

FREE ORIGINAL PROGRAMS

3rd Anniversary Issue

FAMILY COMPUTING

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The Big Plus of Desktop Publishing

Tips to Start the School Year Right

Make Life Easier With a Modem

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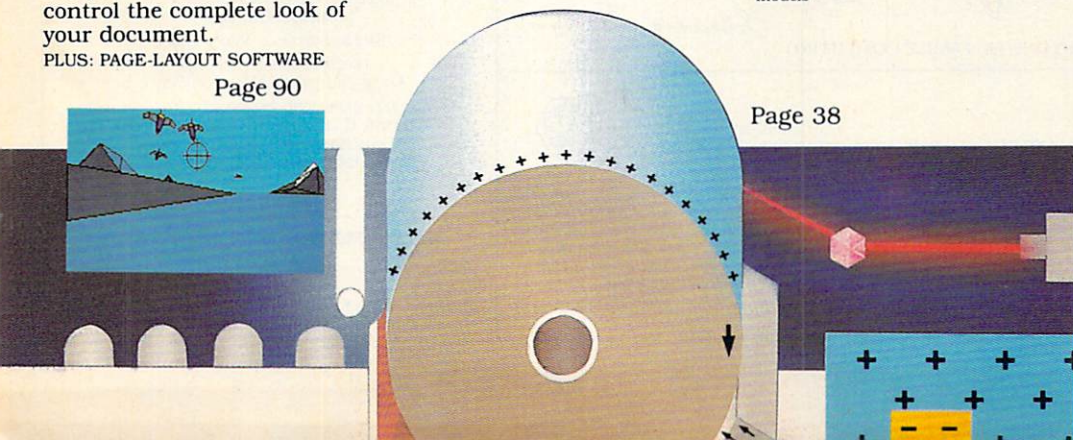
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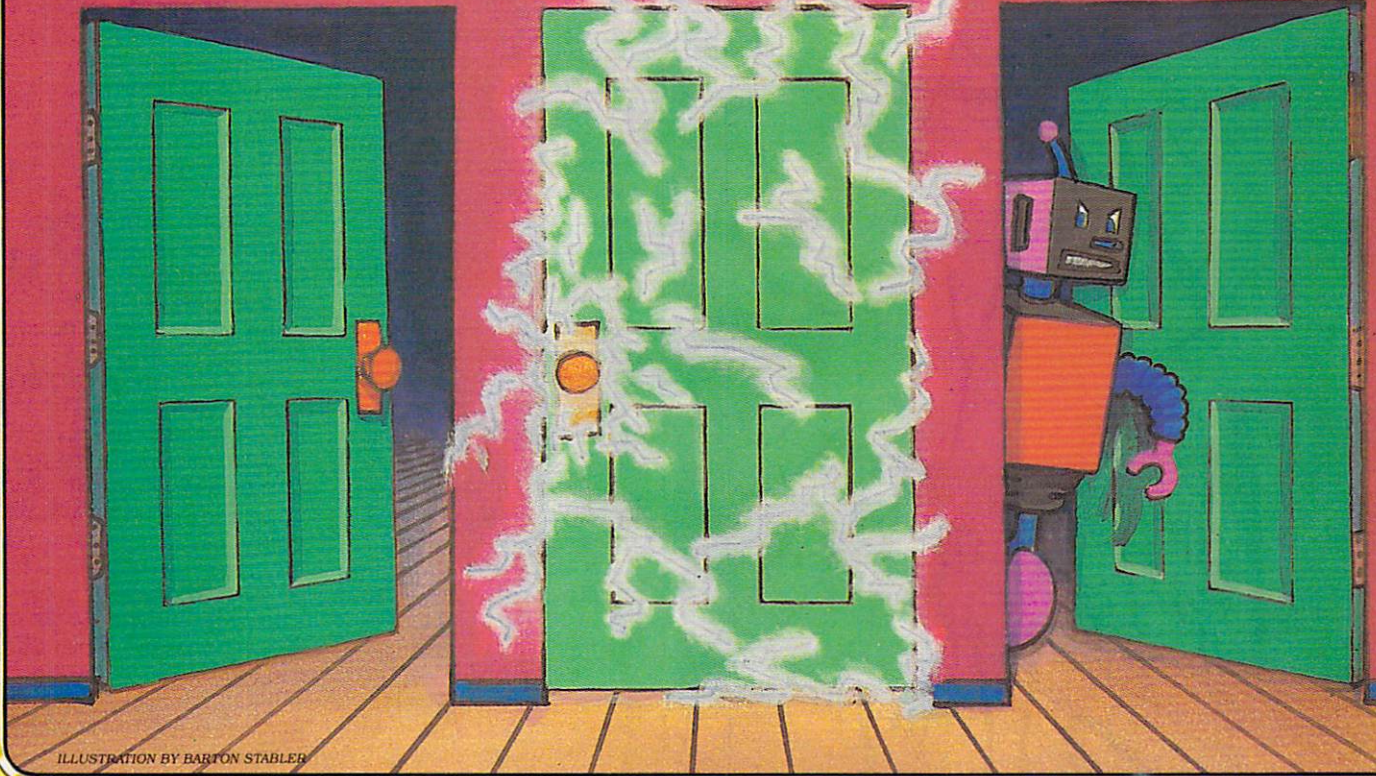
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FAMILY COMPUTING (ISSN 0738-6079) is published monthly by Scholastic Inc., 730 Broadway, New York, NY 10003. Subscriptions: in the U.S. and possessions, 12 issues for \$19.97; outside the U.S. add \$6 (surface mail) or \$25.97 (air-mail). Office of publication: 351 Garver Rd., P.O. Box 2700, Monroe, OH 45050-2700. Second-class postage paid at Monroe, OH 45050-9998 and additional offices. POSTMASTER: Send address changes and notice of undelivered copies to FAMILY COMPUTING, P.O. Box 2511, Boulder, CO 80302. Printed in U.S.A. Copyright © 1986 by Scholastic Inc. All rights reserved.



the PROGRAMMER



★ S E P T E M B E R ★

HOME HELPER PROGRAM

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Let *Chore Chooser* help you cut the guff, and get on to doing all that stuff!

FUN-LEARNING PROGRAM

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Puzzle fans, take note! *Word Search* doesn't just let you solve puzzles, it lets you create them. You supply the words; then the program takes over, forming puzzles that you can solve on-screen or print out.

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ILLUSTRATION BY JAMES CHERRY III

Cherry

CHORE CHOOSER

BY JOEY LATIMER



As if doing chores weren't bad enough, many families have to deal with arguments over who's going to do what. With *Chore Chooser* making your family's weekly chore assignments, there won't be any fuss. Who can argue with an impartial machine that selects at random?

The program prints a weekly schedule for posting on the refrigerator door or bulletin board.

For each day, the schedule shows exactly what each person is expected to do.

The program isn't limited to family chores, either. With a little modification, it can produce schedules for car pools, neighborhood clubs, or hundreds of other common situations.

SETTING UP

Before running the program, you'll have to make

a list of chores that must be done every day. When doing so, keep in mind that not all members of the family may be capable of performing every chore. A young child can't move the car, for example. The answer to this problem is to make two or more versions of *Chore Chooser*—one for general chores and one for chores that only certain members of the family can handle. When you run the "general" version of the program (see *Running Chore Chooser*, below), you'll supply everyone's name. When running the "grown-ups only" version, you'll naturally enter only the names of adults.

Substitute your chores for the examples in DATA statements 1000-1110. Each chore should occupy one line, beginning with a line number, followed by the word DATA, a space, and then a brief description of the chore itself. (Don't use commas or other punctuation in a chore description.) For example, washing the dishes would probably be entered something like this:

```
1000 DATA WASHING DISHES
```

Add new line numbers as necessary to make room for all your chores, numbering them in increments of 10.

DATA statement 10000 (containing the word DONE) tells the computer where the end of your chore data is. Be sure not to delete it accidentally, and be careful not to enter any statements with numbers higher than 10000. Don't worry about room; since you number your chore DATA statements starting at 1000 and go up by 10's, you have room for 900 chores!

Once you've entered your chore data, SAVE a copy of the program on disk or cassette. The program is now ready to run.

RUNNING CHORE CHOOSER

Before typing RUN, make sure your printer is hooked up and ready to print.

Chore Chooser begins by asking you to enter the names of everybody in your family. Enter them one by one as you're asked, and press RETURN or ENTER after each name. When you're done entering names, just press RETURN or ENTER again to continue. The computer will then select at random among these names and assign all the chores impartially. If there are more chores than people, someone may have to do more than one thing. The program will try to balance this out through the week.

When the computer has made its choices, you'll be asked to press any key to print out the schedule. Afterward, you can press the "P" key to print another copy, the "M" key to reshuffle and choose again (if you don't think the computer's random assignments are appropriate), and the "S" key to start from scratch and enter names, or the "Q" key to quit.

Whenever chores change, as they tend to do seasonally, you can delete, add, or modify the chore DATA statements freely. Just make sure to leave statement 10000 alone, keeping it the highest numbered statement in the program, and SAVE a fresh copy of each modified version of *Chore Chooser* on disk or cassette for later use. —J.J.

Adam/Chore Chooser

```
10 LOMEM: 29000: DIM na$(35): tp$ = CHR$(32)
20 FOR i = 2 TO 20: tp$ = tp$ + CHR$(32): NEXT i
30 br$ = "=": FOR i = 2 TO 78
40 br$ = br$ + "=": NEXT i: nc = 1
50 READ du$: IF du$ <> "DONE" THEN nc = nc + 1: GOTO 50
60 nc = nc - 1: RESTORE: DIM ch$(nc)
70 FOR i = 1 TO nc: READ ch$(i)
80 IF LEN(ch$(i)) > 18 THEN ch$(i) = LEFT$(ch$(i), 17) +
" "
90 NEXT i: m = 28000: POKE m, 62
100 POKE m + 1, 0: POKE m + 2, 50: POKE m + 3, 117
110 POKE m + 4, 253: POKE m + 5, 201: CALL 28000
120 HOME: PRINT "Press any key to start.":
130 IF PEEK(64885) = 0 THEN z = RND(1): GOTO 130
140 CALL 28000: HOME
150 PRINT TAB(8); "*-CHORE CHOOSE*-": PRINT
160 PRINT "Please type in the name of each";
170 PRINT "person available for chores."
180 PRINT "Press <RETURN> after typing"
190 PRINT "each name."
200 PRINT: PRINT "When you have finished,"
210 PRINT "press <RETURN> again to"
220 PRINT "continue.": PRINT
230 nn = 1
240 INPUT ">"; na$(nn): IF na$(nn) <> "" THEN 270
250 IF nn < 3 THEN 240
260 nn = nn + 1: GOTO 310
270 IF LEN(na$(nn)) > 17 THEN na$(nn) = LEFT$(na$(nn),
16) + " "
280 IF nn <= 34 THEN nn = nn + 1: GOTO 240
290 PRINT: PRINT "That's all the names I"
300 PRINT "can accept."
310 tl = nc / nn: IF tl <> INT(tl) THEN tl = INT(tl) + 1
320 pl = (tl + 1) * nn + 5: pl = pl - INT(pl / 66) * 66
330 DIM ma$(tl * nn, 7)
340 PRINT: PRINT "Please stand by while I arrange";
350 PRINT "the chart.": FOR i = 1 TO 50
360 r1 = INT(RND(1) * nc) + 1: r2 = INT(RND(1) * nc) + 1
370 IF r2 <> r1 THEN t$ = ch$(r1): ch$(r1) = ch$(r2): ch
$(r2) = t$
380 r2 = INT(RND(1) * nn) + 1: r1 = INT(RND(1) * nn) + 1
390 IF r2 <> r1 THEN t$ = na$(r2): na$(r2) = na$(r1): na
$(r1) = t$
400 NEXT i: FOR i = 1 TO 7: FOR j = 1 TO tl * nn
410 ma$(j, i) = "--": NEXT j: NEXT i
420 np = 1: cp = 1: op = 0: dp = 1
430 ma$(np - 1, tl + op + 1, dp) = ch$(cp)
440 cp = cp + 1: IF cp > nc THEN cp = 1
450 np = np + 1: IF np > nn THEN np = 1
460 IF nn < nc AND (cp - INT(cp / nn) * nn) = 1 THEN op = op
+ 1
470 IF cp <> 1 THEN 430
480 FOR i = 1 TO 50
490 r1 = INT(RND(1) * nc) + 1: r2 = INT(RND(1) * nc) + 1
500 IF r2 <> r1 THEN t$ = ch$(r2): ch$(r2) = ch$(r1): ch
$(r1) = t$
510 NEXT i
520 op = 0: dp = dp + 1: IF dp < 8 THEN 430
530 PRINT: PRINT "Make sure your printer is"
540 PRINT "ready, then press any key"
550 PRINT "to print the chart."
560 GET k$
570 PRINT: PRINT CHR$(4); "PR#1"
580 PRINT: PRINT LEFT$(br$, 69); "*-CHORE"
590 PRINT: PRINT
600 PRINT SPC(20); "Sunday"; SPC(14); "Monday";
610 PRINT SPC(14); "Tuesday": PRINT br$
620 FOR j = 0 TO tl * nn - 1
630 IF j / tl = INT(j / tl) THEN q$ = na$(j / tl + 1): PRINT q$
; LEFT$(tp$, 20 - LEN(q$)); GOTO 650
640 PRINT tp$;
650 FOR k = 1 TO 3
660 PRINT ma$(j + 1, k); LEFT$(tp$, 20 - LEN(ma$(j + 1, k)));
670 NEXT k
```

```
680 IF (j + 1) / tl = INT((j + 1) / tl) THEN PRINT br$
690 NEXT j
700 FOR i = 1 TO 66 - pl: PRINT: NEXT i
710 PRINT "CHOOSE*-"; LEFT$(br$, 69)
720 PRINT: PRINT
730 PRINT "Wednesday"; SPC(11); "Thursday"; SPC(12);
740 PRINT "Friday"; SPC(14); "Saturday": PRINT bk$
750 FOR j = 0 TO tl * nn - 1: FOR k = 4 TO 7
760 PRINT ma$(j + 1, k); LEFT$(tp$, 20 - LEN(ma$(j + 1, k)));
770 NEXT k
780 IF (j + 1) / tl = INT((j + 1) / tl) THEN PRINT br$
790 NEXT j
800 FOR i = 1 TO 65 - pl: PRINT: NEXT i
810 PRINT CHR$(4); "PR#0"
820 HOME: PRINT: PRINT "Would you like to ..."
830 PRINT: PRINT "<p>rint another copy of"
840 PRINT TAB(5); "this chart,"
850 PRINT "<m>ake a new chart from this"
860 PRINT TAB(5); "information,"
870 PRINT "<s>tart over, or"
880 PRINT "<q>uit? ";
890 GET k$: IF k$ > "Z" THEN k$ = CHR$(ASC(k$) - 32)
900 IF k$ = "P" THEN 530
910 IF k$ = "M" THEN 340
920 IF k$ = "S" THEN RUN
930 IF k$ = "Q" THEN HOME: END
940 GOTO 890
1000 DATA Walk dog
1010 DATA Dump trash
1020 DATA Weed flower bed
1030 DATA Water plants
1040 DATA Feed animals
1050 DATA Vacuum carpets
1060 DATA Dust furniture
1070 DATA Wash clothes
1080 DATA Make sack lunches
1090 DATA Do dishes
1100 DATA Sweep floors
1110 DATA Clean bathroom
10000 DATA DONE
```

Apple II series w/printer/Chore Chooser

```
10 DIM NA$(35): TP$ = CHR$(32)
20 FOR I = 2 TO 20: TP$ = TP$ + CHR$(32): NEXT I
30 BR$ = "=": FOR I = 2 TO 78
40 BR$ = BR$ + "=": NEXT I: NC = 1
50 READ DUS$: IF DUS$ <> "DONE" THEN NC = NC + 1: GOTO 50
60 NC = NC - 1: RESTORE: DIM CH$(NC)
70 FOR I = 1 TO NC: READ CH$(I)
80 IF LEN(CH$(I)) > 18 THEN CH$(I) = LEFT$(CH$(I), 17) +
" "
90 NEXT I: HOME: POKE -16368, 0
100 PRINT "PRESS ANY KEY TO START."
110 IF PEEK(-16384) < 128 THEN Z = RND(1): GOTO 110
120 HOME: POKE -16368, 0
130 PRINT TAB(12); "*-CHORE CHOOSE*-": PRINT
140 PRINT "PLEASE TYPE IN THE NAME OF EACH"
150 PRINT "PERSON AVAILABLE FOR CHORES."
160 PRINT "PRESS <RETURN> AFTER TYPING EACH NAME."
170 PRINT: PRINT "WHEN YOU HAVE FINISHED,"
180 PRINT "PRESS <RETURN> AGAIN TO CONTINUE.": PRINT
190 NN = 1
200 INPUT ">"; NA$(NN): IF NA$(NN) <> "" THEN 230
210 IF NN < 3 THEN 200
220 NN = NN + 1: GOTO 260
230 IF LEN(NA$(NN)) > 17 THEN NA$(NN) = LEFT$(NA$(NN),
16) + " "
240 IF NN <= 34 THEN NN = NN + 1: GOTO 200
250 PRINT: PRINT "THAT'S ALL THE NAMES I CAN ACCEPT."
260 TL = NC / NN: IF TL <> INT(TL) THEN TL = INT(TL) + 1
270 PL = (TL + 1) * NN + 5: PL = PL - INT(PL / 66) * 66
280 DIM MA$(TL * NN, 7)
290 PRINT: PRINT "PLEASE STAND BY WHILE I ARRANGE"
300 PRINT "THE CHART.": FOR I = 1 TO 50
```

WORD SEARCH

BY JOHN JAINSCHIGG



What doesn't take up much room and can keep almost anyone amused for hours? Word-search puzzles, of course! Great for car trips and waiting rooms, word-search (or "find-a-word") puzzles are also a good way for kids to learn word-recognition skills and improve vocabulary. After all, if you can recognize a word spelled backward on the diagonal, you can recognize it anywhere.

The trouble with word-search puzzles is that the commercial kind aren't guaranteed to contain the words you want, and making up your own puzzles from scratch is no picnic. These problems are solved with *Word Search*, a program that helps you create word-search puzzles for friends and family to solve on the computer screen or print out for fun to go!

YOU SUPPLY THE WORDS

Word Search lets you create puzzles in three sizes: small, medium, and large. Precise dimensions vary from one version of the program to another, according to screen size.

Once you've chosen a size, you'll be asked if you wish to see the puzzle on the screen as it's being formed. If you elect to see the puzzle, you'll be permitted to help *Word Search* along when it has trouble fitting a word in. An empty border will appear on the screen, and you'll see each word as the program places it.

Whether you're watching the puzzle as it forms or not, the program will ask you to enter, one by one, the words you want to appear in your puzzle. Note that you may not enter words that are too long to fit into the puzzle size you've selected.

As each word is entered, *Word Search* will try to fit it into your puzzle. Whenever possible, it will try to overlap words, increasing the density and difficulty of your puzzle and making it possible to enter more words than could fit otherwise.

Word Search isn't perfect, of course, and occasionally it won't be able to fit a word in. When this happens, the program will do one of two things. If you've elected to watch the puzzle being formed, *Word Search* will ask you to specify a place for the word it's having trouble with. Do so by moving the cursor to where you want the word to begin in the grid. (Use the following keys to direct the cursor: "I" [up], "J" [left], "K" [down], and "L" [right].) Press RETURN or ENTER, and then move the cursor to the word's ending position and press RETURN or ENTER once again. If you can't find a place, abandon the word by pressing the "A" key, and go on. If, on the other hand, you've chosen not to watch and participate in the formation of the puzzle, *Word Search* will automatically abandon any word it can't find a

place for.

As the puzzle fills up, *Word Search* will eventually start having more and more trouble fitting in words. It will, however, keep trying new words until you tell it to quit. Do so by pressing RETURN or ENTER at the WHAT IS YOUR WORD? prompt.

SOLVING YOUR PUZZLE

When your puzzle is finished, *Word Search* will ask you whether you want to solve the puzzle on the screen or print it out, along with a word list. Additional options permit

you to print out a word list for reference, abandon the puzzle and try again, or quit.

To solve a puzzle on the screen, move the cursor (using the keys specified above) to the beginning of a word, press RETURN or ENTER, move the cursor to the end of the word, and press RETURN or ENTER once again. *Word Search* will even highlight the word you've found and tell you how many words you have left to go. You can quit and return to the options menu at any time by pressing the "M" key.

Adam/Word Search

```

10 DIM dr(7,2),dm(3,2),cu$(26),m$(6):NORMAL
20 FOR z = 0 TO 7:READ dr(z,1),dr(z,2):NEXT z
30 FOR z = 1 TO 3:READ dm(z,1),dm(z,2):NEXT z
40 FOR z = 1 TO 26:cu$(z) = "":NEXT z
50 FOR z = 1 TO 6:m$(z) = "<" + STR$(z) + ">":NEXT z
60 sp$ = CHR$(32):FOR z = 1 TO 124:z$ = z$ + sp$:NEXT z
70 GOSUB 2000:PRINT "<1> Small (10 x 10)"
80 PRINT "<2> Medium (20 x 15)"
90 PRINT "<3> Large (28 x 15)":PRINT
100 PRINT "Which size puzzle do you want"
110 PRINT "to create? ";
120 GET k$:k = ASC(k$)-48:IF k < 1 OR k > 3 THEN 120
130 gx = dm(k,1):gy = dm(k,2):wl = gx*gy
140 DIM p$(gx,gy),w$(wl):re$ = CHR$(13)
150 lm = 16-gx/2:nw = 0:GOSUB 2000
160 PRINT "Would you like to see the"
170 PRINT "puzzle as it's being built? ";:GOSUB 2100
180 sp = (k$ = "Y"):GOSUB 2000:IF sp THEN GOSUB 2300
190 VTAB 21:HTAB 1:INPUT "What is your word? ";wd$
200 t = LEN(wd$):GOSUB 2500
210 IF t = 0 THEN ON (nw > 0) GOTO 790:GOTO 190
220 IF t <= gx AND t <= 19 THEN 250
230 VTAB 21:HTAB 1
240 PRINT "That word is too long to fit.":GOTO 320
250 nw$ = "":ef = 0
260 FOR z = 1 TO t:k = ASC(MID$(wd$,z,1))
270 IF k < 65 OR (k > 90 AND k < 97) OR k > 122 THEN e
f = 1:z = t:GOTO 290
280 nw$ = nw$ + CHR$(k-32*(k > 96))
290 NEXT z:IF NOT ef THEN 330
300 VTAB 21:HTAB 1:PRINT "That word contains"
310 PRINT "nonalphabetic characters."
320 GOSUB 2600:GOSUB 2500:GOTO 190
330 IF nw = 0 THEN 370
340 jf = 0:FOR z = 1 TO nw
350 IF nw$ = w$(z) THEN jf = 1:z = nw
360 NEXT z:IF jf THEN 190
370 maxc = 0:ffl = 0:FOR p = 1 TO LEN(nw$)
380 cl = ASC(MID$(nw$,p,1))-64
390 IF cu$(cl) = "" THEN 500
400 FOR cr = 1 TO LEN(cu$(cl)) STEP 2
410 cx = ASC(MID$(cu$(cl),cr,1))
420 cy = ASC(MID$(cu$(cl),cr+1,1))
430 FOR d = 0 TO 7:cd = d+4-INT((d+4)/8)*8
440 bx = cx+dr(cd,1)*(p-1):by = cy+dr(cd,2)*(p-1)
450 x = bx:y = by:GOSUB 4000
460 IF NOT fit THEN 490
470 ffl = 1:IF numc <= maxc THEN 490
480 maxc = numc:wx = bx:wy = by:wd = d
490 NEXT d,cr
500 NEXT p
510 IF ffl THEN x = wx:y = wy:d = wd:GOTO 680
  
```

```

520 FOR t = 1 TO 100:bx = INT(RND(1)*(gx-1))+1
530 by = INT(RND(1)*(gy-1))+1:d = INT(RND(1)*8)
540 x = bx:y = by:GOSUB 4000:IF fit THEN t = 100
550 NEXT t:IF fit THEN x = bx:y = by:GOTO 680
560 GOSUB 2500:VTAB 21:HTAB 1
570 PRINT "I can't seem to fit"
580 PRINT CHR$(34);nw$;CHR$(34);" IN."
590 IF NOT sp THEN GOSUB 2600:GOSUB 2500:GOTO 190
600 PRINT "Would you care to try? ";
610 GOSUB 2100:GOSUB 2500:IF k$ = "N" THEN 190
620 px = 1:py = 1:GOSUB 5000:IF ef THEN 190
630 x = bx:y = by:GOSUB 4010
640 IF fit THEN x = bx:y = by:GOTO 690
650 GOSUB 2500
660 VTAB 22:PRINT "Sorry, but that doesn't fit."
670 GOSUB 2800:ON k$ = "A" GOTO 190:GOTO 620
680 vx = dr(d,1):vy = dr(d,2)
690 nw = nw+1:w$(nw) = nw$:FOR z = 1 TO LEN(nw$)
700 p$(x,y) = MID$(nw$,z,1):lp = ASC(p$(x,y))-64
710 IF LEN(cu$(lp)) = 254 THEN cu$(lp) = RIGHT$(cu$(lp),252)
720 cu$(lp) = cu$(lp)+CHR$(x)+CHR$(y)
730 IF sp THEN VTAB y+3:HTAB x+lm-1:PRINT p$(x,y);
740 x = x+vx:y = y+vy:NEXT z
750 GOSUB 2500:IF nw < wl THEN 190
760 VTAB 21:HTAB 1
770 PRINT "I don't have space for any"
780 PRINT "more words.":GOSUB 2600
790 FOR i = 1 TO gx:FOR j = 1 TO gy
800 IF p$(i,j) = "" THEN p$(i,j) = CHR$(INT(RND(1)*26)+65)
810 NEXT j,i
820 qz = 1:wf = 0:uw = nw:wp = 1
830 GOSUB 2000:PRINT "Would you like to ..."
840 PRINT:PRINT:c = 1:IF wf = 0 THEN 880
850 PRINT m$(c);"continue playing,":c = c+1
860 PRINT m$(c);"play from the beginning,"
870 c = c+1:GOTO 890
880 PRINT m$(c);"play your puzzle on-screen,":c = c+1
890 PRINT m$(c);"print puzzle (w/word list),":c = c+1
900 PRINT m$(c);"print out a word list,":c = c+1
910 PRINT m$(c);"leave this puzzle, or":c = c+1
920 PRINT m$(c);"quit? ";
930 GET k$:s = ASC(k$)-48
940 IF s < 1 OR s > 5+(wf > 0) THEN 930
950 GOSUB 2000:IF wf = 0 THEN 980
960 IF s = 2 THEN GOSUB 2900
970 s = s-(s <> 1)
980 ON s GOTO 990,1300,1300,1410,1430
990 GOSUB 2400:px = 1:py = 1
1000 VTAB 20:HTAB 1
1010 PRINT "You've yet to find ";uw;" word(s). "
1020 GOSUB 3000:VTAB 21:PRINT "WORD #";:GOSUB 3200
1030 GOSUB 5000:IF ef THEN 1030
1040 IF mf THEN 830
1050 ws$ = "" : x = bx : y = by
1060 t$ = p$(x,y)
1070 IF ASC(t$) > 128 THEN t$ = CHR$(ASC(t$)-128)
1080 ws$ = ws$+t$:IF x <> ex OR y <> ey THEN x = x+vx:
y = y+vy:GOTO 1060
1090 z = 1
1100 IF LEFT$(ws$(z),1) = re$ AND MID$(ws$(z),2) = ws$ T
HEN 1150
1110 IF ws$(z) = ws$ THEN 1180
1120 z = z+1:IF z <= nw THEN 1100
1130 GOSUB 2700:VTAB 22:HTAB 1
1140 PRINT "That word isn't in the list.":GOTO 1170
1150 GOSUB 2700:VTAB 22:HTAB 1
1160 PRINT "You've already found that word. ";
1170 GOSUB 2600:GOSUB 2700:GOSUB 3000:GOTO 1030
1180 w$(z) = re$+w$(z):x = bx:y = by
1190 INVERSE:t = ASC(p$(x,y))
1200 IF t > 128 THEN t = t-128:GOTO 1220
1210 p$(x,y) = CHR$(t+128)
1220 VTAB y+3:HTAB x+lm-1:PRINT CHR$(t);
1230 IF x <> ex OR y <> ey THEN x = x+vx:y = y+vy:GOTO
1190

```

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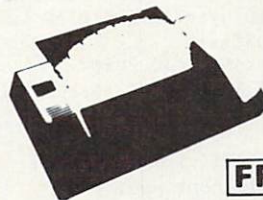
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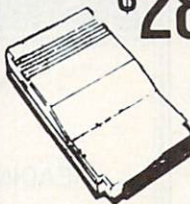
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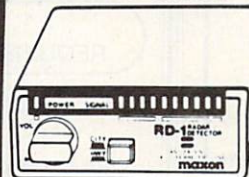
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1240 NORMAL:wf = wf+1:uw = nw-wf:IF uw > 0 THEN 1000
1250 GOSUB 2900:VTAB 20:HTAB 1:PRINT LEFT$(z$,30)
1260 GOSUB 2500
1270 VTAB 21:HTAB 1:PRINT "Congratulations!"
1280 PRINT "You've solved the puzzle."
1290 GOSUB 2600:GOTO 820
1300 PRINT "Press any key"
1310 PRINT "When printer is ready.":GOSUB 2200
1320 PRINT:PRINT CHR$(4);"PR#1"
1330 PRINT:IF s = 3 THEN 1380
1340 FOR i = 1 TO gy:FOR j = 1 TO gx
1350 t = ASC(p$(j,i)):IF t > 128 THEN t = t-128
1360 PRINT CHR$(t);sp$;:NEXT j:PRINT:NEXT i
1370 PRINT:PRINT
1380 FOR z = 1 TO nw:t$ = w$(z)
1390 IF LEFT$(t$,1) = re$ THEN t$ = MID$(t$,2)
1400 PRINT t$:NEXT z:PRINT CHR$(4);"PR#0":GOTO 830
1410 PRINT "Are you sure you want to start again? ";
1420 GOSUB 2100:ON k$ = "N" GOTO 830:RUN
1430 PRINT "Are you sure you want to quit?";
1440 GOSUB 2100:ON k$ = "N" GOTO 830:HOME:END
2000 HOME:PRINT TAB(10);"*Word search*":PRINT:RETURN
2100 GOSUB 2200:IF k$ <> "Y" AND k$ <> "N" THEN 2100
2110 RETURN
2200 GET k$:k = ASC(k$):IF k > 96 THEN k = k-32
2210 k$ = CHR$(k):RETURN
2300 INVERSE:VTAB 3:HTAB lm-1:PRINT LEFT$(z$,gx+2)
2310 FOR z = 1 TO gy:VTAB z+3:HTAB lm-1:PRINT sp$
2320 VTAB z+3:HTAB lm+gx:PRINT sp$:NEXT z
2330 HTAB lm-1:PRINT LEFT$(z$,gx+2):NORMAL:RETURN
2400 GOSUB 2300:FOR i = 1 TO gy:VTAB i+3:HTAB lm
2410 FOR j = 1 TO gx:t$ = p$(j,i)
2420 IF t$ = "" THEN PRINT sp$;:GOTO 2450
2430 t = ASC(t$):IF t < 128 THEN PRINT t$;:GOTO 2450
2440 INVERSE:PRINT CHR$(t-128);:NORMAL
2450 NEXT j,i:RETURN
2500 VTAB 21:HTAB 1:PRINT LEFT$(z$,92);:RETURN
2600 PRINT "Press <RETURN> to continue.";
2610 GOSUB 2200:ON k$ <> re$ GOTO 2610:RETURN

```

```

2700 VTAB 22:HTAB 1:PRINT LEFT$(z$,61);:RETURN
2800 PRINT "<T>=Try again <A>=Abandon";
2810 GOSUB 2200:IF k$ <> "A" AND k$ <> "T" THEN 2810
2820 GOSUB 2700:RETURN
2900 FOR i = 1 TO gx:FOR j = 1 TO gy:t = ASC(p$(i,j))
2910 IF t > 128 THEN p$(i,j) = CHR$(t-128)
2920 NEXT j,i:FOR z = 1 TO nw
2930 IF LEFT$(w$(z),1) = re$ THEN w$(z) = MID$(w$(z),2)
2940 NEXT z:wf = 0:uw = nw:wp = 1:RETURN
3000 VTAB 22:HTAB 1
3010 PRINT "<S. BAR>=Next word <ESC>=Menu":RETURN
3200 VTAB 21:HTAB 7:PRINT wp$;:";
3210 IF LEFT$(w$(wp),1) <> re$ THEN PRINT w$(wp);:":R
ETURN
3220 INVERSE:PRINT MID$(w$(wp),2);:":NORMAL:RETURN
4000 vx = dr(d,1):vy = dr(d,2)
4010 fit = 1:numc = 0
4020 ex = x+vx*(LEN(nw$)-1):ey = y+vy*(LEN(nw$)-1)
4030 IF x < 1 OR x > gx OR y < 1 OR y > gy OR ex < 1 OR
ex > gx OR ey < 1 OR ey > gy THEN fit = 0:RETURN
4040 FOR z = 1 TO LEN(nw$)
4050 t$ = p$(x,y):IF t$ = "" THEN 4090
4060 IF ASC(t$) > 128 THEN t$ = CHR$(ASC(t$)-128)
4070 IF t$ = MID$(nw$,z,1) THEN numc = numc+1:GOTO 409
0
4080 fit = 0:z = LEN(nw$)
4090 x = x+vx:y = y+vy:NEXT z:RETURN
5000 VTAB 23:HTAB 1
5010 PRINT "Press <RET> at start of word."
5020 GOSUB 6000:IF mf THEN RETURN
5030 bx = px:by = py:VTAB 23:HTAB 1
5040 PRINT "Press <RETURN> at end of word."
5050 GOSUB 6000:IF mf THEN RETURN
5060 ex = px:ey = py:vx = ex-bx
5070 vy = ey-by:ax = ABS(vx):ay = ABS(vy)
5080 IF vy = 0 THEN sl = 0:GOTO 5100
5090 sl = vx/vy
5100 IF (ABS(sl) = 0 OR ABS(sl) = 1) AND ((ax = LEN(nw

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$)-1 OR ay = LEN(nw$)-1) OR qz) THEN vx = SGN(vx):vy =
SGN(vy):ef = 0:RETURN
5110 GOSUB 2700:VTAB 22:HTAB 1
5120 PRINT "I think you've made a mistake."
5130 GOSUB 2800:IF qz THEN GOSUB 3000
5140 ON k$ = "I" GOTO 5000:ef = 1:RETURN
6000 VTAB py+3:HTAB px+lm-1
6010 GOSUB 2200:IF k = 13 THEN mf = 0:RETURN
6020 IF NOT qz OR (k <> 32 AND k <> 27) THEN 6070
6030 IF k = 27 THEN mf = 1:RETURN
6040 wp = wp+1:IF wp > nw THEN wp = 1
6050 VTAB 21:HTAB 7:PRINT LEFT$(z$,24)
6060 GOSUB 3200:GOTO 6000
6070 IF k$ < "I" OR k$ > "L" THEN 6010
6080 px = px+(k$ = "L")-(k$ = "J")
6090 py = py+(k$ = "K")-(k$ = "I")
6100 px = px+gx*((px = 0)-(px = gx+1))
6110 py = py+gy*((py = 0)-(py = gy+1)):GOTO 6000
7000 DATA 0,-1,1,-1,0,1,0,1,-1,0,-1,-1
8000 DATA 10,10,20,15,28,15

```

Apple II series/Word Search

```

10 DIM DR(7,2),DM(3,2),CUS(26),MS(6):NORMAL
20 FOR Z = 0 TO 7:READ DR(Z,1),DR(Z,2):NEXT Z
30 FOR Z = 1 TO 3:READ DM(Z,1),DM(Z,2):NEXT Z
40 FOR Z = 1 TO 26:CUS(Z) = "":NEXT Z
50 FOR Z = 1 TO 6:M$(Z) = "<" + STR$(Z) + ">":NEXT Z
60 SP$ = CHR$(32):FOR Z = 1 TO 160:Z$ = Z$ + SP$:NEXT Z
70 GOSUB 2000:PRINT "<1> SMALL (10 X 10)"
80 PRINT "<2> MEDIUM (20 X 15)"
90 PRINT "<3> LARGE (37 X 15)":PRINT
100 PRINT "WHICH SIZE PUZZLE DO YOU WANT TO CREATE?";
110 GET K$:K = ASC(K$)-48:IF K < 1 OR K > 3 THEN 110
120 GX = DM(K,1):GY = DM(K,2):WL = GX*GY
130 DIM PS(GX,GY),W$(WL):RES$ = CHR$(13)
140 LM = 20-INT(GX/2):NW = 0:GOSUB 2000
150 PRINT "WOULD YOU LIKE TO SEE THE PUZZLE AS IT'S BE

```

```

ING BUILT? ";:GOSUB 2100
160 SP = (K$ = "Y"):GOSUB 2000:IF SP THEN GOSUB 2300
170 VTAB 21:HTAB 1:INPUT "WHAT IS YOUR WORD? ";W$
180 T = LEN(W$):GOSUB 2500
190 IF SCRN(14,0)+16*SCRN(14,1) = 215 THEN 210
200 GOSUB 2000:IF SP THEN GOSUB 2400
210 IF T = 0 THEN ON (NW > 0) GOTO 790:GOTO 170
220 IF T <= GX AND T <= 28 THEN 250
230 VTAB 22:HTAB 1
240 PRINT "THAT WORD IS TOO LONG TO FIT.":GOTO 320
250 NWS$ = "":EF = 0
260 FOR Z = 1 TO T:K = ASC(MID$(W$,Z,1))
270 IF K < 65 OR (K > 90 AND K < 97) OR K > 122 THEN E
F = 1:Z = T:GOTO 290
280 NWS$ = NWS$ + CHR$(K-32*(K > 96))
290 NEXT Z:IF NOT EF THEN 330
300 VTAB 21:HTAB 1:PRINT "THAT WORD"
310 PRINT "CONTAINS NONALPHABETIC CHARACTERS."
320 GOSUB 2600:GOSUB 2500:GOTO 170
330 IF NW = 0 THEN 370
340 JF = 0:FOR Z = 1 TO NW
350 IF NWS$ = W$(Z) THEN JF = 1:Z = NW
360 NEXT Z:IF JF THEN 170
370 MAXC = 0:FFL = 0:FOR P = 1 TO LEN(NWS)
380 CL = ASC(MID$(NWS,P,1))-64
390 IF CUS(CL) = "" THEN 500
400 FOR CR = 1 TO LEN(CUS(CL)) STEP 2
410 CX = ASC(MID$(CUS(CL),CR,1))
420 CY = ASC(MID$(CUS(CL),CR+1,1))
430 FOR D = 0 TO 7:CD = D+4-INT((D+4)/8)*8
440 BX = CX+DR(CD,1)*(P-1):BY = CY+DR(CD,2)*(P-1)
450 X = BX:Y = BY:GOSUB 4000
460 IF NOT FIT THEN 490
470 FFL = 1:IF NUMC <= MAXC THEN 490
480 MAXC = NUMC:WX = BX:WY = BY:WD = D
490 NEXT D,CR
500 NEXT P
510 IF FFL THEN X = WX:Y = WY:D = WD:GOTO 680
520 FOR T = 1 TO 100:BX = INT(RND(1)*(GX-1))+1

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