



INTRODUCTION TO GRAPHICS

How Illustrator Works

Information Sheet No. 

IN THIS INFORMATION SHEET IS BASED ON EARLIER VERSIONS OF THIS SOFTWARE BUT YOU WILL LEARN THE BASIC DIFFERENCES BETWEEN OBJECT-ORIENTED AND BITMAP APPLICATIONS AND YOU'LL GET A BROAD OVERVIEW OF HOW OBJECTS ARE CREATED AND MODIFIED IN ILLUSTRATOR.

Vectors and rasters

There are two main types of picture-making applications: bitmap (or "raster") and object oriented (or "vector"), and it's important to know their strengths and weaknesses. Bitmap programs are ideal for creating soft, painterly effects; object-oriented programs are ideal for creating sharp, smooth-edged layered images, like logos, and for creating typographic designs.

Some bitmap applications—like Painter—also have some built-in vector capabilities. In Illustrator, you can rasterize a vector image—convert an object-oriented image into a bitmap image. And you can also place or open a bitmap image into an Illustrator document.

Drawings created in an object-oriented program like Adobe Illustrator or Macromedia FreeHand are composed of separate, distinct objects or groups of objects that are positioned on

one or more layers. Objects are drawn using free-style or precise drawing tools, and are mathematically defined. An object drawn in Illustrator can be recolored, resized, and reshaped without diminishing its sharpness or smoothness, and it can be moved easily without disturbing any other objects. An object in an object-oriented drawing will look smooth and sharp regardless of the size at which it is displayed or printed (Figs. 1 & 2).

Object-oriented files are usually relatively small in storage size, so you can save multiple versions of a file without filling up valuable hard drive space. Object-oriented drawings are also resolution independent, which means the higher the resolution of the printer, the sharper and finer the printed image will be.



FIG 1 -- AN OBJECT-ORIENTED GRAPHIC.

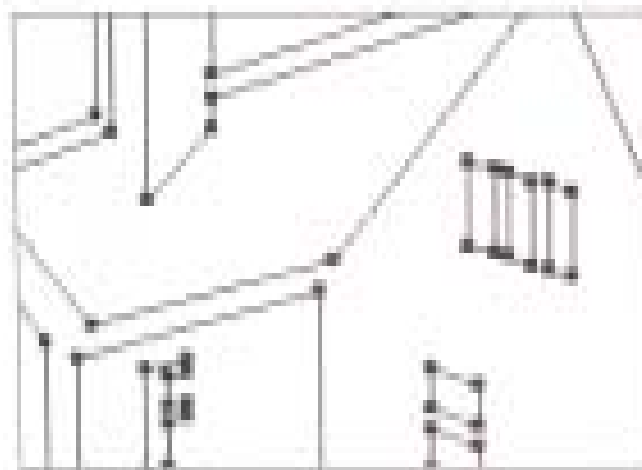


FIG. 2 -- A CLOSEUP OF THE SAME OBJECT-ORIENTED GRAPHIC IN ARTWORK VIEW, SHOWING SELECTED LINE SEGMENTS AND ANCHOR POINTS.

An image created in a bitmap program, like Photoshop, on the other hand, is composed of a single layer of tiny squares on a grid, called pixels. One pixel layer can be arranged above or below another pixel layer. If you paint on a bitmap image, you will recolor just that area of pixels, not whole, independent objects. If you zoom way in on

a bitmap image, you'll see a checkerboard of tiny squares. Bitmap files tend to be quite large, and the printout quality of a bitmap image is dependent on the resolution of the image. On the other hand, bitmap programs are ideal for creating subtle color gradations, digital paintings, montages, or photo realistic images, and for editing photographs (Figs. 3 & 4).

Your Illustrator images will mostly consist of vector shapes, though you can place or open a raster image in Illustrator and perform some operations on it.

How objects are made



Fig. 3 -- A BITMAP GRAPHIC.



Fig., 4 -- EXTREME CLOSEUP OF A BITMAP, SHOWING THE INDIVIDUAL PIXELS THAT MAKE UP THE IMAGE.



Fig. 5 -- CLOSEUP OF AN ILLUSTRATION IN ARTWORK VIEW, SHOWING CURVED



In Illustrator, the key building blocks that you will be using to compose an illustration are Bezier objects, type, and placed bitmap images. Bezier objects are composed of anchor points connected by curved or straight segments (Fig. 5). The edge of an object is called its path. A path can be open (with two endpoints) or closed and continuous. You can close an open path by joining its endpoints or open a closed path using the Scissors tool. Some Illustrator tools-like the Rectangle, Ellipse, Polygon, and Star-produce

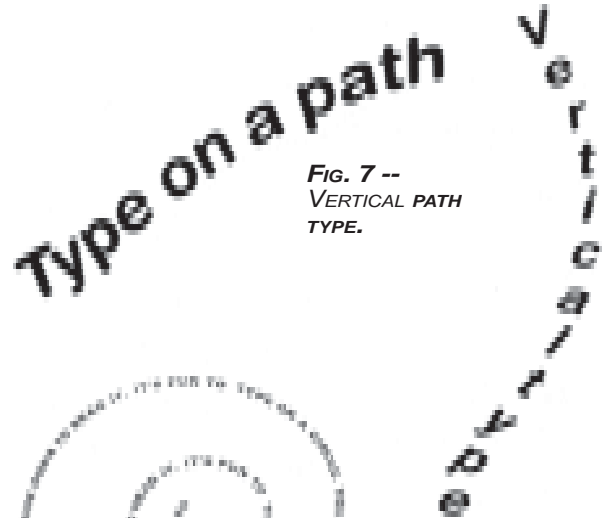


Fig. 7 -- VERTICAL PATH TYPE.

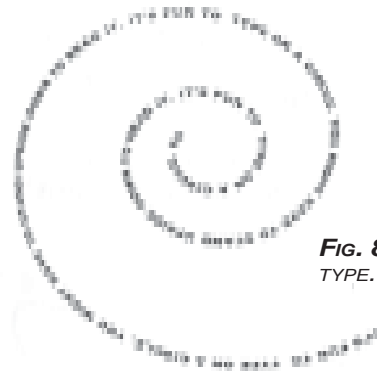


Fig. 8 -- HORIZONTAL PATH TYPE.



Fig. 9 -- NORMAL POSTSCRIPT TYPE.



Fig. 10 -- AFTER CONVERTING TO OUTLINES, THE OBJECT IS RESHAPED.

complete, closed paths simply by clicking on the artboard. The number and position of the anchor points on these paths is determined automatically.

Other tools—like the Pencil and Pen produce open or closed paths by clicking or dragging with the mouse. The Pencil tool creates open or closed freeform lines. The Paintbrush tool can be used with its four categories of brushes to create calligraphic, scatter, art, or pattern brushstrokes. You can use Illustrator's brushes or create your own. And using Illustrator's most versatile tool of all—the Pen—you can create as many corner or curve anchor points as you need to form an object of any shape.

If you want to use a scanned image as a starting point, you can place it onto a template layer in an Illustrator file, and then trace it manually with the Pen tool or trace it automatically using the Auto Trace tool.

The Layers palette's role is to help you keep track of the various elements in an illustration. This palette is used to restack objects and to toggle locking, displaying, and printing on or off for individual layers.

Adding words

Illustrator has six tools for creating PostScript type, and a large number of features with which type can be styled and formatted. Type can be free floating (point type), it can flow along the edge of an object (path type) (Figs. 6 - 8), or it can fill the inside of an object of any shape (area type). Depending on which tool is used to create it, type can flow and read vertically or horizontally. It can be repositioned, edited, restyled, recolored, or transformed. And if your text is too long to fit inside one object, it can be linked so it flows into another object. You can also convert type characters into graphic objects, called outlines, which can be reshaped or modified like any other Illustrator object (Figs. 9 - 10). This is how letter shapes can be personalized.

How objects are modified

An object must be selected before it can

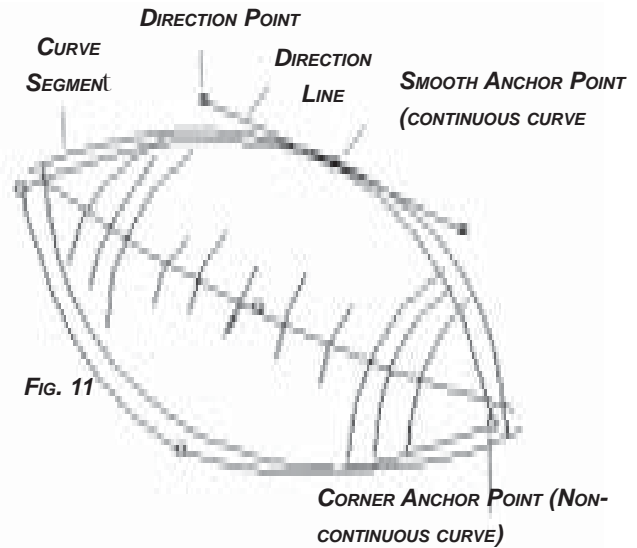


Fig. 11

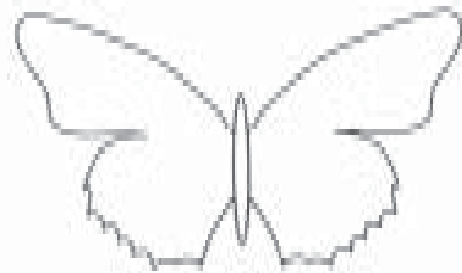


Fig 12 -- THE ORIGINAL OBJECTS.



FIG. 13 -- AFTER CLICKING THE **UNITE** BUTTON ON THE **PATHFINDER** PALLETTE, THE INDIVIDUAL SHAPES ARE COMBINED INTO A SINGLE SHAPE.

be modified, and there are three tools that do the job: Selection, Direct-selection, and Group-selection. An object can be modified using menu commands, filters, dialog boxes, palettes, and tools. There are more than 50 tools and 18 movable palettes (Toolbox, Actions, Align, Attributes, Color, Character, Gradient, Info, Layers, Links, MM Design, Navigator, Paragraph, Pathfinder, Stroke, Swatches, Tab Ruler, and Transform). If you need fast access, leave most of the palettes open while you work. To save screen space,

you can dock them together in groups and shrink down the ones you use infrequently.

How everything shapes up

An object's path can be reshaped by moving its anchor points or segments or by converting its curve anchor points into corner anchor points (or vice versa). A curve segment can be reshaped by rotating, length-en- ing, or shortening its direction lines. Because a path can be reshaped easily, you can draw a simple shape first and then develop it into a more complicated form later on (Fig. 11).



Fig. 14 -- THE ORIGINAL FORMATION



Fig. 15 -- AFTER APPLYING THE *TRANSFORM EACH* COMMAND.



Fig. 16 -- *BLENDS* IN ILLUSTRATOR ARE *LIVE*, WHICH MEANS THEY ARE EDITABLE.



Fig 17 -- ILLUSTRATOR'S *GRADIENT MESH* FEATURES CAN BE USED TO CREATE LUSH PHOTOREALISTIC, NATURALISTIC OR PAINTERLY IMAGERY.

Some tools are specifically designed for modifying paths, such as the Add anchor-point tool, which adds points to a path; the Delete anchor-point tool, which deletes points from a path; the Scissors tool, which splits a path; and the Convert direction-point tool, which converts corner points into curve points, and vice versa.

Some tools are used like sculptors' tools to change the contour of an object. The Knife tool carves out sections of an object. The Smooth tool removes points to create smoother curves. The Erase tool removes whole chunks of a path. And the Pencil or Reshape tool reshapes an object when it's dragged along the object's edge.

There are two categories of filters in Illustrator. The vector filters randomly distort an object's shape or modify its color. The bitmap filters add artistic, painterly touches or textures to a rasterized object or a placed bitmap image.

The Pathfinder commands, applied via the Pathfinder palette, combine overlapping objects, divide areas where objects overlap into separate objects, or apply color to areas where objects overlap—and produce a new object in the process (Figs. 12 - 13).

Other modifications can be made using the transformation tools. The Scale tool enlarges or reduces an object's size; the Rotate tool rotates an object; the Reflect tool creates a mirror image of an object; the Shear tool slants an object; and the Blend tool transforms one object into another object by creating a series of transitional shapes. Multiple transformations can be performed at once using the Free Transform tool, the Transform Each command (Figs. 14 - 15), or the Transform palette.

Still other Illustrator commands combine individual objects into more complex configurations. The Compound Path command, for example, "cuts" a hole through an object to reveal underlying shapes. Or you can use an object as a mask to hide parts of other objects that extend beyond its edges.

Do not be concerned about making a mistake: Illustrator has a multiple undo capability.

If you want to repeat a series of operations, on the other hand, use the Actions palette.

Filling and stroking

you can fill the inside of an open or closed object with a flat color, a gradient (a smooth gradation of two or more colors), or a pattern of repeating tiles. Patterns and gradients can be produced right in Illustrator. And you can stroke the edge of an object with a flat color in a solid or dashed style. If you have a painter's touch, you'll enjoy Illustrator's



FIG. 18 -- PREVIEW VIEW

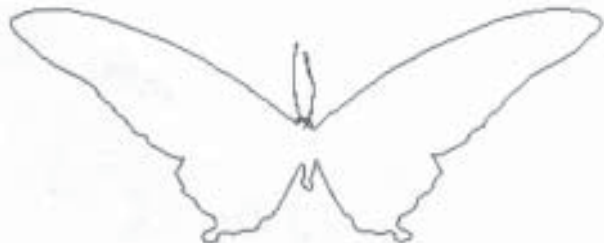


FIG. 19 -- ARTWORK VIEW

live, editable blends (Fig. 16) and its gradient mesh features, which create multicolored, editable gradient mesh objects (Fig. 17).

A stroke or fill color can be a color from a matching system, like PANTONE, or a CMYK, HSB, or RGB color that you mix yourself. In Illustrator, you can mix, apply, and save colors in true RGB or CMYK color mode. This means that a color will be consistent for its model—whether it's a CMYK color being color managed for color separation, an RGB color being color managed for display on screen, or a spot color being converted to a process color.

On the screen

You can draw an illustration by eye or you can use any of Illustrator's precision tools

to help you work more exactly using Smart Guides, rulers, guides, grids, the Measure tool, the Move dialog box, and the Align palette. You can change the view size of an illustration as you work to facilitate editing and reduce eye-strain. You can Zoom in to work on a small detail or Zoom out to see how the drawing looks as a whole. If a drawing is at a large view size, you can move it around in its window using the Hand tool or the Navigator palette.

An illustration can be displayed and edited in Preview view (Fig. 18), in which all the fill and stroke colors are displayed. Or to speed up editing and screen redraw and to make it easier to select anchor points, you can display your illustration in Artwork view (Fig. 19), where objects are displayed as wire frame outlines. In Preview Selection view, you can selectively preview individual objects.

You may already be familiar with tool tips, the on-screen prompter, which you can use to remind yourself of a tool name or shortcut. The even more useful on-screen helpers are context-sensitive menus, from which you can choose most of Illustrator's commands.

Overall . . .

There are many options for outputting your Illustrator artwork. It can be color separated right from Illustrator or printed on any PostScript output device (e.g., laser printer or imagesetter). If you want to export an Illustrator file to a page layout application, like PageMaker or QuarkXPress, or to an image editing application, like Photoshop, you can save it in an assortment of file formats, including EPS, TIFF, and WMF/EMF.

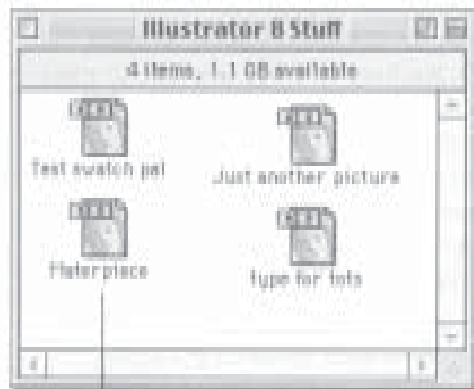
And last but not least, for on-screen output, you can use an Illustrator file in a multimedia program (e.g., Director, Premiere, After Effects). You can save it in the GIF or JPEG file format, export it, if you like, to Adobe's ImageReady to refine its appearance or file size, and then display it on a World Wide Web page. Or you can assign a URL to an Illustrator object to create an image map GIF, and export the file for use as a clickable element on a Web page.

STARTUP

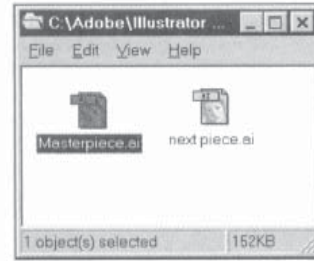
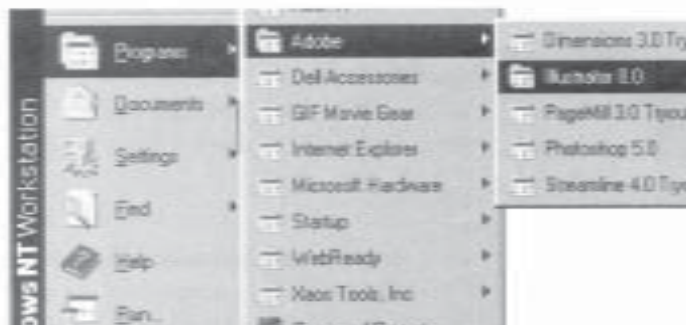
In this part you will learn how to launch Illustrator, create a new illustration, define the working and printable areas of a document, save an illustration in various file formats, open an existing illustration, place a file from another application into Illustrator, use the Links palette to manage linked images, close an illustration, and quit/exit Illustrator.



1 Click the Illustrator application icon on the Launcher.



2 Or double-click an Illustrator file icon.



3 Double-click an Illustrator file icon.

To launch Illustrator

Open the Adobe Illustrator folder in My Computer, then double-click the Illustrator application icon. or Double-click an Illustrator file icon (Fig. 1). or Click the Start button on the Taskbar, choose Programs, choose Adobe, choose Illustrator 8.0, then click Adobe Illustrator 8.0 (Fig. 2).

TIP: If you launch Illustrator by choosing or clicking the application icon, a new untitled document window will appear automatically.

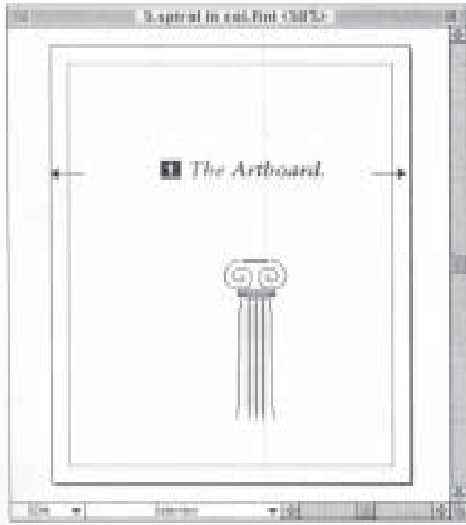
To create a new document:

When you launch Illustrator using any method other than by clicking an existing file icon, a new document window will open automatically. If Illustrator is already open and you want to create a new document, choose File menu > New (Command-N/ Ctrl-N).

TIP: You'll learn more about tracing later, but here's a sneak preview. To trace over a bitmap image, create or open an Illustrator document, then use File menu > Place to import a TIFF, PICT, or EPS with the Template box checked. Then, on another layer, use the Pen, Pencil, or Auto Trace tool to draw path shapes above the placed image.

To convert an existing layer into a template layer, click the layer name on the Layers palette, then choose Template from the Layers palette menu. All objects on a template layer are dimmed and uneditable.

In the center of every Illustrator document is a non-movable artboard work area that represents the maximum printable size of the illustration (Fig. 1). The default artboard



In the Document Setup dialog box, choose a preset Artboard Size, or enter custom Width and Height values, or check the Use Page Setup/Use Print Setup box to use the Paper size currently chosen in the Page Setup/Print Setup dialog box.

area is 8 1/4 inches wide by 11 inches high. You can specify whether the artboard will contain one printable page or facing printable pages. Or you can tile (subdivide) an oversized illustration into a grid so it can be printed in sections on standard-size paper.

Note: The Scale of the printable page is specified in File menu > Page Setup/Print Setup.

Changing the Artboard Dimensions

1. Choose File menu > Document Setup (Command-Option-P/Ctrl-Alt-P).

2. Choose a preset size from the Artboard: Size drop-down menu (Fig. 2) or . . .

Enter numbers in the Width and Height fields. The maximum work area is 227 by 227 inches or . . .

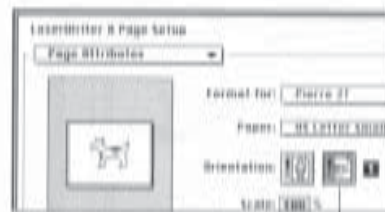
Check the Use Page Setup/Use Print Setup to have the Artboard dimensions conform to the Paper size currently selected in Page Setup/Print Setup.

Click Page Setup/Print Setup to view those settings. Choosing a size other than the current Page Setup/Print Setup size automatically unchecks the Use Page Setup/Print Setup box.

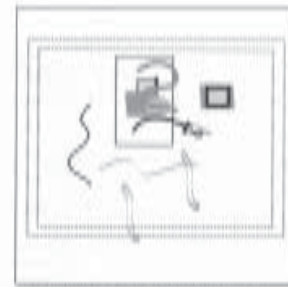
3. Click OK (Return-Enter).

TIP: Objects placed outside the artboard will be saved with the illustration, but they won't print.

Note: If the Page Setup/Print Setup Scale percentage is other than 100%, the page size and artboard will resize and the illustration will print proportionately smaller



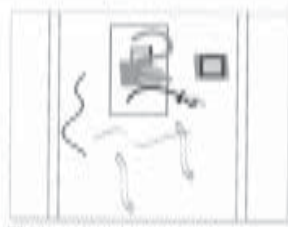
Click the landscape Orientation icon in the Page Setup dialog box (Macintosh).



The printable page is landscape Orientation.



The Page tool.



The artboard in landscape Orientation. The printable page doesn't extend beyond the artboard.

or larger. If the Use Page Setup/Use Print Setup box is unchecked in the Document Setup dialog box, the artboard will match the Artboard: Size option, but the Page boundary will match the current Page Setup/Print Setup size. If Use Page Setup/Use Print Setup is checked, the artboard dimensions can only match the Page Setup/Print Setup printout size.

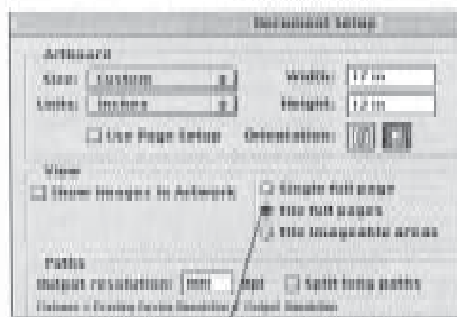
You can switch the printable area of an illustration from a vertical (portrait) to a landscape

orientation. Then you'll need to make the artboard conform to the new orientation.

To create a landscape page:

1. Choose File menu > Document Setup (Ctrl-Alt-P).

2. Windows: Click Print Setup.
3. Click the landscape Orientation icon (Fig. 1).
4. Click OK (Return/Enter).
5. Click OK (Return/Enter) again to close the Document Setup dialog box (Fig. 2).

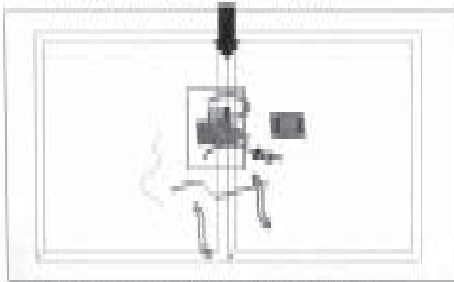


Click the Tile full pages button in the Document Setup dialog box.



The Page tool.

Parts of objects that fall within this "gutter" area will not print.



The artboard divided into two pages.



An oversized illustration filled into positions for printing (see page 308).

TIP: Drag with the Page tool (H or Shift-H) if you want to reposition the printable area on the artboard (Fig. 3) Double-click the Page tool to reset the printable area to its default position.

TIP: Double-click the Hand tool to dis-

play the entire artboard in the document window.

To create a landscape artboard:

1. Choose File menu > Document Setup.
2. Click the landscape Orientation icon, if it isn't already highlighted.
3. Click OK (Return/Enter). (See the tips above).
4. If the entire page isn't visible on the artboard (Fig. 4), reopen Document Setup and enter new Width and Height values to enlarge the artboard to accommodate the new orientation. And remember, objects outside the artboard area won't print.

By default, a new document contains a single page, but you can turn it into a multi-page document. If you turn on the Tile full pages option, as many full page borders as can fit in the current size of the artboard will be drawn. Changing the artboard size will then increase or decrease the number of page borders.

To divide the artboard into multiple pages:

1. Choose View menu > Fit In Window (Command-0/Ctrl-0).
2. Choose File menu > Document Setup.
3. Enter a new Width that's at least double the existing single-page width.
4. Click the View: "Tile full pages" button (Fig. 1).
5. Click OK (Return/Enter).
6. Optional: Choose the Page tool (H or Shift-H) (Fig. 2), then click near the left edge

Include Placed Files?

If you check the Include Placed Files box in the EPS Format dialog box, and you print, from another program (i.e., QuarkXPress or PageMaker), an Illustrator file containing a linked, placed EPS image, you won't need the original EPA image. You will still need the original EPS image to print the file from Illustrator, though.

If your Illustrator file contains linked, placed images and you don't check the Include Placed Files option when saving, you'll get a second chance to save with placed files, because an alert box will open. Just say yes.

of the artboard. New page borders will be drawn (Fig. 3) (If the tile lines aren't showing, choose View menu > Show Page Tiling.)

TIP: You can also tile full pages in landscape mode by clicking the landscape Orientation icon in the Document Setup dialog box and in the Page Setup/Print Setup dialog box and choosing Artboard Size: Tabloid. Then, if necessary, click with the Page tool near the top or bottom of the artboard to cause the new page borders to be drawn.

TIP: To tile an entire artboard page into the printer's paper size, create an artboard size that's large enough to hold several print paper sizes, and then click "Tile imageable areas" in the Document Setup dialog box 0.

TIP: If you're going to need trim, crop, or registration marks, make the artboard larger than the page.

A file saved in the native Illustrator format will be smaller in file size than the same file saved in the EPS format. However, if you want to open an Illustrator file in any application that doesn't read native Illustrator files, you must save it in the Illustrator EPS format (instructions on the next page) or in another file format that your target application can read.

To save a new illustration in the native Illustrator format:

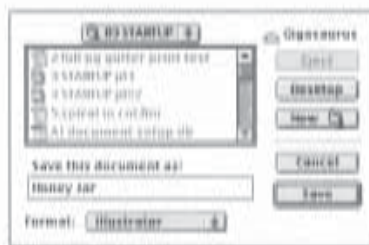
1. Choose File menu > Save (Command-S/ Ctrl-S).
2. Enter a name in the File Name field (Fig. 2).
4. Highlight a drive, then click Open.
5. Use the Save in pop-up menu to navigate to the folder in which you want to save the file.
6. Leave the Format (Macintosh) or Save as Type (Windows) as Illustrator, and click Save (Return/Enter).
7. Click a Compatibility option (Fig. 3). If you choose an earlier version, some elements of your illustration (such as gradient meshes) may be altered if the file is reopened in a later in version of Illustrator.

8. Optional: Check the Include Placed Files box to save a copy of any placed files within the illustration.

XXXX - HOW ILLUSTRATOR WORKS

THE SAVE SHORTCUTS

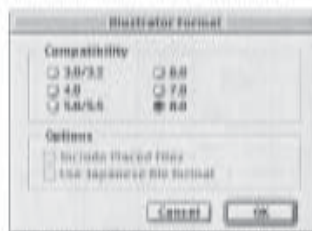
	Macintosh	Windows
Save	Command-S	Ctrl-S
Save As	Command-Shift-S	Ctrl-Shift-S
Save a Copy	Command-Option-S	Ctrl-Alt-S



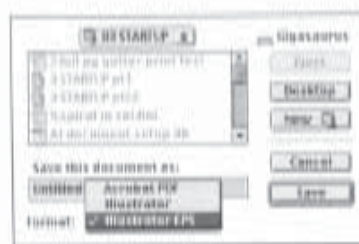
Macintosh: Enter a name in the Save this document as field, click Desktop, open a drive and a folder, then click Save.



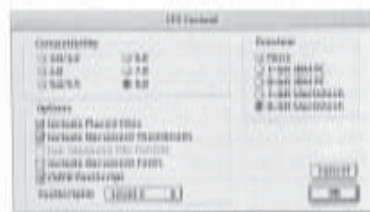
Windows Save dialog box for Illustrator.



Click a Compatibility option (Illustrator version) and other Options, if applicable, in the Illustrator Format dialog box.



Choose Format: Illustrator EPS in the Save as Type dialog box.



Click a Compatibility option (Illustrator version), a Preview option, and other Options, if applicable, in the EPS Format dialog box.

9. Click OK (Return/Enter). The prior version of a file is overwritten when the Save command is executed. Don't be shy--save frequently! And back up!

To save an existing file:

A file in the native Illustrator format has no preview option, and it can be opened and modified only in Illustrator or Photoshop. To import an Illustrator file into a page layout, word processing, or other drawing application, save it in the Illustrator EPS format.

To save an illustration as an EPS:

1. Follow steps 1-5 on the previous page. If the file has already been saved, choose File menu > Save As or Save a Copy for Step 1 (see the sidebar on the next page).

2. Choose Save as Type Illustrator EPS (Fig. 1).

3. Click Save (Return/Enter).

4. Click a Compatibility option (Fig. 2) If you choose an earlier version, some elements in your illustration may be altered. Only version 8 preserves gradient meshes.

5. Click a Preview option:

None to save the illustration with no preview. The EPS won't display on screen in any other application, but it will print.

1-bit IBM PC or 1-bit Macintosh to save the illustration with a black-and-white preview.

8-bit IBM PC or 8-bit Macintosh to save the illustration with a color preview. This option produces the largest file storage size.

Note: Regardless of which preview option you choose, color information will be saved with the file and the illustration will print normally from Illustrator or any other application into which it's imported.

6. Optional steps:

Check the Include Placed Files box to save a copy of any linked, placed files with the illustration (see the sidebar).

Check the Include Document Thumbnails box to save a thumbnail with the file for previewing in Illustrator's Open dialog box.

Check the Include Document Fonts box to save any fonts used in the document as a part of the document. Only individual characters used in the font are saved, not the whole character set. Included fonts will show and print on any system, even where they aren't installed. Be sure to check this option if your Illustrator file contains type and you're going to import it into a layout application.

7. Check the CMYK PostScript box to convert any RGB color fills or strokes on Illustrator paths into CMYK equivalents.

8. Choose a PostScript level that conforms to your printing device from the dropdown menu. Level 2 or 3 are the preferred choices, with Level 3 being the best option for printing gradient meshes. Level 1 produces a significantly larger file size. If you are saving an Illustrator EPS file that contains gradient meshes

and you will be placing that EPS file back into Illustrator, choose PostScript Level 1.

9. Click OK (Return/Enter). If you didn't check the Include Place Files box and your file contains placed, linked images, an alert box will appear. Click "Save with placed files" or "Save without placed files." 0

Note: You'll get a warning prompt if you save an EPS file that contains a placed, drag-and-dropped, or rasterized RGB image ©, whether or not you check the CMYK PostScript option (this option is designed to convert RGB objects to CMYK for improved printing). RGB color objects are saved as RGB in an Illustrator EPS file and will separate correctly from Illustrator. An image that is drag-copied from Photoshop to Illustrator is automatically converted to RGB. To prevent this mode change, save the file in Photoshop in CMYK Color mode and in the TIFF or EPS format, then place it into Illustrator.

To revert to the last saved version:

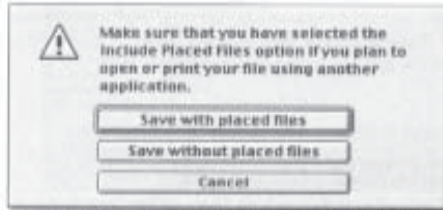
1. Choose File menu > Revert.
2. Click Revert.

Save As or Save a copy?

You can use the Save As or Save a Copy command to save an existing file in a different format (i.e., Illustrator, Illustrator EPS, or Acrobat PDF) or to convert a file to an earlier Illustrator version. Use Save As to save the illustration under a new name and continue working on the new version while preserving the original on disk. Use Save a Copy to do just the opposite save the current version as a new file to disk and continue working on the original.

Backward Compatibility

If you save an illustration in an earlier version of Illustrator, but it was created using features that are not present in that earlier version, the illustration may be altered or information may be deleted from it to make it compatible with the earlier version. For example, a gradient fill or gradient mesh may be converted into a blend, or vertical type will become horizontal type. The earlier the Illustrator version, the more the illustration could change.



1 This prompt will appear if you didn't check the Include Placed Files box in the EPS Format dialog box and your file contains placed, linked images. Here's your second chance to include those placed files.



2 This prompt will appear if you save, as EPS, an Illustrator file that contains RGB images from other applications or objects with applied RGB colors that were rasterized in Illustrator.

Reopening a PDF

Blend, gradient, or brushstroke objects will be included in an Illustrator file that is saved as a PDF. However, if such a file is reopened in Illustrator, these objects will be converted into expanded objects.

When saving as PDF, if the Compress Text and Line Art option is checked (the default) in the Compression part of the PDF Format dialog box, then earlier versions of Illustrator will not be able to open that saved PDF file.

You can save an Illustrator file that contains a linked image as a PDF file. When that PDF file is reopened into Illustrator, the linked image will be converted into an embedded image.

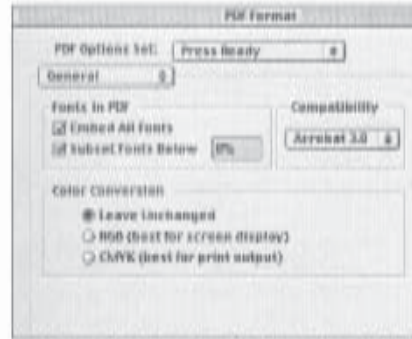
Use PDF (Portable Document Format) to transfer an Illustrator file to another application or another computer platform that reads PostScript-based Acrobat PDF files or to save your Illustrator file for display on the World Wide Web. The PDF format preserves groups, text, and layering information, and saves RGB colors as RGB and CMYK colors as CMYK. A file in PDF format can also be viewed in Acrobat Reader or edited using Acrobat Exchange.

You can open one page of a multi-page PDF file in Illustrator, edit any vector graphics or bitmap images on the page, and then resave the page in PDF format. If you save an Illustrator file as PDF and then reopen or place it in Illustrator, you'll still be able to edit individual objects as you normally would, with the

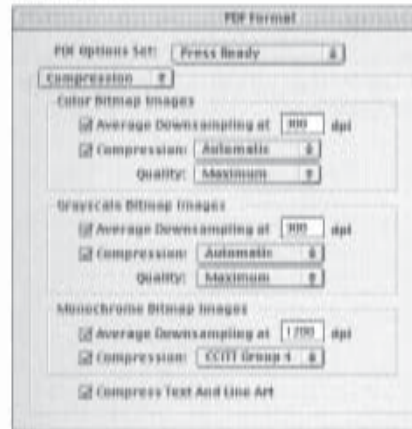
exception of gradient fills. (As a workaround, you can expand a gradient fill into separate objects, and then edit the individual objects.)

To save a file as an Acrobat PDF:

1. Choose File menu > Save, Save As, or Save a Copy.



1 General options for the Press Ready PDF Options Set.



2 Compression options for the Press Ready PDF Options Set.

2. Enter a name in the "Save this document as" field, choose a location in which to save the file, choose Acrobat PDF from the Format (Macintosh) or Save as Type (Windows) drop-down menu, then click Save.

3. When you choose a PDF Options Set, the dialog box reconfigures automatically.

Press Ready for high-end printing. All

fonts are automatically embedded, and compression is set to JPEG, maximum quality. Custom color and high-end image options are preserved. This set produces maximum image quality, but the resulting file size is the largest of the options sets.

Print Quality for low-end printing (ink jet, laser printers, or laser copiers). All CMYK color information is included and fonts are embedded. No high-end image options are used, so the file size is smaller than the Press Ready option produces.

Web Ready for on-screen display output. Images are converted to RGB color, fonts are not embedded, and image resolution is 72 ppi. The resulting file size will be the smallest possible.

Note: If you want to manually change any of the preset settings, proceed with the remaining steps. If you're satisfied with the current settings, skip to step 8.

4. Choose General from the second dropdown menu.

5. Check Embed All Fonts to have all fonts used in the file embedded in the file.

Check Subset Fonts Below and enter a value in the % field to determine how

many glyphs (characters used in the document) from the font's character set will be embedded. The higher the percentage, the more glyphs will be embedded.

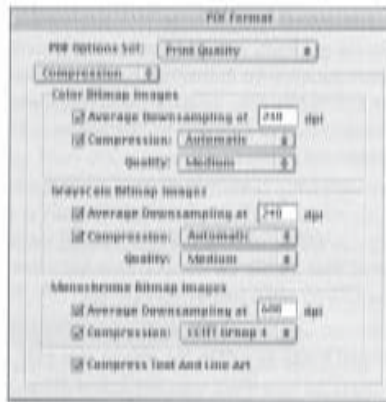
Note: Adobe recommends not choosing the Subset Fonts Below option for TrueType fonts. If you do so, those fonts will be substituted if the PDF file is reopened in Illustrator.

6. Choose Acrobat 3 format (or Acrobat 4 when that version is released) from the Compatibility drop-down menu.

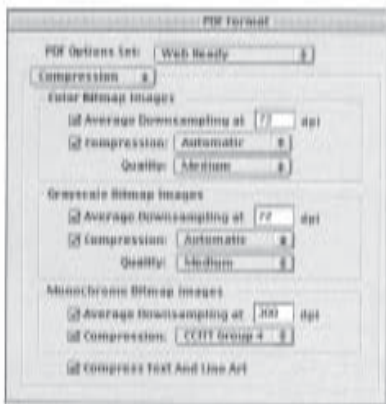
7. Choose a Color Conversion method: Unchanged to leave colors in their current modes; RGB to convert colors in vector objects to RGB color mode (suitable for on-screen output); or CMYK to convert colors to CMYK color mode for print output.

8. Choose Compression from the second drop-down menu. The compression options will update for the chosen PDF options set. If you want to change any settings, refer to page 4 of the Adobe Illustrator 8 Read Me, otherwise, leave them as is.

9. Click OK (Return/Enter).



11 Compression options for the Print Quality PDF Options Set.



12 Compression options for the Web Ready PDF Options Set.

Formats you can open in Illustrator

Native formats: Illustrator versions 1.0 through 8.0 (.ai).

Raster (bitmap) formats: Filmstrip, Kodak PhotoCD, and PixelPaint.

Vector formats: CMX, CGM, and CorelDraw up to version 7.

Formats you can open or place in Illustrator

Native formats: EPS (Ceps), PDF (.pdf).

Raster (bitmap) formats: EPS, Amiga IFF, BMP, GIF89a, JPEG, PCX, PNG, Photoshop (layers are flattened!), PICT, Pixar, DXF, TGA, and TIFF

Graphics (vector) formats: FreeHand up to version 8, DXF, WMF/EMF and Macintosh PICT (from DeltaGraph or a CAD program).

Text file formats: Plain text (ASCII), MS RTF, MS Word (up to 6.0/95), and WordPerfect DOS or Windows.

Note: Before importing a FreeHand or CorelDraw file, see the Illustrator Read Me file to learn about some limitations.

A TIFF that you drag-and-drop into Illustrator or a PICT that you drag-and-drop, open, or place into Illustrator will downsample to 72 ppi, which is an acceptable resolution for a multimedia or Web project, but not for printing. To acquire a high resolution image for a print project, use Illustrator's Place command to place an EPS or TIFF, or use the Open command.

Watch your downsampling

A TIFF that you drag-and-drop into Illustrator or a PICT that you drag-and-drop, open, or place into Illustrator will downsample to 72 dpi, which is an acceptable resolution for a multimedia or Web project, but not for printing. To acquire a high resolution image for a print project, use Illustrator's Place command to place an EPS or TIFF, or use the Open command.

Acquiring images in Illustrator

You can use Illustrator to open or import objects or images in a variety of file formats, which means you can work with imagery that was originally created in another application.

Methods for acquiring an image from another application include the Open command, the Place command, and the drag and-drop method. The method you choose to use depends on which file formats are available for saving the file in its original application and how you intend to use the imagery in Illustrator.

When you open a document from another drawing (vector) application using the Open command, a new Illustrator file is created, and the acquired objects can be manipulated using any Illustrator tool, command, or filter. If you open a document from a bitmap-based program like Photoshop using the Open command, the image won't convert into workable paths; it will stay in its outlined box.

The Place command inserts imagery or text into an existing Illustrator document. EPS and TIFF are the best formats for saving a file for placing into Illustrator, because in these formats, the color, detail, and resolution of the original image are preserved. If you place a layered image from Photoshop, it will appear on one layer (flattened) in Illustrator. If you want to trace an image, check Template in the Place dialog box.

If you drag-and-drop a Photoshop selection or layer into Illustrator, it will appear in a bounding box.

A bitmap image that is acquired in Illustrator via the Open, Place, or drag-and-drop method can be moved, placed on a different layer, masked, modified using any transformation tool, or modified using any color or raster (bitmap) filter.

TIP: If you reduce the scale of an opened or placed TIFF or EPS image, the resolution of that image will increase, respectively. Conversely, if you enlarge such an image, its resolution will decrease.

A list of file formats that can be opened in Illustrator appears on the previous page.

To open a file from within Illustrator:

1. Choose File menu > Open (Ctrl-O).

2. Check the Show Preview box to display a thumbnail of the illustration, if it contains

a preview that Illustrator can display.

3. Windows: Filter out files by choosing from the Format drop-down menu, or choose All Formats to display files of all formats. The default setting is *.ai.

4. Locate and highlight a file name, then click Open (Return/Enter) (Fig. 1) or Double-click a file name.

5. If you're opening a multi-page PDF, another dialog box will open ©. Click an arrow to locate the desired page (or click the "1 of []" button, enter the desired page, then click OK), then click OK.

TIP: When opening an EPS file in Illustrator:

Any fonts used in the file must be installed in your system in order to print properly.

If the EPS file contains a clipping path, use the Selection tool to select both the image box and the clipping path. Use the Direct-selection tool to select only the image box or the clipping path, or to reshape the path.

If Illustrator can't parse (embed) the EPS, you'll get a warning prompt. Stop the opening operation, resave the EPS in its original application as a PostScript Level 1 file, and then reopen it in Illustrator.

Easy Open

From the File menu > Recent Files submenu, you can choose from a list of up to 10 of the most recently opened files.

Replace one placed image with another

Check the Replace box before you click Place. Any transformations that were made to the original placed image will be applied automatically to the newly placed one.

To open a file from Windows Explorer:

Double-click an Illustrator file icon in the window. Illustrator will launch if it is not already open (Fig. 1).

A placed image can be moved, moved
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to a different layer, masked, transformed, or modified using any raster filter.

To place an image from another application into an Illustrator document:

1. Open an Illustrator file.
2. Choose File menu > Place.
3. Locate and highlight the name of the file that you want to place, then click Place or Double-click a file name (Fig. 2).
4. Check the Link box to place only a screen version of an image into Illustrator (the image must reside on your hard disk). The actual, original image will remain separate from the Illustrator file at its original resolution. If you modify and resave a linked image in its original application, it will automatically update in the Illustrator document or Uncheck the Link box to embed (parse) the actual image into the Illustrator file.

This increases a file's storage size. You can edit the bounding box of and apply color filters to an embedded EPS or PDF.

5. Optional: Check the Template box if you want the placed image to appear as a dimmed image on its own template layer.
6. Click Place (Return/Enter).

TIP: When placing an EPS file, any fonts that are used in the file must be installed in your system in order to print properly.

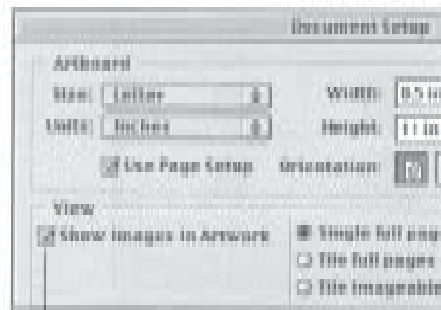
TIP: If you place an EPS file with a clipping path into Illustrator, the area around the path will be transparent, and it will remain transparent even if you move it, transform it, or apply a bitmap filter to it.

If a placed image was saved in its original application with a preview that Illustrator recognizes, it will render fully in Preview view, whether or not the "Show Images in Artwork" box is checked in Document Setup. If you place an image that doesn't contain a preview that Illustrator recognizes, the image will display as an empty outlined box with an "x" through it in either view. Follow these instructions to have images display in black-and-white in their outlined box in Artwork view.

To display a placed image in Artwork view:

1. Choose File menu > Document Setup.
2. Check the View: Show Images in Artwork box (Fig 1-4).
3. Click OK (Return/Enter).

Reopening a file that contains linked images



Check the Show Images in Artwork box in the Document Setup dialog box.



Placed image, Artwork view.



Placed image, Artwork view, Show Images in Artwork box checked.



Linked, placed image selected, Preview view. Notice the "X" across the outline box, designating this image as linked.



If a linked file was moved to another folder or is otherwise missing, Illustrator will alert you with this dialog box when you open the illustration. To reestablish the link, click Replace, then locate the file.

Artwork view. To completely break the link and prevent any alert prompts from appearing, delete this bounding box and save the file. You'll never need to re-link a Macintosh PICT, because such images are embedded automatically.

The Links palette

To keep file sizes down, you can link any imported EPS, GIF, JPEG, or TIFF image to an Illustrator

file rather than embed it within the file. A copy of the image will act as a placeholder in your Illustrator document, but the actual image will remain separate from the Illustrator file. If you revise a linked image via the Edit Original button, the image will update in the Illustrator document. To link a file, use the File menu > Place command, and make sure the Link box has a check mark. Instructions for placing and linking images are on page 43. Illustrator's Links palette helps you and your service bureau or print shop keep track of linked files. It lists all the linked and embedded files in your Illustrator document and puts a number of useful controls at your fingertips. To view the Links palette, choose Window menu > Show Links.

To edit a linked image in its original application:

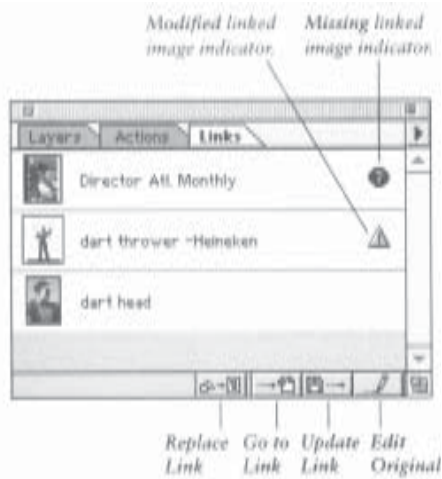
1. Click on the name of the image on the Links palette list.
2. Click the Edit Original button at the bottom of the palette or Choose Edit Original from the Links palette menu.

The application in which the linked image was created will launch if it isn't already open, and the image will open.

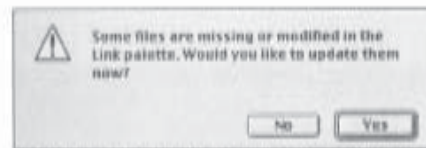
3. Make your edits, save the file, and then return to Illustrator. When the warning prompt appears, click Yes (Fig. 2). The linked image will update.

Note: In our testing in Windows, the correct application didn't always open when these steps were followed. Oh well.

If you replace one linked image with another, any transformations that were applied to the original image, such as scaling or



The Links palette lets you keep track of linked images, link to new files, and convert linked images into embedded ones. It's especially useful if you plan to send complex Illustrator files to a print shop.



This prompt will appear if you edit a link in its original application via the Edit Original button.

rotating, will be applied to the new image.

To replace one linked image with another:

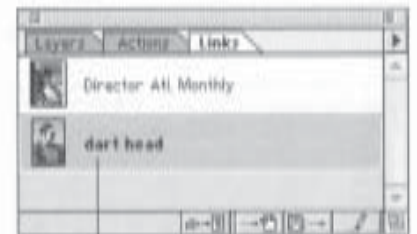
1. On the Links palette, click the name of the file that you want to replace (Fig. 1).
2. Click the Replace Link button at the bottom of the Links palette or Choose Replace from the Links palette menu.
3. Locate the replacement file, then click Place (Fig. 2).

TIP: To replace a linked image another way, click on the existing image in the document window, choose File menu > Place, check the Replace box, locate the replacement image, then click Place.

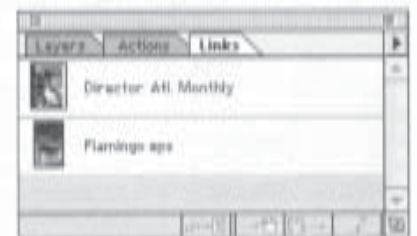
When you locate a linked image, it becomes selected in the document window.

To locate a linked image in an Illustrator file:

1. Open the illustration that contains the linked image.
2. Click the name of the linked image on the Links palette list.
3. Click the Go to Link (second) button at the bottom of the palette. or Choose Go to Link from the Links palette menu.



Click on the name of the linked image that you want to replace, then click the Replace Link (first) button.



The linked image is replaced.

To view file information for a linked image:

1. Double-click the file name on the Links palette. A dialog box with the image's file format, location, size, modifications, and transform information will appear.
2. Click OK (Return/Enter).



The Link Information dialog shows the linked image's file format, location, size, and modifications.

To choose Links palette display options:

To change the size of the thumbnail images that are displayed in the Links palette, choose Palette Options from the Links palette menu, click the preferred size, then click OK. To display just the file icon without a thumbnail, click None.

To change the order of links on the palette, from the Links palette menu choose Sort by Name (alphabetical order), Sort by Kind (file format) or Sort by Status (missing, then modified, then embedded, then fully linked) (Fig. 1-2). To sort only selected links, first click, then Shift-click consecutive names or Command-click/Ctrl-click non-consecutive names.

To control which type of links display on the palette, choose Show All, Show Missing, Show Modified, or Show Embedded from the Links palette menu (Fig. 3).

An exclamation mark icon appearing to the right of a link on the Links palette list indicates that the original file has been modified and the link is outdated. Use the Update Link button to update it.

Note: If you edit a linked image via the Edit Original button, you won't need to update it this way—you'll get a warning prompt to update it automatically. You can't update a missing linked image (indicated by a question mark); you'll have to replace it instead.

To update a modified linked image:

1. Click on the name of the modified image on the Links palette list.

2. Click the Update Link (third) button at the bottom of the palette or Choose Update Link from the Links palette menu.

Note: To refresh the thumbnails and image names on the Links palette, choose Refresh List from the palette menu.

To convert a linked image to an embedded image:

1. On the Links palette list, click the name of the image that you want to embed.

2. Choose Embed Image from the Links palette menu.

Note: You can't unembed an embedded image. You can use the Replace command on the Links palette menu to replace an embedded image with a linked image.

To close a file:

Windows: Click the close box in the upper right corner of the document window (Ctrl-W).

If you attempt to close a picture that was modified since it was last saved, a warning prompt will appear. You can close the file without saving (click Don't Save), save the file (click Save), or cancel the close operation (click Cancel).

TIP Hold down Option/Alt and choose Close (or Option/Alt click the close box) to close all open files.

To quit/exit

Illustrator:

Choose File menu > Exit (Ctrl-Q).

All open Illustrator files will close. If changes were made to any open files since they were last saved, a warning prompt will appear. Save the file(s) or quit/exit without saving them.

