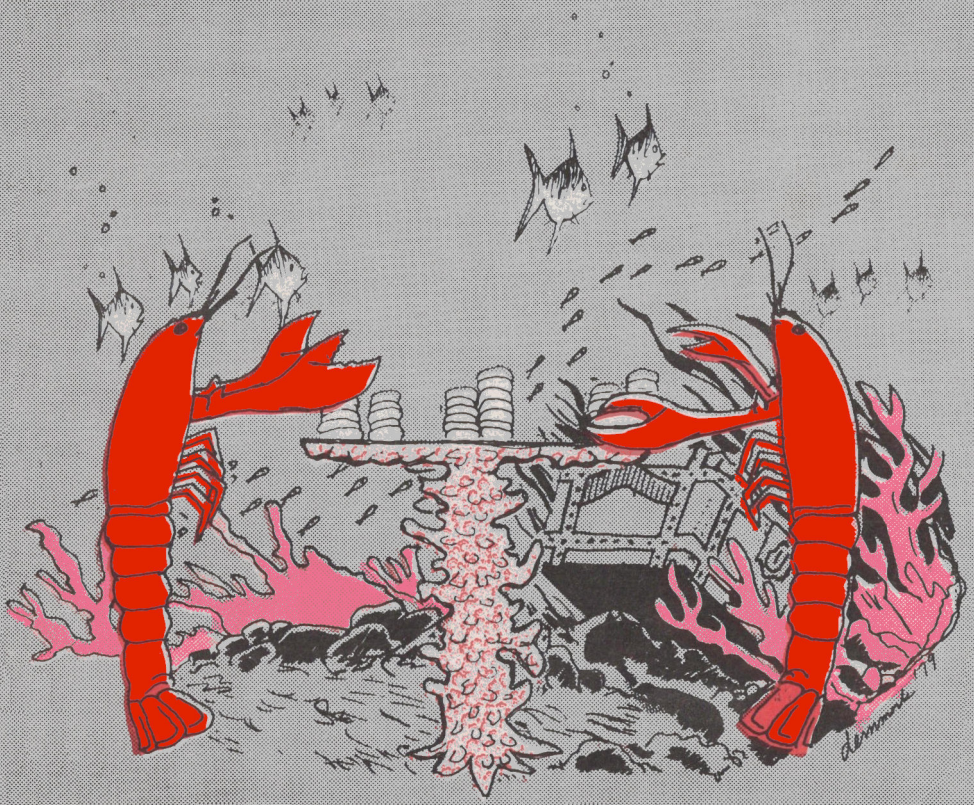
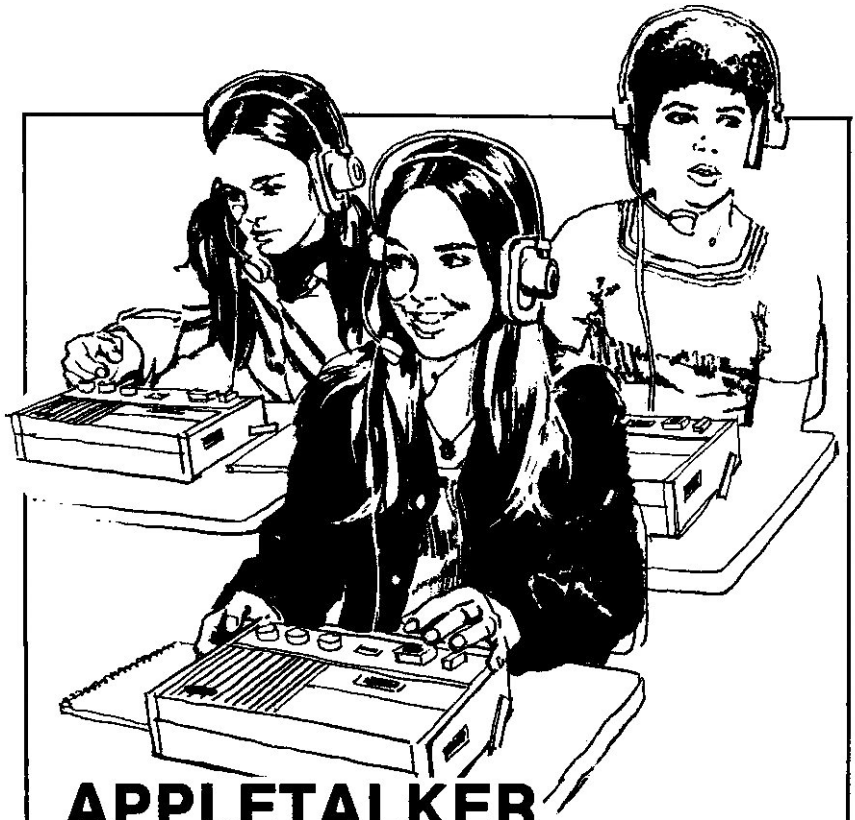
SoftSide™ Apple Edition

FEBRUARY 1980 VOL. 1, NO. 2 $2.00

Super Nim ...
Connection ...
... and more!





APPLETALKER

Gives Apple II* the power of speech WITHOUT hardware costs

The APPLETALKER accepts voice or audio information through the cassette input port, digitizes the information and stores it in numbered tables in your computer's memory for later playback using Apple's* on-board speaker. You can also SAVE tables to tape for later use. Comes complete with all the routines and instruction you will need. Demo program also supplied.

Apple II,* Integer 16K, $15.95

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SOFTAPE™

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OUR COVER ...

The cover shows our development team play-testing SUPERNIM under harsh environmental conditions prior to computer adaptation. Illustration by Sharon Demmerle.

*

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FASTGAMMON

Backgammon is a two-person game.
In FASTGAMMON the computer is one player
(its men are O's) and you are the other (your men are X's).

Whether you are a beginner or an experienced backgammon player, FASTGAMMON can help you improve your game. First of all, you now have an opponent that is always ready and willing to play. There is no substitute for experience — the more games you play the more you learn about backgammon. But there is another unique method by which FASTGAMMON can help you improve your game.

By selecting "2" when the starting message is displayed, the same sequence of rolls that occurred in the game just played (the last game for which you selected "1") will occur again.

HOW GOOD IS FASTGAMMON?

We make no claims that FASTGAMMON plays at an expert level. In fact, good players will notice obvious mistakes that the computer makes from time to time. The game of backgammon has many subtleties, and the algorithm programmed into version 1 of FASTGAMMON is a fairly simple one. There is an advantage that the computer has, however, over human players — the computer never forgets what it "knows". Due to oversights, distractions, or haste, human players often forget what they know. This fact is the edge that makes FASTGAMMON competitive against good players. 16K $19.95

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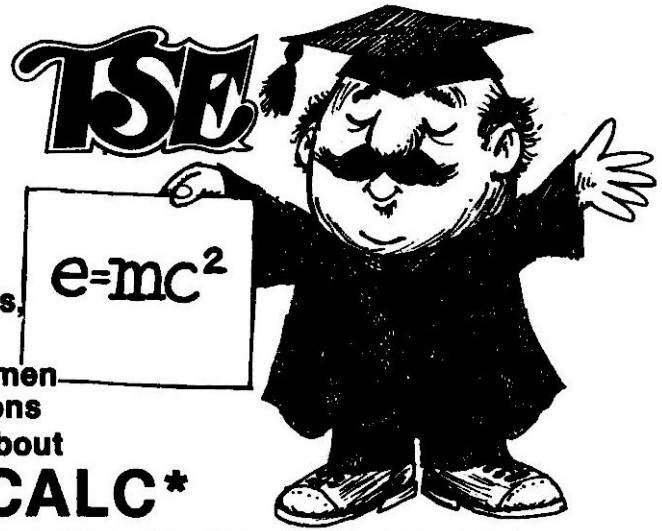

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EDITORIAL

I've owned my APPLE II* computer for over two years now and one fact has never ceased to amaze me: the proliferation of **good** software. From BREAK-OUT and STAR TREK, which consumed hours of my time 2 years ago, to SPACE INVADERS and ADVENTURE games which consume my spare time today.

Decent software has been written by eight year old children, by octogenarians, by men and women alike. And, by good software, I don't mean simple Tic-Tic-Toe games. I mean well-thought-out and documented programs. Programs that can maintain your bank accounts, your address book, help compose letters, assist in business planning, teach languages or sciences, and entertain.

The point that I'm trying to make is that it is not difficult to do a good programming job — if you really want to. The easiest way to begin is to write a program on something you are very familiar with. Determine what it is you really want the program to do. Chart out the logic flow of your idea. Try to disassemble the program into independent logical blocks. Only when you have thoroughly thought out your task should you begin with the actual coding. The coding phase of your program should be the shortest task of all if you are well organized.

No program is without those isidious little bugs that seem to appear when they were not expected. Many articles have been written on techniques to de-bug a program. SoftSide: Apple Version, will run a short piece in a future issue. But for now let me recommend reviewing the logic flow and trying the program with parameters that will give known answers. More later.

Okay, the program is completed. All known bugs have been exterminated and it runs beautifully. You are very proud, and rightly so! But now what? I've got a suggestion. Share it with others who might also appreciate it. An easy way to do this would be to send the program and whatever documentation you have on it to SoftSide: Apple Version.

We will review the program and, if there is sufficient appeal, publish it in a future issue. Of course you will get the proper credit for your hard labors. We will even pay you for the privilege of publishing your program. But the biggest reward is seeing your name above a published program.

You can contact me about your program at the SoftSide address.

MDW

From: Synergistic Software

HIGH ADVENTURE

Wilderness Crusade -- Free the kingdom of Draconia from the Evil Necromancer! Your party must overcome obstacles, defeat hostile inhabitants, survive natural hazards, explore tombs, temples, castles, and ruins, in search of gold and magical devices.

48K Integer; Cassette $14.95, Disk $17.50.

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16K Integer; Cassette $12.50, Disk $14.95. Both adventures on disk. 48K Integer, $29.95.

WORKHORSE

Mailing List Database -- Entry and storage of a list of names with associated addresses, cities, states, zip codes, phone numbers, comments, and code designations. List, search, edit, print labels; convert prior mailing lists. Up to 225 records can be loaded on line at any time.
48K AppleSoft, Disk $34.50.

PROGRAMMER'S DELIGHT

Higher Graphics -- A complete set of shape generation, manipulation and utilization tools for the programmer. Quickly and easily, you add sophisticated graphic displays and effects to your programs. Shape Maker, Table Combiner, Screen Creator, 4 shape tables, 3 high-res displays, and the machine language graphics routines required to produce high resolution graphics on the Apple II.
48K, Integer Basic, Disk $24.95.

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SUPERNIM
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SUPERNIM

by Dr. Jerry Dubnoff

SUPERNIM is a game of skill and derring-do, a masterpiece of give and take. The man and machine alternate turns removing pieces from the screen display. From 1-3 pieces may be removed. However, if more than one, they must be taken adjacently, horizontally or vertically. The player with the last piece on the board wins.

With roots stretching into the middle ages, NIM has become a traditional computer game. However, it is normally only played in one dimension. SUPERNIM, by adding a second dimension, is a great deal more challenging.

Ideally, SUPERNIM will run in APPLE II* systems having FIRMWARE, APPLESOFT*, and 16K free memory. It should run, also, in 24K systems with APPLESOFT* in RAM.

SUPERNIM will amuse and challenge you. As Ali Haho, ancient Arabian Nimist and philosopher once said:

> "May you pick the last camel and be aboard his back five minutes before it occurs to him to spit."

SUPERNIM is a winner!

```
10  REM SUPER-NIM
20  REM A MULTI-DIMENSIONAL GAME
30  REM COPYRIGHT 1979
40  REM BY JERRY DUBNOFF
50  FOR I = 770 TO 906: READ J: POKE
    I,J:K = K + J: NEXT : IF K <
     > 8431 THEN  STOP : REM DAT
    A ERROR
60  DATA 173,48,192,136,208,5,206
    ,1,3,240,9,202,208,245,174,0
    ,3,76,2,3,96,169,0,73,0,141,
    31,3,96,0,5,0,12,0,47,0,63,0
    ,84,0,87,0
70  DATA  219,  219,27,56,46,62,9,
    88,48,46,36,17,37,55,14,9,39
    ,172,171,33,44,86,104,34,44,
    54,1,88,48,14,36,53,40,54,0,
    219,155,36,44,45,222,43,45,5
    4,73,33,36,63,9,45,0
80  DATA 219,219,34,36,53,53,53,3
    7,36,9,54,14,33,36,45,18,36,
    45,54,6,0,34,36,0,219,19,36,
    63,84,41,37,9,54,46,37,36,63
    ,73,49,54,45,36,4,0
90  IF  PEEK (175) + 256 *  PEEK
    (176) > 8157 THEN 130
100 POKE 232,32: POKE 233,3: TEXT
    : HOME : HGR : ROT= 0: FOR I
     = 1 TO 5: SCALE= I: GOSUB 1
    20: NEXT : FOR I = 0 TO 128 STEP
    4: ROT= I: GOSUB 120: NEXT :
     FOR I = 1 TO 15: SCALE= I: GOSUB
    120: NEXT
110 FOR I = 15 TO 1 STEP  - 1: SCALE=
    I: GOSUB 120: NEXT : FOR I =
    1 TO 8: SCALE= I: GOSUB 120:
     NEXT : HCOLOR= 6: DRAW 1 AT
    140,90: FOR I = 1 TO 5: PRINT
     CHR$ (7): NEXT : GOTO 140
120 XDRAW 1 AT 140,90: FOR J = 1
    TO 5:K =  PEEK ( - 16336): NEXT
    : XDRAW 1 AT 140,90: RETURN
130 TEXT : HOME : VTAB 12: HTAB
    11: PRINT "*** SUPER-NIM ***
    "
140 GOSUB 1170: TEXT : HOME : GOSUB
    1180
150 VTAB 12: HTAB 10: PRINT "WAN
    T INSTRUCTIONS? ": GOSUB 110
    0: IF X = 217 THEN  PRINT B$
    : GOSUB 1040
160 TEXT : HOME : VTAB 10: HTAB
    7: PRINT "I CAN PLAY AT DIFF
    ERENT LEVELS OF": HTAB 7: PRINT
    "SKILL.  TELL ME IF YOU ARE:"
    : PRINT
170 HTAB 7: PRINT "1) A BEGINNER
    ": HTAB 7: PRINT "2) AN INTE
    RMEDIATE PLAYER": HTAB 7: PRINT
    "3) AN ADVANCED PLAYER": PRINT
    : HTAB 7: PRINT "ENTER 1, 2,
     OR 3: "B$;
180 GET A$: FOR DF = 1 TO 3: IF
    A$ =  STR$ (DF) THEN  PRINT
    B$: GOTO 200
190 NEXT : GOTO 180
200 HOME : VTAB 12: HTAB 7: PRINT
    "ENTER # OF SECTIONS (2-6): ";
210 GET A$: FOR MX = 2 TO 6: IF
     A$ =  STR$ (MX) THEN  PRINT
     B$: HOME : GOTO 230
220 NEXT : GOTO 210
230 FOR J = 3 TO 6:S(J) = 0: NEXT
    .MV = 0:S(1) = 63: FOR J = 3
    TO MX:S(J) =  FN R(19) + 45
    : NEXT : IF MX = 2 THEN S(3) = 0
240 MV =  FN R(42) + 10: FOR J =
     1 TO 15: IF MV = MT(J) THEN
     240
250 NEXT :S(2) = 63 - MV:MV = 0:
```

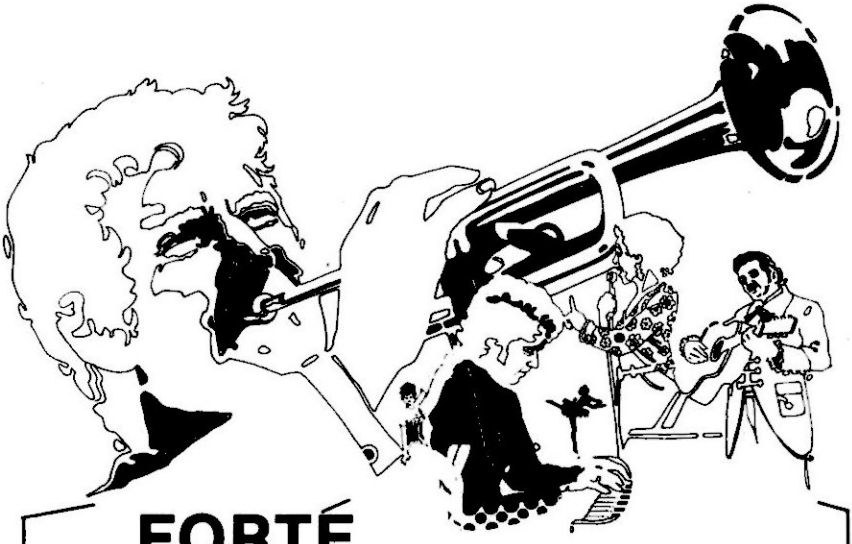
```
     GOSUB 680
260  HOME : HTAB 11: PRINT "WANT
     TO GO FIRST? ";: GOSUB 1140
270  GET A$: IF A$ = "Y" THEN 300
280  IF A$ = "N" THEN 490
290  GOTO 270
300  HOME : HTAB 13: PRINT "IT'S
     YOUR TURN."B$
310  FOR I = 1 TO MX: IF TB(I) =
     TB THEN  FOR P = 1 TO 1000: NEXT
     : PRINT : HTAB 3: PRINT "I G
     UESS YOU WILL CHOOSE SECTION
     "I" !"B$B$: FOR P = 1 TO 45
     00: NEXT : GOTO 360
320  NEXT : PRINT : HTAB 4: PRINT
     "ENTER SECTION #, OR Q FOR Q
     UIT. ";
330  GET A$: IF A$ = "Q" THEN  TEXT
     : HOME : CLEAR : GOTO 920
340  FOR I = 1 TO MX: IF A$ =  STR$
     (I) AND S(I) THEN  PRINT B$:
      GOTO 360
350  NEXT : GOTO 330
360 CS$ = "": FOR B = 5 TO 0 STEP
      - 1: IF SB(I,B) THEN CS$ =
     CS$ +  STR$ (6 - B) + " ": GOTO
     380
370 CS$ = CS$ + "  "
380  NEXT : POKE 34,15: HOME : HTAB
     18: PRINT  LEFT$ (CS$,6): HTAB
     18: PRINT  MID$ (CS$,7,6)
390  IF TB(I) = 1 THEN  PRINT : HTAB
     2: PRINT "NOT MUCH CHOICE! I
     'LL MOVE FOR YOU. "B$B$: GOSUB
     1170 MV = S(I) S(I) = 0: GOSUB
     680: GOTO 470
400  PRINT  PRINT "THE PIECES IN
      SECTION ";I;" ARE SHOWN ABO
     VE.": POKE 34,20
410  PRINT "ENTER YOUR MOVE AS 1-
     3 ADJACENT DIGITS": INPUT "I
     N ASCENDING ORDER, & HIT 'RE
     TURN'.";A$: IF  LEFT$ (A$,1)
      = "Q" THEN  TEXT : HOME : CLEAR
     : GOTO 920
420  FOR J = 1 TO 15: IF LM$(J) =
     A$ THEN  GOSUB 820: GOTO 450
430  NEXT
440  HOME : FLASH : HTAB 5: PRINT
     "THAT MOVE DOES NOT COMPUTE!
     ": NORMAL : PRINT : GOSUB 11
     60: GOTO 410
450  IF  NOT OK THEN 440
460 MV = MT(J):S(I) = S(I) - MV: GOSUB
     680
470  HOME : HTAB 6: PRINT "YOUR M
     OVE IS DISPLAYED ABOVE. ": GOSUB
     1140: FOR P = 1 TO 2000: NEXT
     : IF TB = 0 THEN 840
480 MV = 0: GOSUB 680
490  HOME : HTAB 14: PRINT "IT'S
     MY TURN."B$: PRINT : FOR P =
     1 TO 1500: NEXT : IF TB < 5 OR
     DF = 3 THEN 510
500  IF DF = 1 OR ( RND (1) ) .5 AND
     TB > 7) THEN 640
510  POKE QL,QX: POKE Q3, FN G(S(
     1)): FOR J = 2 TO MX: POKE Q
     1, PEEK (Q3): POKE Q2, FN G(
     S(J)): CALL QG: NEXT J:SUM =
      PEEK (Q3)
520  IF  NOT SUM AND TB < 5 THEN
      FOR P = 1 TO 1000: NEXT : FLASH
     : HOME : VTAB 15: HTAB 15: PRINT
     "I GIVE UP! ": GOSUB 1160: GOSUB
     1170: NORMAL : GOTO 840
530  IF  NOT SUM THEN 640
540  IF TB < 3 THEN  HTAB 3: PRINT
     "SORRY ABOUT THIS NEXT MOVE,
      BUT...": GOSUB 1120: GOTO 5
```

```
    60
550  IF TB < 5 THEN  HTAB 3: PRINT
     "I DON'T THINK MUCH OF YOUR
     CHANCES!": GOSUB 1130
560  FOR P = 1 TO 500: NEXT : POKE
     Q1,SUM: FOR I = 1 TO MX: POKE
     Q2, FN G(S(I)): CALL QG: IF
      FN G(S(I)) >  PEEK (Q3) THEN
     580
570  NEXT : STOP : REM PROGRAM ER
     ROR
580 WG =  PEEK (Q3): FOR J = 1 TO
     15: GOSUB 820: IF  NOT OK THEN
     600
590  IF  FN G(S(I) - MT(J)) = WG THEN
     610
600  NEXT : STOP : REM PROGRAM ER
     ROR
610 MV = MT(J):S(I) = S(I) - MV: GOSUB
     680: HOME : HTAB 2: PRINT "I
     'VE REMOVED "TM" PIECE";: IF
     TM > 1 THEN  PRINT "S";
620  PRINT " FROM SECTION "I".": GOSUB
     1140: FOR P = 1 TO 2000: NEXT
     : IF TB = 0 THEN 1030
630 MV = 0: GOSUB 680: GOTO 300
640  FOR P = 1 TO 1000: NEXT
650 I =  FN R(MX) + 1: IF  NOT S(
     I) THEN 650
660 J =  FN R(13) + 1: GOSUB 820:
      IF  NOT OK THEN 660
670  GOTO 610
680 TB = 0: FOR J = 1 TO 6:TB(J) =
     0:T% = S(J): FOR B = 0 TO 5:
     T = T% / 2:T% = T:SB(J,B) =
      SGN (T - T%):TB(J) = TB(J) +
     SB(J,B): NEXT :TB = TB + TB(
     J): NEXT : IF  NOT MV THEN 7
     00
690 TM = 0:T% = MV: FOR B = 0 TO
     5:T = T% / 2:T% = T:MB(B) =
      SGN (T - T%):TM = TM + MB(B
     ): NEXT
700  FOR J = 1 TO 6:ST$(J) = "": FOR
     B = 5 TO 0 STEP  - 1: IF J <
      > I THEN 730
710  IF  NOT MV THEN 730
720  IF MB(B) THEN ST$(J) = ST$(J
     ) + "0 ": GOTO 750
730  IF SB(J,B) THEN ST$(J) = ST$
     (J) + "% ": GOTO 750
740 ST$(J) = ST$(J) + ". "
750  NEXT : NEXT
760 J = 2:K = 1:L = 1: GOSUB 770:
     J = 3:L = 7: GOSUB 770:J = 7
     :K = 4:L = 1: GOSUB 770:J =
     8:L = 7: GOSUB 770: GOTO 780
770 PR$(J) = " " +  MID$ (ST$(K),
     L,6) + " *  " +  MID$ (ST$(K
      + 1),L,6) + " *  " +  MID$
     (ST$(K + 2),L,6): RETURN
780  TEXT : HOME : VTAB 2: IF MX <
     4 THEN  VTAB 5
790  FOR J = 0 TO 4: PRINT  TAB(
     7);PR$(J): NEXT : IF MX < 4 THEN
     810
800  FOR J = 5 TO 10: PRINT  TAB(
     7);PR$(J): NEXT
810  POKE 34,15: RETURN
820 OK = 0: POKE QL,QR: POKE Q1,S
     (I): POKE Q2,MT(J): CALL QG:
      IF  PEEK (Q3) = MT(J) THEN
     OK = 1
830  RETURN
840  CLEAR :W = 5
850  TEXT : HOME
860  IF  PEEK (175) + 256 *  PEEK
     (176) < 8157 THEN  HGR : GOTO
     890
870  VTAB 12: HTAB 15: IF W = 5 THEN
```

```
     PRINT "YOU WIN!": GOTO 910
880  PRINT "I WIN!": GOTO 910
890  ROT= 0: SCALE= 8: GOSUB 980:
     GOSUB 990: GOSUB 1010: GOSUB
     980: FOR I = 8 TO 1 STEP  -
     1: SCALE= I: GOSUB 940: NEXT
900  SCALE= 8: GOSUB 990: FOR I =
   1 TO 32 STEP 4: ROT= I: GOSUB
   950: NEXT : ROT= 32: GOSUB 9
   90: ROT= 0: FOR I = 1 TO 8: SCALE=
I: GOSUB 960: NEXT : GOSUB 1000
910  FOR I = 1 TO 5: PRINT  CHR$
     (7): NEXT : FOR I = 1 TO 300
     0: NEXT
920  GOSUB 1110: VTAB 21: PRINT "
     WANT TO PLAY ANOTHER GAME? "
     ;: GET A$: IF A$ = "Y" THEN
      FOR I = 770 TO 906: READ J:
      NEXT : TEXT : HOME : GOSUB
     1180: GOTO 160
930  TEXT : HOME : VTAB 11: HTAB
     7: PRINT "IT'S BEEN FUN PLAY
     ING WITH YOU.": PRINT : HTAB
     7: PRINT "SO LONG UNTIL NEXT
      TIME!": PRINT  CHR$ (7): END
940  GOSUB 980: GOSUB 970: GOSUB
     980: RETURN
950  GOSUB 990: GOSUB 970: GOSUB
     990: RETURN
960  GOSUB 1000: GOSUB 970: GOSUB
     1000: RETURN
970  FOR J = 1 TO 5:K =  PEEK ( -
     16336): NEXT : RETURN
980  XDRAW 2 AT 140,60: RETURN
990  XDRAW 3 AT 140,100: RETURN
1000  XDRAW W AT 140,60: RETURN
1010  FOR I = 1 TO 3: FOR J = 100
      TO 30 STEP  - 10:K = 5: GOSUB
     1020: NEXT : FOR J = 30 TO 1
     00 STEP 10:K = 5: GOSUB 1020
     : NEXT : NEXT : RETURN
1020  POKE 768,J: POKE 769,K: CALL
     770: RETURN
1030  CLEAR :W = 4: GOTO 850
1040  HOME : HTAB 5: PRINT "IN TH
     IS GAME, YOU AND I TAKE": PRINT
     "TURNS REMOVING PIECES FROM
     A DISPLAY": PRINT "SHOWN ON
     THE SCREEN. FROM 1-3 PIECES"
1050  PRINT "MAY BE REMOVED AT EA
     CH TURN, BUT IF": PRINT "2 O
     R 3, THEY MUST BE ADJACENT E
     ITHER": PRINT "HORIZONTALLY
     OR VERTICALLY.": PRINT
1060  HTAB 5: PRINT "WHEN IT IS Y
     OUR TURN TO PLAY, CHOOSE",: PRINT
     "FIRST THE SECTION OF THE DI
     SPLAY WHERE": PRINT "YOU WIS
     H TO MOVE, AND THEN SPECIFIC
     ": PRINT "PIECES, WHICH YOU
     CAN PICK BY NUMBER.": PRINT
1070  HTAB 5: PRINT "THE PLAYER W
     HO TAKES THE LAST PIECE": PRINT
     "OF THE ENTIRE DISPLAY WINS
     THE GAME.": PRINT : HTAB 5: PRINT
     "YOU CAN VARY MY LEVEL OF SK
     ILL."
1080  PRINT "AND CAN ALSO VARY TH
     E INITIAL NUMBER": PRINT "OF
      SECTIONS, FROM 2 TO 6. YOU
     HAVE": PRINT "YOUR CHOICE, A
     FTER SEEING THE INITIAL": PRINT
     "DISPLAY, OF GOING FIRST OR
     SECOND."
1090  PRINT "THEORETICALLY, YOU C
     AN WIN EVERY GAME!": PRINT :
      GOSUB 1170: PRINT "HIT ANY
     KEY WHEN YOU ARE READY TO PL
     AY.": GOSUB 1110
1100 X =  RND (1):X =  PEEK ( - 1
```

```
     6384): IF X < 128 THEN 1100
1110  POKE  - 16368,0: RETURN
1120  POKE PI,255: POKE DU,190: CALL
     BE. FOR PA = 1 TO 50: NEXT :
      POKE DU,127: CALL BE. POKE
     PI,190: POKE DU,255: CALL BE
     : RETURN
1130  POKE PI,180: FOR K = 1 TO 3
     : POKE DU,75: CALL BE: FOR P
     A = 1 TO 50: NEXT . NEXT : POKE
     PI,228: POKE DU,255: CALL BE
     . RETURN
1140  FOR I = 1 TO 8:J = 240 / I:
      POKE PI,J: POKE DU,I: CALL
     BE. NEXT : RETURN
1150  POKE PI,230: POKE DU,255: CALL
     BE: RETURN
1160  FOR K = 1 TO 300:L =  PEEK
     (CL). NEXT . RETURN
1170  FOR P = 1 TO 3000: NEXT : RETURN
1180 PI = 768:DU = 769:BE = 770:C
     L =  - 16336.B$ =  CHR$ (7):
     QG = 791.Q1 = 792:QL = 793:Q
     2 = 794:Q3 = 799:QA = 41:QX =
     73
1190 G$ = "0112102312030334102301
     3223303215100323340312302123
     31320534254152": IF  LEN (G$
     ) <  > 64 THEN  STOP   REM E
     NTRY ERROR
1200  DEF  FN G(J) =  VAL ( MID$
     (G$,J + 1,1)). DEF  FN R(J) =
      INT ( RND (1) * J)
1210  DIM LM$(15): FOR J = 1 TO 1
     5: READ LM$(J). NEXT
1220  DATA  1,2,3,4,5,6,12,23,45,
     56,14,25,36,123,456
1230  DIM MT(15): FOR J = 1 TO 15
     : READ MT(J): NEXT
1240  DATA  32,16,8,4,2,1,48,24,6
     ,3,36,18,9,56,7
1250 PR$(0) = "   1          2
          3":PR$(10) = "   4
         5          6"

1260 PR$(1) = "          *
     *".PR$(4) = PR$(1).PR$(6) =
     PR$(1).PR$(9) = PR$(1).PR$(5
     ) = "**********************
     ****": RETURN
```



FORTÉ

ENJOY MAKING YOUR OWN BEAUTIFUL MUSIC!

FORTÉ is an interpretive language devoted to the playing of music, which allows the operator to use the music playing capabilities of the Apple II* in a way that, up until now, required hours of tedious calculations and coding. Now, with FORTÉ, all the hard work is done for you.

Programs written in FORTÉ are as easy to enter, list and edit as are programs written in APPLE'S* INTEGER BASIC.

Play music from the computer speaker, or from the cassette output for recording to a high fidelity music system plugged into the output port.

Programs easily saved onto cassette or disk and can be listed to a printer for hardcopy documentation.

FORTÉ was developed to be easy and fun for the beginner, yet capable of handling the most complex passages the veteran can devise! **16K, $19.95**

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THE BASIC HANDBOOK

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A definitive reference/idea book. Explains over 50 favorite versions of the BASIC language in detail as used in micros, minis and mainframes. Everything you need to know about the most important statements, functions, operators and commands. From the same author as the **TRS-80 Users/Learners Manual.**
360 pages $14.95 plus $1.00 shipping and handling

LITTLE BOOK OF BASIC STYLE

John M. Nevison

Ideal reference for BASIC programmer, junior high to research scientist. Indexed, illustrated, 151 pages.
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plus $1.00 shipping and handling

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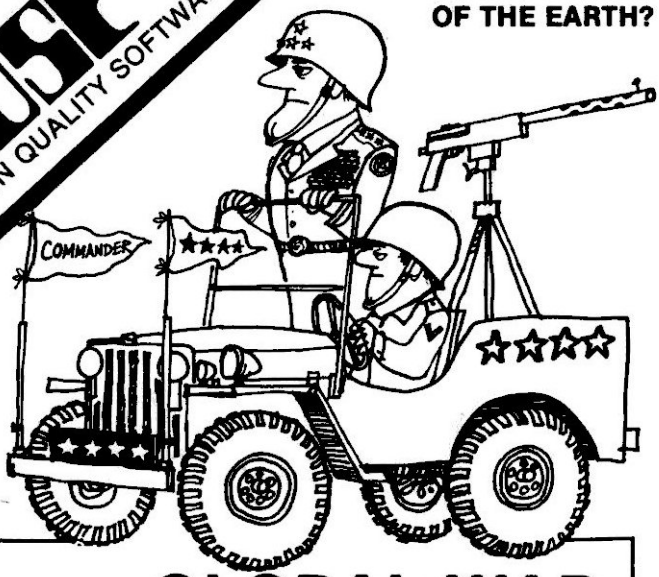

GLOBAL WAR

Features a highly detailed projective map of the earth's continents divided into forty regions. The computer assigns each player a portion of the regions and starting armies. The players can allocate armies to specific regions or attack another player's territory. The object of the game is to take control of the Earth. An adult strategy game for two to nine players. Complete with instruction manual and rule book.

Cassette, Applesoft, 32K, $17.95

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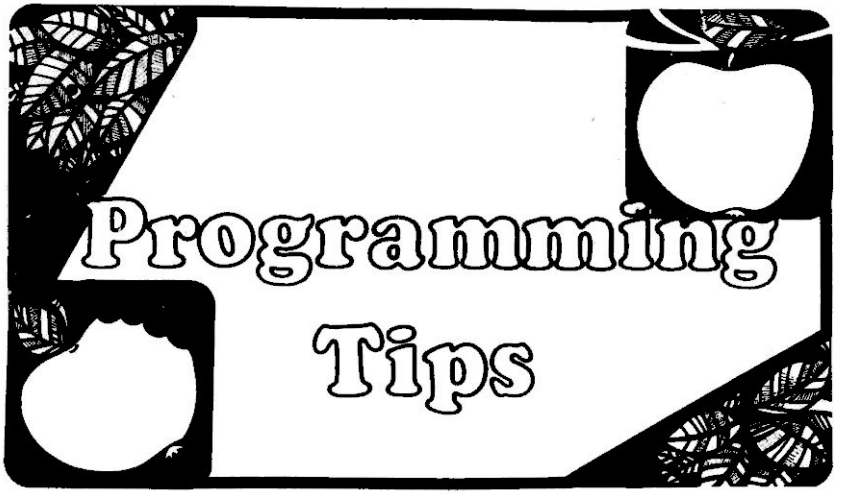


TEXT Mode

The last executable line of your program should reset the computer to its original state. For example, if you were in graphics mode, your last line should return you to text mode.

In AppleSoft*, you could use this line:

```
999 TEXT : HOME : END
```

A more general case for AppleSoft* and Integer BASIC is this line:

```
999 TEXT : CALL-936 : END
```

BELL

You can make the output of your program more interactive and more interesting by using the BELL (Control G) in your PRINT statements. Signal an input by prompting the user with one or more BELLs. One way to arrest attention is to place a control-G between each letter.

RND(THOUGHTS)

When you load a BASIC program into the Apple computer you will hear two beeps (if it is a good load). These two beeps mean something significant.

There are actually two loads taking place. The first tells the computer the length of the BASIC program to follow. This is the dip in the pitch that you hear before the main program load. Now the computer knows how much data to expect and if it will fit within your system requirements.

The second beep signifies the second (BASIC program) load.

With a monitor load (i.e., 300.500R) you have already told the computer how much data to expect and, therefore, you only hear one beep.

There are a number of ways available to you to improve your programming skills — outside of reading SoftSide: Apple Version, of course.

First is your local computer store. Your dealer probably has programming classes in session right now, or would be interested in forming a class if you expressed an interest. In addition, there are a number of good books on programming that he probably stocks. Ask him for his recommendation.

Then there are the Apple computer clubs that have sprung up all over the nation. The biggest one is A.P.P.L.E., located at 8710 Salty Drive NW, Olympia, WA 98502. They publish a newsletter entitled 'Call-A.P.P.L.E.' that is chock full of interesting items and programming hints. My recommendation is to join A.P.P.L.E. But don't overlook any local computer club that may be able to offer you assistance.

A number of independent newsletters are on the market today. I will present a review of the ones I am familiar with in a later issue.

Finally, there are the computer magazines. Names like Byte, Personal Computing, Creative Computing, and Recreational Computing should become household words to you. Since I subscribe to all of them, I feel permitted to offer my comments. Byte is hardware

(equipment) oriented and somewhat too technical for the beginner (although it does have the largest circulation.) Creative Computing has a good mix of articles. I look forward to receiving my issue each month. Personal Computing has interesting software articles and is easy to read. Recreational Computing is full of software to enter into your computer. It started as a newspaper and was the first computer publication I read. So I owe my loyalty to Recreational Computing. Considering all the time I spend with my Apple, my wife has a different opinion!

Do you have any suggestions concerning programming or the Apple Computer? Why not write them down and send them to SoftSide: Apple Version; attention: Editor. Whatever is bothering you is surely bothering many people. And we can help by publishing your letter with the answer to your problem. Give us a try!

If you would like to write an article for SoftSide: Apple Version, please send it in. Mark it attention: Editor. If your article has appeal to the SoftSide - Apple audience, we will publish it and pay you for it. The same goes for programs. Let me hear from you.

SoftSide?
What happened to AppleSeed?

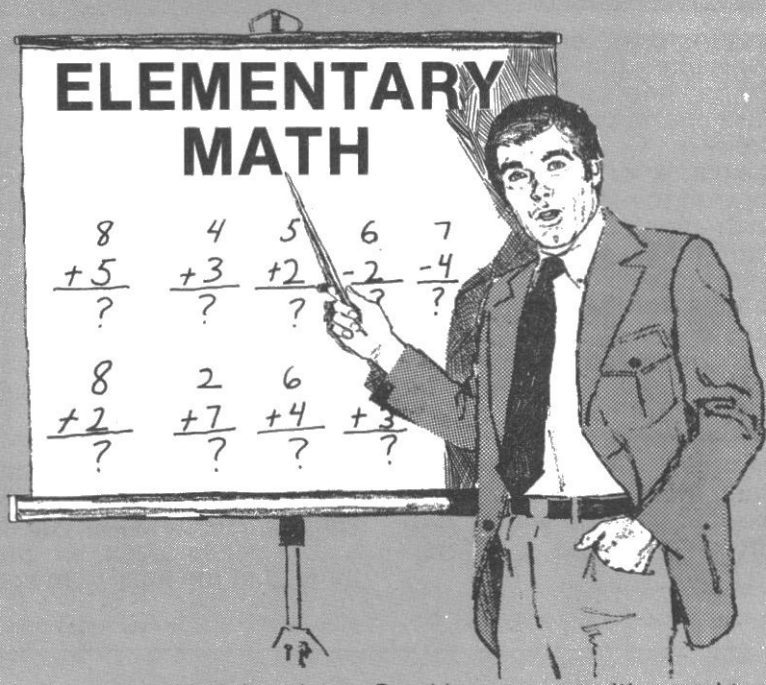
After one issue, we have changed our name! A change of ownership? What happened? Actually, we were contacted by Apple Computer Company and politely requested to avoid their trademarked Name. We were happy to oblige.

SoftSide is a familiar name. It is shared by a sister publication for the TRS-80 that is highly respected as the best source of personal applications software for that computer. Now the Apple edition can share that same enthusiasm.

We would also like to invite you to visit our retail store at 6 South Street, Milford, N.H., if you are nearby. And at your local computer store, watch for our RamWare label on fine programs, coming soon!

George Blank, Editor in Chief

Note: Apple and Apple II are trademarks of the Apple Computer Company, Cupertino, CA, which has no connection with SoftSide Publications.



Elementary Math is a lo-res Graphics program with sound to assist the youngsters in their addition drills. It is for children in kindergarten through grade two or three. The program has a number of remark statements to assist the parent in modifying the program to suit individual needs.

A SoftSide exclusive!

```
100 TEXT : CALL -936
102 TAB 16: PRINT "GRAPHICS"
110 TAB 13: PRINT "ADDITION DRILL"

120 PRINT : TAB 19: PRINT "BY"
130 POKE 50,63: REM  FOR INVERSE VID
    EO
140 PRINT : TAB 11: PRINT "A P P L E
     S E E D"
150 POKE 50,255: REM  FOR NORMAL VID
    EO
170 VTAB 20: PRINT "PRESS RETURN TO
    BEGIN ";: INPUT Z$
172 CALL -936: PRINT "HOW MANY WRONG
     ANSWERS SHOULD": PRINT "I PERMI
    T BEFORE GIVING THE ANSWER "
    ;: INPUT SUMOFWRONG
174 VTAB 10: PRINT "ENTER THE ANSWER
     '99' ": PRINT "TO QUIT THE SESS
    ION"
175 FOR KK=1 TO 2000: NEXT KK: REM
    DELAY LOOP
180 GR
190 CALL -936: COLOR=15
195 REM  FOR-NEXT LOOP FOLLOWING CLE
    ARS GRAPHICS SCREEN TO WHITE
```

```
200 FOR K=0 TO 39
210 HLIN 0,39 AT K
220 NEXT K
230 WRONG=0
240 A= RND (10)+1:B= RND (10)+1

250 COLOR=1
260 FOR X=0 TO 3*A-3 STEP 3
270 PLOT X,15: PLOT X,16: PLOT
    X+1,15: PLOT X+1,16
320 PRINT "": REM  CTRL-G BETWEEN Q
    UOTES FOR BELL
322 FOR KK=1 TO 100: NEXT KK: REM
     HIS LOOP IS USED FOR A DELAY
330 NEXT X
340 FOR Y=0 TO 3*B-3 STEP 3
350 PLOT Y,24: PLOT Y,25: PLOT
    Y+1,24: PLOT Y+1,25
400 PRINT "": REM  CTRL-G BETWEEN Q
    UOTES FOR BELL
402 FOR KK=1 TO 100: NEXT KK: REM
     ANOTHER DELAY LOOP
410 NEXT Y
430 TAB 16: PRINT A;" + ";B;"= "
    ;: INPUT GUESS
440 IF GUESS=99 THEN 700
450 IF GUESS=A+B THEN 550
455 GOSUB 660: REM  DRAW AN 'X'
460 WRONG=WRONG+1
470 IF WRONG>=SUMOFWRONG THEN 520

490 GOSUB 580: TAB 6: PRINT "WRONG!
     TRY AGAIN, PLEASE"
500 GOTO 430
520 GOSUB 580: GOSUB 580: TAB 5
    : PRINT "SORRY! THE ANSWER IS "
    ;A+B
522 TAB 10: PRINT "LET'S TRY ANOTHER
     "
524 FOR KK=1 TO 3500: NEXT KK: REM
       DELAY LOOP
530 GOTO 190
550 TAB 16: PRINT "CORRECT!!": REM
     3 CTRL-G'S BETWEEN QUOTES
555 GOSUB 650: REM  DRAW A 'CHECK'
560 FOR KK=1 TO 1000: NEXT KK
570 GOTO 190
580 FOR J=1 TO 7: REM  THIS ROUTINE
    PRODUCES A BUZZ FOR WRONG ANSWER

590 Z= PEEK (-16336)+ PEEK (-16336
    )- PEEK (-16336)- PEEK (-16336
    )
600 Z= PEEK (-16336)+ PEEK (-16336
    )- PEEK (-16336)- PEEK (-16336
    )
610 Z= PEEK (-16336)+ PEEK (-16336
    )- PEEK (-16336)- PEEK (-16336
    )
620 NEXT J: RETURN
650 COLOR=0: PLOT 28,7: PLOT 29
    ,8: PLOT 30,9: PLOT 31,8: PLOT
    32,7: PLOT 33,6: PLOT 34,5:
     PLOT 35,4: PLOT 36,3: PLOT
    37,2: PLOT 38,1: RETURN
651 REM  ABOVE PLOTS GIVE A 'CHECK'
    FOR CORRECT
660 COLOR=0: PLOT 33,30: PLOT 33
    ,35: PLOT 34,31: PLOT 34,34
    : PLOT 35,32: PLOT 35,33: PLOT
    36,33: PLOT 36,32: PLOT 37,
    34: PLOT 37,31: PLOT 38,35:
     PLOT 38,30: RETURN
661 REM  ABOVE PLOTS GIVE A 'X' FOR
    INCORRECT
700 TEXT : CALL -936: PRINT "GOOD-BY
    E!"
999 END
```

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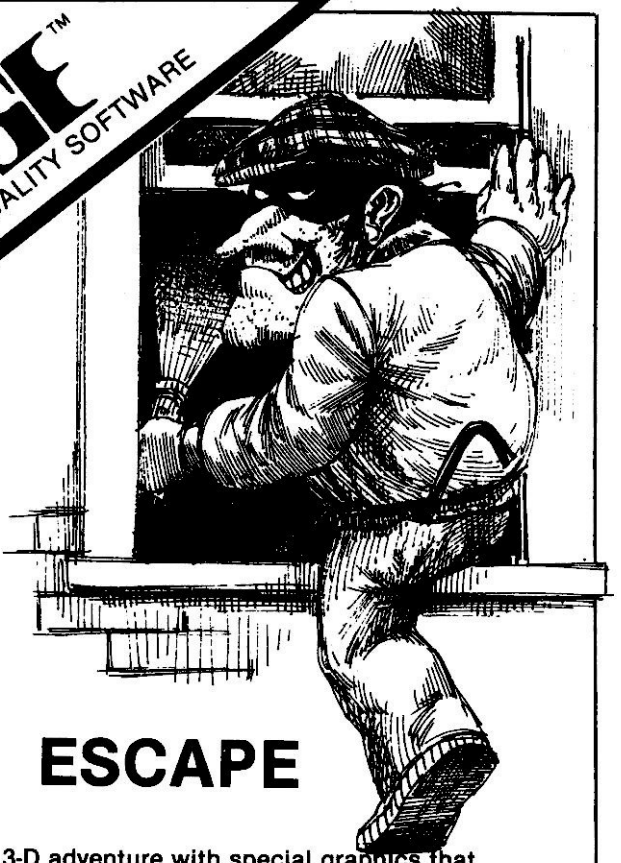

ESCAPE

Exciting 3-D adventure with special graphics that place you inside a maze of hallways. Find your way out by following the clues of people you meet inside. But be careful . . . the liars will not hesitate to give you false maps and compasses. It's hard to quit this game! Rated as the number 1 Apple* program by the Marin Computer Center.

Cassette, 16K, $12.95

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CASSETTES

TANK WAR is a state-of-the-art shootout for two players with dramatic sound and graphics. Players choose the style and size of their tank. Steer your tank with the game paddles to pursue and outmaneuver your opponent. Fire two types of missiles to disable and destroy the enemy. Damage speed and chosen tank size all interact for maximum interest. (16K) $12.95

MAZE GAME, the original and still the best maze game for APPLE II* users. Set the size and difficulty level of your maze and watch as it is randomly generated. Every maze is different. Special graphics place you inside a colorful 3-D maze. Player options include getting a maze map, having a compass available, and leaving retraceable footprints on the maze floor. Our most popular game and a challenge for the solitary player of all ages. (16K) $12.95

SIDE SHOWS is a collection of six exciting games selected for their originality, ease of operation and imaginative use of the Apple.* Includes the Apple Tree, Safecracker, Pip Shoot, Minelayer, Blockade and Quadripong. In the Apple Tree two players use the paddles to catch randomly falling apples. In Blockade and Minelayer, try to surround your opponent with a moving wall or mine field. Pip Shoot can be played by two or more and the object is to shoot down as many "pips" as possible. Quadripong is four wall pong with varying ball speed and sound. Use the paddle carefully to be first to open the safe in Safecracker. (8K) $12.95

UNCLE SAM'S JIGSAW is an educational geography game featuring a detailed drawing of the United States. Each of the 48 continental United States must be recognized by its shape and location in a high resolution map of the U.S. The student gets two points for each state he names from shape alone, one point when recognition requires shape and location. Education in its most enjoyable form. Requires APPLESOFT* board and 32K ($12.95)

ELECTRIC CRAYON utilizes the 15 brilliant colors of low resolution graphics to turn your Apple* into a radiant color display, resembling a moving neon sign. Easily draw and animate color figures directly from the keyboard. Your drawings can be saved on tape and recalled later. Includes documentation. (8K) $17.95

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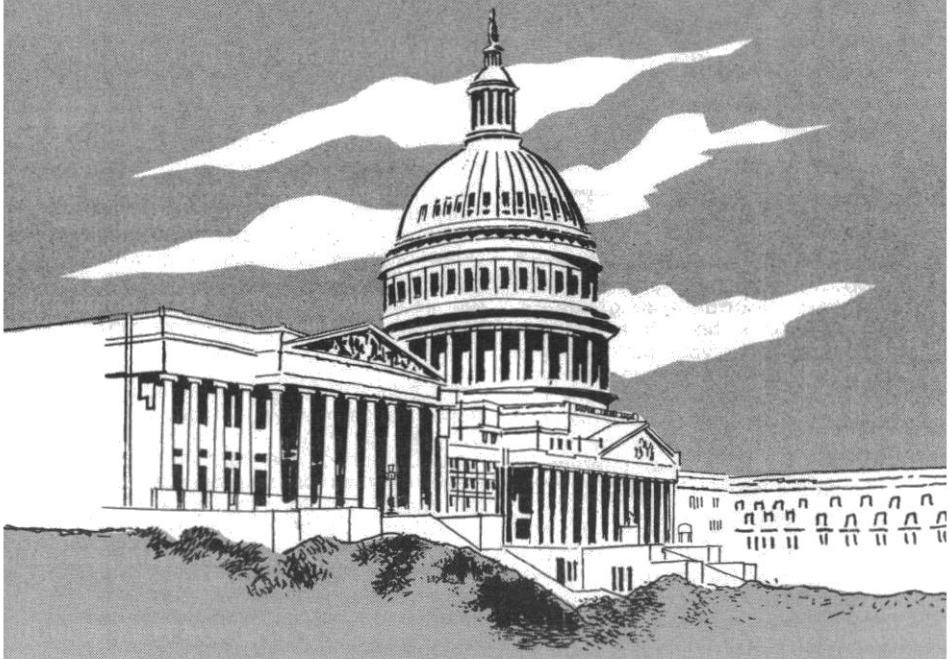
STATE CAPITOLS



by Jack Brandon

State Capitols, by Jack Brandon, is an educational game to assist you in learning the state capitols and their proper spelling. It is for both adults and youngsters. My wife enjoys running this program because she likes to show me how much she remembers from school - and how much I forgot!

```
100 REM    'STATE CAPITALS'
110 REM  WRITTEN BY JACK BRANDON - H
    AVRE, MONTANA - APRIL 5, 1978
120 CALL -936
130 VTAB 8: TAB 19: PRINT "****"
    : VTAB 10: TAB 17: PRINT "CAPITA
    LS"
140 VTAB 12: TAB 18: PRINT "OF THE"
    : VTAB 14: TAB 15: PRINT "UNITED
     STATES": VTAB 16: TAB 19: PRINT
    "****"
150 FOR I=1 TO 1000: NEXT I: CALL
    -936
160 PRINT "THIS PROGRAM WILL HELP YO
    U LEARN THE    NAMES AND THE COR
    RECT SPELLING OF THE   FIFTY CAP
    ITALS."
170 PRINT : PRINT "AFTER EACH STATE
    IS GIVEN TYPE IN THE   NAME OF T
    HE CAPITAL THEN PRESS 'RETURN'."

180 PRINT "IF YOU MISS THE CAPITAL,
    THE CORRECT"
190 PRINT "NAME WILL BE GIVEN AND TH
    E QUESTION "
200 PRINT "REPEATED UNTIL YOU GET IT
     CORRECT."
210 PRINT : PRINT "IF YOU CANNOT GUE
    SS THE CORRECT ANSWER,"
220 PRINT "ENTER 'NEW' AND ANOTHER S
    TATE WILL BE"
230 PRINT "SELECTED."
240 PRINT : PRINT "WHEN YOU WISH TO
    QUIT TYPE 'BYE' AND"
250 PRINT "YOU WILL GET YOUR SCORE."

260 CALL -384
270 VTAB 23: PRINT " PRESS ANY KEY T
    O BEGIN.": CALL -380: GOSUB
    990
280 DIM S$(20): DIM C$(20): DIM
    A$(20): DIM G$(10):C=0:W=0:
     CALL -936
290 CALL -936:R=( RND (50))*10:
     GOTO 490+R
300 VTAB 5: CALL -384: PRINT "STATE:
    ";: CALL -380: PRINT " ";S$

310 VTAB 8: CALL -384: PRINT "CAPITA
    L:";: CALL -380: INPUT " ",
    A$
320 IF A$="NEW" THEN 290: IF A$
    ="BYE" THEN 390:C=C+1
330 IF A$=C$ THEN 370: PRINT : PRINT
    : PRINT "     THE CAPITAL IS..."
    ;: GOSUB 470
340 PRINT C$: FOR I=1 TO 100: NEXT
    I: GOSUB 400
350 PRINT : PRINT " PRESS ANY KEY TO
     CONTINUE.": GOSUB 990
360 CALL -936: GOTO 300
370 S=( RND (5)+1)*10: PRINT : PRINT
    :W=W+1: GOTO 990+S
380 FOR I=1 TO 3000: NEXT I: CALL
    -936: GOTO 290
390 CALL -936: VTAB 10: PRINT "YOU H
    AD ";W;" OUT OF ";C;" CAPITALS C
    ORRECT."
400 PRINT : PRINT "DO YOU WISH TO CO
    NTINUE (YES OR NO) ";: INPUT
    G$
410 IF LEN(G$)=0 THEN 290
420 IF G$(1,1)="Y" THEN 290
430 CALL -936: VTAB 10: TAB 13:
     PRINT "**************": PRINT
    "
440 VTAB 11: TAB 13: PRINT "*
         *": TAB 12: PRINT "**   TH
    E END   **": TAB 13: PRINT
    "*            *"
```

```
450 TAB 13: PRINT "***************"

460 FOR I=1 TO 2000: NEXT I: CALL
    -936: END
470 POKE 50,127: RETURN
480 POKE 50,255: RETURN
490 S$="ALABAMA":C$="MONTGOMERY"
    : GOTO 300
500 S$="ALASKA":C$="JUNEAU": GOTO
    300
510 S$="ARIZONA":C$="PHOENIX": GOTO
    300
520 S$="ARKANSAS":C$="LITTLE ROCK"
    : GOTO 300
530 S$="CALIFORNIA":C$="SACRAMENTO"
    : GOTO 300
540 S$="COLORADO":C$="DENVER": GOTO
    300
550 S$="CONNECTICUT":C$="HARTFORD"
    : GOTO 300
560 S$="DELAWARE":C$="DOVER": GOTO
    300
570 S$="FLORIDA":C$="TALLAHASSEE"
    : GOTO 300
580 S$="GEORGIA":C$="ATLANTA": GOTO
    300
590 S$="HAWAII":C$="HONOLULU": GOTO
    300
600 S$="IDAHO":C$="BOISE": GOTO
    300
610 S$="ILLINOIS":C$="SPRINGFIELD"
    : GOTO 300
620 S$="INDIANA":C$="INDIANAPOLIS"
    : GOTO 300
630 S$="IOWA":C$="DES MOINES": GOTO
    300
640 S$="KANSAS":C$="TOPEKA": GOTO
    300
650 S$="KENTUCKY":C$="FRANKFORT"
    : GOTO 300
660 S$="LOUISIANA":C$="BATON ROUGE"
    : GOTO 300
670 S$="MAINE":C$="AUGUSTA": GOTO
    300
680 S$="MARYLAND":C$="ANNAPOLIS"
    : GOTO 300
690 S$="MASSACHUSETTS":C$="BOSTON"
    : GOTO 300
700 S$="MICHIGAN":C$="LANSING":
    GOTO 300
710 S$="MINNESOTA":C$="ST. PAUL"
    : GOTO 300
720 S$="MISSISSIPPI":C$="JACKSON"
    : GOTO 300
730 S$="MISSOURI":C$="JEFFERSON CITY
    ": GOTO 300
740 S$="MONTANA":C$="HELENA": GOTO
    300
750 S$="NEBRASKA":C$="LINCOLN":
    GOTO 300
760 S$="NEVADA":C$="CARSON CITY"
    : GOTO 300
770 S$="NEW HAMPSHIRE":C$="CONCORD"
    : GOTO 300
780 S$="NEW JERSEY":C$="TRENTON"
    : GOTO 300
790 S$="NEW MEXICO":C$="SANTA FE"
    : GOTO 300
800 S$="NEW YORK":C$="ALBANY": GOTO
    300
810 S$="NORTH CAROLINA":C$="RALEIGH"
    : GOTO 300
820 S$="NORTH DAKOTA":C$="BISMARCK"
    : GOTO 300
830 S$="OHIO":C$="COLUMBUS": GOTO
    300
840 S$="OKLAHOMA":C$="OKLAHOMA CITY"
    : GOTO 300
850 S$="OREGON":C$="SALEM": GOTO
    300
```

```
860 S$="PENNSYLVANIA":C$="HARRISBURG
    ": GOTO 300
870 S$="RHODE ISLAND":C$="PROVIDENCE
    ": GOTO 300
880 S$="SOUTH CAROLINA":C$="COLUMBIA
    ": GOTO 300
890 S$="SOUTH DAKOTA":C$="PIERRE"
    : GOTO 300
900 S$="TENNESSEE":C$="NASHVILLE"
    : GOTO 300
910 S$="TEXAS":C$="AUSTIN": GOTO
    300
920 S$="UTAH":C$="SALT LAKE CITY"
    : GOTO 300
930 S$="VERMONT":C$="MONTPELIER"
    : GOTO 300
940 S$="VIRGINIA":C$="RICHMOND"
    : GOTO 300
950 S$="WASHINGTON":C$="OLYMPIA"
    : GOTO 300
960 S$="WEST VIRGINIA":C$="CHARLESTO
    N": GOTO 300
970 S$="WISCONSON":C$="MADISON"
    : GOTO 300
980 S$="WYOMING":C$="CHEYENNE":
    GOTO 300
990 IF PEEK (-16304)<127 THEN GOTO
    990: POKE -16368,0: RETURN
1000 TAB 5: PRINT "CORRECT...YOU'RE D
    OING GREAT!!": GOTO 300
1010 TAB 6: PRINT "CORRECT...YOU'RE B
    RILLIANT!!": GOTO 300
1020 TAB 7: PRINT "CORRECT...YOU'RE R
    IGHT ON!!": GOTO 300
1030 TAB 4: PRINT "CORRECT...EXCEPTIO
    NAL ABILITY!!": GOTO 300
1040 TAB 4: PRINT "CORRECT...YOU'RE T
    HE GREATEST!!": GOTO 300
1050 REM
1060 REM
```


16K MEMORY KITS

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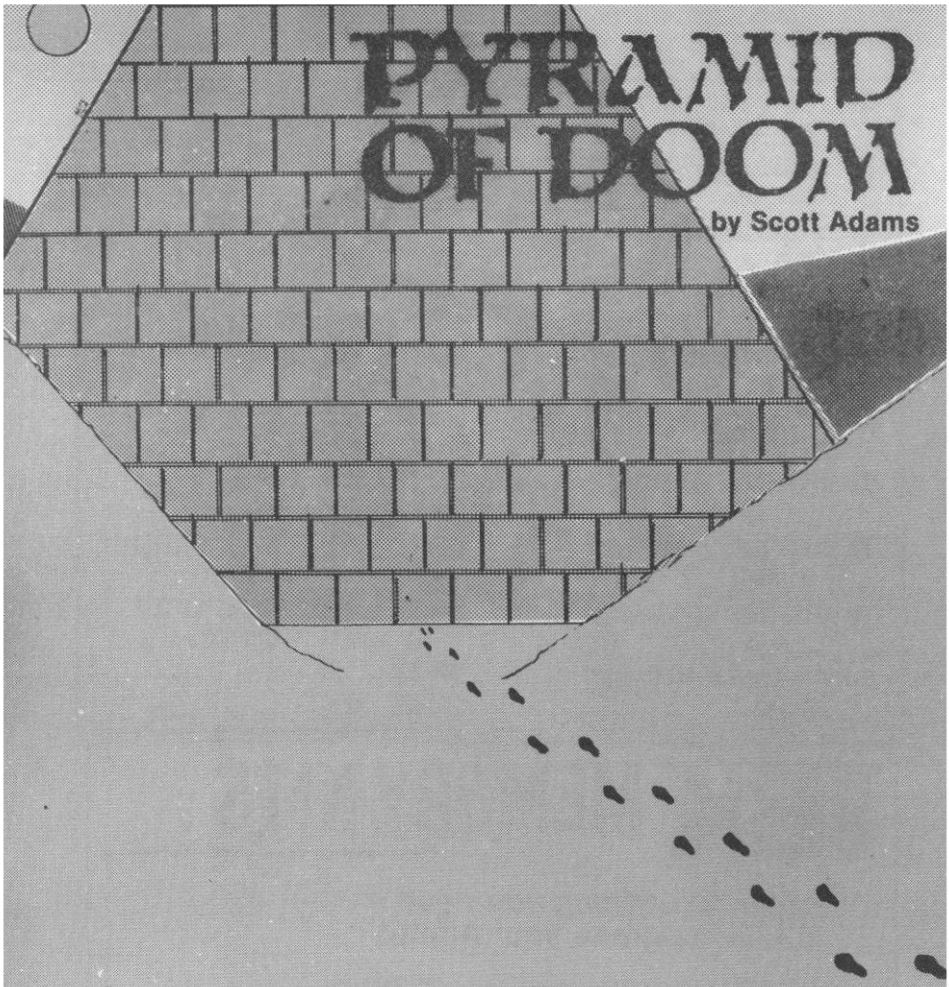

On a trek through the vast uncharted center of the Sahara Desert in search of a missing explorer, you come upon a pyramid recently exposed by the shifting sands. Will you be able to collect its treasures and escape? Or will you join its denizens for that long eternal sleep?

24 K Machine Language Cassette $14.95

Want to know what adventure is before you part with that much money? Try the Adventure Sampler! Adventure 0 is a mini version of Adventure 1, offering hours (instead of weeks) of challenge for only $5.95.

Warning: This program may be addictive, leading to prolonged and habitual adventuring.

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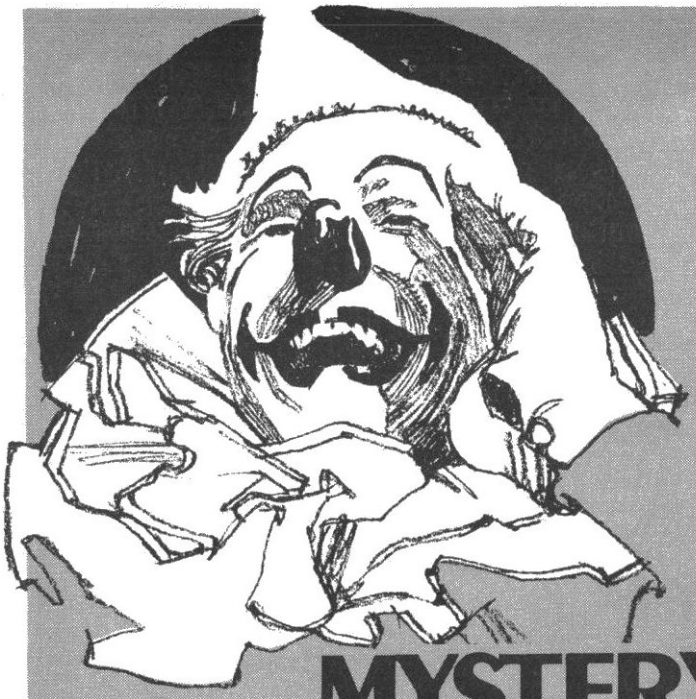

MYSTERY FUN HOUSE

A SCOTT ADAMS ADVENTURE

The lure of a Fun House is the unexpected when you least expect it, and this adventure is true to tradition. It takes all your ingenuity just to get past the ticket counter, so prepare yourself for many thrilling and challenging hours in Scott Adam's Fun House!

24 K Machine Language
Cassette $14.95

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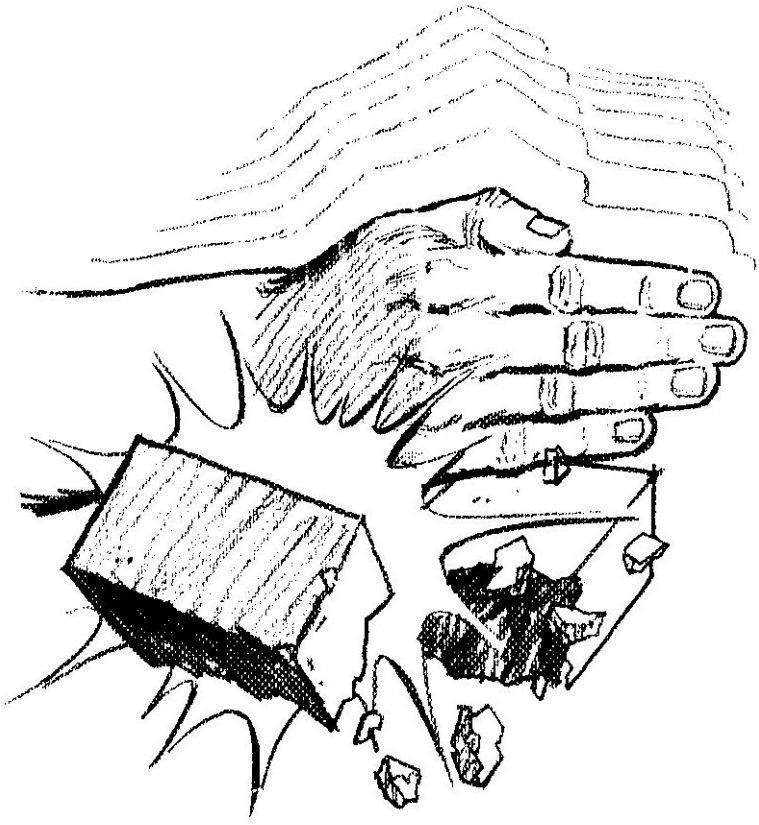
CONNECTION



Chip Anderson, the author of Connection, is a youngster from Raleigh, North Carolina. Connection is well written with Lo-res Graphics. We can predict good things for Chip in the future!

```
  1 REM **********************
  2 REM *                    *
  3 REM *     CONNECTION     *
  4 REM *                    *
  5 REM *  BY:CHIP ANDERSON  *
  6 REM *       9/12/79      *
  7 REM *                    *
  8 REM *  404 VERNON TERR.  *
  9 REM *  RALEIGH N.C. 27609 *
 10 REM *   (919)-781-4229   *
 11 REM *                    *
 12 REM **********************
100 REM
110 REM  *** INITIALIZE ***
120 REM
130 DIM B(56),CL(2)
140 DIM Q$(10),A$(150),B$(10)
150 G$="": REM  CTRL-G
160 GOSUB 2000: REM INSTRUCTIONS
170 REM SET UP GRID & MATRIX
180 GR : CALL -936
190 COLOR=15
200 FOR I=2 TO 37 STEP 5
210 HLIN 2,37 AT I: VLIN 2,37 AT
    I
220 NEXT I
230 PRINT "   1    2    3    4    5
       6    7": POKE 34,21
240 FOR I=0 TO 56:B(I)=0: NEXT
    I
250 CL(1)=7:CL(2)=13
260 T=0: REM TURN COUNTER
270 IF RND (2)=1 THEN TF=1
280 IF TF=1 THEN 500
400 REM
410 REM *** PLAYER ONE'S MOVE ***
420 REM
430 P=1
440 IF TF=0 THEN T=T+1
450 IF T=25 AND TF=1 THEN 920: REM
    CHECK FOR FULL GRID
460 PRINT "WHICH COLUMN ";A$;:
    INPUT C: IF C<1 OR C>7 THEN
    460
470 CALL -936
480 GOSUB 700: REM DROP CHECKER
490 GOSUB 1000: REM TEST FOR WIN
500 REM
510 REM *** PLAYER TWO'S MOVE ***
520 REM
530 P=2
540 IF TF=1 THEN T=T+1
550 IF T=25 AND TF=0 THEN 920: REM
    CHECK FOR FULL GRID
560 PRINT "WHICH COLUMN ";B$;:
    INPUT C: IF C<1 OR C>7 THEN
    560
570 CALL -936
580 GOSUB 700: REM DROP CHECKER
590 GOSUB 1000: REM TEST FOR WIN
600 GOTO 400: REM DO IT AGAIN
700 REM
710 REM  *** DROP CHECKER ***
720 REM
730 Y=1
740 IF B(C*7+Y)<>0 THEN 760
750 Y=Y+1: IF Y=8 THEN 760: GOTO
    740
760 Y=Y-1:YS=Y
770 IF Y=0 THEN 900
780 FOR Y=3 TO YS*5 STEP 5
790 COLOR=CL(P)
800 GOSUB 860
810 IF Y=(YS-1)*5+3 THEN 830
820 COLOR=0: GOSUB 860
830 NEXT Y
840 B(C*7+YS)=P
850 RETURN
860 FOR A=Y TO Y+3
870 HLIN ((C-1)*5)+3,((C-1)*5)+
```

```
   6 A1 A
 880 NEXT A
 890 RETURN
 900 PRINT G$;"COLUMN FULL.."
 910 POP : IF P=1 THEN 400: GOTO
     500
 920 PRINT G$;G$;G$;"TIE GAME..."
     : GOTO 1400
1000 REM
1010 REM *** TEST FOR WIN ***
1020 REM
1030 IF T<4 THEN RETURN : REM NO ONE
     CAN WIN BEFORE FOURTH TURN
1040 FOR M=1 TO 7: FOR N=1 TO 7
1050 IF B(M*7+N)<>P THEN 1360
1060 IF MD4 THEN 1110
1070 FOR TS=1 TO 3
1080 IF B((M+TS)*7+N)<>P THEN 1110

1090 NEXT TS
1100 GOTO 1300
1110 IF ND4 THEN 1160
1120 FOR TS=1 TO 3
1130 IF B(M*7+(N+TS))<>P THEN 1160

1140 NEXT TS
1150 GOTO 1300
1160 IF MK4 OR NK4 THEN 1210
1170 FOR TS=1 TO 3
1180 IF B((M-TS)*7+(N-TS))<>P THEN
     1210
1190 NEXT TS
1200 GOTO 1300
1210 IF MK4 OR ND4 THEN 1260
1220 FOR TS=1 TO 3
1230 IF B((M-TS)*7+(N+TS))<>P THEN
     1260
1240 NEXT TS
1250 GOTO 1300
1260 IF MD4 OR ND4 THEN 1310
1270 FOR TS=1 TO 3
1280 IF B((M+TS)*7+(N+TS))<>P THEN
     1310
1290 NEXT TS
1300 GOTO 1300
1310 IF MD4 OR NK4 THEN 1360
1320 FOR TS=1 TO 3
1330 IF B((M+TS)*7+(N-TS))<>P THEN
     1360
1340 NEXT TS
1350 GOTO 1300
1360 NEXT N,M
1370 RETURN
1380 POP : PRINT G$;G$;G$;"YOU WIN, "
     ;
1390 IF P=1 THEN PRINT A$: IF P=
     2 THEN PRINT B$
1400 INPUT "PLAY AGAIN?",Q$: IF
     Q$<>"N" AND Q$<>"NO" THEN 170

1410 TEXT : CALL -932: PRINT "THANK Y
     OU FOR PLAYING";: POKE 50,63
     : PRINT "##CONNECTION": POKE
     50,255: END
2000 REM
2010 REM *** INSTRUCTIONS ***
2020 REM
2030 TEXT : CALL -936
2040 VTAB 2: TAB 12: POKE 50,63:
      PRINT "*** CONNECT 4 ***":
      POKE 50,255: POKE 34,3
2050 CALL -936: INPUT "DO YOU NEED IN
     STRUCTIONS (Y/N)?",Q$
2060 IF Q$<>"Y" AND Q$<>"YES" THEN
     2140
2070 CALL -936:A$="THE OBJECT OF THIS
      GAME IS TO CONNECT  FOUR OF YO
     UR CHECKERS IN A ROW EITHER"
     : GOSUB 3000
2080 A$="ACROSS, UP & DOWN, OR DIAGON
```

```
    ALLY WHILE  PREVENTING YOUR OPPO
    NENT FROM DOING THE SAME ":
     GOSUB 3000
2090 FOR I=0 TO 2000: NEXT I
2091 PRINT
2100 A$="YOU CAN DROP YOUR CHECKERS I
    NTO ANY ONE OF THE SEVEN VERTICA
    L COLUMNS IN THE    GRID.":
     GOSUB 3000
2101 PRINT
2110 A$="WHEN A CHECKER IS DROPPED, I
    T WILL SLIDETO THE BOTTOM MOST U
    NOCCUPIED SQUARE IN THAT COLUMN
    ": GOSUB 3000
2120 FOR I=0 TO 2000: NEXT I
2130 PRINT : PRINT
2140 INPUT "PLAYER ONE'S NAME?",
    A$
2150 PRINT A$;"'S OPPONENT'S NAME?"
    ;
2160 INPUT B$
2170 RETURN
3000 REM
3010 REM *** PRINT A$ WITH SOUND ***
3020 REM
3030 FOR I=1 TO LEN(A$)
3040 PRINT A$(I,I);
3050 IF A$(I,I)=" " THEN 3070
3060 FOR J=0 TO 10+ RND (20):Z= PEEK
    (-16336)+ PEEK (-16336): NEXT
    J
3070 NEXT I
3080 PRINT
3090 RETURN
```

Eliminating Bad Seeds

There is a fundamental law of science that has spilled over into the publishing field: If anything can go wrong, it will!

In the first issue of APPLESEED we printed a program titled 'Digital Clock' and attributed it to the editor. Well, the editor DID NOT write this program. My name was added, and the program published by mistake and I can only apologize to the author — whomever he/she may be.

Again, my sincere apology to the author of this program.

THE EDITOR

WORMS?

After this issue was ready to go to press, we were informed of errors in the Dog Star Adventure listing in issue one. Corrections will appear in issue three.

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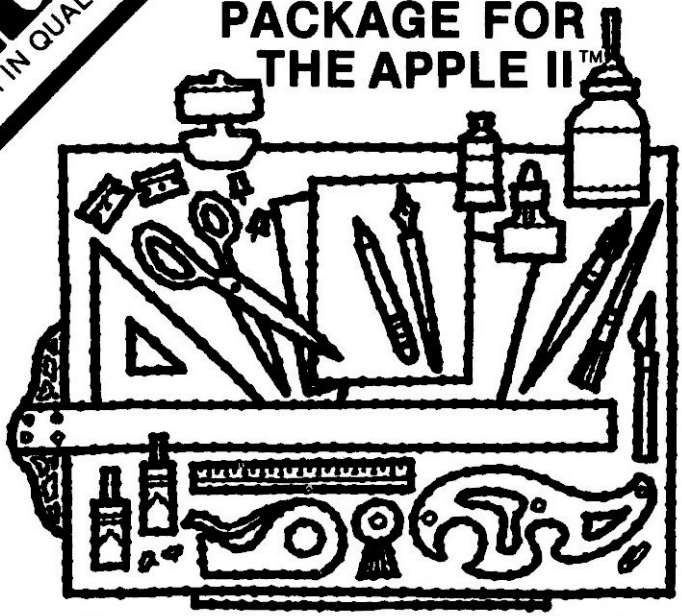

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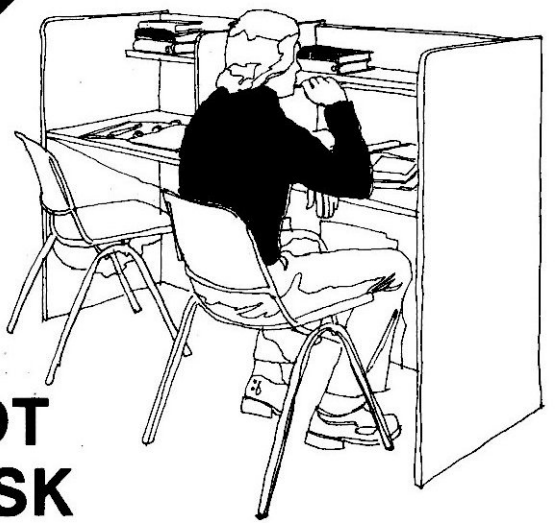

APPILOT EDU-DISK

APPILOT is an Apple II* version of the standard C.A.I. language PILOT. APPILOT is a dialogue-oriented language and includes color graphic commands, a musical mini language and disk commands for lesson segmentation. Designed for "Turnkey" operation, APPILOT includes a program editor, program interpretor and extensive on-line HELP lessons to instruct the user on all aspects of program development. Manual included.

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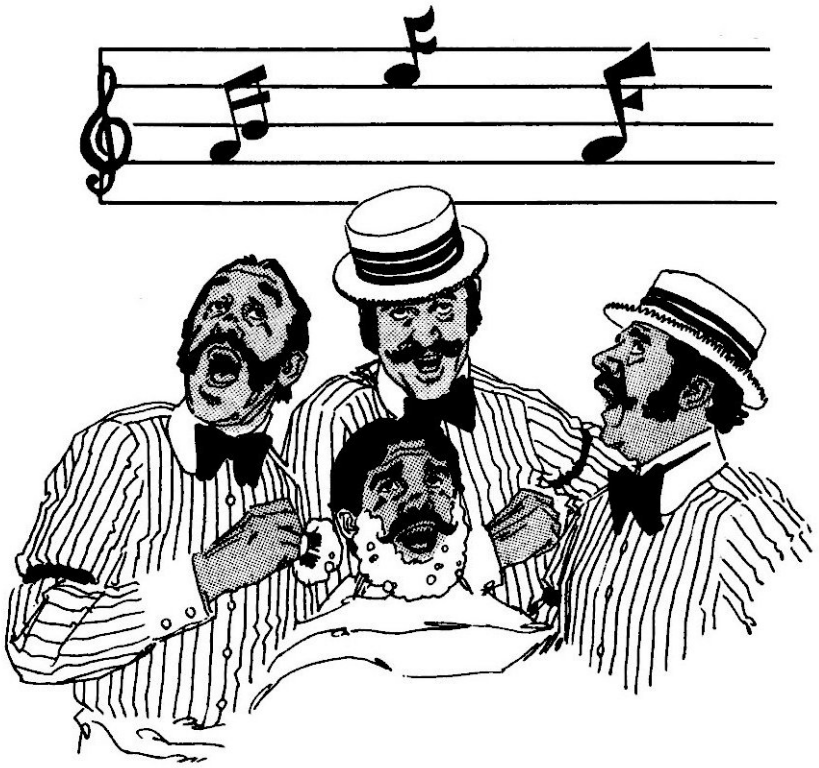

MUSICAL SCALES

by Roger Wagner

Roger Wagner's program, Musical Scales, was one of his first programs. Since that time, Roger has formed his own software company: Southwestern Data Systems. SDS produces some excellent utility and graphics programs (see the ads in this issue of SoftSide: Apple Version.)

This program will teach you the musical scales in an interesting and enjoyable manner. It uses lo-res graphics and sound to produce the musical notes.

This is an excellent program for the children to use. It will teach them the scales plus get them interested in programming.

```
100 DIM X(18): DIM Y(18): DIM NX(
    15): DIM NY(15)
110 DIM N$(8)
120 DIM P(15)
130 GOSUB 1160
140 DIM G$(4)
150 N$="CBAGFED"
160 DIM NAME$(25)
170 X(1)=11:X(2)=12:X(3)=11:X(4
    )=9:X(5)=8:X(6)=8:X(7)=8:X(
    8)=7:X(9)=7:X(10)=8
180 X(11)=9:X(12)=9:X(13)=11:X(
    14)=12:X(15)=13:X(16)=13:X(
    17)=12:X(18)=11
190 Y(1)=12:Y(2)=13:Y(3)=14:Y(4
    )=17:Y(5)=18:Y(6)=19:Y(7)=20
    :Y(8)=21:Y(9)=22:Y(10)=23
200 Y(11)=24:Y(12)=25:Y(13)=25:
    Y(14)=24:Y(15)=23:Y(16)=22:
    Y(17)=21:Y(18)=20
210 NX(1)=-1:NX(2)=0:NX(3)=1:NX(
    4)=-1:NX(5)=1:NX(6)=-1:NX(7
    )=0:NX(8)=1
220 NY(1)=-1:NY(2)=-1:NY(3)=-1:
    NY(4)=0:NY(5)=0:NY(6)=1:NY(
    7)=1:NY(8)=1
230 P(1)=49:P(2)=52:P(3)=59:P(4
    )=65:P(5)=73:P(6)=78:P(7)=87

240 P(8)=100:P(9)=104:P(10)=117
    :P(11)=130:P(12)=146:P(13)=
    156:P(14)=174:P(15)=195
250 GOTO 680
260 IF S<8 THEN HLIN 23,29 AT 7

270 IF S<4 THEN HLIN 23,29 AT 3

280 IF S=31 THEN HLIN 23,29 AT
    31
290 FOR I=1 TO 8
300 PLOT 26+NX(I),5+NY(I)
310 NEXT I
320 RETURN
330 COLOR=6
340 FOR I=1 TO 8
350 PLOT 26+NX(I),5+NY(I)
360 NEXT I
370 IF S=11 THEN 460
380 IF S=15 THEN 460
390 IF S=19 THEN 460
400 IF S=23 THEN 460
410 IF S=27 THEN 460
420 IF S=3 THEN 490
430 IF S=7 THEN 490
440 IF S=31 THEN 490
450 RETURN
460 COLOR=0
470 HLIN 25,27 AT S
480 RETURN
490 COLOR=6
500 HLIN 23,29 AT 3: HLIN 23,29
    AT 7
510 RETURN
520 COLOR=8
530 VLIN 12,26 AT 10
540 FOR I=1 TO 18
550 PLOT X(I),Y(I)
560 NEXT I
570 RETURN
580 GR
590 COLOR=6
600 FOR I=0 TO 39
610 HLIN 0,39 AT I
620 NEXT I
630 COLOR=0
640 FOR I=1 TO 5
650 HLIN 5,35 AT (4*I+7)
660 NEXT I
670 RETURN
680 CALL -936
```

```
690 PRINT "THIS PROGRAM WILL HELP YO
    U LEARN THE": PRINT "THE NOTES O
    F THE MUSICAL SCALE."
700 PRINT "I WILL SHOW YOU A NOTE OF
     THE SCALE": PRINT "AND YOU WIL
    L TELL ME ITS NAME.": PRINT
    "THERE ARE NO SHARPS OR FLATS."

710 PRINT : PRINT "WHAT IS YOUR NAME
    ?"
720 INPUT NAME$
730 PRINT : PRINT "ENTER THE NUMBER
    OF QUESTIONS YOU": PRINT "WOULD
     LIKE TO BE ASKED ";NAME$;":"

740 PRINT : INPUT N
750 GOSUB 580
760 GOSUB 520
770 FOR J=1 TO N
780 S=32-(2* RND (15)+1)
790 IF S=LS THEN 780
800 LS=S
810 NO=((S-1)/2) MOD 7
820 IF NO=0 THEN NO=7
830 T=(S-1)/2
840 COLOR=0: GOSUB 260
850 GOSUB 1150
860 PRINT : PRINT : PRINT : PRINT
    "WHAT IS THIS NOTE ";NAME$;
    "?"
870 AN=AN+1
880 INPUT G$
890 IF G$=N$(NO,NO) THEN 970
900 FOR KN=1 TO 3
910 POKE 0,75: POKE 1,40: CALL
    2
920 NEXT KN
930 PRINT "SORRY-TRY AGAIN":WR=
    WR+1
940 FOR KN=1 TO 250: NEXT KN
950 GOSUB 1150
960 GOTO 860
970 PRINT "RIGHT!": GOSUB 1150
980 FOR I=1 TO 25: NEXT I
990 COLOR=6: GOSUB 260
1000 COLOR=6: GOSUB 330
1010 COLOR=0: GOSUB 370
1020 NEXT J
1030 PRINT "YOU GOT ";(AN-WR);" OF "
     ;AN;" RIGHT, ";NAME$;"."
1040 PRINT "WANT TO TRY AGAIN? (Y/N)"
1050 INPUT Q$: IF Q$="Y" THEN 1080
1060 IF Q$="N" THEN 1120
1070 GOTO 1040
1080 PRINT "ENTER THE NUMBER OF QUEST
     IONS YOU": PRINT "WOULD LIKE:"

1090 AN=0
1100 INPUT N
1110 GOTO 770
1120 TEXT
1130 CALL -936
1140 END
1150 POKE 0,P(T): POKE 1,255: CALL
     2: RETURN
1160 REM :THE LINES BELOW PUT A SHORT
      MACHINE LANGUAGE TONE GENERATOR
      INTO MEMORY
1170 POKE 2,173: POKE 3,48: POKE
     4,192: POKE 5,136: POKE 6,208
     : POKE 7,4: POKE 8,198: POKE
     9,1: POKE 10,240
1180 POKE 11,8: POKE 12,202: POKE
     13,208: POKE 14,246: POKE 15
     ,166: POKE 16,0: POKE 17,76
     : POKE 18,2: POKE 19,0: POKE
     20,96: RETURN
2000 REM    COPYRIGHT 1979
2010 REM    ROGER WAGNER
2020 REM    SOUTHWESTERN DATA SYSTEMS
```

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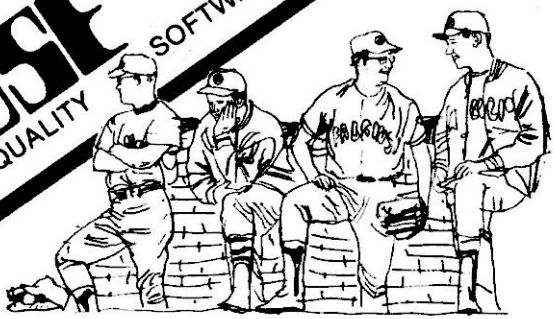

Bring the excitement of Major League baseball to your APPLE II.* BASEBALL is a high resolution action game with outstanding player control. Strikes and outs are tallied and a scoreboard is displayed after every batter. So get up to bat, watch out for those slow pitches, hit the ball and hope that the opposing team doesn't catch it. A challenging game and a must for sports fans.

Cassette, 16K, Applesoft,* $14.95

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A real text editor for cassette based APPLE-II* computers. Insert, delete or change lines of text in the computer's memory. A 'FIND' command will locate all occurrences of a specified text string. Save your text on tape and recall it later or merge it with another file. 1001 uses in the home - menus, birthdates, addresses and phone numbers, appointments, etc. Easily links to your printer. Complete with easy-to-understand user's guide.

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Sargon II is the program that took on the maxi-computers in the West Coast tournament, and finished in the money! More thinking power than you ever expected.

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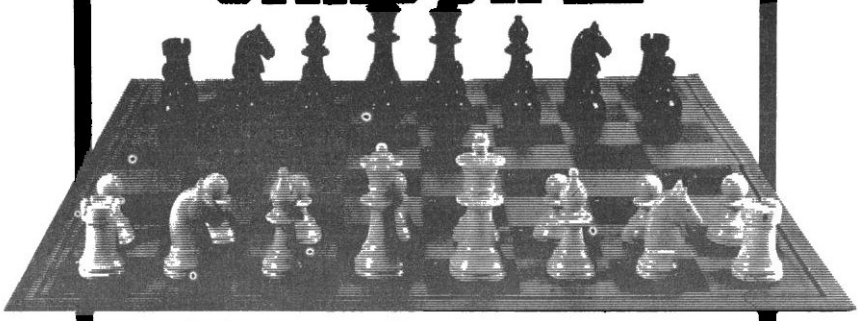

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FOR THE APPLE II

Hayden Book Company, Inc.

Game Playing with BASIC, Tape 1 -- features 10 recreational and educational programs: Coin Toss, Coin by Coin; Coin Toss with Summary; Rolling One Die; Rolling Two Dice; Seven/Eleven; Mouse in a Maze; A Random Walk; Battle of the Numbers; Dealing a Poker Hand; and Tic-Tac-Toe. $9.95

Game Playing with BASIC, Tape 2 -- features 9 programs: Knight's Tour; Guess the Number; Prime Numbers 1; Prime Numbers 2: Chinese Remainder Theorem; Perfect Numbers; Fibonacci Numbers; Square Numbers; and Armstrong Numbers. $9.95

Game Playing with BASIC, Tape 3 -- features these 8 programs: Slot Machines; Blackjack; Roll the Dice; Towers of Hanoi; 15 Puzzle; Buried Treasure; Odd Cell Magic Square; and 4 x 4 Magic Square. $9.95

General Mathematics-1 -- features these 13 programs: Log to Any Base; New Coordinates; Rectangular Polar Coordinates; Permutations; Vector Cross-Products; Max/Min Locator; Number Rounder; Dimension Scaler; Histogram; Circle Finder; Nth Root of a Number; Normally Distributed Random Numbers; and Rational Fractions. $14.95

Engineering Mathematics-1 -- features these 8 programs: Solving Simultaneous Equations; Evaluation of a Polynomial; Quadratic Equations; Integration by Simpson's Rule; Newton-Raphson Roots; Derivative of a Function; Factorial of a Given Number; and Extended Factorial Calculation. $14.95

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SORT

Sort is a utility program to assist you in reorganizing words or strings. You enter your strings one by one and this program will sort them in ascending order. You determine at what position in each string to sort on. For example, you can sort on the second through the fifth position in each string if you desire.

The sort routine is written as a subroutine to permit you to utilize it in one of your own programs that may need a sort function.

A SoftSide: Apple Version Exclusive!

```
100  TEXT : CALL  - 936
110  HTAB 12. PRINT "WORD SORT RO
     UTINE"
120  VTAB 5: PRINT "ENTER MAXIMUM
      NUMBER OF WORDS IN YOUR": PRINT
     "LIST TO BE SORTED ";: INPUT MAX
130  DIM ENTRY$(MAX),TEMP$(MAX),T
     EMP(MAX)
140  HOME
60000  VTAB 5: PRINT "PLEASE ENTE
     R THE WORDS YOU WISH SORTED.
     ": PRINT : PRINT "WHEN DONE
     ENTER THE WORD 'DONE'."
60010  PRINT : PRINT
60020  FOR I = 1 TO MAX: PRINT I;
     : INPUT ". - ";ENTRY$(I)
60030  IF ENTRY$(I) = "DONE" THEN
     60050
60040  NEXT
60050 ENTRYNO = I - 1
60060  PRINT
60070  PRINT "ENTER THE POSITION
     OF THE FIRST LETTER": PRINT
     "YOU WISH TO SORT ON (USUALL
     Y 1): ";: INPUT START: PRINT
60080  PRINT "ENTER THE NUMBER OF
      CHARACTERS YOU": PRINT "WIS
     H TO SORT ON: ";: INPUT LNGT
     H
60090  PRINT : PRINT "I WILL SORT
    THE GIVEN LIST OF WORDS": PRINT
   "BY LOOKING AT ";LNGTH;" CHA
   RACTERS STARTING": PRINT "WI
   TH POSITION ";START: PRINT :
    PRINT "IS THIS OK (Y/N) ";: INPUT Y$
60100  IF  LEFT$ (Y$,1) <  > "Y" THEN
      GOTO 60070
60110  FOR I = 1 TO ENTRYNO
60120 TEMP(I) = I:TEMP$(I) =  MID$
     (ENTRY$(I),START,LNGTH)
60130  NEXT
60140  GOSUB 60210
60150  HOME
60160  FOR I = 1 TO ENTRYNO: PRINT
     ENTRY$(TEMP(I)): NEXT
60170  PRINT : PRINT "ANOTHER SOR
     T WITH SAME WORDS (Y/N) ";: INPUT
     Y$
60180  IF  LEFT$ (Y$,1) = "Y" THEN
     60050
60190  HOME . PRINT . PRINT : PRINT
     : PRINT : PRINT "         T
     H E     E N D  "
60200  END
60210  REM  SORT SUBROUTINE
60220 Y = ENTRYNO + 1:Z = 1:Q = 1

60230  HOME
60240  PRINT : HTAB 10: PRINT "##
     ##  SORTING  ####": PRINT : FOR
     KK = 1 TO 100. NEXT KK
60250 Y =  INT (Y / 2)
60260  IF Y = 0 THEN 60350
60270 D = ENTRYNO - Y
60280  FOR K = 1 TO D:Z = K + Y:T
     EMP$ = TEMP$(Z):TEMP = TEMP(
     Z):Q = K
 60290  REM  USE <=FOR ASCENDING
     SORT; =>FOR DESCENDING SORT
60300  IF TEMP$(Q) <  = TEMP$ THEN
     60330
60310 Z = Q + Y:TEMP$(Z) = TEMP$(
     Q):TEMP(Z) = TEMP(Q):Q = Q -
     Y
60320  IF Q > 1 THEN 60300
60330 Z = Q + Y:TEMP$(Z) = TEMP$:
     TEMP(Z) = TEMP: NEXT K: GOTO
     60250
60340  HOME
60350  RETURN
```

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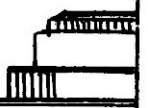

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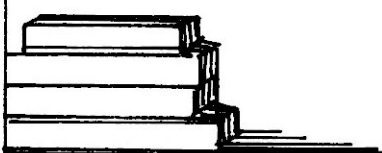

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PROGRAMMING TIPS

The VOCAL Apple.

The Apple II has a built in speaker that permits excellent interaction between the user and the program it is running. In this article, let's discuss how to make the Apple more vocal and responsive.

Type in this short Integer program:

```
100 GOSUB 260
110 X = RND(100) : Y = RND(100)
120 PRINT "HOW MUCH IS ";X;" PLUS ";Y;
130 INPUT ANSWER
140 IF ANSWER = X + Y THEN 200
150 POKE 0,90 : POKE 1,100 : CALL 2
160 POKE 0,100: POKE 1,100 : CALL 2
170 POKE 0,255: POKE 1,255 : CALL 2
180 PRINT "WRONG!  TRY AGAIN."
190 GOTO 120
200 POKE 0,20 : POKE 1,60  : CALL 2
210 POKE 0,30 : POKE 1,60  : CALL 2
220 POKE 0,40 : POKE 1,60  : CALL 2
230 POKE 0,50 : POKE 1,60  : CALL 2
240 POKE 0,30 : POKE 1,255 : CALL 2
250 GOTO 110
260 POKE 2,173 : POKE 3,48 : POKE 4,192
270 POKE 5,136 : POKE 6,208: POKE 7,4
280 POKE 8,198 : POKE 9,1  : POKE10,240
290 POKE 11,8  : POKE 12,202:POKE13,208
300 POKE 14,246: POKE 15,166:POKE16,0
310 POKE 17,76 : POKE 18,2 : POKE19,0
320 POKE 20,96 '
```

Line 100 starts off this program by branching to a subroutine at line 260.

Lines 260 - 320 put a short machine language program into the Apple's memory. This program will make the Apple more vocal when this subroutine is run. Machine language programs are accessed by the CALL statement; in our case we are CALLing a routine beginning at memory location 2.

Line 110 generates 2 RaNDom numbers for us to add.

Line 120 asks for the answer. If we are correct we branch to line 200 to hear a fanfare. If we are wrong we drop down to line 150 to hear a 'raspberry'. Then back to line 120 to try again.

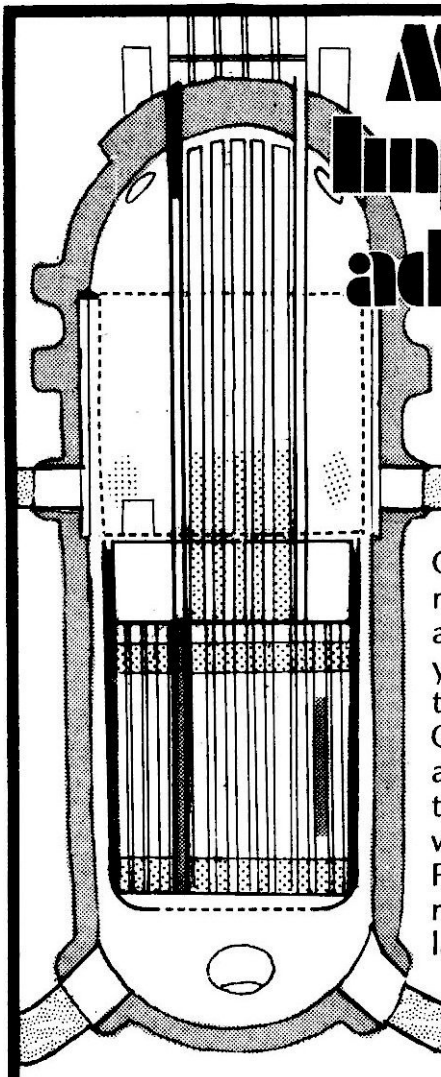
To exit this program type (CTRL-C) and (RETURN).

When you are finished trying out this program. DELete lines 110 - 250. This will leave only lines 100 and 260 - 320.

Now try your hand at generating music by typing in the following lines:

```
110 INPUT "ENTER PITCH ";P
120 INPUT "ENTER DURATION ",D
130 POKE 0,P : POKE 1,D : CALL 2
140 GOTO 110
```

You can put this short routine in your programs to generate music and to make your Apple more vocal.



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by Scott Adams

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PROGRAMMING TIPS

If you read last month's programming tip, you now have some familiarity with the Apple II editing capabilities using the ESC-A,B,C, or D combination. Let's go a step further.

As a remainder:

ESC-A	cursor right	ESC-C	cursor down
ESC-B	cursor left	ESC-D	cursor up

Type in the following line (> = Integer Basic)

```
10 PRINT "THE APPLESEED MAGAZINE
   PRESENTS PROGARMMING TIPS."
20 END
```

Note the mistake in the word 'programming'. We are going to correct this mistake without typing in the complete line.

Now list line 10. You should see the following:

```
10 PRINT "THE APPLESEED MAGAZINE PR
   ESENTS PROGARMMING TIPS."
```

Using the ESC editing keys, put the cursor over the 1 and use the right arrow to copy the entire line (press the arrow and the REPT key) up to the error. Type in RA to make the correction in the word programming.

Now if you list line 10 you should see the following:

```
10 PRINT "THE APPLESEED MAGAZINE PR
          ESENTS PROGRAMMING TIPS."
```

It doesn't look much different than the original, but wait. Now run the program. It should say:

```
THE APPLESEED MAGAZINE PR  ESENTS PROGRAMMING TIPS.
```

The reason this happened is that you copied over a number of blank spaces when you used the right arrow and the REPT key.

The Apple II presents 40 characters in a line and when you run the cursor all the way to the end and back down again, you copied into memory these blank spaces. The cure is simple!

Before you do any editing, clear the screen and then type in POKE 33,33 (RETURN). This tells the Apple to restrict the screen width to 33 characters. Now do all the correcting you want and don't worry about those unwanted blank spaces.

When you are completed, return the Apple to its original state by typing POKE 33,40 (RETURN), or type in TEXT (RETURN).

We will discuss the screen width and length (called the screen window) in a further PROGRAMMING TIPS column.

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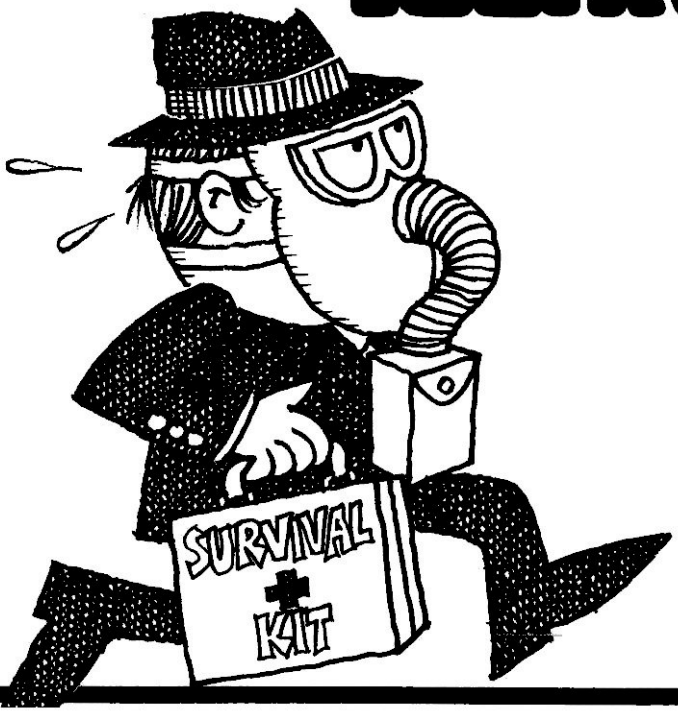

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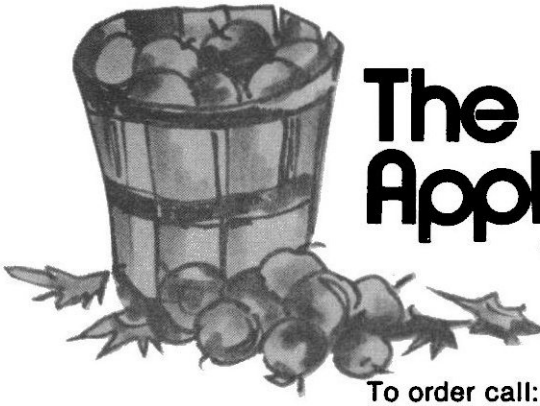

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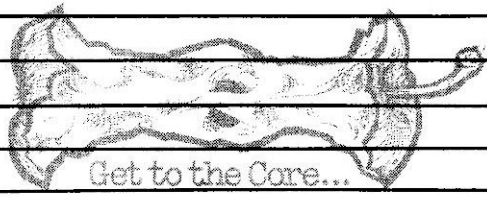

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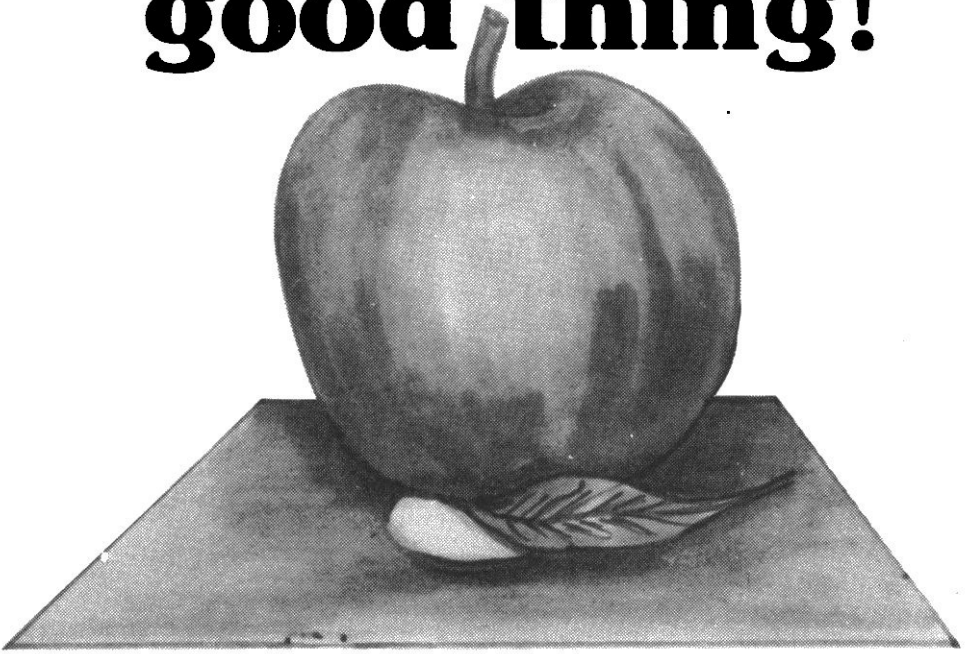

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