Movie Maker®

The Animation Construction Set

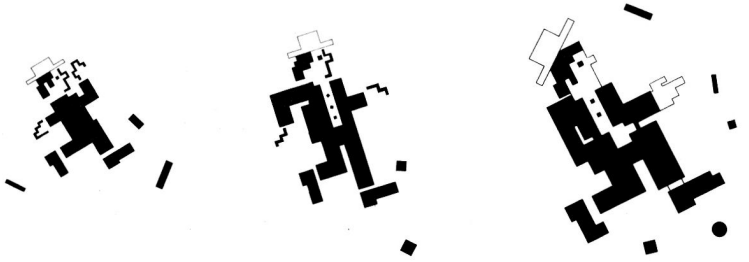
Interactive Picture Systems, Inc.

ELECTRONIC ARTS™

Back in 1982, Interactive Picture Systems was two people (Guy Nouri and Eric Podietz), one project (create an on-screen painting program for the Capital Children's Museum in Washington D.C.), and a long string of 14 hour days, 7 days a week.

The result was *Paint*, one of the first microcomputer drawing programs, and suddenly computer graphics no longer belonged only to programmers. "What next," their fans and friends asked? "Gonna make those pictures move," Guy and Eric said. "Impossible on a micro," said the experts, smugly.

So when you use your own microcomputer to make your own animated graphics with *MovieMaker*, send samples to an expert of your choosing. And smile. Smugly.



Movie Maker®

Movie Maker is an animation program that helps you draw shapes, create sequences of shapes, record sequences to form moving characters, add sound, and play back the results. *Movie Maker* also lets you experiment by editing scenes, rerecording video and audio tracks, and changing colors. The *Movie Maker* program is on Side 1 of the Program Disk. Side 2 of that disk contains some ready-made movies. Both sides of the Data Disk contain shapes and backgrounds you can use to create your own movies. To store movies you create, you also need at least one blank disk.

The following information applies to all computers, except where noted. For operating instructions for your specific computer, see the relevant section at the end of this manual.

1. THE MOVIE MAKER TOUR

MODES, MENUS, AND COMMANDS

Movie Maker is made up of four modes: 1. COMPOSE, where you create your background scenery and characters (called shapes); 2. RECORD, where you put your shapes into sequences and arrange your sequences into full animations; 3. SMOOTH, where you remove flickering and add credits; and 4. PLAY, where you watch your completed movies.

In *Movie Maker,* you use a series of menus and commands. First, *Movie Maker* displays menus giving lists of major tasks you can do (for example, one option might be **1. COMPOSE**). After you select tasks from the menus, you use commands to create and modify artwork, create sound, and so on. You type commands onto the keyboard using a single letter, sometimes followed by a number. In this guide, we spell out the names of commands, **boldfacing** the characters we want you to type. Thus, **G**(oto) means you should type **G**; **G**(oto)**050** means you should type **G050**, etc.

TYPES OF MOVIE MAKER FILES

Movie Maker uses six different types of files:

Shape Files (SHP) contain the images that you use to create your animated sequences. Shape Files also store figures you draw so you can reuse them in different combinations. Each Shape File stores up to 64 different images on a single screen called a Shape Page.
Background Files (BKG) contain the background scenery against which your characters move.
Animation Files (ANI) are made by putting shapes into sequences and recording the sequences over a Background File.
Sound Files (SND) are a preexisting set of files on your Movie Maker Program Disk that you use to create your sound tracks. After recording an animation, you can bring in a Sound File and record audio tracks (music and sound effects) to accompany the video tracks. (The Commodore 64/128 version of the program allows up to 3 audio tracks; the Atari version, up to 4 audio tracks; the Apple version, none.)
Extra Function Files (FNC) contain additional tools to enhance your animations. SCALE changes the width and height of a shape without redrawing. TEXT enters text and graphic symbols directly onto a background or Shape Page.
Movie Maker Movie Files (MVM) contain the finished movies you create.

You must use at least one Shape File and one Animation File in a movie. *Movie Maker* keeps track of all files and causes them to interact as needed.

ACTORS AND SEQUENCES

A movie is made up of six video tracks and (depending on your computer) up to four audio tracks. You can create and modify each track separately. In your finished movie, these tracks all play at the same time. *Movie Maker* refers to each video track as an "actor." Each actor can contain one or more sequences of shapes — for example, a sequence showing a moving robot (sequence 1) and then a sequence showing a flying spaceship (sequence 2). A sequence can include up to 16 different shapes and can be up to 300 frames long. As you work with *Movie Maker,* first specify your actor (such as **A1**) and then your sequence (such as **S1**). You can use the same sequence with more than one actor. Simply specify the new actor number (such as **A2**) and the sequence number you want to reuse (such as **S1**). See Figure 1 on page 15.

WATCHING SAMPLE MOVIES

To watch some existing movies, insert the Movie Maker Program Disk with Side 2 facing up. See the Instructions for Your Computer for how to load the Autoplay feature on your computer.

2. TUTORIAL

CREATING YOUR OWN CHARACTERS

Let's create two drawings of a robot using COMPOSE. Later we'll animate these to get the robot to do exercises.

NOTE: If you ever get lost in *Movie Maker:* Type **U** and the Utility Menu appears, giving you a list of all the tasks available to you. If you want to move to another mode (e.g. from COMPOSE to RECORD), select the Main Menu and then type your option number (1 to 4). When you see the message INSERT MOVIE MAKER DISK INTO DRIVE 1, THEN HIT RETURN, insert the Movie Maker Program Disk in the drive and press **RETURN**.

Step 1: Start Movie Maker. On the Main Menu, type **1** and press **RETURN** to select COMPOSE. From the Utility Menu, use the arrow keys to highlight FORMAT Disk and press **RETURN.** Insert a blank disk and follow the instructions on the screen to format a new disk where you can save your artwork. Back on the Utility Menu, highlight COMPOSE and press **RETURN**. You should see a blank Shape Page with a slowly blinking square outline on the upper left.

Step 2: Type **B**(order). (Remember that you should only type the bold letter **B**.). Use the joystick to drag out the upper left corner. Press the button and drag out the lower right corner. When the outline fills about 1/8th of the screen, press the button again.

Step 3: Press the **SPACEBAR**, then type **P**(en)**1** to tell the program that you want to draw using pen color 1. The cursor appears in the center of the outline. To draw, hold down the button on the joystick and use the stick or your cursor control keys to move the cursor. To lift up your pen and move it, first release the joystick button. Use this method to draw a robot like the one on the left below. For close-in drawing, type **Z**(oom). Type **Z**(oom) again to return to normal drawing mode. (Atari owners, please type **Z2** or **Z3** to zoom and **Z1** to return to normal.)

To erase, type **P**(en)**0** to tell the program that you want to draw with the background color, then draw over the material that you want to erase. To erase a large amount at once, type **W**(indow), use the joystick or the cursor keys to move the window over the material you want to erase and type **E**(rase). To bring back what you just erased, type **R**(estore). See Figure 2 on page 15.

Step 4: When you have drawn your first robot, color in its body by moving your pen inside the area you want filled and pressing **I**(nsert color) and the number of a color (for example, 2); then press the joystick button. (The color choices appear at the top of the screen. The color on the left is C1, and so on.)

Step 5: Type **W**(indow), then type **D**(uplicate). Use the stick or the cursor keys to move the window to the right, leaving behind a copy of the robot. When you have enough room, press the button again to put down another copy of the robot.

Step 6: Next press **O**(utline) to define the new picture as an animation cell. The window fills with color for a second and you hear a "yoo-hoo" sound. Then press the **SPACEBAR** to leave **D**(uplicating) mode.

Step 7: You have two identical shapes outlined on your Shape Page. Type **P**(en)**0** and move the cursor to the second robot. Erase the arms and legs. Then type **P**(en)**1** and draw new arms and legs like the ones on the robot on the right.

Step 8: Type **U**(tility). Select KEEP File, then select SHAPE, then type the name for your file—ROBOT. Press **RETURN.** This saves your shapes on your own disk in a file called SHP.ROBOT. (We'll refer to your files disk as the MyMovies Disk.)

MAKING YOUR MOVIE

Now we'll use RECORD, SMOOTH, and PLAY to create a movie of the robot doing exercises. We'll use only one actor (Actor 1) and one sequence (which we'll call Sequence 1).

Step 1: From the COMPOSE Utility Menu, select Main Menu; then type 2 for RECORD. When you see the message INSERT MOVIE MAKER DISK INTO DRIVE 1, THEN HIT RETURN, insert the Program Disk in the drive and press **RETURN**.

Step 2: When the RECORD Utility Menu appears, replace the Program Disk with Side 1 of the Movie Maker Data Disk. From this disk, we'll use an existing Background File called FAMILY. Highlight GET File and press **RETURN**. Next, highlight BACKGROUND and press **RETURN**. Then type **FAMILY** and press **RETURN**. Highlight RECORD and press **RETURN**. You should now be on your ROBOT Shape Page.

Step 3: Type **S**(equence)**1** to create a sequence showing our robot doing exercises. Use the joystick or the cursor keys to move the flashing outline over the robot at the left and press the joystick button. Move it over the other robot and press the button again. Notice that the cell counter on the Help Line increases by one each time you press the button.

Step 4: Type **A**(ctor)**1** to record on the first track. This takes you to your FAMILY Background Page and places the first shape of Sequence 1 in the center of the screen. Set the speed of the recorder on slow by typing **F**(rame rate)**3**. Now press the **SPACEBAR** to start recording, and using the joystick, move the robot slowly to the right. Press the **SPACEBAR** to stop recording. Type **Y**(ank) to make the robot disappear from the screen. Type **F**(rame rate)**4**, then type **G**(oto), and press the **SPACEBAR** to preview and then stop the action.

Step 5: To save your animation, type **U**(tility Menu), select KEEP File, then select ANIMATION. Remove your Movie Maker Data Disk and insert your MyMovies Disk. Type in the name for your movie—ROBOT—and press **RETURN**.

Step 6: Now it's time to produce a flicker-free version of our movie, complete with titles. Select the MAIN Menu option and remove your MyMovies Disk and replace it with the Movie Maker Program Disk. Type **3** and press **RETURN** to load the SMOOTH section of the program. When the SMOOTH Utility Menu appears, remove the Program Disk and reinsert the MyMovies Disk.

Select the ENTER Beginning Text option and press **RETURN**. You are on a blank screen where you can enter a title and credits for your movie. Type any message you like, up to 23 lines long. Your text appears in your movie exactly as you type it here so make sure that you type only *complete words* on a line. Press **RETURN** at the end of the line. Use the cursor keys (or Control I, J, K, and M on the Apple II or II+) to move the cursor around. Use the Backspace or Delete key (or type over them with spaces) to delete unwanted characters. When you finish typing your credits, return to the menu by pressing **ESC** (or **<-** on the C64).

Step 7: Select the SMOOTH Animation option. Type a name for your finished movie—ROBOT—and press **RETURN**. (Make sure you have the MyMovies Disk in the drive.) The smoothing, which removes the flicker from your movie, is done automatically, and your movie is saved as an MVM file. Press **RETURN** to finish this step.

Step 8: Now it's time to look at what you've made. Remove your MyMovies Disk and replace it with the Movie Maker Program Disk. Select the MAIN Menu option, then type **4** (for PLAY) and press **RETURN**. When the PLAY Utility Menu appears, replace the Movie Maker Program Disk with MyMovies Disk. Select PLAY Movie and press **RETURN**. Type the name you gave your movie in the SMOOTH section (ROBOT) and press **RETURN** once more.

Congratulations! You've just made a movie! (To stop the movie, type **U**.)

EXPLORING THE FILES ON THE DATA DISK

To look at the predefined shapes, backgrounds, and sequences on the Movie Maker Data Disk, return to the Main Menu and reinsert the Movie Maker Program Disk. Type **2** for RECORD. Then replace the Program Disk with the Data Disk. (Both sides contain Shape and Background Files. For now, insert Side 2.) Select CATALOG Files and then EVERYTHING to see a list of all the files on this side of the disk. Using GET File, load associated Shape, Background, and Animation Files (for example, the ones called Doggy). Select RECORD. The Shape Page is displayed. Press **ESC** (or **<-** on the C64) to see the Background Page. Type **A1 S1** and press the **SPACEBAR** to see a sequence.

You can use these predefined sequences in your own animations. The Birthday, Christmas, and Halloween card sets (on Side 2) offer you an especially easy opportunity for customization.

3. THE UTILITY MENU

When you choose a mode from the Main Menu, *Movie Maker* displays the Utility Menu for that mode. If you are already working in a mode (for example, on a Shape Page) and you want to go back to the Utility Menu, simply type **U**(tility Menu). The Utility Menu lists all the tasks you can do in a mode. Use the four cursor keys (or I, J, K, and M on the Apple II or II+) to move the highlight bar to the desired option on a Utility Menu, and press **RETURN**. Sometimes *Movie Maker* shows you a second menu to collect more information. You select options on the other menus in the same way you do on the Utility Menu.

MENU OPTIONS

The Utility Menu for all modes is identical except for the last option at the bottom of the left-hand column, which displays the name of the mode you're in. The Utility Menu options are described here.

CATALOG Files displays a listing of the various types of files on your disk. When you select this option, *Movie Maker* asks you what kind of files you want to catalog: SHAPE, BACKGROUND, EXTRA FUNCTION files, or EVERYTHING. Select one and press **RETURN**.

GET File brings into memory previously created shapes, backgrounds, and other files. (Once a file is in memory, you can view it by selecting COMPOSE, RECORD, etc., from the Utility Menu.) After you select GET File, a second menu of choices appears: SHAPE, BACKGROUND, or EXTRA FUNCTION. If you choose SHAPE or BACKGROUND, the program asks for the file's name. Type it and press **RETURN**. If you choose EXTRA FUNCTION, you must specify one of two file names: TEXT or SCALE. TEXT and SCALE are explained under **X**(tra function) in Chapter 4.

KEEP File saves the work currently in memory to your disk. When you select KEEP File, you must select the type of file you are saving: SHAPE, BACKGROUND, or EXTRA FUNCTION. Select one and press **RETURN**. *Movie Maker* prompts you for a name for the file. Remove your Movie Maker Program Disk, and insert your own formatted disk. Then type the file name using up to eight characters and press **RETURN**.

MAIN Menu returns you to the Main Menu. You can now go to another mode.

COMPOSE, RECORD, SMOOTH, or **PLAY** lets you start working in the currently selected mode. Select the mode name and press **RETURN**. *Movie Maker* takes you to the currently loaded Shape Page.

RENAME File changes the name of a file on your disk. First give the new name for the file and then the old name.

DELETE File removes an unwanted file from your disk.

FORMAT Disk *formats* a blank disk so that you can save your work. (Formatting a disk erases everything on it and prepares it for use with your computer.) You can't save files on your Movie Maker Program or Data Disks since they are write-protected. Select FORMAT Disk and replace the Movie Maker Program Disk with a blank disk. Press **Y** to confirm the format process or press only **RETURN** to cancel your request. Type in a name for the disk when you are prompted to do so. (When the catalog of file names on any file disk fills more than one screen, it's time to start a new file disk.)

SELECT Drive tells *Movie Maker* which drive you want to work with now. (Use this option only if you have more than one disk drive. Always put the Program Disk in drive 1 and your file disk in drive 2.)

CLEAR Memory removes a file currently in memory. Select the CLEAR Memory option, highlight the type of file you want to clear, and press **RETURN**. (The bottom of the Utility Menu screen shows the name of any active files.) For example, to clear your current Shape Page and start with a blank one, select CLEAR Memory and then select SHAPE as the type of file you want to clear. This option lets you reset part or all of the computer's memory without turning off the power or rebooting the program.
Warning: Use the CLEAR Memory option with care! Once you clear something from memory, you can't get it back unless you have previously stored it on a disk.

THE HELP LINE AND COLOR BAR

Throughout *Movie Maker,* press **H**(elp) to remove the Help Line (at the bottom of the screen) and the Color Bar (at the top of the screen) or to redisplay them.

4. COMPOSE

CREATING SHAPES

To draw or modify shapes for your animations, choose COMPOSE from the Utility Menu. This provides you with a blank Shape Page containing a slowly blinking square outline. The commands described below are the tools you have available to help you create your works of art:

B(order) resizes the window on your screen. Pressing **B**(order) activates the border of the window. A blinking square appears in the top left corner of the window. Using the joystick button, drag the top left corner of the window up (to stretch) or down (to shrink). Then freeze it in place by pressing the joystick button. This moves the blinking square to the lower right corner of the window, allowing you to stretch or shrink that corner in the same way. You can make the window up to 1/8 the size of the screen (1/4 on Atari).

C(olor)# changes the colors on the Color Bar and in your drawing. Press **C**(olor)**1**, **C**(olor)**2**, **C**(olor)**3**, or **C**(olor)**0** to designate the color you want to change, then use the cursor keys to cycle through the colors. (Note to Apple owners: There is no Color Bar on the Apple version of the program. The Apple has 8 colors. Black is number 0 or 4, white is 3 or 7, green is 1, purple is 2, orange is 5, and blue is 6. Colors 0 through 3 are complementary. Colors 4 through 8 are complementary. Mixing non-complementary colors can produce unpredictable results.)

D(uplicate) creates a copy of a shape. Type **W**(indow) and move the window over the shape. (Use **B**(order) if necessary to resize the window so the shape fits inside of it.) Type **O**(utline) to define the shape as an animation cell. Type **D**(uplicate) and press the button, then move the window with the joystick or the cursor keys. Press the button again to make a new copy of the shape at the position of the window. Type **O**(utline) to define the new shape as an animation cell, etc. Each time you press the button, a new copy of the shape appears until you press the SPACEBAR to leave duplicating mode. (Use **D**(uplicate) when you want to create several similar shapes. Draw the basic shape, make copies of it, and then make changes to the copies.)

E(rase) deletes a shape or part of a shape. Using the joystick, position the window around the part of the shape that you wish to eliminate, and press **E**(rase). (You can retrieve the just-erased material by typing **R**(estore).)

I(nsert color) adds color to a shape. For example, to make the body of your shape red (which, let's say, is the second color on the Color Bar), press **I**(nsert)**2**. Then use the joystick to move the pen to the part of the shape you want filled with color and press the joystick button. Color 2 fills the indicated part of the shape. To fill the shape with a different color, simply repeat the steps.

M(irror) draws symmetrical shapes. Draw one half of the shape, and use the **D**(uplicate) command to copy it elsewhere on the screen. Press the joystick button to stamp a copy on the screen. Press the **SPACE-BAR** to cancel the Duplicate command. With your window still positioned over the copy, press **M**(irror) followed by a cursor key to flip (mirror) the shape on the horizontal or vertical axis. Pick up the mirrored shape by pressing the joystick button. Join it to the first half and press the joystick button to put it down. Enlarge your window by using **B**(order) to fit around the new shape and press **O**(utline) to define this new shape.

O(utline) defines a shape on the Shape Page so you can use it in a sequence. Surround a shape with the window and type **O**(utline). You hear a "yoo-hoo" sound while a color wipes back and forth across the outline. If you're not sure which shapes have been outlined, press **V**(iew outlines).

P(en)**#** draws freehand shapes. Select a color by typing **P**(en) followed by the Color Number **0, 1, 2,** or **3**. Color 0 is the same as the background and so can be used as an eraser. Colors 1, 2 and 3 are the ones currently appearing at the top of the screen, numbered from left to right. Typing **H**(elp) toggles the Color Bar on and off. (Apple owners, see C(olor), above.) When you type **P**(en)**#**, a small blinking square appears inside the blinking outline. This is your pen, which you control with the joystick. When you want to draw, hold down the joystick button while moving the joystick. You can also draw by using the cursor keys. These are especially useful for drawing horizontal and vertical lines. Also, if you want to draw two vertical lines exactly the same length, you can count the number of times you press the cursor key for the first line and then repeat it for the second.

R(estore) retrieves the last erased shape, provided it is still in memory.

T(rade colors)**##** trades two colors in a shape. Thus, if Color 1 is green and Color 3 is red, you can switch them by typing **T**(rade)**13** (read as: trade Color 1 for Color 3).

V(iew outlines) previews the shapes that have been outlined. Press **V**(iew outlines) again or any other key to turn off **V**(iew outlines).

W(indow) enables you to move the window around the screen. Press **W**(indow), and use the joystick to move the window anywhere on the screen. To pick up and move a shape (without its outline), type **W**(indow), move the window over the shape with the joystick or the cursor keys, then press the button. You can now move the window and its contents. Press the button again to drop the shape so you can move the window again without its contents.

X(tra function) allows you to use the Extra Function files of TEXT or SCALE. To load one of these files, type **U**(tility Menu), select GET File, select EXTRA FUNCTION as the file type, and type **TEXT** or **SCALE** followed by **RETURN**. Once you load TEXT, you can type letters, numbers, and graphic characters directly onto your Shape or Background Page. Type **X**(tra function), which gives you a screen cursor. Move the cursor around with the cursor keys and type text wherever you like. All upper-case alphanumeric characters and punctuation marks are available, as well as the graphics character set, if your computer has one. To exit the TEXT mode, press **ESC** (or **<-** on the C64).

With **SCALE**, you can alter the width or height of a shape. To activate **SCALE** from your Shape Page, move the window over the shape you wish to expand and type **X**(tra function). Now move the joystick up, down, right or left, hold it there, and press the button to double the shape's size. You can also press a number key to produce different scalings. For example, by pressing 3 after you move the joystick, you expand the shape to three times its original size. When the expanded shape is the size you want, press the joystick button.

Z(oom) allows you to get a close-up view of your shapes. While in **Z**(oom) you can draw just as you would in the normal drawing mode. To return to normal drawing mode, press **Z**(oom) again. (Atari owners, use **Z2** and **Z3** for different levels of zoom resizing, and **Z1** to return to normal size.)

CREATING SEQUENCES

Use these commands when you are ready to put shapes into sequences. (You can perform almost all of these tasks in RECORD also.)

A(ction) puts you into the Background Page. If you have created a sequence of shapes using **S**(equence)**#**, the first shape of your sequence is in the middle of the screen. Press the **SPACEBAR** to start the action, and experiment by moving the sequence around the screen with the joystick. Press the **SPACEBAR** again to stop the action.

J(ump)**#**: See Creating Sequences in Chapter 5.

S(equence)**#** creates a sequence of shapes to use in your animation. First press the **SPACEBAR** to clear any current command. Press **S**(equence)**1** for the first sequence. On the Shape Page, position the window over the first shape you want in the sequence and press the button. Then move the window over the second shape and press the joystick button again, and so on until you have picked up all the shapes for the desired sequence, up to a maximum of 16 shapes per sequence. (Watch the Help Line: it should say S1.00 for sequence 1, S1.01 for sequence 1 shape 1, S1.02 for sequence 1 shape 2, and so on.)

Press **A**(ction) to go to the Background Page to preview your sequence in action. If the action of the sequence is not exactly what you want, press **ESC** to return to the Shape Page and then redraw or reselect shapes for the sequence. To replace a sequence, type the same sequence number as before and use the joystick button to select *new* shapes. To keep the sequence you previewed and create another, press **S**(equence) **2** for your second sequence.

NOTE: When you KEEP a Shape Page, any currently defined sequences are saved along with the shapes.

Y(ank) removes outlines from shapes on your Shape Page. Use **V**(iew outlines) to see all your outlined shapes. Use the joystick or cursor keys to move the window over the one you wish to remove. Now type **Y**(ank) and the outline around the shape vanishes with a "swoosh." If you happen to **Y**(ank) an outline from a shape that you need, redefine the shape by typing **W**(indow) to create a window. Then position the window over the shape and type **O**(utline).

ESC (or **<-** on the C64): In COMPOSE, you can draw *shapes* on the Shape Page and *backgrounds* on the Background Page. Press **ESC** (or **<-**) at any time to toggle between one and the other. You draw backgrounds just like shapes, but you cannot **O**(utline) shapes on a Background Page.

SPACEBAR: The **SPACEBAR** cancels any current command except **Z**(oom). You can then select another command.

PREVIEWING ANIMATIONS

In COMPOSE, you can adjust animations as you preview by using three commands—**F**(rame rate), **K**(wickness), and **L**(oop)**#**. For descriptions of these commands, see Recording Animations in Chapter 5.

5. RECORD

In RECORD, you create animation files from the shape and background files that you created in COMPOSE or that were provided on the Movie Maker Data Disk. Many of the COMPOSE commands are available in RECORD, but some of them do slightly different things. Remember, in COMPOSE you create shapes, so most of the functions there act on shapes. In RECORD, you build those shapes into animation files, so these functions now act on sequences and animations. For example, in COMPOSE, **E**(rase) deletes *shapes*, while in RECORD, **E**(rase) deletes *frames*.

CREATING SEQUENCES

When you first enter RECORD, the Utility Menu is displayed (see Chapter 3). Select GET FIle to retrieve the Shape File and Background File you want to work with. Then select RECORD from the Utility Menu. You find yourself on the Shape Page where you can review shapes and decide which ones to use.

A(ctor)**#** specifies the track number you will be recording. For example, to record a sequence on the first video track, type A(ctor)1. This moves you to the Background Page and turns on the recorder, automatically putting it on pause until you activate it by pressing the **SPACEBAR**. You must also specify the sequence number you will be recording on that track. See **S**(equence)**#** below.

J(ump)**#** specifies the number of pixels a shape is to move each time you move the joystick or press a cursor key. **J**(ump)**1** causes the shape to move one pixel at a time, **J**(ump)**2** two pixels at a time, and so on through nine pixels. **J**(ump)**0**, the default setting, is for an accelerating jump rate, making the character appear to gain speed as it moves.

S(equence)**#** creates a sequence of shapes to use in your animation. To create the first sequence, first press the **SPACEBAR** to clear any current command. Type **S**(equence)**1** for the first sequence. Move the outline from one defined shape to another on your Shape Page by moving the joystick left and right. When the outline surrounds the first shape you want in the sequence, press the joystick button.
You will hear a "yoo-hoo" sound to indicate that the shape has been picked up in the sequence, and the CEL number on the Help Line increases by one for each new shape, or cel, you add. Continue moving through the shapes and pick them up in the order in which you want them displayed. Each sequence can include up to 16 shapes.

To create a second sequence from the Shape Page, type **S**(equence)**2**. You can create up to nine separate sequences. When you've created your sequences, type **A**(ctor)**#** and **S**(equence)**#** to go to the Background Page and record.

Y(ank): If you have recorded all the sequences you want on the first video track (**A**(ctor)**1**), but have not yet reached frame 300, stop the recorder (**SPACEBAR**) and type **Y**(ank) to remove the sequence from the screen. Otherwise it remains on the screen for the rest of the animation. You can also **Y**(ank) a shape from a single frame. Type **G**(oto) followed by the frame number, type the **A**(ctor)**#** to position the window over the proper shape, and type **Y**(ank). To **Y**(ank) the next shape of that sequence from the next frame, **G**(oto) that frame, type the same **A**(ctor)**#**, then type **Y**(ank).

If you want to reposition a shape within a single frame, **G**(oto) that frame and type **A**(ctor) followed by the number of the track on which it was recorded. A window marks the shape, which you can then move to the new screen location with the joystick or cursor keys. Press the joystick button to secure the new location.
To erase an actor entirely from a track, type **F**(rame rate)**0**, then press the SPACEBAR to single step through the track and type **Y**(ank) for each frame.

ESC (or **<-** on the C64) lets you toggle between the Shape and Background Pages. If you are recording on the Background Page and want to create a new sequence, press **ESC** to go back to the Shape Page. Type **S**(equence)**2** for the second sequence; then, using the joystick, move the window across the shapes, grabbing the ones you want by pressing the joystick button. To record the new sequence, press **ESC** to get back to the Background Page and then type **S**(equence)**2**, **A**(ctor)**1**.

SPACEBAR enables you to start or stop recording. As you record, you can move the shape around the screen with the joystick. For example, if your sequence is of a dog running and you want the dog to run from one side of the screen to the other, position the dog, activate the recorder by pressing the **SPACEBAR**, then move the dog across the screen with the joystick while the recorder captures the action. To stop the recorder, press the **SPACEBAR** again. You can record up to six actors (or video tracks) in a single movie. To record each additional actor, use **P**(layback), **R**(ewind) or **G**(oto) to go to the frame where you will start recording the new track. (You can leave blank frames on any track.) Type **A**(ctor) followed by the new track number, and then type **S**(equence)**#** to specify the sequence you will be recording on that track. Press the **SPACEBAR** to start and stop the recorder.

RECORDING ANIMATIONS

The following commands enable you to record sequences on a Background Page, creating an animation:

E(rase frame) deletes a frame. Use **G**(oto) to get to the frame; type **A, N** or **C** to enter recording mode. Then type **E**(rase), and that frame will disappear. (Once you use this function, you cannot retrieve an erased frame except by reloading it from a disk file.) The program renumbers all subsequent frames accordingly when you erase a frame.

F(rame rate) lets you adjust the animation speed in frames per second. You can select the frame rate before you view a sequence by pressing **F**(rame rate) followed by a number from **0** to **9**, or you can do it "on the fly" as your animation runs. The higher the frame rate the faster the animation. As you change the frame rate, the number after SPEED on the Help Line changes.

G(oto)**###** lets you move to different places in an animation sequence. To review a sequence from the beginning, type **G**(oto). To go to a specific frame, type **G**(oto) followed by a three-digit number. Thus, to go to the 34th frame of your animation, type **G**(oto)**034**.

K(wickness)**#** determines the number of times each shape appears on the screen; e.g., when you set **K**(wickness) to **3**, each shape of your sequence appears on the screen for three frames. Normally, you set the **K**(wickness) rate at 1. However, if you are recording an actor on a second track and you want to show it moving more slowly than the first actor, increase the second actor's **K**(wickness). (If you change only the frame rate, both actors would still move at the same rate relative to each other, because frame rate affects *all* video tracks equally.) Before you change the **K**(wickness), stop the action by pressing the **SPACEBAR**. Type **K**(wickness) followed by a number from **1** to **9** and press **RETURN**. Then press the **SPACEBAR** to view your animation at the new frame rate.

L(oop)**#** lets you cycle through the animation more than once. You can have a sequence run continuously by typing **L**(oop) followed by a **0** (zero). Or you can have the sequence cycle a certain number of times by pressing **L**(oop) followed by a number from **1** to **9**.

P(layback) plays back your animation from the current frame number. To stop and start playback, press the **SPACEBAR**.

R(ewind) plays your animation backwards. This is useful if you are looking for a particular frame but don't know its frame number.

Z(oom) enables you to record a close-up of the image you are recording. (Not available for the Apple.)

/(frame marker) marks a specific frame so you can come back to it later. Type **/** when the frame is displayed on screen. Now you can **R**(ewind) right to that frame without having to remember its number. To turn the frame marker off, **G**(oto) the frame number and press **/** again.

RECORDING SOUND

You should complete the video part of your animation before recording sound effects and music. You can record several audio tracks on top of your video, using a different **V**(oice)**#** for each track. The C64 has three voices; the Atari has four; and the Apple has none.

To load one of Movie Maker's SOUND files, type **U**(tility Menu), choose GET File from the menu, and press **RETURN**. Choose SOUND and press **RETURN**. Make sure Side 1 of the Program Disk is in the drive and type one of these file names—FX (for effects), STRING (for music), or DRAGON (for the dragon movie). Press **RETURN**. Select RECORD from the Utility Menu. Then use the three commands described below.

N(oise) activates the sound file, turns on the recorder, and puts it on pause until you press the **SPACEBAR**. To preview the sounds, type **V**(oice)**1** and press the number keys on the top row of the keyboard. Each number has a different sound effect or musical note associated with it. Follow the same procedure to hear the sounds associated with each number for the other two voices.

Q(uiet)**#** turns off a voice without erasing it from the sound track. First, stop the recorder and then type **Q**(uiet) followed by the voice number. (This is like turning off the monitor to that sound track). To turn off more than one voice, type **Q**(uiet) followed by the appropriate numbers. When you want to reactivate the voices again, type **V**(oice) followed by their numbers.

V(oice)**#** records a soundtrack for your animation. After you record your video tracks, go to the place in your animation where you want to add sound. Type **N**(oise), then **V**(oice) followed by the number of the voice track on which you want to record. Type **F**(rame rate) and a number to set a recording rate you can synchronize with.

Press the **SPACEBAR** to start recording and press the number keys corresponding to the sounds you want to produce. To stop recording, press the **SPACEBAR**. To stop a sound with the recorder still running, press the number **0**. Erase a sound track by recording over it. For example, to erase Voice 1, type **G**(oto) (to go to the beginning), type **N**(oise), then type **V**(oice)**1**. If you don't press a number key while the recorder is running, you record silence over Track 1. If you *do* press number keys, those sounds are recorded over your previous sounds.

CHANGING COLORS

The commands **C**(olor)**0**, **C**(olor)**1**, **C**(olor)**2** and **C**(olor)**3** change the entire color scheme of your animation. You cannot recolor individual pieces of shapes in RECORD; you must go back to COMPOSE. If you press **C**(olor)**1**, for example, and use the arrow keys to change the hue of that color, everything on the screen that was Color 1 changes hue. You can only record one color change at a time. To change a second color, **G**(oto) the beginning again and select the next color to change.

STORING ANIMATIONS

Once you have recorded an animation, store it on disk in the same way you store a Shape or Background Page. First type **U**(tility Menu). If you are using a single disk drive, remove the Program Disk and replace it with a files disk. If you are using two disk drives, make sure you select the second drive as the one for storing your files. Now, select KEEP File. Then select ANIMATION. Type a name for the file. Note the contents of each file you save to disk so you won't have to look at every file to see what contains.

6. SMOOTH

In the SMOOTH mode, you smooth the flickering out of your animation, add a title and credits, and turn the animation into a finished movie. The SMOOTH Utility Menu contains some standard options plus these three new choices:

ENTER Beginning Text adds scrolling titles to the beginning of your animation. Selecting this option takes you to a blank screen where you can type the name of your movie and credits. Maximum text length is 23 lines with 20 characters per line. Use these keys for editing:

Cursor to upper left	**CLR/HOME** on C64, **CTRL-N** on Apple and Atari
Clear screen	**SHIFT-CLR/HOME** on C64, **CTRL-L** on Apple and Atari
Delete characters	**INS/DEL** on C64 and **DELETE** on Atari and Apple, or type over with spaces.
Begin new line	**RETURN**
Preview scrolling text	**CTRL-P** (not available on the Apple)

ENTER Ending Text adds credits (up to one screenful) to the end of your animation. While typing text using either ENTER Beginning Text or ENTER Ending Text, you can return to the Utility Menu by pressing the **ESC** key (or **<-** on the C64).

SMOOTH Animation saves your movie and takes out the flickering. Make sure a formatted disk is in the drive, select this option, and type in a name when asked.

7. PLAY

In the PLAY mode, you can watch your final productions. You can't make any permanent changes to your movie in this program, but you can view it at different speeds. The PLAY Utility Menu has two standard options and these two new ones:

CATALOG Movies displays a list of your *completed movies*.

PLAY Movie runs your completed movie.

COMMANDS

F(rame rate)**#** affects the speed of movie playback. You can use a number from **0** to **9**.

S(ave screen) saves a movie screen to disk while your movie is playing. A menu prompts you for a name for the screen (up to eight letters). Then *Movie Maker* saves it and returns you to your movie. (This feature not available on the Atari).

SPACEBAR starts and stops playback of the finished movie.

/ and then **SPACEBAR** make your movie run continuously. To stop a movie from running continuously, press **/** again.

8. ADVANCED ANIMATION TIPS

RECORDING

• Characters on early tracks (actors) are in the background while characters on later tracks (actors) are in the foreground. For example, if a tree shape is recorded as Actor 2, Actor 1 always passes behind the tree, and Actor 3 always passes in front of it.

• You can insert different colors in individual frames — for example, when you create a sunset. (This effect is not available in the Apple version.)

•You can record the same sequence on two tracks so that you can have two identical characters on the screen at the same time. Type **A**(ctor)**1** **S**(equence)**1**; then **G**(oto) the beginning of the animation. Type **A**(ctor)**2** and **S**(equence)**1** to record on the second video track.

• If you have created more than one sequence for your character, you can change sequences "on the fly" by typing **S**(equence) followed by the number of the desired sequence while the recorder is running. Remember: you can rerecord any track by going back to the beginning of the animation and typing the **A**(ctor)**#** of the track you want to record over.

DRAWING

•Overlapping outlines of various sizes and proportions can overlap a single shape. Each portion of the shape that has been outlined is a separate shape capable of being sequenced. This technique can be very useful in some situations. For example, by outlining the shape of a character with both a short and a tall window you can sequence them to make the character appear to be jumping up and down. It also economizes on workspace on your Shape Pages.

•To get ideas on how to leave out details when drawing complex figures, examine the existing Shape Files using the **Z**(oom) command in COMPOSE.

MAKING READY-TO-PLAY MOVIES

• You can playback your finished movies in four different ways. (1) Boot the Movie Maker Program Disk, load the PLAY section to go to the Screening Room, and select a movie. (2) Boot the Autoplay side of your Program Disk. While the beginning countdown animation is going from 10 to 1, replace the disk with your files disk. At the end of the countdown, *Movie Maker* plays your movies in the order they were recorded onto the disk. (3) To make your own Autoplay disk, see the Instructions For Your Computer. (4) You can create a movie on videotape by hooking your computer to a VCR and recording on your VCR as you play one or more Movie Maker MVM files on your computer.

MISCELLANEOUS

• Before you save a file, use the CATALOG Files option to see which file names are already on the disk. You cannot use the same name twice in the same kind of file, but you *can* use, for example, the name DOG to store a Shape File, DOG to store a Background File of a doghouse, and DOG to store an Animation File. This is useful if you are planning to use all those files to make a finished movie about a dog.

• Back up your work on two different file disks using KEEP File. (At a minimum, make backups at the end of every Movie Maker session.)

INSTRUCTIONS FOR YOUR APPLE II

STARTING MOVIE MAKER

To load the *Movie Maker* program, put Side 1 of the Program Disk in drive 1. Close the drive door; turn on your computer and monitor. To play five sample movies, insert Side 2 of the Program Disk instead.

To make five more movies, use SMOOTH with these SHP, BKG, and ANI Files on the Data Disk: LAKE (on Side 1) and BDAY, DOG, EAGLE, and XMAS (on Side 2).

MAKING YOUR OWN AUTOPLAY DISKS

To make your own autoplay disk, use DOS 3.3 to copy these files from Side 2 of the Program Disk—HELLO, AUTOPLAY, AND MMA.OBJ. In addition, to cause the autoplay feature to start with the "10, 9, 8..." feature, you can copy CNTDWN.INI. (If you need instructions for using your DOS 3.3 file copy utility named FID, see your DOS manual.) If you have ProDOS instead of DOS 3.3, use your disk copy utility to copy all of Side 2 of the Movie Program Disk; then use *Movie Maker's* DELETE File option to erase the MVM Files you don't want.

USING THE KEYBOARD (FOR APPLE II+ OWNERS)

On the Utility Menus, use these cursor control keys—**I** (up), **M** (down), **J** (left), and **K** (right). When moving the Outline, Window, or Pen on a Shape or Background Page, use **Control-I**, **Control-J**, etc. To go forward and backward one frame at a time in RECORD mode, use the Arrow keys.

USING GRAPHICS FILES DRAWN WITH THE KOALAPAD

Movie Maker can use a graphics file created with the Koalapad if you name it as follows: Pick a name containing up to 8 characters followed by .BKG (for example, SEASHORE.BKG). Save your file directly on a Movie Maker file disk; then use GET File to bring it into *Movie Maker.*

INSTRUCTIONS FOR YOUR ATARI

STARTING MOVIE MAKER

To load the *Movie Maker* program, turn on the disk drive. When the busy light goes out, put Side 1 of the Program Disk in drive 1. Close the drive door; turn on your computer and monitor. (ATARI XL and XE owners: When you turn on the computer, hold down the Option key until the logo appears.) To play six sample movies, insert Side 2 of the Program Disk instead.

To make four more movies, use SMOOTH with these SHP, BKG, and ANI Files on the Data Disk: DOG and FISH (on Side 1) and BDAY and XMAS (on Side 2).

MAKING YOUR OWN AUTOPLAY DISKS

To make your own autoplay disk, use Atari DOS to copy the file AUTORUN from Side 2 of the Program Disk. In addition, to cause the autoplay feature to start with the "10, 9, 8..." feature, you can copy CNTDWN.INI . Then use Atari DOS to write DOS onto the disk. Now you can save MVM files on this disk (using KEEP File) and play them back automatically.

CUSTOMIZING THE JOYSTICK FOR LEFT-HANDED USE

If you press **RETURN** while the Main Menu is on the screen, your joystick controls are rotated 90 degrees to the right. This makes it easy to use the stick with the left hand and the button with the right. Press **RETURN** again to return control to the normal setting.

CHANGING COLOR HUE AND LUMINANCE

You can change both hue and luminance on the Atari. When you press **C1**, **C2**, or **C3** to change a color, use the left and right cursor keys to change the *hue* and the up and down cursor keys to change the *luminance.*

INSTRUCTIONS FOR YOUR C64

STARTING MOVIE MAKER

To load the *Movie Maker* program, turn on your disk drive, computer, and monitor. Put Side 1 of the Program Disk in drive 1. Type **LOAD "EA,8,1** and press **RETURN**. Wait while the program loads. Press **RETURN** again when the title screen appears to go directly to the Main Menu. To play eight sample movies, insert Side 2 of the Program Disk instead and type **LOAD "ALDR,8**. Press **RETURN**. Then type **RUN** and press **RETURN.**

To make four more movies, use SMOOTH with these SHP, BKG, and ANI Files on the Data Disk: DOG and FISH (on Side 1) and BDAY and XMAS (on Side 2).

MAKING YOUR OWN AUTOPLAY DISKS

If you own a file copy program, copy these files from Side 2 of the Program Disk—ALDR, MMA1.OBJ, and MMA2.OBJ. In addition, to cause the autoplay feature to start with the "10, 9, 8..." feature, you can copy CNTDWN.INI. Then use *Movie Maker's* SMOOTH to put the movies on the disk. To playback all of the movies, type **LOAD "ALDR,8** and press **RETURN.** Then type RUN and press **RETURN.**

USING SOUND FILES WITH READY-MADE ANIMATIONS

Use the DRAGON sound (SND) file with the DRAGON SHP and BKG files. Use the STRING sound file with the LAKE files. Use the FX sound file with all the other sets.

JOYSTICK AND KEYBOARD TIPS

1. Plug your joystick into joystick port 2.
2. When the guide calls for the **ESC** key, use the Arrow key at the top left of the keyboard.
3. When using the **X**(tra function) TEXT (described in Chapter 4, Creating Shapes), you can use these commands: **F1** to toggle between lower and upper-case letters; **F3** to toggle between inverse and regular letters; **F5** to toggle betwen smaller letters and regular-size letters; **F7** to leave the TEXT mode.You can also use color for text by typing **C1**, **C2**, or **C3** before using **X**(tra function) TEXT.

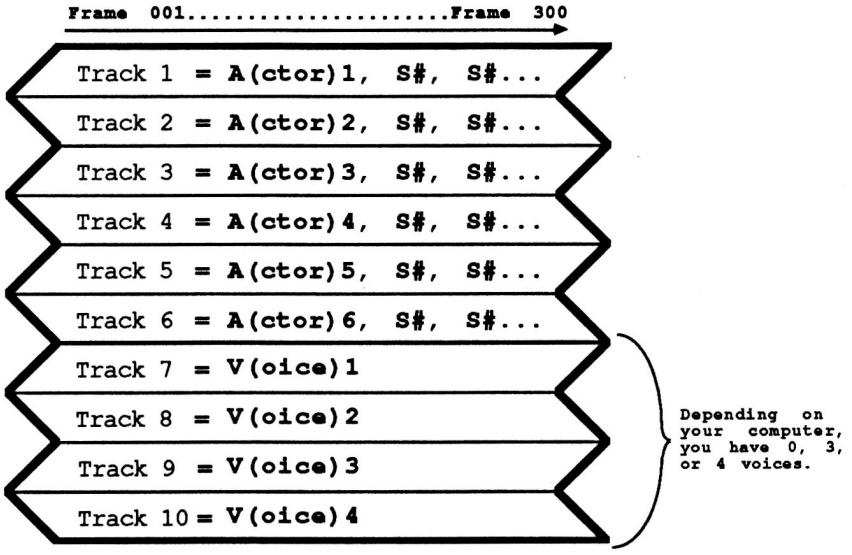


FIGURE 1

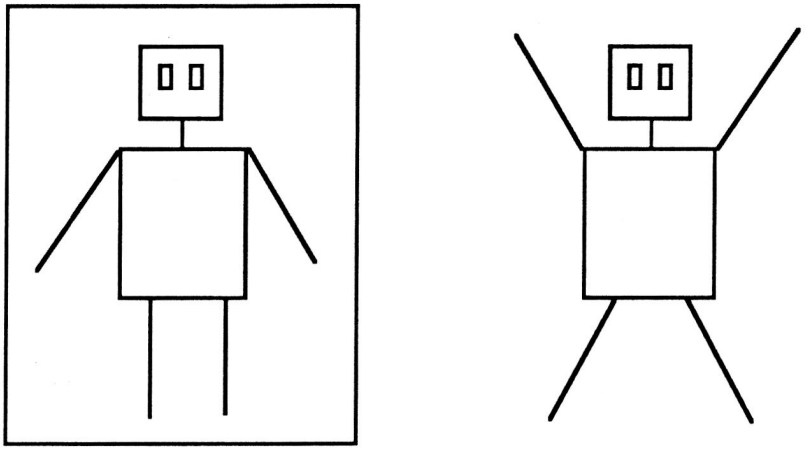


FIGURE 2

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