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Minimum requirements:

- Intel Pentium II 200-MHz processor
- Windows 95/98/ME/2000/XP/NT 4 or later
- 32MB of available RAM
- 20MB of available disk space
- Color monitor running at 16-bit or higher
- Mouse or Drawing Tablet

Recommended:

- Intel Pentium III 500-MHz processor
- Windows 95/98/ME/2000/XP/NT 4 or later
- 128MB of available RAM
- 20MB of available disk space
- Color monitor running at 24-bit
- Drawing Tablet

To install PixelToolbox on a Windows computer:

1. Unzip 'PixelToolbox.zip' to a temporary folder
2. Run Setup.exe
3. Follow the on-screen instructions
4. Launch PixelToolbox by selecting it from the Start Menu

To uninstall, run the uninstall program via the Start Menu or the Add/Remove Programs Control Panel applet.

PixelToolbox is the complete solution for designing desktop graphics for the Windows operating system. Create, edit, and apply 1-bit patterns, wallpaper tiles, icons, and cursors - all from a single integrated environment.

PixelToolbox offers the standard set of painting tools along with a few filters and features not found in other software. The unique interface, tools, and workflow were engineered to maximize your creative potential.

The user interface is a virtual 'drawing desktop' with everything you need close at hand. The tools are arranged for quick and intuitive access, and designed to be elegant and non-obtrusive.

This software was designed for artists by an artist with years of experience in fine art, digital design, and user interface design. We hope that our hard work becomes a creative experience that will please your muse countless times.

Enjoy!

The New Screen is where you select the project, size, and color space to work in. This is the screen that appears immediately after launching PixelToolbox, and is always accessible by clicking on the New button that is common to every project space.
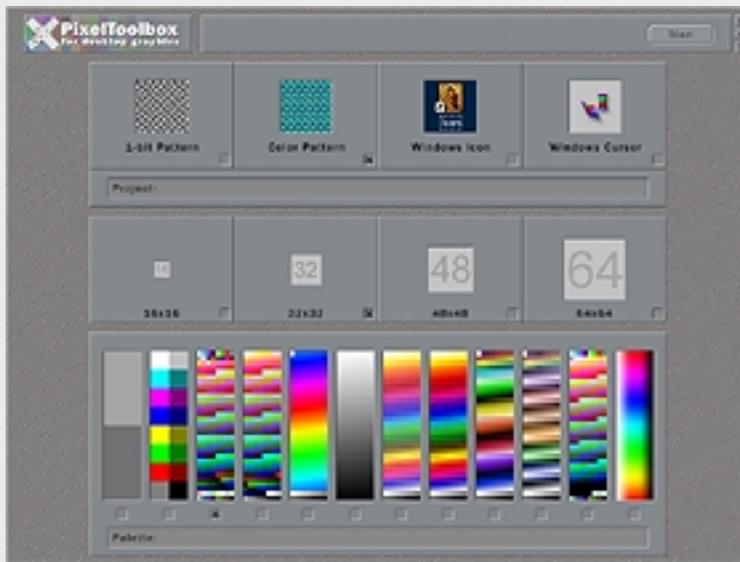
New Screen Options

There are 4 projects to choose from:

- 1-bit Pattern - 8x8 pixel, black & white patterns saved in a special integer format to a file called 'Control.ini'. Although limited, this format is very space efficient.
- Color Pattern - Also known as Wallpaper tiles, these designs can be created in virtually any color depth and can be used as wallpaper, or exported for use in other applications.
- Windows Icon – These small graphics are the visual representation of links to programs and files.
- Windows Cursor – These small graphics serve as the onscreen indicator of the mouse position, and current function.

There are 5 sizes available: 8x8, 16x16, 32x32, 48x48, and 64x64.

There are 4 color depths available: 1, 4, 8, and 32-bits, with 9 different palettes to choose from in 8-bit depth.

Not all color choices and sizes are available for all projects.

After making your choices, click Start to get started creating.

PixelToolbox Window

The PixelToolbox window is 800x600 pixels and cannot be resized. It can however be moved, minimized, and closed just like any standard Windows application. To move, click and drag on any of the window's edges. The minimize and exit buttons are located in the upper-right corner of the window, below the help button.
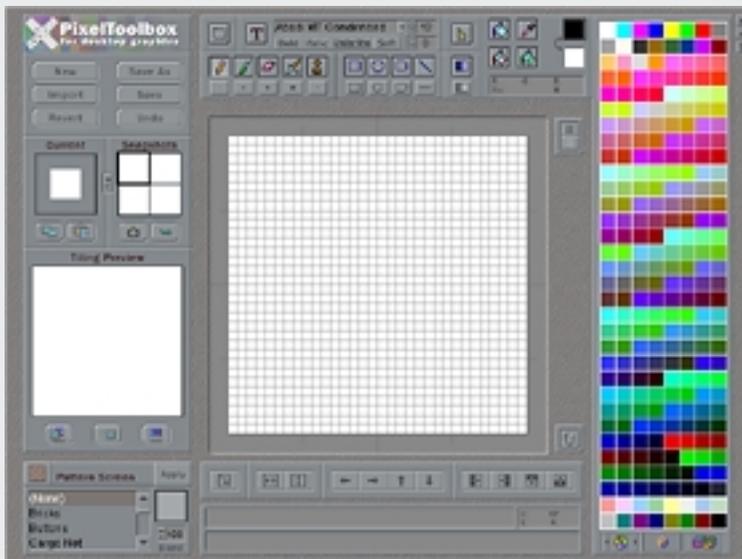
Drawing Area & Grid Overlay

In PixelToolbox all drawing takes place inside the area located at the center of the workspace. The drawing area is always magnified in order to compensate for the relatively small graphics that the file formats require. The magnified environment makes the act of drawing feel more natural, and also makes editing individual pixels a snap.

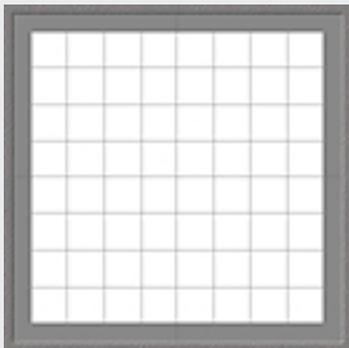The interactive grid overlay is a handy guide that divides the workspace into pixel-sized units, or converts into a perspective grid for creating Windows XP-style icons. To control the grid overlay:

Click this button to toggle the grid's visibility.

Toggles the grid color between gray and the reverse of the color beneath.

Toggles the grid between pixel mode and perspective mode. *This option is only available in the icon project space.*

File Menu

Located in the upper-left corner of the workspace, the File menu provides you with the functions you need to manage your file output.

New - Exit the current project and return to the 'New' screen.

Import - Import an image into the current project. Images are imported as active selections so they can be repositioned. If the imported image is larger than the project, it is scaled to fit within the bounds of the project while maintaining its original proportions. With selections, the imported image is scaled to fit the selection.
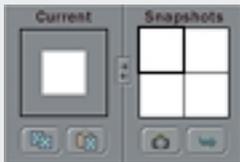
Revert - Returns saved projects to the last saved state.

Save As - Invokes a dialog box that allows you to name and save your project.

Save - Automatically saves changes to projects saved in the same session using Save As.

Undo/Redo - Toggle virtually any change you make to your project.

Current Menu

The Current menu contains an actual-size preview of the current project, along with the clipboard functions. As with most of the actual-size previews in PixelToolbox, the Current preview can be magnified to 64x64 pixels in projects that are 32x32 pixels or smaller. The Current menu also shares the Swap function with the Snapshots menu.

Copy the entire image or a selection to the clipboard.

Paste the contents of the clipboard into the current project as an active selection. If the pasted image is larger than the current project, it is scaled to fit within the bounds of the project while maintaining its original proportions. With selections, the pasted image is scaled to fit the selection.

Swap the current image and the selected snapshot in one operation. Handy when all the snapshots are in use.

The Snapshots menu is described on the following page.

Snapshots Menu
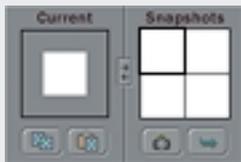
Snapshots are versions of your project that you can record and go back to at any time. Snapshots extend the standard Undo function by allowing you to temporarily save, view, and select from multiple versions of your project.

There are 4 snapshot placeholders in every workspace, more than enough to free you from the burden of mistakes, and encourage you to explore new possibilities.

To select a snapshot, simply click on it. Snapshots can be magnified if they are selected.

Take a snapshot of the current image.

Apply the selected snapshot to the current image.

Swap the current image and the selected snapshot in one operation. Handy when all the snapshots are in use.

To Clear a snapshot, double right click on it.

Tiling Preview Menu

The Tiling Preview Menu consists of a real-time preview of your tiled design, along with functions to apply the design to your desktop, and export it to a variety of formats. The tiling preview area updates automatically as you paint and manipulate your images, giving you indispensible feedback that makes creating accurate tiles easy and fun.

Apply - Saves changes to the current project and applies the design to the desktop in one operation. If the current project has not been saved, you will be prompted to save it. *Applies as a pattern in 1-bit, and as wallpaper in the color spaces.*

Export - Exports the current project to a variety of formats including Web-ready JPG, and PNG formats.

Control Panel Applets - Opens the Windows Display, or mouse control panel depending on the project. *The tiling preview, and the apply to desktop and export functions are replaced in cursor and icon projects with the applet control.*

1-bit Pattern Browser

1-bit patterns are 8x8 pixel, black & white patterns saved as a series of 8 integers to a file named 'Control.ini'. Although limited in possibilities, this format is very space efficient. On average each pattern occupies a whopping 30 bytes on your hard drive. Windows does come with a basic browser/ editor for 1-bit patterns, but if you've ever used it you'll agree that it's a very limited and uninspiring workspace. In PixelToolbox, the Pattern Browser is integrated into the 1-bit Pattern work space for easy access. Edit, rename, and delete patterns on the fly, in an environment designed to inspire you.

To preview a pattern in the preview window, select it from the list.

To rename the selected pattern, double click on the Current Pattern Field located directly below the list.

Edit - Loads the selected pattern into the workspace for editing.

Delete - Deletes the selected pattern from your collection.

Status Displays

The status displays are text displays that provide you with valuable information such as cursor position, color values, and tool tips, giving you the feedback that you need to work with precision. The primary status displays are grouped together and centered at the bottom of the PixelToolbox workspace.

File Status	X: W:
	Y: H:
Tips Status	
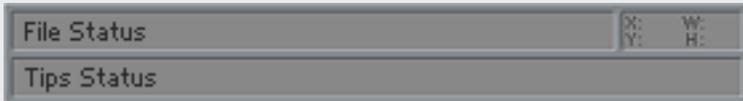
File Status - After using 'Save As', the name of the file is written to this status display.

Tips Status - All tool tips and keyboard shortcuts appear here. Shift+click to toggle the visibility.

Coordinates Status - Shows mouse position inside the drawing area, and the width and height of selections, shapes, and gradients.
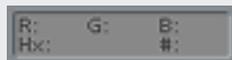
Color Status - Works with palettes, color chips, the RGB Picker, and the Color Dropper to show you the RGB, hexadecimal, and palette index values of a color.

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Foreground & Background Color Chips
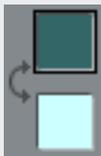
The foreground and background color chips are an integral part of every project space. All of the drawing tools work with one, or both of these colors depending on the tool. Although the palettes vary between the project spaces, the color chips function basically the same way.

The foreground color always defaults to black, and the background color to white. You can return a chip to its default value when it's selected by double right clicking the chip.

To change the color of one of the chips, select the chip by clicking on it, then choose a color from the current palette.

To swap colors between the chips, click on the semi-circular arrow to the left of the chips.

The foreground and background chips behave a little differently in the 1-bit pattern space, since there are no other colors to choose from. In the 1-bit space, clicking either chip has the effect of swapping colors between the chips. The foreground chip always remains selected.

Working with Palette Colors

Palettes are indexed color sets used in digital design to produce graphics with small file sizes that look the same on any platform.

The 4-bit palette consists of 16 colors. This palette is a remnant from the early days of personal computing when monitors displayed only 16 colors. It is still used to design icons, cursors, and graphics for older systems and portable devices with limited displays.

8-bit palettes contain 256 colors. Although used more frequently than the 4-bit palette, 8-bit palettes are also a remnant from an earlier time. 8-bit images are still used a great deal in Web design, software design, and multi-media because of their relatively small file sizes. PixelToolbox gives you 9 beautiful 8-bit palettes to choose from.

To select a color from the 4 & 8-bit palettes, simply click on the color. Selecting a color changes the color of the color chip currently selected.

Working with RGB Colors

RGB is the color model that modern computer monitors use to display colors. In this model, red, green, and blue values are specified as levels ranging from 0 to 255. Amazing as it seems, with this model it is possible to 'mix' just about any color that you can imagine... 16, 777, 216 possible colors to be exact.
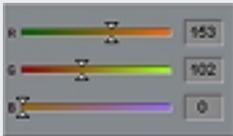
The RGB color picker consists of a slider and text box for each of the color components. As a rule, lower values produce darker colors, and higher values produce lighter colors. Pure grays are mixed with equal values of each color component.

The Custom Palette allows you to work with a palette of your favorite colors in 32-bit mode. It integrates with the color picker to make using and saving custom colors as easy as possible. When 'Edit Colors' is checked, clicking on a color changes the color to the color of the selected chip. When it is unchecked, clicking the color changes the color of the selected chip to the custom color.

Save - Writes the RGB values of the colors to 'PixelToolbox.ini'.

PixelToolbox contains several tool menus - some are common to all of the project spaces and color depths, while some are unique to a particular project or color depth. In addition, a few of the common tools function differently depending on the project or color depth.
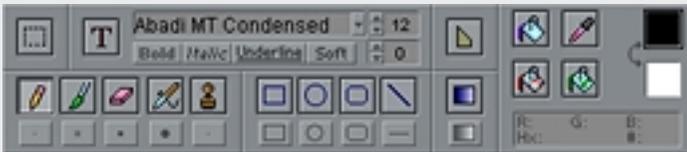
The Tools Menu is located directly above the drawing area. It contains all of the drawing and painting tools. The tools and options in this menu vary between projects and color depths.

The Manipulation Functions are located directly below the drawing area. These functions affect the entire image, or active selections.
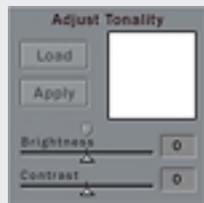

The Effects Menu is located in the lower-left corner of the workspace. Here you will find Pattern Screen and Fast Weave - unique functions to texture and transform your designs.

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Special Menus

In PixelToolbox the color depth determines what tools are available and how they function. Some of the functions are written specifi-cally to take advantage of the built-in limita-tions of indexed palettes. Functions such as the Randomize Color, Invert Color, and Cycle Palette Colors func-tions are common to the 4 & 8-bit color depths. Variations of two of these tools - Generate Random Pattern, and Invert Pattern are available in 1-bit depth.

Since palette functions are not practical with over 16 million color choices, PixelToolbox offers a group of functions in 32-bit color depth specially designed to work with RGB images. Adjust HSL, and Adjust Tonality allow you to adjust image properties such hue, contrast, and color saturation in a completely interactive and non-destructive way. 32-bit color also offers a group of single-click tools - Blur, Sharpen, Negative, and Colorize. *Even though the tools vary between color depths remember that you can take full advantage by copying and pasting between color depths, usually with great results.*

Drawing & Painting Tools

There are a total of 10 variants for the drawing and painting tools. Each tool uses the subset of these 10 variants that best mimic its real-world counterpart. The variants come in 4 sizes (measured in pixels): 1, 3, 5, & 7, and 3 styles: square aliased, round aliased, and round anti-aliased. The variants can be selected by clicking on the variants button directly below the tool.

Pencil - Uses only the aliased variants in all 4 sizes. Works with the Foreground color chip.

Brush - Uses all of the variants except for the 1 pixel variant. Works with the foreground color chip.

Eraser - Uses all of the variants. Works with the background color chip.

Airbrush - Uses the foreground color chip. It works like a spatter brush and uses only aliased variants in 1, 4, & 8-bit color depth. In 32-bit it uses only anti-aliased variants and produces a faded, soft-edged stroke.

Cloning Brush - Uses all of the variants. Sample the image and 'paint' it into another part of the same image. Right click to select the area to sample, then paint.

Shape & Line Tools

The shape tools each have 3 variants:

Outline - Draw an outline of the shape using the foreground color chip.

Filled Outline - Draws a filled shape with an outline. The outline uses the foreground color chip, and the fill uses the background color chip.

Solid - Draws a filled shape with no outline. The fill uses the foreground color chip.

The line tool comes in 5 widths: 1, 2, 3, 4, & 5 pixels. The selected width is the width that the shape tools use for the outline variants. The variants can be selected by clicking on the variants button directly below the tool. To draw a shape simply click and drag in any direction.

Rectangle Tool - Draw a rectangle.

Oval Tool - Draw an oval.

Rounded Rectangle Tool - Draw a rounded rectangle.

Line Tool - Draw a straight line.

Elastic Gradient Tool

The Elastic Gradient Tool is an innovative revision of the standard gradient tool found in other applications. The first thing you'll notice is that the gradient updates dynamically as you draw. PixelToolbox calculates the optimal color spread to size ratio on the fly, giving you continuous feedback. The other unique thing is the way that the tool functions in the 4 & 8-bit color spaces. Instead of making a smooth blend between two colors like it does in the 32-bit color spaces, it divides the area evenly using the colors in the palette that are numerically in between the two colors. The results can be striking enough to give you a new reason to use indexed colors. The Elastic Gradient tool uses both the foreground and background color chips as the start and end points in the gradient. The available variants are:

Draws a horizontal gradient.

Draws a vertical gradient.

Draws a rectangular radial gradient.

Draws an oval radial gradient.

Fill, Color Dropper, & Warp Tools

The fill tools work with the foreground color chip to fill areas in your image that are the same color as the pixel that is clicked on.

Fill Tool - Fills a contiguous area.

Checker Fill Tool - Fills every other pixel in a contiguous area.

Selective Fill Tool - Fills every pixel in the image that is the color of the pixel that is clicked on.

The Color Dropper changes the color of the selected color chip to a color sampled from the image. Most of the drawing and painting tools transform into the Color Dropper when right clicked.

Color Finder - Only available in the 8-bit color spaces, this tool hilites the location on the palette of the color that is sampled.

Warp Tool - Click and drag to distort the image from the point clicked. Use it to make subtle changes or to completely transform your image.

Selection Tool

The Selection Tool allows you to discretely manipulate areas of the image, as well as reposition imported elements and text. *This tool is not available in the 1-bit Pattern project space.*

To select an area in your image, click and drag in any direction.

To reposition a selection, click inside of the selection and drag in any direction. *If the selection is one that you created, as opposed to one created by the import or paste functions, dragging the selection from its original area, or using the image manipulation functions will 'cut' the area out by filling it with the background color. Alternately, you can make the selection a copy by holding down the Shift key when you drag or manipulate the selection.*

To deselect a selection, click on the gray gutter just outside the drawing area, select another tool, or Ctrl+D.

To delete a selection, press the Delete key, use Clear Image, or drag the entire selection off of the image and let your mouse up.

Text Tool

The Text Tool makes it possible to add text, symbols, and other TrueType font characters to your images. It works with the foreground color chip to let you specify the text color.

To add text, select the text tool and click anywhere on your image, then enter your text in the window that pops up, and click ok. Your text is added to the image as a selection with a transparent background, ready for you to reposition.

Abadi MT Condensed

Access the font list by clicking on the current font name, or the adjacent button. *Shift + click on the font name opens the Character Map.*

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Font size and character spacing can be controlled with the size and kerning controls at the right of the Text Menu. The range depends on the dimension in pixels of the project.

Bold *Italic* Underline Soft

The available font styles are: Bold, Italic, and Underline. Click to toggle.

Soft - Smooth the edges of the text with anti-aliasing. *This option is available only in the 8 & 32-bit color spaces.*

Transparency, Inverse, & Hotspot Tools

The Transparency and Inverse Color Chips can be found in the icon and cursor project spaces, located directly to the right of the drawing area. The colors of these two chips represent the transparent, and inverse-color areas. Both colors can be disabled and enabled by right clicking the chip. Only the transparent color can be changed.

Transparency Color Chip - The top chip is the color that will be transparent in your icon or cursor. This color is transparent in the workspace to allow you to accurately preview the transparency.

Inverse Color Chip - When enabled, areas painted pure black will show the inverse of the color beneath the icon or cursor. *The Inverse Color Chip is disabled by default.*

Hotspot Tool - Available only in the cursor project space, this tool is for specifying a pixel to serve as the cursor's hotspot. When the hotspot is not specified, the top-left pixel (0, 0) is used.

To set a hotspot, simply click the desired pixel. The hotspot blinks when the hotspot tool is selected and inside the drawing area.

Image Manipulation Functions

The following functions are available in all of the project spaces. They affect either the entire image, or the area inside a selection.

Clear Image - Fills the image or selection with the background color.

Rotate - Rotates the image or selection clockwise in 90 degree increments.

Flip - 2 functions that flip the image or selection horizontally, or vertically.

Nudge - 4 functions that move the image or selection in increments of 1 pixel.

In the pattern project spaces, nudging the image is non-destructive and cycles your design as if it were tiled. In the icon and cursor project spaces, nudging the image makes the leading pixels disappear and the trailing pixels are filled with the background color.

Mirror - 4 functions that mirror one half of the image or selection to the other.

Palette Color Manipulation Functions

These functions are available in all of the 4 & 8-bit color spaces:

Cycle Palette Colors - Changes every color in your image or selection to the prior, or next color in the palette depending on the direction clicked. This function wraps between the last and first colors in the palette.

Invert Palette Colors - Changes every color in your image or selection to the inverse color on the palette.

Randomize Palette Colors - Changes every color in your image or selection to a new color randomly chosen from the palette. This function was designed to preserve the total number of colors in the image.

The following functions are available in the 1-bit pattern space:

Random Pattern - Generates a random pattern.

Invert Pattern - Makes black pixels white, and white pixels black.

32-bit Color Manipulation Functions

The following functions are available in the 32-bit color spaces:

Adjust HSL - Adjust the Hue, Saturation, and Lightness of your image interactively. Hue is represented in degrees, and Saturation and Lightness as percentages.

Adjust Tonality - Adjust the brightness and contrast of your image interactively. Brightness is a linear value, and contrast a percentage.

These two applets share several functions:

Load - Loads the current image into the applet.
Apply - Applies the changes to the current image.
To reset the sliders, click on the small arrow above the sliders. To clear the image from the applet, double right click the applet preview image.

The following functions are also availble in 32-bit:
Blur - Blurs the image or selection.
Sharpen - Sharpens the image or selection.
Negative - Makes your image or selection a negative.
Colorize - Colors your image or selection with the foreground color.

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Pattern Screen & Fast Weave Functions
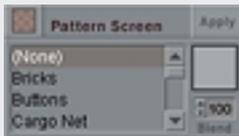
Pattern Screen is an innovative function that lets you to use your collection of Windows 1-bit patterns as textures that can be selectively applied to your image. To use: select a pattern from the list, adjust the **Blend**, then click **Apply**. Black pixels in the original pattern are colored the foreground color, and white pixels are transparent. *Blend is not available in the 4-bit color spaces.*

Access Fast Weave by clicking on the Pattern Screen button. *Fast Weave is not available in 1-bit.*

Fast Weave is for making simple 'woven' designs. Choose the colors, and shadow colors for the vertical strand, the horizontal strand, and the background. Specify the width and spacing of the horizontal and vertical strands, and the depth of the shadow - in pixels. The range of each number is determined by the physical dimensions of the project. To choose a new color, select the color chip and choose a new color from the palette or RGB picker. The background and background shadow colors can be made transparent by right clicking the color chip. When you're ready, click **Apply**.

PixelToolbox
for desktop graphics

New: Ctrl+N
Save & Save As: Ctrl+S
Import: Ctrl+I
Export: Ctrl+E
Revert: Ctrl+R
Undo & Redo: Ctrl+Z
Set Tile: Ctrl+T

Swap Fg & Bg Colors: Ctrl+G
Grid Visibility: Spacebar
Clear: Delete

Copy: Ctrl+C
Paste: Ctrl+V
Take Snapshot: Ctrl+K
Apply Snapshot: Ctrl+P
Swap Snapshot: Ctrl+W

Quit: Ctrl+Q
Minimize: Ctrl+M
Help: Ctrl+H

Control Panel Applets: Ctrl+1

Nudge Left: Left Arrow
Nudge Right: Right Arrow
Nudge Up - Up Arrow
Nudge Down - Down Arrow

Mirror R to L: Ctrl+Left Arrow
Mirror L to R: Ctrl+Right Arrow
Mirror T to B: Ctrl+Down Arrow
Mirror B to T: Ctrl+Up Arrow

Flip H - Shift+Left Arrow
Flip V - Shift+Down Arrow

Rotate - Shift+Right Arrow

Deselect - Ctrl+D

Start (New): Enter

The following file formats can be imported into PixelToolbox:

- Windows Bitmap - BMP
- JPEG Image - JPG
- Portable Network Graphic - PNG
- Targa Image - TGA
- Tagged Image File Format - TIF
- Windows Desktop Pattern - Integer format (Control.ini)
- Practically any raster format via the Windows Clipboard

PixelToolbox can save and export to the following formats:

- Windows Bitmap - BMP
- JPEG Image - JPG
- Portable Network Graphic - PNG
- Targa Image - TGA
- Tagged Image File Format - TIF
- Windows Icon - ICO
- Windows Cursor - CUR
- Windows Desktop Pattern - Integer format (Control.ini)

PixelToolbox was authored with Macromedia Director 8, with extended functionality made possible by the RavWare ImageExport Xtra, and the Buddy API Xtra.

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Special Thanks:
My family and friends - Their encouragement, patience and love have always been my inspiration.
The Director Community - For beta-testing PixelToolbox.

AxiomX provides limited technical support through email. We do our best to answer your questions thoroughly and in a timely manner. We are also interested in your ideas concerning new features or functions. Please send your email to AxiomX support at:

support@axiomx.com