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New Apple IIs for Home and School

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Taming MS-DOS

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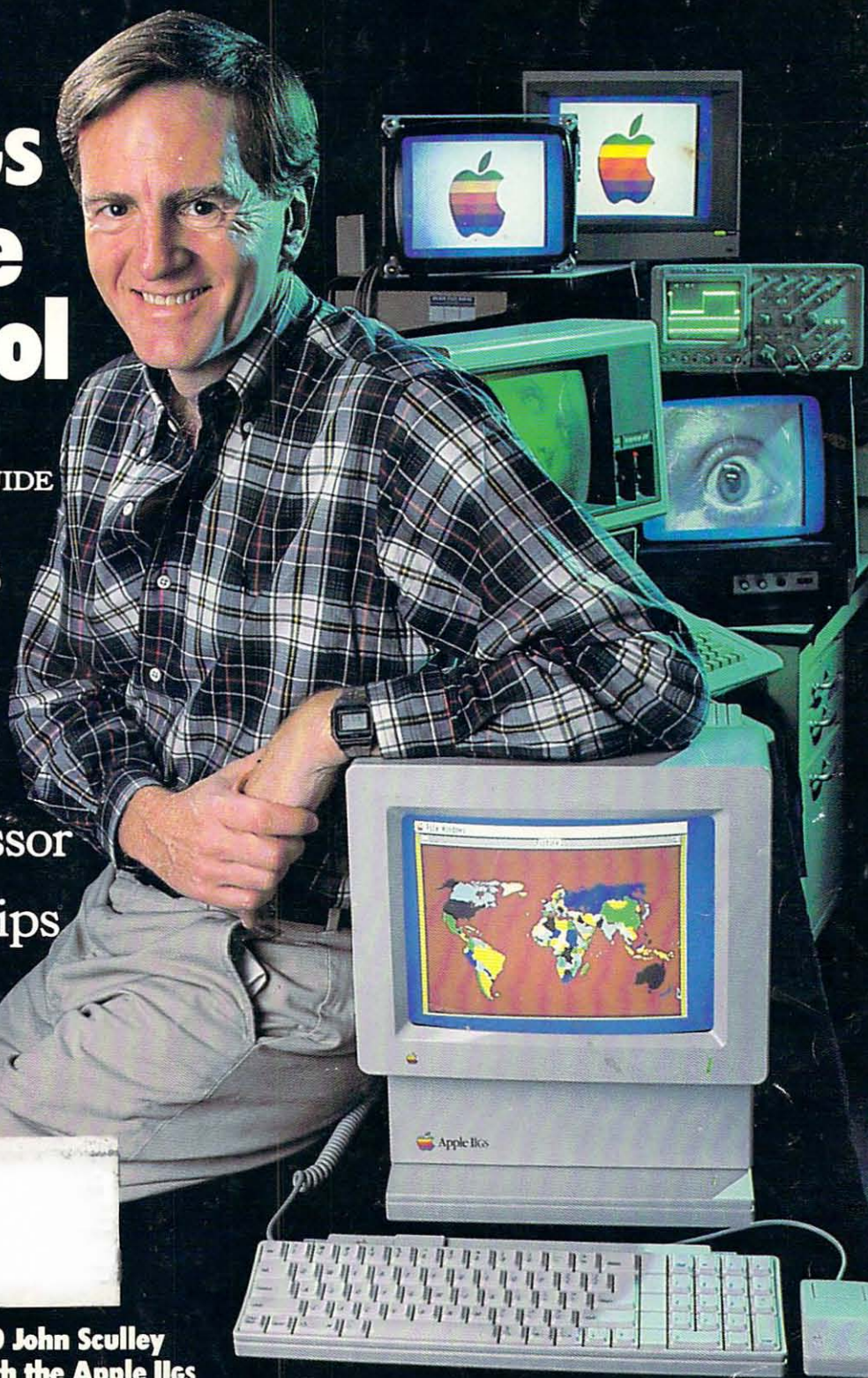
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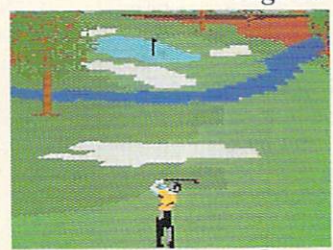
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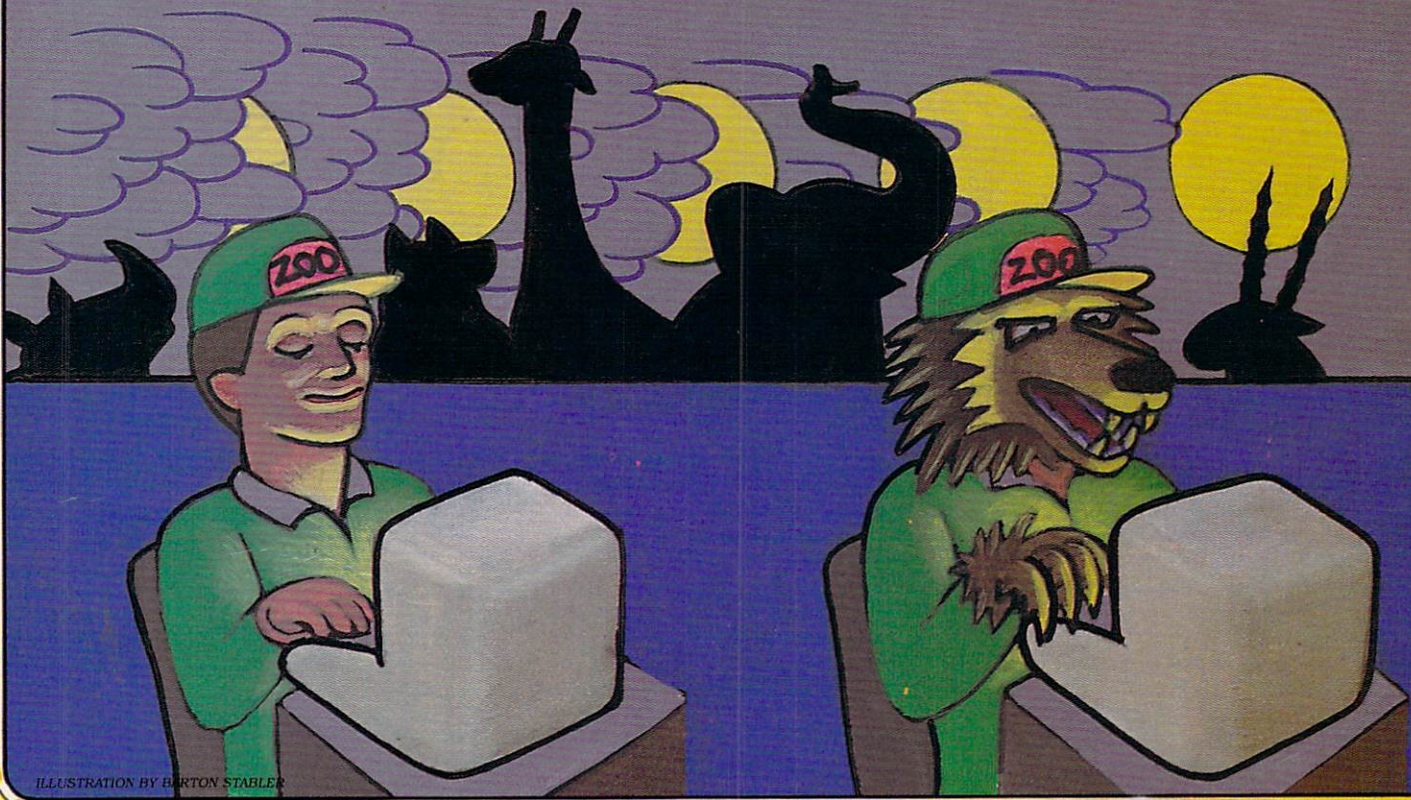


ILLUSTRATION BY BARTON STABLEY

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Will the werewolf blow his cover? Type in *Will the Werewolf* and find out.

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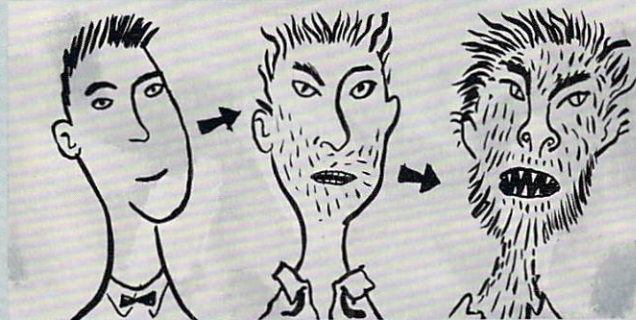
TIPS TO THE TYPIST Page 80 How to type in FAMILY COMPUTING programs

ILLUSTRATION BY JIM CHERRY III

Cherry

WILL THE WEREWOLF

BY JOEY LATIMER



Most people think of William B. Werewolf as an ordinary zookeeper. And they know that to earn some extra money, Will moonlights as a computer programmer. But they don't know that he never works on nights when the moon is full. You see, Will inherited a condition from his ancestors: The light from a full moon transforms him into a grisly, wild-eyed werewolf. As a child, he roamed the wooded hills behind the family farm whenever the moon was full, but now he locks himself in his room to avoid being seen.

One rainy, miserable night, Will gathered his computer disks and went to work. This particular night seemed no different from any other. He and his fellow hackers on the late shift played a battle simulation and then got to work. When Will began struggling with his latest programming problem, he

noticed that the rain had stopped and the sky was clearing. As the clouds moved across the sky, out popped a bright, full moon. Will had forgotten the date and now it was too late. He suddenly changed into a werewolf. Then, when a cloud drifted across the moon, he went back to normal again. Will kept changing from human to werewolf until finally the thick cloud coverage returned. As for his friends in the computer lab? They were so involved with their programs that they never even noticed the werewolf in their midst!

If you'd like to see Will do his werewolf routine in low-resolution computer graphics, type the *Will The Werewolf* program into your computer, SAVE it to disk or cassette, and then RUN it. Use Will in a window on Halloween and your house could be the talk of the neighborhood!

Adam/Werewolf

```

10 DIM rX(532)
20 FOR i = 1 TO 532:READ rX(i):NEXT i
30 HOME:GR
40 fa = 1:GOSUB 1000
50 dr = 1000:GOSUB 2000
60 FOR x = 1 TO RND(1)*7+4
70 COLOR= 9:PLOT 16,14:PLOT 23,14
80 dr = 250:GOSUB 2000
90 COLOR= 6:PLOT 16,14:PLOT 23,14
100 dr = 1500:GOSUB 2000:NEXT x
110 COLOR= 15
120 FOR i = 0 TO 10 STEP 2:j = 6-i/2
130 HLINE 0,j AT i:HLINE 0,j AT i+1:NEXT i
140 dr = 750:GOSUB 2000
150 COLOR= 9:PLOT 16,14:PLOT 23,14
160 COLOR= 6:PLOT 15,14:PLOT 22,14
170 dr = 1000:GOSUB 2000
180 COLOR= 9:PLOT 15,14:PLOT 22,14
190 FOR de = 1 TO 60:COLOR= INT(RND(1)*9)+1
200 IF de = 60 THEN COLOR= 1

```

```

210 PLOT 16,14:PLOT 23,14:NEXT de
220 fa = 229:GOSUB 1000
230 COLOR= 8:VLINE 4,7 AT 8:VLINE 6,7 AT 9
240 VLINE 6,7 AT 30:VLINE 4,7 AT 31
250 COLOR= 15:PLOT 18,28:PLOT 18,29
260 PLOT 21,28:PLOT 21,29
270 tt = INT(RND(1)*400)+400
280 FOR de = 1 TO tt:COLOR= INT(RND(1)*15)+1
290 IF de = tt THEN COLOR= 1
300 PLOT 16,14:PLOT 23,14
310 NEXT de:GOTO 40
1000 FOR ro = 0 TO 39 STEP 2
1010 y = 0:FOR x = 1 TO rX(fa)
1020 COLOR= rX(fa+1):fa = fa+2
1030 HLINE y,y+rX(fa)-1 AT ro
1040 HLINE y,y+rX(fa)-1 AT ro+1
1050 y = y+rX(fa):NEXT x:fa = fa+1
1060 IF ro = 16 THEN COLOR= 6-5*(fa > 270):PLOT 16,14:
PLOT 23,14
1070 NEXT ro:RETURN
2000 FOR de = 1 TO RND(1)*dr+dr:NEXT de:RETURN
3000 DATA 3,0,17,8,6,0,17,3,0,15,8,10,0,15,3,0,14
3010 DATA 8,12,0,14,3,0,13,8,14,0,13,5,0,12,8,4
3020 DATA 9,8,8,4,0,12,5,0,11,8,3,9,12,8,3,0,11
3030 DATA 9,0,11,8,2,9,2,8,3,9,4,8,3,9,2,8,2,0
3040 DATA 11,7,0,11,8,2,9,6,8,2,9,6,8,2,0,11,7
3050 DATA 0,11,8,2,9,6,8,2,9,6,8,2,0,11,7,0,11,8
3060 DATA 2,9,6,8,2,9,6,8,2,0,11,7,0,11,8,1,9,6
3070 DATA 8,4,9,6,8,1,0,11,5,0,11,8,1,9,16,8,1,0
3080 DATA 11,3,0,12,9,16,0,12,5,0,12,9,4,8,8,9
3090 DATA 4,0,12,7,0,12,9,5,8,1,15,4,8,1,9,5
3100 DATA 0,12,5,0,13,9,5,8,4,9,5,0,13,5,0,5
3110 DATA 14,8,9,14,14,8,0,5,0,3,14,11,9
3120 DATA 12,14,11,0,3,5,0,3,14,12,9,10,14,12
3130 DATA 0,3,5,0,3,14,13,9,8,14,13,0,3
4000 DATA 4,15,7,0,10,8,6,0,17,4,15,6,0,9,8,10,0,15
4010 DATA 4,15,5,0,9,8,12,0,14,4,15,4,0,9,8,14,0
4020 DATA 13,8,15,3,0,5,8,8,9,2,8,4,9,2,8,8,0,8
4030 DATA 16,15,2,0,6,8,1,5,1,8,4,9,2,8,1,9,2,8,2,9
4040 DATA 2,8,1,9,2,8,4,5,1,8,1,0,8,13,0,8,8,1,5,2
4050 DATA 8,2,9,4,8,1,9,4,8,1,9,4,8,2,5,2,8,1,0
4060 DATA 8,11,0,9,8,1,5,1,8,2,9,6,0,2,9,6,8,2,5
4070 DATA 1,8,1,0,9,7,0,9,8,4,9,6,0,2,9,6,8,4,0
4080 DATA 9,7,0,10,8,3,9,6,0,2,9,6,8,3,0,10,7,0
4090 DATA 11,8,2,9,5,0,4,9,5,8,2,0,11,5,0,11,8,4
4100 DATA 9,10,8,4,0,11,5,0,12,8,2,9,12,8,2,0,12
4110 DATA 7,0,12,8,2,9,2,8,8,9,2,8,2,0,12,13,0,4
4120 DATA 14,5,0,3,8,3,9,2,8,1,0,4,8,1,9,2,8,3,0
4130 DATA 2,14,5,0,5,9,0,3,14,10,8,3,9,2,8,4,9,2
4140 DATA 8,3,14,11,0,2,7,0,2,14,11,8,4,9,6,8,4
4150 DATA 14,12,0,1,4,0,1,14,13,8,12,14,14,4,0,1
4160 DATA 14,14,8,10,14,15,3,14,16,8,8,14,16

```

Apple II series/Werewolf

```

10 DIM R$(610)
20 FOR I = 1 TO 610:READ R$(I):NEXT I
30 HOME:GR:POKE -16302,0
40 FOR I = 40 TO 47:HLINE 0,39 AT I:NEXT I
50 FA = 1:GOSUB 1000:DR = 1000:GOSUB 2000
60 FOR X = 1 TO RND(1)*7+4
70 COLOR= 9:PLOT 16,14:PLOT 23,14
80 DR = 250:GOSUB 2000
90 COLOR= 6:PLOT 16,14:PLOT 23,14
100 DR = 1500:GOSUB 2000:NEXT X
110 COLOR= 15:FOR I = 0 TO 10 STEP 2:J = 6-I/2
120 HLINE 0,J AT I:HLINE 0,J AT I+1:NEXT I
130 DR = 750:GOSUB 2000
140 COLOR= 9:PLOT 16,14:PLOT 23,14
150 COLOR= 6:PLOT 15,14:PLOT 22,14
160 DR = 1000:GOSUB 2000
170 COLOR= 9:PLOT 15,14:PLOT 22,14
180 FOR DE = 1 TO 60:COLOR= INT(RND(1)*9)+1
190 IF DE = 60 THEN COLOR= 1
200 PLOT 16,14:PLOT 23,14:NEXT DE
210 FA = 270:GOSUB 1000
220 COLOR= 8:VLINE 4,7 AT 8:VLINE 6,7 AT 9

```

TIPS TO THE TYPIST

Typing BASIC programs from FAMILY COMPUTING is a great way to learn about programming and get some free software to boot! But it's frustrating to type in a long program, only to find it doesn't work as it should. If you're new to typing in programs, here are some tips to help make your first experiences rewarding ones.

BEFORE TYPING IN A PROGRAM

1. Check to see if it will run on your computer under a version of BASIC you have available. Also check to see if special hardware—a disk drive, joysticks, or a printer, for example—is required. Unless the program heading indicates otherwise, you can assume that a program will run under any standard version of BASIC on any standard hardware configuration, with these exceptions:

- "Apple II series" programs will run under Applesoft BASIC on the Apple II plus (w/language card), IIe, and IIc. Programs requiring a disk drive will work equally well under DOS 3.3 or ProDOS.

- Compatibility of IBM BASIC Programs is determined by both the hardware and the version of BASIC used. Our "IBM PC & compatibles" programs are composed on IBM PCs & PCjr's and tested under most versions of BASIC available for those machines. They are then tested on a variety of IBM-compatible machines under the versions of BASIC supplied with them. Each IBM PC & compatibles program listing is supplemented by a rundown of the machines and versions of BASIC under which the program is guaranteed to work. Most programs will probably run on many other PC compatibles and under other versions of BASIC.

- TI programs not marked "w/TI Extended BASIC" should be run under standard (console) TI BASIC.

2. If you have a disk drive, prepare ("format" or "initialize") a disk so you can save the program once you're finished typing. Your DOS (Disk Operating System) manual or disk-drive manual will tell you how.

3. Get your version of BASIC fired up and ready. Read the introductory chapters of your BASIC manual for instructions.

WHILE TYPING, KEEP IN MIND THAT . . .

1. BASIC programs consist of "lines," each beginning with a line number (Macintosh BASIC "lines" don't need line numbers), containing letters, numbers, and punctuation marks of various kinds. Each "line" may be composed of several "statements"—instructions that tell the computer to perform various actions—and may continue over several physical lines on the page and/or on your screen.

When typing in a BASIC program, forget considerations of format and get the *content* of what you type to match the *content* of what you see on the printed page. Regardless of how margins may break up a program "line," it hasn't ended until you reach another line number or the end of the program listing. Begin typing with the line number, then continue on, typing every letter, number, space, and punctuation mark in the order it appears, ignoring margins. Where the "line" ends, there will usually be some trailing spaces (which you don't have to type in), followed by the next line number at the left margin of the listing. At this point, all you have to do is press the RETURN or ENTER key to register the "line" in memory, then continue with the next "line."

2. All marks in a program listing—including every letter, number, space, and punctuation mark—*mean* something to your computer. Moreover, even symbols that look very similar to you mean completely different things to the machine. For example, it is important to distinguish between "1" (number one) and "l" (small letter "L"), or "O" (capital letter "O") and "0" (digit zero). Note that zeros are slashed in most program listings to facilitate discrimination.

It's important, therefore, to duplicate every line exactly when typing. Otherwise you can't expect the program to work as it should, or even work at all. Even uppercase versus lowercase is important on certain computers; the words "PRINT" and "print" may mean completely different things.

3. Each computer has its own commands and keys for program "editing," and your user's manual will tell you how to use them. Besides the editing keys, there are two sure-fire ways of correcting errors in a BASIC program line. If you're just typing along and make a mistake, press the backspace-delete key (the back-arrow key on most systems) to rub out the offending character, and then continue typing. Once you've pressed RETURN or ENTER to register the line, mistakes are a little harder to fix. You must use the editing keys or type the line in again from the beginning (including the line number) and press RETURN or ENTER. The new line will replace the old one with the same line number in your computer's memory. This option is a little more work, but foolproof.

AFTER YOU'VE FINISHED . . .

1. Just type RUN and press RETURN or ENTER. If you've typed everything correctly, the program should work as described.

2. Of course, it almost never does, not even for seasoned programmers. Typing in a program and having it run off the bat qualifies as a small miracle. Usually there are one or more mistakes, major or minor, that have slipped past your careful scrutiny and are causing your computer to do unexpected things. Not to worry. Now comes what some people consider the most enjoyable part of the programming process: a procedure called "debugging"—finding and eliminating your mistakes. To review portions of your program on the computer screen, use the LIST command as explained in your BASIC manual. If you have a printer, you might find it more convenient to print out what you've typed (check your manual for the appropriate command). Look over each section of the program carefully, preferably with someone else's help. Make sure you haven't dropped a line or a character, miscounted spaces between a pair of quotes, mistaken a comma for a period, mixed up an "O" and a zero, or (most likely) all of the above. When you find a mistake, retype the offending line from the original listing, including the line number, and press RETURN or ENTER as explained above.

Naturally, mistakes tend to occur more frequently in certain areas of a program than in others. Complicated equations are easy to foul up by dropping or mismatching parentheses or math symbols. Data statements—program lines beginning with the usual number, followed by the word DATA—are another popular trouble spot. Check them carefully. And, of course, remember to SAVE a copy of the corrected program when you're finished.

Good luck!

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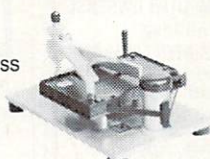
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