

COMIC WORKS™

Created by
MacroMind®, Inc.
and Mike Saenz

Featuring:

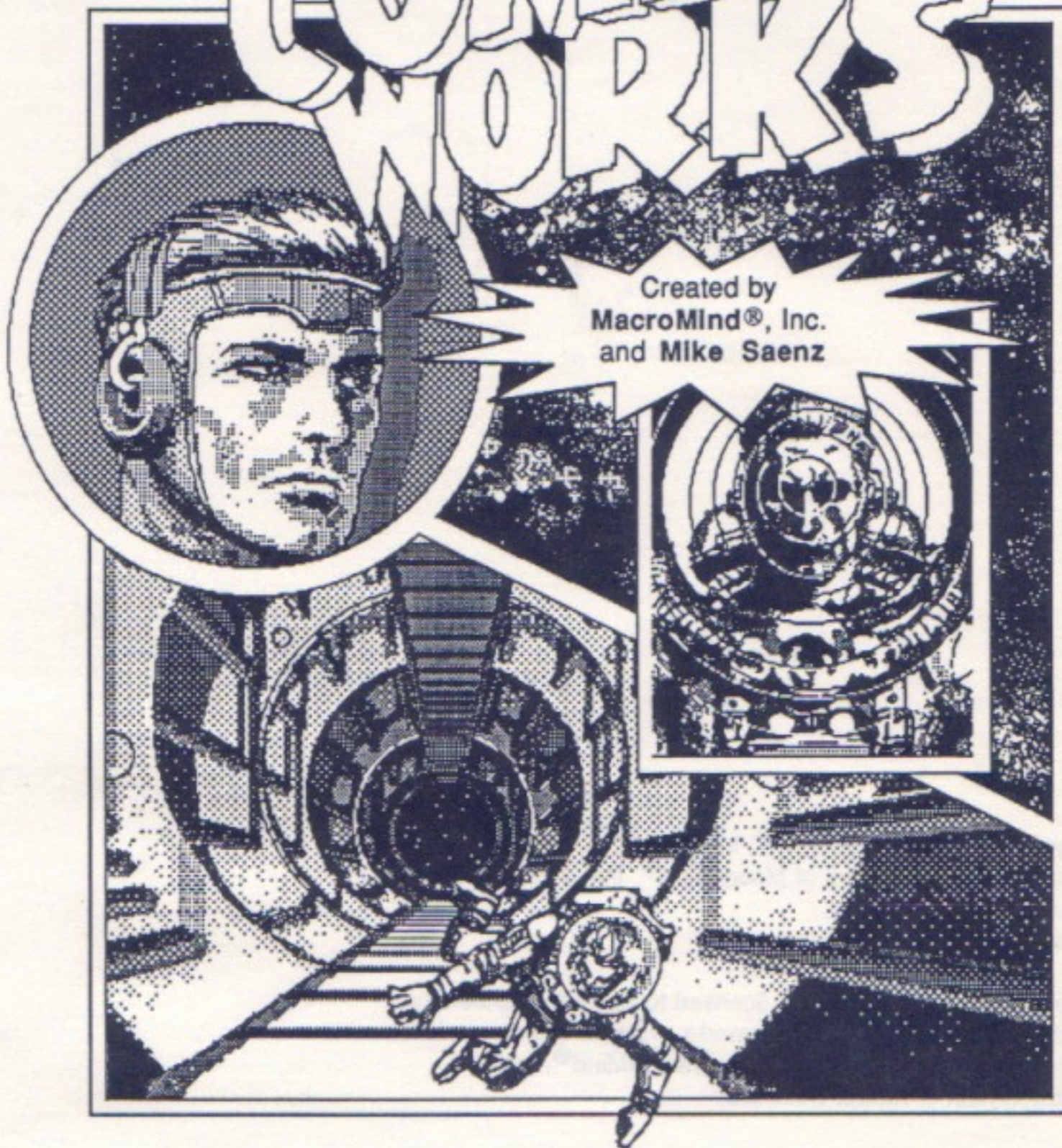
- Custom prints comic books, cards, ads, posters, newsletters, comic strips. . . hundreds of applications!
- A complete **PAINT PROGRAM** • Object-oriented **PAGE LAYOUT**
- Mixed **TEXT** and **GRAPHICS** anywhere on the screen
- Special **COMIC BOOK** fonts • **CUSTOM PANEL** and **VOICE BALLOONS** • A library of **COMIC ART**



Folio™

COMIC WORKS

Created by
MacroMind®, Inc.
and Mike Saenz



MINDSCAPE, INC. 3444 Dundee Rd. Northbrook, IL 60062

ComicWorks Copyright © 1986 MacroMind®, Inc.
ComicWorks™ is a licensed trademark of MacroMind®, Inc. and Mike Saenz
Folio is a trademark of Mindscape, Inc.
All Rights Reserved.

Macintosh and Macintosh+ are trademarks licensed to Apple Computer, Inc.
MacWrite, MacPaint, and MacDraw are trademarks of Apple Computer, Inc.
Art Grabber+™ and ThinBits™ are trademarks of MacroMind®, Inc.
PosterMaker is a trademark of Strider Software.

This program contains a version of PosterMaker™, created by Strider Software
in Pembine, Wisconsin. A stand-alone version of PosterMaker is also available.
For more information, contact your local dealer or call Strider software at
(715) 324-5487.

The front and back of this package were created with **ComicWorks**.

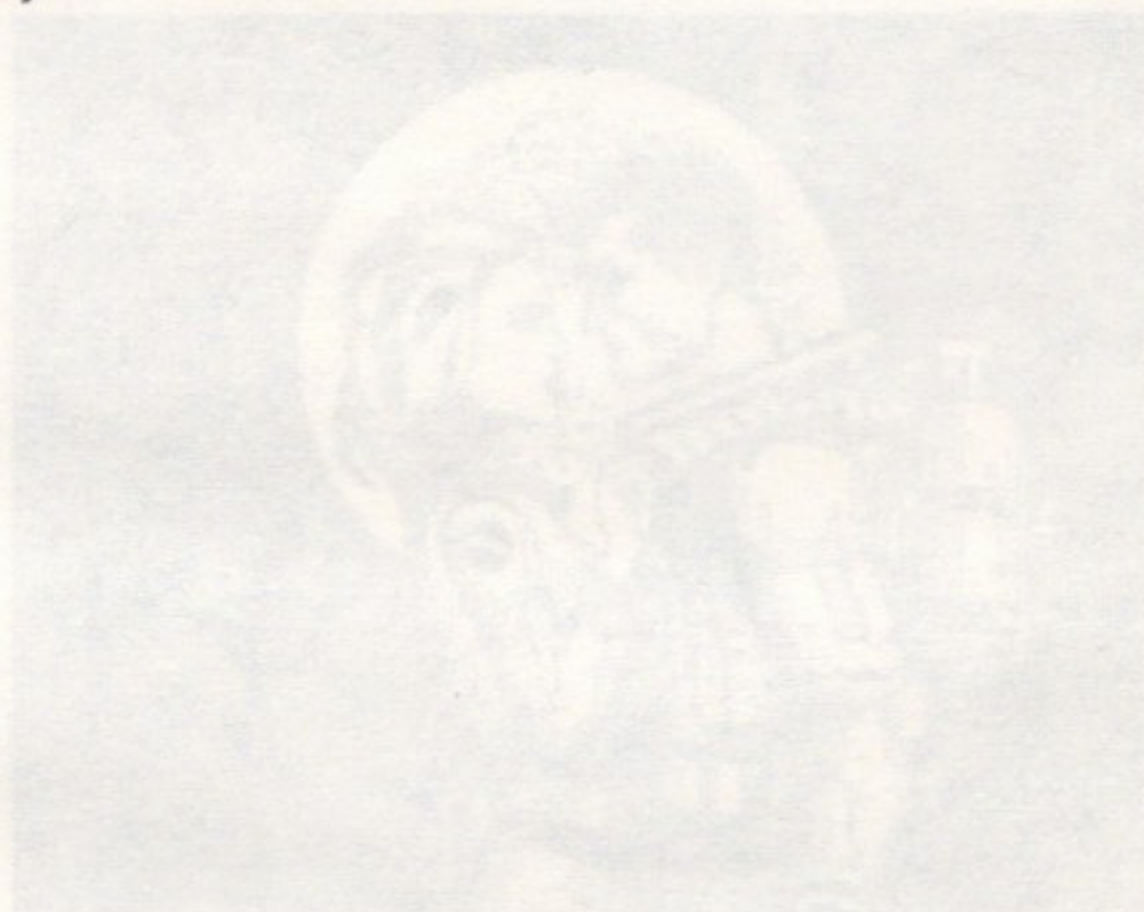
Printed in the U.S.A.

Table of Contents

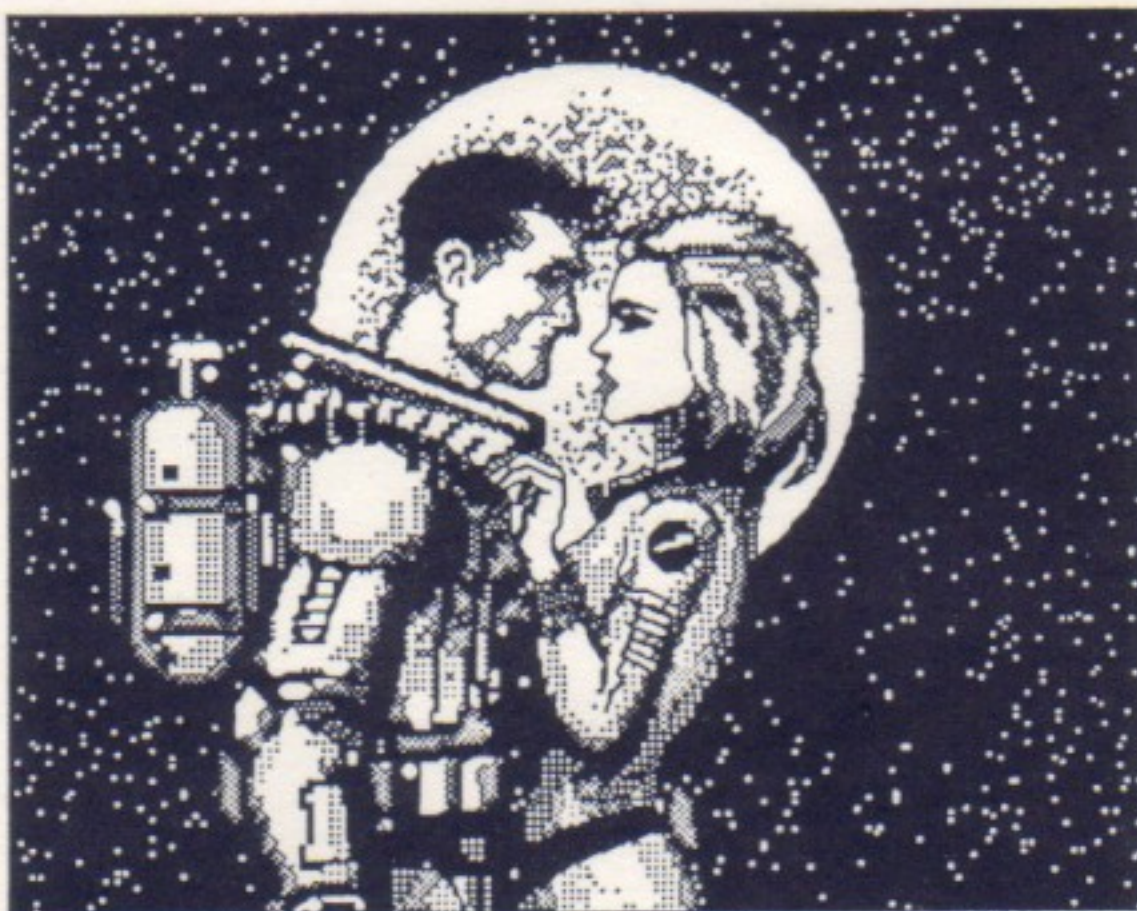
Introduction	7
Getting Started	9
What's in the Package?	10
Hardware	10
Getting Loaded	10
Using this Manual	10
QuickStart	11
Part 1: A Star Revealed	15
How to Use ComicWorks	15
What Else Can It Do?	18
Part 2: The First Adventures - Tutorials	19
Tutorial One	22
Tutorial Two	30
Part 3: Dreams Made Real	41
Panels, Easels, and Balloons	42
New Panel Tool	42
New Easel Tool	44
New Balloon Tool	45
Manipulating Panels, Easels, and Balloons	46
Selected Panel	46
Easel Selector	46
Priority Levels	46
The Hand	47
The Art Tools	48
The Pencil	48
The Brush	48
Lines	49
Rectangles, Ovals, Regions, and Polygons	50
The Paint Bucket	50
The Eraser	50
Graphic Text	50
The Lasso & Marquee	50
The Airbrush	51
UnDo	52
The Layout Tools	52
Page Orientation	52
ThinBits™	52
Shuffle Up One, Shuffle Down One...	54
Center	54
Reshape Panel/Balloon	54

Format Text	55
Show Pages	55
Grid Maker	56
Add/Delete Page	58
Art Grabber+™	58
Open Browse Comic	58
Document Size	60
Printing	61
Making the Printout	61
Bit Image vs. Object-Oriented Printing	62
LaserWriter Printing	63
Card Format	64
Other Tools and Features	64
Special Editing Commands	64
Custom Patterns and Brushes	65
Panel, Easel, and Balloon Features	67
Fine Movements	67
Transparent Paper	67
Clip Exception	68
Crop Work	68
Wrap Panel	68
Set Background Color	68
The Ink Window	69
FatBits	71
Part 4: Tips and Techniques	72
If You Can't Draw in a panel	73
Template Documents	73
Working With Full-Screen Windows	74
Working With Windows	74
If You Lose an Easel	74
Quickly Moving Easels and Panels	74
Using the Grid for Drawing	75
Weirdnesses	76
Organizing Your Work	76
Airbrush Tips	77
Compatibility With MacPaint	78
Using the Inks	78
Creating a Custom Mask	82
For Experts Only—Customizing ComicWorks With ResEdit	83
Part 5: Strider Software's PosterMaker™	85
Scaling an Area	87
Drawing a Border	88
Printing	88
Saving Posters	88
Moving PosterMaker	89

Part 6: Quick Reference	90
The Tools	91
The Menus	92
Shortcuts	100
The Command Keys	101
 Part 7: The Archives	 102
 MacroMind®, Inc	 109
Biographies	109
Credits	111
Acknowledgments	111
Bibliography	112
Glossary	113



THE INTRODUCTION



Introduction

When you were a kid, did you ever read comic books? Most of us did (some of us still do), and an awful lot of us tried to make our own. We would feverishly scribble out our versions of our favorite characters—complete with dialog that would make an English teacher cringe—and either hide them under our bed or send them off to comic book companies hoping to be discovered.

There are a lot of us who still wish we could create comics. We want to be able to tell stories of beautiful heroines and bug-eyed monsters and square-jawed heroes. We'd love to be able to draw and paint and capture imaginations with our talents. Unfortunately, most of us aren't very good at it.

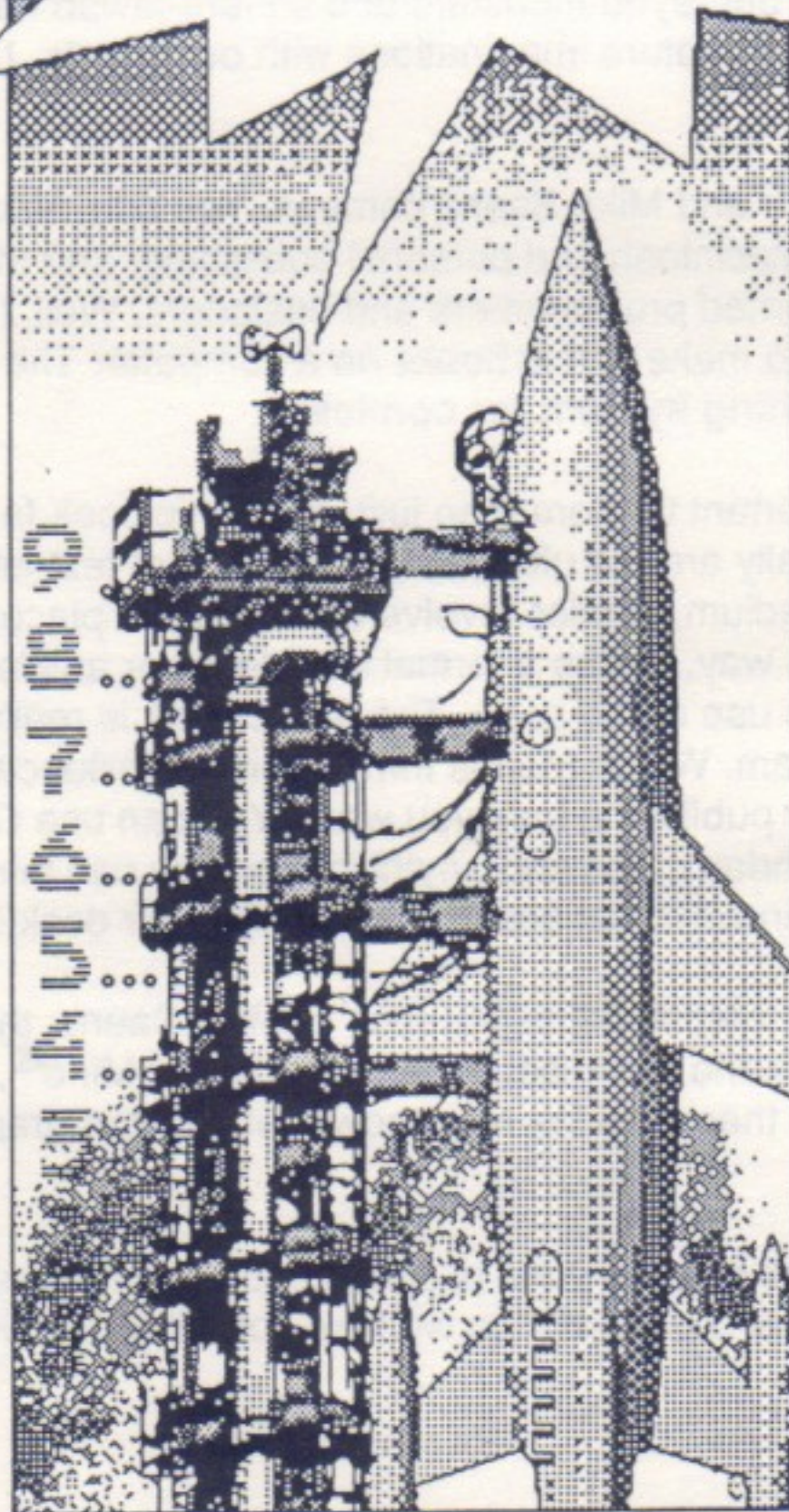
That's where MacroMind® and Mike Saenz come in. You see, Mike is a comic book artist who stumbled upon the Macintosh and personal publishing, and MacroMind® is a group of enlightened and very talented programmers and designers. Well, they got together and decided to make it easy to make comic books on a computer. The result is **ComicWorks**, the first **personal publishing system for comics**.

This development is important to more than just the comic book fans out there. Because, you see, comic books really are the ultimate combination of text and graphics. More than almost any other print medium, comics involve the free-form placement of text and artwork in virtually every possible way. Unlike a formal newsletter or article, a comic book has to be flexible and creative in its use of the page. The comic book is really the ultimate test of a desktop publishing program. Which means that if **ComicWorks** can make comic books, it can do virtually any other publishing task you want. You can use **ComicWorks** to create your newsletters and birthday cards and anything else you can think of... plus you can be wild, crazy, and creative in ways not possible with any other desktop publishing program!

ComicWorks takes the professional experience of Mike Saenz, the user interface and graphics of the Macintosh, the technical expertise of MacroMind®, and two disks full of Mike's art, and combines them into the most powerful and **fun** graphics tool yet created for any personal computer.

Turn the page and you will enter a world of spaceships and heroes, monsters and mayhem, and more than a little fun and creativity as we take you on a tour of **ComicWorks**.

GETTING STARTED



Getting Started

What's in the Package?

Enclosed in this package you will find:

- this manual,
- a program disk containing **ComicWorks**, **PosterMaker™**, and a System Folder
- two art disks containing several short comic book stories, templates for **greeting cards**, **newsletters** and **storyboards**, and a complete comic art library.
- a reference card detailing the various ways to work with your **ComicWorks** disks

Hardware

All you need to use **ComicWorks** is a Macintosh or Macintosh+ with at least 512K of memory. A printer is highly recommended, as is a second disk drive. If you have a graphics tablet or other alternative to the mouse, you may find it complements **ComicWorks** as well.

Getting Loaded

To load **ComicWorks**, just insert the disk into the internal disk drive and turn on your computer. Double-click (click the button twice quickly) on the **ComicWorks** icon when it appears.

Using This Manual

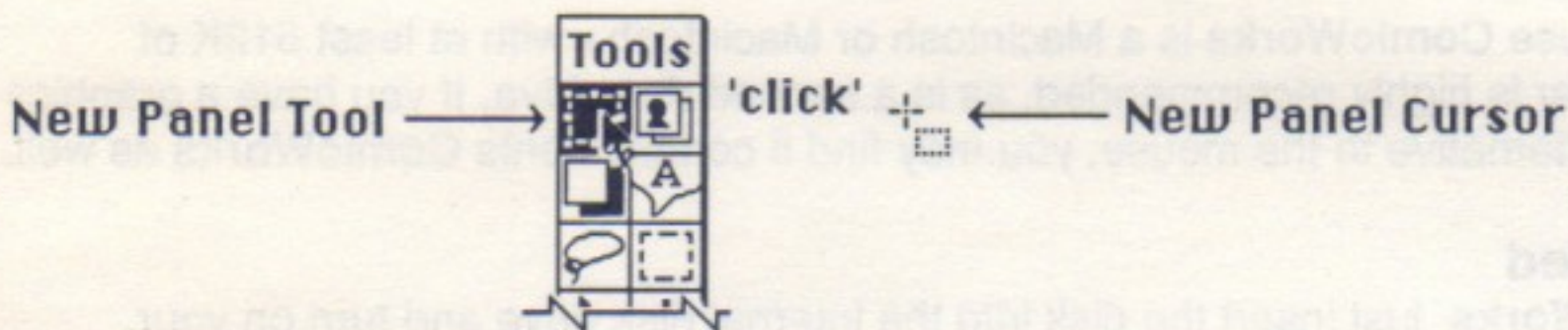
This manual is broken down into several sections. If you are in a hurry to try out **ComicWorks**, read the **QuickStart** section first. That will get you going. When you are ready for an introduction to the larger **ComicWorks** world, read **Part 1: A Star Revealed**. It will take you step by step through the basic concepts of how the program works. When you are ready to use the program some more, come back to the manual and work your way through the tutorials in **Part 2: The First Adventures** and read **Part 3: Dreams Made Real** for a detailed look at every command. **Part 4: Tips and Techniques** explains a few little tricks we've figured out to help you get the most out of the program. **Part 5: Strider Software's PosterMaker™** explains how to use this exciting program to create posters from your **ComicWorks** document—you can print up to 32 times bigger than a standard page! **Part 6: Quick Reference** gives a command-by-command breakdown of the menus, windows, tools, and keyboard commands which let you completely bypass the menus for most functions. Finally, **Part 7: The Archives** contains a complete printout of all of the artwork included on the art disks that came with this package.

QuickStart!

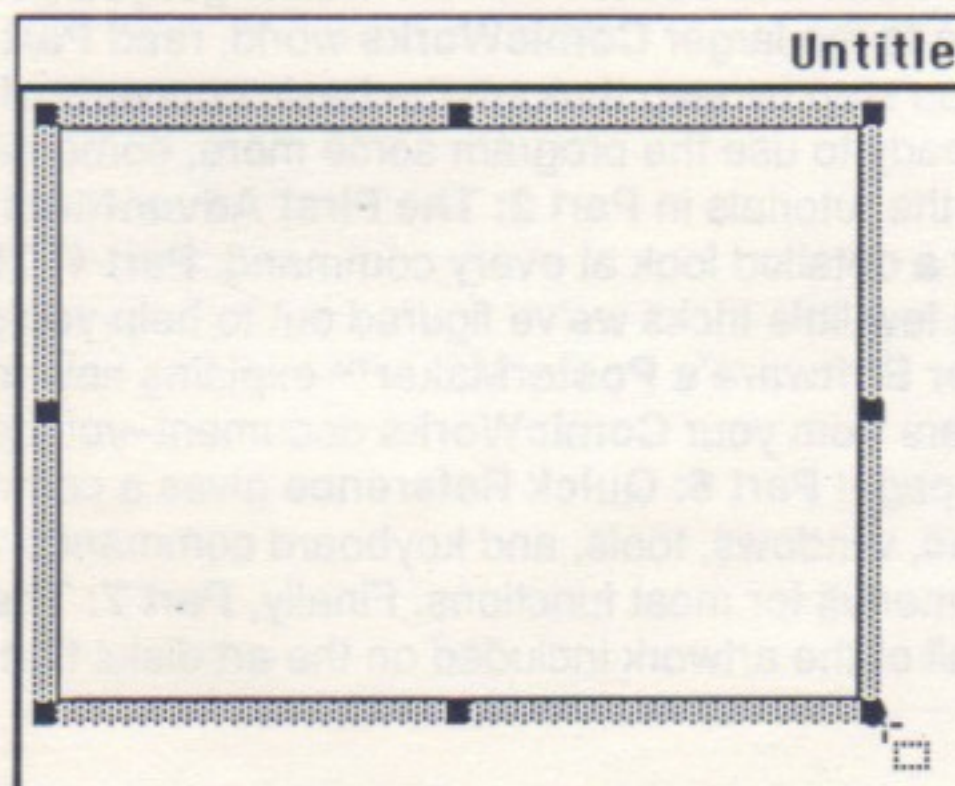
You are probably anxious to get started on your first masterpiece, so turn on your Macintosh, put the **ComicWorks** program disk in the drive, and double-click on the **ComicWorks** icon (point to it with the mouse and click the button twice quickly).

When the program starts, follow the steps below to create your first **ComicWorks** document.

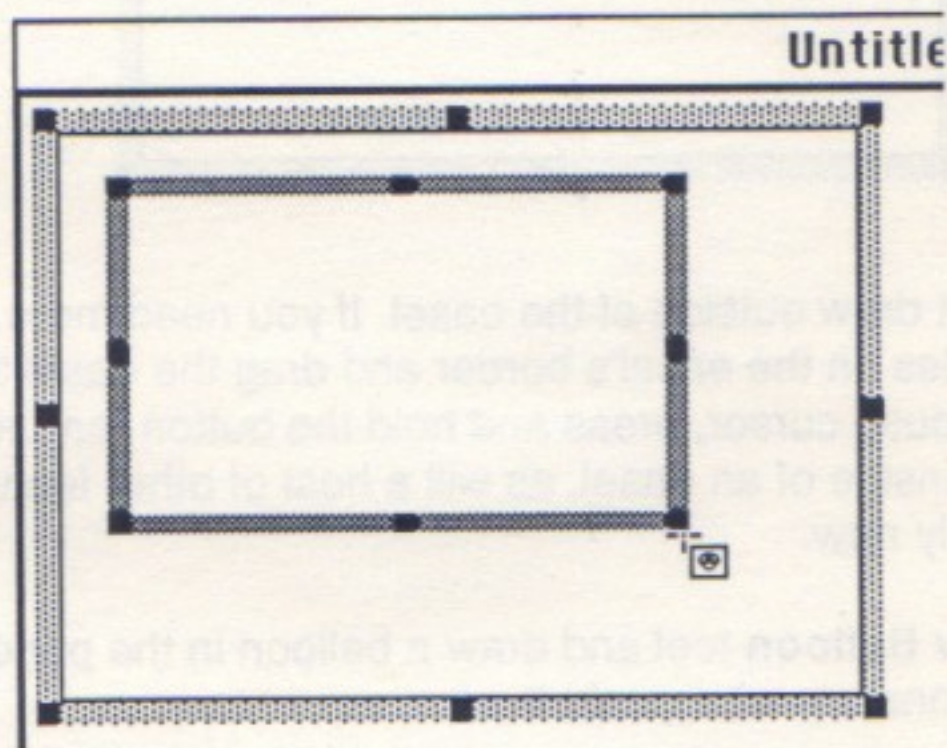
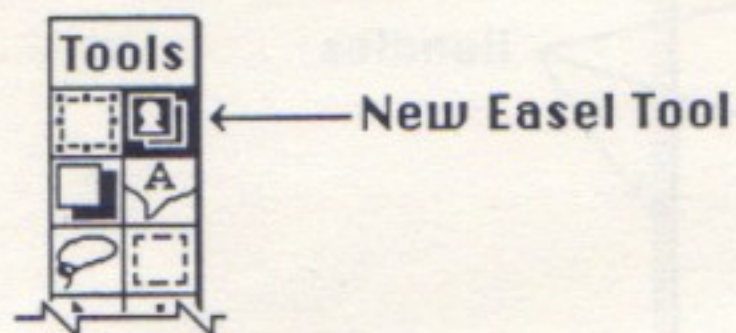
1. The window labeled **Untitled** is your window onto the **ComicWorks** page — we call it the **document window**. You can move around the page with the scroll bars, just like in any other Macintosh application. To create a **panel** (the place where everything important happens in **ComicWorks**), click on the **New Panel** tool in the **Tools** window.



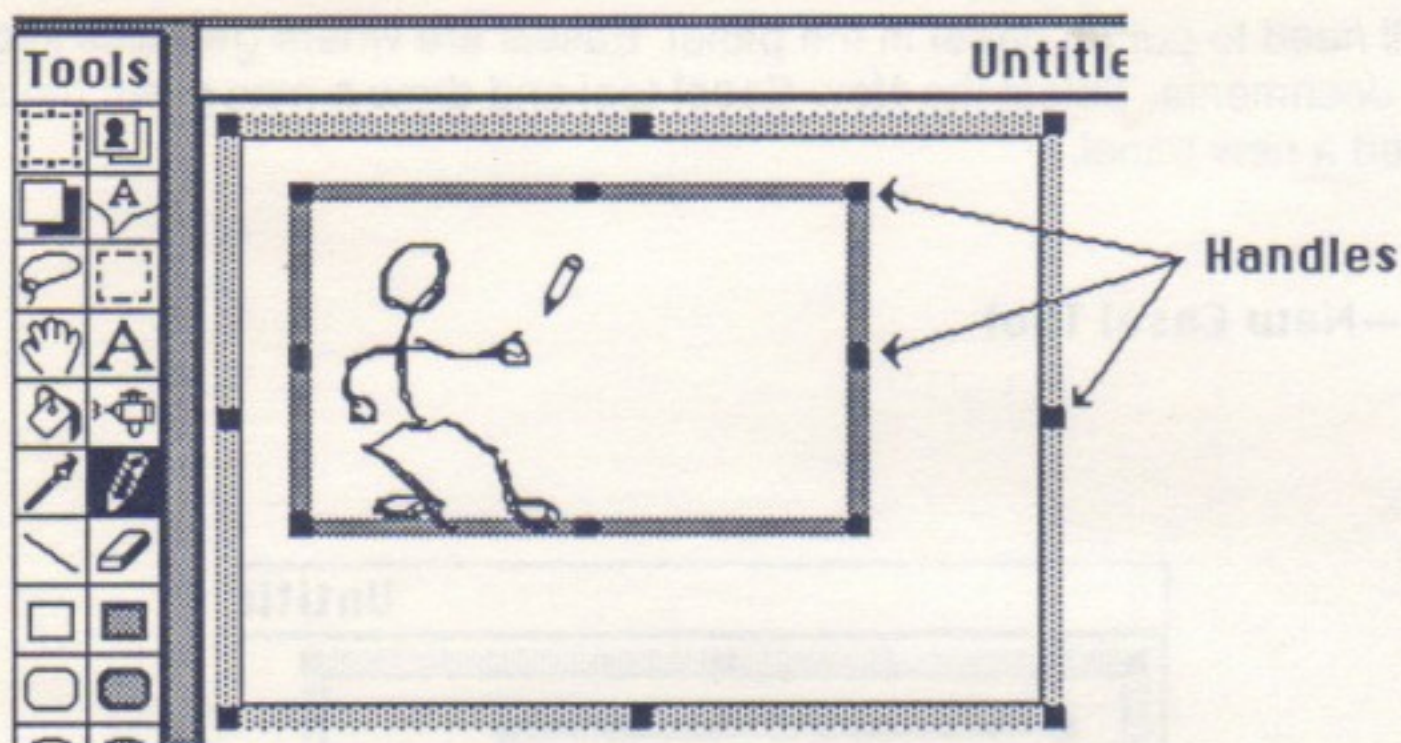
Your cursor will change shape. Use this new cursor to draw a rectangle on the page the size you want your panel to be. Draw the rectangle by placing the cursor at the top left corner, pressing and holding the button, and dragging the cursor diagonally to the right. If you draw past the edge of the window, the page will automatically scroll to accommodate you. When you release the mouse button, you will see a new panel appear.



2. Now you will need to put an **easel** in the panel. Easels are where graphics live in **ComicWorks** documents. Select the **New Easel** tool and draw a new easel the same way you created a new panel.

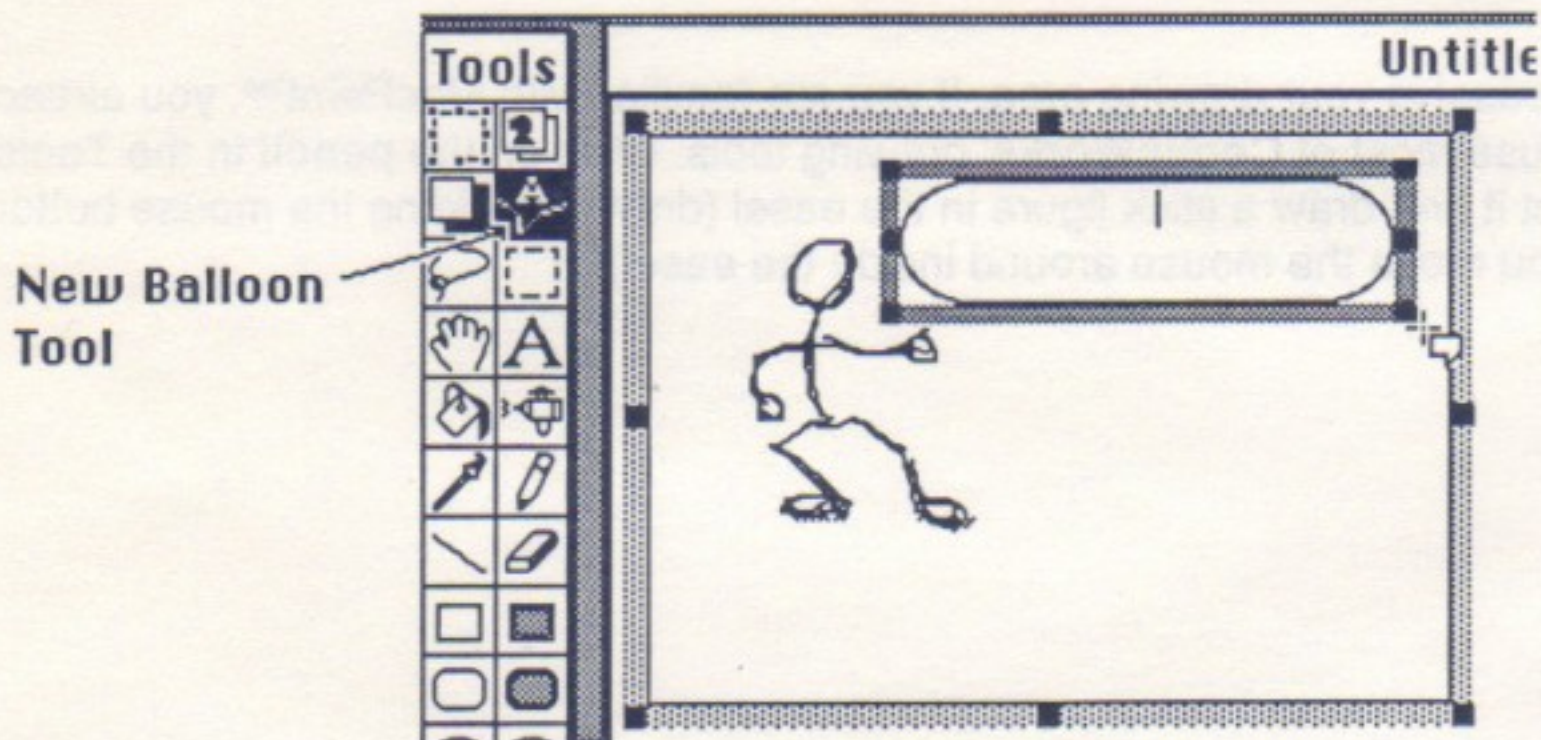


3. The easel is your drawing area. If you are familiar with MacPaint™, you already know how to use most of **ComicWorks'** drawing tools. Click on the **pencil** in the Tools window to select it and draw a stick figure in the easel (draw by holding the mouse button down while you move the mouse around inside the easel).



Notice that you cannot draw outside of the easel. If you need more room in the easel, "grab" one of the black handles on the easel's border and drag the easel to its new size (point to the handle with the mouse cursor, press and hold the button, and move the mouse). Any of the art tools will work inside of an easel, as will a host of other features, some familiar from MacPaint, others totally new.

4. Now select the **New Balloon** tool and draw a balloon in the panel—just like you did to make the easel. Balloons are where text lives.



5. Type "Welcome to ComicWorks!" in the balloon. If the text won't fit in the balloon, grab one of the balloon's handles and stretch it (just like you did with the easel) until the text fits.

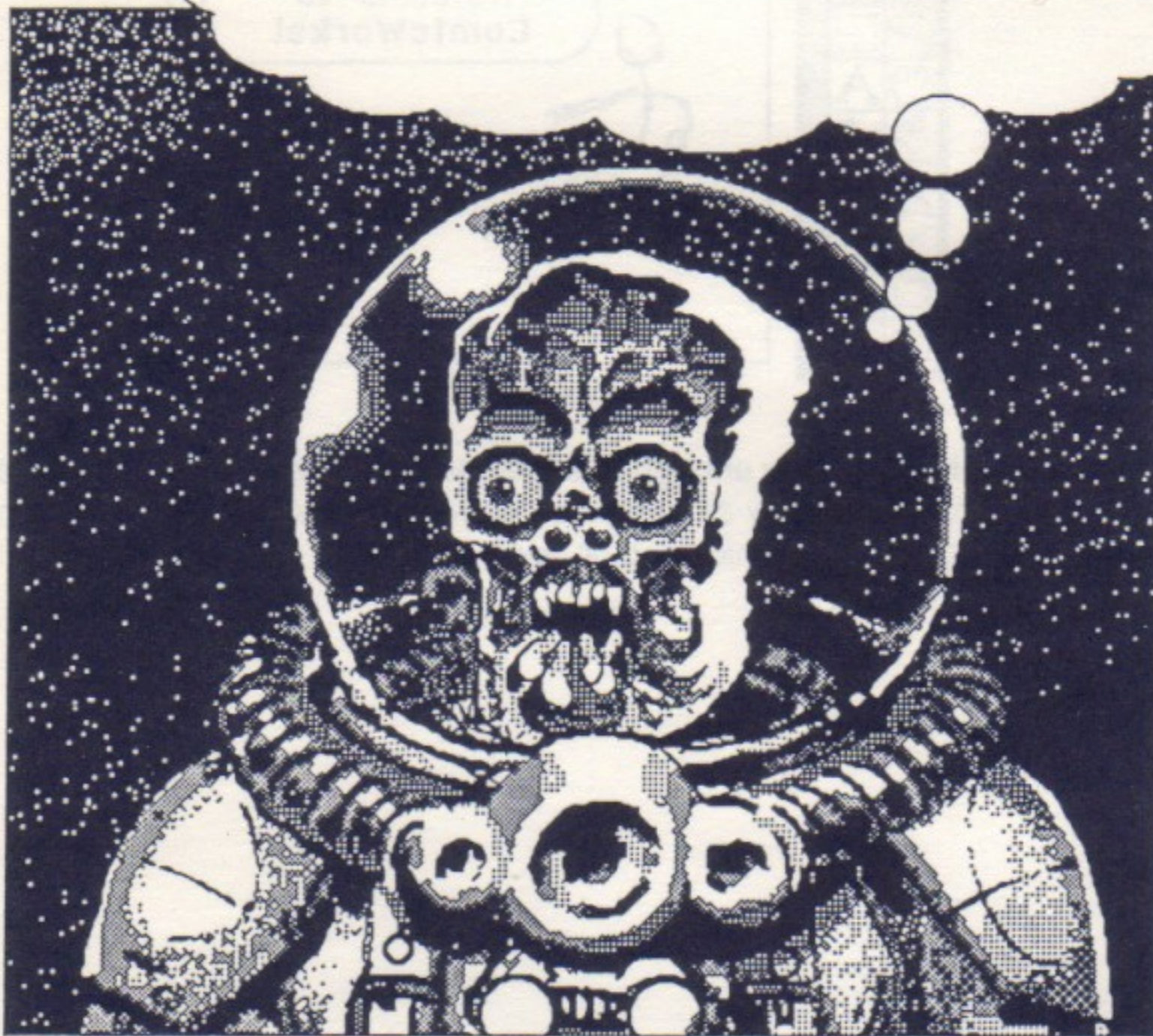
6. Double-click on the word **ComicWorks** (in the balloon). You should see the text reverse color. Now select **Bold** from the **Style** menu.

7. Click anywhere in the document window (but outside of the panel) to see your creation as it would print out.



Well, there you have it. You know enough to experiment and have fun with **ComicWorks**. If, however, you are ready to really stretch your imagination and learn about the most innovative thing to happen to graphics and desktop publishing since the Macintosh, turn the page and dig in!

A STAR REVEALED!

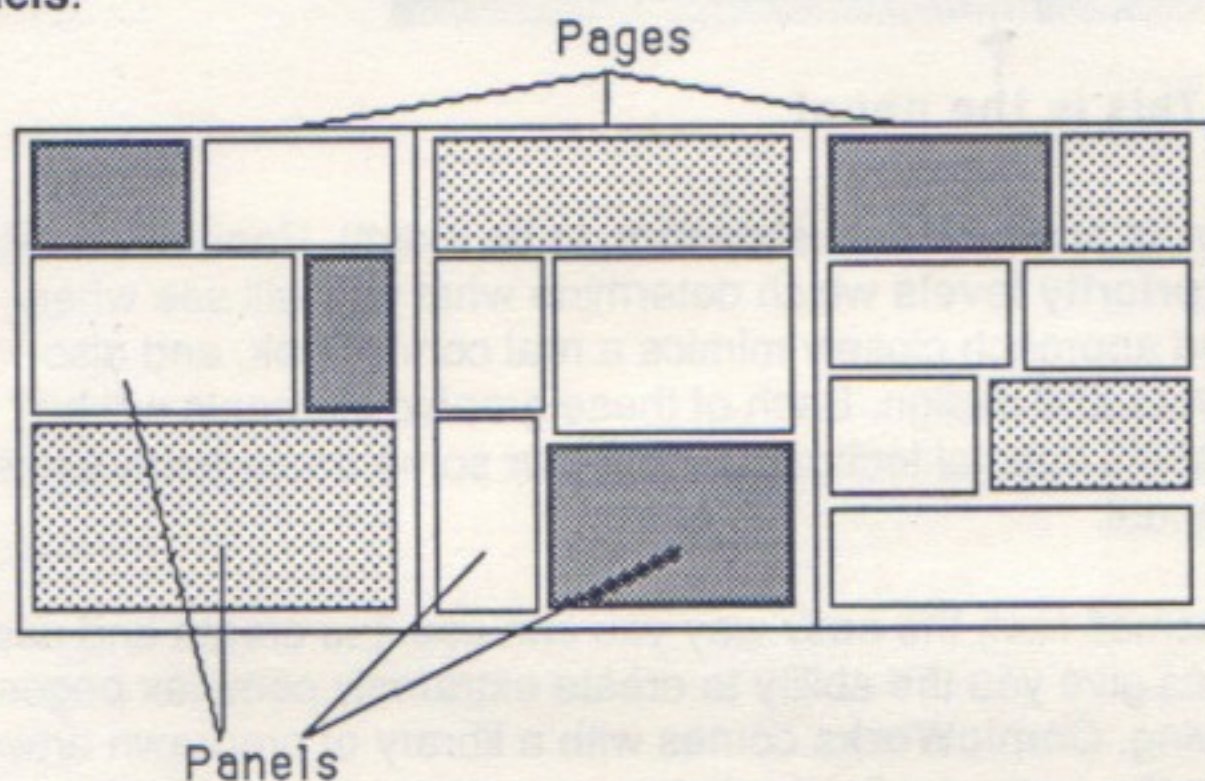


Part 1: A Star Revealed

How to Use ComicWorks

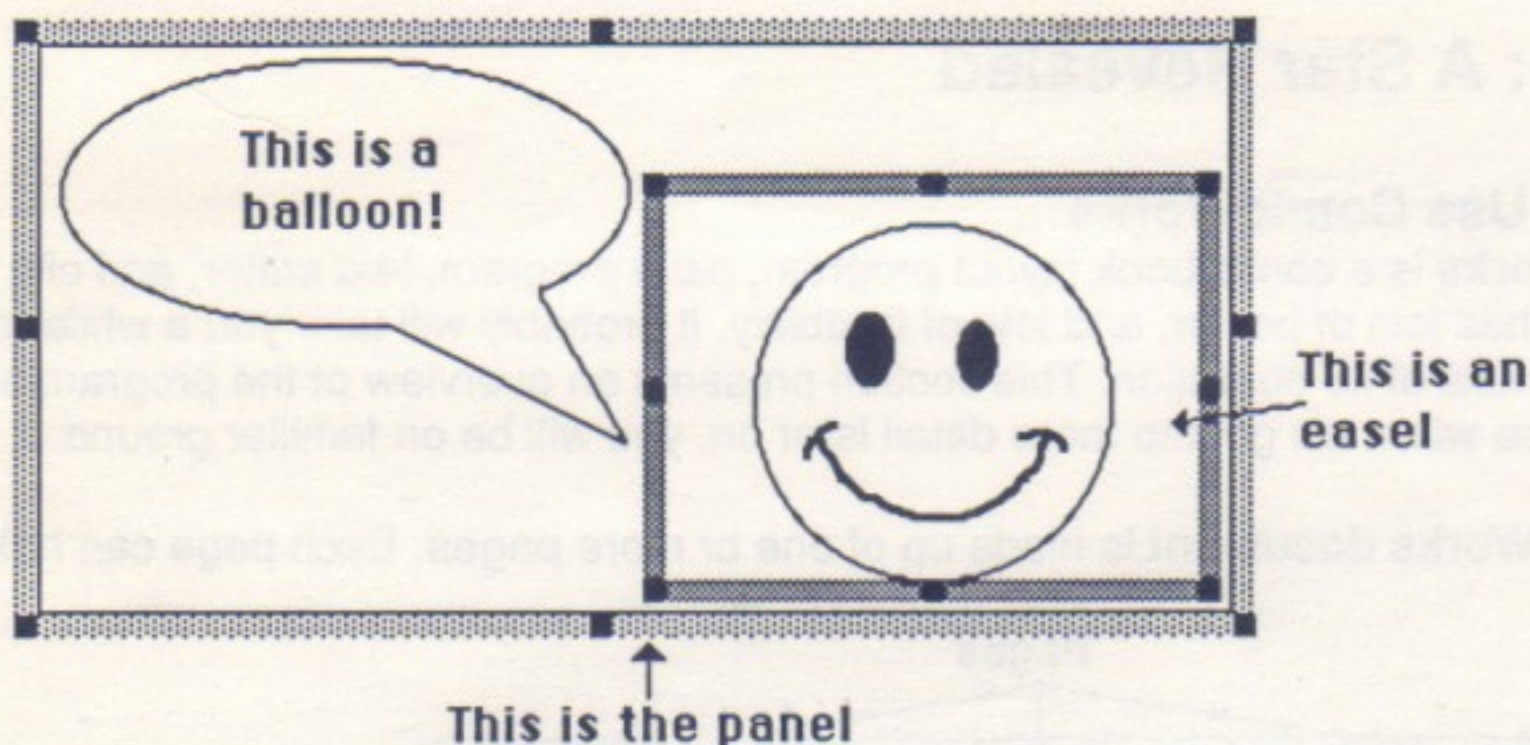
ComicWorks is a comic book layout program, paint program, text editor, and clip art library. It has lots of power, and lots of flexibility. It probably will take you a while to learn all the little tricks of its operation. This section presents an overview of the program and its abilities, so when we go into more detail later on, you will be on familiar ground.

A **ComicWorks** document is made up of one or more **pages**. Each page can hold many **panels**.



A **ComicWorks** panel is exactly like a panel in a real comic book. It is an area on the page which holds text and graphics. A **ComicWorks** panel has many special characteristics, but the most important thing to remember is that it can contain both graphics and text areas.

Within panels are the graphics areas, called **easels**, and the text areas, called **balloons**.



Each panel can hold many easels and balloons (sixty-four, to be exact). Panels, easels, and balloons all have specific **priority levels** which determine what you will see when they overlap. This multi-layered approach closely mimics a real comic book, and also allows for great flexibility in layout and design. Each of these graphic elements will be discussed in detail (including some special techniques that blur some of the boundaries between them) later in this manual.

Part of **ComicWorks'** power comes from the easy way you can use it to create and use graphic libraries. These libraries give you the ability to create extremely complex pages with a minimum of actual drawing. **ComicWorks** comes with a library of predrawn artwork to get you started. This art is in the form of a finished story, a number of individual panels and independent drawings, and several page templates for special layout work such as greeting cards, storyboards, and newsletters. For the most part, the art is in the style of the typical 1950's outer space comic book. You will find a wide selection of spaceships, heroes, heroines, bug-eyed-monsters (BEMs), and planets to choose from when you create your own stories.

Several complete comic book pages are included with **ComicWorks**. Four of these pages make up the story **Two Ships** on **Art Disk #2**. With a little rearranging, any number of alternate storylines can be generated. You can change the text in the balloons, rearrange panels, and even touch up the artwork to change these stories into your own creations.

ComicWorks is a powerful and flexible (not to mention fun) tool. You can use our art or make your own. You can mix and match the panels provided in a myriad of ways. You can become a great comic book artist, or just make birthday cards. It's up to you.

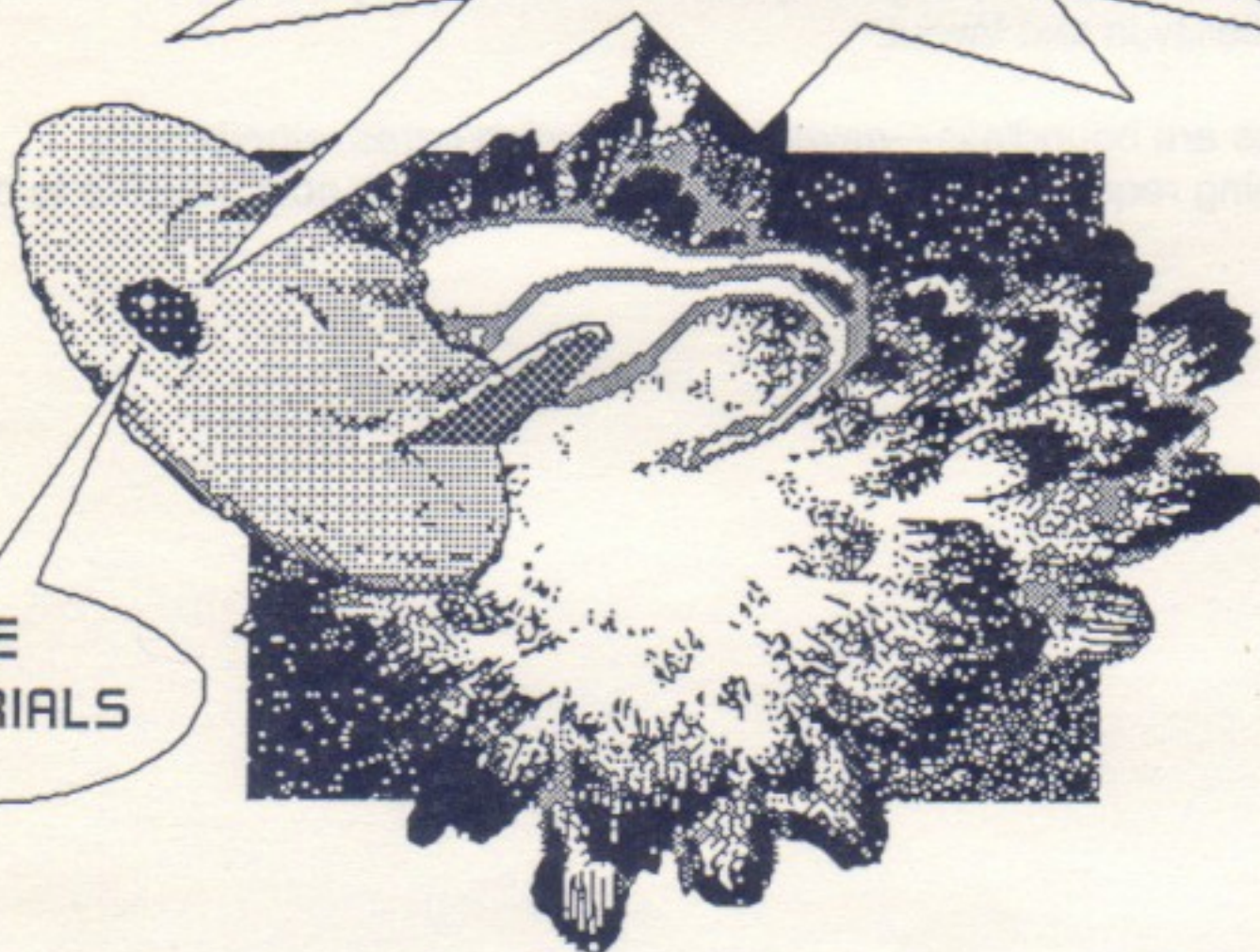
What Else Can It Do?

As you might have noticed by now, **ComicWorks** has tremendous potential... and may not be just for making comic books. **ComicWorks** breaks new ground with its unique ability to combine object-oriented bit-mapped graphics with full text editing anywhere on any page.

ComicWorks has no artificial boundaries such as columns or pages. Documents can be made up of many pages. Art and text can exist side by side—they can even overlap if you like. Art can be anywhere in a panel—even crossing pages, and a panel can be any shape and can be bigger than a page. Each piece of art and text is a separate object, making editing and layout easy, and allowing for the easy creation of graphic libraries. Text balloons can be any shape, and the text can be made to wrap to any arbitrary space. Balloons and panels can be placed anywhere and can easily be customized to allow unheard-of flexibility in text layout.

The possibilities are boundless—newsletters, greeting cards, storyboards, articles—anything requiring text and graphics side by side is now possible to design and print.

THE FIRST ADVENTURES!

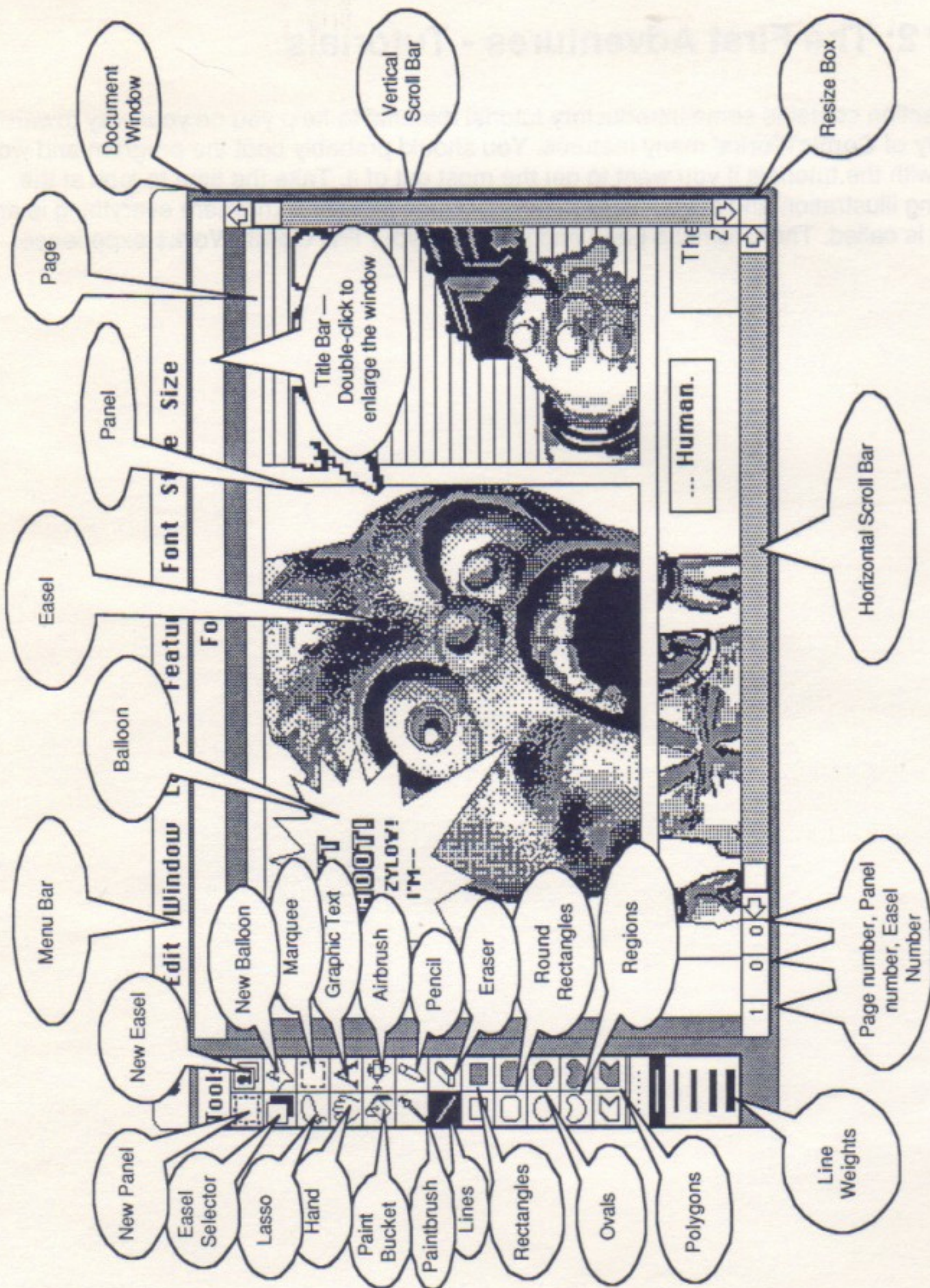


THE
TUTORIALS

Part 2: The First Adventures - Tutorials

This section contains some introductory tutorial material to help you on your way toward mastery of **ComicWorks'** many features. You should probably boot the program and work along with the tutorials if you want to get the most out of it. Take the time to look at the following illustration and at your screen, and become familiar with where everything is and what it is called. Then, turn the page and jump into your first **ComicWorks** experience.





Tutorial One

First, select **Open** from the **File** menu.

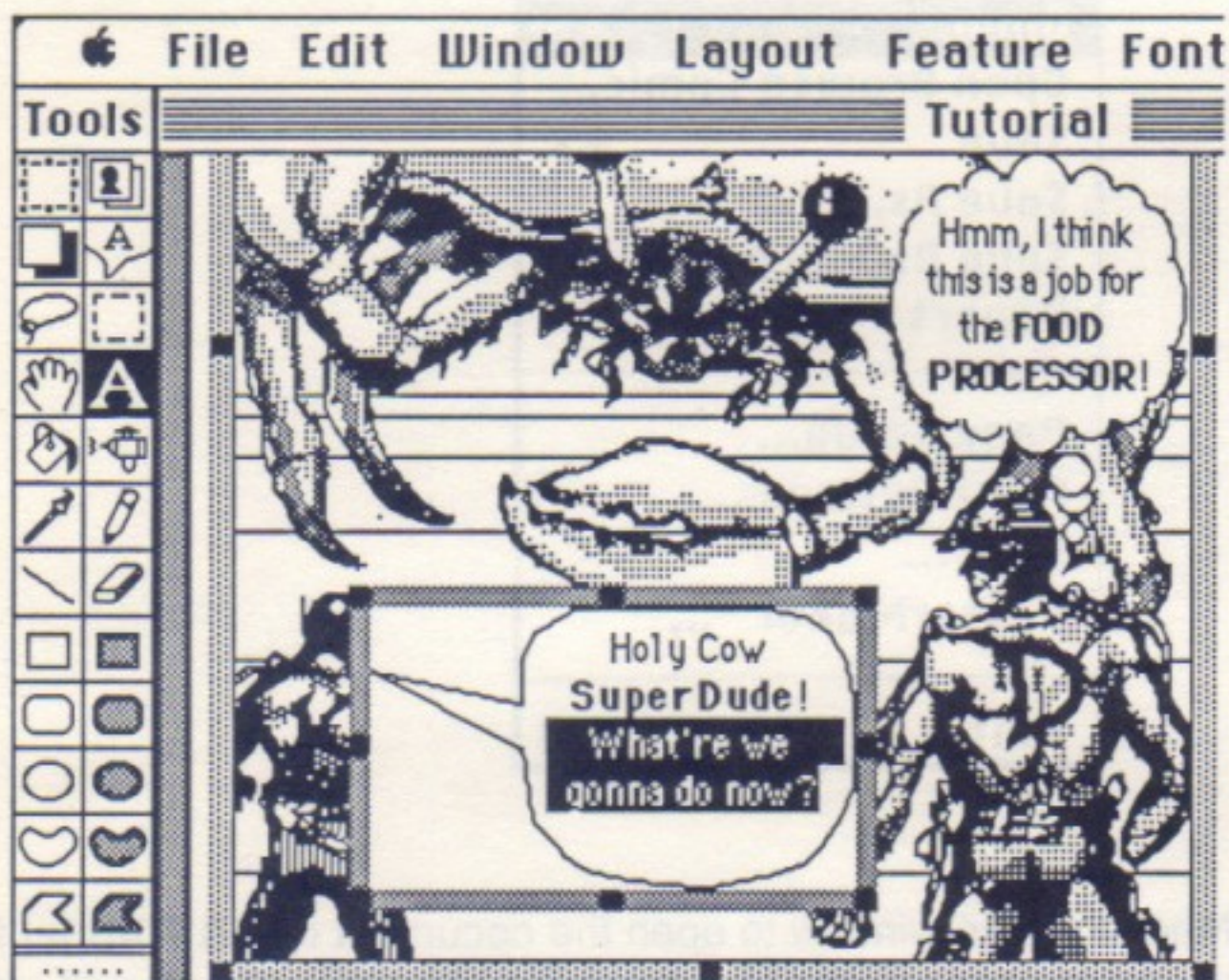


Use the standard Macintosh file window to open the document called **Tutorial** from **Art Disk #1**. Note: If you are unfamiliar with Macintosh file selection, you should refer to the manual that came with your machine.

Feel free to scroll around the document with the scroll bars to get an idea of what you will be working with.

1. Change the Text

Now, point to the first **panel** on top of the **balloon** which says "Holy cow, superdude!..." and click the mouse button. This will **select** the **panel** and the **balloon** within the panel. Once the grey border appears around the balloon, press and hold the mouse button while you drag the highlighted area over the words "What're we gonna do now?"

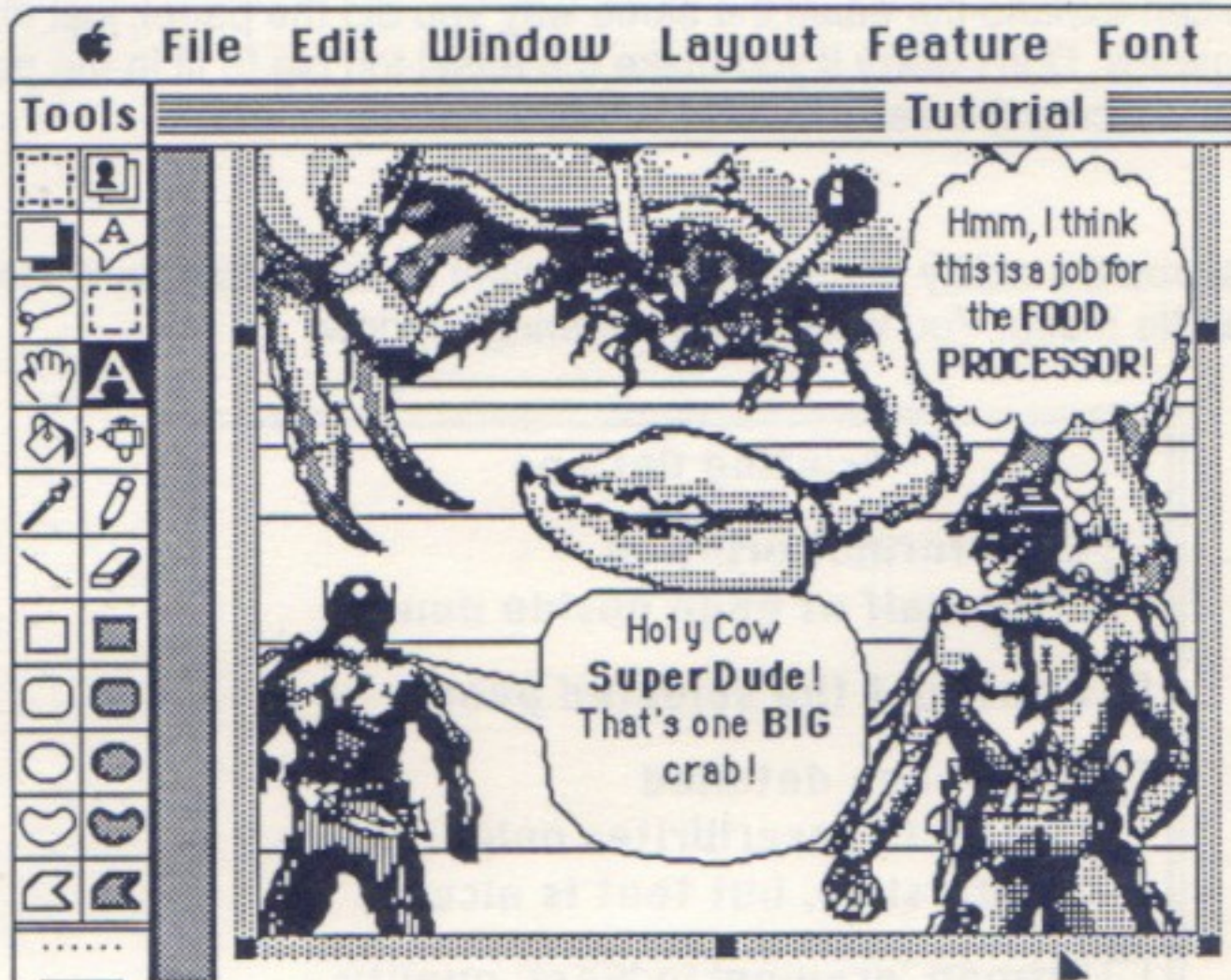


Now type in "That's one BIG crab!!" That's all there is to changing the text in a **ComicWorks** balloon.

Now select the word **BIG** (drag over it just like you did before) and change its style to **Bold** by selecting **Bold** from the **Style** menu. You can also change the size and font of any of the text. Go ahead and experiment with some of the original fonts developed especially for **ComicWorks**.

2. Move a panel

Panels can be moved around anywhere in a document. They can even cross over between two pages. You can select a panel (without selecting any of the easels or balloons inside it) by holding down the **Option** key at the same time you click on a panel.



You will see a frame appear around the panel, but not around any of the smaller pieces within it. If you want to move the panel, point to the gray frame around the panel and drag it where you want it to go. If you hit the edge of the window, the area will scroll automatically to accommodate you. Move the panels around on the page until you like the arrangement. A shortcut when moving panels and easels is to click on the object and drag it without waiting for the frame to appear.

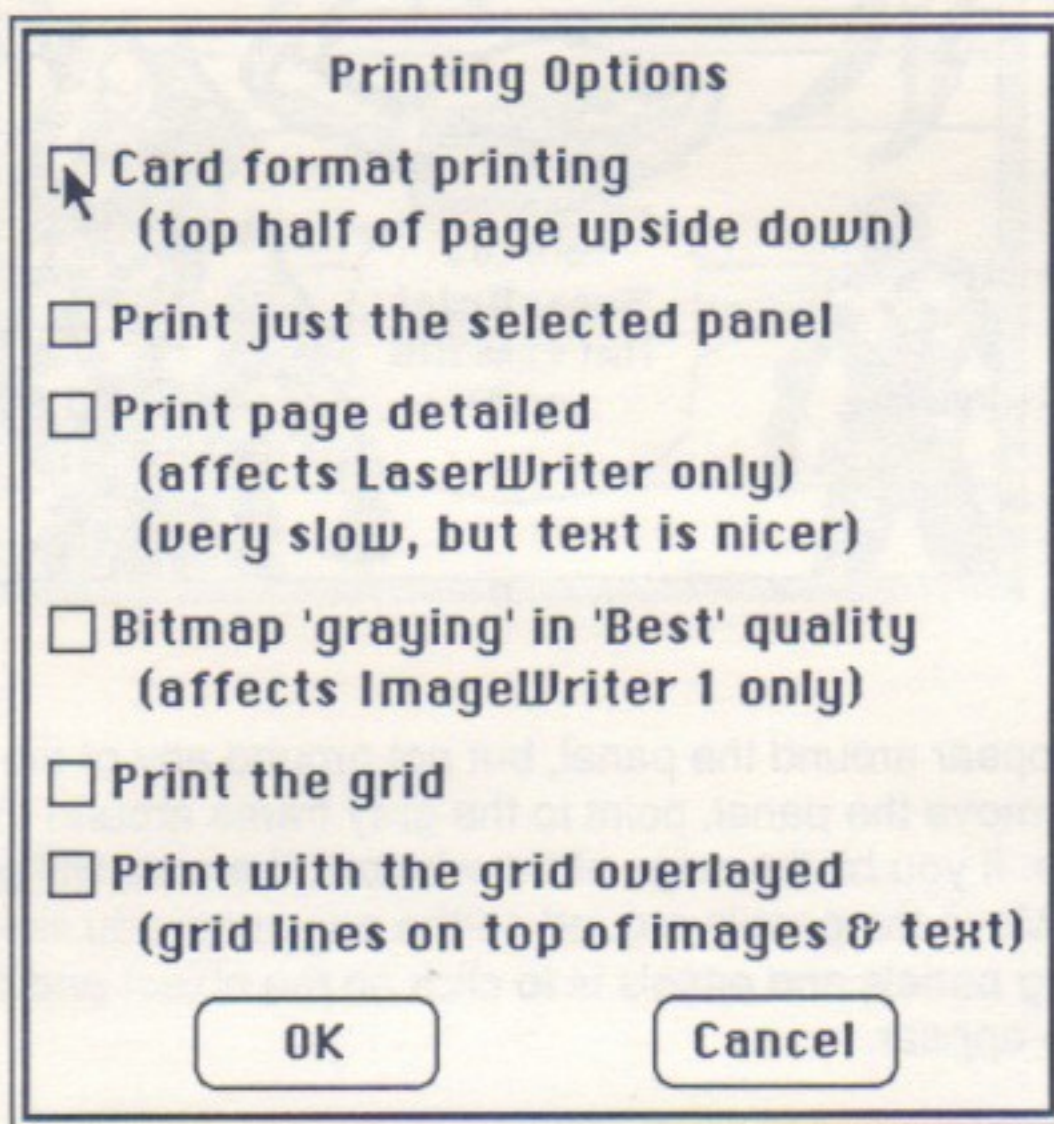
You can also resize panels. Each of the small black squares on the panel frame is called a **handle**. You can stretch or shrink a panel by pointing to one of these handles, holding the button down, and dragging the panel to its new size. Panels can be as large as 2 pages or as small as 1/4 inch square. Notice that the panel edge **clips** the artwork inside of it. In a sense, panels can be thought of as windows inside of your document.

3. Changing a panel

To change the artwork inside of a panel, select the piece of art you are interested in by pointing to it and clicking the mouse button. You can now use the tools in the **Tools Window** to draw right on top of what's there. As you know, this art area is called an **easel**. Select the pencil and draw in the selected easel. Notice that the drawing is restricted to the easel's area. You can expand the easel the same way you did the panel; just drag one of the small black handles. Don't worry if you make the easel too big to fit in the panel, the edges of the panel will crop the easel to fit.

4. Card format

ComicWorks features the ability to print out a document as a greeting card. Select **Print Options** from the **File** menu. You will see the following window:

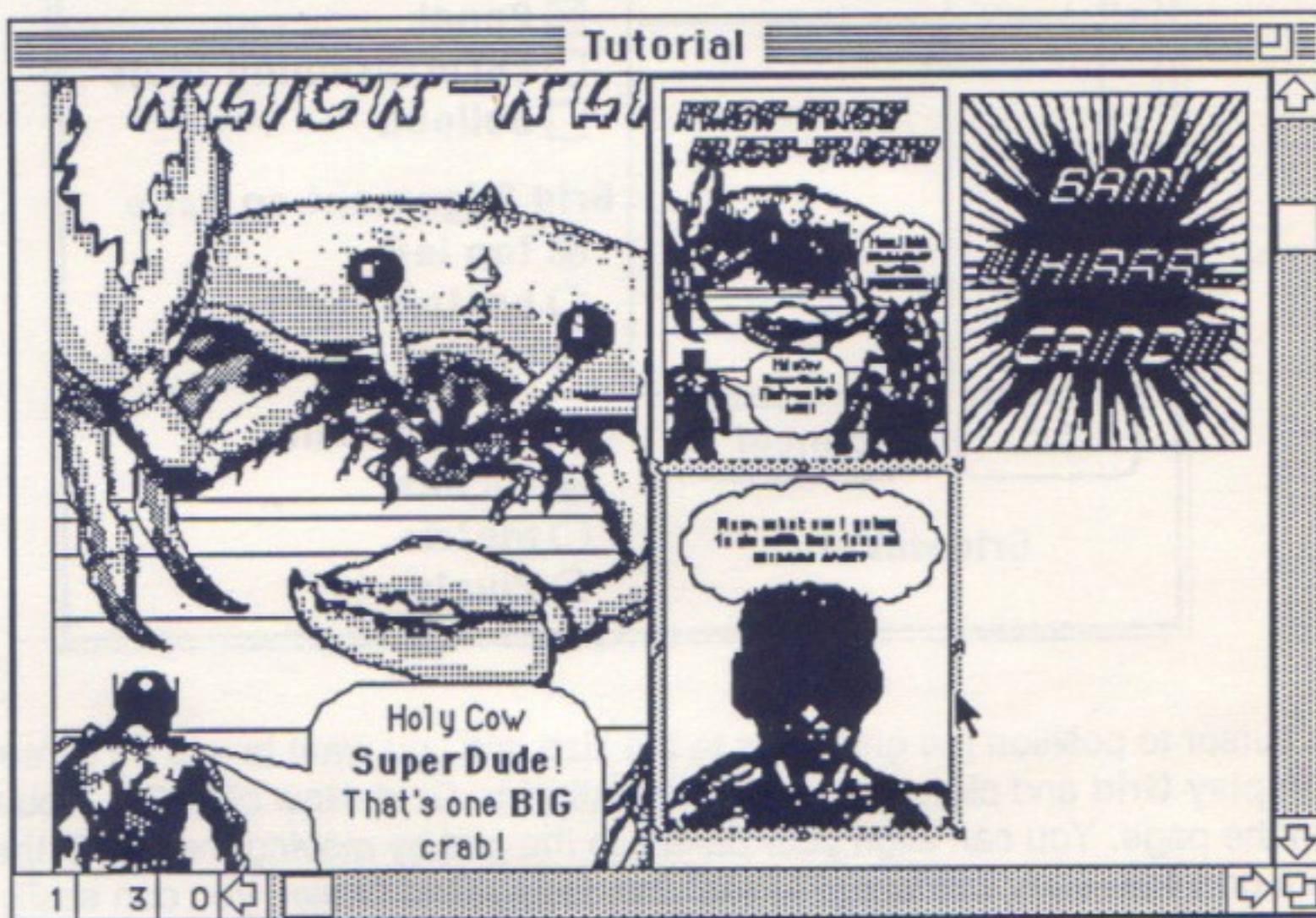


There are several options available to you here, but for now, we are just interested in the first selection, **Card format printing**. Point to the button labeled **Card format printing** and click the mouse button. Now click **OK**. When you return to the document window, you will see that two lines now divide the page into quarters. These quarters show you where everything will end up when you print a document in card format. The computer will automatically flip and flop the top half of the document so that it will be right side up when the card is folded.

5. ThinBits™

The panels aren't in the right places to print out as a card; you will need to move them around a little. The easiest way to do this is with **ThinBits**, a feature designed especially for **ComicWorks**.

First, select **ThinBits** from the **Feature** menu. The screen will split into two halves: one side is normal-sized; the other side is reduced.

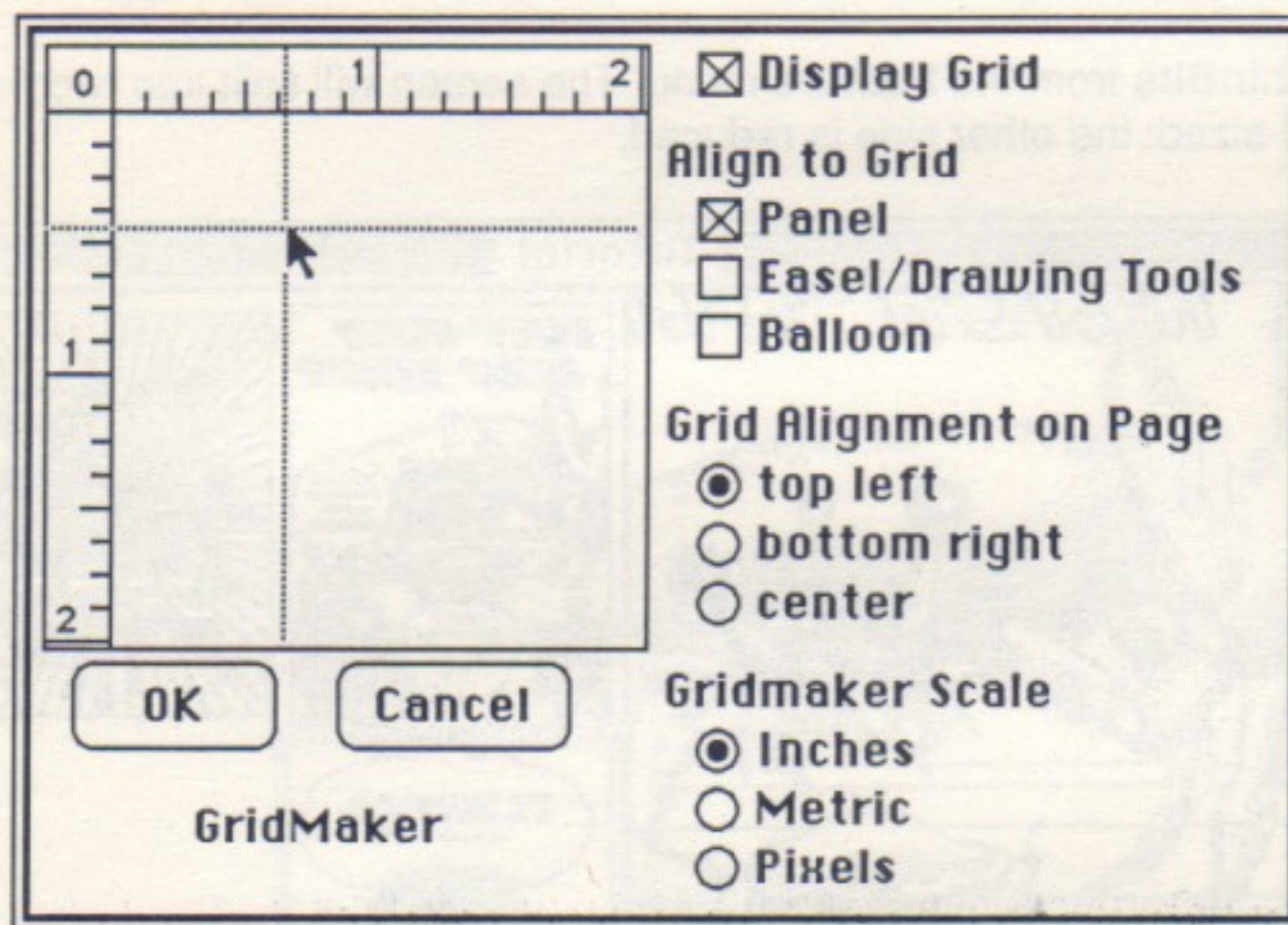


All of the tools work the same in this reduced area of the screen as they do in the normal-sized side of the screen. For example, to select a panel, just click inside the panel you want (on the right side of the screen) while holding the **Option** key down. You will see the panel border appear on both sides of the window. You can now move the panel around on the page by dragging it by its gray border area. Of course, you can also just click and drag in one motion when you are certain of what you want to move.

Select and move the panels around until you have them arranged with the first panel (with the giant crab) in the upper-left quadrant of the screen. This will be the front of our card. Now you need to move the second panel to the lower left quadrant, and the third panel to the lower right. These two panels will form the inside of our card. Select **ThinBits** again to return to the normal view of your document.

6. Grid Maker

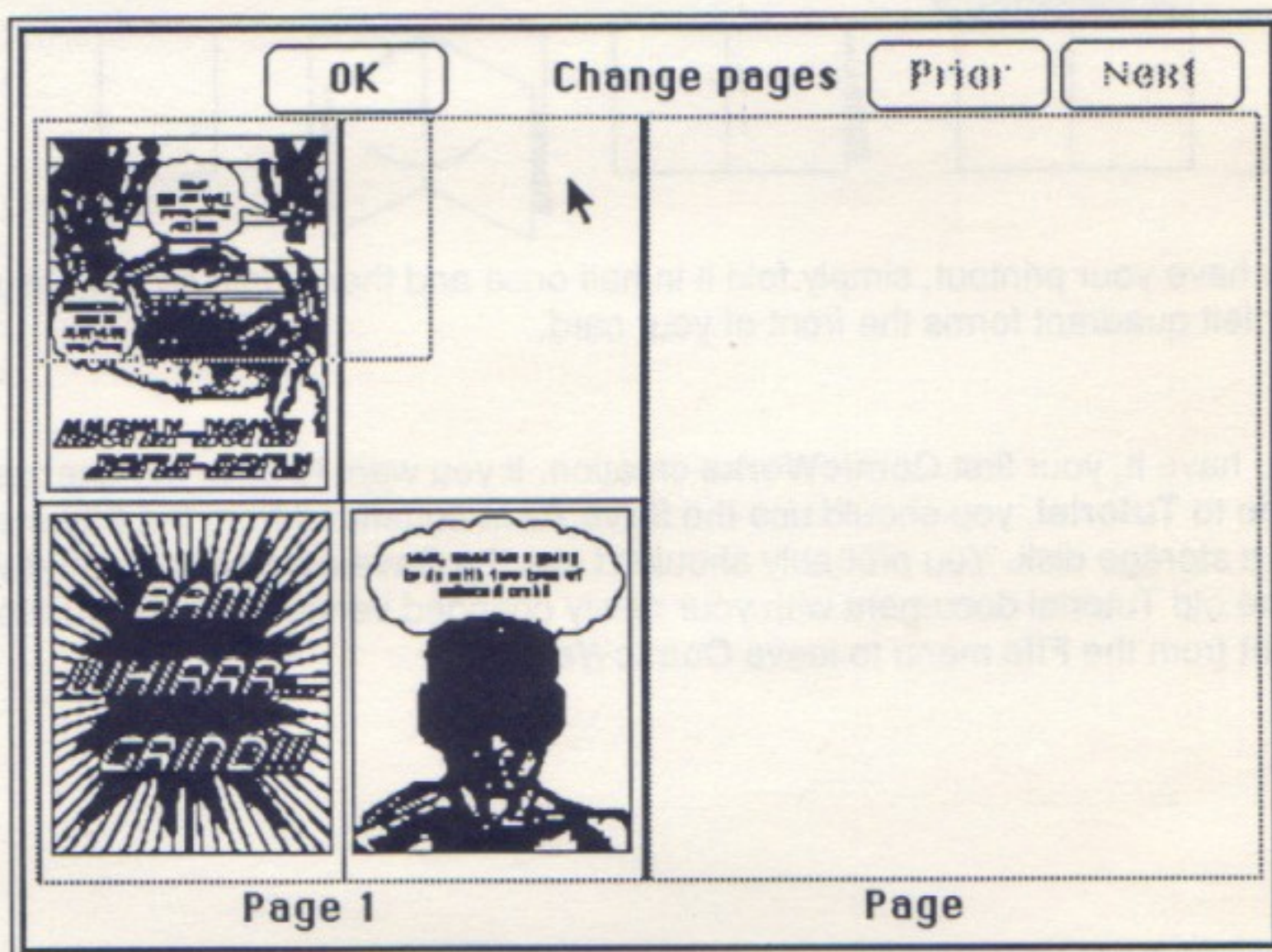
ComicWorks incorporates a tool to allow you to easily align panels with each other. Go to the **Window** menu and select **Grid Maker**. You will see the following window:



Use the cursor to position the gray lines to the size grid you want to see on screen. Now select **Display Grid** and click on **Panel** under **Align to Grid**. Now click **OK**. You will see a grid on the page. You can align your panels to the grid by moving them until they are close to a grid line. They will "snap" to that line. Using Grid Maker, you can easily align all your panels neatly.

7. Showing a page

Before you print out your masterpiece, you will probably want to see what it looks like. Select **Show Pages** from the **Window** menu.



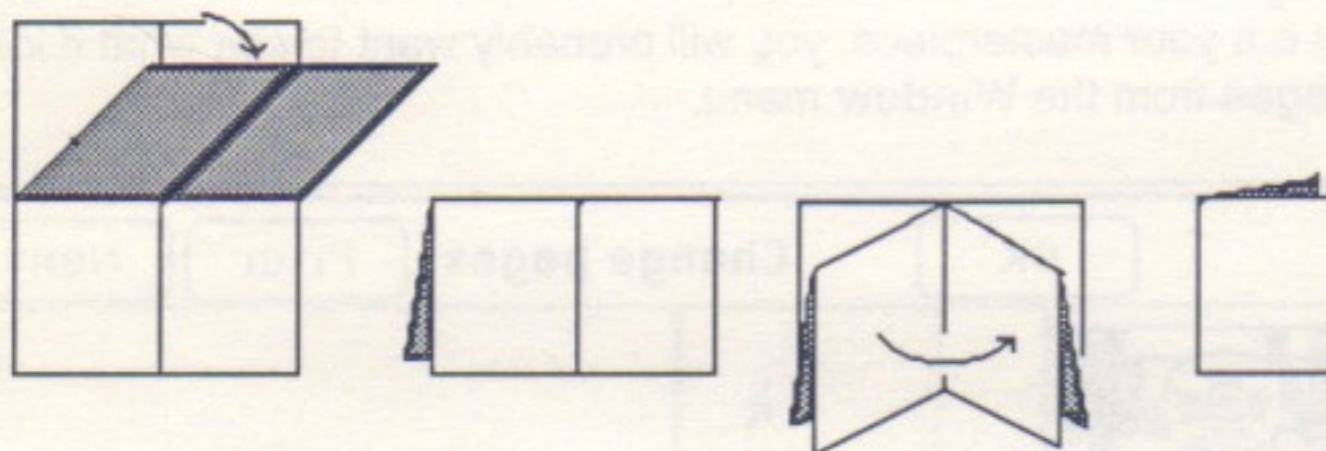
Notice that the top part of the page has been flipped upside-down. This is the way the page will be printed.

If you had more than one page in your document, you could use the **Next** and **Prior** buttons to move through the pages.

8. Printing

Like most Macintosh programs, **ComicWorks** makes printing easy. Select **Print** from the **File** menu. Select the print quality (if you are using an ImageWriter) and number of copies you want, and then click **OK**. Your card will be printed ready to fold and send out.

9. Folding



Once you have your printout, simply fold it in half once and then again so that the panel in the upper left quadrant forms the front of your card.

There you have it, your first **ComicWorks** creation. If you want to save the changes you have made to **Tutorial**, you should use the **Save As...** command from the **File** menu to save it to a storage disk. You probably shouldn't use the **Save** command, as that will replace the old Tutorial document with your newly changed version. When you are done, select **Quit** from the **File** menu to leave **ComicWorks**.

Tutorial Two

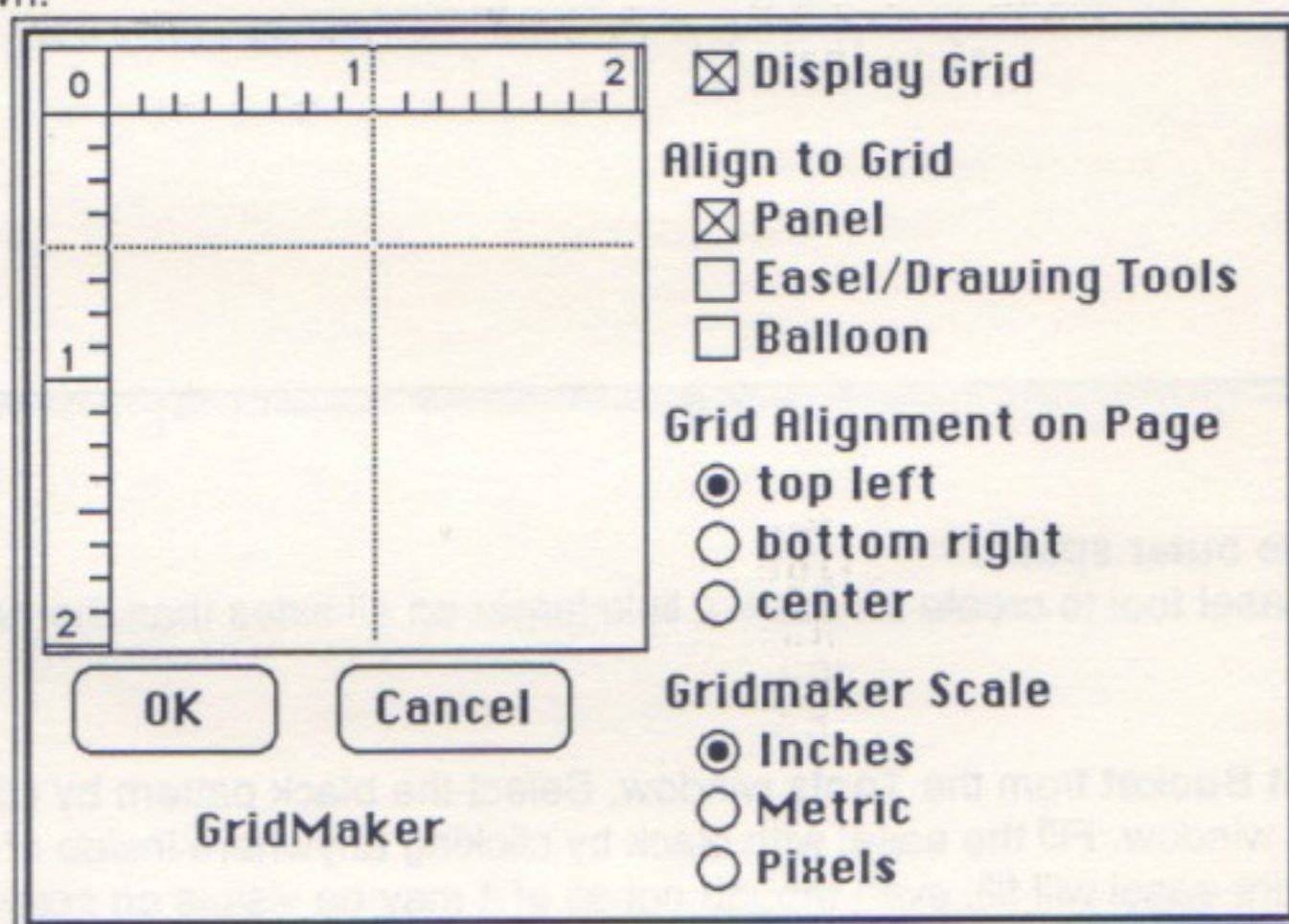
In this tutorial, we will create a document from scratch. Your goal is to create an advertisement for your science fiction bookshop. In the process, you will learn some more about **ComicWorks**' unique ability to combine text and graphics anywhere on the page. Let's get started:

1. Create a new document.

If you have quit **ComicWorks**, then run the program and a new, empty document will appear when the program starts. If you are already in **ComicWorks**, select the **New** command from the **File** menu.

2. Create an alignment grid.

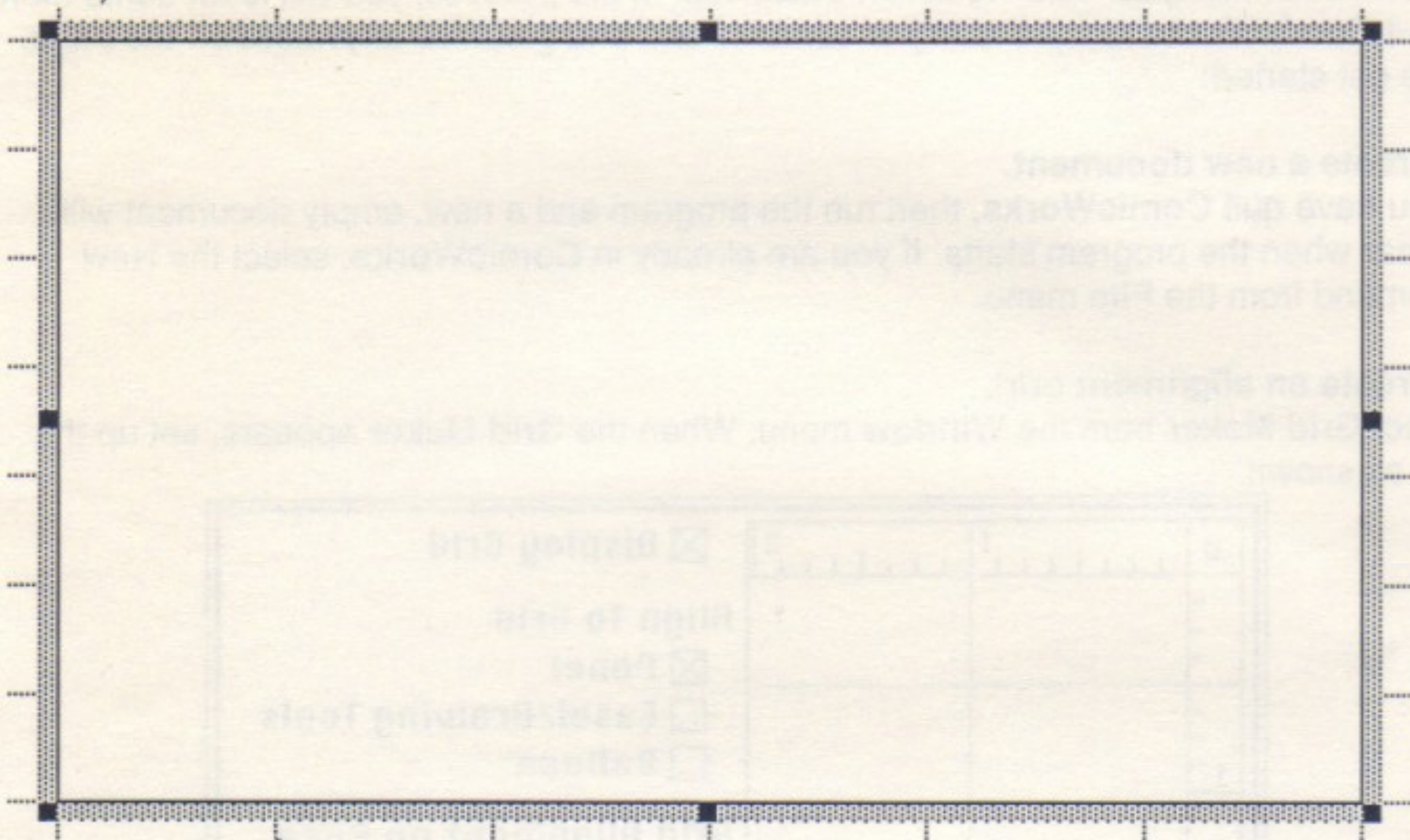
Select **Grid Maker** from the **Window** menu. When the **Grid Maker** appears, set up the grid as shown.



Click **OK** to display the grid.

3. Create a panel.

Select the **New Panel** tool and create a 6 by 3 1/2 inch panel. (Use the grid to measure the size)



4. Create a little outer space.

Use the **New Easel** tool to create an easel a little larger on all sides than the panel.

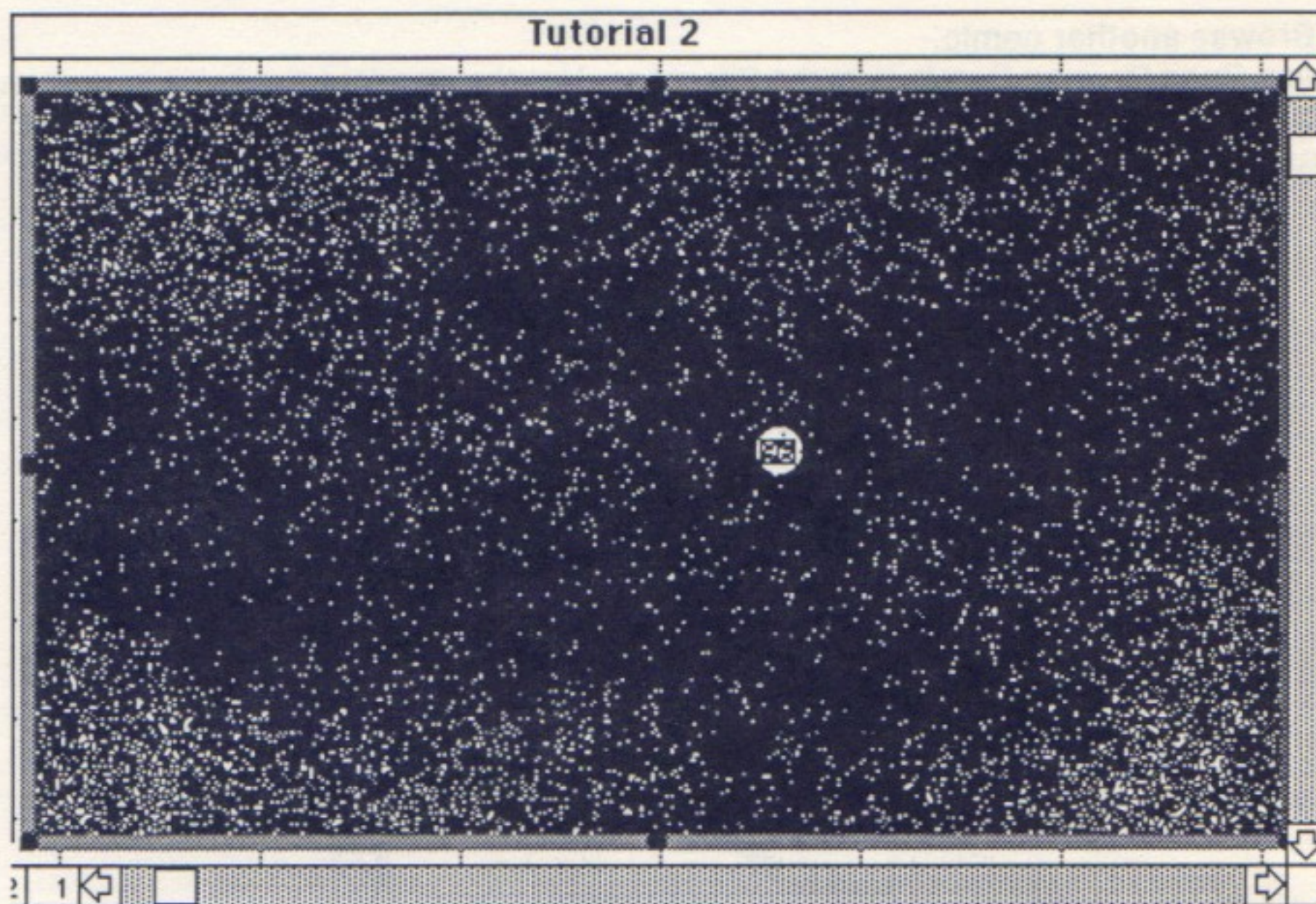


Select the **Paint Bucket** from the **Tools** window. Select the black pattern by clicking on it in the **Patterns** window. Fill the easel with black by clicking anywhere inside of the gray border. The entire easel will fill, even though not all of it may be visible on screen.



Now, select the **Airbrush** from the **Tools** window and select the white pattern from the **Patterns** window (or hit the **Backspace** key to toggle from black to white).

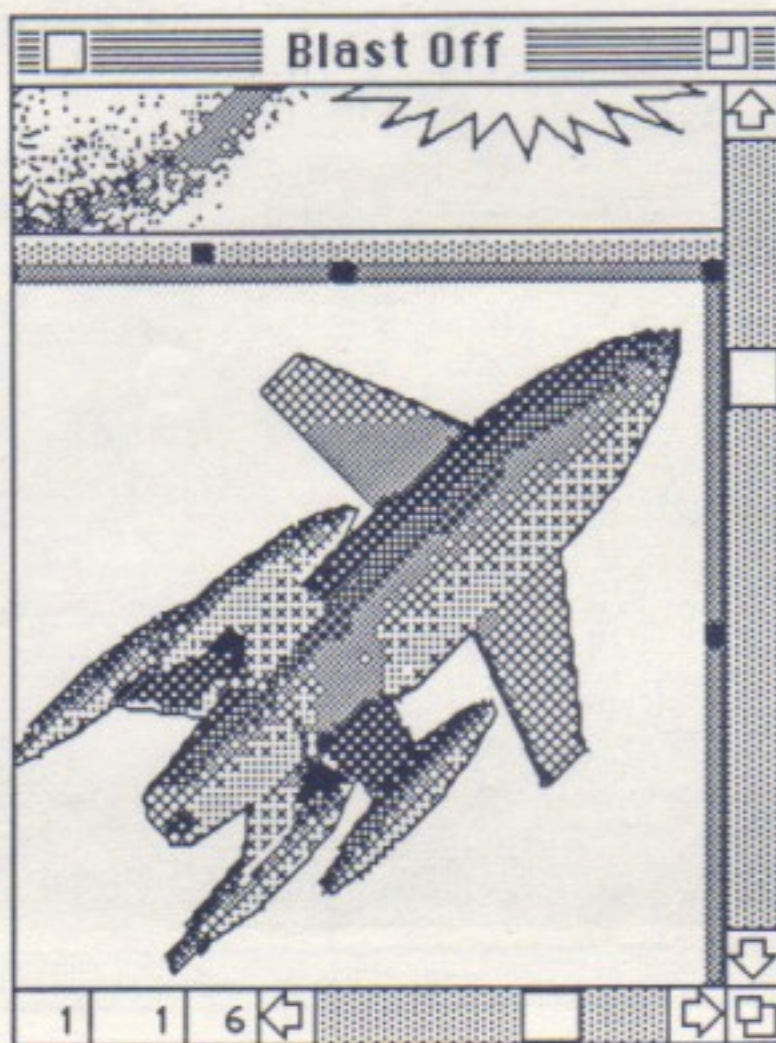
Press the **0** (zero) key to select the largest spray size. The "96" that appears in the airbrush cursor means that the spray will cover a circle 96 pixels across. Use the **Airbrush** to scatter stars across the black easel.



Now use **Selected Panel** from the **Feature** menu to select the panel and see what your space looks like.

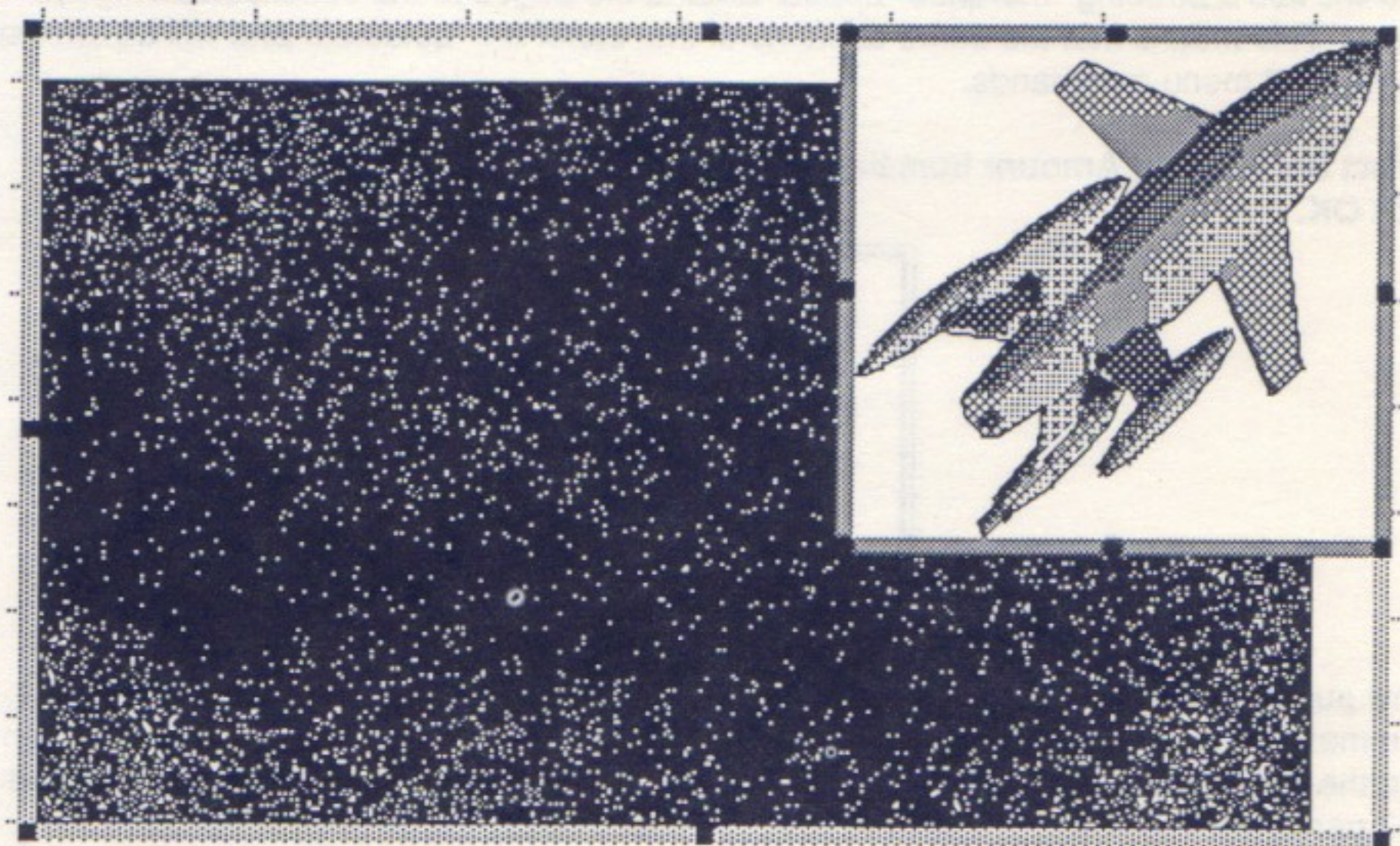
5. Browse another comic.

Select **Open Browse Comic** from the **File** menu. Use the standard file dialog to open the document called **Blast Off** from **Art Disk #1**. Scroll through the document and select a spaceship by clicking on it.



Use the **Edit** menu's **Copy** command to duplicate the ship in memory. Click in the title bar of the document window to bring it back to the front.

If your panel is not selected, then click on it while holding the **Option** key down. Make sure that the panel is selected, not the easel it contains (panels have light gray borders, easels darker gray). Select **Paste** from the **Edit** menu. You should see the ship from **Blast Off** appear in a new easel in the panel. Move it until the ship extends beyond the upper right corner of the panel.



Normally, the ship would be cut off, or "clipped," by the edge of the panel. If you want to see what this means, click anywhere outside the panel. Re-select the ship by clicking on it and select **Clip Exception** from the **Feature** menu. Now deselect the panel by clicking outside of it. Notice that the ship now extends past the panel boundary.

6. Put in the Earth.

Use the **Open Browse Comic** command to open the document called **Planets** from **Art Disk #1**. Select and **copy** the largest Earth from the top panel. Close the **Browse** window and use **Option-click** to select the panel you have been working on. **Paste** the image into the panel (a new easel will appear to hold it).

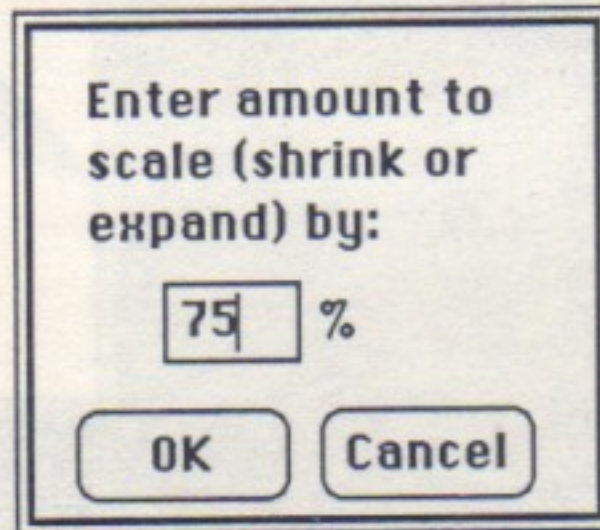
7. Scale an image.

Without de-selecting the image of the Earth, double-click on the marquee icon in the **Tools** window.



You will see a strobing "marquee" appear around the edges of the easel containing the planet. This means that the entire contents of that easel are "selected" and will be affected by the **Edit** menu commands.

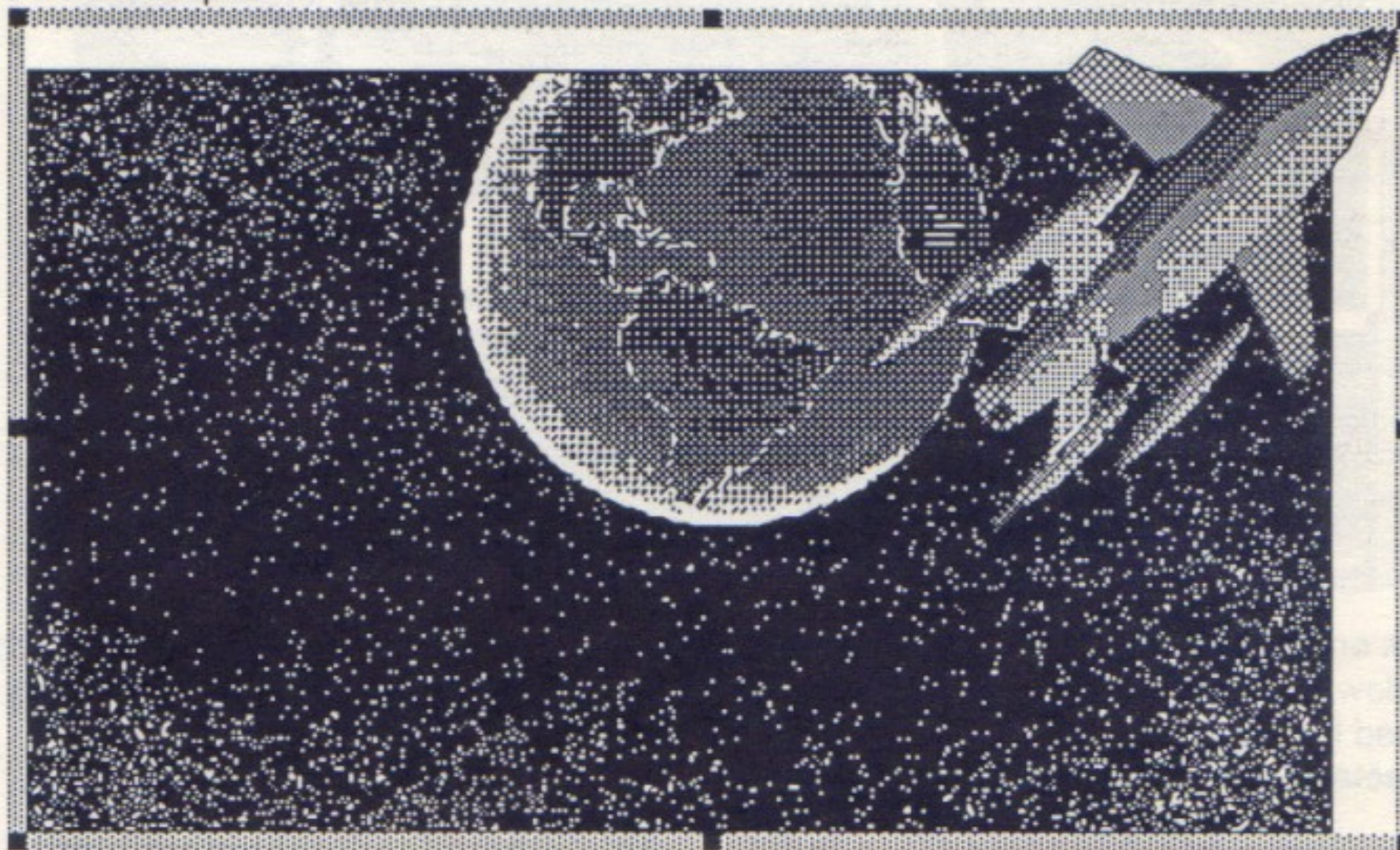
Select **Set Scaling Amount** from the **Feature** menu. Type 75 into the dialog box and click **OK**.



Now pull down the **Edit** menu. You will see the command **Scale by 75%**. Select that command. The image in the easel should be reduced to 75% of its original size. You can use the **Set Scaling Amount** command to set the scaling to any amount between 1 and 999 percent.

8. Change the priority levels.

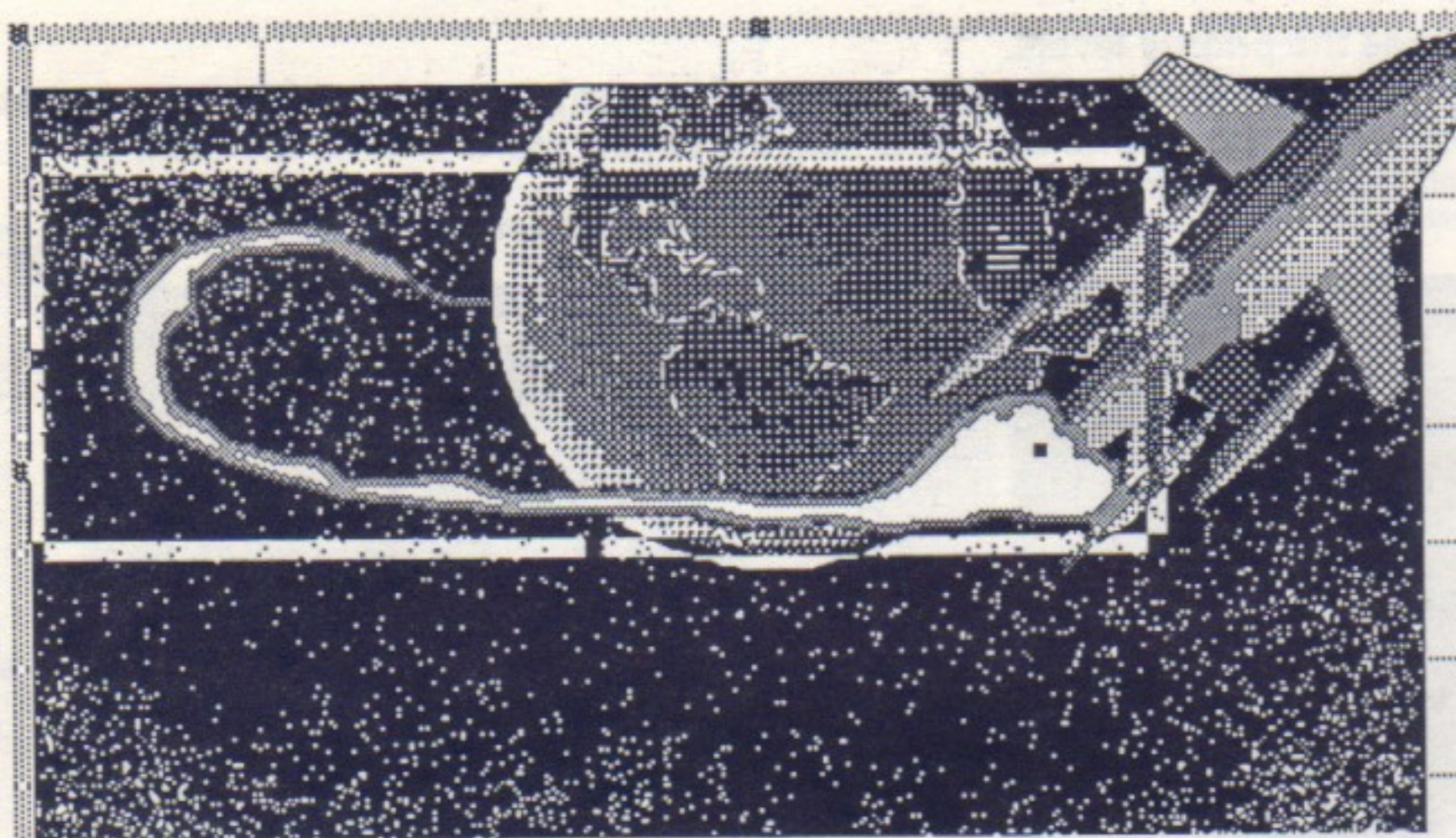
Move the Earth to the upper corner of the panel so part of it overlaps the spaceship. Now use the **Shuffle Down One** command from the **Layout** menu to move the Earth down a level so the ship is in front of it.



9. Use Transparent Paper to align a new easel.

A rocket needs a plume of flame if it is to look really impressive. Use the **New Easel** tool to draw an easel which covers the tail of the rocket and extends to the left of the earth.

The goal is to draw an exhaust plume on the ship. We can do this in the new easel, but it will be hard to make it line up properly because we can't see the ship underneath it. The solution is to select **Transparent Paper** from the **Feature** menu. This will allow you to see through the easel to the images below—as if you were drawing on a piece of glass—while you work.



Click on the **Paintbrush** icon in the **Tools** window, select medium gray from the **Patterns** window, and draw an exhaust in the easel. Make sure you make the flame a completely closed loop or you will see the space background through the middle of it. Use the **Selected Panel** command to see how your panel looks so far.

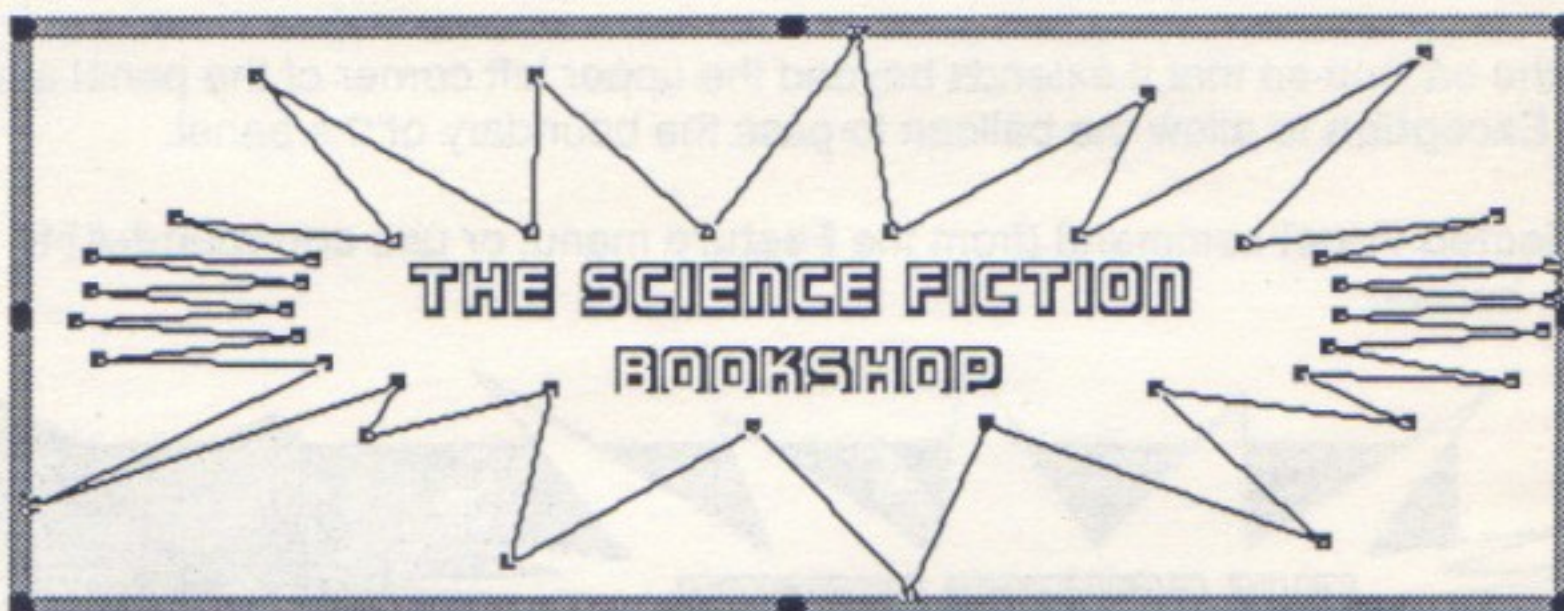
10. Add the company name.

Use the **New Balloon** tool to create a new balloon in the upper part of the panel. Click in the panel and type "THE SCIENCE FICTION BOOKSHOP." Select all the text (by dragging over it like you did in the first tutorial) and change it to the **Commando** font and the **Shadow** style.

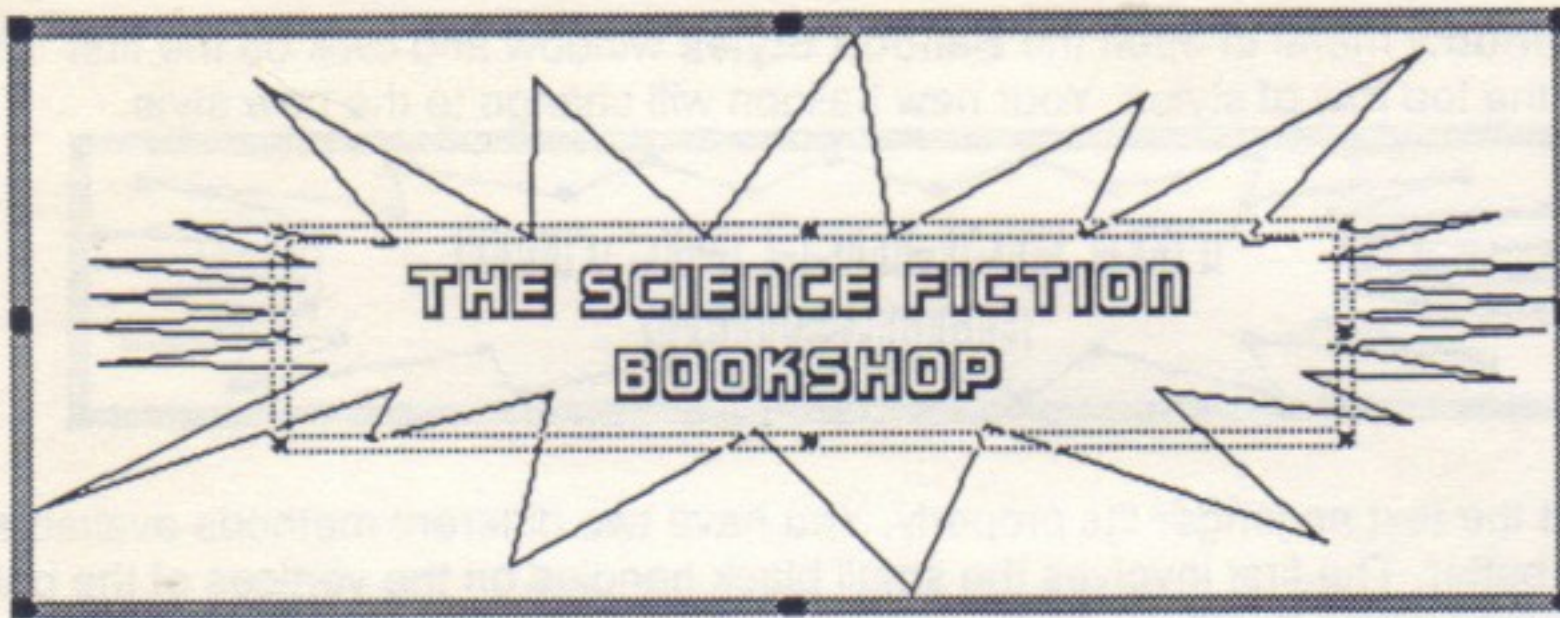
Use the **Window** menu to open the **Balloon Styles** window and click on the first "Electric" balloon in the top row of styles. Your new balloon will change to the new style.



Notice that the text no longer fits properly. You have two different methods available to make it fit better. The first involves the small black handles on the vertices of the balloon. You can "grab" these handles with the cursor to change the shape of the balloon.



That makes more room, and at the same time, makes the balloon more interesting looking. We can fit the rest of the text neatly into the balloon with the **Format Text** command in the **Layout** menu. When you select this command, a format rectangle will appear around the text in the selected balloon. You can move and resize this rectangle just like you can move and resize panels, easels, and balloons.



Drag the format rectangle until the text all fits inside the balloon.

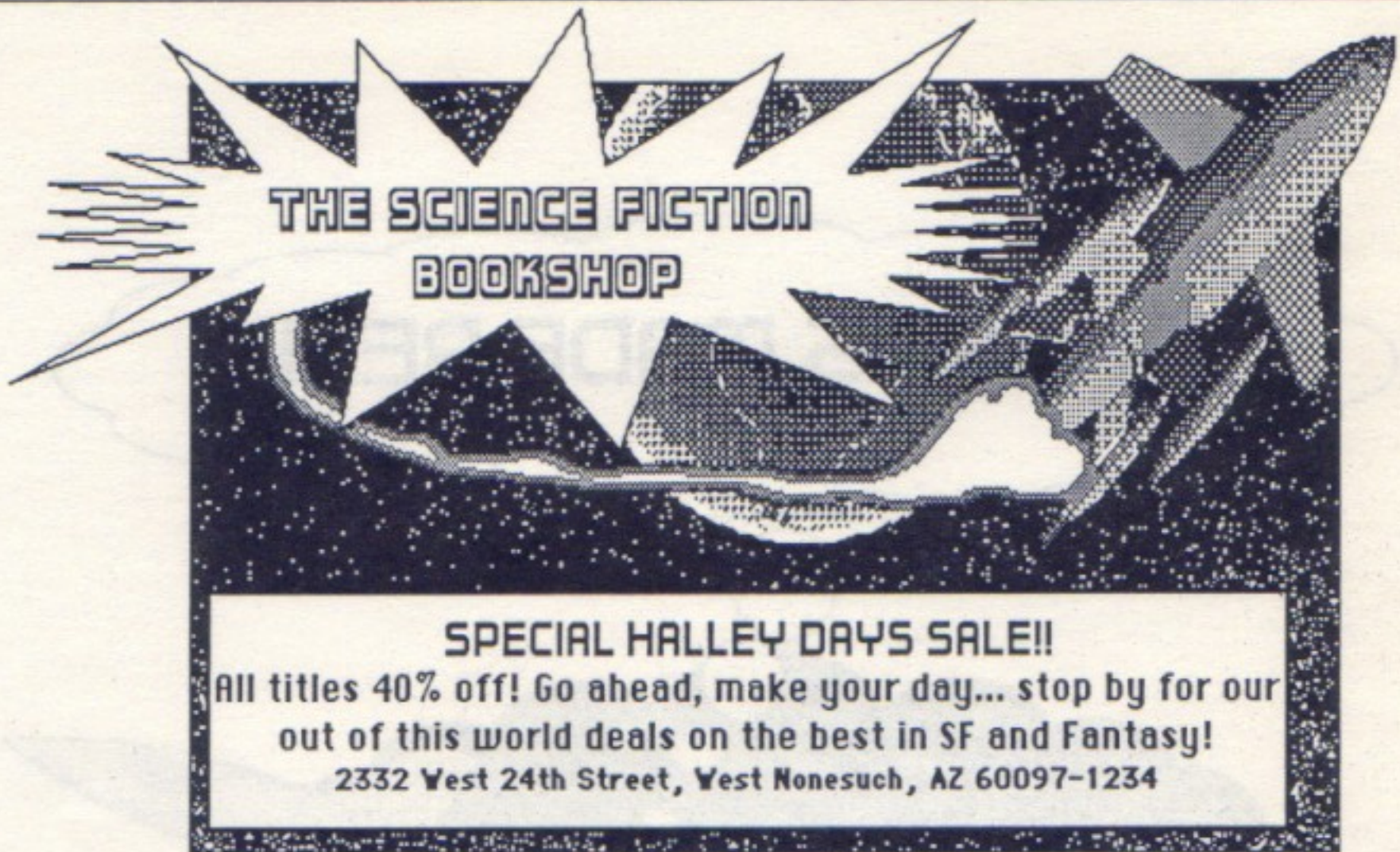
Now place the balloon so that it extends beyond the upper left corner of the panel and the select **Clip Exception** to allow the balloon to pass the boundary of the panel.

Use the **Selected Panel** command (from the **Feature** menu, or use **command-A**) to deselect the balloon.



11. Add the last bit.

The final touch is to add the body of the text. Open the **Balloon Styles** window (use the **Window** menu, or double-click on the **New Balloon** tool). Select the square balloon from the bottom row of the window, click on the second-heaviest border thickness, and draw a rectangular balloon in the bottom half of the panel. Use the **Font** and **Style** menus to enter the text as shown.



The heading for the text is in the **Commando** 12 point font, the body is in **Chicago** 12 point, and the address is bold-face **Geneva** 9 point. The text is centered in the balloon.

12. That's all folks!

Click anywhere in the document window, but outside of the panel you've been working on. You will see your creation in all its glory. If you want, you can save it to a storage disk, print it out, or do whatever you want with it... after all, it's your creation!

DREAMS MADE REAL



Part 3: Dreams Made Real

Now that you have had a chance to become familiar with **ComicWorks**, let's take a look at the various features in more detail.

Panels, Easels and Balloons

Every **ComicWorks** document is made up of some combination of these three things. A **ComicWorks** document can be several pages long, and each page can hold any number of panels. Think of a panel as a window into the document. A panel can extend over more than one page, and each panel can hold up to sixty-four easels and/or balloons. Those are the generalities, now for the specifics.

New Panel

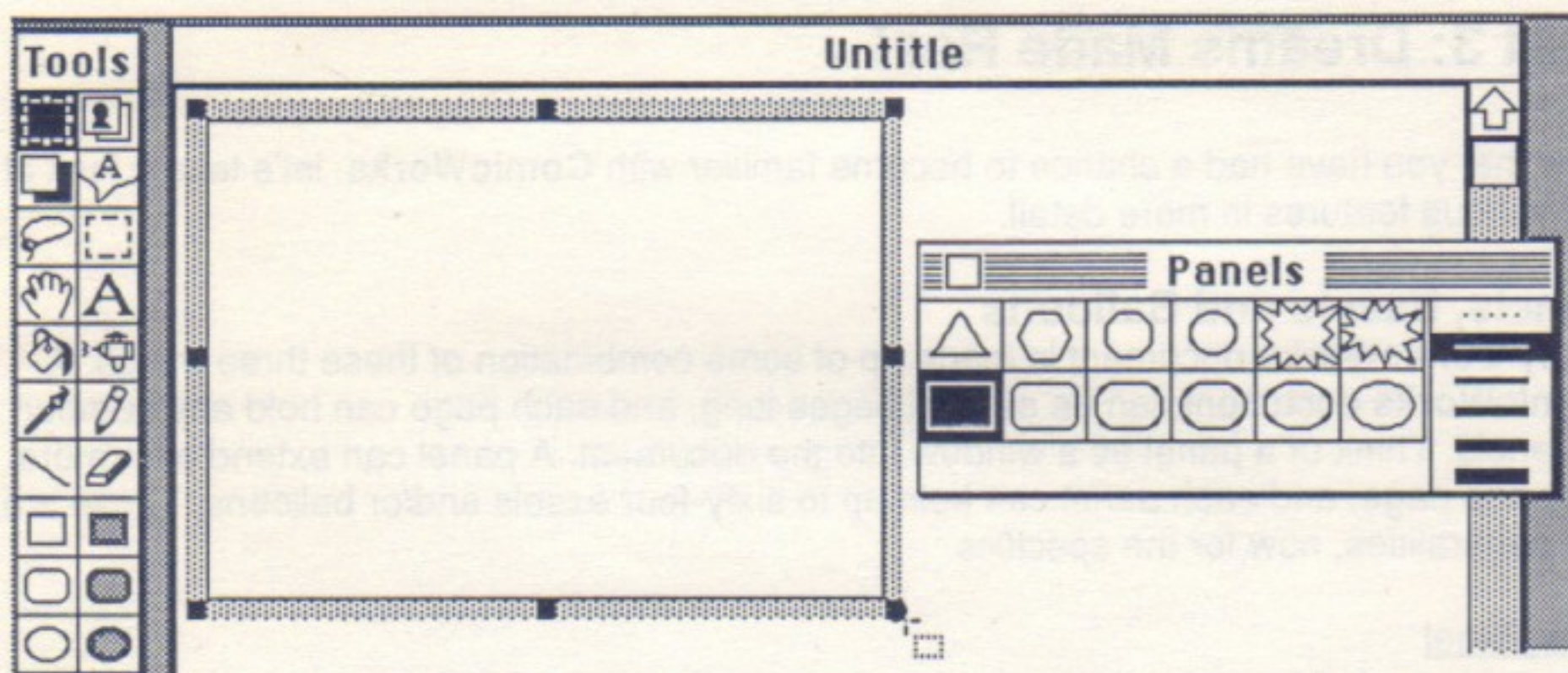
A panel is a window into your document which holds easels (graphics) and balloons (text). Panels can be moved around, cut, copied, pasted, and can extend up to two pages in area. There are twelve standard panel shapes, as well as five different weights of border (including no border at all). You can even change six of the twelve styles to suit your special needs.

The artwork included on the **ComicWorks** library disks all resides in panels. Some of the panels contain complete scenes, and others hold only one or two separate pieces of art.

The new panel tool



is used to create a new, empty panel. When you select this tool, the cursor will change shape. You draw a new panel by pressing and holding the mouse button while you drag the panel to the size you want. If you want a panel that is bigger than the window, just drag until you hit the edge; the window will scroll automatically. Double-click on the icon to open the **Panel Styles** window.



The panel you draw will be a standard **ComicWorks** panel. That is to say, it will be a simple rectangle with a single-width border. The style can be easily changed, as we will see in a moment.

New Easel

An easel is a window within a panel. **Panels own easels.** That is, all easels created in a selected panel are considered to be a part of that panel and no other. This is true even of easels created outside of the visible boundaries of the panel. If you create an easel beyond the boundaries of a panel, it will seem to disappear once it is deselected.

Easels are where the art in a **ComicWorks** document exists. Just like panels, easels can be moved around (within a panel), cut, copied, pasted, and resized. Easels exist only within panels, and a panel can hold up to sixty-four easels. If you move, cut, copy, or paste a **panel**, all of the easels within that panel will be treated as part of the panel.

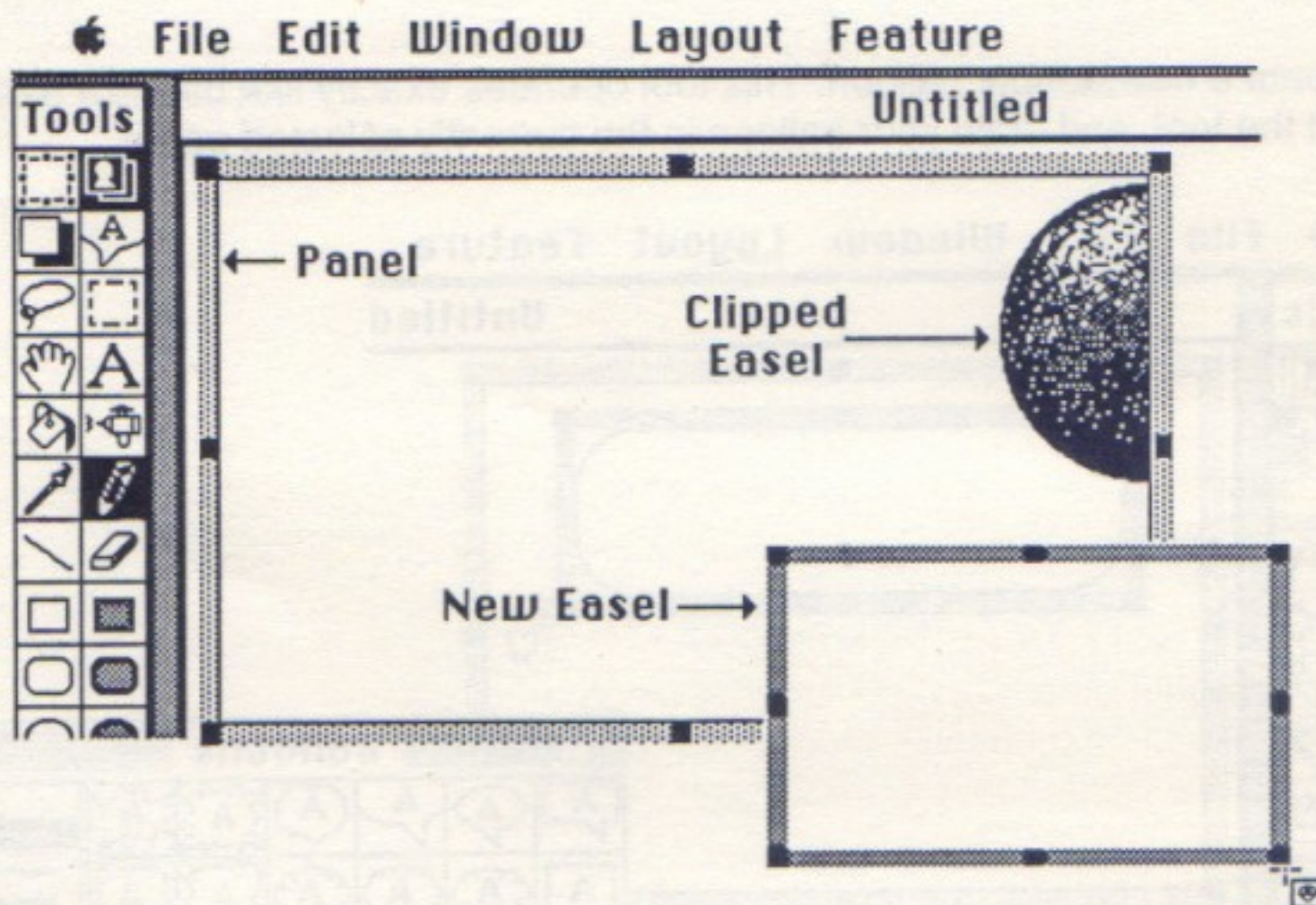
Easels have **priority levels** within the panel. In other words, the last easel you create will be seen in front of the first easel you created. This arrangement can be changed easily, as we'll soon see. Easels normally are opaque—like paper—but they can be made **transparent**—like clear glass—temporarily if you need to see what is going on beneath them.

The border of the parent panel normally clips any easel which crosses it, but this clipping can be turned on and off for individual easels with the **Clip Exception** command (see page 68).

The new easel tool



is used to create new easels within the selected panel. You use this tool almost exactly the way you used the new panel tool. When you select the tool, the cursor will change shape. You can now draw a new easel in the currently selected panel. Easels only exist inside of panels. In fact, if you create an easel without first selecting a panel, a new panel will be created to hold the new easel. An easel can extend beyond the panel, and the window will automatically scroll if you draw past the window's edge.



The new easel you create will have priority over everything else in the panel, but this can be easily changed with the various layout commands. Easels do not have visible borders and are "matted" together to produce the final image in a panel. What that means is that only the object in an easel is visible—the white rectangle around it is not. It is as if you cut out the graphics with a pair of scissors and pasted it in place.

If you double-click on the new easel icon, you will open up the **Grid Maker** window (see page 56).

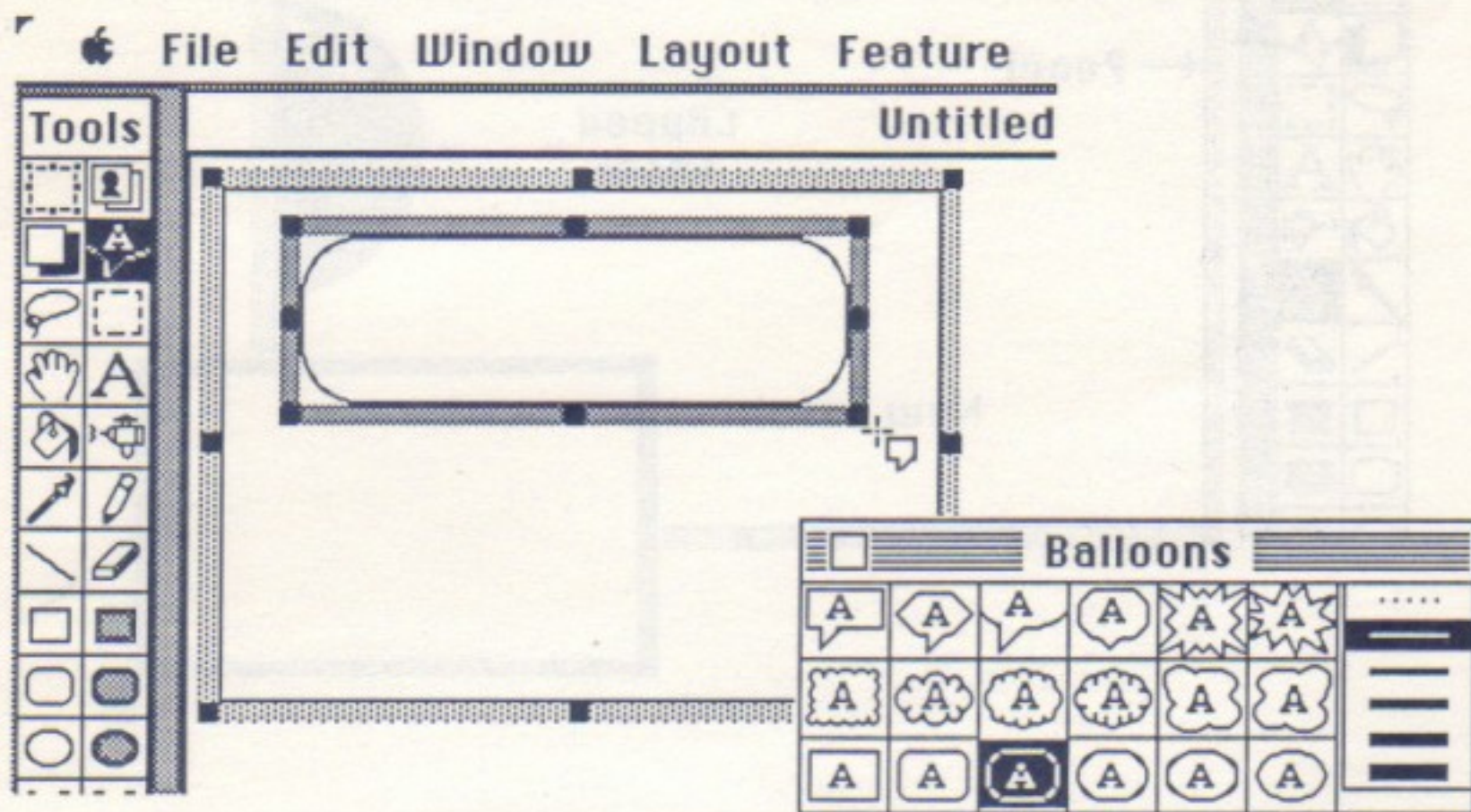
New Balloon

Balloons are similar to easels in that they **are owned by and exist within panels**. Balloons differ from easels in that they contain only text. Text inside a balloon can be edited just like in MacWrite™. You can have multiple fonts, styles, and sizes all within one balloon. You can even control the area within the balloon in which text will appear with the **Format Text** command. You can cut, copy, or paste entire balloons or any part of the text they contain. You can even paste in text from other programs like MacWrite™, Word™, and ThinkTank™ via the Clipboard or Scrapbook. In addition, balloons can be resized and reshaped. There are eighteen different styles of balloon, of which the six shown in the top row of the **Balloon Styles** window are re-shapeable and include special pull-down mouthpieces.

The **new balloon** tool



is used to create a new, empty balloon. This tool operates exactly like the new easel tool. Simply select the tool, and draw your balloon in the currently selected panel.



The newly-created balloon will be the default style unless you first select a different option from the balloon styles window. Double-click on the New Balloon icon to open the Balloon Styles window.

We will discuss the different styles in more detail and how to manipulate them later. If you want to use the text as a graphic element rather than as a standard dialog balloon, you can always use the **Text->graphic** command to turn the balloon into an easel permanently.

Note: The maximum total number of easels and balloons in a panel is 64.

Manipulating Panels, Easels, and Balloons

Here are a few techniques which allow you to completely control the appearance and position of the panels, easels, and balloons in your document:

1. Click on any object in a panel to select that object.
2. Hold the **Option** key down and click on a panel to select the entire panel.
3. Choose **Selected Panel** from the **Feature** menu to deselect an object, and select its parent panel.
4. Drag any of the black "handles" on the gray borders of a panel, easel, or balloon to resize that object.
5. Drag the gray rectangle framing a selected panel, easel, or balloon to move that object.
6. If an object is **not** already selected, click and drag (without letting up on the mouse button) on a panel, easel, or balloon to move it quickly.
7. Use the **Easel Selector** in the Tools window to step through all the easels and balloons inside a panel or all the panels in a document.



You can step in the other direction by holding the **Option** key while you click on the icon. The Easel Selector makes it possible to select a panel, easel, or balloon that might be hard to get at with the mouse.

8. Change the priority level of an object up and down in the panel, or change the priority level of panels in the document, with the **Shuffle Up One**, **Shuffle Down one**, **Bring to Front**, and **Send to Rear** commands in the **Features** menu. These are just like similar features in MacDraw™.
9. Move around the document with the scroll bars, just as in any other Macintosh

application. You can also use the **Hand** from the Tools window to slide the page around under the window. Select the hand and press and hold the mouse button while you move the mouse... the page will move with the hand.



All of the art tools will turn into the hand as long as the **space bar** is held down. This allows you to quickly move the page while retaining whatever tool you are using at the time.

10. Use **ThinBits** to look at and work on the entire page at one time. All of the techniques listed so far will work in ThinBits as well as in the normal view. ThinBits is a great way to see exactly how your page is shaping up as you work.

The Art Tools

These all live in the **Tools** window. You can move the Tools window around on screen so that you can create a working area you are comfortable with. Should the Tools window ever be concealed, select **Tools** from the **Window** menu to bring it to the front.

Many of the art tools will be familiar to you from MacPaint and similar programs; if you think you recognize a tool, you probably have seen it before. Even if this is the case, you may want to read this next section; **ComicWorks** has a lot of surprises up its sleeves.

All of the art tools are usable only inside of easels. In addition, they are restricted to the page area. Thus, if an easel extends beyond the limits of the page, all drawing will be "chopped off" at the edge of the page.



The Pencil

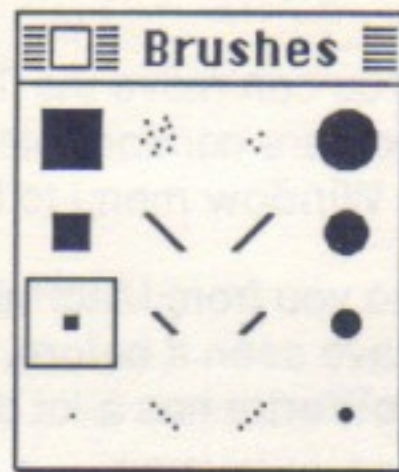
The pencil is used to toggle pixels on and off. If you start drawing on a black area, you will find yourself drawing in white. If you start on a white area, you will be leaving a black trail. Hold the **Shift** key to draw horizontally or vertically—this is known as "constraining" the pencil.

The pencil is a shortcut into **FatBits** (see page 71); double-click on the pencil icon to enter **FatBits** or point to the area you wish to see in FatBits and hold the command key down and click the mouse button. The FatBits area will appear on the opposite side of the screen from where you are working. Use the commands in the **Features** menu to change the scale of FatBits.

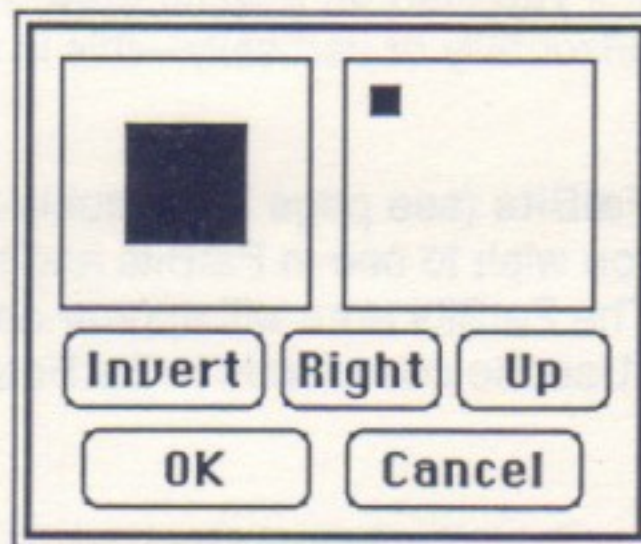


The Brush

The brush "paints" in the currently selected **pattern**. The brushes available to you are displayed in the **Brushes** window, which you can display by selecting **Brushes** from the **Window** menu or by double-clicking on the brush icon.



Select a brush by clicking on the brush you want to use. You can edit the brush shapes by double-clicking the brush you want to edit, or by selecting **Brush Edit** from the **Window** menu. You can use this window to draw a new brush or to grab a portion of the screen to use as a brush. Just click anywhere outside the window to "pick up" a portion of the screen. You can create a random brush shape by clicking in the menu bar.



← **Brush Edit Window**

The **Shift** key will constrain the brush to horizontal and vertical lines. **Caps Lock** will paint with transparent "watercolor" paint. **Option** will "spray" with the current brush pattern in a similar fashion to MacPaint's spray can. The speed of the "spray"-effect is controlled by the line weight settings.



Lines

This tool is used to draw lines of the thickness indicated by the line weights indicator at the bottom of the Tools window. You can constrain lines horizontally and vertically as well as to a 45° angle by holding down the **Shift** key as you draw. You can draw in the current pattern by holding down the **Option** key.



Rectangles, Ovals, Regions, and Polygons

These all act just like their MacPaint counterparts. The left-most icon for each shape is used to draw outlines, while the right-most icon allows you to draw filled shapes (using the currently selected pattern). **Shift** will constrain ovals to circles and rectangles to perfect squares. **Option** will allow patterned borders. **Caps Lock** will use transparent paint, and double-clicking on the filled shapes will open the Patterns window (if it isn't already present).



The Paint Bucket

The bucket fills any white or black area with the current pattern. Fills are bounded by the extent of the current easel, not the size of the screen. Double-click the bucket in the **Tools** window to open the Patterns window.



The Eraser

The eraser works the way you would expect. Use it like a giant white paintbrush to clear out areas of your drawing. Double-click it to completely erase the current easel. Like most of the other tools, the eraser can be constrained horizontally and vertically with the **Shift** key.

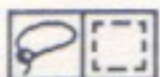


Graphic Text

This is just like text in MacPaint. Select the text icon to turn your cursor into an i-beam shape. Click anywhere in an easel to place the typing cursor. You can now type in up to 255 characters. The text you type will lay in over the graphics. Font, style, and size can be selected from the appropriate menus, however the text you enter can only have one style/font/size combination at a time, and cannot be changed once you click the mouse anywhere else in the window.

NOTE: Graphic text cannot be edited once it is entered. If you want to be able to edit your text, you must use a text balloon.

Double-click the graphic text icon to open the **Ink** window (see page 69).



The Lasso & Marquee

These are the selector tools. For the most part, they work just like similar tools in MacPaint. Use the **Marquee** to select a rectangular area within an easel (use the cursor to draw a rectangle inside the easel, just like you draw panels, easels and balloons). **Double-click** on the marquee to select the entire active easel. If you hold the **Shift** key down while

selecting with the marquee, the selection area will be constrained to a perfectly square area.

Once the area is enclosed, you can **Cut**, **Copy**, and **Paste** that area. Press **Backspace** to delete the selected area (**Undo** will bring it back). You can also use any of the editing tools, such as **Invert**, **Rotate**, **Trace Edges**, and the like on the selected area. These graphics editing commands are all found under the **Edit** menu. You can move the selected area around the easel by dragging it with the mouse. If you want to make a quick copy of the area you've selected, you can hold down the **Option** key while you drag the copy to a new position. If you want to make many copies for a "trails" effect, hold both the **Option** and **Command** keys down while you drag. The speed of this effect is controlled by the line weight setting. The **Shift** key will constrain the movement of the selected area to the horizontal and vertical directions.

One of the more powerful editing abilities you have with a marquee selection is scaling. You can change the size and proportion of a selected area by holding down the **Command** key and dragging a corner of the selection rectangle. The image inside the selected area will shrink or expand as you move the mouse. This size change can be kept proportional by holding the **Shift** key along with the **command** key. If you need to scale an area a specific amount, you can use the **Set Scaling Amount** command in the **Feature** menu to select a scaling percentage (the default is 50%). Then, once your area is selected, select **Scale by XX%** from the **Edit** menu. You will see the selected area change exactly the amount you indicated.

The **lasso** behaves in much the same way as the marquee, except that it selects variable-shaped areas. Simply use the lasso cursor, as if you were using the pencil, to draw an outline around the area you want to select. The area you outline will be selected. Double-click on the lasso to select the contents of an entire easel. Once the area is selected, you will be able to use the **Cut**, **Copy**, **Paste**, **Center**, **Invert** and **Fill** commands to manipulate it. Press **Backspace** to delete the selection.

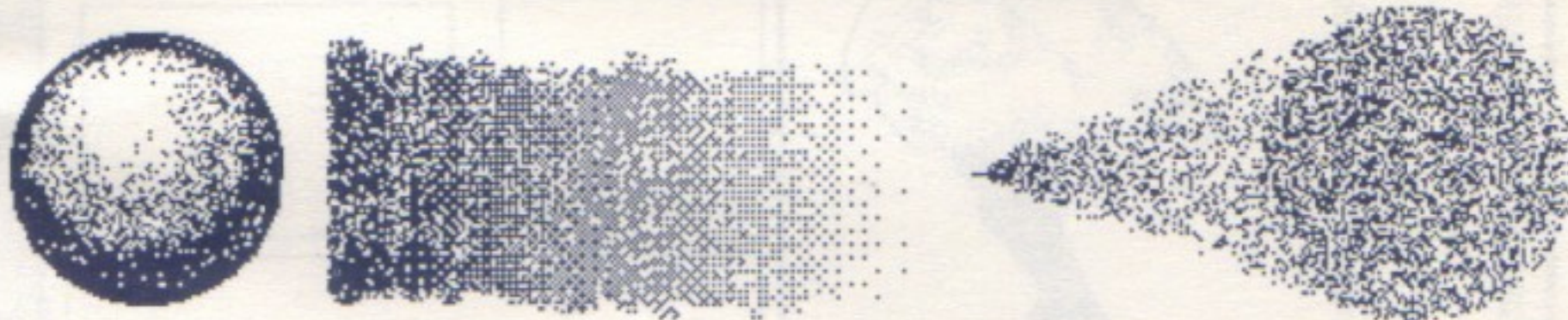
The lasso works sort of like the **paint bucket**. Imagine what would happen if you were to drop black paint in the area you have lassoed. The parts **not** filled with black are the areas the lasso selects. There is, however a special lasso mode which allows you to select the entire area you outline—as if you were cutting it out of paper. Hold the **Option** key while you use the lasso to make this sort of selection.

The Airbrush



Unlike other "spray paints" you may have seen, this is a real airbrush. The spray is random, adjustable from 1 to 96 pixels across, has variable density, and is probably the coolest thing you've seen in a long time. Set the size of the spray with the number keys

(1,2,3,4,5,6,7,8,9,0) for large increments, or use the **+** and **-** keys for fine adjustment. Use **O**, **P**, **[**, **]** to vary the spray density. **Shift** constrains the spray to horizontal and vertical movement, **Caps Lock** sprays transparent paint, and double-clicking on the Airbrush icon will open the Patterns window. Press the **Option** key while spraying for a randomizing effect. **Backspace** toggles from white to black spray and vice versa.



Many special techniques are possible with the airbrush that are not available in any other graphics program. We discuss some of them in the techniques chapter and we are certain you will discover new ones of your own.

UnDo

This is technically not an art tool, but it is very important. Anything you do with any of the art tools can be undone with the **UnDo** command from the **Edit** menu.

The Layout Tools

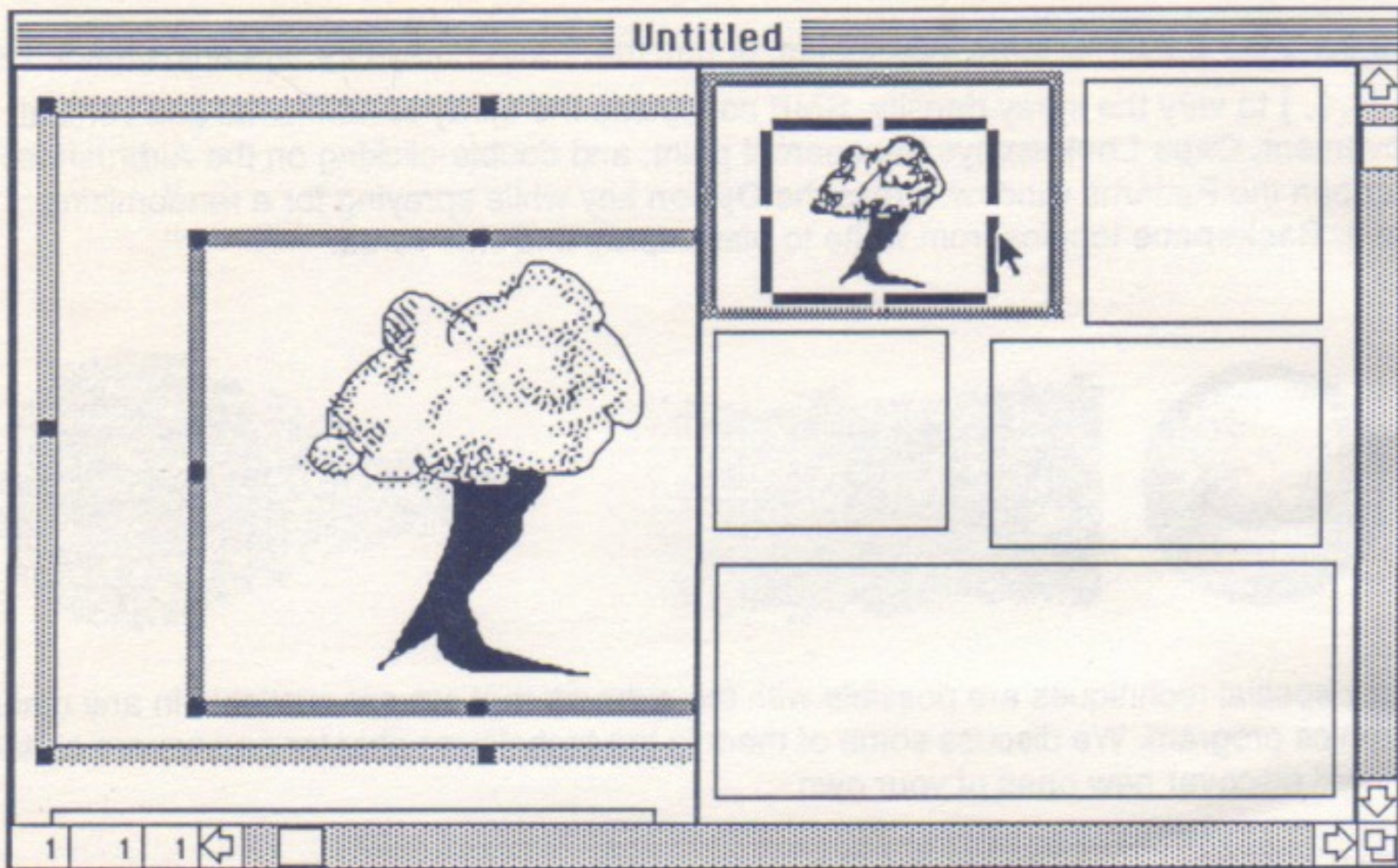
Layout is a really special part of **ComicWorks**. Using the powerful layout tools, you can produce on paper exactly what you see in your mind's eye. And, of course, because this is a Macintosh application, what you see on the screen is exactly what you will see on paper when it is printed out.

Page Orientation

ComicWorks lets you set up your page either horizontally or vertically. You can choose which orientation you want **for your entire document** with the **Page Setup** command from the **File** menu. This will set both the printout orientation and the position of the page on the screen.

ThinBits™

ThinBits is the most powerful of the **ComicWorks** layout tools. ThinBits allows you to look at and manipulate an entire page at a time. You can do anything to the ThinBits page that you can to the full size equivalent, but it allows you to make page-wide movements of panels, easels, and balloons as well as to draw with any of the tools on the entire page.



To enter ThinBits, select **ThinBits** from the **Feature** menu (or double-click the **hand**). Half the screen (whichever half you aren't using at the moment) will become a miniature image of the entire current page.

Note: The ThinBits area uses "transparent paper" for its display at all times.

Any and all of the editing and drawing commands work on either side of the screen. For instance, you can use it to move panels around to fine tune your page design. You can easily and quickly create full-page panels, easels, and balloons. You can very quickly draw large rough sketches and create layouts which you can use as a basis for more detailed work. Anything you need to do that affects the entire page is easier and faster with ThinBits.

To exit ThinBits, simply select it from the menu (or double-click on the hand) a second time or command-click in the ThinBits side of the screen.

Select **Proportional ThinBits** from the **Features** menu to make the ThinBits area the same shape as an actual page. Since the size of the ThinBits area is dependent upon the size of the document window, selecting **Proportional ThinBits** will usually cause the document window itself to change in size and/or shape.

Shuffle Up One, Shuffle Down One, Bring to Front and Send to Rear

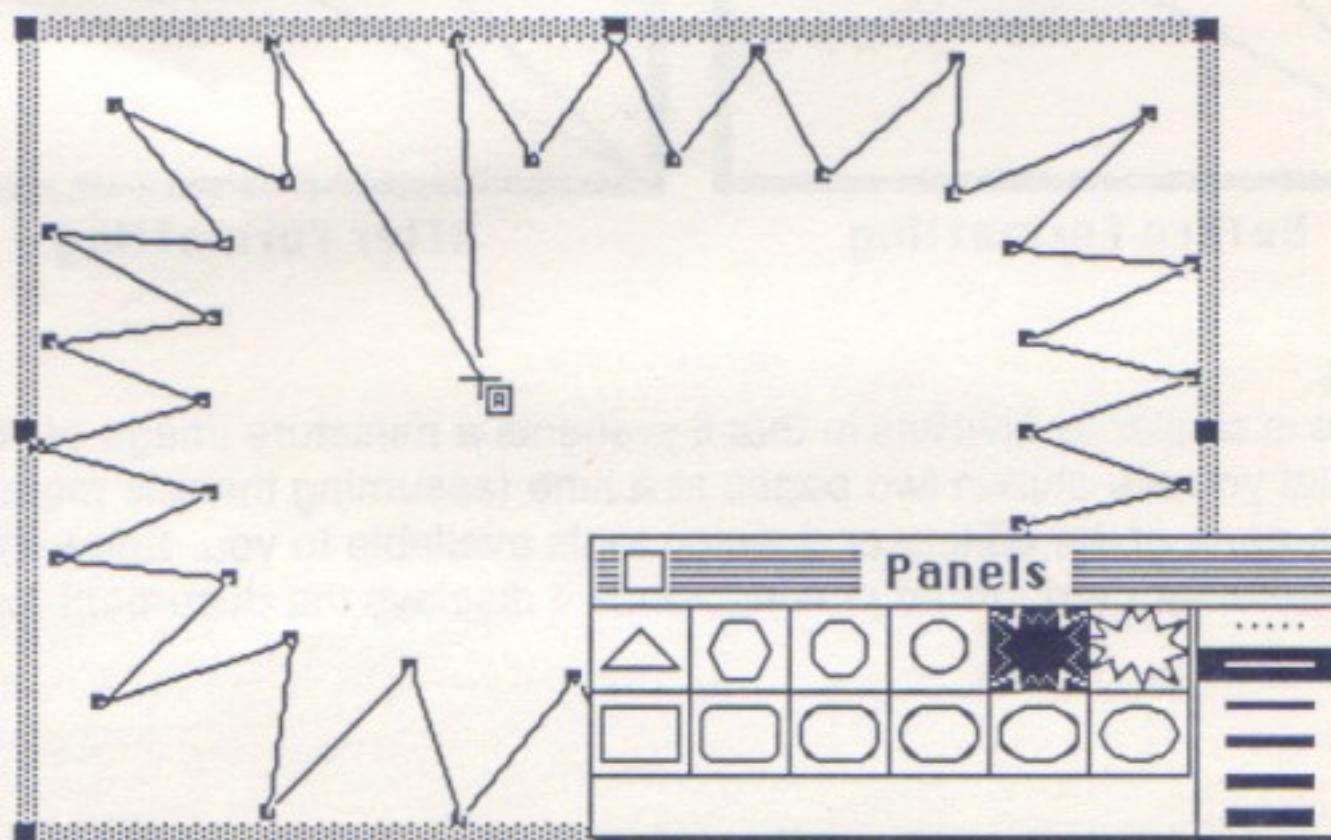
The commands are all found in the **Layout** menu. They can be used to change the priority level of easels and balloons inside panels, but they can also be used to change the priority level of overlapping panels. Simply select the panel you want to affect (hold the **Option** key while clicking on a panel) and choose the appropriate command from the menu. When you use any of these commands to change the priority level of an object, you will be shown briefly exactly what effect the command has had on the final appearance of your document.

Center

The **Center** command will center a selected area in an easel, a selected easel or balloon in a panel, or a selected panel on the page.

Reshape Panel/Balloon

The **Reshape** command allows you to customize the shape of certain balloons and panels. If a balloon or panel is one of the six types in the **top row** of either the **Balloon Styles** or **Panel Styles** window, it can be reshaped. By selecting the balloon or panel to be reshaped and then selecting **Reshape...** from the **Layout** menu, the "handles" will appear. Drag the handles with the cursor to change the shape of the balloon or panel.



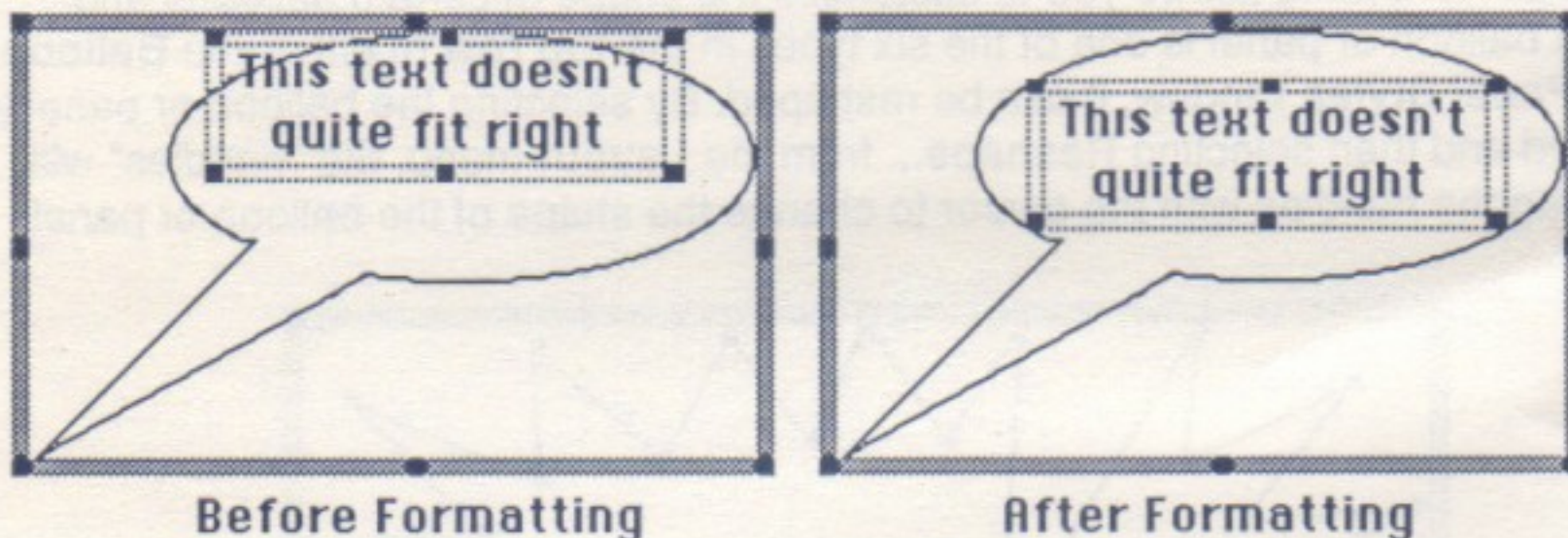
Add a new handle by holding down the **Option** key and clicking on an existing handle.

Delete an unwanted handle by clicking on the offending handle while holding down both the **Option** and **Shift** keys.

Note: If you choose a different shape for your balloon or panel (from the appropriate style window), you will lose any changes you may have made to the selected balloon or panel. Undo is the only way to get the changes back.

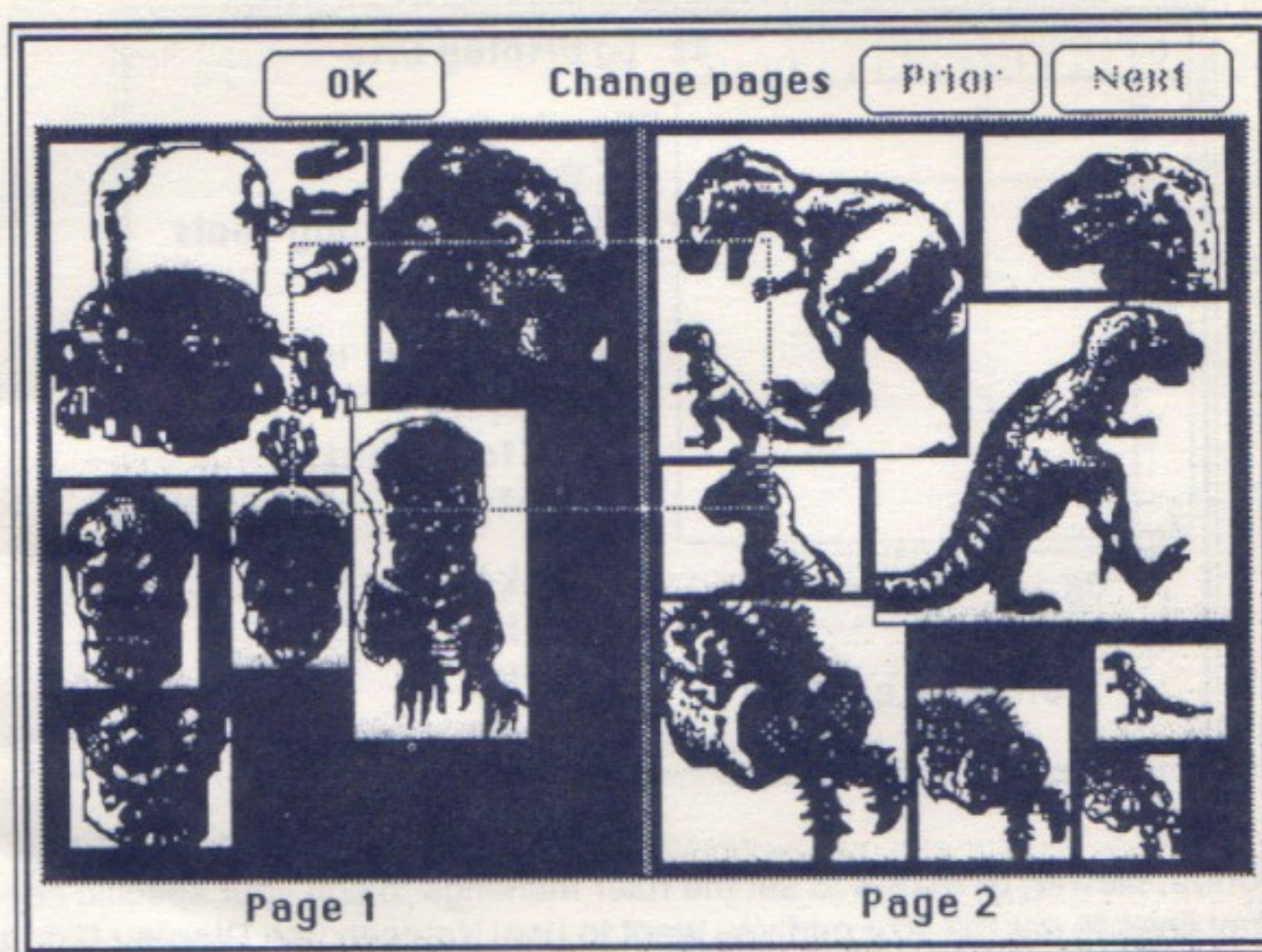
Format Text

Occasionally, text will not fit properly in an altered balloon. Select the balloon to be affected and then select **Format Text** from the **Layout** menu to change the text area inside the balloon. A frame will appear which represents the rectangle inside the balloon into which the text maps itself. You can move the rectangle around and change its shape (just like you have done with panels and easels) without affecting the balloon itself.



Show Pages

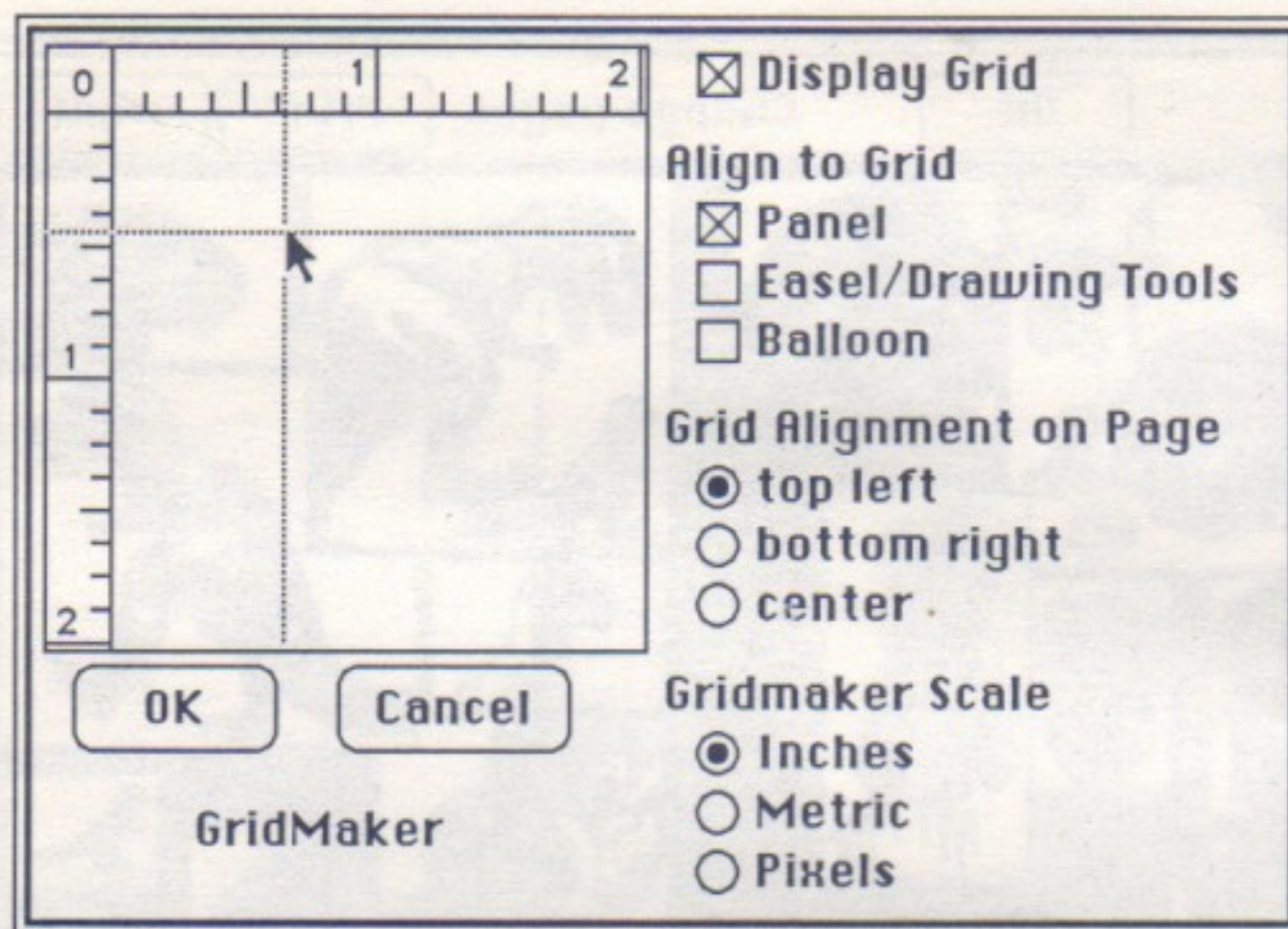
Show Pages is similar to ThinBits in that it presents a miniature image of your document. It differs in that you are shown two pages at a time (assuming there is more than one page) and you have none of the editing or drawing tools available to you. Show Pages is particularly useful for card format printing, since it displays the document exactly as it will print out.



When you select **Show Pages** from the **Window** menu (or when you double-click on the **Hand** tool while holding the **Option** key), you will see two pages of your document with buttons labeled **Next** and **Prior**, and a small gray rectangle will be superimposed on the picture. Use **Next** to advance to the next page, use **Prior** to go back a page. The gray rectangle represents the portion of the document visible in the document window. Drag the rectangle around to move your window on the document.

Grid Maker

Selecting **Grid Maker** opens a window in which you can create and control an alignment grid for your document. You can use such a grid to easily and precisely align the elements of your **ComicWorks** document.



Click on **Inches**, **Metric**, or **Pixels** to set the ruler markings to suit your specific needs. Drag the gray lines to set the size grid you want to use. You can use **Display Grid** to show the grid or leave it invisible. Click on **Panel**, **Easel**, and/or **Balloon** to choose what elements you want to "snap" to the grid (whether or not the grid is visible). **Grid Alignment on Page** chooses whether the grid lines up with the upper left corner, the lower right corner, or whether it is centered on the page. In general, you will find that **Grid Maker** can make a complex layout and positioning chore easy and painless. And the flexibility of its many settings allows you to customize it for the work you need to do.

When you turn on **Easel/Drawing tools** as an alignment option, the art tools will align to the grid when you draw. This makes various special effects possible, some of which are discussed in the techniques chapter.

Note: If you need to measure in picas, select the pixel scale. A pica is roughly equivalent to 12 pixels (points).

If you want to see the grid laid on top of your artwork temporarily, press **command-~**. You will see the grid (whether you have **display grid** selected or not) on top of your work for as long as you hold the keys down.

Add / Delete Page

Select **Add Page** from the **Edit** menu to add a page to your **ComicWorks** document. You will be able to add a page at any point in the document. Use **Delete Page** to remove any page permanently. Any panel which crosses over two pages will travel with the page which holds the upper left corner of the panel.

Art Grabber+™

You can use **Art Grabber+** to copy art from MacPaint documents into **ComicWorks**. Select **Art Grabber+** from the **Apple** menu. A new menu and a new window will appear on screen. Use the **Grabber** menu to **Open** a MacPaint document. When the graphics appear, use the selector (just like the Marquee) to select the area you want to "grab." The window will automatically scroll to let you copy up to a full MacPaint page. Use the **Grab** or **Copy** commands to copy the art to the clipboard. You can now **Paste** the art into your **ComicWorks** document.

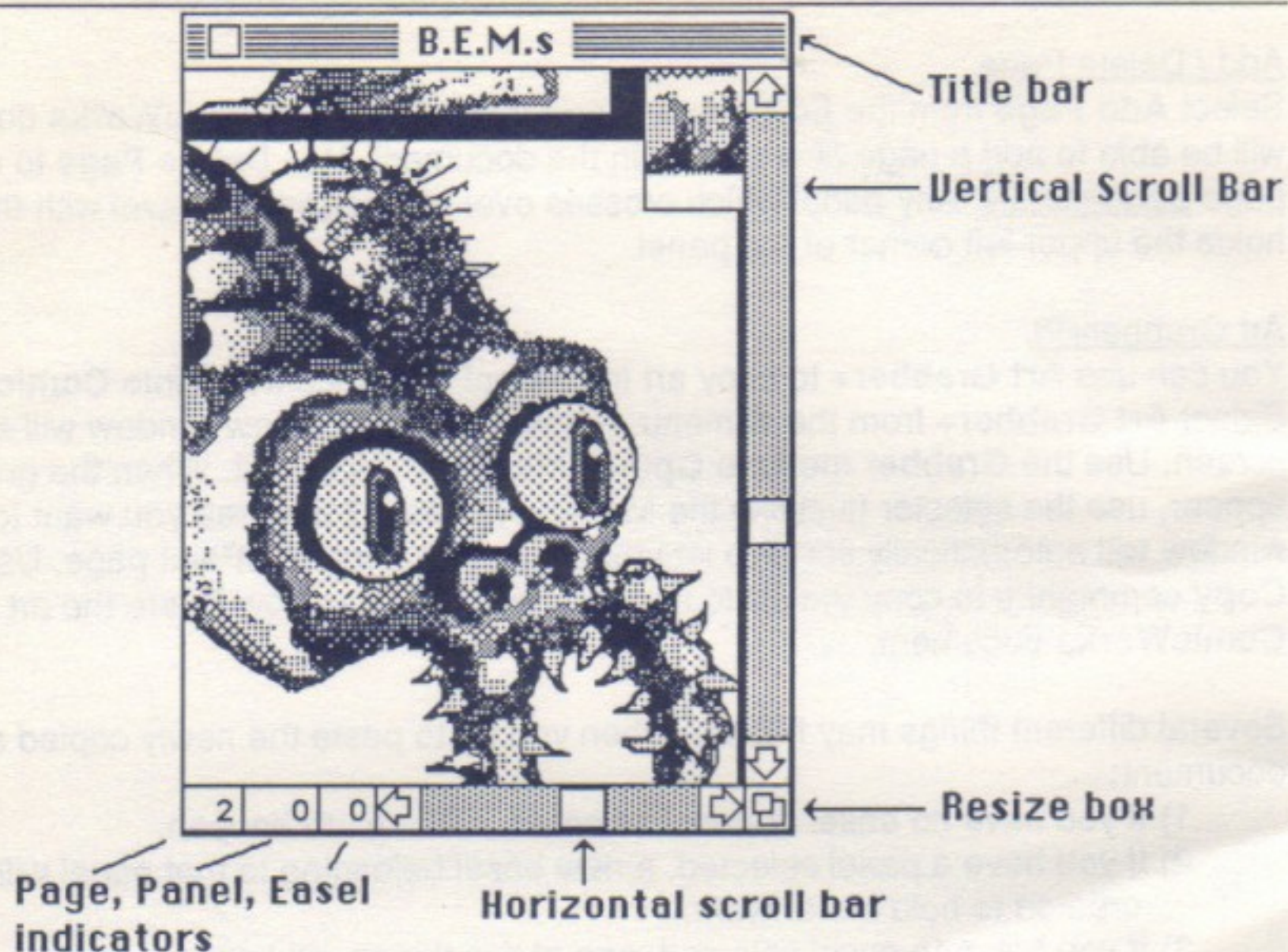
Several different things may happen when you try to paste the newly copied art into your document:

- 1) If you have no easel or panel selected, nothing will happen.
- 2) If you have a panel selected, a new easel belonging to that panel will be created to hold the artwork.
- 3) If you have an easel selected, one of two things will happen:
 - A) If the easel is too small, you will be informed that no paste can be done.
 - B) If the easel is large enough, the art will be dropped into the easel as a selected "floating" area that you can then move into position.

A good technique is to create a panel (select the **new panel** tool and click once on the page), paste the art into the empty panel, and then select **Wrap Panel** from the **Feature** menu. This will drop the artwork into the panel and then expand the panel enough to hold the art completely.

Open Browse Comic

You can open a second **ComicWorks** document in the **Browse** window. This new document can be "browsed" for art to include in your current document. You might call it a "comic grabber." All of the artwork included with this package can be accessed through the **Browse** window.



This allows you to select panels, easels, or balloons to include in your current work. Simply select **Open Browse Comic** from the **File** menu and select the comic you wish to browse. The **Browse** window will open (if it isn't already present) and will display the comic you selected. Use the scroll bars to scroll through the **ComicWorks** document until you find the art you want and then select it just like you would in your main document. Use the **Copy** command from the **Edit** menu to copy the selected item and then **Paste** it into your document. If you want to expand the window so you can see more of the document, use the resize box to stretch the window or double-click in the title bar to expand the window to full-screen size.

If you keep the **Browse** window open while you work, you can use the **Browse** command from the **Window** menu to bring it to the front when you need it.

Document Size

Technically, there is no limit on the number of pages you can have in one document—assuming you have enough RAM to hold them. Because the amount of memory a page uses is highly dependent on the amount of art and text within it, no strict rule about the maximum number of pages permissible can be stated for a given memory size. For performance reasons, however, you will probably not want to create complex documents of very many pages. Instead, if you plan to do very complicated layouts, you will probably find that creating one or two page documents is far more efficient.

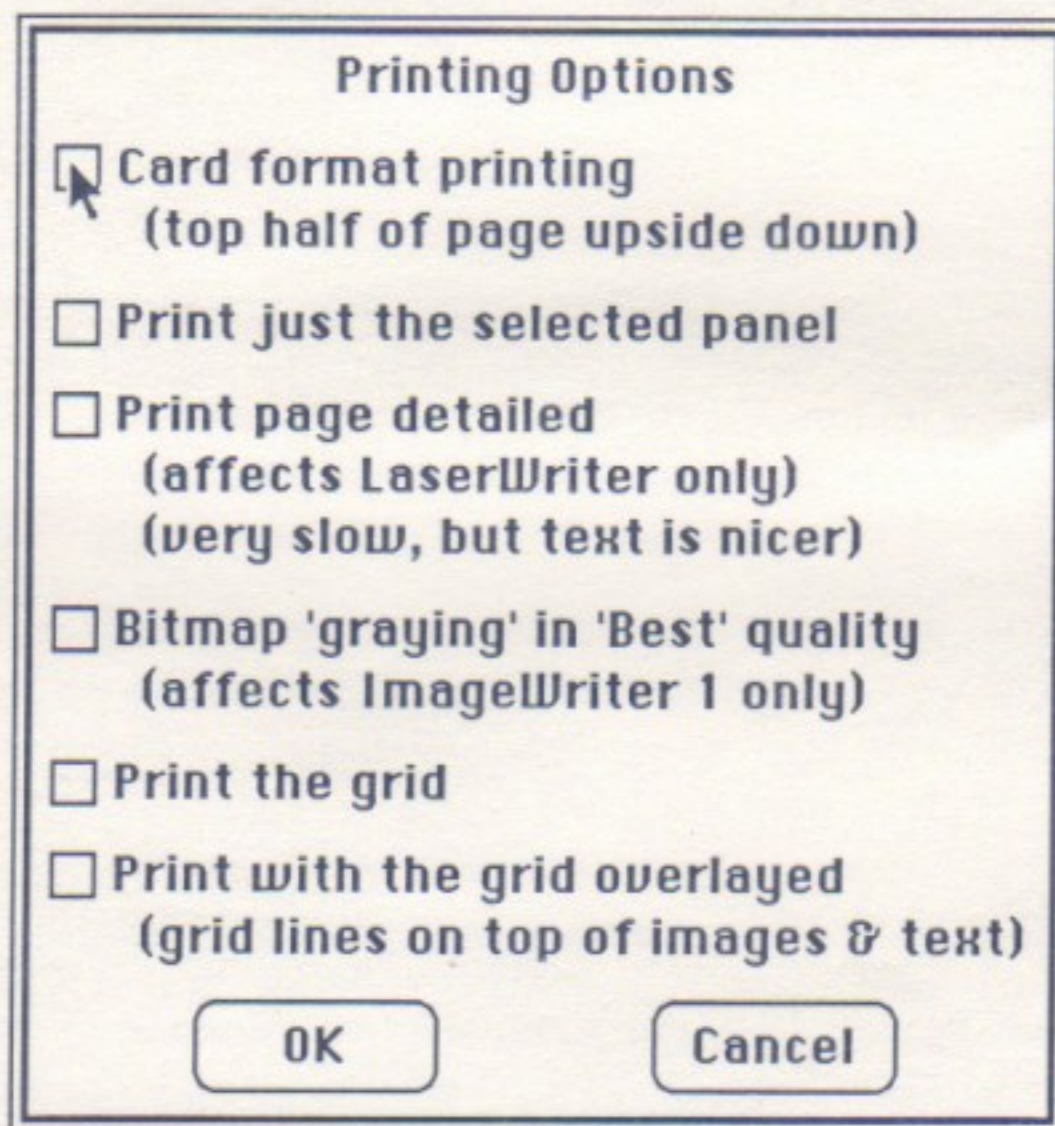
Printing

ComicWorks is geared toward the production of a printed page. All of the Macintosh printing conventions are followed, plus we have incorporated some special features to make life more fun.

Making the Printout

If you have ever used any Macintosh application that prints, you already know the basics of printing a **ComicWorks** creation. The three steps are 1) select from the various **Print Options**; 2) use **Page Setup** to set various printing parameters; and 3) **Print** the document.

Open the **Print Options** window to select from several different settings.



Card format printing and **Print page detailed** will be discussed shortly.

Click on **Print just the selected panel** to print one panel out of a document.

Turn **Bitmap 'graying'** on or off to set the darkness of graphics when you print in the **Best** print mode on an ImageWriter.

Print the Grid prints just the grid — this will print the default grid if you haven't changed it or even turned it on in Grid Maker.

Print with the grid overlayed prints the page with the grid superimposed on top of the image. It will print the default grid unless you have changed it with Grid Maker.

Click **OK** when the settings are what you want.

Use **Page Setup** to set the paper size and orientation before printing.

Note: Page orientation changes (print horizontal or print vertical) change the actual on-screen document as well as the printing format.

Finally, select **Print** to send the document to the printer. You will need to select the number of copies, page range, and print quality.

Bit Image Vs. Object-Oriented Printing

A **ComicWorks** document is made up of numerous "objects." An object can be a text balloon, an easel containing graphics, or a panel. When you print, there are two different ways the document can be treated.

The default method is called "bit-image" printing. This means that the document is sent to the printer exactly the way it appears on the screen. All objects are combined into a "bitmap" (like a MacPaint document) prior to printing. This means several things: a document will print faster, you don't need any room on the disk when you print, and text will print out just like it looks on screen. For ImageWriter users, this is the print mode that is used when you select **Faster** from the **Print** dialog.

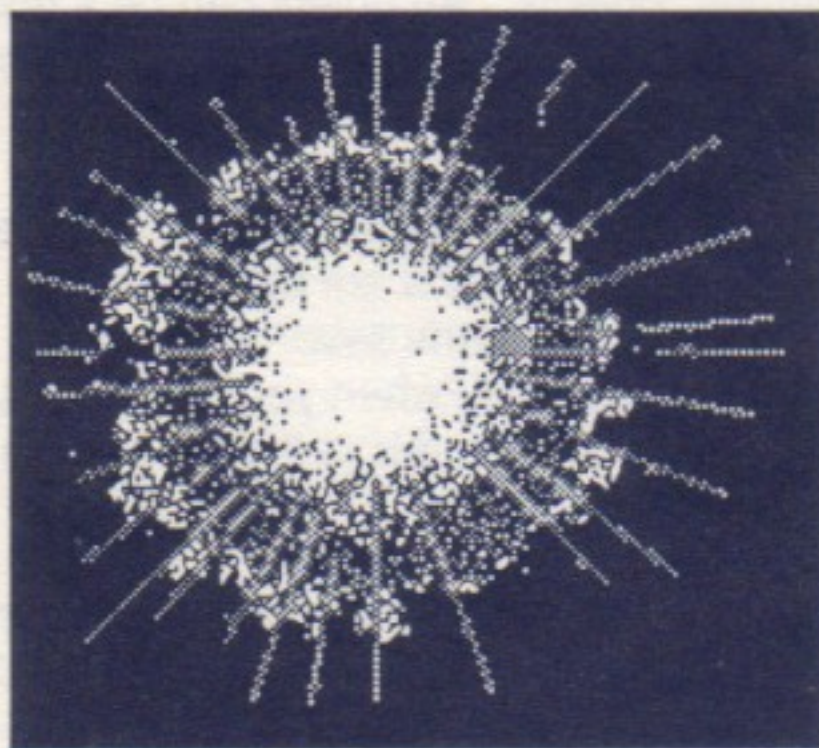
The other way **ComicWorks** can print is by considering the document as a collection of objects. In this case, each object is sent to the printer separately, one after another. The results of this are slower printing, better print quality, and the need to maintain room on the system disk for "spooling." In addition, text will be printed as text, not as a bitmap. The last item needs some clarification. For ImageWriter users, this means that it is possible to produce near letter quality text. If the font used in a text balloon is also available in the System file on the disk in a point size twice that used in the document, the font will be scaled down from that larger size. This will result in much better quality text. ImageWriter users choose this mode by selecting **Best** from the **Print** dialog. LaserWriter users should select **Print page detailed...** from the **Print Options** window.

LaserWriter Printing

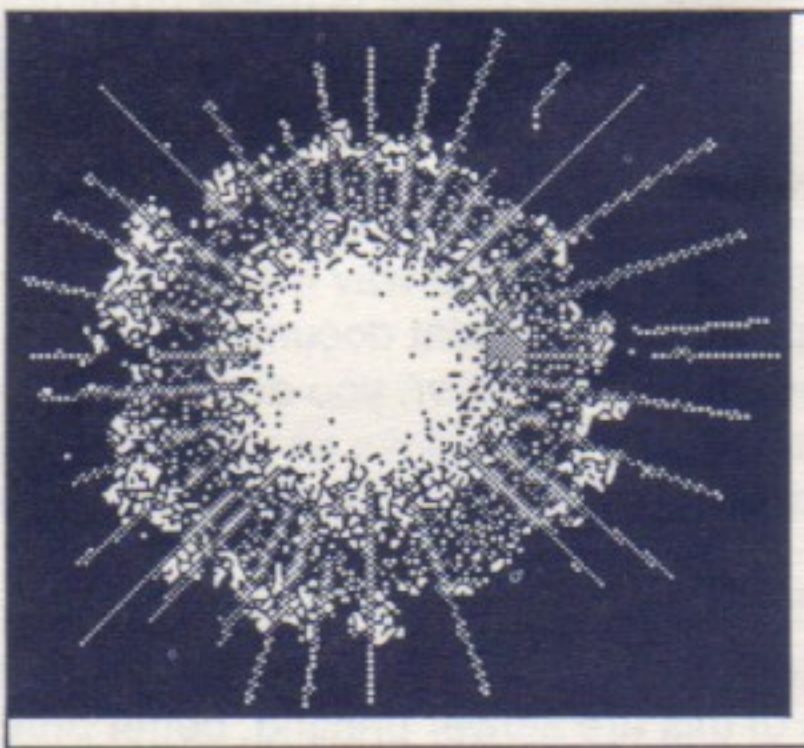
The LaserWriter brings new power and quality to **ComicWorks** printing, but it also adds some limitations that you need to be aware of.

When you print an object-oriented **ComicWorks** document to the LaserWriter, certain things will happen. First off, any text in balloons will be treated as real text by the printer. This means that if you use a LaserWriter font, you will get the full 300 dots per inch resolution of the printer for that text. Any fonts not supported directly by the LaserWriter will be scaled down from the largest available size, and balloon and panel frames will be drawn as perfectly smooth lines with no jaggedness. Graphics will be printed as a normal bitmap, and will be smoothed or not according to the **Page Setup** dialog.

While this all sounds great, there are some problems. The first is that LaserWriter printing can be very slow. A complex page could easily take one-half hour to print. Second, because of an aspect ratio difference between the screen and the LaserWriter, bitmaps will be printed slightly smaller than they appear on screen. This would not be a problem if there were only bitmaps present, but since panel frames are printed full-size, there will sometimes be a gap on the right and bottom sides of the enclosed bitmap.



On Screen

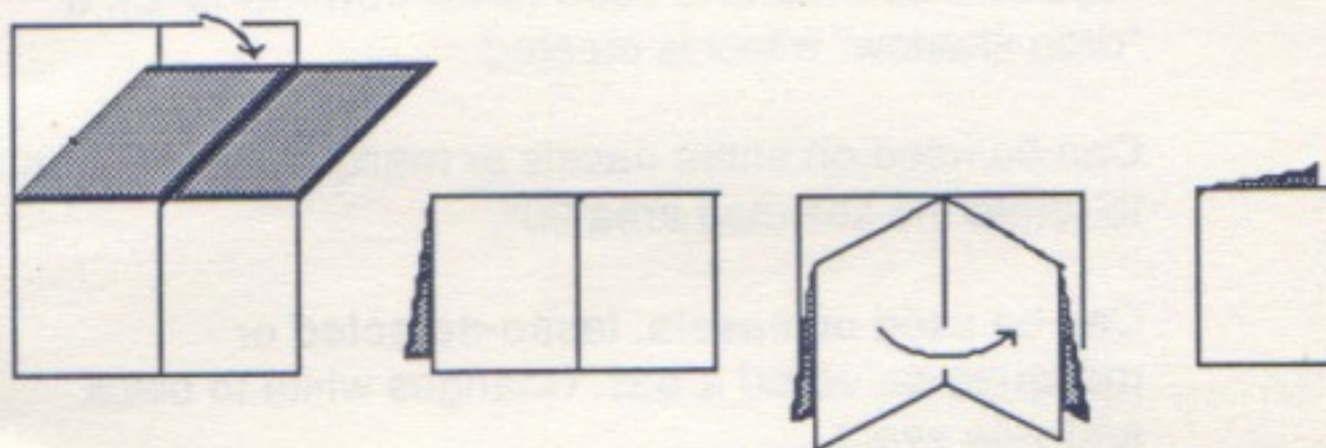


Printout

The only solution is to compensate on-screen for the discrepancy by careful cropping of the bitmapped areas. Another problem is the fact that the LaserWriter is unable to print panels with other than the basic rectangular shape. The Ink modes **Xor** and **NotXor** are also unusable. **Print with the grid overlayed** won't work because it uses the Xor process. There is no way to circumvent these problems via object-oriented printing.

The solution to many of these difficulties is to use bit image printing. This ignores the object-oriented nature of the **ComicWorks** document and prints each page as a big bitmap (just like a MacPaint printout). This allows you to get exactly what you see on screen on the printer—round panels and all—and will generally print much more quickly than standard printing. Because of its advantages, bit image printing is the default in **ComicWorks**. Unfortunately, you will not be able to achieve the same high quality text and balloon/panel borders that you do with standard printing. If you wish to print your document as an object-oriented document, you should turn on **Print page detailed** in the Print Options window.

Card Format Printing



Use this feature to create your own customized greeting cards. Click in the box next to this choice in the Print Options window and click **OK**. Your document will be divided into quadrants when you leave the Print Options window. Go ahead and create your document normally, but remember that when you print it out, the top half will be flipped to become the front and back of the folded card. You can use **Show Pages** to see what will happen when you print. Card format printing is always done as bit image printing, regardless of any other settings.

Other Tools and Features

By now, you may be slightly overwhelmed by the number of **ComicWorks**' features, tools, and techniques. Here, however, we'll show you the last few tricks you need to know to create really professional-looking work.

Special Editing Commands

The commands at the bottom of the **Edit** menu are very powerful graphics manipulation tools to enhance your work.

Scale by 50%

Can only be used with a **Marquee** selection. The command allows you to scale the enclosed graphic by the specified percentage. Set the scaling amount from

1% to 999% with the command **Set Scaling Amount** in the **Feature** menu.

Flip Vertical

Flop Horizontal

Can both be used to affect entire **easels**, or any portion of an easel which has been selected with the **marquee**. The designated area is reversed in the horizontal or vertical directions.

Trace Edges

Can only be used on a **marquee** selection. All black areas in the selected area are outlined. If the shifted keyboard command is used (**shift-command-E**), a "drop shadow" effect is created.

Rotate

Can be used on entire easels or **marquee** selections to rotate the selected area 90°.

Invert

Can be used on **easels**, **lasso-selected** or **marquee-selected** areas. Changes white to black and *vice versa*.

Fill

Can be used on **lasso-selected**, or **marquee-selected** areas. Fills the selected area with the current pattern.

In addition to the above commands, a special feature called **Trails** has been added. Whenever you have an area selected with the **marquee** or **lasso**, you can create a very special effect by holding the **Option** and **Command** keys down while you drag the area around. This will leave a trail of the image as if you were painting with a giant brush. The speed with which the image will be copied depends on the currently selected line weight.

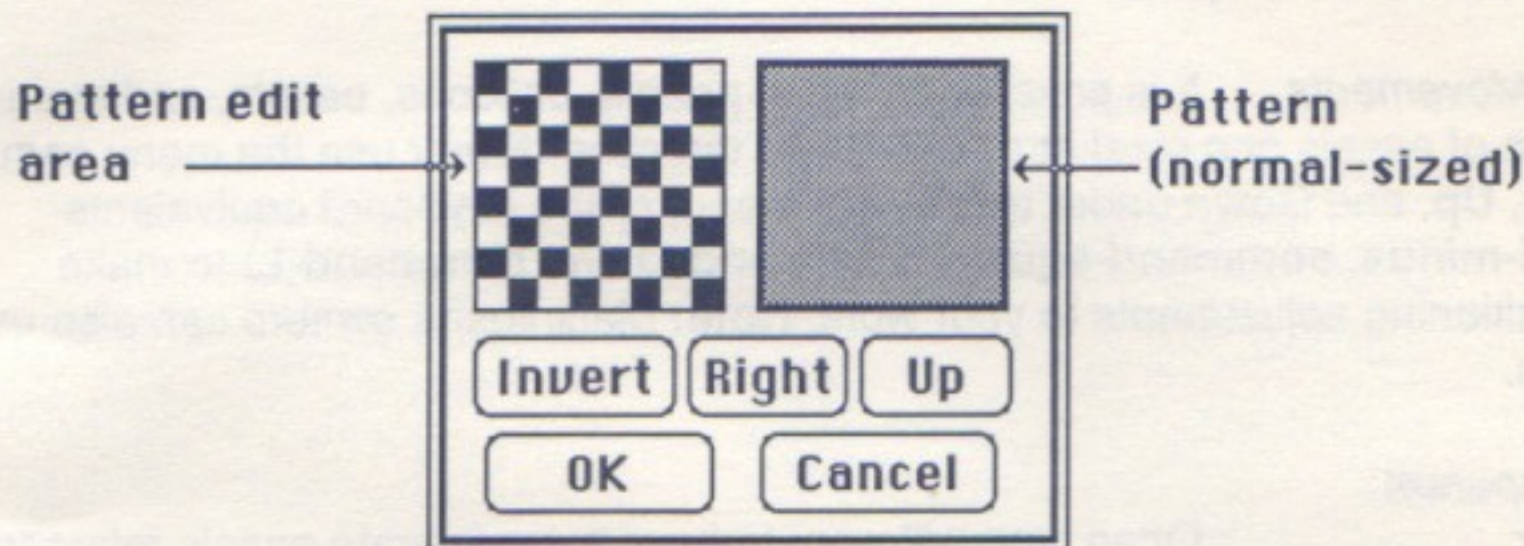
You can also double-click on the **lasso** or **marquee** icons in the **Tools** window to select the entire contents of an active easel. This allows you to affect the whole easel with the edit commands, even if you can't see the whole easel on screen.

Custom Patterns and Brushes

Although **ComicWorks** has a full set of brushes and patterns to choose from, you may find that you need to create your own for a special customized look. To make this possible, we have included both a pattern and a brush editor.

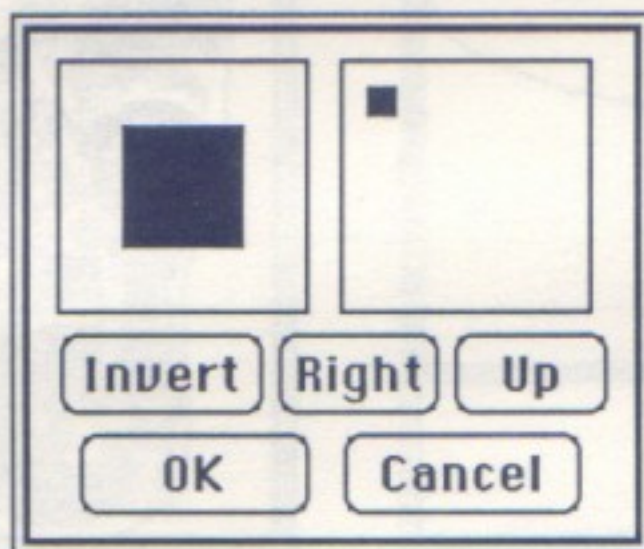
Custom Patterns You can open the pattern editor window from the **Window** menu or

by double-clicking on the pattern (in the **Patterns** window) you wish to edit. A window will open showing the normal-sized pattern on one side and a fatbits-like view of it on the other.



You can draw in the edit area just like in FatBits, and the normal-sized area will show you what the pattern will look like. Use the **Right** and **Up** buttons to scroll the pattern in the edit area. **Invert** will reverse black and white areas. You can also click outside of the **Pattern Edit** window to "grab" a pattern from anywhere on the screen. When the pattern is perfect, click **OK** to exit the window. Click **Cancel** if you decide not to keep your changes.

Custom Brushes You can open the **Brush Edit** window from the **Window** menu or by double-clicking on a brush in the **Brushes** window. The brush editor works exactly like the pattern editor. Draw in the edit area, or "grab" a brush from anywhere on screen by clicking the mouse over any part of the screen. If you want to create a random brush, click in the menu bar.



Note: Edited patterns and brushes are saved with the document. If you come up with a set of patterns and/or brushes you want to use repeatedly, save an empty document containing those patterns/brushes as a template. The **New** command restores all patterns and brushes to their original state.

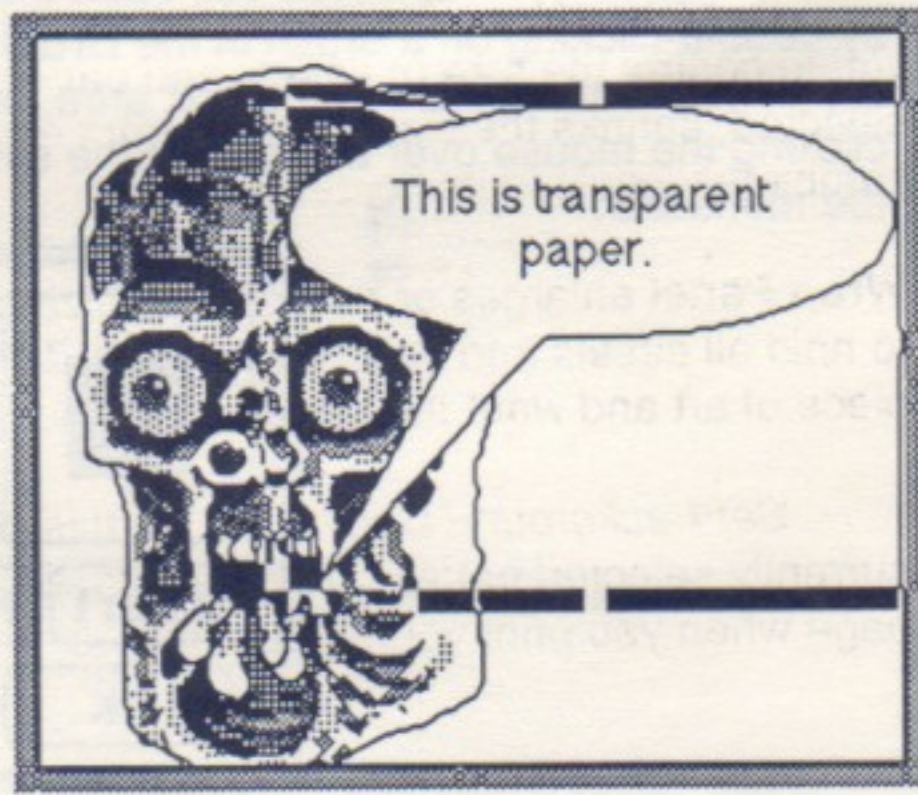
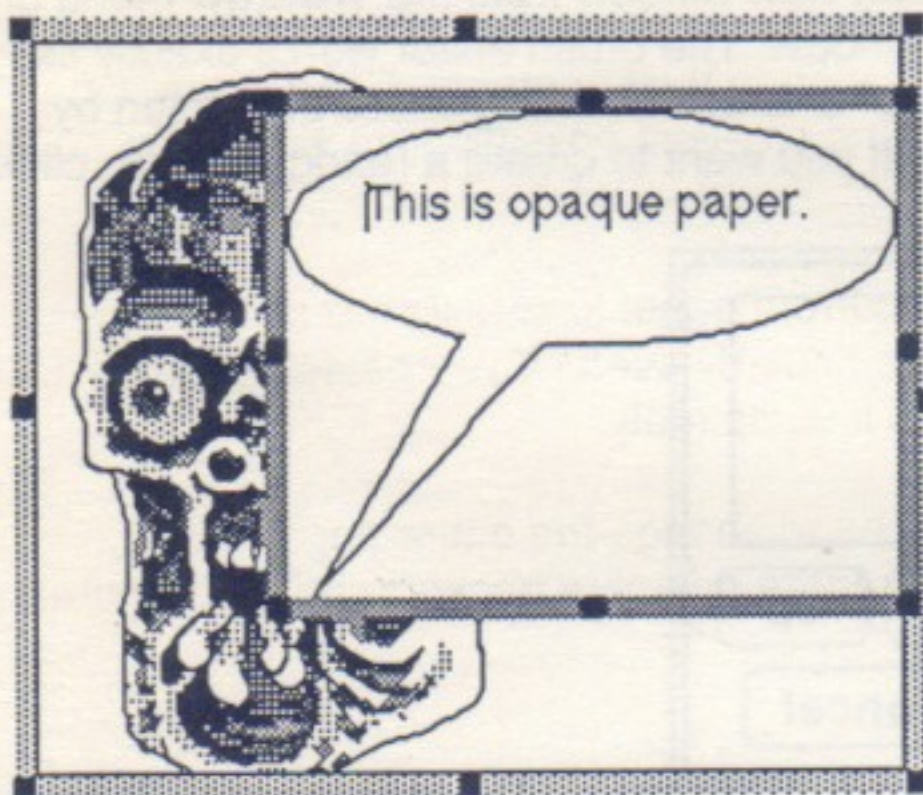
Panel, Easel, and Balloon Features

You have already learned the basics of using Panels, Easels, and balloons, but there are a few special features to explore.

Fine Movements It is possible to move panels, balloons, easels, and even selected areas inside of easels one pixel at a time in any direction. Either use the menu commands **Left**, **Right**, **Up**, and **Down** under the **layout** menu, or the keyboard equivalents (**command-minus**, **command-equals**, **command-O** and **command-L**) to make precise positioning adjustments to your work. **Note:** Macintosh+ owners can also use the cursor keys.

Transparent Paper

Often, you will want to have two separate easels relate to each other graphically. For instance, you want to draw the exhaust plume of a rocketship and you need to have it streaming out of the engine, but you also want to keep it a separate object. Or you need to position the mouthpiece of a balloon directly over the speaker's mouth. These things can be difficult if you try to use a normal easel since you can't see through to the object beneath as you draw. **ComicWorks** includes a feature called **Transparent** paper to make your job easier. When you select **Transparent** paper, the rectangle around your current easel, panel, and/or balloon will become clear, or transparent, temporarily.



You can still draw on the easel, but now you can see through to the bottom layers. The results of priority levels and clipping are displayed as they will appear when the panel is deselected. All of the art tools will work on transparent paper. Although they may feel a little strange at first, the results can be well worth the effort. **Note:** The **Transparent paper** command does not change the final appearance of your document. It merely changes, temporarily, the way you see what you are working on.

Clip Exception **Clip Exception** is a great tool for creating dynamic effects. Normally, panel boundaries "clip" the easels and balloons inside them. This is fine, but what if you want a balloon or easel to extend beyond the boundary? For instance, you want a superhero's fist to rip through the side of the panel, or a spaceship to seem to fly right out of the frame at the reader.



Regular Clipping



Clip Excepted

Simply select the easel or balloon you want "excepted" from clipping and choose **Clip Exception** from the **Feature** menu.

Crop Work

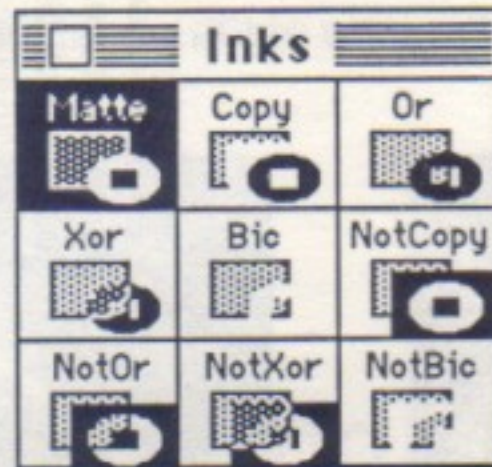
Wrap Panel

These two commands (in the **Feature** menu) make it easy for you to control the size of easels and panels in relation to their contents. **Crop Work**, when selected, shrinks the size of the current **easel** to the smallest possible size needed to completely enclose its contents.

Wrap Panel enlarges or reduces the size of the current panel to exactly the size needed to hold all easels and balloons inside it. This is particularly useful if you paste in a large piece of art and want the panel to expand to hold it completely.

Set Background Color Use this command to change the entire page to the currently selected pattern. This pattern will fill the entire printable background area of the page when you print your document.

Selecting **Ink** from the **Window** menu will open a special window.



Normally, **ComicWorks** easels are "matted" on top of one another. You have seen what this looks like. The ink selections allow you to create various special effects by changing what happens when one easel overlaps another. The icons represent what will happen for each mode. To use the **Ink** window, select an easel and then click on the icon you want in the **Ink** window. Every easel can have its own ink setting. The best way to understand the **Ink** window is to experiment with it. Try layering various objects on top of one another with different ink settings. The two most common settings you will probably use are **Matte** and **Xor**. **Matte** is what you have seen so far, and **Xor** inverts—particularly useful for typing white text on a black background. The illustration shows the results of laying one graphic on top of another and then changing the ink used. More detailed explanations and hints are given in the Techniques chapter.

The Ink settings and their effects

Top



+



Bottom

Matte



Outlines

Copy



Copies entire rectangle

Or



Makes it transparent

Xor



Reverse black and white

BIC



Makes black clear

NotCopy



Inverts then copies entire rectangle

NotOr



Inverts then makes transparent

NotXor



Inverts then reverses black and white

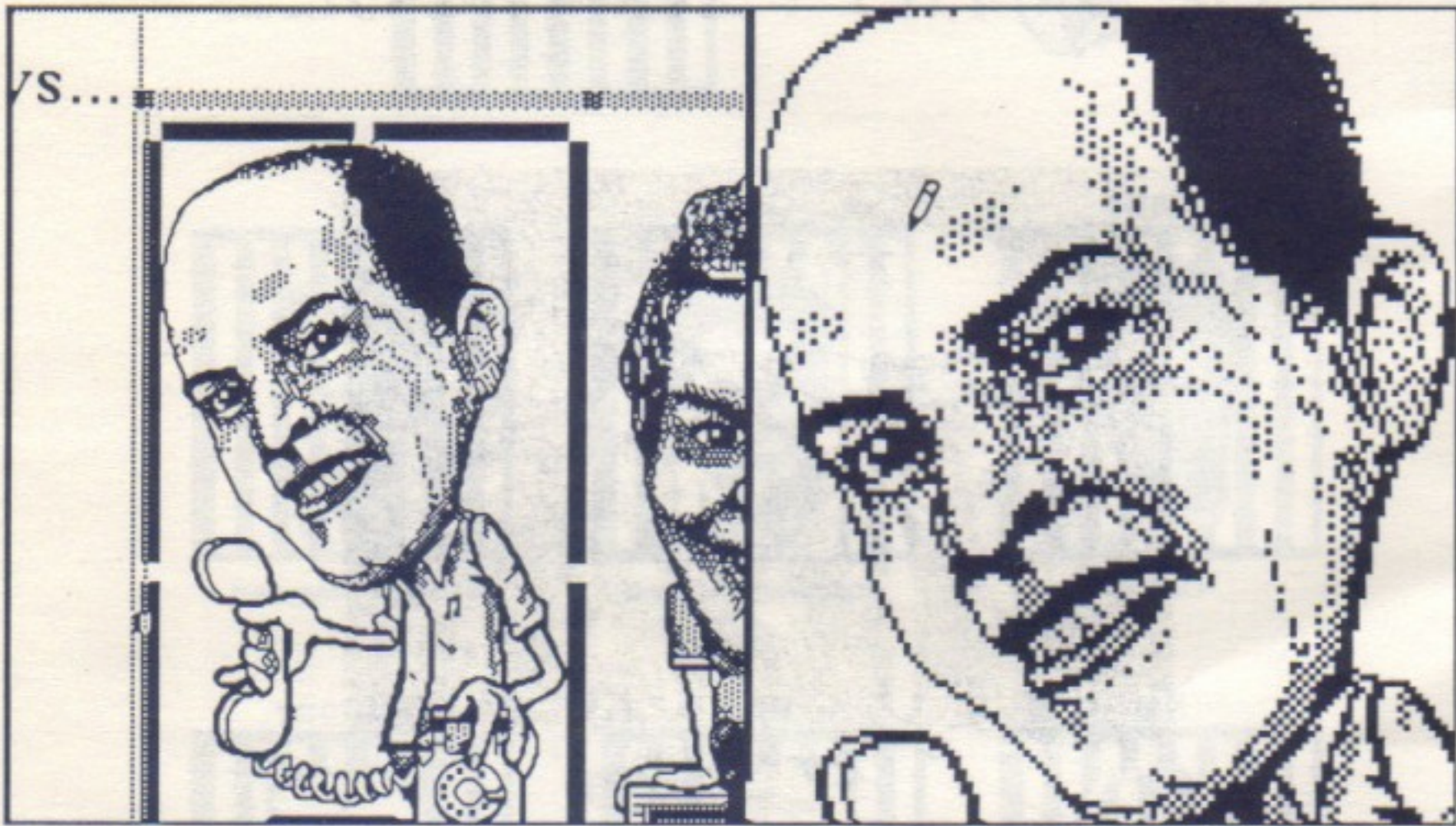
NotBIC



Inverts then makes black clear

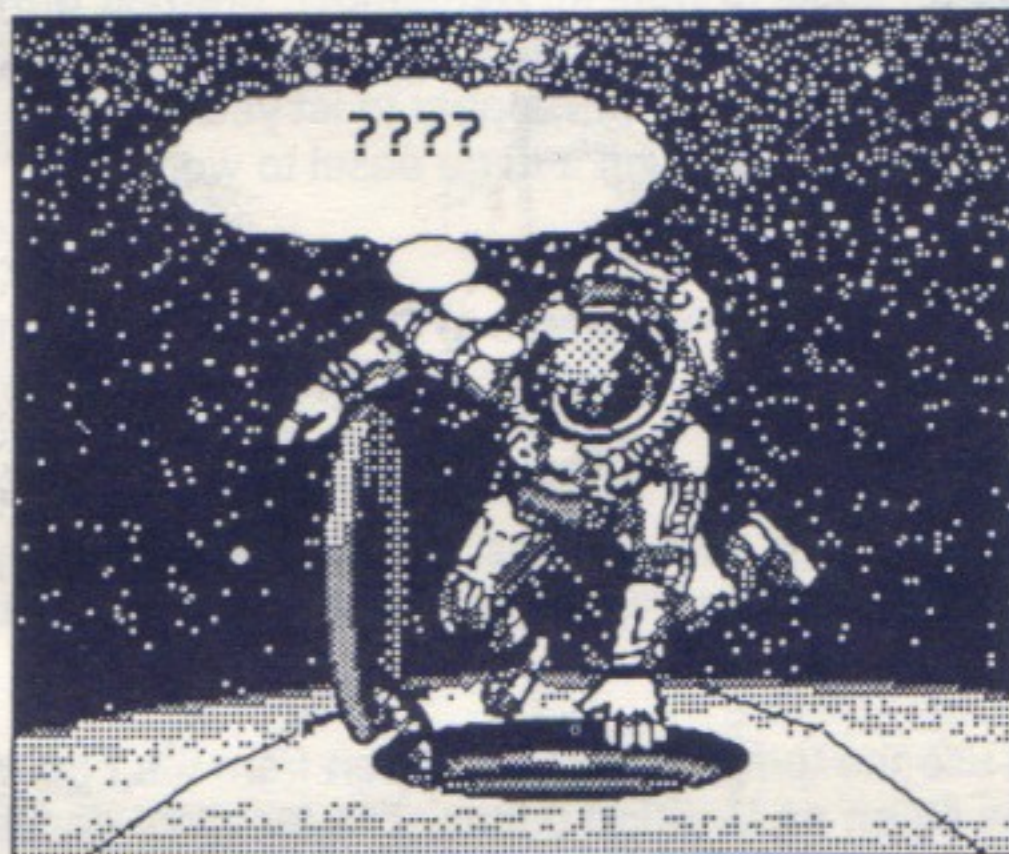
FatBits

FatBits gives you easy access to pixel by pixel editing of your graphic endeavors. Enter FatBits from the features menu, or by Command-clicking any of the drawing tools, or by double-clicking the pencil icon. The FatBits area will appear on whichever side of the screen you aren't using.



All of the drawing and editing tools work on either side of the screen. You can even change the scale of FatBits with the **Small Bits**, **Medium Bits**, and **Large Bits** commands in the **Features** menu. These give 2x, 4x, and 8x magnification respectively.

TIPS AND TECHNIQUES



Part 4: Tips and Techniques

This section is a potpourri of tips and techniques we've discovered while working with **ComicWorks**. This is where you'll find a complete explanation of **Ink**, ways to work with full-screen windows, oddities and weirdnesses of the system, and other good things to make your work more exciting and professional looking.

If You Can't Draw in a Panel

You probably don't have an easel to work in. Remember, drawing **only** happens inside easels—created with the **new easel tool**—and easels are contained in panels. If you try to draw without an easel present, a dialog will appear to let you know what's going on, and will offer you the option of quickly creating a large easel to work in.

Template Documents

You can create your own brushes and patterns in **ComicWorks**, as well as your own reshapeable balloons and panels. It is easy to create custom template documents that reflect your personal work needs.

When you have brushes, patterns, grid settings, or entire layouts that you like and want to work with frequently, save them in a template document (i.e. a template you can use in the future).

Whenever you want to use the template, choose **Open** from the **File** menu then select the file's name and click the **Open as Untitled** button. The template document will open as an untitled document.

A quick way for you to access your most commonly-used template document is to name it **Template** and save it on your System disk. Then when you want to use it, select **New** from the **File** menu while you hold down the **Option** key. The document will be opened as an untitled document. This is particularly useful if you want to work on the whole page as one large painting (like MacPaint). Simply create a page-sized panel and a matching full-page easel and save the document as **Template** on your System disk. Then use **Option-New** whenever you want to start a new document.

Customized balloons and panels

If you create some reshapeable balloons or panels that you want to use again in the future, save the document containing them to a data disk. Then whenever you want to use the special objects, just open that template as a browse document, copy out the balloon or panel that you want, and paste it into your edit document.

Working With Full-screen Windows

To get a bigger window, and more working area, double-click on the title bar of the document window (if you have an Enhanced Macintosh or a Macintosh+, use the zoom box). When you need to get a tool (for instance to change from the pencil to the airbrush), use the following sequence:

- Press **command-S** to make the Tool window visible (you could also select **Tool** from the **Windows** menu)
- Select the tool you want
- Press **command-S** a second time to send the Tool window away again

You can use a similar sequence to access the patterns window (using **command-D**). Use the various double-click sequences to access the other windows (e.g. double-click on the balloon-creator icon to get to balloon styles). To return your document window to its original (smaller) size, just double-click on the title bar again. Note that double-clicking on the title bar also works with the **Browse** window. If your document window is behind your **Browse** window, you can bring your document window to the front by selecting it from the **Window** menu.

Working with Windows

Hint: You can leave the **Art Grabber+** and **Browse** windows open while working with them. Just click the title bar of the document window (or select it from the **Window** menu) to work on the document and vice versa. This makes it quicker to switch back and forth between them.

If You Lose an Easel

It is possible to have an easel which is not visible inside a panel. If you "lose" an easel in this way, there are a couple of ways to find it again. You can use the **Easel Selector** tool to select an easel in a panel, visible or not. Alternatively, you can choose **Wrap Panel** from the **Feature** menu to expand the panel to a size large enough to encompass all easels it contains.

Quickly Moving Easels and Panels

When selecting an easel or panel with the mouse, hold your mouse button down until you get a gray outline; you can then move the outline of the object around the screen. Wherever you release the mouse button is where the easel or panel will move to.

Using the Grid for Drawing

How to get a 3-D effect

Turn on the grid. Start with a black 4x4 pixel brush and make a horizontal line. Using the **Layout** commands, move the easel up and left 3 pixels. Now draw with the nearly-black pattern. Move the easel again, and repeat the process, moving down the gray scale to nearly-white. This is what you will get:



How to get custom angles

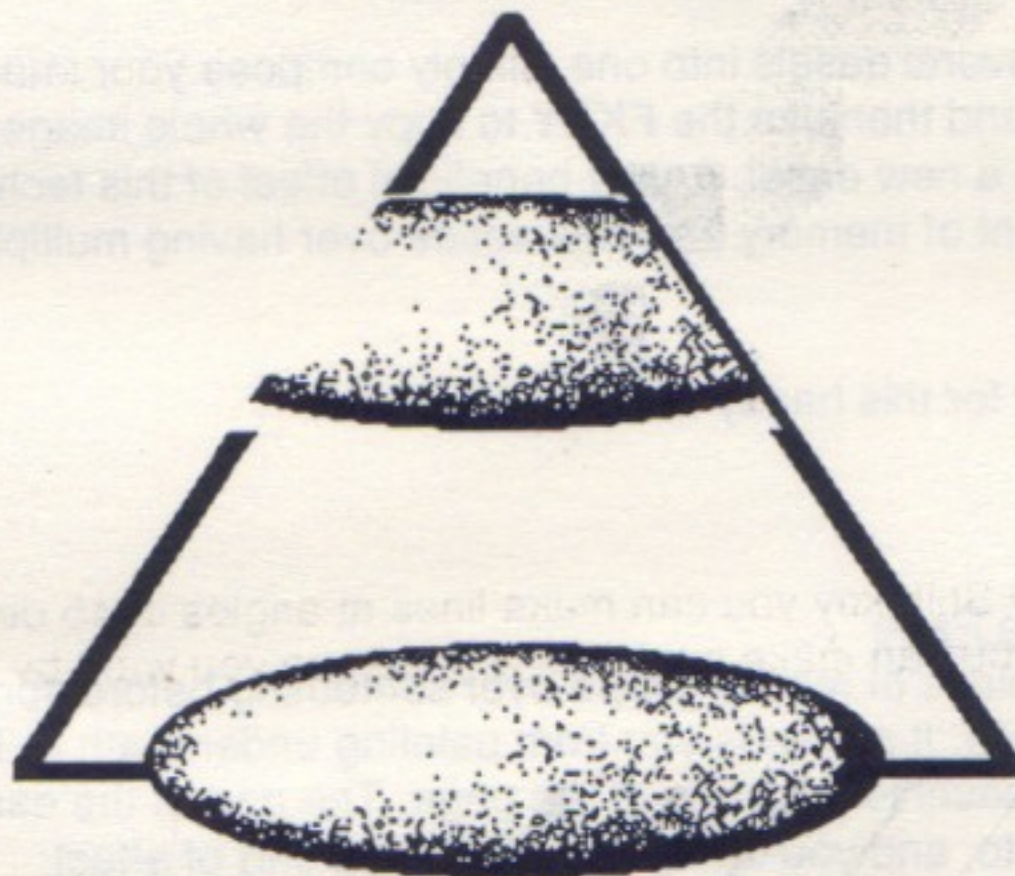
Using the line tool with the Shift key you can make lines at angles of 45 degrees. Using the line tool with the grid on, you can make angles of any degree you want by adjusting the size of the grid.



Weirdnesses

Occasionally when you are editing text, the cursor may look like it is "frozen" in a certain position. Don't worry. You can just continue working, or if you want to get rid of the frozen cursor, just click on the border of the balloon.

If you have a reshapeable panel (i.e. one of the panels in the upper row of panel styles) you may run into the following problem: if any of the items in the reshapeable panel are **Clip Excepted** then the panel will look a little strange, like this one:



We're sorry about this, but it's one of the limitations of the Macintosh Toolbox.

Organizing Your Work

One Big Panel

When starting a page, create a single big panel that covers the whole page (ThinBits makes this easy). Then you can easily place an easel or balloon anywhere on the page without worrying about which panel it belongs to. You can also resize things so that the easel/balloon isn't clipped. This method is good for posters and brainstorming.

Group Things in Panels

Keep related objects together in one panel and use the panel as a group that you can move around on the page independently. Remember that you can overlay panels on top of each other, and can use the Layout commands (e.g. Send To Rear) on panels.

Group Easels

There is not currently a "group easels" command in **ComicWorks**. Instead, we have included a special tool (in the System file) called an **FKEY** which can be used for this purpose. If you press **Command-Shift-6** you will see the cursor change into a small cross-hair selector. Use this selector to draw a rectangle around any area on the screen you want to copy to the Clipboard. When you release the mouse button, anything inside the rectangle is put on the Clipboard ready to paste in as graphics. If you want to copy the entire screen to the Clipboard, just click the mouse button in one spot.

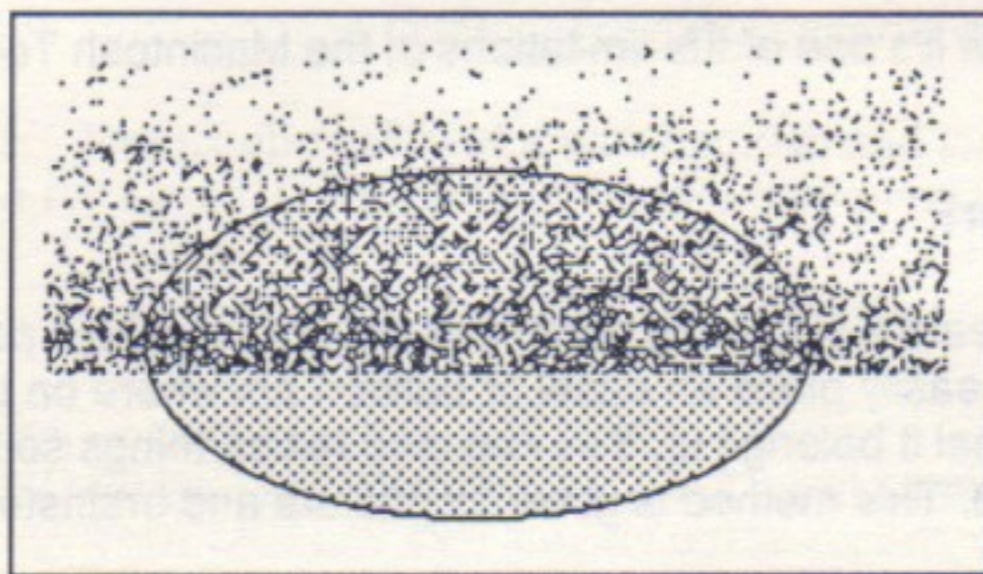
If you need to combine several easels into one, simply compose your image the way you want it to end up looking and then use the **FKEY** to copy the whole image to the Clipboard. You can then paste it into a new easel. A very beneficial effect of this technique is that it can save a tremendous amount of memory and disk space over having multiple images stacked on top of one another.

Many thanks to Joe Miller for this handy little tool.

Airbrush Tips

Mask With the Edge of the Page

This works like putting a piece of masking tape over something before spray painting it (an artist would call it a "frisket"). It prevents you from painting underneath it. To do this in **ComicWorks**, move the easel to the edge of the page. The part of the easel that is off the page will not be drawn onto, and you can get the following sort of effect:



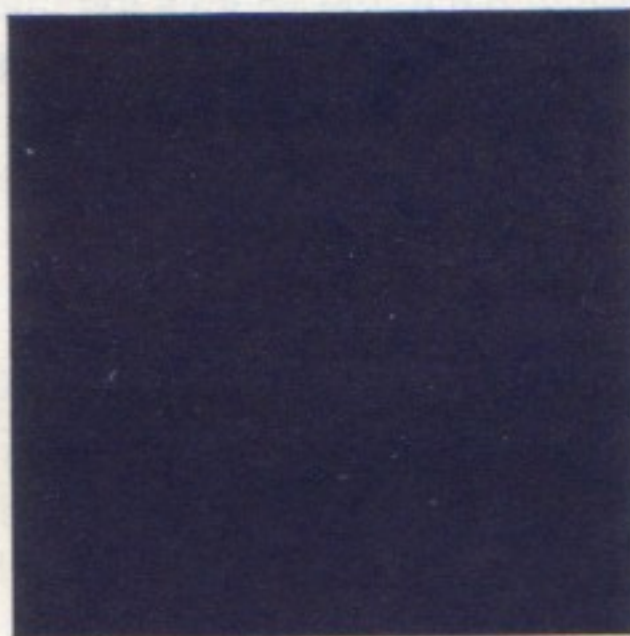
"Acid Etch" Reveal

You can get a nice, eerie effect by creating a piece of art in one easel, laying another easel filled with a solid pattern on top of it, and then etching away the top easel with the airbrush

and white paint. If you do this with transparent paper on, you will be able to see and control the effect as it happens.



Bottom Layer



Top Layer



After Airbrush
with white

Compatibility with MacPaint

Easels are fully compatible with MacPaint. You can copy entire easels or any selected part of an easel, put it in the scrapbook, and later paste it into MacPaint.

Panels and balloons are special to **ComicWorks**. If you put them in the scrapbook, you won't see a picture of them, just the words "this is a panel from ComicWorks." If you want to move a whole panel from **ComicWorks** to MacPaint or some other application, try the following:

- Save the page that has that panel as a MacPaint document.
- Use Art Grabber+ to open the MacPaint document, select the panel you want, and paste it into the scrapbook or other application.

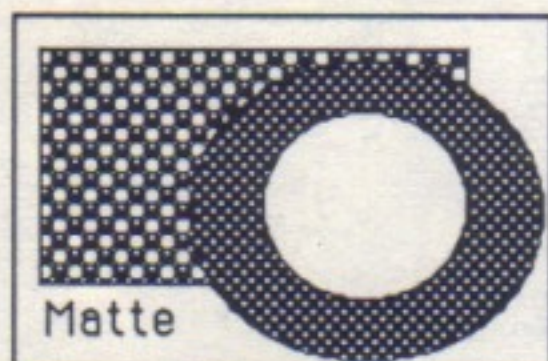
Using the Inks

The **Inks** are a very powerful feature of **ComicWorks**, but they can be a little confusing. The following is an in-depth look at the various inks and their uses.

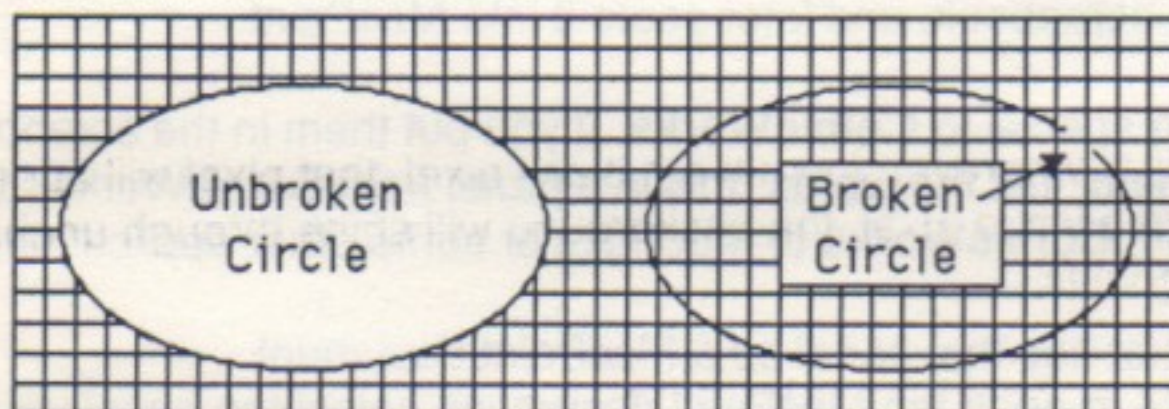
Note: The Ink modes **Xor** and **NotXor** do not work with the LaserWriter printer if you choose **Print page detailed** from the **Print Options** window. The default-bit image printing-takes care of this, but with the usual limitations (see page 61).

Matte

This is the default ink. Matte outlines the edges of the image in the easel and then drops it on top of whatever is below. It works the same way as the lasso when deciding which parts are opaque and which are transparent. Matte uses twice the amount of memory that any of the other ink modes use.

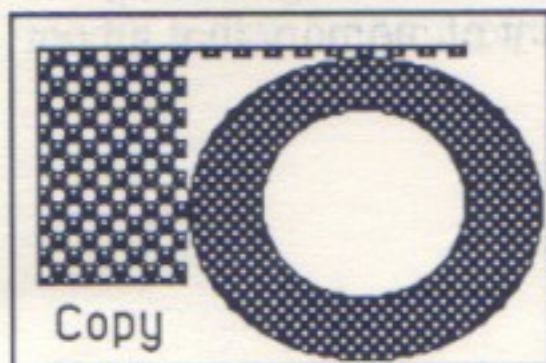


Matte Ink works sort of like the paint bucket in determining where to copy the image to; if you took the paint bucket and dropped paint outside of the image, then wherever the paint did *not* reach is the area that will be copied. All the other areas are left as background. Therefore if you have a tiny hole in a circle (see illustration below), you will be able to "see through" the circle, since like the paint bucket, the background is flowing in through the tiny hole.



Copy

Leaves the white rectangle around the image. Useful when you aren't positioning things one on top of another, or for backgrounds. Uses half the memory that Matte uses.



Or

Gives a see-through or transparent effect.



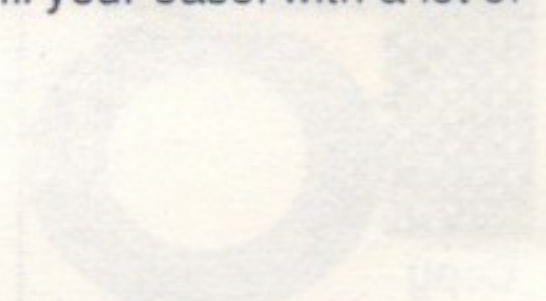
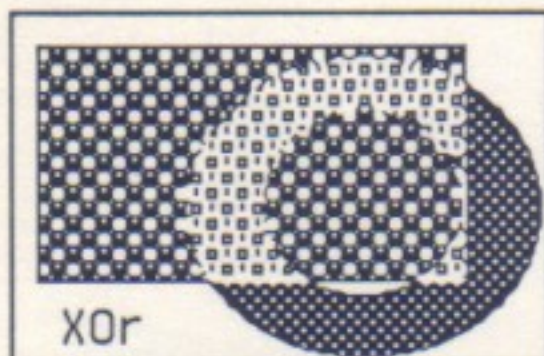
BIC

"Black Is Clear," means that wherever you have a black pixel, that pixel will appear clear or white. Wherever you have a white pixel, the background will shine through unchanged. This is good for making ghosts.



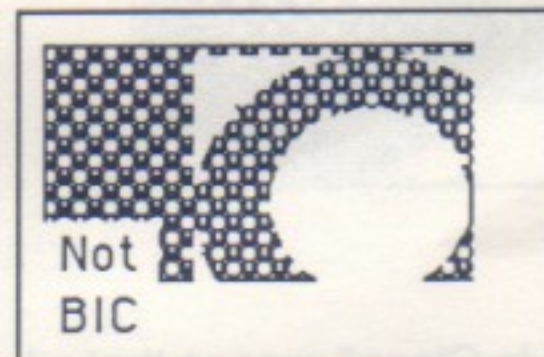
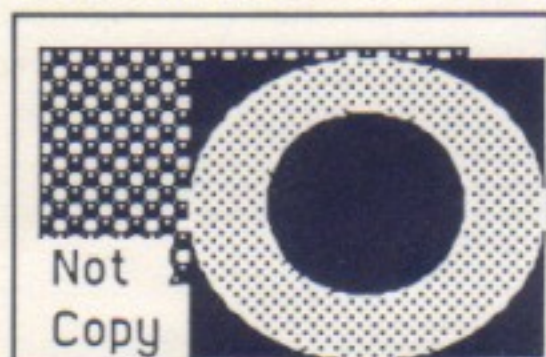
XOR

Any black pixel will reverse the pixel behind it (this is called "Exclusive OR" in computer parlance). Useful for getting various weird-looking effects. Also useful for inverting large areas (such as getting white text on a black background) if you fill your easel with a lot of black.



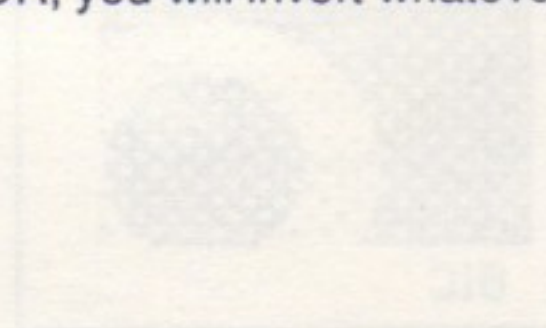
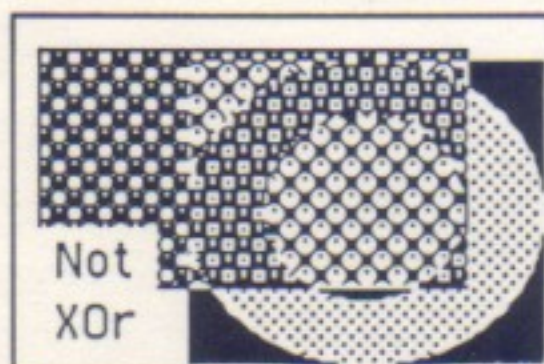
NotCopy, NotOr, NotBIC

These work the same as the others, except that the image is first inverted, then the Copy, Or, or BIC transformation is applied. Mostly they are good for weird effects.



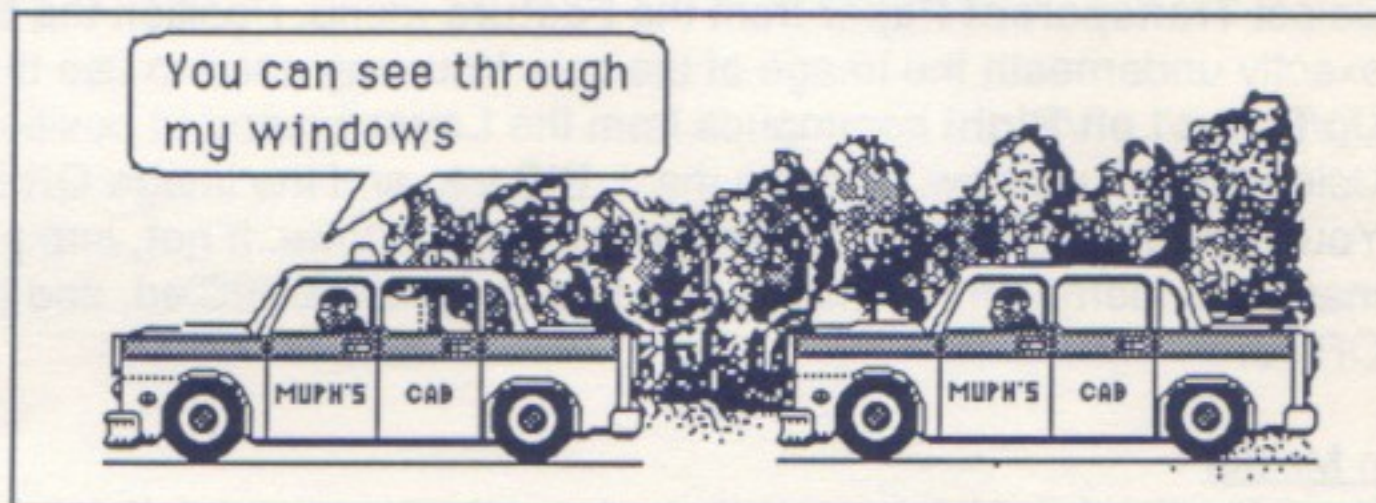
NotXor

This is especially useful if you just want to invert something, like getting white text on a black background. You can take a blank easel and with NOT XOR, you will invert whatever is behind it.

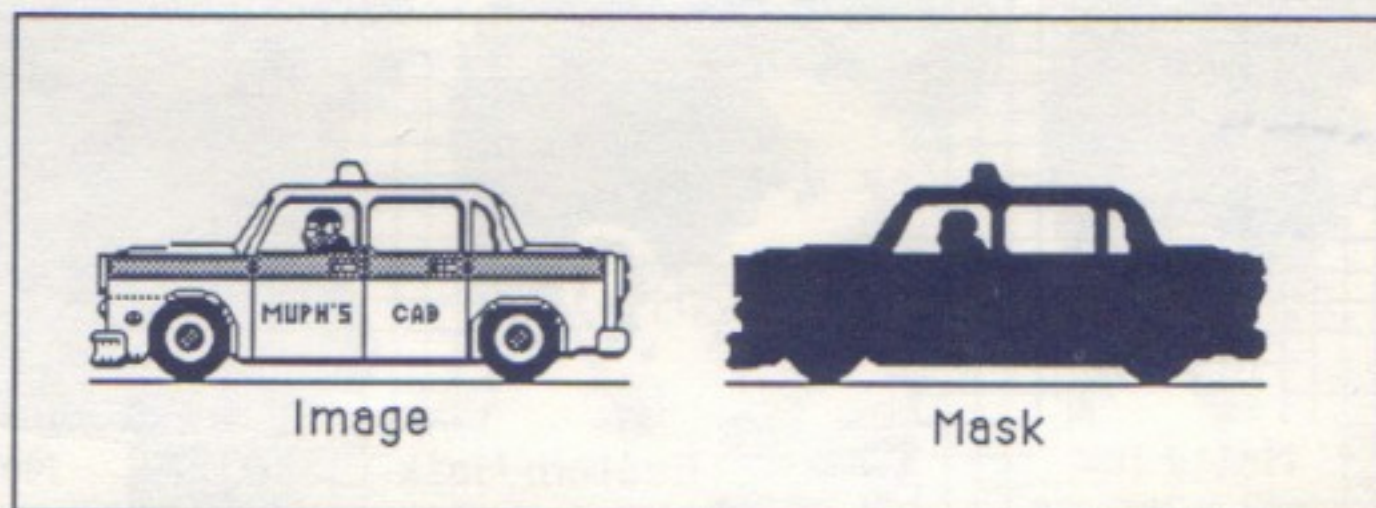


Creating a Custom Mask

While Matte Ink will do what you want 99% of the time, there are occasions when you will want to create a "custom mask." For example, the cab on the right is done with matte ink so you can't see through its windows. The cab on the left was done with a custom mask.



ComicWorks images objects onto the screen by first clearing some space for them (i.e. erasing the background). The area that it clears is determined by the *mask*. For Matte Ink, this mask is automatically determined by **ComicWorks** in a way that is similar to how the paint bucket tool works (see the Matte Ink discussion above). You can create your own *custom mask* in **ComicWorks** and use it to clear space for the image. For example, the cab's custom mask has holes in it for the windows:



So, when the background is cleared using the mask, the background behind the windows is left intact, since that area is white in the custom mask.

How to Create a Custom Mask

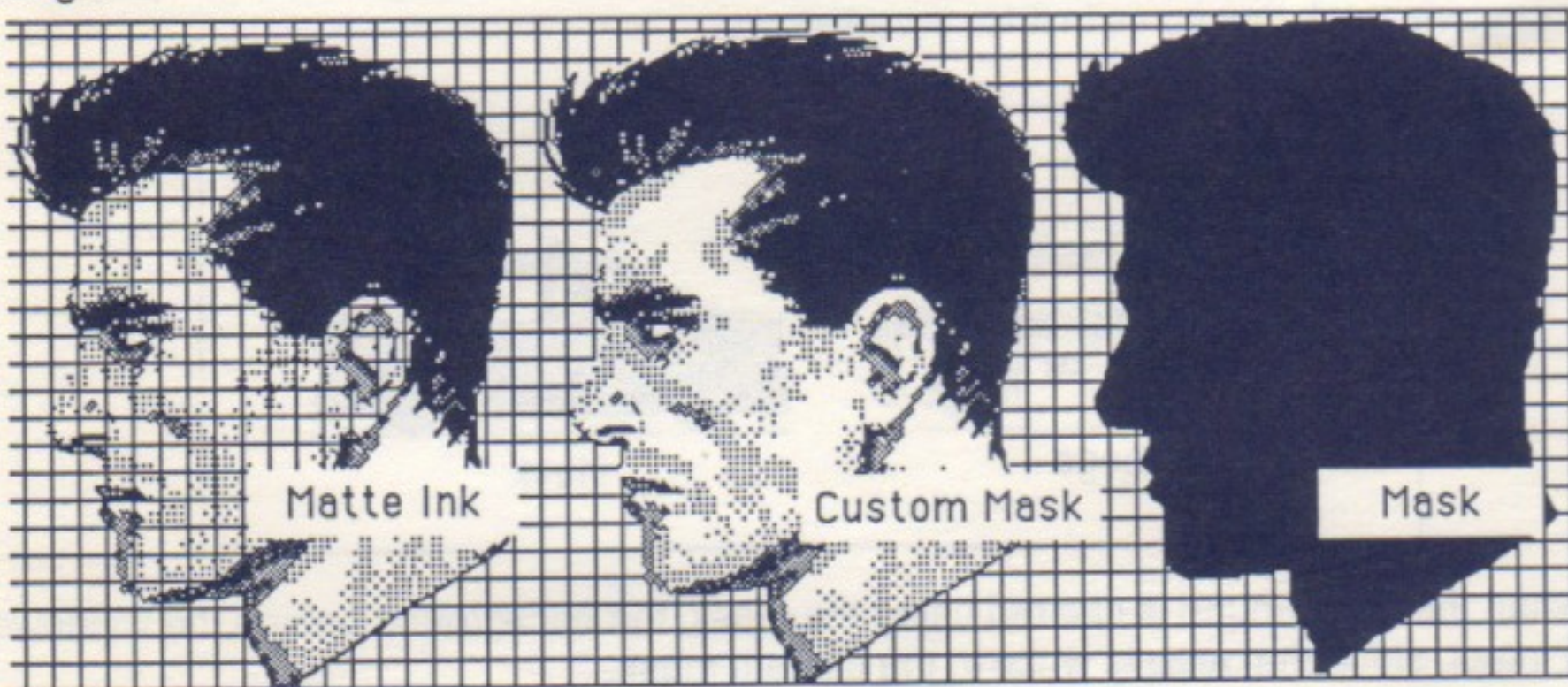
So much for the theory of it. Here is a step by step tutorial on how to create the custom mask for the cab shown above:

- Create the background (the trees)

- Create the cab as a separate easel.
- Copy the cab, choose **Selected Panel** from the **Feature** menu, and paste. You will now have two copies of the cab.
- Go back to the first copy of the cab (which is underneath the second one). Fill in all the areas of the cab with black except for the windows.
- Select **Transparent Paper** from the **Feature** menu. Position the black mask exactly underneath the image of the cab. You may need to use the **Up/Down/Left/Right** commands from the **Layout** menu to position it exactly.
- Using the **Ink** window, give the mask **BIC** ink, and the image **OR** ink.
- You should now be able to see through the windows. If not, make sure that the mask is underneath the image, and that the mask is BIC'ed, and the image is OR'ed.

More Custom Masks

There is another situation in which a custom mask can be very useful. If you have an object that doesn't have a sharply defined border (perhaps it was created using the Airbrush tool), then the background will "leak" into the object if you use **Matte** ink. To prevent this, use a custom mask that is shaped like the object. The custom mask will keep the background from leaking into the object. For example, in the face below, the forehead and nose are not sharply defined. Therefore, a custom mask is used to prevent the background from showing through.



For Experts Only — Customizing ComicWorks With ResEdit

If you are familiar with using the resource editor from Apple® called ResEdit, then you might want to try customizing your **ComicWorks** application with your own patterns, brushes, balloons, or panels. **Keep in mind that you are doing this at your own risk**, and make sure you are working with a backup copy of the program, not the original, in case something goes wrong. After saving the brushes, patterns, balloons, or panels that you like in a document, use ResEdit to copy over the following resources from the document to the **ComicWorks** application:

PAT# patterns

BRS# brushes

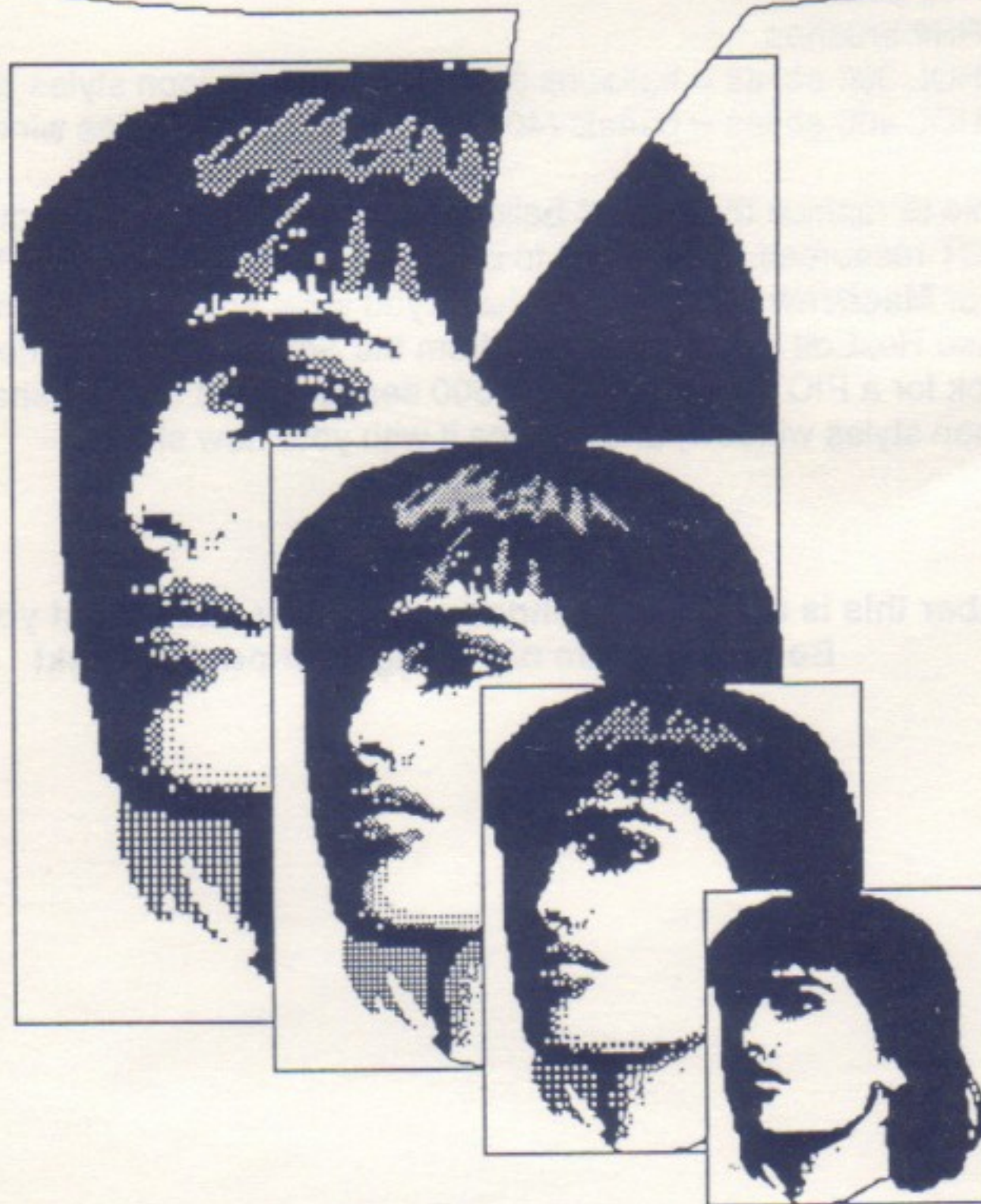
PHDL 300 series = balloons (301= top left in balloon styles window)

PHDL 400 series = panels (401 = top left in panel styles window)

It is also possible to replace the "cloud" balloons with any shape you want. They are stored as standard PICT resources. If you want to make a new shape, use **MacPaint**, **ComicWorks**, or **MacDraw** to create the shape you want and copy it to the Scrapbook. You can then use ResEdit to copy the PICT from the Scrapbook file to the **ComicWorks** application. Look for a PICT resource in the 500 series (501 is the first shape in the second row of the balloon styles window) and replace it with your new shape.

**Remember this is not recommended unless you know what you are doing.
Be sure you are not using your original disk!**

STRIDER SOFTWARE'S POSTERMAKER™



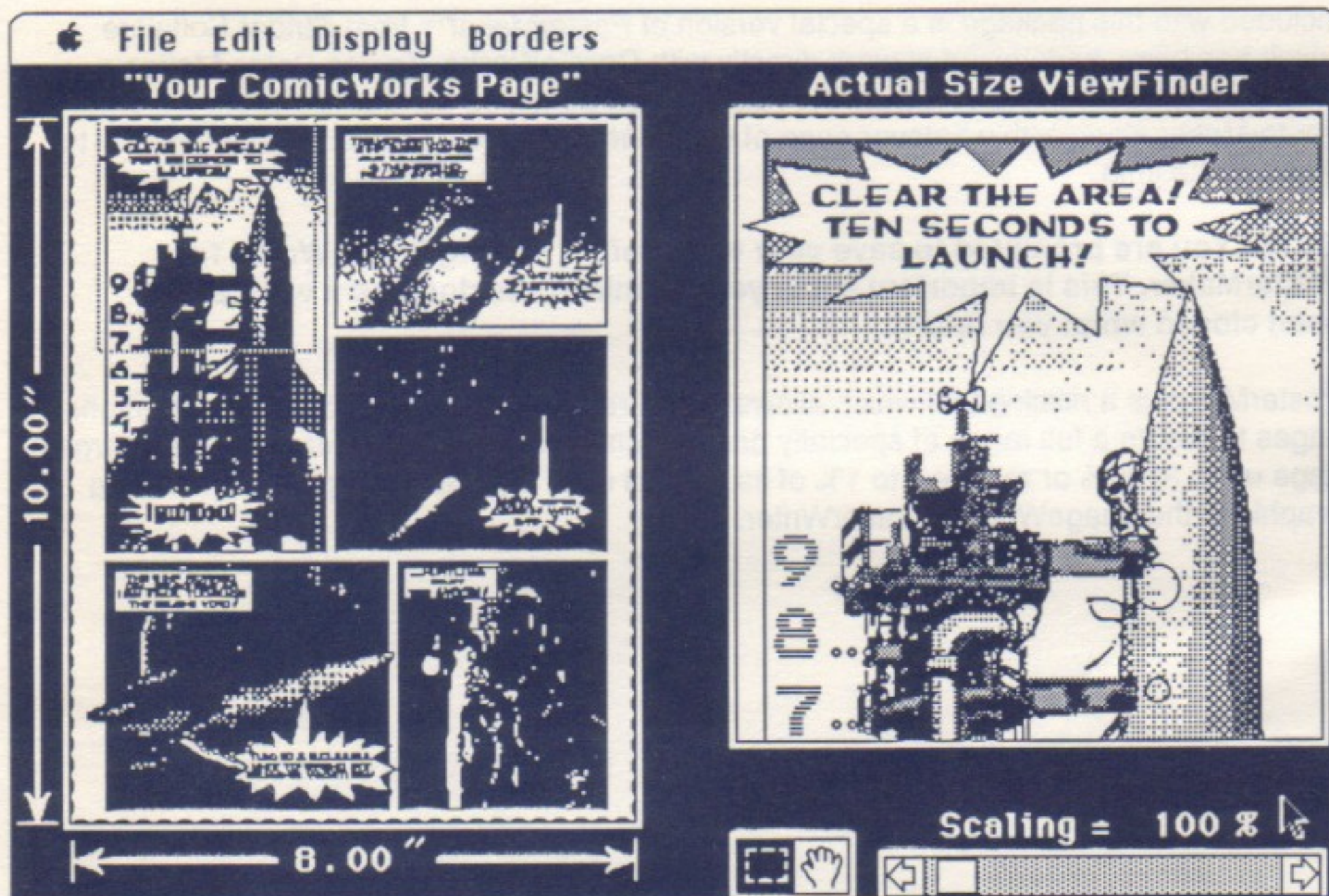
Part 5: Strider Software's PosterMaker™

Included with this package is a special version of PosterMaker™ from Strider Software which has been customized to work directly with **ComicWorks**. To use PosterMaker, simply select **PosterMaker™** from the **File** menu. You will be transferred into PosterMaker along with whatever page of your **ComicWorks** document you happened to be on at the time.

NOTE: You are prompted to save your work before leaving **ComicWorks** for PosterMaker. This is important since your **ComicWorks** document will have been closed when you return.

PosterMaker is a scaling tool which allows you to reduce and expand pages and portions of pages to create a full range of specialty printed items. With PosterMaker, you can enlarge a page up to 3200% or reduce it to 1% of its original size. You can then print the resulting graphic to the ImageWriter or LaserWriter.

When you enter PosterMaker, you will see the following screen:

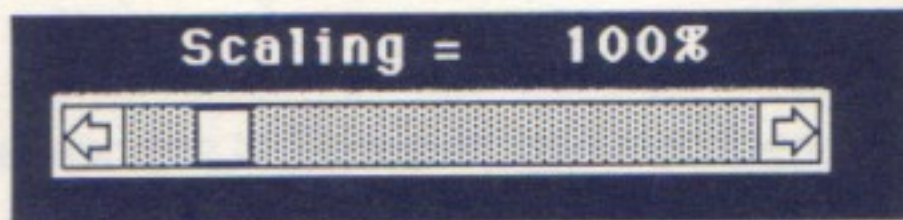


Your **ComicWorks** page is displayed on the left side of the screen, and the right side presents a full-size view of a portion of your original document.

Scaling an Area

Use the selection marquee to select the portion of your page that you want to scale (up or down). If you want to scale the entire page, double-click on the marquee icon.

Now use the Scaling Control to adjust the the dimensions of the poster.



Click in the arrows to move by single percentage points, click in the gray area to move in 10 point increments, and drag the white box to move by large jumps. The measurements of the output image will be displayed and updated continuously along the left and bottom sides of your page.

Drawing a Border

Select a border for your poster from the **Borders** menu. The border you select will be drawn around the entire selected area—just inside the selection box you drew with the marquee tool. You can use the hand to move the viewfinder window around your document so you can see how the border looks. If you don't like the border you chose, use **Undo** to remove it.

You can use the **Show Poster** command to see what your printout will look like. Page break markers will be superimposed on the image so you can see what will fit on each page.

Printing

Select **Print as MacPaint Document** from the **File** menu to print the page at its original 8x10 inch size.

Choose **Print Scaled Poster** to print the scaled image. Posters 8 inches wide or less are printed (on the ImageWriter) in one long strip. Posters over that width will be printed in 8 inch strips up to the width of the final poster. LaserWriter printouts will be made up of 8x10 inch segments of the scaled image.

Saving Posters

You can save the page as a MacPaint document by selecting **Save as MacPaint Document** from the **File** menu.

You can save a specific segment of a scaled image by selecting **Show Segments** from the **Display** menu and then clicking on **Pause** when the segment you want to save is showing.

Then use the **Save Current Segment** command to save that segment as a MacPaint document.

You can save the scaled poster with the **Save Scaled Poster** command. You will be prompted to save each page of the scaled poster to disk.

Moving PosterMaker

If you need more room on your **ComicWorks System Disk**, you may want to move PosterMaker to another disk. Use the Finder to drag the PosterMaker icon to your destination disk. It is important, however, that you have the disk containing PosterMaker in one of your disk drives when you select **PosterMaker™**, or **ComicWorks** will be unable to find it.

Note: The version of PosterMaker included with ComicWorks will work only in conjunction with your ComicWorks System Disk.

Leaving PosterMaker

When you are finished with PosterMaker, simply select **Quit** to return to the MiniFinder, or **Return to ComicWorks** to go back to what we modestly consider the world's greatest graphics tool.

THE REFERENCE SECTION



EARTH
(SOL 3: NO INTELLIGENT
LIFE)

THE TOOLS



New Panel Tool — Use this to draw a new panel on the page. The window will scroll to accommodate the size. Panels hold easels and balloons.



New Easel Tool — Use this to draw a new easel in a selected panel. The window will scroll automatically at the edges. Easels hold artwork.



New Balloon Tool — Use this to draw a new balloon in the selected panel. Balloons hold text.



Easel Selector — Step through all the easels in a panel or panels in a document. One step forward for each click. Hold the Option key to reverse direction. The shift forward is only a temporary change to allow easy editing.



Lasso and Marquee — Are used exactly like their MacPaint counterparts. They affect only the artwork inside easels. Once art is selected, various options are available, including Cut, Copy, Paste, Flip & Flop, Invert, Rotate, Fill, Trace Edges, etc...



The Hand — Use this to slide the page underneath the window; it has the same effect as the scroll bars. Double-click to enter or leave ThinBits.



Graphic Text — Use this to enter non-editable text directly into an easel. It works just like the MacPaint equivalent.



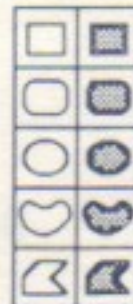
Paint Bucket — Pattern fills like in MacPaint. Fills on white or black. Only works inside of easels. Fills with the current pattern as selected from the Patterns window.



The Fabulous Airbrush — The coolest thing you've ever seen. Sprays a variable-sized, random spray of the current pattern. Number keys (1,2,3,4,5,6,7,8,9,0) control the size in large jumps. Use + and - to vary the spray size by one-pixel increments. **Backspace** toggles between white and black spray for special effects. Use the **O P []** keys to vary the density of the spray. Press the **Caps Lock** key for transparent spray.



Brush, Pencil, Line, Eraser — These are just like the same tools in MacPaint. Double-click the brush to choose a shape. Double-click the pencil to enter FatBits. Double-click the eraser to clear a selected easel. Draw patterned lines with the **Option** key.



Shapes — Identical to MacPaint. Use the **Shift** key to constrain the shapes and **Caps Lock** to use transparent paint. Use the **Option** key to draw lines and borders with the current pattern.

File

New: Create a new document. You will be prompted to save any work in progress.

Open: Open an existing document. Uses standard Macintosh file system.

Open Browse Comic...: Open a second **ComicWorks** document from which you can copy panels, easels, and balloons for inclusion in your current working document.

Save: Save a document. Prompts for name only on the first save. Thereafter, the document is saved to the same file name.

Save As...: Save a document under a new name and/or to a new place.

Save as MacPaint...: Save the current page as a MacPaint document for use with other graphics programs.

Revert: Revert to the most recently saved version.

Page Setup...: Open standard page setup dialog. Horizontal/vertical printing affects page position.

Print Options: Gain access to special **ComicWorks** print modes...

The diagram illustrates the connection between various print modes and the **Printing Options** dialog box. On the left, a 2x2 grid of boxes contains the numbers 1, 4, 2, and 3. Lines connect these numbers to specific options in the dialog box on the right:

- Box 1 connects to "Print as a four-fold card".
- Box 4 connects to "Card format printing (top half of page upside down)".
- Box 2 connects to "Print the current panel".
- Box 3 connects to "Print just the selected panel".

Other options in the dialog box include:

- "Print page detailed (affects LaserWriter only) (very slow, but text is nicer)"
- "Bitmap 'graying' in 'Best' quality (affects ImageWriter 1 only)"
- "Print the grid"
- "Print with the grid overlayed (grid lines on top of images & text)"

At the bottom of the dialog box are "OK" and "Cancel" buttons.

Print...: Access standard Macintosh printing.

PosterMaker™...: Leave **ComicWorks** and enter PosterMaker — taking the current page with you. You will be prompted to save your work first.

Quit: Leave **ComicWorks**. You are prompted to save your work if you haven't already done so.

Edit

UnDo: UnDo whatever you just did.

Cut, Copy, Paste, Clear: Work inside easels just like MacPaint; inside balloons just like MacWrite. Also can affect entire panels and easels.

Add Page and Delete Page: Add or delete a page at any point.

Edit (cont)

Scale by 50%: Scale a marquee-selected area by the percentage set with the **Set Scaling Amount...** command under the **Feature** menu.

Flip Vertical, Flop Horizontal: Flip or flop easels or marquee-selected areas within easels.

Trace Edges: Outline edges of Marquee-selected areas within easels. Select with the Shift Key held to create a "drop-shadow."

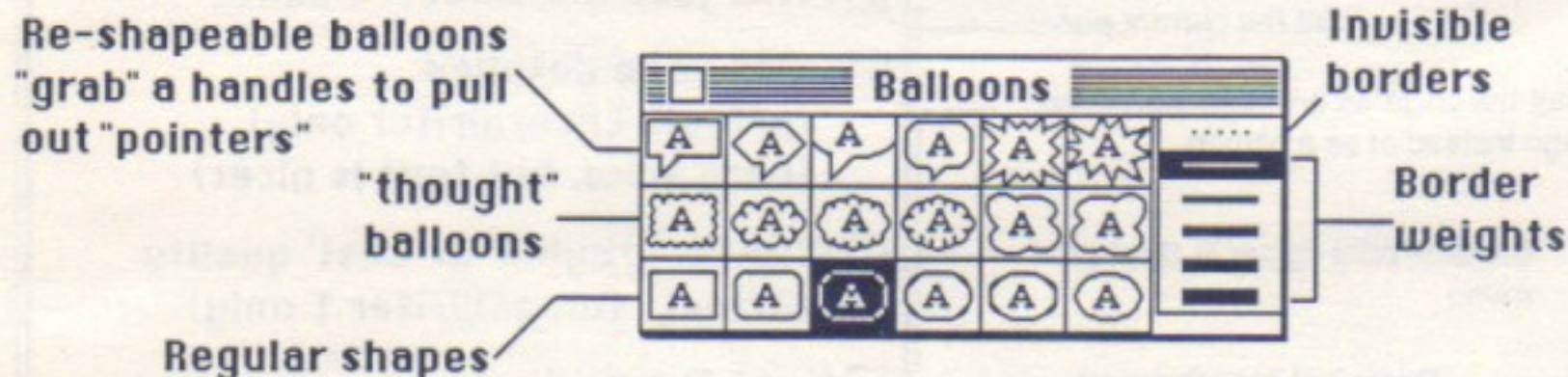
Rotate: Rotate marquee selected areas within easels 90° clockwise.

Invert: Reverse black and white for entire easels, marquee selections, or lasso selections.

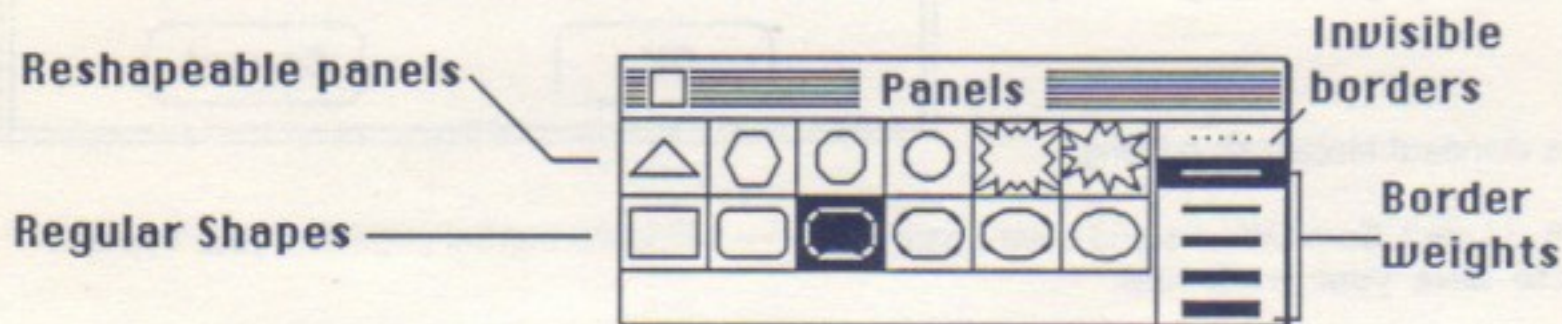
Fill: Fill a selected area with the current pattern. If the area has been marquee selected, the entire rectangle will be filled. If the lasso was used, only the selected bits will be filled.

WINDOW

Balloon Styles: Open the **Balloon Styles** window. Select a balloon style and then draw the balloon. Change an existing balloon by selecting the balloon then clicking on a style.



Panel Styles: Operates in the same manner as Balloon Styles. You can use the **Reshape...** command to reshape the panels selected from the top row of the **Panels** window.



Window (cont.)

Grid Maker: Select **Grid Maker** to create an alignment grid to help you with positioning on the page.

Drag the gray lines to set the vertical and horizontal spacing of the grid.

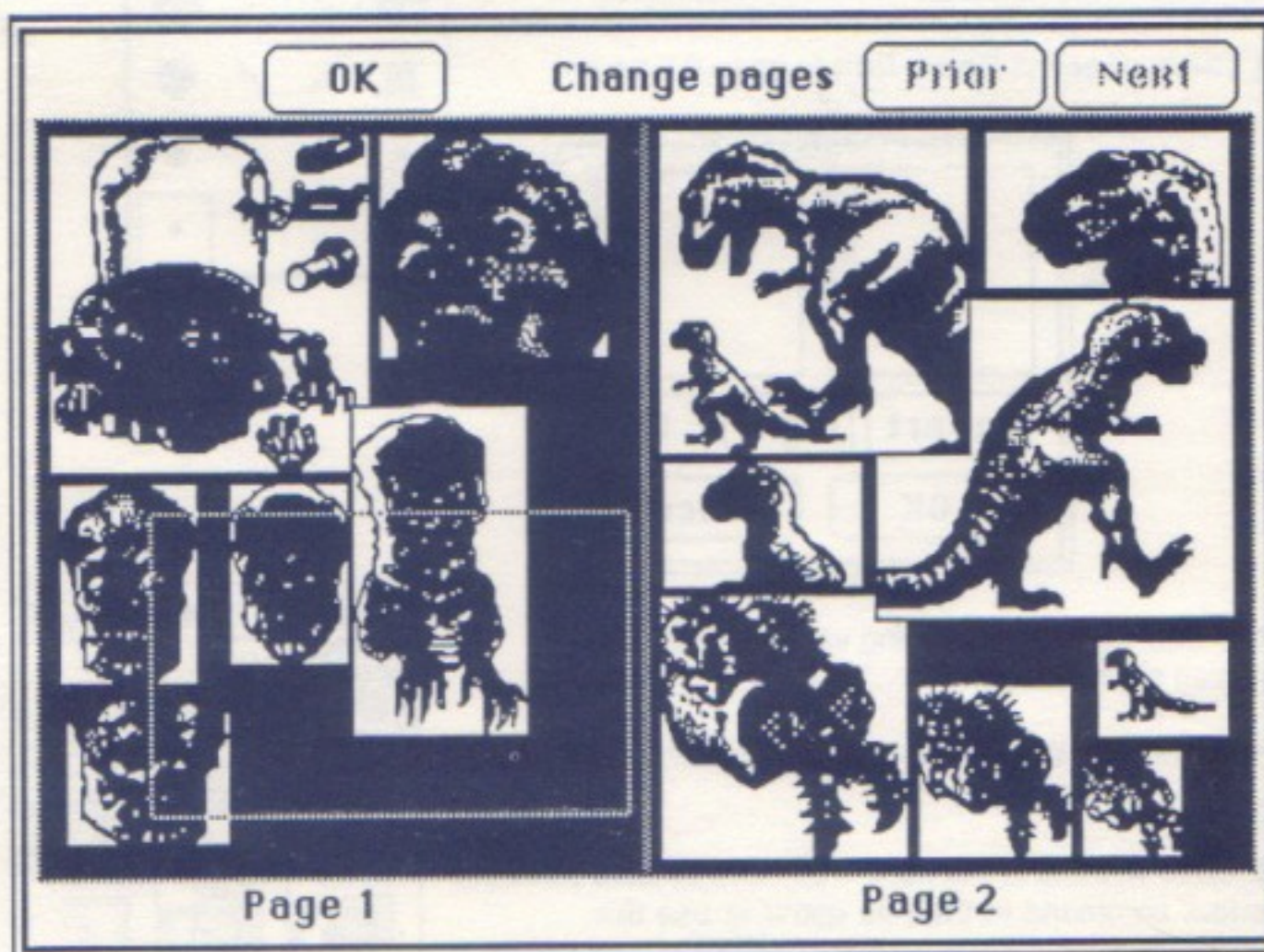
Check off **Display Grid** to show the grid on the page.

Click on the **Align to Grid** options to cause objects and/or tools to "snap to" the grid lines (visible or not).

Grid alignment controls the placement of the grid in relation to the page.

Scale selects inches, centimeters or pixels.

Show Pages: See your work, two pages at a time, as it will print out. It even displays the flipped and flopped quadrants for card printing.



Window (cont.)

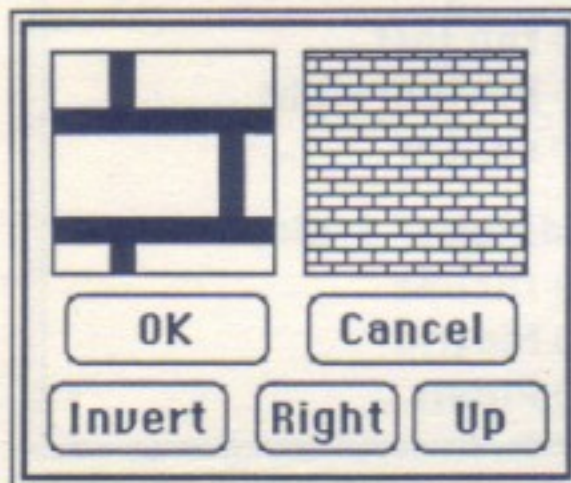
Tools: Bring the Tools window to the front if it is obscured, return it to the screen if it has been closed, and close it if it is in the front.

Patterns: Display the patterns window. Double-click on any pattern to open the pattern editor.



Current pattern

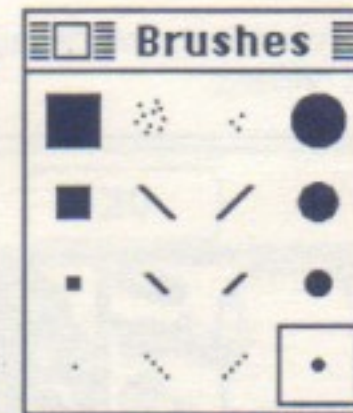
Pattern Editor



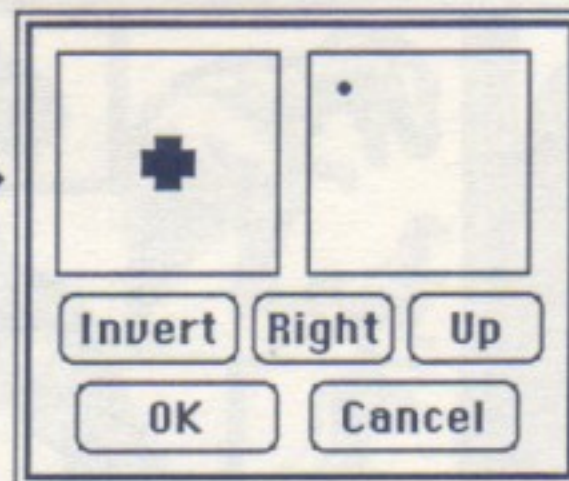
Pattern Edit: Use the cursor to draw in the right-hand window. Point to any part of the screen to "grab" a pattern. Invert, right, and up do exactly what you would expect.

Brushes: Open the Brushes window. This can also be accomplished by double-clicking the Paintbrush icon in the Tools window.

Double-click on a brush, or select Brush Edit to open the brush editor.



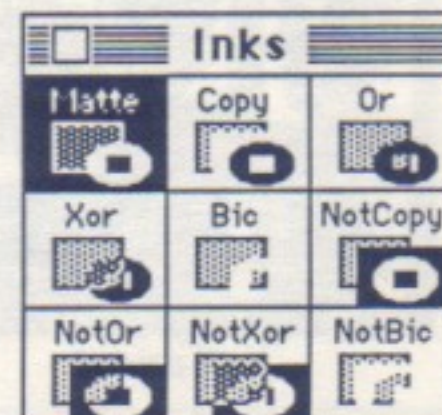
Brush Edit Window



Help: Open a series of help screens explaining various keyboard, double-click, and airbrush shortcuts.

Ink: Open the Inks window. Use the Inks window to select the copy mode for a selected easel.

Browse: Bring the Browse window to the front. You need to have used the Open Browse Comic... command in the File menu to use this command.



Untitled: Bring the document window to the top. The menu command will change to reflect the name of the document.

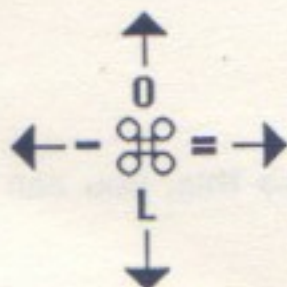
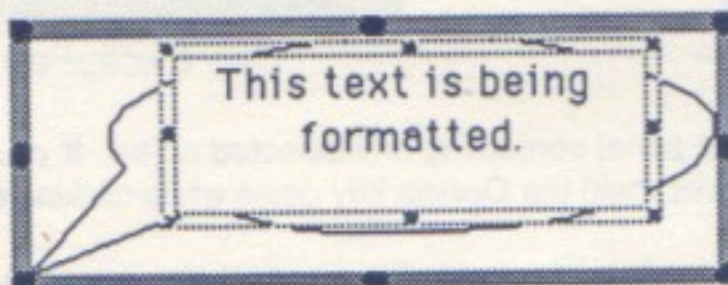
Layout

Shuffle Up One, Shuffle Down One, Bring to Front, Send to Rear: Affect the priority levels of panels, easels, and balloons.

Center: Center panels on pages, easels and balloons in panels, and selected graphics inside easels.

Reshape Panel/Balloon: If a selected balloon or panel is of a reshapeable type, this command will turn on its "handles" so you can reshape it.

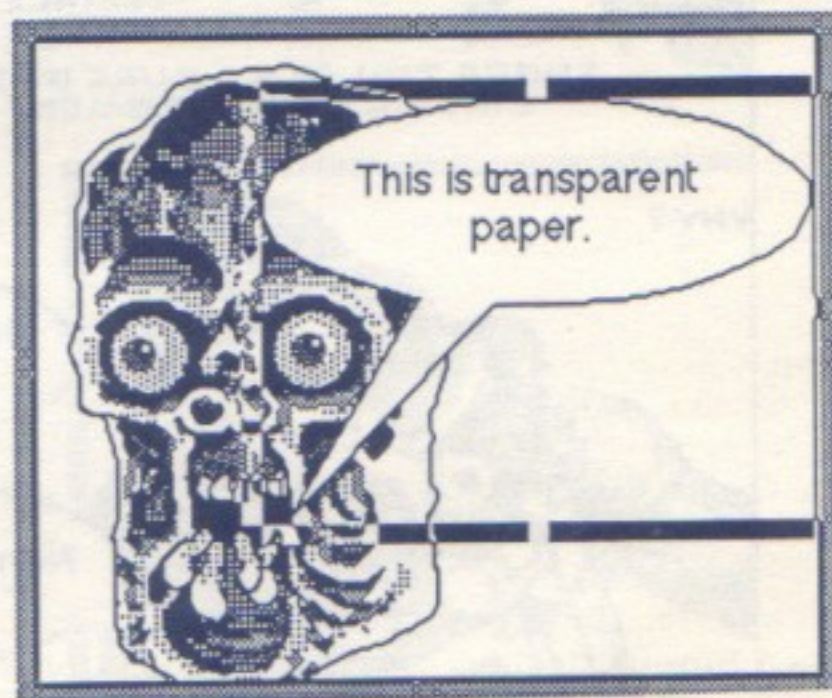
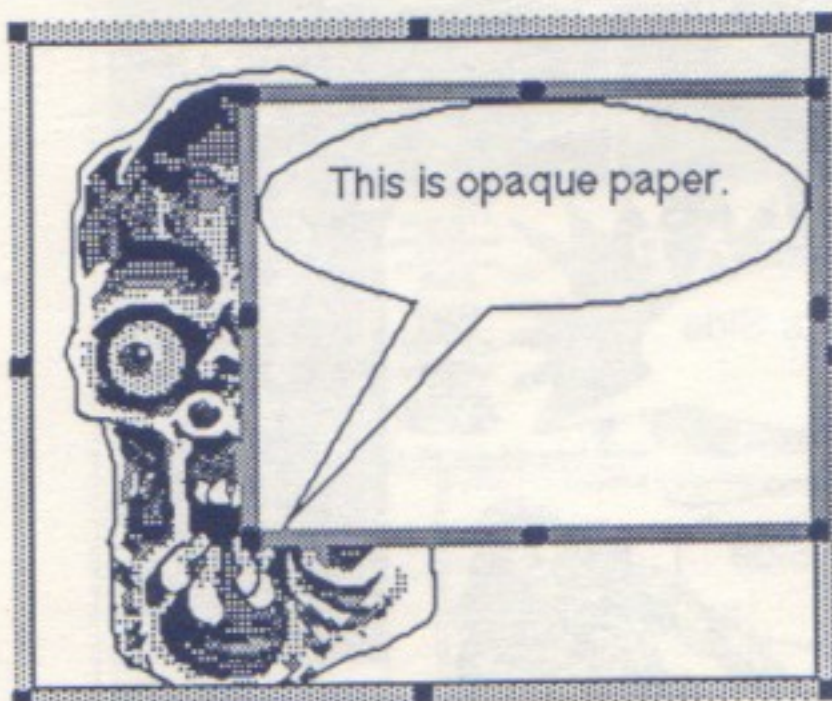
Format Text: Allows you to move and reshape the text area inside a balloon. This is especially useful in reshapeable balloons. Select this command while a balloon is selected and you will see a rectangle appear around the text. You can resize and drag this just like you would an easel or balloon. Click outside the balloon to re-format the text to fit the new rectangle.



Left, Right, Up, and Down: These move any selected panel, easel, or balloon one pixel in any direction. Macintosh+ owners can use either the command key equivalents or the cursor keys.

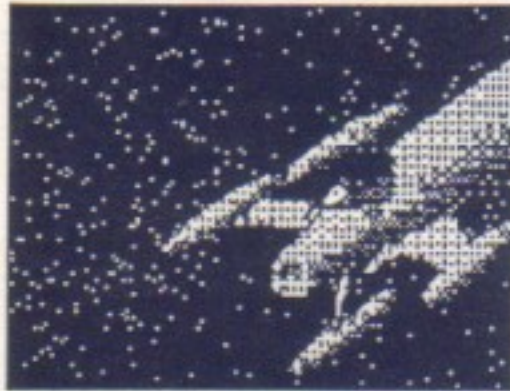
Feature

Transparent Paper: This causes the electronic "paper" you are drawing on to become "transparent." Easels, panels, and balloons can all be "seen through" to the material beneath. Art tools behave a little strangely on transparent paper, so don't be surprised. The effect is temporary and only affects your view of the document, not its final appearance.



Feature (cont.)

Clip Exception: Select an easel or balloon and then select this command. Any part of the easel or balloon that extends beyond the panel boundary will no longer be clipped off.



Regular Clipping



Clip Exception

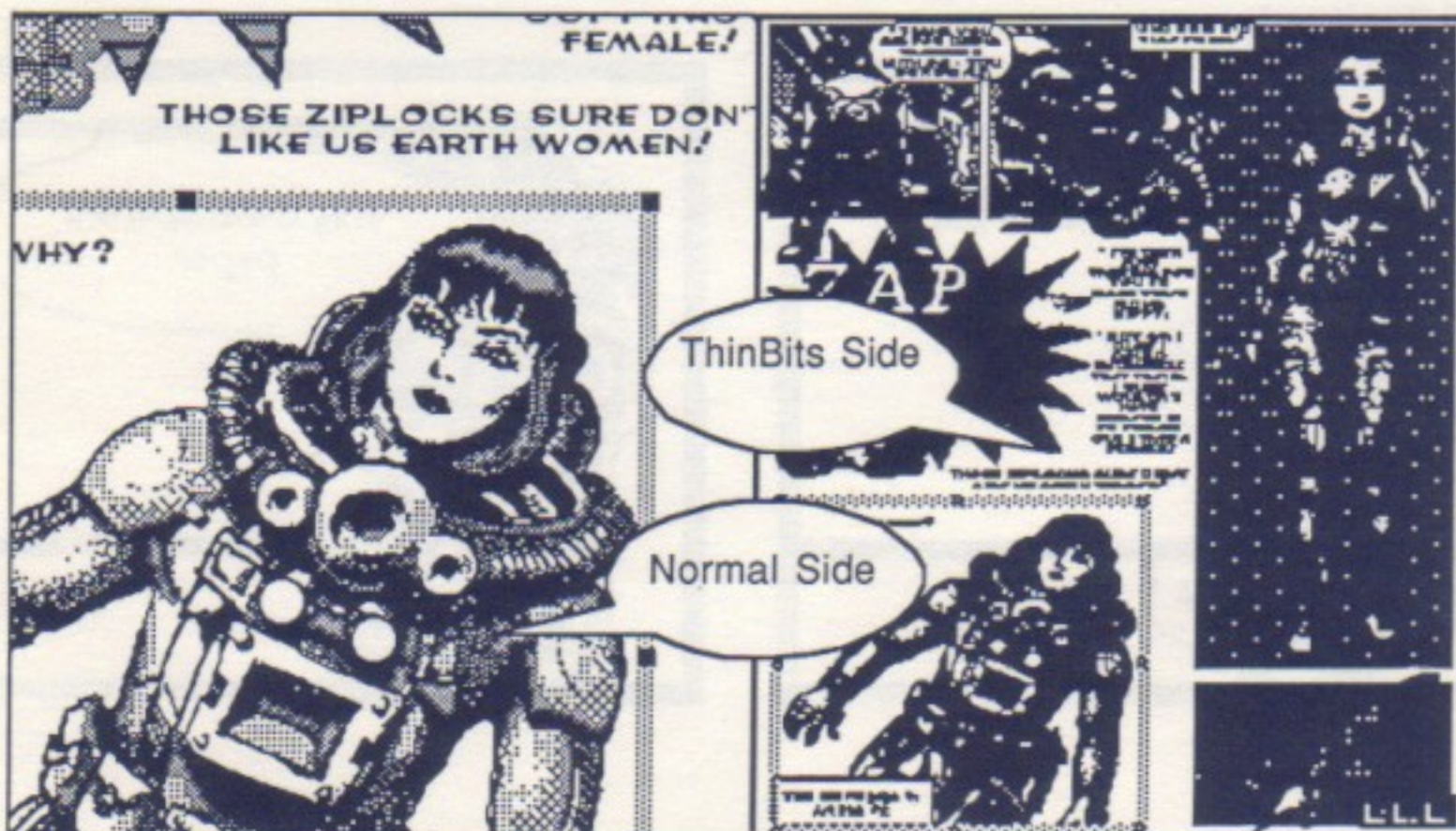
Selected Panel: Select the entire panel containing any selected object. If you want to select a panel directly, without selecting any of its contents, hold the **Option** key down while clicking on the panel.

Wrap Panel: Stretch or shrink the selected panel to the smallest size necessary to completely enclose all objects within the panel.

Crop Work: Shrink an easel to the smallest size which can contain the artwork.

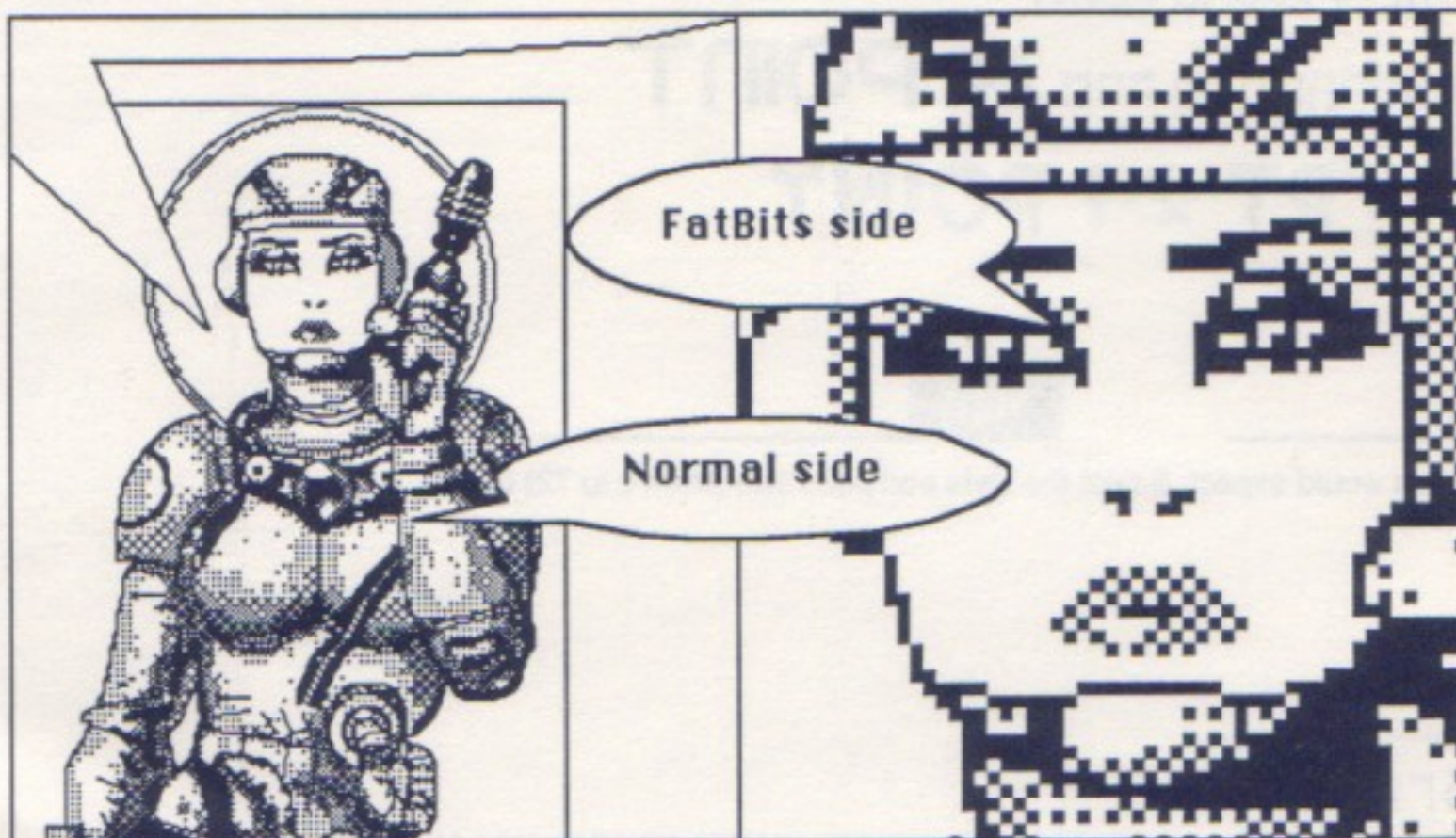
Text->Graphic: Change (permanently!) a balloon into an easel. **NOTE:** Once you use this, you can no longer edit the text inside the former balloon!

ThinBits™: Turn on ThinBits. ThinBits is the opposite of FatBits. When you turn on ThinBits (either through this menu command or through double-clicking on the Slider), half of the document window will change into a Show Pages style miniature of the current page. All of the tools, commands, and features work on the ThinBits side of the screen just like they do on the normal side. You can even create, Cut, Copy, Paste, and move panels, easels, and balloons. Which side of the screen will become ThinBits depends on which side you are working on when it is selected.



Feature (cont.)

FatBits: Turn on FatBits. FatBits probably is familiar to anyone who has used MacPaint. Ours is a little different, however. Enter and leave FatBits by selecting this menu command, double-clicking the pencil, or by holding the command key and clicking anywhere in the document. **ComicWorks** FatBits also adds three levels of magnification to help you work on exactly the part of the drawing you need to work on.



Use any of the tools to work on either side of the window. Use the **scroll bars** or the **Slider** to move around the document. **Command-Click** anywhere on the normal side of the window to center that area in the FatBits side. **FatBits** is like **ThinBits** in that it will appear on whichever side of the window you are not using.

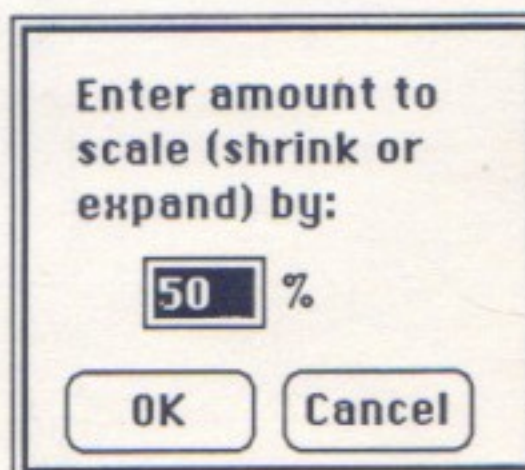
Small Bits, Medium Bits, and Large Bits: Control the scale of FatBits to allow various levels of precision. Small bits is a 2X, medium is a 4X, and large is an 8X magnification.

• **Small** ▪ **Medium** ■ **Large**
⌘5 ⌘6 ⌘7

Set Background Color: Set the color of your paper to the currently selected pattern.

Proportional ThinBits™: Adjust the size of your window so that the ThinBits area has the same proportions as the page.

Set Scaling Amount: Open a dialog box with which you can set the scaling amount (from 1 to 999%) performed by the **Scale by XX%** command in the **Edit** menu.



Font

Select the font you want to use for typing in both text balloons and in easels. Several special comic fonts have been included. They are:

COMIC 9 AND 10 POINT

COMMANDO 12 AND 24 POINT

CRYPT 24 POINT


Style

Size

Exactly what you would expect. Select the style and point size (from 6 to 72) of your text.














Art Grabber+™












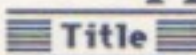
Art Grabber+ is a desk accessory which allows you to grab large portions of a MacPaint document without ever leaving **ComicWorks**. When you select **Art Grabber+** from the  menu, a new window and menu will appear. Use the **Open** command from the **Grabber** menu to open a MacPaint document. The picture will appear in the window. Use the selection marquee to select as much of the document as you want (up to a full page!). When the area you want is enclosed, select **Grab** from the **Grabber** menu—or use the **Edit** menu's **Copy** command. The art will now be on the clipboard, ready for you to paste into your **ComicWorks** document.

Keyboard, Double-click, and Airbrush shortcuts

Keyboard:

Shift	-->	Constrain
Option 	-->	Backwards
Shift ⌘ E	-->	Drop Shadow
Option/Select Panel	-->	Selected Panel
⌘ MouseClick	-->	Enter/Leave FatBits
⌘ 	-->	Stretch
Option 	-->	Special Lasso
Backspace  or 	-->	Clear Selection
Option ⌘  or 	-->	Multiple Copy
Spacebar	-->	Hand
Option  ,  , 	-->	Patterned Border
Caps Lock	-->	Watercolor
↑ ↓ ← →	-->	Up, Down, Left, Right
Option 	-->	Spray Brush
⌘ < or >	-->	Change Font Size
Shift ⌘ < or >	-->	Change Font
~ Key	-->	Undo
⌘ ~ Key	-->	Show Grid

Double-Clicks:

	-->	Panel Styles
	-->	GridMaker
	-->	Balloon Styles
 or 	-->	Select Easel
	-->	ThinBits
Option 	-->	Show Pages
	-->	Brushes
	-->	FatBits
	-->	Clear Easel
Other Tools	-->	Patterns
Brush Window	-->	Brush Edit
Pattern Window	-->	Pattern Edit
	-->	Ink
	-->	Full Screen

Airbrush:

	0	-->	Light Air Pressure
	P	-->	Medium Air Pressure
	{	-->	Heavy Air Pressure
	}	-->	Maximum Air Pressure
	1,2,3,...0	-->	Spray Size
	-, +	-->	Change Spray Size
	Backspace	-->	Toggle Black/White
	Option	-->	Randomize

Line Widths:



Line Widths also affect:

- Multiple Copy Speed
- Spray Brush Speed

Reshaping Polygons:



While reshaping balloons & panels, click on a corner with:

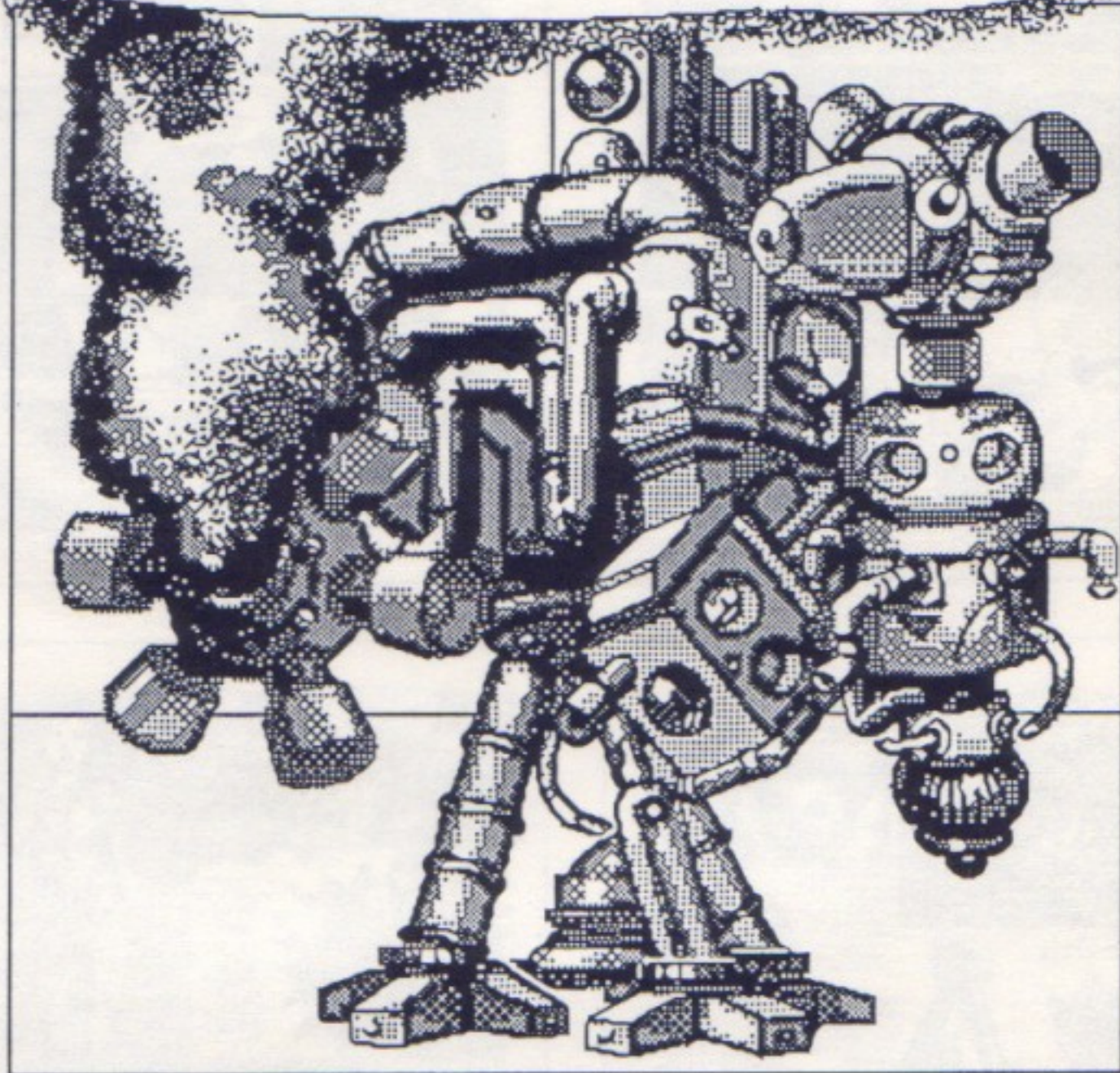
Option --> Add a corner

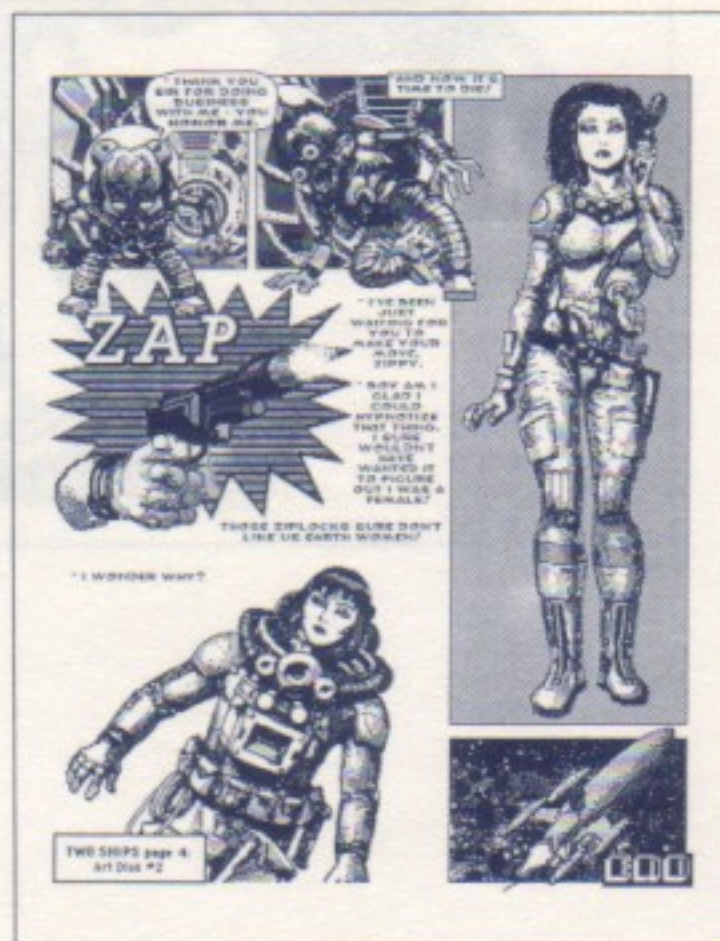
Option-Shift --> Delete a corner

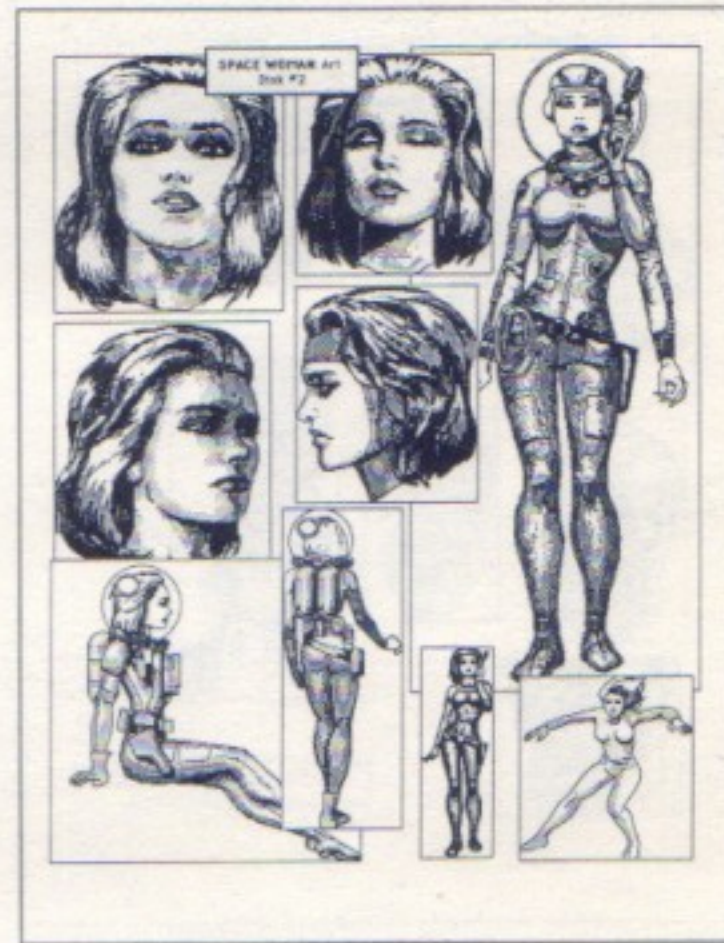
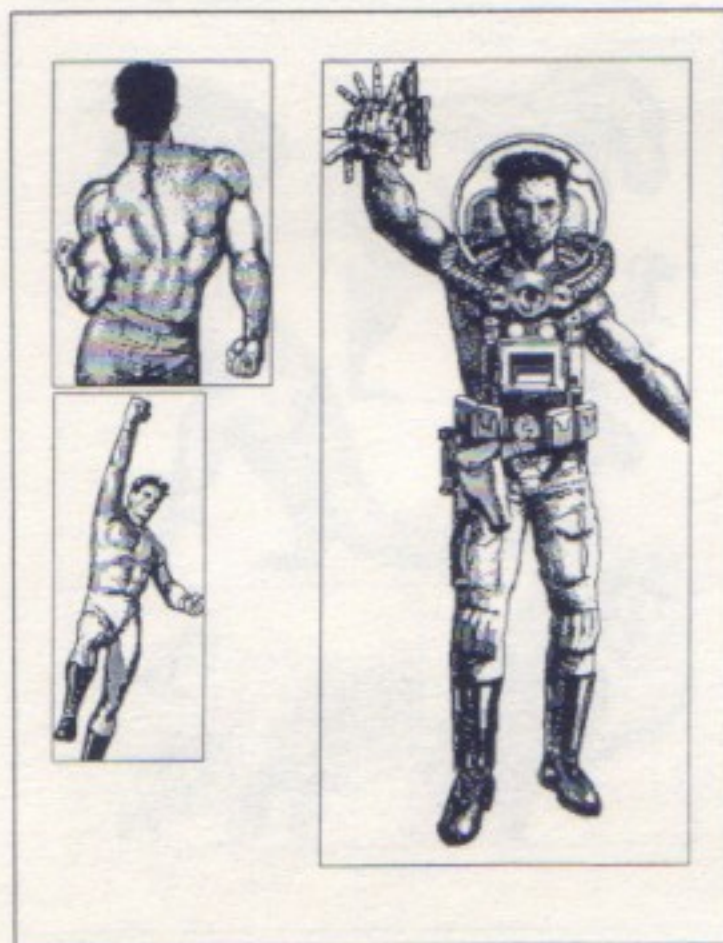
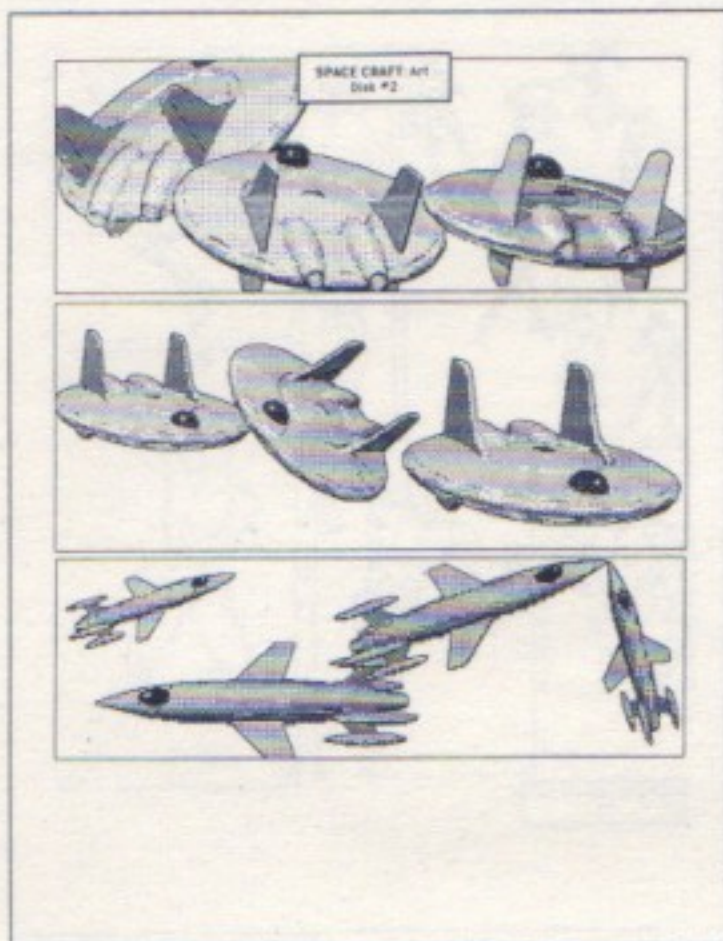
ComicWorks Command Key Equivalents

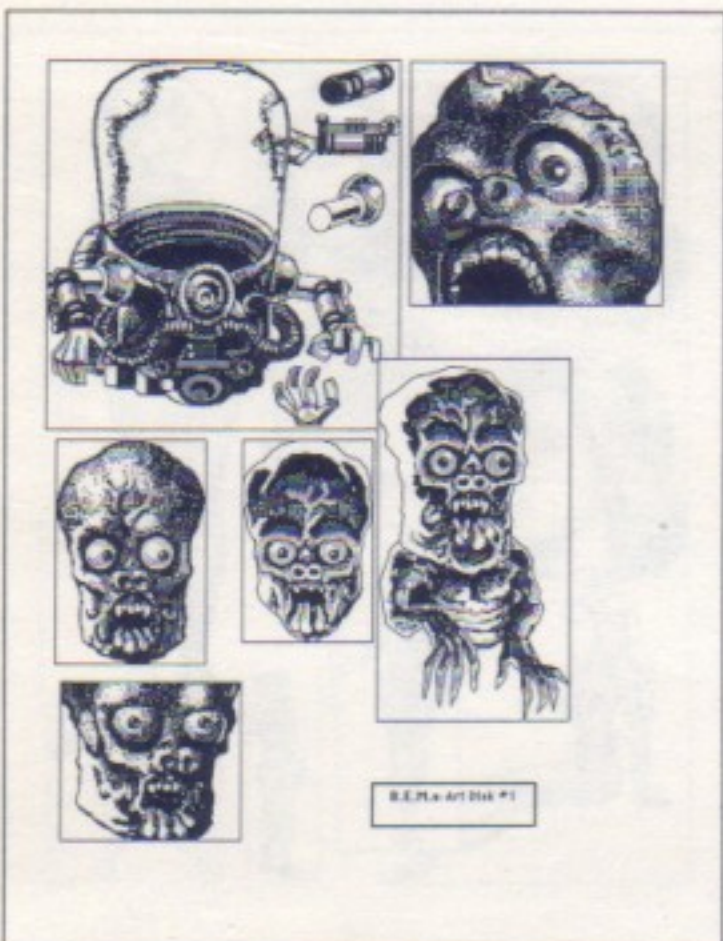
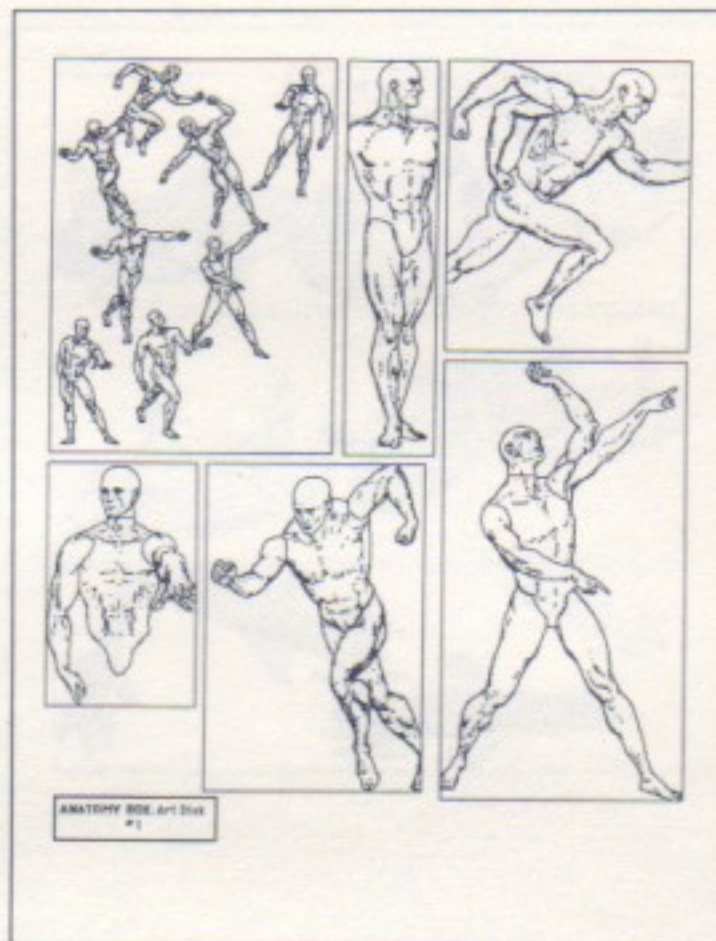
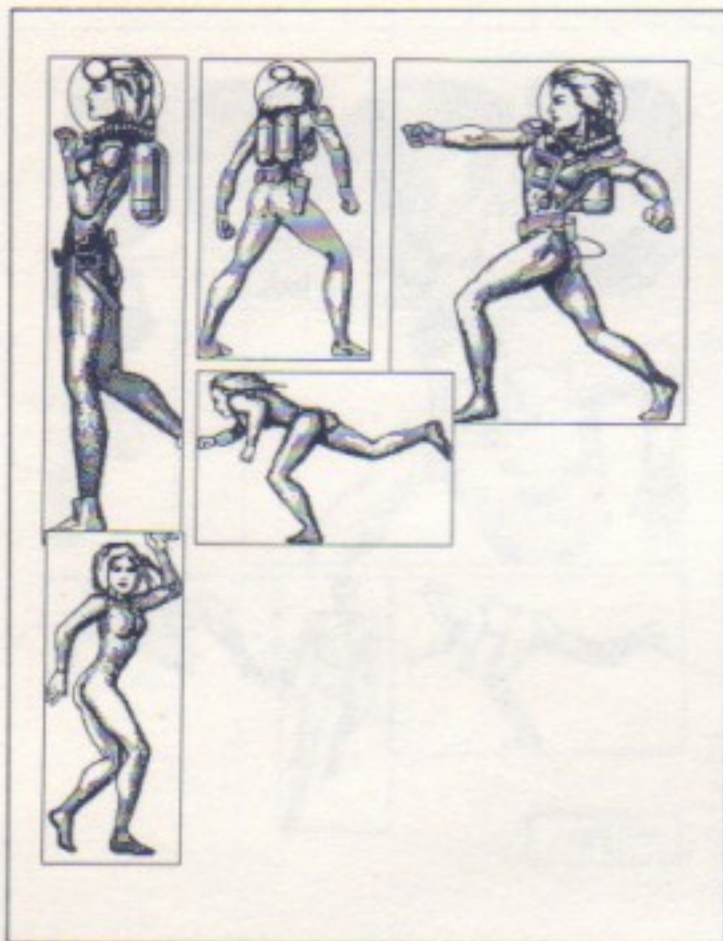
Key	Function	When Available
A	Selected Panel	Always
B	Bold Text	Always
C	Copy	Always
D	Patterns window	Always
E	Trace Edges	Use with marquee selection
F	Format Text	Balloon must be selected
G	Reshape Balloon/Panel	Balloon or panel must be selected
H	Flop Horizontal	Easel or marquee selected
I	Italic Text	Always
J	Flip Vertical	Easel or marquee selected
K	Save	Always
L	Down One Pixel	Any selected object or graphic area
M	Open	Always
N	Clip Exception	Panel must be selected
O	Up One Pixel	Any selection
P	Plain Text	Always
Q	Quit	Always
R	Rotate 90°	Easel or marquee selected
S	Tools Window	Always
T	Transparent Paper	Always
U	Underline Text	Always
V	Paste	Always
W	Wrap Panel	Panel selected
X	Cut	Always
Y	Crop Work	Easel selected
Z	UnDo	Always
1	Shuffle Up One	Panel, easel, or balloon selected
2	Shuffle Down One	Panel, easel, or balloon selected
3	Bring to Front	Panel, easel, or balloon selected
4	Send To Rear	Panel, easel, or balloon selected
5	Small Bits	Always
6	Medium Bits	Always
7	Large Bits	Always
8	Balloon Styles	Always
9	Panel Styles	Always
;	Scale by XX%	Marquee selection
-	Left One Pixel	Any selected object or graphic area
=	Right One Pixel	Any selected object or graphic area
>	Increase Font Size	When text is selected
<	Decrease Font Size	When text is selected

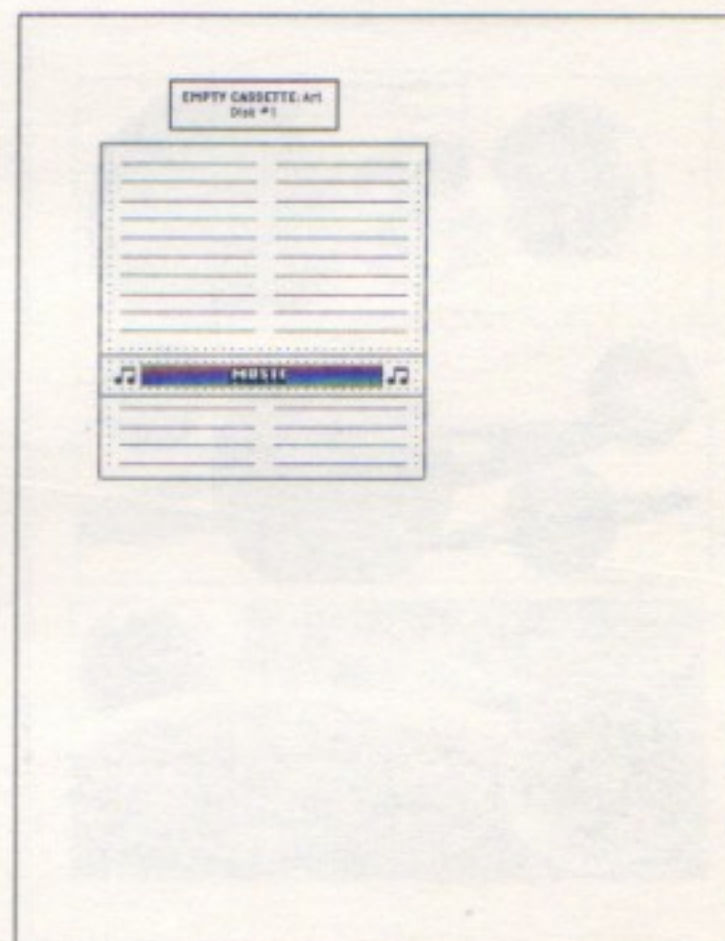
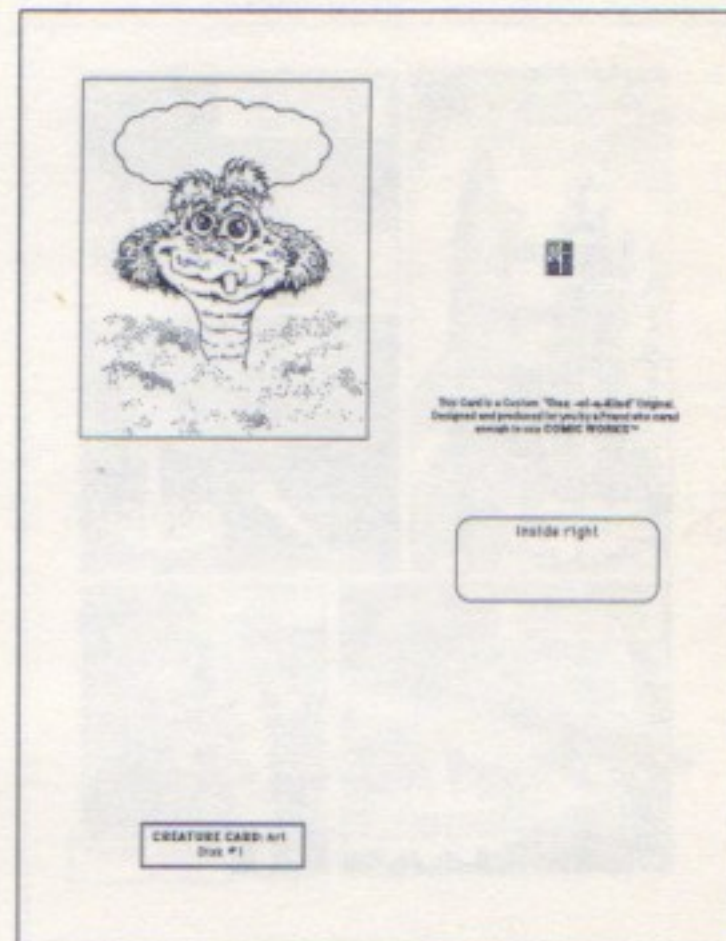
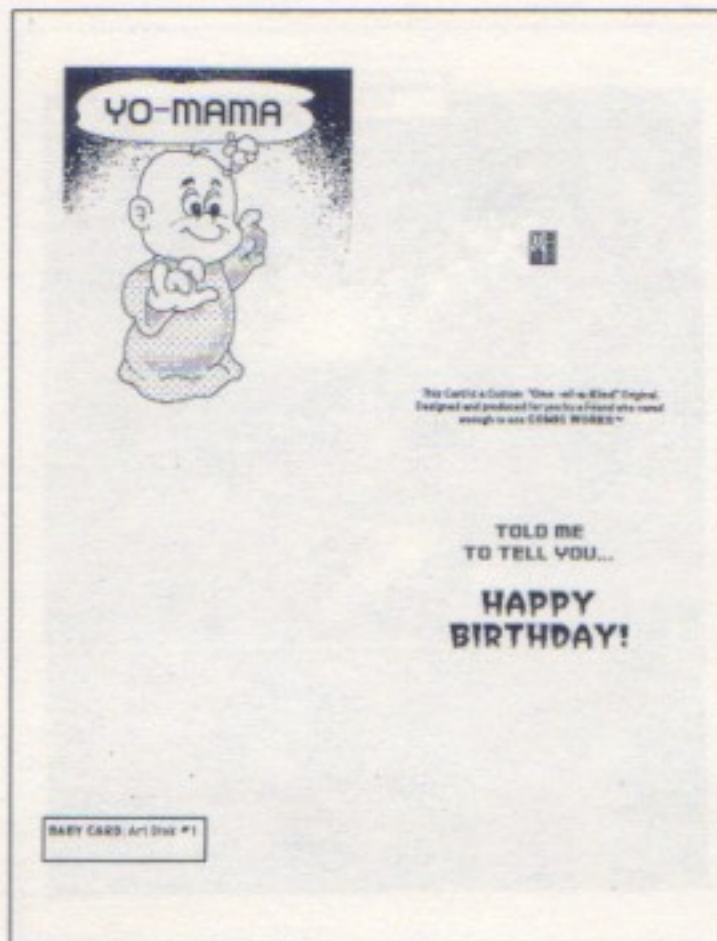
THE ARCHIVES

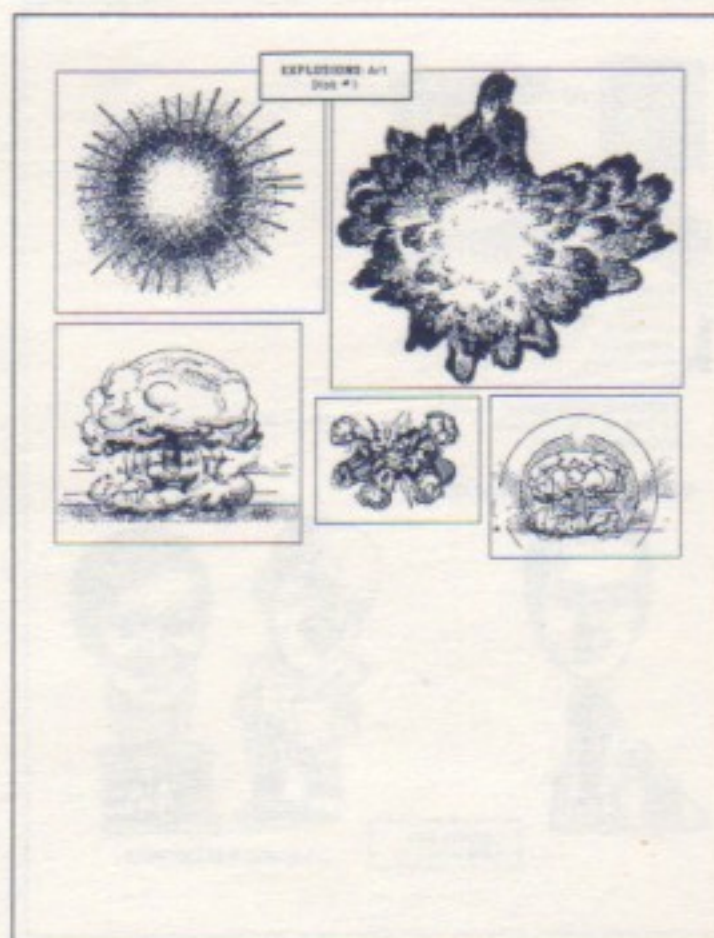
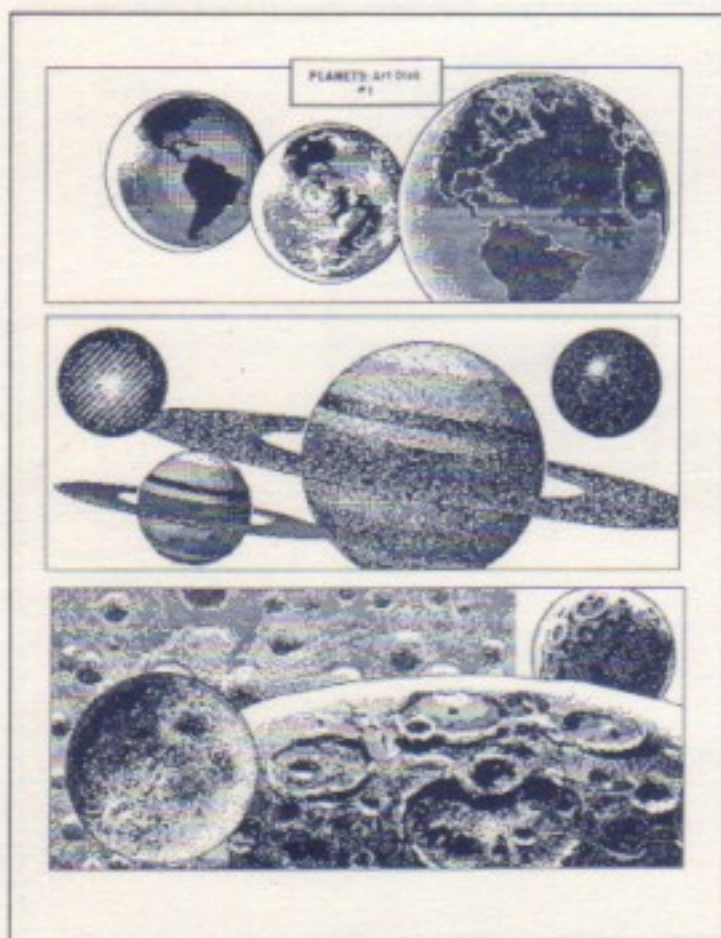
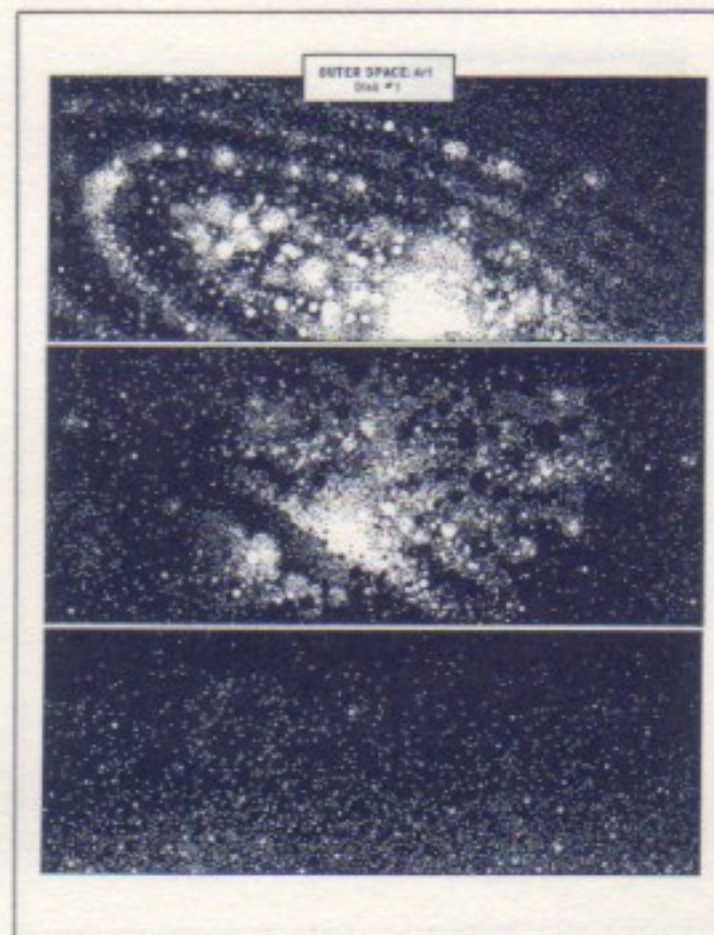












MacroMind® Inc.

MacroMind was formed in April, 1984, to produce powerful, easy to use creativity software for the Apple Macintosh. They are the people responsible for **MusicWorks™**, **VideoWorks™**, **Art Grabber™ w/Body Shop** and **M.U.D.** (MacroMind Utility Disk), which includes **CheapPaint™**, **Art Grabber+™**, and a host of other utilities.

Marc Canter and **Jay Fenton** are the founders of MacroMind.

Marc has experience in the professional audio and video production worlds, and has produced a record entitled **PITCH**. His background is also in opera, laser light shows, and cab driving. His goals are to change the world by producing the best creativity software and authoring systems there are.

Jay has been programming entertainment software for over 10 years and is the man responsible for such classics as the **Bally Arcade** and **GORF**. Currently Jay is spending his free time exploring the worlds of ham radio, small craft aviation, and cats. His current goal is to discover a thought controlled software development system that can keep pace with his ideas.

Biographies

Erik Neumann used to support his electronic music habit by doing programming for stock brokers and federal government oil moguls. Now that he has joined MacroMind, hobby and vocation are one. His goal is to create a computer controlled piano-percussion instrument, following the basic design of the Eniac One, that will unite East and West and lead to global understanding and harmony.

Dan Sadowski enjoys working at home, where commuting to work means "going upstairs." He has been undertaking this rigorous commute since he joined the permanent collection of MacroMind consultants in 1984. Long before that he had Mastered the Science of Information Engineering in Electronic Visualization at the University of Illinois at Chicago, which allowed him to freelance as an interactive graphics software engineer for a while before hooking up with MacroMind, where he can write really long sentences like this using his ComicWorks program.

When not programming into the wee hours, he is spending hours with his wee ones.

Mike Saenz is a professional comic book artist. He started in the trade fresh out of art school. He started out at Warren Publications and later spent five years with Marvel Comic's Epic Magazine. Mike discovered the Macintosh along with the rest of us in 1984, and his

first computer comic, **SHATTER**, began selling out in 1985. Having made some news, some history, and some money, he recently moved to Manhattan. He is spending his time creating incredible computer comics, listening to records, and playing with his various high-tech toys.

Mike would like to thank the MacroMinders for making a fantasy into a reality. He would also like to thank Wally Wood, Joe Orlando, Jack Kirby... and other comic book greats too numerous to list for turning fantasy into fantasy. And finally, thanks to Roxy for her unwavering support.

Credits

Programming: Dan Sadowski, Erik Neumann, Jay Fenton

Artwork: Mike Saenz, Jack Nichols, Mark Pierce, Marc Canter, Lawrie Kaplan, Scott Berfield

Outer Space Art: Mike Saenz

Storylines: Mike Saenz, Marc Canter

Packaging: Jack Nichols, Mike Saenz

Documentation: Scott Berfield, Marc Canter, Ann Elflin

Manual Design and Layout: Scott Berfield, Jack Nichols

Management: Marc Canter, Erik Neumann, Scott Berfield

Agent: Ned Leavitt

Lawyers: Ron Futterman, Ron Abramson

Debugging: Ann Elflin, Jeff Hill, Randy Severin, Michelle Halm, Nancy Perla, Sheryl Martinelli, Lawrie Kaplan, Devorah Samet Canter

P.R.: Marc Canter, Karen Novak

Acknowledgments

Devorah Samet Canter, Katherine Mitchell, Patti Harrison, Ann Elflin, Perry Karsen, Mary Murphy, Jim Sadowski, Leon Samet, Larry Lewis, Roger Buoy, Bill Atkinson, Andy Herzfeld, Alan Kay and Steve Jobs

Bibliography

Airbrush Painting Art: Techniques and Projects, Norman Fuller, 1983 Sterling, New York, New York.

Comics and Sequential Art, Will Eisner, 1985 Poorhouse Press, Tamarac, Florida.

Dynamic Anatomy, Burne Hogarth, 1970 Watson-Guption Publications, New York, New York.

Dynamic Figure Drawing, Burne Hogarth, 1970 Watson-Guption Publications, New York, New York.

How to Become a Comic Book Artist, Rich Buckler, 1986, Solson Publications, Brooklyn, New York.

How to Draw Comics the Marvel Way, Stan Lee and John Buscema, 1978 Simon & Schuster, Inc., New York, New York.

The Official Marvel Comics Try-Out Book, 1983, Marvel Comics, New York, New York.

Recommended Magazines

Amazing Heroes, Fantagraphics Books, Agoura, California.

Comics Interview, Fictioneer Books Ltd., New York, New York.

Personal Publishing, The Renegade Company, Bartlett, Illinois.

Publish!, PC World Communications, San Francisco, California.

Glossary

Airbrush - A tool that lets you "spray" any patterned paint; you can adjust the intensity and size of the spray.

BIC - A ComicWorks Ink mode explained in the Techniques chapter.

B.E.M. - An acronym for Bug-eyed monsters from the 1950's.

Balloon - The area in a **ComicWorks** panel in which full text editing is possible.

Bit Image - As opposed to **object-oriented**. One of **ComicWorks'** print modes in which the **ComicWorks** document is considered as one large image instead of as separate objects. In **ComicWorks**, bit image refers to a method of printing in which the exact on-screen appearance of a document is reproduced on the printer.

Bitmap - An area of graphics. It is called a bitmap because a graphics area is actually composed of many small dots, or pixels, each of which is represented in the computer's memory as a single bit of information. Each easel's contents is a bitmap.

Bitmap Graying - An effect on the ImageWriter which causes bitmapped areas to print lighter in the **Best** print mode.

Browse Comic - A second ComicWorks document from which you can copy art into your current working document.

Brush - A shape used to paint with patterns.

Card Format - A printing format that makes the top half of a page turn upside-down to make a four-fold card.

Clipboard - A temporary area in memory which holds whatever you copy or cut. Anything on the clipboard will be replaced the next time you copy or cut anything.

Clipping - The process of displaying only that part of a balloon or easel which is inside of the panel border. Clipping allows panels to act as windows onto the artwork within them.

Condensed - Text with less than the standard spacing between letters.

Constrain - When using the command key and the following tools: pencil, line, square, circle, round rectangle and polygon, the cursor is constrained in its motion to allow you to make perfect circles and squares, and straight horizontal, vertical, and diagonal lines.

Crop - To remove excess white area around a piece of art.

Default - When you create a new document, certain fonts, styles, paints, paint brushes, printing modes, balloon and panel styles, etc. are set before you begin; these are the defaults. Certain of the defaults can be changed and will be saved with the document.

Easel - An area in a panel which contains graphics. The art inside easels will matte in on top of other art in a panel unless a special mode is chosen from the **Ink** window.

Extended - Text with more than the standard spacing between letters.

FatBits - Enlarges a portion of the document to one of three levels.

Format Rectangle - See **Text Rectangle**.

Graphics text - Non-editable text (like MacPaint) created in an easel with the Graphic Text tool.

Grey Scale - A range of patterns from black to white.

Grid maker - Used to create an alignment grid to align panels, easels, or balloons.

Handles - Squares on panel, easel, and balloon frames; format text rectangles; and reshapeable panels and balloons which are used to stretch, shrink, and resize those objects.

Ink - A term used to describe various special effects possible in **ComicWorks**.

Invert - To reverse black and white areas.

Lasso - A selection tool. Selects bounded areas inside easels without taking the white area around them.

Marquee - A selection tool. Selects a rectangular area in an easel.

Mask - A special technique using different ink modes explained in detail in the Techniques chapter.

Matte - A **ComicWorks** ink mode explained in the Techniques chapter.

Mouthpieces - The triangular "tubes" on a text balloon which show which character is speaking. Mouthpieces can be created by dragging any of the handles on a reshapeable balloon.

Object-oriented - When printing, the opposite of **bit image**. The document is treated as a collection of separate objects which are sent to the printer sequentially.

Or - A **ComicWorks** ink mode explained in the Techniques chapter.

Panel - The basic element of a **ComicWorks** document. Panels hold easels and balloons. A panel will normally clip the art and text within its boundaries.

Pattern - An eight pixel by eight pixel design used to paint on screen. Patterns can be edited.

Personal Publishing - The process of creating published works with personal computers. Often referred to as "desktop publishing."

Pica - A graphic arts measurement. There are six picas in one inch.

Pixels - The dots on screen which make up the screen image. The current Macintosh screen displays 512 pixels horizontally and 342 pixels vertically.

Point - A graphic arts measurement. There are 72 points in one inch. This is also the resolution of the Macintosh screen so a point can, in this case, be considered to be the same as a pixel.

PosterMaker™ - An application from Strider Software which can enlarge a **ComicWorks** page to make a poster.

Priority Levels - The priority level of an object determines its position from front to back in relation to other objects in the document.

Proportional ThinBits - A special ThinBits mode in which the ThinBits area is exactly proportional to an 8" by 10" page.

RAM - Random Access Memory - The memory in a computer available for programs and data. The RAM available in your computer will affect the maximum size and complexity of the **ComicWorks** documents you create. Standard Macintosh memory sizes are 128K, 512K, and 1 megabyte. **ComicWorks** requires at least 512K to operate.

Resize Box - Also called a grow box, the icon in the lower right corner of a window, which is used to change the size of that window.

Scrapbook - A desk accessory which allows you to store multiple selections permanently. A permanent version of the Clipboard. See your Macintosh manual for details.

Text Rectangle - Also called a **Format Rectangle**. The rectangular area in a balloon to which text conforms itself. You can change the text rectangle with the **Format Text** command.

ThinBits™ - Lets you view and work on the entire page at once.

Transparent Paper - A way of working which is more like drawing on acetate than on paper.

Xor - A **ComicWorks** ink mode explained in the Techniques chapter.

Zoom Box - Only exists on a Macintosh+ or Enhanced Macintosh. The small icon in the title bar which expands the window to full-screen size. Replaced by double-clicking on the title bar for regular 512K Macintoshes.



Mindscape, Inc.
3444 Dundee Rd.
Northbrook, IL 60062

Software that challenges the mind

01300