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ABOUT ANIMATE

Animate is a program that allows anyone to create professional quality graphics animation with their Apple computer. In fact, it's the utility we've been using here at Broderbund to create some of the animation in our products.

Utilizing the easy-to-use drawing and editing capabilities of this program, you can easily create simple animation sequences: balls bouncing, a man walking, a bird flying, etc. with just a few minutes work.

With a little more effort, detailed animated figures can be created that follow intricate paths and timing sequences over any double hi-res background, for truly lifelike animation.

For the computer graphics doodler: Animate will be fun and will help you develop your animating skills, or may even uncover skills you didn't know you had!

For the experienced artist: Animate will be a useful development tool for detailed, quality animation.

For the programmer: Animate's animation routines can be incorporated into your own programs to give them polish and flair.

For the Dazzle Draw user: Animate can now take your computer screen masterpieces, such as landscapes and put moving animals on them; street scenes and put animated people and cars on them; spacescapes and put moving planets and rocket ships on them; and coral reefs and have colorful fish swim around them.

Animate, like its sister program Dazzle Draw, incorporates a large set of very powerful tools, but is organized in a way that makes these tools simple to use and easily accessible.

USING ANIMATE

Animate is really made up of two different programs; the Graphic Designer and the Scene Designer.

The Graphic Designer is used to develop your characters and backgrounds using the drawing, editing and preview features that are found in this section. When Animate starts up, it always goes to the Graphic Designer first.

In the Scene Designer you put together your characters and backgrounds, and even add sound and text, to create entire animated scenes. Your scenes can be saved on data disks, and if you want, you can even make your own Show Disks which will automatically run the scenes. You can send these disks to friends so they can watch your creations too, since they don't need to have Animate for a Show Disk to run!

For your convenience several characters and backgrounds, already designed in the Graphic Designer, are provided on the enclosed LIBRARY DISK and are ready to be used in the Scene Designer.

USING THIS MANUAL

This manual is divided into several parts to show you how to get started and how to use all the features of the program.

The first section, *Getting Started*, tells you what you'll need to use the program and how to load it into your computer.

Basics introduces the menus and general features of the program.

The *Graphic Designer* and *Scene Designer* sections of the manual describe all of the available options and menu items in detail, together with step-by-step examples.

The *Appendices* provide technical information on program features, color and ProDOS.

The *Glossary* includes brief definitions of all the menus, functions and terminology used in the program and this manual.

At the very end, you'll find a display of all menus for quick reference.

GETTING STARTED

WHAT YOU'LL NEED
- Apple IIc or 128K IIe.
- At least one disk drive, although two are recommended.
- Color TV or monitor.
- A mouse, Apple Graphics Tablet, KoalaPad, or joystick.
- Blank disk(s) for saving your work.

Optional
- Dot Matrix printer.
- Apple ImageWriter II, Scribe, or Epson JX-80 color printer.

(Refer to Animate package for a complete list of printers you can use with the program.)

START IT UP!

1. Insert the Animate disk into the disk drive, turn on your monitor, and then your computer. The program will load automatically.

2. Wait until the red light on the disk drive goes out. An animated title screen will appear. After the animation is finished, another screen will appear and you will be asked to select your input device. Follow the simple on-screen prompts. Once you've selected your input device, press RETURN to continue.

3. At this point you will be asked if you want to save your setup information to disk. If you plan to always use the same equipment, saving your setup will save you time.

4. Press RETURN. You will be asked to turn over the Animate disk. After you turn it over and close the disk drive door, press any key and the program will go directly to the main screen. (Note: Be sure to keep the Animate disk in the drive while you are working with the program. Animate will need to load certain features from the disk periodically.)

Printer Setup

For Animate to print properly you need to enter certain information about your printer set-up. To do this, select number 2, Printer Setup, from the Utility Menu and follow the on-screen prompts. If you have an Apple IIe, you will be asked to select an interface card. If you have a IIc, the program will automatically select the Apple Super Serial interface.

Note: You can set-up your printer while you're working with Animate (see instructions for Printer Setup under the Crown Menu on page 14) but this setup cannot be saved to disk.

TOOLS OF THE TRADE

The best tools for using Animate are either a mouse or an Apple Graphics Tablet. Although you can use a drawing pad or joystick, you'll have less control over the cursor.

With your "artist's tool" you can move the cursor (a white pointer or other shape) around the screen to select features from the program and to create your drawings.

This manual was written assuming you will be using a mouse. Depending on which input device you use, you'll want to keep in mind the instructions below that apply.

MOUSE
: To select an Animate feature, move the cursor by moving the mouse on a clean, flat surface next to your computer until the cursor reaches the feature you want. Press the mouse button to highlight your choice, and then release the button. This is called "clicking the mouse." To draw, move the mouse while holding down the button. Then release the button to finish a stroke.

APPLE GRAPHICS TABLET
: Move the stylus on the surface of the pad to move the cursor. Press the pen down in place of pressing the mouse button.

KOALAPAD
: Apply pressure to the tablet's surface to move the cursor. Use the right pad button in place of the mouse button.

JOYSTICK
: Move the joystick up, down, left, and right to move the cursor. To move the cursor rapidly across the screen, press button 0 while moving the joystick. Use button 1 in place of the mouse button.

To give you finer control over the cursor, when using the Draw/Preview and Zoom features with the joystick (see pages 15 and 16 in the manual), the arrow keys on the Apple keyboard will also control movement of the cursor. Pressing the ⌂ (open apple) key together with the arrow keys will move the cursor rapidly.

Note: The buttons on various drawing tablets and joysticks may vary.

BASICS

If you haven't already done so, insert the Animate disk in the drive, turn on your computer and follow the prompts to the main screen. This is the Graphic Designer portion of Animate. Take a minute to study the screen. The boxes above the line at the top are menus, indicating the options and features available. The empty space below the line at the bottom will be filled with other options and features depending on the menu items you select. The small white arrow is the cursor. It will take on different shapes, depending on the features you pick.

MENUS ────── [☺] [File] [Tools] [Edit] [Goodies]   [Undo]

UNDO BOX ──────

CURSOR ──────────────────────────────── ▷

DRAWING AREA ──────
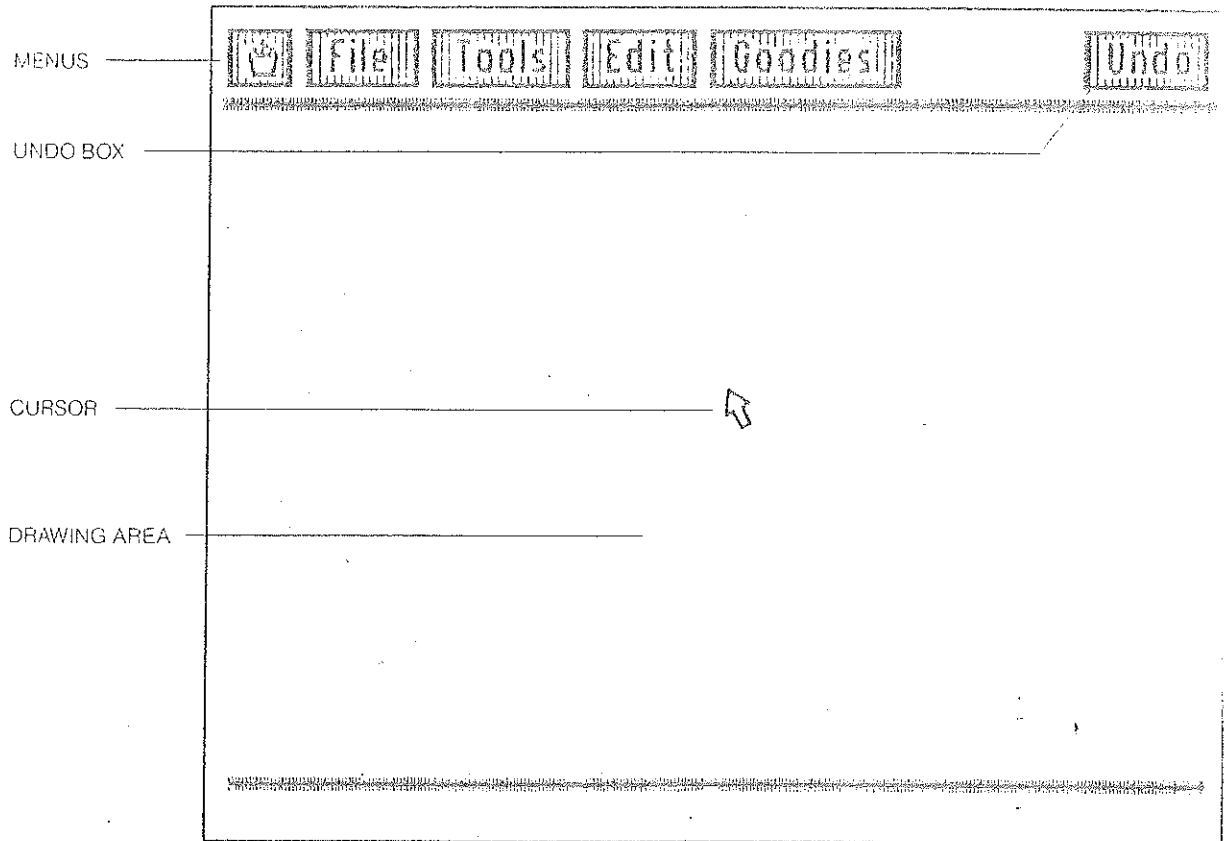
The large blank area between the top and bottom lines is your work area. This is where you'll draw your characters and backgrounds, preview your animated work, and arrange your final animated masterpieces!

MOVING THE CURSOR Before you begin, practice moving the cursor with the mouse. You don't have to hold down the button.

PULLING DOWN MENUS Animate's features are listed in "pull-down menus." This means that you "pull down" each menu before selecting a feature in the program. To take a look at the available

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features, move the cursor to each menu, one at a time, and press the mouse button. Like magic, a list of features appears underneath each menu. Remember to hold down the button, or the menu will disappear!

CHOOSING FEATURES

To choose one of Animate's features, simply pull down the appropriate menu. You'll also find a quick reference menu at the back of this manual. Keep the mouse button held down and move the cursor over the feature you want to highlight, and then release the button. When a feature is gray, it can't be highlighted, and selecting it will have no effect.
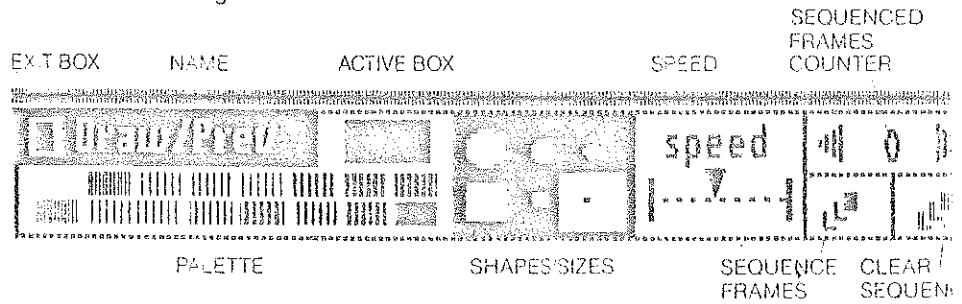
ABOUT WINDOWS

Windows in Animate are the boxes that appear on the screen containing either information about the program or "tools" for using the various features.

Using Tool Windows

When you choose certain functions of the program, tool windows appear at the bottom of the screen. A tool window is really like a tool box. It contains the tools you'll need to use the feature you've picked. For example, this is the screen you'll see if you select Draw/Preview from the Tools menu. Notice the tool window for this feature. The tool windows for other features will vary in their appearance. You'll find detailed descriptions of all the tool windows in the program in this manual. For now, take a look at the tool window for Draw/Preview. It contains the following features:

EXIT BOX   NAME   ACTIVE BOX   SPEED   SEQUENCED FRAMES COUNTER

DRAW/PREVIEW TOOL WINDOW

PALETTE   SHAPES/SIZES   SEQUENCE FRAMES   CLEAR SEQUEN⋅

Name
Identifies the tool window.

Shapes/Sizes
Gives you a selection of two paint brush shapes, and three different sizes.

Palette
Lets you pick one of 16 colors.

Active Box
Tells you what color is active.

Exit Box
Lets you exit Draw/Preview and return to the main menus.

Speed
Adjust the animation speed in the preview window.

Sequence Frames
Lets you create a custom frame sequence.

Clear Sequence
Erases a custom sequence.

Sequenced Frames Counter
Indicates how many frames are in the current sequence.

Preview Selector
Activates the preview dow when the word ' appears here, and p away the preview wi when the word "OFF displayed. When it's the preview window available.

Preview Window Activator
Activates the animat the preview window.

WATCH THE COLORS!

By now you have probably noticed that the little boxes that contain the names of the menus and features change color from time to time. Each of these colors has a specific meaning.

Blue or Green
It's okay to use this option.

Gray
This option is currently inactive. You can't use it right now.

Yellow or Pink
You've just highlighted this option and it will be selected when you release the button.

Red
Applies to Undo only. Lets you know when the Undo function is available.

TAKING THE PLUNGE

We're now ready to explore the various features of Animate. As explained earlier there are two distinct sections in Animate, the Graphic Designer, and the Scene Designer.

When you boot up the Animate disk, the Graphic Designer's main screen always comes up first.

THE GRAPHIC DESIGNER

Animate's Graphic Designer helps you to create and edit the individual characters that will appear in your animated scenes. Essentially, any element that is going to be a part of your mini-movies has to first be created in the Graphic Designer.

The Graphic Designer provides you with the necessary tools to draw character frame by frame, for cell-animation. For example, if you wanted to draw a falling rock, the first frame might show the rock near the top of the frame, and in each successive frame, the rock would be drawn closer and closer to the bottom. When the frames are sequenced together and previewed, the rock will appear to fall towards the ground.

You can also draw stationary backgrounds in the Graphic Designer, but a graphics drawing program, like Dazzle Draw, is even better suited for large scale drawings. The drawing tools in Animate are designed for the intricate detail of cell-animation character drawing.

All of the menu options in the Graphic Designer are described in detail on the following pages.

THE CROWN MENU

The Crown menu includes fundamental features of the program. As an exercise, select the first feature, About Animate. Here's how you do it:
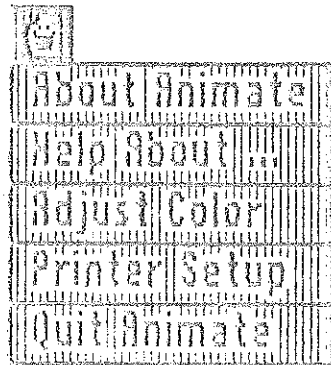
1. Move the cursor to the Crown menu.
2. When you reach it, hold down the mouse button.
3. Now move the cursor over About Animate and then release the button.
4. A window with a message appears on the screen.
5. To exit the feature and return to the main menus, click the mouse.

Here are descriptions of the features you'll find in the Crown menu:

About Animate

This feature is like a title screen. It tells you who created and published the program and the publication date.

Help About

This is a built-in assistance tool that lets you call up some helpful information about the menu features and Undo. For a little help from Animate, just click the mouse over Help About, turn over the Animate disk, and then move the cursor, now shaped like a question mark, to the appropriate feature. A window with a brief description of the feature appears on the screen. You may use Help About at any point to get information about an Animate feature in use.

When you are finished with Help About be sure to turn over the Animate disk and put it back into the disk drive.

Adjust Color

The Adjust Color feature puts color bars on your screen to help you adjust your monitor. To exit, just click the mouse.

Printer Setup

This feature allows you to change your printer setup without having to re-boot the program. If you have not already selected a printer setup, you can do so now. Animate works on a variety of popular printers, check the label on the back of the box for particulars. To get proper print outs you must let the program know what kind of printer you'll be using. Here's how:

1. Pull down the Crown menu and select Printer Setup.
2. A "dialogue box" will appear on the screen.
3. The dialogue box indicates three things: The name of the printer, the name of the interface card, and the slot number your interface card is in. If your printer, interface card, or slot number do not match these, you must change the settings. (If you have a IIc, you can only change the printer settings.)
4. To change a setting, click the mouse on that item. The name will be highlighted and the bottom section of the dialogue box will display your choices. Click the mouse over the up-and-down arrows to scroll through your choices. When you see the name you want, just click over it.
5. To change another item, click the mouse over the item you want to change and follow the same steps.
6. If you change your mind at any time during this procedure, just click the mouse over Cancel and Animate will restore the original names.
7. Once you've made the desired selections, simply click the mouse over Okay. The dialogue box will disappear.

To test your printer, make sure your printer is turned on and "selected", then click Test in the dialogue box. The message "Welcome to Animate" should print out on your printer. If your printer doesn't respond, try changing the setup information. Occasionally you may have to reboot Animate if it stops working after an inaccurate setup

Note: Make sure you've saved your work before selecting "Test."

Quit Animate

When you're ready to stop using Animate, this feature lets you remove the program from your computer's memory without turning off the system. You can then start up another program.

Here's how you do it:

1. Select Quit Animate from the Crown menu.
2. A dialogue box appears. When it asks you if you want to quit the program, click Okay if you do, and Cancel if you don't.

THE UNDO BOX

You've probably noticed that the Undo box has no features. This is because the Undo box has a unique function. It gives you the option of "undoing" the last step you took—for example, the last stroke you drew or section you cut or pasted. This option works only if you use it immediately following the action you want to take back, when the Undo box is red. To undo an action, move the cursor to Undo and click the mouse.
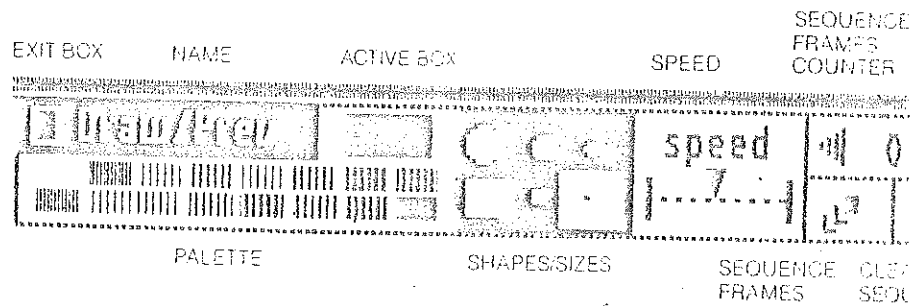
THE TOOLS MENU

The Tools menu provides the basic features you'll need to create your animated characters, as well as backgrounds.

DRAW/PREVIEW

Draw/Preview allows you to edit and draw animated characters and backgro
Draw/Preview also has features which allow you to preview your creations "i

Here is a step-by-step process for drawing a character, sequencing it, and p
its motion.

DRAW/PREVIEW TOOL WINDOW

EXIT BOX   NAME   ACTIVE BOX   SPEED   SEQUENCE FRAMES COUNTER

PALETTE   SHAPES/SIZES   SEQUENCE FRAMES   CLE SEQ

1. For the purposes of this example, first pull down the Tools menu and sel
Frames. A tool window will appear at the bottom of the screen. Point to the b
the number "18" in it and click the button. This will put a standard set of fram
the screen for you to draw in.

2. Now we're ready to do some drawing. Pull down the Tools menu and sel
Draw/Preview. A tool window will appear at the bottom of the screen. Pick the
you want to draw in by pointing to the desired color block and clicking the mo
button.

3. Next, select a brush by moving the pointer to the desired brush shape an
and clicking the mouse button.

4. To draw, move the pointer around within any of the frames on the screen
holding the button down. Release the button when you want to stop drawing
to another frame. Repeat this process in as many of the frames as you want.

5. Once you're finished drawing, the frames can be sequenced together. If y
been just doodling around, your sequence probably won't make any sense, b
just try for practice anyway.

6. Move the pointer to the Frame Sequence icon and click the mouse buttor
that the pointer changes to a pointing finger, this means that the program is n
for you to select a frame sequence.

7. To pick a sequence, move the pointer to the interior of any frame and click
ton. The edge of the frame will turn white indicating you just selected it for the
sequence, and the number in the right hand area of the tool window will incre
indicating how many frames you have sequenced so far.

8. Select up to 255 frames — you can even select the same frame more than
then move the pointer down to the ➤ arrow and click the button repeatedly on
arrow. Notice that the white frame border follows your sequence on the screen

9. To see your sequenced frames in action, move the cursor to the Preview S
at the right of the tool window (the word "SEE" should be displyed here) and cl
button. A preview window will appear in the middle of screen. If you now move

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pointer to the ► arrow and HOLD THE BUTTON DOWN you will see your sequenced frames animate in the preview window. Selecting the ◄ arrow, animates your sequence in reverse.

10.   The animation in the preview window can be sped up or slowed down by pointing to the speed arrow, holding the button down and moving the pointer. Once you've set the speed, release the button and set the preview window in motion again.

11.   To get rid of the preview window, move the pointer to the Preview Selector (it should now say "OFF") and click the button. The preview window will disappear, and the white frame border will appear around the the frame that was last displayed in the preview window.
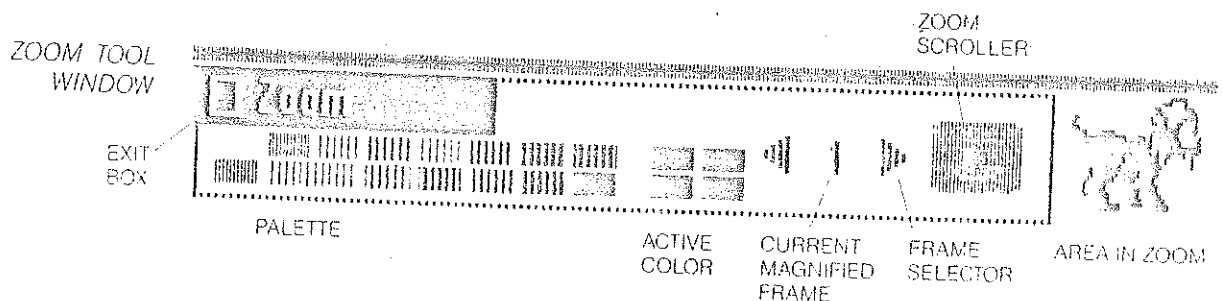
[Note: The Preview Selector to the right of the tool window will be gray, meaning it is inactive, if no frame sequence has been selected.]

12.   If you don't like a particular sequence, you can erase the sequence, without altering your drawings, by selecting the Clear Sequence icon in the tool window. You can now define a new sequence by repeating step 7 again.

While you are working in DRAW/PREVIEW you can access the portions of the screen that are hidden by Animate's menus and tool windows by pressing the ESC key. Press ESC again to return to the menus and windows. (Undo can't be used to take back a brush stroke in the hidden areas.)


ZOOM

The Zoom feature lets you magnify a small segment of the screen so that you can do fine detail work by adding and deleting colors, pixel by pixel. You can work in even finer detail with the Color option, in the Goodies menu, turned off. The Grid function, also in the Goodies menu, can further enhance your Zoom work. See page 24 for instructions on using these features.

ZOOM TOOL WINDOW

EXIT BOX

PALETTE

ACTIVE COLOR

CURRENT MAGNIFIED FRAME

FRAME SELECTOR

ZOOM SCROLLER

AREA IN ZOOM

1.   Pull down the Edit menu and select the Zoom feature. (You should already have some frames on the screen with something drawn in them. If not, follow steps 1 thru 4 on page 15 before continuing with this section.)

2.   A dotted-line box will appear on the screen. To isolate the area of the screen you want to magnify, move the box to the desired place and click the mouse.

3.   The selected area will be enlarged to fill up the entire drawing area so you can modify the drawing pixel by pixel.

4.   While you're working, you can "move around" within the frame by using the "zoom scroller" that appears in the Zoom tool window. The zoom scroller is like a joystick that directs the positioning of the magnified working area. Simply point the cursor at the dot in the center of the zoom scroller and hold down the mouse button. Then move the cursor in the desired direction.

If you've already defined a sequence of frames (see page 15) two arrows and a frame number will appear in the Zoom tool window. The number indicates the frame you are currently "zoomed in" on. To automatically zoom to other frames in the sequence just click either of the arrows. (NOTE: This feature will be available only if the the upper left corner of the zoom window is placed WITHIN a sequenced frame.)

ZOOM
MAGNIFICATION
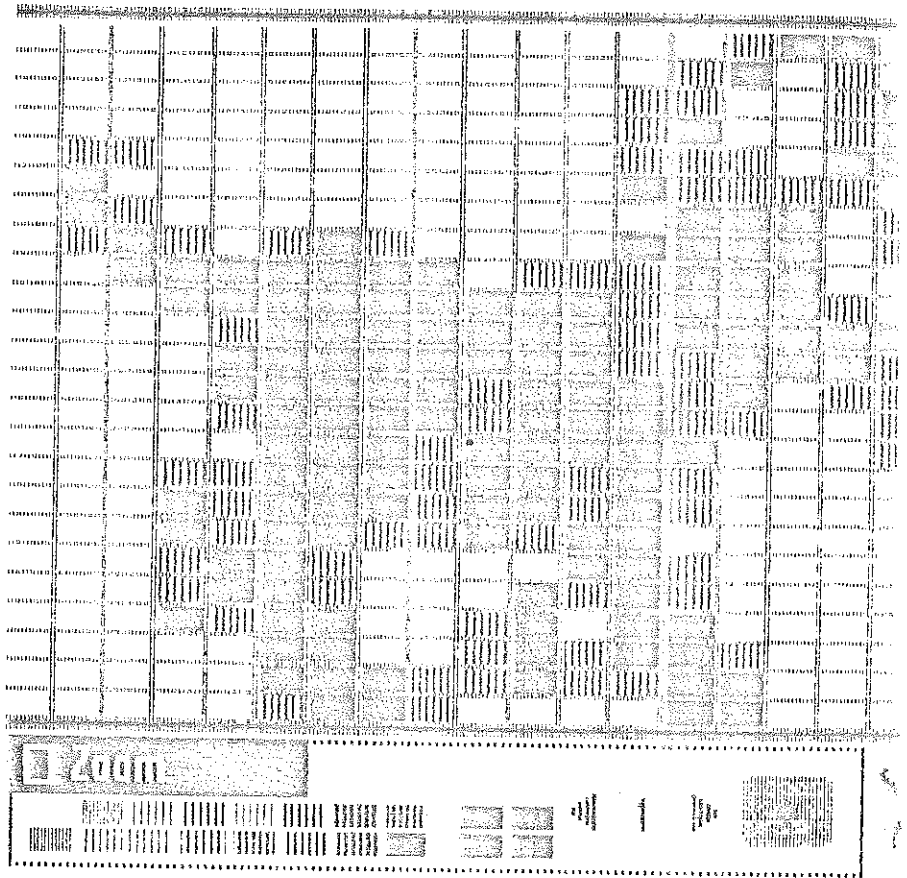
Working in your magnified section, here's how to add and delete colors:

1. Pick a color.
2. Move the cursor to the pixel you want to color and click the mouse. To c̶ than one pixel, simply hold down the button while moving the mouse until yo in all the pixels.
3. If you change your mind and want to erase this color, click the mouse ov pixel or pixels that have that color. The pixels will turn black.

MAKE FRAMES

Make Frames allows you to make custom sized frames to enclose your chara

(Note: When doing your first few animations you may find it easier to use the Frames option in the Tools menu to make your frames. See Appendix V on pa more information about frames.)

Here's how to use Make Frames:

(Make sure the screen is clear. If it isn't, select Clear Screen in the Goodies m

17
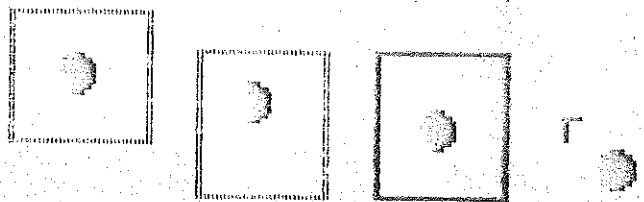
1. Pull down the Tools menu and select Draw/Preview.
2. Select the large round brush size and draw a few round balls randomly on the screen by pressing and releasing the mouse button in different areas of the screen. Draw as many as you like, but keep them spaced fairly far apart.
3. Pull down the Tools menu and select Make Frames. Notice the pointer changes shape.
4. Position the pointer directly to the upper left of one of the balls. Hold the button down, and move the mouse diagonally to the lower right. You should see a frame start to form between the pointer position and the upper left corner. Keep moving to the lower right until the frame completely surrounds the ball, then let go of the mouse button.
5. Repeat this process for each of the balls on the screen.
6. Once all of the balls have been surrounded by frames, they can be sequenced in the same manner as described in the Draw/Preview section on page 15.

STND. FRAMES

This option will instantly create a page full of standard size frames for your worksheet. The first few times you use Animate we suggest you create your frames using this option instead of Make Frames. See Appendix V on page 41 for more information about frames.

STND. FRAMES TOOL WINDOW

Frames		18	42	80
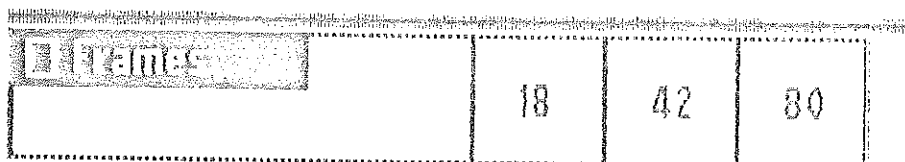
1. Select Stnd. Frames from the Tools menu.
2. A tool window will appear indicating three different frame sizes. The numbers indicate how many frames fit on a screen. The bigger the number, the smaller the frame size.
3. Move the pointer to a number and press the button. The screen will become full of frames.

CUSTOM MASK

[*Note:* This is an advanced feature, and is not necessary for using Animate effectively.]

A "mask" makes it possible for a character to pass over a colored background without having the background "mix" with the character's colors or show through where it shouldn't. Animate automatically generates standard masks for all characters. (The masks themselves aren't visible on the screen, but are stored internally in the computer's memory.)

Animate's standard mask considers any portion of a character that is black to be transparent, so any background that a character passes over will show through in these black areas.

If you need to change a mask for any reason, you would use this option. See Appendix VI on page 42 for details.

SCENE DESIGNER

This option allows you to go to the Scene Designer to create an animated scene.
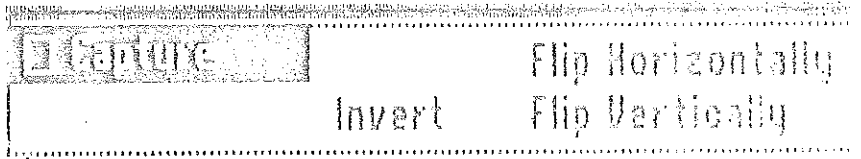
THE EDIT MENU

The Edit menu gives you the option of editing your work. Using the Capture feature, you can work on anything drawn inside or outside of a frame. There are also specific features which affect the frames and their contents directly.

CAPTURE

The Capture feature lets you define a section of your drawing on the scr it onto the computer's invisible "clipboard" for later use. (The clipboard is the Capture tool window is put away.) The Capture feature must be used can use the Flip, Invert, Cut, Copy or Paste features.

CAPTURE TOOL WINDOW

Capture   Flip Horizontally

Invert   Flip Vertically

Here's how to capture a section:

1. Pull down the Edit menu and select Capture. (You should already h: frames on the screen, with something drawn in at least one of them. If n steps 1 thru 4 on page 15 before continuing with this section.)

2. Move the cursor to the upper left corner of the section you want to c sure it's not over a frame boundary), and press the mouse button. Hol' th button, drag the cursor to the lower left and a dotted-line will appear on

3. While continuing to hold down the mouse button, move the mouse s ted line surrounds the area you want to edit. Notice that if you started yo within a frame, you can't drag it past the frame boundaries.

4. Release the mouse button. The dotted line should remain where yo dotted line started outside a frame and you dragged it over one or more aries it will disappear. Remember, you can only capture something comp or completely outside of a frame.

To make the dotted line disappear move the pointer anywhere on the d the screen and click the mouse button.

FLIP With this feature, you can flip a captured section of your drawing vertically or horizontally.

CAPTURE AND FLIP
HORIZONTALLY
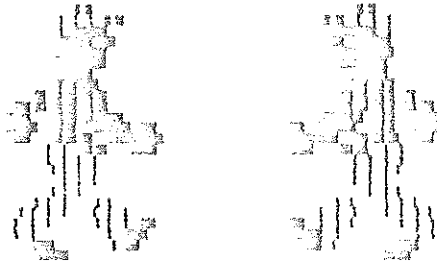
Here's how you flip a section:

1. Capture the section you want to change.
2. Select Flip Horizontally or Flip Vertically from the Capture tool window.

INVERT The Invert feature lets you change colors in a captured section of your drawing to their "opposite" colors (such as white into black).
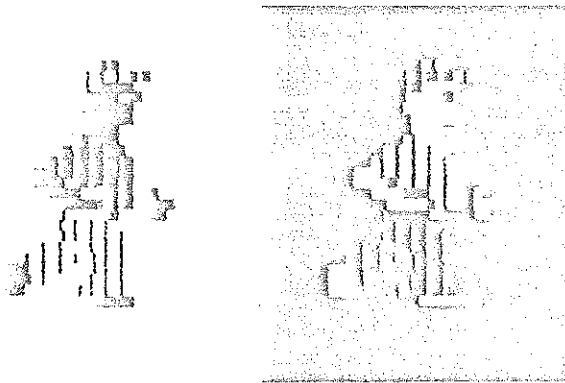
Here's how you invert colors:

1. Capture the section where you want to invert colors.
2. Select the Invert option from the Capture tool window.

CUT AND PASTE   Using the Cut and Paste features together, you can remove the section you c and reposition it in another area of your drawing. Here's how you do it:
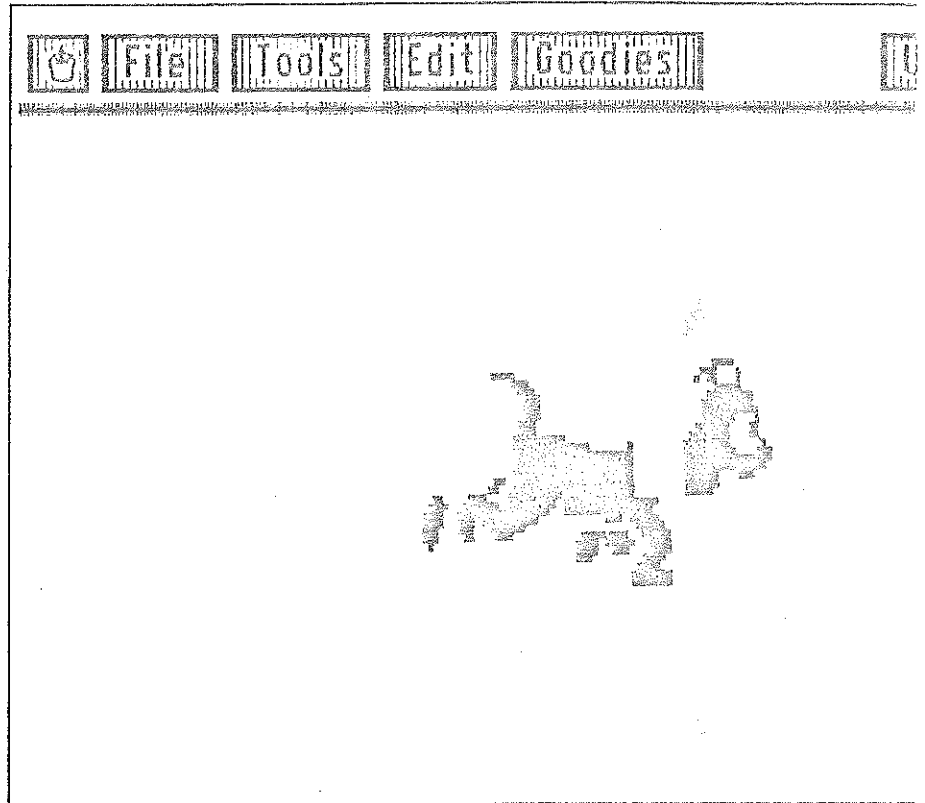
1.   Capture the section you want to reposition.
2.   Select Cut from the Edit menu, or type "x" on your keyboard. The capture tion will be lifted off your screen and placed onto the clipboard. In its place wil black space.
3.   Select Paste or type "v". A dotted-line box will appear indicating the size o section about to be pasted.
4.   Press the mouse button and drag the dotted-line box to where you want tl tion to be relocated. If you want to align the section in a frame, drag the box s(upper left corner is within the frame and, still holding the mouse button down, the space bar. The dotted-line box will automatically align itself within the frair want to resume moving the box, press space bar again.
5.   To paste the section, release the mouse button.

SHORT CUT: For a one-step capture-cut-paste follow this procedure:

1.   Move the cursor inside the section you've just captured. Press the mouse down to "lift" the section.
2.   Continue to press the button while you "drag" the box to where you want i relocated.
3.   Release the button. The section will be relocated instantly.
4.   To make multiple copies while in the paste mode, type "CONTROL-v" and the mouse button each time you want a copy to pasted to the screen.

COPY AND PASTE

With the Copy feature, you can reproduce a section of your drawing without removing it and, by using Paste, place the duplicate onto another part of your screen. Here's how:
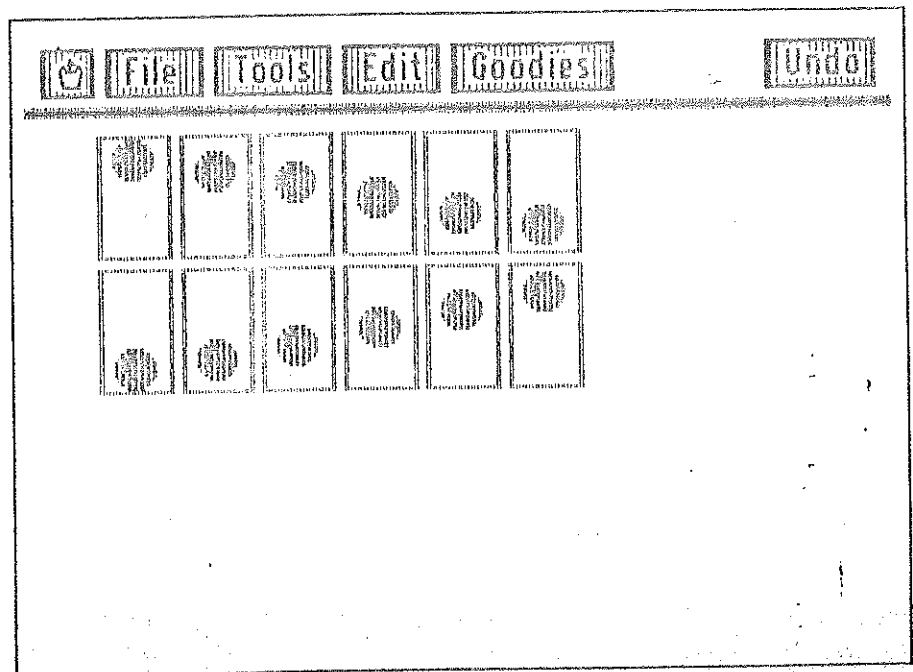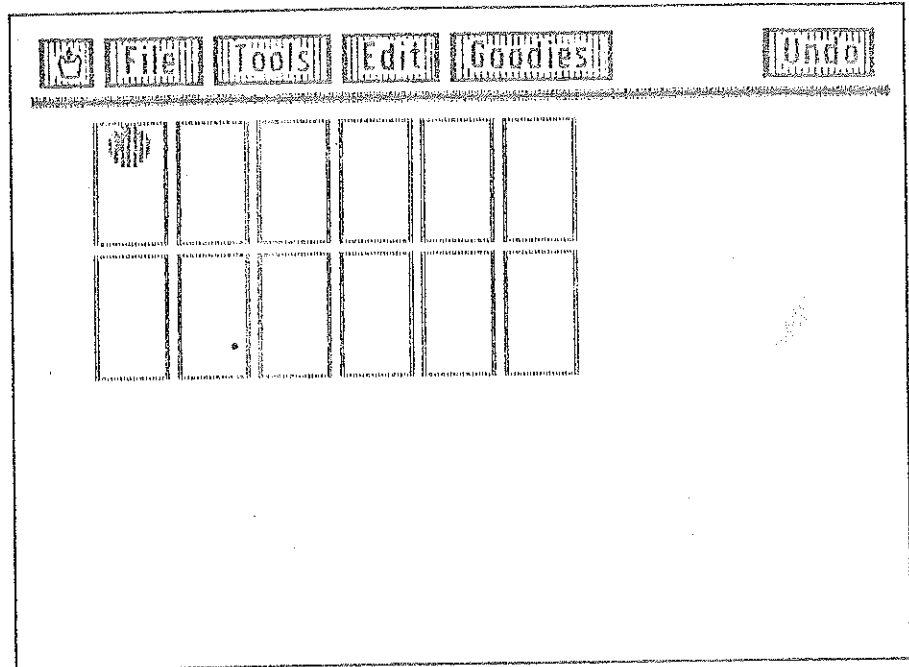
1. Capture the section you want to copy.
2. Select Copy from the Edit menu or type "c". The captured section will be copied off the screen and placed on the computer's clipboard. This time you won't see a blac space replacing it—the orginal remains on the screen.
3. Select Paste or type "v". A dotted-line box will appear indicating the size of the section about to be pasted.

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4. Press the mouse button and drag the dotted-line box to where you
tion to be relocated. If you want to align the section in a frame, drag the
upper left corner is within the frame and, still holding the mouse button
the space bar. The dotted-line box will automatically align itself within t
want to resume moving the box, press space bar again.

5. To paste the section, release the mouse button.

6. To make multiple copies while in the paste mode, type "CONTROL
the mouse button each time you want a copy to pasted to the screen.

CLEAR IMAGE

Use this feature to erase the contents of any frame on the screen. (No'
is only available while Draw/Preview or Custom Mask are selected, or
Frames has been used.)

1. Using Draw/Preview and Make Frames from the Tools menu, crea
frames on the screen and draw inside them.

2. Select Clear Image from the Edit menu.

3. Move the pointer to the inside of one of the frames on the screen
button. The contents of the frame will be cleared to black.

COPY FRAME

The Copy Frame feature lets you conveniently duplicate any frame on
comes in handy for making a series of custom frames all the same siz
(Note: This feature is only available while Draw/Preview or Custom M
or just after Make Frames has been used.)

1. Create a frame on the screen using the Make Frame feature in
2. Select Copy Frame from the Edit menu.
3. Move the pointer to the inside of the frame on the screen and p
dotted line will appear in the shape of the frame you just selected.
4. Position the dotted line with the mouse and press the button. A
"pasted" to the screen. You can do this as many times as you want
cross the boundaries of other frames, or try to paste a frame within

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CLEAR FRAME This feature allows you to remove a frame without altering its contents. (Note: This feature is only available while Draw/Preview or Custom Mask are selected, or just after Make Frames has been used.)

1. Using Draw/Preview and Make Frames from the Tools menu, create several frames on the screen and draw inside them.
2. Select Clear Frame from the Edit menu.
3. Move the pointer to the inside of one of the frames on the screen and press the button. The frame will disappear, but the the drawing inside the frame will remain on the screen.

THE GOODIES MENU The Goodies menu gives you just that—features that let you enhance your work but which aren't essential for using the program.
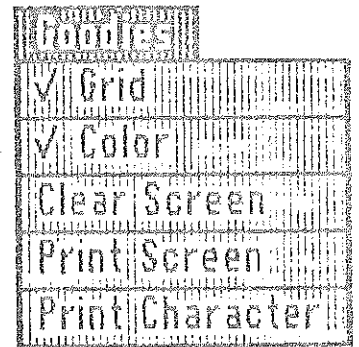
GRID The Grid feature is useful whenever you magnify a section of the screen with Zoom. It helps you define where the pixels are on the screen. Grid is active if there's a check mark next to it. To use Grid with Zoom:

1. Select the Zoom feature from the Edit menu.
2. When the magnified section appears on the screen, select Grid from the Goodies menu, and resume your work.

COLOR The Color feature, used with Zoom, gives you the option of drawing fine detail in either color or black and white. While in Zoom, with the Color option active, you can draw with all of the 16 colors available in Animate. With the Color option off you can draw in black and white, and in much greater detail, since you have control over the smaller parts of the screen, the bits, that define the double hi-res colors.

The Color feature also affects painting with the Draw/Preview option, letting you paint much smoother curves with certain colors when Color is off.

The Color option is "on" when there is a check mark by the word Color in the Goodies menu.

CLEAR SCREEN Clear Screen lets you erase the entire screen. Note that your work will be lost unless you save it to disk before clearing.

1. Select Clear Screen from the Goodies menu.
2. Click Yes to confirm your choice, or No if you don't want to erase your work.

PRINT SCREEN

The Print Screen feature lets you print out the screen's work area on pape color or black and white, depending on your equipment. Before you print, check Printer Setup in the Crown menu. Then simply click on Print Scree printing in the middle of a picture, press the ESC key.

PRINT CHARACTER

The Print Character feature prints out a character in the sequence that yo it. Instead of printing the worksheet, only the frames you sequenced will b the order that you defined. (See Appendix X on page 47 for tips on how to character print outs into animation "toys.")

THE FILE MENU

The File menu lets you save or retrieve your work-sheets, characters, backgrounds and scenes to and from a separate data disk. You can also delete them from the disk, and you can load Dazzle Draw and single hi-res pictures.
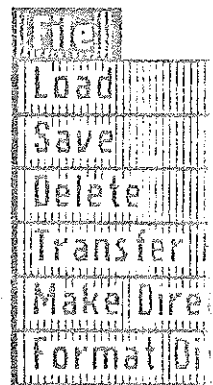
All of the features in the File menu use a "dialogue box", a box that appears on the screen which sets up a dialogue between you and the computer. Animate will ask for specific information, like the name of the file, and you'll provide the answers.

DISK DRIVES

For convenience, it's preferable to use Animate with two disk drives. If your only one drive, the program will prompt you to swap disks when necessary

FORMAT DISK

Before you can save your creations, you must prepare a disk to receive inf from the computer. This is called "formatting your disk."

You should have either a blank disk or one with data on it that you no long Whenever you format a disk that's already been used, all the information o erased.

Here's how to format a disk:

FORMAT:

1. Select Format Disk from the file menu.
2. Remove the Animate disk, and insert the disk you want to format in th drive.
3. Type in a name for your disk by following the rules for naming disks an described below.
4. If Animate finds information on the disk you are formatting, you must c you really want to format the disk by clicking Okay. Remember, if you form with information on it, you'll erase everything on the disk.
5. When the formatting is completed you will have a data disk on which y save your creations.
6. Put the Animate disk back in the disk drive.

> ### RULES FOR NAMING DISKS AND FILES
> 1. Disk names and file names must begin with a letter.
> 2. Use only letters, numbers, or periods, separately or combined.
> 3. Do not use any spaces or punctuation characters other than periods.
> 4. Do not use more than 15 characters.
> 5. Use a different name for each disk, so you (and Animate) can tell them apart.

FILES There are three different kinds of files that can be created and saved with the Graphic Designer: Worksheets, Characters and Backgrounds.

A Worksheet is any screen that has drawings on it. A Worksheet in Animate typically contains character shapes enclosed in frames.

A Character is a series of sequenced frames from a Worksheet. You don't actually "see" your character until it animates, either in the preview window or in the Scene Designer.

A Background is any drawing that is specifically used in the Scene Designer as a backdrop for your animated scenes.

See Appendix I on page 40 for more information about the different files created by Animate.

LOAD

LOAD SCENE DIALOGUE BOX
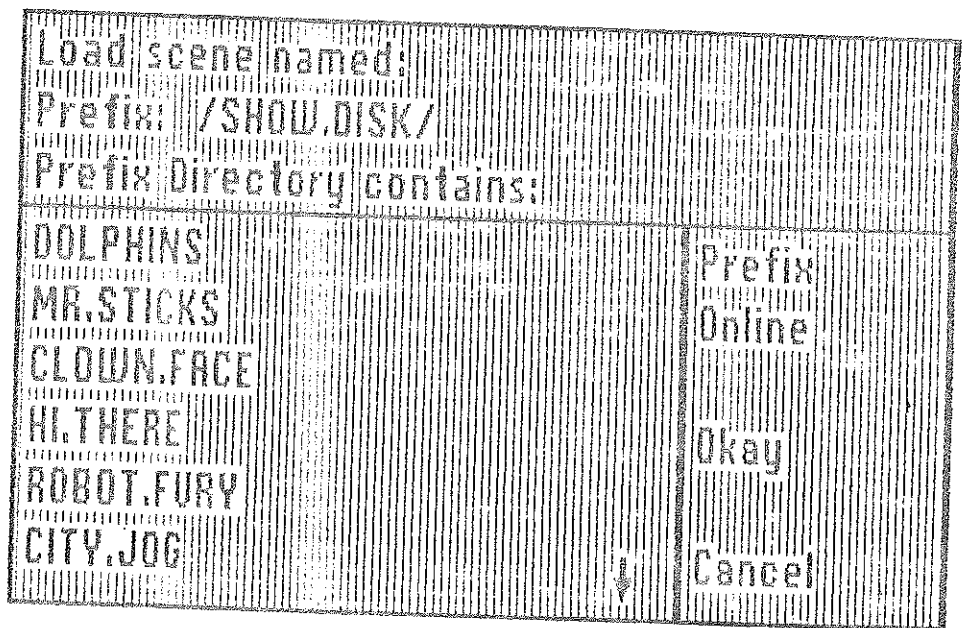
DIRECTORY

ARROW

The Load feature lets you retrieve a saved worksheet, background or scene. Here's how it works:

1. Select Load in the File menu.
2. Select Worksheet or Background depending on what you want to retrieve. (If you load a Scene, Animate will take you directly to the Scene Designer.)
3. A catalog will appear in the dialogue box and a prompt at the top of the box saying "Load Worksheet (or Background, or Scene) named:"
4. Move the cursor to the name of the file you want to load and click the mouse. The name will appear on the first line.
5. Click over Okay, and the Worksheet or Background will appear on the screen when the loading is completed.

SAVE   The Save feature lets you save a worksheet, character or background. Here works:

1. Select Save in the File menu.
2. Select Worksheet, Character or Background from the dialogue box, de what you want to save.
3. A catalog will appear in the dialogue box and a prompt at the top of the ing "Save Worksheet (or Character, or Background) as:"
4. Type in the name. If you are re-saving a file already listed, click over the
5. Click over Okay.

DELETE   Delete PERMANENTLY removes files from the disk.

1. Select Delete in the File menu.
2. Select Worksheet, Character, Background or Scene from the dialogue k depending on what type of file you want to delete.
3. A catalog will appear in the dialogue box and a prompt at the top of the ing "Delete Worksheet (or Character, or Background, or Scene) named:"
4. Click over the desired file name. The name will appear on the first line.
5. Click Okay to confirm that you want to delete that file.

TRANSFER PIC   This feature allows you to load single hi-res and double hi-res pictures creat programs other than Animate, and allows you to save them as either Works! Backgrounds. Single hi-res pictures that are loaded into Animate will autom converted to double hi-res.

1. Select Transfer Pic in the File menu.
2. Select Load.
3. A catalog will appear in the dialogue box and a prompt at the top of the ing "Load Picture named:"
4. Move the cursor to the name of the file you want to load and click the m name will appear on the first line.
5. Click over Okay, and the picture will appear on the screen when the loa completed.

You can also use Transfer Pic to save a Worksheet or Background as a singl ble hi-res picture so it can be used by other graphics programs.

1. Select Transfer Pic in the File menu.
2. Select Save.
3. A catalog will appear in the dialogue box and a prompt at the top of the ing "Save Picture named:"
4. Type in the name. If you are re-saving a file already listed, click over the
5. Click over Okay.
6. Choose whether you want to save as a Single Hi-res or Double Hi-res pi you save as a single hi-res picture, Animate will convert it.
7. Click over Okay.

[*Note to Dazzle Draw Users:* Use Transfer Pic to load your Dazzle Draw pict Animate, or use Transfer Pic to save your Worksheets and Backgrounds as d res pictures so you can do further work on them in Dazzle Draw. See Appenc page 40 for more information about using Dazzle Draw with Animate.]

MAKE DIRECTORY   Make Directory gives you the option of organizing your disk files into categor subdivisions. For example, you might want to file all of your animal character together. This feature makes it easier to locate files. If you want to create mul categories, you should make a directory before you save your work.

For example, let's say you want to create a subdirectory called "Animals" to di your animal characters from any others. Here's how you do it:

1. Select Make Directory from the File menu.

2. Type "Animals" and click over Okay. Your new category will now be filed away in the disk directory.
3. To file characters under "Animals", change the name of the Prefix. To do so, click over Prefix, and then over "Animals" in the disk directory.
4. Click over Okay or press return.
5. Next time you want to save a picture, it will automatically be filed under "Animal:

CHANGING PREFIXES OR DISKS

Once you have selected one of the file functions, Save, Load, Delete or Transfer Pic and are at the dialogue box with the catalog, you can select a particular directory or that disk, or select a different disk, by using the PREFIX and ON LINE functions av: able in the dialogue box.

To select a subdirectory:

1. Click Prefix.
2. A catalog will appear in a dialogue box and a prompt at the top of the box sayin "Set Prefix to:"
3. Click over the desired prefix.
4. Click Okay.

To select a different disk:

1. Click On Line.
2. Select one of the disk names from the catalog. The new name will automaticall become the new Prefix.
3. Click Okay. Any further disk operations will now affect the disk with the name y selected.

Note: If you insert a different data disk in the drive, since your last disk access, Ani-mate will automatically recognize the new disk as the current data disk the next tim you want to load or save a file.

THE SCENE DESIGNER

Animate's Scene Designer allows you to create your own animated sce[...] characters and backgrounds drawn in the Graphic Designer.

The Scene Designer provides you with the necessary tools to select th[...] and backgrounds you want, assign movement paths to your characters and text to your scene and much, much more.

All of the menu options in the Scene Designer are described in detail o[...] pages.

What is a Scene?

A scene is an animated cartoon which contains one or more character[...] and possibly some text and sound.

To create a scene you must first assemble the necessary building bloc[...] have at least one character that has been created and saved from the C[...] Designer, or you can use one of the characters supplied on the enclose[...] Although you can use the clear black screen for a background, your sc[...] made more interesting if you use a colorful background. The backgroun[...] drawn with Animate, Dazzle Draw, any double hi-res drawing utility, or y[...] one of the pre-drawn backgrounds on the Library Disk.

Once you've gathered your building blocks all you need to do is tell you[...] what to do and where to go in your scene. You do this by defining path[...] character. When the scene is run, your characters will follow these path[...]
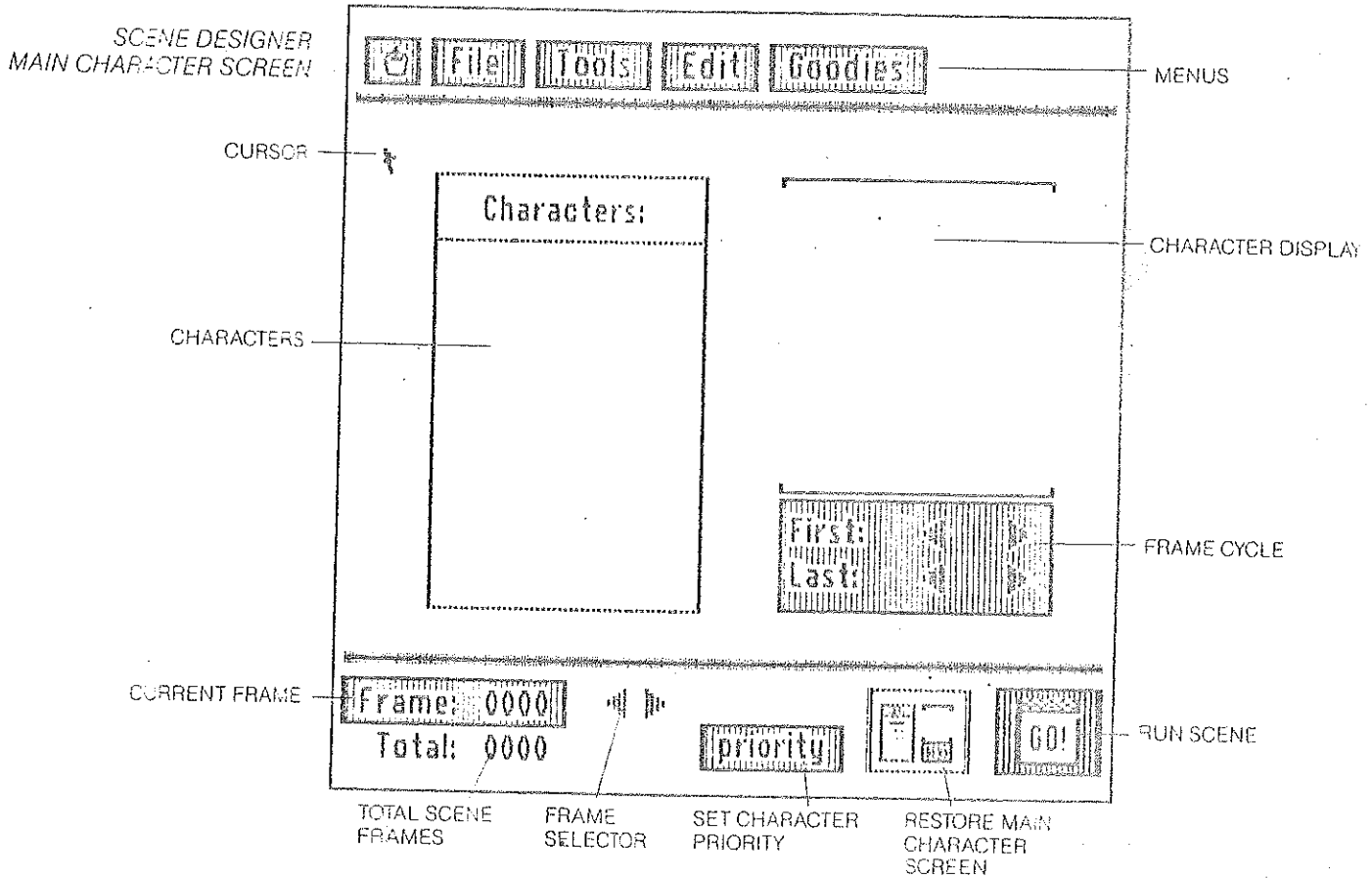
At any point during the creation of your scene, you can insert text into it[...] handy way to have on-screen characters talk, or to have a descriptive n[...] your scene. You can also add a soundtrack to your scene using Animat[...] editor.

Once you finish creating your scene, you can sit back and watch it run f[...] to end; just like a cartoon on TV!

MAIN CHARACTER SCREEN

When you first enter the Scene Designer you are presented with the Main Character Screen, which looks like this:

SCENE DESIGNER MAIN CHARACTER SCREEN

CURSOR

CHARACTERS

MENUS

CHARACTER DISPLAY

FRAME CYCLE

CURRENT FRAME

RUN SCENE

TOTAL SCENE FRAMES

FRAME SELECTOR

SET CHARACTER PRIORITY

RESTORE MAIN CHARACTER SCREEN

Characters:

First:
Last:

Frame: 0000
Total: 0000

priority

GO!

The Main Character Screen contains several important features to help you create a scene.

Characters:

The large yellow rectangle displays the names of the characters that have been loaded from a data disk. You can load up to 16 characters, totalling no more than 255 frames, into the Scene Designer at any one time. The highlighted character will be the one that you will currently be working with. To select another character simply move the cursor to its name and click the mouse button.

Character Display:

The selected character will be displayed on the right side of the screen. A number in the lower right indicates which character frame is being displayed. At the bottom are two sets of arrows that are used to regulate the beginning and end frames of your character's animation cycle.

Frame:

The number here represents the current selected frame in your scene. You can select a particular scene frame by stepping through the scene with the arrows, or you can go directly to a specific frame by clicking on the word Frame and typing in a frame number.

If you press ESC you can view the entire screen. While viewing the entire screen, use the arrow keys on the Apple keyboard to step through the scene. Press ESC again to return to the main screen.

Total:

This number indicates the total number of frames in your scene.

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Priority:

Priority determines which characters are "in front" or "in back" of each other in scene. As each character is inserted into a scene, it is assigned a screen prior later the character is introduced, the higher the priority. So that your first char initially pass behind your second character, etc. You can alter the priority for a in your scene by selecting Priority and following the prompts.

Go:

Click Go to have your entire scene run from beginning to end. While the scene ning the following keyboard options are available:

```
      space bar —  pause
              → —  speed up (scenes always start out at their maximum speed)
              ← —  slow down
        RETURN —  restart scene
           ESC —  stop the scene and go back to the main screen
```

Restore Main Character Screen:

This icon will appear when your scene occupies the work area of the screen. Clicking over this icon will restore the Main Character Screen.

THE CROWN MENU

The Crown menu includes fundamental features of the program and is describ the Graphic Designer section of this manual on page 13.

THE FILE MENU

The File menu lets you retrieve characters, backgrounds and scenes from a separate data disk, and also lets you save your scenes.

In addition, the file menu lets you create Show Disks that will run your scenes without requiring the Animate program.

All of the features in the File menu use a "dialogue box", a box that appears on the screen which sets up a dialogue between you and the computer. Animate will ask for specific information, like the name of the file, and you'll provide the answers.

DISK DRIVES

For convenience, it's preferable to use Animate with two disk drives. If your syst only one drive, the program will prompt you to swap disks when necessary.

LOAD

The Load feature lets you retrieve a saved character, background or scene.

1. Select Load from the File menu.
2. Select Character, Background or Scene depending on what you want to ret
3. A catalog will appear in the dialogue box and a prompt at the top of the box ing "Get Character (or Background, or Scene) named:"
4. Move the cursor to the name of the file you want to load and click the mous name will appear on the first line.
5. Click over Okay and the file will load.

After loading a background or scene Animate will return you to the Scene Desic However, when loading characters, steps 3 thru 5 can be repeated until you've l all the characters you want. To get back to the Scene Designer, click over Canc

SAVE SCENE   Once you've put together an animated scene, you can save it to a data disk:

1. Select Save Scene in the File menu.
2. A catalog will appear in the dialogue box and a prompt at the top of the box saying "Save Scene named:"
3. Type in the name. If you are re-saving a scene already listed, click over the name.
4. Click over Okay.

If you save a scene to a disk that does not contain the appropriate background file for that scene, Animate will automatically transfer the background to the new disk. Just follow the prompts on the screen when Animate asks you to swap disks.

DELETE   See page 27 for instructions on how to delete files from a data disk.

MAKE DIRECTORY   See page 27 for instructions on how to create a directory on a data disk.

FORMAT DISK   See page 25 for instructions on how to format a new data disk.

MAKE SHOW DISK   A Show Disk is a special data disk that will automatically run scenes that are saved on it by simply booting it. These disks can be sent to friends or relatives with computers like yours, and they don't need to have the Animate program to see your creations. The Animate Demonstration Disk is an example of a Show Disk.

To make a Show Disk follow this procedure:

1. Select Make Show Disk in the File menu.
2. Follow the instructions on the screen and insert a blank disk into the disk drive.
3. Select Okay.

Once the computer is finished, the disk is ready to have scenes put on it. By using the Load Scene and Save Scene features you can load a scene from one of your data disks, and save it onto the Show Disk. (The number of scenes you can save on a show disk is determined by several factors: The length of each scene; the number of characters each scene contains; and how many backgrounds are used.)

When you're finished, simply Quit Animate and boot the Show Disk. The Show Disk contains a special program that allows you to select the order in which the scenes are to be shown. When your scenes are running, the following keyboard options are available:

space bar — pause
→ — speed up
← — slow down
RETURN — restart scene
TAB — skip to next scene
ESC — stop the scene. Allows you to resequence the scene order.

THE TOOLS MENU

The Tools menu provides the necessary features you need to choreograph the movements of your characters on the screen. This is done by defining paths for them to follow.

Paths can be defined in three ways: You can move the character directl mouse, or you can "lead" the character towards a destination with the m finally, you can move the character directly using the keyboard.

When your scene is run, the characters will follow the exact paths you'v

You can also exit back to the Graphic Designer thru the Tools menu.

SET PATH DIRECTLY

This is the quickest and easiest method for defining a character's path:

1. Load one or more characters using the Load option in the File ment
2. When you are back at the main screen, select one character by clic name.
2. Select Set Path Directly in the Tools menu.
3. a. The screen will clear to the background, and the character you appear in the center. Without pressing the button, move the mouse back The character will follow your movements.
    b. Move the character to a starting position on the left side of the s
    c. Hold the button down and move the mouse slowly to the right. T will run through its pre-drawn animation cycle as it follows the mouse. W ton is held down, the computer "records" the movements of the characte button is not pressed, the computer does not "record" the character's mo
4. When you are finished making a path for your character press the E accept the path and go back to the main screen. If you don't like the path defined and want to try again, press the DELETE key instead, and the cc erase the path you just created.

Note: While "recording" your character's movements, the computer will m audible click as each frame passes. To toggle the clicking sound on or of key.

Additional Characters:

To add more characters to your scene. select a new character, find the fra you want the new character introduced (by clicking the arrows, or the Fra the main screen) and simply define a path for the new character. You can many as 16 characters in your scene.

SET PATH BY LEADING

This method of defining a path is very useful for straight line paths leadin destinations.

1. Load one or more characters using the Load option in the File menu.
2. When you are back at the main screen, select one character by clickii name.
3. Select Set Path By Leading in the Tools menu.
4. a. A dialogue box will appear asking you to select the speed at whic character will follow the mouse. Set the speed by dragging the speed poin desired position on the sliding scale. Click over Okay.

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THE TOOLS MENU

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Paths can be defined in three ways: You can move the character directl[y] mouse, or you can "lead" the character towards a destination with the m[ouse] finally, you can move the character directly using the keyboard.

When your scene is run, the characters will follow the exact paths you'v[e]

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1. Load one or more characters using the Load option in the File menu.
2. When you are back at the main screen, select one character by clicl[king] name.
2. Select Set Path Directly in the Tools menu.
3. a. The screen will clear to the background, and the character you[r] appear in the center. Without pressing the button, move the mouse back The character will follow your movements.
    b. Move the character to a starting position on the left side of the s[creen]
    c. Hold the button down and move the mouse slowly to the right. T[he] will run through its pre-drawn animation cycle as it follows the mouse. W[hen] ton is held down, the computer "records" the movements of the character button is not pressed, the computer does not "record" the character's mo[vement]
4. When you are finished making a path for your character press the E[SC] accept the path and go back to the main screen. If you don't like the path defined and want to try again, press the DELETE key instead, and the co[mputer] erase the path you just created.

Note: While "recording" your character's movements, the computer will m[ake an] audible click as each frame passes. To toggle the clicking sound on or of[f] key.

Additional Characters:

To add more characters to your scene, select a new character, find the fra[me] you want the new character introduced (by clicking the arrows, or the Fra[me] the main screen) and simply define a path for the new character. You can [have as] many as 16 characters in your scene.
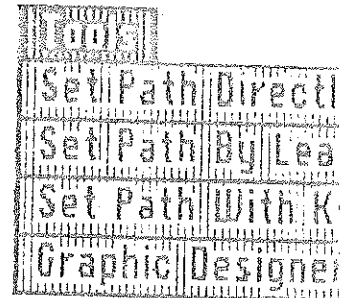

SET PATH BY LEADING

This method of defining a path is very useful for straight line paths leading destinations.

1. Load one or more characters using the Load option in the File menu.
2. When you are back at the main screen, select one character by clicki[ng] name.
3. Select Set Path By Leading in the Tools menu.
4. a. A dialogue box will appear asking you to select the speed at whic[h] character will follow the mouse. Set the speed by dragging the speed poin[ter] desired position on the sliding scale. Click over Okay.

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b.   The screen will clear to the background, and the character you selected will appear in the center. You will also see the cursor arrow and a small dot beneath it. The arrow and dot indicate the topmost and bottommost points, respectively, of your character's cell frame.

c.   Select a starting position for your character, by holding down the ⌂ (open apple) key and moving the mouse. The computer does not "record" this movement.

d.   Select a destination for your character by releasing the ⌂ (open apple) key and moving the cursor to the desired place. The character will remain behind at the starting position.

e.   To have the character move towards the destination, hold the mouse button down. The character will start to go through its pre-drawn animation cycle as it moves towards the cursor. While the button is held down, the computer "records" the movements of the character. When the button is not pressed, the computer does not "record" the character's movements.

5.   When you are finished making a path for your character press the ESC key to accept the path and go back to the main screen. If you don't like the path you just defined and want to try again, press the DELETE key instead, and the computer will erase the path you just created.

(See page 33 for information on adding more characters to your scene.)

SET PATH WITH KEYBOARD

This method of defining a path is ideal for very detailed positioning of characters in your scene, since you control the path frame by frame, pixel by pixel, and you don't have to worry about an unsteady mouse.

1.   Load one one more characters using the Load option in the File menu.
2.   When you are back at the main screen, select one character by clicking on its name.
3.   Select Set Path With Keyboard in the Tools menu. The screen will clear to the background, and the character you selected will appear in the center.
4.   a.   Move the character to a starting position on the screen with the arrow keys, or by holding down the mouse button and moving the mouse.

b.   To animate your character, press the space bar. The character will advance one frame of its pre-drawn animation cycle.

c.   Advance the character to the next position on the screen with the arrow keys or the mouse. Go back to step 4.b. to "record" the next frame.

d.   Continue repeating steps 4.b. and 4.c. until you are finished.

5.   Press the ESC key to accept the path and go back to the main screen. If you don't like the path you just defined and want to try again, press the DELETE key instead, and the computer will erase the path you just created.

(See page 33 for information on adding more characters to your scene.)

GRAPHIC DESIGNER

This option allows you to go back to the Graphic Designer section of the program to edit and create characters and backgrounds.

THE EDIT MENU

The features in the Edit menu allow you to make changes or fix mistakes in your animated scenes. You can alter the sequence of frames, characters or sound, by reshuffling them within the scene, or copy one section of your scene to a different place in the scene, or you can simply delete entire sections or characters.

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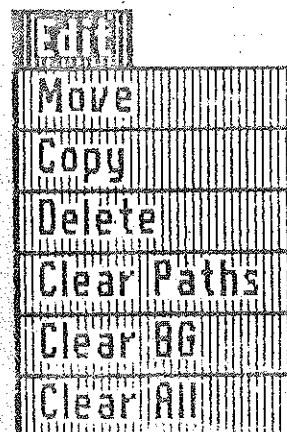
MOVE This option lets you move a section of frames, sound, or of a character'
location in a scene to another.
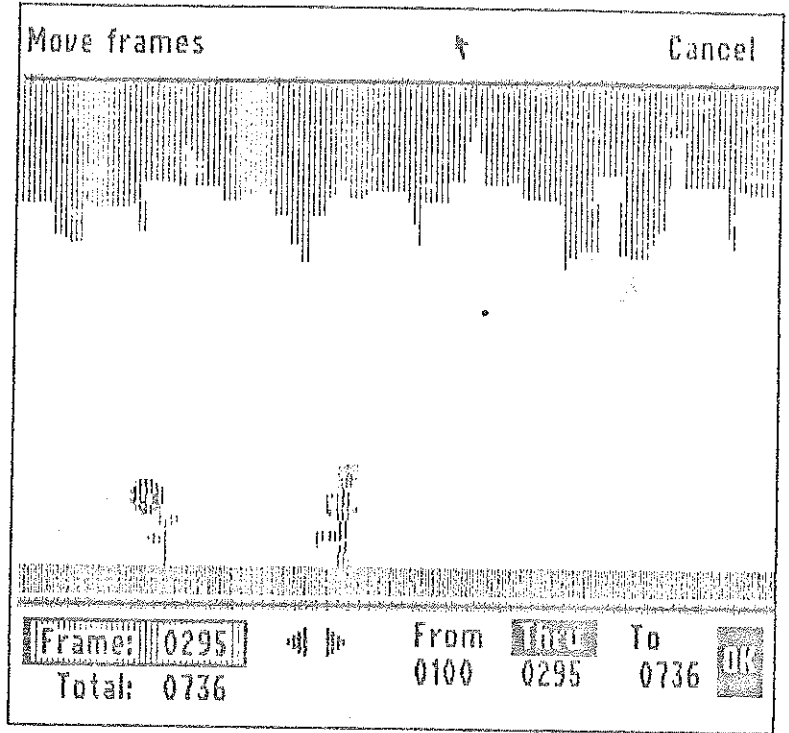
1. Define a character path by following the instructions for Set Path Di
Tools menu.
2. Select Move in the Edit menu.
3. A dialogue box will appear asking you which element in the scene y
Move: Frames, Character or Sound. For our example select Frames and
(The process is identical for Characters and Sound.)
4. Click on the word From at the bottom of the screen.
5. Select a frame by clicking on the Frame box and typing a number, o
arrows to step through the scene to the desired frame.
6. Click on the word Thru at the bottom of the screen. Repeat step 5 to
frame.
7. Click on the word To at the bottom of the screen. Repeat step 5 agai
8. Click Okay. The range of frames starting with From and ending with
"pasted" in at the frame specified under To, and "cut" from their original l
9. If you don't want to make any changes, click Cancel instead of Okay.

COPY This option lets you duplicate a section of frames, sound or a character's
one location in a scene to another.

1. Define a character path by following the instructions for Set Path Dir
Tools menu.
2. Select Copy in the Edit menu.
3. A dialogue box will appear asking you which element in the scene yc
Copy: Frames, Character or Sound. For our example select Frames and
(The process is identical for Characters and Sound.)
4. Click on the word From at the bottom of the screen.
5. Select a frame by clicking on the Frame box and typing a number, or
arrows to step through the scene to the desired frame.
6. Click on the word Thru at the bottom of the screen. Repeat step 5 to
frame.
7. Click on the word To at the bottom of the screen. Repeat step 5 again

8. Click Okay. The range of frames starting with From and ending with Thru will be "pasted" in at the frame specified by To.
9. If you don't want to make any changes, click Cancel instead of Okay.

DELETE This option lets you delete a section of frames, sound or a character's path from a scene.

1. Define a character path by following the instructions for Set Path Directly in the Tools menu.
2. Select Delete in the Edit menu.
3. A dialogue box will appear asking you which element in the scene you want to Delete: Frames, Character or Sound. For our example select Frames and click Okay. (The process is identical for Characters and Sound.)
4. Click on the word From at the bottom of the screen.
5. Select a frame by clicking on the Frame box and typing a number, or use the arrows to step through the scene to the desired frame.
6. Click on the word Thru at the bottom of the screen. Repeat step 5 to select a frame.
7. Click Okay. The range of frames starting with From and ending with Thru will be deleted from the scene.
8. If you don't want to make any changes, click Cancel instead of Okay

CLEAR PATHS This feature will erase all character paths in your scene.

1. Select Clear Paths in the Edit menu.
2. A dialogue box will appear asking you to verify your selection. Click Yes to confirm.

CLEAR BG Use this feature to erase the background to black.

1. Select Clear BG in the Edit menu.
2. A dialogue box will appear asking you to verify your selection. Click Yes to confirm.

CLEAR ALL This feature will remove all characters, paths and the background from the computer's memory. Do this only when you want to completely start over again with new characters and a new background.

1. Select Clear All in the Edit menu.
2. A dialogue box will appear asking you to verify your selection. Click Yes to confirm.

THE GOODIES MENU The Goodies menu contains special features and utilities that you can use to embellish your scenes.
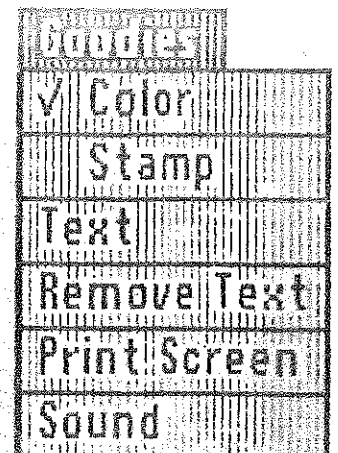
COLOR This feature allows more detailed path motion if you are using Animate with chrome monitor. If you are using a color monitor, you will get strange results feature is turned off.

The Color feature only affects your scene when you are defining paths for ch If the scene was created with Color off, it will ALWAYS run with Color off.

Color is "on" when there is a check mark by the word Color in the Goodies m

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STAMP Stamp is a special effect that causes an animated character to leave an impr itself on the background as it moves across the screen.
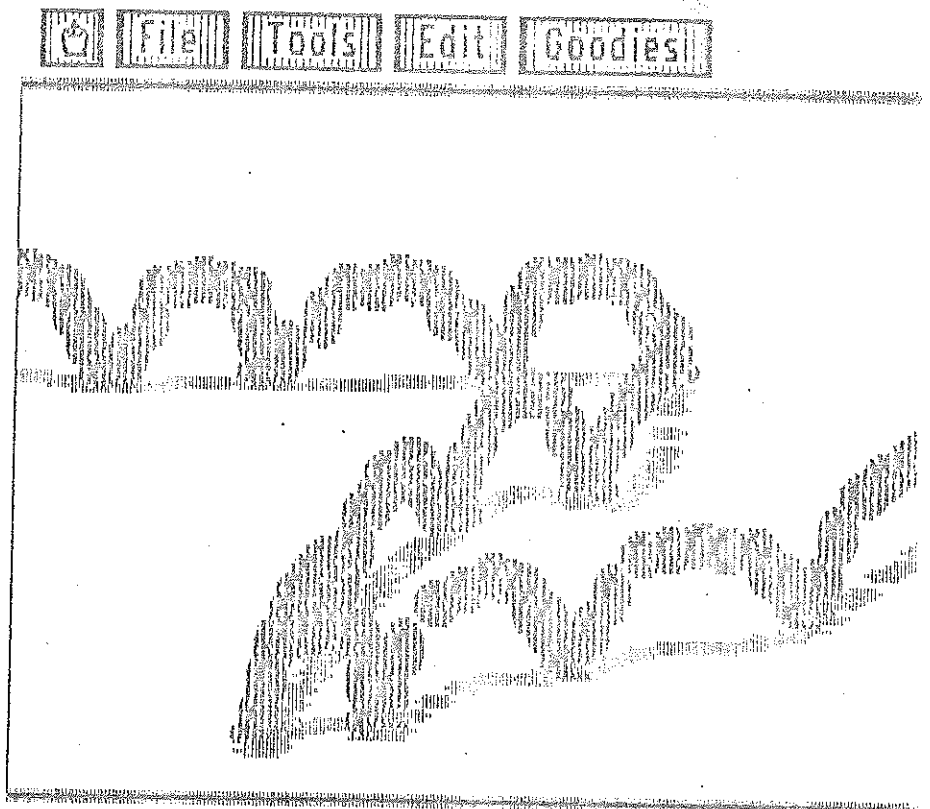
1. Get one or more characters using the Load option in the File menu.
2. When you are back at the main screen, select one character by clicking or name.
3. Select Stamp under the Goodies menu. A check mark should now appear the word Stamp in the Goodies menu—this means that the Stamp special effe is "on."
4. Select Set Path Directly under the Tools menu.
5. Hold the mouse button down and move the character on the screen. Notic the stamp feature makes the character leave an imprint of itself on the backgro
6. When you are finished press ESC.
7. To turn "off" Stamp, select it again, and the check mark will disappear.

TEXT This option allows you to insert text into your animated scenes. The text will ap a frame you designate, and will remain in your scene until you use the REMOV TEXT feature.

1. Create a scene by following the instructions for Set Path Directly in the Too menu.
2. Find the frame where you want the text to appear by stepping through the with the arrows at the bottom of the main screen.

Hi, my name is
Dave and I love
to jog...
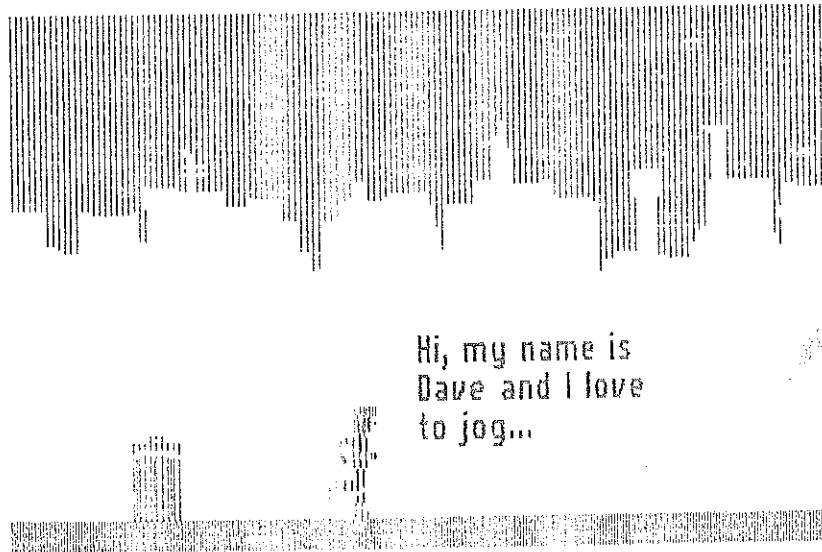
3. Select Text in the Tools menu.
4. Position the cursor on the screen to indicate where you want the text to appear and press the button. A blinking vertical bar will appear indicating that you can begin typing your text.
5. You can type up to five full lines of text. When you are finished, press the ESC key.

REMOVE TEXT   Once text has been added to your scene it will remain there until you use this feature to remove it.

1. Add text to your scene by following the instructions for Text in the Goodies menu.
2. Find the frame where you want the text to disappear by stepping through the scene with the arrows at the bottom of the main screen. It should be one or more frames past the point where the text was inserted.
3. Select Remove Text in the Tools menu.
4. Point to the text you want removed, click the button, and the entire phrase will disappear.

PRINT SCREEN   This feature allows you to print any single frame, or "still," from your animated scene.

1. Create a scene by following the Instructions for Set Path Directly in the Tools menu.
2. Find the frame you want printed by stepping through the scene using the arrow keys at the bottom of the main screen.
3. Make sure there is paper in your printer, and your printer is on.
4. Select Print Screen in the Goodies menu.

SOUND   This feature allows you to integrate sound into your animated scene.

HOW SOUND WORKS IN ANIMATE

When you run a scene that includes sound, the animation stops while the computer plays any notes that it encounters in each frame. The more notes that a frame has, the longer the animation must delay.
This is fine if you want your scene to pause at certain points with music playing. But if you want the music to play along with the animation, you have to "synch" it to the animation. This is done by spreading the music throughout the scene, entering only one note of music per frame, or even one note per every two or three frames. This way, the animation only stops for very short periods at any one time to play a note. It's recommended that you use notes of as short a duration as possible when implementing this technique.

Here is a step-by-step guide to the features found in Animate's sound editor:

SOUND EDITOR

MUSICAL STAFF

OPTIONS

CURRENT FRAME

FRAME SELECTOR

KEYBOARD

NOTES   RESTS
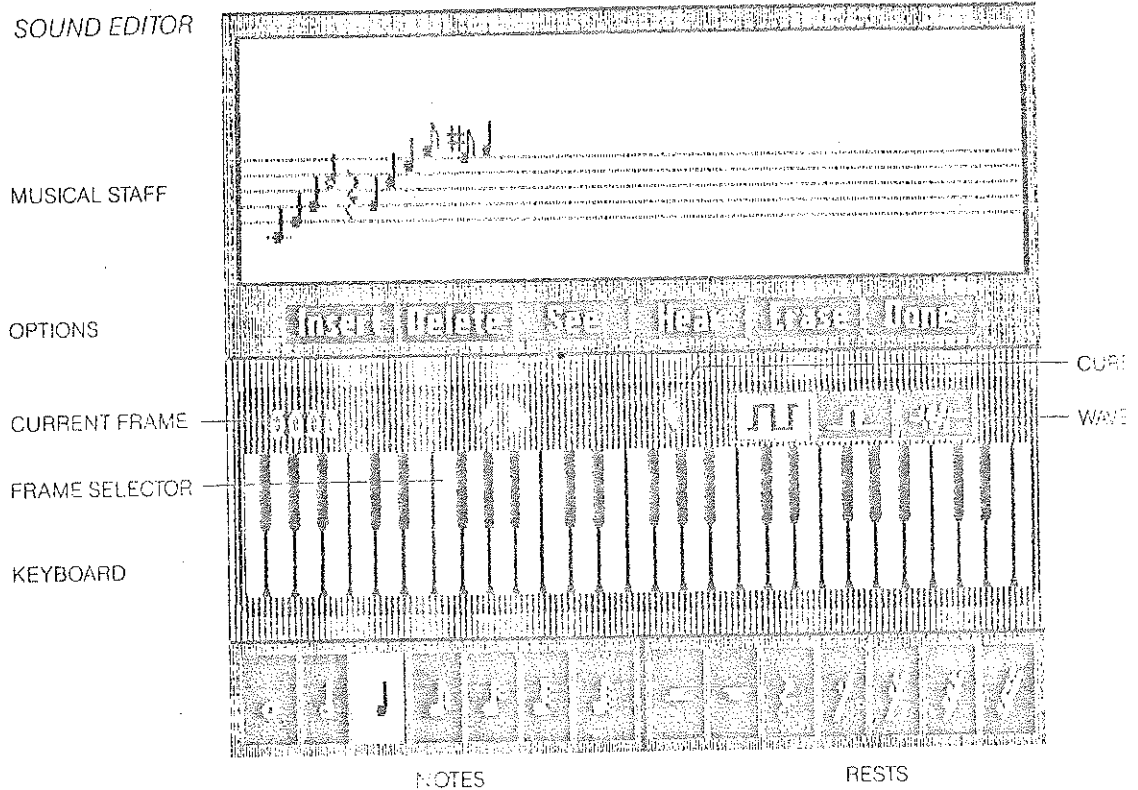
1.   Create a scene by following the instructions for Set Path Directly in the T menu.
2.   Find the frame where you want sound to start by stepping through the sc using the arrows at the bottom of the main screen.
3.   Select Sound in the Goodies menu. A piano keyboard with a musical sta top will appear. The entire staff represents ONE frame of your scene. The nu the left of the keyboard indicates which frame.
4.   Select tone duration from the seven available on the lower left area of th
5.   To the upper right of the keyboard are three waveforms that determine h will sound: Long Square, Short Square and Noise. Select the Short Square v (Note: the Noise wave has no pitch values.)
6.   Move the cursor to the piano keyboard and press the mouse button. You speaker will make a sound and a note will appear on the music staff above th keyboard.
7.   Click the right arrow to advance the scene one frame forward. The numb left of the keyboard indicates the scene frame. (You can also use the ← and → arrow keys to back up and advance the frames.)
8.   To see where in the scene you are, click See, and the current frame from scene will appear. You can step through the scene by pressing the arrow key the mouse button or press ESC to return to the music editor.
9.   Repeat steps 6 and 7 several times, moving the cursor over different key piano keyboard. You can also insert rests (pauses) by selecting them from th right area of the screen.
10.   Select Hear to listen to the music in the current frame.
11.   To clear notes from a frame select Erase.
12.   Repeat steps 6 and 7 several times again, sometimes putting more tha note in a frame.
13.   To get rid of an individual note, select Delete, point the cursor at one of ON THE MUSICAL STAFF and click the button.
14.   To insert a note between two other notes select Insert, point the cursor the notes ON THE MUSICAL STAFF and click the button. A vertical line will the staff. Any future notes that you enter will appear directly to the left of this
15.   When you are finished using the sound editor, select Done.

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APPENDICES

WORKING ELEMENTS

As you work with Animate you will be manipulating several different kinds of files: worksheets, characters, backgrounds, scenes and pictures. Each one of these files has a special purpose as described below:

Worksheet

A worksheet is your animator's sketchpad, created with the Graphic Designer. When you save a worksheet file on a data disk you are saving the image you see on the screen. A worksheet is used to develop your animated characters and usually contains shape drawings enclosed in frames.

Character

A character is something drawn in the Graphic Designer that animates. When you sequence frames on a worksheet you are actually creating a character. Until the frames are actually sequenced, all you have are static shapes. When you save a character to disk you are saving the frames you sequenced, in the order you sequenced them. You can then use the character in the Scene Designer.

If you destroy a worksheet, you won't destroy any characters sequenced and saved from that worksheet, but you will no longer be able to make any changes to them, or make new sequences from that worksheet. It's a good idea to keep your worksheets around, even when you've finished developing characters from them.

Backgrounds

As with a worksheet, when you save a background, you are saving the image you see on the screen, except there are usually no frames on a background. If you do happen to save a background that has frames on it, the frames will simply be treated as gray rectangles.

Animate saves backgrounds in a special way by compressing them so they take up a little space on the disk as possible.

Pictures

A picture is any screen drawing created independently of Animate. Pictures are loaded and saved using the Transfer Pic feature.

Using Transfer Pic you can even load single hi-res pictures. Animate will automatically convert them to double hi-res. Transfer Pic can also save double hi-res screens as single hi-res pictures.

It's important to note that a picture is different from a background. Backgrounds are pictures that are saved in a special way so they can be used by Animate in scenes. Backgrounds also take up less space on a disk than pictures do.

APPENDIX II

USING ANIMATE WITH DAZZLE DRAW

If you use Brøderbund's Dazzle Draw paint program, you may find it convenient to develop your character drawings and backgrounds in Dazzle Draw and then load them into Animate for frames, sequencing and inclusion in scenes.

To use your Dazzle Draw work as an Animate worksheet, you must first save the Dazzle Draw picture on a data disk, quit Dazzle Draw, boot up Animate and use the Transfer Pic function to load in the Dazzle Draw picture. After you've finished working on it in Animate, make sure you save it as a worksheet.

If you want to use a Dazzle Draw picture as a background for an Animate scene, follow the procedure in the above paragraph to load it into Animate, then save it as a back-

ground. (Dazzle Draw pictures are not the same as Animate backgrounds. See Appendix I on page 40, for more information about pictures and backgrounds.)

To work on an existing Animate worksheet or background in Dazzle Draw, use Tr. Pic to save the file as a picture, then load it into Dazzle Draw.

APPENDIX III

ProDOS AND ANIMATE

Animate uses Apple Computer's ProDOS filing system. ProDOS stands for the Professional Disk Operating System for the Apple II series of computers. Basical "operating system" tells the computer how to keep track of the files on a disk. Pro has been designed to identify individual disks by name, rather than by the disk d the disk happens to be in at any given time. Each disk is considered a volume of mation and is identified by its Volume Name.

When you format a disk for use with ProDOS, you must type in a name for the vc The information on a volume is divided into files. To load (or save or delete) a file ProDOS must know both the name of the file and the name of the volume it's on. Otherwise, ProDOS may not find it.

The prefix is a shortcut supplied by ProDOS to help you organize your files. You set the Prefix to the name of a volume, and then load (or save or delete) a file by plying only the file name—ProDOS will add the file name to the end of the Prefix identify the right file.

ProDOS has a special type of file called a directory file, or just a directory. A dire contains the names of other files which are considered to be within the directory Thus, a volume is a little bit like a file cabinet, a directory like a file drawer, and fi saved within the directory like individual file folders inside the file drawer.

Animate provides two special commands to help you with ProDOS—Prefix and C Line. Prefix lets you change the name of the prefix ProDOS automatically adds t file names you type, and On Line will tell you the names of all the volumes in the drives connected to your computer. Remember that the prefix can only be a volu name or a volume name followed by a directory name.

APPENDIX IV

UNI-DISK 3.5

Animate supports Apple's Disk 3.5 as a data disk drive. If your system has more one Disk 3.5 interface card, Animate will select drive 1 of the interface card in th highest numbered slot when formatting a data or show disk.

APPENDIX V

FRAMES Graphic Designer Frames

In the Graphic Designer, frames are used to define which portions of the screen meant to be animated. To animate the frames, you have to put them in order by sequencing them. When the frames are rapidly displayed, one after another in t sequence you selected, the images in the frames, your "character", will appear t move. This technique is known as "cell-animation", and is widely used in cartoon movies.

In Animate, frames appear as gray boxes on a worksheet. Often one of the boxe be highlighted with a white border, indicating it is a sequenced frame that was r modified or reviewed. Some important rules about frames that you should alway keep in mind are:

1. Frames cannot be put within or around other frames.

2. Frames cannot cross over or into other frames.

3. For consistency and ease of editing, it is best to keep the same frame size for all the frames of a particular character. When the frame sizes are all the same, it's easier to maintain the relative position of a character from one frame to the next.

4. Avoid making your frames any larger than they have to be. When your character is animating, the entire area bounded by the frame is redrawn for each character position. The larger your frame size, the longer it will take to animate. The three standard frame sizes provided in the Stnd. Frames option are good examples of frame sizes that animate at reasonable speeds.

5. If you want to animate a very large character, it will usually move faster if you break it down into smaller parts and animate those individually. For example, a giant monster contained entirely in one frame would animate much slower than the same monster broken down into several different parts, such as arms, head, legs and body. In the Scene Designer you would just put each of the parts together, defining paths for them like any other character.

Scene Designer Frames

In the Scene Designer, frames generally refer to the length of a particular scene. Each frame of a scene also corresponds to a frame of a character's animation.

When in a scene, a character will cycle through its own frame sequence. For example, if a walking man character is made up of 8 frames, when you introduce it into a scene, the animation will cycle through frames 1 thru 8 repeatedly.

You can alter the range of the cycle with the arrows under the character display in the Scene Designer. This is useful if, for example, you have drawn a spaceship that flies in 4 of its frames, and explodes in the last 3 frames. If you want to show the spaceship flying for a time before exploding, you can set the cycle to repeat frames 1 thru 4, and have the ship just fly. When it comes time for the explosion, the cycle is set for frames 5 thru 7 displaying just the explosion.

APPENDIX VI

MASKS While the standard masks that Animate generates are adequate for most situations, there are times when you may want to modify or create your own.

For example, if you create a character that is a round ball with black spots on it and animate it over a colored background, the background will show through where the black spots appear. Your red ball will seem to have holes in it. To make the entire ball appear solid you will have to change the existing mask.

Before you can edit the mask, you first need to know what it looks like. Here's how to expose the mask on the screen:

1. First you need to create a character: Select Stnd. Frames in the Tools menu.
2. Select 18 from the tool window.
3. Select Draw/Preview in the Tools menu.
4. Select a color from the palette and a brush shape and size.
5. Draw some shapes in the first three frames on the top line. (For the purposes of this example you can just draw some doodles, there will be plenty of time to get artistic later.)
6. Select the Frame Sequence icon. The cursor will turn into a pointing finger.
7. Point to the interior of each frame, one at a time. You have created a character by sequencing the frames.
8. Select Custom Mask in the Tools menu.
9. Select the first frame by clicking on the arrows in the tool window until the number 1 appears. The white frame border indicates the frame selected.
10. Click over Paste Mask in the tool window.
11. Move the dotted line box to the frame directly below the frame you selected. Make sure the upper left corner of the box is within the frame.
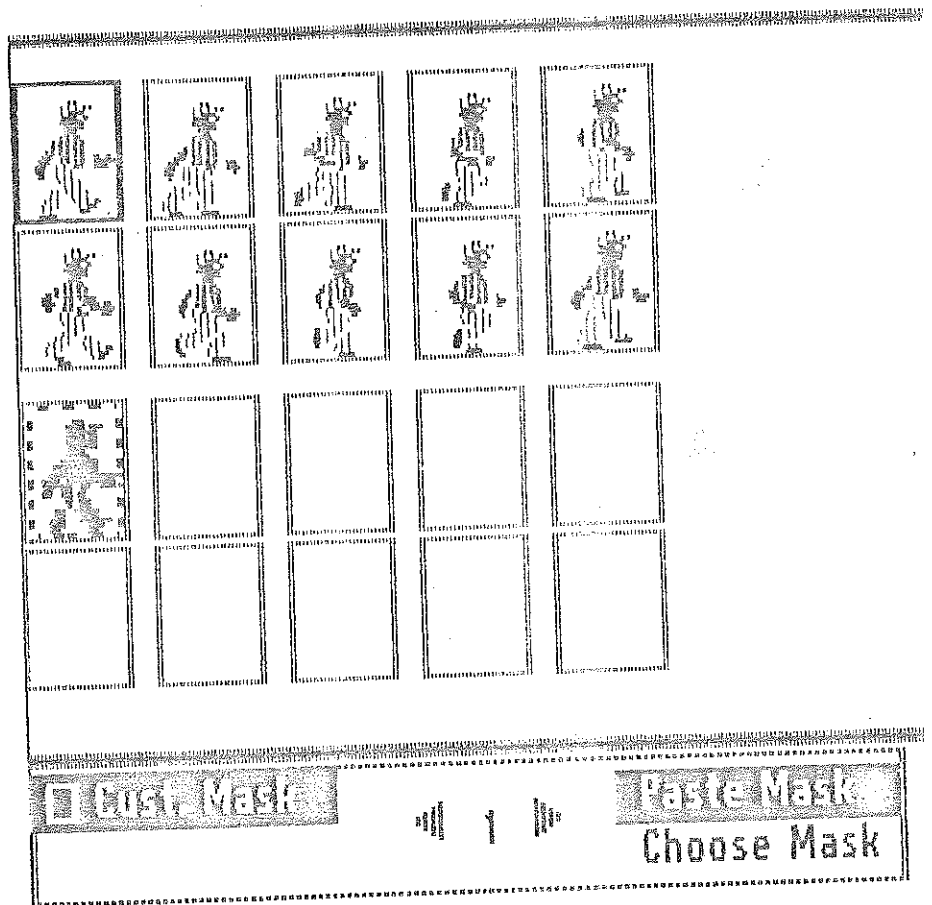
12. Holding the mouse button down press the space bar to align the box in frame. Release the button. You have just pasted the mask for shape 1 into t below it.

13. Repeat steps 9 through 12 for the remaining two frames.

[Note: In our example we had plenty of extra frames on the screen to use fo masks. If you generate frames with the Make Frames option you may only h enough frames on the screen for the character shapes. In this case make e for the masks by using Copy Frame in the Edit menu.]

When a character is animating in a scene, the mask is superimposed over t ground, "behind" your character, and regulates which parts of the backgrou through and which are completely covered by your character. Generally, ea the mask that is white is opaque; you can't see through it. Each part of the i is black you can see through.

[Note: Actually, white is not the only opaque color. Each color bit that is "on opaque, and each bit that is "off" will be clear. Since colors on the compute up of different on/off bit combinations, each color will have a different mask tern. See Appendix VII on page 44 for more information about color on the

Once the masks are visible on the worksheet you can edit them using the tures in Draw/Preview and reassign them to the character with Custom Ma

1. Select Draw/Preview in the Tools menu.
2. Select a color from the palette and select a brush shape and size.
3. Alter the look of the masks slightly by drawing on each one.
4. When you are finished, select Custom Mask from the tools menu.
5. Select frame number 1 by clicking on the arrows in the tool window. T border indicates the frame selected.
6. Click over Choose Mask in the tool window.
7. You can now assign one of the mask drawings to the shape in frame 1 inside the desired frame. A window will appear in the middle of the screen you what your character looks like against a white background, with the n

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8. Repeat steps 5 through 7 for the remaining frames.

Note: If you resequence the frames again they will default back to the standard mask. To use your new masks, simply re-assign them.

APPENDIX VII

HOW COLOR WORKS

One of the main features of Animate is its extraordinary use of color. This section is an introduction to how these colors work in your Apple IIe and IIc. It's not required reading for using Animate, but it will help you understand how double high-resolution color works.

How a Color Television or Monitor Works

The inside of the viewing surface of a color picture tube is coated with stripes, bars, or dots of phosphor. In the back of this tube an "electron gun" shoots a beam of electrons at the phosphors, which then give off light. The color picture tube has three different phospors, one which glows red, one green, and one blue. Every color the eye can see is created with one or more of these colors. The dots of phosphors are organized into groups of three (called triads.) Each triad is composed of one dot each of the red, green, and blue phosphor colors.

From your point of view as you sit at a sufficient distance from your TV or monitor, the light from individual dots in a triad appears to be mixed together, so that you'll see a mxture of the three colors, rather than individual dots of red, green, and blue. This way each triad can display a wide range of colors, depending on the brightness of its three color components.

What the Apple does

The Apple displays text and graphics by controlling the brightness of the beam of electrons fired by the electron gun. The electronics in the television automatically aim the beam at each triad on the viewing surface, one after another. The Apple turns the beam on to display bright areas, and off to display dark areas. Colors are created by switching the beam on and off within each triad. As an example, to produce the color violet, the beam is turned on when it is aimed at the red phosphor, off when it is aimed at the green phosphor, and back on again when it is aimed at the blue phosphor. It's the combination of just the blue and red phosphors that makes violet.

Double High Resolution Graphics

To display Double High Resolution graphics, the Apple divides each Red/Green/Blue triad into four sections, and is able to set the electron beam on or off for each of these sections. There is an on/off switch, or "bit," in the Apple's RAM for each section of each triad, and this bit determines whether the Apple will set the electron gun on or off for that section. Each possible combination of bright and dark sections within a triad results in a different color. This way the Apple can display any of sixteen colors at each triad. Each triad corresponds to a single picture element, or pixel.

How the Colors are Formed

Each triad contains a dot of red, green, and blue phosphor, in that order. The first section of each triad corresponds to three fourths of the red phosphor, so that when a bit in the Apple's RAM indicates that the electron gun should be turned on for that section, three fourths of the red phosphor will glow. Similarly, the second section corresponds to one fourth of the red phosphor and one half of the green phosphor. The third section corresponds to one half of the green and one fourth of the blue, and the fourth section to three fourths of the blue.

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ONE TRIAD DIVIDED INTO FOUR SECTIONS EQUALS ONE PIXEL

Red Phosphor	Green Phosphor	Blue Phosphor
First section	Second section	Third section	Fourth section
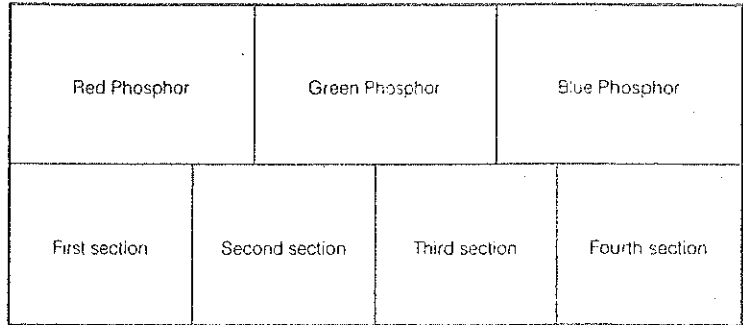
How Colors Interact

As you watch your monitor, you'll sometimes see a mixture of colors (or between pixels of different colors. The reason is simple — any three cons phor dots are capable of displaying any color. Consequently, any three a phor dots — for example, two from one triad (or pixel) and one from anoth interact, mixing their light together into possibly a different color. For exa pixel displaying blue (beam off for red and green, on for blue) is just to t triad displaying red (beam on for red, off for green and blue), the light fr and red phosphors will mix together and you will see the color as violet. you inspect the color closely with the Zoom command, you'll see a blue red pixel.

APPENDIX VIII

RGB MONITOR

Animate supports "mixed mode" RGB display. Mixed mode allows mono color to be displayed on the screen at the same time, resulting in easy t windows and dialogue boxes.

If you have an RGB monitor that does not have mixed mode capabilities played in Animate's menus, windows and dialogue boxes will be difficult order to get more information on the screen, Animate uses a smaller fol instances which does not display well on non-mixed mode RGB. Howev animated graphics display well.

APPENDIX IX

PROGRAMMER'S AIDS

The back side of the Animate Demonstration Disk Show Disk contains c animation utilities that programmers can incorporate into their own BAS bly language programs. To access the utilities, simply boot the back sid Demonstration Show Disk and the Programmer's Aids menu will appear

Brief explanations of the utilities can be found on the disk. More detailed is outlined below:

Watch Command for Applesoft

The WATCH command is an added ProDOS command which allows you run a scene from within an Applesoft BASIC program.

The command must first be installed, either by selecting the option from mer's Aids menu, or by issuing the command   BRUN WATCH.CMD   fro Applesoft command prompt.

Once installed, the command may be used either in immediate (from the deferred (within a program) mode using these conventions:

Syntax is: WATCH <scenename>

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Where < scenename > is the name of the scene file in the current default volume directory. Note that although the file is saved by the Animate program with "SC." preceeding the scene name, these characters should NOT be included in the < scenename > parameter. < scenename > must be a legal scene name, as used by the Animate program. Only the actual scene name should be given, without a path-name prefix.

If the scene includes a background, the background file must reside on the volume as well. Use the ProDOS PREFIX command to change the current default volume (see your ProDOS manual for details.)

If the scene file is not on the current volume, or if its background file is missing, the ProDOS error PATH NOT FOUND will be given.

Because of restrictions in memory when using Applesoft, the WATCH command may not be able to handle large scene files. If your scene uses many character shapes, or large character shapes, or if it is quite long running, it may not fit into available memory. If this is the case, the ProDOS error PROGRAM TOO LARGE will be given.

Since a large amount of memory is required by the WATCH command to load and run a scene, it may not be usable with very large Applesoft programs. The WATCH command uses both hi-res pages, plus the area between $6000-$8000 when called. In addition, HIMEM is lowered to $9400 (normal is $9600) to allow for the command handler itself. This leaves $8000-$9400 for Applesoft string storage or user subroutines.

Although Applesoft is not affected, locations $26F thru $2FF are used during execution, and all of auxilliary memory and auxilliary bank-switched (language card) memory is used as well.

After execution, the WATCH command returns the display to the mode it was prior to execution. Hi-res displays created by your Applesoft program will, however, be destroyed when a scene is run. .

Shape Output for Assemblers

This option is intended for assembly language programmers who would like to use characters generated with Animate in their own programs.

The utility, named SHPOUT, may be selected from the Programmer's Aids menu, or by using the ProDOS "smart" run command: -SHPOUT.

Selection of options from the main screen is accomplished by moving the " > " pointer with the arrow keys. Press the Space Bar to change an entry.

Selecting the Character file option presents you with a screen similar to the file operations window in Animate. Select between Prefix, Online, Okay, or Cancel by pressing the space bar. Select a file from the list with the arrow keys. Place the option bar over Okay, and press the Return to load the Character.

Selecting Output file will first ask you where you would like to send the output. You can choose from either a ProDOS text file, the screen, or a printer. If you choose to send your output to a file, a filing screen like the one used in selecting a Character will appear. Select the destination file with arrow keys, or type in the name. Place the option bar over Okay and press return to select the file.

The ASCII MSB option toggles between "Off" and "On" when selected. Some assemblers expect the text files to be in Negative ASCII format (MSB on.) Others expect Positive ASCII (MSB off.) Set this option according to the requirements of the assembler you are using.

The Method option toggles between "Columns" and "Rows." This determines whether the character will be listed as verticle columns of bytes, or as horizontal rows. The choice you make depends on the nature of your shape drawing routine. The example drawing routine (DRAW.EXMPL.S) included on the Programmer's Aids disk uses the Column method.

The Pseudo-Op selection toggles between the DFB pseudo-op and the HEX pseudo-op. Use the one compatible with your assembler.

The Label option defines a label that will be used at the start of each sequence image, along with the sequence number. The default label is SHAPE. Selecting this option allows you to type in a new label, up to 16 characters long.

The Header option defines a line that will appear as the first line in the
this option allows you to type in a new header, up to 28 characters long

When you have set all the parameters, press ESC to output the Charac
image definitions to the file, screen, or printer.

Changing the Default Values

Once you find the values you use the most when using SHPOUT, you
modify the program to use these as the default values. Here's how to d

First, BLOAD SHPOUT,TSYS,A$2000
Then, CALL - 151

The parameters to modify occupy locations $2008-$2038 as follows:

FUNCTION	ADDRESS	# OF BYTES
ASCII MSB	$2008	1
Method	$2009	1
Pseudo-OP	$200A	1
Label	$200B	16
Header	$201C	28

If you are using a printer which requires an initialization string, you m
string, in ASCII, in bytes $2038-$2047.

When all the values are set to your liking, re-save the file by typing BS
SHPOUT,TSYS,A$2000

Example of Drawing Routine

The Programmer's Aids disk includes an example source file DRAW.E
corresponding object file named DRAW.OBJ, which can serve as a m
double hi-res drawing routines. You may BRUN DRAW.OBJ to see wh
like.

The source file is in positive ASCII.

APPENDIX X

USING ANIMATE PRINT OUTS

The print outs that the Print Character option generates can be used
to show off your animated characters to friends, by making simple an
Here are just a few ideas:

FLIP BOOK: Flip books can easily be made by cutting out each frame of your cha
them in order and stapling them together at the top. To see your cha
simply fan through the "book" with your thumb.

ROTOSCOPE: Cut out your printed character frames and paste them, in sequence,
disk, about 5-7" across, so that the top of each frame is near the out
disk. Try to space them evenly.

Cut a narrow slit that you can see through, about 2" long, in a piece

Put a pin through the center of the disk and stick it into a pencil eras
pencil in one hand, spin the disk and look through the slit at the top
where you should see your character in motion.

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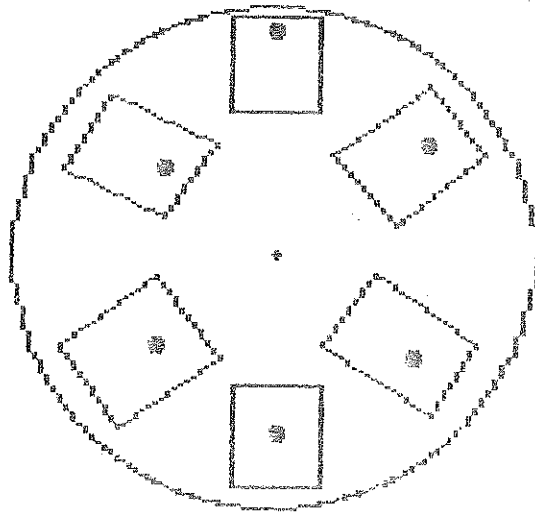
ZOETROPE: Cut out the printed character frames and paste them, in sequence, onto a long strip of cardboard, so that the bottom of each frame is near one of the long edges of the strip.

Cut narrow slits that you can see through, about 2" long, along the opposite edge of the cardboard strip. Position the slits between each of the character frames.

Bend the strip so the two ends touch and paste them together. The character frames should be on the inside.

Put the disk on a record turntable and either turn the record player on, or spin the turntable by hand, while looking through the slits. You should see your character animating.

(*Note:* You can build an elaborate zoetrope with Brøderbund's Toy Shop™ program, too!)
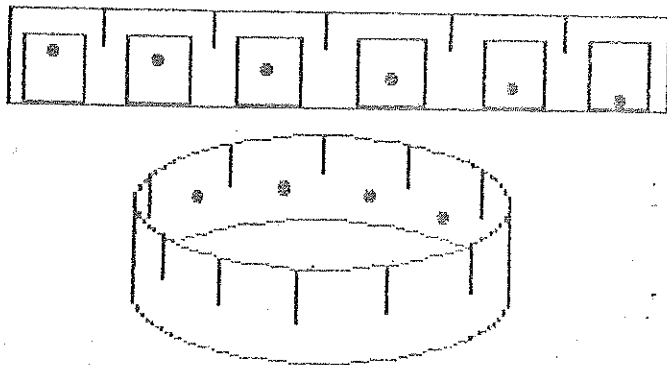
OTHER TOYS: Visit your local hobby or art supply store for books on how to make other animation toys, or use your own imagination to come up with some animation "gizmos" of your own!

GLOSSARY

[Note: Functions that are included in Animate menus and tool windows are shown here in all capital letters.]

ABOUT ANIMATE:
A CROWN menu function. Gives a copyright notice with the names of the author and publisher, and copyright date.

ADJUST COLOR:
A CROWN menu function. Calls up a screen with 6 color boxes to use as a visual aid during the manual adjustment of your color monitor or TV screen.

"Boot Up":
The process in which a program is automatically started by inserting a disk into the computer's disk drive and turning on the computer.

CAPTURE:
A Graphic Designer EDIT menu operation. Lets you modify your work. With the CAPTURE function, you can define a section of the screen and then CUT, COPY and PASTE it, FLIP it horizontally or vertically or INVERT colors in that section.

CATALOG:
A list of file names on a disk.

Cell-Animation:
A style of animation where the object to be animated is drawn throughout several frames, or cells. The frames are rapidly displayed in sequence to give the illusion of motion.

Character:
Any element of a scene that has a defined path. Characters are created in the Graphic Designer by sequencing frames on a worksheet.

Character Display:
Square area on the right side of the Scene Designer's main screen. Shows the currently selected character from the character list.

Character List:
Rectangular area on the left side of the Scene Designer's main screen, listing characters that are available for inclusion in a scene.

CHOOSE MASK:
A CUSTOM MASK feature. Lets you assign a mask to a particular shape.

CLEAR ALL:
A Scene Designer EDIT menu function. Erases all characters, paths, background, sound and text. Clears the computer's memory so you can start creating a scene from scratch.

CLEAR BG:
A Scene Designer EDIT menu function. Erases a scene's background to black.

CLEAR FRAME:
A Graphic Designer EDIT menu function. Removes a frame from the screen without altering its contents.

CLEAR IMAGE:
A Graphic Designer EDIT menu function. Eras of a cell-frame.

CLEAR PATHS:
A Scene Designer EDIT menu function. Erase: paths in a scene.

CLEAR SCREEN:
A Graphic Designer GOODIES menu function. your drawing from the screen and "clean your \ out turning off the computer.

"Clicking the Mouse":
Refers to pressing down and then releasing of mouse (or other input device) to activate differe used in Animate.

Clipboard:
A special "off-screen" area in the computer's m holds a section of your drawing that you have c or copied for future use. It holds one captured i

COLOR:
A Graphic Designer GOODIES menu function. choose between drawing in color or black and ' magnify sections of your drawing. Used with th function.

COLOR:
A Scene Designer GOODIES menu function. A choose between creating a scene for a monoch monitor.

COPY:
A Graphic Designer EDIT menu function. Used TURE to allow you to copy a section of your dra its duplicate onto another part of the screen.

COPY:
A Scene Designer EDIT menu function. Allows section of frames, character's path or sound fro: scene to another.

COPY FRAME:
A Graphic Designer EDIT menu function. Allow cate a frame and paste copies of it on the scree

CROWN menu:
The menu at the upper left-hand corner of the s includes the pull-down functions ABOUT ANIM, ABOUT . . . , ADJUST COLOR, PRINTER SETI ANIMATE.

Cursor:
The small white arrow or other shape (question paint brush, etc.) that functions as a pointer or p ing across the screen as you move the mouse.

CUSTOM MASK:
A Graphic Designer TOOLS menu function. Allc and assign masks to character frames.

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CUT:
A Graphic Designer EDIT menu function. Used with the CAPTURE and PASTE operations. Lets you lift off a section of your picture and place it onto the "clipboard" so you can PASTE it.

Cycle:
The range of frames that a character repeats when following a path in a scene: normally from the first frame thru the last frame, but the range can be modified in the Scene Designer.

DELETE:
A FILE menu function. Used to remove files from your data disk.

DELETE:
A Scene Designer EDIT menu function. Allows you to remove a section of frames, a character's path or sound from a scene.

DELETE:
A SOUND feature. Lets you remove notes from the musical staff.

Dialogue Box:
A box that appears on the screen which sets up a "dialogue" between you and the computer. It provides information and asks questions.

DONE:
A SOUND feature. Returns you to the Scene Designer's main screen.

"Dragging the Cursor":
Refers to moving the cursor by pressing down the mouse button, moving the mouse, then releasing the button.

DRAW/PREVEW:
A Graphic Designer TOOLS menu function. Lets you draw characters, backgrounds, sequence frames and preview motion.

EDIT menu:
In the Graphic Designer includes the pull-down menu operations: CAPTURE, CUT, COPY, PASTE, CLEAR IMAGE, COPY FRAME, CLEAR FRAME.

EDIT menu:
In the Scene Designer includes the pull-down menu operations: MOVE, COPY, DELETE, CLEAR PATHS, CLEAR BG, CLEAR ALL.

ERASE:
A SOUND feature. Clears the currently displayed musical staff.

FILE menu:
In the Graphic Designer includes the pull-down menu operations: LOAD, SAVE, DELETE, TRANSFER PIC, MAKE DIRECTORY, FORMAT DISK. Lets you save worksheets, characters, backgrounds and pictures onto a disk and then retrieve them for later use.

FILE menu:
In the Scene Designer includes the pull-down menu operations: LOAD, SAVE SCENE, DELETE, MAKE DIRECTORY, FORMAT DISK, MAKE SHOW DISK. Lets you load backgrounds and characters to make scenes with, and to save the scenes.

FLIP HORIZONTALLY & VERTICALLY:
Functions in the CAPTURE tool window. Allows you to flip defined areas of the screen either vertically or horizontally.

FORMAT DISK:
A FILE menu operation. When you want to save pictures on a new data disk, this operation prepares the disk to receive information from the computer.

Frame:
In the Graphic Designer, a section of the screen (called a "cell") that contains a single character image.

Frame:
In the Scene Designer, measures the length of your scene.

GO:
A Scene Designer function. Runs a scene from beginning to end.

GOODIES:
In the Graphic Designer includes the pull-down menu operations: GRID, COLOR, CLEAR SCREEN, PRINT SCREEN, PRINT CHARACTER. These are "goodies" that let you enhance your work, but aren't essential to using Animate.

GOODIES:
In the Scene Designer includes the pull-down menu operations: COLOR, STAMP, TEXT, REMOVE TEXT, PRINT SCREEN, SOUND. These are "goodies" that let you enhance your work, but aren't essential to using Animate.

GRAPHIC DESIGNER:
A Scene Designer TOOLS menu function. Takes you to the Graphic Designer.

Graphic Designer:
The part of Animate where characters and backgrounds are developed.

GRID:
A Graphic Designer GOODIES menu function that adds a visual aid to the ZOOM operation. Overlays an outline of contrasting lines over the magnified section, clearly delineating each pixel.

HEAR:
A SOUND feature. Lets you listen to the music that is currently on the musical staff.

HELP ABOUT:
A built-in assistance tool in the CROWN menu. Gives you a brief description of any Animate function you've selected.

INSERT:
A SOUND feature. Lets you enter notes on the musical staff in between other notes that are already there.

INVERT:
A function in the CAPTURE tool window. When active, this function will change all the colors in the captured space to their "opposite" colors. (Example: black changes to white.)

LOAD:
A FILE menu operation. The process of retrieving a saved worksheet, character, background, scene or picture from a disk and into the computer's memory.

MAKE DIRECTORY:
A FILE menu function that uses ProDOS to let you create a multi-level filing system for your data disk.

MAKE FRAMES:
A Graphic Designer TOOLS menu function. Lets you create custom sized cell-animation frames.

MAKE SHOW DISK:
A Scene Designer FILE menu function. Creates special data disks that can be used to automatically run scenes created with Animate.

Mask:
Regulates how a character will look when placed on a colored background. You can alter masks by using the CUSTOM MASK function.

Menu:
A screen display of a list of operations. In Animate's Graphic Designer the menu names appear as blue boxes across the top of the screen. In the Scene Designer they appear as green boxes. The five menus are: CROWN, FILE, TOOLS, EDIT, and GOODIES.

MOVE:
A Scene Designer EDIT menu function. Allows you to reposition a section of frames, a character's path, or sound within a scene.

PASTE:
A Graphic Designer EDIT menu function. Used with CAPTURE and CUT or COPY to reposition or reproduce "captured" sections of the screen.

PASTE MASK:
A CUSTOM MASK feature. Lets you display a shape's mask on the screen.

Path:
The course a character follows in a scene.

OFF:
A DRAW/PREVIEW feature. Turns the preview window off and "puts it away."

Picture:
Any full screen drawing that has not been saved as an Animate worksheet or background.

Pixel:
An abbreviation for "picture element," or the smallest building block normally used in a color drawing. A pixel in Animate is made up of 4 dots or "bits" of color.

Preview Window:
A DRAW/PREVIEW feature. The area of the screen that displays a character's motion.

PRINT CHARACTER:
A Graphic Designer GOODIES menu function. Lets you print out on paper the series of frames that make up a character. The character frames are printed out in their sequenced order.

PRINT SCREEN:
A Graphic Designer GOODIES menu function. Lets you print out on paper the image you have on your screen.

PRINT SCREEN:
A Scene Designer GOODIES menu function. on paper a "still frame" from a scene.

PRINTER SETUP:
A CROWN menu function. Asks you to enter F Card, and Slot Number information. For Anim these settings must match your equipment.

PRIORITY:
A Scene Designer function. Lets you alter whi pass in front of each other in a scene.

ProDOS:
Stands for "the Professional Disk Operating S the Apple II series of computers. Basically, it i instructions the computer follows to keep trac the files on a disk.

Prompt:
A message or question to you from the compi appear on the screen and either tell you how you to provide further information.

"Pulling Down Menus":
Refers to the method of choosing functions in pointing and pressing the mouse over a menu of the screen, then moving down the exposed and stopping on the menu function desired.

QUIT ANIMATE:
A CROWN menu function. Lets you exit Anim. start up another program without turning off y

REMOVE TEXT:
A Scene Designer GOODIES function. Erase: was added to a scene with the TEXT function.

SAVE:
A Graphic Designer FILE menu function. The ferring a worksheet, character, background or computer onto a data disk for future use.

SAVE SCENE:
A Scene Designer FILE menu function. The p ferring an animated scene from the computer for future use.

Scene:
A mini-movie or cartoon that contains one or r characters. Scenes are created in the Scene [they can also be enhanced with sound and te:

SCENE DESIGNER:
A Graphic Designer TOOLS menu function. T Scene Designer.

Scene Designer:
The part of Animate where scenes are createc

SEE:
A DRAW/PREVIEW feature. Activates the prev

SEE:
A SOUND feature. Lets you see the "action" in rently affected by the sound editor.

Sequence:
An ordered series of frames that define a character's animated motion.

SET PATH BY LEADING:
A Scene Designer TOOLS menu function. Lets you define a path by indicating a destination towards which the character moves.

SET PATH DIRECTLY:
A Scene Designer TOOLS menu function. Lets you define a path by directly moving the character with the mouse.

SET PATH WITH KEYBOARD:
A Scene Designer TOOLS menu function. Lets you define a path using the Apple keyboard.

Shape:
Any image in a single frame.

Show Disk:
A special data disk made using the MAKE SHOW DISK function in the Scene Designer FILE menu. Allows you to put together several scenes that will automatically run one after another.

SOUND:
A Scene Designer GOODIES menu function. Lets you add music and sound effects to your scenes.

SPEED:
A DRAW/PREVIEW feature. Lets you adjust the speed of the preview window.

SPEED:
A SET PATH BY LEADING feature. Lets you control how fast a character will move towards its destination.

STAMP:
A Scene Designer GOODIES menu function: A special effect that causes each frame image of a character to be "stamped" onto the scene's background.

STND. FRAMES:
A Graphic Designer TOOLS menu function. Automatically creates a page of cell-animation frames. Three standard sizes are available.

TEXT:
A Scene Designer GOODIES menu function. Lets you insert titles, dialogue and descriptions in your scenes.

TOOLS menu:
In the Graphic Designer includes the pull-down menu operations: DRAW/PREVIEW, ZOOM, MAKE FRAMES, STND. FRAMES, CUSTOM MASK, SCENE DESIGNER.

TOOLS menu:
In the Scene Designer includes the pull-down menu operations: SET PATH DIRECTLY, SET PATH BY LEADING, SET PATH WITH KEYBOARD, GRAPHIC DESIGNER.

Tool Window:
An elongated box that appears at the bottom of the screen when you select certain TOOL and EDIT features. Contain symbols for options available with the selected feature.

TRANSFER PIC:
A Graphic Designer FILE menu operation. Allows you to lc single hi-res and double hi-res pictures created with other grams. This feature automatically converts single hi-res pi tures to double hi-res, and vice-versa.

UNDO:
A feature in the Graphic Designer that lets you take back t last action you took, such as the last stroke you drew or th last section you cut, copied or pasted. It is active when the surrounding the word UNDO is red.

Waveform:
Used to define the type of sound a note will play in the sou editor. Three waveforms are available: long square, short square, and noise.

Window:
A box that appears over your drawing area when you sele certain features. Contains symbols for options available, o information on, selected features.

Worksheet:
A page of character images enclosed in frames, created ir Graphic Designer.
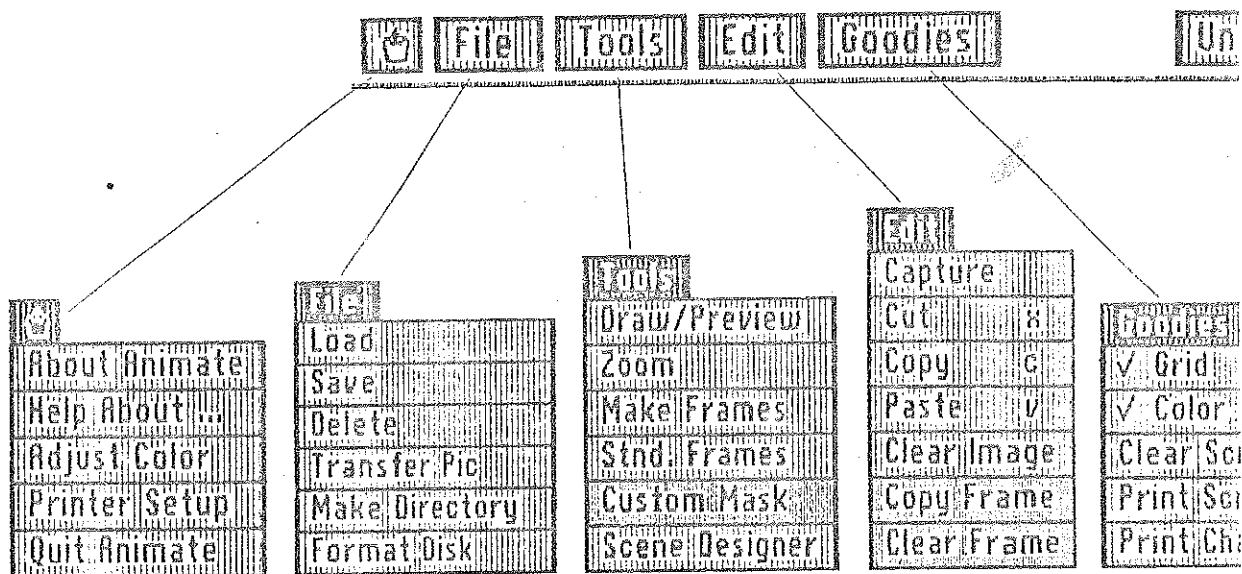
ZOOM:
A Graphic Designer TOOLS menu operation. Lets you red the magnified area you're working on, while you're workin

Zoom Scroller:
A device in the ZOOM tool window that lets you reposition magnified area you're working on, while you're working.

MENUS AT A GLANCE

THE GRAPHIC DESIGNER MENUS

Menu bar: | File | Tools | Edit | Goodies | Un

(Apple) menu:
- About Animate
- Help About ...
- Adjust Color
- Printer Setup
- Quit Animate

File:
- Load
- Save
- Delete
- Transfer Pic
- Make Directory
- Format Disk

Tools:
- Draw/Preview
- Zoom
- Make Frames
- Stnd. Frames
- Custom Mask
- Scene Designer

Edit:
- Capture
- Cut &
- Copy C
- Paste V
- Clear Image
- Copy Frame
- Clear Frame

Goodies:
- √ Grid
- √ Color
- Clear Sc
- Print Sc
- Print Ch

THE SCENE DESIGNER MENUS

Menu bar: | File | Tools | Edit | Goodies |

(Apple) menu:
- About Animate
- Help About ...
- Adjust Color
- Printer Setup
- Quit Animate

File:
- Load
- Save Scene
- Delete
- Make Directory
- Format Disk
- Make Show Disk

Tools:
- Set Path Directly
- Set Path By Leading
- Set Path With Keyboard
- Graphic Designer

Edit:
- Move
- Copy
- Delete
- Clear Paths
- Clear BG
- Clear All

Goodies:
- √ C
- S
- Tex
- Ren
- Prin
- Sou

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