

## Microangelo Studio Colors



To choose a color, position the cursor over any color well in the color box, then click the left mouse button to set Color 'A', or click the right mouse button to set Color 'B'. The color box is a free floating pop up window. It can be turned on or off from the View menu.

The tools in the Microangelo Studio tool box use the 'A' and 'B' colors for all drawing operations. The currently selected 'A' and 'B' colors are displayed in the status panel to the left of the grid area

### Color Box

Microangelo Studio initializes the color box with the complete range of colors used by the current image being edited. In addition to providing monochrome, 16, and 256 regular painting colors, the color box also includes color wells that contain transparent and inverse screen ink. To create or edit icon images in different color formats, select an existing image format from the Image Format combo box on the tool bar, or add a new image by clicking the New Image Format button on the far right of the tool bar.

### Palette Files

The Studio initializes the color box for a new 256 color image using a default palette file included with Microangelo (default.pal). You can save different palette files on your system by opening the Edit menu and clicking Save Palette, and use them again later by clicking the Open Palette option. The palette files used by Studio are not binary PAL files used by some Windows applications. They are ASCII text files in a format used by Paint Shop Pro from JASC, Inc. So in addition to being able to edit colors graphically in the Studio, you can also edit your palette files in a plain text editor such as Notepad. (Do not attempt to edit a palette file using Wordpad or any other word processing application). The header records are followed by color definitions, one color per record. Colors are defined by their relative red, green, and blue components in intensities from 0 to 255.

### Creating Custom Colors

When editing an image containing 256 colors, you can edit any color in the color box by double clicking directly on its color well. If you create a 256 color icon and customize colors in the color box, you can save the color palette by clicking Save Palette on the Edit menu.

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## How Colors are Used by the Drawing Tools



### Drawing

The left mouse button is used with most of the drawing tools to paint using the primary 'A' color, and the right mouse button is used to paint using the secondary 'B' color. The Pencil, Line, Brush, Flood, Rectangle, and Ellipse functions operate in this manner.

### Color Eraser

The 'A' and 'B' colors are used to specify the foreground and background colors for the color eraser. The tool will change the 'A' (foreground) color to the 'B' (background) color. Using the right mouse button instead of the left will reverse this operation, changing any 'B' color under the Eraser to the 'A' color.

### Selection frame

The 'B' (background) color is also used when the selection frame is used to cut or drag a selection to a new location. The desired 'B' color must be chosen before making the selection.

When a cut operation is performed, or the selection is dragged to a new location, the area the image previously occupied is filled with the 'B' color.

You can also use the Tools menu and click Paste and Drag to select either the Transparent or Opaque color 'B' option. When a selection is dragged and the Transparent Color B option is in effect, any area in the selection that matches the 'B' color will be treated as a transparent area during the drag.

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**Pencil tool**

- 1 Click the Pencil tool button in the tool box; or on the Tools menu, click Choose Tool. **Pencil**.
- 2 Move the Pencil to the place on the icon where you want to start drawing.
- 3 Click the left mouse button (for Color 'A') or the right button (for Color 'B'), and hold it down as you draw.
- 4 Release the mouse button.

**Tip**

- Pressing either SHIFT key will restrict the Pencil tool to the current row or column. You can press and release the SHIFT key more than once during a single draw to restrict and free the drawing motion.

**Brush tool**

- 1 Click the Brush tool in the tool box; or on the Tools menu, click Choose Tool.**Brush**.
- 2 Select a shape representing the brush you want to draw with from the tool pan directly below the toolbox. A highlight appears around the shape you have selected.
- 3 Move the cursor to the place on the icon where you want to start drawing.
- 4 Click the left mouse button (for Color 'A') or the right button (for Color 'B'), and hold it down as you draw.
- 5 Release the mouse button.

**Flood tool**

- 1 Click the Flood tool in the tool box; or on the Tools menu, click Choose Tool. **Flood**.
- 2 Move the cursor to the area you want to fill.
- 3 Click the left or right mouse button to flood with Color 'A' or Color 'B', respectively.

### **Color eraser**

- 1 Click the Color eraser in the tool box; or on the Tools menu, click Choose Tool. **Color Eraser**.
- 2 Select a shape representing the Eraser you want to use, from the area below the toolbox. A rectangle appears around the option you have selected.
- 3 Move the Eraser to the place on the icon where you want to start editing.
- 4 Click the left mouse button to replace Color 'A' with Color 'B'. Click the right mouse button to replace Color B with Color A.

### **Straight line tool**

- 1 Click the Straight line tool in the tool box; or on the Tools menu, click Choose Tool. **Straight Line**.
- 2 Place the cursor at the starting point for the line.
- 3 Drag the cursor to where the line will end. The origin and the X and Y components of the line will be displayed in the status bar.
- 4 Release the mouse button to complete the drawing operation.

### **Tip**

- Press either SHIFT keys to restrict the line to increments of 45 degrees.

**Rectangle tool**

- 1 Click the Rectangle tool in the tool box; or on the Tools menu, click Choose Tool.**Rectangle**.
- 2 Move the cursor to one corner of the of the rectangle.
- 3 Drag diagonally to the opposite corner. The origin and size of the rectangle will be displayed at the far right of the status bar.
- 4 Release the mouse button to complete the drawing operation.

**Tip**

- Press either SHIFT keys to restrict the drawing to perfect squares.



### **Rectangle tool (filled)**

- 1 Click the Rectangle tool (filled) in the tool box; or on the Tools menu, click Choose Tool.**Rectangle (Filled)**.
- 2 Move the cursor to one corner of the rectangle.
- 3 Drag the cursor diagonally to the opposite corner. The size of the rectangle will be displayed at the far right of the status bar. (When the left mouse button is used to drag, the rectangle will be framed with Color A and filled with Color B. Using the right mouse button reverses this operation - the rectangle will be framed with Color B and filled with Color A).
- 4 Release the mouse button to complete the drawing operation.

### **Tip**

- Press either SHIFT keys to restrict the drawing to perfect squares.

### **Rectangle tool (solid)**

- 1 Click the Rectangle tool (solid) in the tool box; or on the Tools menu, click Choose Tool.**Rectangle (Solid)**.
- 2 Move the cursor to one corner of the rectangle.
- 3 Drag the cursor diagonally to the opposite corner. corner. The size of the rectangle will be displayed at the far right of the status bar. (When the left mouse button is used to drag, the rectangle will be drawn with Color A. Using the right mouse button draws the rectangle using Color B).
- 4 Release the mouse button.

### **Tip**

- Press either SHIFT keys to restrict the drawing to perfect squares.

**Color pipette**

- 1 Click the Color pipette tool in the tool box; or on the Tools menu, click Choose Tool. **Color Pipette**
- 2 Move the cursor over the pixel which contains the desired Color 'A' or Color 'B'.
- 3 Click the left mouse button to replace color 'A' or the right mouse button to replace color 'B'.  
The color is updated and the cursor returns to the prior drawing tool.

**Note:**

- The Color pipette can only be accessed from the toolbox or Tools menu when you are working with a 256 color image.

**Color locator**

- 1 Click the Color locator tool in the tool box; or on the Tools menu, click Choose Tool.**Color Locator**.
- 2 Click a cell in the grid area or the color well in the color box that contains the color to be located. The color well will blink in the color box and in all cells in the grid area that contain the color.

**Note:**

- The Color locator can only be accessed from the toolbox or Tools menu when you are working with a 256 color image.

### **Selection frame**

- 1 Click the Selection tool in the tool box; or on the Tools menu, click Choose Tool. **Selection Frame.**
- 2 Move the cursor to one corner of the area that you want to select.
- 3 Drag the cursor to the opposite corner of the area you want to select. A rectangle shows which pixels will be selected. All pixels within the rectangle, including those "under the rectangle," are included in the selection. The size of the area selected will be displayed at the far right of the status bar.
- 4 Release the mouse button to complete the select operation. A highlighted border will enclose the selected area. The area may now be dragged to any other location in the work area, or operated on using the Cut or Copy editing commands.

**Ellipse tool**

- 1 Click the Ellipse tool in the tool box; or on the Tools menu, click Choose Tool. **Ellipse**.
- 2 Move the cursor to one corner of the of the bounding rectangular area that will contain the ellipse.
- 3 Drag diagonally to the opposite corner.
- 4 Release the mouse button to complete the drawing operation.

**Tip:**

- Press either SHIFT keys to restrict the drawing to perfect circles.

**Ellipse tool (filled)**

- 1 Click the Ellipse tool (filled) in the tool box; or on the Tools menu, click Choose Tool. **Ellipse (Filled)**.
- 2 Move the cursor to one corner of the of the bounding rectangular area that will contain the ellipse.
- 3 Drag diagonally to the opposite corner. (When the left mouse button is used to drag, the ellipse will be framed with Color A and filled with Color B. When the right mouse button is used this operation is reversed - the ellipse will be framed with Color B, and filled with Color A).
- 4 Release the mouse button to complete the drawing operation.

**Tip:**

- Press either SHIFT keys to restrict the drawing to perfect circles.

**Ellipse tool (solid)**

- 1 Click the Ellipse tool (solid) in the tool box; or on the Tools menu, click Choose Tool. **Ellipse (Solid)**.
- 2 Move the cursor to one corner of the of the bounding rectangular area that will contain the ellipse.
- 3 Drag the cursor diagonally to the opposite corner. (When the left mouse button is used to drag, the ellipse will be drawn using Color A. When the right mouse button is used, it will be drawn with Color B).
- 4 Release the mouse button to complete the drawing operation.

**Tip:**

- Press either SHIFT keys to restrict the drawing to perfect circles.



The view menu contains options that determine what features are displayed in Microangelo Studio. You can toggle the display of the tool bar, the status bar, the color box, the tool box, and the editing grid.

The status panel is located to the left of the grid area. It displays an actual size view of the image being edited and the current 'A' and 'B' drawing colors.

The color box is used to select drawing colors when creating or editing an icon image. The color box is a pop up window that can be moved anywhere on your desktop. The color box offers a full range of colors for the image being edited, as well as transparent and inverse screen selections.

The tool box provides access to the tools used to edit an icon image. The tool box is a pop up window that can be moved anywhere on your desktop.

Color A is assigned to your left mouse button. Choose a new Color 'A' by positioning the cursor over a color well in the color box and clicking the left mouse button.

Color B is assigned to your right mouse button. Choose a new Color 'B' by positioning the cursor over a color well in the color box and clicking the right mouse button.

The status bar at the bottom of the program window displays information and messages that provide feedback as you work. It displays information about tool buttons and menu selections, and also provides information on the cursor location and movement during drawing operations.

The Browser can be opened from the Librarian by clicking Browser on the File menu. This is the best way to access to all files containing libraries when you are opening a file in a new Librarian window.



The transparent ink well is available on all palettes. It is the well that has a computer screen filled with a dark blue color.

The inverse screen ink well is available on all palettes. It is the well that has a computer screen filled with a pink color.

## Introduction to Microangelo Studio



Microangelo Studio can create, open, and save Icon Resource files. The Studio will create or edit any size image from 8x8 to 64x64 pixels in monochrome, 16, or 256 color formats.

### Workspace

At the center of the main window is the grid area. It displays the zoomed view of the icon image and is where all drawing actions take place. Above the grid area is where the most commonly used menu commands can be accessed from the Studio tool bar.

To the left of the grid area, is the status panel that displays, from top to bottom, an actual size image of the icon being edited, and the current Color 'A' and Color 'B' settings.

The color box and the tool box are separate pop up windows. Click the left or right mouse button over the desired color well in the color box to select a new 'A' or 'B' color. Microangelo Studio initializes the new image size and color format to 32 x 32 pixels and 16 colors. You can select the size and color format of a new image in an icon by clicking on the New Image Format button on the tool bar.

At the bottom of the program window is the status bar. When a tool tip is activated or when one of the tool's from the tool box is selected, a short description of the action or tool will be displayed on the left side of the bar. The current X and Y coordinates of the cursor are displayed to the right when it is moved over the grid area.

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## General Rules for Operating the Tools



Microangelo Studio will initialize to a minimum window size. The main window size may be increased, but it cannot be reduced below the minimum size. The color box and tool box are separate pop up windows that can be moved anywhere on your screen. Click the View menu to control the display of features in Microangelo Studio including the tool and status bars and the color box and tool box.

### Freehand tools

Drawing with freehand tools (Pencil, Brush, and Color Eraser) is performed by pressing the left or right button in the edit area. Drawing continues as the mouse is moved until the mouse button is released.

### Precision tools

Drawing with precision tools (Line, Rectangle, and Ellipse tools) is performed by pressing the left or right mouse button and dragging the mouse with the button depressed. A line image of the potential figure is displayed in the grid area and in the actual size image in the status panel as the drawing action is performed. Releasing the mouse button completes the paint operation and updates the icon image.

### Flood tool

To paint using the flood tool, press the left or right mouse button over a color cell in the grid area. The pixels, and all adjacent pixels of the same color will be filled. The operation continues until the flood is completely bounded by different color pixels.

### Selection frame

The selection frame works very much like the rectangle tool. Press the left mouse button and drag to select areas of the edit image. A selected area can be cut, copied or moved to a different location. You can also paste into the selected area using the Paste Special selection on the Edit menu.

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## **Edit menu**

### **Undo**

Reverses changes you make on an icon, such as colors, or shapes. The Undo command changes to Can't Undo when there are no more commands to be undone. This will undo previous drawing action performed on the icon image. The specific Undo action displayed (for example, Undo rectangle or Undo Flood) identifies the command that is available to be undone if you cannot reverse the action.

### **Redo**

Restores drawing actions that were undone using the Undo command. The Redo command is only available after using Undo and before continuing with any new drawing actions. The specific Redo action displayed (for example, Redo Ellipse or Redo Flood) identifies the command that is available to be redone.

### **Cut**

Removes selected graphics and puts it on the Clipboard. This command is available only when you select graphics. Graphics that you place on the Clipboard remains there until you replace it with a new item.

### **Copy**

Copies selected graphics to the Clipboard. Graphics that you copy to the Clipboard, replaces the previous contents.

### **Paste**

Inserts a copy of the Clipboard contents into the work area, replacing the selection (if any) with the graphics on the Clipboard. The graphics are pasted into a selection frame, where they can be dragged to the desired location. Once pasted into the selection frame, dragging the image will insert Color 'B' as the background color. This command is not available if the Clipboard is empty or if the selected graphics cannot be replaced.

### **Paste Special**

This will scale a bitmap image either from the Clipboard (if an image is present), or directly from a bitmap file. You will also have the option of pasting into the Studio as a New Selection, or paste into Studio in the current selection.

### **Tip:**

- You may convert a BMP file into an icon, by pasting it to the Clipboard, and using the Paste Special option on the Edit menu. However, if your bitmap uses colors that are not available in the currently active palette, the Studio will substitute the closest color available from the currently active palette. To ensure color integrity, use the Open Bitmap As Image, found on the Edit menu.

The New Selection will paste the bitmap image into the grid area, without altering the size of the bitmap image.

The current selection is only available, if pixels has been defined in the grid area, by the selection frame tool. The Studio will scale the size of the current image, into the area defined by the selection frame.

The Open Bitmap As Image, found on the Edit menu, is the most efficient way to convert a bitmap image into an icon. With this selection, color integrity of the bitmap is preserved. Studio will alter the color box, to accommodate any colors that are not found in the palette, but used in the image. If the Paste Special selection is used, color integrity is NOT preserved. The Studio will use a color close to the one used in the original bitmap image.



The selection frame defines an area of the bitmap that you can cut, copy, clear, or move.

## **File Menu**

### **New**

Prepares the work area to begin editing a new icon. The new icon is initialized to the screen color. If you are currently working on an icon file, Microangelo Studio will prompt you to Save the icon file.

### **Open (Ctrl+O)**

Opens an existing icon resource file, (\*.ICO) file.

### **Save (Ctrl+S)**

Saves the work area to the current icon resource file (\*.ICO) on disk. When you save an icon for the first time, Microangelo Studio displays the Save As dialog box.

### **Update/Update and Exit**

If operating the Studio through a Server mode from the Librarian, the Save function will display as **Update**. The image will be pasted in the current window. When editing an existing icon, the image will be updated automatically from the file from which it was opened.

The **Update and Exit** will perform the same as Update, except that the Server mode of the Studio will close.

### **Save As**

Displays the Save As dialog box, where you specify the location of the icon resource file (\*.ICO) on disk.

### **Exit (Alt+F4)**

Closes the Microangelo Studio program.

## **Tools menu**

### **Selection frame**

The selection frame defines an area of the bitmap that you can cut, copy, clear, or move.

### **Pencil**

Draws in a constant width of one pixel. Drawing continues as the mouse is moved until the mouse button is released.

### **Straight line**

Draws a line, filled with Color 'A' or Color 'B'. A line image of the potential figure is displayed for your inspection as the cursor is dragged. Releasing the mouse button completes the paint operation and updates the icon image.

### **Brush**

Colors multiple pixels using the current brush size and shape. Drawing continues as the mouse is moved until the mouse button is released.

### **Flood**

Replaces an area of one color with another color. The pixels, and all adjacent pixels of the same color will be filled. The operation continues until the flood is completely bounded by different color pixels.

### **Color eraser**

Used to selectively replace one color with another color. Editing continues as the mouse is moved until the mouse button is released.

### **Rectangle**

Draws a rectangle framed with Color 'A' or Color 'B'. A line image of the potential figure is displayed for your inspection as the cursor is dragged. Releasing the mouse button completes the paint operation and updates the icon image.

### **Rectangle (filled)**

Draws a rectangle filled with Color 'A' or Color 'B'.

### **Rectangle (solid)**

Draws a rectangle framed with Color 'A' and is filled with Color 'B'.

### **Ellipse**

Draws an ellipse framed with Color 'A' or Color 'B'. A line image of the potential figure is displayed for your inspection as the cursor is dragged. Releasing the mouse button completes the paint operation and updates the icon image.

### **Ellipse (filled)**

Draws an ellipse filled with Color 'A' or Color 'B'.

### **Ellipse (solid)**

Draws an ellipse framed with Color 'A' and is filled with Color 'B'.

### **Color pipette**

Picks up Color 'A' or Color 'B' from the editing area. This option will become available in the Tools menu, and the tool box, when creating or editing an image with more than 16 colors.

### **Color locator**

Locates the color in the grid area, and the color box. All instances where the color was located in the grid area, will blink. This option will become available in the Tools menu, and the tool box, when creating or editing an image with more than 16 colors.

## **View menu**

### **Toolbar**

This option shows or hides the tool bar from the Studio's display. The tool bar provides quick and easy selection of commonly used options.

### **Status bar**

This option shows or hides the status bar from the Studio's display. The status bar is located at the bottom of the program window. It displays descriptive information when a menu item is highlighted, or one of the tool tips is activated.

### **Color box**

This option shows or hides the color box from the Studio's display. The color box is an independent window, and can be moved anywhere on your desktop. The palette will offer more colors when the image format is changed (depends on the capability of your individual system).

### **Tool box**

This option shows or hides the tool box from the Studio's display. The tool box is an independent window, and can be moved anywhere on your desktop. It contains all tools available to create or edit icon images.

### **Grid**

This option shows or hides the grid from the Studio's display.

### **Open a Color Palette**

- 1 Set the image format to 256 colors, (you may select any size).
- 2 Click Open Palette from the Edit menu.
- 3 Browse to the folder where the palette is stored.
- 4 Select the palette, and click Open.

### **Note:**

- You are only able to open a 256 color palette. The 16 primary colors are established, and are unable to be edited.

### **Save a Color Palette**

- 1 Set the image format to 256 colors, (you may select any size).
- 2 Click Save Palette from the Edit menu.
- 3 Name the palette, and choose the folder in which it is to be saved.

### **Note:**

- You are only able to save a 256 color palette. The 16 primary colors are established, and are unable to be edited.

**Edit a Color**

- 1 With the 256 color box active, double click on the color to be edited.
- 2 From the Blend Color dialog, make changes to the color.
- 3 Click OK to return to editing the icon image.

**Note:**

- You are only able to edit a color in a 256 color box. The 16 primary colors are established, and are unable to be edited.

## **Create Icon Resource**

- 1 Click New from the File menu.
- 2 If you are currently working in an edit session of another image, you will be prompted to save current file, before opening a new file.
- 3 Microangelo Studio will open with a blank grid area to start creating a new icon.
- 4 Once drawing has been completed, click Save As from the File menu.

### **Tip:**

- If you would like to experiment with the editing of an image, click Update from the File menu. This will update the image in the file, but leave the Studio open, so that you may edit the image with different color schemes, or shapes, etc.



### Create 'Custom' Size Image for Icon Resource

- 1 Click New from the File menu.
- 2 Microangelo Studio will open with a blank grid area to start creating a new icon.
- 3 Click the New Image Format button (far right of tool bar), and choose the size, and number of colors from the different options; or scroll to the **Custom...** selection and define your own.
- 4 Once editing has been completed, click Save As from the File menu.

**Tip:**

- Once you have created several different formats, for a particular image, you will be able to edit the different formats, by quickly referencing them from the Image Format combo box.

### **Edit Icon Resource**

- 1 Click Browser from the File menu.
- 2 Click the Icons Tab.
- 3 Browse to the folder that contains icon.
- 4 Double-click on the icon image that you would like to edit.
- 5 Make any desired changes to the image.
- 6 Click Save from the File menu.

## Creating an Icon Resource From a Bitmap

- 1 Click New from the File menu.
- 2 Click the New Image Format button (far right of tool bar), and choose the size, and number of colors from the different options; or scroll to the **Custom...** selection and define your own.
- 3 Click Open Bitmap File from the Edit menu.
- 4 Browse to the folder which contains the bitmap file.
- 5 Select the file, and click Open.
- 6 Click Save As from the File menu to save image as an icon.

### Tip:

- You may also convert a BMP file into an icon, by pasting it to the Clipboard, and using the Paste Special option on the Edit menu. However, if your bitmap uses colors that are not available in the currently active palette, the Studio will substitute the closest color available from the currently active palette. To ensure color integrity, use the Open Bitmap As Image, found on the Edit menu.

## **Open Icon Resource**

- 1 Click Browser from the File menu.
- 2 Click Icons Tab.
- 3 Browse to the folder that contains the icon.
- 4 Double click on icon.
- 5 Studio will open the image, and place it in the grid area, ready to be edited.

### **Edit Icon Image in a Library**

- 1 Click Browser from the File menu.
- 2 Click Libraries Tab.
- 3 Browse to the folder which contains the file.
- 4 Double click on file to open.
- 5 Double click on icon to be edited.
- 6 Librarian will initialize in Server mode with the Studio component.

