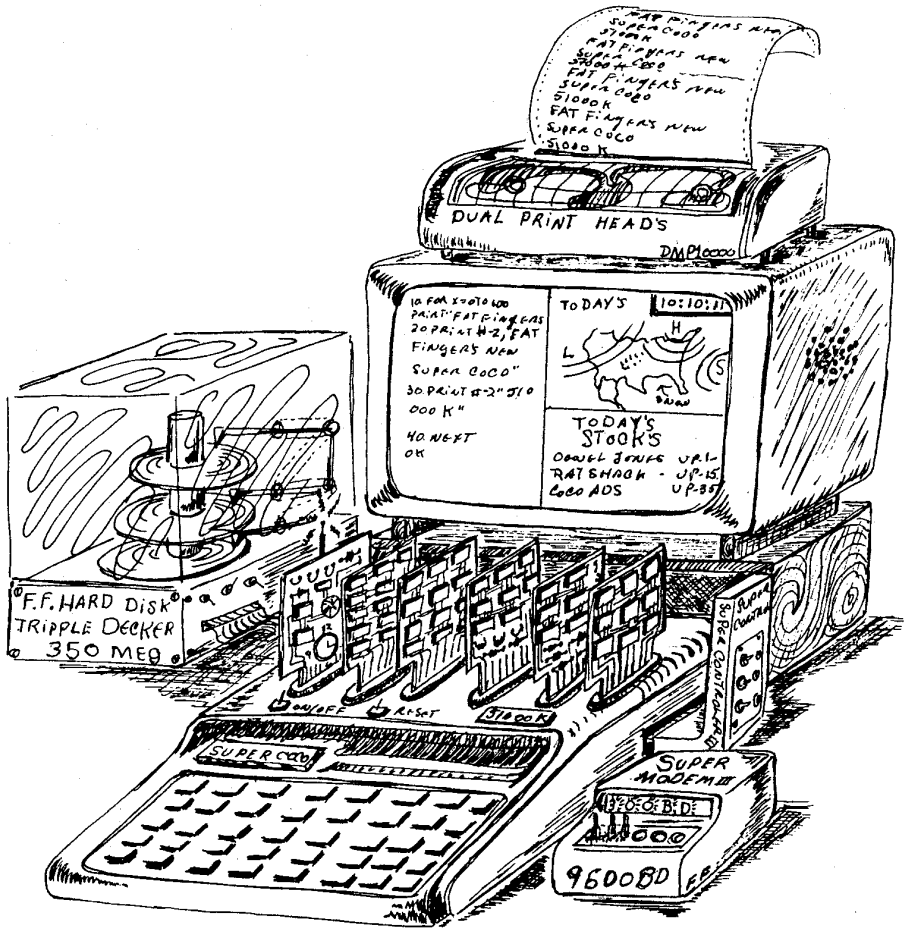
COCO-ADS

The Color Computer Users Magazine
Nov, 1986 $1.00 Issue B12

Next issue will be the start of our third year.



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```
10 CLEAR1000
20 VERIFYON
30 CLS
40 PRINT"          --FILE COPY--"

50 PRINT
60 PRINT"  THIS WILL COPY AN ENT
IRE DISK FILE BY FILE INSTEAD OF
 TRACK BYTRACK (AS backup DOES).
 THIS WAYYOU CAN MAKE A BACKUP O
F A DISK (OR MOST OF A DISK) THA
T GETS ANI/O ERROR WHEN A backup
 IS DONE.":PRINT
70 INPUT"COPY FROM DRIVE";F
80 INPUT"COPY TO DRIVE";T
90 INPUT"INSERT DISKS AND HIT 'E
NTER' TO START";N$
100 PRINT
110 PRINT"COPYING..."
120 TRACK = 17
130 FOR S= 3 TO 11
140 DSKI$F,17,S,A$,B$
150 A$=A$+LEFT$(B$,127)
160 FOR P= 1 TO 255 STEP 32
170 NAME$= MID$(A$,P,8)
180 EXT$=MID$(A$,P+8,3)
190 IF EXT$<>"   "THEN EXT$="."+
EXT$:NAME$=NAME$+EXT$
200 IF LEFT$(NAME$,1)=CHR$(255)
THEN END
210 IF LEFT$(NAME$,1)=CHR$(0) TH
EN 260
220 '
230 IF F=T THEN 310
240 PRINT NAME$;"  FROM"F"TO"T
250 COPY NAME$+":"+RIGHT$(STR$(F
),1) TO NAME$+":"+RIGHT$(STR$(T)
,1)
260 NEXTP
270 IF F=T THEN CLS:INPUT"INSERT
 SOURCE DISK AND HIT ENTERTO REA
D MORE OF THE DIRECTORY";N$:G=1
280 NEXTS
290 VERIFYOFF
300 END
310 CLS:IF G=1 THEN 330
320 PRINT"INSERT SOURCE DISK AND
 HIT ENTERTO COPY ";NAME$;:INPUT
N$:COPY NAME$:GOTO260
330 PRINT"COPYING ";NAME$:COPY N
AME$:G=0:GOTO260
```


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rs1

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The Program of the Month
by
Eric G. Robichaud

The month of November is upon us at last, and with it the beginning of the end. As October draws to a close and we head full tilt into November, the local dept. stores begin stocking up on popular items, and begin putting up their Christmas displays in anticipation of that hectic pre-Christmas shopping spree. This month I have a program which I hope everyone will find helpful this year when it comes to Christmas shopping.

The accompanying program, ingeniously called "Christmas List", will keep track of... a Christmas list. The program is a database manager that will allow you to enter the names of the people on your list, the present that you bought for each, the price, and a short comment, and will keep a running total of the amount of money you have spent.

"Christmas List" starts off with a cute rendition of "Joy To The World" while displaying the title screen. After you run the program more than once you will probably get tired of sitting there listening to the carol, so holding down the space bar while the title screen is drawing will skip right to the main menu. The main menu provides options to Create/Add to the list, Print the list to the printer, display the list on the screen one person at a time, edit the list, or save/load a list.

There are two options to revise the list: delete or replace, which either deletes a specified entry from the list, or allows you to change it. When saving or loading a list, there are options for casette as well as disk.

The program is very easy to use, and is quite self explanatory. I must say that I have used the program quite extensively in the past and found it helpful. The printer option is useful for compling a tentative list. What I've done in the past was to have one list for the names of the people I haven't bought presents for yet, and possible gifts, and final list of the people I have gifts for and what they are.

By using this program I found that I spent less time standing in the store trying to remember if I bought a certain thing, and I also avoided buying duplicate presents. I suppose this program, then, is for those people who are as unorganized as myself!

For those of you who were trying to follow my column last month to understand my method of programming adventures, I am sorry if you were confused about the illustrations. The fact is that there weren't any! I had drawn up some nice graphics illustrations to accompany the article, but they were left out somewhere along the way. If you are intersted in following the method I use, feel free to write to me, and I will send you a copy of illustrations, and in the mean time we'll see if we can have them printed.

Also, there was some confusion over the "Personalized Christmas Adventure" advertised last month. The ad was not printed in it's origional manner, which lead to much ambiguity. The adventure is a package that is meant to be a Christmas gift from you to a friend, etc. You send us the necessary information and we will personalize the adventure: as the person plays the adventure he/she will find things such as pictures and credit cards. Typing "look pictures" will respond with familiar names, etc.

Altogether, I need no less than five names: the name of the sender (you), the name of who the gift is for, and the names of three or more friends/relatives. Please include the hobby or interest of each of the persons listed.

The adventure is very user friendly and contains a lot of "frills", and humor. It requires 32K and is available on disk or cassette for ten dollars.

If you have any questions or comments on any of the topics covered in this issue, or on anything at all, feel free to write to me at 10 Stoneham Dr., Woonsocket, RI 02895. Next month I'll be presenting some entertainment for the holiday season, then I'll be starting the New Year off with some practical, useful programs.... so once again, please stay tuned!

```
10 '**************************
20 '*     CHRISTMAS LIST      *
30 '*  BY ERIC G. ROBICHAUD   *
40 '*    PARAGON SOFTWARE     *
50 '*   COPYRIGHT (C) 1985    *
60 '*   NOV. 1986 COCO ADS    *
70 '**************************
80 '
90 CLS
100 PCLEAR1:PMODE0
110 PRINT @ 137,"CHRISTMAS LIST"

120 PRINT @ 238,"BY :":PRINT @ 3
59,"ERIC G. ROBICHAUD"
130 FOR ASD=1 TO 62
140 SET(ASD,0,RND(8))
150 NEXT ASD
160 FOR ASD=1 TO 30
170 SET(63,ASD,RND(8))
180 NEXT ASD
```

```
190 FOR ASD=62 TO 1 STEP -1
200 SET(ASD,31,RND(8))
210 NEXT ASD
220 FOR ASD=30 TO 1 STEP -1
230 SET(0,ASD,RND(8))
240 NEXT ASD
250 IF INKEY$=CHR$(32) THEN 350
260 MT$="T4;O3;L2;C;L4;O2;B;L8;A
;L2.;G;L4;F;L2;E;D;"
270 MU$="L2.;C;P32;L4;G;L2;A;L4;
P32;A;L2.;B;P32;L4;B;O3;L1.;C"
280 MV$="L4;C;C;O2;L4;B;A;G;L4.;
G;L8;F;L4;E;O3;C"
290 MW$="O3;L4;C;O2;L4;B;A;G;P32
;L4.;G;L8;F;L4;E;P32;E;P32;E;P32
;E;P32;E;P32;L8;E;F"
300 MX$="L2.;G;L8;F;E;L4;D;P32;D
;P32;D;P32;L8;D;E;L2.;F;L8;E;D"
310 MY$="O2;L4;C;O3;L2;C;O2;L4;A
;L4.;G;L8;F;L4;E;F;L2;E;D;L1;C"
320 MZ$="XMT$;XMU$;XMV$;XMW$;XMX
$;XMY$;"
330 PLAY MZ$
340 FOR Y=1 TO 800:NEXT Y
350 CLEAR:CLEAR 8000
360 DIM A$(100),G$(100),AM(100),
C$(100)
370 F=0:L=100:I=0:T=0:V=1:'V=-1
FOR CASSETTE
380 GOTO 590
390 CLS:SOUND 125,2:IF I>L THEN
1980 ELSE PRINT @ 12,"-INPUT-"
400 PRINT @ 66,"TOTAL=";I-1:PRIN
T @ 85,"MAX.=";L
410 PRINT @ 98,"AMT.=";
420 PRINT USING "$$#####.##";T
430 PRINT @ 192," ";I;
440 LINE INPUT " NAME:";A$
450 IF A$="DONE" THEN 570
460 IF A$="" THEN 430
470 A$(I)=A$
480 PRINT
490 LINE INPUT "     GIFT:";G$(I
)
500 PRINT
510 LINE INPUT "      AMT:";AM$:
AM(I)=VAL(AM$)
520 T=T+AM(I)
530 PRINT
540 LINE INPUT "    COMNT:";C$(I
)
550 I=I+1
560 GOTO 390
570 I=I-1
580 REM
590 CLS:SOUND 125,2:PRINT:PRINT"
       WOULD YOU LIKE TO:"
600 PRINT "       ";STRING$(17,"
-"):PRINT
610 PRINT "    (1) PRINT TO PRIN
TER"
620 PRINT "    (2) ADD/INPUT"
630 PRINT "    (3) REVISE"
640 PRINT "    (4) PRINT ON SCRE
EN"
650 PRINT "    (5) SAVE LIST"
660 PRINT "    (6) RETRIEVE LIST
"
670 PRINT "    (7) END"
680 PRINT
690 PRINT "          SELECT (1-7
)"
700 M1$=INKEY$:IF M1$="" THEN 70
0
710 M=VAL(M1$):IF M<1 OR M>7 THE
N 700
720 ON M GOTO 740,950,1420,1060,
2160,2340,1000
730 GOTO 590
740 REM*****PRINTER FUNC.
750 IF I=0 THEN 2030
760 CLS:SOUND 125,2
770 PRINT @ 104,"PRINT TO PRINTE
R":PRINT @ 423,"<P>":PRINT @ 438
,"<X>":PRINT @ 454,"ACCEPT
   CANCEL"
780 P$=INKEY$:IF P$="" THEN 780
790 IF P$="X" THEN 590
800 IF P$="P" THEN 820
810 GOTO 780
820 IF (PEEK(&HFF22)/2)=INT(PEEK
(&HFF22)/2) THEN 840
830 CLS:SOUND 5,5:PRINT:PRINT "
   PLEASE READY YOUR PRINTER ":P
RINT:PRINT"        AND PRESS <EN
TER>":INPUT PR$:GOTO 820
840 PRINT #-2,CHR$(27);CHR$(14);
TAB(15)"CHRISTMAS LIST";CHR$(27)
;CHR$(15)
850 PRINT#-2:PRINT #-2:PRINT #-2
:PRINT #-2
860 PRINT #-2,TAB(0)" #";TAB(4)"
NAME";TAB(25)"GIFT";TAB(44)"AMOU
NT";TAB(57)"COMMENTS"
870 PRINT #-2,STRING$(79,"-")
880 PRINT#-2:PRINT #-2
890 FOR X=1 TO I
900 PRINT #-2,TAB(0)X;TAB(4)A$(X
);TAB(25)G$(X);TAB(44)AM(X);TAB(
57)C$(X)
910 NEXT X
920 PRINT#-2:PRINT#-2:PRINT#-2
930 PRINT #-2,TAB(23)"TOTAL AMOU
NT SPENT= $";T
940 FOR Y=1 TO 800:NEXT Y:GOTO 5
90
950 REM*****ADD/INPUT FUNC.
960 I=I+1
970 IF I>L THEN 1980
```

```
980 IF I=1 THEN 390
990 CLS:SOUND 125,2:PRINT @ 10,"
-ADDITIONS-":GOTO 400
1000 REM*****END
1010 CLS
1020 PRINT @ 173,"MERRY":PRINT @
 235,"CHRISTMAS"
1030 FOR Y=1 TO 2000:NEXT:CLS
1040 END
1050 GOTO 400
1060 REM*****SCREEN ? FUNC.
1070 CLS:SOUND 125,2
1080 IF I=0 THEN 2090
1090 PRINT:PRINT "       WOULD Y
OU LIKE TO:":PRINT "        ";STR
ING$(17,"-")
1100 PRINT:PRINT "    1) LIST AL
L FILES":PRINT "    2) LIST A CE
RTAIN FILE": PRINT "    3) RETUR
N TO MAIN MENU"
1110 PRINT:INPUT "          SELE
CT(1-7)";M
1120 ON M GOTO 1300,1140,590
1130 GOTO 1070
1140 CLS:SOUND 125,2:PRINT @ 96,
"":LINE INPUT "  NAME:";N$
1150 FOR X=1 TO I
1160 IF A$(X)=N$ THEN 1220
1170 NEXT
1180 CLS:SOUND 125,2
1190 PRINT:PRINT "  SORRY, THE F
ILE YOU WISH TO ":PRINT "      S
EE IS NOT PRESENT."
1200 FOR Y=1 TO 2000:NEXT
1210 GOTO 1060
1220 CLS:PRINT @ 32," NAME=";A$(
X)
1230 PRINT @ 64," FILE #:"X:PRIN
T @ 79,USING "TOT AMT=$$#####.##"
;T
1240 PRINT @ 160," GIFT:"G$(X)
1250 PRINT @ 224,"  AMT: $"AM(X)

1260 PRINT @ 288," COMM:"C$(X)
1270 PRINT @ 448,"";
1280 LINE INPUT "   HIT <ENTER>
TO CONTINUE ";Y$
1290 GOTO 1060
1300 REM ? ALL O' LIST
1310 CLS:SOUND 125,2
1320 FOR X=1 TO I
1330 PRINT @ 32," NAME=";A$(X)
1340 PRINT @ 64," FILE #:"X:PRIN
T @ 79,USING "TOT AMT=$$#####.##"
;T
1350 PRINT@ 160," GIFT:"G$(X)
1360 PRINT@ 224,"  AMT: $"AM(X)
1370 PRINT@ 288," COMM:"C$(X)
1380 PRINT @ 448,"";:LINE INPUT
"   HIT <ENTER> TO CONTINUE ";Y$
```

P A R A G O N S O F T W A R E

The following software packages are now available from *Paragon Software*. All prices are final...we pay all postage and handling.

1) 'The Program of the Month' programs
Available on disk and/or cassette, except where otherwise noted. Please mark the month, year, and issue of the magazine the program appeared in, to maintain maximum accuracy. Programs cost $5.00 for either disk or tape.

2) 'The Program of the Month' articles
If you missed a month, or just started your subscription to CoCo Ads, you can get back issues of 'The Program of the Month' article saved on disk. The article is accompanied by the disk text file reader, so there is no need for a seperate word processor.

A single article on disk accompanied by the Text File Reader costs $5.00. *SPECIAL: If you order the article and a program (item #1 above) together, you only pay $8.00 for the entire package- the program, article, and text file reader!

The perfect Christmas Gift for every computer buff... The *Paragon Software* Personalized Christmas Adventure! Fill out the following order form and send it in! When filling out the form, mark the name and address of where you would like the gift sent...We will mail it directly to the recipient with a TO/FROM tag if you mark the appropriate section of the order form.

This Adventure contains many 'frills' and extras to make it one of the most user-friendly, and fun adventures on the market! Adventure costs $10 disk or tape. 32K NEEDED.

1) Please send me ( ) copies each of the programs listed in issues (, , , ,) of CoCo Ads Magazine.

2) Please send me ( ) copies each of the article appearing in issues (, , , ,) of CoCo Ads Magazine.

3) I would like to order the Christmas Adventure.

Name of recipient: City and State of above
Name of sender: main hobby/interest of above:
Please send my order to (me/recipient) at:

SEND TO: PARAGON SOFTWARE,
C/O ERIC ROBICHAUD
10 STONEHAM DRIVE
WOONSOCKET, RI 02895

```
1390 NEXT X
1400 FOR Y=1 TO 850:NEXT Y
1410 GOTO 1070
1420 REM*****REVISIONS FUNC.
1430 IF I=0 THEN 2070
1440 CLS:SOUND 125,2:PRINT:PRINT
 "      WOULD YOU LIKE TO:"
1450 PRINT "      ";STRING$(17,"
-")
1460 PRINT
1470 PRINT "    1) DELETE"
1480 PRINT "    2) REVISE [REPLA
CE]"
1490 PRINT "    3) RETURN TO MAI
N MENU"
1500 PRINT:PRINT
1510 INPUT "       SELECT (1-3)"
;M
1520 ON M GOTO 1540,1770,590
1530 GOTO 1440
1540 CLS:SOUND 125,2
1550 REM*******DEL FUNC
1560 PRINT @ 43,"-DELETE-":PRINT
 @ 430,"<X>":PRINT @ 459,"TO CAN
CEL"
1570 PRINT @96,""
1580 LINE INPUT" NAME TO DELETE:
 ";D$
1590 IF D$="X" THEN 1440
1600 FOR X=1 TO I
1610 IF A$(X)=D$ THEN 1640
1620 NEXT X
1630 CLS:PRINT:PRINT:PRINT "  SO
RRY, THE FILE YOU WISH TO
 DELETE IS NOT PRESENT.":FOR Y=1
 TO 1000:NEXT Y:CLS:GOTO 1560
1640 CLS:SOUND 125,2:PRINT @ 43,
"-DELETE-":PRINT @ 423,"<D>":PRI
NT @ 438,"<X>":PRINT @ 452,"TO D
ELETE":PRINT @ 467,"TO CANCEL"
1650 PRINT @ 128,"    NAME:"A$(X
)
1660 PRINT "    GIFT:"G$(X)
1670 PRINT "     AMT:"AM(X)
1680 PRINT "   COMNT:"C$(X)
1690 D$=INKEY$:IF D$="" THEN 169
0
1700 IF D$="X" THEN 1420:IF D$="
D" THEN 1710 ELSE 1690
1710 A$(X)="":G$(X)="":T=T-AM(X)
:AM(X)=0:C$(X)=""
1720 FOR D=(X+1) TO I
1730 A$(D-1)=A$(D):G$(D-1)=G$(D)
:AM(D-1)=AM(D):C$(D-1)=C$(D)
1740 NEXT D
1750 I=I-1:PRINT @ 288,"     IT
HAS BEEN DELETED.":SOUND 125,2
1760 FOR Y=1 TO 759:NEXT Y:GOTO
1420
1770 REM*******REVISE FUNC
1780 CLS:SOUND 125,2:PRINT @ 43,
"-REVISE-"
1790 PRINT @ 431,"<X>":PRINT @ 4
60,"TO CANCEL"
1800 PRINT @ 128,"":LINE INPUT "
 NAME TO REVISE:";R$
1810 IF R$="X" THEN 1420
1820 FOR X=1 TO I
1830 IF A$(X)=R$ THEN 1860
1840 NEXT
1850 CLS:SOUND 125,2:PRINT:PRINT
:PRINT"  THE FILE YOU WANT TO RE
VISE":PRINT "    IS NOT PRESENT.
":FOR Y=1 TO 1000:NEXT:CLS:GOTO
1770
1860 FOR Y=1 TO 759:NEXT
1870 CLS:SOUND 125,2:CLS:PRINT @
 43,"-REVISE-"
1880 PRINT@96,"";:LINE INPUT "
NAME:";A$(X)
1890 PRINT
1900  LINE INPUT "  GIFT:";G$(X)

1910 PRINT
1920 T=T-AM(X)
1930 LINE INPUT "   AMT: $";AAA$
:AM(X)=VAL(AAA$)
1940 T=T+AM(X)
1950 PRINT
1960 LINE INPUT " COMNT:";C$(X)
1970 FOR Y=1 TO 759:NEXT:GOTO 14
20
1980 REM*****END O LIST
1990 I=I-1
2000 SOUND 125,2
2010 CLS:PRINT:PRINT"  YOU HAVE
REACHED THE LIMIT.":PRINT "  PLE
ASE SAVE YOUR FILE, AND":PRINT"
      START A NEW ONE OR":PRINT
"    OTHERWISE END YOUR INPUT.":
PRINT:PRINT "          THANK YO
U."
2020 FOR Y=1 TO 2500:NEXT Y:GOTO
 590
2030 REM*****NONE FOR PRINTER
2040 CLS:SOUND 125,2:PRINT:PRINT
 "   YOU DON'T HAVE ANY FILES TO
    PRINT ON THE PRINTER, PLEASE
      CHECK YOUR RECORDS AGAIN."

2050 PRINT:PRINT "          THA
NK YOU."
2060 FOR Y=1 TO 2500:NEXT Y:GOTO
 590
2070 CLS:SOUND 125,2:PRINT:PRINT
  "   YOU DON'T HAVE ANY FILES":P
RINT "    TO REVISE, PLEASE CHEC
K   ":PRINT"      YOUR RECORDS A
GAIN.":PRINT:PRINT "          T
```

```
HANK YOU."
2080 FOR Y=1 TO 2500:NEXT:GOTO 5
90
2090 REM*****NONE FOR SCREEN
2100 CLS:PRINT:PRINT "   YOU DON
'T HAVE ANY FILES TO     PRINT O
N THE SCREEN, PLEASE":PRINT "
 CHECK YOUR RECORDS AGAIN.":PRIN
T:PRINT "           THANK YOU."
2110 FOR Y=1 TO 2500:NEXT:GOTO 5
90
2120 REM*****NONE TO SAVE
2130 CLS:SOUND 125,2:PRINT:PRINT
 "  YOU DON'T HAVE ANY FILES TO
     SAVE, PLEASE CHECK YOUR":P
RINT "         RECORDS AGAIN.":P
RINT:PRINT "           THANK YOU
."
2140 FOR Y=1 TO 2500:NEXT
2150 GOTO 590
2160 REM*****SAVE FUC.
2170 IF I=0 THEN 2120
2180 CLS:K=I:SOUND 125,2
2190 PRINT@44,"-SAVE-":PRINT@423
,"<S>":PRINT@437,"<X>":PRINT@453
,"TO SAVE":PRINT@466,"TO CANCEL"

2200 K$=INKEY$:IF K$="" THEN 220
0
2210 IF K$="X"THEN590
2220 IF K$="S"THEN2240
2230 GOTO 2200
2240 GOSUB 2550
2250 CLS:PRINT@131,"PLEASE READY
 OUTPUT DEVICE":PRINT@206,"THEN"
:PRINT@267,"HIT <ENTER>"
2260 K$=INKEY$:IF K$=CHR$(13) TH
EN 2270 ELSE2260
2270 SOUND 125,2:OPEN"O",#V,L$
2280 PRINT#V,K
2290 FOR Y=1 TO K
2300 PRINT#V,A$(Y):PRINT#V,G$(Y)
:PRINT#V,AM(Y):PRINT#V,C$(Y):PRI
NT#V,T
2310 NEXTY
2320 CLOSE #V:SOUND125,2
2330 FORY=1 TO 1000:NEXTY:GOTO59
0
2340 REM*****RETRIEVE FUNC.
2350 CLS:PRINT@45,"-LOAD-":PRINT
@423,"<L>":PRINT@438,"<X>":PRINT
@453,"TO LOAD":PRINT@467,"TO CAN
CEL"
2360 K$=INKEY$:IF K$=""THEN2360
2370 IF K$="X" THEN 590
2380 IF K$="L" THEN 2400
2390 GOTO 2360
2400 CLS:IF I>0 THEN PRINT:PRINT
:PRINT:PRINT"    ITEMS ALREADY I
```

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RS 6

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```
N MEMORY":FORY=1TO2000:NEXT:GOTO
590
2410 GOSUB 2550
2420 CLS:PRINT:PRINT" PLEASE REA
DY INPUT DEVICE AND "
2430 PRINT:PRINT"          PRESS
<ENTER>"
2440 K$=INKEY$:IF K$=""THEN2440
2450 IF K$=CHR$(13)THEN SOUND 12
5,2:GOTO2470
2460 GOTO 2440
2470 OPEN"I",#V,L$
2480 INPUT #V,K
2490 FOR Y=1 TO K
2500 INPUT#V,A$(Y):INPUT#V,G$(Y)
:INPUT#V,AM(Y):INPUT#V,C$(Y):INP
UT#V,T
2510 NEXTY
2520 CLOSE#V
2530 I=K
2540 SOUND 125,2:FORY=1TO1000:NE
XT:GOTO590
2550 CLS:PRINT@193,"";:LINEINPUT
" NAME OF DATA FILE: ";L$
2560 IF LEN(L$)<1 OR LEN(L$)>8 T
HEN SOUND 30,1:GOTO 2550
2570 FOR AA=1 TO LEN(L$):IF MID$
(L$,AA,1)="/" OR MID$(L$,AA,1)="
." THEN SOUND 30,1:GOTO 2550
2580 NEXT
2590 RETURN
```

```
 10 ' TEXT SCREEN PRINT UTILITY
 20 ' WILL DUMP THE CONTENTS OF
 30 '   THE TEXT SCREEN TO THE
 40 '   PRINTER WHEN THE RIGHT -
 50 '   ARROW KEY IS PRESSED
 60 CLS
 70 'FIND TOP OF MEMORY
 80 GOSUB 450
 90 'RESERVE 100 BYTES
 100 TM=TM-100
 110 CLEAR 200,TM
 120 'FIND TOP OF MEM AGAIN, SINC
 E
 130 '   "CLEAR" ERASED VARIABLES

 140 GOSUB 450 : TM=TM-100
 150 'POKE MACHINE LANG. ROUTINE
 160 '   INTO HIGH MEMORY
 170 X=0
 180 READ A
 190 IF A=999 THEN 290
 200 POKE TM + X , A
 210 X=X+1 : GOTO 180
 220 'USR ROUTINE TO SET-UP
 230 '   GETCHAR INTERCEPT
10 240 '
```

```
250 ' BD   B3ED   JSR   GETARG
260 ' FD   016B   STD   $16B
270 ' 57          RTS
280 '
290 US$=CHR$(&HBD)+CHR$(&HB3)+CH
R$(&HED)+CHR$(&HFD)+CHR$(&H01)+C
HR$(&H6B)+CHR$(57)
300 VP=VARPTR(US$)
310 US=PEEK(VP+2)*256+PEEK(VP+3)

320 DEFUSR9=US
330 Y=USR9(TM)
340 CLS:PRINT"THE TEXTDUMP UTILI
TY HAS BEEN   LOADED INTO MEMORY
."
350 PRINT:PRINT"WHENEVER THE COM
PUTER IS WAITINGFOR INPUT (I.E.
IN COMMAND MODE,OR EXECUTING AN
input STATEMENT,PRESSING THE RIG
HT-ARROW KEY    WILL CAUSE THE T
EXT SCREEN TO   BE OUTPUT TO THE
 PRINTER."
360 PRINT:PRINT"IF A PRINTER IS
NOT CONNECTED,  OR IS NOT TURNED
 ON, NOTHING    WILL HAPPEN  WHE
N THE RIGHT-    ARROW KEY IS PRE
SSED."
370 END
380 '*************************
390 '
400 'SUBROUTINE TO FIND OUT
410 '  TOP OF MEMORY
420 '
430 'LOCATIONS 39 AND 40 HOLD
440 '    CURRENT TOP OF MEMORY
450 TM=PEEK(39)*256+PEEK(40)
460 'DECIDE 16K OR 32K
470 IF TM<16384 THEN TM=16383
480 IF TM>16383 THEN TM=32767
490 ' "TM" NOW HOLDS TOP OF
500 '    PHYSICAL MEMORY
510 RETURN
520 '*************************
530 '
540 ' DATA FOR TEXTPRNT UTILITY
550 '
560 '*************************
570 '
580 DATA 15,112,13,111,39,3,126,
140,241,52,20,189,161,153,189,16
1,193,39,248,198,96,231,159,0,13
6,129,9,38,61,182,255,34,132,1,3
8,54,134,254,151,111,142,4,0,166
,132,129,32,37,10,129,96,37,10,1
29,128,37,4,134,192,139,160,128,
64,173,159
590 DATA 160,2,48,1,31,16,196,31
,38,224,134,13,173,159,160,2,140
,6,0,38,213,15,111,32,180,53,20,
50,98,57
600 DATA 999
```

COCO III

MTCC3

MTERM PATCH PROGRAM FOR THE COCO III. YOU NEED VERSION 4.0

```
10 FOR X=&HE00 TO &HE16
20 READ H$:POKE X,VAL("&H"+H$):N
EXT X
30 EXEC &HE00
40 POKE &H9692,19
50 GOTO 70
60 GOTO90
70 IF PEEK(&HC000)=68 THEN PCLEA
R12 ELSE PCLEAR 13
80 GOTO 60
90 GOTO570
100 CLS
110 PRINT@1,  "MTERM 4.0 CoCo 3
Patch Program"
120 PRINT@33, "**=*=*=*=*=*=*=*=*
=*=*=*=*=*=**"
130 PRINT: PRINT "Filename to pa
tch?"
140 PRINT "<Enter> = MTRM40"
150 A$= "> ": GOSUB 550
160 IF H$="" THEN H$="MTRM40"
170 PRINT:PRINT"Loading ";H$
180 IF PEEK(&HC000)<>68 THEN CLO
ADM H$:GOTO200
190 LOADM H$
200 EX=PEEK(&H9D)*256+PEEK(&H9E)

210 POKE&H185C,&HF3:POKE&H3A3F,&
HF4
220 POKE&H3A8A,&HF3:POKE&H399C,&
HF5
230 POKE&H3AD7,&HF4:POKE&H3ADA,&
HF5
240 POKE&H3AF4,&HFE
250 '
260 'THE FOLLOWING POKE DISABLES

270 'THE WORDPAK CODE IN MTERM.
280 'IF YOU ARE NOT GOING TO BE
290 'USING AN RGB MONITOR AND
300 'WILL BE USING A WORDPAK,
310 'THEN REMOVE THE FOLLOWING
320 'POKE.
330 '
340 POKE &H4500,&H20
350 '
360 PRINT: PRINT "Filename for p
atched version:"
370 PRINT: A$="> ": GOSUB 550
380 IF H$="" THEN H$="MTRM40"
390 IF PEEK(&HC000)<>68 THEN:CSA
VEM H$,&HE00,&H4F7F,EX:GOTO410
400 SAVEM H$,&HE00,&H4F7F,EX
410 PRINT
420 PRINT "Your patched MIKEYTER
M was saved"
430 PRINT "under the name: "; H$

440 PRINT: PRINT "To use your pa
tched version type"
450 PRINT "LOADM "; CHR$(34); H$
; CHR$(34); ":EXEC"
460 POKE &HFFDE,0  'Exit 64K mod
e
470 POKE &H71,0
480 PRINT: PRINT
490 LINEINPUT "Please hit your <
ENTER> when    finished reading.
..."; A$
500 CLEAR 200,&H7FFF
510 PCLEAR 4
520 EXEC40999
530 DATA 1A,50,8E,80,0,B7,FF,DE,
EC,84,B7,FF,DF
540 DATA ED,81,8C,E0,0,25,F1,1C,
AF,39
550 PRINT A$;: LINEINPUT H$
560 RETURN
570 GOTO100
```

DOS

COCO III DOS UPGRADE.

```
5 SD=2:ST=6:SR=20:BD=2400:TR=40:
BR=18
6 ON BRK GOTO 2000
7 WIDTH 40
10 CLS:ATTR 7,2:PRINT "
       COCO 3 ":ATTR 2,0:PRINT S
TRING$(39,"*")
15 PRINT TAB(9)"COCO3 DOS UPGRAD
E"
20 PRINT TAB(9)"1) STEP RATE
   ";ST
30 PRINT TAB(9)"2) SIDES PER DRI
VE ";SD
40 PRINT TAB(9)"3) BAUD RATE
   ";BD
```

```
41 PRINT TAB(9)"4) TRACKS PER DI
SK ";TR
42 PRINT TAB(9)"5) CONT WITH PAT
CH"
45 PRINT STRING$(39,"*")
50 ATTR 2,0,B
60 PRINT "ENTER NUMBER ";
70 ATTR 2,0
80 A$=INKEY$:IF A$="" THEN 80
90 A=VAL(A$) :IF A<1 OR A>5 THEN
 10
100 ON A GOTO 110 ,200,300,400,6
90
110 'SELECT STEP RATE
120 CLS:PRINT STRING$(39,"*")
130 PRINT TAB(9)"1) 30 M.S."
132 PRINT TAB(9)"2) 20 M.S."
134 PRINT TAB(9)"3) 12 M.S."
136 PRINT TAB(9)"4)  6 M.S."
140 PRINT STRING$(39,"*")
150 ATTR 2,0,B
155 PRINT "ENTER NUMBER ";
156 ATTR 2,0
160 A$=INKEY$:IF A$="" THEN 160
170 A=VAL(A$)
172 IF A=1 THEN SR=23:ST=30:RT=3

174 IF A=2 THEN SR=22:ST=20:RT=2

176 IF A=3 THEN SR=21:ST=12:RT=1

178 IF A=4 THEN SR=20:ST=6:RT=0
180 GOTO 10
200 'SIDES
210 CLS:PRINT "SIDES (1/2)"
215 A$=INKEY$:IF A$="" THEN 215
216 A=VAL(A$)
220 IF A<1 OR A>2 THEN 210
225 SD=A
230 GOTO 10
300 'BAUD RATE
310 CLS:PRINT STRING$(39,"*")
320 PRINT TAB(9)"1) 600"
330 PRINT TAB(9)"2) 1200"
340 PRINT TAB(9)"3) 2400"
350 PRINT TAB(9)"4) 4800"
360 PRINT TAB(9)"5) 9600"
370 PRINT STRING$(39,"*")
380 ATTR 2,0,B
382 PRINT "ENTER NUMBER ";
383 ATTR 2,0
384 A$=INKEY$:IF A$="" THEN 384
386 A=VAL(A$):IF A<1 OR A>5 THEN
 310
388 IF A=1 THEN BR=87:BD=600
390 IF A=2 THEN BR=41:BD=1200
392 IF A=3 THEN BR=18:BD=2400
394 IF A=4 THEN BR=9:BD=4800
396 IF A=5 THEN BR=1:BD=9600
398 GOTO 10
400 REM TRACKS PER DISK
410 CLS:PRINT "     35 OR 40 TRA
CKS (3/4)"
420 A$=INKEY$:IF A$="" THEN 420
430 IF A$="3" THEN TR=35 :GOTO 1
0
440 IF A$="4" THEN TR=40:GOTO 10

450 GOTO 400
680 STOP
690 CLS:PRINT "STARTING PATCH PL
EASE WAIT"
750 REM
830 IF SD=1 THEN 900
840 PO=55453
850 FOR N=0 TO 3
860 READ B:POKE PO+N,B
870 NEXT N
880 DATA 1,2,65,66
900 POKE150,BR
910 PRINT
920 POKE &HD7C0,RT: POKE &HD816,
SR
1000 REM 40 TRACK
1010 GRANS=TR*2-2
1020 POKE &HD29D,TR:POKE &HD65F,
TR:POKE &HD682,TR
1030 POKE &HD44D,GRNS:POKE &HC73
5,GRANS:POKE &HC7BB,GRANS:POKE &
HC7D0,GRANS
1040 POKE &HC7EF,GRNS:POKE &HCD2
6,GRANS:POKE &HCEB5,GRANS
1050 POKE &HD534,TR-1:POKE &HC75
A,1
1060 CLS:LOCATE 10,10
1070 PRINT "PATCH INSTALLED"
1080 END
2000 REM BREAK ROUTINE
2010 CLS:PRINT "PROCESS ABORTED
"
```


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WHAT TANDY NEEDS

I am disgusted with Tandy's decision to NOT put sockets for two banks of DRAMs on the mother board of the CoCo 3.

The official explanation for why this was not done was "there was not enough room". That of course is nonsense. There is PLENTY of room under the keyboard... they could easily have made the mother board just a bit bigger and had it extend under the keyboard a little.

Had they done so, the upgrade to 512K would cost intelligent customers about $35 to $40 at current 256K by 1 DRAM prices. This compared to the absurd and insulting $150 that Tandy wants for its kludge board.

An alternative explanation is that the 512K upgrade board was a temporary measure and that definitive upgrade would consist of replacing the four 64K by 4 chips wiht four 256K by 4 one mega bit chips. This too, however, is nonsense, for while such 4 bit wide one megabit chips ARE on the drawing boards, it will be MANY months... perhaps a year... before they are delivered and drop in price to the point where a set of four of them costs anywhere NEAR the cost of a set of 16 41256's.

Had Tandy decided to use 64K by 1 DRAMS in the 128K CoCo 3 they would have to have had 16 sockets instead of the current four sockets. This would have added a little to the cost of the Coco 3. But 16 64K by 1 DRAMS still cost a little LESS than do four 64K by 4 DRAMS. So that added cost is offset a little there. And they would not have needed those little socket strips they use for the plug in memory board. That would have saved them a little more there. One other scheme Tandy could have used was to have had 16 18 pin sockets for 256K by 4 chips, and populated only four of them for the 128K CoCo 3. This is a little odd, but it would have allowed users to continue using the existing 4 memory chips in their CoCo 3 when they went to upgrade it, rather than throwing them away as is currently the case.

At current retail (quantity one) prices, the costs for memory using given sets of chips is as follows:

128K with four 64K by 4 chips (as used in the Coco 3) = $16 ($4.00 per chip currently)

128K with sixteen 64K by 1 chips = $14.50 (90 cents per chip currently)

512K using sixteen 256K by 1 chips = $40.00 ($2.50 per chip for 41256's)

512K upgrade done by ADDING twelve extra 256 by 4 chips to four already on the board = $48.00

512K using 256K by 4 chips = price not available because chips are not yet available. Likly price to be a LOT higher than $40 for a LONG
LONG time.

I would label the decision to use a plug in upgrade board as at best a blunder on Tandy's part in the CoCo 3's design. And at worst an arrogant effort to sew up the CoCo 3 upgrade market using a gimmick that shows total lack of concern for the purses of loyal CoCo 3 purchasers. Tandy may end up paying dearly for this mistake in terms of lack of CoCo 3 sales, for it contriubtes to too high a price for the 512K system.

Low Cost Displays for the CoCo III
by Michael Marcelletti

As many of you are well aware, the CoCo 3 does not give a useful 40 column display on most new color TV's because the display is so wide. Here are few tips on getting a working, low priced display for the 40 column mode.(For the 80 column mode, you =have= to either get a composite monochrome monitor or a color RGB analog monitor, there is no way around it).

On the majority new color TV'S, the 40 column mode is cut off on the left side. Since most, if not all new color sets have no horizontal hold adjustment, these leaves you out in the cold. However, many older sets =do= have a horizontal hold adjustment which will allow you to properly center the display. I won't give a specific price, however, it shouldn't be much of a problem to pick up a used color TV with a horizontal hold control for a relatively low price.

Although a used color television will give color graphics and text, a monochrome TV set will give better performance for using text. Now, as far as I can tell from looking at the few different B&W sets that we have in my family's consumer electronics store, all inexpensive B&W sets have a horizontal hold control.(It is not worthwhile to put automatic controls on such a profitless commodity as a monochrome set). Thus, you can get a new set at a very reasonable price. Also, if you are willing to buy a used set at a garage sale or something like that, you can probably get a display for a song.

On more thing to remember, make sure that the set you are getting does have a working, stable horizontal hold adjustment. Other than that, following the above guidelines should help you get a low-priced, reasonably well performing 40 column text display for your new CoCo 3.

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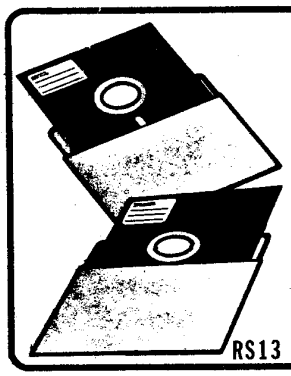

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A commentary about
the CoCo III
by Miki Sandorfi

Most people have greeted the new Tandy CoCo III with open arms. However, there are a few who seem to believe Tandy did not really do as much with the new CoCo as they should have.

Some of the major complaints I have read about include disk storage, software availability, CoCo III processing power, OS-9 not being a very popular operating system and Tandy support. First off, disk storage is NOT a problem on the CoCo. Under OS9 you can do ANYTHING you want with your disk drives. How many computers can claim the capability of running a 40 track, single sided drive as drive 0, a 40 track double sided drive as drive 1, and an 80 track double sided drive as drive 2??? I haven't seen many Apple computers doing that. A $5000 IBM computer can't even do that!!! The OS9 device descriptors for the drives can be readily modified to match any type of configuration you may have. This means that by having four 80 track, double-sided drives, it is possible to have nearly 3 MEGABYTES of floppy disk storage online.

The CoCo can also be expanded by using hard disk drives. Tandy has now offered a hard disk controller card for about 9 months which can support up to 70 megabytes of storage. This exceeds the IBM maximum capacity of 60 megabytes by 10 megabytes!

A few months after the release of the CoCo III, there will be PLENTY of software available just for the new CoCo. What game programmer can refuse 640x192 grahics?? And imagine the graphing applications!! For the price of an IBM color graphics display adapter, you could buy the CoCo III. On top of that, the new CoCo offers a choice of 4 displayed colors at any one time out of a palette of 64...the IBM only allows one forground color and one background color out of a palette of 16. This opens up the possibility of VERY powerful word processors. Imagine being able to tell which part of text you are going to copy by seeing the text change to a different color!

In the area of computing power, simply stated, the 6809 can compute circles around the 8088. This is mainly due to the advanced architecture of the 6809, which is a much newer processor compared to the ancient 8088. It is true the 68000 is faster than the 6809, but the 6809 is designed specially to run high level languages, which the 68000 is not designed for. This is one reason Tandy stresses OS9 as THE operating system, which brings me to my next point.

OS9 level II will release the potential of the new CoCo. You will be able to do everything you can do with Level I, but the enhancements enable you to do many more things. For example, you are no longer limited to having only 48k of free work space. You can now have over 400k of user space! Some people might quibble that you have to break up programs so they fit in 40k blocks, but this is not worse than the memory segmentation on the IBM PC series. The PC requires your code and data to 63k or less. This is because the 8088 is an 8 bit microprocessor pretending to be a 16 bit CPU. Nobody seemed to have complained about that, and it did not hamper the development of software. The same thing goes for the CoCo.

Among other features of the new OS9, you will be able to run your computer at 2 megahertz (twice the speed at which it now runs), you will be able to run up to 15 tasks at once, each outputting to a separate window on your screen, and with MultiVue, you can use OS9 as if it were a Macintosh or an Atari ST. How many computers do you know of that can allow up to three people to use the CPU at the same time (with the PBJ 2SP-Pak)??? I think the new release of OS9 will be much more powerful, and with MultiVue, ANYBODY can use OS9 without problems.

Finally, I believe Tandy will give the CoCo III very good support. It has been mentioned previously that Tandy stated the computer only has 640x192 resolution, while it is capable of 640x225. Well, this is primarily due to the fact that the standard home television can only display a maximum of 192 lines without overscanning. Even dedicated monitors are often limited to this 192 line limit. There are, however, some monitors which will support up to 300 vertical lines, so through machine language the full graphics range is available.
Tandy is really not short-changing its customers, but only advertising what they are SURE will work for everybody.

As for service, how many computer manufacturers enable you to have your computer repaired in one of thousands of repair centers nationwide? If an Apple went on the fritz, you would have to take a long hike to the "nearest" authorized Apple dealer, where they send it out to be repaired. It may take weeks.... IBM service is even worse. I once had to have a simple repair made, and my PC was "out to repairs" for over 6 weeks!

I am behind the new CoCo all the way. I am in the midst of developing desktop publishing software which goes above and beyond what other desktop publishing systems are capable of. I am currenntly working on an IBM-PC version, but with the speed and resolution of the new CoCo, I plan to introduce a version which runs under OS9 for the new machine. Imagine having your CoCo doing desktop publishing!!! Features available to me under OS9 would make this system incredible. You would be able to 1) receive a file from one serial port, 2) send a file to a Dot Matrix Printer, laser printer, or a photo-typesetter, and 3) edit/revise a file at the console ALL AT THE SAME TIME! The only other system I know of which can do the same things is the MCS PowerView typesetting system from CompuGraphic which costs over $10,000 per terminal!

I believe the CoCo III has a very bright future, and VERY powerful software should be introduced soon. Hmmm... more power than an IBM at 1/5th the price. I like that idea!

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PER WORD

L L I S T E R

THIS PROGRAM POKES A MACHINE LANGUAGE ROUTINE INTO HIGH MEMORY IN A 32K COCO. THIS ROUTINE WILL ALLOW YOU TO SET THE NUMBER OF CHARACTERS PRINTED ON EACH LINE OF YOUR PRINTER. THE NUMBER OF CHARACTERS TO BE PRINTED ON EACH LINE IS SET BY POKING LOCATION 155 WITH THE NUMBER OF CHARACTERS + 1. THIS MAKES IT EASY TO PRODUCE A LISTING WHICH IS FORMATTED THE SAME AS THOSE IN THE MAGAZINES. THIS ROUTINE WILL WORK IN A 16K MACHINE BY CHANGING THE CLEAR STATEMENT TO CLEAR 200,16327 AND THE FOR LOOP TO FOR X=16328 TO 16383 AND
THE EXEC STATEMENT TO EXEC 16328.

```
130 DATA 182,001,103,167,141,000
,046,190,001,104,175,141,000,040
,134, 126,183,001,103,048,141,00
0,004,191,001,104,057,052
140 DATA 002,150,111,129,254,038
,016,150,156,139,001,145,155,037
,008, 015,156,134,013,173,159,16
0,002,053,002,018,018,018
150 CLS
160 CLEAR 200,32711
170 FOR X=32712 TO 32767
180 READ Y
190 POKE X,Y
200 NEXT X
210 EXEC 32712
220 POKE 155,33
```

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The Dragon's Castle
By Mitchell Software
Reviewed by Michael Marcelletti

"The Dragon's Castle" is brought to us by Steve Mitchell, of Mitchell Software. Many of us are familiar with his game "Rescue on Alpha II" which was the Grand Prize winner in a Rainbow Adventure Contest. In my opinion, this new game is a worthy sucessor to that fine program.

"The Dragon's Castle" is a 32K graphic adventure game written in BASIC. After loading and running the game, you are asked if you want the high speed poke.(Note to CoCo 3 owners: after loading, just enter the Poke 65497,0, and then at the prompt type "N"). You are then given an attractive title screen, and the game begins.

The goal of this game is to defeat a dragon that has taken over the castle where a beautiful princess lives. Along the way you will meet Goblin henchmen, a Zombie, and some sort of Imp that loves to rip you off. The goal is to save the princess by killing the dragon. I know some of these elements have been overused by other programmers, but the design of the game is involving, and the fact that I have seen some of these elements before didn't stop me from enjoying the game.

As for the graphics of the game, they are very good. Oh sure, they are a bit on the slow side being in BASIC, but that is not that much of a problem, and besides, if you run it on a CoCo 3 at 2 Megahertz, it is not slow at all! However, althought the game is involving, and very well done, I do have one gripe: No game save. While this is not a fatal problem, it does annoy that I have to start fresh every game.

To sum up my opinion, I would have to say that this is an excellent game for the novice to intermediate adventurer. Also, this is a very good first graphics adventure. For the advanced adventurer, I would give this game a slightly lower, but still very positive rating because the vocabulary is on the small side and some puzzles might be easy for the advanced adventurer to solve. Also, I would recommend this game to someone that wants to see some outstanding programming technique. Frankly, I have to say that Steve Mitchell gets more than I thought possible out of Extended Color Basic, and that isn't faint praise!

To conclude, I would have to say that for any adventurer, this game is a good or outstanding choice. Also, programmers will like the game.

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S I G N M A K E R
BY DAVID COMPTON

THE PRIMARY PURPOSE OF SIGNMAKER IS TO ALLOW THE USER TO MAKE LEAFLETS, SMALL POSTERS AND SIGNS USING THE PRINTER. IT REQUIRES A SCREEN DUMP PROGRAM. SIGNMAKER ITSELF DOES NOT USE ANY PRINTER CODES, AND SHOULD THEREFORE BE COMPATIBLE WITH ANY PRINTER CAPABLE OF PRINTING DOT MATRIX GRAPHICS. JUST MAKE SURE YOU DON'T DO A PCLS BEFORE LOADING THE SCREEN DUMP PROGRAM!

ONCE THE PROGRAM IS INITIALIZED, YOU WILL BE ASKED TO ENTER YOUR TEXT. YOU WILL BE IN THE LOWER CASE MODE, SO PRESS SHIFT-0 IF YOU WANT ALL CAPITAL LETTERS. ALL NUMBERS AND MOST PUNCTUATION MARKS ARE ALSO SUPPORTED.

SIGNMAKER USES YOUR PMODE4 SCREEN TO DRAW THE LETTERS. THE UPPER CASE LETTERS ARE ABOUT 3/8" HIGH AND THE LOWER CASE ABOUT 1/4" WHEN PRINTER. THE <ENTER> KEY IS USED ONLY WHEN YOU'VE FINISHED ENTERING YOUR TEXT. TO START A NEW LINE WITHIN THE TEXT, USE THE SHIFT-UP ARROW KEYS. THIS WILL PRODUCE A LEFT ARROW ON THE SCREENB. AS A GENERAL RULE, DON'T PUT MORE CHARACTERS IN A LINE OF TEXT THAT WILL FIT ON ONE LINE OF COCO'S NORMAL TEXT SCREEN. THE SCREEN WILL HOLD 16 LINES OF TEXT.

SIGNMAKER'S SECONDARY PURPOSE IS TO PROVIDE YOU WITH TWO GRAPHICS ALPHABETS (UPPER AND LOWER CASE) AND A SET OF NUMBERS TO USE IN YOUR OWN PROGRAMS. YOU CAN EASILY MAKE ROOM IN THE ARRAY FOR MORE PUNCTUATION MARKS AND PERHAPS SPECIAL CHARACTERS.

```
10 'SIGNMAKR
20 ' COPYRIGHT 1985 BY DAVID M.
COMPTON
30 CLEAR 1000
40 CLS:PRINT"PRESS <I> FOR INSTR
UCTIONS OR   <P> FOR PROGRAM"
50 I$=INKEY$:IFI$=""THEN50
60 IFI$="P"THEN200
70 IFI$<>"I"THEN40
80 CLS:PRINT"'SIGNMAKR' USES A P
MODE 4 SCREENTO GENERATE LETTERS
 WHICH MAY BEPRINTED USING A SCR
EEN PRINT    PROGRAM.
90 PRINT"IT HAS TWO ALPHABETS (U
PPER AND LOWER CASE), ALL NUMERA
LS AND   THE FOLLOWING PUNCTUATI
ON MARKS:! $ ' : , . - ?
```

```
100 PRINT"UPON INITIALIZATION, Y
OU WILL BEIN THE LOWER CASE MODE
.
110 PRINT:PRINT"PRESS ANY KEY
120 IFINKEY$=""THEN120ELSECLS
130 PRINT"SIGNMAKR WILL ALLOW UP
 TO 16    LINES OF TEXT. TO STAR
T A NEW   LINE, USE THE [_] (SHI
FT UP AR- ROW) KEY."
140 PRINT
150 PRINT"TO CENTER TEXT, BEGIN
THE LINE  WITH ANY CHARACTER WHI
CH SIGN-  MAKR DOES NOT RECOGNIZ
E (SUCH AS'/') AND SPACE OVER AN
Y NUMBER  OF SPACES.":PRINT
160 PRINT"PRESS <ENTER> ONLY WHE
N YOU'RE  READY TO PRINT."
170 PRINT
180 PRINT"PRESS ANY KEY
190 I$=INKEY$:IFI$=""THEN 190
200 CLS
210 DIMLE$(122):Y=12
220 FORX=48TO57:READLE$(X):NEXT
230 FORX=65TO122:READLE$(X):NEXT

240 '****** PUNCTUATION
250 LE$(32)="BR3":LE$(33)="BR2U1
BU2U3BR1BD6":LE$(44)="G1E1BR1":L
E$(46)="U1D1BR1":LE$(45)="BU3BR1
R3BD3BR1":LE$(63)="BR2BU5E1R2F1D
1G1BD2D1BR3"
260 LE$(58)="BR2U1BU2U1BR1BD4":L
E$(39)="BR1BU5E1BD6":LE$(36)="BU
FR1ND1R1EUHL2HUER1NU1R1FBD5"
270 '******* NUMBERS
280 DATA BU1U4E1R2F1D4G1L2R2BR1,
R1U6G1E1D6R1BR1,BU5E1R2F1D1G4R4B
R1,BU6R4D1G1L1R1F1D2G1L3R3BR2,BU
3U3D3R4NU2D3BR1,BU6BR4L4D3R3F1D1
G1L3R3BR2,BU1U4E1R2F1BD2NL3D3L3R
3BR1,BU6R4D1G4D1BR4,BU1U1E1H1U1E
1R2F1D1G1F1D1G1L2R2BR2
290 DATA BU1F1R2E1U4H1L2G1D2R4BR
1BD3
300 '***** UPPER CASE LETTERS
310 DATA U4E3F3DNL5D3,U7R4FDGL3R
3FD2GL3BR5,BR4BUGL3HU5ER3FBD6,U7
R4FD5GL4R4BR2,BR5L5U4NR4U3R5BD7,
U4NR4U3R5BD7,BU6BR5HL3GD5FR3EU2N
L2BD3,U7D3R5NU3D4,R4L2U7L2R4BD7,
BUFR3U7NL2R2BD7,U7D4NE4U2F5
320 DATA NU7R5,U7F3E3D7,U7F5NU5D
2,BU1U5ER3FD5GL3R3BR1,U7R4FD2GL4
D3BR5,BU1U5ER3FD6NH3L4R4,U7R4FD2
GL4R4D2F1,BU6BR5HL3GDFR3FD2GL3HB
R5BD1,BU7R3NR3D7BR3,BU7D6FR3EU6D
6BD1,BU7D4F3E3U4D4BD3
330 DATA BU7D6FE3F3EU6D6BD1,UE5U
BL5DF5D,BU7DF3E3UDG3D3BR3,BU7R5G
6DR5
340 DATA ,,,,,
350 '***** LOWER CASE LETTERS
360 DATA U2R4U2L4R4D4L3R3BR1,U6D
2R4D4L4R4BR1,U4NR4D4R4BR1,U4R4NU
2D4L4R4BR1,U4R4D2L4D2R4BR1,U6R3F
BD2BL1L3D3BR5,U4R4D4L4R4D2L3R3U2
BR1,U6D2R4D4BR1,U3BU2UBR1BD6,BD2
BL3R3U5BU2UBR1BD6,U6D4RE3G2F2DBR
1,U6BR1BD6
370 DATA U4R4D4U4R4D4,U4R4D4BR1,
U4R4D4L4R4BR1,BD2U6R4D4L4R4BR1.,U
4R4D6U2L4R4BR1,U4DER2BD4BR1,R4U2
L4U2R4BR1BD4,BR1U6D2NL2R2BD4BR1,
U4BR4D4L4R4BR1,BU4D2F2E2U2BR1BD4
,BU4D2F2E2UDF2E2U2BR1BD4,E4BL4F4
BR1,U4BR4D4NL4D2L3R3U2BR1,BU4R4G
4R4BR1
380 CLS:PRINT"ENTER TEXT LINE"
390 POKE282,0
400 PRINT:LINEINPUTA$
410 IFA$=CHR$(13)THEN430
420 B$=B$+A$
430 PMODE4,1:PCLS1:SCREEN1,0:COL
OR0,1
440 DRAW"BM12,12"
450 FORX=1TOLEN(B$)
460 I=ASC(MID$(B$,X,1))
470 IFI=42THENDRAW"BM12,24":GOTO
560
480 IFI=95THENY=Y+12:DRAW"BM12,"
+STR$(Y):GOTO560
490 IFI=64THENDRAW"BM12,36":GOTO
560
500 IFI=43THENDRAW"BM12,48":GOTO
560
510 IFI=59THENDRAW"BM12,60":GOTO
560
520 IFI=60THENDRAW"BM12,72":GOTO
560
530 IFI=62THENDRAW"BM12,84":GOTO
560
540 DRAWLE$(I):IFI>32ANDI<97THEN
DRAW"BM+2,0"
550 DRAW"BM+2,0"
560 NEXT
570 POKE282,1
580 IFINKEY$=""THEN580ELSECLS:PR
INT:PRINT"    LOAD SCREEN DUMP P
ROGRAM":END
```


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A I R B A T T L E

SHOOT DOWN AS MANY ENEMY PLANES AS YOU CAN IN SIX MINUTES. YOU HAVE 30 SECONDS FOR EACH PLANE. USE THE RIGHT JOYSTICK TO BRING THE ENEMY PLANE INTO YOUR SIGHTS, AND FIRE YOUR GUNS WITH THE FIRE BUTTON.

```
10 GOTO650
20 PCLEAR4
30 PMODE3,1
40 DIMA(34,20)
50 PCLS
60 SCREEN1,1
70 FORI=4TO28:PSET(I,8,2):PSET(I
,14,3):PSET(I,13,3):NEXTI
80 FORI=5TO12:PSET(17,I,3):NEXT
90 FORI=14TO18:PSET(I,10,3):PSET
(I,12,3):NEXTI
100 FORI=9TO12:PSET(9,I,3):PSET(
25,I,3):NEXTI
110 FORI=13TO21:PSET(I,11,3):NEX
TI
120 PSET(17,9,3)
130 PSET(13,16,3):PSET(15,15,3):
PSET(20,16,3):PSET(19,15,3)
140 PRESET(4,8,1):PRESET(28,8,1)
:PRESET(15,8,1):PRESET(19,8,1)
150 PRESET(4,14,1):PRESET(28,14,
1)
160 GET(0,0)-(34,20),A,G
170 PCLS
180 R=1:T=0:TT=0:S=0:MV=1
190 X=0:Y=0
200 X=RND(200)-100:Y=RND(180)-90

210 A=0:B=0
220 PSET(128,86,0):PSET(128,106,
0):PSET(108,96,0):PSET(148,96,0)
:PSET(128,85,0):PSET(128,107,0):
PSET(106,96,0):PSET(150,96,0)
230 X=X+INT((32-A)/12):Y=INT((32
-B)/12)
240 T=T+1:IFT>84THEN GOTO440
250 IFY>75THENY=75
260 IFY<-75THEN Y=-75
270 IFX<-112THENX=-112
280 IFX>108THEN  X=108
290 PUT(113+X,86+Y)-(147+X,106+Y
),A,PSET
300 IFPEEK(65280)=126ORPEEK(6528
0)=254 THENGOTO350
310 X=X+RND(5)-3:Y=Y+RND(3)-2
320 MV=-MV:IFMV=1THEN GOTO240
330 A=JOYSTK(0):B=JOYSTK(1)
340 IFPEEK(65280)<>126ANDPEEK(65
280)<>254THEN GOTO220
350 S=S+1:SOUND50,2
360 LINE(64,192)-(128,96),PSET:L
INE(192,192)-(128,96),PSET
370 LINE(64,192)-(128,96),PRESET
:LINE(192,192)-(128,96),PRESET
380 IFX>-10ANDX<10ANDY>-5ANDY<5T
HEN GOTO400
390 GOTO220
400 FORI=15TO30 STEP5:CIRCLE(128
,96),I,3,.4:NEXTI
410 FORI=15TO30 STEP5:CIRCLE(128
,96),I,2,.4:NEXTI
415 FORZ=50TO25 STEP-1:SOUNDZ,1:
NEXTZ:SOUND1,1
420 H=H+1
430 FORTI=1TO500:NEXTTI
440 PCLS
450 CLS
460 PRINTTAB(6)"AFTER";R;"AIRPLA
NES":PRINT
470 PRINTTAB(5)"SHOTS >"TAB(20)S

480 PRINTTAB(5)"HITS >"TAB(20)H
490 IFT<=84THEN GOTO510
500 PRINT"TOO MUCH TIME.  HE GOT
 AWAY!":G=G+1
510 PRINTTAB(5)"GOT AWAY >"TAB(2
0)G
520 TT=TT+T:PRINTTAB(5)"SCORE >"
TAB(20);INT((250*R-TT)*SQR(TT/25
0*R)*SQR(H/(S+1)))
530 IFTT>1008THEN GOTO640
540 PRINT:PRINTTAB(8)"TIME REMAI
NING"
550 PRINTTAB(6)"MINUTES"TAB(16);
"SECONDS":M=INT((1008-TT)/168):S
C=INT(((1008-TT)-M*168)/2.8)
560 PRINTTAB(9);M;TAB(17);SC:PRI
NT
570 PRINT"PRESS <FIREBUTTON> TO
CONTINUE";
580 M=PEEK(65280):IFM<>126ANDM<>
254 THENGOTO580
590 PMODE3,1
600 PCLS
610 SCREEN1,1
620 T=0:R=R+1
630 GOTO190
640 PRINTTAB(10)"TIME'S UP!":PRI
NT@452,;:INPUT"<ENTER> FOR A NEW
 GAME";X$:RUN
650 CLS2
660 PRINT@224,"          AIR BAT
TLE!"
680 FORTI=1TO2000:NEXTTI
690 CLS
700 PRINTTAB(8)"-INSTRUCTIONS-":
PRINT
710 PRINT"SHOOT DOWN AS MANY ENE
MY PLANES":PRINT"AS YOU CAN IN S
IX MINUTES. ";:PRINT" YOU HAVE 3
0 SECONDS FOR EACH PLANE."
```

```
720 PRINT:PRINT"USE THE RIGHT JO
YSTICK TO BRING":PRINT"THE ENEMY
 PLANE INTO YOUR":PRINT"SIGHTS,
AND FIRE YOUR GUNS WITH":PRINT"T
HE FIRE BUTTON."
730 PRINT:PRINT"YOUR SCORE WILL
BEA COMPOSITE":PRINT"OF TIME, A
CCURACY, AND NUMBER OF HITS."
780 PRINT@486,"<ANY KEY> TO BEGI
N";
790 EXEC44539:GOTO20
```

W O R D H U N T

SELECT YOUR PUZZLE SIZE AND ENTER YOUR WORDS. THE COMPUTER WILL MIX THEM UP AND PRINT OUT THE PUZZLE TO THE PRINTER, WITH AN ANSWER SHEET.

```
10 DIM PS,TW,Z$,I,PN$,SN$,J,SD$,
TD,A,B,X,Y,SA,SB,PA,PL,S,AW,CC,C
R,AK$,WN,WL,F,MP$,T
20 GOTO 160
30 '
40 'PUZZLE PRINTOUT SUBROUTINE
50 '
60 IF LEFT$(PN$,1)="Y" THEN PRIN
T#-2,CHR$(31);SN$ ELSE PRINT#-2,
CHR$(31)"WORD HUNT ............
."
70 PRINT#-2,CHR$(30):PRINT#-2
80 PRINT#-2,"COPY";CC:PRINT#-2
90 FOR I=1 TO S
100 FOR J=1 TO S
110 IF J=1 THEN PRINT#-2,TAB(T)"
 "PG$(I,J);ELSE PRINT#-2," "PG$(
I,J);
120 NEXT J
130 PRINT#-2
140 NEXT I
150 RETURN
160 CLS
170 PRINT@43,"WORD HUNT"
180 PRINT@79,"BY"
190 PRINT@136,"JEFFREY A. STIPES
"
200 PRINT@234,"QXCdZDhIPR"
210 PRINT@266,"PFrNMCOuYW"
220 PRINT@298,"LoQJIKHLnG"
230 PRINT@330,"wNDPQXPZSt"
240 PRINT@362,"OWZJPFBLKR"
250 PRINT@394,"colorVNUOC"
260 PRINT@426,"JNNPZGVWWO"
270 PRINT@458,"KTcomputer"
280 FOR TD=1 TO 460*2
290 NEXT TD
300 '
310 'CLEAR ADEQUATE STRING SPACE
320 '
330 CLEAR 2000:CLS
340 PRINT@35,"-*-SELECT A PUZZLE
 SIZE-*-"
350 PRINT@130,"1 -20X20 (12 OR L
ESS WORDS)"
360 PRINT@194,"2 -30X30 (18 OR L
ESS WORDS)"
370 PRINT@258,"3 -38X38 (24 OR L
ESS WORDS)"
380 PRINT@293,"NOTE: YOU MUST BE
 ABLE TO"
390 PRINT@331,"PRINT 80 COLUMNS.
"
400 PRINT@417,"";:INPUT"ENTER SE
LECTION (1/2/3)";PS
410 '
420 'SET SIZE, TOTAL NO. WORDS A
ND TAB VARIABLES
430 '
440 IF PS=1 THEN S=20:TW=12:T=19
:GOTO 480
450 IF PS=2 THEN S=30:TW=18:T=9:
GOTO 480
460 IF PS=3 THEN S=38:TW=24:T=1:
GOTO 480
470 GOTO 400
480 CLS:PRINT@128,"BE SURE YOUR
PRINTER IS ON LINE AND THAT THE
PAPER IS ADJUSTED"
490 PRINT"TO PRINT APROXIMATELY
ONE-HALF  INCH BELOW THE TOP PER
FORATION."
```

RS5

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```
500 PRINT@352,"";:INPUT"PRESS <E
NTER> TO CONTINUE";Z$
510 '
520 'DIMENSION PUZZLE GRID AND W
ORD LIST ARRAYS
530 '
540 DIM PG$(S,S),WR$(TW)
550 CLS
560 PRINT"FOR BEST RESULTS USE W
ORDS OF   12 LETTERS OR LESS AND
 NO BLANK SPACES, NUMBERS, OR PU
NCTUATION."
570 PRINT"IF YOU DON'T WANT TO U
SE THE    TOTAL NUMBER OF WORDS
AVIAIBLE  THEN TYPE XX AS YOUR L
AST WORD."
580 '
590 'WORD INPUT SECTION
600 '
610 PL=256
620 FOR I=1 TO TW
630 PRINT@PL,"WORD#"I">";:PRINT
640 PRINT@PL+10,"";:LINEINPUT WR
$(I)
650 IF WR$(I)="" THEN 630
660 IF LEFT$(WR$(I),2)="XX" THEN
 WR$(I)="":AW=I-1:I=TW:GOTO 700
670 AW=TW
680 IF PL=>448 THEN PL=224
690 PL=PL+32
700 NEXT I
710 '
720 '# COPIES - ANS. KEY - PUZZL
E NAME
730 '
740 CLS
750 INPUT"HOW MANY COPIES";CR:PR
INT
760 IF CR=1 THEN 800
770 PRINT"DO YOU WISH THE PUZZLE
S TO BE"
780 INPUT"THE SAME OR DIFFERENT
(S/D)";SD$:PRINT
790 IF SD$<>"S" AND SD$<>"D" THE
N 770
800 INPUT"ANSWER KEY (Y/N)";AK$:
PRINT
810 IF AK$<>"Y" AND AK$<>"N" THE
N 800
820 INPUT"DO YOU WANT A SPECIAL
NAME FOR  YOUR PUZZLE (Y/N)";PN$
:PRINT
830 IF PN$<>"Y" AND PN$<>"N" THE
N 820
840 IF PN$="Y" THEN PRINT@224,"N
AME (MUST NOT EXCEED 38 TOTAL  L
ETTERS, CHARACTERS, AND SPACES."
;:LINEINPUT SN$
850 IF LEN(SN$)=<38 THEN 930 ELS
E PRINT@288:PRINT@320,"YOUR TITL
E IS TO LONG-REENTER."
860 FOR TD=1 TO 460*2
870 NEXT TD
880 PRINT@320
890 GOTO 840
900 '
910 'START OF TOTAL COPIES LOOP
920 '
930 FOR CC=1 TO CR
940 IF CC>1 AND SD$="S" THEN 171
0
950 CLS
960 PRINT"PREPARING A BLANK GRID
":PRINT"OF ";S;"X";S;"*";
970 FOR I=1 TO S
980 PRINT"-*";
990 FOR J=1 TO S
1000 PG$(I,J)=" "
1010 NEXT J,I
1020 '
1030 'TOTAL WORDS PLACEMENT LOOP

1040 '
1050 FOR WN=1 TO AW
1060 '
1070 'START POINT FOR TARGET WOR
D
1080 '
1090 A=INT(RND(0)*S+1)
1100 B=INT(RND(0)*S+1)
1110 '
1120 'TARGET WORD DIRECTION
1130 '
1140 X=INT(RND(0)*3+1)-2
1150 Y=INT(RND(0)*3+1)-2
1160 IF X=0 AND Y=0 GOTO 1140
1170 SA=A:SB=B
1180 '
1190 'TARGET WORD PLACEMENT LOOP

1200 '
1210 FOR WL=1 TO LEN(WR$(WN))
1220 '
1230 'SET FLAG FOR WORD FIT CHEC
K
1240 '
1250 F=0
1260 '
1270 'CHECK GRID LOCATION FOR AC
CEPTANCE OF CURRENT LETTER
1280 '
1290 IF PG$(A,B)<>" " AND PG$(A,
B)<>MID$(WR$(WN),WL,1) THEN WL=L
EN(WR$(WN)):GOTO 1400
1300 A=A+X
1310 B=B+Y
1320 '
1330 'CHECK IF CURRENT WORD LENG
TH IS OUT OF GRID
1340 '
```

```
1350 IF A<0 OR B<0 OR A>S OR B>S
 THEN WL=LEN(WR$(WN)):GOTO 1400
1360 '
1370 'SET FLAG TO INDICATE CURRE
NT WORD FIT IS OK
1380 '
1390 F=1
1400 NEXT WL
1410 '
1420 'CHECK FLAG - 1=OK (RESET F
LAG TO 0) : 0=WON'T FIT (RELACAT
E)
1430 '
1440 IF F<>1 THEN 1090 ELSE F=0
1450 CLS
1460 PRINT"HIDING >"WR$(WN)
1470 FOR WL=1 TO LEN(WR$(WN))
1480 PG$(SA,SB)=MID$(WR$(WN),WL,
1)
1490 SA=SA+X
1500 SB=SB+Y
1510 NEXT WL
1520 NEXT WN
1530 CLS
1540 '
1550 'CHECK FOR ANSWER KEY RESPO
NSE
1560 '
1570 IF LEFT$(AK$,1)="Y" THEN PR
INT"<*>PRINTING THE ANSWER KEY<*
>":GOSUB 60 ELSE 1650
1580 '
1590 'ANSWER KEY PAGE ADVANCE
1600 '
1610 FOR PA =1 TO 66-(S+5)
1620 PRINT#-2
1630 NEXT PA
1640 CLS
1650 PRINT"PLACING RANDOM LETTER
S IN THE   PUZZLE GRID*";
1660 FOR I=1 TO S
1670 PRINT"-*";
1680 FOR J=1 TO S
1690 IF PG$(I,J)=" " THEN PG$(I,
J)=CHR$(INT(RND(0)*26)+65)
1700 NEXT J,I
1710 CLS:PRINT"PRINTING COPY #";
CC
1720 '
1730 'CALL PUZZLE PRINTOUT SUBRO
UTINE
1740 '
1750 GOSUB 60:PRINT#-2:PRINT#-2
1760 '
1770 'PRINT LOOP FOR TOTAL WORD
LIST
1780 '
1790 FOR I=1 TO TW STEP 3
1800 IF WR$(I)="" THEN I=TW:GOTO
 1820
1810 PRINT#-2,TAB(9)WR$(I);TAB(3
3)WR$(I+1);TAB(58)WR$(I+2)
1820 NEXT I
1830 '
1840 'PUZZLE PAGE ADVANCE
1850 '
1860 FOR PA=1 TO 66-(INT(AW/3+.6
7)+7+S)
1870 PRINT#-2
1880 NEXT PA
1890 NEXT CC
1900 CLS:PRINT@227,"ANY MORE PUZ
ZLES (Y/N)";:INPUT MP$:IF MP$="Y
" THEN RUN ELSE END
```

B I T E S I Z E

THIS DISK UTILITY WILL DISPLAY OR SENT TO THE PRINTER THE DIRECTORY OF YOUR DISK, INCLUDING THE BITES OF EACH PROGRAM. THIS WAY YOU CAN SEE JUST HOW BIG EACH PROGRAM IS. ALSO MAKES A NICE PRINT OUT FOR THE FRONT OF YOUR DISK ENVELOPE.

```
10 ' P D SOFTWARE
20 ' P O BOX 13256
30 ' HOUSTON, TX  77219
40 ' (C) 1985
50 CLS
60 CLEAR 1500
70 PRINT@10,"BITE SIZE"
80 PRINT:INPUT"     PRINTER Y/N"
;Y$
90 IFY$="Y"THENSW=1
100 IF SW=1 THEN LINEINPUT"
NAME OF DISK ";NA$
110 Z=INT((28-LEN(NA$))/2)
120 IF SW=1 THEN PRINT#-2,STRING
$(Z," ");NA$:PRINT#-2,STRING$(Z,
" ");STRING$(LEN(NA$),"-")
130 IF SW=1 THEN PRINT#-2,"NAME
    EXT  GR  BYTE SIZE":PRINT#-2

140 PRINT
150 CLS:PRINT"NAME     EXT  GR
BYTE-SIZE":PRINT
160 DSKI$ 0,17,2,G1$,G2$
170 FOR X=3 TO 11
180 DSKI$ DR,17,X,A$,B$
190 C$=A$+LEFT$(B$,127)
200 FOR N=0 TO 7
210 D$=MID$(C$,N*32+1,32)
220 IF LEFT$(D$,1)=CHR$(255) GOT
O 320
230 N$=MID$(D$,1,8):E$=MID$(D$,9
,3)
```

```
240 IF LEFT$(N$,1)=CHR$(0) THEN
320
250 PRINTN$;"/";E$"  ";
260 IF SW=1 THEN PRINT#-2,N$;"/"
;E$"  ";
270 FOR S=12 TO 16
280 F$=MID$(D$,S,1)
290 F=ASC(F$)
300 ON S-11 GOSUB 380,390,410,56
0
310 NEXT S
320 NEXT N
330 NEXT X
340 GOSUB 670
350 IFSW=1THENPRINT#-2:PRINT#-2
360 IFINKEY$=""THEN360
370 GOTO50
380 RETURN
390 RETURN
400 RETURN
410 FG=F:FT=INT(F/2)
420 IF FT>=17 THEN FT=FT+1
430 A=(F AND 1):IF A=0 THEN FS=1
 ELSE FS=10
440 TG=1:GA=F
450 GOSUB 540
460 IF LG>67 THEN GOTO 480
470 TG=TG+1:GA=LG:GOTO 450
480 LT=INT(GA/2):IF LT>=17 THEN
LT=LT+1
490 NS=(LG AND 15)
500 A=(GA AND 1):IF A=0 THEN LS=
1 ELSE LS=10
510 LS=LS+NS-1:LG=GA
520 BG=(NS-1)*256
530 RETURN
540 N$=MID$(G1$,GA+1,1)
550 LG=ASC(N$):RETURN
560 S=S+1
570 F$=MID$(D$,S,1)
580 LB=ASC(F$)
590 TB=(TG-1)*2304+BG+LB
600 PRINTTG;
610 IF SW=1 THEN PRINT#-2,TG;
620 T5=T5+TG
630 PRINTUSING"###,###";TB
640 IF SW=1 THEN PRINT#-2,USING"
###,###";TB
650 T6=T6+TB
```

****

W A N T E D

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P D SOFTWARE P.O.BOX 13124 HOUSTON,TX 77219

****

```
660 RETURN
670 IFSW=1THENPRINT#-2,TAB(14)"-
----------"
680 PRINTTAB(14)"----------"
690 FR=FREE(0)
700 IFSW=1THENPRINT#-2,USING"%
  %##      ## ###,###";"FREE";FR
;T5;T6
710 PRINT"FREE ";FR;
720 PRINTTAB(13)T5;
730 PRINTUSING"###,###";T6
740 RETURN
```

C L I M B E R

THE OBJECTIVE OF THIS GAME IS TO CLIMB TO THE TOP LEVEL OF THE STRUCTURE. USE THE RIGHT JOYSTICK TO MOVE AND THE FIRE BUTTON TO JUMP OVER THE FIREBALLS IF NECESSARY. NOTE THAT THE FIREBALLS MOVE FASTER AS THE GAME PROGRESSES.

```
1 REM COPYRIGHT (C) T&D SOFTWARE
  1983
2 GOTO8
3 ON D GOTO 4,5,6,7
4 NP=P-T2:RETURN
5 NP=P+K1:RETURN
6 NP=P+T2:RETURN
7 NP=P-K1:RETURN
8 PCLEAR4:PMODE3
9 CLEAR300,15999
10 FORI=16000 TO 16279:READD:POK
EI,D:NEXT
11 DIM FB(5,2):K0=0:K1=1:K2=2:K3
=3:K4=4:K5=5:HT=16000:LC=1055:T2
=32
12 CLS3:PRINT@12,"CLIMBER";:PRIN
T@64,"";
13 PRINT"  THE OBJECTIVE OF THIS
 GAME IS  TO CLIMB TO THE TOP LE
VEL OF    THE STRUCTURE. USE THE
 RIGHT    JOYSTICK TO MOVE AND T
HE FIRE   BUTTON TO JUMP OVER FI
REBALLS   IF NECESSARY."
14 PRINT@288,"   NOTE THAT THE F
IREBALLS MOVE  FASTER AS THE GAM
E PROGRESSES."
15 GOSUB104
16 S=0:GL=5:GA=1:NM=3
17 PCLS:SCREEN1,0
18 FORI=1024 TO 1535:POKEI,K5:NE
XT
19 FORI=1057 TO 1086:POKEI,K3:NE
XT
20 FORI=1217 TO 1246:POKEI,K3:NE
XT
21 FORI=1313 TO 1342:POKEI,K3:NE
XT
```

```
22 FORI=1409TO1438:POKEI,K3:NEXT

23 FORI=1505 TO 1534:POKEI,K3:NE
XT
24 A=1094:GOSUB121
25 A=1105:GOSUB121
26 A=1115:GOSUB121
27 A=1262:GOSUB123
28 A=1272:GOSUB123
29 A=1350:GOSUB123
30 A=1362:GOSUB123
31 A=1371:GOSUB123
32 A=1444:GOSUB123
33 A=1448:GOSUB123
34 A=1454:GOSUB123
35 A=1463:GOSUB123
36 FORI=1024 TO 1536 STEP32:POKE
I,K4:POKEI+31,K4:NEXT
37 FB(K1,K0)=1027:FB(K1,K1)=K2
38 FB(K2,K0)=1480:FB(K2,K1)=K2
39 FB(K3,K0)=1195:FB(K3,K1)=K2
40 FB(K4,K0)=1308:FB(K4,K1)=K4
41 FB(K5,K0)=1388:FB(K5,K1)=K2
42 PP=1500:PC=PEEK(PP)
43 POKEPP,K0
44 FORI=K1 TO K5:FB(I,K2)=PEEK(F
B(I,K0)):POKEFB(I,K0),K1:NEXT
45 PLAY"V31T5004ADBE02EDA01ED03E
DE"
46 EXECHT
47 LF=K0
48 FORGC=K1 TO GL:IF PP<=LC THEN
101
49 H=JOYSTK(K0):V=JOYSTK(K1)
50 IF LF=K1 THEN52
51 FP=PEEK(65280)
52 IF H<10 THEN PD=K4:GOTO57
53 IF H>53 THEN PD=K2:GOTO57
54 IF V<10 THEN PD=K1:GOTO57
55 IF V>53 THEN PD=K3:GOTO57
56 GOTO77
57 SOUND255,1:D=PD:P=PP:GOSUB3:C
P=PEEK(NP)
58 IF FP<>254 AND FP<>126 THEN65

59 IF PD=K1 OR PD=K3 THEN77
60 IF CP=K4 THEN77
61 P=NP:GOSUB3:IFPEEK(NP)=K4 THE
N77
62 IF PEEK(NP)=K1 THEN77
63 POKEPP,PC:PC=PEEK(P-T2):POKEP
-T2,K0:EXECHT:IFPEEK(P)=K1 THENS
=S+RND(K3)*100:PLAY"05V31T100ADE
03ED"
64 POKEP-T2,PC:PC=PEEK(NP):POKEN
P,K0:EXECHT:PP=NP:GOTO77
65 IFCP=K1 THENPOKEPP,PC:PP=NP:P
C=PEEK(NP):POKEPP,K0:GOTO90
66 IFCP=K4 THEN77
67 IF LF=K0 THEN73
68 IF (PD=K2 OR PD=K4) AND PEEK(
NP+32)=K3 THENLF=K0:GOTO76
69 IF CP=K3 AND PD=K3 THEN77
70 IF CP=K3 AND PD=K1 THEN NP=NP
-32:IF PEEK(NP)=K1 THEN90 ELSE76

71 IF PEEK(NP)=K2 THEN76
72 GOTO77
73 IF CP=K2 THENLF=K1
74 IF PD=K3 AND PEEK(NP+32)=K2 T
HEN NP=NP+32:LF=K1
75 IF (PD=K1 OR PD=K3)AND LF=K0
THEN77
76 POKEPP,PC:PP=NP:PC=PEEK(NP):P
OKEPP,K0:EXECHT
77 NEXT GC
78 FOR GC=K1 TO GA
79 FORI=K1 TO K5:P=FB(I,K0):D=FB
(I,K1):GOSUB3
80 IFFB(I,K2)<>K2 THEN83
81 IFPEEK(FB(I,K0)-T2)<>K0 THEN8
3
82 POKEFB(I,K0),FB(I,K2):POKEFB(
I,K0)-T2,K1:GOTO90
83 CP=PEEK(NP):IF CP<>K4 AND RND
(K3)<>RND(K4) THEN86
84 IF D=K2 THEN FB(I,K1)=K4 ELSE
 FB(I,K1)=K2
85 GOTO 88
86 IF CP=K0 THENPOKEFB(I,K0),FB(
I,K2):GOTO90
87 POKEFB(I,K0),FB(I,K2):FB(I,K2
)=PEEK(NP):FB(I,K0)=NP:POKENP,K1

88 NEXT:EXECHT:NEXTGC
89 GOTO48
90 FORI=1 TO 10:POKEPP,K0:PLAY"T
5001ADE":EXECHT:POKEPP,K1:EXECHT
:NEXT:CLS:NM=NM-1:IF NM=0 THEN95

91 PRINTTAB(10)"SCORE: ";S
92 PRINTTAB(10)"RESERVES: ";NM
93 FORTD=0TO3000:NEXT
94 GOTO17
95 PRINTTAB(10)"SCORE: ";S
96 PRINT:PRINTTAB(11)"GAME OVER"

97 PRINT:PRINTTAB(9)"PLAY AGAIN
? (Y/N)"
98 K$=INKEY$:IFK$="Y" THEN16
99 IF K$<>"N" THEN98
100 END
101 CLS:PRINTTAB(8)"LEVEL COMPLE
TE !":PRINTTAB(10)"BONUS: ";:B=R
ND(5)*1000:PRINTB:S=S+B:GL=GL-1
102 IF GL<0 THEN GL=1:GA=GA+1
103 PRINT:GOTO91
104 PRINT@484,"PRESS [ENTER] TO
CONTINUE";
```

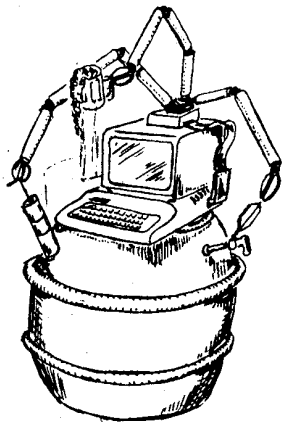
```
105 IFINKEY$<>CHR$(13)THEN105
106 RETURN
107 DATA 111,141,0,142,111,141,0
,139,111,141,0,133,166,141,0,129
,198,32,61,227
108 DATA 141,0,123,195,4,0,31,1,
166,132,129,64,37,2,128,64,198,1
2,61,48
109 DATA 141,0,157,48,139,49,141
,0,111,198,12,166,128,167,160,90
,38,249,166,141
110 DATA 0,83,198,192,61,237,141
,0,86,166,141,0,72,198,192,61,22
7,141,0,75
111 DATA 18,18,18,211,186,31,1,7
9,230,141,0,55,48,139,198,12,49,
141,0,60
112 DATA 166,160,18,18,167,132,4
8,136,32,90,38,244,166,141,0,31,
76,167,141,0
113 DATA 26,129,32,38,143,111,14
1,0,18,166,141,0,12,76,167,141,0
,7,129,16
114 DATA 16,38,255,124,57,16,0,0
,0,0,0,0,0,0,0,11,64,242,255,242

115 DATA 255,242,255,242,255,242
,255,242,255,242,255,242,255,242
,255,242,255,242,255,242
116 DATA 255,242,255,242,255,242
,255,242,255,242,255,242,255,242
,255,242,255,242,255,242
117 DATA 85,85,150,0,0,65,130,40
,40,40,40,40,170,166,150,85,85,8
5,85,85
118 DATA 85,85,85,150,40,0,40,40
,40,0,40,40,40,0,40,40,204,51,20
4,51
119 DATA 204,51,204,51,204,51,20
4,51,0,0,0,0,0,0,0,0,0,0,0,0
120 DATA 170,170,170,170,170,170
,170,170,170,170,170,170,20,85,8
5,85,85,247,60,48
121 EA=A+96:FORI=A TO EA STEP32
122 POKEI,K2:NEXT:RETURN
123 POKEA,K2:POKEA+32,K2:RETURN
```

THE COST OF A MEMORY UPGRADE

The cost of a Tandy 512K upgrade is 150.00, or so I am told. Now, a C-128 upgrade that adds 128k and gives a total of 256K was 109.97 at my local Toys R' Us. I checked with a local Apple dealer, and the 512K upgrade for the GS is 129.95. Thus, I think I can honestly say that the Tandy upgrade is not out of line. As for the possibility of it being to less expensive by designing the computer differently, well, I don't think so. I took a look at the photo on page 95 of the October Rainbow, and it doesn't look like there is room on the board for an additional 12 chips.(There are four sockets already for the 128K of RAM). Thus, to make it possible to get 512K on-board would have required redesigning the board and the current case, which would have cost more money. Also, since it would have resulted in a bigger computer, many people would have to then buy a new computer desk, for let's say, 100 bucks. Thus, no net savings in money would have been achieved.

As for the monochrome monitor:
As a Radio Shack Dealer(independently owned) I sell a good quantity of Mod 1000's, or did, until my stock ran out. For almost all those machines, I sold color monitors. I would have to say that my monochrome sales were less than 10%. Thus, Tandy not emphasizing monochrome monitors is understandable, not that many people are going to buy them, and frankly, I think somebody elses mono monitors would be a better choice in many cases. In any case, Tandy does mention monitors generically in both the full line catalog and in the computer hardware catalog. Also, people that would want a mono monitor are probably familar with the terminalogy of "composite monitor" and what it means. Yeah, maybe Tandy should say outright, "or, get one of our monochrome monitors for high-quality text", but, the fact that they don't is not high level crime in my opinion.

As I said, I am sorry if I have said anything stupid, but, I haven't the time/money right now to do all the downloading I want. After all, I am saving up for a CoCo 3!



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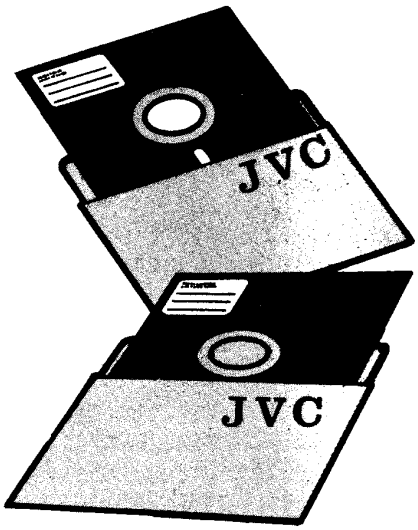

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Back Issues

BACK ISSUES OF THE 'COCO ADS' WITH THE PROGRAMS ON TAPE OR DISK ARE NOW AVAILABLE TO YOU. THE PACKAGE COMES WITH THE NEWSPAPAER AND TAPE OR DISK WITH THE PROGRAMS ALREADY TYPED IN AND READY TO RUN. THE FOLOWIING ARE AVAILABLE.

ISSUE A1

YAHTZEE	- GAME OF DICE, LIKE THE GAME YAHTZEE
SORT	- BASIC BUBBLE SORT DEMO

ISSUE A2

SCREEN DUMP	- DUMPS SCREEN TO PRINTER
SEE	- DISK DIRECTORY UTILITY
CALENDAR	- PRINT TO PRINTER A CALENDAR
LABYRINTH	- ADVENTURE (VERY GOOD)
FINDWORD	- WORD SEARCH PUZZLE

ISSUE A3

TAPE LIST	- PROGRAM NAMES ON TAPE TO PRINTER & ENTER COUNTER #
CLOCK	- DISPLAYS CLOCK IN CORNER OF SCREEN
DISKMAP	- DISK UTILITY SHOWS DISK USAGE
LIST	- LIST TO PRINTER DATA FILES
KEYBOMBER	- GAME
PONG	- GAME
BOX LABEL	- LABEL INSERTS FOR YOUR CASSETTE BOXES
DESIGNS	- MAKES DESIGNS
REMULAK'S	- ADVENTURE (VERY GOOD)

ISSUE A4

LABELS	- MAKES 2 ACCROSS LABELS
DATA BASE	- 5 PROGRAMS IN THIS PACKAGE OF A VERY POWERFUL DATA BASE PROGRAM.

ISSUE A5

LABELS	- CENTERS LABELS
DATA SPEAK	- UTILITY TO MAKE YOUR PROGRAMS LINES TALK
MULTI PAC	- UTILITY FOR SPECTRUM PROJECTS MULIT-PAK
GONDOLA	- GAME (VERY GOOD)
AUTO LINE	- ML UTILITY TO MAKE AUTO-LINES
DISK FILE	- KILLS FILES ON MULTI-DISKS
ODD COUPLE	- TRIVIA GAME
HANGMAN	- HANGMAN GAME
FLIP-FLOP	- FLIP-FLOP GAME
TRANSFER	- DISK UTILITY TO TRANSFER PROGRAMS FROM DRIVE 0 TO 1

ISSUE A6

AIR-RAID	- GAME
GRAPH	- BUSINESS MAKES NICE LOOKING GRAPHICS
AUTOLINE #2	- BASIC VERSION OF ML AUTOLINE PROGRAM
TANKS	- GAME OF TANKS
RACE-ACE	- CAR GAME
PERCENT	- KEEP STUDENTS AVERAGE
SUB DESTROYER	- GAME
ANIMAL	- GAME AGAINST THE COMPUTER
COPYTRACK 17	- DISK UTILITY
AUTO-WRITE	- UTILITY TO MAKE BASIC PROGRAMS

ISSUE A7

AIRATTACK	- GAME
ST. GEORGE	- ADVENTURE
CASDICE	- DICE GAME
PURCHASE ORDER	- BUSINESS TO WRITE PURCHASE ORDERS-DISK
EQUATION	- CALCULATOR UP TO FOUR VARIABLES
TRACK MOVE	- DISK UTILITY
PHONE	- KEEP TRACK OF YOUR PHONE NUMBERS

ISSUE A8

DISKCOPY	- DISK UTILITY
CERIFY	- DISK UTILITY
SCANNER	- DISK UTILITY
TIME	- EDUCATIONAL FOR THE YOUNG TO LEARN TIME
MUSIC	- HELPS MAKE MUSIC
PING PONG	- GAME
PHONE DIALER	- DIAL A TOUCH TONE PHONE THROUGH YOUR COCO
PHONE SORTER	- SORTS YOUR PHONE NUMBERS

ISSUE A9

COMPAC	- UTILITY TO REMOVE ALL UNWANTED LINES (REM)
DISK LISTER	- DISK UTILITY
JEWELS	- ADVENTURE
CASSETTE LIB	- FILE PROGRAM FOR YOUR CASSETTE PROGRAMS
TITLE PAGE	- TO FORMAT A TERM PAPER
CHANGE SQUAR	- GAME TO MATCH COLOR SQUARES
MYSTER ISLND	- ADVENTURE
PIG	- GAME

ISSUE A10

ROM MAP	- A LOOK AT YOUR RAM
ROLLOVER	- UTILITY
CODE TABLE	- GENERATE CODE TABLE
MAZE	- NEAT LITTLE GAME
MUSIC	- HELPS YOU TO WRITE MUSIC
ANIMAL DISK	- GUESS THE ANIMAL GAME
SOUND REQU	- SEE DIFFERENT SOUNDS ON YOUR SCREEN
DESTROYER	- SHIP GAME
SAFE CRAKER	- OPEN THE SAFE (GAME)

ISSUE A11

TAX ESTIMATE	- HELPS ESTIMATE YOUR TAX THOURGH THE YEAR
M L T T D	- UTILITY TO TRANSFER TAPE TO DISK
PARTS INVEN	- INVENTORY FILE PROGRAM
DATA MAKER	- MAKES DATA STATEMENT FROM JUST INPUTS
KABOOM	- GAME
DEF MOV	- GAME
R/C AIRPLANE	- GAME
MATCH SQU	- GAME

ISSUE A12

PILOT	- UTILITY
TEST	- UTILITY
SCHOOL ADV	- ADVENTURE
MINI-GEN	- GENERATOR TO MAKE YOUR OWN ADVENTURES
DISK-CALC	- VERY GOOD SPREADSHEET CALCULATOR PROGRAM
COCO-MONITOR	- UTILITY

ISSUE B1

CHESS - GAME
TRUCKER - GAME
CODEFILE- GAME
FRACTION - EDUCTIONAL
4-D TICTACTOW - GAME
DRAW POKER - CARD GAME
JUNGLE TREK - ADVENTURE

ISSUE B2

CLOCK - A CLOCK
WORD PROC - PROCESSOR
CASS FILE - TAPE UTILITY
CASTLE - ADVENTURE
HOME BUDGET - BUDGET
DISK MASTER - DISK UTILITY
ROAD RACE - GAME

ISSUE B3

AMORITZATION
SPOOLER PRINT
DISKCOPY UTIL
PUZZLE - GAME
STOCKMARKET
WIDTH CHANG
BIORHYTHM
TANK GAME

ISSUE B4

RECOVER - UTILITY
DATABOOK- FILE
ROMPAC TO TAPE - UTILITY
CALENDAR- UTILITY
LETTER - BUSINESS
ANTI-TORPEDO - GAME

ISSUE B5

CANNON - GAME
CRYPT - ADVENTURE
BANNER - UTILITY
FLASH CARD - EDUCATIONAL
WORDS-GAME & EDUCATIONAL
REPORTER KIT - BUSINESS

ISSUE B6

RETRIEVER- UTIL
POOL - GAME
STATES - EDUC
DRAW - GAME
DISK SPEED-UTIL
ML ADDR - UTIL
TRIANGLE-ART
NAME - FILE
HANGMAN - GAME

ISSUE B7		ISSUE B8	
CONQUEST	VG ADVENTURE	STOCKMARKET	GAME
MTERM CONFIG	UTILITY	DISK TRICK	DISK UTILITY
LOST TREASURE	ADVENTURE	DRAW	DRAW
DISK ZAPR	DISK UTILITY	BRICKS	GAME
LOTTO	LOTTERY NUMBERS	WATTS	UTILITY
SPELL HELP	EDUCATIONAL	DIARY	FILE
UNSCRAMBLE	EDUCATIONAL	ORBQUEST	ADVENTURE
		ROM TO ROM	UTILITY
		CLOCK	UTILITY

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ADVENTURING FROM THE OTHER END OF THE PROGRAM
Part III: Displaying Information,
Getting Commands, and
Dispatching Them.

By: Michael E. Salsbury

The last two articles got you through the idea-making phase and programming in the map, objects, and commands. It also left you with the challenge to see what you can do on your own of this section. Now you get to see how well you did. This time we will write the instructions needed to display all the "I AM IN:", "I SEE:", "EXITS ARE:", etc. information. We will also learn how to take in the player's command and convert it into a pair of numbers, so that we may send the computer to a "LOOK", "GET", or "NORTH" routine and so that it knows to "LOOK" at item 1, or "DROP" item 2, etc. We will NOT go into those routines yet. That's next month!

Well, you should have written something just about like this last time if you accepted my little challenge:

```
500 T=T+1:C=0:O=0:RD=RD-1
510 PRINT"I AM ";R$(L)
520 PRINT:PRINT"I SEE:"
530 FORI=1TO(number of objects)
540 IFO(I)=L THENPRINT"-";O$(I);"-",;
550 NEXTI:PRINT:PRINT
560 PRINT"EXITS ARE:";
570 IFL(L,1)>0THEN?"NORTH,"
580 IFL(L,2)>0THEN?"SOUTH,"
590 IFL(L,3)>0THEN?"EAST,"
600 IFL(L,4)>0THEN?"WEST."
610 PRINT:INPUT"WHAT DO I DO?";D$
```

Line 500 initializes each turn, etc. as asked in the challenge. Line 510 tells you where you are by using L to pick out the room description in R$. Lines 520 through 550 go through the objects one by one and if the object is located in the current location, it prints the name, surrounded by dashes in two columns on the screen. Lines 560 through 600 check to see that the exits connect to something and then output the word for each exit that goes someplace (unless it's hidden, i.e., L(x,y)=0). Line 610 gets in the player's command. Now we have to figure out how to turn these commands into numbers, which makes them easier for the computer (and us) to handle.

Remember in the last article that I told you there were two ways to handle player's commands? First was to have all possible commands in a single string. We will discuss this first.

What we have the CoCo do in this method is to get the first three letters of the player's command and then go down the command string three letters at a time until we find a match. If there is no match, we don't have a command we understand, so we say "got no idea what you want" or words to that effect. If there is a match, we store the command number in C and proceed to process the object. In BASIC, the method looks like this:

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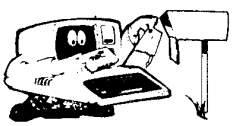

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```
650 D2$=LEFT$(D$,3)
660 FORI=1TOLEN(C$)STEP3
        670
IFD2$=MID$(C$,I,3)THENC=(I+2)/3:I=LEN(C$)
      680       NEXTI:IFC=0THENPRINT"DON'T
UNDERSTAND.":GOTO500
```

As you can see, it is fairly simple and doesn't take much effort to understand. However, if you have a lot of commands, and have to use more than the first three letters of a command to avoid duplication, then you may find that you cannot store all the commands in one string. This leaves you with two options. The first is to set up another string and in effect copy the above to scan the second variable. This is kind of sloppy, but effective. The other method is neater and is the one I like to use more than the above.

In this method, you have the first three letters of each command stored in a separate part of the C$(x) array. You take the first three letters of the player's command and then go down the C$ array until you find a match. When you do, you give C the appropriate number and leave the loop. It looks about like this:

```
650 D2$=LEFT$(D$,3)
660 FORI=1TO(number of commands)
   670    IFD2$=C$(I)THENC=I:I=(number    of
commands)
   680    NEXTI:IFC=0THENPRINT"DON'T     GET
IT.":GOTO500
```

This one takes the same number of lines, but is a little simpler from the standpoint of "following" what is going on in the listing. Another person can easily look at those lines and with not too much effort can figure out what they do. I suspect, though, that this method is maybe slower and more memory-eating than the other, but to me is still the preferred one. Simplicity is important to me.

Now that we know what command the player typed in, it is a simple matter to locate what object they are talking about through the same process. That is, we go down the player's command and find a space, since every good typist separates his words with a space. The first three characters to the right of the space will be the first three in the name of the player's intended object, such as "BAS" for "baseball" in "throw baseball". Once we have the player's object in word form, we compare it against our list of objects and voila, the number of the object! The code looks like this:

```
    700     FORI=1TOLEN(D$):IFMID$(D$,I,1)="
"THEND2$=MID$(D$,I+1,3):I=LEN(D$)
710 NEXTI
720 FORI=1TO(number of objects)
730 IFD2$=LEFT$(O$(I),3)THENO=I:I=(number of
objects)
740 NEXTI
```

CONGRATULATIONS!! You now know the toughest parts of adventure writing. All that is left for you to learn now are the tedious parts. The first of those is the next line in our little example, and what follows it:

```
750 ON C GOSUB 1000,2000,3000,4000,5000
760 ON C-5 GOSUB 6000,7000,8000,9000,10000
770 GOTO500
```

This takes the C of the player's command and goes to the routine designed to handle it. For example, if North were command number 1 then the program would go to 1000 where it would change the variables necessary to go north (if it could), or look at a dog, or get a baseball, etc. Line 770 just returns to the beginning of the next turn. Easy huh?

If you got through all this and understand how it works, the rest is really downhill from here. It consists of a lot of IF statements that print things on the screen and change one or more variables. Easy to understand from a programming standpoint. Tedious and time-consuming from a typing and debugging standpoint.

Before next month, go over your fledgeling adventure and make sure that it does in fact produce the right command number and object number when you enter a command as the player. All you have to go is just replace 750 and 760 with two PRINT statements. If the numbers it prints are right, so is your coding. If not, have fun debugging, but get it right BEFORE you go on.

Next month is going to be interesting, because it is the actual puzzle programming part of adventure writing. It consists of figuring out how to turn your puzzle ideas into IF statements and variables. Sometimes that can be a puzzle as great as the game itself!

Until then, this is the old Lost Adventurer, signing off for another 30 days or so. Hope all your problems have quick, easy solutions! Address any questions (with a SASE) to:

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Q B E E

USE THE JOYSTICK OR KEYBOARD TO MOVE 'QBEE' AROUND THE BOARD. TRY TO CHANGE ALL THE BLOCKS TO RED.
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```
10 ND=PEEK(27)*256+PEEK(28)-3:DE
FUSR0=ND-840:DEFUSR1=ND-691:DEFU
SR2=ND-685:DEFUSR3=ND-679:DEFUSR
4=ND-673:DEFUSR5=ND-667:GOSUB375
:CLEAR300
15 DIMSC(5),NM$(5):SL=8:SR=216:S
Y=56:KJ=0:SN=1:LV=1:SC=0:Q=4:F1=
20:F2=40:D1=25:E1=2:FORI=1TO5:SC
(I)=0:NM$(I)="":NEXTI
20 X=112:Y=70:CT=1:U=112:V=16:U1
=112:V1=16:U2=0:V2=0:W=112:Z=16:
W1=112:Z1=16:W2=0:Z2=0:C=0:D=0:E
=0:F=F1:BX=1:BY=1:FL=0:IFKJ<>0TH
ENGOSUB350:GOTO35
25 M1$="V31O4L255EFE":M2$="V31T5
L8O5CO4AGAL4GL8GAGBABL4AL8ABAGG#
AA#L4BO5EL24CO4BA#AG#GG#AA#BO5C"
:M3$="V31O5L255;1;2;3;4;5;6;7;8;
9;10;11;12;":M4$="V31O1L255CGCGC
":M5$="V31L255O1CDEFGAB":M6$="V3
1T5O1L8AP8BO2CO1BAO2L4.FL8EP4L8E
FEDCO1BAP8O2EA":S$=CHR$(128)
30 GOSUB315
35 ONKJ GOSUB165,180:C=C+1:IFC>F
 THENGOSUB80
40 D=D+1:E=E+1:IFD=(D1+1)THENPP=
PPOINT(128,32)
45 IFD>D1 ANDE>E1 THENE=0:IFC<F
THENF=F2:GOSUB110ELSEGOSUB110
50 IFR=1THEN35
55 IFX=U2 ANDY=V2 THENZZ=USR4(Y1
):ZZ=USR4(X1):X1=X:Y1=Y:U=X:V=Y:
GOTO155
60 IFX=W2 ANDY=Z2 THENZZ=USR4(Y1
):ZZ=USR4(X1):X1=X:Y1=Y:W=X:Z=Y:
IFPP=4THENCT=CT-1:GOTO195:ELSE19
5
65 IFY<00RPPOINT(X+16,Y+16)=1THE
NX=X1:Y=Y1:GOTO35ELSEIFPPOINT(X+
16,Y+16)=3THENCT=CT+1:SC=SC+50:G
OSUB235
70 ZZ=USR4(Y1):ZZ=USR4(X1):ZZ=US
R1(Y):ZZ=USR1(X):PLAYM1$:X1=X:Y1
=Y:IFCT=17THENSN=SN+1:BO=SN*500:
SC=SC+BO:PLAYM2$:IFSN>3THENGOSUB
250:GOTO20ELSE20
75 GOTO35
80 IFU=X1 ANDV=Y1 THENCT=CT-1:ZZ
=USR5(V1):ZZ=USR5(U1):GOTO155
85 IFPPOINT(U+16,V+16)=1THENPLAY
M3$:ZZ=USR5(V1):ZZ=USR5(U1):C=0:
U=112:V=16:U1=112:V1=16:U2=0:V2=
0:GOSUB235:RETURN
90 IFPPOINT(U+16,V+16)=4THENCT=C
T-1:SC=SC-50
95 IFPPOINT(U+14,V+13)=2THENIFPP
=4THENCT=CT-1:SC=SC-50:PP=3
100 ZZ=USR5(V1):ZZ=USR5(U1):ZZ=U
SR3(V):ZZ=USR3(U):PLAYM4$:U1=U:V
1=V:U2=U:V2=V:IFRND(2)=1THENU=U+
32ELSEU=U-32
105 V=V+27:RETURN
110 IFW=X1 ANDZ=Y1 THENCT=CT-1:I
FPP=4THENZZ=USR4(Z1):ZZ=USR4(W1)
:GOTO195 ELSEZZ=USR5(Z1):ZZ=USR5
(W1):GOTO195
115 IFPP=4THENZZ=USR4(Z1):ZZ=USR
4(W1) ELSEZZ=USR5(Z1):ZZ=USR5(W1
)
120 PP=PPOINT(W+16,Z+16):ZZ=USR2
(Z):ZZ=USR2(W):PLAYM5$:W1=W:W2=W
:Z1=Z:Z2=Z:IFW=X1 THENW=W+32-(RN
D(2)-1)*64ELSEW=W+32*SGN(X1-W)
125 IFZ=Y1 THENZ=Z+27-(RND(2)-1)
*54ELSEZ=Z+27*SGN(Y1-Z)
130 IFW<16THENW=W+64ELSEIFW>208T
HENW=W-64
135 IFZ<16THENZ=Z+54ELSEIFZ>151T
HENZ=Z-54
140 IFSN>1ANDZ=43THENIFW=16THENW
=80ELSEIFW=208THENW=144
145 IFSN=3ANDZ=151THENIFW=80ORW=
144THENZ=97
150 RETURN
155 PLAY"V31L255":FORI=1TO12:ZZ=
USR3(V):ZZ=USR3(U):PLAY"O1;=I;":
ZZ=USR1(V):ZZ=USR1(U):PLAY"O4;=I
;":NEXTI
160 CT=CT+1:U=112:U1=112:V=16:V1
=16:C=0:U2=0:V2=0:X=X1:Y=Y1:Q=Q-
1:IFQ=0THEN255ELSECOLOR1,1:LINE(
0+(Q-1)*16,0)-(15+(Q-1)*16,15),P
SET,BF:COLOR4,1:GOTO35
165 R=0:A=JOYSTK(0):B=JOYSTK(1):
IFPEEK(339)=254THENGOSUB210
170 IFA<20ANDB<20THENX=X-32:Y=Y-
27ELSEIFA>43ANDB<20THENX=X+32:Y=
Y-27ELSEIFA>43ANDB>43THENX=X+32:
Y=Y+27:ELSEIFA<20ANDB>43THENX=X-
32:Y=Y+27ELSER=1:RETURN
175 RETURN
180 R=0:IFPEEK(345)=247THENGOSUB
210
185 IFPEEK(343)=247THENX=X-32:Y=
Y-27ELSEIFPEEK(344)=247THENX=X+3
2:Y=Y-27ELSEIFPEEK(339)=191THENX
=X+32:Y=Y+27ELSEIFPEEK(338)=191T
HENX=X-32:Y=Y+27ELSER=1:RETURN
190 RETURN
195 IFFL=1THEN205ELSEPLAY"V31O5L
255":FORI=1TO12:ZZ=USR2(Z):ZZ=US
R2(W):PLAY"=I;":ZZ=USR1(Z):ZZ=US
R1(W):PLAY"=I;":NEXTI:CT=CT+1:W=
```

```
112:W1=112:W2=0:Z=16:Z1=16:Z2=0:
X=X1:Y=Y1:D=0:E=0:F=F1:Q=Q-1
200 IFQ=0THEN255ELSECOLOR1,1:LIN
E(0+(Q-1)*16,0)-(15+(Q-1)*16,15)
,PSET,BF:COLOR4,1:GOTO35
205 FORI=1TO20:ZZ=USR2(Z):ZZ=USR
2(W):PLAY"O1L255V31C":ZZ=USR4(Z)
:ZZ=USR4(W):PLAY"O5L255V31D":NEX
TI:D=0:W=112:W1=112:W2=0:Z=16:Z1
=16:Z2=0:E=0:F=F1:CT=CT+1:SC=SC+
300:GOSUB235:RETURN
210 IFD<(D1+1)THENRETURNELSEIFX=
208 AND Y=97 AND BX=1 THEN215ELS
EIFX=16 AND Y=97 AND BY=1THEN225
ELSERETURN
215 ZZ=USR4(Y):ZZ=USR4(X):ZZ=USR
1(SY):ZZ=USR1(SR):FL=1:BX=0:GOSU
B110:FORI=1TO100:NEXTI:IFD<>0 TH
ENGOSUB110
220 FL=0:COLOR1,1:LINE(216,56)-(
247,83),PSET,BF:COLOR4,1:ZZ=USR1
(Y):ZZ=USR1(X):RETURN
225 ZZ=USR4(Y):ZZ=USR4(X):ZZ=USR
1(SY):ZZ=USR1(SL):FL=1:BY=0:GOSU
B110:FORI=1TO100:NEXTI:IFD<>0 TH
ENGOSUB110
230 FL=0:COLOR1,1:LINE(8,56)-(39
,83),PSET,BF:COLOR4,1:ZZ=USR1(Y)
:ZZ=USR1(X):RETURN
235 SC$=STR$(SC):IFSC<=0 THENSC$
=" 0"
240 SC$=USR0(SC$):RETURN
245 CLS0:PRINT@109,"level";:PRIN
T@174,LV;:PRINT@268,"screen";:PR
INT@334,SN;:IFSN>10RLV>1THENPRIN
T@457,"bonus"S$S$S$;BO;:POKE1487
,61:SCREEN0,1:RETURNELSESCREEN0,
1:RETURN
250 Q=Q+1:D1=20:F1=10:F2=20:SN=1
:LV=LV+1:IFLV=3THENE1=1:RETURNEL
SEIFLV=4THENE1=0:RETURNELSEIFLV>
4THEND1=15:F1=10:F2=10:RETURNELS
ERETURN
255 GOSUB235:FORI=1TO800:NEXTI:F
ORI=1TO5:IFSC>SC(I)THEN275ELSENE
XTI
260 CLS0:PRINT@73,"your"S$"score
"S$"was";:PRINT@128+INT((32-LEN(
STR$(SC)))/2),SC;:PRINT@270,"pre
ss";:PRINT@325,"spacebar"S$"or"S
$"fire"S$"button";:PRINT@394,"to
"S$"play"S$"again";:SCREEN0,1
265 A$=INKEY$:IFPEEK(339)=254THE
NA$=" "ELSEIFA$<>" "THEN265
270 PRINT@491,"get"S$"ready";:SC
REEN0,1:SC=0:Q=4:SN=1:LV=1:F1=20
:F2=40:D1=25:E1=2:FORI=1TO300:NE
XTI:GOTO20
275 IFI<5THENFORJ=5TO(I+1)STEP-1
:SC(J)=SC(J-1):NM$(J)=NM$(J-1):N
EXTJ
280 CLS:PRINT@9,"CONGRATULATIONS
!";:PRINT@66,"YOUR SCORE QUALIFI
ES FOR THE";:PRINT@137,"TOP FIVE
 ROSTER";:PRINT@225,;:INPUT"MAY
WE HAVE YOUR NAME FOR THE   RECO
RD BOOKS";NM$(I)
285 SC(I)=SC:IF LEN(NM$(I))>15TH
ENNM$(I)=LEFT$(NM$(I),15)
290 CLS3:FORI=1TO5:PRINT@0+(I-1)
*96,I;:PRINT@5+(I-1)*96,NM$(I);:
IFSC(I)=0THENNEXTI ELSEPRINT@22+
(I-1)*96,SC(I);:NEXTI
295 PRINT@449,"PRESS SPACEBAR OR
 FIRE BUTTON ";:PRINT@490,"TO PL
AY AGAIN ";:SCREEN0,1
300 A$=INKEY$:IFPEEK(339)=254THE
NA$=" "ELSEIFA$<>" "THEN300
305 CLS0:PRINT@235,"get"S$"ready
";:SCREEN0,1:SC=0:Q=4:SN=1:LV=1:
F1=20:F2=40:D1=25:E1=2:FORI=1TO3
00:NEXTI:GOTO20
310 GOTO310
315 CLS0:PRINT@262,"keyboard";S$
;"or";S$;"joystick";:PRINT@333,"
(k/j)";:SCREEN0,1:POKE1357,40:PO
KE1359,47:POKE1361,41:POKE1363,6
3
320 A$=INKEY$:IFPEEK(339)=254THE
NA$="J"ELSEIFA$=""THEN320
325 IF A$="J"THENKJ=1ELSEIFA$<>"
K"THEN315ELSEKJ=2
330 ON KJ GOTO 335,340
335 CLS0:PRINT@229,"use";S$;"the
";S$;"right";S$;"joystick";:PRIN
T@292,"to";S$;"control";S$;"your
";S$;"direction";:SCREEN0,1:GOTO
345
340 CLS0:PRINT@3,"use"S$"the"S$"
following"S$"keys"S$"to";:PRINT@
68,"control"S$"your"S$"direction
";:PRINT@195,"left"S$"arrow";:PR
INT@207,"right"S$"arrow";:PRINT@
296,"enter";:PRINT@303,"clear";;
:SCREEN0,1:POKE1261,28:POKE1262,
47:POKE1293,47:POKE1294,28
345 FORI=1TO2000:NEXTI:PMODE3,1:
PCLS:LQ$="BL4C2L2U2L2D2L2BU3C3R6
U1R2L10U1R10U1L10U1R10U1L10R2C2U
4L2R2D4C3R6U1C2U3R2L2D3"
350 GOSUB245:PCLS:RESTORE:FORI=1
TO17:READX1,Y1:IFI=2ANDSN=1THENF
ORJ=1TO2:READX1,Y1:NEXTJ ELSEIFI
=16ANDSN=3THENFORJ=1TO2:READX1,Y
1:NEXTJ
355 COLOR3,1:LINE(X1,Y1)-(X1+31,
Y1+27),PSET,BF:DR$="BM"+STR$(X1+
31)+","+STR$(Y1+27)+";C0F8U27NH8
D27L32H8":DRAWDR$:NEXTI
360 IFQ=1THEN370ELSEFORI=0TO(Q-2
):DRAW"BM"+STR$(15+I*16)+",15;"+
LQ$:NEXTI
```

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```
365 DATA112,16,48,16,176,16,80,4
3,144,43,48,70,112,70,176,70,16,
97,80,97,144,97,208,97,48,124,11
2,124,176,124,80,151,144,151,16,
151,208,151
370 ZZ=USR1(Y):ZZ=USR1(X):COLOR2
,1:LINE(8,56)-(39,83),PSET,B:LIN
E(216,56)-(247,83),PSET,B:X1=X:Y
1=Y:SCREEN1,0:GOSUB235:PLAYM6$:R
ETURN
375 CLS0:PRINT@480,"DO YOU NEED
INSTRUCTIONS (Y/N)?";:S$=CHR$(12
8):A=175:A1=175:B=191:C=255:D=22
3
380 A$=CHR$(A):B$=CHR$(B):C$=CHR
$(C):D$=CHR$(D)
385 PRINT@131,A$A$A$A$S$S$S$S$B$
B$B$B$S$S$S$C$C$C$C$C$S$S$D$D$D$
D$D$;:PRINT@162,A$S$S$S$S$A$S$S$
S$B$S$S$S$B$S$S$C$S$S$S$S$S$S$D$
;
390 PRINT@194,A$S$S$S$S$A$S$S$S$
B$S$S$S$B$S$S$C$S$S$S$S$S$S$D$;:
PRINT@226,A$S$S$A$S$A$S$S$S$B$B$
B$B$S$S$S$C$C$C$C$S$S$S$D$D$D$D$
;
395 PRINT@258,A$S$S$S$A$A$S$S$S$
B$S$S$S$B$S$S$C$S$S$S$S$S$S$D$;:
PRINT@290,A$S$S$S$S$A$S$S$S$B$S$
S$S$B$S$S$C$S$S$S$S$S$S$D$;:PRIN
T@323,A$A$A$A$S$A$S$S$B$B$B$B$S$
S$S$C$C$C$C$C$S$S$D$D$D$D$D$;
400 A=B:B=C:C=D:D=A1:A1=A
405 Z$=INKEY$:IFZ$="Y"THEN415ELS
EIFZ$<>"N"THEN380
410 RETURN
415 CLS:PRINT"USE THE JOYSTICK O
R KEYBOARD TO MOVE 'QBEE' AROUND
 THE BOARD.":PRINT"TRY TO CHANGE
 ALL THE BLOCKS TO RED.":PRINT"D
O NOT TOUCH ANY OTHER OBJECTS M
OVING ON THE SCREEN, THEY ARE D
EADLY."
420 PRINT"YOU BEGIN WITH 4 'QBEE
S' AND GETONE ADDITIONAL 'QBEE'
AFTER EACH3 SCREENS COMPLETED.":
PRINT"AS THE LEVELS INCREASE, TH
E GAMEBECOMES MORE DIFFICULT."
425 PRINT@480,"PRESS ANY KEY FOR
 MORE";
430 A$=INKEY$:IFA$=""THEN430
435 CLS:PRINT"YOU CAN ESCAPE THE
 SCORPION BY  PRESSING THE JOYST
ICK BUTTON    OR SPACEBAR WHEN Y
OU ARE ON THE CUBE DIRECTLY BELO
W A YELLOW    BOX.":PRINT:PRINT"
HOWEVER, THIS WILL ONLY HELP IF
THE SCORPION IS VERY NEAR."
440 PRINT@480,"PRESS ANY KEY TO
BEGIN";
445 A$=INKEY$:IFA$=""THEN445
450 RETURN
```

COCO PROGRAM PACKS

Here is a great way for you to increase your library of programs for your COCO. Each pack contains very useful programs for learning, application, and are ready to use. Each has the size of each program with a description. The codes are: F-FILE G-GAME B-BUSINESS U-UTILITY E-EDUCATION C-CASSETTE D-DISK P-PRINTER K-KEYBOARD J-JOYSTICK HF-HOME FINANCE PICTURE ART

PROGRAM PACK # 1

IN-OUT	263	DESIGN	ROMRAM	2083	U,84K	64KTEST	2029	U,64K
UPPER32K	529	U,64K	HEXTODEC	435	U	DEC<>HEX	1596	U
BASECONV	1332	U	DISKTEST	1402	U,D	SOUNDDEM	2090	DEMO
CONVERGE	783	E,B	TESTPATT	2314	U	COMPLAWS	4014	G,K
CHESS	9664	G,K	CHECKERS	3067	G,K	PATROL2	5876	G,J
ELECTMAZ	7125	G,J	ICE	3586	G,J	TANKS	3469	G,J
DODGE-EM	2839	U,D	SOISAYS	3950	G,K	DOORS	1087	G,K
FUELCOST	1170	HF	OHMSLAW	1895	B	LANDER	1984	G,K
WHERISIT	4497	G,K	HANGMAN	2592	G,K	OTHELLO	7267	G,K
GOLDMINE	5201	G,K	STATCAP	2462	EDUC	PINGPONG	1383	G,J
BIORYTHM	5107	G,K,P	CALENDAR	4532	U,P	MAILLIST	2958	F,P,C

PROGRAM PACK # 2

DISKLIST	2111	U,D,P	DIRLIST	2386	U,D,P	ML ADDR	1997	U,D,P
DISKDUMP	1181	U,D,P	PRINUTIL	2496	U,K	CALPRINT	4795	U,P
ALPHSONG	1036	E,M	PAINT	1102	DRAW	DOGPICT	3003	PICTURE
EVADER	1178	G.K	NUKATTC	3282	G,K	BASICMAP	6781	U,K
JOYPAINT	176	DRAW	PUNKIN	1018	PICT	HOMOYMS	1676	EDUC
ABBREV	7156	EDUC	CONVERT	5118	E,B	CASTLE	8172	ADV
CASSDIR	1012	U,P,C	CVERT	1776	U,E	FLASCARD	1985	EDUC
MESSAGE	312	U	RELOCAT	965	U	DISKLIST	1538	U,D
DSKTAPE	1667	U,D,C	BEAST	2227	G,K	DOGFIGHT	2145	G,J
PLANE	1066	G,J	DOGS	1547	G,K	CALENDAR	1830	U,P
COUNT	590	U						

PROGRAM PACK # 3

BOXLABLE	993	U,C	MONOL	15132	G,K	ATOMS	2803	G,K
FLIP	2700	G,K,J	POWER UP	249	U,P	DISKSORT	1883	U,D
READBIN	461	U,D	MACDATA	898	U,C	CUBES	2263	G,K
HEXLOAD	1812	U	HANGMAN	2509	G,K	OHMS	1234	U,E
SPEDMATH	6303	EDUC	SCRDUMP	133	U,P	DSKCLEAN	505	U,D
DIRGET	252	U,D	DIRSAVE	295	U,D	ML ADDR	262	U,D
WALLHIT	2112	G,K,J	TEMPCONV	571	U	CHKBOOK	2248	HF,C
DIS	4104	U,P	LOCFIND	669	U	MISSLETT	767	G,E
MEMORIE	2767	G,K	FISH	2088	G,K	CHIPER	770	G,K
CARCAL	1388	HF	BIGHILLG	2140	G,K	PROTECT	3095	G,K,J
STOCK	5227	G,K	JUMP	1999	G,K	FOOTBALL	7078	G,K
BOWLSUM	2491	FILE	HILOW	5709	G,K	MEMTEST	1889	U

PROGRAM PACK # 4

COMMAND	5154	G	PACMAN	16605	G	TYCOON	4317	G
DIALER	2324	U	DEXICON	1715	U	DISK FIX	893	D,U
DISKTIME	1170	D,U	DOS64A	6569	U	GDS	10055	G
PIXCMP	4490	PIC	ROMPACK	928	U	SOUND	58	U
SPOOLER	159	U	UT	3148	U	Z	8311	U
QUADDRAW	263	DRAW	B	2183	U	CLOCK	370	U
COPY DIR	1055	D,U	DDCOPY	3193	D,U	FDCTST	6277	G
FIND	622	G	ODIE	6154	PIC	PEANUTS	6154	PIC
SPACE	6154	PIC	ISLAND	13403	ADV	PATTERN	4572	ART
CHEKBOOK	7098	FIN						

MLDISK	3070	D,U
DSK EDIT	8165	D,U
TOF	3019	G
OBJECTS	4211	G
TRIANGLE	4539	PIC
HALLDEMO	1910	PIC
CASTLE	21217	ADV

SLITHER	2156	G
ICELAND	3472	G
PIXDUMP	2140	U,P
COPYDIR	1566	D,U
INVITE	1533	U
IN-OUT	226	ART
HOBBIT	3634	G
BIOTYTHM	1787	G,P
3-D-T	4263	G,K

D-ADV	17651	ADV
QUEST	8439	G
CUBIC	5331	G
GRID	3715	PIC
LABELPRT	420	U,C
DISASSY	7512	U
PATTERN	994	U
PHONE	1629	F

LOANAMOR	1633	FIN
SLITTER	2137	G,K
FARMING	12878	G
DSKSPEED	1470	D,U
CLOCK	1112	U
FINANCE	18343	FIN
MESSAGE	828	U

DECIDE	4795	G
WEATHERX	4797	U
SUB	9473	ADV
BASEBALL	21936	PIC
GUITAR	10886	E,M
TRIANGLE	7007	PIC
TRAIL	7938	G,K,J

KINGDOM	11949	ADV
DKS2TP	2483	D,U
MLADFND	2762	U
DISMON	13924	U
SQUEEZE	3166	D,U
MAZE	7106	G,K
DSKLOCK	2795	D,U

PROGRAM PACK # 5

SORT	794	U
HEALTH	18728	EDU
AIRPORT	12031	G
TANKS	8323	G
WORLDMAP	7435	EDU
LINES	2263	ART

TELETERM	5792	COMM
SOUND	58	EDU
CUBE	5907	G
CIA	13777	ADV
GARFIELD	6154	PIC
KALVOS	1259	G

PROGRAM PACK # 6

TUMBLERS	3979	G
EDUCATE	1511	G
CONTOUR	1143	U
DIRLIST	1535	D,U
MATHPAL	6460	EDU
GOLDMINE	5646	G
CONNECT4	2647	G,K
SIMON	782	G,K
DARTBORD	4431	G,K

ELIZA	7083	G
DUNGEON	4362	ADV
SLOSKROL	218	U
PILOT	4135	G
DUPER	2971	U
HUSTLE	1239	G
OTHELLO	5800	G,K
TICTACT	4269	G,K
COPTER	3022	G

PROGRAM PACK # 7

SWORDS	9198	G
SURVIVE	9751	ADV
DOTMAT	16651	G
TIGER	6154	PIC
PEEK	1799	U
MLFINDER	440	U
PORT	249	U
LOAN	6038	BUS

TROLL	11561	ADV
SPELWORD	2135	EDU
FLIGHT	5435	G
ZIGGY	6154	PIC
ROMDUMP	421	U
COLORBAR	91	U
PAYMENT	340	U

PROGRAM PACK # 8

MLTTD	840	U
IDKIT	12911	G
TREK	10169	G,K
EXREF	5524	U
PHONEDIR	2393	F,C
BARTENDR	5710	REF
FLIPPAGE	5734	U

BLACKJK	7520	G,K
SPACE	17397	PIC
DSCOPY	1946	D,U
ALARM	4150	U
TICKTAPE	5510	U
DSKLIBRY	5598	F,D
DSKAID	8025	D,U

PROGRAM PACK # 9

BIBLE	3249	EDUC
PROJEVAL	9107	B
DATAPRNT	413	U
AMORLN	3655	F
POKER	6924	G,K
SHIPS	3756	PIC

BOMBER	2604	G,K
FILES	8401	B,C
DISKDIRE	4979	D,U
ASSMLBER	6211	U
TANK	4132	G,J
HANDBALL	3883	G,J

PROGRAM PACK # 10

CHECKS	6453	F,D,C
SLOTS	3984	G,K
ICE	6060	G
SIMSAS	636	G,K
STATUS	7787	D,U
CROSROAD	2991	G,J
SELFMAIL	985	U,P

BONGOCARD	1701	G,P
DATAFILE	7239	F
ASSMBLER	12803	U
DISKNAME	7820	D,U
DISKLOOK	684	D,U
ANIMALS	6219	E,K

Continued on next page

PROGRAM PACK # 11

COMBAT	5862	G	MCONVERT	2895	U	FRACTION	7192	G,E
BALONS	4976	G,K,J	DATA3	6066	B,F	LIFE	7561	G
MUSCOMP	3441	G,E	BOGGEL	6013	G,K	OFFSET	2241	U
BATSHIP	7357	G,K	DUMPALL	5409	U	GEOGAME	8452	G,E
MAILLIST	4641	B	VALENCE	2414	G,E	GRAPHDZN	4942	PIC
WEREWAND	10443	ADV	POKER	5943	G,K	ASSMBLER	11338	U
MAZE3	6237	G	RUBCUBE	10321	G			

PROGRAM PACK # 12

CIPHER	772	G,K	COPYM	1929	U	SCRPRINT	3033	U,P
MOPLY	15219	G,K	SOUNDS	5276	U,E	DISTANCE	7454	U
DATES	3221	U	PHONWORD	1424	U	ROBOTS	5201	G,K
DIGGEM	5850	G,K	CONNT4	8002	G,K	ROLLON	4360	G,K
WILLSADV	10330	ADV	BASICMAP	6159	U	GRAPHICS	10794	U
RACEWAY	7335	G,K	TYPING	2803	E,G	CHECKS	6951	FIN
MONEYHLP	8074	FIN	WORDPRC	9387	B,C			

PROGRAM PACK # 13

CADIOH	9696	EDU	HAUNTHSE	12572	ADV	DISKHLP	8162	D,U
FINT-IT	4782	G,K	MISSLES	4154	G,K	PLANE	1066	G,J
FLASHCRD	4062	EDU	COMPTALK	3815	G	HOMEUTIL	12284	FIN
CHKBOOK	6601	FIN	SHAPES	6463	G,K	VIPERS	5169	G
POKING	7137	EDU	BUGS	13238	G	GEOSTUDY	7579	EDU
USASTUDY	7720	EDU	HEALTH	18697	EDU			

PROGRAM PACK # 14

DISKWASH	2150	D,U	AUTODIAL	2326	U	MASTMESS	5980	B
BIGPRINT	5751	U	TRIVIA	8053	G	D-TO-D	3539	D,U
SORT32	967	U	CHARACTR	3794	G	64KLOOK	16361	U
SCRIPT	5553	EDUC	LOADINTR	6184	B	FINDAWRD	3966	G
BUTR17	3543	U	BATTSHIP	4039	G,K	FLY	6252	G
64KMEMT	2798	U	OTHELLO	7144	G.K	FINANAD	12250	EDU
SPDSHEET	10430	BUS	METCONV	2238	U	CRACE	3630	G,J

PROGRAM PACK # 15

DKTODK	4764	D,U	ATTACKER	7439	G	BIORYTHM	2309	G,P
HANGMAN	2592	G,K	TREK	8730	G,K	3DTTT	7614	G,K
TYPEFACE	5280	U,P	STAT-LOG	4937	F	WORDSCAR	3863	G
DSKMSTER	9083	D,U	TYPING	4799	E,G	CHECKS	5675	FIN
20ODD	8383	ART	FISHING	2091	G	MEMORY	2729	G
HORSERAC	5373	G	KRAKEN	10046	ADV	KINGS	13660	ADV
STOCKS	9603	B,U	CYRPTO	6252	G			

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201 637 6644	B&J SOFTWARE 24HR	NJ
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206 256 6624	DIAL YOUR MATCH	WA
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214 686 4796	FLYING FORTRESS	TX
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214 784 7883	NE TX BBS	TX
215 244 0864	THE CITADEL	PA
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215 866 1805	COLORAMA	PA
216 788 7910	COCO NUT TREE	OH
217 359 9577	CCSH BBS 1	IL
217 753 3167	LINK UP	IL
217 893 0453	CCSH #1	IL
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301 344 9156	NASA GET AWAY SPEC	MD
301 599 1726	JOE SARTORI	MD
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409 983 2383	COCO CLUB BBS	TX
412 479 3786	COLORAMA	PA
412 744 2335	COCONET	PA
413 532 9631	COCO NUT	MA
414 699 3214	COLOR 80	WI
414 793 4055	MIDWEST DATA	WI
415 364 2658	REDWOOD BOARD	CA
415 552 8268	KINKY KOMPUTER	CA
415 651 4147	AARDWOLF EXPRESS	CA
415 782 4402	EAST BAY BBS	CA
416 653 2248	COLOUR DRAGON 1	ON
416 689 7950	DAVES DATACOM	ON
416 743 6221	COCO NUT	ON
416 823 4521	COLOUR DRAGON 2	ON
501 857 3138	COBBS41	AR
502 365 7785	COLORAMA	KY
502 937 4594	COLORAMA	KY
503 649 4497	BEE COLOR BBS	OR
503 761 6345	BIT BUCKET SYS	OR
504 277 6926	CHALMETTE BBS	LA
504 876 1790	BAYOU BOARD	LA
504 885 5619	STARBASE 6809	LA
512 285 5028	COLORAMA	TX
512 353 1508	COLORAMA	TX
512 629 7670	COBBS	TX
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513 236 8307	DACCUG	OH
513 396 7467	CINSOFT	OH
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515 277 6510	COCO CLUB	IA
515 288 0304	EXCALIBER	IA
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516 331 3718	COLORAMA	NY
516 673 9452	UNKNOWN	NY
517 339 3367	COOMPUNET	MI
517 793 1579	C/NET	MI
602 245 0488	COCO NET	AZ
602 245 0488	DENNIS CONNOLLY	AZ
602 298 0730	SUPER COCO BBS	AZ
602 344 8070	TBBS	AZ
602 899 1350	COCO PUB	AZ
707 437 6336	FALCON COLOR 80	CA
712 323 2943	MACCC	NE
713 280 8711	NASA	TX
713 354 3717	COBBS	TX
713 666 9076	NETHER WORLD	TX
713 847 9070	-= COCO ADS =-	TX
713 923 6809	COCO LOGO	TX
713 941 1542	GOLDEN COCO	TX
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803 279 5392	AUGUSTA TBBS	SC
803 288 0613	DLOAD OS9	SC
803 669 3275	PRO-COLOR	SC
803 791 7389	MIDLAND 80	SC
804 285 0041	SKELTON ISLAND	VA
804 862 4663	3 MUSKETEERS	VA
804 868 0922	PEN COLOR BD	VA
804 868 0922	PENINSULA COCO BD	VA
804 887 5302	GAMMA COLOR 80	VA
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816 436 2904	FRISKY COCO	MO
817 232 2087	FORT WORTH BBS	TX
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