Giffer™

An image conversion and display program

©1988-91 Random Dot Software

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Giffer™, an image display program for the Macintosh II, is Copyright 1987-91 by Stephen Blackstock, who reserves all rights to its distribution and sale.
Giffer is Beerware™. If you like it and use it, please send me a case of beer (or $20 so I can buy one). If you do send me something, I'll make you a registered user of Giffer, and that will entitle you to receive news about Giffer updates. (Please also tell me what version you have!) I plan to work on Giffer more, so this update news might be beneficial if you like the program.

What is Giffer?

Giffer is an image display program for the Macintosh II family of computers. It works best in 256 color (8-bit) mode, but will work in 16 color (4-bit), 4 color (2-bit) and 2 color (1-bit) modes as well. Giffer also works in 24-bit mode, but 24-bit images will not be displayed in full color (they

will be dithered to 256 colors). (GIF currently does not support 24 bits of color, so there would be no way to save a 24-bit images in GIF.) It is a memory-intensive program, so it's nice to have as much memory as you can get to run it. However, it will run with the standard 1 Meg.

Giffer was written as a utility to display images stored in `GIF`, or Graphics Interchange Format. `GIF` is a graphics compression and storage standard developed and Copyrighted by CompuServe Information Service and H&R Block Company. `GIF` is useful for storing color images of arbitrary size for at least two reasons: it is a file format that is completely computer-independent, and it incorporates a compression scheme that allows file sizes to be just fractions of image sizes. `GIF` files can be created and viewed on any computer, provided that there exists software with these capabilities. Currently, the Macintosh II family of computers are about the best personal computers for displaying color graphics, so they are excellent machines on which to view `GIF` images.

In addition to `GIF` files, Giffer can display and encode `PICT` files (the kind MacDraw can produce), `PICT` resources with ID=0 (the kind you can use for a Startup Screen on the Mac II), and `QDV` files. `QDV` format, developed byRandom Dot Software, is a simple color image storage format that does not use compression. If you wish to use `QDV` format, please contact Random Dot Software at the address listed above. Giffer can also READ, but not WRITE, `ThunderScan SCAN` image files.

Here's a brief summary of the different types:

- GIF

Graphics Interchange Format, an image compression and encoding standard developed by CompuServe Information Service

- ThunderScan Scan Image

Scan Image files are produced by ThunderScan digitization hardware and software. They hold 32 gray levels of information per pixel. ThunderScan is produced and trademarked by ThunderWare, Inc.

- QDV

These files are used mainly by the author of Giffer and a few others who wish to display very simply-encoded color images. The format will not be of interest to most users of Giffer. However, anyone interested in `QDV` format may obtain the necessary information by contacting Steve Blackstock at the address listed above.

- picture resource ID=0

Files which have a resource of type `PICT` with `ID=0` are displayable with Giffer. A Macintosh II StartupScreen document is such a file. Giffer will handle files generated by GrayView, another image-display program, written by David Fry, because these files use this format.

- PICT (data fork)

The standard way to save most graphics objects in files on the Macintosh is by using a `PICT` data file. This is the type of file that is generated by most drawing and painting programs available for the Macintosh. It is also readable by these programs. Giffer can also save in this format so that images can be viewed and even manipulated with other software.

- TIFF (Tagged Image File Format)

TIFF is a very popular and very versatile file format which, like GIF, is platform-independent. Currently, Giffer reads only a subset of the possible TIFF image types. (Giffer won't read 24-bit TIFF files, yet.) Also, Giffer's TIFF-reading capabilities haven't been extensively tested. I'm rushing this feature into Giffer, because I've had many requests for it. TIFF is, indeed, a major graphics format.
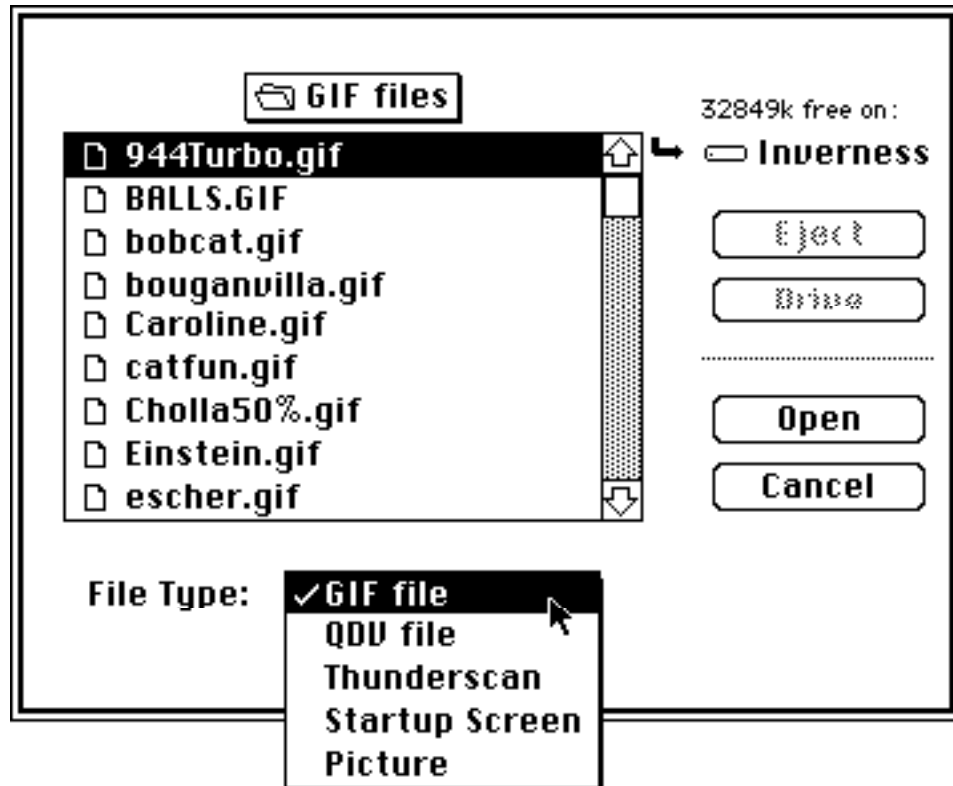
If you have trouble reading a particular TIFF file, please feel free to let me know.

How can I get GIF images?

As of 7/90+-, over 5000 GIF files in the data libraries in the Pictures Support Forum (GO GALLERY) on CompuServe. This forum is where GIF started and is developing. **If you download files from this area, make sure that you don't strip any characters (such as non-printing characters) from the files!** Many communications programs for the Macintosh will believe that GIF files are TEXT files, since they are not encoded in the standard MacBinary format, because they are not Macintosh-specific files. If your communications software strips non-printing characters from these files, what you will end up with is something you can't use at all. This can be a waste of time and money, so it's worth being careful about. Some GIF files may also be available on other on-line services or from public domain libraries in computer user groups. However, CompuServe is certainly the first place to look.

How do I see these images?

Run Giffer! Under the file menu, choose the Open… command, choose the type of file you wish to open from the pop-up menu at the bottom of the dialog box, and choose the file you wish to open. If you don't see your file in the dialog box after you select the Open… command, make sure that you select the correct file type from the pop-up menu at the bottom of the dialog box:

```
        ┌─────────────────────────────────────────────────────┐
        │                                                     │
        │         ┌──────────────────┐    32849k free on:     │
        │         │ 🗁 GIF files     │                        │
        │         └──────────────────┘    ▭ Inverness         │
        │    ┌──────────────────────────┐↱                    │
        │    │🗋 944Turbo.gif        ⬆│  ┌────────────────┐  │
        │    │🗋 BALLS.GIF            │  │     Eject       │  │
        │    │🗋 bobcat.gif          ▓│  └────────────────┘  │
        │    │🗋 bouganvilla.gif     ▓│  ┌────────────────┐  │
        │    │🗋 Caroline.gif        ▓│  │     Drive       │  │
        │    │🗋 catfun.gif          ▓│  └────────────────┘  │
        │    │🗋 Cholla50%.gif       ▓│  ·················    │
        │    │🗋 Einstein.gif        ▓│  ┌────────────────┐  │
        │    │🗋 escher.gif         ⬇│  │     Open        │  │
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        │                                  ┌────────────────┐  │
        │                                  │    Cancel       │  │
        │   File Type: ┌─────────────────┐ └────────────────┘  │
        │              │✓GIF file        │                    │
        │              │ QDU file    ▷   │                    │
        │              │ Thunderscan     │                    │
        │              │ Startup Screen  │                    │
        │              │ Picture         │                    │
        │              └─────────────────┘                    │
        └─────────────────────────────────────────────────────┘
```

If you open a `GIF` file, Giffer will read the file off disk and then display a dialog box showing you the progress of the decompression. As soon as decompression is complete, a window will pop up, and your image will be displayed. For other types of images, the image will just be displayed without any decompression progress indicator.

How Giffer Works

Every image that you view with Giffer will be in two places: on the screen in a window that you see, and in memory. The image on the screen is called the "windowed" image, and the one in memory is called the "memorized" image. They can be different! When you first display an image on the screen, the memorized image will be the same as the windowed image. The windowed image can actually be larger than the screen, so you might not actually see all of the windowed image. You can do some manipulating of the windowed image: You can move it around, stretch it in both directions, and shift scan lines in it. However, what you do to the windowed image has no effect on the memorized one, until you select Memorize Image from the ImageStorage menu. Memorize Image will replace the current memorized image with the windowed image.

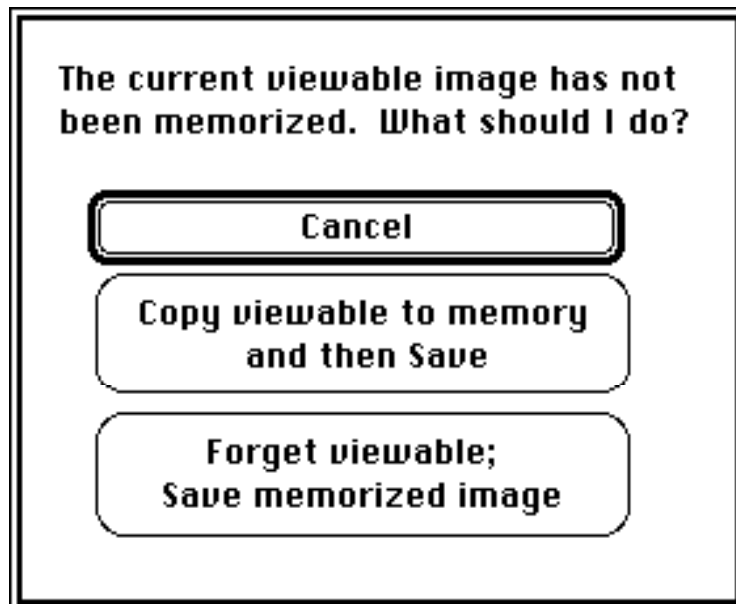Here's a brief summary of menu commands:

File Menu:

Open... Use this command and the subsequent dialog box to select the type of file you wish to open, and the particular file you wish to open.

Close Use this command to close the frontmost window. You can also use the close box in the upper left corner of a window to close it.

Get Info Use this command to get information about the dimensions and color table of the memorized image.

Save as... Use this command to save the memorized image to disk in a specified format. You will be saving the MEMORIZED image, not the windowed image. You may save any memorized image in any of four formats: GIF file, QDV file, Startup Screen, and Picture (PICT). Select the desired file format from the pop-up menu at the bottom of the dialog box that appears after selecting Save as.... If you save as a GIF file, you will be presented a dialog box showing you the progress of GIF compression. You might need to be patient here. Compression can take a while, and sometimes does.

Remember that saving saves the memorized image. If you try to save when the memorized image and the windowed image are different, Giffer will present the following dialog box:

```
┌──────────────────────────────────────┐
│                                        │
│  The current viewable image has not    │
│  been memorized. What should I do?     │
│                                        │
│     ╔════════════════════════════╗     │
│     ║          Cancel            ║     │
│     ╚════════════════════════════╝     │
│                                        │
│     ╭────────────────────────────╮     │
│     │   Copy viewable to memory   │     │
│     │       and then Save         │     │
│     ╰────────────────────────────╯     │
│                                        │
│     ╭────────────────────────────╮     │
│     │      Forget viewable;       │     │
│     │    Save memorized image     │     │
│     ╰────────────────────────────╯     │
│                                        │
└──────────────────────────────────────┘
```

Click the button that corresponds to the action you want to take.

Edit Menu:

Copy Use this command to copy the entire frontmost image to the Clipboard. You can then paste into a new Giffer window or even into another application.

Paste Use this command to paste the contents of the Clipboard into a new window. In

this way, you might copy an image from another program and paste it into Giffer in order to make a `GIF` document out of it.

Giffer currently does not support the cutting and pasting of parts of windows, but this feature is planned for a future release.

TouchUp Menu:

Zoom... Use this command to change the size of the windowed image. The windowed image can be as large as 16384 x 16384 (pixels). You can specify either an exact width and height, or you can choose to quarter, half, double, or quadruple the image size. For some shortcuts, you can use the keyboard:

F1 (extended keyboard)..........Quarter
F2 or Command-[left arrow]....Half
F3 or Command-[right arrow]..Double
F4...................................Quadruple
[home] or Spacebar...............Revert

Revert discards any changes you have made and displays a windowed image that corresponds exactly to the memorized image.

Be aware that zooming takes the MEMORIZED image and displays it in a window of the size you suggest. The windowed image is lost unless you explicitly memorize it.

Shift Scan line... Use this command if you want to move a horizontal row of pixels to the right or left. This feature is useful especially with ThunderScanned images, because, they often have a few scan lines which are slightly out of alignment.

Once you select this command, the cursor will disappear and you will see a highlighted horizontal line that moves up and down with your mouse. Position it on the line you wish to shift, and then click. You can now use the arrow keys to move the line left or right, and click again when you're done.

Use Default Palette This command will force the frontmost window to be redrawn with the the "default" color palette. This will usually cause the image to look worse. However, it is useful for creating startup screens, because the StartupScreen mechanism will pay attention only to the default colors. It will not attempt to display an image in the colors best suited to it. Be aware that forcing a default palette affects both the windowed and memorized images, and the action is therefore irreversible.

ImageStorage Menu:

Memorize Image: Use this command to copy the windowed image to the memorized image. If the windowed image extends off the screen, the new memorized image will as well. You won't lose parts of the image you can't see by using this command.

Effects Menu:

Window Closing Preferences You can use this command to tell Giffer whether or not to make a big deal out of closing a window. Play around with the options to decide what you like best. Your selections will be remembered the next time you run the program.

Miniaturize or Bring Back Sometimes, especially if you have a lot of memory and are able to open many files at once, your desktop will get so cluttered with pictures that it's hard to find the window you're interested in. The miniaturization feature will help in these instances. Choosing

the Miniaturize command will shrink the frontmost window and send it off in an out of the way corner. You can bring it back by choosing Bring Back or by clicking on it's Zoom box.

Other things...

Window Sizing: There is an invisible size box in the lower right corner of each window. You can click in it and drag to resize the window just as you're used to with other Mac applications. The size box is invisible, so it doesn't interfere with the picture. But it's there. However, if the bottom right corner of the window is not on the screen, you won't be able to grasp it. In that case, you'll have to use the Zoom command to size the window.

Extended Window Dragging: If you hold down the **option** key and click on a picture (except in the invisible size box region) the cursor will change to an "extended dragger" cursor. It will allow you to drag the window without grasping the title bar. This is sometimes necessary when the window extends off the screen and you want to view the bottom of it. If you drag the title bar of the window, you'll be limited by the menu bar in moving the window. With the extended dragger, you can push most of the window up under the menu bar, so you can see it's bottom. **Use this feature with caution!** Pushing the title bar of a window out of your visible area will make it so you can't see its close box or the highlighting of the title bar that tells you it's the active window.

Can I distribute Giffer and GIF files in general?

You should feel free to distribute Giffer as much as you'd like. Everyone who wants or needs Giffer should have it. If you do distribute Giffer, please try to distribute this documentation along with it. And remember, Giffer is Beerware.

Distribution of GIF files is a stickier issue. GIF is a copyrighted standard, and CompuServe reserves rights to it. But, you should feel free to distribute any images which you **created** and to which you can claim authorship, even if you used Giffer to make GIF files out of them. You should be careful about distributing GIF files that you obtain from other sources. Most of the files you download from CompuServe, for instance, bear the statement: "GIF file for personal use only. Distribution prohibited except under CIS guidelines." This doesn't mean that you can't redistribute these files at all; it just means that you need CompuServe's permission to do it. They probably would love for the files to be given to non-profit groups, but they probably would not like you to be selling them. Contact CompuServe for more information.

What are Giffer and GIF good for?

Many people will use Giffer purely for its entertainment value. It offers its users a chance to see images that were created outside the Macintosh world, and, with the right images, it can show off the display capabilities of the Macintosh II in all it's glory.

However, Giffer, and GIF, can be used for things far beyond just entertainment. GIF's

ability to store color images in highly compressed format that is completely computer-independent is very powerful. It will allow people who work with graphics on different computers to be able to port their graphics between those computers, and that ability is certainly nothing to sneeze at!

Revision History

      1.12 (8/91) - Fixed bug which caused off-screen dialogs on IILC. Added support for Flex™ images.

      1.11 (6/91) - Added color icons for System 7.0. Improved System 7.0 comaptibility. Fixed bug which caused crash on Mac LC.

      1.10b1 (3/91) - Added limited support for TIFF. Allowed Giffer to read GIF 89a revision files (needs significant testing). Fixed the Open command so that it will allow any file to be selected when the option key is held down as the menu selection is made.

      1.08 (5/90) - Grouped the various Open and Save command into single Open and Save as… commands. Moved file format specification to pop-up menus in the GetFile and SaveFile dialog boxes. Image windows now open on the "deepest" display device to take advantage of greatest color capabilities. Giffer 1.08 has been tested on a Macintosh IIfx and a Macintosh IIci.

      1.07 (5/90) - Fixed a bug that caused Giffer to occasionaly crash on a Maintosh IIci.

      1.06 (7/89) - Provided compatibility with 32-Bit Quickdraw and MultiFinder. Fixed several memory-related bugs, the "discolored desktop" problem, and the "no invisible resize box" bug.

      1.05 - unreleased.

      1.04

      1.03

      1.02 - unreleased.

      1.01

      1.0 - original release.

Epilogue:

      I am committed to doing further work on Giffer and fixing bugs that now exist in the program. Someday, Giffer will be a much more powerful program. I will listen to anything you have to say to me regarding bugs, suggestions for improvements or new ideas for implementation with interested ears. Please don't hesitate to drop me a line and tell me your complaints and wishes.
I should thank my beta-testers for helping me to debug Giffer and for giving me some ideas. They are, in no particular order, David MacMakin, Fred Fish, Price Collins, Bill Volk, Jay Weiss, and Keith Sproul. Also, thanks to Kevin Mitchell for some great icons and Karen Brothers for some great moral support. Finally, thanks to Alan, Sarah, Richard, and the cats for putting up with my late-night hacking.