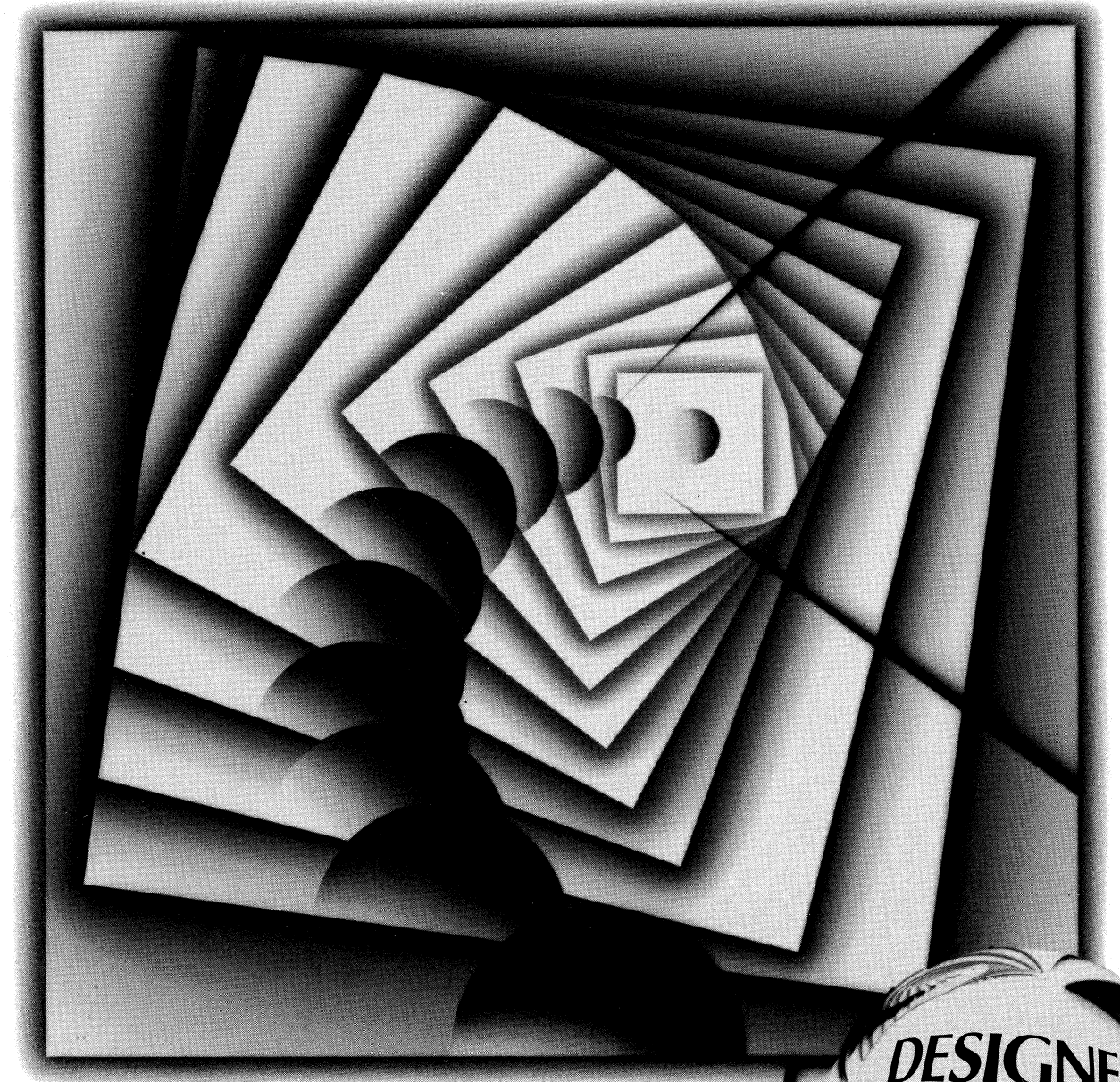


# FANTAVISION™

U S E R ' S M A N U A L





# FANTAVISION™

THE MAGIC MOTION/SPECIAL EFFECTS GENERATOR

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To Mom and Dad, with Love.

— Scott



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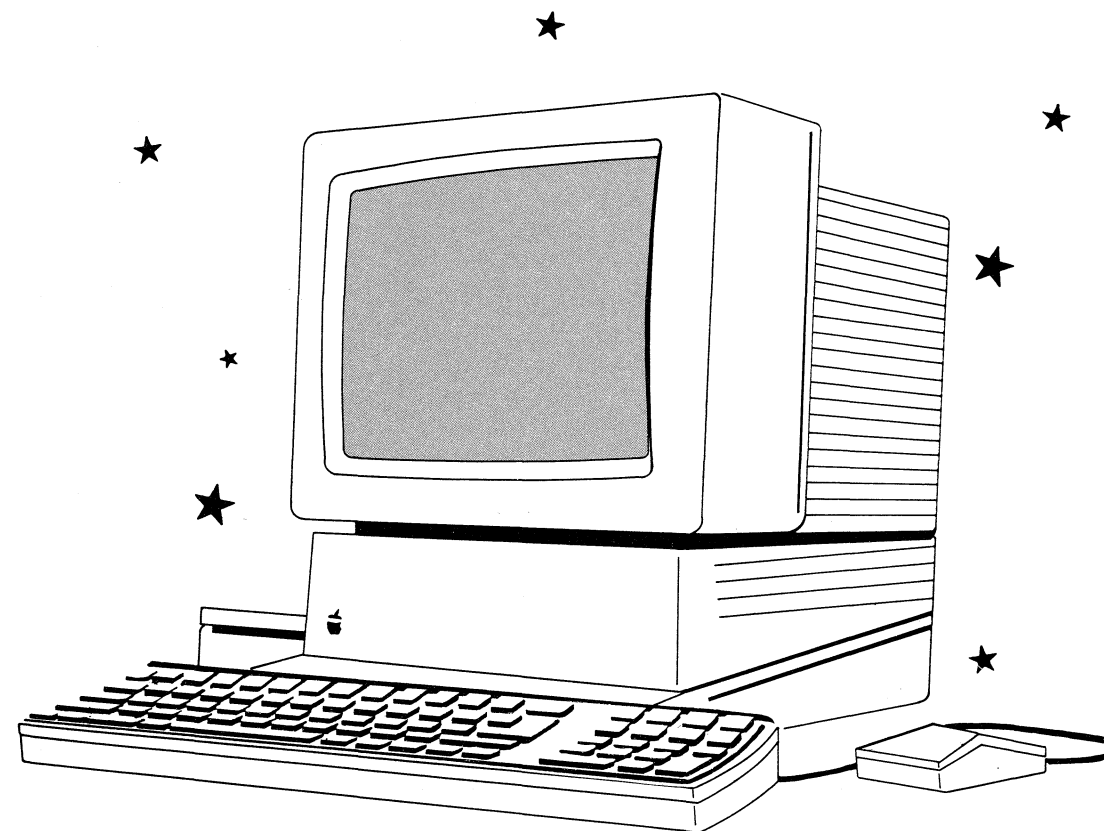
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# ABRACADABRA...

...you are about to make some magic. And if seeing is believing, then the best way to introduce you to the magic of FANTAVISION is for you to get a look at how it works. So before you start to explore this manual, boot up the FANTAVISION DISK, choose Matinee from the Crown Menu, and be amazed!

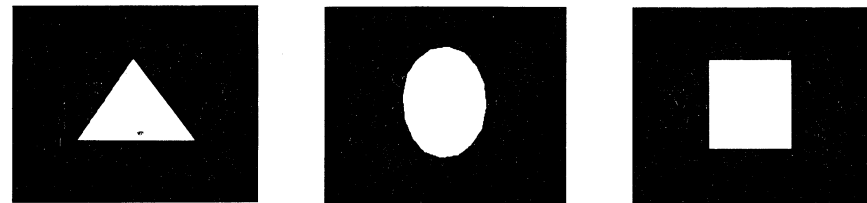




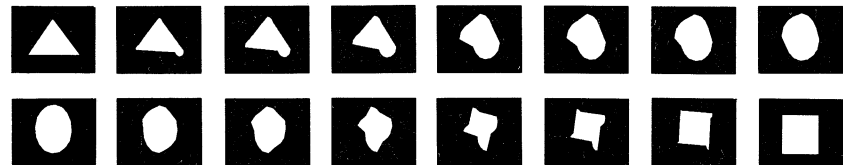
# HERE'S HOW FANTAVISION WORKS

## TWEENING AND TRANSFORMATION

To draw using FANTAVISION you plot a series of points which the computer connects together to form objects — something like the way “connect the dots” cartoons work. Then you and FANTAVISION become partners in manipulating those objects to create animation and special effects. It's a partnership where FANTAVISION does all the work, and you have all the fun!



“Tweening” — short for “in between” frames — is the animation technique that makes the objects you create “flow.” Frames are the building blocks of FANTAVISION. Each frame contains a single still picture that you create on the screen. (Frames are indicated on the FANTAVISION screen by the scroll bar on the right.) If, for example, you draw a stick figure standing straight up in Frame 1, and then draw the same figure touching its toes in Frame 2, FANTAVISION will run the sequence of Frame 1 and Frame 2 — with as many as 64 intermediate positions — so that your little stick figure will appear to bend over slowly to touch its toes.



“Transformation” is another technique central to FANTAVISION's magic. If you were to add, say, a frog in Frame 3, the little stick figure, after touching its toes, would turn smoothly into a frog.

With FANTAVISION you can produce original animated sequences from scratch, or with the program's easy-to-use editing features, make changes to the demo sequences located in the Matinee section of the disk. You can create background scenes for your sequences with FANTAVISION or load super-high-resolution backgrounds from another program. You'll also be able to produce self-running “movies” of your creations that you can show to friends, send as animated greeting cards, or use for demonstration purposes in the classroom or in meetings.

FANTAVISION can be whatever you want it to be — a tool or a toy. Just let your imagination run free, and see what happens!



# OFF AND RUNNING

## HOW THIS MANUAL IS ORGANIZED

### GETTING STARTED

This section tells you what hardware you'll need, how to load the program, and how to make a data disk.

### BARE BONES

If you're someone who prefers starting up the program and plunging right in, or if you can't wait another second to begin creating your own sequences, turn directly to the BARE BONES section of this manual starting on page 10. BARE BONES consists of brief, introductory descriptions of all of the various functions of the program.

### STEP-BY-STEP

If you need a little hand holding and prefer the “tutorial” approach to learning, turn to STEP-BY-STEP on page 27. This section will walk you through each function and give you hands-on practice as you go.

### APPENDIX I

This section tells you how to call up the Movie Matinee, a show made up of movie demos on the FANTAVISION disk, and tells you how to create a Show Disk of your own.

### APPENDIX II

This section explains in detail the more complex features of some of FANTAVISION's functions.

### APPENDIX III

This Trouble-Shooting section points out problems you may encounter when using some of FANTAVISION's features, and suggests how to solve them.

### GLOSSARY

This glossary provides definitions of terms used throughout the manual.

### AT-A-GLANCE

This quick reference section is located on the inside back cover. It includes a diagram of the FANTAVISION screen and a list of keyboard commands.



# GETTING STARTED

## WHAT YOU WILL NEED

- ▶ Apple IIgs with minimum 256K
- ▶ 3.5-inch disk drive
- ▶ color or monochrome TV or monitor
- ▶ mouse

## MOUSE

With the mouse, you can move the cursor (a black arrow or other shape) around the screen to select features and create and animate shapes.

FANTAVISION's features appear as "icons" (graphic symbols like the pencil, hands, and knife on the left side of the menu or the scroll bar on the right); as numbers; and as features with names, hidden under "pull-down menus." You can "pull-down" each feature from the main menu, much as you would a shade.

You select an icon or number by using the mouse to move the cursor to the icon or number you want. To highlight your choice, press and then release the mouse button. This is called "clicking the cursor." To select a feature from a pull-down menu, use the mouse to move the cursor to the menu and hold down the button. Then move the cursor to the feature you want and release the button.

## LOADING THE PROGRAM

Place the FANTAVISION disk in the 3.5-inch disk drive number 1, label side up. (If this appears to be the wrong disk drive, check the IIgs Control Panel for the starting slot; refer to your IIgs owner's manual for more information on "startup slot".) Turn on your monitor and then your computer. The program will load automatically, and a welcoming screen will appear.

## MAKING A DATA DISK

In order to save the movies and special effects you create, you will need a formatted data disk. To format a disk:

1. Pull down the FILE MENU, select Format Disk, and then follow the prompts. (ProDos disks formatted by the Apple IIgs system will also work. However, only those disks formatted in Fantavision will format as Show Disks.)
2. When you have completed the process, the program will return you to the main FANTAVISION screen.



## LOADING THE MOVIE AND BACKGROUND DEMOS

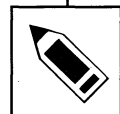
A collection of movie demos and sample backgrounds is located on the FANTAVISION disk. To gain access to these demos and backgrounds:

1. Start the Program. Pull down the FILE MENU and select LOAD. The Load Screen will appear.
2. Click the mouse button when the cursor is over the title of the Movie you want to run. The Movie will come up on the screen.
3. You may select a Background Screen from the LOAD screen by clicking the word "Screen", and then selecting a Background file. (Do this before you load the Movie. For example, before you load the Movie "Gulls", load the Screen "Windycove.")
4. To run the movie, click the cursor over the word GO at the bottom of the screen, or press "G" on the keyboard.



Each function discussed below is numbered to correspond with the diagram of the FANTAVISION Screen on the inside back cover.

## #1 DRAW



position.

To DRAW using FANTAVISION you plot a series of points which the computer connects to form objects. Points are plotted by clicking the mouse when the cursor is in the desired

You tell the computer that you are finished drawing an object either by connecting the last point plotted to the first, or by changing the Object Number or the Frame Number (see below). If you inadvertently close off an object by connecting the first and last points, or by changing the object-or frame number, clicking the mouse button twice while the cursor is in the drawing area will open it up again. You can then continue working from the last point you plotted.

There is a limit of 64 points per object. The OBJECT STATUS BOX (see page 15) will tell you how many points you have plotted. When you try to plot point 65, you will be told that the object is full. FANTAVISION allows you to animate up to 8 objects in each frame.

## #2 OBJECT COUNTER



The OBJECT COUNTER will tell you the number of the object you are currently working on by highlighting that number in black. When you are finished working on an object, you can use the OBJECT COUNTER to move on to the next, by simply clicking the cursor on the new Object Number.

You do not need to work on objects in numerical order. However, the higher the Object Number, the greater the priority of the object. In other words, if you draw Object #1 and Object #2 in exactly the same place, only Object #2 will be visible. If you want to grab Object #1, just click on number 1 in the Object Counter.

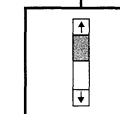
By using the CAPTURE BOX (see page 14), it is possible to work on more than one object at once. In this case all the objects being manipulated will be highlighted in black in the OBJECT COUNTER. You can use the OBJECT COUNTER to insert or delete objects from the CAPTURE BOX simply by pressing the appropriate Object Number.

You can introduce a new object or delete an existing object at practically any point. To delete an object from the rest of a Movie, do not use that Object Number for at least one frame. To introduce an object, simply make sure that the Object Number you want to use was not used in the previous frame.



The "French Window" to the right of the number 8 in the OBJECT COUNTER is used for two purposes. Normally, you will select this window when you are working on a background color. In this case the OBJECT STATUS BOX (see page 15) will show the Background color and the total number of points in the frame. The "French Window" also gives you access to two special FANTAVISION functions. See "Clipping Window" and "Super Palette" in APPENDIX II, (page 60). (The Super Palette is also explained on page 15 under THE COLOR PALETTE.)

## #3 THE SCROLL BAR



At the right of your screen is the SCROLL BAR. To tell what frame you are working on at the moment, look at the FRAME COUNTER at the top right corner of your screen.

To move to a different frame, press the UP arrow, which will take you "up", a frame at a time, to the beginning of the Movie, or the DOWN arrow, which will take you "down" to the end of the Movie. You may move to any frame at any time. However, whenever you "look" at a frame you "expose" it. That doesn't mean you can't use it. It means that a blank frame will be added to your Movie. Blank frames can be deleted using CUT from the EDIT MENU commands (see page 23).

If you're working on a long movie and want to move around quickly, rather than one frame at a time, drag the SCROLL BAR up and down to a new position. Also, you can click at any position on the SCROLL BAR. You may also move quickly through the SCROLL BAR by holding the cursor button down on one of the arrows.

## #4 GRAB POINT



moving.

The Grab command allows you to GRAB, and move any point in any object in the current frame. Lines which act like rubber bands will show you the points that connect to the one you're

The OBJECT COUNTER will highlight in black the Object Number you've grabbed.

Where many points are close together it may be difficult to grab the one you want. You may have to move the other points out of the way and then put them back after you've grabbed and moved the point you want. If two points are on top of each other, the object currently highlighted will take precedence.



## #5 INSERT POINT



To insert points into a completed object select the INSERT POINT command. By placing the cursor between two adjacent points (positioning it as close to the middle as possible), and then pressing the mouse button, you can "rubber band" around with your new point until you reach the desired location. Release the button and the new point is set.

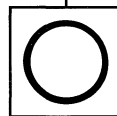
You cannot insert a point into the center of a solid object without starting at the edge.

## #6 DELETE POINT



You can delete points from an object with the DELETE POINT command. Place the cursor over the point to be deleted and click the mouse button. If you wish to delete an entire object, point by point, you must delete every point in it. The object will become a line, then a point, and then disappear. There are easier ways to delete objects. See CAPTURE BOX (page 14), CUT (page 23), and ZAP (page 24).

## #7 MAKE CIRCLE



The MAKE CIRCLE command places the center of a circle at the spot where the cursor is located when you press the mouse button. The circumference of the circle will be established by the point where you release the mouse button. The circle is made up of 16 points. Point 1 is located at the place where you released the button.

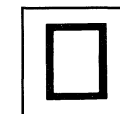
Very small circles will not look perfectly round when you blow them up using the ZOOM command. Circles are, however, "clipped" by the edges of the screen. What this actually means is easier to see in action than it is to explain. But in a nutshell here it is . . . Everything is clipped to a "virtual" window that is 256 x 256. Since the actual screen resolution is 160 dots wide by 200 lines tall, you can actually zoom objects outside of the confines of your screen. Note, however, that if you go beyond that "virtual" window, and you want to be able to zoom back down to your original circle, use ZOOM only and your circle will not be damaged. If you use any other tool or command while you are zooming out to the edges, your original circle will be squashed when you zoom back in. For fine-tune zooming, use ZOOM only!



You can't use MAKE CIRCLE when there are any points already plotted in that Object Number.

To make ellipses with MAKE CIRCLE you can squash or stretch your circle using the SQUASH command from the GOODIES MENU (see page 21).

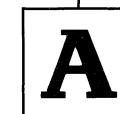
## #8 MAKE RECTANGLE



Select the MAKE RECTANGLE command to quickly make rectangles and squares using a rubber banding box, rather than drawing them point by point.

You can't use MAKE RECTANGLE when there are any points already plotted in that Object Number.

## #9 TEXT



### USING THE TEXT FUNCTION

Fantavision allows you to place text on the screen in two ways. The easiest and most flexible way is to use the Text mode, which you reach by selecting the "A" icon. This method allows you to type in the letters you want to appear on the screen.

The second method, which is more difficult to use, allows you to load in very complicated characters. This method is explained in APPENDIX II, "Using Fonts from the Program Disk" (page 57).

Once you are in the Text mode, place the cursor where you want to start typing and click the mouse button. Wait until you see a square cursor, then start typing. If you accidentally start typing before pressing the button, you will wind up entering keyboard commands, not typing.

The Text mode characters are always from the same font, but you can manipulate them using the GOODIES MENU to simulate a variety of typesyles. (For instance, use LEAN to make italics.)

Once you start typing you can put eight letters into each available Object Number. As one Object Number is filled, the text will automatically start to fill the next available Object Number so that you do not have to stop typing.

To delete, use the left arrow key. To end a line, use the **Return** key. To end an Object Number, use the right arrow key. Using these keys is handy for manipulating letters or words separately. For example, if you are working with the name Bob, you may wish to press the right arrow after typing "Bob", even though you could enter five more letters into that Object Number. Keeping the word "Bob" as a separate Object Number enables you to do such things as ZOOM, TURN, or LEAN "Bob" without including the letter that follows.



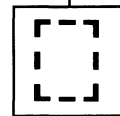


You may go back and re-open an Object Number with TEXT in it if it is not yet made up of eight letters. At this point FANTAVISION will once again automatically move to the next available Object Number so that you can keep typing without stopping to choose new Object Numbers. An Object Number needn't be empty of TEXT before more TEXT is added. This means that manipulating a single Object Number may affect letters in words far apart from each other. Likewise, the left arrow key will DELETE down through the Object Numbers in sequence, NOT back through the letters in sequence.

Check the STEP-BY-STEP procedure (page 31) if you find this confusing.

The letter (and eight points) created in the Text mode are actually lines made up of seven segments. Therefore, they are difficult to manipulate point by point. Study Line mode in the DIMENSION BOX to gain a clearer understanding of this matter.

## #10 CAPTURE BOX



The CAPTURE BOX allows you to select which objects in a frame you want to manipulate using the commands in the GOODIES MENU, and COPY, PASTE, and ZAP from the EDIT MENU. When the CAPTURE BOX is not selected the GOODIES affect all objects in the frame.

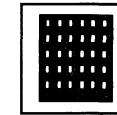
There are two ways to capture objects with the CAPTURE BOX. The first is to surround the objects with the CAPTURE BOX. You do this by holding the mouse button down and maneuvering the CAPTURE BOX around the objects until they are enclosed. Then release the button. The CAPTURE BOX will shrink to tightly surround the objects within it. The OBJECT COUNTER will highlight in black those objects included in the CAPTURE BOX.

The second way is to select the CAPTURE BOX command, then go straight to the OBJECT COUNTER and select the objects you want in the box. The CAPTURE BOX will expand to include those objects. With either method you may remove objects from the CAPTURE BOX by de-selecting their Object Numbers in the OBJECT COUNTER.

To move objects in the CAPTURE BOX, place the cursor within the CAPTURE BOX and drag to the desired location. To create a new CAPTURE BOX, place the cursor on the outside of the current CAPTURE BOX and start from scratch.



## #11 THE COLOR PALETTE



FANTAVISION comes with six PALETTES, each containing 24 colors and patterns. You can cycle through the different PALETTES using the UP and DOWN arrows in the lower left corner. The number between the arrows tells you the number of the PALETTE you are using.

**Note:** A special color resides at the very last position (lower right corner) of palette number 6. It is special in that it is not just a simple pattern, but it is an opal-like color that will shimmer and change during animation. The effect is called OPALESCENCE. The six colors in the bottom left are also special — they shift as the shape of the object changes.

### THE SUPER PALETTE

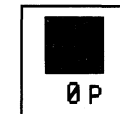
When French Window is selected, the word Palette replaces the Animation and Dimension boxes. The UP and DOWN arrow keys control this "Super" Palette. There are three Super Palettes, numbered 1-3:

1. The Fantavision Palette. This is the default, set when you clear the movie.
2. The Apple Palette. This is what Apple put in your ROM.
3. The Screen Palette. This is the palette of the last loaded screen. It starts out as the palette of the Fantavision Title page. Palette 3 is automatically set when you load a screen. You can create your own palette in a paint program, save the screen, and then load it into Fantavision for custom colors.

These three Super Palettes change every color displayed in the regular palettes at the left of your Fantavision screen. There are even three flavors of opalescence.

If you load in a strange background, Fantavision will force at least one color to be different, so you will still see the screen.

## #12 OBJECT STATUS BOX



This box displays the color and the number of points in the current active object. If you have selected a group of active objects with the CAPTURE BOX, the OBJECT STATUS BOX will display information about the lowest numbered object in the group.



## #13 GO

**GO**

Selecting GO will run the current Movie. To stop the current movie click the mouse button or press ESC and the movie will revert to the last frame you were working on.

### KEYBOARD COMMANDS WHILE RUNNING

<b>1-3</b>	Set Speed from slow to normal to fast
<b>Space Bar</b>	Stop and step through the animation
<b>Esc</b>	Escape: If you press Esc when the animation is running, or when you are stepping through the animation using the Space Bar, you can copy the image to the Clipboard, so that it can be inserted with Paste as a new frame. Returns you to current work frame.
<b>Return</b>	Skip to next movie if in Matinee only
<b>L</b>	Loop Current Movie if in Matinee only
<b>←</b>	Backward Animation
<b>→</b>	Forward Animation

## #14 GLOBAL



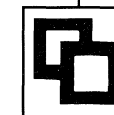
When you select the GLOBAL command, changes to an object using the COLOR PALETTE, ANIMATION BOX, or DIMENSION BOX, will be made to that object in all frames in which it appears.

The GLOBAL command looks for all frames in which the object to be changed has the same color (or animation type, or dimension) as in the current frame and changes those frames automatically. In other words, if you have a blue fish as Object #1 in Frame 1 and you want to change it to green, selecting GLOBAL and then changing Object #1 from blue to green will change all frames in which Object #1 was blue, to green. If Object #1 was yellow in Frame 3, it will NOT change to green because the command is "blue to green."

GLOBAL works in the same way when changing animation type or dimension, so that, for example, you can change a specific Object Number from Outline mode to Dot mode or from Normal mode to Trace mode. The GLOBAL command works on a singular attribute — color, animation style or dimension — not on any combination of the three.

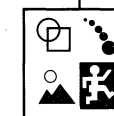


## #15 OVERLAY



The OVERLAY command allows you to preserve everything that appears on the screen at any time during the editing process. This enables you to keep your animation in register, to keep your Background visible as you make your Movie, or to study several frames at once.

## #16 ANIMATION BOX



There are four animation modes available in FANTAVISION. These are:

- Normal mode
- Background mode
- Trace mode
- Transparency mode

### NORMAL MODE



An object animated in Normal mode will change from the object drawn in the current frame to the object drawn in the subsequent frame with whatever number of intermediate frames you set when you establish the film speed. (See Keyboard Commands on the inside back cover.) As each new version of the object appears, the previous one is erased so that movement appears realistic.

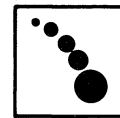
### BACKGROUND MODE



When you want an object you draw to become a part of the background, use Background mode. You may use this mode to create a Background at the beginning of your movie, or you may drop objects into the Background temporarily in order to use their Object Numbers for new animated objects.

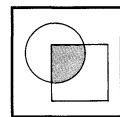
**NOTE:** WHENEVER BACKGROUND MODE IS USED, THAT OBJECT NUMBER SHOULD BE LEFT BLANK IN THE NEXT FRAME, UNLESS YOU WANT TO LEAVE A TRAIL IN THE BACKGROUND.

If you do not leave the next frame blank, then your background will leave a trail. If you run your animation backwards (using the left arrow while the movie is running), then the background will leave a trail if the previous frame is not left blank.



### TRACE MODE

In Trace mode an object will leave its image behind without erasing it. Trace mode is useful for a variety of special effects. Movie demos which show some of the uses of Trace mode include TRITRACE and VOLCANO. The Trace mode can also be used to speed up the animation. (See Speed Tips in Appendix II.)

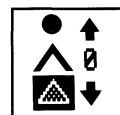


### TRANSPARENCY MODE

This mode animates objects in the same way the normal mode does, except that it adds the special effect of transparency. In Transparency mode an object will be "see-through", so that as it passes over the background or a lower-numbered object, a complementary color of the object and the color it is passing over appears. This is a helpful mode for creating ghosts, shadows, kaleidoscopes and other special effects.

**NOTE:** WHENEVER TRANSPARENCY MODE IS USED OVER A BACKGROUND COLOR OTHER THAN BLACK, THE COMPLEMENTARY COLOR WILL APPEAR IMMEDIATELY AND WILL NOT LOOK THE SAME AS THE PALETTE COLOR SELECTED.

## #17 THE DIMENSION BOX



Although all the objects in FANTAVISION are drawn by plotting points, the objects themselves may be solid shapes, lines or dots. The preset value for each new object is solid shapes. Within each "dimension" are a variety of modes which give you added options. These are:

#### SOLID SHAPES

0. No outline
1. Black outline
2. White outline
3. Black outline with last segment open
4. White outline with last segment open

#### LINES

0. Outline with last segment open
- C. Connect last segment to close shape
9. Leave a blank segment after 9 are drawn
8. Leave a blank segment after 8 are drawn
7. Leave a blank segment after 7 are drawn
6. Leave a blank segment after 6 are drawn
5. Leave a blank segment after 5 are drawn
4. Leave a blank segment after 4 are drawn
3. Leave a blank segment after 3 are drawn
2. Leave a blank segment after 2 are drawn
1. Leave every other segment blank



### DOTS

1. Smallest Size
- 2-8. Progressively larger
9. Largest dot size



### SOLID SHAPES

The preset value for Solid Shapes is No Outline. Use the DOWN arrow to cycle through the other values. Using either of the first two outline options gives objects a clean, distinct look. When using the Trace animation mode the outline keeps the shape of the object distinct against the trail it leaves behind during animation.

**NOTE:** USING AN OUTLINE OPTION WILL SLOW DOWN THE ANIMATION.

The two outline options that leave the last segment open allow you to add segments to a solid object without intervening lines. If you want to attach a leg to an elephant, for example, using option 3 or 4 on both the body and the leg will enable the parts to appear as a single solid object without a line separating them.

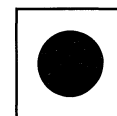


### LINES

Line mode is normally set to "O" for "Open." This means that a line will be drawn connecting only the points you plot. When you select the "C" for "Closed" option by pressing the Down arrow, the last point you plot will be connected with the first one to form a solid outline.

The numbered Line options are reached by pressing the UP arrow. These allow you to draw a variety of seemingly distinct objects which all use the same Object Number.

A blank segment is left after whatever number of segments you designate. You can use this invisible segment to get to some other point. For instance, if the Line mode is set to 2, all the legs of a spider could be a single object (assuming the spider has knees). The third, invisible segment, would be used to move the cursor from the foot of the spider's leg up to the body, in order to draw the next leg. You could also draw several human stick figures and have them use the same Object Number.



### DOTS

The preset value for Dot size is 5. Selecting the DOWN arrow makes the dots bigger (up to size 9), while the UP arrow makes them smaller. The smaller dots are the exact points you plot on the screen. The largest dot is still made up of only a single point, which is in the center of the dot. You cannot edit the edge of the dot in any way, since no points are plotted there.



## THE PULL DOWN MENUS: #18 THE GOODIES MENU

The GOODIES MENU consists of:

ZOOM



FLIP

TURN

SQUASH

LEAN

SOUND &amp; STUFF

There are two arrow indicators to the right of the word GOODIES, which will look like this when you start the program:  

All GOODIES commands act on all objects in the frame unless you use the CAPTURE BOX to specify which objects you want.

ZOOM

When you open the GOODIES MENU for the first time, the ZOOM command is already activated and will have a check mark next to it. Each time you select the outward arrows, the object(s) to be zoomed will be enlarged by 12%. Each time you select the inward arrows, the objects will shrink by 12%.

TURN

When you select the TURN command, two spiralling arrows will appear to the right of the GOODIES MENU. One arrow spirals clockwise, the other counter-clockwise. Each time you select one of the spiralling arrows, the object(s) to be turned will rotate 22.5 degrees (16 turns all the way around) in the direction of the arrows. When you use TURN **without** using the CAPTURE BOX, all objects turn around a point in the **center** of the screen. When you capture an object and TURN it, it turns around a point **in the middle of the CAPTURE BOX**.

LEAN

Selecting the LEAN command allows you to lean objects to the left or right by using the left or right arrows.



FLIP

The FLIP command allows you to flip the desired object(s) horizontally with the left-right arrows, or vertically with the up-down arrows. When you use FLIP without the CAPTURE BOX, the center of the screen is the line over which objects will flip. When you use the CAPTURE BOX, objects flip within it, and not throughout the frame.

SQUASH

The SQUASH command is used to flatten objects or to stretch them. SQUASH can be used to make ellipses out of circles and is useful for creating shadows.

SOUND &amp; STUFF

This option will allow you to select a Sound and other settings for a frame. The current frame will be reduced and displayed in the upper left corner of the screen. A different frame can be selected using the Scroll Bar or arrows.

To synchronize a Sound with the current frame, click on the name of the sound in the lower left corner of the screen. "Volume", "Pitch", and "Balance" may also be controlled on a Sound-by-Sound, frame-by-frame basis simply by moving the appropriate "sliders."

**(NOTE:** Volume can be set for all sound from your IIGs using the IIGs Control Panel. See your IIGs owner's manual for more information.)

Using different "voices" is also a good way to be sure that the Sound from a previous frame is not cut short by the next Sound played. If sound in Frame 1 is cut short by sound in Frame 2, set the sound in Frame 2 to a different "voice".

"Sustain" will cause the sound to repeat over and over again. Use STOP to end the sustain function for the voice that you sustained.

The Sound & Stuff Screen will also let you control frame "Looping" and frame Speed.

Looping allows you to replay a number of frames a number of times. For instance, you have created a Movie of a playful puppy, who wags his tail once, starting in frame 5 and ending in frame 10. To make him wag his tail 3 times, you can clone the series of frames several times, or from frame 10, you can select Sound & Stuff, change "Go to" to frame 5, and set "Repeat" to 2. When Fantavision gets to frame 10 the first time, it will then go to frame 5 and repeat the sequence two more times — a total of 3 "wags."



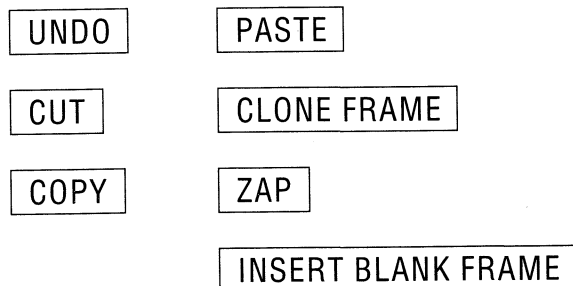
“Speed” is related to the number of “tweens” per frame. Normally, Fantavision creates 16. If you set it to the far left (64 tweens per frame), the animation will be very smooth, and much slower. Set to the far right, Fantavision will create no tweening, and your animation will be very fast. Anywhere in between allows you to precisely control the speed between each frame, so you can speed up or slow down your Movies where needed.

To leave Sound & Stuff, saving your changes, click anywhere on the Menu Bar or in the reduced image of the current frame.

To abandon the changes, click on the “Clear” button in the upper right corner and all information will be reset to the program defaults.

## #19 THE EDIT MENU

The EDIT MENU consists of:



CUT, COPY, PASTE, and ZAP work differently on the Frame level than they do on the Object level. UNDO works on the icon commands listed on the left side of the screen and on the COLOR PALETTE. CLONE always means CLONE Frame.

UNDO

1. UNDO and DRAW  
UNDO with the DRAW command will undo the last point plotted, unless that last point was used to close an object.
2. UNDO and GRAB POINT  
UNDO will return the last point grabbed to its former position.
3. UNDO and INSERT POINT  
UNDO will delete the last point inserted.
4. UNDO and DELETE POINT  
UNDO will restore the last point deleted.
5. UNDO and MAKE CIRCLE  
The circle disappears.



6. UNDO and MAKE SQUARE  
The square disappears.

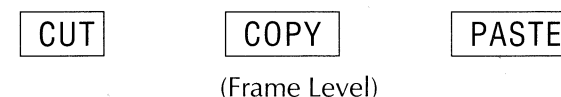
7. UNDO and TEXT  
UNDO removes the last object typed. Since an object may be made up of as many as eight letters, up to eight letters may be removed by the UNDO command. Always press RETURN first when you are finished typing text.

8. UNDO and CAPTURE  
UNDO will restore an object moved with the CAPTURE BOX to its former position. UNDO will not undo GOODIES commands. To undo GOODIES commands, just do them in reverse.

9. UNDO and COLOR PALETTE  
UNDO will undo the last change of color. Colors changed with the GLOBAL COMMAND cannot be undone with UNDO. You have to change them back with GLOBAL.

10. UNDO and GO, GLOBAL, OVERLAY, OBJECT COUNTER, BACKGROUND COLOR, FRAME COUNTER.  
UNDO has no effect on any of the above.

11. UNDO and ANIMATION TYPE, DIMENSION  
UNDO will take you back to your last change of ANIMATION TYPE or DIMENSION, though it's just as easy to change these manually.



CUT is one of the three commands that interact with the Clipboard. The other two are COPY and PASTE. When you CUT a frame, the whole frame goes to the Clipboard and replaces whatever else may have been there. The frame that has been cut **disappears** from your movie. To get that frame back you must PASTE it in front of the frame you want it to precede.

COPY differs from CUT in that it copies a frame to the Clipboard without cutting it out of the current movie.

PASTE lets you make a single copy of the frame you have CUT or COPIED. You do this by selecting PASTE while on the frame you want the pasted frame to precede.

**NOTE:** If you press **Esc** while the animation is running, or while you are stepping through the animation using the **Space Bar**, you automatically COPY the image to the Clipboard, so that it can be inserted with PASTE as a new frame. (This allows you to make a “tween” into a frame.)

**CUT****COPY****PASTE**

(Object Level)

You can use CUT, COPY and PASTE on the object level by first using the CAPTURE BOX. In this case, only the objects selected by the CAPTURE BOX will be affected. If no objects are selected, the entire frame will be CUT and COPIED. In addition, when you PASTE Objects into a frame they will simply be added to the objects already in that frame, rather than forming an entirely new frame. If, however, the number of objects in the current frame plus the number of objects on the Clipboard is more than eight, the extra objects will not be PASTED. Lowest numbered objects get pasted first. You may PASTE a single object in a frame multiple times by re-selecting PASTE.

**CLONE FRAME**

Selecting CLONE FRAME automatically copies the current frame to the END of the movie. CLONE FRAME does not affect the contents of the clipboard.

CLONE FRAME is handy when you have a complicated frame that you don't want to draw over again. You can simply CLONE it to the next frame (assuming that's the current end of the movie) and edit it from there. Sometimes you will "expose" a frame without realizing it, so that when you CLONE there are blank frames between the body of the movie and cloned frame. In this case, use CUT to delete the blank exposed frames.

CLONE FRAME is somewhat deceiving because nothing seems to be happening when you use it. If you look at the Frame Counter, however, you will see that you've jumped to the end of the movie.

When you use CLONE FRAME with the CAPTURE BOX, it works exactly the same way as without it, except that the CAPTURE BOX stays highlighted, even in the newly cloned frame. This is convenient when you are using the GOODIES MENU in an incremental fashion (e.g., slowly rotating a square). You can simply select CLONE FRAME and then a GOODIES option without having to re-capture the object in each frame.

**ZAP**

Using ZAP allows you to delete a frame or an object without affecting what's on the Clipboard. This is different from CUT which replaces the contents of the Clipboard with the CUT material.

**INSERT BLANK FRAME**

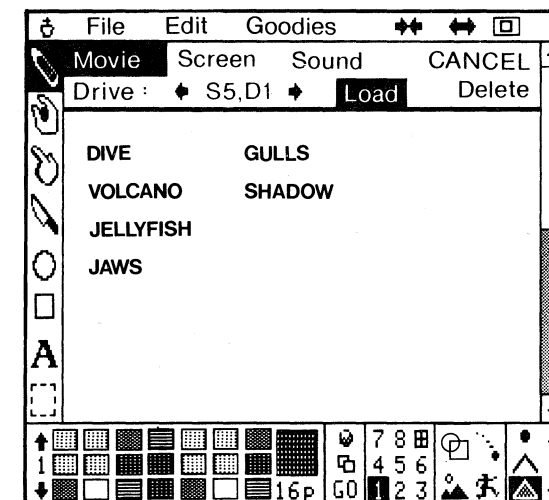
You may insert a blank frame at your current position in the movie by choosing INSERT BLANK FRAME.



## #20 THE FILE MENU

**LOAD****CLEAR****SAVE****FORMAT DISK****DELETE****QUIT****LOAD**

When you select the Load command, you will see a screen that looks like this:



A list of Movie files appears on the screen. To see additional files, press the DOWN arrow. Return to the beginning of the list by clicking "MOVIE". To select a Movie file, click the mouse button on the file name.

Loading one Movie on top of another Movie will result in the current Movie — but not the Background, if there is one — being automatically cleared. To load a Background file, click on SCREEN and follow the same procedure as for MOVIE.

**SAVE**

The SAVE command allows you to save a Movie, a Screen, or a Sound Library. You will need to have a formatted data disk on hand. If you haven't yet formatted a FANTAVISION data disk, refer to MAKING A DATA DISK on page 8, or the instructions under FORMAT DISK on page 26. In an emergency you may use any other ProDOS data disk. To leave SAVE without saving your Movie, Screen, or Sound Library, press CANCEL.



If there is no title for the movie when you click SAVE, a flashing underline will appear in the name box for you to enter one. To change a name, just click in the name box. Press **RETURN** to enter the name and save the movie.

To save your data to a disk in another disk drive, click on the DRIVE arrows until you see the DRIVE number where you want to save.

### DELETE

DELETE works a lot like LOAD. When you select it, a list of movies appears. Select the movie you want to delete by clicking on it. You can't get that movie back so use this command with caution! (Of course if you've backed up your disk, everything is safer.)

### CLEAR

When you select the CLEAR command, you will be asked if you want to clear a Movie, a Screen, or Sound. Highlight your choice, then click on CLEAR to proceed or CANCEL to leave the movie intact.

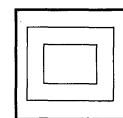
### FORMAT DISK

You may format or "initialize" a blank disk on which to save your Movies by selecting this command and following the on-screen instructions. This Command will automatically create a Matinee Show Disk for your movies. You may only format 3.5-inch disks.

### QUIT

When you want to leave FANTAVISION, select QUIT. Remove the Fantavision disk, insert another program disk and then reboot your computer by clicking on Y for Yes.

## #21 THE FULL SCREEN ICON



You may remove all menu bars, borders, and icons from the screen by clicking on the Full Screen icon. Only your drawing and the Full Screen icon will remain on the screen. Click on the icon to bring back the menus and tools.

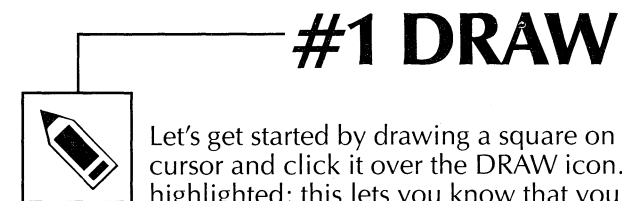


Before we begin our walk around the FANTAVISION screen, let's take a quick look at what FANTAVISION can do. Start up Fantavision, choose Matinee from the Crown Menu, and watch the fireworks!

Now that you've had a glimpse of the kind of delights you can create with FANTAVISION, press **ESC** to return to the FANTAVISION screen, and let's get started on the Grand Tour.

As with BARE BONES, this tutorial is organized numerically to correspond to the diagram of the FANTAVISION Screen on the inside back cover of this manual. You can refer to this diagram to identify the location of each of the features as we go along. You will notice, however, that in this section some of the features are dealt with out of their numerical order on the diagram. This is necessary in order to make a logical progression from one step of the tutorial to the next.

Before you begin, clear the screen, if necessary, by opening the FILE MENU and selecting CLEAR. You may need to clear both Movie and Screen.



Let's get started by drawing a square on the screen. Move the cursor and click it over the DRAW icon. The icon will be highlighted; this lets you know that you are ready to draw.

1. Move the cursor onto the blank screen, place it where you want to begin drawing your square, and click the button.
2. Now, click the button again and start to move the cursor around the screen. Notice that a line connects your cursor to the first point you plotted. This line is called a "rubber band". Rubber banding — or pulling this line around the screen — lets you see exactly what the line will look like when you connect it to the next point you plot.
3. Move the cursor to where you want the second point to be by taking your finger off the button. You should now have a straight line connecting your two dots.
4. Place a third dot on the screen. Now you have two sides of your square. To complete the square, move the cursor to make a fourth dot and then connect this dot with the first dot you made. You should have a black square.

Next, have some fun with this square you've created. To animate, you need to have several versions of the same object so that FANTAVISION can cycle between them. That's what animation is. But before you begin, you will need to understand a few things about the SCROLL BAR (#3 on the diagram).

The SCROLL BAR is made up of frames. These frames are the building blocks of the animation and special effects you will create with FANTAVISION. Your square has been drawn in Frame 1. To make it do something interesting, you need to get to Frame 2. To do this:



1. Put the cursor on the DOWN arrow at the bottom of the SCROLL BAR and click the mouse button once. (Don't put the cursor on the DOWN arrow at the very bottom of the screen. That arrow is not part of the SCROLL BAR.) The number at the top of the screen should now be 2. Your square has disappeared, and the screen is blank.

2. Press the UP arrow and your square will return. Press the DOWN arrow again, and your square will be gone. The UP arrow takes you up the SCROLL BAR to the beginning, the DOWN arrow takes you down the SCROLL BAR to the end. The SCROLL BAR will be discussed in more detail later on (see page 45).

3. Now, draw an object in Frame 2. This time make a triangle by placing three points on the screen before closing the shape. You should now be looking at a black triangle.

Two frames are sufficient to make a movie, however short. To run the movie, place the cursor on the word GO at the bottom middle of the screen (#13 on the diagram). FANTAVISION will automatically loop through your animation continuously. You have just made your first special effect. Congratulations!

To stop your animation you have two choices. Clicking the mouse button or **Esc** will return you to the last frame you were working on, in this case Frame 2.

With FANTAVISION it is not necessary to draw objects with an equal number of points in every frame. You'll recall that to draw your square, you plotted four points. To draw the triangle, you plotted three. There is a limit of 64 points per object. If you try to place 65 points in an object you are drawing, you will get an "Object Full" message. You can, however, continue to refine your object. We'll explain how when we get to Object Numbers and the OBJECT NUMBER COUNTER (see page XX).

## #4 GRAB POINT

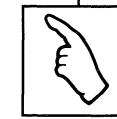


1. Select the GRAB POINT icon.
2. Move the cursor to one of the corners of your triangle.
3. Press the button and move the cursor. The rubber banded lines show what your shape will look like. Move the shape around a bit and then release the mouse button to set the new position.

When many points are close together it can be difficult to grab the one you want. Rubber banding enables you to see which point you've grabbed, and to move the points you don't want out of the way until you reach the point you do want. When you've positioned the desired point where you want it on the screen, you can then move all the other points back where they belong. If two points are on top of each other, the highlighted object is selected first. If you grab the wrong point, run the cursor off the edge until the rubber band line disappears, then release the button.



## #5 INSERT POINT



1. Place the cursor over the INSERT POINT icon and click the mouse button. Move the cursor to a place on the edge of your shape that is approximately halfway between two adjacent points.

If you try to insert a point too near one point and too far from the other, FANTAVISION won't understand what you're up to.

Also, you cannot insert a point by placing the cursor in the middle of your square or triangle. You must insert the point on the edge, and then move it from there.

2. Press the mouse button. When you move the cursor around, you should get a rubber banded image showing you where your new point will be once you release the button. If you're not getting the rubber banded image, you may be too close to one of the points between which you're trying to insert a point. Make sure you are halfway between the points, and that the two points are actually adjacent.

3. Try inserting points at various places on both your triangle and your square. You'll soon learn how to get rid of points if you add more than you really want. You might want to click GO to see how your animation looks now.

## #6 DELETE POINT



1. Select the DELETE POINT icon.
2. Move the knife to any of the points in your object (the points are at the corners) and click the button to delete the point. Notice that the two dots which were connected to the dot you deleted are now connected to each other. Run your animation again.

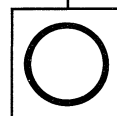
If you deleted one corner of your triangle you got a straight line. Yet you saw that your animation would still work. You can delete one end of the remaining line and you'll have just one point. Even with only one point, you can run your animation. Delete this final point though, and you can't run the animation. This is because there's nothing for the object in the other frame to change into.

Now, clear your screen. To do this, pull down the FILE MENU (#20 on the diagram) and select CLEAR. Click on MOVIE if it isn't already highlighted, and then CLEAR.





## #7 MAKE CIRCLE



MAKE CIRCLE sets the mid-point of the circle wherever you first click the mouse button. The first point in the circumference of the circle is plotted wherever you release the button. Knowing the location of the first point in the circle is important when you are planning your animations. If your circle didn't end up in the right place, simply capture it and move it, or ZAP it and begin again.

1. Start by selecting MAKE CIRCLE and placing the cursor on the screen. Press the button, then move the cursor up two or three inches before releasing it.

2. Now do the same thing for Frame 2.

3. For Frame 3, press the mouse button, then move the cursor to the right several inches before releasing it. Press GO to run the animation.

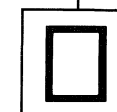
Notice that while the transition from Frame 1 to Frame 2 is relatively straightforward (assuming you drew your circles more or less the same size), the animation from Frame 2 to Frame 3 and from Frame 3 to Frame 1 makes it appear that the circle is rolling. That's because the point at which you release the mouse button is considered the first point in the circle. The first point of the object in one frame moves to the first point of the object in the next frame, so the circle appears to roll to the right and then back again.

4. Now let's draw another circle in Frame 4, only this time move the cursor to the left and release the button. Run the animation. You'll notice that at one point your circle seems to become very small. That's because the points between Frames 3 and 4 are switching places, since you went to the right with the cursor in one frame, and to the left in the next. During the transition they meet in the middle, so the circle appears small.

You will learn later in this tutorial how to change your circle from a solid, to an outline, to a circle made of dots. You may want to know how to change the speed of your animation, since solid circles have been known to move slowly unless prodded. See the section titled **KEYBOARD COMMANDS** on the inside back cover of this manual. The number keys 1 through 3 are speed controls, with 1 being the slowest speed and 3 the fastest. The slower you go, the more smoothly things will seem to move. Also see speed control by frame under **SOUND & STUFF**.



## #8 MAKE RECTANGLE



MAKE RECTANGLE is similar to MAKE CIRCLE except that a rectangle is made of only four points. The first point will be plotted when you press the mouse button; the third point will be plotted when you release it. (The second and fourth points are plotted automatically.)

1. CLEAR the circle movie you created.

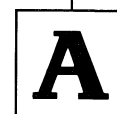
2. Select the MAKE RECTANGLE icon.

3. Move the cursor onto the blank screen and plot a point near the center of the screen by pressing the button. This point will be one corner of the square.

4. Hold the button down and move the cursor down and to the right to create a square or rectangle.

5. Now go to Frame 2 and make a square by starting at the lower right corner and moving the cursor to the upper left. Click over GO to run the animation. Again, just as with circles, you've flipped the location of the first point from one side of the object to the other. At one point, the object will almost disappear.

## #9 TEXT



There are two ways of putting text into FANTAVISION movies. The usual way is to select the TEXT icon and follow the steps outlined below. The text that you get using this approach is easy to use and manipulate. Another way of handling text by using Movie files with special fonts in them, is covered in APPENDIX II, "Using Fonts from the Program Disk" (page 57).

1. CLEAR the movie.

2. Select TEXT by clicking the mouse button over the "A". Move the cursor to the left side of the blank screen, click the button (a rectangle will appear) and type the following:

I LOVE

If you make a mistake while typing, use the left arrow key to delete backward one character at a time. When you're done, press **RETURN** or click the mouse button. Position the cursor on the next line, click the mouse button, and type **DOGS**. Then press **RETURN**.



If you suddenly find that you're looking at a list of movie titles instead of **I LOVE DOGS**, you forgot to click the mouse button. Without that click FANTAVISION thinks you are giving keyboard commands, rather than typing in characters. Select CANCEL to get back to where you want to be.

If you find you don't have room to write **I LOVE**, select ZAP from the EDIT MENU and start again — farther to the left. Now look at the OBJECT COUNTER. Notice that you are on Object #2. This is because you have typed nine characters. Each Object Number can hold eight characters, after which the text is automatically moved to the next available Object Number. Spaces do not count. Thus, the **S** in **DOGS** is the first character in the second Object Number.

3. Give some thought to what you've just done. You may think it would be a lot of fun to make text spin around and flip as you've seen it done on the FANTAVISION demos. But right now, even if you just wanted to color the words **I**, or **LOVE**, or **DOGS** different colors, you would have a problem. That's because Object #1 consists of the first eight characters, **I LOVE DOG**, Object #2 has the last S. If you try to color any of your objects you will wind up with an odd mix.

To see how this would look, try clicking the cursor on one of the colors in the COLOR PALETTE. Notice that only the S changed color. Move back to Object #1 and try a different color. See what we mean?

You want each of the words to respond as if it were an object unto itself. This is how to do it:

CLEAR the movie and type again, only press the right arrow key after **I** and **LOVE**. (There is no need to press the **Space Bar**). Press **Return** when you're done. Now select a color from the COLOR PALETTE. This time the entire word, **DOGS**, is object number 3 and changes color.

You can add text to an existing object by highlighting its number before you position the cursor. This text will get mixed in with other text objects. That's O.K., but it gets tricky when you use the Backspace. The Backspace moves backwards through an object, not necessarily backwards through the text, so be careful.

## #2 OBJECT COUNTER



You'll use this feature a lot as you work with FANTAVISION. It will tell you what object you are working on at any given time. Now CLEAR the movie and we'll start another project.

1. Start by making a simple triangle. If you then try to plot another point to start a new object nothing will happen when you click the button once. (If you click the button twice, it will re-open the triangle.)

2. You can use the OBJECT COUNTER to tell FANTAVISION that you are finished with one object and want to work on another. Move the cursor and click over number 2.



3. Now, go back to the screen and draw a new shape directly on top of the old one. This time you shouldn't have any trouble.

You do not need to work on objects in any numerical order. However, the higher the Object Number, the greater the priority of the object. In other words, if you draw Object #1 and Object #2 in exactly the same place, only Object #2 will be visible. Right now, since both of the objects are black, this may be a little unclear.

To illustrate how this works we'll need to use the COLOR PALETTE.

4. Move down to the COLOR PALETTE and click the cursor over one of the colors. You should now be looking at object #2 that is filled with the color you selected.

5. Now click Object #1. Move to the COLOR PALETTE and click the cursor over another color. You won't see much change now because, regardless of what color you make Object #1, it won't be visible if Object #2 is on top of it.

### ANIMATING MORE THAN EIGHT OBJECTS IN YOUR MOVIE

It is possible to have any number of objects in your movie as long as no more than eight are animated at any one time. You can introduce a new object and delete an existing object whenever you want.

To delete an object, simply do not use that Object Number for at least one frame. To introduce an object in the middle of a movie, make sure that the Object Number you want to use was not used in the previous frame.

To see how this works, first CLEAR the current movie. Then:

1. Load the Movie Demo called "Objects". If you need to refresh your memory on how to load demos, refer to LOADING MOVIE AND BACKGROUND DEMOS on page 9.

You will notice that there are eight objects on the screen in Frame 1. Objects #1, #2 and #3 are the rectangles on the left; Objects #4, #5, #6, #7, and #8 are the colored balls on the right. Now click to Frame 2. Again the same eight objects appear, but in different positions. The same is true of Frame 3. But when we get to Frame 4, Objects #4-8 are the only objects on the screen. Objects #1-3 have not been used.

2. Now click Frame 5. Objects #4-8 are still the same colored balls, but Objects #1-3 have been used to create a juggling stick man. By not using Objects #1-3 in Frame 4, those Object Numbers were freed so that they could be used to represent something other than the rectangles drawn in the first three frames.

3. Now click through Frames 6-8 to Frame 9. Here again in Frame 9, Objects #1-3 have not been used, allowing those Object Numbers to represent something else — in this case, the original rectangles — as the animation loops from Frame 8 through Frame 9 and back to Frame 1. To see how it all looks, just click the cursor over GO, and sit back and watch the show.



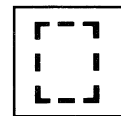
The "French Window" to the right of the number 8 in the OBJECT COUNTER is used for several things. In FANTAVISION's regular mode, selecting this window means you are working on the Background color. In this case the OBJECT STATUS BOX (see page 36) will show the Background color and the total number of points in the frame. The French Window also gives you access to special FANTAVISION functions. See APPENDIX II (page 59).

4. Click over the French Window and then select a color from the PALETTE. Presto, a color fills the Background of the Movie Demo.

When you're done with the French Window, you should select an Object Number or a drawing tool, so you won't accidentally set the clipping window (Appendix II).

There are other things you can do with the OBJECT COUNTER, and we'll discuss these when we explore the CAPTURE BOX, next.

## #10 THE CAPTURE BOX



You'll use the CAPTURE BOX when you don't want to edit a whole frame at once. To explore this feature, load the Movie Demo called "Snowman".

1. Pull down the FILE MENU, choose LOAD, then select SNOWMAN from the list of titles.

2. Select CAPTURE BOX. Your cursor will now behave in the same way it did when you were making squares or rectangles. In this case, however, you are going to use it to "capture" objects on the screen and move or edit them.

3. In order to use the CAPTURE BOX you must completely surround the object you wish to capture. Practice by placing a CAPTURE BOX around the head on the demo. Move the cursor to a place above and to the left of the hat. Press the mouse button, then move the cursor diagonally to the corner below and to the right of the face, and release the button. Notice that the CAPTURE BOX will shrink to surround any objects within it.

4. Now take a look at the OBJECT COUNTER. Objects #3, #4 and #6 are highlighted in black. This tells you that the face on the screen consists of three objects. In this case the head is Object #3, the hat is Object #4, and the face Object #6.

If you prefer, you can define the objects you want to capture by number. Let's try it.

1. First, click the cursor in the drawing area outside of the capture box. The CAPTURE BOX will disappear, and Objects #3, #4 and #6 will no longer be highlighted in the OBJECT COUNTER.

2. Click on Object #3. The CAPTURE BOX will enclose the head.



3. Click Object #4. The CAPTURE BOX will now surround the hat.

4. Finally, click Object #6. The CAPTURE BOX will now include the eyes and mouth.

### MOVING WITH THE CAPTURE BOX

If you place the cursor within the existing CAPTURE BOX, the objects within that CAPTURE BOX will move around on the screen as you move the cursor. Let's try it.

1. Move the cursor to a point inside the CAPTURE BOX that surrounds the head. Hold down the mouse button.

2. Now move the cursor to the left. The frame of the CAPTURE BOX will move with you.

3. Release the button. The objects that were inside the CAPTURE BOX will move over so that they are inside the frame again. Try moving the head to several different places on the screen.

4. Select Object #6 in the OBJECT COUNTER. What happened? You probably can't see much difference, except that #6 is no longer highlighted. In a moment you'll see what you've done.

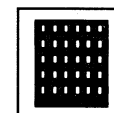
5. Objects #3 and #4 are highlighted in black in the OBJECT COUNTER. Place the cursor within the CAPTURE BOX, press the button and move the cursor to the left or right. The face stays put. That's because when you selected Object #6, you removed the face from the CAPTURE BOX.

6. To put the face back, place the cursor outside of the existing CAPTURE BOX and capture the face

7. Place the cursor inside the CAPTURE BOX and drag it to its proper place with the other parts of the head. When you release the mouse button, the face will be back where it belongs.

When multiple objects are within the CAPTURE BOX, the object information (see OBJECT STATUS BOX, page 36) regarding color, number of points, animation type and dimension type refers to the lowest number object within the CAPTURE BOX. When you are finished rearranging the Snowman, exit the capture mode by selecting a different drawing tool.

## #11 THE COLOR PALETTE



At the bottom left of your screen are three rows of colored squares. To the left of the color squares are an UP ARROW, a DOWN arrow and the number 1. This is your COLOR PALETTE.



There are six PALETTES. The number 1 on the left indicates that you are using PALETTE #1. You can move between the PALETTES by clicking the UP and DOWN arrows. To select a color for the object you are working on, simply click the cursor on the color you want. The color will appear in the OBJECT STATUS BOX — the larger box at the right of the PALETTE.

Let's experiment with changing the colors of the different objects that make up the face of the Snowman.

1. Select Object #4 from the OBJECT COUNTER box. Right now the color of Object #4 is black.

2. Move the cursor to the PALETTE. Select a different color by clicking the cursor over the color you want. The color of the object on the screen will change, as will the color in the OBJECT STATUS BOX.

3. Now, try the different PALETTES, selecting other colors. Move to Objects #3 and #6 and experiment some more.

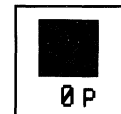
Note that, in this case, you can only change colors in the frame you are working on. In other words, if you change the color of Object #4 in this frame, you will not have changed the color of Object #4 in other frames. Try it and see.

1. Click to Frame 2. Notice that the hat here is still black.

2. Now click back to Frame 1. The hat will be whatever color you changed it to.

You will learn how to change the color of the hat in both frames when we experiment with the GLOBAL command.

## #12 OBJECT STATUS BOX



The OBJECT STATUS BOX is a useful tool for determining what the Object Number of a certain object is when you can't remember, or for keeping track of how many points are in an object.

The OBJECT STATUS BOX gives you information about the color and number of points in whatever object is highlighted in the OBJECT COUNTER. Try it and see.

1. Select GRAB POINT and grab the nose on the face. Notice that the OBJECT STATUS BOX shows the color of the face, the fact that the face is made up of 3 points, and that the Object Number, as indicated by the OBJECT COUNTER, is 6.

2. Now select DELETE POINT and delete one of the eyes. Notice that the number of points changes from 3 to 2 as you do so?



Here's an exercise that shows how useful the OBJECT STATUS BOX can be.

1. Select the CIRCLE icon.

2. Change the OBJECT COUNTER to #7 if necessary and the COLOR PALETTE to the color of the remaining eye.

3. Now draw an eye to replace the one you deleted. The left and right eyes should look pretty much the same. You might think that both eyes could be edited in the same way.

4. However, if you check the OBJECT STATUS BOX you will see that the new eye is made up of 16 points, rather than just one point. Select DELETE POINT and try deleting the new eye. It will take longer to get rid of this eye than it took to get rid of the first.

Many editing functions work differently on an object made of 16 points than they do on an object made of one point. Checking the OBJECT STATUS BOX can save you confusion in cases like these.

## #13 GO



As you have learned, selecting GO will make your Movie run. Once your Movie is running there are many things you can do to it. These include:

1. Selecting keys 1-3 to change the speed of the Movie.

2. Pressing the **Space Bar** to step through your Movie.

3. Pressing the left arrow to make your Movie run backward. (Pressing the right arrow will make it run forward again.)

4. Pressing **Esc** or the mouse button to save the current image to the Clipboard and stop the movie.

The Clipboard (discussed under #19 THE FILE MENU) is handy when you want to save any part of your animation and paste it somewhere else. Using the Clipboard lets you save a frame you did not actually draw, and enables you to smooth out your animation wherever it seems too jerky.

If you stop your animation by pressing the **Space Bar**, you can continue stepping through the animation by pressing the **Space Bar** again, or you can press one of the speed keys to restart the animation.

Try loading the DIVE demo and having some fun by trying out all the various features that work with GO.



## #14 GLOBAL



CLEAR your movie to start this section.

1. Use MAKE RECTANGLE to draw rectangles in each of the first three frames.
2. Now select GLOBAL above GO, just left of the 7 in the object counter.
3. Go to the COLOR PALETTE and select any color other than the one you used to draw your squares. Run the Movie and notice that all the squares have changed color. After you run the movie, GLOBAL is turned off.
4. Select GLOBAL again, then try selecting a different dimension, such as Dots from the DIMENSION BOX (#17 on the screen diagram). Run your animation again. Notice that the object has changed to Dots throughout. Before you proceed to step 5, highlight the solid triangle in the DIMENSION BOX.
5. Turn GLOBAL off, if necessary, and change the color of the present rectangle. Run your animation and notice that this time the color of the other rectangles did not change.
6. Stop your animation by pressing **ESC**. Select GLOBAL. Change the color of your rectangle yet again. Run the animation. What happened? The rest of the animation did not change despite the fact that you had selected the GLOBAL command. Why not?

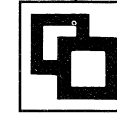
The GLOBAL command looks for objects of the same Object Number and color and changes them to the new color. In other words, if you had changed one object to green and all the rest were black, changing the green one to yellow while the GLOBAL command is selected won't have any effect on the black objects because the program is looking for green objects to change, not black ones.

GLOBAL will search all frames for the object number you wish to change and change only the single attribute you want changed. If you're changing color, it will ignore animation type and DIMENSION. If you're changing DIMENSION it will ignore animation type and color.

**NOTE:** BE CAREFUL NOT TO LEAVE THE GLOBAL COMMAND ON WHEN YOU AREN'T USING IT. YOU CAN MAKE A BIG MESS IN A HURRY!!! YOU SHOULD CLICK GLOBAL OFF RIGHT NOW.



## #15 OVERLAY



The OVERLAY command preserves everything you put on the screen, regardless of what frame you are on. This command is useful for studying several frames at once and making sure that objects move along the paths you want them to move along. The OVERLAY command does not preserve everything shown on the screen during actual animation.

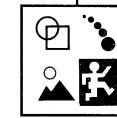
1. Turn on the OVERLAY command and click through the frames of the short animation you created above. Your screen will look rather messy.

It is important at this point that you understand the significance of the term **current frame**. The current frame is indicated in the upper right corner of the screen. Although you can see the objects from every frame on the screen while you are using OVERLAY, you can work only with the object that is actually in the current frame.

2. Use the GRAB hand to try grabbing points from various objects on the screen. Notice that the hand works with only one of the objects — the object in the current frame.

Try loading the DIVE demo and step through all the frames with the OVERLAY command on. Be sure to click OVERLAY off when you are done.

## #16 ANIMATION BOX



For each frame you create, you must indicate the way you want to animate it. The four icons in the ANIMATION BOX each represent a different animation mode.

### NORMAL MODE



This is the mode you have been working in thus far. An object animated in Normal mode will change from the object drawn in the current frame to the object drawn in the subsequent frame with whatever number of intermediate frames you set when you establish the film speed (see **KEYBOARD COMMANDS** on the inside back cover of this manual and **SPEED** under **SOUND & STUFF**).

As each new version of the object appears, the previous one is erased so that the movement seems realistic. That's what happened with the triangle and square you animated in the DRAW section (see page 27). FANTAVISION is always set in this mode for Frame 1 and will remain in this mode for all the objects created in the frame unless you select another of the animation modes. If you choose a different mode for Frame 1, the program will change to that mode beginning with Frame 1.



### BACKGROUND MODE

This mode lets you "drop" objects into the background that you have drawn with FANTAVISION. There are several reasons you may want to drop objects into the background. One is so that the objects can serve as a "set" for your Movie. For example, you might want to create a row of buildings and then animate a car driving in front of them.

Another reason for dropping objects into the background is to free up their Object Numbers so that you can animate something else. (Since a background object just sits there, you no longer need to keep track of it with an Object Number.)

A third important reason for dropping objects into the background is to speed up your animation. The more things FANTAVISION has to keep track of, the slower it will go. If you draw a face and want to wiggle only the nose, you might drop the rest of the face into the background so that the nose will wiggle faster. Once dropped into the background however, the image of an object remains until the background is cleared.

In most instances, you'll want to create a background at the beginning of your Movie. But you can also temporarily drop objects into the background in order to use their Object Numbers for new animated objects.

Try this experiment:

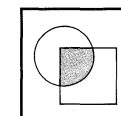
1. Select the Background icon from the ANIMATION BOX.
2. Next, select MAKE RECTANGLE. Draw a square in the center of the screen and give it a color.
3. Click to Frame 2, leave it blank, and then go on to Frame 3.
4. In Frame 3 select the Normal animation mode (the running man), then draw a triangle in the center of the screen and assign it a color different from that of the square in Frame 1. Click to Frame 4 and draw another triangle. Click to Frame 5 and leave it blank. Now run your animation. Notice that the square you drew stands still while the triangle moves, then disappears while the Movie cycles through the frames in which the Background is drawn.

Remember that after you created the Background square in Frame 1, you left Frame 2 blank. You also left a blank frame at the end of the sequence. This is to prevent the background square from tweening to the triangle and leaving a mess. Another method to avoid tweening in the background is to set the speed to Max (no tweens) for those frames. Since the Movie will run through a loop, the last frame will precede Frame 1 after the first run-through. So this frame should also be blank, or have its speed set to Max.



If you don't leave the next frame blank, then your background will leave trails. Try cutting Frame 2 from your movie (by selecting CUT from the EDIT MENU while on Frame 2) and see what kind of problem that creates. To erase the background, use Clear from the FILE MENU, highlight Screen, and click on Clear.

Tweening in the background allows you to create some great still pictures. It is really a whole new way to use Fantavision. Some examples of this on the disk include the movies JUNK and ART.

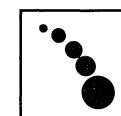


### TRANSPARENCY MODE

CLEAR your previous Movie and Screen before starting this section. Transparency mode adds a "see-through" effect to objects created with this mode. When "transparent" objects pass over the background or lower numbered objects, a complementary color of the object and the color it is passing over appears.

1. Draw a shape in the middle of the screen using normal animation mode (should be object number 1).
2. Click on 2 in the Object Counter, and then on the Transparency mode icon. Now draw a shape using a different color in the upper left corner of the screen (the color will not look exactly like the color you selected from the palette unless your background is black; it will be the complement of the transparent object's color and the background.). Don't use black or the object will disappear altogether.
3. Go to frame 2 by clicking the down arrow under the scroll bar.
4. Click on 1 in the Object Counter and draw Object number 1 in the middle of the screen using normal animation mode.
5. Click on 2 in the Object Counter and redraw Object 2, this time on the opposite side of the screen (lower right corner) so it will pass over Object 1 when animated.
6. Run the movie by clicking on GO (press an appropriate number, 1-3, to speed up or slow down the animation as you watch it). Note how you can see Object 1 through Object 2 as 2 passes over 1.

An example of a demo that uses Transparency mode is JELLYFISH.



### TRACE MODE

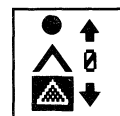
In the Trace mode an object leaves its image behind without erasing it. This is useful for creating a variety of special effects.

To practice using the Trace mode simply use the GLOBAL command and then change the movie you created above from Transparency mode to Trace mode. Try running the animation at different speeds (keys 1-3) to see the different effects.

A good example of a demo that makes use of Trace mode is VOLCANO.



## #17 THE DIMENSION BOX



CLEAR your Movie before starting on this section. All of the objects in FANTAVISION are drawn by plotting points, but the objects themselves may be solid shapes, lines or dots. The icons in the DIMENSION BOX represent the variations available for creating an object. Within each of these variations — or “dimensions” — are a variety of modes which give you added options. Each of the options is numbered. You activate the options by using the UP and DOWN arrows to select the number you want.



### SOLID SHAPES

The preset value for each new object is Solid Shapes. This means that unless you indicate otherwise, the objects you create will be filled once they are closed. Throughout most of this tutorial, you have been working with this dimension. It should be highlighted in the lower right corner of your screen right now. The optional modes available with Solid Shapes are:

0. No outline
1. Black outline
2. White outline
3. Black outline with last segment open
4. White outline with last segment open

Clear the movie before starting this section.

Let's experiment to see how each of these options works:

#### 0 — NO OUTLINE

Note that the digit between the UP and DOWN arrows is set at zero.

1. Click over the French Window in the Object Counter and choose a background color other than black or white.
2. Now, move the cursor and click Object #1. Select another color, and then draw a medium-sized triangle in the middle of the screen. The shape is solid, but has no outline around it.
3. Draw a similar triangle somewhere else on the screen in Frame 2.
4. Run your animation to get a sense of how fast it moves. You'll discover that it moves more slowly once you put an outline around it.

#### 1 — BLACK OUTLINE

1. Stop the animation and turn the GLOBAL command on. Move the cursor to the DIMENSION BOX at the lower right corner of the screen. Click the DOWN arrow once. The number 1 will appear. Look at what has happened to your triangle. It has a black border around it.

2. Run your animation again to see how the outline slows things down.



#### 2 — WHITE OUTLINE

1. Turn GLOBAL on, then click the DOWN arrow to move to number 2. Now you have a white outline around your triangle.

2. Run the animation again to see how it looks.

#### 3 — BLACK OUTLINE WITH THE LAST SEGMENT OPEN

Stop the animation, turn GLOBAL on, and click the DOWN arrow to number 3. Two sides of the triangle are now outlined in black, and the third side has no outline. This option allows you to add another object to a solid object without the presence of an intervening line.

Before you proceed be sure to click GLOBAL off.

To illustrate, let's turn the triangle into a rectangle.

1. Select #2 in the OBJECT COUNTER.
2. Select the same color you used for the triangle you drew above and click the DOWN arrow in the DIMENSION BOX back to 3.
3. Attach a second triangle to the first triangle to create a rectangle. Make sure that the last side of the new triangle is parallel to the open side of the first triangle. You should now have a rectangle or a parallelogram.

If there's any “light” coming through where the two triangles join, you can adjust that by selecting GRAB and fine tuning the placement of the triangles.

#### 4 — WHITE OUTLINE WITH THE LAST SEGMENT OPEN

This option works the same as the previous option except that the outline is white.

1. With Object #1 highlighted, click the DOWN arrow to 4.
2. Now highlight Object #2 and do the same.

**NOTE:** Leaving one side of an object open is a good technique to use if you want to attach segments — such as elephant legs or bending elbows — to the drawing.

Using the outline options will give your objects a clean, distinct look. In the Trace mode, outlines keep the shape of objects distinct against the trails they leave behind during the animation.



### LINES

CLEAR your Movie before starting on this section. With Lines you can create an object that will not be filled in.

1. Select the Line icon, pick a color, and then plot a shape. Notice that, this time, when you return to point 1 to close the shape, the object is not filled in.



The various Line options indicated by the letters C (Closed) and 0 (Open), and the numbers 9 through 1:

0. Outline with last segment open
- C. Connect last segment to close shape
9. Leave a blank segment after 9 are drawn
8. Leave a blank segment after 8 are drawn
7. Leave a blank segment after 7 are drawn
6. Leave a blank segment after 6 are drawn
5. Leave a blank segment after 5 are drawn
4. Leave a blank segment after 4 are drawn
3. Leave a blank segment after 3 are drawn
2. Leave a blank segment after 2 are drawn
1. Leave every other segment blank.

Each time you select Lines the letter 0 will appear between the arrows. This stands for "Open" and is the standard setting for Lines.

The number options are useful for creating such things as segmented legs without using up too many Object Numbers.

For example, you could use a number option to create a spider with four legs. Each of the four legs is a line made up of two segments. Ordinarily to draw four separate legs you would have to assign four separate object numbers, one for each leg. If you didn't, you would find that when you moved your cursor back to the body of the spider to draw the next leg, a straight line would appear connecting the spider's foot to the body. Since you can only animate eight objects in each frame, being able to draw a number of different line segments with just one Object Number comes in handy.

Using a number option, you can get around the problem of the spider's legs by in effect telling the computer to leave the line connecting the foot to the body blank.

Here's how to do it:

1. Draw a Solid Shape with Object Number 1. This is the spider's body.
2. Now select Object Number 2, change to Line mode, and click the UP arrow in the Dimension Box until the number 2 appears between the arrows.
3. Now, starting with the body, make four spider legs each consisting of two segments. See how it works?

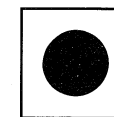
The stick figures in the demo CANCELED required just two Object Numbers because they were created using option number 2 while in Lines.

#### CLOSED OPTION

To reach the Closed option click the DOWN arrow. Closed works by automatically connecting the last point you plot in an object to the first point, whenever you change Object Numbers or frames. This saves you the chore of having to place your last point exactly on top of the first point you plotted. (You may have to make the spider's legs a different color from the body to see this effect.)



## DOTS



CLEAR your Movie before starting on this section. Dots lets you instantly create dots of varying sizes. You use the UP and DOWN arrows to indicate the size you want your Dot to be. The preset value is 5. To make the Dot larger, click the DOWN arrow. To make it smaller, click the UP arrow.

1. With your cursor, click the Dot icon. The number 5 will appear between the UP and DOWN arrows.

2. Move to the PALETTE, choose a color, and then place a Dot on the screen by clicking.

3. Now, click the DOWN arrow until you reach the number 9. Watch and see what happens to your Dot.

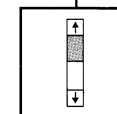
4. Next take a look at what happens to your Dot when you click the UP arrow until you reach the number 1. You can see how useful this is for creating instant heads for stick figures, balls for bouncing, or other circular shapes.

The smallest Dots are simply the exact points you plot on the screen. The largest Dot is still only a single point, which is at the center of the Dot. You cannot edit the edge of the Dot in any way, since no points are plotted there. None of the GOODIES functions will change the shape of a single Dot. The only thing about a Dot that can be changed is its size.

A large Dot may be indistinguishable from a small circle. However, the circle is made up of 16 points and the Dot only one. You can have up to 64 Dots using a single Object Number, but only one circle. Circles **can** be edited and manipulated with GOODIES.

Since you can change the DIMENSION of anything at any time, you may have fun experimenting with changing objects in the various demos to Dot mode and back again.

## #3 THE SCROLL BAR



We touched briefly on the SCROLL BAR while discussing the DRAW function. You already know that the SCROLL BAR is made up of frames, and that you need to create objects in at least two frames to make those objects "move."

It will help to have a Movie demo to illustrate how the SCROLL BAR works, so right now pull down the FILE MENU and select Load. Choose DIVE, the Movie Demo you experimented with earlier.

The SCROLL BAR has 250 frames. You are allowed a maximum of eight animated objects per frame. (Each object can have up to 64 points.) You can move through the various frames by clicking the UP and DOWN arrows on the Scroll Bar. You can tell what frame you are in by checking the FRAME COUNTER in the upper-right corner of the screen. Right now you are in Frame 1 of the DIVE demo. The white block under the UP arrow indicates that Frame 1 is located in that square.





1. Click the DOWN arrow until the FRAME COUNTER reads 9. Notice that the white block dropped down indicating that Frame 9 is located there.

2. Click the DOWN arrow until the FRAME COUNTER reads 25. (You can do this rapidly with the mouse by holding down the cursor until the COUNTER reaches the number you want. Dragging the cursor up or down the SCROLL BAR or clicking on a particular spot will have the same effect.)

3. Click the DOWN arrow until the white block rests above the arrow at the bottom of the SCROLL BAR. This is the last frame in the movie. To add a new blank frame, just click the DOWN arrow once again. If you do this by accident, you can CUT or ZAP the blank frame.

## THE PULL DOWN MENUS: #18 THE GOODIES MENU

The GOODIES MENU allows you to manipulate objects in a variety of ways after you have created them. To get acquainted with the GOODIES MENU, clear the screen (using CLEAR from the FILE MENU).

### ZOOM

1. Draw a triangle. When you first start up FANTAVISION you'll find that the ZOOM function on the GOODIES MENU has a check next to it. This means that ZOOM is automatically selected when you start up. If you are not on ZOOM right now, select it using the cursor. To the right of the word GOODIES are two sets of arrows; one set points inward toward each other, the other points outward. Select the inward pointing set and see what happens to your triangle. It got smaller, didn't it? In fact, it got 12% smaller.

2. Click the inward pointing arrows until your triangle disappears. Then click the outward pointing arrows and watch your triangle return. If your triangle runs up against the edge of the screen, what happens? Objects will be "clipped" if they are ZOOMed to the edge of the screen.

Let's create a quick animation using ZOOM.

1. First, shrink your triangle a bit.

2. Select CLONE FRAME from the EDIT MENU. You are now in Frame 2.

3. Now blow your triangle back up with the ZOOM command and select GO. Your triangle should look like it is breathing at you, a sight you'll never see in geometry class.



### TURN

Clear your Movie again (using CLEAR from the FILE MENU) so you can experiment with TURN.

1. Make a rectangle on the left side of the screen using the MAKE RECTANGLE icon.

2. Select TURN from the GOODIES MENU. Notice that the arrows to the right of the word GOODIES are now turning counter-clockwise and clockwise.

3. Click either arrow repeatedly. Your square should be turning AND moving around on the screen. That's because when you use TURN without using the CAPTURE BOX all objects turn around a point at the center of the screen.

4. Now use the CAPTURE BOX to surround your square. Then try using either arrow. What happens? When you capture an object and TURN it, it turns around a point in the middle of the CAPTURE BOX.

### LEAN

Clear your Movie so you can experiment with LEAN.

1. Select LEAN from the GOODIES MENU.

2. Using the MAKE RECTANGLE icon make a black rectangle to represent a door.

3. Now change to Object #2, and place a colored rectangle exactly on top of the black one. You should be able to see only the colored rectangle.

4. Using the CAPTURE BOX, select Object #1 from the Object Number indicator.

5. Click the left-hand LEAN arrow and see what happens. Your black door should lean from behind the colored one.

6. Using the MOVE feature of the CAPTURE BOX (by placing the cursor inside the box and dragging), move the base of the black door so that it's back where it started, matching the base of the colored door. Now what have you got? A shadow!

LEAN is very useful for creating shadow effects. To create a shadow, no matter how complicated the shape, all you have to do is copy the object (a procedure you'll learn in the next section) make it a dark color, lean it, and move it.

7. Click the cursor button outside the CAPTURE BOX and experiment with LEAN again. This time both of your doors should be moving around. Remember, UNLESS THE CAPTURE BOX IS USED, ALL THE OBJECTS IN THE FRAME WILL BE AFFECTED BY THE GOODIES COMMANDS.

**FLIP**

Select FLIP and horizontal and vertical arrows will appear. You can FLIP the doors back and forth with the horizontal arrows or upside down with the vertical ones.

1. Place the CAPTURE BOX around both doors and FLIP again. Notice the difference? WHEN YOU USE THE CAPTURE BOX, OBJECTS FLIP WITHIN THE BOX AND NOT THROUGHOUT THE FRAME. Otherwise, the center of the screen is the line over which objects will flip.

**SQUASH**

CLEAR your Movie before starting on this section. The SQUASH command lets you flatten objects so that they appear to be receding into the distance or coming toward you. You can make ellipses by SQUASHING and stretching circles. SQUASH is also useful for creating shadows in which the light source is above the object rather than to one side.

1. Using the MAKE CIRCLE icon, make a black circle in the middle of the screen.

2. Use the SQUASH command to flatten the circle so that it appears to be lying on its side.

3. Now go to the EDIT MENU and select CLONE FRAME. You should now be in Frame 2.

4. Using the CAPTURE BOX move your circle toward the top of the screen. Then with ZOOM make it smaller. Now run the animation. See how you can create a 3-D perspective by SQUASHing objects and moving them "forward" and "backward"?

**SOUND & STUFF**

This option allows you to select a Sound and other settings for a frame. The current frame is reduced and displayed in the upper left corner of the screen. A different frame can be selected using the Scroll Bar or arrows.

1. Using the Circle icon, make a circle (any color you want) in the upper left corner of the screen.

2. Go to the EDIT MENU and select CLONE FRAME. You should now be in Frame 2. Using the CAPTURE BOX, move your circle to the lower right corner of the screen.

3. Select CLONE FRAME again and you should now be in Frame 3. Move your circle again, this time to the top center of your screen. Repeat this for Frame 4, except this time move your circle to the lower left corner of the screen.



4. Now go to the GOODIES MENU and select SOUND & STUFF. You will see a reduced image of the last frame you were on in the upper left corner of the screen.

5. Click on the up arrow of the Scroll Bar until you get to Frame 1. Make sure Sound says None.

6. Click on the down arrow of the Scroll Bar to move to Frame 2 and add the sound Step1 by clicking once on that name in the Sound Box on the left side of the screen.

7. Move to Frame 3 and click on the sound Step2.

8. Move to Frame 4 and click on the sound Step1 again. Now run the animation by clicking on GO. Notice how the sounds you selected for each frame in your movie are matched with that frame only.

9. Go back to the SOUND & STUFF screen again and play with the different controls. Adjust the Volume, Pitch, and Balance, run the animation again, and see the differences. Adjust the Speed. Notice that the speed is adjusted on a frame-by-frame basis and is simply the number of "twens" per frame. What happens when you change the Looping? Click on one of the Looping arrows and run your animation again.

10. To leave Sound & Stuff, saving your changes, click anywhere on the Menu Bar or in the reduced image of the current frame to return to the Fantavision screen.

11. To abandon the changes, click on the "Clear" button in the upper right corner and all information will be reset to the program defaults.

## #19 THE EDIT MENU

The EDIT MENU consists of the following functions:

**UNDO****PASTE****CUT****CLONE FRAME****COPY****ZAP****INSERT BLANK FRAME**

CUT, COPY, PASTE, and ZAP work differently on the Frame Level than they do on the Object Level. UNDO works on the commands indicated by the icons on the left side and the bottom of the screen. CLONE FRAME always works on a frame level.

**UNDO**

1. UNDO and DRAW  
Using UNDO with the DRAW command will UNDO the last point plotted UNLESS that last point was used to close an object.
2. UNDO and GRAB POINT  
UNDO will return the previous point grabbed to its former position.
3. UNDO and INSERT POINT  
UNDO will delete the last point inserted.
4. UNDO and DELETE POINT  
UNDO will restore the last point deleted.
5. UNDO and MAKE CIRCLE  
The circle disappears.
6. UNDO and MAKE SQUARE  
The square disappears.
7. UNDO and TEXT  
UNDO will remove the last object typed. Since an object may be made up of as many as eight letters, up to eight letters may be removed by using UNDO.
8. UNDO and CAPTURE  
UNDO will restore an object MOVED with the CAPTURE BOX to its former position. It will not UNDO GOODIES functions. To undo GOODIES functions simply do them in reverse.
9. UNDO and the COLOR PALETTE  
UNDO will undo the last change of color. Colors changed with the GLOBAL command CANNOT be undone with UNDO. To change them back use GLOBAL.
10. UNDO and GO, GLOBAL, OVERLAY, OBJECT COUNTER, BACKGROUND COLOR, FRAME COUNTER  
UNDO will not affect any of the above.
11. UNDO and ANIMATION mode, DIMENSION  
UNDO will undo your last change of ANIMATION mode or DIMENSION, though it's just as easy to change it manually.

**CUT****COPY****PASTE**

CLEAR whatever Movie you have on the screen before you start this section.

CUT, COPY, and PASTE are three functions that interact with the Clipboard, a special "off-screen" area in the computer's memory. The Clipboard holds images you have captured and then cut or copied for future use. It holds one captured image at a time.



When you CUT a frame, the whole frame goes to the Clipboard and replaces anything else that is there.

The frame which has been CUT disappears from your Movie. To get that frame back you must PASTE it in front of the frame you want it to precede.

COPY differs from CUT in that it copies a frame to the Clipboard without cutting it out of the current Movie.

PASTE allows you to paste a frame you have CUT or COPIED into your Movie. You do this by selecting PASTE while on the frame you wish the pasted frame to precede.

You may also use CUT, COPY and PASTE on the Object Level while using the CAPTURE BOX. In this case only the objects selected by the CAPTURE BOX will be affected.

When you PASTE objects into a frame they will be added to the objects already in that frame, rather than creating a new frame. If the number of objects in the current frame plus the number of objects on the Clipboard is more than eight, the extra objects will simply fail to PASTE. In this case, lower Object Numbers have precedence. You may PASTE a single object into a frame multiple times by re-selecting PASTE.

Now, load the demo REDWHITEBLUE. Select GO to run the animation. You'll see that the film is three frames long and that each frame contains a word describing its color. Frame 1 is WHITE, Frame 2 is RED, and Frame 3 is BLUE. We're now going to change the order to RED, WHITE and BLUE. Stop the animation. Be sure that you are on Frame 1.

1. CUT the Frame 1, WHITE, from the Movie. It will go to the Clipboard; the square in Frame 1 will now be RED.

2. Click to Frame 2, BLUE. Now you need to place the WHITE square on Frame 2 so that the BLUE square can move to Frame 3. To do this, simply move to Frame 2, and PASTE. Click through the frames again, starting with Frame 1, and you'll see that the sequence is now RED, WHITE and BLUE.

Now you know how to CUT and PASTE on a Frame level. Remember that COPY works like CUT except that it does not delete the Frame when it puts it on the Clipboard.

Now, let's try using CUT, COPY and PASTE on the Object Level.

With this next exercise you're going to arrange the Movie so that each successive frame includes its own color word, plus the color words in the frames leading up to it. In other words, it will say RED in Frame 1, RED and WHITE in Frame 2, and RED, WHITE and BLUE in Frame 3.

1. To do this go to Frame 1. Capture RED with the CAPTURE BOX and select COPY. Nothing appears to happen.

2. Now, click to Frame 2 and select PASTE. The RED you copied from Frame 1 will appear next to the WHITE in Frame 2.



3. Now, surround both words with the CAPTURE BOX. Select COPY again. Click to Frame 3 and select PASTE. Now, you should have RED, WHITE, and BLUE all lined up in a row.

You can also use CUT, COPY and PASTE to rearrange the Object Numbers of the objects in a frame, but it is difficult. To do it, COPY the objects one by one into a blank frame in the order you want, then PASTE that frame in and cut out the old frame.

**NOTE:** If you press **Esc** or **Return** when the animation is running, or when you are stepping through the animation using the **Space Bar**, you can COPY the image that is on screen when the animation stops to the Clipboard, so that it can be inserted with PASTE as a new frame.

### CLONE FRAME

Selecting CLONE FRAME automatically copies the current frame to the end of the Movie. CLONE FRAME does not affect the contents of the Clipboard.

CLONE FRAME is very handy when you have a complicated frame that you don't want to have to draw over again. You can just CLONE it to the next frame (assuming that's the current end of the Movie) and edit it from there.

Sometimes you will "expose" a frame without realizing it, so that when you CLONE there are blank frames between the bulk of the Movie and the cloned frame. If this happens, simply delete the blank exposed frames with CUT.

CLONE FRAME is somewhat deceiving because nothing seems to happen when you use it. If you look at the Frame Counter, however, you'll see that you've jumped to the end of the Movie.

When you use CLONE FRAME with the CAPTURE BOX it works exactly the same as without it, except that the CAPTURE BOX stays highlighted even in the newly cloned frame. This is convenient when you are using the GOODIES MENU in incremental fashion. For example, when you are slowly rotating a square. You can select CLONE FRAME and then the GOODIES option without having to re-capture the object in every frame.

Try the spinning square trick to see how easily you can use CLONE FRAME to get exciting effects. First, CLEAR your previous Movie.



1. Draw a square anywhere on the screen.
2. Put the CAPTURE BOX around it, and then select CLONE FRAME. You should be on Frame 2.
3. Go to the GOODIES MENU and select TURN. Click the counter-clockwise arrow four times.
4. Now select CLONE FRAME again. Click the counter-clockwise arrow four more times.
5. Select CLONE FRAME once again. Click the counter-clockwise arrow another four times.
6. Run your Movie. You should have a spinning square.

If you like this sort of thing, play with the square some more.

1. Stop the animation, and go to the GOODIES MENU. Select SQUASH.
2. Go through each frame and click the SQUASH down arrow five times. Select GO and run the Movie again.
3. Stop the animation, and move Frames 2 and 4 to different parts of the screen and run the animation again.
4. Try making the object larger when it's at the bottom of the screen and smaller when it's at the top (use ZOOM).

### ZAP

ZAP allows you to delete a frame or an object without affecting what's on the Clipboard. To ZAP a single object, you must first surround it with the CAPTURE BOX.

Once an object or frame is ZAPPED, it is gone and you cannot get it back.

### INSERT BLANK FRAME

INSERT BLANK FRAME allows you to do just that — insert a blank frame wherever you want in the current movie.

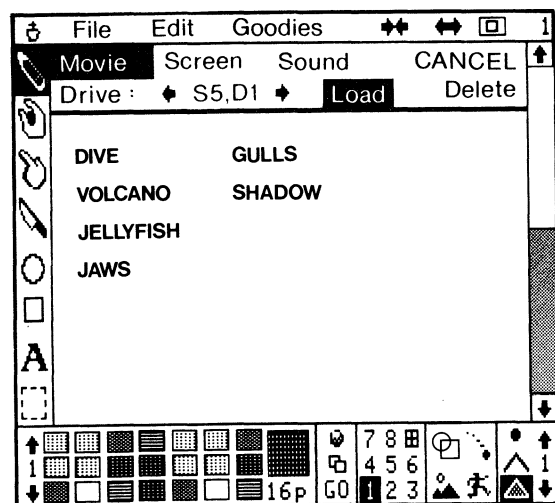


## #20 THE FILE MENU

### LOAD

1. Select the LOAD command. You will get a screen that looks like this:

(Diagram-words and graphics)



2. You may choose to load Movies, Screens, or Sound. If you have movies, screens, or sound on another disk, insert that data disk in an available drive. Click the word Movie, Screen, or Sound to get the appropriate catalog.

3. To get files from another drive simply click on the DRIVE arrows and a catalog of files on the disk in that drive will appear. Fantavision will load and save from both 3.5-inch and 5.25-inch drives. It will also load and save to a hard disk, though you may only save to the primary directory on the hard disk.

4. To see files which do not appear on the first screen, press the DOWN arrows. To get back to the top of the list again, click "Movies," "Screen," or "Sound," whichever you have been working with.

5. To select a file, click the file name.

Loading a Movie will wipe out the current Movie. If you don't want to lose your current Movie, be sure to save it before you load another. This is true of Screens as well.



### SAVE

1. When you want to save a Movie or Screen you've created, select this option. Click in the Name area to type the name, or just click SAVE. If you want to save to drive 2 rather than drive 1, click on the Drive arrow until it changes to 2. You can also save the current Sound Library to another disk (e.g. for a Show Disk).

2. You'll need to have a FANTAVISION or ProDOS formatted data disk on which to save your Movie. If you haven't yet formatted a data disk using FANTAVISION, see the instructions under FORMAT DISK (page 26).

3. When Fantavision saves files, those files are automatically compacted.

To leave the SAVE function without saving your Movie, Screen, or Sound Library, select CANCEL.

### CLEAR

The CLEAR command allows you to clear both the present Movie and the present Screen. Click on the option you wish to Clear, then click CLEAR again.

### FORMAT DISK

You may format or "initialize" a blank disk on which to save your Movies by selecting this function and following the on-screen instructions. FORMAT will automatically format your disk as a Show Disk, which means that it is self-booting, allowing you to send your Fantavision movies to other people. Formatting clears the present Screen.

### QUIT

When you want to leave FANTAVISION, select QUIT. You can then start up another program simply by pressing Y for Yes.

This brings to a close our tour through the magical world of FANTAVISION. It's a world all of us are just beginning to explore. We look forward to the dreams that FANTAVISIONaries like yourself will create.

Should you have any initial difficulties making the transition from reality to fantasy, consult the Trouble-Shooting section in Appendix III. If you've already made the leap but want more knowledge for your journey, the following APPENDICES discuss some interesting techniques.

May the FANTASY be with you!



## MOVIE MATINEE

This is a demo of a Show put together from the Movies on the FANTAVISION disk. To view the Show, select "MATINEE" from the Crown Menu.

The Show loops continuously. To pause the Movie, press the **Space Bar**. You may reverse the action by pressing the left arrow on the keyboard to go backward and the right arrow to go forward. You may speed up or slow down the action by pressing the number keys. 1 is slow, 2 is normal, and 3 is fast. To stop the Movie press **Esc**. To skip to the next Movie, press **Return**.

## CREATE A SHOW

One of the best things about FANTAVISION is that you can save the Movies you create onto a Show Disk and share them with your relatives and friends. Because FANTAVISION lets you format the Show Disk so that it will self-start, the recipients of your epic efforts don't need to have FANTAVISION to run the show. All they'll need is an Apple IIGS computer with at least 256K of memory and a 3.5" drive.

To put together your own Show, you must first format a self-starting Show Disk on which to save the Movies you want in your show. To do this, from the program, select FORMAT DISK from the FILE MENU, and follow the prompts.

**NOTE:** ANY DISK FORMATTED WITH PRODOS CAN SAVE DATA, BUT ONLY DISKS FORMATTED FROM WITHIN FANTAVISION CAN BE SHOW DISKS.

After you have formatted your Show Disk:

1. To assemble your own Show Disk you will copy and save Screens and Movies to your formatted Show Disk in the order in which you want them to appear. The following instructions are for a single drive system. If you have two drives you can save yourself some disk swapping by choosing drive 2 on the Load screen (see FILE MENU).

2. To create your Show Disk you must first select some Movies and Screens. You may choose Movies and Screens from your FANTAVISION disk, Movies that you have created and saved to a formatted data disk, or super-hi-res screens from any ProDOS disk that is in a format that Fantavision supports. The disk from which you get your Movies and Screens will be called the source disk. Insert your source disk now.

3. Pull down the FILE MENU and select LOAD. Click on Screen. Any supported super-hi-res pictures on the source disk will be automatically displayed.



4. Choose the Movie you want to use to begin your Show Disk.
5. Insert your formatted Show Disk. Pull down the FILE MENU and select SAVE. Click on Movie and save it on your Show Disk.
6. Add whatever Movies you want to run after this by loading them from a source disk and saving them on the Show Disk. The Movies will run in the order that you save them.
7. Now move all the Screen and Sound files used by these movies by loading them from a source disk and saving them to the Show Disk.
8. To run your Show, simply start up the Show Disk.

To save a Movie or Screen to a disk in drive 2, select SAVE from the FILE MENU and click on the Drive arrows to change to Drive 2 ("S5,D2" means "Slot 5, Drive 2").

After this, each time you save a Movie or a Screen it will be saved to drive 2. If you want to save to drive 1 again, follow the same procedure as you used to change to drive 2. The save drive system is separate and distinct from the load drive system. Thus, you may load Movies or Screens from drive 1 and save them to drive 2 automatically. This is especially helpful when creating a Show Disk.

### APPENDIX II

## ADVANCED FANTAVISION

### USING FONTS FROM THE DEMO DISK

On the FANTAVISION disk is listed a number of Movie files ending with the word FONT. These files contain fonts you can use in FANTAVISION movies. The complexity of the font characters varies, but in all cases the letters are more complex than the font you get when you simply use the TEXT mode.

The complexity of these fonts results in trade-offs in terms of flexibility. If a single character uses as many as three or four Object Numbers, you will not be able to animate very much text at one time. For this reason you may wish to use a more complex character as the first letter in a word made using regular TEXT mode, or you might put all your complex characters into the background and animate on top of them.

In either case, transferring characters from the FONT files to your Movie can be tricky if you intend to do a lot of it. The basic maneuver involves COPYING the characters you wish to use to the Clipboard, then going to the Movie you are creating in order to PASTE them in. The main difficulty is that the characters are made up of several objects, and only eight objects will fit in a frame or on the Clipboard at one time.



To see how this works, let's try a simple example first. Load in one of the Movies files that ends with the word FONT. Run the Movie. Notice that the Movie simply cycles through the letters, one per frame. If you want to spell your name, using this font for the first letter, and TEXT mode for the remainder, you must first find the frame with the proper letter. Click through the frames until you come to the first letter of your name.

COPY this letter to the Clipboard. The best way to do this is to CAPTURE it, then COPY it. Notice when you CAPTURE the letter how many Object Numbers it uses. It may use only one, but some of the fonts require more. Now CLEAR the Movie. PASTE the letter from the Clipboard into the frame, then use TEXT mode to complete your name. Unless you have a very long name you should be able to fit all of it into one frame without using up all the Object Numbers. Now you can CLONE your name from frame to frame, SQUASH it, TURN it, ZOOM it, or whatever you want to do.

The process gets considerably more complex as you use more letters from the FONT. Let's try spelling the word "MOM" with one of the fonts. This time you'll assemble the entire word in an empty frame at the end of the Font Movie, then COPY and PASTE that frame into your new Movie.

The way to do this is to CAPTURE each letter you want from the Font Movie. Each time you capture a letter, go to a blank frame at the end of the Font Movie and paste in the letter. All the letters should be pasted in the same frame. Once the word "MOM" is assembled COPY the entire frame. Then CLEAR the Movie, PASTE the word "MOM" into your new Movie and you're ready to go. Just for fun you could flip "MOM" upside down in Frame 2 so that you get "WOW MOM" when you run your Movie.

Now let's get really complex. Let's suppose that you want to put the word "Brøderbund" into a Movie using one of the font files. Each character in the font files you've chosen is at least one Object Number. The word "BRØDERBUND" is ten characters long (add another if you want to slash the 0). Since you can have only eight Object Numbers in any given frame, this means that in this case the word "BRODERBUND" will have to be spelled over several frames. How can you best handle this?

If you put "BRØDER" in one frame and "BUND" in the next, you will get a Movie that changes from the first two syllables into the last one without spelling anything clearly.

To get around this problem, you will have to put some portion, if not all, of the word into the background, using Background mode.

Still you can't put all the characters into one frame. The only way to see all of the word at once is to use the OVERLAY command. Remember that when using Background mode the Object Numbers need to be left blank in adjacent frames.



Follow the same procedure you used for the word "MOM" in order to get the first few characters into your Movie. Leave Frame 2 blank. Go back (after saving your new Movie) and assemble the next several characters. PASTE them into Frame 3 in your new Movie, then go back and assemble some more characters and PASTE them in Frame 5. You can start your animation in Frame 7.

You may have encountered a number of problems by now. Maybe you lost characters, or the characters are too big to fit straight across the page. All of these problems can be overcome with practice. This feature is in here to give you a skill you can grow into. We don't want you to get tired of FANTAVISION too quickly.

### CONVERT AND UNPACK

There are two BASIC programs on the Fantavision Master. These can be run from BASIC, or selected by the Launcher. CONVERT lets you run your old Apple II movies with this program. UNPACK saves your Fantavision Screens in a format most Paint programs will accept, so you can print out your Masterpieces.

#### CONVERT

If you bought the original Fantavision for the Apple II series, this program will convert your movies to run with the GS version.

First make a copy of the movies you wish to convert and put your originals in a safe place. Run Convert and follow the instructions. It will convert all of the movies on the disk, saving them over the old movies.

#### UNPACK

Fantavision saves all Screens as standard Apple Packed Screens (Type \$C0, Auxtype 1). If your Paint program can't read this format, then you will need to unpack them. First make a copy of the Packed Screens onto a blank disk. Up to 80% of this disk should be empty because unpacked screens are much bigger than packed screens. Run Unpack and follow the instructions. The Unpacked Screen will be saved over the Packed ones. Now your paint program can load them and print them.

**WARNING:** ALWAYS MAKE A BACK-UP OF YOUR DISK BEFORE YOU USE EITHER CONVERT OR UNPACK ON IT.

### OTHER USES FOR THE FRENCH WINDOW

#### BACKGROUND COLOR

This function of the French Window is explained under OBJECT COUNTER, in the BARE BONES and STEP-BY-STEP sections of this manual.

#### LOOPING

Looping is explained under SOUND & STUFF (page 21).

#### Super Palette

Super Palette is explained under THE COLOR PALETTE (page 15).



### THE CLIPPING WINDOW

"Clipping" is a term used in computer graphics. It means that a portion of an object may be visible on the screen even though other portions of the object have already left the "stage." If objects were not clipped, they would simply disappear as they got to the edge of the animation window.

FANTAVISION uses a Clipping Window even in its Regular mode. To see how this works, try drawing a Dot, size 9, at the very bottom of the screen. You'll see that only the top half of the Dot is visible; the remainder is clipped. If the Dot weren't clipped it would be visible right on top of the items on the screen, (which would be a real mess). You wouldn't be able to draw it close enough to the edge of the screen so that anything less than the entire Dot was visible.

Sometimes you may want the clipping window to be a size other than the entire FANTAVISION screen. To solve the problem, FANTAVISION lets you make a clipping window which is smaller than the entire screen. This lets you achieve nifty effects, such as stars shooting by a spaceship window. Here's how you do it.

1. Select the French Window in the OBJECT COUNTER.
2. Select the CAPTURE BOX. After this, you will actually be handling the Clipping Window not the CAPTURE BOX.
3. Create a Clipping Window like a Capture Box. If you don't like this box you can delete it by clicking anywhere in the drawing area, and then drawing another one.
4. Any Background you have loaded will not be affected by the Clipping Window.

**NOTE:** The Clipping Window only works when you run the movie, so you can edit objects that are outside the window.

### SPEED TIPS

Even though the Apple IIcs is a powerful machine, the task of real-time tweening can be daunting. To speed things up there are several tricks.

1. Normal animation must draw and then erase to create motion. Trace mode doesn't erase, so it can move twice as fast. If you have objects that are on top of a normal object, put them in Trace. The object underneath will do the erasing for both of them. This can speed up text too. Type your text onto a background colored square. Animate the square, but put the text into Trace mode.
2. You can speed things up by not outlining areas. Outlines can almost double the drawing time.
3. Fantavision prefers short and wide areas since it works fastest with horizontal lines. Also, just shrinking an image a little can quicken the action.
4. Circles take 16 points, so for small circles, try using a single dot instead.
5. Transparent objects move a little slower than normally animated ones.



## TROUBLE-SHOOTING

FANTAVISION is a powerful program, and pains have been taken to make certain you don't accidentally use that power to damage the Movie you're working on. Sometimes the program won't let you do things you want to do because there's something else you need to do first. This section will help you figure out what the problem is.

### DRAW

**SYMPTOM:** Beeping sound when you try to place a brand new object in an apparently empty frame.

**CAUSE:** A single point, not easily visible, may have been plotted in the frame accidentally. Press the mouse button twice in the drawing area to re-open the point, or delete it with DELETE POINT.

### GRAB POINT

**SYMPTOM:** Unable to GRAB some of the points on the screen.

**CAUSE:** When you have activated the OVERLAY command you can only GRAB POINTS in the current frame. The points you can't GRAB are probably in other frames. Turn off the OVERLAY command and you'll see which points are available to GRAB. Also, you cannot GRAB POINTS in a Background.

### INSERT POINT

**SYMPTOM:** Unable to insert a point.

**CAUSE:** You may not be close enough to the mid point between two adjacent points. Or, the two points between which you're trying to insert the point may not be adjacent (change to Line mode to see if they're connected). Another possibility is that there are already 64 points in the object.

### DELETE POINT

**SYMPTOM:** Unable to delete a point.

**CAUSE:** The point you want to delete may not be in the current frame. Make sure the OVERLAY command is turned off.

### MAKE CIRCLE

**SYMPTOM:** Unable to make a circle.

**CAUSE:** You can only make a circle in a blank Object Number, even though the circle takes up only 16 of the 64 available points. You can insert points in the same Object Number after you've made the circle.





### MAKE RECTANGLE

SYMPTOM: Unable to make a rectangle.

CAUSE: You can only make a rectangle in a blank Object Number, even though the rectangle takes up only 4 of the 64 available points. You can add individual points in the same Object Number after you've made the rectangle.

### TEXT

SYMPTOM: Some horizontal lines are invisible.

CAUSE: They are the same color as the background. Change object color or background color.

SYMPTOM: Strange lines appear connecting the letters together in a peculiar way.

CAUSE: If you have changed the DIMENSION mode, which is automatically set to Line 7 for TEXT to some other Line, you can create these kind of problems. Change it to Line 7 by clicking the line TYPE icon and clicking the nearby up or down arrows until 7 appears.

### CAPTURE BOX

SYMPTOM: Unable to capture an object.

CAUSE: The object may be in the Background (you cannot CAPTURE Backgrounds), or it may not be in the current frame. Turn off OVERLAY and CLEAR SCREEN to make sure.

SYMPTOM: Many functions work differently when the CAPTURE BOX is selected.

CAUSE: The CAPTURE BOX. Change to DRAW and things should work right.

### COLOR PALETTE

SYMPTOM: Unable to change the color of an object on the screen.

CAUSE: The object may not be selected in the OBJECT COUNTER. Whenever you switch from creating an object to using the CAPTURE BOX, all objects are de-selected from the OBJECT COUNTER. Select the proper Object Number and you shouldn't have any problem changing colors.

SYMPTOM: Getting weird colors on the screen.

CAUSE: There are several possible causes of this problem.

- You have selected opalescence or one of the shifting colors from the bottom row of Palette 6 (on the left).
- You have selected a number on the Super Palette (on the right). Press the UP arrow until you see Super Palette number 1, the default.
- You are in Transparent mode. These colors will get mixed with colors on the screen, so they won't look like the expected color. Transparent black is completely invisible, so it's a bit tricky to use!



### OBJECT STATUS BOX

SYMPTOM: Status doesn't change even when Object Numbers are changed.

CAUSE: If you have selected multiple objects with the CAPTURE BOX, the OBJECT STATUS BOX will only give you information about the lowest numbered object, regardless of what other objects you select or remove from the CAPTURE BOX.

### GO

SYMPTOM: Movie won't run.

CAUSE: You have only one frame in the Movie.

SYMPTOM: Movie runs backward, or runs forward then backward.

CAUSE: Press the right arrow to make the Movie run forward. If the Movie is muddled from the last frame to the first, put a blank frame at the end.

SYMPTOM: The Movie appears to flash in places.

CAUSE: You may have blank frames between your action frames. Get rid of the blank frames using CUT.

SYMPTOM: The action is too jerky.

CAUSE: The Movie is running too fast. Slow it down by pressing 1 on the top Keyboard row while the movie is running. Speed can also be controlled frame-by-frame using Sound & Stuff from the Goodies Menu. Click on the Speed Adjustment Bar until the movie is running at the speed you want it to. You may set the movie speed from this screen by clicking on the Speed Adjustment Bar in Frame 1.

### GLOBAL

SYMPTOM: You selected GLOBAL, but it didn't change the color, animation or dimension of your object throughout the entire Movie.

CAUSE: GLOBAL will change your object in a new frame only when conditions match the object in the original frame. If you're changing a blue object to yellow, GLOBAL will change that object to yellow only in frames where the object is blue. In frames where the object is another color, the color will not be changed.

### OVERLAY

SYMPTOM: When OVERLAY is turned off, there are still objects and other elements on the screen which aren't in the current frame.

CAUSE: Any object dropped to the Background or any Background screen loaded in will still be present even if OVERLAY is turned off. Use the CLEAR SCREEN command to eliminate any background objects or screens that you don't want visible in the current frame.



### OBJECT COUNTER

**SYMPTOM:** Unable to select any of the Object Numbers.

**CAUSE:** If the CAPTURE BOX is highlighted, you can only select Object Numbers which are already being used in the current frame. If there are no objects in the current frame (not counting background objects which are visible, but not editable) then you will be unable to select any Object Numbers until you move out of the CAPTURE BOX mode.

**SYMPTOM:** Unable to add to an Object even though there are fewer than 64 points plotted.

**CAUSE:** You may be using MAKE CIRCLE or MAKE RECTANGLE mode, both of which require a completely empty Object Number.

### THE ANIMATION BOX

**SYMPTOM:** Objects don't seem to be in the same mode they were when you created them.

**CAUSE:** You may have left the GLOBAL command on, so that changes you thought were being made to only one frame were actually being made to all frames.

**SYMPTOM:** The Background turns into a real mess at the beginning or end of the animation.

**CAUSE:** The Object Numbers you use to create the Background must be left blank in the next frame. Add a blank frame to the end of your Movie and see if that helps.

**SYMPTOM:** When using Trace mode the object makes a smear that is completely black (or white).

**CAUSE:** The animation is running too slowly. Speed it up either by pressing 3 while the movie is running or by adjusting the Speed Adjustment Bar in the Sound & Stuff screen.

**SYMPTOM:** When using Trace mode, objects jump all over the screen.

**CAUSE:** The animation is running too quickly. Slow it down by pressing 1 while the movie is running or by adjusting the Speed Adjustment Bar in the Sound & Stuff screen.

### THE SCROLL BAR

**SYMPTOM:** There are blank frames in your Movie.

**CAUSE:** Anytime you look at a new frame you expose it. This adds blank frames to your Movie. Simply CUT the unwanted frames.



### THE GOODIES MENU

**SYMPTOM:** One of the GOODIES functions stops working.

**CAUSE:** Each GOODIES command can be used eight times in a row. Then the software says to itself, "I need a new picture of this object, 'cuz I've ZOOMED it or LEANED it or SQUASHED it about as far as I can. My algorithms are tired." Change practically anything, the icon selected on the left side for example, then return to GOODIES and you'll be able to ZOOM or TURN or SQUASH another eight times.

### THE EDIT MENU

**SYMPTOM:** CLONE FRAME makes a copy of the frame but places it somewhere beyond your last frame.

**CAUSE:** You must have accidentally exposed frames between your last frame and where you wanted the CLONED frame to be. CUT the exposed frames.

**SYMPTOM:** When using PASTE the object is assigned a different Object Number than the one it had in the frame it was copied from.

**CAUSE:** The program automatically assigns to an object to be PASTED the first available Object Number in the new frame. To do otherwise would involve asking you what Object Numbers you want assigned to what objects every single time you used PASTE. This would be very cumbersome. In order to have the desired Object Number assigned, you may occasionally have to create dummy objects in all the Object Numbers lower than the one you want, then PASTE, and then delete the dummy objects.

### THE FILE MENU

**SYMPTOM:** LOAD Screen doesn't work.

**CAUSE:** LOAD Screen is looking for a super-hi-res picture using ProDOS. These include Fantavision Screens, PaintWorks Plus and Deluxe Paint Screens (screens that have a resolution of 320 x 200)

### THE CROWN MENU

**SYMPTOM:** Scott Anderson won't answer your phone calls.

**CAUSE:** Scott is happily married. Questions regarding FANTAVISION may be directed to Brøderbund Software by letter or phone.

### ALL OTHER PROBLEMS

Experiment like crazy. Use the manual. Sleep on it. Ask your mother. Write your Congressperson. If none of this works, call our Customer Service Dept. at (415) 492-3500 during normal business hours.

**ALWAYS KEEP YOUR ORIGINAL FANTAVISION DISK HANDY WHEN CALLING CUSTOMER SERVICE.**



<b>BACKDROP</b>	A super-hi-res screen that you load and use as a backdrop for your FANTAVISION animation. Backdrops may be created with Fantavision, PaintWorks Plus or Deluxe Paint.
<b>BACKGROUND</b>	The color that fills the entire screen behind your COLOR animation and your Background Objects. Background Color is reached through the French Window in the OBJECT COUNTER. The Background Color will paint over any Background which has been loaded in.
<b>BACKGROUND OBJECT</b>	Any object that has been dropped to the background using Background mode. Background Objects appear in front of the Background Color.
<b>CLIPBOARD</b>	The place in the computer's memory where a picture of the screen is put when you use COPY or CUT. The picture is retrieved from the Clipboard when you use PASTE.
<b>CLIPPING WINDOW</b>	The area of the screen within which animation is visible. Clipping allows portions of an object to be visible within the window, rather than forcing the entire object to be either visible or not visible.
<b>FRAME</b>	There are two kinds of frames in FANTAVISION: Key frames you create which will be animated when your Movie is run, and "in-between" frames created by the computer.
<b>FRENCH WINDOW</b>	The icon at the top right of the OBJECT COUNTER. Selecting the French Window gives you access to Background Color, the Clipping Window and the Super Palette.
<b>GLOBAL</b>	A command that can be used to change color, animation type and dimension throughout a Movie. GLOBAL is similar to "search and replace", a standard feature of many word processors.
<b>IMAGE OBJECT</b>	Everything you see on the screen at one time. Something you create on the screen that the computer recognizes as separate from the background or from the next "thing" you create. Objects can be manipulated in various ways, including turning and flipping just as they can in real life.



<b>OVERLAY</b>	A command that allows you to combine a number of frames into a single image.
<b>PIXEL</b>	A picture element. The smallest unit of light that can be turned on by your computer. Pixel size is determined by the hardware.
<b>RUBBER BANDING</b>	Also called "ghosting", this technique allows you to move a transparent version of an object around the screen until it is placed where you want it properly, at which time the object becomes solid.
<b>TRANSFORMATION</b>	The act of changing an object from one thing into another, such as changing a frog into a car.
<b>TWEENING</b>	FANTAVISION's automatic computation of "in-between" frames based on key frames drawn by the user.
<b>ZOUNDS</b>	About the nicest thing you can think of to say after you accidentally mess up your entire movie by forgetting to turn GLOBAL off before making some changes.

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# KEYBOARD COMMANDS

**G** = GO  
 ↑↓ = Scroll Bar  
**W** = Full Screen Window

**1-8** = Object Counter  
**9** = French Window (Background)

## FILE

**L** = Load  
**S** = Save  
**Ctrl X** = Clear

**D** = Delete  
**F** = Format Disk  
**Q** = Quit

## EDIT

**Z** = Undo  
**X** = Cut  
**C** = Copy  
**I** = Insert Blank Frame

**V** = Paste  
**K** = Clone  
**^** = Zap

## GOODIES

**Ctrl Z** = Zoom  
**Ctrl T** = Turn  
**Ctrl L** = Lean

**Ctrl F** = Flip  
**Ctrl S** = Squash  
**T** = Sound & Stuff

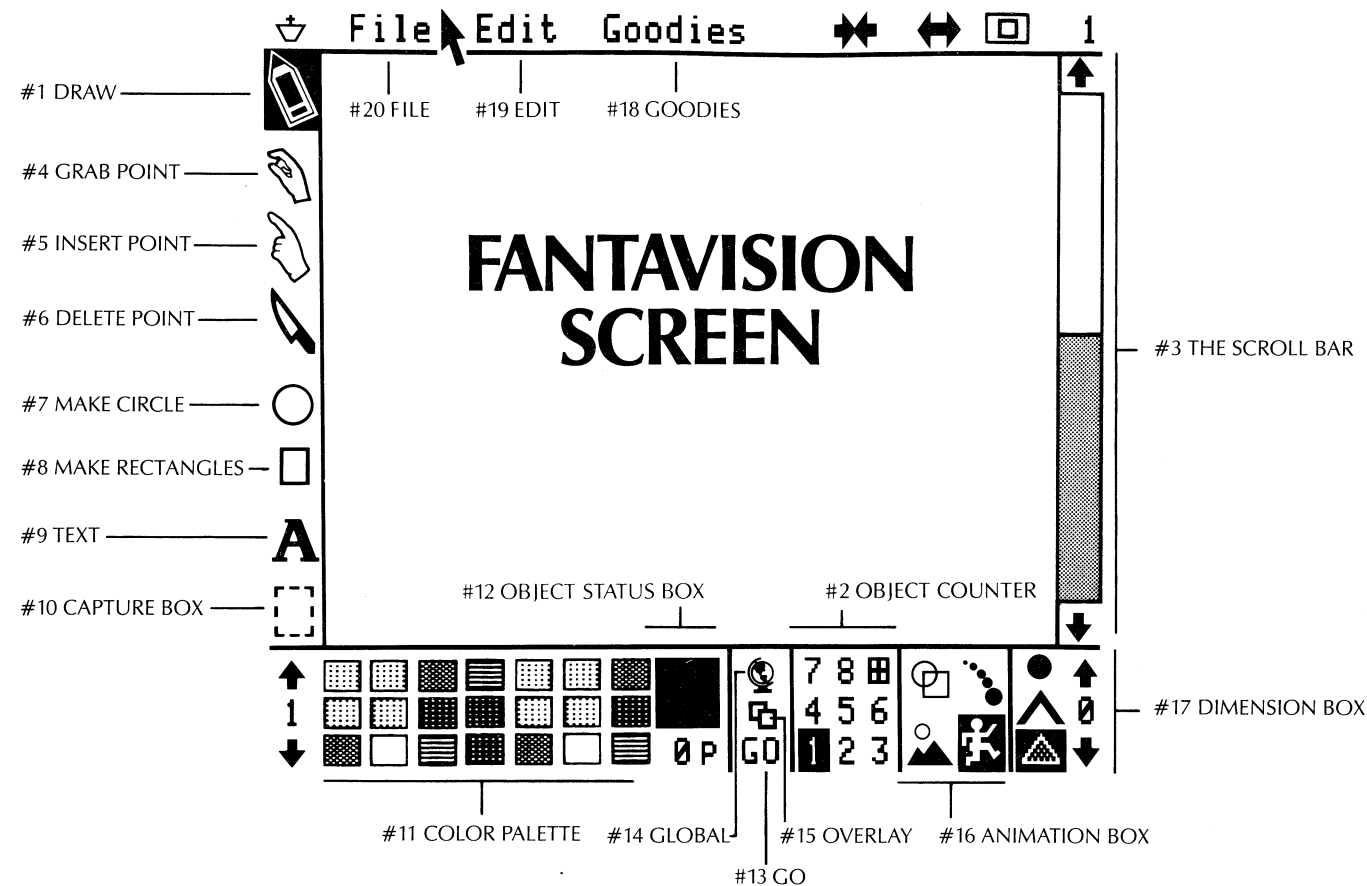
## WHILE RUNNING

**1-3** Set Speed (Slow to fast)  
**Space Bar** Stop/Start Motion  
**Esc** Escape: If you press **ESC** when the animation is running, returns to current work frame.

**Return** Skip to next Movie  
**←** Backward Animation  
**→** Forward Animation  
**L** Loop current movie

## CROWN

**?** = About Fantavision  
**M** = Matinee



# KEYBOARD

