window in full screen size.

Tool Bar

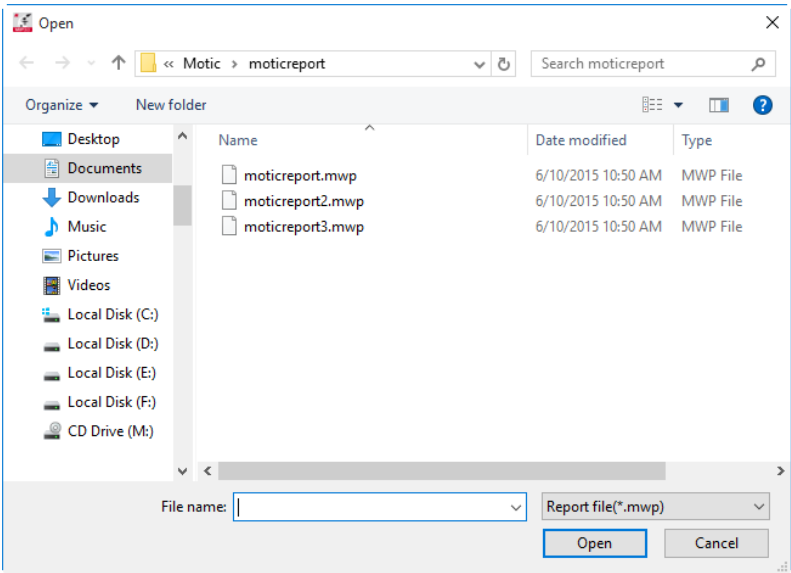
The Report Tool Bar is located at the top of the Report window and displays as follows:

New Page

The **New Page** button creates a new report page

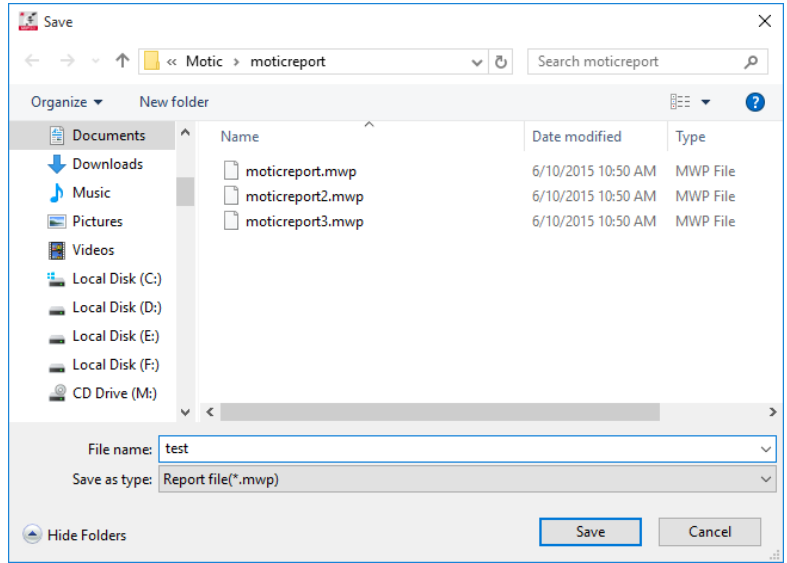
Load

The **Load** button brings up the following dialog box from which an existing report may be opened.



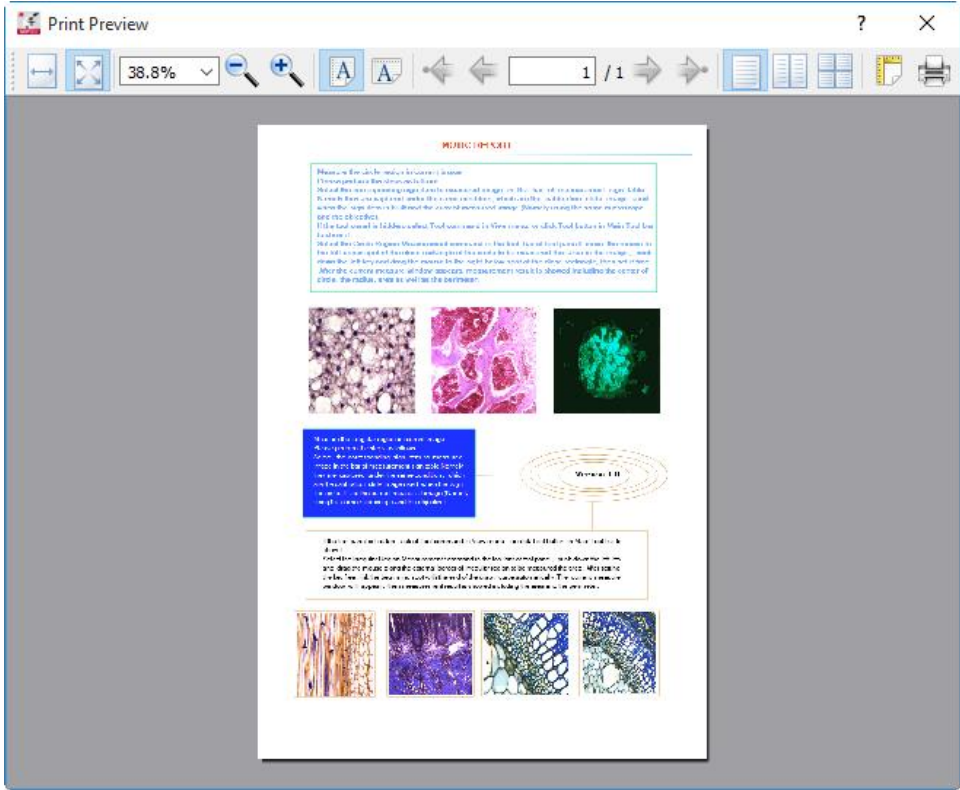
Save

The **Save** button brings up the Save As dialog box which allows users to save the report documents as *.mwp format files



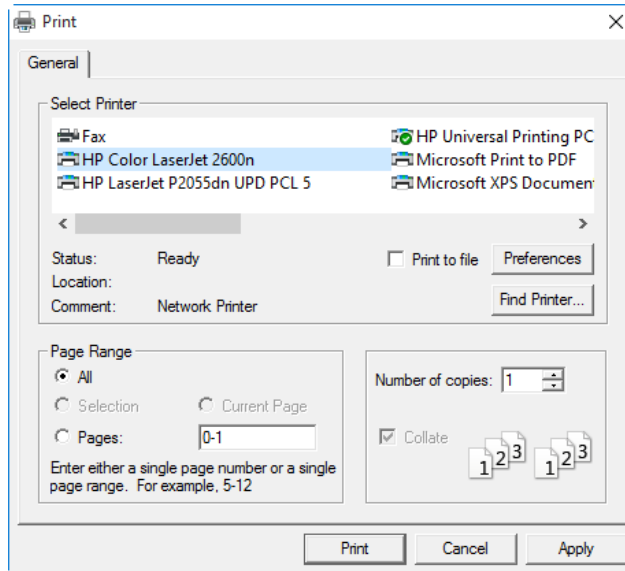
Print Current Page

The **Print Current Page** button enables users to preview the current report. Press the Print Current Page button to display the following interface.



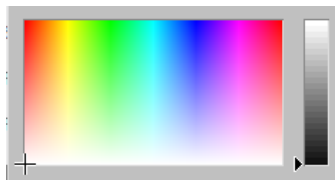
Print Setting

The **Print Setting** button brings up the Print dialog box which allows users to set the Printer, Print range, Copies and Properties parameters.



Color

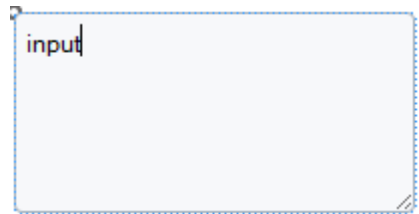
The **Color** button brings up the Color Palette through which users are able to select a text color.



Text

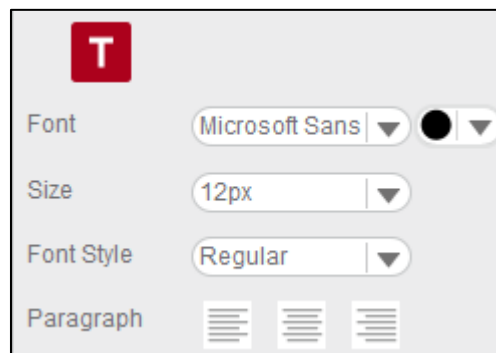
Click the **Text** button and move the cursor to the location on the report where the text is to be displayed, click the left mouse button and begin typing.

To change the existing captions, click the text to bring up the following dialog box, enter the new content



Font

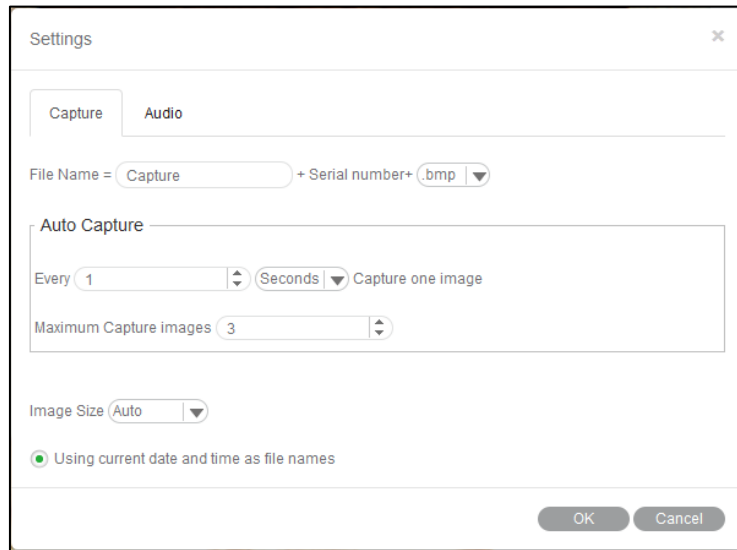
The **Font** button brings up the Font dialog box which allows users to modify the font, font style, size, effects and color of the text.



Settings

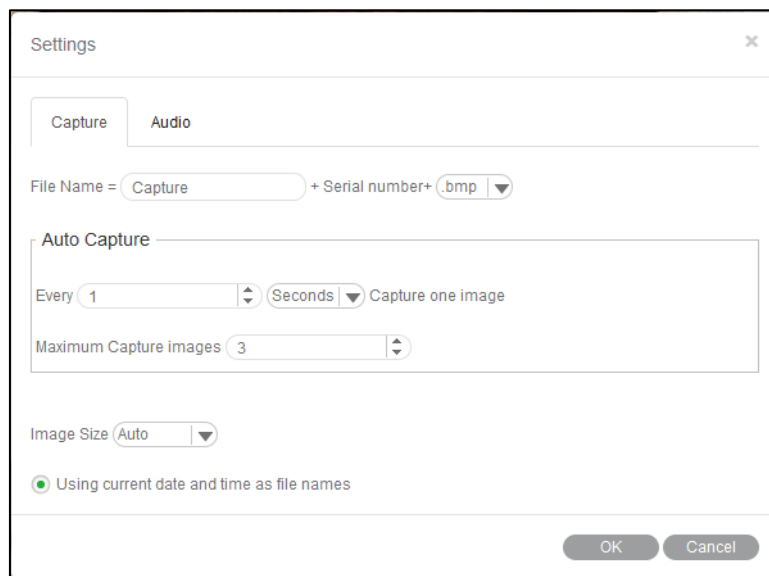
Introduction

The **Settings** command provides access to the **Capture**, **Audio** settings. Click the Settings button in the toolbar to bring up the following dialog box.



Capture

Click the Settings button in the toolbar to bring up the following dialog box. Click the **Capture** tab to display the capture settings:



Here, define the **file name**, **image size**, frequency and maximum number of images to automatically be captured. To choose the **Using current date and time as file names** option, click the check box left of the option.

Click the **OK** button to confirm the new settings.

Audio

Click the Settings button in the toolbar to bring up the following dialog box. Click the **Audio** tab to display the Audio settings:



Click the check box to the left of the **Auto Play** option and the music selected in the Playlist of the Control Panel will play automatically each time Motic Images Plus 3.0 ML is opened.

Click the **OK** button to confirm the new settings.

Exit

The **Exit** command closes the program after prompting users to save any unsaved files.

Edit

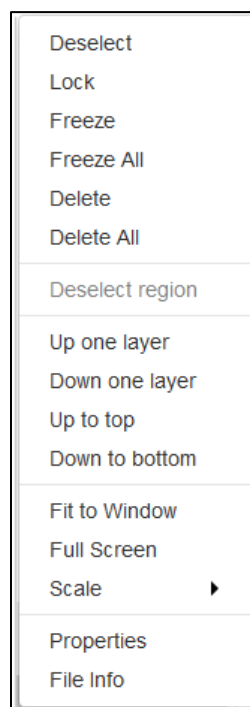
Introduction

The **Edit** Menu includes the following commands: **Undo(Ctrl+Z)**, **Redo(Ctrl+Y)**, **Cut**, **Copy,Paste,Rectangle Marquee**, **Circle Marquee**, **Ellipse Marquee**, **Polygon Marquee**, **Irregular Marquee** , **Select All and Deselect region**. The corresponding tool bar functions are

shown below:



Click the right mouse button in the Image window to bring up a popup menu ([see Popup menu functions](#)):



Popup menu functions

Rectangle Marquee

With the **Rectangle Marquee command**, users are able to define a rectangular region by clicking and dragging with the mouse.

To move the selected rectangular region, place the mouse pointer on the side of the figure, and then click and drag when the cross pointer appears.

To change the size of the selected region, place the mouse pointer on a corner of the rectangle, and then click and drag the mouse when the hand pointer appears.

Circle Marquee

With the **Circle Marquee command**, users are able to define a circular region by clicking and dragging the mouse.

To move the selected circular region, place the mouse pointer at the center of the circle, then click and drag the mouse when the cross pointer appears.

To change the size of the selected region, place the mouse pointer at the extreme point of the radius, then click and drag the mouse when the hand pointer appears.

Ellipse Marquee

With the **Ellipse Marquee command**, users are able to define an elliptical region by clicking and dragging the mouse.

To move the selected elliptical region, place the mouse pointer at the center of the ellipse, then click and drag the mouse when the cross pointer appears.

To change the size of the selected region, place the mouse pointer at the extreme point of the

major or minor half axis, then click and drag the mouse when the hand pointer appears.

Polygon Marquee

With the **Polygon Marquee command**, users are able to define a polygon by clicking and dragging the mouse.

To move the selected polygon, place the mouse pointer on the side of the polygon, then click and drag the mouse when the cross pointer appears.

To change the size of the selected region, place the mouse pointer on a corner of the polygon, then click and drag the mouse when the hand pointer appears.

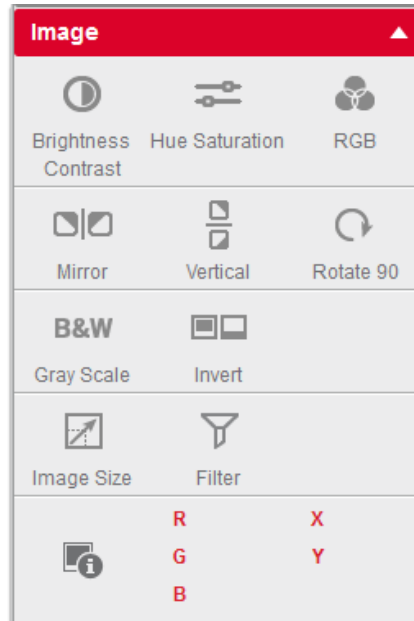
Irregular Marquee

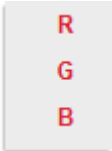
With the **Irregular Marquee command**, users are able to define an irregular region by clicking and dragging the mouse. The selected irregular region may be moved using the drag-and-drop method when the cross pointer appears.

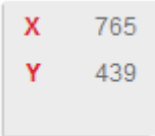
Image

Introduction

The **Image** Menu includes the following commands: **Brightness Contrast, Hue Saturation, RGB, Mirror, Vertical, Rotate 90, Gray Scale, Invert, Image size** and **Filter** . The corresponding tool bar functions are shown below:

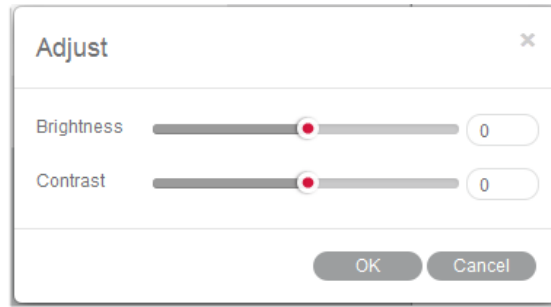


The **RGB**  box displays the color information at the point of the cursor's current location.

The **XY**  box displays the XY coordinates of the cursor's current location.

Brightness/Contrast

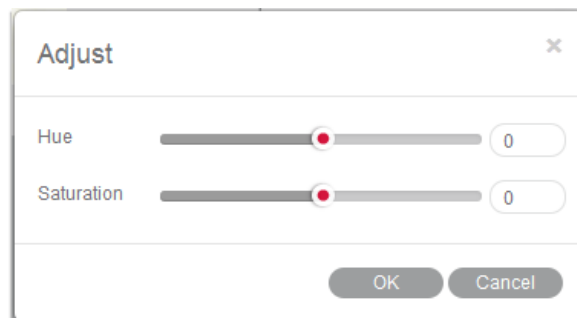
Select the **Brightness/Contrast** command to bring up the following window:



Dragging the Brightness slider to the left or the right will decrease or increase the brightness of the active image. The number to the right of the slider displays the brightness value. The value ranges from -255 to +255 and the default value is 0. Dragging the Contrast slider to the left or the right will decrease or increase the contrast of the active image. The number to the right of the slider displays the contrast value. The value ranges from -127 to +127 and the default value is 0.

Hue/Saturation

Select the **Hue/Saturation** command to bring up the following window:

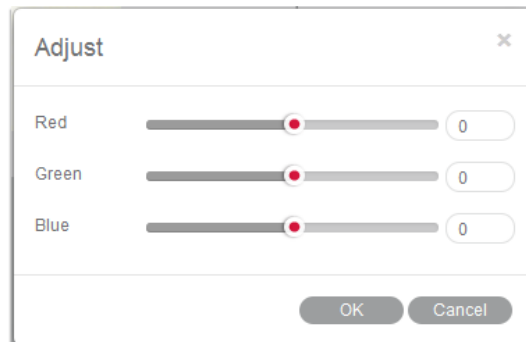


Dragging the Hue slider to the left or the right will decrease or increase the hue of the active image. The number to the right of the slider displays the hue value. The value ranges from -360 to +360 and the default value is 0. Dragging the Saturation slider to the left or the right will decrease or increase the saturation of the active image. The number to the right of the slider

displays the saturation value. The value ranges from -100 to +100 and the default value is 0.

Red/Green/Blue

Select the **Red/Green/Blue** command to bring up the following window:



The three sliders are used to adjust the red, green and blue color channels of the active image.

Dragging the sliders to the left or the right will decrease or increase the channel value. The numbers to the right of the sliders display the red, green and blue color channel values. The values range from -100 to +100 and the default value is 0.

Mirror

The **Mirror** command mirrors the current image horizontally.

Vertical

The **Vertical** command mirrors the current image vertically.

Rotate 90

The **Rotate 90** command rotates the current image clockwise by 90 degrees.

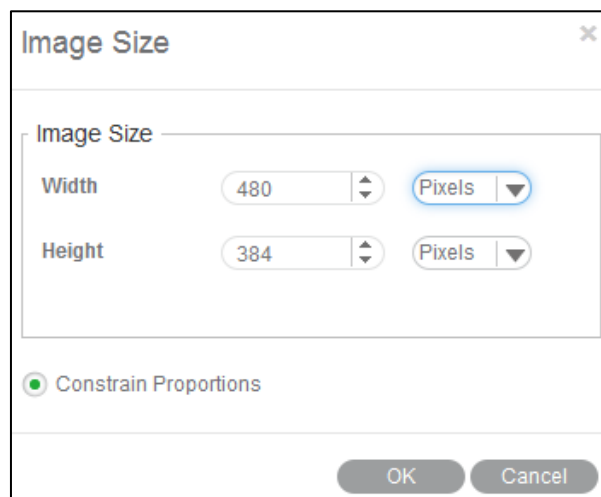
Gray Scale

The **Gray Scale** command convert the current image into gray scale image.

Image Size

The **Image Size** command brings up the Image Size dialog box, allowing users to define the height and width of the image. The units may be measured in "Pixels" or by "Percent".

Select the Constrain Proportions checkbox to maintain the image proportions even though the size is changing. When this option is selected, adjusting either the Width or Height values will automatically influence the other value in order to keep the image in proportion.

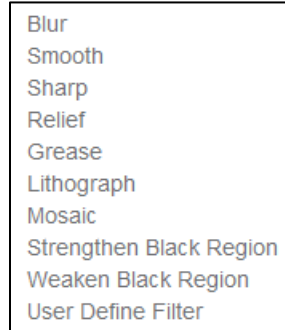


Filter

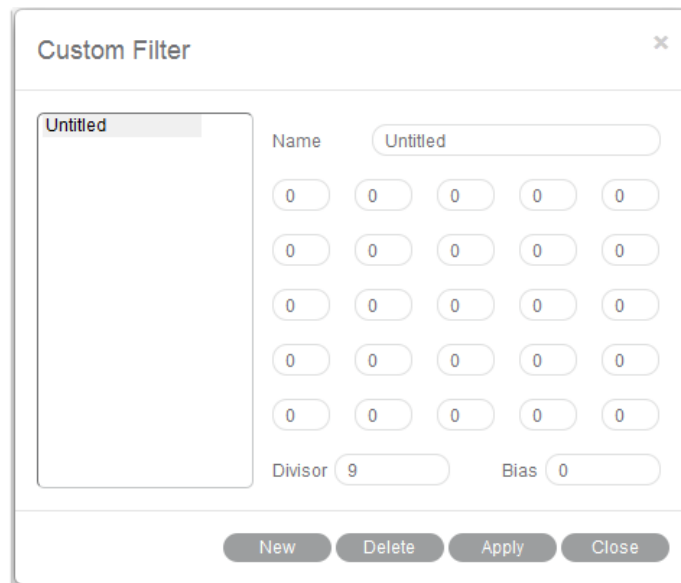
The **Filter** command provides a list of filters used to process and create various special effects on the current image, including **Smooth**, **Blur**, **Sharp**, **Relief**, **Grease**, **Lithograph**, **Mosaic**,

Strengthen Black Region ,Weaken Black Region and User Define Filter.

To get the effect you want on the current image, please select the corresponding command.



The **User Define Filter** command brings up the Custom Filter window with which users are able to personally define filters.



To define a new filter, click "New", enter the name of the filter and the name will be added to the list in the Custom Filter window. Enter values into the blanks to create a filter matrix, divisor and bias.

Click "Delete" and the selected filter will be deleted.

To open an existing filter, select an item from the list and click "Apply".

Measure

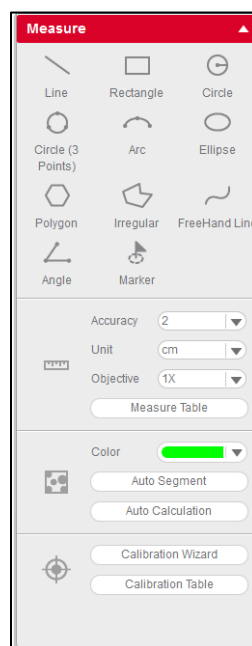
Introduction

The **Measure** Menu includes the following commands: **Line, Rectangle, Circle, Circle(3 Points),**

Arc, Ellipse, Polygon, FreeHandLine ,Irregular, Angle,Auto Segment, Auto

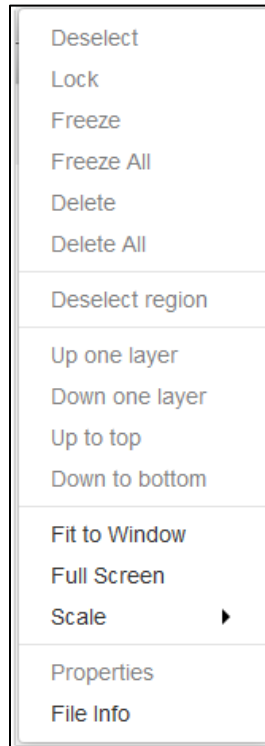
Calculation,Calibration Wizard and **Calibration Table**. The corresponding tool bar functions

are displayed below:



Click the right mouse button in the Image window to bring up a popup menu ([see Popup](#)

[menu functions](#)):



Line

The **Line** command measures the length of lines. Click the left mouse button on the image and drag to create a line. The results are displayed in the measure info box.

Place the mouse pointer at the extreme point of the line, then click and drag the mouse when the hand pointer appears to change the length of the line. The results in the measure info box will change correspondingly as well.

Place the mouse pointer on the line, then click and drag the mouse when the cross pointer appears to move the line.

Rectangle

The **Rectangle** command measures the width, height, area and perimeter of rectangles. Click and drag the left mouse button on the image to create a rectangle. The results are displayed

in the measure info box.

Place the mouse pointer at the vertex of the rectangle, then click and drag the mouse when the hand pointer appears to change the size of the rectangle. The results in the measure info box will change correspondingly as well.

Place the mouse pointer on an edge of the rectangle, then click and drag the mouse when the cross pointer appears to move the rectangle.

Circle

The **Circle** command measures the radius, area and perimeter of circles. Click and drag the mouse to create a circle. The results will be displayed in the measure info box.

Place the mouse pointer at the extreme point of the radius, then click and drag the mouse when the hand pointer appears to change the size of the circle. The results in the measure info box will change correspondingly as well.

Place the mouse pointer on the center of the circle, then click and drag the mouse when the cross pointer appears to move the circle.

Circle (3 points)

The Circle (3 points) command measures the radius, area and perimeter of circles. The results will be displayed in the measure info box. Place the mouse pointer on any of the three points on the circle, then click and drag the mouse when the hand pointer appears to change the size of the circle. The results in the measure info box will change correspondingly as well.

Place the mouse pointer on the circle, then click and drag the mouse when the cross pointer

appears to move the circle.

Arc

The Arc command allows users to measure the radius, arc length and perimeter of circles. The results will be displayed in the measure info box.

Click and drag the mouse to create a arc. Place the mouse pointer at the red point of the arc, then click and drag the mouse when the hand pointer appears to change the shape of the arc.

Place the mouse pointer on the arc, then click and drag the mouse when the cross pointer appears to move the arc.

Ellipse

The **Ellipse** command measures the major half axis, minor half axis, area and perimeter of ellipses. Click and drag on the image to create an ellipse (the initial shape drawn will be that of a circle). The results will be displayed in the measure info box.

Place the mouse pointer on the extreme point of the major or minor half axis, then click and drag the mouse when the hand pointer appears to change the size and shape of the ellipse.

The results in the measure info box will change correspondingly as well.

Place the mouse pointer on the center of the ellipse, then click and drag the mouse when the cross pointer appears to move the ellipse.

Polygon

The **Polygon** command measures the area and perimeter of polygons. The results will be

displayed in the measure info box.

To complete a polygon, double click the left mouse button after setting the required points (single click to set the points of the polygon). After the polygon is closed, the results will display.

Place the mouse pointer on any point of the polygon, then click and drag the mouse when the hand pointer appears to change the size of the polygon. The results in the measure info box will change correspondingly as well.

Place the mouse pointer on any edge of the polygon, then click and drag the mouse when the cross pointer appears to move the polygon.

Freehand line

This **Freehand Line** command allows users to measure the length of free lines. The results will be displayed in the measure info box.

Place the mouse pointer on the free line, then click and drag the mouse when the cross pointer appears to move the free line.

Irregular

The **Irregular** command measures the area and perimeter of irregular figures. Click and drag the left mouse button on the image to draw an irregular image, release the button to complete the shape. The results will be displayed in the measure info box.

Click and drag the mouse when the cross pointer appears to move the irregular figure.

Angle

The **Angle** command measures the degree of an angle. Click the left mouse button on the image to set the first point of the angle. Move the mouse and click the left mouse button to set the second point. Once the third point is set an angle will be produced. The results will be displayed in the measure info box.

Place the mouse pointer on any point of the angle, then click and drag the mouse when the hand pointer appears to change the degree of the angle. The results in the measure info box will change correspondingly as well.

Place the mouse pointer on an edge of the angle, then click and drag the mouse when the cross pointer appears to move the angle.

Auto Calculation

The **Auto Calculation** command provides detailed data of the objects segmented from the image.

The Auto Calculation Result window will then be displayed. In this window, access detailed data of the segmented image, such as the number of objects, total area, percentage of total area, minimum object area, maximum object area, average object area, minimum object perimeter, maximum object perimeter, average object perimeter and the serial number, area and perimeter of respective objects.

To access the data of a certain object, click on the object in the image window and the data for that object will be highlighted in dark blue.

Click on the data of the desired object(s) and the corresponding object(s) will flicker in the

image window.

Click and drag on a particular data item to change its location in the list of results.

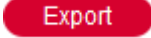
The screenshot shows a window titled "Auto Calculation Result" with a close button (X) in the top right corner. On the left side, there is a list of summary statistics:

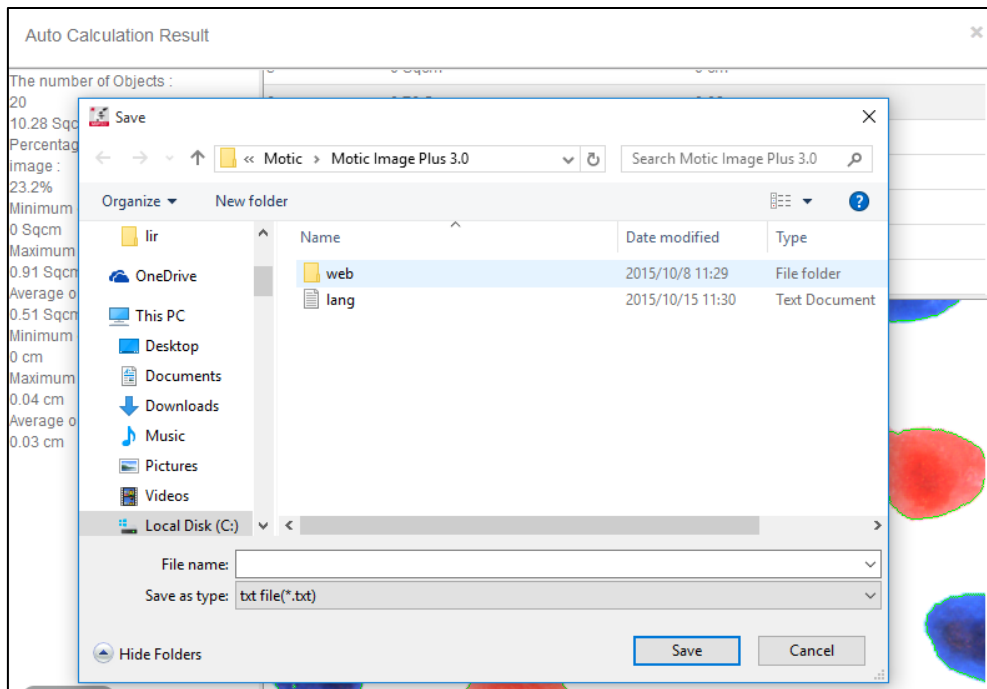
- The number of Objects : 20
- 10.28 Sqcm
- Percentage of total area in the whole Image : 23.2%
- Minimum object area : 0 Sqcm
- Maximum object area : 0.91 Sqcm
- Average object area : 0.51 Sqcm
- Minimum object perimeter : 0 cm
- Maximum object perimeter : 0.04 cm
- Average object perimeter : 0.03 cm

On the right side, there is a table with three columns: "No.", "Area", and "Perimeter". The table contains five rows of data:

No.	Area	Perimeter
1	0.19 Sqcm	0.02 cm
2	0.01 Sqcm	0 cm
3	0.68 Sqcm	0.03 cm
4	0.47 Sqcm	0.03 cm
5	0 Sqcm	0 cm

Below the table is a preview image showing several colored, irregularly shaped objects (blue, green, red, black) on a white background. At the bottom left of the window, there is an "Export" button.

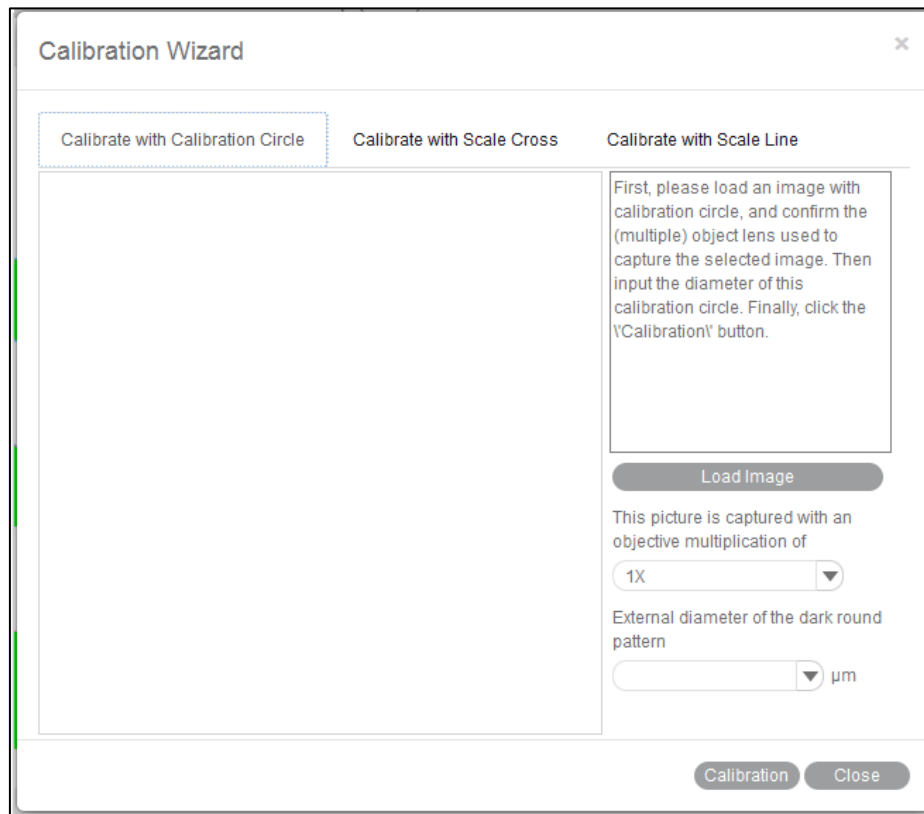
Click the Export button  to bring up the Save As dialog box with which users can use to export calculation results and save them as a Text file(*.txt) or CVS file(*.csv).



Calibration Wizard

The **Calibration Wizard** command provides three calibration methods: Calibrate with Calibration Circle, Scale Cross and Scale Line.

Select the Calibration Wizard command to bring up the following window:



Select the different tabs to display the corresponding panels. Follow the instructions outlined in the corresponding panel to calibrate.

Calibration Table

The **Calibration Table** command brings up the Calibration table. All calibration data are saved here for later measuring.

If the Scale check box is selected, the measurement results of a certain object will not change no matter which size the image is when captured. For example, although a distance of 2500µm looks different in images of different sizes (640x480 vs. 320x240) the measurement results will still be the same: 2500µm.

Sign names	$\mu\text{m}/\text{pixel-X axis}$	$\mu\text{m}/\text{pixel-Y axis}$	Objective	Scale	Sign image width	Sign ima
100X	1	1	100	false	320	240
10X	10	10	10	false	320	240
1X	100	100	1	false	320	240
20X	5	5	20	false	320	240
2X	50	50	2	false	320	240
3X	33.33333	33.33333	3	false	320	240
40X	2.5	2.5	40	false	320	240

Sign Name Capture

Scale Scale

OK Delete

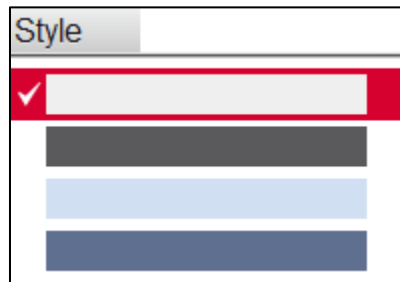
Language

The Language menu brings up the following. Select a language from the Select language drop down list. the interface will display in the selected language.

Language	Style
✓ English	
Chinese	
Chinese(Traditional)	
German	
French	
Italian	
Spanish	
Portuguese	
Arabic	
Korean	
Japanese	
Polish	
Catalonian	
Lithuanian	
Russian	

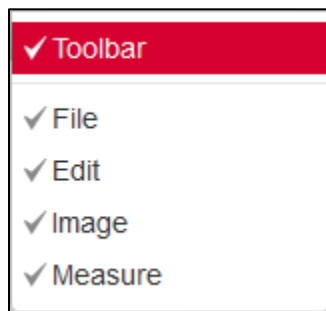
Style

Four color styles are provided ,click "Style" button and select one of them to switch the interface style.



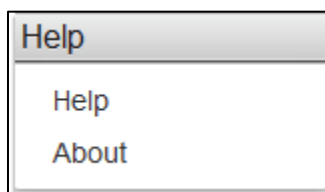
View

Display all panel statut.When you select it ,the panel will display in the software interface



Help

The **Help** menu has two commands:



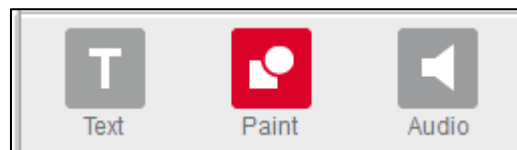
About: Display the program's copyright and version information.

Help: Provide detailed instructions on how to use the program.

Control Panel

Introduction

When an image is opened in Motic Images Plus 3.0 ML, the following **Control Panel** will display.



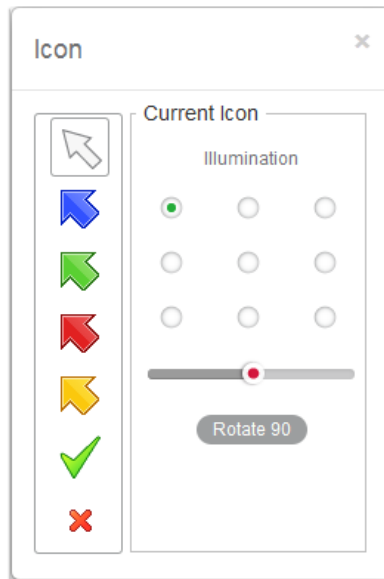
This Control Panel is composed of the following tabs: **Text**, **Paint**, **Measure**, and **Audio**.

Paint

Click the **Paint** tab in the Control Panel to display the Paint panel:



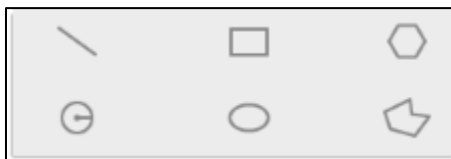
Click the **Icon** button to bring up a dialog box which provides a variety of icons to add to the current image.



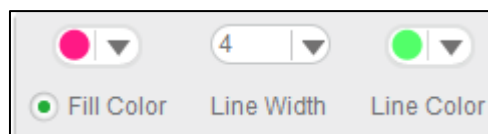
Select a desired icon and click on a position of the image to place the icon.

The circles under the title **Illumination** represent the direction of the lamp-house which will add shadow to the selected icon. Choose a direction by clicking the corresponding circle. The **slider** bar under the circles displays the angle of the lamp-house, dragging to the left or the right will decrease or increase the degree of the angle.

Click the **Rotate 90** button to rotate the icon 90 degree clockwise.




With the buttons draw different shapes in the current image.




To define a line and fill color, click the boxes next to the options to bring up the color palette from which a color may be selected.


Choose to add fill color to the figures or not by clicking the check box left of the option.


To set the line width, Select the line width in the drop down list

With the  button, draw lines in the current image.

With the  button, draw rectangles in the current image.

With the  button, draw polygons in the current image.

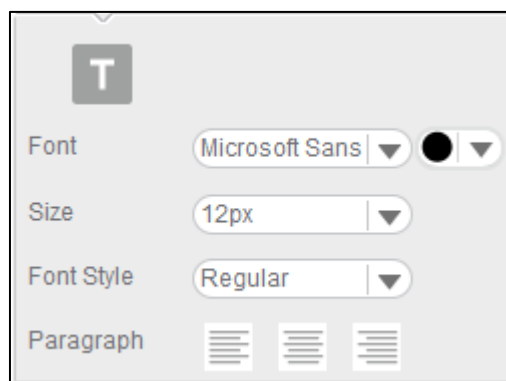
With the  button, draw circles in the current image.


With the  button, draw ellipses in the current image.


With the  button, draw irregular figures in the current image.

Text

Click the **Text** tag in the Control Panel to display the Text panel:



Click the **Color** button  to bring up the color palette, from which a text color may be selected.

Click the **Text** button  to add text to the cursor's current location.

Click Font drop down list to select the font .

Click Size drop down list to select the font size.

Click Font Style down list to select font style.

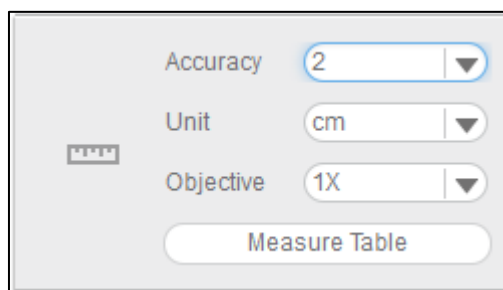
The **Align Left** button aligns the selected texts, numbers or inline objects to the left with a ragged right edge.

The **Center** button centers the selected texts, numbers or inline objects.

The **Align Right** button aligns the selected texts, numbers or inline objects to the right with a ragged left edge.

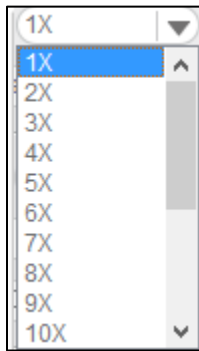
Measure

Click the Measure tab to display the **Measure** control panel:

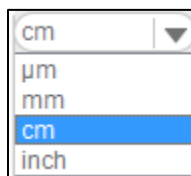


The settings in the Measure panel have a direct affect on measurement results.

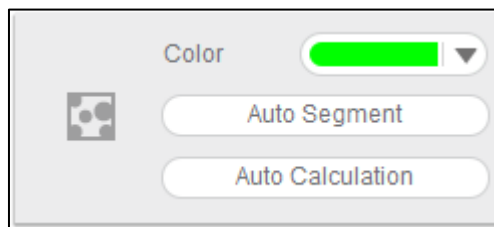
From the **Objective Lens** drop down list, select the objective lens that was used to capture the current image.



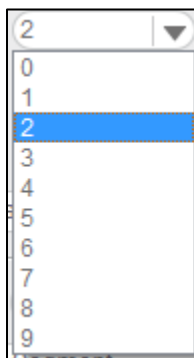
From the **Units** drop down list, select the desired measurement units.



Click the **Color** button to display the color palette where a fill color may be selected for segmented objects.

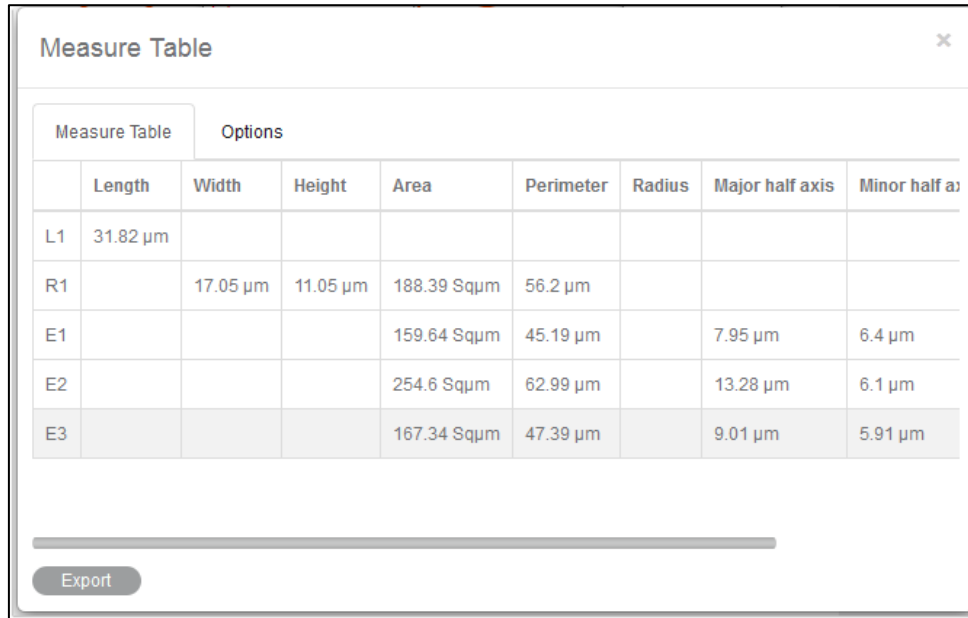


From the **Accuracy** drop down list, select the number of digits to be displayed after the decimal point in the measurement values.



The **Measure Table** button opens the following window which is composed of two tabs,

Measure Table and Options: The Measure Table tab lists all measurement results

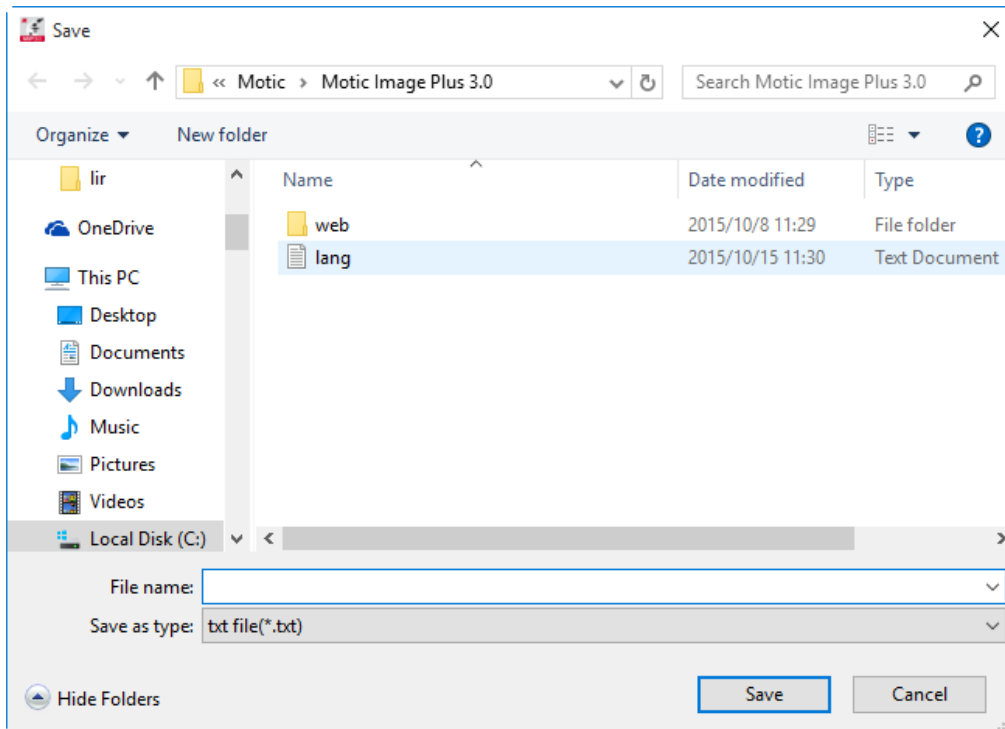


The screenshot shows a window titled "Measure Table" with two tabs: "Measure Table" and "Options". The "Measure Table" tab is active and displays a table with the following data:

	Length	Width	Height	Area	Perimeter	Radius	Major half axis	Minor half axis
L1	31.82 μm							
R1		17.05 μm	11.05 μm	188.39 Sq μm	56.2 μm			
E1				159.64 Sq μm	45.19 μm		7.95 μm	6.4 μm
E2				254.6 Sq μm	62.99 μm		13.28 μm	6.1 μm
E3				167.34 Sq μm	47.39 μm		9.01 μm	5.91 μm

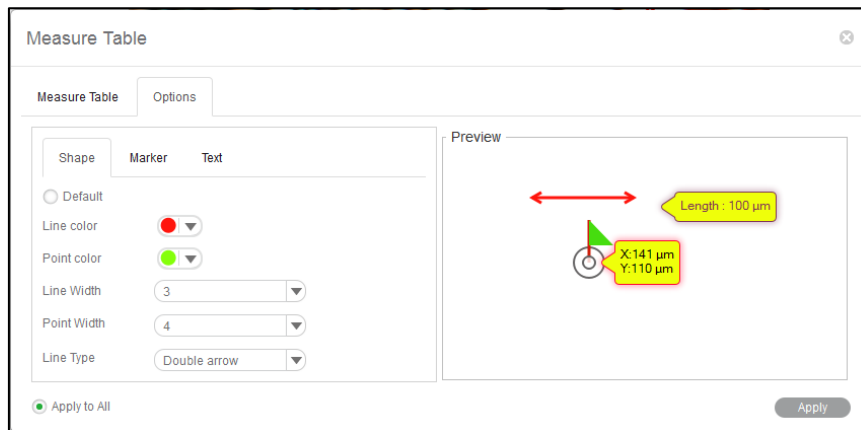
Below the table is a horizontal scrollbar and an "Export" button.

To export the data in the Measure Table, click "Export" to bring up the following dialog box with which users are able to save the data as *.txt or *.csv files.



Click the Common tab under the Options tab to display the Common panel.

Here, set the line width, line color, point color, point type, arrow size and line type of the figures and preview the new settings in the Preview window.



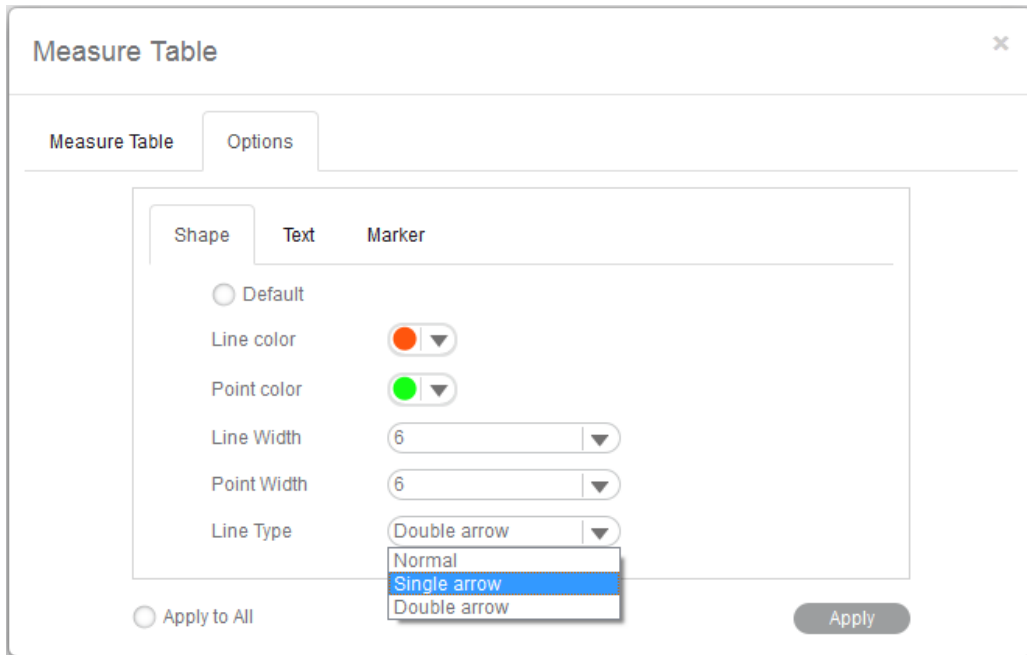
Default radio is selected by default Please uncheck "Default" radio to cancel the default settings and then customize the settings.

Click Line color and Point color to bring up the color palette which user can customize the line and point color. Click Line width and Point width to customize the line and point width. Click text tab to customize the font and font size ect . Click "Apply" button to apply the new settings.

Select "Apply to all" radio to apply the new settings to all the figures in the image.



Line Type provides Normal, Single arrow, Double arrow options for selection.

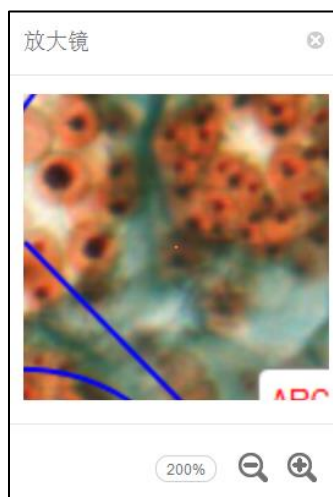
Click Marker to mark the flag color ,flagpole color and size.



Magnifier

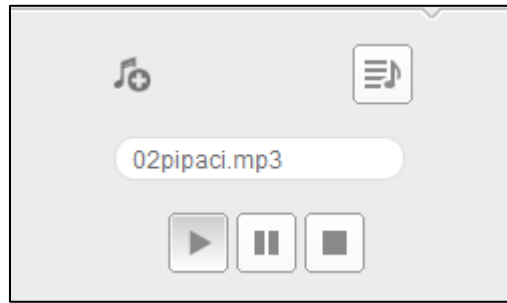
Click the **Magnifier** button in the toolbar to display the Magnifier panel:


Click the  button to reduce the magnification and click the  button to increase the magnification. The maximum magnification is 800%.

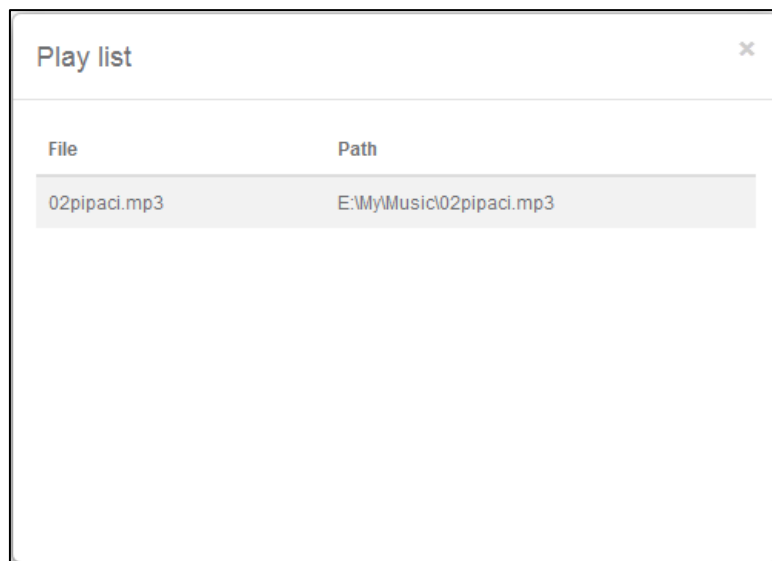


Audio

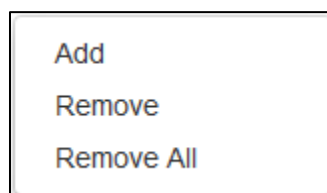
Click the Audio tab to display the **Audio** control panel:



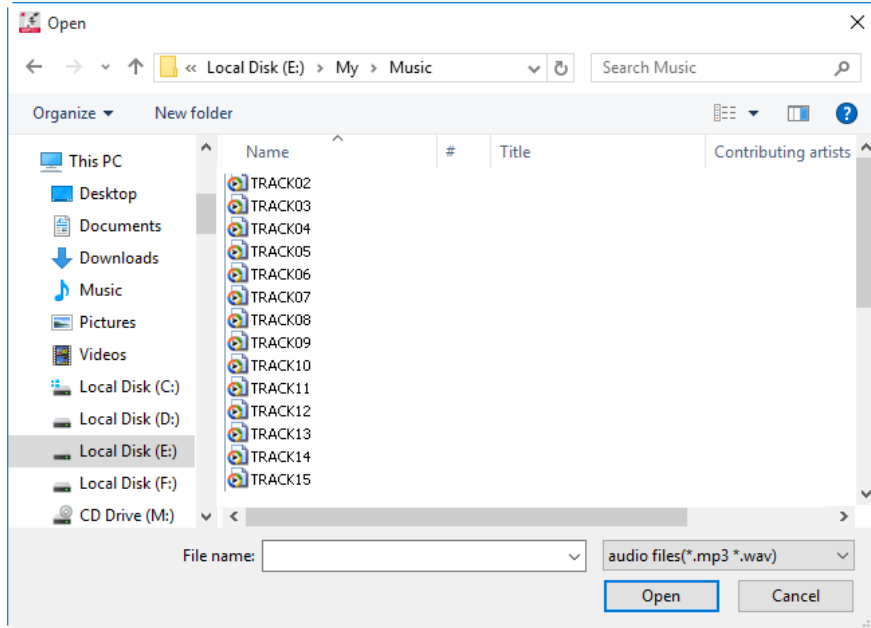
Click the **Play List** button  to bring up the following Playlist window:



Click the right mouse button in the window to display this popup menu:






To add music to the playlist, select the **Add** command to display the Open dialog box:



Select the desired music files, click the **Open** button and the selected music will be added to the playlist. If the Auto Play option in the Audio panel of the Setting dialog box has been selected, the music in the playlist will be played in turn automatically each time Motic Images Plus 3.0 ML is run.




To remove the music listed in the playlist, select the Remove All command from the popup menu.


If music exists in the playlist, click the **Play** button  to play the music; click the **Stop** button  to stop play and click the **Pause** button  to stop the music temporarily, to continue play, click the Pause button again. The slider at the bottom of the Audio tab shows the progress of the music that is being played. Click the Add audio to current image button

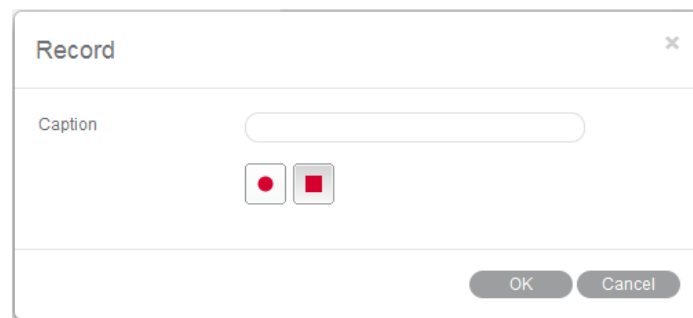



, move the cursor onto the image and left click to display the following box:

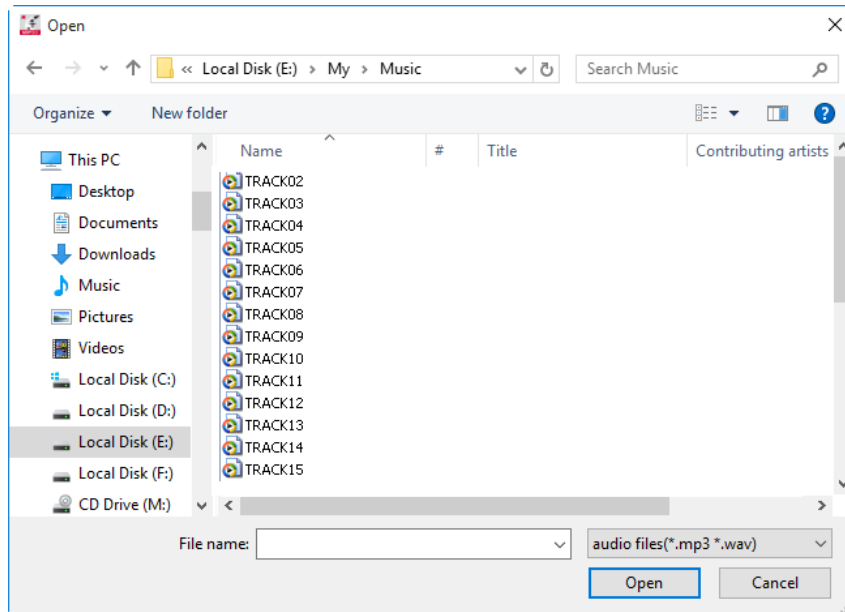


Click the Play button  to play the audio files listed in the playlist; click the Stop button  to stop play and click the Pause button  to temporarily stop play, to continue play, click the Pause button again.

Click the Record button  to display the Record window with which users are able to record sound, music, etc. Click the Record button in the window to start recording; click the Stop button to stop recording. Users are also able to name the sound or music file - input a name into the Name box, click the OK button and the name will display in the play box shown above.



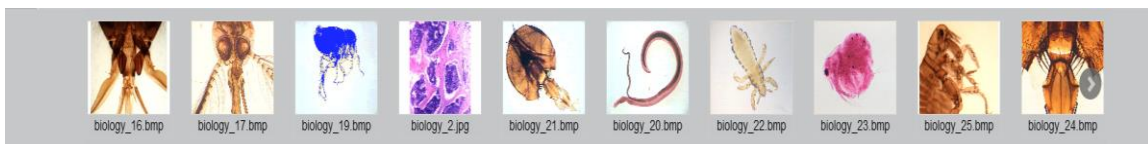
Click the  button to bring up the Open dialog box from which users can open an existing audio file. Click the Open button and the selected file will be added to the play box shown above.



Preview Window

The **Preview Window** is located to the bottom of the image window.

With the Preview Window users are able to preview images that have been opened. When an image is opened it will automatically display in the preview window.



How to...

Use the Popup Menus

In the Image window

Click the right mouse button in the image window to display the following popup menu:



Deselect: This command deselects the selected objects.

Lock: This command locks the selected objects making it impossible to move them around.

Selected regions cannot be locked.

Freeze: This command freezes the location and size of the selected measured figure.

Freeze All: This command freezes the location and size of all the measured figures.

Delete: This command deletes the selected object. It cannot delete a selected region.

Delete All: This command deletes all the objects that have not been locked or frozen. It cannot delete selected regions.

Deselect region: This command deselects the selected regions.

Up one layer: This command brings the selected item up a layer when there are several items on the image.

Down one layer: This command brings the selected item down a layer when there are several items on the image.

Up to top: This command brings the selected item to the top layer when there are several items on the image.

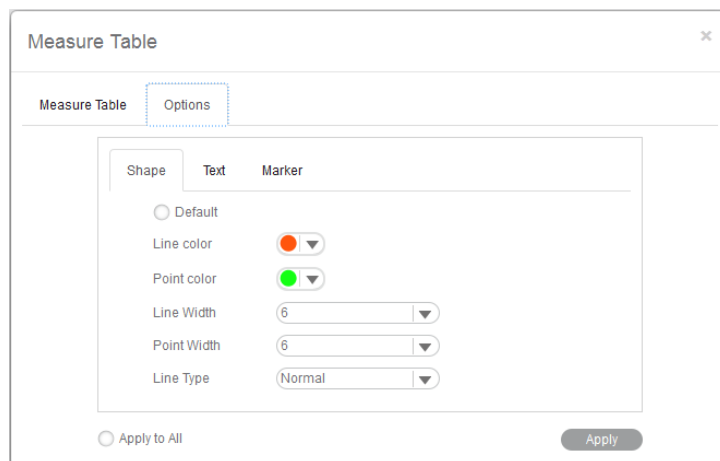
Down to bottom: This command brings the selected item to the bottom layer when there are several items on the image.

Fit to Window: This Command resize the image to fit into the current window.

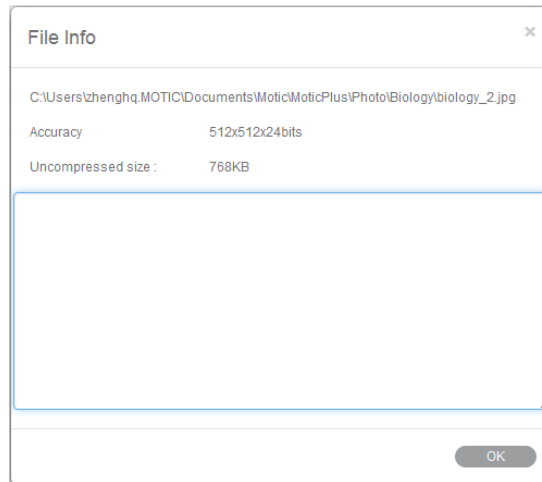
Full Screen: This command brings the image window into full screen view.

Scale: This Command resize the current image by scale.

Properties: This command brings up the Properties dialog box which allows users to define the selected object's parameters.

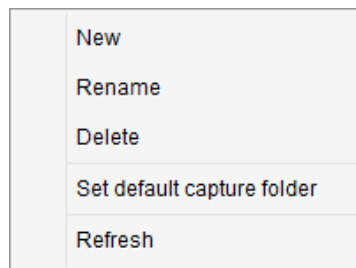


File Info: This command brings up the File Info dialog box which provides information about the current image.



In the Album window

Click the right mouse button in the upper column of the Folder panel to bring up the following popup menu:



New: This command enables users to add a new folder to the selected folder.

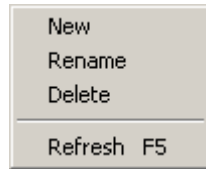
Rename: This command enables users to rename the selected folder.

Delete: This command enables users to delete the selected folder

Set as default capture folder: This command enables users to set the selected folder as the default capture folder. Images captured using this program will then be saved in the selected folder automatically

Refresh(F5): This command enables users to refresh the contents displayed in the upper column of the Folder panel. Pressing the F5 key will refresh the contents as well.

Click the right mouse button in the lower column of the Folder panel to bring up the following popup menu:



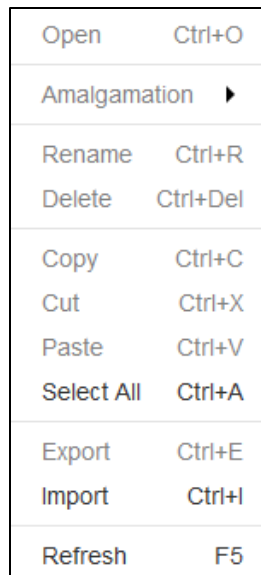
New: This command enables users to add a new folder to the selected folder.

Rename: This command enables users to rename the selected folder.

Delete: This command enables users to delete the selected folder.

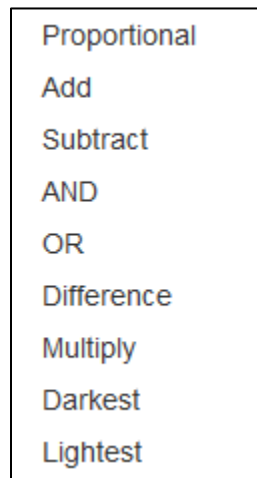
Refresh(F5): This command enables users to refresh the contents displayed in the upper column of the Folder panel. Pressing the F5 key will refresh the contents as well.

Click the right mouse button in the preview window right of the Album window to bring up the following popup menu.



Open: This command enables users to open the selected image. Press "Ctrl" and "O" in the keyboard at the same time can open the selected image also.

Amalgamation: This command displays various amalgamation methods. Select an amalgamation method and a dialog box will display to confirm the name of the resulting image.



Rename: This command enables users to rename the selected images. Ctrl+R is the shortcut of rename function.

Delete: This command enables users to delete the selected image. Ctrl+Del is the shortcut of delete function.

Copy: This command enables users to copy the selected image and save it to the clipboard. Ctrl+C is the shortcut of copy function.

Cut: This command enables users to cut the selected image and save it to the clipboard. Ctrl+X is the shortcut of cut function.

Paste: This command enables users to paste the content from the clipboard to a desired location. Ctrl+V is the shortcut of paste function.

Select All: This command enables users to select all the images in the folder. Ctrl+A is the shortcut of select all function.

Export: This command enables users to export the image in the album to the desired location.

Import: This command enables users to import the image in the desire location to the album.

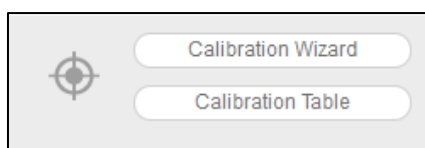
Refresh: This command enables users to refresh the selected folder.F5 is the shortcut of refresh function.

Calibrate

Introduction

Motic Images Plus 3.0 ML provides three calibration methods: **Calibrate with Calibration Circle**, **Calibrate with Scale Cross** and **Calibrate with Scale Line**.

click the-Calibration button in the Measure tool bar to displaythe corresponding toolbar.



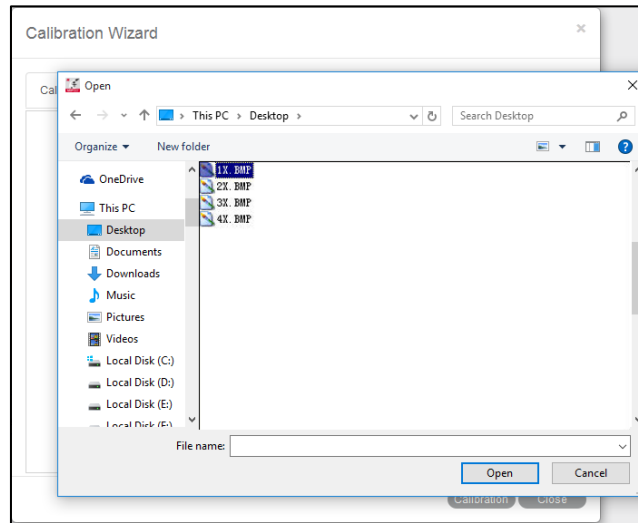
Select the Calibration Wizard command to bring up the Calibration Wizard window. Select a calibration method by selecting the corresponding tab.

Calibrate with Calibration Circle

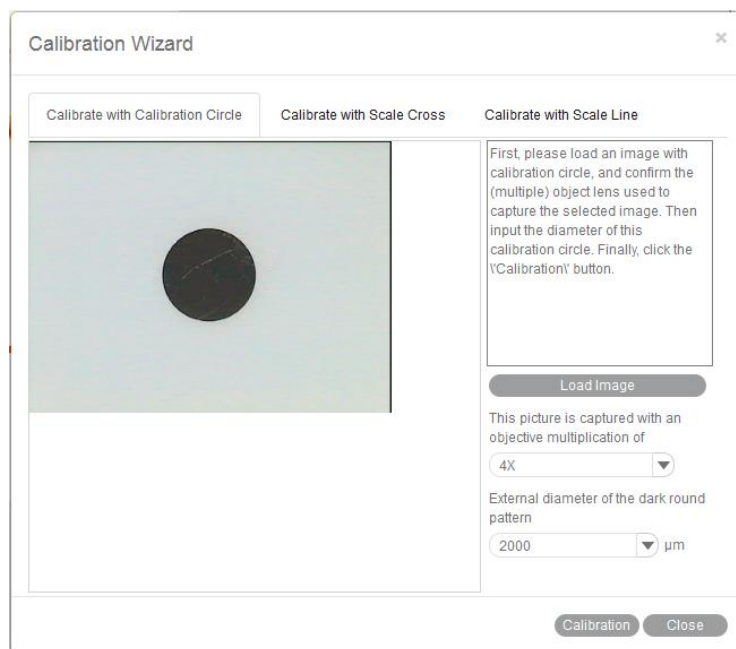
To **calibrate with a calibration circle**, select the Calibration Wizard command to display the Calibration Wizard window. Click the Calibrate with Calibration Circle tab to display the corresponding panel.

Click the Load Image button to bring up the Open Image files dialog box from which a calibration circle may be selected for calibration. Click the Open button to load the selected

image.



Confirm the objective lens used to capture the selected image and input the diameter of the calibration circle. Click the Calibration button to complete calibration.



The Save Sign dialog box will display when the Calibration button is selected. Input a Sign Name by clicking the corresponding objective lens from the list at the left of the dialog box.

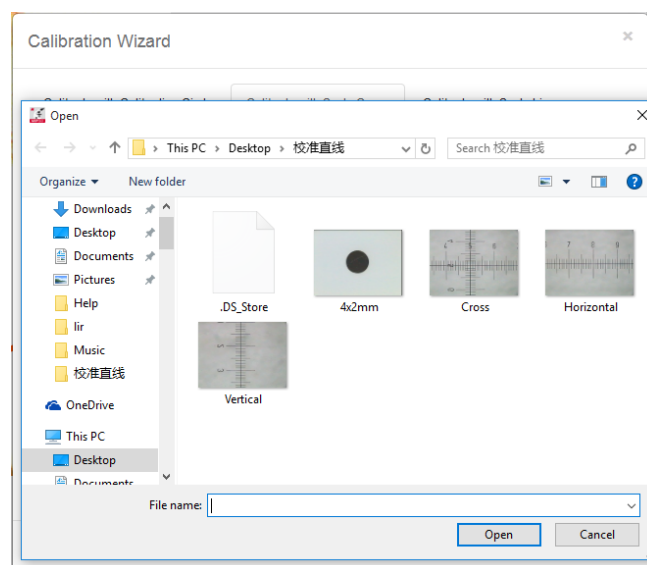
Next, click the Save button to save the calibration results for measuring.



When calibration is complete, click the Close button to close the Calibration Wizard window.

Calibrate with Scale Cross

To **calibrate with a scale cross**, select the Calibration Wizard command to display the Calibration Wizard window. Click the Calibrate with Scale Cross tab to display the corresponding panel. Click the Load Image button to bring up the Open Image files dialog box from which a scale cross may be selected for calibration. Click the Open button to load the selected image.

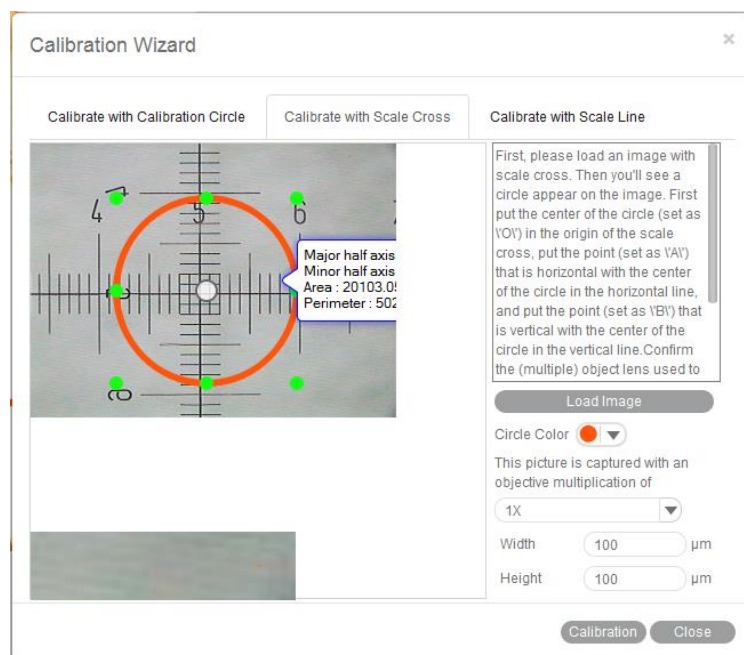


When the image is loaded, a circle will appear on it. Modify the color by clicking the Circle

Color button  to bring up the palette where a scale cross color may be selected.

First, put the center of the circle (set as "O") in the origin of the scale cross. Next, put a point (set as "A") that is horizontal with the center of the circle on the horizontal line, and put a point (set as "B") that is vertical with the center of the circle on the vertical line. The magnifier window under the image window will help users accurately to place the points.

Confirm the objective lens used to capture the selected image and input the actual length of "OA" in the "Width" bar and the actual length of "OB" in the "Height" bar. Click the Calibration button to complete calibration.



The Save Sign dialog box will display when the Calibration button is selected. Input a Sign Name by clicking the corresponding objective lens from the list at the left of the dialog box.

Next, click the Save button to save the calibration results for measuring.

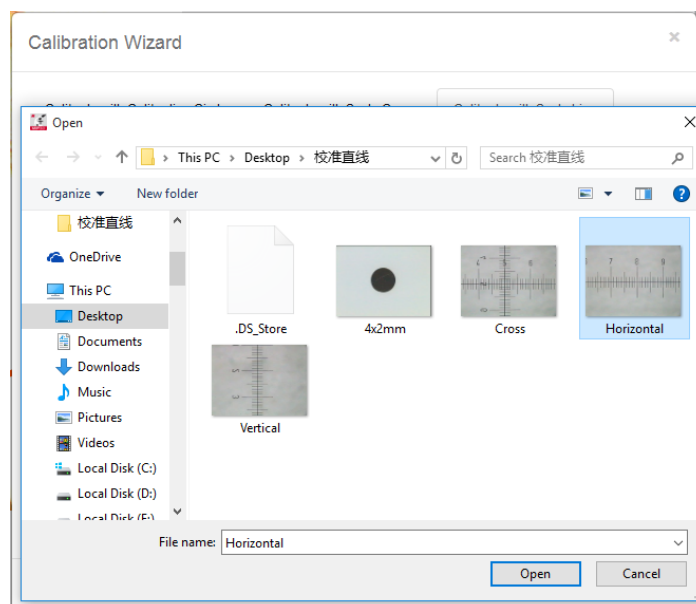


When calibration is complete, click the Close button to close the Calibration Wizard window.

Calibrate with Scale Line

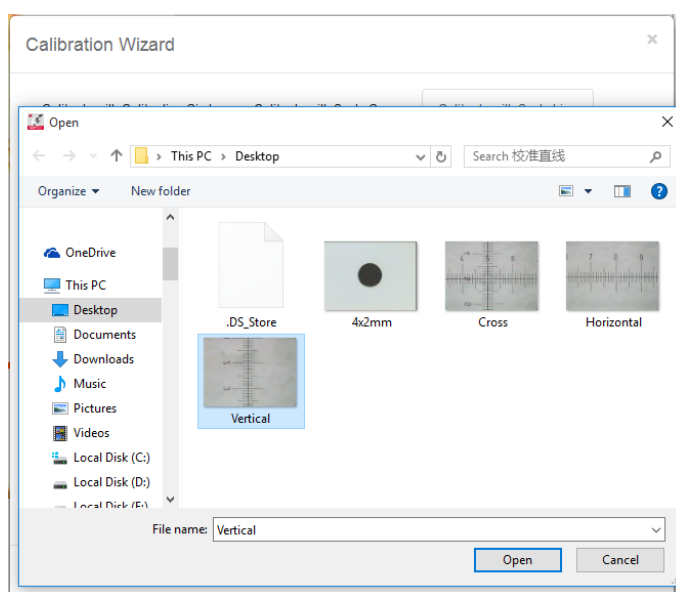
To **calibrate with scale lines**, select the Calibration Wizard command to display the Calibration Wizard window. Click the Calibrate with Scale Line tab to display the corresponding panel.

Click the Load Image button to bring up the Open Image files dialog box from which scale lines may be selected for calibration. Click the Open button to load the selected image.

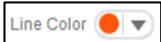


Click the Vertical tab to load the vertical scale lines. Click the Load Image button to bring up the Open Image files dialog box from which vertical lines may be selected for calibration. Click the Open button to load the selected images.

Note: The same steps apply for both the Vertical and Horizontal lines but the two images must be captured by objective lenses of the same magnification.

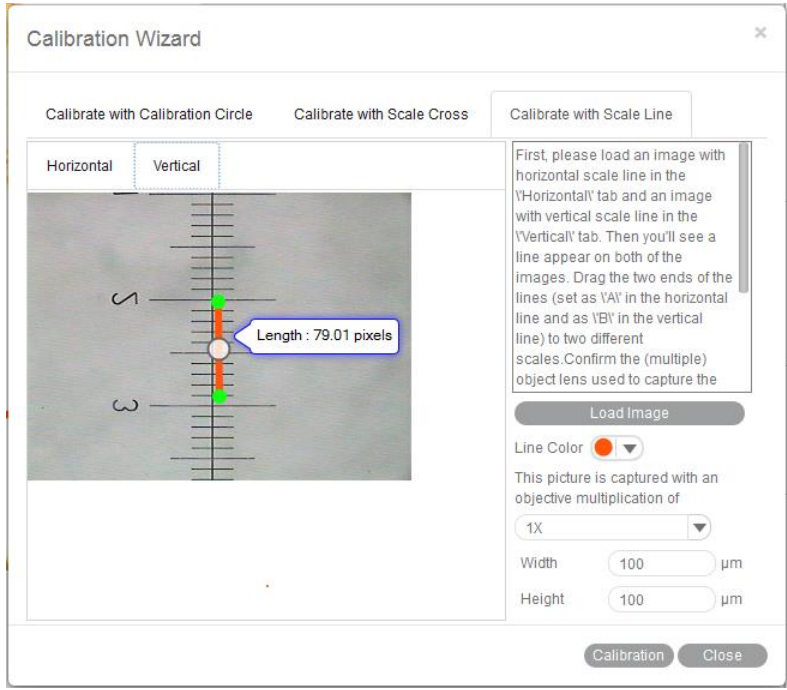
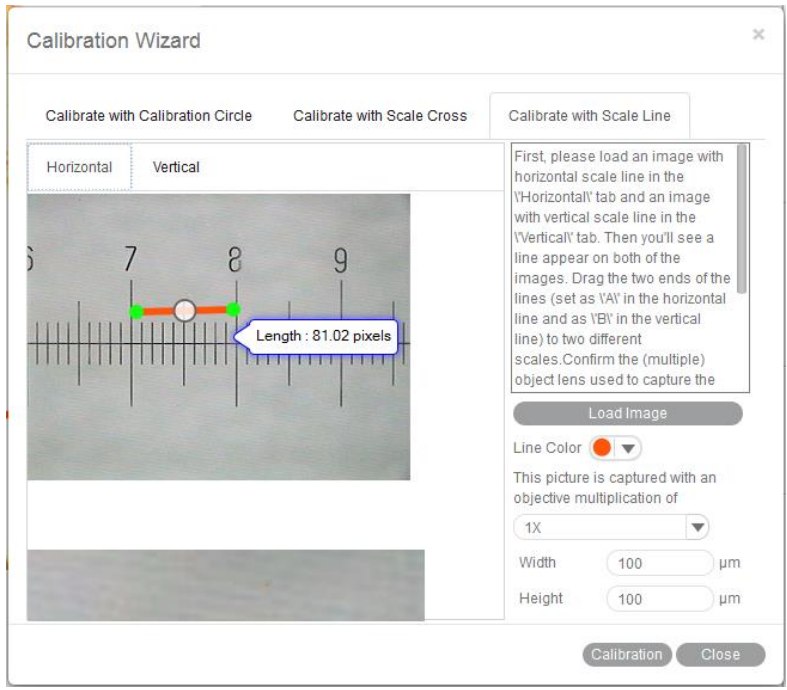


Once the image is loaded, a line will appear on it. Modify the color of the line by clicking the

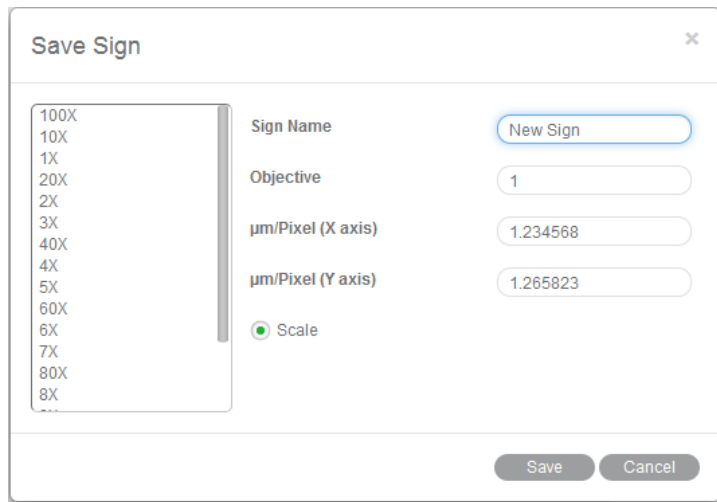
Line Color button  to bring up the palette where a line color may be selected.

Drag the two ends of the line (set as "A" in the horizontal line and as "B" in the vertical line) to two different scales. The magnifier window under the image window will help users accurately place the points.

Confirm the objective lens used to capture the selected images and input the actual length of "A" in the "Width" bar and the actual length of "B" in the "Height" bar. Click the Calibration button to complete calibration.



The Save Sign dialog box will display when the Calibration button is selected. Input a Sign Name by clicking the corresponding objective lens from the list at the left of the dialog box. Next, click the Save button to save the calibration results for measuring.



The image shows a 'Save Sign' dialog box with a close button (X) in the top right corner. On the left is a scrollable list of magnification levels: 100X, 10X, 1X, 20X, 2X, 3X, 40X, 4X, 5X, 60X, 6X, 7X, 80X, and 8X. The main area contains the following fields and options:

- Sign Name:** A text input field containing 'New Sign'.
- Objective:** A text input field containing '1'.
- µm/Pixel (X axis):** A text input field containing '1.234568'.
- µm/Pixel (Y axis):** A text input field containing '1.265823'.
- Scale:** A radio button that is currently selected.

At the bottom right, there are two buttons: 'Save' and 'Cancel'.

When calibration is complete, click the Close button to close the Calibration Wizard window.