

## WELCOME TO EASY COLOR PAINT (ECP), Version 0.4

### Overview

This program, ECP 0.4, contains the basic features of a color paint program, including patterns, fatbits, and cut-and-paste. It was originally designed for children under 12 but, in its present form, it should appeal to children of all ages. It's been tested with Systems 5.0 and 6.0.2, and it's compatible with Multifinder. Before launching ECP, use the Control Panel to set your Mac II to 16-color mode.

ECP is written in Lightspeed C 3.0, and it's freeware: please distribute it freely, along with its companion files (namely this documentation file and any accompanying example pictures). Comments or questions may be directed to the programmer at the following address:

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To receive an update of ECP about May 1, 1989, please send \$2.00 to cover postage and the cost of the disk to this address. I'll try to incorporate as many suggestions as possible that I receive before then.

In this document, letters in parentheses denote keyboard equivalents (press the indicated key while holding down the Apple/Command key).

### The Menubar

The menubar consists of the standard Apple, File, and Edit menus, followed by menus for Windows and Tools and, to the right of these, a varying number of additional menus, depending on the tool currently in use.

The Apple menu contains a standard "about" box, followed by desk accessories and, if you're running Multifinder, whatever items Multifinder chooses to display.

The File menu contains the standard entries Open(O), Save(S), Save-As, and Quit(Q). Pictures are saved as ECP documents, which can be retrieved later by double-clicking their icon. If you ask to quit before saving your picture., you'll be asked for confirmation. "Save" and "Save-as" are treated alike: if you're asking to overwrite a file, you'll be asked for confirmation.

The Edit menu contains standard entries for editing, each of which will be dimmed when it is not applicable. Cut(X) and Copy(C) each copy into the clipboard the region that you've selected using the Mark tool (discussed below), after which Cut fills the region with the current background color. Paste (V) lets you read an area you've previously saved within ECP or a PICT that you've previously stored in the clipboard from another application (e.g. by doing a Cut or Copy). Reading a PICT lets you to read black-and-white pictures and then colorize them (the

Bucket tool can be quite useful for this).

The Windows menu allows you to *Clear* the window (after supplying confirmation), *Invert* either the entire window or a region outlined by Mark (e.g. pink "inverts" to light brown and vice versa), or *display* any of the 5 basic windows provided by ECP (e.g. when a

window has gotten buried. It also lets you *Flip*, horizontally or vertically, either the whole window or the region selected by the Mark tool

The Tools menu lets you select from the basic program modes, namely Brush(B), Bucket(K), Rectangle(R), Round Rectangle(D), Oval(C), Triangle-Plus(T), Line(L), Words(W), Mark(M), and Fatbits(F). Each of these tools will be discussed shortly.

The Size menu lets you choose the size of the paint brush and the lines drawn by the Line tool and the various shape tools (Rectangle, etc.). Note that the sizes 1-9 may be selected as keyboard equivalents, and a size of 10 with the keyboard equivalent of 0.

The Shapes menu lets you specify whether shapes (Rectangle etc.) are to be filled in, hollow, filled-in with a border, or hollow with borders. The width of hollow shapes is determined by the Size menu, while the borders are thin (1-pixel) lines drawn in the foreground color.

The Corners menu lets you specify how rounded you want the corners of Round Rectangles to be.

The Words menu lets you choose the character face (i.e. plain, bold, italic, underlined, outlined, shadowed, or any combination of these) and the character size. [At present, only the standard Geneva font is provided.]

## **Windows**

ECP works with 6 windows, 5 of which appear when you launch the application and one of which ("fatbits") comes up when you enter fatbits mode. Each window has its own appearance and functionality and may be moved or closed. When a window has been closed or becomes obscured, it can be restored by choosing the associated option in the Windows menu.

The primary drawing window appears near the upper left of your screen. All graphic operations will take place in this window. It's initially labeled "Untitled" but will take on the filename you've most recently read or saved. It's probably a good idea not to cover up this window with other windows.

The Patterns window presents a standard set of 38 Macintosh patterns ranging from solid to brick to tapestry. When colors have been selected from the Colors window, all black pixels in the currently selected pattern will appear in the foreground color, while white pixels will appear in the background color. For example, you might choose to paint red bricks with black between them. The currently selected pattern is "highlighted" by a heavy border. [This highlighting also occurs in the "status square" in the Colors window, which lets you see exactly how the currently specified foreground and background colors will appear when applied to the selected pattern.] If part of the Patterns window becomes obscured, you may uncover it either by clicking in a non-pattern portion of it (e.g. between the patterns) or by selecting "Show Patterns" from the Windows menu. You may close this window and later reopen it using this menu item. The initially selected pattern is the all-black-pixels pattern, which means that you'll be painting with a solid color.

The Tools window lets the tool icons that appear in the Tools window remain visible. Older

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children, and adults, may want to close it using the close box at the top left since since it obscures the Mixtures window discussed below and since each of the tools can also be selected from the Tools menu or through its keyboard equivalent.

The Pure Colors window lets you select foreground and background colors, which are found in the top and bottom rows respectively. The foreground color will be applied to the black pixels in the currently selected pattern (the initial pattern is all-black) and the background color to the white pixels of the selected pattern. Each of the current color settings is indicated by a form of highlighting like that used for patterns. The Pure Colors window also lets you see what is to be painted or drawn on the screen via the large "status square" appearing about one inch from the left edge of the screen. Finally, there is a "back up" item which restores the screen to its appearance just before one of the last updates (see below for more information on saving and restoring the screen). For convenience, selecting as a foreground color the foreground color that's already current causes the pattern to be set to the all-black-pixels pattern.

The Mixtures window shows each of the 66 "ditherings" that can be made by selecting exactly two colors from the first 12 pure colors and applying these to the "gray" pattern (the 4th one in the leftmost column) that contains 50% black bits and 50% white bits. When you select a color in the Mixtures window, you'll see the pattern and pure color selections change accordingly.

The Shapes and Cut and Paste windows have to do with the Triangle-Plus and Fatbits tools discussed below.

## Tools

The Paint Brush(B) tool paints the screen based on the current foreground and background colors (initially black and white), the selected pattern (initially the all-black-bits pattern), and the brush size (initially 10). When you're in Paint Brush mode, ECP will drag a square representing the brush around the screen that shows the "inverse" of the bits beneath it. For small brush sizes, however, a pencil-shaped cursor will appear. When you're painting (i.e. you've clicked the mouse in the primary painting window and haven't yet released it), no cursor or inverse-square appears, but you can usually tell where the brush is since you'll see its effects taking place as you move the mouse. Naturally, you may release the mouse momentarily and then press it again in order to be sure where it's positioned.

The Bucket(T) tool lets you spill paint, based on the foreground and background colors and the selected pattern. The "hot spot" associated with the bucket cursor, i.e. the single pixel on the screen considered to be the mouse position, is the end of the dripping paint on the right side of the bucket cursor. The effect of spilling paint is to cover all pixels that are the same color as the pixel where the mouse was clicked and which can be reached by horizontal and vertical movements without moving across differently colored pixels. If in doubt, experiment; it will become clear quickly. One interesting use of the bucket tool is to read black-and-white pictures from the clipboard and colorize them. In order to prevent solid black lines from appearing in the resulting picture, you may want to (carefully!) position the bucket within the lines themselves.

The Rectangle(R) tool lets you quickly paint a rectangle, which you specify by dragging the mouse from any corner of the rectangle to its opposite corner. Rectangles are always positioned with their sides parallel to the sides of the display screen. The current pattern, and also the foreground and background colors, are applied to the shape. If you've asked for hollow or hollow bordered shapes via the Shapes window, you'll see the effect of this as you drag. Borders are added only when you release the mouse. If, while dragging, you want to discontinue the rectangle painting *dragging the mouse into the menubar will cause the figure to go away* (unless

and until you drag back). If you've already released the mouse, try clicking the Backup icon in the Pure Colors window.

The Round Rectangle(D) tool works just like the previous Rectangle tool, except that the shapes it produces have rounded (currently, circular) corners. Choose the degree of roundedness from the Corners menu.

The Oval(C) tool is like the Rectangle tool, but it paints ovals. Note that the places where you click the mouse and later release it denote the corners of the smallest rectangle that contains the oval and therefore will probably not themselves be points on the oval.

The Triangle-Plus(T) tool is a new, fledgling, undocumented feature that represents one of several possible directions for future versions of ECP. It currently provides only two types of triangles and one diamond. Enjoy it.

The Lines(L) tool lets you draw lines that reflect the current pattern and colors but which, unlike with the Rectangle tool, may slope at any angle. As with the Rectangle tool and its cousins, you may drag into the menubar to cancel a pending operation.

The Words(W) tool lets you put text on the screen. A variety of sizes and styles are available. When you first click the mouse, you'll see a "blinker"; the cursor will be hidden until you move it, and the blinker will move as you type to show the current insertion point. You may now type characters from the keyboard, which will appear in the foreground color. If you make a mistake, you may use either the left-arrow key or the <delete> key to back up. When you press the <return> key, the insertion point moves to the following line, immediate below the point where you first clicked. You may backup to previous lines, but not to previously typed segments of text.

The Mark(M) tool lets you sweep out a rectangular area for copying. The area being selected will be indicated by an animated "marquee". If you click inside this region while holding the mouse down, you can drag it anywhere in the picture. By default, the region left behind will be set to the current background color. If you hold down the Option key when you click, however, a copy will be moved. In each case, when you release the mouse, the region will again be highlighted, but at its new location. You may now drag it somewhere else, or sweep out another area for copying, or change tools. If you have selected the *Transparent* item in the Cut and Paste window, portions of whatever is being dragged that appear in the background color will not be moved. To select a new region that's contained inside the first one, first click the mouse somewhere outside the region. You may also use the Cut, Copy, and Paste commands from the Edit window, or their keyboard equivalents, to move a selected area to the clipboard. That is, Cut and Copy move it there, Paste brings back a copy. This lets you make multiple copies in a picture, and it also lets you move pieces from one picture to another. Finally, you may save a picture piece indefinitely in the Scrapbook desk accessory, using these same editing commands.

The Fatbits(F) tool lets you specify with a magnifying glass cursor a portion of the screen to be blown up for closer inspection. The middle of the cursor corresponds to the middle of the region to edit. If you specify a point too close to either or both edges, you'll be given a square to edit that just touches the edge of the screen. To edit, click on the large dots in the large square on the left. This will cause the dot to be replaced by the foreground color, unless it's already the foreground color, in which case it will be converted into the background color. After clicking, you may drag the mouse to edit more bits. The area you're editing is displayed in normal size in the medium-size window to the right of the one with the fat bits. When you've completed your editing, you may click either the "O.K." icon or the "NO" icon to return to the main screen, or

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you may click the cursor in the medium size square to the right of the editing square to specify further editing.

### **The Keyboard**

You'll use the keyboard mainly for typing characters in Words mode, and for giving the names of files to be read or written to. The keyboard may also be used for command-key equivalents for changing modes or defining line sizes. If you're entering text in 'Word' mode, however, the command-key is ignored.

### **Saving the Screen and Backing Up**

It's easy to make a mistake. For this reason, ECP will automatically save the contents on the drawing window when you change tools, when you click in the menubar, when you press the 'Enter' key, and when you move a window. You may restore the screen to its appearance before it was last saved by clicking the "Backup" square in the Pure colors window or by pressing the 'Enter' key while holding down the Option key.

### **Suggestions**

1. The order in which you carry out operations can be significant. For instance, if you spill paint outside a letter containing a closed path (such as "o"), you'll notice that the interior remains unaffected. For this reason, you may want to wait until you've almost completed a picture before adding text. Similarly, paint spilling onto a dithered pattern (as specified by the Mixtures window) will affect only a single pixel.
2. Any suggestions or bug reports you can send me will be noted in future documentation or , in the case of bugs, hopefully fixed before a future release.

**[End of ECP 0.4 Documentation]**