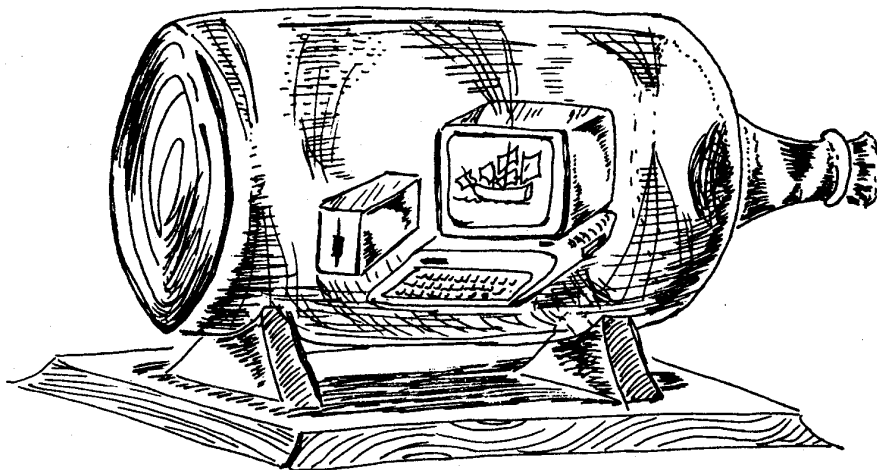
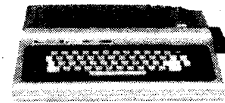


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The Color Computer Users Magazine
Feb, 1987 \$2.00 Issue C-3



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TO
JACK SCHNEIDER



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Program of the Month

by

Eric G. Robichaud

Last issue I promised a utility this month, but my plans fell through; things were going a little too smoothly, so Murphy's Law took over and threw a Monkey wrench into the works (I trashed a disk). This month I'm going to present, instead, part two of my adventure series which was originally slated for April, and hopefully I'll have the utility up and running for next month.

"Nuclear" is part two of my time machine adventure that I began in the October 1986 issue. Part one, "Present", was a fairly easy adventure with a bit of humor thrown in, and no REAL perils. Now that you've had a chance to get familiar with my adventures, and the beginners out there have tried their hand at solving an adventure, we're going to get more complex.

In "Nuclear", you return as Scoop Johnson who has found the Time Machine in the Military Base, and just pulled the lever and entered a new time zone. You step out of the time machine to find a rather morbid scene: you have just entered time after the occurrence of a full-scale Nuclear War. Your task is to find the time machine and pull the lever again, in an attempt to get back to your normal time zone. You must battle coldness from the "nuclear winter", hunger, and radio-active contamination.

A rather morose scene, granted, but also a very challenging one; you must construct many of the things you will need to get through the adventure. This adventure series, as I mentioned in the previous installment, was written to provide a gradual increase in difficulty level to bring a new adventurer through the ranks of adventure solving.

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This is a full 32K game, so some of the "Frills" of the first installment were left out in order to provide a more involved, and complex situation; however, the game is easy to play, and still contains a certain amount of extras. I would like to emphasize once again that the games in this series are all independent adventures which are tied together by their theme; each installment is a totally separate game which can be typed in and RUN by itself.

Now that I have set up the scenario for this installment of the game, I will continue with my explanation of how to program an adventure. Now that you've finished the boring job of entering all of the tedious data (ie. room descriptions, direction data, and item data) you are ready to start with the actual program logic.

The next portion of your adventure, after the data, should be the program's vocabulary. This is where the program becomes interesting! The best way I've found to accomplish this task is to set up two string variables: one for the verbs and one for the nouns. At this point you should

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decide how many letters of each word you would like the program to recognize. The most common numbers are three or four, meaning that typing "LOO STI" is the same as typing "LOOK STICK". I like to use four letters so that the word you want to use is defined better (so it doesn't take DROwn for DRUp for example).

Once you've decided this point, make a list of all of the verbs that will be needed in your adventure. Make sure to include other variations on important verbs, such as TAKE and GET, so that either may be used. Also include a few "FRILLS". These make the adventure more flexible, and more interesting. Do the same for the nouns; make a list of all of the objects that one may come across during the adventure, including inanimate objects and unimportant things that you would like the program to recognize. Once you have your lists, create two strings such as V\$ and N\$, and enter the first four letters of each verb in the verb string, and the same for the noun string. If the word is more than four letters, truncate the word at four, or if it is less, pad the command with extra spaces. A typical line might look like:

```
800 V$="LOOKGET TAKEI DROP"
```

with the commands being Look, Get, Take, Inventory (short cut version), and Drop. Next we will establish the routine to get the player's command. This routine will take the user's command (done by a simple INPUT or LINEINPUT) and break it up into two halves: the verb and the noun. Next, the routine should either truncate the word if it is more than the specified number of characters, or pad it with spaces if the word isn't long enough. After this, the routine will just branch back to the main program. I like to keep this type of routine at the end of the program so I don't have to jump around it, and just call it when necessary.

Now that the command has been dissected into it's two halves, the program must jump to a routine to discern what these commands are. The routine is simply an INSTR command which compares the player's word with the program's vocabulary. When it does so, the program will return a zero if the word isn't recognized, or a number which identifies which word the person entered. At this point it is best to write down all of the verbs (in the order they are in the program) and number them so you can see which numbers represent which verbs.

Now that the subroutine has performed it's function, the program branches back to the main program again, and goes through an ON...GOTO... statement which sends the computer to the specified line, depending on what number command was entered. Nouns are also referenced by number. If my statement read:

```
2000 ON V GOTO 900,950,975,980,1000 ...
```

and the player typed "I", then the program would jump to line 980, because "I" is the fourth command according to our previous example.

Each of these routines can be seen in my programs towards the end of each one. Since I try to use the same variables from one game to the next, I just keep the same routines. Feel free to use these in your programs since they are quick, efficient, and (best of all) already done!

In the next instalment I'll wrap up the tutorial part of my adventure series, and I'll present part three. The information above may seem confusing and highly detailed at first glance, but should be easy to follow if you just refrence the article with my program, and the hypothetical examples I've cited.

If you have any questions or comments, feel free to write to me at 10 Stoneham Drive, Woonsocket, RI 02895 or contact me on SOFTWARE CONNECTION BBS in Woon., RI (401)-765-2890. This month's program is available on Disk or Tape for \$5.00 postage paid from the author. If all goes well I will have that utility for next month...

```
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20 * PT 2-NUCLEAR *
30 * BY: ERIC G. ROBICHAUD *
40 * PARAGON SOFTWARE *
50 * COPYRIGHT (C) JAN '87 *
60 * FEB 1987 COCO ADS *
70 *****
80 PMODE0:PCLEAR1:CLEAR:CLEAR120
0:DIM A$(65),RM(65,4),I$(15),IT$
(15),IT(15)
90 TW=0:D=0:P=0:RA=0:H=0:T=1:C=0
:RO=0
100 DATA"YOU ARE IN THE MIDDLE O
F AN ABONDONED CITY STREET.
RUBBLE AND DEMOLISHED BUILDING
S ARE EVERYWHERE. THERE IS A
HOSPITAL PARKING LOT TO THE WEST
, THE REMAINS OF A NEWSPAPER
STAND TO THE EAST, AND PART OF A
BUILDINGTO THE NORTH.
```

110 DATA"YOU ARE STANDING IN WHAT WAS SOMEBODY'S KITCHEN. ALL THAT REMAINS IS THE FLOOR, A COUPLE OF COUNTERS, AND 2 PARTIALLY EXISTING WALLS. THERE IS A BRICKFIRE PLACE TO THE WEST, A STREET TO THE SOUTH, AND SOME MORE RUINS TO THE NORTH.

120 DATA"YOU ARE STANDING BEFORE A WRECKED NEWSPAPER STAND. THERE IS A SIGN IN THE MIDDLE OF A PILE OF RUBBLE THAT READS: 'LA TIMES' THERE IS A GAS STATION TO THE EAST, AND A BARREN CITY STREET TO THE SOUTH.

130 DATA"YOU ARE AT THE SITE OF A DEMOLISHED GAS STATION. YOU SEE SEVERAL OVER-TURNED CARS, AND SMASHED GLASS, EVERYWHERE. THERE IS A BANK VAULT, JUTTING OUT OF A PILE OF RUBBLE, TO THE NORTH, AND THE MEMORY OF A NEWSPAPER STAND TO THE SOUTH.

140 DATA"THIS USED TO BE A PARKING LOT FOR THE SUNNYVILLE HOSPITAL. THERE ARE OVER-TURNED, DEMOLISHED CARS EVERYWHERE. THE GROUND IS CANVASSED BY SHATTERED GLASS. THERE IS A STREET TO THE NORTH, AND THE HOSPITAL TO THE SOUTH.

150 DATA"YOU ARE STANDING IN WHAT USED TO BE THE NORTH WING OF THE SUNNYVILLE HOSPITAL. THERE IS A WALL PARTIALLY DIVIDING THIS AREA THE WEST WING, AND LIKEWISE FOR THE SOUTHERN WING. THERE IS A PARKING LOT TO THE NORTH.

160 DATA"YOU ARE SURROUNDED BY THE REMAINS OF THE HOSPITAL'S WEST WING. THERE IS MUCH PARAPHANALIA HERE THAT HAS BEEN REDUCED TO RUBBLE. THE NORTH WING OF THE HOSPITAL LIES TO THE EAST.

170 DATA"THIS IS THE SOUTHERN PORTION OF THE HOSPITAL. THE ENTIRE EASTERN AND SOUTHERN WALLS HAVE BEEN DEMOLISHED. YOU ARE OVERLOOKING A VIEW OF TOTAL DESTRUCTION. THE RUINS STRETCH OUT OF SIGHT IN ALL DIRECTIONS. THE NORTH WING LIES TO THE NORTH.

180 DATA"YOU ARE CURRENTLY LOCATED NEAR THE RUINS OF MANY CEMENT BUILDINGS. CHIPS OF CONCRETE ARE STREWN ABOUT, AND DEBRIS LITTERS THE GROUND. A CRUDE REN-

DERING OF A KITCHEN LIES TO THE SOUTH.

190 DATA"THERE IS A LONE, BRICK, FIRE-PLACE STANDING HERE. EVERYTHING ELSE IN SIGHT HAS BEEN TOTALLY LEVELED. THERE IS A STORE TO THE WEST, ANOTHER BUILDING TO THE NORTH, AN UNDISTINGUISHABLE BUILDING TO THE SOUTH, AND A KITCHEN TO THE EAST.

200 DATA"YOU ARE STANDING BEFORE AN UNRECOGNIZABLE BUILDING. DEBRIS LITTERS THE AREA. PILES OF RUBBLE STRETCH OUT OF SIGHT IN ALL DIRECTIONS. THERE IS A CHIMNEY STANDING TO THE NORTH WITH NO SURROUNDINGS.

210 DATA"THIS IS A LOCAL BOOK STORE. PART OF THE WESTERN WALL HAS BEEN REMOVED. THERE ARE BOOKS AND PAPERS STREWN ABOUT. SEVERAL BOOK CASES HAVE TOPPLED OVER ONTO THE FLOOR. THERE IS A BRICK CHIMNEY STANDING, ALONE, TO THE EAST.

220 DATA"YOU ARE IN THE LOCAL RADIO STATION, URAQT. MOST OF THE EQUIPMENT BEEN DEMOLISHED. THERE IS A SPECIAL NEWS BULLETIN ON A DESK, AGAINST THE WEST WALL. THERE IS A FOREST TO THE NORTH, A CHIMNEY TO THE SOUTH, AND A BANK TO THE EAST.

230 DATA"YOU ARE CURRENTLY STANDING IN AN OBLITERATED FOREST. WISPS OF SMOKE ARE RISING FROM THE SCORCHED, DOWNED TREES. THE FOREST STRETCHES OUT OF SIGHT IN ALL DIRECTIONS.

240 DATA"YOU ARE CURRENTLY STANDING IN AN OBLITERATED FOREST. WISPS OF SMOKE ARE RISING FROM THE SCORCHED, DOWNED TREES. THE FOREST STRETCHES OUT OF SIGHT IN ALL DIRECTIONS.

250 DATA"THE AREA YOU ARE STANDING ON USED TO BE A BANK. ALL THAT REMAINS IS THE VAULT. THERE IS A GAS STATION TO THE SOUTH, A PILE OF DEBRIS TO THE EAST, A BOWLING ALLEY TO THE NORTH, AND A RADIO STATION TO THE WEST.

260 DATA"YOU ARE STANDING AMIDST A PILE OF RUBBLE THAT WAS ONCE A BOWLING ALLEY. ALL THAT REMAINS IS PART OF THE SNACKBAR, IN THE NORTH-WESTERN CORNER. THERE IS A BANK VAULT STANDING, TO THE

SOUTH.

270 DATA"ALL YOU SEE, IN EVERY DIRECTION, IS PILES AND PILES OF DEBRIS. THERE IS NOTHING LEFT TO EVEN SUGGEST THAT THERE WERE PEOPLE LIVING IN THE IMMEDIATE AREA. TO THE SOUTH THERE IS MORE DESTRUCTION, TO THE WEST THERE IS BANK VAULT.

280 DATA"THIS IS A FIELD CONSISTING SOLELY OF BURNT UNDERBRUSH. SCORCHED LEAVES AND TWIGS ARE EVERYWHERE. A STRONG SMELL OF SMOKE PERMEATES THE AIR. THERE IS AN OPENING TO A MINE SHAFT TO THE EAST, AND SOME PILES OF RUINS TO THE NORTH.

290 DATA"YOU ARE STANDING IN THE ENTRANCE TO A MINE SHAFT. THE SHAFT ENTERS THE SIDE OF A MOUNTAIN, TO THE SOUTH. TO THE NORTH THERE IS A FIELD OF BURNT UNDERBRUSH.

300 DATA"YOU ARE CURRENTLY STANDING IN AN OBLITERATED FOREST. WISPS OF SMOKE ARE RISING FROM THE SCORCHED, DOWNED TREES. THE FOREST STRETCHES OUT OF SIGHT IN ALL DIRECTIONS.

310 DATA"YOU ARE STANDING JUST INSIDE OF THE MINE SHAFT. A HIGH TUNNEL LEADS SOUTH, INTO DARKNESS. TO THE NORTH IS THE OPENING OF THE SHAFT.

320 DATA"YOU ARE IN A TWISTY MINE SHAFT. YOU REALIZE THE SHAFT WAS BUILT TO MINE COAL. IT TOO DARK TO NOTICE ANYTHING ELSE. THE TUNNEL LEADS WEST, AND NORTH.

330 DATA"YOU ARE IN AN EVER TURNING MINE SHAFT. THE TUNNEL HEADS EAST AND SOUTH.

340 DATA"YOU ARE IN THE MIDST OF A LONG, DOWNWARD SLOPING, NORTH/SOUTH TUNNEL. COAL DUST FILLS THE AIR. YOU HEAR A LOUD RUMBLE.

350 DATA"YOU ARE IN AT AN INTERSECTION IN THE MAZE OF TUNNELS. THE GROUND IS FILLED WITH POT HOLES AND ROCKS, MAKING TRAVELING HARD. THE WAY TO THE NORTH IS BLOCKED DUE TO A CAVE-IN.

360 DATA"YOU ARE IN A NARROW TUNNEL. A WIDER TUNNEL HEADS OFF TO THE EAST, A DOWNWARD SLOPING TUNNEL CURVES OUT OF SIGHT TO THE SOUTH AND ANOTHER TUNNEL LEADS NORTH.

370 DATA"YOU ARE IN A FAIRLY WIDE TUNNEL, WITH OTHERS LEADING NORTH, WEST, AND SOUTH. YOU HAVE NOTICED THAT THE SOIL IS GETTING SOFTER.

380 DATA"THIS IS A WIDE, EXTREMELY HIGH ROOM WITH SOFT SOIL. THERE ARE SEVERAL DIFFERENT TYPES OF PLANTS GROWING HERE. THERE IS A TUNNEL TO THE WEST, AND ANOTHER TO THE SOUTH.

390 DATA"YOU ARE IN A LOW, NARROW TUNNEL THAT HEADS NORTH, AND EAST. THE FLOOR IS FILLED WITH STONES.

400 DATA"YOU ARE IN AN EXTREMELY DARK, LOW PASSAGEWAY. A TUNNEL DISAPPEARS AROUND A CORNER TO THE SOUTH, AND LIKEWISE TO THE WEST.

410 DATA"THIS IS APPEARS TO BE A DEAD END TUNNEL. UPON OBSERVATION, YOU NOTICE A CRACK IN THE EAST WALL, WHERE THE TUNNEL CAVED IN. A TWISTING TUNNEL HEADS WEST.

420 DATA"YOU ARE IN THE MIDST OF A TWISTY TUNNEL. THE SOIL FEELS COOL. THE TUNNEL CONTINUES NORTH, AND WEST.

430 DATA"YOU ARE AT THE SOUTHERN END OF AN EXTREMELY LOW PASSAGEWAY. THERE IS A CRACK IN THE WESTERN WALL.

440 DATA"YOU ARE CURRENTLY LOCATED IN A TWISTY TUNNEL. FROM THE LOOKS OF THINGS, IT APPEARS THAT THE MINERS WERE TAKING SUPPLIES INTO THE DEEPER REGIONS OF THE MINE WHEN THEY WERE EVACUATED. (OR...)

450 DATA"YOU ARE SITUATED IN A TWISTING-TURNING, NORTH/SOUTH PASSAGEWAY. COAL DUST IN THE AIR IS MAKING IT HARD FOR YOU TO BREATHE.

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460 DATA"YOU ARE IN A HIGH, WIDE TUNNEL. THERE ARE TUNNELS BRANCHING OFF INTO ALL DIRECTIONS. THE WAY TO THE WEST HAS BEEN BLOCKED DUE TO A CAVE-IN.

470 DATA"YOU ARE AT A TURN IN A TUNNEL. THE TUNNEL CONTINUES SOUTH, AND EAST. THERE ARE MANY SUPPLIES HERE THAT LOOK AS IF THEY WERE DROPPED WITHOUT HESITATION.

480 DATA"YOU ARE AT A DEAD END IN THE MAZE OF TUNNELS. THE ONLY WAY OUT IS BACK TO THE WEST.

490 DATA"THIS IS A NARROW, TWISTY TUNNEL THAT HEADS NORTH AND EAST.

500 DATA"THIS IS A HIGH PASSAGEWAY THAT SHOOTS OFF INTO ALL DIRECTIONS.

510 DATA"THIS IS A HIGH PASSAGEWAY THAT SHOOTS OFF INTO ALL DIRECTIONS. YOU HEAR A LOUD RUMBLE.

520 DATA"THIS IS A LOW, DARK TUNNEL WITH OTHERS LEADING OFF INTO ALL DIRECTIONS. THE WAY TO THE SOUTH HAS BEEN BLOCKED DUE TO A CAVE-IN.

530 DATA"THIS IS A LOW, DARK TUNNEL WITH OTHERS LEADING OFF INTO ALL DIRECTIONS.

540 DATA"THIS IS AN EXTREMELY DARK TUNNEL WITH PASSAGEWAYS LEADING OFF INTO ALL DIRECTIONS.

550 DATA"YOU ARE IN THE MIDST OF A TUNNEL HEADING EAST/WEST IN DIRECTION. YOU HEAR A LOUD RUMBLE.

560 DATA"YOU ARE STANDING AT A 3-WAY INTERSECTION OF TUNNELS. TUNNELS HEAD OFF TO THE NORTH, SOUTH, AND EAST.

570 DATA"YOU ARE IN A DAMP, COLD AREA THAT IS LOWER, IN ALTITUDE, THAN THE REST OF THE MINE. THERE ARE PASSAGEWAYS LEADING WEST AND SOUTH.

580 DATA"YOU ARE AT AN INTERSECTION OF LOW, DARK TUNNELS. THE TUNNEL TO THE EAST HAS BEEN BLOCKED DUE TO A CAVE-IN.

590 DATA"THIS PASSAGEWAY IS PROBABLY THE WIDEST, HIGHEST IN THE MINE SHAFT. IT APPEARS TO OPEN UP WIDER, TO THE SOUTH. OTHER TUNNELS LEAD WEST AND NORTH.

600 DATA"YOU ARE STANDING IN THE MIDDLE OF AN EXTREMELY LARGE, HIGH CIRCULAR 'ROOM'. THE SOIL THAT FORMS THE WALLS AND CEILING IS LIGHT BROWN IN COLOR. THERE IS A TUNNEL TO THE NORTH. THERE IS A LEDGE TO THE SOUTH, ABOUT 25 FEET UP.

610 DATA"YOU ARE STANDING ON A VERY WIDE LEDGE, THAT EXTENDS TO THE EAST, OVER-LOOKING A VERY LARGE, HIGH CIRCULAR 'ROOM'. YOU ARE ABOUT 25 FEET UP.

620 DATA"THIS IS THE EASTERN END OF A WIDE LEDGE. TO THE SOUTH IS A HIGH WALL WITH AN OVAL OPENING IN IT, LEADING TO ANOTHER AREA.

630 DATA"YOU ARE STANDING UNDER AN ARCHWAY THAT CONNECTS THE MAIN MINE SHAFT, TO THE NORTH, WITH THE NEWEST AREA, TO THE SOUTH. THE WALL, THE ARCHWAY IS CUT OUT OF, IS ABOUT 10 FEET THICK. YOU HEAR A LOUD CRASHING, CLATTERING SOUND TO THE SOUTH.

640 DATA"YOU ARE STANDING ON A NARROW LEDGE OVER-LOOKING A DEEP POOL OF WATER WITH A WATERFALL POURING INTO IT CREATING A SWIRLING VORTEX OF WATER. A DEAFENING SOUND IS ECHOING IN THE CAVERN. THERE IS AN ARCHWAY TO THE NORTH.

650 DATA"YOU ARE STANDING AT THE EDGE OF A DEEP POOL OF WATER. THERE IS A LEDGE ABOUT 25 FEET UP THE SIDE OF THE CAVERN YOU ARE IN. THERE IS A WATERFALL POURING INTO THE POOL, FROM ABOUT 200 FEET UP, CREATING A DEAFENING ROAR.

660 DATA"YOU ARE IN AN UNDERWATER CAVERN. IT IS VERY DARK, AND ROCKS ARE EVERYWHERE. THERE IS A BEAM OF FAINT LIGHT COMING FROM THE SOUTH.

670 DATA"YOU ARE AT THE EDGE OF A SHALLOW POOL OF WATER THAT DISAPPEARS UNDER A GROUP OF ROCKS, TO THE NORTH. A PASSAGEWAY LEADS SOUTH.

680 DATA"YOU ARE LOCATED IN A TWISTING TUNNEL. YOU SEE SOME LIGHT COMING FROM THE SOUTH. YOU HEAR A LOUD RUMBLE.

Continued on page 55

This is a review of the following:
A book (text, manual, tutorial)
"C from A to Z" by Bryan Costales
Published by Prentice Hall, Inc.
Englewood Cliffs, New Jersey 07632
Price \$16.95

A famous mountain climber was once asked why he wanted to climb Mt. Everest? He responded by exclaiming, "It was there!!". The same can be said of a coco enthusiast wanting to learn C. A good answer would be, there is a C compiler for the coco!!

On a more serious note though, many companies are now doing all their new internal programming in C language. A C programmer with a couple of years experience can expect to earn \$40,000 plus per year. C language has a number of major advantages over both Basic and over Assembly language programming. C is very portable due to the fact that it is standard. Anyone who has ever attempted to convert a Basic program written for an Apple or even a TRS80 model 1 to the coco knows that even though all three are called Basic, there is still a great deal of effort required to convert one from the other.

C on the other hand was developed by the AT&T Bell Laboratories for it's internal use. Later, C language was, adopted by a number of larger Universities without any major changes. This made the original version written by Dennis Ritchie and documented in the Kernighan and Ritchie book become the defacto standard. In addition C is a compiled language which gives C the virtual speed and flexibility of Assembly language which is hardware dependent. C is a relatively simple low level language in that it has a limited number of reserved keywords; however, a C program is written by calling subroutines called functions from the main program. Although these functions (subroutines) can be difficult to write many have been written and are standard. They are provided as a "standard" C library with the hardware dependent compiler. The job of the programmer then is to become familiar with these functions and to use them in the programs.

Practical applications using C on a 64k coco are very limited, due to the memory space required by compiled C programs. The practicality of implementing C on a 512k coco 3 remains to be seen. Anyone wishing to learn C simply because it is available or the possibility of getting one of the better

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paying programming jobs, the coco C compiler running under OS-9 is an excellent and most cost effective tool for this task. There are a number of books on C programming that can be found in the computer section of any large bookstore. I have examined perhaps a dozen of these books. To date I have found "C from A to Z" to be the best C language tutorial available. The manual provided by Tandy with the C compiler is an excellent reference manual; yet not much help to one who wants to learn the language. The C Bible, "The C Programming Language" by Brian W. Kernighan and Dennis M. Ritchie is a "must" for any C programmer but not ideal for the beginner due to it's terse and concise style.

"C from A to Z" has 20 chapters and each chapter is divided into small sections. Each section covers a single new topic or aspect of the language and as a reinforcement may incorporate a previously presented topic. Each topic is presented in an easy to read style and if a previous topic is incorporated, the author will refer back to it's original location in the text. Since one only learns by doing, the outstanding feature of this book is that each section has a short C program demonstrating the subject of the section. These short demo programs can be easily typed, compiled and run. They can also be easily modified by the "student" so that one can easily see the effects of modifying the program. Most of the fun is in "debugging" the program which are caused by typing errors. I have entered, compiled and run most of the demo programs and found none that would not properly compile on the coco when correctly typed.

Almost every C book that I have seen presents the subject matter in a different order. Although there doesn't appear to be much difference in which order one learns C, the order given in "C from A to Z" is more than satisfactory, as long as one follows the examples in sequence and not try to skip throughout the book. I find C to be a more difficult language to learn and use than Basic because of the function concept. A C programmer must become familiar with the standard C functions (subroutines) before he can become proficient. This tutorial will make the process much less painful. The book should be available at (or orderable) from any large bookstore or could be ordered directly from the publisher, Prentice Hall.


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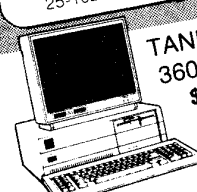
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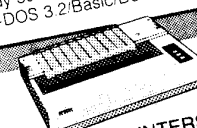
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C O C O III

Diskplus Documentation: Version 2.0
(c) 1986 James E. Hartman
September 22, 1986

Diskplus allows the user to send or receive entire disks via normal XMODEM send or receive programmes (such as Miketerm). Multiple files can, therefore, be sent using this programme, and they will be reconstructed onto the target disk exactly as they were on the original. These files can be sent/received from any BBS system that supports XMODEM file transfer.

Diskplus is part of the ongoing flood of Free-Ware programmes for various computers; your payment of \$5 will make you eligible for programme updates (such as: multiple target disks, automatic file chaining, and variable length output files), patches, and bug fixes from other registered owners. Also, registered owners will receive a list of other Frei-Ware programmes available with their updates or patches.

How to use Diskplus.

When you run Diskplus, the opening menu gives you four options:

1. Convert disk to file.

This option allows you to convert a disk in drive 0 into text file(s) on drive 1. Insert the disk to be sent into drive 0, and a (preferably) blank disk into drive 1.

Enter an eight character file name. (Note: The slash, extension of "000", and the ":1" are tagged onto the filename automatically; the user, however, MUST enter at least 1 character for the filename.) The programme will then proceed to read in the sector data and write it to the file(s) on drive 1. Note that the resultant filenames will be sequentially numbered in the rightmost character of the extension, and each output filename will be no longer than 41K (buffer size of Miketerm is 42K). For example:

```
>original filename: PHAEDRUS/000
>second file      : PHAEDRUS/001
>third file       : PHAEDRUS/002
>last file        : PHAEDRUS/003
```

No disk will be longer than 4 output files. Once the run is complete, the main menu will come back up again.

2. Convert file to disk.

When this option is selected, the programme will prompt you to enter the input filename. Enter the filename used to save the data from your download source. Note: It is important that you save the download source with the same filename, and extensions sequentially numbered 000 through 003. Be sure that a freshly formatted disk is in drive 0, and the disk with the files downloaded is in drive 1. The Diskplus programme will then proceed to place the sector data onto the disk in drive 0, going sequentially through the files until the entire disk is created. If Diskplus cannot find the next file in the sequence, it will ask for that disk to be inserted into drive 1. Change the disk and hit Enter to continue. If there are no more files in the sequence, press Space to abort operation. (Note that the latter situation will only happen with files created with the original Diskplus programme, which did not feature the auto-chain function.) Once complete, the main menu shows again.

3. Collect Disk in Drive 1.

This is a new feature to Diskplus. When selected, you are prompted to insert the disk to be collected into drive 1, and press Enter. If you press Space at that prompt, the process will be aborted. Once Enter is pressed, the collection routine will begin. What the collect routine does is scan the disk for sectors that contain data that is no longer being used by any of the active files on the disk. It then erases those unused sectors, so that Diskplus can create the shortest possible output file(s). Note that there is no way to get data back if, for some reason, sectors that are needed by the programme(s) on the disk are not marked as active. Be sure to only collect on a backup disk unless you are absolutely sure that there are none of these unmarked sectors on your disk.

4. Exit programme.

Self-explanatory.

Special notes:

The Diskplus programme skips sectors that are "blank" under RS dos; i.e., any sector that is all \$FF (decimal 255) characters will not be written into the output file. Each sector is written into the output file as 11

follows:

2 bytes - track and sector

256 bytes - sector data

Therefore, for every 256 bytes read, 258 bytes are written. Overall, on a 10 gran file, 180 excess bytes will be written. However, on the average, fewer extra bytes will be written, since any extra sectors on the end of a gran that are unused will be skipped (for example, if only two sectors of the 10th gran are used, the remaining 7 will be skipped). Thus, it is normal that a disk with 48 grans used, for example, will be converted into three files that total 42 grans. No data is lost in the transition. The auto-chain feature of Diskplus V 2.0 is achieved through the following naming and data conventions:

1. 8-character main file name is kept through all of the files used, and the extensions are numbered sequentially (000 through 003). This allows the programme to find the next file in sequence.

2. The final record of the final file in the series contains the data for Track 34, Sector 18, no matter what is contained in that sector. This flags the programme to stop reading that file and to end the conversion process.

Filenames of less than eight characters are now supported. The collect routine can be dangerous, especially with some game disks. Never collect an OS-9 disk.

The following send/receive times are valid for Miketerm:

One Diskplus 2.0 file, length 18 grans (40.5K): 27 minutes, at 300 BAUD

One Diskplus 2.0 file, length 18 grans (40.5K): 6.75 minutes, at 1200 BAUD

```
10 REM
20 REM * DiskPlus v. 3.1/CoCo 3
*
30 REM
40 REM Takes the disk in drive 0
and
50 REM copies it into an ASCII f
ile on
60 REM drive 1
70 REM
80 REM or
90 REM
100 REM takes file on drive 1 an
d
110 REM restores it onto disk in
drive
120 REM 0
130 REM
140 REM ASCII file should be sen
t
150 REM XMODEM for best results.
```

```
160 REM
170 REM Programme written by:
180 REM James E. Hartman
190 REM
200 REM (c) 1986 TimeCraft Softw
are
210 REM
220 WIDTH 40:CLS3:ATTR 3,2
221 CLEAR5000
222 FILES 2,1000
223 DIM I0$(18),I1$(18),I2$(18)
230 LOCATE 9,1:PRINT"DiskPlus v.
3.1/CoCo 3";
240 LOCATE 8,3:PRINT"<1> Convert
disk to file";
250 LOCATE 8,4:PRINT"<2> Convert
file to disk";
260 LOCATE 8,5:PRINT"<3> Collect
disk/drive 1";
270 LOCATE 8,6:PRINT"<4> Exit pr
ogramme";
280 LOCATE 8,8:PRINT"Your choice
: ";
290 A$=INKEY$:IF A$="" THEN 290
300 A=VAL(A$):IF A<1 OR A>4 THEN
SOUND 5,1:GOTO 290
310 PLAY"L255;O3;"
311 ATTR 3,2,B:LOCATE 9,2+A:PRIN
TCHR$(48+A);
312 ATTR 3,2:PRINT">";:LOCATE 0,
23
320 ON A GOTO360,550,790,720
330 REM
340 REM ** CONVERT D TO F **
350 REM
360 LOCATE 9,15:PRINT"Enter outp
ut filename:";:GOSUB 1190:IF Z$=
"" THEN 220
370 OPEN"D",#1,Z$,258
380 K=1:L=1
390 FIELD #1,2 AS H0$,128 AS H1$
,128 AS H2$
400 FOR T=0 TO 34
410 FOR S=1 TO 18
420 GOSUB 1150
430 DSKI#0,T,S,I1$(S),I2$(S)
440 NEXT S:FOR S=1 TO 18:IF T=34
AND S=18 THEN 460
450 IF I1$(S)=STRING$(128,255) A
ND I2$(S)=I1$(S) THEN 500
460 LSET H1$=I1$(S):LSET H2$=I2$
(S)
470 I0$=CHR$(T)+CHR$(S):LSET H0$
=I0$
480 PUT #1,K:K=K+1:GOSUB 1150
490 IF K>158 THEN CLOSE:GOSUB 10
00
491 MID$(Z$,LEN(Z$)-2,1)=CHR$(48
+L)
492 OPEN "D",#1,Z$,258
```

```

493 FIELD #1,2 AS H0$,128 AS H1$
,128 AS H2$:K=1:L=L+1
494 LOCATE 13,16
495 PRINTZ$;
500 NEXT S,T
510 CLOSE:GOTO 220
520 REM
530 REM ** CONVERT F TO D **
540 REM
550 LOCATE 9,15:PRINT"Enter input filename :";
551 GOSUB 1190:IF Z$="" THEN 220

560 OPEN"D",#1,Z$,258
570 K=1:L=1:LL=LOF(1):DZ=0
580 FIELD#1,2 AS H0$,128 AS H1$,128 AS H2$
590 IF K>LL THEN CLOSE:GOTO 640
600 GET #1,K:K=K+1
610 IO$(L)=H0$:I1$(L)=H1$:I2$(L)=H2$
611 IF IO$(L)=CHR$(34)+CHR$(18) THEN DZ=1
620 GOSUB 1150
630 L=L+1:IF L=19 THEN 640 ELSE 590
640 FOR Z=1 TO L-1
641 T=ASC(LEFT$(IO$(Z),1))
642 S=ASC(RIGHT$(IO$(Z),1))
643 IF (T>34) OR (S<1) OR (S>18) THEN 660
650 DSKO$0,T,S,I1$(Z),I2$(Z):GOSUB 1150
660 NEXT Z:L=1:IF K>LL THEN CLOSE ELSE 590
670 IF DZ=1 THEN 220
680 MID$(Z$,LEN(Z$)-2,1)=CHR$(48+M)
681 GOSUB 1080:M=M+1:LOCATE 13,16:PRINTZ$;;GOTO 560
690 REM
700 REM ** EXIT **
710 REM
720 LOCATE 10,15:PRINT"Really exit? (Y/N):";
730 A$=INKEY$:IF A$="" THEN 730
740 IF A$="Y" OR A$="y" THEN CLS:PRINT"PROGRAMME RUN ENDED.":END

750 IF A$<>"N" AND A$<>"n" THEN SOUND 5,1:GOTO 730 ELSE 220
760 REM
770 REM ** COLLECT DISK **
780 REM
790 LOCATE 4,15:PRINT"Insert disk to be collected into";
800 LOCATE 9,16:PRINT"drive 1 and hit ENTER.";

```

```

810 ZK$=INKEY$:IF ZK$="" THEN 20 ELSE IF ZK$<>CHR$(13) THEN 810
820 LOCATE 4,15:PRINTSTRING$(32,32);:LOCATE 9,16:PRINTSTRING$(22,32);
830 DSKI$1,17,2,A1$,A2$:A1$=LEFT$(A1$,68):A2$=""
840 FOR I=1 TO 68
850 K=ASC(MID$(A1$,I,1))
860 IF K<192 THEN 950
870 T=INT((I-1)/2):IF (I-1)/2=T THEN H=0 ELSE H=1
880 IF I>34 THEN T=T+1
890 IF K=255 THEN S=9:GOTO 920
900 S=201-K
910 IF S=0 THEN 950
920 FOR J=(H*9)+9 TO (H*9)+10-S STEP -1
930 DSKO$1,T,J,STRING$(128,255),STRING$(128,255)
931 LOCATE 11,15:PRINTUSING "Track:## Sector:##";T;J;
940 NEXT J
950 NEXT I
960 GOTO 220
970 REM
980 REM ** CHECK FREE SPACE **
990 REM
1000 IF FREE(1)>=18 THEN LOCATE 10,22:PRINTSTRING$(20,32);
1001 LOCATE 5,23
1002 PRINTSTRING$(32,32);:RETURN

1010 LOCATE 10,22:PRINT"Disk in drive 1 full";
1020 LOCATE 5,23:PRINT"Insert new disk and hit ENTER.";
1021 SOUND 100,1:SOUND 50,1
1030 IF INKEY$<>CHR$(13) THEN 1030
1040 GOTO 1000
1050 REM
1060 REM ** CHECK FILE EXIST **
1070 REM
1080 OPEN"D",#1,Z$,1
1081 IF LOF(1)=0 THEN CLOSE
1082 KILL Z$ ELSE CLOSE:LOCATE 7,22
1083 PRINTSTRING$(26,32);:LOCATE 9,23:PRINTSTRING$(22,32);:RETURN
1090 LOCATE 7,22:PRINT"Insert disk with next file";
1100 LOCATE 9,23:PRINT"in sequence; hit ENTER";:SOUND 100,1:SOUND 50,1
1110 ZK$=INKEY$

```

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```
1111 IF ZK$=CHR$(13) THEN RETURN
    ELSE IF ZK$=" " THEN CLOSE:GOTO
220 ELSE 1110
1120 REM
1130 REM ** DISPLAY T/S INFO **
1140 REM
1150 LOCATE 6,15:PRINT USING"Tra
ck:## Sector:## Record:###";T;S;
K;:RETURN
1160 REM
1170 REM ** GET FILENAME **
1180 REM
1190 LOCATE 13,16:PRINT"
/000:1";:M=1:LOCATE 13,16
1200 Z$=""
1210 A$=INKEY$:IF A$="" THEN 121
0
1220 IF A$=CHR$(13) AND LEN(Z$)=
0 THEN RETURN
1230 IF A$=CHR$(8) AND LEN(Z$)<2
    THEN LOCATE 13,16:GOTO 1200
1240 IF A$=CHR$(8) THEN Z$=LEFT$
(Z$,LEN(Z$)-1):PRINT CHR$(8);:GO
TO 1210
1250 IF LEN(Z$)=8 THEN Z$=Z$+"/0
00:1":LOCATE 13,16:PRINT Z$:RETU
RN
1260 IF A$=CHR$(13) THEN Z$=Z$+"
/000:1":LOCATE 21,16:PRINT"/000:
1";:RETURN
1270 Z$=Z$+A$:PRINTA$;:GOTO 1210
```

INTERFERENCE

Almost everyone using a TV has interference, to one degree or another - but you may find that some of the following things will help you reduce it to a tolerable level. Note: there are no "magic" solutions to this problem, other than dumping the TV and using a monitor.

1. Try looping the cable into a small circle, and see if you can position it someplace where the interference is lessened.
2. Get a torroidal core, and loop the cable around the core.
3. Make sure you're using high quality RG-59/U coaxial cable instead of the cable that Radio Shack sent along with the computer. Solder a RCA phono jack on one end... and put a cable-TV 'F' connector on the other. Plug the 'F' connector into a cable-TV 75-to-300 ohm matching transformer instead of the 'switch box' that came with the computer. Keep the run of coax as short as possible.

Obviously, the easiest to try is #1, but if you've tried all three, and none work, consider putting in a monitor driver. That way, you'll bypass the radio frequencies altogether, which is where the source of the problem really is.

PALETTE ROM

THIS PROGRAM MODIFIES THE SUPER EXTENDED BASIC TABLE USED BY THE PALETTE RGB AND RGB COMMANDS. THE DATA GIVEN SUPPLIES A GRAY SCALE FOR COLORS 1 TO 4, RED, GREEN, BLUE AND PALE BLUE, COLORS 5 TO 8. ALL TEXT IS WHITE ON BLACK. THERE IS ONE PROBLEM, WHEN USING WIDTH OR HSCREEN THE COMPUTER CHANGES BACK PALETTE 15, YOU WILL HAVE TO CHANGE THIS (PALETTE15,??) IF YOU USE IT. THE STANDARD SET IS AVAILABLE BY TYPING CMP AND THE NEW SET IS ACCESSED BY TYPING RGB. ANY VALID PALETTE VALUES CAN BE USED IN THE DATA, THESE ARE JUST MY SUGGESTIONS. NOTE: THESE CHANGES CAN BE ERASED BY PRESSING RESET. IF YOU WOULD TO CHANGE THE CMP SET (AND LEAVE THE RGB SET INTACT - FOR RGB USERS) CHANGE LINE 60 TO Y=&HE654 AND ENTER YOUR FAVORITE PALETTE COLORS IN THE DATA STATEMENT. YOU MAY WANT TO EXPERIMENT TYPING IN NEW PALETTE VALUES INTO THE GIVEN RANGE AND CALLING THE RGB COMMAND. THIS ML FAST PALETTE UPDATE COULD REALLY GIVE YOUR PROGRAM A PROFESSIONAL TOUCH.

FOR THE RUN 100 SECTION, PRESS ANY KEY TO COMPARE THE TWO METHODS PRESSING BREAK FLIPS FROM STANDARD TO SPECIAL PALETTES PRESSING BREAK AGAIN EXITS THE PROGRAM WITH THE DATA GENERATED PALETTE SET ON.

```

60 Y=&HE664
70 FORX=0TO15:READA$:A=VAL("&H"+
A$):POKEX+Y,A:NEXTX
80 DATA 00,10,20,30,07,12,0B,2D,
30,00,00,30,30,00,00,30
90 RGB:WIDTH40:CLS:PRINT"RUN 10
0 - TO SEE ML FAST PALETTE UPDAT
E JEB":END
100 HSCREEN2:HCLS0:PALETTE15,&H3
0
105 FORX=1TO15:HCOLORX,0:HLINE(X
*2 0,0)-(X*20+19,191),PSET,BF:NE
XTX
110 ONBRKGOTO170
120 HCOLOR15,0:HLINE(56,32)-(117
,39),PRESET,BF:HPRINT(7,4),"RGB
WAY ":CMP
130 IFINKEY$=""THENZ=RND(16)-1:G
OSUB200:GOTO130
140 HCOLOR15,0:HLINE(56,32)-(117
,39),PRESET,BF:HPRINT(7,4),"PALE
TTES":CMP
150 IFINKEY$=""THENZ=RND(16)-1:G
OSUB300:GOTO150
    
```

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```

160 GOTO120
170 ONBRKGOTO60
180 Z=15:GOSUB200
190 CMP:GOSUB400:RGB:GOSUB400:GO
TO190
200 Y=&HE664:FORX=0TO15:POKEX+Y,
0:NEXTX
210 POKEY+Z,63:RGB:RETURN
300 FORX=0TO15:PALETTEZ,0:NEXTX
310 PALETTEZ,63:RETURN
400 FORX=1TO500:NEXTX:RETURN
    
```

DISK DIR PRINT

A PROGRAM THAT WILL LIST THE STARTING GRANULE AND TRACK/SECTOR OF EACH PROGRAM ON A DISK.

```

10 'LIST PROGRAMS' STARTING GRAN
ULE AND TRACK/SECTOR
20 CLEAR2048:I=1:POKE150,18:CLS
30 DIM NA$(67)
40 INPUT"PRINTER OR SCREEN, P OR
S";A$
50 IF A$<>"P" THEN 100
60 IF (PEEK(&HFF22) AND 1) <> 0
THEN PRINT"PRINTER NOT READY..."

70 D=2:INPUT"HEADER";A$
80 IF (PEEK(&HFF22) AND 1) <> 0
THEN 60
90 PRINT#-D,CHR$(13);CHR$(13);A$

100 F=FREE(0)
110 FOR S=3 TO 11
120 DSKI$ 0,17,S,A$,B$
130 A$=A$+LEFT$(B$,127)
140 FOR I=0 TO 7

```

```



150 U=I*32+1
160 IF ASC(MID$(A$,U,1))=0 THEN
190 ELSE IF ASC(MID$(A$,U,1))=25
5 THEN 200
170 NA$(N)=MID$(A$,I*32+1,16)
180 N=N+1
190 NEXT I,S
200 PRINT#-D,"      NAME      EXT 16
1T   LSB"
210 FOR N=0 TO 67
220 IF NA$(N)="" THEN 310
230 G=ASC(MID$(NA$(N),14,1))
240 IF G>33 THEN TRK=G+2 ELSE TR
K=G
250 PRINT#-D,RIGHT$(STR$(N+101),
2)" ";LEFT$(NA$(N),8) " ";MID$(NA
$(N),9,3) " ";HEX$(G);LEFT$(STR$(
TRK/2)+" ",5);ASC(MID$(NA$(N),1
6,1));
260 IF N=0 OR D=2 THEN PRINT#-D:
GOTO300
270 IF INT(N/15)<(N/15) THEN PRI
NT#-D:GOTO300
280 N$=INKEY$:IF N$="" THEN GOTO
280
290 PRINT#-D
300 NEXT N
310 PRINT#-D,F;"FREE GRANULES"
320 IF D=2 THEN D=0 :GOTO310
330 END
340 VERIFY ON:SAVE"DIREL.BAS":VER
IFY OFF

```

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F I N A N C E

A WAY TO KEEP YOUR FINANCES IN ORDER. INSTRUCTIONS ARE IN THE PROGRAM.

```

10 CLS:PRINT:PRINTTAB(4)"***FINA
NCIAL ANALYST***"
11 PRINT:PRINT:PRINTTAB(2)"SELEC
T THE FINANCIAL ACTIVITY IN WHIC
H YOU ARE INTERESTED:"
12 PRINT:PRINT"<A> LOAN PAYMENT"

13 PRINT"<B> FUTURE VALUE"
14 PRINT"<C> PRESENT VALUE"
15 PRINT"<D> COMPOUND INTEREST";
PRINT"<E> END":FORX=1TO5:PLAY"V3
0;T175;L4;A+;A;A-":NEXTX:PRINT@4
55,"ACTIVITY?"
16 R$=INKEY$:IFR$=""THEN16
17 IFR$="A"THENGOSUB100
18 IFR$="B"THENGOSUB200
19 IFR$="C"THENGOSUB300
20 IFR$="D"THENGOSUB400
21 IFR$="E"THEN25
22 CLS:SOUND50,4:PRINT@199,"ANOT
HER ACTIVITY":PRINTTAB(11)"":PR
INT"<Y><N>";A$
23 R$=INKEY$:IFR$=""THEN23
24 IFR$="Y"THEN10ELSE25
25 END
100 REM LOAN PAYMENT
101 CLS:PRINT:PRINTTAB(10)"LOAN
PAYMENT"
102 PRINT:SOUND200,1:INPUT"LOAN
VALUE $";P:R=P
103 SOUND200,1:INPUT"ANNUAL INTE
REST RATE %";Z
104 SOUND200,1:INPUT"TIME PERIOD
S (MONTHS)";I
105 Y=Z/12
106 LP=P/(((1-(1+Y/100)^-I))/(Y/
100))
107 GOSUB135
108 PRINT:PRINT"WOULD YOU LIKE A
MONTHLY":PRINT"BREAKDOWN <Y><N>
?"
109 R$=INKEY$:IFR$=""THEN109
110 IFR$="Y"THENGOSUB125ELSE132
111 FORX=1TOI
112 A=P*Y/100
113 Z=LP-A
114 P=P-Z
115 IFP-Z<=0THEN121
116 FORT=1TO250:NEXTT
117 GOSUB127
118 C=C+1:IFC=12THEN119ELSE120
119 FORT=1TO250:NEXTT:GOSUB125
120 NEXTX

121 P=0:GOSUB127
122 GOSUB144:GOTO132
123 RETURN
124 CLS
125 CLS:PRINT" MTH  PRNCPL
INT  BAL":LETC=0
126 RETURN
127 PRINTUSING"###";X;
128 PRINTUSING"$#####.##";Z;
129 PRINTUSING"$#####.##";A;
130 PRINT" ";:PRINTUSING"$#####
.##";P;
131 RETURN
132 SOUND50,1:PRINT@455,"ANOTHER
<Y><N>";
133 R$=INKEY$:IFR$=""THEN133
134 IFR$="Y"THEN100ELSE10
135 CLS
136 PRINT:PRINT:PRINT"ON A LOAN
VALUE OF $"P
137 PRINT"AT"Z"% ANNUAL INTEREST
RATE OR"
138 PRINT"AT";:PRINTUSING"###.###
#";Y;:PRINT"% MONTHLY INTEREST"
139 PRINT"FOR" I "TIME PERIODS"
140 PRINT"YOUR PAYMENT PER PERIO
D"
141 PRINT"WILL BE:";
142 PRINTUSING"$#####.##";LP
143 PRINT:A=LP*I-P:PRINT"TOTAL I
NTEREST IS:";:PRINTUSING"$#####
.##.##";A:RETURN
144 A=LP*I-R:PRINT"TOTAL INTERES
T IS:";:PRINTUSING"$#####.##";A

145 RETURN
200 REM FUTURE VALUE
201 CLS:PRINT@74,"FUTURE VALUE"
202 PRINT:SOUND200,1:INPUT"DEPOS
IT PER PERIOD $";D
203 SOUND200,1:INPUT"ANNUAL INTE
REST %";I
204 SOUND200,1:PRINT"DEPOSIT FRE
QUENCY:";PRINT"<A>DAILY; <B>WEEK
LY; <C>BIWEEKLY; <D>MONTHLY; <E>
QUARTERLY; <F>SEMI-ANNUALLY; <G>
ANNUALLY"
205 R$=INKEY$:IFR$=""THEN205
206 SOUND200,1:INPUT"NUMBER OF D
EPOSIT PERIODS";P
207 IFR$="A"THEN214
208 IFR$="B"THEN215
209 IFR$="C"THEN216
210 IFR$="D"THEN217
211 IFR$="E"THEN218
212 IFR$="F"THEN219
213 IFR$="G"THEN220
214 A=I/360:T$="DAY":GOTO221
215 A=I/52:T$="WEEK":GOTO221

```

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```
216 A=I/26:T$="TWO WEEK PERIOD":  
GOTO221  
217 A=I/12:T$="MONTH":GOTO221  
218 A=I/4:T$="QUARTER":GOTO221  
219 A=I/2:T$="SIX MONTH":GOTO221
```

```
220 A=I:T$="YEAR":GOTO221  
221 FV=(D*((1+A/100)^P)-1)/(A/100)  
222 CLS:PRINT:PRINT:PRINT:PRINT  
IF YOU DEPOSIT";:PRINTUSING"###  
##.##";D  
223 PRINT"EACH "T$" AT"I"% ANNUA  
LLY"  
224 PRINT"OR";:PRINTUSING"###.##  
##";A;:PRINT"% PER "T$  
225 PRINT"THE VALUE AT THE END O  
F"P:PRINTT$"S WILL BE:"  
226 PRINTUSING"#####.##";FV  
227 PRINT:PRINT"WOULD YOU LIKE A  
":PRINT" MONTHLY BREAKDOWN <Y><N  
>?"  
228 R$=INKEY$:IFR$=""THEN228  
229 R=0:B=0:IFR$="N"THEN250ELSEG  
OSUB248  
230 X=1  
231 R=D*A/100  
232 B=D+R  
233 GOSUB243  
234 FORX=2TOP  
235 R=B*A/100  
236 B=B+R+D  
237 FORT=1TO175:NEXTT  
238 GOSUB243  
239 C=C+1:IFC=12THENGOSUB241  
240 NEXTX:GOTO250  
241 FORT=1TO200:NEXTT:GOSUB248  
242 RETURN  
243 PRINTUSING"##";X;  
244 PRINTUSING"#####.##";D;  
245 PRINTUSING"#####.##";R;  
246 PRINT" ";:PRINTUSING"#####  
.##";B;  
247 RETURN  
248 CLS:PRINT"PD DEPOSIT IN  
T BAL":PRINT:LETC=0  
249 RETURN  
250 SOUND50,1:PRINT@455,"ANOTHER  
<Y><N>?"  
251 R$=INKEY$:IFR$=""THEN251  
252 IFR$="Y"THEN200ELSE10  
300 REM PRESENT VALUE  
301 CLS:PRINT@41,"PRESENT VALUE"  
  
302 PRINT:SOUND200,1:PRINTTAB(1)  
"SELECT <A> LUMP SUM DEPOSIT OR  
<B> SERIES OF PAYMENTS"  
303 R$=INKEY$:IFR$=""THEN303  
304 IFR$="B"THEN318
```

```

305 CLS:SOUND200,1:PRINT:PRINT:I
INPUT"TARGET VALUE $";T
306 SOUND200,1:INPUT"ANNUAL INTE
REST RATE %";I
307 SOUND200,1:INPUT"TIME PERIOD
(MONTHS)";P
308 A=I/12/100
309 PV=T*(1+A)^-P
310 CLS:PRINT@96,"YOU NEED TO DE
POSIT";:PRINTUSING"#####.##";P
V
311 PRINT"TODAY TO HAVE";:PRINTU
SING"#####.##";T
312 PRINT"IN"P"MONTHS"
313 PRINT"AT";:PRINTUSING"###.##
##";A;:PRINT"% INTEREST PER MONT
H"
314 PRINT"OR";:PRINTUSING"###.##
##";I;:PRINT"% ANNUALLY"
315 PRINT@455,"ANOTHER <Y><N>?"
316 R$=INKEY$:IFR$=""THEN316
317 IFR$="Y"THEN300ELSE10
318 CLS:SOUND200,1:PRINT:PRINT:P
RINT"PAYMENT TIME PERIODS: <A>WE
EKS; <B>MONTHS;<C>QUARTERS; <D>Y
EARS"
319 R$=INKEY$:IFR$=""THEN319
320 SOUND200,1:INPUT"ANNUAL INTE
REST %";I
321 SOUND200,1:INPUT"PAYMENT VAL
UE $";P
322 IFR$="A"THEN326
323 IFR$="B"THEN327
324 IFR$="C"THEN328
325 IFR$="D"THEN329
326 A=I/52;U$="DAY":GOTO330
327 A=I/12;U$="MONTH":GOTO330
328 A=I/4;U$="QUARTER":GOTO330
329 A=I;U$="YEAR":GOTO330
330 SOUND200,1:INPUT"PAYMENT PER
IODS ";M
331 PRINT"PAYMENTS ARE MADE AT <
A>THE BEGINNING OR <B> THE END O
F EACH PERIOD?
332 R$=INKEY$:IFR$=""THEN332
333 IFR$="A"THEN335
334 PV=P*((1-(1+A/100)^-M)/(A/10
0));T$="END":GOTO336
335 PV=P*(1+(1-(1+A/100)^-(M-1))
/(A/100));T$="BEGINNING"
336 CLS:PRINT@96,"THE PRESENT VA
LUE OF"M:PRINTUSING"#####.##";P
;:PRINT" PAYMENTS"

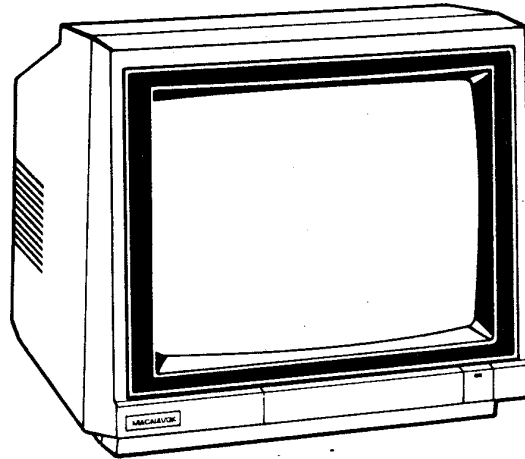
```

```

337 PRINT" MADE AT THE "T$:PRINT
" OF EACH "U$
338 PRINT"AT";:PRINTUSING"###.##
##";I;:PRINT"% PER YEAR"
339 PRINT"OR";:PRINTUSING"###.##
##";A;:PRINT"% PER "U$
340 PRINT"IS";:PRINTUSING"#####
.##";PV
341 GOTO315
400 REM COMPOUND INTEREST
401 CLS:PRINT@40,"COMPOUND INTER
EST"
402 PRINT
403 SOUND200,1:INPUT"DEPOSIT $";
D
404 SOUND200,1:INPUT"ANNUAL INTE
REST %";I
405 SOUND200,1:PRINT"COMPOUNDS <
A>DAILY; <B>MONTHLY; <C>QUARTERL
Y;<D>SEMI-ANNUALLY; <E>ANNUALLY"
406 R$=INKEY$:IFR$=""THEN406
407 SOUND200,1:PRINT"NUMBER OF C
OMPOUNDING":INPUT" PERIODS";P
408 IFR$="A"THEN413
409 IFR$="B"THEN415
410 IFR$="C"THEN417
411 IFR$="D"THEN419
412 IFR$="E"THEN421
413 A=I/360;T$="DAY"
414 GOTO423
415 A=I/12;T$="MONTH"
416 GOTO423
417 A=I/4;T$="QUARTER"
418 GOTO423
419 A=I/2;T$="SIX MONTHS"
420 GOTO423
421 A=I;T$="YEAR"
422 GOTO423
423 FV=D*(1+A/100)^P
424 CLS:PRINT@96,"A DEPOSIT OF";
:PRINTUSING"#####.##";D
425 PRINT"AT"1"% INTEREST ANNUAL
LY"
426 PRINT"OR";:PRINTUSING"###.##
##";A;:PRINT"% INTEREST EACH "T$
427 PRINT"WILL HAVE A VALUE OF";
:PRINTUSING"#####.##";FV
428 PRINT"AT THE END OF"P;T$"S"
429 PRINT@455,"ANOTHER <Y><N>?"
430 R$=INKEY$:IFR$=""THEN430
431 IFR$="Y"THEN400ELSE10

```

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REVIEW COCOUTIL II
BY LEN

I use an IBM PC for word processing on my job, and have often wished that I could transfer text files between my CoCo at home and the IBM. I had no way to do it, though, until I discovered COCOUTIL II, published by Mark Data Products in Mission Viejo, CA. This program lets me to work with text files on the IBM and transfer them to a CoCo formatted disk, or vice versa.

COCOUTIL II is an enhanced version of the earlier COCOUTIL. I've never seen the original program, so I don't know what the enhancements are, but the current program is very useful, indeed.

COCOUTIL II runs on an IBM (or 100% compatible) with MSDOS version 2.0 or higher, and two floppy disks, or one floppy and a hard disk.

The program is loaded into the PC; it won't run on the CoCo. COCOUTIL II makes some necessary temporary adjustments to MSDOS parameters, checks the monitor and adapts the display to it, and then assigns one drive to be the "MSDOS" drive, and another to be the "CoCo" drive. Default is Drive A="MSDOS" and Drive B="CoCo". I use it this way, although COCOUTIL lets you change them.

After loading COCOUTIL, you insert your MSDOS text disk (or a blank, MSDOS formatted disk), and insert the CoCo disk (again, with text or blank, CoCo formatted) into the CoCo drive. One of the disks must have text on it. You can't type onto the disks using COCOUTIL II. COCOUTIL II starts off with an easy-to-read "Menu Box" that tells you which drive is MSDOS and which is CoCo, displays the day of the week, the MSDOS version in use, the number of MSDOS or CoCo files currently loaded, and the maximum number that may be loaded.

Across the top of the Menu Box is a lineup of options, and a large open space is provided for display of file contents or disk directories.

The menu options are:

COPY. Copies a MSDOS file to a CoCo disk, or vice versa.

DIR. Displays the directory for either disk.

ERASE. Allows you to delete a file or files from either disk.

FORMAT. Formats a disk to CoCo format in the CoCo drive, 35 track only.

INSERT. Inserts linefeeds after carriage returns into an ASCII text file to "normalize" it for MSDOS environment. Lines in CoCo ASCII text files normally terminate with a carriage return only.

OPTIONS. Permits you to set configuration values to control screen colors, types of window borders, and change drive assignments. These configurations may be saved to disk so

they act automatically when you start up COCOUTIL II.

I use the default configuration.

PRINT. Dumps any file to your printer in either ASCII or DUMP format. DUMP displays two columns, Hex on the left, and ASCII alongside. DUMP is dandy for locating ASCII characters within a binary file. The ASCII format prints out an ASCII text file exactly as it is on the disk except that non-printable characters (like control codes from a word processor) are printed as periods.

REMOVE. Does the opposite of INSERT. Removes linefeeds after carriage returns on ASCII files.

SHELL. Allows you to temporarily suspend COCOUTIL II without losing data so you can operate on a DOS shell program (instructing the printer, for example), and then return to COCOUTIL II.

VIEW. Displays the contents of any file on the screen. Like the PRINT function, this can be done in ASCII or DUMP format.

COCOUTIL II is easy to use. The arrow keys, space bar, or tab key are used to make your menu selection, or you can type the first letter of the option you wish. The ESC key takes you to the previous menu.

In the DIR mode you use the F7 and F8, END, HOME, or PAGE UP and PAGE DOWN to move within the file display while you're looking at a disk directory.

F3 allows reload of the filename buffer if you change disks in mid-stream, and F4 allows you to change the current MSDOS subdirectory. COCOUTIL's SORT feature (in DIR mode) sorts your directory display in ascending or descending order by name, extension, date (CoCo directories don't have dates), or size. It doesn't change the disk directory; just the display.

The COPY and ERASE options have a "wildcard" feature that permits you to operate on several files with one instruction.

At work, I use a PC/AT with two floppy drives and a 30MB hard drive. The first time I tried COCOUTIL, I loaded it onto the hard disk and booted it from there, but couldn't get it to run. The screen went blank, and the computer kept searching Drive A, one of the floppies.

I called Mark Data Products for help, and within 5 minutes COCOUTIL II was up and running. It seems that COCOUTIL had assigned 21

Drive A to be the MSDOS disk. The solution was simply to insert a MSDOS formatted disk into Drive A instead of trying to use the hard disk as the MSDOS disk.

Later, however, I did load COCOUTIL II onto the hard disk of a PC/XT that has only one floppy. I had to reassign the drives, making the hard drive (Drive C) the MSDOS drive, and the floppy drive (Drive A) the CoCo drive. COCOUTIL II worked fine.

Most of my work is on IBM's DisplayWriter 3 word processor. I made an ASCII save of some text to the MSDOS disk, then, using COCOUTIL II, I copied the file to a CoCo disk and used the REMOVE feature to delete the linefeeds after carriage returns.

When I got home I started up my Telewriter 64 word processor and loaded the file I'd copied. It was perfect except that lines between paragraphs were missing, which closed up the text. I think this was due to some incompatibility between DW3 and Telewriter. The problems were easily corrected, and I still may discover some way to avoid them in the future.

Then I prepared a new text file on T64 and saved it to disk in ASCII. Next day, after adding linefeeds with INSERT, I was able to transfer the CoCo file to a MSDOS disk and load it into DW3 with no problems, although I did have to re-paginate.

Since then I've successfully transferred ASCII text files back and forth many times.

I have experienced one annoyance with COCOUTIL II. Occasionally, when viewing a file on the CoCo disk, I'll get a "CoCo sector not found" message, meaning that COCOUTIL wasn't able to find the next sector of the file I was viewing. The sector or the pointer don't seem to be permanently lost because when I try again, the sector is usually found. This might be a problem with the PC drive. It doesn't happen often, but if it does, I'll contact Mark Data to see if they know what's happening.

COCOUTIL II will transfer BASIC programs, too, either ASCII or compressed, although I have no idea why anyone would want to transfer a compressed (binary) file between CoCo and MSDOS, since they're incompatible. I have, however, downloaded an MSDOS program file from the IBM club on PLINK using my CoCo, and successfully transferred it to the PC using COCOUTIL II.

COCOUTIL is capable of transferring machine language files, too, although, again, they're incompatible between the two machines. But you can transfer them. What you do with them

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is up to you to figure out.

I'm very pleased with COCOUTIL II and recommend it to anyone who needs to transfer ASCII or machine language files between an IBM compatible and a CoCo.

LETTERS TO THE EDITOR

I'm getting fed up with some of the people who are griping about the SUPPOSED lack of third party support for the Coco 3. These people seem to think that software just materializes overnight by the wave of someone's magic wand.

Well, it ain't so. It takes months just to write a decent piece of software. It can take more months to write the docs and get it into distribution. I don't know the average amount of development time involved in marketing a major piece of software, but it wouldn't surprise me if it was a year or longer.

So, only two months after the new Coco starts to appear at the Radio Shack stores, some users are complaining about the "lack of support" for the machine.

I imagine these people bought the Coco 2 well after third party support was widespread. We "old-timers" who bought the machine when it first arrived remember no third party software to speak of for the first two years.

Even Radio Shack does not have any Coco 3 software available yet. If Radio Shack, who has had the machine longer than anybody else, hasn't been able to get software to market, how can anyone reasonably expect a third party vendor to have software ready?

So, the bottom line is, LIGHTEN UP! I don't want to hear anymore about "lack of third party support" until April 1988, which is 18 months after the machine became readily available. At that time we will be able to reasonably evaluate the amount of third party support going to the Coco 3.

DIARY.NEW
BY RAY ONLEY

HELLO AGAIN. I AM BACK WITH A BRAND NEW VERSION OF MY ALREADY SEMI-FAMOUS DIARY PROGRAM.

I REALIZED THAT THERE WERE MANY FALTS TO MY EARLIER VERSION OF THIS PROGRAM. LIKE NOT BEING ABLE TO EDIT WHAT WAS WRITTEN, EASY-TO-CRACK PASSWORD COADING (NONE), AND JUST GENERALLY NOT BEING VERY GOOD.

THE BIGGEST CHANGE I HAVE MADE IS THE ABILITY TO EDIT WHAT HAS BEEN WRITTEN. TO DO THIS, GO INTO WRITING MODE, TYPE IN YOUR ENTRY, AND ON AN EMPTY LINE, TYPE 'END'

THE COMPUTER WILL PROMPT YOU WITH A LIST OF THINGS YOU MIGHT WANT TO DO. I THINK THE REST IS SELF-EXPLANATORY. IF YOU WISH TO EDIT SOME TEXT YOU HAVE ALREADY WRITTEN, JUST ENTER TYPE/EDIT MODE. THE COMPUTER WILL DISPLAY WHAT YOU HAVE WRITTEN AND THEN PROMPT YOU WITH THE EDITING MENU. YOU CAN GO ON FROM THERE.

THE SECOND NEW FEATURE I HAVE ADDED IS A MUCH BETTER PASSWORD CODEING SYSTEM. SOMEONE WOULD HAVE TO SPEND QUITE A BIT OF TIME TO FIGURE IT OUT. THERE ARE PARTS OF THE CODEING PROCESS I HAVE TROUBLE UNDERSTANDING.

THE THIRD MAJOR IMPROVEMENT IS BEING ABLE TO SEE YOU ENTRY ON THE SCREEN BY PAGEING INSTEAD OF HAVING IT WIZZ BY YOUR EYES UNCONTROLABLY. WHICH IS WHAT HAPPENED IN THE PREVIOUS VERSION.

I HAVE SPENT OVER SEVEN HOURS REPROGRAMING DIARY, AND HAVE MADE COUNTLESS IMPROVEMENTS. I HOPE YOU ENJOY THIS NEW VERSION AS MUCH AS I HAVE. IF YOU HAVE ANY QUESTIONS OR COMMENTS, SEND A SASE TO:

RAY ONLEY
810 CASCADE RD.
CINCINNATI, OH 45240

WANTED

Your friends name and address that are COCO owners. We would like to send them a free sample of COCO ADS. Please send to-
P D SOFTWARE P.O.BOX 13124 HOUSTON, TX 77219

```

10 CLEAR 4000: DIM A$(100)
20 P$=""
30 CLS: PRINT "WILL YOU BE USING A
  CASSETTE OR A DISK (1=CASSETTE,
  2=DISK)"
40 Z$=INKEY$: IF Z$="" THEN 40 EL
  SE CD=VAL(Z$)
50 IF CD<1 OR CD>2 THEN 30
60 IF CD=1 THEN 100
70 IF CD=2 THEN PRINT: PRINT "WHIC
  H DISK DRIVE DO YOU WANT THE ENTR
  IES STORED ON (0-3)?: VERIFY ON
80 Z$=INKEY$: IF Z$="" THEN 80
90 Z=VAL(Z$): IF Z<0 OR Z>3 THEN
  80 ELSE DRIVE(Z)
100 CLS: PRINT TAB(4) "COMPUTERIZED
  DIARY-";: IF CD=1 THEN PRINT "TAP
  E"
110 IF CD=2 THEN PRINT "DISK"
120 PRINT STRING$(32, 243): PRINT "C
  HOOSE ONE.": PRINT
130 PRINT "1) WRITE/EDIT AN ENTRY
  ": PRINT "2) SAVE AN ENTRY": PRINT "
  3) LOAD AN ENTRY": PRINT "4) PRINT
  AN ENTRY": PRINT "5) DELEATE A DI
  SK FILE": PRINT "6) CLEAR PRESENT
  ENTRY": PRINT "7) CHANGE INPUT/OUT
  PUT DEVICE": PRINT "8) CHANGE DRIV
  E NUMBER": PRINT "9) END"
140 CO$=INKEY$: IF CO$="" THEN 14
  0 ELSE CO=VAL(CO$)
150 IF CO<1 OR CO>9 THEN 100 ELSE
  ON CO GOTO 200, 410, 610, 800, 1010
  , 1110, 160, 1280, 1210
160 IF CD=1 THEN CD=2: GOTO 100
170 IF CD=2 THEN CD=1
180 GOTO 100
190 CLS: PRINT TAB(6); "COMPUTERIZE
  D DIARY": PRINT STRING$(32, 131+(RN
  D(7)*16)): RETURN
200 GOSUB 190
210 IF A>0 THEN GOSUB 840: GOTO 2
  70
220 A=0
230 A=A+1
240 PRINT STR$(A); "> ";
250 LINEINPUT A$(A): IF A$(A)="EN
  D" THEN A$(A)="" : A=A-1: GOTO 270
  ELSE IF LEN(A$(A))>26 THEN PRINT
  "PLEASE KEEP LINES SHORTER THEN
  27 CHARACTORS.": GOTO 240
260 GOTO 230
270 PRINT: PRINT: PRINT "<L>IST, <C
  >ONTINUE, <E>DIT, OR <M>AIN MEN
  U
280 B$=INKEY$: IF B$="" THEN 280
290 IF B$="L" THEN GOSUB 840: GOT
  O 270
300 IF B$="C" THEN 230

```

```

310 IF B$="E" THEN 340
320 IF B$="M" THEN 100
330 GOTO 280
340 PRINT:INPUT"EDIT WHICH LINE"
;B
350 PRINT:PRINT"LINE"B"READS AS
FOLLOWS:":PRINT
360 PRINT A$(B)
370 PRINT:PRINT"TYPE IN NEW LINE
OR PRESS ENTER TO LEAVE LINE AS
IS.
380 PRINT STR$(B);"> ";
390 LINEINPUT C$:IF LEN(C$)>26 T
HEN PRINT"PLEASE KEEP LINES SHOR
TER THEN 27 CHARACTORS." ELSE I
F C$="" THEN PRINT:GOTO 270 ELSE
A$(B)=C$
400 GOTO 270
410 REM SAVE FILE
420 GOSUB 190:INPUT"FILE NAME";F
ILE$:IF LEN(FILE$)>8 THEN 420
430 PRINT:INPUT"PASSWORD TO BE I
NCODED INTO DATAFILE";PW$
440 PRINT:PRINT"READY CASSETTE R
ECORDER OR DISK DRIVE AND PRESS
ANY KEY"
450 IF INKEY$="" THEN 450
460 GOSUB 1100:N$="":K$="":IF CD
=2 THEN 530
470 OPEN"O",-1,FILE$
480 PRINT#-1,P$;A
490 FOR S=1 TO A
500 PRINT#-1,A$(S)
510 NEXT S
520 CLOSE-1:GOTO 100
530 OPEN"O",1,FILE$
540 PRINT#1,P$
550 PRINT#1,A
560 FOR S=1 TO A
570 PRINT#1,A$(S)
580 NEXT S
590 CLOSE1:GOTO 100
600 RETURN
610 GOSUB 190:INPUT"FILE NAME";F
ILE$
620 PRINT:INPUT"PASSWORD INCODED
ON FILE";PW$:PRINT:PRINT"READY
CASSETTE RECORDER OR DISK DRIVE
AND PRESS ANY KEY
630 IF INKEY$="" THEN 630
640 IF CD=2 THEN 720
650 OPEN"I",-1,FILE$
660 INPUT#-1,K$:GOSUB 1180
670 INPUT#-1,A
680 FOR S=1 TO A
690 LINEINPUT#-1,A$(S)
700 NEXT S
710 CLOSE-1:GOTO 100
720 OPEN"I",1,FILE$
730 INPUT#1,K$:GOSUB 1180

```

```

740 INPUT#1,A
750 FOR S=1 TO A
760 LINEINPUT#1,A$(S)
770 NEXT S
780 CLOSE 1
790 GOTO 100
800 GOSUB 190:PRINT"DO YOU WANT
THE TEXT DESPLAYED ON THE SCREE
N OR THE PRINTER (S/P)"
810 SP$=INKEY$:IF SP$="" THEN 81
0
820 IF SP$="P" THEN 930
830 GOSUB 840:GOTO 100
840 FOR D=0 TO INT(A/11)
850 GOSUB 190
860 FOR E=D*11 TO D*11+11
870 PRINT STR$(E);"> ";A$(E)
880 NEXT E
890 PRINT@480,"PRESS ANY KEY";
900 IF INKEY$="" THEN 900
910 NEXT D
920 RETURN
930 PRINT"READY PRINTER AND PRES
S ANY KEY
940 IF INKEY$="" THEN 940
950 GOSUB 190
960 FOR D=1 TO A
970 PRINT A$(D)
980 PRINT#-2,A$(D)
990 NEXT D
1000 GOTO 100
1010 CLS
1020 INPUT"FILE TO BE KILLED (TY
PE 'ABT' TOABORT OPERATION)";KI$
1030 IF KI$="ABT" THEN 100
1040 IF LEN(KI$)>8 THEN 1020
1050 PRINT:INPUT"PASSWORD INCODE
D ON FILE";PW$
1060 OPEN"I",1,KI$:INPUT#1,K$:GO
SUB 1180
1070 CLOSE
1080 KILL KI$+"/DAT"
1090 GOTO 100
1100 P$=STRING$(LEN(PW$)*3,32):F
OR X=0 TO LEN(PW$)-1:MID$(P$,X*3
+1,3)=STR$(ASC(MID$(PW$,X+1,1))-
30):NEXT:RETURN
1110 CLS:FOR X=1 TO 5:SOUND 240,
5:NEXT X
1120 GOSUB 190
1130 PRINT"WARNING!!! DATA ABOUT
TO BE DELETED! PRESS <1> I
F OK TO CLEAR. PRESS <2> TO G
ET BACK TO MAIN MENU"
1140 OK$=INKEY$:IF OK$=""THEN114
0
1150 IF OK$="2" THEN 100
1160 FOR X=1TOA:A$(X)="":NEXT:A=
0

```



```

1170 GOTO 100
1180 N$=STRING$(LEN(K$)," "):FOR
  X=0 TO LEN(K$)-1:MID$(N$,X+1,1)
=CHR$(VAL(MID$(K$,X*3+1,3))+30):
NEXT
1190 FOR X=1 TO LEN(N$):IF MID$(
PN$,X,1)=MID$(N$,X,1) OR MID$(N$
,X,1)=CHR$(30) THEN NEXTX ELSE C
LOSE:PRINT:PRINT"INCORRECT PASSW
ORD. ABORTING TO MENU.":FOR X=1
TO 1000:NEXT:GOTO 100
1200 RETURN
1210 CLS:FOR X=1 TO 5:SOUND 240,
5:NEXT X
1220 GOSUB 190
1230 PRINT"WARNING!!! ABOUT TO E
ND PROGRAM PRESS <1> TO END OR <
2> TO GO BACK TO MAIN MENU"
1240 OK$=INKEY$:IF OK$=""THEN124
0
1250 IF CD=2 AND OK$="1" THEN VE
RIFY OFF
1260 IF OK$="1" THEN CLEAR 600:C
LS:END
1270 GOTO 100
1280 GOSUB 190
1290 PRINT"CURRENT DRIVE NUMBER
IS"Z
1300 PRINT
1310 PRINT"NEW DRIVE NUMBER (0-3
)?
1320 Z$=INKEY$:IF Z$="" THEN 132
0
1330 Z=VAL(Z$):IF Z<0 OR Z>3 THE
N 1310 ELSE DRIVE(Z)
1340 GOTO 100

```

Discoveries.....

Hi Kids,

It's going to take awhile before a whole lot of new information starts coming through about the III, though one thing seems certain, we are seeing more in CoCoAds than in many of the other magazines and newsletters.

Most business computers present a totally dark screen with the text in light letters and it seems that the smaller computers always have a light screen with black letters. This is a bit difficult to do serious text processing and there have been many methods put forth to solve this.

Probably the easiest method is to lift pin 32 of the 6847 VDG that was used on all of the earlier boards pright up to the last CoCo II. Next, simply run a small wire from any ground source to the lifted pin and solder it on. Tin the wire first so that you won't have to put too much heat on the pin.

There's only one drawback to this. You will now have your lowercase letters producing a light square which is just the reverse of what it was before. POKE282,255 to toggle lowercase off.

I've had a lowercase board for so long now that it's hard for me to realize how awful the old checkerboard screen was. All this has changed now with the III. You have lowercase and screen color control when you choose WIDTH 40 or 80. Now we come to the good part! One can create what is called an initialization program that can be booted from disk or loaded from cassette whenever you powerup.

Here's one that I put together for you to play with. You know that many Apples and other computers must load in their BASIC or whatever language they're going to use anyway so this isn't so bad if you want to preset your computer the way you want.

```

10 CLS:POKE44014,0 'Clears screen,
  removes "OK"
20 POKE41384,95 'Changes cursor to
  left arrow
30 POKE41381,134 'Stops cursor flashing
40 POKE&H3FE,PEEK(&H72):POKE&H3FF,PEEK(&H73)
50 POKE&H72,3:POKE&H73,&HF9
60 FORI=&H3F9 TO &H3FD:READP$
  :POKEI,VAL("&H"+P$):NEXT
70 DATA12,7F,FF,DF,7E
75 ' lines 40 - 70 are reset protection
80 POKE25,14:POKE3584,0:NEW 'Pclear 0

```

So that's it this time, Bye kids.

John C. Burke
38699 Greenwich Circle
Fremont, Ca. 94536

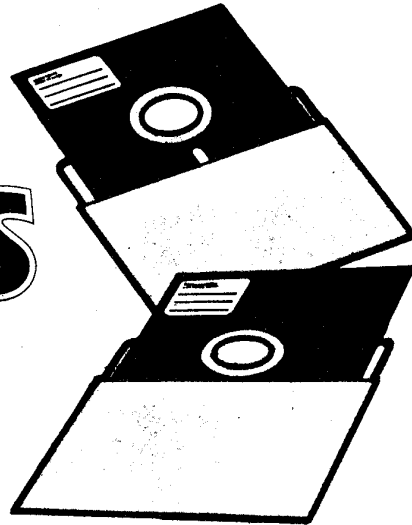
Hints and Tips:

The "!" that one sometimes sees in a listing is the computers way of interpreting a command that is not in it's vocabulary.

Last month we saw an example of this where a CoCo 1 or 2 was used to read a listing from a III. Since there are a number of new commands the older machines' interpreter cannot decipher them and they will use a "!" instead. It should be easy enough to substitute the appropriate commands, ATTR, PALETTE, WIDTH, etc., whenever you encounter a "!".

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ISSUE A1 YAHTZEE SORT	GAME OF DICE BASIC SORT	ISSUE A3 TAPELIST CLOCK DISKMAP LIST KEYBOMER PONE BOXLABL DESIGNS REMULKS	UTILITY UTILITY DISK UTIL UTILITY GAME GAME UTILITY PICTURES ADVENTURE	ISSUE A4 LABELS 2 DATA BASE - FIVE PROGRAMS IN THIS PACKAGE OF A VERY POWERFUL DATA BASE PROGRAM
ISSUE A2 SCREENDMP SEE CALENDAR LABYRINTH FINDWORD	UTILITY DISK UTILITY PRINT A CALENDAR ADVENTURE WORD SEARCH	ISSUE A6 AIR-RAID GRAPH AUTOLINE2 TANKS RACE-ACE PRECENT SUBDEST ANIMAL COPYTK17 AUTORITE	GAME BUSINESS UTILITY GAME GAME SCHOOL GAME GAME DSK UTIL UTILITY	ISSUE A7 AIRATTAK STGEORGE CASDICE PURCHASE EQUATION TRACKMOVE PHONE
ISSUE A5 LABELS DATA SPEAK MULTI PAC GONDOLA AUTO LINE DISK FILE ODD COUPLE HANGMAN FLIP-FLOP TRANSFER	UTILITY UTILITY UTILITY GAME UTILITY DISK UTIL TRIVIA GAME GAME GAME DISK UTIL	ISSUE A9 COMPAC DISKLIST JEWELS CASSCAT TITLEPG CNGSQUAR MYSTILSD PIG	GAME BUSINESS UTILITY GAME GAME SCHOOL GAME GAME DSK UTIL UTILITY	ISSUE A10 ROMMAP ROLLOVER CODETABL MAZE ANIMALDK SOUNDRE DESTROY SAFECKR
ISSUE A8 DISKCOPY CERIFY SCANNER TIME MUSIC PING PONG PHONDIALER PHONE SORT	UTILITY UTILITY UTILITY EDUCATION MAKE MUSIC GAME UTILITY UTILITY	ISSUE A12 PILOT TEST SCHOOL MINI-GEN DISK-CAL COCO-MON	UTILITY DSK UTIL ADVENTURE TAPE UTIL SCHOOL GAME ADVENTURE GAME	UTILITY UTILITY GAME GAME GAME GAME GAME GAME
ISSUE A11 TAX ESTIMATE M L T T D PARTS INVEN DATA MAKER KABOOM DEF MOV R/C AIRPLANE MATCH SQU	ESTIMATE TAX UTILITY INVENTORY FILE DATA STATEMENT GAME GAME GAME GAME	ISSUE B1 CHESS TRUCKER CODEFIL FRACTIO 4-D TIC DRAWPKE JUNGLE	UTILITY UTILITY ADVENTURE TAPE UTIL SCHOOL GAME ADVENTURE GAME	UTILITY UTILITY GAME GAME GAME GAME GAME
ISSUE B2 CLOCK WORD PROC CASS FILE CASTLE HOME BGT DISK MAST ROAD RACE	A CLOCK PROCESSOR TAPE UTILITY ADVENTURE BUDGET DISK UTILITY GAME	ISSUE B3 AMORIT SPOOLER DISKCOPY PUZZLE STOCKKET WIDTHCGE BIORHYTHM TANK	UTILITY UTILITY UTILITY GAME GAME UTILITY GAME GAME	UTILITY UTILITY UTILITY GAME GAME UTILITY GAME GAME
ISSUE B4 RECOVER DATABOOK ROMTOTPE CALENDAR LETTER ANTI-TOP	UTILITY DATA BASE UTILITY UTILITY BUSINESS GAME	ISSUE B5 CANNON CRYPT BANNER FLASH CRD WORDS REPORTER	GAME ADVENTURE UTILITY EDUCATION GAME EDUC BUSINESS	ISSUE B6 RETRIEV POOL STATES DRAW DISKSPED ML ADDR TRIANGLE NAMES HANGMAN
			UTILITY GAME EDUCATION GAME UTILITY UTILITY ART DATA BASE GAME	

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NOTICE

IN ISSUE C-1 THE PROGRAM
CALLED STAYING ALIVE WAS SENT
IN WITH NO AUTHOR. WELL WE
HAVE FOUND THE AUTHOR TO BE:

ALAN KLEIN
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10 REM MULTIPLICATION PUZZLE
20 REM HOWARD M. KALODNER
30 REM 8540 TOLBUT STREET
40 REM PHILA. PA. 19152
50 REM AUGUST 1, 1985
60 REM -----

```

70 CLS: CLEAR 1000
80 LC$=STRING$(32,32)
90 DIM N$(6,6),C$(6,6),X$(6),J$(
6,10)
100 G=0
110 FOR N=0 TO 9:FOR T=1 TO 6
120 J$(T,N)=" "
130 NEXT T:NEXT N
140 X(1)=RND(900)+99:X(2)=RND(90
0)+99
150 X(6)=X(1)*X(2)
160 FOR I=1 TO 2
170 X$=STR$(X(I)):X$(I)=RIGHT$(X
$,3):X$(I)=STRING$(3,32)+X$(I)
180 NEXT I
190 X(5)=INT(X(2)/100)
200 X(4)=INT((X(2)-100*X(5))/10)

210 X(3)=X(2)-100*X(5)-10*X(4)
220 X(5)=X(5)*X(1)*100
230 X(4)=X(4)*X(1)*10
240 X(3)=X(3)*X(1)
250 FOR I=3 TO 6
260 X$=STR$(X(I)):L=LEN(X$):X$(I
)=RIGHT$(X$,L-1):X$(I)=STRING$(6
-LEN(X$(I)),32)+X$(I)
270 NEXT I
280 IF X$(3)=" 0" THEN X$(3)=
31" 000"

```

```

290 IF X$(4)=" 0"THEN X$(4)=
" 0000"
300 IF X$(5)=" 0"THEN X$(5)=
" 00000"
310 PRINT:PRINT " DIRECTION <
Y>YES OR <N>0"
320 QQ$=INKEY$:IF QQ$=""THEN 320

330 IF QQ$="Y"THEN 880
340 IF QQ$="N"THEN 360
350 GOTO320
360 FOR R=1 TO 6
370 FOR C=1 TO 6
380 C$(R,C)=" "
390 N$(R,C)=MID$(X$(R),C,1)
400 IF N$(R,C)<>" " THEN C$(R,C)
="X":TQ=TQ+1
410 NEXT C
420 NEXT R
430 CLS:PRINT@0,TQ-V" NUMBERS LE
FT":PRINT TAB(14)"123456":PRINT;

440 PRINT TAB(14)"====="
450 FOR R=1 TO 6
460 PRINT TAB(14);
470 FOR C=1 TO 6
480 PRINT C$(R,C);
490 NEXT C
500 IF R=2 OR R=5 THEN PRINT:PRI
NT TAB(14)"-----";
510 PRINT
520 NEXT R
530 PRINT@11*32,"";G=G+1:PRINT"
GUESS #:";G
540 IF TQ=V THEN PRINT@13*32+10,
"game over":END
550 PRINT@12*32,"";:INPUT"COLUMN
";RR$:RV=VAL(RR$)
560 IF RR$="T" THEN 680
570 IF RR$="Q" THEN 770
580 IF RR$="C"THEN 970
590 IF RV<1 OR RV>6 OR RV<>INT(R
V) THEN PRINT@12*32,LC$:GOTO550
600 PRINT@13*32,"";:INPUT "NUMBE
R";NN$
610 NN=VAL(NN$):IF NN>9 OR NN<0
OR NN<>INT(NN) THEN PRINT@13*32,
LC$:GOTO600
620 IF J$(RV,VAL(NN$))=" "+NN$ T
HEN PRINT "USED":FOR TT=1 TO 500
:NEXT TT:G=G-1:GOTO430
630 FOR C=1 TO 6
640 IF N$(C,RV)=NN$ THEN C$(C,RV
)=NN$:V=V+1
650 NEXT C
660 J$(RV,VAL(NN$))=" "+NN$
670 GOTO 430
680 CLS
690 PRINT:PRINT TAB(8)" C O L U
M N S

```

```

700 PRINT TAB(8)" 1 2 3 4 5
6
710 PRINT TAB(8)"-----
----"
720 FOR N=0 TO 9:FOR T=1 TO 6
730 PRINT TAB(8);
740 PRINT J$(T,N);" ";
750 NEXT T:PRINT:NEXT N
760 PRINT:PRINT "PRESS ENTER TO
CONTINUE";:INPUT QQ$:G=G-1:GOTO4
30
770 CLS
780 PRINT:PRINT TAB(14);
790 FOR R=1 TO 6
800 PRINT TAB(14);
810 FOR C=1 TO 6
820 PRINT N$(R,C);
830 NEXT C
840 IF R=2 OR R=5 THEN PRINT:PRI
NT TAB(14)"-----";
850 PRINT
860 NEXT R
870 END
880 CLS:PRINT:PRINT" A 3 DIGIT B
Y 3 DIGIT MULTIPLICATI
ON PROBLEM IS DISPLAYED, B
UT THERE ARE NO NUMERALS, ON
LY X'S.
890 PRINT:PRINT"IT'S YOUR JOB TO
REPLACE EACH 'X' WITH THE CO
RRECT NUMERAL.
900 PRINT:PRINT "BY GUESSING A N
UMERAL IN A COLUMN, YOU WIL
L BEGIN TO SOLVE THE PROBLEM.
910 PRINT:PRINT"PRESS ENTER TO C
ONTINUE";:INPUT QQ$
920 CLS:PRINT:PRINT"ENTER t FOR
THE COLUMN REQUEST TO SEE THE N
UMERALS YOU HAVE ALREADY USED
.
930 PRINT:PRINT"ENTER c FOR A CL
UE."
940 PRINT:PRINT"ENTER q TO QUIT
- BUT DON'T GIVE UP TOO EASI
LY.
950 PRINT:PRINT TAB(12)"good luc
k"
960 PRINT:PRINT"PRESS ENTER TO B
EGIN";:INPUT QQ$:GOTO360
970 PR=RND(6):PC=RND(6)
980 IF N$(PR,PC)=" "THEN 970
990 W=VAL(N$(PR,PC))
1000 IF J$(PC,W)=" "THEN 1010 E
LSE 970
1010 FOR R=1 TO 6
1020 IF VAL(N$(R,PC))=W AND N$(R
,PC)<>" " THEN C$(R,PC)=N$(R,PC
):J$(PC,W)=" "+N$(R,PC):V=V+1
1030 NEXT R
1040 GOTO430

```


HARD COPY
By Lonnie Hortick
(FKEYS III REVIEW)

I have always envied the "clone" users because of one thing only - FUNCTION KEYS! I do prefer OS-9 over MS-DOS and the ability to generate 4 voices without adding on new hardware but I have always wanted function keys! Oh sure, I know the COCO III has 2 function keys and Control and Alt keys and there are keyboards available for the I and II that have up to four but I want function keys by the bunch!

Well, along comes Spectrum Projects with a program called FKEYS III that looks like it will fit the bill. It has, count 'em, TWENTY function keys on the COCO III and EIGHTEEN on the COCOs I and III!! Need to say I was delighted to review this program?

The program is compatible with the III and most older COCOs. It works with either DEB 1.0 or 1.1 and with Steve Bjork's DFIX/BIN. The instructions are four Xeroxed pages long but I had to reread them to fully understand what was going on with the DOS modifications module. More on that later...

FKEYS III runs in the all RAM mode so that you must reload it upon each and every power-up but - it does offer the option to save an EPROM version that can be programmed into whatever type of EPROM your disk controller uses so that all of the functions are available automatically. This is a strong point in favor of this program. Now if I could only get a cheap EPROM burner...

The program allows you to use the pre-programmed keys or customize it to suit yourself. you can also modify DOS to take advantage of double sided drives and/or 6 to 30 ms step rates. In fact you can make as many different customized versions of FKEYS as you have needs or applications!

Since my main computer is a grey cased COCO I with the upgraded keyboard but no function keys I chose to use the down arrow as my control key. I quickly set up 18 function keys and save the resulting file to disk. With my modified copy some of the commands I have at my disposal are: a directory of drive 0, 1, 2, or 3 with free grans remaining; LOADM; RUN; DOS; POKE113,0:EXEC40999; RUN"DOS"; SAVE"; LOADM"DOS"; LIST and many other common functions that can all be done with 2 keystrokes.

This program, since it runs in the all RAM mode will remain in memory after using such programs as SCRIPSIT and the VEGAS GAME

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PACK. As long as the program does not call it's own all RAM mode and has a safe exit back to RS BASIC then your modified DOS should remain memory resident. FKEYS III is not compatible with programs such as MKKEYTERM or Jeff Francis' utility program since they utilize their own all RAM mode. And, of course, it is not compatible with OS-9.

All in all I found FKEYS III to be program of tremendous help when operating in RS DOS. I plan to customize another version that will allow me to initialize, backup and copy all at the touch of a couple of keys. The EPROM version, should you elect to go that route, allows you to have access to the features you need ost on a continuous basis without having to rerun the program again.

On my infamous scale of 1 to 10 I rate this product an 8.5 only because of the murkiness of the documentation with regard to saving the modified DOS. I had to re-read this several times and re-run the program in order to fully understand what was going on. FKEYS III can be ordered from Spectrum Projects, Inc., P.O. Box 264, Howard Beach, New York 11414. The price is \$24.95 plus \$3.00 for shipping and handling.

C O C O P R O G R A M P A C K S

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
CHESSE	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	DOGPIC	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						

PROGRAM PACK # 5

MLDISK 3070 D,U	SORT 794 U	TELETERM 5792 COMM
DSK EDIT 8165 D,U	HEALTH 18728 EDU	SOUND 58 EDU
TOF 3019 G	AIRPORT 12031 G	CUBE 5907 G
OBJECTS 4211 G	TANKS 8323 G	CIA 13777 ADV
TRIANGLE 4539 PIC	WORLDMAP 7435 EDU	GARFIELD 6154 PIC
HALLDEMO 1910 PIC	LINES 2263 ART	KALVOS 1259 G
CASTLE 21217 ADV		

PROGRAM PACK # 6

SLITHER 2156 G	TUMBLERS 3979 G	ELIZA 7083 G
ICELAND 3472 G	EDUCATE 1511 G	DUNGEON 4362 ADV
PIXDUMP 2140 U,P	CONTOUR 1143 U	SLOSKROL 218 U
COPYDIR 1566 D,U	DIRLIST 1535 D,U	PILOT 4135 G
INVITE 1533 U	MATHPAL 6460 EDU	DUPER 2971 U
IN-OUT 226 ART	GOLDMINE 5646 G	HUSTLE 1239 G
HOBBIT 3634 G	CONNECT4 2647 G,K	OTHELLO 5800 G,K
BIOTYTHM 1787 G,P	SIMON 782 G,K	TICTACT 4269 G,K
3-D-T 4263 G,K	DARTBORD 4431 G,K	COPTER 3022 G

PROGRAM PACK # 7

D-ADV 17651 ADV	SWORDS 9198 G	TROLL 11561 ADV
QUEST 8439 G	SURVIVE 9751 ADV	SPELWORD 2135 EDU
CUBIC 5331 G	DOTMAT 16651 G	FLIGHT 5435 G
GRID 3715 PIC	TIGER 6154 PIC	ZIGGY 6154 PIC
LABELPRT 420 U,C	PEEK 1799 U	ROMDUMP 421 U
DISASSY 7512 U	MLFINDER 440 U	COLORBAR 91 U
PATTERN 994 U	PORT 249 U	PAYMENT 340 U
PHONE 1629 F	LOAN 6038 BUS	

PROGRAM PACK # 8

LOANAMOR 1633 FIN	MLTD 840 U	BLACKJK 7520 G,K
SLITTER 2137 G,K	IDKIT 12911 G	SPACE 17397 PIC
FARMING 12878 G	TREK 10169 G,K	DSCOPY 1946 D,U
DSKSPEED 1470 D,U	EXREF 5524 U	ALARM 4150 U
CLOCK 1112 U	PHONEDIR 2393 F,C	TICKTAPE 5510 U
FINANCE 18343 FIN	BARTENDR 5710 REF	DSKLIBRY 5598 F,D
MESSAGE 828 U	FLIPPAGE 5734 U	DSKAID 8025 D,U

PROGRAM PACK # 9

DECIDE 4795 G	BIBLE 3249 EDUC	BOMBER 2604 G,K
WEATHERX 4797 U	PROJEVAL 9107 B	FILES 8401 B,C
SUB 9473 ADV	DATAPRNT 413 U	DISKDIRE 4979 D,U
BASEBALL 21936 PIC	AMORLN 3655 F	ASSMLBER 6211 U
GUITAR 10886 E,M	POKER 6924 G,K	TANK 4132 G,J
TRIANGLE 7007 PIC	SHIPS 3756 PIC	HANDBALL 3883 G,J
TRAIL 7938 G,K,J		

PROGRAM PACK # 10

KINGDOM 11949 ADV	CHECKS 6453 F,D,C	BONGOCARD 1701 G,P
DKS2TP 2483 D,U	SLOTS 3984 G,K	DATAFILE 7239 F
MLADFND 2762 U	ICE 6060 G	ASSMBLER 12803 U
DISMON 13924 U	SIMSAS 636 G,K	DISKNAME 7820 D,U
SQUEEZE 3166 D,U	STATUS 7787 D,U	DISKLOOK 684 D,U
MAZE 7106 G,K	CROSROAD 2991 G,J	ANIMALS 6219 E,K
DSKLOCK 2795 D,U	SELFMAIL 985 U,P	

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
WEREWAND1	0443	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
WILLSADV1	0330	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	HAUNTHSE1	2572	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
SPDSHEET1	0430	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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201 526 6839	THE AIRPORT	NJ	312 597 8485	CREME DE COCO	IL	614 754 1971	COLORAMA	TN
201 564 6112	COCO NUTS	NJ	312 679 8111	ENCHANTED TOILET	IL	615 476 3340	ONLINE EXCHANGE	TN
201-569 0162	NAME UNKNOWN	NJ	312 720 0796	COCO EXTRACORDINARIE	IL	615 476 3340	BBS	TN
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201 657 0611	COLOR CORNER	NJ	314 428 2692	AS IS SOFTWARE	MO	615 839 3130	COLORAMA	TN
201 725 5028	CCIE #1	NJ	315 437 4890	ANORIN MICROWAVE	NY	615 842 6809	68 MICRO	TN
201 773 8265	MEADOWLANDS BBS	NJ	315 446 7793	COMPUTER STORE	NY	615 982 8232	DISK FIX	TN
201 790 6795	PHOTO-80	NJ	315 487 0503	COLOR 80	NY	615 983 6163	REBEL CORNER	TN
201 827 7815	SUSSEX CO BBS	NJ	315 986 4828	COLOR 80 #12	NY	615 983 7180	COM-NET 1	TN
201 928 0949	COCO CREATIONS	NJ	316 663 3600	SALT CITY SWAPPER	KS	616 345 0536	SUNBURST	
201 928 9488	COCO CREATIONS	NJ	316 686 3813	COLOR 80	KS	616 364 7621	DARBY'S DEN	
203 229 6481	COOL COCO OS9	CT	317 392 2769	DUKES SHERBYVILLE	IN	616 534 1822	GRTBBS	
203 237 2668	DAVE SCHWARTZ	CT	317 873 5808	COCO HOTLINE	IN	616 538 8229	COBBS	
203 334 5778	MISSION CONTROL	CT	319 277 0646	COMPUTER CELLAR	IA	616 895 6722	DELTA BBS	
205 649 2894	UNKNOWN	AL	319 396 8875	BLOOM COUNTY HERALD	IA	616 949 2521	WESTERN ALLIANCE	
206 255 5150	LIGHT HOUSE	WA	401 272 1138	SYSLINK HQ	RI	617 321 6809	ORAN BECKLER	MA
			401 765 2890	COLORAMA	RI	617 472 8612	PHOTO TALK	MA
			403 474 0147	NORTHERN ALBERTA COCO		617 646 6809	LOGICAL PRODUCTS	MA
			403 564 4118	WES-CAN BBS		617 872 5170	FARMINGHAM	MA
			404 378 4410	COCO BOARD HQ	GA	617 879 4086	GATOR BOWL	MA
			404 924 1248	COOSERVE	GA	619 368 3478	INNER CONN	CA
			404 997 6238	INDEX SYSTEM	GA	619 437 1130	MONITOR	CA
			405 248 8433	SHAMBALA	OK	701 281 0233	DAKOTA DATA	ND
			405 436 6885	TRADERS HOTLINE	OK	701 839 0390	COUNTRY MICRO BBS	ND
			405 598 6113	HIDEAWAY	OK	703 476 1147	SAMOH BBS	VA
			405 728 7654	COCO INC	OK	703 631 8577	SHADOW KEEP	VA
			408 629 2277	MICROBUR BBS	CA	703 680 3075	COLORAMA	VA
			408 646 1850	PEN-CO BBS	CA	704 255 0032	ACCESS TBBS	NC
			408 733 6809	SHAWN JIPP	CA	704 264 7381	INFORMATION EXCHANGE	NC
			408 984 7937	RAINBOW CONNECTION	CA	704 541 3306	SAGCNC	NC
			409 983 2383	COCO CLUB BBS	TX	707 257 1485	PHIL RUSIN	CA
			412 479 3786	COLORAMA	PA	707 437 6336	FALCON COLOR 80	CA
			412 744 2335	COCONET	PA	712 323 2943	MACCC	NE
			413 532 9631	COCO NUT	MA	713 280 8711	NASA	TX
			414 377 6226	ADVENTUREWARE	WI	713 354 3717	COBBS	TX
			414 699 3214	COLOR 80	WI	713 376 9102	== COCO ADS ==	TX
			414 793 4055	MIDWEST DATA	WI	713 666 9076	NEITHER WORLD	TX
			415 364 2658	REDWOOD BOARD	CA	713 923 6809	COCO LOCO	TX
			415 552 8268	KIRKY KCMPTER	CA	713 941 1542	GOLDEN COCO	TX
			415 651 4147	AARWOLF EXPRESS	CA	713 946 2825	DATA BASE	TX
			415 782 4402	EAST BAY BBS	CA	714 350 2668	COLOR CORNER	CA
			415 991 4911	X-RATED BOARD	CA	714 354 8004	KANDY SHACK	CA
			416 494 7001	COLOUR BBS	ON	714 359 1586	GROWTH NET BBS	CA
			416 653 2248	COLOUR DRAGON 1	ON	714 534 5174	ORANGE COCO	CA
			416 689 7950	DAVES DATACOM	ON	716 473 2334	COLORAMA	NY
			416 743 6221	COCO NUT	ON	717 652 8659	COLORAMA	PA
			416 823 4521	COLOUR DRAGON 2	ON	718 499 1633	CALL BOARD	NY
			501 857 3138	COBBS41	AR	718 727 1781	TELE-NET	NY
			502 365 7785	COLORAMA	KY	718 837 2881	KING BYTE C.C.	NY
			502 937 4594	COLORAMA	KY	800 323 0905	MCI MAIL SERVICE	
			503 649 4497	BEE COLOR BBS	OR	803 279 5392	AUGUSTA TBBS	SC
			503 761 6345	BIT BUCKET SYS	OR	803 288 0613	DLOAD OS9	SC
			504 277 6926	CHALMETTE BBS	LA	803 393 7399	PEE DEE EXCH	SC
			504 876 1790	BAYOU BOARD	LA	803 791 7389	MIDLAND 80	SC
			504 885 5619	STARBASE 6809	LA	804 285 0041	SKELTON ISLAND	VA
			512 285 5028	COLORAMA	TX	804 862 4663	3 MUSKETEERS	VA
			512 353 1508	COLORAMA	TX	804 868 0922	PEN COLOR ED	VA
			512 629 7670	COBBS	TX	804 887 5302	GAMMA COLOR 80	VA
			512 674 0264	SA COLOR BOARD	TX	805 484 5491	COLORAMA	CA
			513 236 8307	DACCUG	OH	805 656 3746	VENTUREZ BBS	CA
			513 396 7467	CINSOFT	OH	805 687 9400	COCO CORNER 1	CA
			513 399 1262	COLORAMA	OH	806 374 9711	BURG BOARD	OH
			513 474 2985	CINTUG	OH	812 476 9453	EVANSVILLE	IN
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			601 875 8688	ONM-COM	MS	816 232 4932	DRANGONS LIAR	MO
			602 245 0488	COCO NET	AZ	816 436 2904	FRISKY COCO	MO
			602 298 0730	SUPER COCO BBS	AZ	817 232 2087	FORT WORTH BBS	TX
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			602 996 8828	MOTOROLA COCO BUGS	AZ	817 789 2254	TY TRAVERS	TX
			604 585 0680	COLOR 80	BC	818 335 6554	COLOR AMERICA BBS	CA
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			609 448 1361	TARDIS	NJ	902 434 5278	COLORAMA	NS
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SOME (RAMBLING) THOUGHTS ON PATCHING OLD
PROGRAMS FOR THE COCO 3

If you have had a CoCo for some time and then bought the CoCo 3 when Tandy finally released it, you probably have come across at least one or two programs that just won't work with the new machine. And that is somewhat puzzling because the new CoCo is so similar to the older models. If your program is one of those "64k" programs that makes use of all available memory, or one that switches to the all RAM mode and then adds code in the empty area above the disk ROM, then you may yet be able to get the program to work! Read on.

A sneaky difference between the new CoCo 3 and the older models is that memory from &HF00 to &HFEFF is used by the CoCo 3 for some rather important system variables. Don't ask me "what variables?" because I don't remember at the moment, but I can guarantee that if you try to write new data into that area of memory, you stand a good chance of crashing the machine.

Most programs for the CoCo do not use memory that high up. An example is Telewriter 64, which uses the all RAM mode, but changes ROM code in just the lower area of memory (starting at &H8000 I believe). Other true 64K programs such as Lyra are just plain lucky since they never quite use that much memory. So what does this mean for the disappointed CoCo 3 user? It "may" be possible for you to patch your program so that it will work.

Patching takes a little expertise, a lot of patience, and some luck. There are two methods that can be used: loading the program into memory and modifying the program with an assembly language monitor such as "Sigmon" (an excellent program, by the way, that seems to have died young) or "ZBug" in Radio Shack's EDTASM, or modifying a disk directly with a disk "zap" program. If the program is auto-starting or loads via "DOS", then you'll have to go with the method of modifying the disk. If you can load the program into memory, and you can fit the monitor program into free memory, then thank your lucky stars.

What has to be done is actually quite simple. Finding the right spots to do it can be tricky. You have to spot the areas that in the program that modify the \$F00 - \$FEFF area of memory (the "\$" means the same thing as "&H" and is used by assembly language programmers). Most programs that do this set a large block of memory to zero or some

value. All blocks must end by \$FF00 since the next 256 bytes are used for I/O and could cause all sorts of unpleasantries if modified blindly. So if you are going to

spot the offending sections of the program, you need to look for code such as:

```
CMPX #$FF00
or
CMPY #$FF00
or
CMPU #$FF00
```

The index register (X, Y, or U) is used as a memory pointer and is checked with these instructions to tell the program when the end of the block is reached.

So what you need to do is to look for all the occurrences of those instructions and change them to

```
CMPX #$FE00
or
CMPY #$FE00
or
CMPU #$FE00
```

Occasionally a programmer will try to be different and check for the end of a block of memory by looking for \$FEFF instead of \$FF00. So if you make the previous patch and the program hasn't quite perked up, then you'll need to look for:

```
CMPX #$FEFF
or
CMPY #$FEFF
or
CMPU #$FEFF
```

and change them to

```
CMPX #$F0FF
or
CMPY #$F0FF
or
CMPU #$F0FF
```

If your monitor doesn't let you search for "CMPX" then substitute the following numbers:

```
CMPX is the same as $8C
CMPY is the same as $1083
CMPU is the same as $1183
```

So instead of searching for "CMPX #\$FF00" you'd be looking for "8C FF 00". Check the directions that come with your monitor to be sure what needs to be entered. Occasionally a monitor will find a sequence of bytes in a program that looks like a correct match, but it turns out that the code really isn't that at all. To make sure, start disassembling about 40 bytes before the match area and see if the match disassembles into what you were looking for. If you must use a disk zap program, then you had better be very cautious! First, make SURE you work with a backup copy of the program. Make just

a few changes at a time and test the program frequently to see how you are doing. Unless you are fortunate enough to be able to disassemble code on a disk directly, you will be working blindly. By now you are probably wondering what brought all this on. Yes, you're right, I had an excellent program that just would not work on the CoCo 3. The program is the assembly language editor from Tom Mix. In case you have it, and my version is the same as yours (2.0), here are the patch addresses. Use a monitor to change the designated memory bytes from \$FF00 to \$FE00, \$FE00 to \$FD00, and \$FDFF to \$FCFF:

\$381B	\$2ADD	\$2709
\$3B47	\$2B5D	\$3748
\$3DCA	\$2B80	
\$3F75	\$3286	
\$40A5	\$3451	
\$40D2	\$3470	
\$4339	\$3816	
\$45E9	\$386D	
\$4A45	\$3FCE	
\$4AAD	\$43A2	
\$4AAD	\$477A	
	\$4A35	
	\$4A41	
	\$4AB1	

M O O N F L I G H T

USE YOUR JOYSTICKS TO KILL THE LITTLE MOON MEN.

```

10 PCLEAR5
15 CLS:INPUT"CAN YOUR COMPUTER H
ANDLE HIGH SPEED (Y/N)";H$:IFL
EFT$(H$,1)="Y"THEN POKE65495,0
20 PMODE 4,1:PCLS:PMODE0,5:PCLS
25 ZA=0:Z=0:X=0:Y=0:DEFFNA(X)=IN
T(JOYSTK(0)/22)-1:DEFFNB(X)=INT(
JOYSTK(1)/22)-1:DIMB(6):DIMP(11)
:DEFFNC(X)=ABS(XM)+1
30 CLS(3):FORX=1TO11:READA$:PRIN
T@X+169,A$;;PLAY"L255;DADA":NEXT
X:FORX=1TO2:READA$:PRINT@238+X,A
$;;PLAY"DADA":NEXTX:FORX=1TO14:R
EADA$:PRINT@296+X,A$;;PLAY"DADA"
:NEXT:PLAY"L10DCAFGD"
35 GOSUB75
40 GOSUB90
45 GOSUB125
50 PRINT@361,"CHOOSE";:PRINT@393
,"1)SAME GAME";:PRINT@425,"2)NEW
GAME ";
55 A$=INKEY$:FORZ=436TO437:PRINT
@Z,CHR$(175);:NEXTZ:PRINT@436,CH
R$(176);:IFA$=""THEN55
60 C=VAL(A$):PRINT@435,C;:SCREEN
0,1:IFC=1THENGOSUB105:GOTO45
65 IFC=2THEN40
70 GOTO 55
75 PMODE4,1:PCLS:FORZ=1TO70:X=RN
D(20):Y=RND(20):PSET(X+50,Y+50,5
):NEXT:GET(50,50)-(62,62),B,G:GE
T(50,50)-(70,70),P,G
80 FORZ=1TO5:READS$(Z),R$(Z):NEX
T:READR$(6):FORZ=1TO3:FORX=1TO5:
READF$(Z,X):NEXTX:NEXTZ:FORZ=1TO
4:READN$(Z):NEXT
85 RETURN
90 PRINT@361,"CHOOSE";:PRINT@393
,"TERRAIN(1-9)";:FORX=406TO447:P
RINT@X,CHR$(175);:NEXTX:GOSUB95:
T=G:PRINT@405,T;:SCREEN0,1:IFT=
OTHEN90ELSESET=T*18:TA=180-T:GOSUB
105:PRINT@393,"GRAVITY(0-9)";:GO
SUB95:PRINT@405,G;:PLAY"DCAFGD":
G=G/10:RETURN
95 A$=INKEY$:FORX=406TO407:PRINT
@X,CHR$(175);:NEXT:PRINT@406,CH
R$(176);:IFA$=""THEN95
100 G=VAL(A$):IFG>9ORG<0THEN95EL
SERETURN

```

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```

105 PMODE3,1:PCLS:SCREEN1,1:LINE
-(0,50),PRESET:FORX=0T030STEP10:
GOSUB110:NEXT:Z=1:GOSUB115:FORX=
92T0122STEP10:GOSUB110:NEXT:Z=2:
GOSUB115:FORX=174T0198STEP8:GOSU
B110:NEXT:Z=3:GOSUB115:LINE-(256
,180),PSET:GOTO120
110 PLAY"L255DA":Y=RND(T)+TA:LIN
E-(X,Y),PSET:RETURN
115 ZA=RND(5):PLAY"AD":X=X-10:DR
AW"S4FM"+STR$(X)+","+STR$(Y)+F$(
Z,ZA):Z(Z)=Y+2:Z(Z+3)=X+10:T(Z)=
ZA:RETURN
120 PMODE4,1:SCREEN1,1:PAINT(1,1
95),5,5:FORZ=1T03:DRAW"S2C2BM"+S
TR$(Z(Z+3)+10)+","+STR$(Z(Z)+3)+
N$(Z):NEXT:DRAW"S2C2BM3,188"+N$(
4):RETURN
125 F=75+(50*G):X=15:Y=20:XV=4:Y
V=0:S=3:PMODE4,1:SCREEN1,0:Q=10:
C=1:PLAY"L25502D":DRAW"S4;C2;BMO
,191R"+STR$(F):F(1)=50:F(2)=145:
F(3)=220:OB=4:OA=71:O=3:XA=X:YA=
Y:OC=8
130 IFF<1THENF=0:YV=YV+1:R=6:YC=
0:XC=0:OA=OA-1:D$="0"+STR$(OB)+
";L155;V31;"+CHR$(OA):PLAYO$:IFOA
=65THENOA=71:OB=OB-1:IFOB<1THENO
B=3
135 IFF=0THENR=6:S=RND(5):GOTO17
5
140 Z=PEEK(65280):IFZ=127ORZ=255
THENXC=0:YC=0:R=6:GOTO175
145 XC=FNA(XC):YC=FNB(YC):YV=YV+
YC:XV=XV+XC:F=F-1
150 IFXC=0THENS=5:GOTO165
155 IFYC=0THENS=XC+2:R=5:GOTO17
0
160 S=XC+3
165 IFYC>0THENR=6ELSER=S
170 PLAY"D"
175 YV=YV+G:X=X+XV:Y=Y+YV:Y=INT(
Y)
180 IFF>0THENPSET(F,191,5)
185 IFX>255-Q THENX=245:XV=0:IFQ
=35THEN360
190 IFX<Q THENX=10:XV=0:IFQ=35TH
EN360
195 IFY<Q THENY=Q:YV=0:IFQ=35THE
N360
200 DRAW"C2;BM"+STR$(XA)+","+STR$
$(YA)+S$(SA)+R$(RA)
205 DRAW"C1;BM"+STR$(X)+","+STR$
(Y)+S$(S)+R$(R):XA=X:YA=Y:SA=S:R
A=R
210 IFQ=35THEN240
215 IFX>34ANDX<78THENZ=1:GOTO235
220 IFX>126ANDX<170THENZ=2:GOTO2
35

```

```

225 IFX>200THENZ=3:GOTO235
230 GOTO240
235 IFZ(Z)-Y<28ANDXV<2ANDYV<3THE
N330
240 IFPPOINT(X-0,Y+2)=1THEN265
245 IFPPOINT(X+0,Y+2)=1THEN265
250 IFPPOINT(X-0,Y-0C)=1THENY=Y-
0C:GOTO265
255 IFPPOINT(X+0,Y-0C)=1THENY=Y-
0C:GOTO265
260 GOTO130
265 IFPPOINT(X+0-2,Y+2)=1ANDPPOI
NT(X-0+2,Y+2)=1ANDXV=0ANDYV<2.5T
HENC=0ELSEC=1
270 IFC=0THEN290
275 PUT(X-6,Y-6)-(X+6,Y+6),B,PSE
T:M$="CRASH LANDING":S=0
280 IFQ=35THENPUT(X-10,Y-10)-(X+
10,Y+10),P,PSET
285 FORZ=1T030:SCREEN1,0:PLAY"L2
55DCA":SCREEN1,1:PLAY"DCA":NEXTZ
:GOTO300
290 IFS=5THENPLAY"L10DCAFGD":M$=
"SAFE LANDING":ELSEC=1:GOTO270
295 S=(ABS(3-YV)+F+G*10+T)*5*D
300 CLS(3):PRINT@10,"MOON FLIGHT
";:PRINT@65,"VERTICAL VELOCITY:"
;:PRINT@97,"HORIZONTAL VELOCITY:
";:PRINT@161,"SCORE";:PRINT@175,
"HIGH SCORE";:PRINT@229,"FUEL";:
FORZ=1T020:PRINT@293,"
";:PRINT@293,M$;:PLAY"L255DCA
":NEXT
305 PLAY"DCA":M$="SAME PLAYER "
310 SS=SS+INT(S):PRINT@86,INT(0-
YV*10);:PRINT@118,(XV*10);:PRINT
@167,SS;:PLAY"L255DCAFGD":IFSS>H
S THENPLAY"L10DCAFGDCL5D":HS=SS
315 PRINT@186,HS;:PRINT@234,F;:I
FS=0THENS=0:M$="NEW PLAYER UP"
320 PRINT@293,M$;
325 RETURN
330 DRAW"C2BM"+STR$(X)+","+STR$(
Y)+S$(S)+R$(R):Y=196-(Z(Z)-Y+2)*
4:PMODE0,5:PCLS:DRAW"S16BMO,160"
+F$(Z,T(Z)):LINE-(255,196),PSET:
SCREEN1,0:PAINT(1,195),5,5:Q=35:
X=(X-Z(Z+3)+10)*4:DRAW"C5S4BMO,1
91R250L250C2R"+STR$(F-1):D=Z:O=1
0:OC=20
335 DRAW"S3C2BM3,184"+N$(4)+"S16
"
340 IFX>235THENX=235
345 XV=XV*2:YV=YV*2
350 IFY<35THENY=35
355 YA=Y:XA=X:GOTO140
360 DRAW"C2BM"+STR$(XA)+","+STR$
(YA)+S$(SA)+R$(RA):Q=10:O=3:PMOD
E4,1:SCREEN1,0:DRAW"C5S4BMO,191R

```

```

200L200C2R"+STR$(F):X=INT(X/4)+Z
(D+3)-10:Y=INT((Y-196)/4+Z(D)+2)
:OC=8
365 IFX>245THENX=245:Y=Y-10
370 XA=X:YA=Y:GOTO200
375 DATAM,O,O,N,,.F,L,I,G,H,T,B,
Y,P,A,U,L,,.G,R,I,F,F,I,T,H,S,R3
U4L4G2F2,R4U2R2,H3U3R3F3G3,E2F2,
L3U4R4F2G2,L4U2L2,H3E3R3D3G3,H2G
2,L2U4E2F2D4L2,D3,
380 DATAE14UBF4DBF8R8D6LBU4R8U3E
12D2F14,E10R16D6L14U3R16U2F4R14D
6L12U3R14U3F6,U36F28R8D6LBU3R8U3
F8E8F8,E12U6F6D6R14D6L12U3R14U2O
F22,E12F8E8R8D6L6U3R6U3E10D8
385 DATAU16E10D16F6R10D6L10U3R10
U3U14H2U6F6D4F12,E14U12E8D20G8R2
0D6L20U3R20U3U14E14D12,E21D8R12D
6L12U3R12U3E8H14E8F10,U26E16F16G
12F8R20D6L20U3R20U3F8,U3E16F16R8
D6L8U3R8U3U24F12D20
390 DATAE4H4U8E8D8F4D6R12D6L12U3
R12U3E4U6E4H8E6F8D10F14,U24E16DB
68D16R12D6L12U3R12U3F12E8,U20E28
D24L12D16R16D6L16U3R16U3E12F8,UB
E16F16R8D6L8U3R8U12H8E8F8,E8U16E
16D16F8D8R16D6L16U3R16U3U24H8E16
F10G6D30
395 DATA8R25L8D4R8D6L8,E2D10L2R4
BR10U10R8D10L8,E2D10L2R4BR10R8U6
L8U4R8,U6R8L8U4R8BR8D10R8U10BR8R
8L8D4R8L8D6R8BR8R8L8U10

```

This greeting was chosen for just the opposite reason, however. We want to present general and technical information in a manner all of us can understand and that each person will have a part in building our column.

I call this our column, because it exists to reflect the exploration of our computers and the mental exercise that we all must contribute.

Just today a very informative letter arrived from Jesse Taft of West Green, Ga. Jesse states that to get a reverse video with a 32 column screen, use:

```

PALETTE12,63:PALETTE13,0:PALETTE8,0
Return to a normal, monochrome screen,use:
PALETTE12,0:PALETTE13,63:PALETTE8,63
Jesse uses the CoCo III at double speed with
his cassette operations using:
POKE143,13:POKE144,18:POKE145,7:POKE65497,0
For a return to normal speed:
POKE143,18:POKE144,24:POKE145,10:POKE65496,0

```

One problem seems to arise with Hi speed ASCII files and we haven't tried this method with disk. Additional POKES are Hi speed 65497,0 and 65496,0 for return.

Here's a nice little routine to transfer block memory to a location in some of the great unmapped Northern icefields of unused wasteland that we are not used to having. I expect to see many more of these as we all learn to unlock those secret doors.

```

Move &H00 to &HFFFF
DE=DESTINATION OF MOVE
SO=SOURCE OF MOVE
EN=END OF SOURCE

1 DE=0:SO=&H1000:EN=&H7FFE
5 FOR TR = DE TO EN-SO
10 LPOKE TR,PEEK(SO+TR)
15 NEXT
16 END
20 'Bring it back
25 FOR TR = DE TO EN-SO
30 POKE TR+SO, LPEEK (TR)
35 NEXT

```

Disk Catalog

KEEP TRACK OF YOUR PROGRAMS ON DISK BY DISK NUMBER. LOADS PROGRAM NAMES FROM YOUR DISK DIRECTORY. THEN YOU MAY ADD TO THE FILE THE TYPE OF PROGRAM AND REMARKS ABOUT IT. WILL SORT & PRINT OUT TO A NEAT PRINT OUT. HOLDS 500 NAMES PER FILENAME AND WILL SEARCH, AND SORT BY PROGRAM NAMES FOR EASY LOOK UP. 32K DISK ONLY. TX add .06125 % tax

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Discoveries.....

Hi Kids,

Probably the most obnoxious TV commercial for used cars is seen here in the Bay Area with the fast talking salesman opening with "Hi Kids" and then, everything after that is spoken in a rapid fire delivery that cannot be understood and finally he takes a deep breath and closes with "Bye Kids".

Bye kids,

John C. Burke
38699 Greenwich Circle
Fremont, Ca. 94536

TELECOMMUNICATIONS NOW!

by Tio Babich

Telecommunications. Doubtless you've heard the term many times before, but never actually decided to make the big jump; probably because you thought "its too expensive" or "too big a phone bill" or perhaps one of a dozen other copouts. Well, the purpose of this article is to tell you how and why to get into telecommunications both as cheaply and easily as possible.

The hardware

Alright, lets go over the myths and truths of what is really needed. Mostly what you need will depend upon what you want to do. As long as your not interested in setting up a BBS, a plain 300 baud modem will do. Right now, Radio Shack is doing a close out on the modem IB, so you can get it for \$29.95 and a cable to hook it up to your CoCo for \$4.95. A total cost of \$35 dollars for the hardware. Still think telecommunicating is expensive? Despite what friends may have told you about 1200 baud, I wouldn't recommend it. Its harder to deal with, the text will zip by on your screen faster than anyone can read it (no matter how fast they read) and it will be plagued with strange characters, due to the fact that phone lines just were not designed to be used with modems at all, and frankly 1200 baud is just to fast for them (I learned the hard way, after buying an expensive modem pak, multipak and a 1200 baud high priced modem... now I'm using my 300 baud again). If you belong to a Local Color Computer club, there is usually someone who has an extra modem which they would like to get rid of for about \$20. Okay, now we have a total cost of \$35 for all of the hardware needed.

The Software

Now heres where it can get pretty expensive if you don't know what your doing. Usually you Don't need to buy a \$69 dollar terminal program. Usually you can get a copy of one of several public domain terminal programs the best of which is MIKEYTERM from one of your friends and then, after experimenting with it, decide if you need something more. If you can do this, your total cost of setting up your telecommunications system will be \$35 dollars. If you can't get MIKEYTERM or any other terminal program from a friend, you may find yourself unable to get it at all, so, out of the goodness of my

heart, I have decided that for \$2 plus \$2 postage and handling (\$4) I will send you a disk filled with MIKETERM (along with the CC3 patch) and many other terminal programs and utilities that you will find invaluable. (My address is: Tio Babich, Miller Pl Rd, Miller Pl NY 11764). So now we have a total cost of either \$35 dollars or \$39 dollars for everything you need to telecommunicate.

The Phone Bill...

No, you won't get a phone bill for a million dollars just because you now use a modem. If you live in New York and decide you want to use BBS'S (electronic mail and talk systems) in california, it may cost you quite a bit. However, if you call local BBS's (look in the BBS list in the back of coco ads), it wont cost you that much (about 15 dollars a month or less, depending upon how much you use it). Delphi, Compuserve and other systems, are another story, and theres usually a tie-line that will be local for you; however, they send you a seperate bill in the mail. I prefer to call BBS's because they don't cost anything. If you feel that you would like to call BBS's accross the world, you can do so. For \$25 a month, you can make as many computer calls as you want, to where ever you want in the USA. Call Telenet for information; Voice:1-800-368-4215, BBS: 1-800-835-3001.

For Those who want Their own BBS.

If you want to set up your own BBS, it is not as expensive as some would have you believe. I have one set up that cost me: \$39.95 for a DCM-3, \$12 for software, and \$5 for a cable to hook it up to my CoCo. Most people think it is expensive to set up a BBS, not Anymore! The folks at "The Saint John Gallery" have seen to that. Thanks to them and a brilliant programmer, they are now marketing a bulliten board system called "The Best BBS". Believe it. I took a chance and sent them a check for \$12. They sent me a BBS with full documentation (something some companys or public domain authors have never heard about) and it works with only one or two drives! The good thing about it was that it used the serial port on the back of the CoCo (you don't have to buy a \$20 cable, \$79 modem pak and \$89 multipak to use it) and has double the features of any other BBS with twice the ease of use (except uploading and downloading, which take up a lot of drive space and no one seems to use them anyway). Want to try it out? You can call My BBS at 516-928-6991, it goes online at 10:30 PM and goes offline at daybreak.

In closing, I'd like to say that I hope this article cleared up a few of the misnomers about telecommunications. Remember, some of the things said above are only my opinion, but I think you will find it noteworthy. For whom it may concern, the address of "The Saint John Gallery" is: PO Box 613, Mt Sinia NY 11766 and "The Best BBS" may be purchased from them for \$12 .

Booting OS-9 on the CoCo3 with a Ramdisk

This is an example of the STARTUP file I use on my OS-9 Boot disk to bring up OS-9 Ver 2.0 with a Ramdisk as the default execution directory. In addition, the script copies over to the ramdisk (I named it "/RO") all of my most used utilities. When the script ends, I am ready to work, without needing to do anything more. This is the major advantage of using such scripts.

To do this, you will need the following files in the directory "/DO/CMDS" on the boot disk:

```
SPEED * May not be needed - See below *
LOAD
COPY
ECHO
FORMAT
MAKDIR
ARC * Carl Kreider's ARC utility *
PRINTERR * May not be needed-see below *
SETIME
UNLOAD * Or UNLINK *
```

You will also need a directory "/DO/SYS" on the boot disk, with the only file residing there being "ERRMSG". I recently uploaded a short patch to the PRINTERR utility to look to the ramdisk for the ERRMSG file instead of "/DO/SYS" when an error occurs. If you wish to have verbose error messages displayed instantly, then you will need this file and the above mentioned patched PRINTERR. If you do not want to use this feature, then delete the line from the script that copies that file over and do not include PRINTERR in your OS9Boot file.

You will need a directory named "/DO/MODULES" on your boot disk to hold any utilities or application programs you want copied into the ramdisk when you boot OS-9. This is an easy way of accomplishing this, since all you need to do to add or delete files from the ramdisk is to add or delete them from this directory. There is never any need to change the startup file.

In addition, you will need in your OS9Boot file the ramdisk device descriptor "RO" and the device driver "CCRDisk". Both of these are available in this SIG in the file "RDISK.CC3". I renamed "RO" from the original name of "TMP". Be sure that BOTH of these modules are in your OS9Boot file, or, you can load them into memory using this shell script before you do anything else. You will also need the null device descriptor ("NIL") and the device driver ("NILDRV") in your OS9Boot file.

These are both supplied with OS-9 Ver 2.0. The following script uses the SYSGO3.ASM module, again, available in this SIG, to default to the ramdisk commands directory. If you do not have this module, I suggest downloading it. You can also use the same module to jump your CoCo3 to the 2 Mhz speed. If you have already downloaded this file and wish to include the 2 Mhz speed, then add to the source file at the beginning of the executable code section these lines:

```
lda #$00
sta $FFD9
```

If you have not downloaded SYSGO3, then you can use the module supplied with OS-9 but, you will have to "CHX /RO/CMDS" after the boot-up process is complete. And, if you would still like to jump to the higher speed, then you can include in the shellscript a line "SPEED 2" assuming you have the SPEED.ASM utility (also available in this SIG).

Once you have all the files in the correct directories and the required modules in the OS9Boot file, this is what happens when you enter "DOS" in RS-DOS immediate mode:

1. RS-DOS finds and executes the code on track 34 which starts OS-9.
2. The OS9Boot file is loaded into memory and execution jumps to SYSGO.
3. The new SYSGO pokes the CoCo3 into 2 Mhz mode.
4. After setting up the system - SYSGO defaults to "RO/CMDS" as the current execution directory and "/DO" as the data directory.
5. SYSGO terminates, and the ramdisk is formatted, sending any output to the null device ("/NIL") instead of the screen.
6. The ARC utility then copies anything in the directory "/DO/MODULES" to the ramdisk directory "/RO/CMDS". I am able to put 40 of my most often used utilities in the ramdisk for quick access this way.

Again, any output from the program is directed to the null device instead of printing it on the screen.

7. You are prompted to enter the date and time, and the procedure ends.

I hope this script is helpfull to some of you -- it makes things much easier for me. I have assumed that most of you reading this know how to make a new OS9Boot file using CONFIG or OS9GEN. If anyone needs help with this, please leave me a message on the board or in E-Mail and I will help.

Mark Griffith

* OS-9 Boot Startup shellscrip *

```
load copy echo
echo Formatting Ramdisk
format /r0 r "Ramdisk" >/nil
makdir /r0/SYS
makdir /r0/CMDS;* /*
The new commands directory */
echo
echo Copying Standard Utilities to Ramdisk
arc -a /d0/modules /r0/cmds >/nil;* /*
Now copy over the modules */
* Delete the next two lines if you are NOT
using the PRINTERR utility *
Copy #25K /d0/sys/errmsg /r0/sys/errmsg
printerr;* /* Set
to print verbose error msg */
echo
echo Transfer complete!
* If using UNLINK instead of UNLOAD,
substitute the following lines:
* unlink copy
* unlink echo
unload copy echo
setime </term
** END of Startup **
```

D O G S T A R S

INSTRUCTIONS IN THE PROGRAM.

```
10 PCLEAR4: CLEAR200
20 CLS0: PRINT@236, "dogstars";
30 DIMA(20,12), TS(9), TS$(9): MX=3
.77: MY=2.82: N9=9: N7=7: N3=3: N2=2:
N0=0: TW=20: T2=12: H2=235: H1=179: T
M=1800
40 FORX=1TO9: TS(X)=0: TS$(X)=STRI
NG$(14, "."); NEXT
50 REM *** DRAW SPACE FIGHTER
20 60 TS(0)=126: TS$(0)="BUD RUSSELL 47
```

```
70 COLOR1,0: PMODE4,1: PCLS: CIRCLE
(10,6),2: LINE(3,6)-(17,6), PSET: C
IRCLE(10,6),8
80 LINE(0,0)-(20,0), PRESET: LINE(
0,1)-(20,1), PRESET: LINE(0,12)-(2
0,12), PRESET: LINE(0,11)-(20,11),
PRESET: GET(0,0)-(20,12), A,6
90 A$=INKEY$: CLS: PRINT "JOYSTICK
OR KEYBOARD (J/K)?";
100 A$=INKEY$: IFA$="" THEN100ELSE
IFA$="K" THENKB=1ELSEKB=0: A$="J"
110 PRINTA$: IFKB THENPRINT: PRINT
"USE ARROW KEYS TO MOVE, SPACE
BAR TO FIRE.": PRINT
120 PRINT "DO YOU WANT INSTRUCTIO
NS (Y/N)?"
130 A$=INKEY$: IFA$="" THEN130ELSE
IFA$<>"Y" THEN250
140 CLS: PRINT@12, "dogstars";: PRI
NT@99, "SO YOU WANT TO KNOW WHAT
IT": PRINT "FEELS LIKE TO HAVE A D
OGFIGHT INDEEP SPACE... STICK A
ROUND!!!"
150 PRINT@227, "WHEN YOU FINISH T
HIS TRAININGAND YOU FEEL YOU'RE
READY, PUSH "; IFKB THENPRINT "AN
Y KEY"; ELSEPRINT "YOUR JOYSTICK B
UTTON";
160 PRINT " AND..."
170 PRINT@355, "THE COMMAND CONSO
LE APPEARS; A BOGIE IS DISPLAYED
, MOVING AT SUB-LIGHT SPEED."
180 GOSUB700
190 PRINT@35, "YOUR OBJECTUS IS T
O LINE THE CROSSHAIRS ON THE PIG
DOG SPACE FIGHTER, PRESS THE FI
RE BUTTON, AND WATCH HIM SIZZLE!
!"
200 PRINT@195, "YOU GET THIRTY SE
CONDS TO NABAS MANY FIGHTERS AS
YOU CAN. TENPOINTS ARE GIVEN FOR
EACH PIGDOGDISINTEGRATUS; ONE P
OINT IS LOSTFOR EACH WASTED SHOT
."
210 PRINT@386, "MAY THE FORCE BE
WITH YOU...": GOSUB700
220 IFKB THEN250
230 PRINT "THINGS TO KNOW.": PRINT
@67, "WHEN A GAME IS OVER, A NEW
GAME MAY BE PLAYED BY DEPRESSI
NGEITHER JOYSTICK'S BUTTON. IF A
GAME IS NOT DESIRED, YOU MAY"
240 PRINT "PRESS 'X' TO EXIT AND
TO GET A PRINT OF THE TOP SCORE
S.": PRINT@320, "** THE JOYSTICK W
HOSE BUTTON **": PRINT "** IS PRE
SSED HAS THE GAME **": GOSUB700
250 CLS
260 PRINT: PRINTTAB(11) "TOP SCORE
S": PRINT: FORX=0TO9: PRINT "X+1; T
```

```

AB(B)TS(X),TS$(X):NEXT
270 IFKB GOSUB710:IFA$="X"THEN32
0ELSE370
280 PRINT@480,"TO PLAY GAME PRES
S YOUR BUTTON!";
290 JB=PEEK(65280)AND3:IFJB=2THE
NJX=346:JY=347:GOTO370
300 IFJB=1THENJX=348:JY=349:GOTO
370
310 IFINKEY$<>"X"THEN290
320 CLS:A$=INKEY$:PRINT"WOULD YO
U LIKE A PRINTOUT OF THE TOP SCO
RES?"
330 A$=INKEY$:IFA$=""THEN330ELSE
IFA$<>"Y"THEN360
340 PRINT#-2:PRINT#-2,TAB(12)"Do
gstars":PRINT#-2,TAB(11)"TOP SCO
RES":PRINT#-2
350 FORX=0TO9:PRINT#-2," X+1;TA
B(B)TS(X),TS$(X):NEXT:PRINT#-2:P
RINT#-2:PRINT#-2
360 PMODE0:PCLEAR1:END
370 X=50:Y=50:KD=247:F=0:S=0:T=0
:REM FIGHTERS,SHOTS & TIME RES
ET
380 REM *** 'DOGSTARS' IS DRAWN
AND SCALED HERE
390 PMODE3,1:PCLS:SCREEN1,1
400 DRAW"BM125,20":FORX=1TO10:Y=
ABS(X-2):IFY=5ORY=1THENY=3
410 S$="S"+STR$(X)+"C"+STR$(Y)
420 DRAW"XS$:BM-48,0;R8F2D8G2L6N
U12L2BM+18,0;H2UBE2R4F2D8G2L4BM+
20,-10;H2L4G2D8F2R4E2U4L2BM+15,-
4;H2L4G2F8G2L4H2BM+12,-10;R4ND12
R4BM+4,12;U8E4F4D4NL8D4BM+6,0;U1
2R6F2D2G2L5F6BM+14,-10;H2L4G2F8G
2L4H2BM-48,2
430 NEXT:PMODE4,1:SCREEN1,1
440 FORX=1TO1000:NEXT
450 REM *** STARTS MAJOR GAME
LOOP, NO 'REM'S TO SAVE TIME
460 PCLS:X=RND(199)+20:Y=RND(164
)+10:I=10:XI=RND(N3)-N2:YI=RND(N
3)-N2:IFKB THENX=RND(99)+78:Y=RN
D(70)+61:X1=RND(20)*5+75:Y1=RND(
17)*4+60
470 A$=INKEY$:TIMER=T
480 IFKB THEN500ELSEP=JOYSTK(NO)
:X1=PEEK(JX)*MX+N9:Y1=PEEK(JY)*M
Y+N7:LINE(X1,Y1-N7)-(X1,Y1+N7),P
SET:LINE(X1-N9,Y1)-(X1+N9,Y1),PS
ET:I=I-1:IFI<0THENI=RND(N7)+N7:X
I=RND(N3)-N2:YI=RND(N3)-N2
490 GOTO550

```

```

500 IFPEEK(344)=KD THENIFX1<245T
HENX1=X1+5
510 IFPEEK(343)=KD THENIFX1>11TH
ENX1=X1-5
520 IFPEEK(342)=KD THENIFY1<184T
HENY1=Y1+4
530 IFPEEK(341)=KD THENIFY1>8THE
NY1=Y1-4
540 LINE(X1,Y1-N7)-(X1,Y1+N7),PS
ET:LINE(X1-N9,Y1)-(X1+N9,Y1),PSE
T:I=I-1:IFI<0THENI=RND(N7)+N7:XI
=RND(N3)-N2:YI=RND(N3)-N2
550 X=X+XI+(X=H2)-(X=N0):Y=Y+YI+
(Y=H1)-(Y=N0):PAINT(X1,Y1),0:PUT
(X,Y)-(X+TW,Y+T2),A,PSET:A$=INKE
Y$:IFA$>"Z"ORA$<" "ANDTM>TIMER T
HEN480
560 T=TIMER:IFT>=TM THEN630
570 P=PPOINT(X1,Y1)
580 PLAY"V31T4L15001
590 PLAY"C":LINE(130,191)-(X1,Y1
),PSET:PLAY"D":LINE(124,191)-(X1
,Y1),PSET:PLAY"E":PAINT(125,191)
:PLAY"F"
600 PLAY"G":PAINT(125,191),0:PLA
Y"F":PUT(X,Y)-(X+20,Y+12),A,PSET
:PLAY"E":LINE(130,191)-(X1,Y1),P
RESET:PLAY"D":LINE(124,191)-(X1,
Y1),PRESET:PLAY"C"
610 S=S+1:IFP=0THEN470
620 F=F+1:PLAY"V31L13001":FORZ=2
TO16STEP2:CIRCLE(X1,Y1),Z,0:PLAY
"C":NEXT:GOTO460
630 REM *** END OF MAJOR LOOP...
SCORING STARTS HERE
640 PS=F*11-S:PLAY"V15T4L203GAFD
2FD3C
650 CLS:PRINT"YOUR SCORE WAS"PS;
CHR$(8)".":X=0
660 REM *** IS THIS SCORE GOOD
ENOUGH TO BE ON THE BOARD?
670 IFPS<=TS(X)THENX=X+1:IFX<10T
HEN670ELSE260
680 FORY=9TOX+1STEP-1:TS(Y)=TS(Y
-1):TS$(Y)=TS$(Y-1):NEXT
690 TS(X)=PS:INPUT"YOUR NAME IS"
;A$:TS$(X)=LEFT$(A$,14):GOTO250
700 REM *** THIS SUBROUTINE WAIT
S FOR KEY OR BUTTON PRESS
710 A$=INKEY$:A$=INKEY$:PRINT@48
0,"<<< HIT ANY KEY TO CONTINUE >
>>";
720 A$=INKEY$:IFA$=""THEN720ELSE
CLS:RETURN

```


W E A T H E R
A N A L Y S I S

ANALYSIS THE WEATHER BY
ENTERING CURRENT WEATHER.
INSTRUCTIONS ARE IN THE
PROGRAM.

```

5 GOTO 100
7 GOSUB 17
8 FORI=1TO4:PRINT:NEXTI:PRINTTAB
(3);:RETURN
10 PRINT P$;:INPUT B$:IF B$="" T
HEN 110
12 IF LEN(B$)<>B THEN PRINT"RE-E
NTER":FORI=1 TO 200:NEXTI:PRINTP
$;:INPUTB$
15 RETURN
17 CLS 'ON APPLE II OR APPLE II
PLUS LINE 17 IS '17 HOME' SAME A
S IN LINE 2010
18 RETURN
20 A$(L)=A$(L)+B$:RETURN
100 DIM A$(365):GOSUB 2000 'ON 1
6K COLOR COMPUTER CHANGE DIM A$(
365) TO DIM A$(150)
105
110 GOSUB 17
112 PRINTTAB(8)"WEATHER ANALYSIS
"
115 PRINT:PRINT:PRINTTAB(4)"TO L
OAD DATA: ENTER L"
120 PRINTTAB(4)"UPDATE DATA: ENT
ER U"
130 PRINTTAB(4)"FORECAST FROM DA
TA: ENTER F"
140 PRINTTAB(4)"DISPLAY DATA: EN
TER D"
150 PRINTTAB(4)"DISPLAY NORMALS:
ENTER N"
160 PRINTTAB(4)"TO MEMORIZE(SAVE
): ENTER M"
170 PRINTTAB(4)"SEARCH DATA: ENT
ER S"
180 PRINTTAB(4)"CORRECTIONS: ENT
ER C"
190 PRINTTAB(4)"TO QUIT: ENTER Q
"
200 PRINT:INPUT"CHOICE ";Y$
221 IF Y$="U" THEN 250
222 IF Y$="F" THEN 400
223 IF Y$="D" THEN 700
224 IF Y$="N" THEN 900
225 IF Y$="S" THEN 1250
226 IF Y$="C" THEN 1500
227 IF Y$="M" OR Y$="L" THEN 300
0

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```

228 IF Y$="Q" THEN 2600
230 GOTO 200
250 GOSUB 17
255 PRINTTAB(11)"DATA UPDATE"
257 PRINT"ENTER:"
260 L=L+1
270 PRINT:P$="DATE (AS 01-05-83)
":B=8:GOSUB 10
275 A$(L)=LEFT$(B$,2)+MID$(B$,4,
2)+RIGHT$(B$,2)
285 P$="HI TEMP (AS +076)":B=4:
GOSUB 10:GOSUB 20
290 P$="LOW TEMP (AS -006)":GOS
UB 10:GOSUB 20
295 P$="BARO. PRES (AS 30.15)":
B=5:GOSUB 10:GOSUB 20
300 PRINT:PRINT"GENERAL WEATHER
CONDITIONS:":PRINT"1= FAIR";
305 PRINTTAB(18)"2= CLOUDY":PRIN
T"3= RAIN";TAB(18)"4= SNOW"
310 PRINT"5= THUNDERSHOWERS";TAB
(18)"6= FLURRIES"
315 PRINT"7= HEAVY RAIN"
320 P$="":B=1:GOSUB10:GOSUB20
325 PRINT:P$="PRECIP(INCHES-AS 0
2.75)":B=5:GOSUB10:GOSUB20
330 GOSUB 17
335 PRINT"ENTER:":PRINT:P$="SNOW
FALL AMT (AS 07)":B=2:GOSUB10:G
OSUB20
346 PRINT:PRINT"FOR WIND DIRECTI
ON AND SPEED,"
350 PRINT"USE THIS CODE:":PRINT"
01=N"TAB(12)"02=NE"TAB(24)"03=E"
355 PRINT"04=SE"TAB(12)"05=S"TAB
(24)"06=SW":PRINT"07=W"TAB(12)"0
8=NW"
360 PRINT:PRINT"ENTER DIRECTION
AND SPEED AS A 4"
362 P$="DIGIT NUMBER-AS 0312":B
=4:GOSUB 10:GOSUB20
365 GOSUB 17
366 PRINT:PRINT"DATE: ";LEFT$(A$
(L),6):PRINT"HI TEMP: ";MID$(A$(
L),7,4)
370 PRINT"LOW TEMP: ";MID$(A$(L)
,11,4)
372 PRINT"BAROMETRIC PRESSURE: "
;MID$(A$(L),15,5)
375 PRINT"CONDITIONS: ";MID$(A$(
L),20,1)
376 PRINT"PRECIPITATION: ";MID$(
A$(L),21,5)
380 PRINT"SNOWFALL: ";MID$(A$(L)
,26,2):PRINT"WINDS: ";MID$(A$(L)
,28,4)
385 PRINTTAB(3)"RECALL THE CODE:
":PRINT"01=N"TAB(8)"02=NE"TAB(1
6)"03=E";

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```

386 PRINTTAB(24)"04=SE":PRINT"05
=S"TAB(8)"06=SW"TAB(16)"07=W"TAB
(24)"08=NW"
387 IF D=1 THEN RETURN
390 PRINT:INPUT"IS THIS CORRECT
(Y/N) ";B$:IF B$="N" THEN 270
392 IF C=1 THEN RETURN
395 GOTO 110
400 GOSUB 17
401 PRINTTAB(12)"FORECAST":PRINT
:PRINT"ENTER:"
405 PRINT:INPUT"BAROMETRIC PRESS
URE: ";A$:A=VAL(A$)
406 IF A$="" THEN 110
410 PRINT:PRINT:PRINT"IS BAROMET
ER?":PRINT"1.STEADY"TAB(16)"2.S
LOW RISE"
411 PRINT"3.RAPID RISE"TAB(16)"4
.SLOW FALL":PRINT"5.RAPID FALL"
412 PRINT:PRINT"(RAPID CHANGE IS
ANY CHANGE IN"
413 PRINT"EXCESS OF 0.06 PER HOU
R.)":INPUTB$:B=VAL(B$):IFB$=""TH
EN110
417 GOSUB17:PRINT"WIND FROM: ?":
PRINT"1=N","2=NE","3=E":PRINT"4=
SE","5=S",
418 PRINT"6=SW":PRINT"7=W","8=NW
"
425 INPUT C$:C=VAL(C$):IF C$=""
THEN 110
430 IFA>=30.2ANDB=4ANDC>=6ANDC<=
BTHEN625
440 IFA>=30.2ANDB=1ANDC>=6ANDC<=
BTHEN620
445 IFA>=30.1ANDB=1ANDC>=6ANDC<=
BTHEN600
450 IFA>=30.1ANDB=3ANDC>=6ANDC<=
BTHEN605
455 IFA>=30.1ANDB=4ANDC>=6ANDC<=
BTHEN610
460 IFA>=30.1ANDB=5ANDC>=6ANDC<=
BTHEN615
465 IFA>=30.1ANDB=4AND(C=4ORC=5)
THEN630
470 IFA>=30.1ANDB=5AND(C=4ORC=5)
THEN635
475 IFA>=30.1AND B=4ANDC>=2ANDC<
=4THEN640
480 IF A>=30.1ANDB=5ANDC>=2ANDC<
=4THEN645
485 IFA>=30.1ANDB=4AND(C=2ORC=3)
THEN650
490 IFA>=30.1ANDB=5AND(C=2ORC=3)
THEN655
492 IFA<=29.8ANDB=5ANDC>=1ANDC<=
3THEN680
493 IFA<=29.8ANDB=5ANDC>=3ANDC<=
5THEN675
494 IF A<=29.8ANDB=3THEN 685

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495 IFA<=30.1ANDB=4ANDC>=2ANDC<=
4THEN660
500 IFA<=30.1ANDB=5ANDC>=2ANDC<=
4THEN665
505 IFA<=30.1ANDB=2AND(C=5ORC=6)
THEN670
600 GOSUB7:PRINT"FAIR, LITTLE CH
ANGE IN TEMP":PRINT"FOR NEXT DAY
OR ";
601 PRINT"TWO.":GOTO 690
605 GOSUB7:PRINT"FAIR TODAY, RAI
NY AND WARMER":PRINT"WITHIN 48 H
OURS.":GOTO690
610 GOSUB7:PRINT"WARMER, RAIN WI
THIN 24 TO 36":PRINT"HOURS.":GOT
O690
615 GOSUB7:PRINT"WARMER, RAIN WI
THIN 18 TO 24":PRINT"HOURS.":GOT
O 690
620 GOSUB7:PRINT"CONTINUED FAIR
WITH LITTLE OR"
621 PRINT"NO CHANGE IN TEMPERATU
RE.":GOTO690
625 GOSUB7:PRINT"FAIR AND WARMER
FOR NEXT 48":PRINT"HOURS.":GOTO
690
630 GOSUB7:PRINTTAB(3)"RAIN WITH
IN 24 HOURS.":GOTO 690
635 GOSUB7:PRINT"WINDY, WITH RAI
N WITHIN 12 TO":PRINT"24 HOURS."
:GOTO690
640 GOSUB7:PRINTTAB(3)"RAIN IN 1
2 TO 18 HOURS.":GOTO 690
645 GOSUB7:PRINT"WINDY AND RAIN
WITHIN 12 HRS.":GOTO 690
650 GOSUB7:PRINT"IN SUMMER WITH
LIGHT WINDS.":PRINT"RAIN MAY NOT
FALL FOR ";
651 PRINT"DAYS.":PRINT:PRINT"IN
WINTER: RAIN WITHIN 24 HOURS.":G
OTO 690
655 GOSUB7:PRINT"IN SUMMER: RAIN
LIKELY WITHIN":PRINT"12 TO 24 H
OURS."
656 PRINT:PRINTTAB(4)"IN WINTER:
RAIN OR SNOW WITH":PRINT"INCREA
SING WINDS."
657 GOTO 690
660 GOSUB7:PRINTTAB(3)"RAIN FOR
NEXT DAY OR TWO.":GOTO 690
665 GOSUB7:PRINT"RAIN WITH HIGH
WINDS FOLLOWED":PRINT"WITHIN 24
HOURS BY ";
666 PRINT"CLEARING AND":PRINT"CO
OLER TEMPERATURES.":GOTO690
670 GOSUB7:PRINT"CLEARING WITHIN
A FEW HOURS.":PRINT"FAIR FOR N
EXT SEVERAL";
671 PRINT" DAYS.":GOTO690

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675 GOSUB7:PRINT"SEVERE STORM WA
RNING. WINDY, ":PRINT"WITH RAIN
OR SNOW ";
676 PRINT"IMMINENT FOL-":PRINT"L
OWED WITHIN 24 HRS BY CLEARING"
677 PRINT"AND COLDER.":GOTO690
680 IF A>=30.1ANDB=5ANDC>=2ANDC<
=4THEN645
681 PRINT"HEAVY RAIN OR":PRINT"S
NOW FOLLOWED IN WINTER BY A":PRI
NT"COLD WAVE."
682 GOTO 690
685 GOSUB7:PRINTTAB(8)"CLEARING
AND COLDER."
690 FOR I=1 TO 6:PRINT:NEXTI:GOS
UB 2500:GOTO 110
700 GOSUB 17
701 D=1:IF L=0THEN 708
703 X=L:FORI=1TOX:L=I:GOSUB365:P
RINT:INPUT"INPUT C TO CONTINUE "
;C$
705 IF C$<>"C" THEN I=X
706 PRINT:NEXTI:L=X:D=0:GOTO110
708 D=0:PRINT"NO DATA FOUND.":FO
RT=1TO2000:NEXTT:GOTO110
900 GOSUB 17
902 PRINT:PRINTTAB(9)"WEATHER NO
RMS"
905 PRINT:PRINTTAB(4)"TEMP"
910 PRINTTAB(2)"HI LO MO RAIN
SNOW"
915 PRINT:PRINT"J 38 23 30 2.83
9.1":PRINT"F 41 24 32 2.70
9.6"
920 PRINT"M 51 31 41 3.19 6.5
":PRINT"A 64 42 53 3.02 0.3"
930 PRINT"M 75 52 63 3.61 0.0
":PRINT"J 83 61 72 3.61 0.0"
935 PRINT:PRINT:INPUT"INPUT C FO
R REST OF YEAR";C$:GOSUB 17
937 PRINTTAB(2)"HI LO MO RAIN
SNOW"
940 PRINT:PRINT"J 87 65 76 3.61
0.0":PRINT"A 85 63 74 3.76
0.0"
950 PRINT"S 78 56 67 3.21 0.0
":PRINT"D 67 45 56 2.82 0.1"
955 PRINT"N 53 35 44 2.66 2.1
":PRINT"D 40 25 33 2.94 7.7"
960 PRINT:PRINT"YR 63 43 53 37.9
6 35.4"
970 PRINT:PRINTTAB(2)"DATA FROM
NWS HBG.,P.A.":PRINTTAB(2)"ELEVA
TION 338 FT."
980 PRINT:GOSUB 2500:GOTO 110
1250 GOSUB 17
1251 PRINT:PRINTTAB(8)"SEARCH DA
TA":D=1
1260 PRINT:PRINT:PRINT"ENTER DAT
E TO FIND:":P$="(AS 01-05-83) "

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1265 B=8:GOSUB10:C$=LEFT$(B$,2)+
MID$(B$,4,2)
1270 X=L:FORI=1TOL:IFC$=LEFT$(A$
(I),4)THENFL=1:T=I:I=L:NEXTI:L=T
:GOSUB365:D=0
1273 IF FL=1 THENFL=0:L=X:GOSUB2
500:GOTO 110
1275 NEXT I:PRINT:PRINT"DATE NOT
FOUND":GOTO 690
1500 GOSUB 17
1505 PRINTTAB(11)"CORRECTIONS":C
=1
1510 PRINT"ENTER DATE TO CHANGE:
":P$="(AS 01-05-83) "
1512 B=8:GOSUB10:C$=LEFT$(B$,2)+
MID$(B$,4,2)
1570 X=L:FORI=1TOL:IFC$=LEFT$(A$
(I),4)THENFL=1:T=I:I=L:NEXTI:L=T
:GOSUB275
1571 IF FL=1 THEN FL=0:L=X:GOSUB
2500:GOTO110
1575 NEXTI:PRINT:PRINT"DATE NOT
IN FILE":GOTO 690
2000 GOSUB 17
2005 FORI=1TO8:PRINT:NEXTI:PRINT
TAB(8)"WEATHER ANALYSIS":FORI=1T
O1000:NEXTI
2010 CLS 'ON APPLE II OR APPLE I
I PLUS LINE 2010 IS '2010 HOME'
SAME AS IN LINE 17
2020 PRINTTAB(2)"THIS PROGRAM IS
DESIGNED TO"
2030 PRINT"STORE ON DISK OR TAPE
A YEAR'S":PRINT"WORTH OF DATA I
N THE FILE";
2035 PRINT" EN-":PRINT"TITLED 'W
EATHER FILE'. IT IS"
2037 PRINT"SUGGESTED THAT FOR ST
ORAGE OF":PRINT"MORE THAN ONE YE
AR OF DATA, A"
2040 PRINT"SEPARATE WEATHER RECO
RD BE":PRINT"MAINTAINED."
2055 PRINT:PRINTTAB(4)"THIS PROG
RAM WILL OFFER A "
2060 PRINT"FORECAST OF EXPECTED
WEATHER":PRINT"CONDITIONS USING
BAROMETRIC"
2100 PRINT"PRESSURE AND WIND DIR
ECTION."
2130 PRINT:GOSUB2500:RETURN
2500 INPUT" INPUT C TO CONTINU
E";C$:RETURN
2600 GOSUB 17:FORI=1TO9:PRINT:NE
XTI:PRINT"HAS THE DATA BEEN"
2610 INPUT"MEMORIZED (Y/N)";H$:I
F H$="N"THEN 110
2620 END
2999 'CASSETTE LOAD AND SAVE ROU
TINE
3000 REM

```

```

3010 PRINT"PLACE WEATHER FILE DI
SK IN":PRINT"DRIVE 0."
3020 IF Y$="L" THEN 3070
3030 PRINT:PRINT"SAVE:":INPUT"PR
ESS <ENTER> WHEN READY";C$
3040 OPEN"D",#1,"WEATHERF/DAT"
3050 PRINT #1,L:FOR I=1 TO L:PR
INT#1,A$(I):NEXT I
3060 CLOSE #1:GOTO 110
3070 PRINT:PRINT"LOAD:"
3080 INPUT"PRESS <ENTER> WHEN RE
ADY";C$
3090 OPEN"I",#1,"WEATHERF/DAT"
3100 INPUT #1,L:FOR I=1 TO L:INPUT
#1,A$(I):NEXT I
3110 CLOSE #1:GOTO 110

```

I HATE EPROMS!
I LOVE TO BURN EPROMS.
I'LL BURN ONE FOR YOU.

SEND A S.A.S.E. FOR ADDITIONAL
INFORMATION.

JOHN C. BURKE
38699 GREENWICH CIRCLE
FREMONT, CA 94536

ICE BLOCK

PROGRAM DONATED BY T&D
SOFTWARE. SEE THEIR AD ON PAGE
30. USE RIGHT JOYSTICK.
INSTRUCTIONS ARE IN THE
PROGRAM.

```

1 REM COPYRIGHT (C) T&D SOFTWARE
1983
2 PCLEAR4:PMODE3:CLEAR400:DIMP(1
0),SB(10),IB(10),CB(10),BL(10),F
$(15),M(4,2),MB(3,3),E(24,1):GOS
UB148:FOR I=0 TO 15:F$(I)=STRING$(2
1,"0"):NEXT
3 CLS
4 PRINTTAB(11)"ICE BLOCK":PRINT
5 PRINT" USE YOUR RIGHT JOYSTI
CK TO MANUEVER YOUR RED PENGUI
N AND CRUSH THE GREEN SNOW MON
STERS WITH ICE BLOCKS. USE THE
FIRE BUTTON TO START AN ICE B
LOCK SLIDING."

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```

6 PRINT" PUSHING AN ICE BLOCK
AGAINST THE WALL OR ANOTHER ICE
BLOCK NEXT TO IT WILL CRUSH IT
.":GOSUB181:CLS
7 PRINT" CRUSHING:"
8 PRINT" 1 MONSTER = 400 PTS
.":PRINT" 2 MONSTERS = 1600
PTS.":PRINT" 3 MONSTERS = 36
00 PTS.":PRINT" 4 MONSTERS =
6400 PTS."
9 PRINT:PRINT"CAN YOUR MACHINE H
ANDLE THE HIGHSPEED POKE ? (POKE
65495,0) (Y/N
)"
10 K$=INKEY$:IFK$="Y"THENPOKE654
95,0:GOTO12
11 IFK$<>"N"THEN10 ELSEPOKE65494
,0
12 PRINT:PRINT" INITIALIZING ..
...":GL=10:R=3:S=0:MG=1
13 NM=0:MM=0:NS=0:FORI=0 TO 20:FOR
J=0 TO 15
14 MID$(F$(J),I+1,1)="0":IFRND(
10)>7 THENMID$(F$(J),I+1,1)="1"
15 NEXT:NEXT
16 NE=6+(10-GL)*2
17 FORL=1 TO NE
18 I=RND(21)-1:J=RND(16)-1
19 IF MID$(F$(J),I+1,1)<>"1" THE
N18
20 MID$(F$(J),I+1,1)="2":E(L,0)=
I:E(L,1)=J
21 NEXT:TI=0
22 PCLS3:FORI=0 TO 20:FORJ=0 TO 15
23 IF MID$(F$(J),I+1,1)="0" THEN
25
24 PUT(I*12+2,J*12)-(I*12+12,J*1
2+11),IB,PSET
25 NEXT:NEXT
26 SCREEN1,0
27 PX=RND(21)-1:PY=RND(16)-1
28 IF MID$(F$(PY),PX+1,1)<>"0" T
HEN27
29 PUT(PX*12+2,PY*12)-(PX*12+12,
PY*12+11),P,PSET
30 MID$(F$(PY),PX+1,1)="4":TIMER
=0
31 FOR GC=1 TO GL
32 H=JOYSTK(0):V=JOYSTK(1):P=PEE
K(65280)
33 TX=PX:TY=PY
34 IF H<6 THENPX=PX-1:PD=4:GOTO3
9
35 IF H>57 THENPX=PX+1:PD=2:GOTO
39
36 IF V<15 THENPY=PY-1:PD=1:GOTO
39
37 IF V>48 THENPY=PY+1:PD=3:GOTO
39

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```

38 GOTO45
39 IF PX<0 OR PX>20 OR PY<0 OR P
Y>15 THEN PX=TX:PY=TY:GOTO45
40 IFMID$(F$(PY),PX+1,1)="1" OR
MID$(F$(PY),PX+1,1)="2" THEN PX=
TX:PY=TY:GOTO45
41 PUT(TX*12+2,TY*12)-(TX*12+2,
TY*12+11),BL,PSET:MID$(F$(TY),TX
+1,1)="0"
42 IFMID$(F$(PY),PX+1,1)="0" THE
N 44
43 FORI=0TO10:PUT(PX*12+2,PY*12)
-(PX*12+2,PY*12+11),P,PSET:PUT(
PX*12+2,PY*12)-(PX*12+2,PY*12+1
1),SB,PSET:NEXT:GOTO117
44 PUT(PX*12+2,PY*12)-(PX*12+2,
PY*12+11),P,PSET:MID$(F$(PY),PX+
1,1)="4"
45 IF P<>126 AND P<>254 THEN71
46 IF NS=3 THEN71
47 ON PD GOTO48,49,50,51
48 BX=PX:BY=PY-1:GOTO52
49 BX=PX+1:BY=PY:GOTO52
50 BX=PX:BY=PY+1:GOTO52
51 BX=PX-1:BY=PY
52 IF BX<0 OR BX>20 OR BY<0 OR B
Y>15 THEN71
53 T$=MID$(F$(BY),BX+1,1):IFT$<>
"1" AND T$<>"2" THEN71
54 D=PD:GOSUB55:GOTO61
55 ON D GOTO56,57,58,59
56 SX=BX:SY=BY-1:GOTO60
57 SX=BX+1:SY=BY:GOTO60
58 SX=BX:SY=BY+1:GOTO60
59 SX=BX-1:SY=BY
60 RETURN
61 IF SX<0 OR SX>20 OR SY<0 OR S
Y>15 THEN69
62 T$=MID$(F$(SY),SX+1,1):IFT$="
1" OR T$="2" THEN64
63 GOTO70
64 IFMID$(F$(BY),BX+1,1)="1"THEN
69
65 S=S+500:FORK=1 TO NE:IFBX=E(K
,0) AND BY=E(K,1) THENL=K
66 NEXT:K=L:IFK=NE THEN68
67 FORL=K TO NE-1:E(K,0)=E(K+1,0
):E(K,1)=E(K+1,1):NEXT
68 NE=NE-1
69 PUT(BX*12+2,BY*12)-(BX*12+2,
BY*12+11),CB,PSET:FORTD=1TO50:NE
XT:PUT(BX*12+2,BY*12)-(BX*12+2,
BY*12+11),BL,PSET:MID$(F$(BY),BX
+1,1)="0":GOTO71
70 NS=NS+1:MB(NS,0)=BX:MB(NS,1)=
BY:MB(NS,2)=PD:MB(NS,3)=0
71 IF NS=0 THEN89

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```

72 FORI=1TO NS
73 BX=MB(I,0):BY=MB(I,1):D=MB(I,
2):GOSUB55
74 IFSX<0 OR SX>20 OR SY<0 OR SY
>15 THEN80
75 T$=MID$(F$(SY),SX+1,1):IFT$="
1" OR T$="2" THEN80
76 IFMID$(F$(SY),SX+1,1)="3" THE
N81
77 PUT(BX*12+2,BY*12)-(BX*12+2,
BY*12+11),BL,PSET
78 PUT(SX*12+2,SY*12)-(SX*12+2,
SY*12+11),IB,PSET:MID$(F$(SY),SX
+1,1)=MID$(F$(BY),BX+1,1):MID$(F
$(BY),BX+1,1)="0":MB(I,0)=SX:MB(
I,1)=SY:IFMB(I,3)<>0THEN86
79 GOTO88
80 S=S+INT(MB(I,3)^2*400):NM=NM-
MB(I,3):GOSUB122:GOTO71
81 MB(I,3)=MB(I,3)+1
82 FORJ=1 TO MM:IFM(J,0)=SX AND
M(J,1)=SY THEN T=J
83 NEXT:J=T:GOSUB125
84 PUT(BX*12+2,BY*12)-(BX*12+2,
BY*12+11),BL,PSET:PUT(SX*12+2,SY
*12)-(SX*12+2,SY*12+11),IB,PSET
:MID$(F$(SY),SX+1,1)=MID$(F$(BY)
,BX+1,1):MID$(F$(BY),BX+1,1)="0"
85 MB(I,0)=SX:MB(I,1)=SY
86 BX=SX:BY=SY:D=MB(I,2):GOSUB55
:IFSX<0 OR SX>20 OR SY<0 OR SY>1
5 THEN88
87 T$=MID$(F$(SY),SX+1,1):IFT$<>
"1" AND T$<>"2" THENPUT(SX*12+2,
SY*12)-(SX*12+2,SY*12+11),SB,PS
ET
88 NEXTI
89 NEXT GC
90 FOR GC=1 TO MG
91 IF NM=4 THEN97
92 IF NM=0 AND NE=0 THEN128
93 IF NE=0 THEN97
94 NM=NM+1:MM=MM+1:M(NM,0)=E(NE,
0):M(NM,1)=E(NE,1):M(NM,2)=RND(4
):NE=NE-1
95 I=M(NM,0):J=M(NM,1):PUT(I*12+
2,J*12)-(I*12+2,J*12+11),SB,PSE
T
96 MID$(F$(J),I+1,1)="3"
97 IF MM=0 THEN116
98 FORI=1 TO MM
99 BX=M(I,0):BY=M(I,1):D=M(I,2):
GOSUB55
100 IF SX<0 OR SX>20 OR SY<0 OR
SY>15 THEN105
101 T$=MID$(F$(SY),SX+1,1):IFT$=
"4"THENPUT(BX*12+2,BY*12)-(BX*12

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```

+12, BY*12+11), BL, PSET:GOTO43
102 IFT$="2" THEN105
103 IFT$="1" THEN112
104 IFT$="0" THEN113
105 IF RND(GL)<10 THEN107
106 D=RND(4):M(I,2)=D:GOTO114
107 IF BX<PX THEND=2:GOTO111
108 IF BX>PX THEND=4:GOTO111
109 IF BY<PY THEND=3:GOTO111
110 D=1
111 M(I,2)=D:GOTO114
112 PUT(SX*12+2, SY*12)-(SX*12+12, SY*12+11), CB, PSET:PUT(SX*12+2, SY*12)-(SX*12+12, SY*12+11), BL, PSET: MID$(F$(SY), SX+1, 1)="0":GOTO114
113 PUT(BX*12+2, BY*12)-(BX*12+12, BY*12+11), BL, PSET: MID$(F$(BY), BX+1, 1)="0":PUT(SX*12+2, SY*12)-(SX*12+12, SY*12+11), SB, PSET: MID$(F$(SY), SX+1, 1)="3":M(I,0)=SX:M(I,1)=SY
114 NEXT
115 NEXT
116 GOTO31
117 PLAY"03T100L50ABCDEFD"
118 R=R-1:CLS:PRINT" SCORE: ";S;" RESERVES: ";R
119 IF R=0 THEN142
120 TI=TI+TIMER
121 FORI=1 TO NM:E(NE+I,0)=M(I,0):E(NE+I,1)=M(I,1):NEXT:NE=NE+NM:NM=0:MM=0:NS=0:GOTO22
122 IF I=NS THEN124
123 FORL=I TO NS-1:FORN=0TO3:MB(L,N)=MB(L+1,N):NEXT:NEXT
124 NS=NS-1:RETURN
125 IF J=MM THEN127
126 FORL=J TO MM-1:FORN=0TO2:M(L,N)=M(L+1,N):NEXT:NEXT
127 MM=MM-1:RETURN
128 CLS:SE=INT((TIMER+TI)/60):TS=SE:MI=INT(SE/60):SE=SE-MI*60
129 CLS:PRINT" GAME TIME ";MI;"MIN. ";SE;"SEC."
130 PRINT:PRINTTAB(8)"BONUS: ";
131 B=0:TS=TS-60
132 IFTS<60 THENB=10
133 IFTS<50 THENB=500
134 IFTS<40 THENB=1000
135 IFTS<30 THENB=2000
136 IFTS<20 THENB=5000
137 PRINTB;"PTS."
138 S=S+B:PRINTTAB(8)"SCORE: ";S;"PTS."
139 GL=GL-1:IFGL<1THENGL=1
140 IFGL=1 THEN MG=MG+1
141 GOTO13

```

```

142 POKE65494,0:PRINT:PRINTTAB(1)"GAME OVER"
143 PRINT:PRINTTAB(6)"PLAY AGAIN ? (Y/N)"
144 K$=INKEY$:IFK$="Y" THEN12
145 IFK$<>"N" THEN144
146 POKE65494,0
147 END
148 PSET(4,0):PSET(6,0)
149 LINE(2,1)-(8,1),PSET
150 FORI=2TO8:LINE(0,I)-(10,I),PSET:NEXT
151 PSET(2,2,1):PSET(8,2,1)
152 PSET(4,4,2):PSET(6,4,2)
153 COLOR2,3:FORI=6TO8:LINE(2,I)-(8,I),PSET:NEXT:COLOR4,3
154 LINE(2,9)-(8,9),PSET
155 PSET(2,10,2):PSET(8,10,2)
156 PSET(0,11,2):PSET(2,11,2):PSET(8,11,2):PSET(10,11,2)
157 GET(0,0)-(10,11),P,G
158 PCLS3
159 PSET(4,0,1):PSET(6,0,1)
160 COLOR1,3:FORI=1TO2:LINE(2,I)-(8,I),PSET:NEXT
161 FORI=3TO6:LINE(0,I)-(10,I),PSET:NEXT:PSET(2,3,2):PSET(8,3,2)
162 PSET(4,4,2):PSET(6,4,2)
163 LINE(2,7)-(8,7),PSET
164 COLOR2,3:LINE(2,6)-(8,6),PSET
165 LINE(2,8)-(2,10),PSET:LINE(8,8)-(8,10),PSET
166 PSET(0,11):PSET(10,11)
167 GET(0,0)-(10,11),SB,G
168 PCLS3
169 COLOR2,3:LINE(0,0)-(10,11),PSET,B
170 PSET(4,2):PSET(6,2):PSET(6,3)
171 PSET(4,9)
172 GET(0,0)-(10,11),IB,G
173 PCLS3
174 COLOR2,3:LINE(0,0)-(10,11),PSET,B
175 FORI=1TO11STEP2:PSET(2,I):PSET(6,I):NEXT
176 FORI=2TO10STEP2:PSET(4,I):PSET(8,I):NEXT
177 GET(0,0)-(10,11),CB,G
178 PCLS3
179 GET(0,0)-(10,11),BL,G
180 RETURN
181 PRINT@484,"PRESS [ENTER] TO CONTINUE";
182 IFINKEY$<>CHR$(13) THEN182
183 RETURN

```

- - E N D - -

690 DATA"YOU ARE STANDING JUST OUTSIDE OF A MINE SHAFT. THERE ARE FIELDS TO THE SOUTH, EAST, AND WEST. THE ENTIRE MINE SHAFT HAS COLLAPSED.

700 DATA"YOU ARE STANDING IN A FIELD CONSISTING ENTIRELY OF BURNT UNDERBRUSH. A SMELL OF SMOKE FILLS THE AIR.

710 DATA"YOU ARE STANDING IN A FIELD CONSISTING ENTIRELY OF BURNT UNDERBRUSH. A SMELL OF SMOKE FILLS THE AIR.

720 DATA"YOU ARE STANDING IN A FIELD CONSISTING ENTIRELY OF BURNT UNDERBRUSH. A SMELL OF SMOKE FILLS THE AIR. THERE ARE SOME TWIGS ON THE GROUND.

730 DATA"YOU ARE LOCATED AT THE BOTTOM OF A DEEP, DARK PIT. IT IS VERY DIFFICULT TO SEE, ALTHOUGH YOU CAN MAKE OUT A SMALL, CIRCULAR TUNNEL TO THE WEST.

740 DATA"YOU HAVE COME TO THE END OF A DARK, DEAD END TUNNEL. YOU HAVE NOTICED THAT THE TIME MACHINE IS HERE! YOU HAVE ENTERED THE TIME MACHINE. YOU NOTICE A DIAL LABELED '1-2-3-4-5'. THERE IS A LEVER HERE. YOU HAVE PULLED THE LEVER.

750 DATA 2,,3,5,9,1,,10,,1,4,,16,3,,1,6,,5,8,,7,,6,,6,,,,,2,,13,11,2,12,10,,,,,10,,14,10,16,,15,13,15,21,14,21,15,14,17,4,18,13,,16,,,,,19,,16,18,,20,,19,22,,21,14,15,21,20,23,,22,,24,,25,23,,24,26,,,,,28,29,27,26,33,28,,29,27,,26,,28,,26,31,,

760 DATA 30,,32,,30,32,32,,31,30,,27,35,,,,,34,36,,37,35,,37,40,38,,37,41,,,,,40,37,,39,,38,42,42,42,41,43,41,41,44,,44,44,43,45,43,43,44,45,45,46,,45,49,48,49,48,,47,,47,,50,,50,49,51,,49,50,,,,,53,,54,,52,53,55,,54,,,,,57,58,57,57,,59,,

770 DATA 58,60,,,,,63,61,62,61,62,60,63,62,63,60,61,62,61,60,63,,65,,,,,0

780 DATA THERE IS A HEAVY ANCHOR HERE.,ANCHOR,51,THERE IS A 6' STEEL POLE HERE.,POLE,35,THERE IS A SMALL COAL SKUTTLE HERE.,SKUTTLE,33

790 DATA THERE IS A BOOK HERE ENTITLED 'NUCLEAR WAR...THE LIGHTER SIDE',BOOK,12,THERE IS A 3' LONG STICK HERE.,STICK,15,THERE

IS A PIECE OF FLINT HERE.,FLINT,9,THERE IS A PILE OF RAGS HERE.,RAGS,7,THERE IS A CAN OF QUAKER STATE OIL HERE.,OIL,4

800 DATA THERE IS A CHOCOLATE CANDY BAR HERE.,CANDY BAR,17,THERE IS A WOODEN MATCH HERE.,MATCH,23,THERE IS A TALL OKRA PLANT HERE.,OKRA PLANT,29,THERE IS A GRAY ASTRAKHAN HERE.,ASTRAKHAN,39,THERE ARE SOME VINES HERE.,VINES,48

810 DATA THERE IS A SUNKIST ORANGE HERE.,ORANGE,44,THERE IS A CANTEEN HERE.,CANTEEN,38

820 V\$="N S E W U D L INV CLIMPEELDRINWEAREAT LIGHT BRAISWIMGET DROPPY TIE ENTETHRO WRAPSOAKOPENREADCOOKSTRIHELPSCOR MOVE"

830 W\$="ANCHPOLESKUTBOOKSTICFLIN RAGSOIL CANDMATCOKRAASTRVINEORAN CANTBULLROCKCRACTWIGTORCWATE"

840 FORX=1TO65:READA\$(X):NEXTX:FORX=1TO65:FORY=1TO4:READRM(X,Y):NEXTY,X:FORX=1TO15:READI\$(X):READIT\$(X):READIT(X):NEXTX

850 R=1

860 IF R>21 THEN T=1 ELSE T=2

870 IF R>22 AND TR<-2 THEN 1140

880 IFR>22 THEN PRINT "IT IS TOO DARK DOWN HERE FOR METO SEE.":GOTO 930

890 CLS4:PRINT:PRINTA\$(R)

900 IF R=65 THEN 2690

910 FORX=1TO15:IFIT(X)=R THEN PRINTI\$(X)

920 NEXT

930 GOSUB 2480:VB\$="":VC\$="":GOSUB 2590:V=0:W=0

940 RA=RA+T:H=H+.75:C=C+.75

950 IFVB\$="" THEN V=0:GOTO 990

960 V=INSTR(1,V\$,VB\$):V=(V+3)/4:IFV<1 THEN V=0

970 IF VC\$="" THEN W=0:GOTO 990

980 W=INSTR(1,W\$,VC\$):W=(W+3)/4:IFW<1 THEN W=0

990 IF V=0 THEN 2680

1000 'IFS...

1010 ON V GOTO 1030,1030,1030,1030,1030,1060,1090,860,1180,1220,1300,1340,1380,1430,1580,1620,1660,1690,1740,1840,1780,1880,1920,1980,2070,2130,2180,2230,2290,2360,2430,2370

1020 GOTO 2680

1030 IF RM(R,V)>0 THEN R=RM(R,V):GOTO 860

1040 IF RM(R,V)=0 THEN 1550

```

1050 'IF
1060 IF R=56 THEN R=55:GOTO 860
1070 IF R=64 THEN PRINT:PRINT"TH
E SIDES OF THE PIT ARE TOO ST
EEP.":GOTO930
1080 GOTO 1550
1090 IF R=63 AND TW=1 THEN R=64:
GOTO860
1100 IF R=63 AND TW<>1 THEN 1550

1110 IF R=55 THEN R=56:GOTO860
1120 IF R=52 THEN R=51:GOTO860
1130 GOTO1550
1140 TR=TR-1
1150 IF TR=-400 THEN PRINT"THE T
ORCH IS BEGINNING TO DIM.":GOTO8
90
1160 IF TR=-500 THEN PRINT"THE T
ORCH WENT OUT.":TR=0
1170 GOTO890
1180 O=0:PRINT:PRINT" YOU ARE CA
RRYING.":FORX=1TO15:IF IT(X)=-1
THEN PRINT" ";IT$(X):O=1
1190 NEXT
1200 IF O=0 THEN PRINT" NOTHIN
G."
1210 GOTO930
1220 'CLIMB
1230 IF W<>13 THEN PRINT:PRINT"I
THINK NOT.":GOTO930
1240 IF R=52 THEN 1270
1250 IF R=51 THEN 1280
1260 GOTO 1570
1270 PRINT:PRINT"CLIMBING THE RO
PE ONCE WAS BAD ENOUGH, YOU EXP
ECT ME TO CLIMB THAT FRAYED PIE
CE OF SILK THREADTWICE?! SURELY
YOU JEST!":GOTO930
1280 IF RP<>3 THEN 1570
1290 PRINT:PRINT"AS YOU CLIMB UP
THE ROPE, THE VINES BEGIN FRA
YING AND SNAPPINGUNDER YOUR WEIG
HT. IN SPITE OF THIS, YOU MAKE
IT TO THE TOP OF THE LEDGE SAFEL
Y.":R=52:GOTO930
1300 IF W<>14 THEN GOTO 1570
1310 IF IT(14)<>-1 THEN PRINT:PR
INT"YOU DON'T HAVE AN ORANGE !":
GOTO930
1320 IF P=-1 THEN PRINT:PRINT"TH
E ORANGE IS ALREADY PEELED.":GOT
O930
1330 P=-1:PRINT:PRINT"OK.":GOTO9
30
1340 IF W<>21 THEN 1570
1350 IF IT(15)<>-1 THEN PRINT:PR
INT"YOU DON'T HAVE A CANTEEN TO
DRINK FROM.":GOTO930

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```

1360 IF OP<>1 THEN PRINT:PRINT"I
CAN'T GET AT THE WATER.":GOTO93
0
1370 PRINT:PRINT"AGHH! REFRESHIN
G! THE CANTEEN HAS
BEEN DISCARDED.":H=H-10:RA=RA-5
:IT(15)=0:GOTO930
1380 IF W=7 ANDIT(7)=-1 THEN PRI
NT:PRINT"THE RAGS FELL OF YOU, A
ND ONTO THE GROUND.":IT(7)=R:GO
TO930
1390 IF W=7 THEN PRINT:PRINT"YOU
DON'T HAVE ANY RAGS.":GOTO930
1400 IF W=12 AND IT(12)=-1 THEN
PRINT:PRINT"YOU THINK 'OOOH! THA
T FEELS GREAT!' AS THE ASTRA
KHAN WARMS YOU UP.":C=C-20:IT(1
2)=0:GOTO930
1410 IF W=12 THEN PRINT:PRINT"YO
U DON'T HAVE THE ASTRAKHAN.":GOT
O930
1420 GOTO1570
1430 IF W<>14 THEN 1480
1440 IF IT(14)<>-1 THEN PRINT:PR
INT"YOU DON'T HAVE THE ORANGE.":
GOTO930
1450 PRINT:PRINT"YUMM!":H=H-15:I
T(14)=0
1460 IF P=0 THEN RA=RA+10:GOTO93
0
1470 GOTO 930
1480 IF W=9 AND IT(9)=-1 THEN PR
INT:PRINT"YUMM!":H=H-20:RA=RA+5:
IT(9)=0:GOTO930
1490 IF W=9 THEN PRINT:PRINT"YOU
DON'T HAVE THE CANDY BAR.":GOTO
930
1500 IF W=12 AND IT(12)=-1 THEN
PRINT:PRINT"NAW, THE FUR ON YOUR
TONGUE WOULD BE KIND OF GRO
SS.":GOTO930
1510 IF W<>11 THEN 1570
1520 IF IT(11)<>-1 THEN PRINT:PR
INT"YOU DON'T HAVE THE OKRA.":G
OTO930
1530 IF CK<>-1 THEN PRINT:PRINT"
THE OKRA HAS NOT BEEN PREPARED."
:GOTO930
1540 PRINT:PRINT"OHOO! THAT TAST
ED GOOD. I NEEDED SOMETHING HOT!"
:IT(11)=0:H=H-25:R=R+3:GOTO930
1550 IF R=49 THEN 2410
1560 PRINT:PRINT"THERE IS NO WHE
RE TO GO IN THAT DIRECTION!":H=H
-.75:RA=RA-T:C=C-.75:GOTO930
1570 PRINT:PRINT"I CAN'T DO THAT
!":GOTO930
1580 IF W<>10 THEN 1570

```



```

1590 IF IT(10)<>-1 THEN PRINT:PR
INT"YOU DON'T HAVE A MATCH TO LI
GHT.":GOTO930
1600 IF MA=1 THEN PRINT:PRINT"TH
E MATCH IS ALREADY BURNING.":GOT
O930
1610 MA=1:PRINT:PRINT"THE MATCH
STARTS TO BURN.":IT$(10)="EVER
BURN' MATCH":GOTO930
1620 'BRAID
1630 IF W<>13 THEN 1570
1640 IF IT(13)<>-1 THEN PRINT:PR
INT"YOU DON'T HAVE THE VINES.":G
OTO930
1650 RP=1:IT$(13)="ROPE":I$(13)=
"THERE IS A BRAIDED ROPE HERE.":
MID$(W$,49,4)="ROPE":PRINT:PRINT
"THE VINES HAVE BEEN BRAIDED
TOGETHER INTO A ROPE.":GOTO930
1660 IF R=56 THEN R=57:GOTO860
1670 IF R=58 THEN R=57:GOTO860
1680 GOTO 1570
1690 IF W=0 THEN PRINT:PRINT"GET
WHAT?":GOTO930
1700 IF W>15 THEN 1570
1710 IF IT(W)=-1 THEN PRINT:PRIN
T"YOU ALREADY HAVE IT.":GOTO930
1720 IF IT(W)<>R THEN PRINT:PRIN
T"I DON'T SEE IT HERE.":GOTO930
1730 IF IT(W)=R THEN PRINT:PRINT
"OK.":IT(W)=-1:GOTO930
1740 IF W=0 THEN PRINT:PRINT"DRO
P WHAT?":GOTO930
1750 IF W>15 THEN 1570
1760 IF IT(W)=-1 THEN PRINT:PRIN
T"OK.":IT(W)=R:GOTO930
1770 PRINT:PRINT"YOU DON'T HAVE
IT TO DROP!":GOTO930
1780 'TIE
1790 IF W<>13 THEN 1570
1800 IF IT(13)<>-1 THEN PRINT:PR
INT"YOU DON'T HAVE ANYTHING TO T
IE":GOTO930
1810 IF RP<>1 THENPRINT:PRINT"YO
U CAN'T TIE A BUNCH OF LOOSE VI
NES TO ANYTHING.":GOTO930
1820 IF IT(1)<>-1 THEN PRINT:PRI
NT"YOU DON'T HAVE ANYTHING USEFU
LL TO TIE IT TO.":GOTO930
1830 PRINT:PRINT"OK, SO YOU'VE T
IED THE ROPE TO THE ANCHOR. NOW
YOU HAVE A ROPE WITH A HOOKED W
EIGHT ON ONE END.":RP=2:IT(1)=0:
I$(13)="THERE IS A ROPE HERE WIT
H AN ANCHOR TIED TO IT.":GOTO
930
1840 IF W<>17 THEN 1570
1850 IF R<>49 THEN PRINT:PRINT"W
HAT ROCK?":GOTO930

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1860 IF IT(2)<>-1 THEN PRINT:PRI
NT"YOU DON'T HAVE ANYTHING TO PR
Y THE ROCK WITH.":GOTO930
1870 PRINT:PRINT"THE ROCK IS EAS
ILY REMOVED FROM THE PASSAGE, BU
T THE POLE IS CRUSHED UNDER T
HE ROCK, RENDEREDIRRETRIEVABLE."
:IT(2)=0:RM(49,1)=47:GOTO930
1880 IF W<>18 THEN 1570
1890 IF R=32 THEN R=34:FORX=1TO5
00:NEXT:GOTO860
1900 IF R=34 THEN R=32:FORX=1TO5
00:NEXT:GOTO 860
1910 PRINT:PRINT"I DON'T SEE A C
RACK HERE.":GOTO930
1920 'THROW
1930 IF W<>13 THEN 1570
1940 IF IT(13)<>-1 THEN 1570
1950 IF RP=0 THEN 1760
1960 PRINT:PRINT"WITH A FEW GOOD
TWIRLS OVER YOUR HEAD, YOU
FLING THE ROPE TOWARDS THE CLI
FF, USING THE ANCHOR AS A WEI
GHT. THE ANCHOR MAKES IT OVER T
HE EDGE OF THE CLIFF AND CATCH
ES."
1970 RP=3:IT(13)=0:A$(52)=A$(52)
+" YOU SEE A ROPE HERE.":A$(51)=
A$(51)+" YOU SEE A ROPE HERE.":G
OTO 930
1980 IF W=0 THEN PRINT:PRINT"WRA
P WHAT ?":GOTO930
1990 IF W=7 OR W=5 THEN 2000 ELS
E 1570
2000 IF IT(7)<>-1 THEN 1570
2010 IF IT(5)<>-1 THEN 1570
2020 IF W=5 THEN 2040
2030 PRINT:LINEINPUT "WRAP RAGS
AROUND WHAT ?":WP$:IF LEFT$(WP$,
4)="STIC"THEN 2050 ELSE 1570
2040 PRINT:LINEINPUT "WRAP STICK
IN WHAT ?":WP$:IF LEFT$(WP$,4)=
"RAGS"THEN 2050 ELSE 1570
2050 PRINT:PRINT" OK. YOU HAVE F
ASHIONED A TORCH OUT OF THE STIC
K AND RAGS.":IT(7)=0:IT(5)=-1:IT
$(5)="TORCH":I$(5)="THERE IS A H
OME-MADE TORCH HERE.":TR=-1:FORX
=1TO2000:NEXTX
2060 MID$(W$,17,4)="TORC":GOTO86
0
2070 'SOAK
2080 IFW<>5THEN1570
2090 IF IT$(5)<>"TORCH" THEN1570
2100 IFIT(5)<>-1THENPRINT:PRINT"
YOU DON'T HAVE IT!":GOTO930
2110 IFIT(8)<>-1THENPRINT:PRINT"
IN WHAT?":GOTO930

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```

2120 IT(8)=0:ST=-1:PRINT:PRINT"THE TORCH IS WELL SATURATED.":GOTO930
2130 'OPEN
2140 IF W<>15 THEN 1570
2150 IF IT(15)<>-1 THEN PRINT:PRINT"YOU DON'T HAVE A CANTEEN.":GOTO930
2160 IF OP=1 THEN PRINT:PRINT"IT'S ALREADY OPEN":GOTO930
2170 OP=1:PRINT:PRINT"OK.":GOTO930
2180 IF W=4 AND IT(4)=-1 THEN 2210
2190 IF W=16 AND R=13 THEN 2220
2200 GOTO1570
2210 PRINT:PRINT"NUCLEAR WAR...THE LIGHTER SIDE. BY: ERIC G. ROBICHAUD":PRINT"FOR SURVIVAL, EAT UNCONTAMINATED OBJECTS, SUCH AS PEELED ORANGES, PURE WATER. BUILD A TORCH FOR INSIDE BOMB SHELTERS. -USE RAGS, OIL, AND A STICK.":GOTO930
2220 PRINT:PRINT"NEW YORK NUKED BY EASTERN STATES IN SECOND WAVE. ...24 MULTIPLE IMPACT VEHICLES LAUNCHED.... TARGETED FOR LOS ANGELES.... EVACUATE IMMEDIATELY.":GOTO930
2230 IF W<>11 THEN 1570
2240 IF IT(11)<>-1 THEN PRINT:PRINT"I DON'T HAVE THE OKRA.":GOTO930
2250 IF IT(3)<>-1 THEN PRINT:PRINT"I DON'T HAVE ANYTHING TO COOK IT IN.":GOTO930
2260 IF IT(10)<>-1 THEN PRINT:PRINT"I DON'T HAVE A FLAME.":GOTO930
2270 IF MA<>1 THEN PRINT:PRINT"I DON'T HAVE A FLAME.":GOTO930
2280 PRINT:PRINT"YOU MANAGE TO SET SOME TWIGS ON FIRE, AND COOK THE OKRA IN THE COAL SKUTTLE. THE OKRA FORMED A STICKY SUBSTANCE WHICH YOU HEARTILY ATE. THE FIRE WENT OUT.":IT(11)=0:IT(3)=R:IT(10)=0:RA=RA+2:H=H-40:GOTO930
2290 'STRIKE
2300 IF W=6 THEN 2310 ELSE 1570
2310 IF IT(6)<>-1 THEN PRINT:PRINT"YOU DON'T HAVE THE FLINT.":GOTO930
2320 IF IT(5)="STICK" THEN PRINT:PRINT"SPARKS FLY...":GOTO930
2330 IF IT(5)<>-1 THEN PRINT:PRINT"SPARKS FLY...":GOTO930

```

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2340 IF ST<>-1 THEN PRINT:PRINT"THE TORCH CAN'T SEEM TO CATCH.":GOTO930
2350 IT(5)="LIT TORCH":IT(6)=0:PRINT:PRINT"THE SPARKS FROM THE PIECE OF FLINT IGNITES THE TORCH, BUT YOU DROPPED AND LOST THE PIECE OF FLINT.":TR=-3:GOTO930
2360 PRINT:PRINT"NO THANKS, I'M ALL SET.":GOTO930
2370 IF W<>19 THEN 1570
2380 IF R<>63 THEN PRINT:PRINT"I DON'T SEE ANY TWIGS HERE.":GOTO930
2390 IF TW=1 THEN PRINT:PRINT"THE TWIGS HAVE ALREADY BEEN MOVED.":GOTO930
2400 PRINT:PRINT"YOU HAVE JUST EXPOSED A DEEP, DARK PIT.":FORX=1 TO 1000:NEXT:TW=1:GOTO860
2410 IF V=1 THEN PRINT:PRINT"THERE IS A ROCK BLOCKING THE PASSAGE.":GOTO930
2420 GOTO 1560
2430 PRINT:PRINT"CURRENT SITUATION CONCERNING: ";PRINT
2440 PRINT"RADIATION ";RA
2450 PRINT"HUNGER ";H
2460 PRINT"COLD ";C
2470 PRINT:GOTO930
2480 IF RA>499 THEN PRINT:PRINT"YOU DIED DUE TO RADIATION SICKNESS.":END
2490 IF RA=300 THEN PRINT:PRINT"YOU ARE GETTING VERY WEAK, DUE TO RADIATION SICKNESS.":FORX=1 TO 15:IFIT(X)=-1 THEN IT(X)=R:PRINT"YOU ARE UNABLE TO CARRY THE WEIGHT OF THE ";IT(X):GOTO2510 ELSE NEXT
2500 IF RA=100 OR R=150 THEN PRINT:PRINT"YOU ARE GETTING SICK, DUE TO RADIATION SICKNESS."

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```

2510 IF C>499 THEN PRINT:PRINT"Y
OU HAVE FROZEN TO DEATH!":END
2520 IF C=200 THEN PRINT:PRINT"Y
OU ARE VERY COLD":GOTO2550
2530 IF C=150 THEN PRINT:PRINT"Y
OU ARE GETTING COLDER.":GOTO 255
0
2540 IF C=100 THEN PRINT:PRINT"Y
OU ARE GETTING COLD."
2550 IF H>499 THEN PRINT:PRINT"Y
OU HAVE DIED OF HUNGER.":END
2560 IF H=200 THEN PRINT:PRINT"Y
OU ARE VERY HUNGRY.":RETURN
2570 IF H=150 THEN PRINT:PRINT"Y
OU ARE GETTING HUNGRIER.":RETURN

2580 IF H=100 THEN PRINT:PRINT"Y
OU ARE GETTING HUNGRY.":RETURN
ELSE RETURN
2590 PRINT:LINEINPUT">";VE$:IFLE
N(VE$)<4 THEN FORX=1TO(4-LEN(VE$
)):VE$=VE$+" ":NEXT:VB$=VE$:RETU
RN
2600 FORX=1TOLEN(VE$):IFMID$(VE$
,X,1)=" " THEN 2620 ELSE NEXT
2610 VB$=VE$:GOTO2630
2620 VB$=LEFT$(VE$,X):VC$=MID$(V
E$,X+1,4)
2630 IF LEN(VB$)<4 THEN FOR X=1
TO INT(4-LEN(VB$)):VB$=VB$+" ":N
EXT
2640 VB$=LEFT$(VB$,4)
2650 IF LEN(VC$)<4 THEN FORX=1 T
O INT(4-LEN(VC$)):VC$=VC$+" ":NE
XT
2660 VC$=LEFT$(VC$,4)
2670 RETURN
2680 H=H-.75:RA=RA-T:C=C-.75:PRI
NT:PRINT"EXCUSE ME??":GOTO930
2690 PRINT:PRINT".....YOU ARE
ELSEWHERE.....":SCREEN0,1
2700 GOTO 2700

```

Wizard's Tower
a review
by
Eric Robichaud

Over the years, "adventures" have emerged as one of the most popular types of computer games. The reason for this is that they are fun and captivating, as most games, but also require skill, cunning, and manipulation, which still appeals to those who find most arcade-style games a waste of time.

"Wizard's Tower" is such a game; an adventure that allows the player to put him/herself into the scenario, to fend for himself against an assortment of monsters and situations. "Wizard's Tower" adds one further dimension to the adventure besides the features listed above: it's a role playing game.

The fact that it is a role playing game means that it is more user-interactive since the player is allowed to choose his character (either a Wizard, a Warrior, or an Elf), and is able to make various decisions during the game that may affect the outcome; the game isn't preset.

I liked this feature since it makes the game more interesting and really puts the fate of the character into the player's hands. Another feature that I found nice was that the adventure revolves around a map that is displayed on the screen, where the player is allowed the benefit of seeing where he/she is, and what's around, and also allows for directions to be selected by pressing the appropriate arrow-key rather than typing in "GO NORTH", etc.

"Wizard's Castle" is a one-part BASIC program that is supplied on either disk or cassette. When running the program, I found that the program seemed a little slow in some spots, and it seemed that it wasn't completely "polished", such as when making an incorrect selection when asked what I wanted to purchase. I made an incorrect selection at which point the program told me so, but it left the error message on the screen, and made no mention that it was waiting for my input. This made it appear as if the program had locked up, especially if another incorrect choice was made, and the same error remained; when another error was encountered, the new error message over-wrote the old one, sometimes leaving the remains of the old message "tacked onto" the end of the new one. Also, when the character dies, and program just comes to a grinding halt with the "OK"

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message from BASIC. The program is 16K cassette, or 32K disk; when I checked for free memory I usually came up with about 10K

left, so there is room for further embellishments.

I assume, since it is a BASIC program and I didn't notice any obscure programming tricks, that it will run perfectly on all versions of the Color Computer without modification, although the documentation didn't mention this point (I'm running it on a CoCo III). The documentation itself supplies all that is needed to successfully play the adventure but does not over-indulge in detail, being only one page in length.

The facts are there for you to make your own decision as to buy it or not, but personally I think it is a good deal, especially considering the price of \$9.95. It is a fun game, and for that price you can't go wrong.

("Wizard's Tower" marketed by Mitchell Software
PO Box 194
Tomahawk, WI 54487
for \$9.95 + \$1.50 Postage & Handling. WI residents must add 5% sales tax)

On-line Information
Update
by
Eric G. Robichaud

This month I've started a new feature which I hope will work out well, but is just running on a trial basis for now. I would like to hear your thoughts and comments after reading this so that I will know what direction to take. The object of this column is to serve as a sort of "Gossip" column, relaying the latest information that has surfaced in the CoCo community, especially in regards to the CoCo 3. First off, I will review the events and opinions circulating since the debut of the CoCo 3.

With the CoCo 3 supporting new 40 and 80 column modes, as well as 1200 BAUD capabilities through the serial ("bit banger") port, several individuals and companies have begun to write Tele-communications programs to support these features. The two most talked about accomplishments in this field are "GREG-E-TERM V.1.1" and "MIKEYTERM 4.3".

Greg Miller's GE TERM 1.1 has many interesting features built into it, including great support of the CoCo 3 including user selectable foreground/background/border colors, 32/40/80 column mode display, and upper/lowercase characters. The program is public domain and is accompanied by a configuration program. All of the features can be custom configured, and can also be changed while on-line.

Mike Ward's MTERM 4.0 has been customized to run on the CoCo 3 in 80 column mode, with a selection of either a Black-on-white screen, or a White-on-Black one. Also, there is an option to keep the normal 32-column mode, but install lowercase and remove the black screen border. The menus aren't centered in 80 columns. There is a four program set available on Comuserve which creates MIKEYTERM 4.3. As with the previous versions of Mikeyterm, version 4.3 is public domain.

For those of you experiencing incompatibilities with programs on the CoCo 3 (usually games), you will be glad to see the first prediction coming through: the patches are flying fast and furious! There is now a patch available which will fix a bug in Steve Bjork's "Ghana Bwana" so that it will run properly on the CoCo 3, as well as allow all of Steve Bjork's games to run on an RGB Monitor, displaying the proper colors (since the color codes are different between composite and RGB monitors, and RGB's don't support artifacting). I have successfully converted all of Steve's games for the CoCo 3.

Another popular patch is "UltraTelepatch" for Telewriter-64. Although the previous patches and programs were all public domain, this one isn't; it's a commercial package. "UltraTelepatch" is by the same author of "Telepatch", Bob Van Der Poel, and adds a few new features to Telewriter, including all of the new features encompassed in "Telepatch", the original patch for Telewriter-64. If you like complexities, this situation is for you! There are three versions of Telewriter-64 floating around now: the original, the Telepatched version, and now UltraTelepatch. The original works fine on the 3, but Telepatch doesn't, so if you like the features of Telepatch you must either patch TELEPATCH (rediculous?) through a text file Art Flexer left on Delphi, or purchase UltraTelepatch which adds some new features and makes the patch CoCo 3 compatible.

The CoCo 3, as most of you know, has RGB capabilities. Most people are familiar with the CM-8 monitor that Radio Shack is selling but the new Magnavox monitor deserves some recognition. There was a review on this monitor in the last issue of this magazine; please read it! I've seen the monitor in action myself, and personally it's the one I'm going to get for my CoCo 3. It contains both RGB *AND* composite video. Both may be connected simultaneously, and switched back and forth via a push button.

My biggest heartache came when I found out that ADOS would NOT run on the CoCo 3 properly. Most of the CoCo 3's new commands collide with the added commands of ADOS rendering them BOTH useless, save for a few. There is now a public domain patch available on Delphi that patches ADOS to work properly on the CC3. From what John Burke has said last month about Art Flexer's plans for ADOS III, I am looking forward to that one myself. For the graphics buff, Erik Gavriluk has a new version of his Apple Macintosh picture converter out for the CoCo 3. The previous version loaded in a graphics picture from an Apple Macintosh (downloaded off a BBS system) and converted it for display on the Color Computer. Because the display on the CoCo was considerably smaller, the program used windowing. The CoCo 3 version allows full horizontal viewing of the picture, with minimal vertical scrolling; most pictures fully fit on one screen. He also has a similar program for converting Commodore-64 graphics pictures.

Greg Miller has released a program like the two previously mentioned ones which converts Atari ST graphics pictures for the CoCo 3. If you are a graphics buff, you'll definitely want to check these out. They are all public domain.

If you've ordered programs that are being advertised, don't be surprised if they aren't available yet and you are put on a waiting list. Many companies will often pre-advertise a product, expecting to have it in stock by the time the ad runs. With the CoCo 3 out now, there is a new market so the major companies are rushing to get some software out, and in many cases some unforeseen event stalls production, and the deadlines aren't met. This has already happened.

Well, this month I've mentioned a lot of information. If you are a regular on Comuserve and/or Delphi this information may already be yesterday's news, but hopefully you were able to pick up a few tidbits. If there is anything you have questions about, or would like further information on, feel free to write to me at 10 Stoneham Drive, Woonsocket, RI 02895 or reach me on SOFTWARE CONNECTION BBS (401)-765-2890. Also feel free to contact me if you have any information you would like to share. Next month I plan to have an address where you can mail order 200 disks with TYVEK sleeves for \$25!

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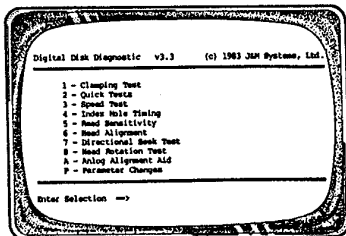
Simply slip in the Memory Minder disk and select one or more of eight sophisticated tests. Easy to understand graphics on your screen display findings in a few moments. Now you can discover potential misalignments and problems before they endanger your valuable data.

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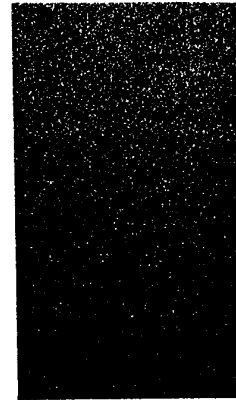
Main Menu

Select one of ten choices to perform routine drive checks, align drives, or aid in troubleshooting. Memory Minder is completely memory-resident, so all of the drives are available for testing.



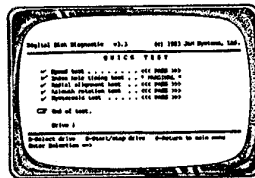
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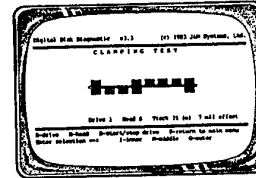
Memory Minder™ is available for a wide variety of popular computers. Each computer and disk configuration requires a separate precision alignment disk. Because of this specific calibration, Memory Minder will run properly on only one configuration.

Memory Minder is currently available for the following:



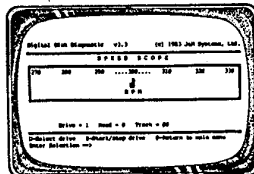
QUICK TEST

The Quick Test allows you to check five of the most important performance parameters of your disk drives, quickly and accurately. The Quick Test checks spindle speed, index hole timing, radial alignment, azimuth and hysteresis. These parameters are all tested with a pass/marginal/fail indication in less than one minute.



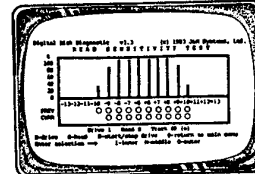
CLAMPING TEST

The main purpose of this test is to ensure that the Test Disk is clamped properly prior to running any of the other tests, since improper clamping can lead to misleading test results. This test is normally a function of the condition of the diskette hub. A badly worn diskette hub will rotate eccentrically about the spindle.



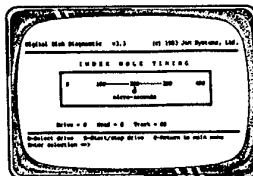
SPEED TEST

The Speed Test provides a measurement of the spindle speed of the disk drive, and assists in the adjustment of the speed control trimpot.



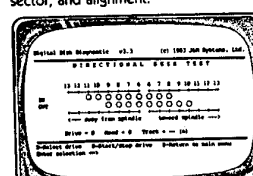
READ SENSITIVITY/WRITE SENSITIVITY

At a glance this screen provides more information than any of the other tests. It indicates the sensitivity, read repeatability per sector, and alignment.



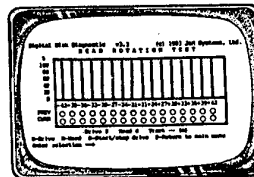
INDEX HOLE TIMING

The Index Hole Timing test provides a measurement of the elapsed time from the leading edge of the diskette index hole to the first sector address mark, and assists in the adjustment of the index hole photo-detector.



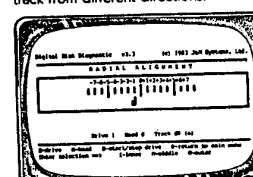
DIRECTIONAL SEEK TEST

The Directional Seek Test provides a qualitative measure of the ability of the head to position itself over the same location when seeking a track from different directions.



HEAD ROTATION TEST

The Head Rotation Test indicates whether the heads are rotated from their normal position. This test may also indicate head damage.



HEAD ALIGNMENT

The Head Alignment Test gives a quantitative indication of the alignment of the head. It may also be used to actually adjust the alignment.

WANTED



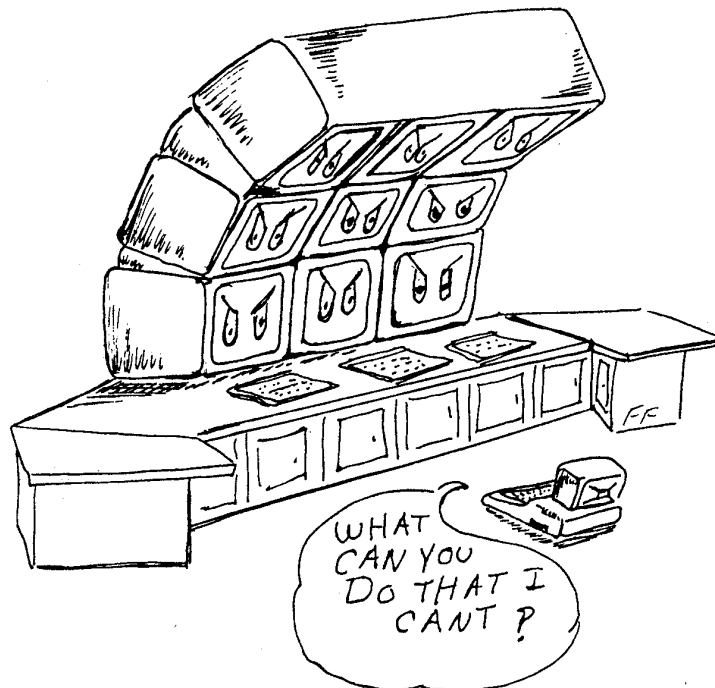
**YOUR PROGRAM TO MARKET
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MARKETING, WE WOULD LIKE TO HELP.**

**SEND US A COPY OF YOUR PROGRAM
WITH ANY TEXT OF HOW TO USE YOUR
PROGRAM. WE WILL REVIEW IT, AND
IF IT LOOKS GOOD, WE WILL SEND A
CONTRACT FOR YOUR REVIEW.**

SEND ALL MATERIAL TO:

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ALL MATERIAL WILL BE RETURNED TO YOU.





INTERNATIONAL COLOR COMPUTER CLUB
 17710 MOSS POINT DR SPRING, TX 77379

The (all new) International Color Computer Club was formed to help people get to know the Color Computer and how it operates, to make available to it's members all the information about the Color Computer that we can find, including information which Radio Shack isn't willing to give you. To make programs available so you may extend your library.

Programming is difficult to learn, and the club is a place you can turn to for help with problems you might have in writing a program of adapting a piece of hardware. We can-not solve all problems, but with hundreds of other members with expertise in every aspect of the Color Computer, we can solve most on them.

New members will receive a new member kit which contains all the programs which are in the current library of programs (165 programs to date), data on the CoCo, and a poke & peek book, all to help you along with your programing.

New members will receive a subscription to COCO ADS, (if you now have one, it will be extended) which is the clubs newsletter to its members. Members may place unlimited FREE classified ads in COCO ADS (one per month) and a discount on all display ads.

You are asked to donate some of your programs you wrote to help increase the library. These programs are available to you FREE, with a small charge for postage and blank tape or disk cost. You also may download programs from the clubs own BBS.

A list of other COCO members will be furnished to you that are in your area.

I hope you have found this informative and decide to join our club. We would really like to have you. I'm sure that you will find the benefits of the club worthwhile. All this for only \$30.00 per year.

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EXT BASIC _____ .DO YOU HAVE A - PRINTER _____ MODEM _____
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HAVE YOU WRITTEN ANY PROGRAMS ? _____

WOULD YOU SHARE THEM WITH OTHER MEMBERS ? _____

WHAT IS YOUR PRIMARY REASON FOR YOUR COCO? _____ We welcome

GAMES _____ BUSINESS _____ BOTH _____ Visa/Master Charge 

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