

IconMaster

Beta Release
Version 0.1

Icon Editing and Management
for
Windows 3.0

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Introduction

Sooner or later, every Windows' user encounters the need to manipulate icons. The need may be just to attach a favorite icon to a program or file, or to keep track of the many fancy icons acquired over time. The need may be to create personalized icons, or to edit existing icons. Whatever the need, the tools provided with Windows will usually be found to be insufficient or at best inefficient.

Windows includes no icon editor or icon management facilities. Because of this lack of icon tools, and because of the wide need to manipulate and edit icons, many independent tools have become available, both shareware and commercial. In attempting to use many of these tools, I have found some very good ones, and some very poor ones. Unfortunately, even the good ones have limitations or have a usage paradigm that does not appeal to me.

I began the development of IconMaster because I could not find an icon editing and management program that I really liked and that had all of the functionality that I was looking for. IconMaster was developed with several goals in mind:

- * Create a single integrated icon editing and management environment.
- * Develop a quality icon graphics editor, including transparent and inverse color attributes.
- * Make it easy to edit and enhance existing icons, including capturing screen images.
- * Make it possible to manage hundreds of icons without having to click-click through them one at a time.
- * Make it possible to use all of the icons a user may already have, i.e. no special file formats or custom libraries.

This is the first beta release of IconMaster, Version 0.1. It is by no means finished. It is, however, quite stable and it does achieve each of the above goals to a reasonable degree. While there are many many more features planned for future releases, IconMaster is being released at this time in order to obtain user feedback. Your input regarding both bugs and suggestions for enhancements is greatly appreciated.

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The shareware version of IconMaster is fully functional, nothing has been crippled. It will, however, occasionally pester you to register the program.

Features Summary

IconMaster has many features and capabilities, along with a few limitations. Each is covered in detail in this manual. In this section, the major features are listed to give you an idea of the capabilities of the current release.

IconMaster has two forms of display, or Modes, each designed to perform specific tasks. The two modes are linked together for convenient operation.

Edit Mode - Complete icon editing capabilities.

- * Variable sized edit window
- * Special visual indication of transparent and inverse-transparent attributes
- * Display of actual sized icon with true transparency over selectable background color
- * Mouse and Keyboard editing controls
- * Undo and Revert commands
- * Many useful and unique editing tools:
 - * Three brush sizes
 - * Hollow and filled rectangles and ellipses
 - * Area fill
 - * Recolor flood
 - * Horizontal and vertical mirror
- * Capture any icon-sized image from the screen
- * Magnified edit image during capture for precise choice of image

Preview Mode - Examine and manipulate multiple icons all at once.

- * Over 100 icons on the screen at once, depending upon CRT resolution
- * Displayed icons labeled with their file names
- * Display on user-selected background color
- * Delete, rename, and select for editing directly from the multi-icon display
- * Copy and move individual icons directly from display
- * Fast display refresh with intelligent memory management

General Features -

- * Automatic window sizing and remembered window size and position
- * Full protection from accidental deletion of icons and edits
- * Automatic file name defaults to .ICO extension, with user override
- * Create Directory button in SaveAs dialogs

Limitations -

- * 32x32 pixel 16-color icons only
- * Maximum of 256 icons in preview mode

Installation

IconMaster consists of a single executable file, IMASTR01.EXE. Installation is as simple as can be:

1) Copy ICONMSTR.EXE to a directory of your choice.

That's it!

Execute normally by double-clicking the executable file in FileManager or by using the Run command. As with other programs, you will probably want to drag IMASTR01.EXE from the FileManager to a Group in the ProgramManager so that you can execute it by double-clicking it's icon.

[In the future there will be an additional file for on-line help.]

Users Guide

This section gives a complete overview of IconMaster operation. With just this information you should be able to use the program effectively. Other sections give additional background and technical information.

ICON FILES

IconMaster reads and writes normal .ICO-style single-icon files. It does not directly read icons from .EXE files, or from .RES resource files, or from other programs' proprietary library formats.

Microsoft defines four different styles of icons, for various displays. The only one widely used, and the only one handled by IconMaster, is the 32X32 pixel 16-color variety. Some icon files contain more than one style for the icon. If you attempt to open such a file for editing, you will receive a warning and IconMaster will proceed to open just the 32X32 16-color style under the name "Untitled". This helps avoid overwriting the original multiple-style file with a single-style from IconMaster. IconMaster writes only single-style files!

Microsoft's default file extension for icons is .ICO. This is also IconMaster's default. You can always leave off the dot and the extension when entering file names, and IconMaster will assume .ICO. If you ever enter an extension other than .ICO, IconMaster will take that extension as a new default until you change it again, or reload the program.

EDIT MODE

IconMaster starts up in Edit Mode. This is the normal mode for creating and editing icons.

Edit Mode Display

The Edit Mode screen display consists of five sections as shown in Figure 1. When IconMaster is started up its window will be sized for optimal editing. You can resize the window and reposition it as with other Windows windows. IconMaster will remember its last size and position and will automatically use it the next time it is started up.

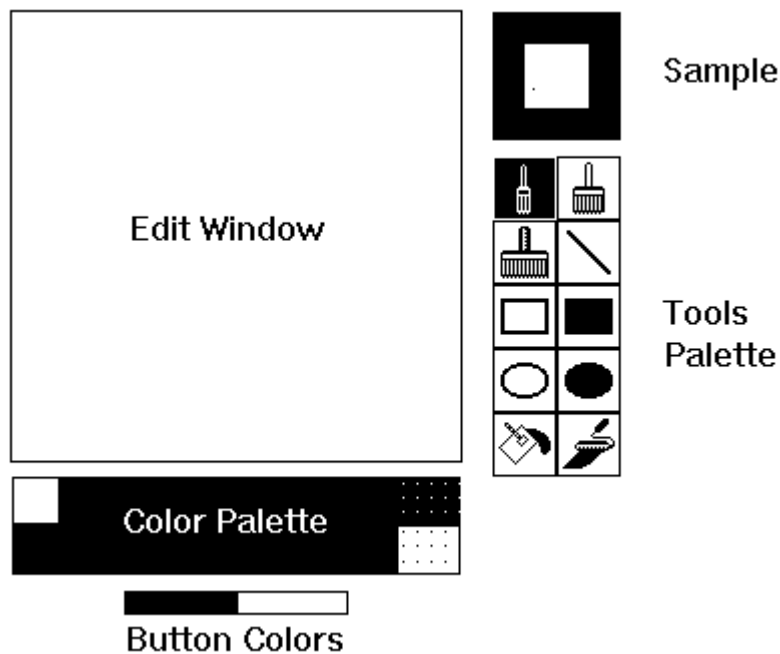


Figure 1
Edit Mode Display

Edit Window-

The edit window shows an enlarged icon image representing a 32X32 bit icon and is used for all editing. The edit window does not have a normal background color. Instead, a blank, i.e. transparent, background is shown as black with a single white dot at the center of each icon pixel. This display helps to distinguish transparent areas, black with white dot, and inverse-transparent areas, white with black dot, from regular colors. It is also helpful in identifying the size of individual icon pixels.

Sample Image -

A sample of the icon, at normal size, is shown to the right of the edit window. A colored background is shown behind and around the icon sample. The default background color is dark gray. The background color can be changed using the Background menu. The sample image is not editable directly. Its contents always follow the edits performed in the edit window.

Tools Palette -

Below the sample image is a palette for selecting drawing tools. The selected tool is indicated by reverse colors. The tools are described in a later section.

Color Palette -

A palette of the sixteen standard colors, plus the special transparent and inverse-transparent 'colors' is shown below the edit window.

Mouse Colors -

Two colored rectangles below the color palette show the currently selected colors for the left and right mouse buttons. The initial default is black for the left button and white for the right button. Any color can be assigned to either mouse button by simply clicking the button on the desired color in the color palette.

Display Sizing -

The five sections of the edit mode display are automatically sized depending upon the size of the overall window. The edit window is made as large as possible. The sample image is always a fixed size, but the extra swatch of background color that surrounds the actual icon sample is removed in small windows. The color palette and mouse color displays size to match the width of the edit window. The tools palette shrinks if a full sized palette will not fit.

Edit Mode Menus

In Edit mode the following menus appear:

	File Menu	Commands for individual icon files, capturing icons, and changing modes
	<u>N</u>ew	Creates a new untitled icon for editing
	<u>O</u>pen...	Open an existing file
	<u>S</u>ave	Save current edits with the current file name
	<u>S</u>ave<u>A</u>s...	Save current edits with a new file name
opened file	<u>R</u>evert	Discard changes made and re-Open the previously
	<u>P</u>review	Enter the Preview Mode, see Preview section
	<u>C</u>apture	Capture an icon image from the screen
	<u>E</u>xit	Quit
	<u>E</u>dit Menu	Commands for altering the icon image being edited
	<u>U</u>ndo	Restore the image as it was before the last edit
	<u>H</u>oriz Flip	Mirror the icon about the vertical center-line
	<u>V</u>ert Flip	Mirror the icon about the horizontal center-line
	<u>C</u>lear	Erase the Edit Image to all transparent

Background Menu

Sixteen Color Rectangles Sets the color background for the sample image

Help Menu

Help On-line help [Not yet implemented]

About IconMaster... Revision and copyright notice

The Open and SaveAs commands invoke normal file dialog boxes with one special difference. A "Create Directory" button is present in the SaveAs dialog box. This allows you to make a new directory, on the fly, when you discover that the place you really want to save a file does not yet exist. When you supply Create Directory with a name, the directory is created under the current directory shown in the SaveAs dialog and it is then made the current directory.

Editng Tools

The tools palette contains ten different tools as shown in Figure 2. A tool is selected by clicking the left mouse button on it. The selected tool is shown in reverse colors. The Small Brush is the default and is shown selected in the figure. All editing takes place in the edit window.

When using the tools to draw, either mouse button may be used. The color drawn will be the appropriate one shown in the mouse color rectangles. The last individual draw can always be Undone.

Figures (line, rectangles, and ellipses) are drawn by pressing a mouse button at the desired starting point, dragging the mouse while holding the button down, and then releasing the mouse button at the desired ending point. During dragging a phantom figure shows where the actual figure will be drawn when the button is released. For lines, the phantom line is shown thru the center of all pixels that will be colored. For rectangles and ellipses, the phantom figure is shown as the outside boundary of the figure that will be drawn. When a figure tool is selected, the cursor in the edit window will be a cross.

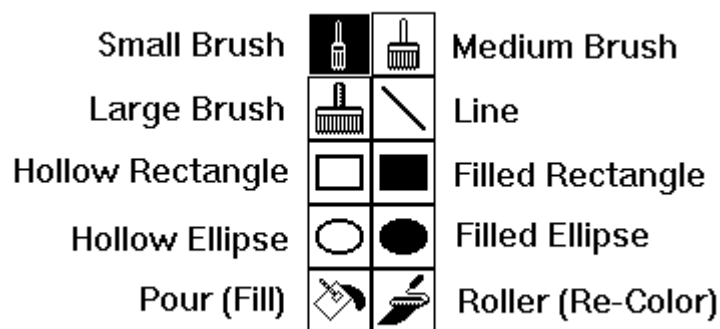


Figure 2

Editing Tools

Brushes

The brush tools are used to draw pixels in the edit window. The sizes are 1X1, 3X3, and 5X5 pixels. Dragging the mouse while holding down a button draws continuously.

Line

The line tool draws a straight line one pixel wide.

Rectangles

The two rectangle tools draw hollow and filled rectangles. The hollow rectangle is one pixel thick and the center of the rectangle is not altered. The filled rectangle is completely colored in the color of the mouse button used.

Ellipses

The two ellipse tools draw ellipses, and circles, in a manner similar to the rectangle tools.

Pour (Fill)

The pouring tool, paint can, pours a new color over the contiguous area having the same color as the starting point selected. Other, non-contiguous occurrences of the color are not changed. In other words, the color at the selected point is read and replaced with the appropriate mouse color and all adjacent points having the same color are similarly painted until any other color is encountered.

Roller (Re-Color)

The paint roller tool recolors all occurrences of the color at the selection point to the new mouse button color. This is similar to Pour except that all occurrences of the color are changed, not just a contiguous area.

Edit Mode Keys

In Edit mode the following keys are active, when the cursor is in the Edit window:

Escape When using a brush tool, behaves as a third mouse button with Transparent color selected

Space or Enter Draw with the Left Button color (Same as Left Button)

Space or Enter plus Control Draw with the Right Button color (Same as Right Button)

Up, Down, Left, Right Move one pixel

Up, Down, Left, Right plus Shift Draw with the Left Button color while moving

Up, Down, Left, Right plus Control Draw with the Right Button color while moving

Editing

Editing is very simple. Start by either Opening an existing icon file or begin from scratch with a File-New command (the default when IconMaster starts up.). (See the Preview mode for another way to get an icon to edit.) Select a color for each mouse button by clicking in the palette. Select a tool from the Tools palette. Draw by clicking or click-dragging either of the mouse buttons in the Edit Image or by using the arrow keys along with Shift or Control. Use the arrow keys for fine control over drawing. Use large brush sizes to quickly draw large areas.

When done, Save the file. If the file was Untitled, or if you use SaveAs, you will be asked for a new file name.

Undoing and Reverting

All edit operations, including Revert and Flip and Clear, can be Undone; but only once. Be especially careful when drawing with a brush since it is easy to draw many times, each spot counts as one time, and only the last one can be undone.

Because Revert is Undoable, you can swap back and forth between the original image and the current edit image any number of times. This is convenient when you want to compare the current edited version to the original.

Whenever you do a Save or SaveAs, the revert image is updated to match the saved version. This means that once you save edits for an existing file the prior version is gone forever.

Capture Command

The Capture command allows you to capture any icon-sized portion of the display and turn it into an icon. When you select File-Capture, the cursor changes to an outline box exactly the size of an icon. Whatever is inside the cursor box is displayed magnified in the Edit window. Just move the box cursor over the portion of the screen that you want to capture and then click the left mouse button or hit Space or Enter. In addition to moving the box-cursor with the mouse, you can use the arrow keys to move in one pixel increments to get just the piece of the screen that you want.

Note that the background of a captured icon will not initially be transparent. It will be whatever actual color was captured. You must edit the captured image if you want any part of it to be transparent. This is very simple using either the Pour or Roller tool.

Here is a little trick you can do with capture. If you have an icon that is not well centered in the square, use capture to grab it from the sample window. Using the arrow keys you can move the icon around one pixel at a time and center it perfectly. After capturing the image, just clean up the background a little.

PREVIEW MODE

Preview Mode lets you see and manipulate lots of icons all at once. Preview is selected from the Edit mode Files menu. The display consists of rows of actual-sized icons on a common selectable color background. The number of icons shown is determined by the size of the window and the resolution of the display. On a 1024 X 768 display you can see upwards of 150 icons at once! If all off the icons won't show at once, a scroll bar is shown in the normal fashion.

Preview mode takes a filespec, i.e. a file path and a name with wildcards, and shows all of the icon files matching that filespec. Normally you would place a whole bunch of somehow related icons in a directory and let Preview show all the icon files with its default of *.ICO. Preview shows all icons in alphabetical order. IconMaster uses intelligent memory management for previewing. If you have enough memory, all of the matching icons will be held in memory and scrolling is quite fast. If there is not enough memory, icons will be re-read from disk when you scroll. IconMaster is very considerate. It will never use the last 500K bytes or so of memory just for icons,

Preview Mode Menus

In Preview mode the following menus appear:

File Menu Commands for selecting groups of icon files for display and manipulation

- Open...** Display a new group of files meeting a filespec
- Refresh** Re-read from disk all files that meet the filespec
- Edit Mode** Switch to Edit mode and the icon that was previously being edited
- Edit Selected** Switch to Edit mode and edit the currently selected Preview icon
- Exit** Quit IconMaster

Icon Menu Commands to manipulate individual displayed icons

- Re-Name** Change name of selected icon (rename file on disk)
- Copy to...** Copy selected icon to a new path and filename
- Move to...** Move selected icon to a new path and filename (Original icon file is deleted but the icon stays on the display with the name "DELETED!".)
- Delete** Delete selected icon (erase its file from disk) (The icon stays on the display with the name "DELETED!".)

Background Menu

Sixteen Color Rectangles Sets the color background for the preview screen

Help Menu

Help On-line help [Not yet implemented]

About IconMaster... Revision and copyright notice

The Copy to and Move to commands invoke dialog boxes similar to SaveAs in the edit mode, including the unique Create Directory button. This means that as you are sorting your icons you can create new directories on the fly without going to the File Manager.

Double-clicking the left mouse button on an icon is equivalent to selecting the icon and doing Edit Selected. That is, it immediately switches to the Edit mode so you can edit the icon you pointed to.

Preview Mode Keys

In Preview mode the following keys are always active:

Delete Delete selected icon from disk
(Same as Icon-Delete command)

Up, Down, Left, Right Move the icon selection
(Will scroll the display if necessary)

When all icons will not fit on the screen at once, a scroll bar appears and the following keys are active:

PageUp, PageDown Scroll the icon display a full screen

Home, End Scroll the display to show first (last) icon.

Note that scrolling does not change the selected icon so the selected icon may be off screen.

Previewing

When you first select Preview, you will be asked for a directory and a filespec. Thereafter, when you select Preview from the Edit mode File menu, you will be switched back to the previous Preview display. To access other directories of icons use the Open menu item in the Preview mode Files menu at any time.

An outline square shows the currently selected preview icon. Icon commands, such as Delete and Re-Name, apply only to the selected icon. Use the mouse to change

selection by clicking on the desired icon. Double clicking an icon automatically switches to the Edit mode and loads the edit window with the selected icon.

When you delete an icon, the file on disk is erased, after a query to be sure that is what you wanted. The display, however, continues to show the deleted icon with the name "DELETED!". At that point you still have the option of recovering the deleted icon by using Copy or Move, or by selecting it for editing (It will be placed in the Edit mode edit window with the name "Untitled".) You can not directly Rename a deleted file since the file itself no longer exists.

When you use Edit mode to edit an icon, changes will not show up in the Preview display until you Save the edits.

The Files Refresh command re-reads the current icon files from disk. Any deleted icons will thus disappear and any Re-Named files will be shown in alphabetical order.

Note that Preview can read up to a maximum of 256 icon files. (You really wouldn't put more than that in one directory would you?)

Background Information

This section provides additional information that may be helpful in using IconMaster. In addition to various background information, an attempt is made to explain the author's rationale for the various features. Having often used highly featured products that described each feature in detail but left me wondering why some features were there and what their intended use was, I hope that this type of information will prove valuable to new users.

Usage Paradigm

IconMaster was developed under the premise that you will want to create new icons, edit existing icons, and manage hoards of existing icons that you have collected. Thus, IconMaster is more than just an icon editor. It also provides the tools you will need to look at, and manipulate, your icons.

One of the most annoying aspects of icon management in Windows is the way in which icons are attached to programs and files in Program Manager groups. You must use the File Properties command. Then go to Change Icon. And then blindly manually enter a file name. If there are many icons in a file, you must then step through them one at a time to get to the one you want. If you have many single-icon files, you must know the exact name of the one file you want. There is no Open-like choices list. Alas, we can't really change that, but we can make it a lot easier to use.

Many who have approached the problem of managing icons seem to think that a solution lies in attaching hundreds of icons to a single file or icon library. That might be a useful thing when the only available viewer that allows you to look at multiple icons requires such bundling, but is a pain when you want to attach the 75th icon in the file to a program. Therefore, IconMaster adopts the single-icon .ICO file as its basic storage and management vehicle. This means that you can freely arrange several different icon directories, each with lots of related icon files, and easily move icons around. IconMaster serves this organization by having a Preview mode that lets you look at a whole directory full of icons all at once and re-name, copy, and delete icons directly from the preview display.

Yes, maintaining single .ICO files can leave you with literally hundreds of files on your disk, which is a very inefficient use of disk storage. However, there is a simple answer; just ZIP them all together and discard the individual files when you aren't using them. (You did register Phil Katz's fine PKZIP and PKUNZIP programs didn't you?). Program Manager actually cooperates in this scheme; when you attach an icon, Program Manager copies it into itself and thereafter you do not have to have the original .ICO file on disk. But beware of the fact that Program Manager tries to update its copy of the icon whenever you exit the Properties box with OK, even if you did not assign a new icon. [Perhaps a future version of IconMaster will automatically ZIP and UNZIP archives. We may even find an automatic way to attach icons to groups.]

Preview Mode

The IconMaster Preview mode is designed to make managing directories full of icons very easy. Each icon that meets the filespec you enter is displayed along with its name. How many icon managers have you seen that show you all of those pretty

little pictures but won't tell you what they are called? Using the Delete, Re-Name, Copy, and Move commands you can readily sort icons into different directories and get rid of duplicates. Using the double-click switch to editing of a previewed icon, you can easily make changes to many icons in a row without getting tangled up in hundreds of keystrokes. This is particularly effective when you want to run thru a bunch of icons that don't have transparent backgrounds and do a simple edit on them to bring them up to modern transparent style.

Editing Tools

You will find that the Pour and Re-color tools behave somewhat differently from those incorporated in some other icon editors. They behave more like those tools found in high-end paint programs. Together, they allow you to easily accomplish just about any color changing task you might have. For instance, suppose you have a bunch of icons that don't have a transparent background. Instead they are on a white background. How do you change the background color? Simple. Just use the Re-color Roller and you are done in one click. Be careful though. If your icon also has some white in the middle of it, it will also become transparent. If you don't want this, then use the Pour, Paint Can, tool to do each patch of white individually.

Icon Styles

As mentioned earlier, Microsoft actually defines four different styles of icons that can all appear in one .ICO file at once. These styles are:

	16 Color 32 X 32 Pixels	for EGA, VGA, and 8414 color
monochrome	2 Color 32 X 32 Pixels	for EGA, VGA, and 8414
built	8 Color 32 X 32 Pixels	for cheap color that no one ever
	2 Color 32 X 16 Pixels	for CGA monochrome displays

The only widely used format is the first one. While we elected to read the 16 Color 32X32 icon style from files that contain multiple styles, we didn't think it was worthwhile to add complexity to edit and save other styles. If you want to optimize for monochrome, just don't use any colors other than white and black. The effect will be the same as if you had used the monochrome format at the cost of a few extra bits in the .ICO file. If you are using a CGA display, run right out and get something better.

Registration and Support

The registration fee for IconMaster is \$20.00. For this fee you receive the right to use IconMaster on a single computer. When you register, you will receive a copy of f the latest release. Please specify the disk format you desire. If not specified, 5.25 inch high density will be sent.

Mail the registration with a check or money order in US dollars to:

Phillip A. Kaufman
19987 Moran Lane
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We appreciate and encourage all comments, suggestions, and bug reports. However, we can only guarantee to respond to registered users.

Both your registration and your comments will help to improve IconMaster and keep it on the leading edge.

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