LUMENA

ANIMATION

USER'S MANUAL

Lumena by John Dunn

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Section 1

Introduction

Installing Lumena Animation on Your Lumena System Disk or Hard Disk

Before you can use it with Lumena, you must install your Animation program on your working copy of Lumena, either on diskette or on a hard disk. The Animation Installation Disk contains an easy-to-use utility that prompts you through the steps required to install the program.

The Installation Disk allows you to install Animation only twice, so be sure to read through the instructions that follow and have all required materials ready before beginning.

Installing Lumena Animation on a Lumena Diskette

If you have version 1.06 or an earlier version of Lumena and do not have a hard disk, be sure to install Animation on your original Lumena System Disk, which must be in drive A of your system when you load Lumena.

To install Animation on a Lumena diskette (your Lumena System Disk if you have version 1.06 or an earlier version), you'll need:

Your Lumena System Disk or working diskette copy of Lumena Fonts Installation Disk;

MS-DOS system disk;

A blank, formatted diskette.

If you've stored any files on your Lumena diskette, you must remove all of them, particularly .PIX (picture) files, from the diskette before installing Animation. Use the MS-DOS COPY command to copy any such files that you want to preserve onto a formatted data diskette; then use the DEL command to delete them from your Lumena diskette.

To install Animation:

1. Load MS-DOS from diskette drive A. Set the date and time, if necessary, or simply press RETURN twice. (If necessary, use MS-DOS to format a blank diskette at this time.) Remove the MS-DOS system disk from drive A.

2. Remove the write-protect tab from the Animation Installation Disk and place the disk in drive A. Remove the write-protect tab from your Lumena diskette and place the diskette in drive B.

3. With the A> prompt on your screen, type:

```
INSTALL B
```

and press RETURN. (If you type the command incorreclty, an error message will result, and you can enter the command again.) The installation utility prompts you to check that you have the correct diskettes in drives A and B and to STRIKE ANY KEY WHEN READY. . . .

4. Press any key. The utility copies Animation onto your Lumena diskette. When the process is complete, this message appears:

```
New LUMENA disk with ANIMATION menu is installed.

Installation Complete.
```

Remove the Animation Installation Disk from drive A and store it in a safe place. Remove your Lumena diskette from drive B and put a write- protect tab on it. This is your working copy of Lumena, which now includes all Animation menus and commands.

Remember that with version 1.06 and earlier versions of Lumena, you must place your original Lumena System Disk in drive A when loading Lumena.

Installing Lumena Animation on a Hard Disk

To install Animation on a working copy of Lumena on a hard disk, you need only your Animation Installation Disk and MS-DOS.

To install the program:

1. Boot MS-DOS. If necessary, use the MS-DOS CHDIR (CD) command to change to your working Lumena directory. Remove the write-protect tab from your Animation Installation Disk and place the disk in drive A.

2. Type:

A:INSTALL C

and press RETURN. (If you type the command incorrectly, an error message will result, and you can enter the command again.) The installation utility prompts you to check that you have the correct diskette in drive A and to STRIKE ANY KEY WHEN READY. . . .

3. Press any key. The utility copies Animation onto your working Lumena directory. When the process is complete, this message appears:

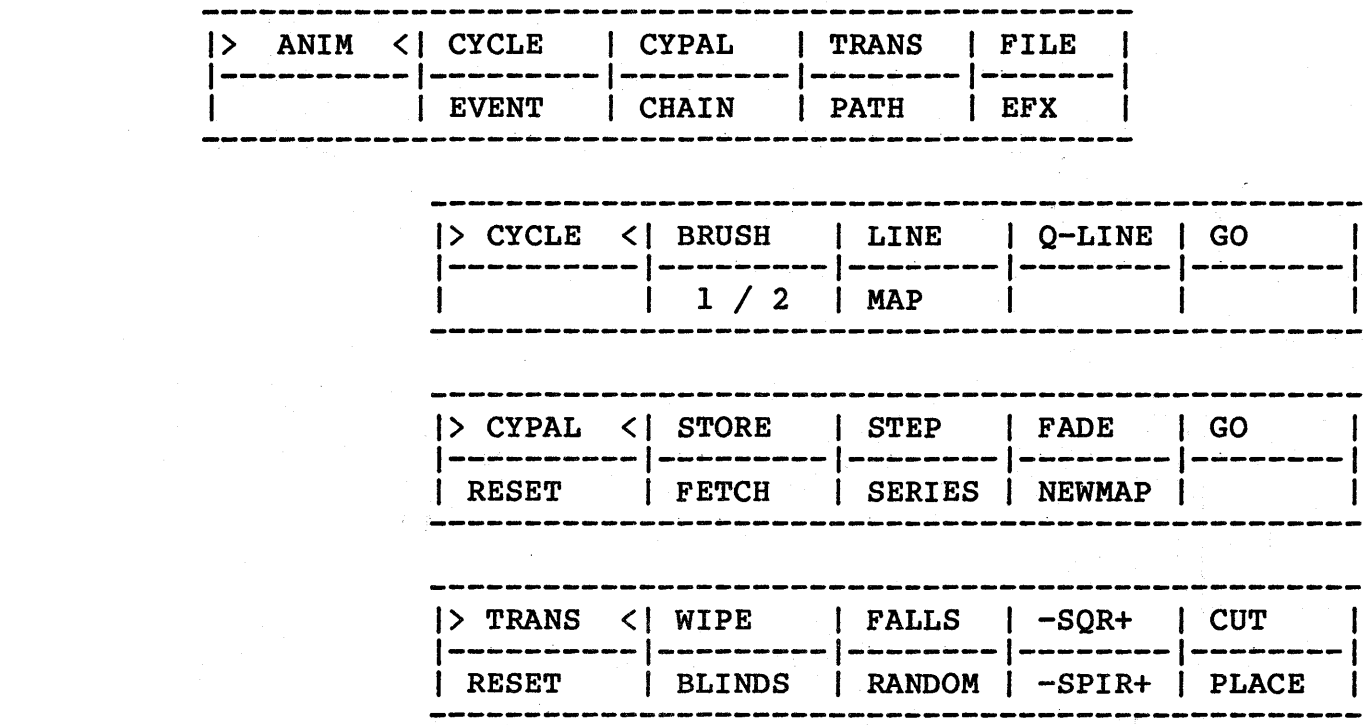
New LUMENA disk with ANIMATION menu is installed.

Installation complete.

Remove the Animation Installation Disk from drive A and store it in a safe place.

Your working copy of Lumena on the hard disk now includes all Animation menus and commands. Remember, however, that with version 1.06 or earlier versions of Lumena, you must place your original Lumena System Disk in drive A when loading Lumena.

Animation Menus



> FILE <	SAVE			SAVANM
LINK	LOAD		LNKANM	LODANM

> EVENT <	INSERT	SCROLL	STEP	-GO+
MOVE	DELETE	EDIT	B / E	REV/LP

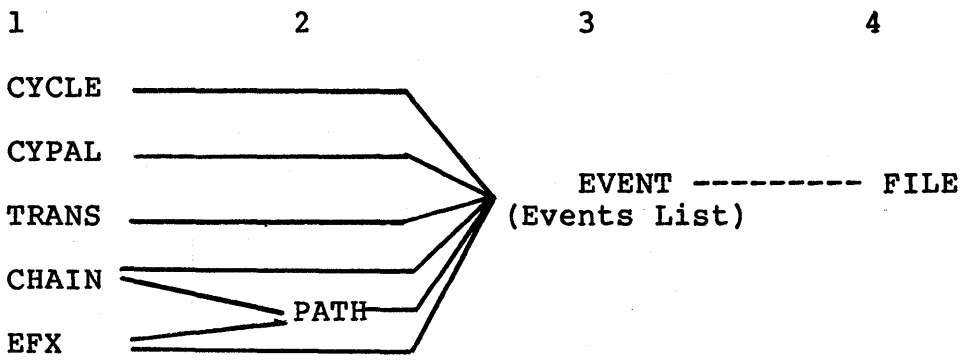
> CHAIN <	MAKE		STEP	-GO+
RESET	CLEAR	PIXEL	PAUSE	PLACE

> PATH <	SWEEP	WALK	STEP	-GO+

> EFX <	SPIN	ZOOM	H / V	-GO+
RESET	BLKPIX		TWEEN	PLACE

> PIXEL <	SCREEN	CELLS	EFX1	EFX2

Arrangement of the Menus



1 Animation events are created through these menus.

The CYCLE and CYPAL MENUS color animation.

The TRANS MENU provides a variety of ways to make transitions from one image to another.

The CHAIN MENU is used for putting individual images into a sequence and determining the exposure time for each image.

Special effects, such as spinning or zooming an image, are created through the EFX MENU.

2 Events created in CHAIN and EFX may occur along a path created through the PATH MENU. If no path is created, they occur in one place on the screen.

3 Animation events are stored in an Events List through the EVENT MENU.

4 The Events List can be saved on disk through the FILE MENU. Two or more events can be linked together so that, when one file of animation events finishes playing, another will be loaded and will play.

Use of the Cell Buffer

Commands in the TRANS, CHAIN, and EFX menus begin with an image stored in the cell buffer. The image can be created using any Lumena commands. The cell must be named in order to be recognized by the animation commands. (See the Lumena CELLS MENUS for details on making and naming cells.)

Use of the Put Buffer

Commands the EFX MENU use the Put buffer (accessed by the Lumena PSG general menu command) to store images. This means that anything currently stored in the Put buffer will be destroyed when you use this menu. It also means that, once EFX images are stored there, you should not put an image into the buffer because the animation images will be lost. (As a precaution, the PSG command is disabled while you're in the animation menus.)

Use of the EFX Buffer by Fonts & Layout

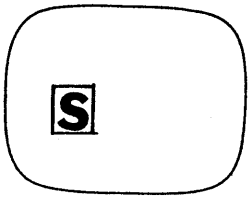
The EFX2 buffer, used by animation, is also used by certain commands in Lumena Fonts & Layout. If you're using Animation and Fonts & Layout together, it's better to create the necessary text first and store it in the cell buffer, then move to the animation menus. If you need to go to the fonts menus after storing animation images in the buffers, be sure to save the animation on disk (using SAVE in the FILE MENU) before using the fonts menus.

Storage of Animation Images

Many animation events require several images generated by Lumena, based on an original hand-drawn image. You store the original image in the cell buffer. The computer-generated variations of the image are stored in the EFX buffers.

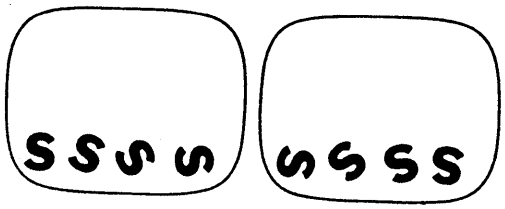
The images making up each event are stored in a single horizontal row. So the width of the original image will determine the number of variations possible, and hence the subtlety of the effect when the event is played. Similarly, the height of the original image determines how many events using different images can be stored at one time. It's to your advantage to make the cell of the original image as small as possible, just big enough to enclose the image.

Images in the cell and EFX buffers might look like this:



Cell Buffer

Original image is stored in a named cell in the cell buffer.



EFX1 EFX2

Images created by SPIN are variations of the original and are stored in the EFX buffers.

The PIXEL command in the CHAIN MENU allows you to bring to the screen images from either of the two EFX buffers or from the cell buffer. This command also allows you to magnify any portion of the screen image to make detailed changes.

Images remain in the buffers only if the event is stored in the Events List (see EVENT MENU). Otherwise, the images for an event are cleared when space is needed for another event.

When the storage area is full, a message to that effect will appear onscreen. At this point you should save the animation sequence currently in the Events List in a disk file. If you want other animation events to follow automatically when the current sequence is played, link one file to the next. (See the FILE MENU for details on saving and linking files.)

How Many Animation Events Are Possible?

Up to 28 events can be stored in the Events List. Although the image storage area may seem limited, different evetas can use the smame images, and many events do not require image storage space.

You could, for example, have the S in the illustration above spin onto the screen from one side, pause, disappear, and tumble off in another direction, all using the same set of images. In short, an event created through the CHAIN or EFX MENU can produce a variety of effects if it is set to follow different paths.

The TRANS MENU, providing interesting ways for images to appear and disappear, requires only the original image in the cell buffer.

The CYCLE and CYPAL MENUS deal with color changes rather than image variation. For example, a landscape can pass from high noon to twilight or midnight just by a change in color mapping.

Storing on Disk

Animation sequences consist of four kinds of information: images, color maps, cell infomration, and the Efvents List, which dtermins how the images are to be animated.

Cell images are saved in a .PIC file, color maps in a .MAP file, cell information in a .CEL file, and the Events List in a .ANM file. If the EFX MENU has been used, .EF1 and .EF2 files are also required. All these files are created through a single SAVE command in the FILE MENU, and all will have the same name (the name you specify through the 1-9 command before saving). All related files are called up together through the LOAD command in the FILE MENU.

Because the files are separate, however, you can also call them up individually through the appropriate menus. .MAP files can be called up through the PALET MENU, .CEL files through the CSTOR MENU, and .ANM files through LODANM in the FILE MENU.

.PIC files, called up through LOAD in the FILE MENU, load into the cell buffer. If you would like the image in a .PIC file to load onto the working screen, first load it into the cell buffer through the FILE MENU, then use SWAP in the DISK MENU. You will then have the same image in a file with a .PIX extension, which can be loaded through the DISK MENU.

Section 2

A Short Guided Tour Through Animation

All animation events begin with a picture created through any Lumena commands. The animation menus offer ways to bring an image to the screen, to change colors in an image, to play in sequence a set of hand-drawn images, and to play a sequence of computer-generated images based on an original hand-drawn image.

Creating a Transition

Draw a picture of any size. If you've already saved a picture on disk, you can use that, or you can load one of the demonstration pictures that came with your Lumena System Disk. For this experiment, a picture filled with colors will be more interesting than one with large areas of background color.

Press CELLS (in the Lumena MAIN MENU). Then go to the CSTOR MENU and press PUTCEL. Press 2 points to define the area of the image that you want to put into the cell buffer; it can be a portion of the image or the full-screen image. When the image area is defined, the cell buffer becomes visible, allowing you to position the cell. Put the cell anywhere onscreen.

When the cell is positioned in the cell buffer, the working screen will reappear. Press twice in the Prompt Box to zap the screen.

Go to the ANIM MENU, then to the TRANS MENU, and press FALLS. The cell buffer will appear. Press inside the cell. The working screen will return, and the image you selected will come to the screen, appearing to fall in from the top.

You can vary the speed of the transition by changing the number in the Status Box--1 is fastest, 8 is slowest. Press RESET, then try FALLS again.

The other transitions work in a similar way. Try them all, using the single picture in the cell buffer. BLINDS allows you to choose, by stroking the pen, whether the blinds should be horizontal or vertical. WIPE lets you choose, by stroking the pen, the direction of the wipe. With SQR (square) and SPIR (spiral), have the picture appear to open from the center (press + in the command box) or close in from the edges toward center (press -).

The PLACE Command

If the image being brought to the screen is less than full-screen size, PLACE will let you position it. (If PLACE is not used, the image will come to the middle of the screen or to the last-selected PLACE.)

The RESET Command

RESET returns the image that was onscreen before the last event. It can also be stored as an event.

Storing an Event in the Events List

When you've created an animation event at the speed you want, press the menu label of the current menu to return to the ANIM MENU, then press EVENT. When the EVENT MENU comes to the screen, press INSERT. The last animation event created is inserted in the Events List. The line at the top of the screen may read, for example, >1 FALLS a, indicating that the first event in the list is a FALLS and that its cell is designated as "a".

A Special Effect

Commands in the EFX MENU create special effects based on an original hand-drawn image, with subsequent images created by Lumena.

Begin with a picture having a definite orientation--a simple letter or number will work. Make it no more than about two inches tall. Put the image into the cell buffer, using PUTCEL in the Lumena CSTOR MENU.

Return to the EFX MENU and press SPIN. The cell buffer screen will appear. Press the cell you want to spin. The working screen will appear again and your screen image will be temporarily stored, while variations of the cell image are created one at a time. Each of these variations is stored in a buffer. When your screen image returns, the effect is ready to be played.

Press GO. The image will appear to spin in place.

If you wish to choose a new location for the event, press PLACE and select a point. You may also want to adjust the speed by changing the number in the Status Box. Then press GO again.

Notice that once the image variations are created, the effect can be played any number of times.

At this point you can decide to store the event to play at its current location, or you can create a path for it to follow.

Creating a Path

To create a path, go to the PATH MENU and press STEP. Each time you press the pen in the image area, a variation of the spinning image will be deposited and the next variation will appear in place of the cursor.

When all the variations have been placed, press GO. Pressing + will make the image spin along the path as you created it; pressing - will cause it to follow the path in the opposite direction. If the path isn't exactly right, press STEP and set a new one.

When the effect has the path and speed that you want, go to the the EVENT MENU and press INSERT. This stores the effect along with its path.

Events List

You can use SCROLL at any time to view the Events List. Press SCROLL. Then press the pen anywhere on the tablet, and while pressing, move it left or right. The line at the top of the screen will scroll through the list.

If you press PLAY, all events in the Events List will play through.

If you press STEP, the events will play through, but each event will begin only at the press of the pen. When each event has played, its elapsed time is shown at the top of the screen.

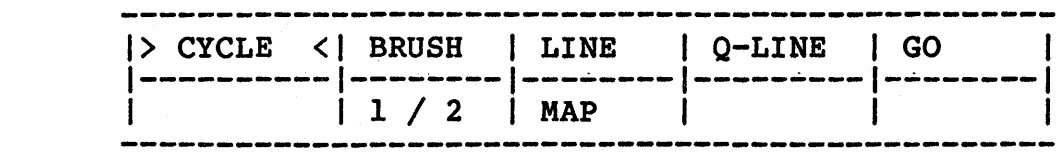
Saving on Disk

The animation sequence in the Events List is in memory but will remain there only until you exit Lumena. To save the sequence on disk, go to the FILE MENU. Write a name into the menu of filenames by pressing a number from 1 through 9 and typing a name of up to six letters. Then press SAVE in the FILE MENU, and press the name you typed in.

SAVE in this menu saves all information needed for the current animation sequence--images, color maps, cell information, and the Events List. LOAD in this menu loads all related files saved through the SAVE command.

Section 3

Cycle Menu



The CYCLE MENU has commands for producing animation effects through color changes. When a sequence of colors is activated through the GO command, the red, green, and blue values of each color are passed to the color in the next position in the palette. Thus, a line drawn with colors in the sequence in which they appear in the palette will appear to move.

In using this menu, the usual order of commands would be:

1 or 2--to designate which map is to be used.
MAP--to choose the range of colors.
BRUSH or LINE or Q-LINE--to draw lines automatically composed of the range of colors selected with MAP.
GO--to animate the picture.

When a line created through this menu is activated by the GO command, it seems to move in the direction in which drawing took place. A spiral drawn from the outside in will appear to move inward. Two lines drawn in opposite directions from a common point will appear to flow out of that point.

Colors composing the line affect the apparent movement. A BRUSH line composed of many colors moves more slowly when cycled than a line composed of few colors. A line drawn with only two colors will appear to shimmer rather than "move along".

COMMAND: BRUSH

PURPOSE: Enable drawing with a paint color which is composed of a range of colors chosen through the MPA command.

PROMPTS: None.

EXIT: Initiate another command.

PRELIMINARY COMMANDS:
1 / 2, MAP (CYCLE MENU)

Press 1 or 2, then use MAP to select the range of colors to be used with BRUSH. (Otherwise, BRUSH will use the colors last chosen.)

PROCEDURE:

1. Press BRUSH, then move into the image area and press while drawing.

EFFECTS:

In a BRUSH line, all colors in the palette between the two colors chosen through the MAP command appear in succession. A slow movement of the pen yields overlapping patches of the colors; rapid movement yields the sequential color patches with space between.

RELATED COMMANDS:
CHANGE SIZE (Status Box)

You can change the size of BRUSH through the Status Box at any time.

COMMAND: LINE

PURPOSE: Draw links composed of the range of colors selected through MAP.

PROMPTS: None.

EXIT: Select another command.

PRELIMINARY COMMANDS:
1 / 2, MAP (CYCLE MENU)

Press 1 or 2, then use MAP to select the range of colors used by BRUSH. (Otherwise, BRUSH will use the colors last chosen.)

PROCEDURE:

1. Press LINE.

2. In the image area, press one point to locate the beginning of the line.

3. Press a second point a short distance from the first , to specify the length of color segment in the line.

4. Press a third point to draw the line.

   Each subsequent press of the pen in the image area will connect the previous end point with the new point.

To terminate a run of line segments, move the cursor into the menu area. You can then move back into the image area and begin a new run of line segments in a new location and with a new length for each color segment in the line.

EFFECTS:

A line of the selected colors connects the chosen points.

A line of cycle colors draws on only the first color touched, so the cycling colors can appear to pass behind objects in the image.

RELATED COMMANDS:

To make a cycle line that covers all colors, first create the line with a single color, using the LINE command in the PENS MENU. Then use LINE in the CYCLE MENU to put a series of colors into it.

COMMAND: Q-LINE (quantized line)

PURPOSE: Draw a horizontal or vertical line composed of the range of colors selected through MAP.

PROMPTS: None.

EXIT: Select another command.

PRELIMINARY COMMANDS:
1 / 2, MAP (CYCLE MENU)

Press 1 or 2, then use MAP to select the range of colors used by BRUSH. (Otherwise, BRUSH will use the colors last chosen.)

PROCEDURE:

1. Press Q-LINE.

2. In the image area, press one point to locate the beginning of the line.

3. Press a second point a short distance from the first, to specify the length of each color segment in the line.

4. Press a third point to draw the line.

   Each subsequent press of the pen in the image area draws a horizontal or vertical line from the previous endpoint to the selected point.

To terminate a run of line segments, move the cursor into the menu area. You can then move back into the image area and begin a new run of line segments in a new location and with a new length for each color segment in the line.

EFFECTS:

This command draws lines that are exactly horizontal or vertical.

A line of cycle colors draws on only the first color touched, so the cycling colors can appear to pass behind objects in the image.

RELATED COMMANDS:

To make a cycle line that covers all colors, first create the line with a single color, using the Q-LINE command in the PENS MENU. Then use LINE in the CYCLE MENU to put a series of colors into it.

COMMAND: GO

PURPOSE: Actively cycle the range of colors selected through the MAP.

PROMPTS: None.

EXIT: None needed.

PRELIMINARY COMMANDS:

You must select a map, and some colors in the map must be used in the image onscreen. Otherwise, the GO command will have no apparent effect.

Ordinarily, this command cycles both maps 1 and 2 (see MAP). To disable one of the maps so that GO cycles just one range of colors, press the number to be disabled, press MAP, then press any color twice.

PROCEDURE:

1. Select the duration for cycling by setting the number in the Status Box (1 is shortest, 8 is longest).

2. Press GO.

EFFECTS:

All colors on the screen that fall within the ranges chosen through MAP shift to the position on their right in the palette.

To store the CYCLE event in the Events List, press INSERT in the EVENT MENU.

RELATED COMMANDS:
LP, PLAY (EVENT MENU)

If the CYCLE event is the only event in the Events List, pressing LP before pressing PLAY will cause the cycling to continue until you exit by pressing anywhere on the tablet.

COMMAND: 1 / 2

PURPOSE: Select which of two available maps will be used by subsequent commands.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press 1 or 2.

EFFECTS:

Use this command to select which of two available maps will be used by other commands in the CYCLE MENU. Whichever is pressed remains active for all subsequent commands (except for GO, which ordinarily uses both maps) until the other map number is pressed.

COMMAND: MAP

PURPOSE: Select a range of colors to be used by BRUSH, LINE, Q-LINE, or GO.

PROMPTS: 2C (2 colors)

EXIT: Initiate another command.

PRELIMINARY COMMANDS:
1 / 2 (CYCLE MENU)

Press 1 or 2 to specify the map being selected.

PROCEDURE:

1. Press MAP.

2. Press two colors, the first and last in the range of colors to be cycled.

   The colors may be chosen from the bottom row of the palette or from the image, but selecting from the palette lets you see exactly which colors fall within the range.

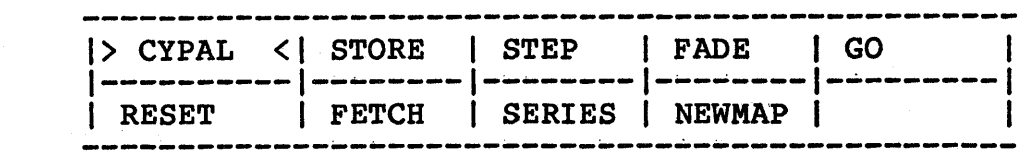
If you want future color cycling to take place against a constant background, do not include background color in your range of colors.

EFFECTS:

MAP determines the set of colors to be used in subsequent BRUSH, LINE, Q-LINE, or GO commands. There is no visible effect until one of those commands is executed.

Section 4

Cypal Menu



The CYPAL MENU allows you to create animation effects through changes in color mapping. Up to eight palettes, or color maps, may be stored.

Changing even one color in the map can produce subtle changes, such as a sky that gradually lightens, or dramatic changes, such as a figure that suddenly appears.

To store a color map:

1. Create the desired palette through the commands in the COLOR MENU and PALET MENU.

2. Select the Animation CYPAL MENU and bring to the Status Box the number under which the map is to be stored.

3. Press STORE.

STEP allows you to step through the stored color maps. After STEP is pressed, each press of the pen advances the number in the Status Box and displays the map stored under that number.

FETCH, SERIES, FADE, RESET, and NEWMAP are events that can be saved in the Events List. STORE and STEP are for storing and viewing maps.

Saving maps on disk:

The eight color maps stored through this menu can be saved in a .MAP file on disk through SAVE or SAVANM in the FILE MENU. The file will contain all the maps currently stored, whether or not the maps are used in the current animation.

COMMAND: STORE

PURPOSE: Store up to eight maps for use with this menu.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Create the desired color map through commands in the COLOR MENU or PALET MENU.

2. Call up the CYPAL MENU and bring into the Status Box the number under which the map is to be stored.

3. Press STORE.

EFFECTS:

The map onscreen is stored and named with the number in the Status Box.

COMMAND: STEP

PURPOSE: Call up the next map in a stored sequence of up to eight.

PROMPTS: None.

EXIT: Lift the pen from the tablet.

PRELIMINARY COMMANDS:
STORE (CYPAL MENU)

To store color maps for use in this menu, use the STORE command.

PROCEDURE:

1. Press the + or - side of STEP.

2. Press briefly anywhere on the tablet.

   At each press of the pen, the number in the Status Box will advance to the next number (if you pressed +) or will return to the previous number (if you pressed -). The map stored under that number will be displayed.

   The command is active as long as the pen is touching the tablet.

EFFECTS:

At each press, the next (or previous) map in a stored series appears onscreen. The number of the map onscreen appears in the Status Box. (If no map has been stored under that number, the palette will display the color map current when you entered the ANIM MENU.)

RELATED COMMANDS:
EVENT MENU

To store any CYPAL event, including STEP, in a list to be played back in sequence, use INSERT.

COMMAND: FADE

PURPOSE: Fade colors from the current map toward a selected map.

PROMPTS: None.

EXIT: None needed.

PRELIMINARY COMMANDS:
STORE (CYPAL MENU)

To store color maps for use in this menu, use the STORE command.

PROCEDURE:

1. Bring to the Status Box the number of the map toward which the current map should fade, using STEP.

2. Press FADE.

   To store the event in the Events List, press INSERT in the EVENT MENU.

EFFECTS:

The current map fades toward the one named in the Status Box.

This command is more effective in television mode than in monitor mode.

COMMAND: NEWMAP

PURPOSE: Call up the map of the image last loaded into the cell buffer.

PROMPTS: None.

EXIT: Press RESET to return to the previous map.

PRELIMINARY COMMANDS:
LOAD (FILE MENU)

The NEWMAP command governs the color map of a picture that has been loaded into the cell buffer through LOAD in the FILE MENU.

PROCEDURE:

1. Press NEWMAP.

EFFECTS:

The map of the image stored in the buffer comes to the screen.

Whenever a picture is loaded into the cell buffer through LOAD in the FILE MENU, its map is put in temporary storage. This is done so that the color map of the onscreen image will not automatically be changed. When the image in the buffer is then called to the visible screen (through commands in the TRANS MENU, for example), its color map can also be called up.

The NEWMAP command allows you to have the change in mapping occur either before or after the picture is called to the visible screen (that is, the NEWMAP command can be stored in the Events List either before or after the event).

Remember that color maps will vary in appearance, depending on whether they were created in the Lumena monitor or composite (TV) mode.

COMMAND: RESET

PURPOSE: Call back the map that was onscreen before the last event.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press RESET.

EFFECTS:

The map onscreen before the last event returns to the screen.

COMMAND: FETCH

PURPOSE: Call up the map named in the Status Box.

PROMPTS: None.

EXIT: None needed.

PRELIMINARY COMMANDS:
STORE (CYPAL MENU)

To store color maps for use in this menu, use the STORE command.

PROCEDURE:

1. Bring to the Status Box the number of maps being called up, using STEP.

2. Press FETCH.

EFFECTS:

The map stored under the number in the Status Box appears onscreen.

RELATED COMMANDS:
STEP, SERIES (CYPAL MENU), RESET (CYPAL MENU); EVENT MENU

SERIES allows you to save as an event the last four maps displayed.

Use RESET to recall to the screen the previous map.

To store a CYPAL event in a list to be played back in sequence, use INSERT.

COMMAND: SERIES

PURPOSE: Collect four maps to flash through (the entire sequence is regarded as one event).

PROMPTS: None.

EXIT: None needed.

PRELIMINARY COMMANDS:
STORE, STEP, FETCH (CYPAL MENU)

To store color maps for use in this menu, use the STORE command.

SERIES uses the last four maps called up by either STEP or FETCH.

PROCEDURE:

1. Press SERIES.

EFFECTS:

The last four maps called up by STEP or FETCH are displayed in the order in which they were called. (To flash through fewer than four maps, select the same map twice in a row.)

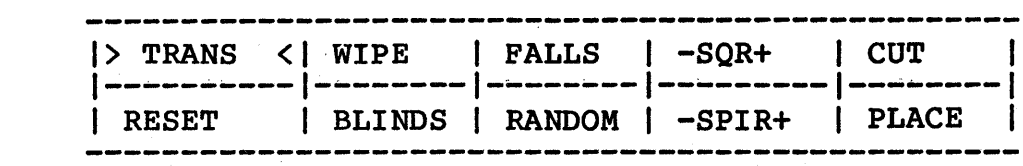
RELATED COMMANDS:
RESET (CYPAL MENU); EVENT MENU

Use RESET to recall the map onscreen before the last event.

To store a CYPAL event in a list to be played back in sequence, use INSERT.

Section 5

Trans Menu



The TRANS MENU provides visual variety in changing from one image to another. The speed of the transition is selected by changing the number in the Status Box, 1 being the fastest and 8 the slowest.

The image onscreen may be totally replaced by a new image, or a portion of it may be replaced. If the new image is smaller than full-screen size, its position is selected through the PLACE command.

COMMAND: WIPE

PURPOSE: Reveal a new image by wiping the screen in a chosen direction.

PROMPTS: OK?

EXIT: None needed.

PRELIMINARY COMMANDS:
PLACE (various menus); 1-8 (Status Box)

If the new image is smaller than full-screen size, select its location through the PLACE command.

Adjust the speed of the transition by changing the number in the Status Box.

PROCEDURE:

1. Press WIPE.

   The prompt H?V appears, allowing you to specify whether the wipe should be horizontal or vertical.

2. Choose the direction of the wipe by pressing the pen anywhere on the tablet, moving it in the desired direction (top to bottom, bottom to top, left to right, or right to left) and releasing pressure.

3. Press inside the cell to be brought to the screen.

4. Press OK? in the Prompt Box.

EFFECTS:

The new image is wiped onto the screen in the selected direction. The speed of the transition is determined by the number in the Status Box.

RELATED COMMANDS:
RESET (TRANS MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the last transition.

To add an event to the Events List, use INSERT.

COMMAND: FALLS

PURPOSE: Make a new image appear to "fall" into place from the top of the screen.

PROMPTS: OK?

EXIT: None needed.

PRELIMINARY COMMANDS:
PLACE (various menus); 1-8 (Status Box)

If the new image is smaller than full-screen size, select its location through the PLACE command.

Adjust the speed of the transition by changing the number in the Status Box.

PROCEDURE:

1. Press FALLS.

   The cell buffer appears, with images and cells visible.

2. Press inside the cell to be brought to the screen.

   The working screen reappears.

3. Press OK? in the Prompt Box.

EFFECTS:

The selected image appears to fall into place. The speed of the transition is determined by the number in the Status Box.

RELATED COMMANDS:
RESET (TRANS MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the last transition.

To add an event to the Events List, use INSERT.

COMMAND: -SQR+ (square)

PURPOSE: Reveal a new image in a square which begins at the outer edges and moves toward the center of the screen (-) or which begins at the center and moves outward (+).

PROMPTS: OK?

EXIT: None needed.

PRELIMINARY COMMANDS:
PLACE (various menus); 1-8 (Status Box)

If the new image is smaller than full-screen size, select its location through the PLACE command.

Adjust the speed of the transition by changing the number in the Status Box.

PROCEDURE:

1. Press the - side of the command for the new image to begin at the edges, or press the + side for the new image to begin at the center.

2. Press inside the cell to be brought to the screen.

   The working screen reappears.

3. Press OK? in the Prompt Box.

EFFECTS:

If - was pressed, the new image is revealed from the edges toward center; if + was pressed, the new image is revealed from the center toward the edges. The speed of the transition is determined by the number in the Status Box.

RELATED COMMANDS:
RESET (TRANS MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the last transition.

To add an event to the Events List, use INSERT.

COMMAND: CUT

PURPOSE: Change instantly to the new image.

PROMPTS: OK?

EXIT: None needed.

PRELIMINARY COMMANDS:
PLACE (various menus)

If the new image is smaller than full-screen size, select its location through the PLACE command.

PROCEDURE:

1. Press CUT.

   The cell buffer appears, with images and cells visible.

2. Press inside the cell to be brought to the screen.

   The working screen reappears, and OK? appears in the Prompt Box.

3. Press OK? in the Prompt Box.

EFFECTS:

The selected image comes to the screen immediately.

The number in the Status Box governs the length of time the image remains onscreen before the beginning of the next event in the Events List.

RELATED COMMANDS:
RESET (TRANS MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the last transition.

To add an event to the Events List, use INSERT.

COMMAND: RESET

PURPOSE: Restore the image onscreen before the last event.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press RESET.

EFFECTS:

The image onscreen before the last event returns to the screen.

RELATED COMMANDS:
INSERT (EVENT MENU)

To add RESET as an event to the Events List, use INSERT.

COMMAND: BLINDS

PURPOSE: Reveal a new image through horizontal or vertical slats which gradually become larger, giving the effect of blinds opening.

PROMTPS: H?V (horizontal or vertical?), OK?

EXIT: None needed.

PRELIMINARY COMMANDS:
PLACE (various menus); 1-8 (Status Box.)

If the new image is smaller than full-screen size, select its new location through the PLACE command.

Adjust the speed of the transition by changing the number in the Status Box.

PROCEDURE:

1. Press BLINDS.

   The prompt H?V appears.

2. To specify whether the blinds should be horizontal or vertical, press anywhere on the tablet, stroke the pen horizontally or vertically, then release pressure.

   The cell buffer appears, with images and cells visible.

3. Press inside the cell to be brought to the screen.

   The working screen reappears.

4. Press OK? in the Prompt Box.

EFFECTS:

The selected image is revealed through horizontal or vertical slats, which gradually become larger until the entire image is revealed. The speed of the transition is determined by the number in the Status Box.

RELATED COMMANDS:
RESET (TRANS MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the last transition.

COMMAND: BLINDS

PURPOSE: Reveal a new image through horizontal or vertical slats which gradually become larger, giving the effect of blinds opening.

PROMTPS: H?V (horizontal or vertical?), OK?

EXIT: None needed.

PRELIMINARY COMMANDS:
PLACE (various menus); 1-8 (Status Box.)

If the new image is smaller than full-screen size, select its new location through the PLACE command.

Adjust the speed of the transition by changing the number in the Status Box.

PROCEDURE:

1. Press BLINDS.

   The prompt H?V appears.

2. To specify whether the blinds should be horizontal or vertical, press anywhere on the tablet, stroke the pen horizontally or vertically, then release pressure.

   The cell buffer appears, with images and cells visible.

3. Press inside the cell to be brought to the screen.

   The working screen reappears.

4. Press OK? in the Prompt Box.

EFFECTS:

The selected image is revealed through horizontal or vertical slats, which gradually become larger until the entire image is revealed. The speed of the transition is determined by the number in the Status Box.

RELATED COMMANDS:
RESET (TRANS MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the last transition.

To add an event to the Events List, use INSERT.

COMMAND: RANDOM

PURPOSE: Change random blocks of the onscreen image into a new image, until the entire new image is revealed.

PROMPTS: OK?

EXIT: None needed.

PRELIMINARY COMMANDS:
PLACE (various menus); 1-8 (Status Box)

If the new image is smaller than full-screen size, select its location through the PLACE command.

Adjust the speed of the transition by changing the number in the Status Box.

PROCEDURE:

1. Press RANDOM.

   The cell buffer appears, with images and cells visible.

2. Press inside the cell to be brought to the screen.

   The working screen reappears.

3. Press OK? in the Prompt Box.

EFFECTS:

Random blocks of the current image change into the new image. The speed of the transition is determined by the number in the Status Box.

RELATED COMMANDS:
RESET (TRANS MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the last transition.

To add an event to the Events List, use INSERT.

COMMAND: -SPIR+ (spiral)

PURPOSE: Reveal the new image in a spiral which begins at the outer edges of the screen and moves toward the center (-) or which begins at the center and moves outward (+).

PROMPTS: OK?

EXIT: None needed.

PRELIMINARY COMMANDS:
PLACE (various menus); 1-8 (Status Box)

If the new image is smaller than full-screen size, select its location through the PLACE command.

Adjust the speed of the transition by changing the number in the Status Box.

PROCEDURE:

1. Press the - side of the command for a spiral that moves from the outside in, or press the + side for a spiral that moves from the center out.

   The cell buffer appears, with images and cells visible.

2. Press inside the cell to be brought to the screen.

   The working screen reappears.

3. Press OK? in the Prompt Box.

EFFECTS:

If you pressed -, the path of the spiral that reveals the new image moves from the outside toward center; if +, the path of the spiral moves from the center out. The speed of the transition is determined by the number in the Status Box.

RELATED COMMANDS:
RESET (TRANS MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the last transition.

To add an event to the Events List, use INSERT.

COMMAND: PLACE

PURPOSE: Set a centerpoint for an event.

PROMPTS: 1P (1 point)

EXIT: None needed.

PROCEDURE:

1. Press PLACE.

   The point last selected through PLACE is highlighted. If no PLACE point has been previously selected, the center of the screen is highlighted.

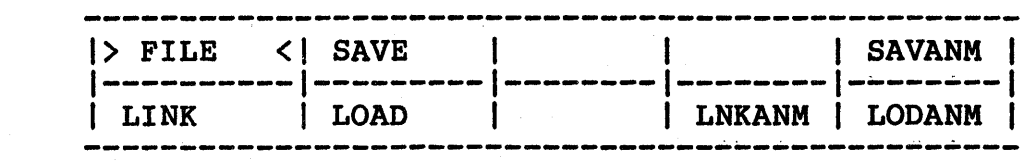
2. Press the point in the image area that you want used as the center of subsequent events. To keep the point last selected, simply press in the Prompt Box.

EFFECTS:

The selected point will be the center of all subsequent events, whether executed through this or any other animation menu, until a new point is chosen through another PLACE command.

Section 6

File Menu



The FILE MENU allows you to save and load animation sequences on disk.

After an animation sequence is stored in the Events List (through the EVENT MENU), use SAVE in this menu to save it on disk.

Animation sequences consist of four kinds of information: images, color map(s), the cells in which the images are stored, and the Events List, which determines how the images are to be animated. SAVE in this menu stores all four kinds of information for a given animation sequence, and LOAD loads all four kinds.

Although SAVE is a single command, it creates four separate files for the animation sequence, all with the same name (the name you give the sequence) but with different extensions. The images are stored in a .PIC file, the color map(s) in a .MAP file, the cell information in a .CEL file, and the Events List in a .ANM file. LOAD in this menu loads all related files saved through SAVE. But these files can be used separately, without calling up the entire animation sequence. A .MAP file can be called up through the PALET MENU, a .CEL file through the CELLS MENU, an image (and all other files) through the L keyboard command.

SAVANM saves only the Events List. This command is useful if you've created an additional Events List which uses the cells, images, and color map(s) of a sequence already saved. The new .ANM file can be linked to the previous sequence and saved as a single file.

COMMAND: SAVE

PURPOSE: Save to disk the current animation sequence.

PROMPTS: SAV

EXIT: None needed.

PRELIMINARY COMMANDS:
1-9 (KEYBOARD COMMANDS)

To name a file, type a number from 1 through 9, then type a name of up to six characters and press RETURN.

PROCEDURE:

1. Press SAVE.

   The menus of filenames appears.

2. Press the name under which the animation sequence should be saved.

EFFECTS:

All information necessary for the current animation sequences is saved on disk.

The information is stored in four associated files, all with the same name but with different extensions. The images stored in the buffer are saved in a .PIC file, the color map(s) in a .MAP file, the cell information in a .CEL file, and the Events List in a .ANM file.

NOTE: This command does <u>not</u> save the image on the visible screen. To save that image, use SAVE in the Lumena DISK MENU.

RELATED COMMANDS:
LOAD (FILE MENU); L (KEYBOARD COMMANDS); LODMAP (PALET MENU); LOAD (CELLS MENU); and LODANM (FILE MENU)

The files saved through the SAVE command in this menu can be loaded independently through other menus. A .MAP file can be loaded through the PALET MENU, a .CEL file through the CELLS MENU, and a .ANM file through LODANM in this menu.

COMMAND: SAVANM (save animation)

PURPOSE: Save the Events List.

PROMPTS: SAV

EXIT: None needed.

PRELIMINARY COMMANDS:
N (KEYBOARD COMMANDS)

To name a file, press the N key, then type a name of up to six characters and press RETURN.

PROCEDURE:

1. Press SAVANM.

   The menu of filenames appears.

2. Press the name under which the animation should be saved.

EFFECTS:

The current Events List is saved to disk in a .ANM file.

NOTE: The current Events List, along with all other information needed for an animation, is saved with the SAVE command. Use SAVANM only when you want to save only the Events List.

RELATED COMMANDS:
LODANM (FILE MENU)

Use LODANM to load an Events List.

COMMAND: LINK

PURPOSE: Link one animation sequence to another.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press LINK.

   The menu of filenames appears.

2. Press the name of the animation sequence to which the current one should be linked.

3. Go to the EVENT MENU and press INSERT.

   (Be sure to SAVE the current animation sequence.)

EFFECTS:

The current animation sequence is linked to the selected animation sequence. Whenever the current sequence is played, the sequence it's linked to will automatically be loaded and play after it.

NOTE: LINK should be used only as the last event in an Events List. If it appears earlier, the new sequences will begin to play instead of subsequent events in the first sequence.

COMMAND: LOAD

PURPOSE: Load an animation sequence from disk.

PROMPTS: LOD

EXIT: None needed.

PROCEDURE:

1. Press LOAD.

   The menu of filenames appears.

2. Press the name of the animation sequence to be loaded.

EFFECTS:

The selected animation sequence is loaded from disk. To play the sequence, go to the EVENT MENU and press PLAY.

RELATED COMMANDS:
L (KEYBOARD COMMANDS); LODMAP (PALET MENU); LOAD (CELLS MENU); LODANM (FILE MENU)

LOAD in this menu loads all associated files for an animation sequence. A .PIC file can be loaded separately through the L keyboard command, a .MAP file can be loaded through the PALET MENU, a .CEL file through the CELLS MENU, and a .ANM file through LODANM in this menu.

COMMAND: LNKANM (link animation)

PURPOSE: Link an Events List to the current Events List.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press LNKANM.

   The menu of filenames appears.

2. Press the name of the .ANM file to which the current one should be linked.

3. Go to the EVENT MENU and press INSERT.

   (Be sure to SAVE the current animation sequence.)

EFFECTS:

The selected .ANM file is linked to the current animation sequence. Whenever the current sequence is played, the linked sequence will automatically be loaded and play after it.

This command assumes that the file being linked to uses the same cells, images, and color maps as the current animation sequence. LNKANM links only a .ANM file. Using LNKANM has the same effect as adding to the Events List, but without changing the already existing images and maps.

NOTE: LNKANM should be used only as the last event in an Events List. If it appears earlier, the new sequence will begin to play instead of later events in the first sequence.

RELATED COMMANDS:
LINK (FILE MENU)

LINK links to the current file all related animation files saved under the selected name, whereas LNKANM links only the .ANM file under the selected name.

COMMAND: LODANM (load animation)

PURPOSE: Load an Events List from a desk file.

PROMPTS: LOD

EXIT: None needed.

PROCEDURE:

1. Press LODANM.

   The menu of filenames appears.

2. Press the name of the .ANM file to be loaded.

EFFECTS:

This command loads only an Events List saved in an .ANM file.

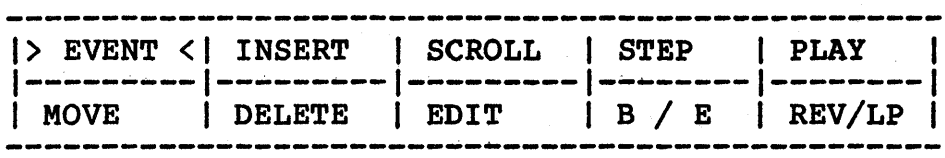
NOTE: This command does NOT load images or cell information.

RELATED COMMANDS:

L (KEYBOARD COMMANDS); LADMAP (PALET MENU); LOAD (CELLS MENU); LOAD (FILE MENU).

Section 7

Event Menu



With the EVENT MENU, you create and edit the Events List--a final playing sequence of the special effects, transitions, chains, and color mapping events created through the various animation menus. The order of events can be rearranged, their playing time adjusted, and the entire sequence viewed through this menu.

Events stored through this menu can be saved on disk through the FILE MENU.

COMMAND: REV/LP (reverse/loop)

PURPOSE: Set PLAY and STEP to go forward and then backward.

PROMPTS: None.

EXIT: Press REV or LP again.

PROCEDURE:

1. Press REV.

OR

1. Press LP.

EFFECTS:

REV and LP are prefixes for PLAY and STEP, turning reverse and looping alternately on or off at each press of the pen . When either command is pressed, a message on the screen indicates whether the setting is on or off. All subsequent PLAY and STEP commands will use that setting until it's changed by another press of the required prefix.

RELATED COMMANDS:
LINK (FILE MENU)

For continuous looping between two Events Lists or several Events Lists, put a LINK command at the end of each Events List before saving it on disk.

COMMAND: B / E (beginning/end)

PURPOSE: Select where PLAY should begin and end.

PROMPTS: BEG (begin) or END

EXIT: None needed.

PROCEDURE:

To select a beginning event:

1. Use SCROLL to bring the Events List to the screen and put in the leftmost position the event you want as the first (beginning) event.

2. Press B.

To select an ending event:

1. Use SCROLL to bring the Events List to the screen and put in the leftmost position the event you want as the last (ending) event.

EFFECTS:

B / E is a prefix for PLAY and STEP. All subsequent PLAY and STEP commands will use these settings until new beginning and ending events are selected through B / E.

If B / E has not been used, PLAY and STEP will play through the entire Events List.

COMMAND: EDIT

PURPOSE: Edit an event stored in the Events List.

PROMPTS: None.

EXIT: Press EDIT again.

PRELIMINARY COMMANDS:

This command assumes that there are animation events stored in the Events List.

PROCEDURE:

1. Use SCROLL to bring to the leftmost position the event to be edited.

2. Press EDIT.

   The event is now open for editing. The message "Editing Event # --" appears onscreen.

To exit, press EDIT again.

EFFECTS:

Once an event is open for editing, you can go into any of the animation menus and change the event in any way. You can make minor variations, such as in timing or the sequence of pictures, as well as major changes, such as by substituting a completely different event.

Pressing INSERT while in the editing mode adds a copy of the event being edited to the <u>end</u> of the Events List.

Whatever event was last created will automatically be stored in the current position of the Events List when you exit EDIT.

COMMAND: DELETE

PURPOSE: Delete an event from the Events List.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Use SCROLL to bring the Events List to the screen and put in the leftmost position the event to be deleted.

2. Press DELETE.

EFFECTS:

The selected event is removed from the Events List.

COMMAND: MOVE

PURPOSE: Move an event to a different position in the Events List.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Use SCROLL to bring the Events List to the screen and put in the leftmost position the event to be moved.

2. Press MOVE and glide the pen left or right until the position where you want to put the event is at the left of the screen.

3. Press in the Prompt Box.

EFFECTS:

The selected event is repositioned in the Events List.

COMMAND: PLAY

PURPOSE: Play through all events in the Events List.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press PLAY.

EFFECTS:

The Events List plays through.

If LOOP is on, PLAY will continue until you exit by pressing the pen anywhere on the tablet.

RELATED COMMANDS:
B / E

To play through only a portion of the Events List, use B / E.

COMMAND: STEP

PURPOSE: Play through all events in the Events List, but begin each event only at a press of the pen.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press STEP.
2. To begin each event in the Events List, press the pen anywhere on the tablet.

EFFECTS:

All events in the Events List are played in sequence, each event beginning at a press of the pen. The name of the event and the time taken to complete it appear when the event is finished playing.

RELATED COMMANDS:
B / E

To avoid having to step through the entire sequence in the Events List, use B / E.

COMMANDS: SCROLL

PURPOSE: Look through the Events List.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press SCROLL.
2. Press down anywhere on the tablet and, keeping the pen depressed, move it left or right.

EFFECTS:

As you move the pen, the Events List at the top of the screen scrolls forward or backward.

Events are identified by a number indicating their position in the Events List, the type of event, and the name of the original cell. For example, the list might read:

1 ZOOM a 2 SPIN c 3 TWEEN

RELATED COMMANDS:
MOVE, DELETE, EDIT, B / E

The SCROLL command is also a prefix for MOVE, DELETE, EDIT, and B / E. Use SCROLL to bring an event to the leftmost position before using one of these commands. Release pressure on the pen when the carat appears next to the event you want to work on with other commands in this menu.

COMMAND: INSERT

PURPOSE: Insert an event in the Events List.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

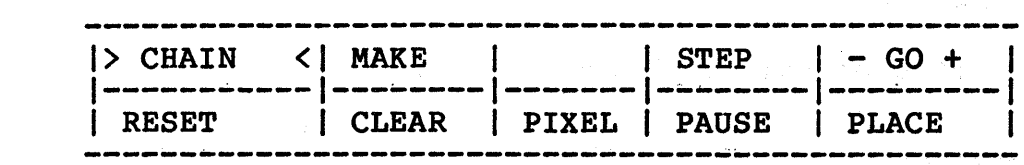
1. Press INSERT.

EFFECTS:

The event most recently created is added to the end of the Events List.

Section 8

Chain Menu



The CHAIN MENU allows you to arrange individual images in a sequence and determine the exposure time for each image. The sequence can then be played forward, backward, or in a continuous loop.

A chain can be stored, through the EVENT MENU, in a list of events to be played in sequence.

COMMAND: MAKE

PURPOSE: Make a chain of images.

PROMPTS: OK?

EXIT: Press OK? in the Prompt Box.

PRELIMINARY COMMANDS:
PLACE (various menus)

Use PLACE to select the onscreen location for the chain of images to play. If PLACE is not used, the chain will appear in the last place selected or in the center of the screen.

PROCEDURE:

1. Press MAKE.

   The cell buffer appears, with cells and images visible.

2. Press inside the cells to be in the chain, in the order in which they should appear. You may press repeatedly in a single cell (the number of presses in a cell governs the relative time that cell will be onscreen).

3. When finished, press OK? in the Prompt Box.

EFFECTS:

This command sets the sequence and relative timing for a chain of images. For example, a cell that was pressed six times will be onscreen twice as long as a cell pressed three times. The actual timing for the total event is set through the EVENT MENU.

RELATED COMMANDS:
- GO + (CHAIN MENU)

Use - GO + to view a chain.

COMMAND: PLACE

PURPOSE: Set a centerpoint for an event.

PROMPTS: 1P (1 point)

EXIT: None needed.

PROCEDURE:

1. Press PLACE.

   The point last selected through PLACE is highlighted. If no PLACE point has previously been selected, the center of the screen is highlighted.

2. Press the point in the image area that you want used as the center of subsequent events. To keep the point last selected, simply press in the Prompt Box.

EFFECTS:

The selected point will be the center of all subsequent events, whether executed through this or any other animation menu, until a new point is chosen through another PLACE command.

COMMAND: STEP

PURPOSE: Call up sequential images in a chain by pressing the pen.

PROMPTS: STP

EXIT: Lift the pen from the tablet.

PRELIMINARY COMMAND:
MAKE (CHAIN MENU)

Use MAKE to create the chain that STEP will step through.

PROCEDURE:

1. Press STEP.
2. Press anywhere on the tablet.

   At each press of the pen, the next image in the last-created chain will appear.

EFFECTS:

Sequential images in a chain appear at each press of the pen.

RELATED COMMANDS:
RESET (CHAIN MENU)

Use RESET to restore the image onscreen before the last command.

COMMAND: - GO +

PURPOSE: Play a chain created through MAKE.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press over the - or the + of GO.

   Pressing over the + causes the chain to play in the order in which it was created; pressing over the - causes it to play backwards.

EFFECTS:

The chain of images plays through, either forward or backward.

RELATED COMMANDS:
RESET (CHAIN MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the chain was played.

Use INSERT to add a chain to the Events List.

COMMAND: RESET

PURPOSE: Restore the image onscreen before the last event.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press RESET.

EFFECTS:

The image onscreen before the last event returns to the screen.

RELATED COMMANDS:
INSERT (EVENT MENU)

To add RESET as an event in the Events List, use INSERT.

COMMANDS: CLEAR

PURPOSE: Clear the screen.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press CLEAR.

EFFECTS:

The screen is cleared of all imaging. This command has the same effect as ZAPping the screen, but it can be stored in the Events List.

COMMAND: PAUSE

PURPOSE: Make an image pause onscreen before the next event begins.

PROMPTS: None.

EXIT: None needed.

PRELIMINARY COMMANDS:
1-8 (Status Box)

Set the length of the pause by adjusting the number in the Status Box (1 is shortest, 8 is longest).

PROCEDURE:

1. Press PAUSE.

   Use INSERT in the EVENT MENU to store a pause in the Events List.

EFFECTS:

The purpose of this command is to create a pause between animation events in the Events LIst. There is no visible effect until the Events List is played.

COMMAND: PIXEL

PURPOSE: View screens or images and magnify them for detailed editing.

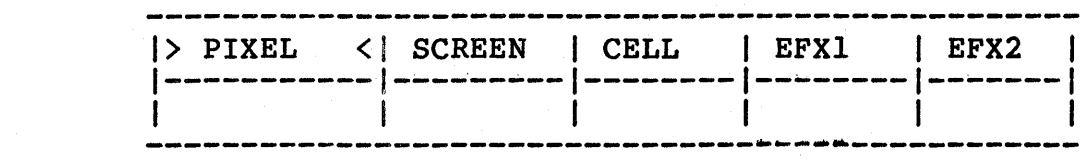
PROMPTS: 2P (2 points); MAG (magnify)

EXIT: Press in the Prompt Box.

PROCEDURE:

1. Press PIXEL.

   The menu is replaced by a menu of accessible screens.



   SCREEN refers to the working screen.
   CELL refers to the cell buffer.
   EFX1 and EFX2 are buffers used by the EFX MENU.

2. Press the screen you want to view.

   The selected buffer screen appears, and the prompt 2P asks you to define an area for magnification.

3. Press 2 diagonal corners.

   The defined area is enlarged to fill the screen.

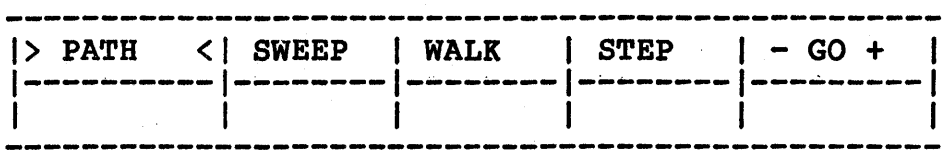
To exit, press MAG in the Prompt Box.

EFFECTS:

The selected area of the chosen screen is enlarged to make detailed editing easier. This command allows you to make changes to the cell buffer screen as well as to the EFX buffers, which are written to by commands in the EFX MENU.

Section 9

Path Menu



The PATH MENU allows you to set a path for an event created through the CHAIN or EFX MENU.

Use the PATH MENU immediately after creating the event for which you want to set a path. Then store the event and its path in the Events List by pressing INSERT in the EVENT MENU.

If no path is set, the event will occur in one place onscreen.

COMMAND: SWEEP

PURPOSE: Make an event occur in a straight line.

PROMPTS: 1P (1 point)

EXIT: None needed.

PRELIMINARY COMMANDS:
CHAIN (EFX MENUS); 1-8 (Status Box)

Create an event through the CHAIN or EFX MENU.

Adjust the duration of the event by changing the number in the Status Box (1 is shortest, 8 is longest).

PROCEDURE:

1. Press SWEEP.

2. Press 2 points to mark the beginning and end of the sweep.

   Press - GO + to view the event.

EFFECTS:

The event last created through the CHAIN or EFX MENU will occur along the path created through SWEEP.

RELATED COMMANDS:
INSERT (EVENT MENU)

To store the path in a list of events to be played in sequence, use INSERT in the EVENT MENU. This stores the event and it's path.

COMMAND: WALK

PURPOSE: Create a path by placing images in sequence.

PROMPTS: 1P (1 point)

EXIT: None needed.

PRELIMINARY COMMANDS:
CHAIN and EFX MENUS

Create an event through the CHAIN or EFX MENU.

PROCEDURE:

1. Press WALK.

   Sequential images appear in place of the cursor as you move the pen.

2. To save a path, press down.

   When you release pressure, the path begins to be saved.

3. Move the pen along the path.

   When the beep sounds, the path is complete.

Press - GO + to view the event.

EFFECTS:

When you press go, the event last created through the CHAIN or EFX MENU will occur along the path created through WALK.

Since the animated event follows the movement of the pen, this command can be used to get a general idea of how an event will look along a path.

RELATED COMMANDS:
RESET (PATH MENU); INSERT (EVENT MENU)

Use RESET to restore the image onscreen before the last event.

To store the path in a list of events to be played in sequence, use INSERT in the EVENT MENU. (This stores the event and its path.)

COMMAND: STEP

PURPOSE: Create a path by positioning each image in the event with a press of the pen.

PROMPTS: STP

EXIT: None needed.

PRELIMINARY COMMANDS:
CHAIN, EFX MENUS

Create an event through the CHAIN or EFX MENU.

PROCEDURE:

1. Press STEP.

2. Press down at each place where an image in the event should appear.

   At each press of the pen, the current image is deposited and the next image in the sequence follows the movement of the pen.

Press - GO + to view the event.

EFFECTS:

The event last created through the CHAIN or EFX MENU will occur along the path created through STEP.

RELATED COMMANDS:
INSERT (EVENT MENU)

To store the path in a list of events to be played in sequence, use INSERT in the EVENT MENU. This stores the event and its path.

COMMAND: - GO +

PURPOSE: Play the most recently created effect.

PROMPTS: None.

EXIT: None needed.

PRELIMINARY COMMANDS:
1-8 (Status Box)

Adjust the duration of the effect by changing the number in the Status Box (1 is shortest, 8 is longest).

PROCEDURE:

1. To play the event as it was created, press +.

OR

1. To play the event in the opposite direction from which it was created, press -.

EFFECTS:

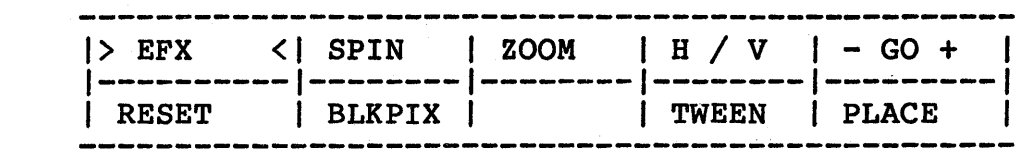
The event most recently created is played, either forward or backward. The duration of the effect is determined by the number in the Status Box.

RELATED COMMANDS:
EVENT MENU

To store the effect in a list of events to be played in sequence, use the EVENT MENU.

Section 10

EFX Menu



The EFX MENU allows you to create various special effects.

The menu uses an original image already created and stored in the cell buffer. The image may be created using any Lumena commands and is stored through the CELL MENU. Be sure the cell is named (otherwise, it will not be recognized by the animation menus.)

An EFX command creates variations of the image in the cell buffer, and GO brings those variations to the screen in sequence. SPIN, for example, varies the orientation of the image so it will appear to turn on its center. Several effects can be created using the same image and stored as separate events.

Images for each event are stored in a single horizontal row across the equivalent of two screens. So the width of the original image determines the number of variations possible, and hence the subtlety of the effect when played. The height of the original image determines how many events using different images can be stored at one time. So it's to your advantage to make the cell of the original image as small as possible.

The effects created through this menu can occur in one location on the screen, chosen through the PLACE command, or they can follow a path created through the PATH MENU.

If the event is to take place in one location, create the event there, then go to the PATH MENU and create a path for it. Finally, go the the EVENT MENU and press INSERT to store both the effect and its path as an event in the Events List.

COMMAND: SPIN

PURPOSE: Cause an image to appear to spin on its centerpoint.

PROMPTS: 1P (1 point); OK?

EXIT: None needed.

PROCEDURE:

1. Press SPIN.

   The cell buffer appears, with images and cells visible.

2. Press inside the cell.

   The working screen reappears.

3. Press OK? in the Prompt Box.

EFFECTS:

Images are created so that, when the effect is played by pressing GO, the original image appears to spin on its center point.

RELATED COMMANDS:
- GO + (EFX MENU)

To view the event with the image spinning clockwise, press the + side of the GO command; to view it spinning counterwise, press the - side of GO. The duration of the event is determined by the number in the Status Box when GO is pressed.

COMMAND: ZOOM

PURPOSE: Enlarge or reduce an image.

PROMPTS: 2P (2 points); OK?

EXIT: None needed.

PROCEDURE:

1. Press ZOOM.

   The cell buffer appears, with images and cells visible.

2. Press inside the cell you want to enlarge or reduce. Moving the pen toward or away from the center of the cell enlarges or reduces its size. Press again to set the size of the zoomed image.

   The working screen reappears.

3. Press OK? in the Prompt Box.

EFFECTS:

Images are created so that, when the effect is played by pressing GO, the original image appears to zoom in or out. The effect can then be played either forward or backward, enlarging or reducing the original image.

RELATED COMMANDS:
- GO + (EFX MENU)

To view the event as it was created, press the + side of the GO command; to view it running in the opposite direction, press the - side of GO. The duration of the event is determined by the number in the Status Box when GO is pressed.

COMMAND: H / V (horizontal/vertical)

PURPOSE: Reduce the horizontal or vertical dimension of an image until it appears on edge.

PROMTPS: 1P (1 point); OK?

EXIT: None needed.

PROCEDURE:

1. Press H or V.

   The cell buffer appears, with image and cells visible.

2. Press inside the cell to be affected.

   The working screen reappears.

3. Press OK? in the Prompt Box.

EFFECTS:

Images are created so that, when the effect is played by pressing GO, the original image appears to turn until it's on edge.

RELATED COMMANDS:
- GO + (EFX MENU)

To view the event as it was created, press the + side of the GO command; to view it running in the opposite direction (going from an edge view to a full picture), press the - side of GO. The duration of the event is determined by the number in the Status Box when GO is pressed.

COMMAND: - GO +

PURPOSE: Play the most recently created effect.

PROMPTS: None.

EXIT: None needed.

PRELIMINARY COMMANDS:
PLACE (various menus); 1-8 (Status Box)

Select a location for the effect through the PLACE command. Otherwise, the event will occur in the last location chosen or, if none has been chosen, in the center of the screen.

Adjust the duration of the effect by changing the number in the Status Box (1 is shortest, 8 is longest).

PROCEDURE:

1. To play the effect as it was created, press +.

OR

1. To play the effect in the opposite direction from which it was created, press -.

EFFECTS:

The effect most recently created is replayed, either forward or backward. The duration of the effect is determined by the number in the Status Box when + or - is pressed.

RELATED COMMANDS:
RESET (EFX MENU); PATH MENU; EVENT MENU

Use RESET to restore the image onscreen before the last effect.

To have the effect take place along a path, go immediately to the PATH MENU and create one. Then store the effect and its path in the Events List.

To store the effect in a list of events to be played in sequence, use the EVENT MENU.

COMMAND: RESET

PURPOSE: Restore the image onscreen before the last event executed through this menu.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press RESET.

EFFECTS:

The image onscreen before the last event was executed returns to the screen. RESET cannot be stored as an event.

COMMAND: BLKPIX (block pixels)

PURPOSE: Put an image into increasingly lower resolution, making it increasingly "blocky".

PROMPTS: 1P (1 point); OK?

EXIT: None needed.

PROCEDURE:

1. Press BLKPIX.

   The cell buffer appears, with images and cells visible.

2. Press inside the cell to be affected.

   The working screen reappears.

3. Press OK? in the Prompt Box.

EFFECTS:

Images are created so that, when the effect is played by pressing GO, the original image appears to become increasingly blocky.

RELATED COMMANDS:
- GO + (EFX MENU)

To view the event as it was created, press the + side of the GO command; to view it running in the opposite direction (going from a blocky image to high resolution), press the - side of GO. The duration of the event is determined by the number in the Status Box when GO is pressed.

COMMAND: TWEEN

PURPOSE: Create a smooth transition between two images.

PROMPTS: None.

EXIT: None needed.

PROCEDURE:

1. Press TWEEN

   As you press points onscreen, a line joins each new point with the previous endpoint. To break a run of line segments, move into the menu, then move back to the image area and continue pressing point. You may change color or line width at any time.

2. When the initial figure is drawn, press in the Prompt Box.

   The initial figure will appear as white lines, serving as a reference.

3. Move into the image area and draw the final figure.

   The colors and pen sizes of the initial figure will automatically be used in the final figure. When the same number of points are pressed in the final figure as in the original figure, Lumena will draw the intervening stages between your two drawings.

EFFECTS:

Images are created so that, when the effect is played by pressing GO, the first image appears to become the second image.

Images created through this command are subject to the space limitations of the EFX buffers. For further discussion, see "Storage of Animation Images" in this manual.

RELATED COMMANDS:
- GO + (EFX MENU)

To view the event as it was created, press the + side of the GO command;/ to view it running in the opposite direction (the second image becoming the first image) press the - side of GO. The duration of the event is determined by the number in the Status Box when GO is pressed.

COMMAND: PLACE

PURPOSE: Set a centerpoint for an event.

PROMPTS: 1P (1 point)

EXIT: None needed.

PROCEDURE:

1. Press PLACE.

   The point last selected through PLACE is highlighted. If no PLACE point has previously been selected, the center of the screen is highlighted.

2. Press the point in the image area that you want used as the center of subsequent events. To keep the point last selected, simply press in the Prompt Box.

EFFECTS:

The selected point will be the center of all subsequent events, whether executed through this or any other animation menu, until a new point is chosen through another PLACE command.