# Motic

# Motic Images
## PLUS

Mac OS X          version 2.0

# Help Manual

# Contents

**Note:**

The intention of this guide is to provide quick instructions to key tasks of the Motic Images Plus 2.0 Mac OS X software. If more detail is needed, or what you are looking for is not contained in this guide, please visit our website http://www.motic.com.

# Installing Motic Images Plus 2.0 Mac OS X

Please read this guide carefully, and follow the instructions to install the Motic Images Plus 2.0 Mac OS X software.

## Preparation for Software Installation

1. Before you start the installation of Motic Images Plus 2.0 Mac OS X, please make sure that you have already installed QuickTime 6.0 or higher in your computer. If not, please visit www.apple.com/quicktime to download the latest version.
2. It is recommended that users update their operating systems to the latest versions, visit www.apple.com/support for details.
3. Get your Motic digital microscope ready, and check that the USB cable of the microscope is NOT connected to the USB port of your computer.

## Recommended Configuration

**C P U**: 600 MHz PowerPC G3 or higher

**Hard Disk Space**: 300 MB or more

**Monitor Resolution**: 1024×768 or higher

**RAM**: 256 MB or more

**OS**:   Mac OS X 10.1 or later (Using the latest update of Mac OS X is highly recommended. For USB 2.0 camera need Mac OS X 10.3 or later)

## Installing Motic Images Plus 2.0 Mac OS X

To install the Motic Images Plus 2.0 Mac OS X software**,** insert the Motic Images Plus CD-ROM into the CD-ROM drive of your computer and follow the instructions provided.

**Note:** If the instructions do not automatically display, double click on the new Motic Images Plus CD icon on your desktop.
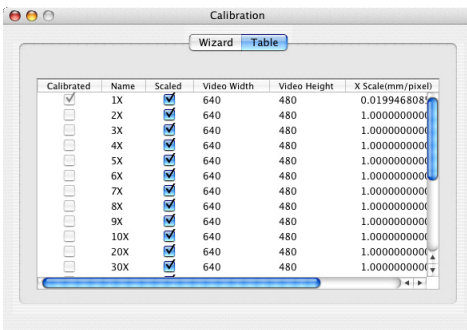
# Precise Calibration

Calibration is a very important step to be taken before using the Motic Images Plus 2.0 Mac OS X measuring system as it will ensure the accuracy of the system's measurements.

Select the Calibration Wizard command from the Measure menu to display the Calibration window. Motic Images Plus 2.0 Mac OS X provides a Calibration with Circle calibration method. A calibration circle covered with an opaque square will display in the window provided you have placed the calibration slide on the microscope. When calibrating, focus the image as clearly as possible and ensure there is sufficient contrast between the object and background.
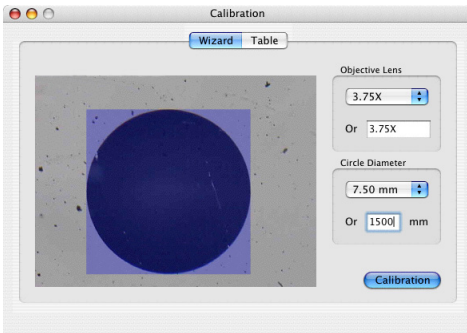
From the drop down lists, confirm the objective lens currently being used and the diameter of the calibration circle. If you wish to calibrate with an objective strength that is not contained in the list, enter a value into the Or value box. The same goes for the circle diameter. The system will always use the value in the Or value box if it deviates from the value displayed from the drop down list. Click "Calibration" to complete the calibration process.

The calibration table displays the calibration results performed under each objective lens strength. Select the Scaled option located to the right of each objective to keep measurements in proportion when the image size changes.

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# The Menus

Once the program has been opened, at the top of the screen will display a list of menus used to access the various functions and commands of the Motic Images Plus software. The following is an introduction to the items listed within each menu.
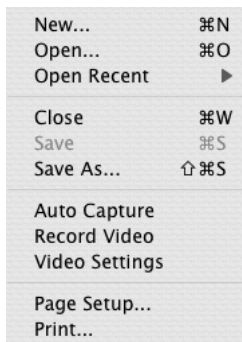


## Application Menu
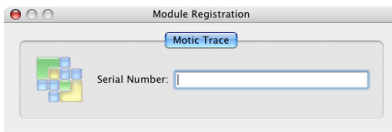


Select 'Rregistration' option from Application Menu to display the Module Registration dialog, in which users can register and active other modules available in Motic Images Plus, such as Motic Trace.

## File Menu



With the File menu, perform standard File menu operations: create new documents, open existing ones, set the parameters for the Auto Capture and Video Recording functions and print a selected document. Select 'Save' to capture a snapshot of whatever is being displayed in the current window (still image, live video or movie). Captured images may then be saved in standard image file formats including .BMP, .JPG, TIF, .PNG and Motic Images Plus .MIX file format.

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When 'Open' option is selected, users may choose to combine two or more images with the Amalgamation function. First, select a file from the list and then drag it from the preview window into the Amalgamation window at the bottom of the dialog. Next, click Amalgamation to display a list of amalgamation methods. Once a method is selected, the images will be combined and saved under a new file name.

**Note:** Mac OS X 10.3 users, when dragging an image from the preview window, click and hold for a moment before dragging.

Select the 'New' option to display this dialog. From here users are given three further options: Live Video, which will display a live camera view (see image below); Normal Still Image, which will display a blank document (here users may also define the width and height of the image window) and Printable paper, which will display a blank document of the dimensions defined in the Page Setup option of the File menu.
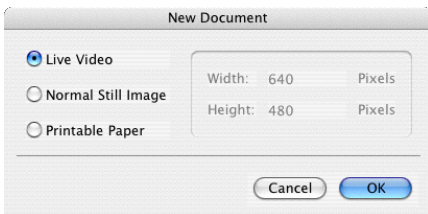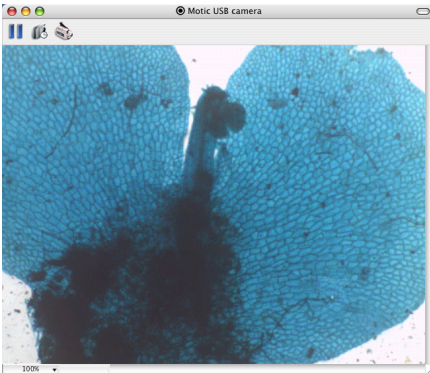
Once the Live Video option has been selected or a still image has been opened, a window similar to this one will display. Image processing and measurements may be performed on the image displayed in this window. If a live video or movie is playing in the window, use the button at the far left of the Toolbar to pause or restart play.

Select a value from the list at the lower left of the window to manipulate the image display size.

When Motic Trace module is activated, users can drag the window proxy icon from one document window to another to overlap the two images. The image can be scaled or rotated for an easy image comparison.

Select the 'Auto Capture' option to display this dialog. From here define the location in which the captured images are to be saved as well as the file name and extension. Next, define an interval time and the total number of images to be captured. Click OK and the number of images defined will be automatically captured at the selected intervals and saved to the defined location.

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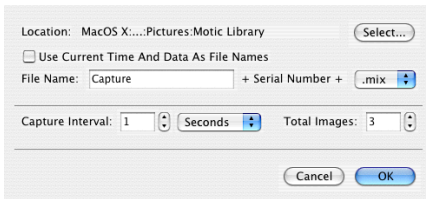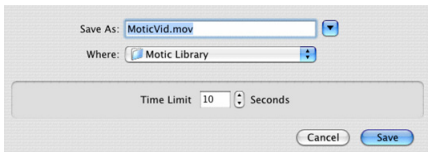
Select 'Record Video' to display this dialog from which the video file name and location may be defined. Input a time limit for recording into the corresponding box and click Save to start the recording process.
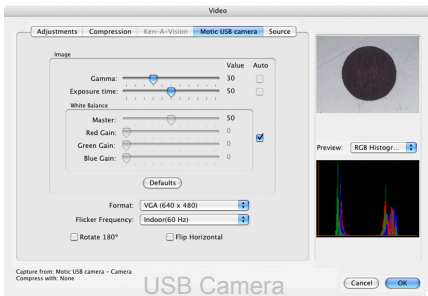
Select the 'Video Settings' option and the following dialog will display allowing users to define the video parameters.

## Edit Menu

| | |
|---|---|
| Undo | ⌘Z |
| Redo | ⇧⌘Z |
| Cut | ⌘X |
| Copy | ⌘C |
| Paste | ⌘V |
| Lock | |
| Unlock | |
| Delete | |
| Move to Front | |
| Move to Back | |
| ✓ Rectangle Marquee | |
| Circle Marquee | |
| Ellipse Marquee | |
| Polygon Marquee | |
| Irregular Marquee | |
| Select All | ⌘A |
| Deselect Marquee | |

The Edit menu contains standard editing functions as well as a list of marquee selections (corresponding to the Selection buttons on the Tool Palette) for highlighting areas of interest on the image. The Lock and Unlock functions allow users to lock or unlock an object's position (marquees, icons, etc.) on the current image. The Move to Front and Back options function in a similar way, moving the selected object (except marquees) either to the front or back of a series of objects on the current image.

## View Menu

| | |
|---|---|
| Hide Toolbar | ⌥⌘T |

The View menu contains only one option which allows users to either hide or display the Toolbar.

## Image Menu

| | |
|---|---|
| Adjust | ▶ |
| Mirror | ▶ |
| Gray Scale | |
| Invert | |
| Image Size | |
| Filter | ▶ |
| User Define Filter | |

The Image menu contains a list of image processing functions. Under the Adjust, Mirror and Filter options are sub-menus which contain lists of more specific image processing functions.

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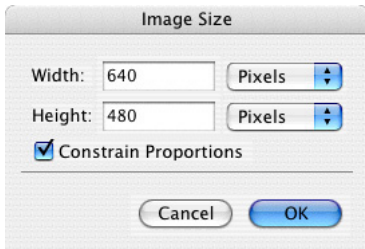
Select the Image size function to display this dialog. From here adjust the size of the image within the image window. Enter the desired values into the Width and Height boxes and from the drop down list select the units of measurement (Pixels or Percent). Click the Constrain Proportions box to keep the image in proportion, when one dimension is adjusted the other will automatically adjust accordingly. Click OK to apply the changes.

List of filters            New filter name

New filter values
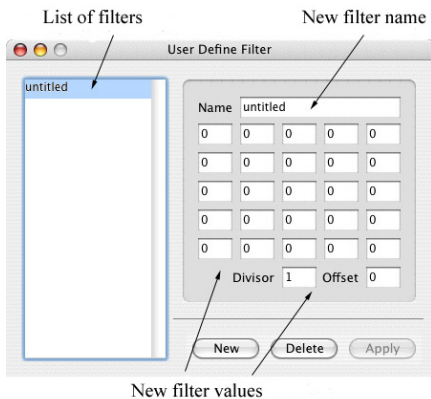
Select User Define Filter from the Image menu to display this dialog which allows users to define their own filters and apply them to an image. To use a previously defined filter, selected the desired filter from the list and click Apply.

## Paint Menu
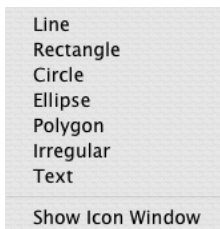
The Paint menu contains a list of shapes and functions which allow users to paint or place objects on the current image.
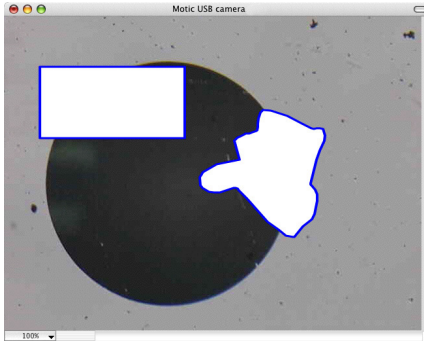
Select a shape from the Paint menu or click the desired shape button from the Paint options in the Tool palette. The color and border thickness can be adjusted through the Info function under the Tools menu.
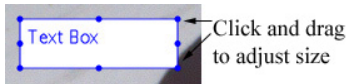
Select the Text option and click and drag in the image window to create a text box at the location the text is to be placed. The color and size of the text can be changed through the Info function under the Tools menu.
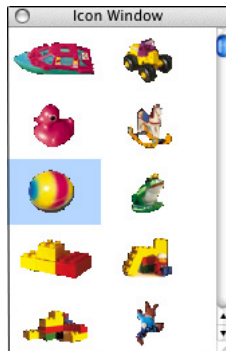
Select the Show Icon Window option from the Paint menu to display this dialog. From here users are able to click and drag an icon from the list into the image window.
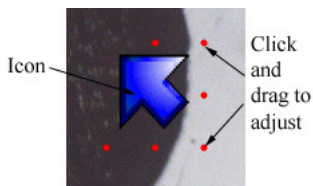
Once the icon displays in the image window it will be surrounded by red dots which allow users to adjust its size and position as well as flip the icon over. When Motic Trace module is activated, users can drag the icon by its centre point, or rotate the icon by dragging its corner.

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# Measure Menu

The  Measure  menu  contains  a  list  of functions  which  allow  users  to  measure specific  aspects  of  an  image.  The  shapes listed  in  the  Measure  menu  correspond  to the  Measure  function  buttons  located  in  the Tool  Palette.  The  Add  Marker  option  will display  a  scale  bar  in  current  document. The  Show  Measure  Table  option  will display  a  list  of  measurement  results  and the  Export  option  allows  for  the  export  of these  results  in  a  selected  file  format.
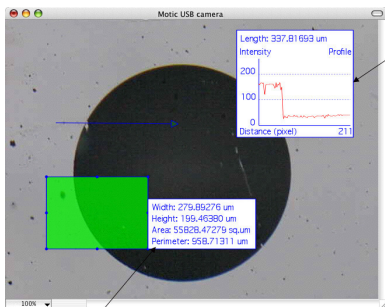
Once  an  object  has  been  created  in  the image  window,  a  window  will  appear displaying  the  parameters  of  that  object.  As well,  the  results  displayed  in  this  window will  also  display  in  the  Measure  Table.
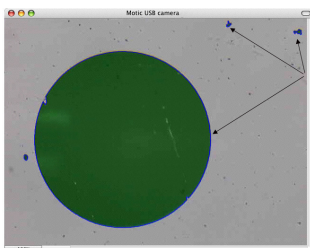
Select  the  Auto  Segment  function  to automatically  segment  objects  from  the background.  Objects  will  be  highlighted and  their  corresponding  parameters  and statistics  can  be  found  in  the  Measure Table.

Parameters and Results



Statistical information

Select the Show Measure Table option to display a list of measured objects corresponding to the current image. Click the Statistics button to display a list of statistical information related to the current image.

## Tools Menu
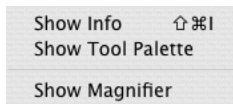




The Tools menu allows users to hide or display the Info window, Tool Palette and Magnifier.
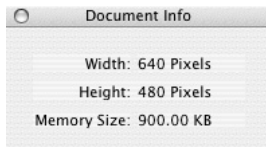
The Info window allows users to manipulate various parameters related to the current operation applied to the image (Marquee, Paint or Measure) including line width and color etc. If no operation has been applied, the Document Info window will display information related to the current image. When Motic Trace module is activated, users can change the alpha property of an image object.

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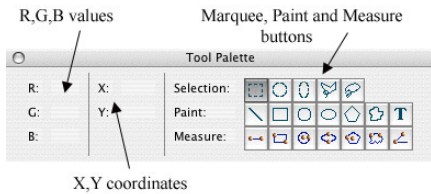
The Tool palette displays automatically once the Motic Images Plus 2.0 Mac OS X program is started. The R, G, B values on the left of the palette show the corresponding color channel values at the cursor's current location in the image window. The X and Y values are the cursor's current X,Y coordinates in the image window. The Selection buttons correspond to the Marquee functions under the Edit menu while the Paint and Measure buttons correspond to their respective menus.

Select the Magnifier option to be able to magnify certain areas or objects in the image window.

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