# THE PATTERN EDITOR

## INTRODUCTION

This chapter explains Resorcerer's Pattern Editor, which edits Macintosh black & white patterns.  The Color Icon Editor is responsible for editing color patterns in resources of type 'ppat'.

Black and white patterns occur in their own resources of type 'PAT ', and in pattern list ('PAT#') resources.  Each pattern consists of 64 bits, arranged in an 8 by 8 pixel square, and stored as 8 consecutive bytes.

If you are not already, you should be familiar with the information on general resource editing, as discussed in the "Editing Resources" chapter earlier in the manual.

### TOPICS COVERED

- Creating a new pattern
- Using the pattern editor
- Copying from the screen
- Decompiling a pattern

# CREATING A NEW PATTERN

When the Pattern Editor is asked to create a new pattern, it sets the pattern to white (all bits in the pattern are cleared). The Editor then opens the new resource for editing.

If you are editing a new pattern in a pattern list ('PAT ') resource, the Pattern List Editor will also create the pattern as all white.

# USING THE PATTERN EDITOR

The Pattern Editor window has three main parts. In the middle is the pixel editing area; on the left is the Snapshot list; and on the right is the sample pattern.

In addition, a **Cancel** button lets you close the pattern without making any editing changes.
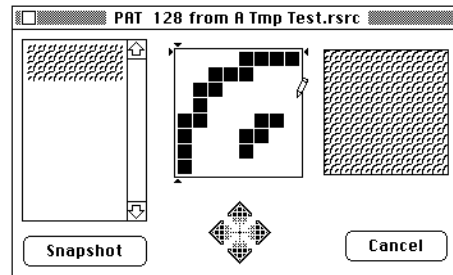
## THE PIXEL EDITING AREA

The pixel editing area shows the pattern's 8 by 8 black & white pixels in an enlarged form. Whenever the mouse is within the editing box, it changes to a pencil to indicate that you can click and draw pixels.

To draw black pixels, click on a white pixel and drag the pencil. To draw white pixels, click on a black pixel and drag the pencil. If you make a mistake, you can choose **Undo** from the **Edit** menu.

**Sorcery:** You can also tap the ` key in the upper left corner of the keyboard, to perform an **Undo** (this is compatible with various other pixel editors, such as MacPaint).

You can make selections of either rows or columns of pixels by clicking and dragging the triangular handles located just outside the editing box bounds. These handles tell you the position at which any pasting of

rows or columns of pixels will occur. Unlike other insertion carets, they don't blink when there is no selection, because in a graphical editor this blinking is too distracting.

You can copy a picture of the pattern bits to the clipboard when you choose Copy from the Edit menu. If any rows or columns are selected, then the Editor copies only those rows or columns.

Below the editing box is a diamond-shaped row and column rotator/shifter. To rotate the pattern's bits up, down, left, or right by one or more rows or columns, click on the top, bottom, right, or left part of the shifter, respectively.

**Sorcery:** To shift rows or columns without rotating them, hold the Shift key down while clicking on the control.

Rotating and shifting is done with respect to the position of the related insertion caret. To insert a row or column, place the horizontal or vertical caret at the position where you want to insert extra space, hold the Shift key down, and click on the appropriate side of the Shifter.


## THE SNAPSHOT LIST

The Snapshot list lets you keep intermediate patterns during editing. The Editor takes an initial snapshot when you open your pattern. Each time you want to save the state of the current pattern you are editing, click once in the **Snapshot** button to append the intermediate pattern to the list. You can keep any number of snapshots in the list.

To restore the pattern you are editing to one of the snapshots in the list, scroll the list to the pattern you want to revert to, and double-click on it.

To clear all snapshots except the first from the list, choose **Clear Snapshots** from the Editor's menu.

**Sorcery:** The Space Bar is the keyboard equivalent of the **Snapshot** button.

### THE SAMPLE PATTERN

The sample pattern area on the right shows you an extended area covered by repeated copies of your pattern as it is currently showing in the editing area.  During times when the editing box is changing, such as when you are drawing new pixels or screen copying into it, the sample is divided vertically into two halves.  The left half shows you the current state of the pattern as you make your change; the right half shows you the pattern in its state just before you started making the change.  This lets you see the difference between the two easily.  When you have finished drawing or screen-copying, both halves return to showing you the current pattern.

### EDITOR MENU COMMANDS

Four basic transformations are available in the Editor's menu that affect the pattern as a whole.  **Erase** sets all pixels white; **Negate** flips the sense of all pixels, from black to white and white to black; **Rotate** rotates the pattern by 90° counter-clockwise; and **Mirror** changes the pattern to its mirror image.

# COPYING FROM THE SCREEN

You can copy any 8 by 8 square area of your Mac screen directly into the editing box when you choose **Copy from Screen…**.  This attaches a "marching ant" selection marquee to the mouse so that you can place it over another pattern in some other window, such as a paint program resting in the background under MultiFinder.

During screen-copying the Editor is constantly copying the contents of the selection rectangle into the editing box, so that you can easily adjust the position of the selection to exactly what you want.  The sample area is also updated continually.

To create a random pattern, place the selection rectangle over the left half of the sample area, which initiates a feedback loop that effectively scrambles all the pixels as you move the mouse.

**Sorcery:**  ⌘= is the command key equivalent of **Copy from Screen…**.
⌘ . (period) lets you cancel out of screen copy mode.

# DECOMPILING A PATTERN

If the pattern you are editing is a complete resource (usually of type 'PAT '), then you can decompile the resource data into a Rez language declaration.  You cannot decompile it if the pattern is part of a pattern list ('PAT#') resource (in this case, you must decompile the pattern list as a whole).

To decompile the pattern resource, first make sure that no rows or columns are selected in the editing area, then choose **Copy** from the **Edit** menu to place the text of the decompilation into the clipboard.  You can then switch to your development editor and paste the text into your Rez source file.