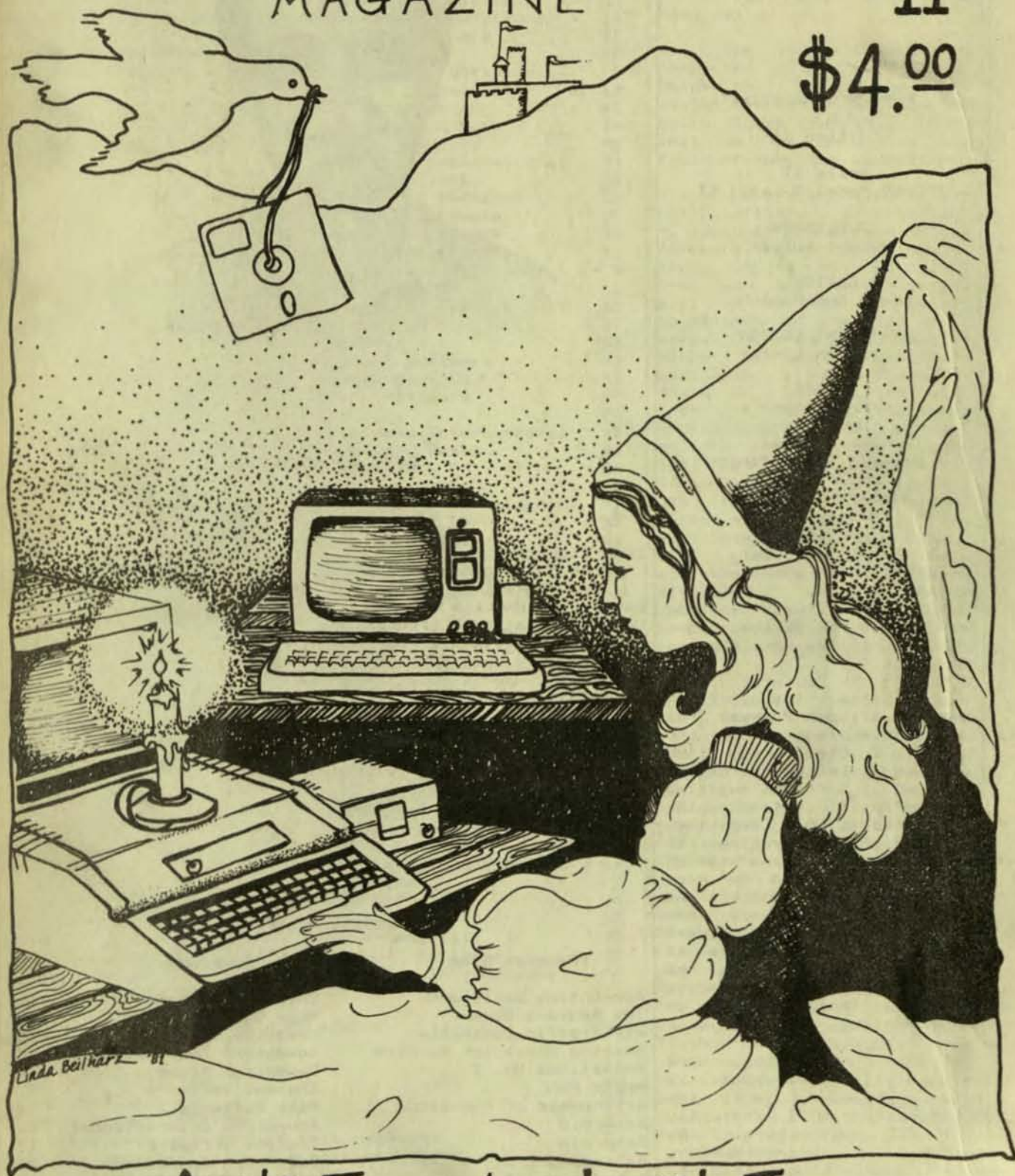


PURSER'S

MAGAZINE

11

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Apple II • and • Level II

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PURSER'S MAGAZINE
FALL
Edition 11

Apple II
TRS-80 Model I Level II

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This is our experimental issue. PURSER'S MAGAZINE has always changed from issue to issue. But this has a few more changes than most.

In this issue, I am trying various formats for the future issues of the magazine. Other magazines are doing better and better reviews. Softalk magazine for the Apple is leading the way. Creative Computing, Kilobaud Microcomputing, 80 Microcomputing, and 80-US are beginning to do more reviews. Radio Shack and Apple companies are now producing their own software directories. So I have to come up with something new to keep my magazine distinctive. That is why I am experimenting.

One of the more successful experiments I have tried is the questionnaire I recently sent all subscribers. My readers' recommendations make interesting reading. When you see two or more



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(This page and most of this magazine was composed using Scripsit and was printed using Radio Shack's Line Printer IV.)

people recommending the same program, you know it is a winner. Also, the answers to the question, "What is the worst program you have purchased?" produced some very surprising comments. Read what people think before you buy your next program.

This issue features an interview with Leo Christopherson. He is the grand master of animation on the Radio Shack computer. Read what he is doing in the field of computer education.

I have discontinued all the software directories. My lists of Apple and TRS-80 software were becoming so large as to be confusing. From now on, this magazine will be devoted completely to reviews of computer software. There are now a number of lists of software available. Radio Shack is doing an excellent job with its APPLICATION SOFTWARE SOURCEBOOK. The current edition has catalog number #026-2114 and costs \$1.95. Glenn Polin of Apple Company has compiled an educational software list. It is published by Sterling Swift. Many other companies are also producing software directories. I will print a complete list of these software directories in issue #12, the Winter issue.

This issue of PURSER'S MAGAZINE was produced on a Radio Shack Model I, Level II computer and an Apple II computer. I used SCRIPSIT, a word processing program for the Model I. On the Apple II computer, I use SUPER-TEXT II, a word processing program from Muse Software.

Most of these pages were prepared using Radio Shack's Model IV printer (Centronics 737). The words you see were reduced to 75 percent of original size. The typesetting in this issue was produced by Brown Graphic Press directly from a Scripsit word processing disk. (In a future issue, I will show you examples of a similar typesetting service from Cove View Press.)

I hope you find this issue unusual and different.

Leo Christopherson



**interviewed by
Bruce Rushton**

We all know about the new places computers can be found. One area which the computer is beginning to pioneer is the field of education, both as a tutor and as a tool to solve problems and stimulate

young minds. A number of school districts nationwide are beginning to institute programs involving computers into their curriculums and various plans can be found in all grade levels.

The Franklin Pierce School District, in Tacoma, Washington, has recently integrated computers into the classroom on a limited basis in grades three through twelve. On the elementary and junior high level, computers are available primarily to gifted students, while computer programming is offered as an elective course in the district's two high schools.

Mr. Leo Christopherson, math teacher and professional programmer of numerous computer games (see accompanying article), is in charge of both computer-assisted education and computer programming at Keithley Junior High School. The program at Keithley has been in operation since the beginning of the 1980 school year and involves seventh and eighth grade students who have been selected for the program as a result of high math scores on nationally administered standardized tests. Computers are also used as tutors in one modified mathematics class per day.

The 48 students involved in the computer programming course at Keithley are divided into two separate groups of 24 pupils each, one group consisting of seventh grade students and the other of eighth graders. These two groups alternate between weekly sessions in an advanced math course and weekly stints in the computer room, where they learn



the basics of programming on seven TRS-80's and one Apple II. Two Monroe 1670's are also used to teach machine level programming. "The goal of the course," states Christopherson, "is not to make expert programmers out of them, but rather to teach them to use computers to solve mathematical problems."

Although only these 48 students are involved in the program at present, it would be a simple matter to expand the course to include a greater number of students if a sufficient number of instructors were utilized. In order to familiarize his students with the machines quickly and effectively, Christopherson has written a manual which teaches BASIC. This manual contains ten lessons, each lesson requiring approximately seven days to complete. Students progress individually, thus enabling a highly motivated student to become a fairly good programmer.



Keithley's program is designed to limit the number of students per machine to three in order to alleviate crowding at the keyboard and allow sufficient "hands-on" experience. Christopherson agrees with this formula, saying that "any more than that creates a hardship."

In addition to his programming class, Christopherson also supervises the use of computers in a modified math classroom. Students are drilled on basic math problems in multiplication, division, addition and subtraction through the use of Radio Shack's K-8 program. Eighteen students are enrolled in this course, although not all utilize the computers simultaneously. Although it is too early to tell what effect computer-assisted instruction is having on the progress of below-grade-level students, it is obvious that enthusiasm is high, an important factor in the educational process.

Christopherson believes that computers can be used in nearly all facets of education, both as a tutor and a tool to teach logical thinking and solve problems. He stresses, however, that adequate guidance and supervision is needed to insure that students receive maximum benefit from computer time and avoid the temptation to play with the machines rather than work with them.

The Franklin Pierce School District has had virtually no damage problems in placing boisterous children in close contact with equipment costing thousands of dollars. Christopherson's students seem to treat access to the computers as a privilege and are therefore relatively cautious in using them, a situation that Christopherson is obviously grateful for.



What sort of equipment is needed to adequately use and teach the use of computers in an educational context? According to Christopherson, there are no "must-have" models of computers, although there are certain features which are musts. Most important is expandability. Expandability allows the machines to grow with the school's needs and also permits increased flexibility in usage, such as allowing teachers to use computers to make out grades. Also beneficial, though not absolutely necessary, is a printer. A printer is especially helpful in courses teaching programming. Machine tape loading systems are adequate for elementary and junior high levels, but high school programs should utilize disks. High schools should also purchase systems with larger memories (around 48K) than would be considered adequate for lower grade levels (16-32K).

What do students get out of computer programming in the long run? Aside from



introducing future job hunters to an exciting and rapidly growing job market, computers inject enthusiasm into learning while instilling logical thinking processes which will remain with young people the rest of their lives. These two aspects alone make computer programming a worthwhile course in any school's curriculum. ●

This story was typed using Scriptall™ word processing program by the interviewer, Bruce Rushton, in Tacoma, Washington. He stored the review on a cassette and mailed it to Purser's Magazine. The editor of Purser's Magazine added the formatting codes for typesetting and shipped it on a disk to Brown Graphic Press, 2488 Summit Street, Columbus, Ohio 43202. There they automatically typeset the article directly from the disk.



Leo B. Christopherson

Leo Christopherson, the man in charge of computer education at Keithley Junior High School, is well-known in computer circles for his many fine programs for both the TRS-80 and Apple II machines. His programs include Android Nim, Bee Wary, Dancing Demons, Snake Eggs, Duel-n-Droids and Life II, all of which have been widely acclaimed by both programming critics and, judging from sales records, the general public.

What makes a person a successful programmer? According to Christopherson, "Some people will be good programmers and others just won't." However, he is careful to point out that there are certain steps which are necessary if anyone is to attain any measure of success.

One of the most important assets any programmer can possess is an intimate knowledge of his computer. By learning his machine's capabilities, limitations and strange quirks, the programmer can more effectively take advantage of each of the computer's features. Christopherson often learns new things about his computers in the process of working out a problem in a developing program or searching for additional memory.

Also important to any programmer is patience and the willingness to completely overhaul a program which doesn't measure up completely to the creator's expectations. This means that careful attention to detail must be maintained throughout the construction of any program. As an example of the meticulous care which

must be given to an evolving program, Christopherson relates the story of the programming of Dancing Demons, to which he devoted two months of intensive effort (approximately 200 hours). Still not satisfied, he completely scrapped the game and restarted from scratch, which led to another two months of work. Only then was he completely satisfied with his product and released it to the public.

Christopherson also suggests extensive testing of the completed program to insure that there are no bugs. He finds his junior high school students are particularly useful guinea pigs and can often find a program's flaw which he may have missed. Such was the case in Bee Wary, where a student caught a serious flaw in under 10 minutes of play. This points out the importance of thorough testing, especially the inclusion of extremely unorthodox play.

What inspires a proficient programmer? Christopherson obtains most of his inspiration through visualizations of graphics concepts he would like to create. He finds his experience as an amateur artist helps in turning these visualizations into realities.

What can we expect to see from Leo Christopherson in the coming weeks and months? Like most true artists, he is reluctant to reveal specific plans for future creations, although he says he has several programs in the early planning stage. Let's hope he finishes them soon!



*** SEARCH TO SELECT A PROBLEM ***

CURRENT PROBLEM: #14

9075 DIS- THE INVENTORS - PT 1: INVENTOR
OF INVENTION: SIR F. BANTING (INSULIN)
IN A CRISTOPHER COLUMBO, THOMAS EDI
SON, MOBILE MACHINE

PRESS
FORWARD ARROW TO SELECT NEXT PROBLEM
BACK ARROW TO SELECT PRIOR PROBLEM
(RETURN) TO RETURN TO THE MENU WITH
ABOVE CURRENT PROBLEM

The introduction to
the matching program.

THE MARVELOUS MATCH MACHINE WILL
SET UP TWO COLUMNS OF WORDS
FROM THE CATEGORY YOU CHOOSE.
YOUR JOB IS TO MATCH THEM.
PRESSING THE KEY MARKED ESC WILL
RETURN YOU TO THE MAIN MENU.
PRESS THE SPACE BAR TO BEGIN

The menu of one of the
editing programs.

*** PROBLEM ENTRY EDITOR ***

PLEASE CHOOSE FROM MENU:

- 1) ENTER A NEW PROBLEM
 - EDIT
 - 2) EDIT CURRENT PROBLEM: #1
 - 3) DISPLAY CURRENT PROBLEM: #1
 - 4) SEARCH FOR PROBLEM TO BE EDITED
 - 5) VERIFY DATA TABLE FORMAT
 - 6) VERIFY TABLE FORMAT TO ALLOW RENUMBER
 - 7) END
- PLEASE ENTER THE NUMBER OF YOUR CHOICE
AND PRESS THE "RETURN" KEY

To change a question,
redo line 9075 et al.

***** THE MATCH MACHINE *****
ANIMAL ITS YOUNG
DOG PUPPY
CAT KITTEN
FROG TADPOLE
BIRD CHICK
SHEEP LAMB
KANGAROO JOEY
BIRD NESTLING
***** A PERFECT MATCH *****
YOU GOT ALL 10 RIGHT IN 12 TRIES!
PRESS THE SPACE BAR TO RETURN TO MENU

THE SHELL GAMES
Apple II disk
from Apple Computer Company

THE SHELL GAMES is a program written to be changed. It begins as a set of tests to be given to students. The tests are a true-false quiz on American History; a multiple choice test on contemporary folklore and little known facts; and matching tests on categories of animals, state capitals, and inventors. These test questions are for demonstration only.

The manual which comes with it explains how the teacher can change the test questions by changing lines in the program. Each type of test also has a hidden program to help the teacher make other changes to the main program if he wishes.

This program misses the mark. The program is difficult to use by people who are non-programmers. The object of the program is to help teachers and parents in preparing computer-aided instruction. Since 95% of all teachers and parents are not programmers, this program limits its own use. The program is written by Bruce Tognazzini. He always creates a masterpiece. This program is no exception. It has everything but the kitchen sink. Adding new questions and answers is simple with some other programs. Not this one. Bruce has created a highly sophisticated editing system to make this task easier for teachers who program. However, it will scare the wits out of any teacher who has not seen a computer before. Since Apples are going into more and more classrooms, most of the teachers are non-programmers. I do not believe that they will be able to use this program.

***** PROFESSOR TRUE *****
BY BRUCE TOGNAZZINI
COPYRIGHT 1979 APPLE COMPUTER INC
PRESENTS ...
UNITED STATES HISTORY
A QUIZ BY
PROFESSOR TRUE
COPYRIGHT 1979 APPLE COMPUTER INC

PLEASE TYPE IN YOUR
FIRST NAME AND THEN
PRESS THE "RETURN" KEY

WELCOME, BOB ...

I AM GOING TO GIVE A TRUE / FALSE
QUIZ. YOU WILL BE GIVEN QUESTIONS AND
ASKED TO ANSWER BY TRUE OR FALSE.
AFTER YOU HAVE ENTERED YOUR CHOICE
I WILL TELL YOU WHETHER YOU MADE THE
CORRECT ANSWER.
I WILL AWARD YOU POINTS FOR EVERY
QUESTION YOU ANSWER RIGHT WITH ONE TRY.

PRESS THE SPACE BAR TO CONTINUE

UNITED STATES HISTORY

***** TRUE OR FALSE? *****

EUROPE FIRST DISCOVERED AMERICA
WITH THE ARRIVAL OF CHRISTOPHER
COLUMBUS IN 1492

PLEASE TYPE A "T" FOR TRUE
OR AN "F" FOR FALSE, AND
THEN PRESS THE "RETURN" KEY FALSE

UNITED STATES HISTORY

***** INFORMATION *****

THE FIRST EUROPEAN THOUGHT TO
HAVE BEEN THE NEW WORLD WAS
BJARNT ARNE JOHNSON IN 1964
THE FIRST TO COLONIZE IT WAS
LEIF ERICSON IN AROUND 1000

PRESS THE SPACE BAR TO CONTINUE

UNITED STATES HISTORY

***** SCORING *****

BOB,
YOU GET 2 POINTS FOR A CORRECT GUESS.
YOU GET 2 POINTS FOR GETTING 5
RIGHT ANSWERS IN A ROW
PLUS 3 POINTS BECAUSE YOU GOT A
HARD ONE AND I LIKE YOU. BOB
PRESS SPACE BAR FOR SCORE

Scenes from the demo
of a true/false CAI.



TYPING TUTOR
Apple II 16K cassette
from Microsoft

TYPING TUTOR is written to teach typing. It is in two sections. The tutorial section teaches typing. The practice paragraph section grades the typist.

The tutorial section shows letters on the screen in two groups of four with a space between. The beginning or drilling typist types these letters as shown. The computer displays how many errors in the line and the number of words per minute. If the typist is fast and accurate on some of the letters, the computer replaces these with new letters. After ten lessons, the typist can choose a slower or faster response time or try a practice paragraph.

The practice paragraph analyzes the typist's speed and accuracy. It shows which keys were missed, the total number of wrong keystrokes, and which keys were slower. It then gives an accuracy rate and the words per minute.

This program will be a good one for a beginning typist. It uses a beep to alert a typist to a mistake. It allows more practice on the letters which need it. It also keeps track of how accurate and fast the typist is so the typist knows if he or she is improving.

The main drawbacks to the program are two. The first is that all typing is done in capital letters. A beginning typist would not learn to use the shift key. For this reason, the program is not practical for a student who will later switch to a typewriter. Similarly, TYPING TUTOR would not be suitable for the average high school typing class. However, it is excellent as a refresher course in typing. It is also good for someone who would like to increase his typing speed.

The second drawback is that most typists have difficulty typing nonsense strings of letters. They are used to words. The groups of letters in the tutorial section are more difficult since they are not words. The practice paragraphs are made up of words or almost words and do not slow a typist down very much. But the paragraphs are not made up of sentences, or of combinations of long and short words. However, they are still excellent practice for someone who needs a brush-up.

TYPING TUTOR is a professional-quality program. The program also comes with a well-written manual. This program is better than any of the other typing programs I have ever reviewed.

1. TYPING TUTOR
2. PRACTICE PARAGRAPH

SELECT (1,2)

THE IMAGE PRODUCERS PRESENTS
:: TYPING TUTOR ::
(C) 1979 MICROSOFT, INC.

1. LETTERS
2. NUMBERS
3. SYMBOLS

SELECT KEYS TO LEARN (1-3)

FAST LESSON KEYS NEW
FDSA ^@><?11
27(85-6
301928374/
X,CHBUNY
THCPQOMURI
E:LKJ
DFAS FDSA
DFAS FD-

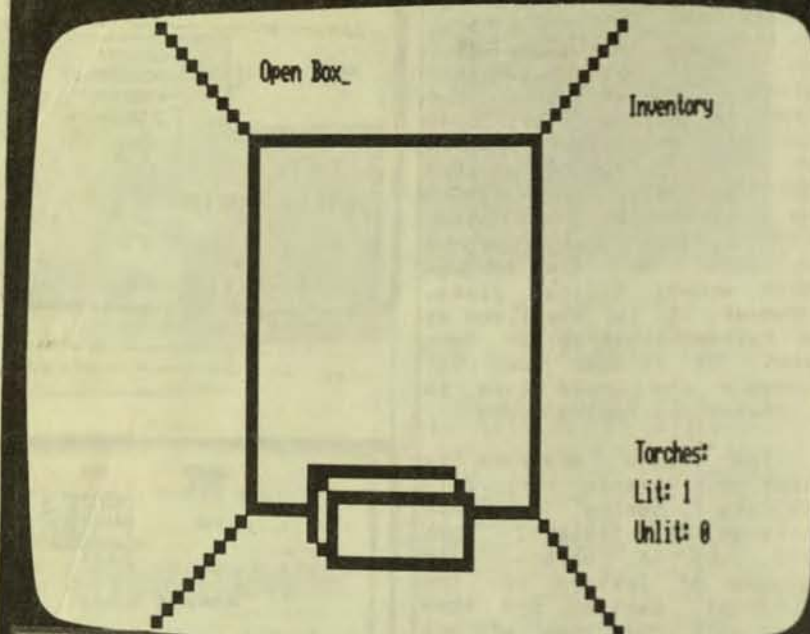
FAST LESSON KEYS NEW
DAS ^@><?11
27(85-6
301928374/
X,CHBUNY
THCPQOMURI
E:LKJ
DFSA DAS
1. ALLOW SLOWER RESPONSE
2. FASTER RESPONSE
3. PRACTICE PARAGRAPH
SELECT(1-4)

:: BEGIN ::

FA ADS ADS FA ADS SAD FADS FADS ADS
FA ADS-
SAD FADS SAD FADS ADS FADS ADS FADS
ADS ADS SAD FA ADS FADS SAD FADS FADS
SAD SAD FA ADS ADS ADS SAD ADS SAD
SAD SAD FADS ADS

PARAGRAPH ANALYSIS:
YOU MISSED 12 KEYSTROKES ON THE
FOLLOWING LETTERS:
A D S RETURN
YOU WERE SLOWER ON THESE KEYS:
A D F S RETURN SPACE
YOUR ACCURACY IS 92 PERCENT.
YOUR RATE IS 18 WORDS PER MINUTE.

1. TYPING LESSONS
 2. ANOTHER PARAGRAPH
- SELECT (1,2)



LABYRINTH

DEATHMAZE 5000
&
LABYRINTH
Level II 16K tape
Med Systems Software

DEATHMAZE

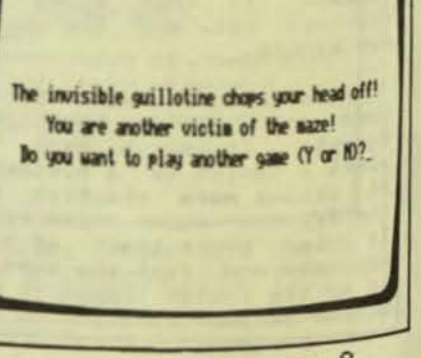
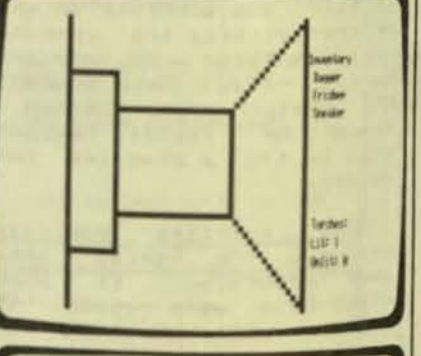
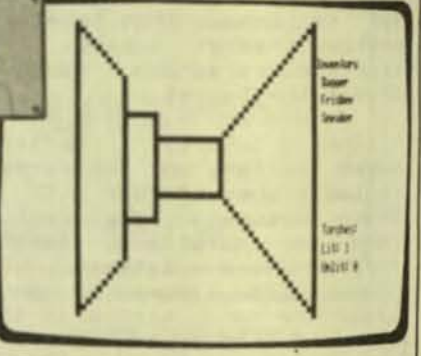
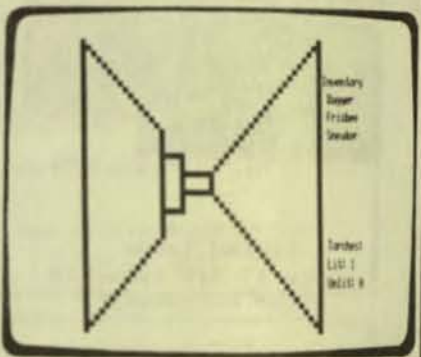
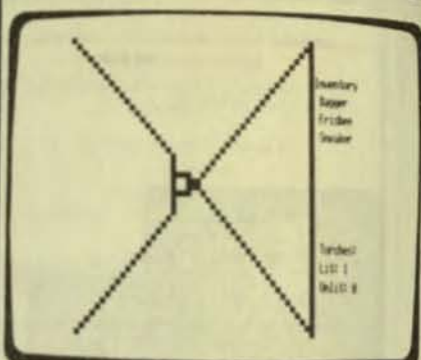
5000



The two programs, DEATHMAZE and LABYRINTH, are similar so I will review them together. These programs are adventure-like games in three dimensional mazes. In both cases, the maze is shown on the screen as though you were in the maze. The graphics are limited but usually adequate. The mazes are random so the solutions vary from game to game. Our reviewer found that some of the moves necessary to complete a game are too tricky. Often the player's fate depends more on luck than skill. However, the programs have been well recieved by the public. We have talked to a variety of game players who really enjoyed both programs.

In LABYRINTH, the player moves through halls and turns corners and may even fall into pits. A minotaur is also in the labyrinth and the player tries to avoid or to kill him. The player must carry a lighted torch in his travels and find food every once in a while. Darkness and starvation are fatal. There are boxes and other objects in the labyrinth which may help the player. The game can be saved to start again later.

In DEATHMAZE 5000, the player tries to find his way out of a 5-story building alive. There are elevators and other ways to go to different floors, but also there are deathtraps. Some things have to be done in the right order. There are many objects to handle and obstacles to overcome. This game can also be saved in progress.



The invisible guillotine chops your head off!
You are another victim of the maze!
Do you want to play another game (Y or N)?

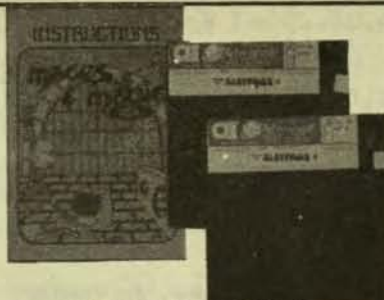
■ ■ STONE OF SISYPHUS RECORDS ■ ■

NUMBER OF PERSONS WHO HAVE ENTERED = 13
 NUMBER OF SURVIVORS = 2
 MORTALITY RATE = 85 %

LARGEST TREASURE VALUE REMOVED = 164 G.P. BY NIM
 MOST EXPERIENCE POINTS = 25 E.P. BY NIM

THIS IS THE LAST CHANCE TO TURN BACK !!!

 POOF!! (INITIALIZING)



STONE OF SISYPHUS
 Level II 32K disk
 from Adventure International

STONE OF SISYPHUS is one of a series of Maces & Magic adventure games. At the start, the player is given personal characteristics by the computer. His intelligence may be great or small. His luck or skill may be low or high. The player purchases weapons and armour using a set amount of money. He then enters the dungeon to search for treasure and fight monsters.

This type of game uses consistent rules. The personal skills given the player are one of the main factors. The player's choice of weapons and armour help decide the outcome of his meetings with the monsters. His judgment in taking or leaving the objects he finds must be based on his strength as well as luck.

The object of the game is not just to fight monsters and to collect treasures. The player must also escape from the dungeon alive. The pamphlet which comes with the disks assures us there is at least one exit from the dungeon.

There are provisions to save the player's character on disk so he may be used the next time. The game in progress may also be saved.

Our game reviewer likes this program. However, we found that it is a little complex to set up the disks of this program. The list of weapons and armor is overpowering. Yet, little information is given on the different weapons.

The game is actually an adventure game as it is a logical puzzle. Only the meetings with the monsters are random.

IRON ROD HERE
 MONSTER PHOTOS HERE
 MATCHES HERE
 CRYSTAL GLOBE HERE

? T
 TRY AGAIN
 ? G
 PICK UP WHAT (? IF FINISHED)? KEYS
 OK
 PICK UP WHAT (? IF FINISHED)? IRON ROD
 OK
 PICK UP WHAT (? IF FINISHED)? MONSTER PHOTOS
 OK
 PICK UP WHAT (? IF FINISHED)? MATCHES

■ ■ INVENTORY ■ ■

PACK ITEMS:			
#	NAME	WGT	GP VALUE
1	KEYS	5	0
2	IRON ROD	20	0
3	ROPE	5	0
4	MONSTER PHOTOS	5	0
5	MATCHES	5	0
6	CRYSTAL GLOBE	15	0

WHICH ITEM ?

'STOP!! PAY TROLL!!', SAYS THE SIGN OVER THE APPROACH TO A BRIDGE OVER A SMALL CANYON. A SLEEPY TROLL LOUNGES IN FRONT OF A SHELTER HUT. YOU MAY PAY THE TOLL TO CROSS THE BRIDGE (COME TREASURE FROM YOUR PACK) (1), CROSS THE BRIDGE BY FORCE (2), OR FOLLOW THE PASSAGE TO THE WEST (3).
 ?

COMBAT TOTALS ARE:

MELVIN 26 GHOUL 30

ARMOR ABSORBED 2 HITS
 YOU TOOK 2 HITS

GHOUL RATING IS NOW 30
 YOUR CONSTITUTION IS NOW 16
 YOUR STRENGTH IS NOW 18

ENTER 'C' IF YOU WISH TO CHANGE YOUR WEAPON,
 OTHERWISE PRESS 'ENTER'?

YOU'RE DEAD !!
 HIT ENTER TO CONTINUE? ■

WELL, MELVIN, YOUR CHARACTERISTICS ARE:

STRENGTH = 10 INTELLIGENCE = 10
 LUCK = 10 CONSTITUTION = 10
 DEXTERITY = 17 CHARISMA = 15

YOU HAVE 237 GOLD PIECES.
 YOU CAN CARRY A MAXIMUM OF 500 UNITS OF WEIGHT.
 YOU ARE PRESENTLY CARRYING 237 UNITS.
 YOU HAVE 0 EXPERIENCE POINTS.
 YOUR LANGUAGE LEVEL IS 1.

PRESS ENTER TO CONTINUE? ■

YOU STAND BEFORE A LARGE STONE EDIFICE SET INTO THE SIDE OF A HILL. TWO DOORS MARK OBVIOUS ENTRANCES. A LARGE DIM MARKED 'DEPOSIT TREASURE HERE' STANDS TO ONE SIDE. THE SOUND OF CHAINS COMES FROM BEHIND THE WEST DOOR. THE OTHER DOOR IS SILENT. YOU MAY TAKE THE WEST DOOR (1), THE EAST DOOR (2), OR EXIT THE GAME BY WALKING INTO THE SUNSET (3).
 ?

YOU HAVE ENTERED A CAVEN WHERE A GROUP OF CHAINS HANGS FROM THE CENTRAL AREA OF THE CEILING. THE CHAINS SWING SLOWLY TOGETHER IN THE BREEZE PASSING THROUGH THE CAVE. THERE ARE NO OBVIOUS EXITS FROM HERE EXCEPT BACK THE WAY YOU CAME. YOU MAY PULL A CHAIN (1) OR LEAVE (2).

KEYS HERE
 IRON ROD HERE
 MONSTER PHOTOS HERE
 MATCHES HERE
 CRYSTAL GLOBE HERE

? ■

PURSER'S MAGAZINE



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Please send two copies of your publication to me for my files. I like to see what people are up to these days.

NAME CHANGES

PURSER'S MAGAZINE was formerly called "Robert Purser's Reference List of Computer Cassettes" and "Computer Cassettes Review."



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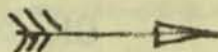
COMPRESS

A Division of Science Books International, Inc.
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Name _____ Date _____
School _____ Phone _____ Number of Apples in your school? _____ Dept. _____
Address _____ City _____ State _____ Zip _____

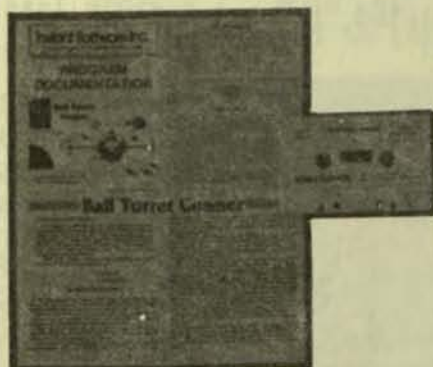
Turn the page to see their program,
The Nucleic Acid Connection



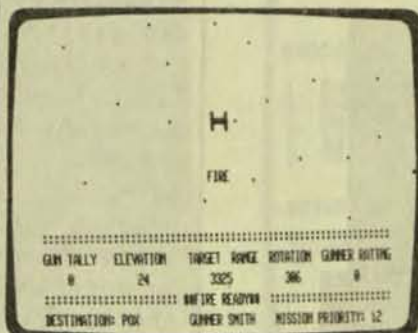
PURSER'S MAGAZINE

BALL TURRET GUNNER is an arcade type of game in which the player shoots enemy fighter ships. The player has a choice of the level of skill. The easiest level has equipment that gives him advice and single enemy ships. The middle levels have equipment that give brief advice, but the enemy

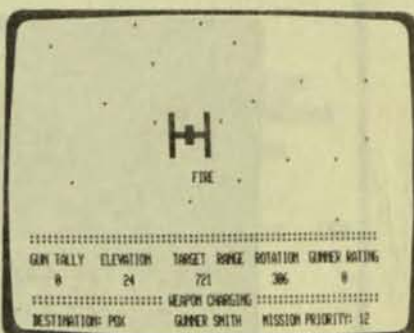
ships may be too fast to hit. In the higher levels, the player has to shoot at fast-moving enemy fighters without help from his broken equipment. Scoring is by adding points when targets are hit, or losing points for evasive action. Points are also lost if the player's ship is destroyed.



BALL TURRET GUNNER
Level II 16K tape
from Instant Software, Inc.



READY, AIM
Aiming for the enemy ship.
Fire when ready. First
you must position the gun.



RECHARGE
The enemy ship is getting
closer. Your weapon is
recharging and you must
wait to fire.

CHROMOSOME :

CGCTGTCGGAGTGGCTCCTTTCAACTAGCGTGGCTCGA-

ATGCGGTAAACCCGCGAGTCCGTTCCAGAGCTGGGACCG-

TCACCGCGATGGGTT

THE RATIO GC:AT = .615384615

PRESS RETURN TO CONTINUE

ENTER 0 TO STOP,
 2 FOR THE RNA MESSAGE,
 3 FOR THE PEPTIDE CHAIN,
 4 FOR MUTAGENESIS,
 OR 5 FOR A CODE TABLE: 6■

THE NUCLEIC ACID CONNECTION
 (Apple II Dos 3.2)

from

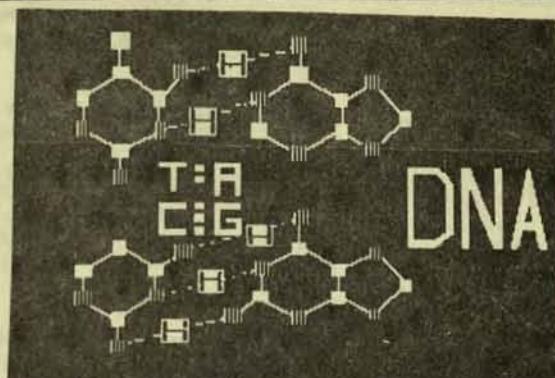
COMPRESS
 PO Box 102
 Wentworth, NH 03282



This program is intended to supplement courses in high school or college biology and genetics. It is suitable as a laboratory exercise and can be completed by a student in less than one hour.

The NUCLEIC ACID CONNECTION illustrates the transcription and translation of the DNA in chromosomes into mRNA and polypeptides. It explores the nature of nucleic acid bases, their function, and the causes and effects of mutations. Eleven mutagens may be used to alter the nucleic acid base. The program is preceded by a brief animated introduction to genetic reproduction. In addition you can see outline drawings of the principal nucleic acid bases.

The NUCLEIC ACID CONNECTION comes on disk with a three page student pamphlet. The cost of the package is \$60.



DO YOU WANT MUTANTS?

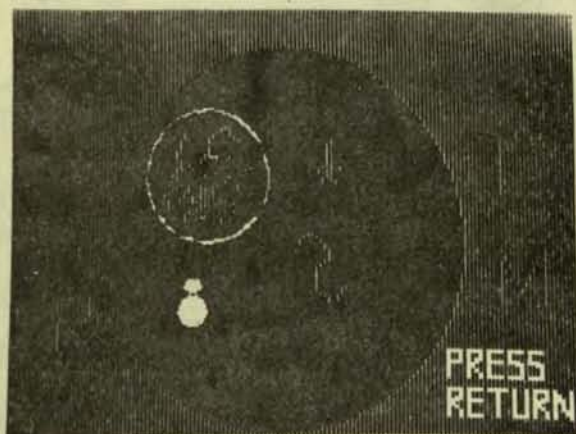
1. The program starts with a brief look at the nucleic acids. This part is optional and can be skipped by the student.

THE NUCLEIC ACID CONNEXION RUNS FROM GENERATION TO GENERATION THROUGH THE GENES AND FROM NUCLEUS TO CYTOPLASM IN MESSENGER RNA. SOMETIMES CALLED 'THE CENTRAL DOCK', IT CONVEYS INFORMATION FROM DNA THROUGH RNA TO PROTEINS. ON OCCASION IT REVERSES, MAKING DNA FROM RNA, BUT ONLY IN VIRALLY INFECTED CELLS.

THIS MODEL CREATES AN ALLELE, THAT IS IT MAKES THE TWO DNA STRANDS THAT HOLD GENETIC INFORMATION. IT TRANSCRIBES A MESSENGER RNA MOLECULE AND TRANSLATES THAT MESSAGE INTO A POLYPEPTIDE.

WOULD YOU LIKE TO SEE A DIAGRAM OF A CELL SYNTHESIZING THE DIFFERENT KINDS OF NUCLEIC ACID (TRANSFER, RIBOSOMAL AND MESSENGER) AND THEN COMBINING THEM INTO A COMPLEX THAT SYNTHESIZES THE PROTEIN STRAND?

2. Only a brief explanation of nucleic acid is given in the program. Much of the material must be covered in the classroom.



3. Animation is used to good advantage. Here is a simplified view of the syntheses of genetic material of a cell.

MESSAGE:

CGCUGUCCGAGUGGCCUCCUUUACUAGCGUGGCUCGA-
AUGCGGUAAACCCGAGUCCGUUCCAGAGCUGGGACCG-
UCACCGCGAUGGGUU

THE MESSAGE HAS 61.5384615% PURINE
PRESS RETURN TO CONTINUE

ENTER 0 TO STOP, DNA SEQUENCE,
1 FOR THE PEPTIDE CHAIN,
2 FOR THE RNA MESSAGE,
3 FOR MUTAGENESIS,
4 OR 5 FOR A CODE TABLE: 99

4. The RNA message of a randomly created molecule is shown here. On the opposite page is the DNA sequence.

POLYPEPTIDE:

INITIATION AT BASE NO. 39

MET-ARG-

WILL YOU REPAIR THIS PREMATURE ENDING? Y
YYYY

INITIATION AT BASE NO. 39

MET-ARG-LYS-PRO-ALA-VAL-ARG-SER-ARG-ALA-
GLY-THR-VAL-THR-ALA-MET-GLY-

PRESS RETURN TO CONTINUE

ENTER 0 TO STOP, DNA SEQUENCE,
1 FOR THE PEPTIDE CHAIN,
2 FOR THE RNA MESSAGE,
3 FOR MUTAGENESIS,
4 OR 5 FOR A CODE TABLE: ■

5. The peptide chain is shown here. Simple one stroke input and input error checking is not used as can be seen by the "YYY" above.

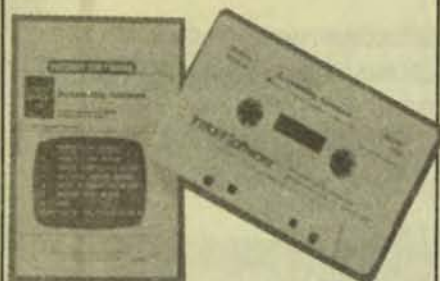
CHOOSE ONE OF THESE MUTAGENS:

- | | |
|---------------------|---------------------|
| 1. BACKGROUND | 2. 2-AMINO PURINE |
| 3. 5-BROMOURACIL | 4. HYDROXYLAMINE |
| 5. NA BISULFITE | 6. ALKYL SULFONATES |
| 7. NITROSOGUANIDINE | 8. ACRIDINES |
| 9. NITROUS OXIDE | 10. UV RADIATION |
| | 11. X RADIATION |

ENTER THE NUMBER (1 THROUGH 11): 11

ENTER A RADIATION DOSE IN ROENTGENS: 100

6. The program uses the computer's mathematical powers to show the random effects of mutation from a variety of causes.



ACCOUNTING ASSISTANT
Apple II 16K Tape
from Instant Software

This package contains two ACCOUNTING ASSISTANT programs. One is Loan Amortization Schedule. The other is Depreciation Schedule.

The user of the loan amortization program enters the principal, interest, term of the loan, and number of payments per year. If the user wants to get a monthly breakdown, he may choose one of four options. The first option lets the user see the principal, interest, and remaining balance. Also, the program can show the principal, interest, and principal to date. Similarly, it can display the amount paid to date, interest to date, and principal to date. And finally it can show the amount paid to date, the principal to date, and the balance to date.

At the end of the program, a summary of the loan is given, showing the principal amount, interest rate, monthly payment, total payments, and the cost of the loan or return on investment.

Anyone using the second program, Depreciation Schedule, has a choice of five different methods. These are straight line, sum of years-digits, declining balance, unit of production, and machine hours.

Personal computers provide us with one of the greatest tools ever invented for the accountant. Since the computer can do any amount of complex mathematics, the benefit of accounting aid programs should be enormous.

Keeping in mind the tremendous potential that we are dealing with, this program is a turkey (in my humble opinion). The depreciation is so simplified it is unsuitable and unacceptable for IRS calculations. It assumes every asset was bought in January. No allowance is made for any additional first year's depreciation.

Programs such as the ACCOUNTING ASSISTANT might be used by accountants, bankers, lawyers, investors, and other professionals. Rarely, however, would programmers need to use such a program. (Most programmers would rather write their own.) Unfortunately, this program is not written for accountants. It is not written for lawyers. It is not even written for bankers or investors. It is written for someone who is familiar with computer programming. This defeats the whole purpose of the program.

Here is one simple example. Ten thousand dollars means \$10,000.00. However, the computer thinks that "10,000" is actually \$10 since it doesn't understand commas. (And don't tell me that any programmer would know enough not to use commas. This program isn't supposed to be written for programmers. It is supposed to be written for real people.)

Other than that, the program is good.

ENTER PRINCIPAL AMOUNT 10.000
EXTRA IGNORED
ENTER ANNUAL INTEREST RATE 5.69
NUMBER OF PAYMENTS PER YEAR 12
TERM OF LOAN (YEARS, MONTHS) 3
778
WOULD YOU LIKE TO SEE THE
MONTHLY BREAKDOWN (Y OR N) ? Y

BEGINNING ENTRY
These items must be entered at the beginning of the program. The instructions do not mention commas in a large figure.

ENTER DATE OF BORROWING (MONTH, YEAR)
(E.G. 12, 78) 73/81
73/81
73/81

MONTHLY BREAKDOWN

FOLLOWING ITEMS CAN BE DISPLAYED:

- 1 - PRINCIPAL, INTEREST, REM. BALANCE
- 2 - PRINCIPAL, INTEREST, PRINCIPAL TO
- 3 - PAID TO, INTEREST TO, PRINCIPAL TO
- 4 - PAID TO, PRINCIPAL TO, BALANCE TO

SELECT ONE OF THE ABOVE OPTIONS ■

MONTHLY BREAKDOWN

The breakdown of monthly payments can be displayed in four ways. Be sure to enter the date as they want it. Do not enter it as dates are usually written.

YEAR 1981
LOAN ON \$10.00 AT 5.69%
MONTHLY PAYMENT \$0.31

MONTH	PAID TO	INTEREST TO	PRINC. TO
APR	\$0.31	\$0.05	\$0.26
MAY	\$0.31	\$0.05	\$0.26
JUN	\$0.31	\$0.05	\$0.26
JUL	\$0.31	\$0.05	\$0.26
AUG	\$0.31	\$0.05	\$0.26
SEP	\$0.31	\$0.05	\$0.26
OCT	\$0.31	\$0.05	\$0.26
NOV	\$0.31	\$0.05	\$0.26
DEC	\$0.31	\$0.05	\$0.26

HIT ANY KEY TO CONTINUE ■

DISPLAY

A loan of \$10 at 5.69% annual interest for a term of 3 years would be repaid at 31 cents a month.



EXERCISE 1

ANSWER THE FOLLOWING 20 RANDOMLY CHOSEN TRUE-OR-FALSE QUESTIONS...YOU SHOULD SCORE OVER 12...

TO ANSWER :
TYPE IN A "T" OR AN "F"

HIT "ENTER" TO CONTINUE? ..

THE PERIOD WHEN MENSTRUAL ACTIVITY IS CEASING IS CALLED THE MENOPAUSE, OR CLIMACTERIC

? T
RIGHT

THE MENSTRUAL FERTILE PERIOD ALWAYS OCCURS AT THE SAME TIME EVERY MONTH

? F
RIGHT

HIT "ENTER" TO CONTINUE? ..

PUBERTY IS THE TIME WHEN A PERSON BEGINS TO CHANGE FROM A CHILD TO A YOUNG ADULT

? T
RIGHT

THE FEMALE SEX HORMONES ARE CALLED ESTROGEN AND PROGESTERONE

? T
RIGHT

HIT "ENTER" TO CONTINUE? ..

... FILL IN THE BLANK ...

CONTRACEPTION MEANS THE SAME THING AS ———

1. QUALITY CONTROL
2. BIRTH CONTROL

? 1
2. BIRTH CONTROL

HIT "ENTER" TO CONTINUE? ..

MALES ALSO EXPERIENCE A CLIMACTERIC, OR MID-LIFE CRISIS. THIS CHANGE IS PRIMARILY

1. PHYSICAL
2. PSYCHOLOGICAL

? 2
RIGHT

HIT "ENTER" TO CONTINUE? ..

VITAFACTS

&

BIRTH CONTROL

Apple II 16K tape
Level II 16K tape
from Personal Software

This personal education package is written to give the facts about birth control. It comes with a booklet giving the meanings of the medical terms used in the program. The booklet also shows diagrams of the human reproductive system.

An audio tape is the main part of the package. The listener hears conversations by three couples. Each couple is going to have a baby they had not planned for. The narrator then gives facts about how a baby is conceived. Later in the tape, a doctor discusses pregnancy and various means of birth control with a young woman. A woman also visits a birth control clinic and hears information from the nurse about other means of birth control. The narrator gives more general information and suggests talking to a family physician for more information. The narrator, nurse and doctor all use medical terms to explain the facts and risks about using each type of birth control.

A computer program also comes in the package.

This program and the others in the Vitafacts series were reviewed by a large group of reviewers. All were impressed with the audio part of this program. Most felt the computer program was a let-down. It is trivial and not well-written. Yet, because of the excellent information provided by the audio tape, all reviewers were still impressed.

Both the audio tape and the computer program are in several sections. After each section of the audio tape, the listener uses the computer to find out how much he remembers of the information. The computer program is in the form of true-false or multiple choice questions. It keeps track of the answers and gives the percent correct.

The program allows for a review of any section.

The information is given in an unbiased way to help the listener learn what is presently available for birth control. Probably most women and men already know something about birth control but may be too shy to ask their doctor for more information. When they know the proper terms to use, it might make them feel more comfortable about finding out more. The impartiality of the audio tape speakers might help relieve any embarrassment.

Using the computer program after listening to the tape helps reinforce remembering the information. Also, it helps break up a long session of listening to the tape. The computer is used only as a tool, just as a written test sheet and pencil would be used. But it is more impersonal. A person might be more comfortable looking at the questions on a computer screen and typing only a True or False. He or she would know that no one else would see how they answered the questions. Some of the multiple choice answers to the questions are ridiculous. They are given as a choice only to spotlight the right answer.

It's just as well that the computer part of the program is minor. Each question must be answered first with a "T" or "F" or number and then the ENTER key pressed. The ENTER key must also be pressed to go on to the next page of questions. It would be simpler if the program just accepted the key pressed as the answer. But it does let the user change his mind before pressing the ENTER key. Also, keeping score of the right answers doesn't seem to add much. The computer program doesn't make full use of the computer's capabilities. Only a little graphics is used.

If the package is bought for the information on the audio tape, it is worth it. If it is bought because it is a computer program - it isn't worth it.

[illegible]

The image shows the Creative Computing Software logo, which consists of the words "creative computing software" in a stylized font inside a rounded rectangle. Below the logo is a photograph of a product box for the "AP-00100 CONTROLLER". The box features the Creative Computing Software logo at the top, followed by the text "TRAIL LEADS TO SOFTWARE CONTROLLER". Below this is a small image of the controller unit, which has two knobs and a digital display. The box also includes the text "creative computing software" and "The Best Value Electronics Buy Money Can Buy".

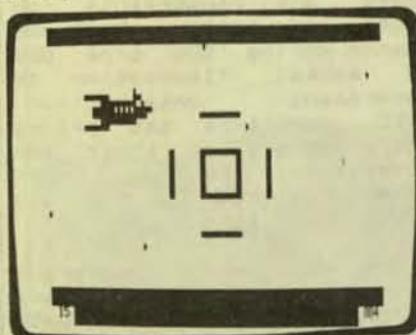
page 16



COSMIC PATROL

Level II 16K disk
from Instant Software

COSMIC PATROL is an arcade type of space war game with a time limit of play. The player has a choice of two game speeds. The computer screen shows a view of space with a target area in the center. This view changes sideways, up or down, or diagonally as the ship moves. The player tries to destroy at least 15 enemy ships within the time limit. The enemy freighters fly slowly into view. Enemy fighter ships appear quickly and will fire at the player's ship. If the player doesn't destroy the fighters, they shoot at him and make him lose playing time.

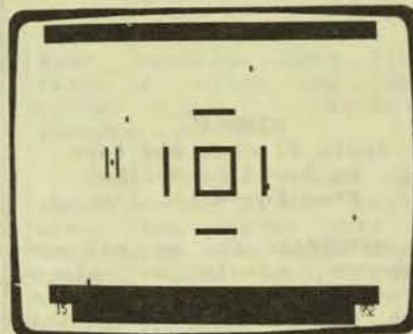


FREIGHTER

An enemy drone freighter is getting close. Fire at him! But be sure to fire ahead of the target. It is not easy.

For an action game, I like this program. Shooting at the other space ships is not easy, as the gun turrets and the enemy freighters move at different speeds. Also there is a delay between the time you fire and the time the shot gets to

the target. It makes a good challenge.



FIGHTER

An enemy fighting ship is approaching on the right. You must fire at him before he hits you. Since the fighter flies in a curved path, it will not be easy.



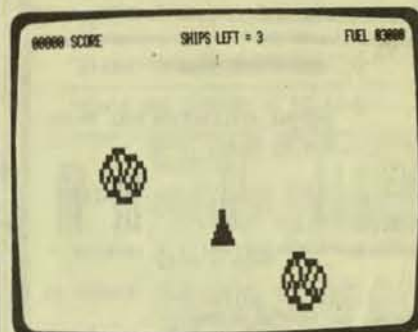
ASTEROID

Level II 16K disk
from Instant Software, Inc.

ASTEROID is an arcade type of game in which the player's spaceship shoots asteroids and alien ships. The player has three ships and limited fuel. Asteroids appear on the screen. The player must move his spaceship or break up the asteroids before they crash into him. He also must destroy or run from alien ships as they appear firing at random. The computer keeps score of the asteroids and alien ships hit by the player.

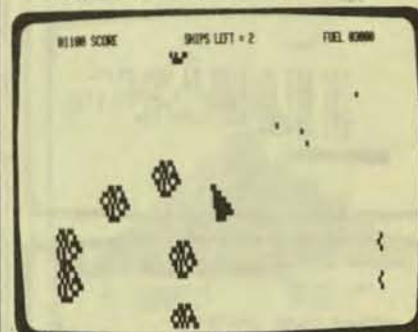
There are many ASTEROID games based on the original

arcade game. This version of the game is OK. Being written in machine language, the program is fast-acting. But the poor graphics of the TRS-80 are a hinderance. Also there is a flaw in the design of the program. If you hold down the fire button and the turn button, the ship continually rotates and continually shoots, giving the best score. This makes the game too easy.



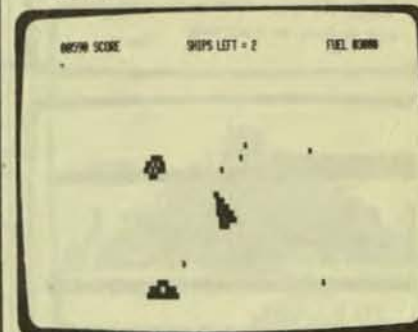
BIG ASTEROIDS

Two large asteroids are approaching the ship. You can win points by trying to break them into smaller ones.



ALIEN SHIP

An alien ship and an asteroid both threaten. You have already lost one ship and only have two left.



SMALL ASTEROIDS

There are lots of asteroids. The small ones can also destroy your ship.


```

(1) OBSERVE SERVICE STATIONS
(2) OBSERVE DOCK YARDS
(3) SERVICE STATION STATISTICS
(4) DOCKYARD STATISTICS
(5) SET PRICES, WAGES, PURCHASES
(6) FINANCIAL STATUS

```

```

(1) SET STATION #1 GAS PRICE
(2) SET STATION #6 PRICE
(3) SET ATTENDANT'S WAGES (1-3)
(4) SET DOCKWORK'S PAY (3-7.5)
(5) SELECT OIL SUPPLIER
(6) RETURN

```

SHOODY ARABIA 5
YUMATT 3
IRACHE 3
MONEY IN: 138 MONEY OUT: 8
HIT RETURN TO CONTINUE

```

<1> BUY STOCK
<2> SELL STOCK
<3> FIX PRICES IN INDUSTRY
<4> RETURN

```

As are other programs from Edu-Ware that I have seen, WINDFALL is very well designed and user-oriented. It provides an insight into the operations of an oil company (though on a very limited scale) and thus can be rather educational. However, after playing several times, I have found that the game environment does not change significantly from game to game. This means that once a successful strategy is discovered (usually after two or three tries), the game becomes dull and predictable. While

The object of the game is to maximize profits by any means, and there are several ways to do this. The most obvious method is to lower production and distribution costs while raising gasoline prices to maximum. However, by cutting wages, productivity and sales volume drop, thereby reducing profits. On the other hand, it is possible to price yourself out of the market with high gasoline prices - the competing oil companies will undercut prices, reducing Engulf's sales. Also, given the instability of the oil market, the government can be expected to intervene, cutting profits even further. You, as Chief of Operations for Engulf, control the pricing structure of Engulf's service stations across the country, set salaries, purchase oil from OPEC, buy and sell company stock, and even engage in price fixing with competing companies.

a rather good program as it is, WINDFALL could be much more enjoyable if several different scenarios were provided. Rather like a puzzle, once solved this game becomes repetitious.

Tom Dolezal

WINDFALL STATUS

```
CREW EXPENSES: 1650
>>NET CASH ON HAND: 739194
=====
INTEREST: 0
>>TOTAL LOANS PAYABLE: 0
=====
>>> NET WORTH: 739194
=====
(1) PAYOFF SOME OUTSTANDING LOANS.
(2) GO ONTO ANOTHER VOYAGE.
(3) EXIT GAME (PAY LOANS, KEEP SHIP)
```

WINDFALL STATUS

DURING YOUR TENURE AS CHIEF OF OPERATIONS OF THE ENGULF OIL CORPORATION THIS COMPANY HAS EXPERIENCED A NET LOSS OF 775 MONETARY UNITS

YOUR MEDIOCRE MANAGEMENT HAS ALLOWED ENGULF TO LIMP THROUGH ANOTHER YEAR

IN PETROL WE TRUST!

Here is an arcade game for two people. Using the game paddles, each player flies a plane and drops bombs. Score is kept by the computer.

This program was rated above average by our reviewers. The program does not work with the Paymar Upper/lower case modification. However, no one seemed to notice (or even care).

IN A LAND NOT FAR AWAY THERE ARE TWO COUNTRIES, OUTER COMMODOBOVIA AND LOWER TEEARESSAYTEELAND. THE NOT SO BRIGHT RULERS OF THESE COUNTRIES, HAVING HEARD THAT AN APPLE FRANCHISE WOULD BE OFFERED TO ONE OF THEM, DECIDE TO ELIMINATE THE COMPETITION BY DECLARING WAR ON EACH OTHER.

BECAUSE A BIG GREEN MOUNTAIN (KNOWN LOCALLY AS "THE BIG GREEN MOUNTAIN") STANDS BETWEEN THE TWO COUNTRIES, THE ONLY WAY TO ATTACK IS BY AIR. BOTH COUNTRIES CONVERT THEIR SLUMPING COMPUTER FACTORIES INTO AIRCRAFT MANUFACTURING PLANTS AND BEGIN TURNING OUT VAST QUANTITIES OF FIGHTER-BOMBERS.

<HIT 'RETURN' TO CONTINUE>

BACKGROUND

This is the locality and reason for this war game. The war takes place between "Outer Commodobovia" and "Lower Teearessayteeland".

LEFT SIDE PERSON:
YOU CONTROL THE ALTITUDE OF YOUR FIGHTERS WITH PADDLE 0 (TURN CLOCKWISE FOR DOWN), FIRE MISSILES AND BOMBS WITH THE PADDLE BUTTON, AND CHOOSE MISSILES OR BOMBS BY HITTING THE '2' KEY.

RIGHT SIDE PERSON:
YOU CONTROL THE ALTITUDE OF YOUR FIGHTERS WITH PADDLE 1 (TURN CLOCKWISE FOR UP), FIRE MISSILES AND BOMBS WITH THE PADDLE BUTTON, AND CHOOSE MISSILES OR BOMBS BY HITTING THE '2' KEY.

<HITTING YOUR OPPONENT'S KEY WHEN HE'S NOT LOOKING IS AGAINST THE GENEVA CONFERENCE RULES OF WAR AND JUST NOT NICE>

<HIT 'RETURN' TO CONTINUE>

CONTROLS

The left side person and the right side person are given directions for using their controls.

CAUTION!

IF YOU CRASH YOUR FIGHTER INTO THE MOUNTAIN, THE MISSILE LAUNCHERS ON YOUR NEXT PLANES WILL BE JAMMED UNTIL ONE MAKES IT ALL THE WAY OVER THE MOUNTAIN WITHOUT GETTING DESTROYED.

SIMILARLY, IF YOU CRASH INTO A BLOCKHOUSE, YOUR BOMB BAY DOORS WILL BE JAMMED UNTIL ONE PASS OVER THE MOUNTAIN IS COMPLETED.

<THESE ARE KNOWN AS MURPHY'S RULES OF WAR>

<HIT 'RETURN' TO START>

CRASH

Do not crash your plane into the mountain or a blockhouse.

!! ATTENTION WING COMMANDERS !!

THE OBJECT OF THIS LIMITED WAR IS TO GET MORE POINTS THAN YOUR OPPONENT BEFORE THE GAME IS OVER. THE GAME IS OVER WHEN ONE ORANGE BLOCKHOUSE-HANGAR IS BOMBED FLAT OR YOU TRIP OVER YOUR COMPUTER POWER CORD, WHICHEVER OCCURS FIRST.

IF BATTLE FATIGUE SETS IN BEFORE EITHER OF THESE HAPPEN, HITTING CONTROL C WILL END THE WAR AND DECLARE THE WINNER.

<HIT 'RETURN' TO CONTINUE>

OBJECT OF THE GAME

The object of the game is to score the most points.

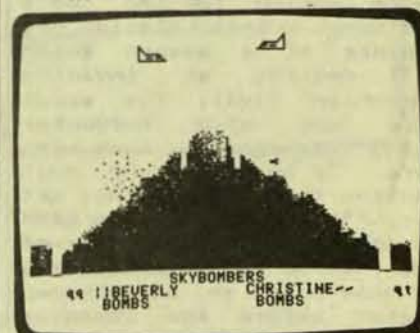
POINTS ARE SCORED AS FOLLOWS:

- 1 POINT - DESTROYING AN ENEMY AIRCRAFT WITH BOMBS OR MISSILES OR BY RAMMING IT
- 1 POINT - WHENEVER AN ENEMY AIRCRAFT CRASHES FOR ANY REASON (INCLUDING INCOMPETENCE)
- 2 POINTS - HITTING THE ENEMY BLOCKHOUSE WITH A BOMB
- 15 POINTS - DESTROYING AN ENEMY PILOT ATTEMPTING TO PARACHUTE TO SAFETY (SURE IT'S MEAN BUT THIS IS WAR)
- 20 POINTS - COMPLETELY FLATTENING THE ENEMY BLOCKHOUSE AND CAUSING THE GAME TO END

<HIT 'RETURN' TO CONTINUE>

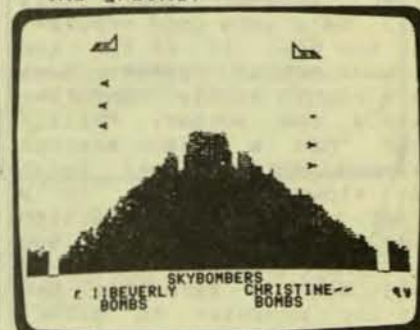
SCORING

These are the points you can score.



HEAD ON

The planes always fly in opposite directions. Either player can make his plane fly closer to the ground.



BOMBING

The planes are dropping their bombs too soon. They will only dig more craters in the sides of the mountain.



SKYBOMBERS II
Applesoft 48K disk
from Instant Software



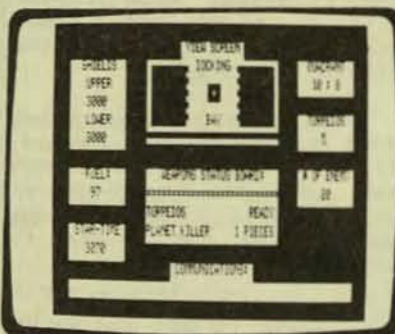
STAR SCOUT
Level II 16K tape
from Adventure International

This is a space ship game vaguely similar to the many Star Trek games. There are 20 levels of play. The screen shows the cockpit instruments and a view of the sector of space that a small scout ship is in. This ship travels through space looking for ten space stations. Each station has a piece of a weapon which will destroy an invading Zargonian fleet. The scout ship may also encounter enemy warships in some sectors. If he does, he must destroy them before they get him. The object of the game is to collect all pieces of the weapon and take them to a home base in an unknown sector before the invading fleet arrives.

The author spent one year working on this program. An expanded disk version is also available. I feel that after another year, this will be a very good program. But for now, it is far too slow. Action games must move right along. Unfortunately the author, Phillip Case, has a unique message display which looks great but slows the game to a crawl. Also the reaction time of the keys is both too slow and too fast. You must hold down a direction key for the computer to detect where you want to move. The program often ignores any key which is pressed and released. Yet, if you do hold a key down a fraction of a second too long, the

program thinks you hit the key two or three times.

This is a good try but fails to hit the mark.



COCKPIT

This is the view of the cockpit. It shows the view screen and the status of the shields, fuel, weapons, and number of enemy. Reports cross the bottom of the view screen.



ANIMATIONS 2
Apple II cassette
from Dandelion Micro
Products

This is a game. You must move past three creatures to win. The program uses a very limited amount of animation; hence the name. The program is entertaining and challenging. I was a little annoyed that the game dies at the end of each try. You can get bored typing "RUN" every three or four minutes.

GAME RULES

THE PLAYERS OBJECT IS TO PASS THREE CREATURES OF THE UNDERWORLD--

THE PLAYER REDUCES THE STRENGTH OF A CREATURE BY FIRING THE WEAPONS. THE POWER OF A MONSTER THEN BEGINS TO RE-TURN. THE PLAYER MAY MOVE BEYOND A BEAST WHILE ITS POWER IS LESS THAN 50%.

TO RECHARGE THE WEAPONS ENERGY GO BACKWARD TO STARTING POSITION TO WIN-PASS ALL THREE CREATURES

DURING PLAY

PRESS KEY > TO GO FORWARD
PRESS KEY < TO GO BACKWARD
PRESS SPACE BAR TO FIRE WEAPONS

USE ARROW KEYS TO MOVE FORWARD & BACKWARD

RULES

These are the rules of the game. You must fire your weapons at each creature to reduce its strength.



POWER OF SKULL=65%
WEAPONS FIRING ENERGY=400

SKULL

This is the Skull that you must pass. The strength of the Skull is now at 65%. You cannot pass him until his strength is below 50%.



POWER OF DEMON=11%
WEAPONS FIRING ENERGY=400

DEMON

The Demon's strength is 11%. You can pass him.

YOU FAILED TO PASS THE CREATURES...
SORRY YOU LOST.

THE FINAL RESULTS WERE

1 DEMON=65%
2 SKULL=65%
3 DEVIL=100%

ENERGY NEEDED TO PASS DEMON=99
ENERGY NEEDED TO PASS SKULL=92
ENERGY NEEDED TO PASS DEVIL=92

THE WEAPONS HAD 0 ENERGY LEFT
YOU WERE BETWEEN DEMON AND SKULL

USE ARROW KEYS TO MOVE FORWARD & BACKWARD

RESULTS

I failed to have enough energy to pass the Devil.



THE STEREO GENERATOR
Applesoft cassette
from Dandelion Micro
Products

This is an interesting aid for programmers. It uses a novel approach to produce stereo music from the Apple II computer. Stereo sound can be obtained by using both the internal speaker and an amplifier/speaker connected to the tape recorder output jack.

The program comes with a demonstration program and instructions for writing your own program. The routines in the program can produce a two-note chord. By adding overtones this can be expanded to a multi-note chord. The program has some limitations. Two totally independent melodies cannot be played at the same time at the same beat. Either one note is directly related to the other or the two separate notes are played alternately.

RANDOM VARIATIONS OF 'BARCAROLLE'

TEMPO=100 BEATS/MIN
VOICE FACTOR=1
TONE FACTORS T1= 02 AND T2= 02
OCTAVES=2 AND 2

BARCAROLLE

These are the random variations of Barcarolle.

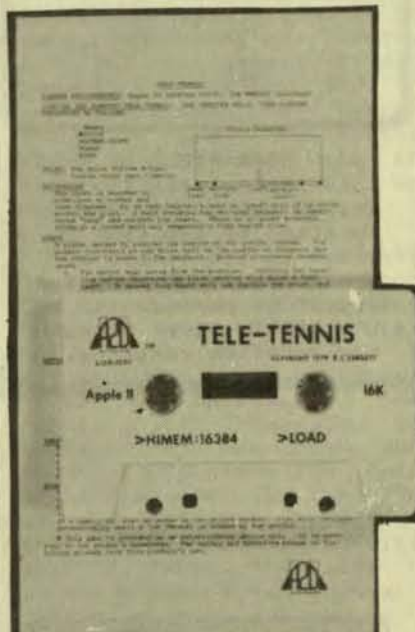
The program is not a general purpose music program. You cannot produce your own stereo music without writing a program. Hence, the program is better suited to computer programmers.

TO DEVELOP YOUR OWN PROGRAM:

1. DELETE LINES 100-200
 2. BEGIN HIGHER THAN LINE 50
 3. REFER TO INSTRUCTION SHEET
- FOR BEST RESULTS CREATE PROGRAM IN OCTAVES S1, S2, AND S3 WHEN USING OVER-TONES.

INSTRUCTIONS

Brief instructions for creating your own program are displayed on the screen. They tell you to refer to the instruction sheet.

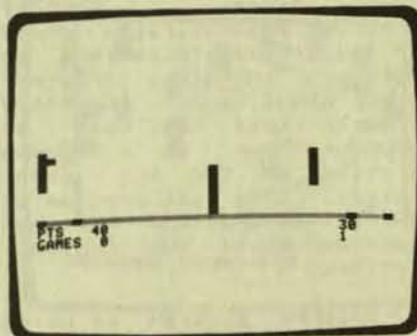


TELE-TENNIS
Apple II cassette
from A2 Devices

This is a game of tennis. It is designed for two players but can be played by one if you are fast. The motion of the tennis ball is realistic. The rules of tennis are followed. The program even has the winner jump over the net at the end of the game, accompanied by a musical tune.

Some skill is involved in playing this game. Because of the parabolic path the tennis ball takes, hitting the ball is more difficult than in games such as BREAK-OUT. However, the program does not give you any skills in tennis. The serve is random and requires no talent. The return cannot be controlled as in the real game of tennis. Except for positioning your paddle, the path of the returning tennis ball is almost at random.

This type of program produces a dilemma. The game itself is fun and challenging. However, it does not live up to the name given it by its author. If you are looking for a tennis game, this is not it. If you are looking for an action game, this will be OK.



THE COURT

This is the playing court. The net is the longer line in the center.

BOB WINS IN 1 SETS

6 --- 4

CARE FOR A REMATCH ? YES OR NO

THE WINNER

Bob won 6 to 4 in one set. Now he has a chance for a rematch.



PLANETARIUM
Level II 16K disk
from AZP Inc.

These programs are written to teach the names, brightness and location of up to 180 stars. One program shows the stars in the sky on the computer screen. The computer gives the location and size of the major constellations. Another program automatically shows 39 major constellations in the sky and gives information about each. The third program lets the user or student look at a chosen section of the sky separately. The last program is a test of what the user has learned about the constellations.

Another program is being written which will also show the constellations by season and month and will suit younger students.

I have long searched for a good program on the stars. This program is a nice start. The author of the program is not an expert on the TRS-80 so the program is a little awkward.

1. A SELF-TEACHING PROGRAM, DESCRIBED BELOW.
PROGRAM TITLE - 'PLANETARIUM'
2. AN AUTOMATIC PROGRAM. WITHOUT YOUR INTERVENTION IT PRESENTS APPROXIMATELY 40 CONSTELLATIONS, SHOWING THEIR RELATIONSHIP WITH OTHER CONSTELLATIONS. EACH CONSTELLATION IS NAMED AND IDENTIFIED BY SOUND.
PROGRAM TITLE - 'A U T O'
3. A TEST PROGRAM. WHEN YOU ARE READY TO BE SCORED YOU WILL BE PRESENTED WITH SEVERAL CONSTELLATIONS WHICH YOU MUST IDENTIFY BY NAME.
PROGRAM TITLE - 'TESTER'

CHOICES

These are the three parts of this program after the introduction. You may run the self-teaching program, the automatic program, or the test program.

IF YOU WANT TO SEE THE FIELD AROUND CASSIOPEIA

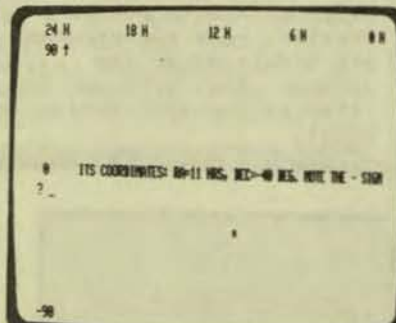
USE RA EXPANSION FACTOR 5
USE RA STARTING (HOURS) 0
USE DEC EXP. FACTOR 5
USE DEC STARTING (DEG.) 70

(AGAIN NOTE YOU MUST USE + OR - FOR DEC ANGLES)

I SUGGEST YOU WRITE DOWN THOSE (4) NUMBERS FOR CASSIOPEIA ?

INFORMATION

All this information will be needed if you want to see the star field around Cassiopeia. You must write it down so you can enter it separately in the other part of the program.



STAR FIELD

This is the star field around one star. The location of the star is given in the middle of the screen, and the star itself is represented by the little block beneath the location sentence.



STAR FINDER Level II tape from Benchmark Computing Services

This program is written for someone seriously interested in astronomy. The computer will figure the position in the sky of any star at any time and date if the user knows where it was at some other time. The user must know astronomical terms.

ENTER DATE (YYYY,MM,DD) EG: 1979,12,25)? 1981,1,1
ENTER UNIVERSAL TIME (HH,MM,SS)? 15,15,30
OBSERVER'S LONGITUDE (DD,MM,SS,S)? 42,28,0
DATE FOR WHICH SIDEREAL HOUR ANGLE OF STAR IS KNOWN (YYYY,MM,DD)? 1962,4,23
HOW DO YOU WISH TO ENTER THE SIDEREAL HOUR ANGLE?
1. IN DEGREES, MINUTES, AND SECONDS.
2. AS RIGHT ASCENSION.
CHOICE? 1

BEGINNING

This is the beginning of the program. The user first enters the date, Greenwich time, his longitude, and the date when the position of the star was known. He then chooses how to enter the star's position.

ENTER DATE (YYYY,MM,DD) EG: 1979,12,25)? 1981,1,1
ENTER UNIVERSAL TIME (HH,MM,SS)? 15,15,30
OBSERVER'S LONGITUDE (DD,MM,SS,S)? 42,28,0
DATE FOR WHICH SIDEREAL HOUR ANGLE OF STAR IS KNOWN (YYYY,MM,DD)? 1962,4,23
HOW DO YOU WISH TO ENTER THE SIDEREAL HOUR ANGLE?
1. IN DEGREES, MINUTES, AND SECONDS.
2. AS RIGHT ASCENSION.
CHOICE? 1
SIDEREAL H. A. OF STAR (DD,MM,SS,S)? 130,12,23,0
ANNUAL VARIATION, MINUTES PER YEAR? 4
DECLINATION (DD,MM,SS,S)? 123,12,9
ANNUAL VARIATION, SECONDS PER YEAR, OF DECLINATION? 2

DEGREES

Entry of sidereal hour angle in degrees, minutes and seconds. The user also enters the annual variation, declination, and variation of declination. The screen then scrolls up to have room for the answer.

? 1962,4,23

HOW DO YOU WISH TO ENTER THE SIDEREAL HOUR ANGLE?

1. IN DEGREES, MINUTES, AND SECONDS.

2. AS RIGHT ASCENSION.

CHOICE? 1

SIDEREAL H. A. OF STAR (000,00,00,57) 12,12,23,0

ANNUAL VARIATION, MINUTES PER YEAR? 4

DECLINATION (000,00,00,57) 12,12,3

ANNUAL VARIATION, SECONDS PER YEAR, OF DECLINATION? 2

	DEG	MIN	SEC
GREENWICH HOUR ANGLE	180	30	52,2941
LOCAL HOUR ANGLE	145	30	52,2957
DECLINATION	123	12	46,0663

ENTER 1 TO CONTINUE, 0 TO STOP

STAR POSITION

After entry of the degrees of the sidereal hour angle and the other information, the program gives him the position of the star at the desired time and date.

? 1962,4,24

HOW DO YOU WISH TO ENTER THE SIDEREAL HOUR ANGLE?

1. IN DEGREES, MINUTES, AND SECONDS.

2. AS RIGHT ASCENSION.

CHOICE? 2

RIGHT ASCENSION OF STAR (000,00,00,57) 12,22,3

ANNUAL VARIATION, SECONDS PER YEAR? 12

DECLINATION (000,00,00,57) 12,30,7

ANNUAL VARIATION, SECONDS PER YEAR, OF DECLINATION? 3

	DEG	MIN	SEC
GREENWICH HOUR ANGLE	143	36	37,9903
LOCAL HOUR ANGLE	185	39	37,9955
DECLINATION	123	33	3,3345

ENTER 1 TO CONTINUE, 0 TO STOP

RIGHT ASCENSION

Entry of sidereal hour angle as right ascension. The user also enters the annual variation, declination, and variation of declination. The program gives him the position of the star at the desired time and date.

by one player taking both sides. The American and German Generals have tanks, infantry, artillery, planes, and other mobile or stationary forces under their control.

The Generals decide from limited forces how many of each to use in the game, and position them on a playing diagram or board. The boards are then combined into one, showing both sides. Each General has four commands in his turn to direct the attack at the opposing army. The commands direct bombing, moving forces, firing artillery, surrendering, and so on.

There are complicated strategy tactics to be used, and numerous but logical rules to follow. For example, a stationary force such as a mine cannot be commanded to move. At the end of the game the computer gives an evaluation of the game, including the deployment and advancement of each General's forces and the points awarded for overall skill. The instruction pages which come with the program give the rules and suggestions for strategy.

Our reviewer comments: "I think this program could be a challenge. The program does not use the Enter key, but accepts whatever key is pressed. It will not accept false or impossible commands, but repeats the request for the same command. I did press the Enter key a time or two when it was waiting for input, and the board diagram scrolled up. I liked the idea of pressing the * to change a command already entered."

I found the game to be a little less than advertised. This program is not what I would consider a military strategy game. It is far from the complex games that you can find in STRATEGY AND TACTICS magazine. The battle field is not related to any actual battle of World War II. Though the rules are specific as to the capabilities of each unit, these rules do not relate to any actual military units. The movement and battle

phases are far simpler than in actual military strategy games.

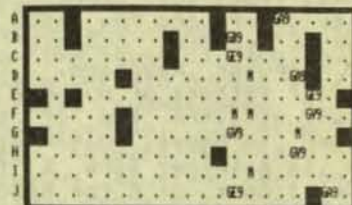
***** AMERICAN SETUP *****
TO START SETUP OVER AGAIN, ENTER AN 0.

NAME	DEFENSE	MOVE	ATTACK	PRICE
INFANTRY	20	4	10	9
TANKS	15	6	15	9
ARTILLERY	15	1	20	9
VEHICLES	5	8	5	5
ENGINEERS	5	4	5	5
PLANES	2	23	20	5
BUNKERS	30	0	20	1
BLOCKS	10	0	5	4
MINES	0	0	10	5

YOU HAVE 250 ATTACK UNITS OF MOBILE FORCES TO START
INFANTRY 0 TANKS 0 ARTILLERY 0 VEHICLES 0 ENGINEERS 0
HOW MANY INFANTRY. YOU HAVE 250 UNITS LEFT

FORCES

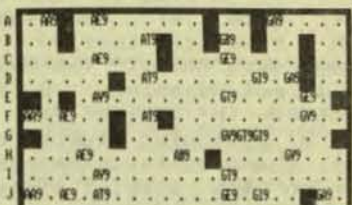
The player has all these forces. Now he may choose how many of which force he wants. Then he will locate them on the playing board.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
ENTER COORDINATES (LETTER,NUMBER) FOR TANKS: 1 3 1-13

POSITIONS

This is half the playing board with some of the German forces in position. The player has placed the mines, vehicles, bunker, engineers, and artillery. Now he must position his tanks.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
COMMAND # 1 ***** AMERICAN TURN *****
1-MOVE 2-UNLOAD 3-ARTILLERY 4-CREATE BLOCK 5-CHANGE

PLAYING BOARD

This board shows the position of both forces after the American and the German forces have been placed separately. It is the American's first turn to decide what to do with his force.



BATTELGROUND

Level II 16K tape
from Instant Software Inc.

BATTELGROUND is a strategy simulation of tactical World War II combat on the Western front. The game can be played by two players or



TYPING TEACHER
Level II 16K tape
from Instant Software

This is a program in seven parts to teach the essentials of touch typing. Each part is loaded separately from the tape. The parts cover one row each of keys or special symbols on the computer keyboard. The row of letters or numbers is shown at the top of the screen in boxes. Under each box is a letter like I for Index finger or M for Middle finger to show which finger should press that key. During practice, one or more letters appear on the screen for the typist to type. The last part includes a general practice typing session and a "bottomless keyboard" to practice typing without wasting paper.

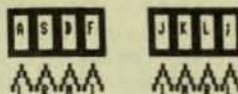
This Level II program is in so many parts that it may be a direct copy with minor wording changes from the Level I 4K program on the other side of the tape. Each practice session is very, very short. The BREAK key is not disabled. During practice in typing "=" or "-", a beginning typist can stop the program. The session on the special symbols ignores the quote (") symbol.

No score is kept of wrong answers. No reward is given at the end of the session for right answers. There is no way for the typist to know if she is improving.

The program is slow to accept the key typed, yet "ENTER" must be pressed after the answer. The

beginning of each session asks, "Do you want to bypass this session?", calling for a "NO" answer if you do want to go through that session. Most questions like this should be written to ask for a "YES" answer.

In this issue, I am reviewing other typing programs. Of them all, this is the most unsatisfactory. It just does not do enough to be worthwhile.



PLACE YOUR FINGERS LIGHTLY ON THE HOME KEYS.
TYPE A LINE OF THE LETTERS 'A S D F' (SPACE BETWEEN LETTERS).
PRESS THE 'ENTER' KEY AT THE END OF THE LINE.
A S D F A S D F
STOP!! WHERE WERE YOU LOOKING AS YOU WERE TYPING?
DO NOT LOOK AT THE KEYS! LOOK AT THE SCREEN.

TO CONTINUE, TYPE THE LETTER 'P'

INSTRUCTIONS

The program shows you which fingers to place on the proper keys.

- 1 TYPING TEACHER INTRODUCTION
- 2 TYPING TEACHER SESSION 1
- 3 TYPING TEACHER SESSION 2
- 4 TYPING TEACHER SESSION 3
- 5 TYPING TEACHER SESSION 4
- 6 TYPING TEACHER SESSION 5
- 7 TYPING TEACHER SESSION 6

WHICH PROGRAM DO YOU WANT? (1-7)

SESSIONS

These are the 7 lessons in this program. They start with the "home row" keys and go on through the other rows of keys.

PART 2 - DRILL WITH COMMONLY USED WORDS.
TYPE EACH GROUP 3 TIMES AND PRESS THE 'ENTER' KEY.
THIS HIS BUT MY
THIS HIS BUT MY
HE ON HE BY
HE ON HE BY
HE WITH YOUR AT
BOY IS THIS A DRUG. THE COMPUTER DOES NOT KNOW WHAT
WILL NOT AS HAVE
I AM TYPING. WHAT A TURNUP!
FOR IS IT WAS
AVOID THIS PROGRAM

DRILL

This drill is on commonly used words. The drill asks that each group of words be typed 3 times. It does not check to see if you did this.



ADDRESS BOOK
Apple II disk & DC Hay's
from Muse Software

This program is a telephone address book. The main benefit of the program is to use it with the DC Hay's telephone connection. With this extra piece of hardware, the program will actually dial telephone calls for you.

The program is well-programmed and very easy to use. The manual is complete and well-written. This is a good program.

I do not use this program to maintain my addresses. Instead, my mailing list of vendors and my mailing list of subscribers are stored on SUPER-TEXT II by Muse Software. My personal phone list is written all over the first two pages of my telephone book. SUPER-TEXT II holds more information than ADDRESS BOOK. My rough telephone book is easier to use than ADDRESS BOOK. I do not own a DC Hayes Micro Modem. Therefore, I personally do not find any address book program useful.

These photos will show you the various options of the program. You can see how flexible the program is.

- 1: ADD AN ADDRESS
 - 2: VIEW / CHANGE ADDRESSES
 - 3: TELEPHONE
 - 4: PRINT LABELS
 - 5: CHANGE PRINTER FORMAT
 - 6: ACCESS STATE/CATEGORY CODES
 - 7: START NEW DATA DISK
 - 8: SORT ADDRESSES
 - 9: CHANGE DATA DISK
 - 10: COPY DATA DISK
- ENTER OPTION #

MENU

The main menu controls the operation of the program.

RECORD # 6

1: NAME : ANN & JYM BATEY
 2: COMPANY : JYMANH ENTERPRISES
 3: STREET : 2091 ROCKNE DRIVE
 4: CITY : CONCORD
 5: STATE : CA
 6: ZIP : 94518
 7: PHONE : 1 (415) 671-9299
 CATEGORY : (02) : ASSISTANT EDITOR

MORE (Y/N)
 OR C TO CHANGE #

NEW RECORD

The format for a new record. Each line is optional. Once you are finished, the address is saved automatically.

#	CODE	CATEGORY
1	01	MANUFACTURER
2	02	ASSISTANT EDITOR
3	03	EDITOR
4	04	UNREQUITED
5	05	VENDOR
6	06	MANUFACTURER

DO YOU WANT TO
 SELECT 1 - 4
 1
 ENTER 2 DIGIT CODE
 CATEGORY DESCRIPTION : DISTRIBUTOR

CATEGORY

Category Codes can be added or changed. Each code is limited to two characters.

RECORD # 0

1: NAME < SELECT ALL >
 2: COMPANY < SELECT ALL >
 3: STREET < SELECT ALL >
 4: CITY < SELECT ALL >
 5: STATE < SELECT ALL >
 6: ZIP < SELECT ALL >
 7: PHONE < SELECT ALL >

SELECT MODE :
 (L OR C) C#

L: SELECT BY LINE
 C: SELECT BY INDEX CODES



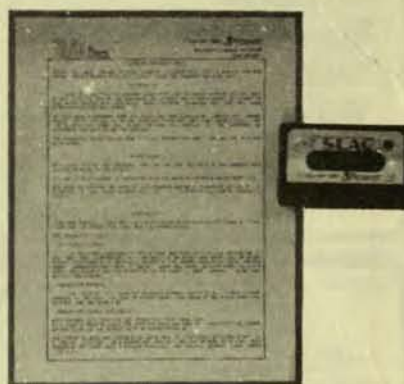
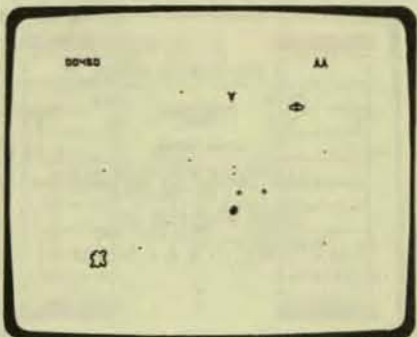
ASTEROID

Apple II 48K cassette
 from Adventure International

One of the more popular arcade games is ASTEROID. Your space ship can shoot forward to destroy astroids and enemy space ships. Shooting astroids is dangerous as that produces multiple fragments. Each fragment is just as dangerous as the original asteroid. The enemy space ships are also deadly.

The cassette tape comes with three versions of the program. The first is easy and good for beginners and intermediate players. The second version is for experts. The third version is almost impossible.

This version of the ASTEROID game is very enjoyable. Our reviewers rated it very highly. This is despite the fact that the program version we have occasionally bombs. It seems to lock up at one rare point now that I have DOS 3.3. When this happens, the program must be reloaded.



SLAG

Level II 16K tape
 from Adventure International

SLAG is a war game for two to twelve players. Each player has control of one nation and takes his turns in the game. Each nation has a certain number of factories, submarines, planes, and missiles. It also has a spy network in the other nations to give reports. A player sends his planes and submarines to destroy factories in the other nations. The attacked player uses missiles for defense. The object of the game is to be the only nation left with factories.

I must have missed something in this program. My personal opinion is that it is far from entertaining. I think that kids may want to play it. But I do not think anyone else will.

RUSSIA: 1 YOU HAVE 50 INDUSTRY, 20 A.B.M.'S, 15 I.C.B.M.'S,
 6 BOMBERS, 4 SUBMARINES WITH 2 MISSILES, AND 0 ASW PLANES
 NEW INDUSTRY COSTS 0 A, AMP'S COST 1 A, MISSILES COST 2 A,
 BOMBERS COST 4 A, SUBMARINES COST 6 A, THEIR MISSILES COST 1 A,
 ASW PLANES COST 5 A, A SPY NETWORK COSTS 5 TO BUILD OR NONE.
 THE SURVIVING NATIONS ARE:
 U.S.A. RUSSIA

PRODUCTION LEFT:
 50

HOW MANY INDUSTRY ARE YOU BUILDING?

REPORT

This is a report on the industries and resources left. The player may build more industries.

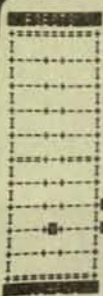
ROBOTS' VERSION

COPYRIGHT 1988, BY DAN BUNTEN
DURING THIS GAME!

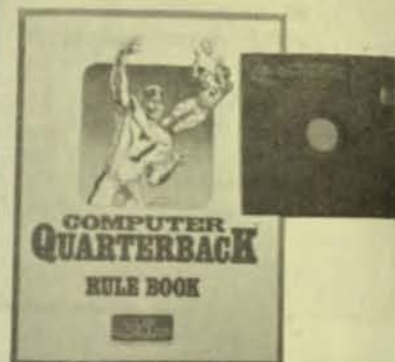
HOW MANY MINUTES/QUARTER?
(MUST BE AT LEAST 5) 5

WOULD YOU LIKE THE SPECIAL BEGINNER'S
OPTION? YES

INSTEAD OF THE NORMAL 30 SECONDS,
YOU WILL HAVE 60 SECONDS ON THE PLAY
CLOCK IN WHICH TO PICK A PLAY.
WHEN YOU ARE ON DEFENSE, THE ROBOTS
WILL NOT START UNTIL YOU PRESS YOUR
BUTTON TO ENTER A DEFENSE OR UNTIL ONE
SECOND IS LEFT ON THE PLAY CLOCK.
PRESS ANY KEY WHEN READY TO START.



O KICK OFF
R 20 YD RETURN
MUDHENS 4:28 ROBOTS 0
QTR 1
1ST DOWN 10 TO GO
3 TIME OUTS 3



COMPUTER QUARTERBACK
Apple II 48K
from Strategic Simulations,
Inc.

This is a football game for one or two players. It can be played as a Semi-Pro, Professional, or Computer opponent. The time for each quarter can be from 5 to 15 minutes of real time. The program uses the game paddles so that two players may secretly enter their plays. The action of the ball on the playing field is shown on the screen, and the players' alignment of men is shown.

The player has 30 seconds in which to choose his play. A special beginner's option allows 60 seconds. In the Semi-Pro game, there are 18 offensive plays and 14 defensive plays. In the Pro game, there are 36 offenses and 24 defenses. Two sets of cards are included in the package. The cards show a diagram of the offensive and defense plays for fast reference by the players. The reference manual has a table showing the average gain of a certain offense against a certain defense.

Special options for beginners keep the game simple until you get a feel for the game.

The Pro game allows the players to assign their own numbers to the plays and decide on the quality of each player on their team. If a printer is connected, a printed list of the play numbers and team qualities can be made.

ROBOTS' VERSION

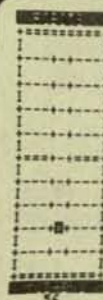
COPYRIGHT 1988, BY DAN BUNTEN

LEFT TEAM

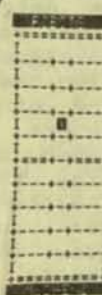
TEAM NAME MUDHENS

THE '2' KEY WILL BE
YOUR TIME-OUT KEY

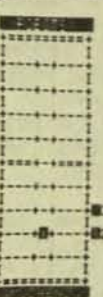
THE MUDHENS WON THE COIN TOSS!
DO YOU WANT TO KICK OR RECEIVE?
(1-KICK, 2-RECEIVE) 2



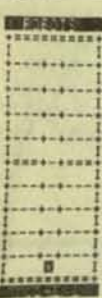
O KICK OFF
R 20 YD RETURN
MUDHENS 4:28 ROBOTS 0
QTR 1
1ST DOWN 10 TO GO
18 PLAY



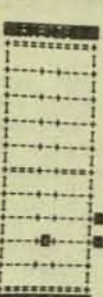
O KICK
MUDHENS 5:00 ROBOTS 0
QTR 1
3 TIME OUTS 3
KICK OFF



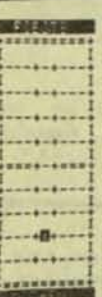
O KICK OFF
R 20 YD RETURN
MUDHENS 4:28 ROBOTS 0
QTR 1
1ST DOWN 10 TO GO
6 PLAY



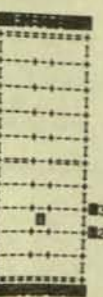
O KICK
MUDHENS 5:00 ROBOTS 0
QTR 1
STANDARD KICK
IT'S A 61 YARD KICK.
THE MUDHENS HAVE IT
ON THE 4 YD LINE.



O KICK OFF
R 20 YD RETURN
MUDHENS 4:28 ROBOTS 0
QTR 1
1ST DOWN 10 TO GO
IT'S A QUICK PITCH
TO THE HALFBACK
ON THE LEFT
THE LINE IS
OVER SHIFTED



O KICK
MUDHENS 5:00 ROBOTS 0
QTR 1
STANDARD KICK
IT'S A 61 YARD KICK.
THE MUDHENS HAVE IT
ON THE 4 YD LINE.
IT'S A 20 YD RUNBACK.



O KICK OFF
R 20 YD RETURN
MUDHENS 4:28 ROBOTS 0
QTR 1
1ST DOWN 10 TO GO
IT'S A QUICK PITCH
TO THE HALFBACK
ON THE LEFT
THE LINE IS
OVER SHIFTED
IT'S A 3 YD GAIN.

After the player has some experience, it would not be as difficult to remember the number to use for each play. The game has a delay after the results of the previous play are given and before the player can enter the number of the play. The game goes pretty fast otherwise.

It is a challenging game, but would be more fun with two players instead of played against the computer. At the end of each half, a summary is shown of the yardage passing, running, and total, and fumbles, penalties, and interceptions for each team.

Our official football reviewer thought that this was a pretty good game.

0: QUICK PITCH
0: OVER MAN
R: 3 YD GAIN

MUDHENS 3:49 ROBOTS 8
QTR 1

2ND DOWN 7 TO GO

IT'S A FLEA FLICKER
TO THE SPLIT END

THE COVERAGE IS
MAN-FOR-MAN

34

0: DIVE
0: SHORT YARDAGE
R: 2 YD GAIN

MUDHENS 2:12 ROBOTS 8
QTR 1

3RD DOWN 1 TO GO

THE DEFENSE IS
IN SHORT YARDAGE

IT'S A HALFBACK BLAST
UP THE MIDDLE

THERE'S A 1 YD LOSS
ON THE PLAY

32

0: QUICK PITCH
0: OVER MAN
R: 3 YD GAIN

MUDHENS 3:49 ROBOTS 8
QTR 1

2ND DOWN 7 TO GO

IT'S A FLEA FLICKER
TO THE SPLIT END

THE COVERAGE IS
MAN-FOR-MAN

COMPLETE THE RECEIVER IS RUNNING
WITH IT

34

0: DIVE
0: SHORT YARDAGE
R: 2 YD GAIN

MUDHENS 2:13 ROBOTS 8
QTR 1

3RD DOWN 1 TO GO

2 PLAY

X X X X X
X X X X X
0 0 0 0 0 0 0

32

0: R TIME OUT

MUDHENS 2:35 ROBOTS 8
QTR 1

2ND DOWN 3 TO GO

1 PLAY

X X X X X X
X X X X X X
0 0 0 0 0 0 0

32

0: DIVE
0: SHORT YARDAGE
R: 2 YD GAIN

MUDHENS 2:12 ROBOTS 8
QTR 1

3RD DOWN 1 TO GO

THE DEFENSE IS
IN SHORT YARDAGE

IT'S A HALFBACK BLAST
UP THE MIDDLE



0: QUICK PITCH
0: OVER MAN
R: 3 YD GAIN

MUDHENS 3:51 ROBOTS 8
QTR 1

2ND DOWN 7 TO GO

16 PLAY

X X X X X X
X X X X X X
0 0 0 0 0 0 0

23

0: R TIME OUT

MUDHENS 2:35 ROBOTS 8
QTR 1

2ND DOWN 3 TO GO

1 PLAY

X X X X X X
X X X X X X
0 0 0 0 0 0 0

26

0: MIDDLE BLAST
0: SHORT YARDAGE
R: 1 YD LOSS

MUDHENS 1:42 ROBOTS 8
QTR 1

4TH DOWN 2 TO GO

THE DEFENSE IS
IN SHORT YARDAGE

IT'S A HALFBACK DIVE
UP THE MIDDLE

0: QUICK PITCH
0: OVER MAN
R: 3 YD GAIN

MUDHENS 3:51 ROBOTS 8
QTR 1

2ND DOWN 7 TO GO

16 PLAY

X X X X X X
X X X X X X
0 0 0 0 0 0 0

22

0: R TIME OUT

MUDHENS 2:35 ROBOTS 8
QTR 1

2ND DOWN 3 TO GO

THE DEFENSE IS
IN SHORT YARDAGE

IT'S A HALFBACK DIVE
UP THE MIDDLE

IT'S A 2 YD GAIN

0: MIDDLE BLAST
0: SHORT YARDAGE
R: 1 YD LOSS

MUDHENS 1:42 ROBOTS 8
QTR 1

4TH DOWN 2 TO GO

THE DEFENSE IS
IN SHORT YARDAGE

IT'S A HALFBACK DIVE
UP THE MIDDLE

IT'S A 1 YD GAIN

WAIT!! THERE'S A FLAG
AGAINST THE ROBOTS



B17 TAPE OPERATING SYSTEM
Level II 16K, 32K, or 48K
tape
from ABS Suppliers

This program allows the computer to load or save programs or information on tape much faster than before. If B17 is in the computer while another program is being written and then saved onto tape, it becomes a part of the new program. The new program will then load faster the next time.

The latest version of B17 came with a sheet of changes to the manual. This sheet makes the manual for B17 hard to follow unless you write these changes in the manual. However, it is nice to have the company inform you of their updates to the program. Then you do not have to wonder why something in the program is slightly different. However, it will be better when they revise the manual itself.

B17 itself loads in about 18 seconds the first time. With B17 loaded, I then saved it onto another tape. It loads the second time in about 5 seconds.

The fast loading time does not work the first time you load a program from tape. Only after you save the program using B17, will it load faster.

The latest revision of B17 comes with a second tape containing TCP, a Tape Certification Program. This program will certify your tapes to work at the higher

speed. However, TCP has a bug in it. It goes into an endless loop asking if you want instructions. A line in the program must be changed before it will work. This program writes data to the tape and then reads it back, both at the higher speed.

Once you have certified your tapes at the higher speed, you must then erase them. If you don't have a good way to erase them, then you can't use them again even if they work at the higher speed.

Programs such as this one are useful to anyone who owns a Model I tape system. However, it is best suited to people who write their own programs. Also B17 has some limitations. Many of the great programs that you can buy use ALL of the computer's memory, so they cannot be used with B17.



ASTRONOMY I
Level II tape
from Benchmark Computing
Services

This program is written for someone interested in astronomy who knows astronomical terms. The computer can give four kinds of information for any date and time. It can display the formula for the position of the sun in the sky. It can give the distance of the constellation or star Aries from the sky's meridian on its equator.

The program can give the equation of time, which is roughly the difference between where the sun actually is and where a sundial says it should be. It can also give the times of sunrise and sunset for any place on the earth.

SELECT OPERATION:

0. STOP.
1. GREENWICH HOUR ANGLE OF ARIES.
2. POSITION OF SUN.
3. EQUATION OF TIME.
4. SUNRISE AND SUNSET TIMES.

SELECTION? _

CHOICES

These are the calculations that can be done. In each of them, the user must enter the Greenwich time.

DATE (YYYY,MM,DD) EG: 1976,12,25? 1981,01,1
UNIVERSAL TIME (HH,MM,SS)? 15,15,0

SIDEREAL HOUR ANGLE: 77 DEGREES, 50.3 MINUTES.

RIGHT ASCENSION (HH MM SS.S) 18 40 27.0

GREENWICH HOUR ANGLE: 47 DEGREES, 49.5 MINUTES.

DECLINATION: -23 DEGREES, 1.1 MINUTES.

HIT ENTER TO CONTINUE? _

POSITION OF SUN

This chart gives the position of the sun. It is for a certain date and time, and is given in relation to the Greenwich hour angle.

DATE (YYYY,MM,DD) EG: 1976,12,25? 1981,01,1
OBSERVER'S LAT AND LONG (DECIMAL DEGREES; LONG + EAST)? 42,30
ALTITUDE OF SUN (DECIMAL DEGREES) FROM TRUE HORIZON? 30
HOURS FROM OBSERVER'S STANDARD TIME TO GMT? 3

SUNRISE (LOCAL STANDARD TIME, HH MM SS): 6 30 26
SUNSET (LOCAL STANDARD TIME, HH MM SS): 6 32 4

HIT ENTER TO CONTINUE? _

SUNRISE

These are the sunrise and sunset times for this date at this latitude and longitude. The observer must enter his latitude and longitude and the altitude of the sun from the true horizon. He must also enter the hours from his time to Greenwich time.



OLE' JIM'S GRAPHIC MATH REVIEW
AND TRIANGLE SOLUTIONS
Level II tape
from James J. Creevey

This program was initially reviewed in the Summer issue of this magazine. At that time, some errors existed in the program. These bugs have been corrected and the program appears to work error free.

PROGRAM INDEX

- (1) - LOGARITHMS
- (2) - SQUARE ROOTS, CUBE ROOTS, NTH ROOT
- (3) - NATURAL EXPONENTIALS
- (4) - RAISING POWERS OF NUMBERS (EXPONENTS)
- (5) - DESCRIPTION OF SINE, COSINE, TANGENT
- (6) - TABLES OF SINE, COSINE, TANGENT ANGLES
- (7) - DEGREE CONVERSION - DECIMAL & DEG.-MIN-SEC.

TYPE SELECTION

REVIEW

Graphic Math Review. This is the index to what is in this part of the program.

FINDING A ROOT OF A GIVEN NUMBER REQUIRES DETERMINING A BASE B , WHOSE EXPONENT IS EQUAL IN VALUE TO THE ROOT BEING SOUGHT, AND THAT WHICH WILL PRODUCE A NUMERICAL EQUIVALENT TO THE ORIGINAL GIVEN NUMBER.

WHEN SEEKING THE SQUARE ROOT, WE ARE SEARCHING FOR A BASE B WHICH WHEN RAISED TO THE 2ND POWER, WILL EQUAL THE VALUE OF THE ORIGINAL GIVEN NUMBER.

OBTAINING THE CUBE ROOT OF A GIVEN NUMBER REQUIRES FINDING A BASE B WHICH HAS BEEN RAISED TO THE THIRD POWER AND PRODUCES A NUMERICAL EQUIVALENT TO THE ORIGINAL GIVEN NUMBER.

TYPE: (1) TO CONTINUE (2) RETURNS INDEX

LOGARITHMS

The description of logarithms. If you have already seen the rest of the review, you can return to the index.

DEG MIN SEC	DEGREE	SINE	COSINE	TAN
300 0' 0"	300	-0.866025	0.500000	-1.732051
301 0' 0"	301	-0.857166	0.515040	-1.664376
302 0' 0"	302	-0.848047	0.529921	-1.600206
303 0' 0"	303	-0.838669	0.544642	-1.539935
304 0' 0"	304	-0.829036	0.559195	-1.482552
305 0' 0"	305	-0.819151	0.573579	-1.427919
306 0' 0"	306	-0.809016	0.587797	-1.375925
307 0' 0"	307	-0.798634	0.601851	-1.325573
308 0' 0"	308	-0.788009	0.615764	-1.276794
309 0' 0"	309	-0.777144	0.629533	-1.229590
310 0' 0"	310	-0.766043	0.643169	-1.183974
311 0' 0"	311	-0.754709	0.656681	-1.139952

TYPE: (1) TO CONTINUE (2) RETURNS INDEX

TABLES

The table of sine, cosine, and tangent. We only wanted the conversion for 300 degrees. Now we can return to the index.

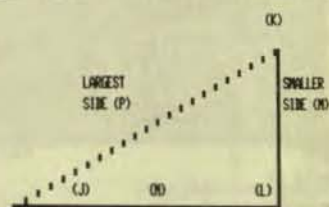
PROGRAM INDEX

- (1) - RIGHT TRIANGLE SOLUTIONS
- (2) - OBLIQUE TRIANGLE SOLUTIONS
- (3) - DESCRIPTION OF SINE, COSINE, TANGENT
- (4) - TABLES OF SINE, COSINE, TANGENT ANGLES
- (5) - DEGREE CONVERSION - DECIMAL & DEG.-MIN-SEC.

TYPE SELECTION

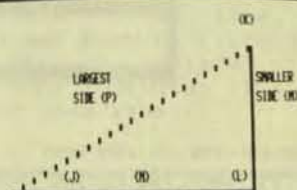
INDEX

Triangle solution index. This is what is in this part of the program. The right and oblique triangles are the new parts.



ALPHABETICALLY TYPE LETTERS OF (2) KNOWN SIDES, OR AN ANGLE AND SIDE EX: NP, NN, NP, NN, NP, NN THEN PRESS (ENTER)?

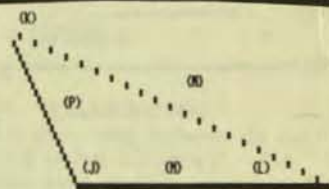
RIGHT ANGLE



INSTRUCTIONS: PROVIDE SIDES IN FEET, ANGLES IN DEGREES. BOTH ANGLE (1) & (2) LESS THAN 90 DEGREES. SIDE (P) LONGEST

TYPE: (1) TO CONTINUE (2) RETURNS INDEX

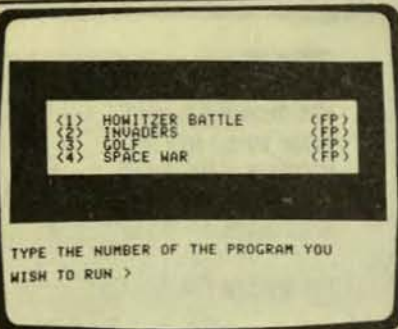
This will tell you the answer to a right angle triangle problem.



(1)= 145 0' 0" (2)= 22 0' 25" (3)= 12 59' 35"
(O)= 76.5341 (H)= 58 (P)= 38
TYPE (1) TO CONTINUE (2) INSTRUCTIONS (3) RETURNS INDEX

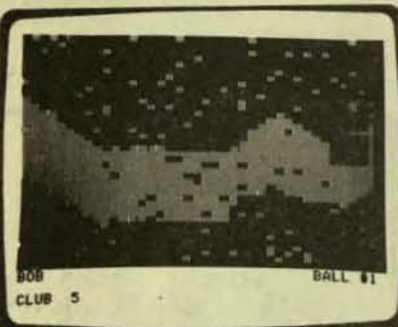
SOLUTION

Oblique triangle solution. The picture is redrawn to show the oblique triangle.



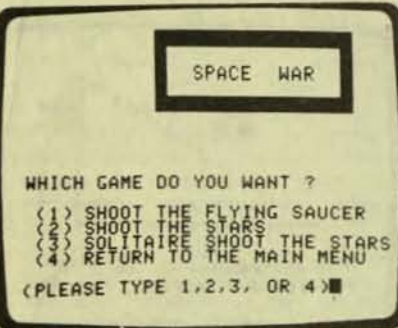
CHOICES

These are the four programs on this disk.



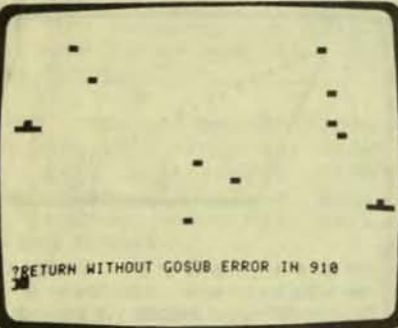
GOLF

This is the playing course. Bob is going to use Club 5 on this shot. Next he will choose the angle of his shot.



SPACE WAR

There are three games of Space War which you can play.



ONE SPACE WAR

This is one of the games in SPACE WAR. There is a bug in it.



PADDLE FUN

Applesoft 32K disk
from Instant Software

Here is series of arcade style games. The first program is HOWITZER BATTLE. The program simulates a cannon shooting at a target. You aim the gun and fire. Each game is different. The landscape changes completely. The wind also changes.

This program is well written, being easy to use and fun. I am particularly impressed by the very realistic cannon shooting. The author must have used all the laws of physics to make its flight look so realistic. I enjoyed this game.

INVADERS is written by the same author as HOWITZER BATTLE. This gives me a good opportunity to discuss machine language programs versus programs written in BASIC.

INVADERS is designed after the popular SPACE INVADERS game. The original SPACE INVADERS is a machine language program written for Japanese arcade machines. (See the review of Creative Computing's SUPER INVADERS for more information. It is fantastic!) However, INVADERS is written in Applesoft BASIC. I know from seeing HOWITZER BATTLE that the author is talented. Yet INVADERS is slow and the graphics are poor. Why is this?

The problem is that an arcade game should not be written in BASIC. In almost every case, BASIC is just too slow. BASIC is also a poor language for graphics. So even though C. T. Shafer is an excellent programmer, this program is the pits.

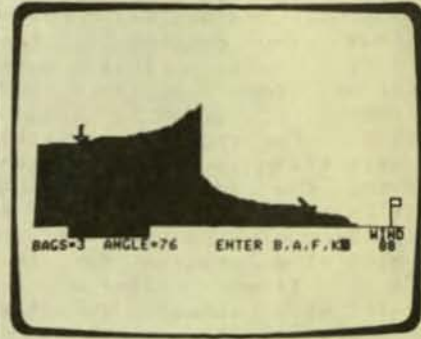
SPACE WARS does not do much. It is just a simple shoot-the-other-guys game. It occasionally bombs. I do not like this program.

GOLF is a simulated golf game. You can choose the iron and the shot angle. When you get on the green, then you put.

Actually, GOLF is not a true simulation. Though everything looks like a golf game, it is in no way similar to playing the game of golf. The real purpose of this game is to be just an arcade game. The use of the word "golf" and picture of the golf course is only to add atmosphere to an arcade game.

As an arcade game, GOLF is quite good. It is fun and challenging.

As a series, PADDLE FUN is only OK. Two good ones out of four is not very good odds.



HOWITZER BATTLE

This is the landscape this time. The angle of the gun's elevation is 76, there are 3 bags of gunpowder to load, and the wind speed is 88. One howitzer is on top of the cliff, and the other is down below.



APPLE FUN

Apple II 32K disk
from Instant Software

This is a series of game programs. The first program in the series is MIMIC. This is a Simon-Says type of game. The program is excellently written. It is easy to use, well thought out, and fun. It might be worth the price of the entire disk.

None of the programs on the disk seem to be written by the same author. Just as MIMIC stands out as a good program, the other programs stand out for their shortcomings.

AIR FLIGHT SIMULATION is a fancy program that has a few awkward moments. The program tries to give the feeling of a real time flight. Yet every time you want to change the throttle, elevators, or ailerons, you must stop the action on the screen until you have input the new value. The joy sticks are not used. The keyboard is used as joystick. Only a number input is used. The controls are very sensitive and a little unrealistic.

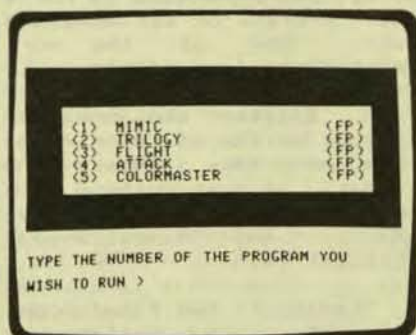
If you do not already know, there are some outstanding flight simulation programs. This program has some new features which makes it interesting. However, many of the other flight simulator programs are done in real-time while this program is not. Many of the other flight simulator programs are extremely easy-to-use. This program is not. So why buy this one?

STAR SHIP ATTACK is an action game. You try to fight, drive off, or capture an enemy ship. At the end of the game you can have the option of playing another game. This option has a bug in it. It is sometimes confused by keystrokes you made during the game.

TRILOGY is a logic game. It requires a color TV set to play this game. The choice of colors was not well planned. Many games use colors which are visible on a black and white set. This game fails to do this. The program has no way for you to start the game over if you get stuck or bored.

COLORMASTER is a master-mind type of game. It requires color. I found no fault with this program other than it is a little awkward to use.

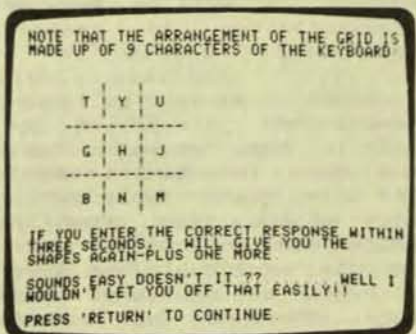
As a whole, this is not one of Instant Software's better selection of programs. I recommend you skip this one. This is too bad since the MIMIC program is excellent.



TYPE THE NUMBER OF THE PROGRAM YOU
WISH TO RUN >

CHOICES

These are the games in
this package.



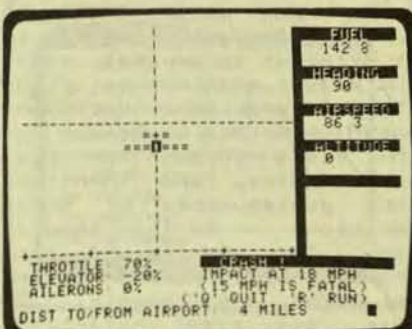
MIMIC

This is the grid and the
letters on the keyboard
used in the game.



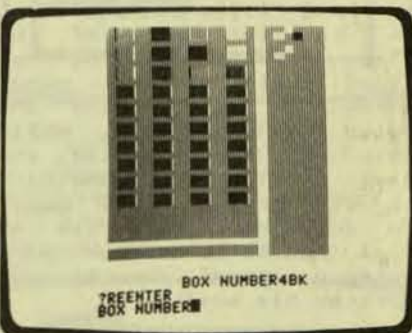
PLAYING MIMIC

These are some of the
figures you must remember.



AIR FLIGHT

This is the Air Flight
Simulation shown on the
screen. The plane is
moving downward below the
artificial horizon line.
It is not banking right or
left from the vertical
turn bank indicator (the
up and down line).



COLORMASTER

These are the boxes to be
filled with colors. One
player has to guess the
other player's colors and
put them in the right
boxes.

SPACE

Apple II 48K disk
by Steven W. Pederson
and Sherwin A. Steffin
from Edu-Ware, Inc.

SPACE is a simulation of life in the interstellar environment of the future. The player's character must deal with real-life situations which might be encountered in such an environment. The complete system is comprised of six scenarios, and while SPACE is not an "adventure" game, it is similar in several ways. The player must assess situations and make decisions based upon his judgment of the risks versus the possible gains, and then face the consequences of those decisions -- be they good or bad. The results of many actions will have an effect on later developments. In this way, a character's entire life will impact his ability to interact and deal with the world around him.

In continuing with realism, most information provided by the program is imprecise and sometimes incomplete. The player is left to discover many things for himself and sometimes take calculated risks based upon what he does know. As in real life, winning SPACE is in the eyes of the player. There are no defined goals to the game, except to stay alive and build the character. While this may seem realistic, any game should have something to aim for, a final goal. In addition, there is no real way to gauge your character's accomplishments except by his wealth.

Each character is created by the computer and is assigned various attributes and values (strength, intelligence, health, skills, personality, financial position, and age). After growing old, a character may even be rejuvenated or cloned in order to continue.

The first scenario requires the character to enter military service. Here, he gains and improves

upon various skills to be used later in life. By taking various training courses, ranging from "brawling" to "computer skills," he may improve his attributes. There are, however, many courses here which apparently have little or no effect on later scenarios. There do not seem to be any applications for many of these obtained skills.

One of the more dangerous scenarios is First Blood, which tests the character's ability to survive a one-on-one combat, to the death. Two characters may combat, or the player may face a computer-generated character, called Adversary.

Another scenario is Defend, in which the character is assigned as the administrator on a star-system which is suddenly attacked by hostile invaders. There are several decisions to be made here including evacuation, surrender, battle, or personal escape. In High Finance, the character may play the stock market. Here, the potential is for a huge profit, or for monetary ruin. One of the more interesting scenarios is Explore, in which the character locates and explores strange worlds to seek valuable minerals. While on a planet, he must contend with animal life, climate, population, and miscellaneous hostilities.

Trader is the final scenario in which wealth and power may be built. After purchasing a ship, the character may purchase and haul cargo to various star systems as well as provide transportation to passengers.

SPACE provides a fairly complicated simulation of life in the future. There are many intangibles which are only discoverable during play of the game, some of which are potentially dangerous, profitable, or both. However, as mentioned before, there is no defined goal to the game. This may or may not be, depending on your point of view, a disadvantage. The price, \$29.95, seems a bit high for a game

of this sort. SPACE is, on the other hand, a unique game series and will provide hours of fun, intrigue, and adventure in the world of the future.

Tom Dolezal

>> INITIAL PRE-ENLISTMENT FILE

MILITARY SERVICE MASTER RECORD JACKET
MILITARY SERVICE: NAVY
CURRENT RANK: TERM 1 INDUCTEES UNRANKED
CURRENT AGE: 18 SERVICE TERM: #1
THE FOLLOWING SECTIONS ARE AVAILABLE FOR INSPECTION BY THE SUBJECT PURSUANT TO THE EARTH FREEDOM OF INFORMATION ACT, TITLE 18, SUBSEC. B, 2 FIRST EARTH CONGRESS YEAR 2727 GALACTIC
(1) BASIC ATTRIBUTE STATUS
(2) RESULTS OF PHYSICAL EXAMINATION
(3) RESULTS OF PSYCHOLOGICAL TESTING
(4) PROMOTION, DEMOTION AND DISCHARGE RECORDS
(5) FINANCIAL ACCRUALS, RETIREMENT AND INSURANCE RECORDS
(6) FINISHED WITH INSPECTION

MENU

In the beginning each character must receive training.

SKILLS ACCRUED BY CATEGORY -3-
SUBJECT NAME: MELVIN FORD
CURRENT RANK: TERM 1 INDUCTEES UNRANKED
AGE: 19 SERVICE TERM: #1
PERSONAL DEV: SERVICE SKILLS
STRENGTH: 0 SHIP'S BOAT: 0
DEXTERITY: 0 VACUUM SUIT: 0
ENDURANCE: 12 FORWARD OBSERVER: 0
SOCIAL STANDING: 0 BLADE COMBAT: 0
INTELLIGENCE: 15 GUN COMBAT: 0
EDUCATION: 3 GUNNERY: 0
TECH ED: PROF. EDUCATION
VACUUM SUIT: 0 MEDICAL: 0
MECHANICAL: 0 NAVIGATION: 0
ELECTRONIC: 0 ENGINEER: 0
ENGINEER: 0 PILOT: 0
CUNNERY: 0 ADMINISTRATIVE: 0
JACK O' TRADES: 0

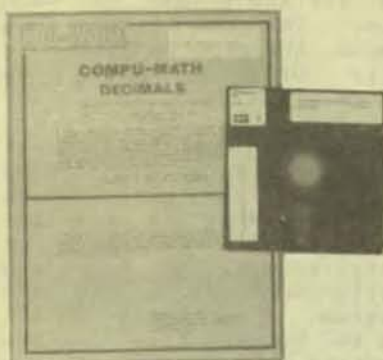
TRAINING

These are all the skills that our hero can gain. Currently he has very little.

CREW EXPENSES: 1650
>> NET CASH ON HAND: 739194
INTEREST: 0
>> TOTAL LOANS PAYABLE: 0
>>> NET WORTH: 739194
(1) PAYOFF SOME OUTSTANDING LOANS
(2) GO ONTO ANOTHER VOYAGE
(3) EXIT GAME (PAY LOANS, KEEP SHIP)

TRADER

This is the final scenario. In this adventure the character we have created trades throughout the star systems to gain fame and fortune.



COMPU-MATH DECIMALS
Apple II 48K disk
from Edu-Ware

COMPU-MATH DECIMALS is a new instructional package in decimals from Edu-Ware Services, Inc. It consists of a diagnostic pre-test and seven learning units. The first learning unit begins by introducing the concept of the decimal as being another form of the fraction. It then gives practice in converting back and forth between them. Successive units cover addition, subtraction, multiplication, and division of decimals, rounding, and percentage.

The pre-test will aid the teacher in diagnosing needs and prescribing the unit with which students should begin. However, it is not powerful enough to be used entirely on its own. Specific performance objectives are given at the beginning of each unit to direct the skill development activities. The package includes the program disk and documentation. The documentation has a section written especially to introduce the young or inexperienced user to the operation of the Apple II or Apple II Plus computer.

This educational program is written to teach about decimals. Sections of the program cover adding, subtracting, multiplying and dividing decimals. Other sections cover changing decimals to fractions, rounding

off decimals, and percentage. There is also a pre-test covering a few questions in each of these areas to find out if the student already knows a little about decimals.

Each section begins with examples of the type of problems and explains how to solve the problem. The student is then given problems to solve. The student types in his answer. If he makes a typing mistake, he cannot move back one digit to change it. The pre-test section is the only one that asks if the answer is correctly entered before accepting the answer. The other sections accept only as many digits as the right answer should have. The back-space key is counted as a digit. The comma is counted as a digit. Then it says if the answer was right or wrong.

At the end of each section, the student is given the option of ending the program or going on to another lesson. If he chooses to go on, the program returns to the list of sections.

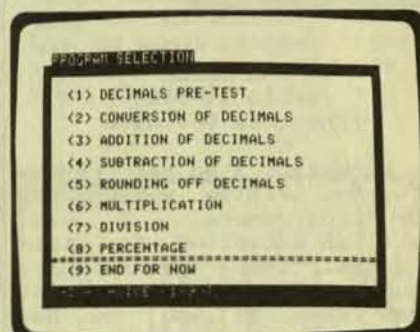
In the last issue of my magazine, I reviewed another of Edu-Ware Services' programs. It covers fractions and is a very good program.

The program on decimals is very different from the fraction program. The most confusing difference is the procedure for typing in answers. I have seen some people who have no problem with this unusual format. Yet other people crash the input routine with every question.

The program itself is highly polished. Yet, it seems to have an occasional bug in it. I experienced one confusing moment. The question was in converting decimals to fractions. A statement at the top of the screen said "do not reduce fractions". The decimal was given as .61. When I entered 61 over 100, the screen said "no - answer is" and showed 610 over 1000. Also, each time a fraction could have been reduced (8/10 to 4/5, for example),

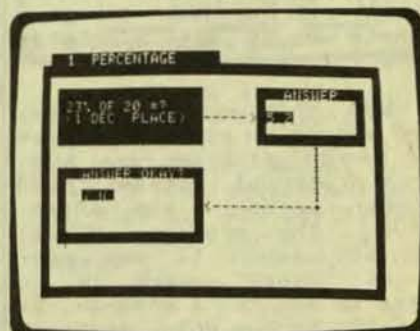
I entered the 8 over the 10. The screen said the answer was correct. It then went on to say that a better answer would be 4 over 5.

As a whole, the package is well-written and high quality. It is not as good as their FRACTIONS program. Because of the care with which this program is written, I believe most school libraries will want a copy. The individual teachers will have to decide if it fits their teaching style.



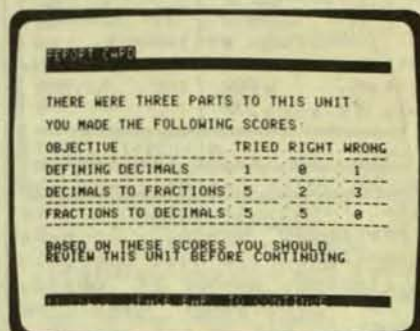
TESTS

This is the menu. The first thing you usually take is the pre-test.



PERCENTAGE

This is a percentage question from the pre-test. Notice that there is a chance to correct your answer.



REPORT CARD

Each section has its own report card.



THE VOICE
Apple II disk
from Muse Software

Normally, I do not review programs written exclusively for programmers. I will make an exception for this program. There is something about it that you should know even if you do not write programs.

THE VOICE adds prerecorded speech to anyone's computer program. Any author can use it. It is a simple way to make a program more interactive.

Now that you know this, you should be more selective of which programs you buy. Most preschool programs need spoken words to be effective. The program, VOICE, can add speech to any program. Since speech is so easy to add to a program, be careful to buy only programs that have speech.

Any program which needs to convey a lot of information quickly can use both the computer's screen and THE VOICE. If the Apple computer is used in industry to control equipment, all warning messages should be spoken. With THE VOICE, this is easy.

The two major limitations of THE VOICE might limit its use. First, it can only use prerecorded words. To make a sentence, it must use only a limited number of words. If a programmer uses THE VOICE in his or her program, the programmer must select a finite number of words to use.

Second, the storage of words does take up a large amount of space. For most programs, a practical limit would be 20 words. However, this is usually sufficient for most applications.

So the next time you are shopping for a program, realize that speech is practical on the Apple.

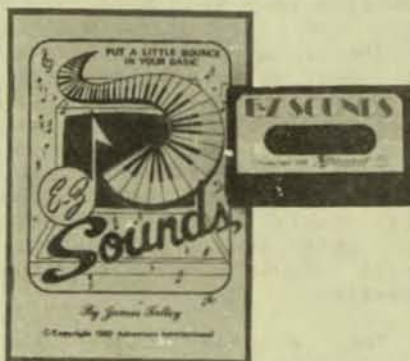
THE MUSE VOICE

1. RECORD A WORD
2. PLAY BACK WORD IN MEMORY
3. PLAY BACK A PHRASE FROM DISK
4. SAVE WORD ON THE DISK
5. SAVE ALL WORDS IN MEMORY TO DISK
6. LOAD ALL WORDS FROM THE DISK
7. SORT THE VOCABULARY ON THE DISK
- +/- CHANGE PLAY BACK RATE
- <PRESS CTRL-Z TO CLEAR MEMORY>

ENTER YOUR SELECTION



I CAN TALK
BUT ONLY UNDER YOUR CONTROL



E-Z SOUNDS
Level II 16K tape
from Adventure International

E-Z SOUNDS is a booklet explaining how to write sound into a BASIC program. It comes with a computer tape of two examples of music written this way. The booklet explains how sound is made by the computer. It then gives the lines of

programming to include in a user's program. It tells the codes to use for the sound of each music note and for the length of each note. The user can then change the program lines to write his own music or sounds.

This is not the first music program for the TRS-80 or Apple. It will not be the last. What is important is that you realize that music, sounds, or tones are easily incorporated into any program. I am trying to get you to be selective in the programs you buy. Therefore, check a program to see if it offers sound. Sound is very effective and useful. Rarely is there a program which cannot benefit from sound. For this reason, buy only programs that offer sound and shy away from the rest.

- 1 DIXIE
- 2 WHEN JOHNNY COMES MARCHING HOME

WHICH SELECTION?

CHOICES

You can listen to "Dixie" or "Johnnie Comes Marching Home"

NOW PLAYING.....

- 2 WHEN JOHNNY COMES MARCHING HOME
- BREAK IN 3600
- READY
- >

LISTENING

This is what you see while listening to one of the songs.

HOW MANY PLAYERS (1 - 10)?

You may ask for instructions at the start. You may also set the number of players from 1 to 10.

ONES	0	3 OF A KIND	0
TWO'S	0	4 OF A KIND	0
THREE'S	0	FULL HOUSE	0
FOUR'S	0	SNL STRAIGHT	0
FIVE'S	0	L6. STRAIGHT	0
SIX'S	0	FLUSH	0
SEVEN'S	0	CHANCE	0
TOTAL	0	TOTAL	0

TO DETERMINE WHAT TO KEEP LET'S EXPLAIN EACH SCORE. THE LEFT SIDE IS SIMPLY 1'S, 2'S, 3'S, ETC. THE OBJECT OF THE LEFT SIDE IS TO SCORE AT LEAST 63 POINTS WHICH WILL GET YOU A BONUS OF 35 POINTS

ENTER TO CONTINUE?

If your 5 dice show at least a pair, you may score points on the left side of the screen. You win 35 bonus points if the score on the left side is over 63 points.

ONES	0	3 OF A KIND	0
TWO'S	0	4 OF A KIND	0
THREE'S	0	FULL HOUSE	0
FOUR'S	0	SNL STRAIGHT	0
FIVE'S	0	LG. STRAIGHT	0
SIX'S	0	FLUSH	0
BONUS	0	CHANCE	0
TOTAL	0	TOTAL	0

SCOREBOARD FOR Y A T - C . NOTICE (13) POSSIBLE SCORES
WATCH ARROW POINT TO POSSIBLE SCORES.

TO REVIEW AGAIN HIT (Q) TO CONTINUE HIT ANY KEY

There are 13 ways you can score. You can also win bonus points.

DICE ARE BEING ROLLED...

1	8				3-K	8
2	0				4-K	8
3	8				F.JL	8
4	0				SLS.	8
5	8				L.G.S.	8
6	0				F	8
					DL	8

1

2

3

4

5

JACK, WHICH ONE DO YOU WANT TO THROW AWAY?

The dice were rolled for the first time. They show all the numbers except 3. Now you must decide which two dice to roll again, or "throw away" for a final score.

Level II 16K tape
from Adventure International

MUSICAL YAT-C is a computer game similar to the board game for one or more players. The computer shows the rules on the screen. Then the faces of five dice are shown. The player must discard some of the dice two times. He then decides how to score the points shown on the dice. The scoring is complicated. One set of scores is by the total points shown on at least two dice with the same number. The other set of scores is by the rules of poker. The player tries to get a certain score for bonus points.

ONES	0	3 OF A KIND	0
TWO'S	0	4 OF A KIND	0
THREE'S	0	FULL HOUSE	0
FOUR'S	0	SM. STRAIGHT	0
FIVE'S	0	LG. STRAIGHT	0
SIX'S	0	FLUSH	0
BONUS	0	CHANCE	0
TOTAL	0	TOTAL	0

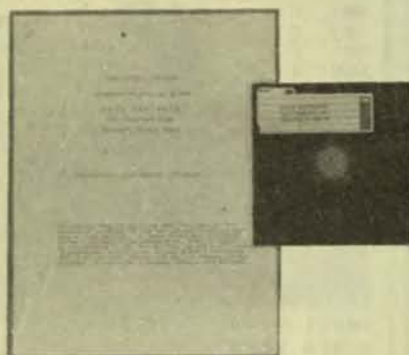
EACH PLAYER GETS 13 TURNS. A TURN CONSIST OF A ROLL OF (5) DICE
AFTER A PLAYER SEES HIS DICE HE MUST DECIDE WHICH ONES TO KEEP
AND WHICH ONES TO THROW AWAY. YOU CAN THROW AWAY TWO TIMES.
ENTER TO CONTINUE?

Each player has 13 turns.
You may score in each of
the categories only once.

YAT - C (JEE)			
ONES	0	3 OF A KIND	0
TWO'S	4	4 OF A KIND	0
THREE'S	0	FULL HOUSE	0
FOUR'S	0	SM. STRAIGHT	0
FIVE'S	0	L.G. STRAIGHT	0
SIX'S	12	FLUSH	0
SEVENS	0	CHANCE	0
TOTAL	16	TOTAL	0

TOTAL SCORE — 16

The final roll of dice included two 2's and two 6's. I had a total score of 16 for that turn.



ARITHMETIC OF FUNCTIONS

Apple II disk
from Math Software

Math Software has created a unique visual aid for teachers of pre-calculus mathematics classes. It is a demonstration program for teachers to use in their classrooms. It shows one of the key principles of higher mathematics.

Much of calculus involves the study of some nasty equations. Currently, teachers show the principles of "limits of functions" by doing an elaborate demonstration on the blackboard. This computer program frees the teacher from doing this demonstration.

ARITHMETIC OF FUNCTIONS is designed to let the computer plot some very nasty equations. While the teacher explains what is happening, the students can see the function being plotted on the screen. The program is also a useful tool for students to use on their own to explore and develop mathematical concepts.

The program has three parts. First, you select one equation. Then you select a second equation. Finally you decide if you want to add, subtract, multiply, or divide the two equations. Look at the photos for some examples.

The most impressive example is to chose two well-behaved equations. Then ask the program to combine them in a such a way that at

least at one point the equation does not exist. Zero divided by zero is such a point.

The program allows the teacher to use equations other than those prerecorded in the program. However, to do this, the teacher needs some familiarity with computer programming.

My main objection to this program is that it is too automatic. The student sees these magic lines appear on the screen and must assume that the computer knows what it is doing. The old method used by teachers consisted of first calculating the values and then plotting them. The calculation part of the demonstration reinforced this learning process. ARITHMETIC OF FUNCTIONS requires you to take too much on faith.

The program performs as advertised and is highly polished. Each math teacher will have to judge for himself or herself to see if this program fits his teaching style.

SELECT G(X) FROM THE FOLLOWING

1. $G(X) = \text{INT}(X)$
2. $G(X) = \text{EXP}(X)$
3. $G(X) = 2\cos(X)$
4. $G(X) = \cos(3\pi X)$
5. $G(X) = \sin(3\pi X)$
6. $G(X) = \tan(2\pi X)$
7. $G(X) = X$
8. $G(X) = 2$

TYPE NUMBER SELECTED & PRESS 'RETURN' 28

FIRST CHOICE

You can choose any of these equations for your first equation.

SELECT F(X) FROM THE FOLLOWING

0. USER PROVIDES F(X) AND G(X)
1. $F(X) = \text{ABS}(X)$
2. $F(X) = 2\cos(X)$
3. $F(X) = 2\sin(X)$
4. $F(X) = 2\sin(3\pi X)$
5. $F(X) = \tan(X)$
6. $F(X) = \log(X)$
7. $F(X) = X$
8. $F(X) = 1$

TYPE NUMBER SELECTION & PRESS 'RETURN' 7

NEXT CHOICE

You can choose any of these equations for your second equation.

WHICH OPERATION SHALL BE USED?

1. ADDITION (+)
2. SUBTRACTION (-)
3. MULTIPLICATION (*)
4. DIVISION (/)

TYPE NUMBER SELECTED & PRESS 'RETURN' 31

THE COMPUTER WILL GRAPH

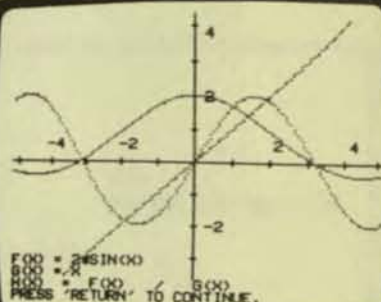
$$H(X) = F(X) / G(X)$$

WHERE

$$F(X) = 2\sin(X)$$

$$G(X) = X$$

PRESS 'RETURN' TO CONTINUE. 32



GRAPH

This is the graph of the first equation, the second equation, and the combination of the two equations. Notice that even though the combined equation does not exist at one point, the equation is well-behaved elsewhere.



NEWDOS+
Level II 32K disk
from Apparatus, Inc.

This is a program to make the disk drives work. The Radio Shack computer comes with its own similar program. However, for some people it is very useful to have this program as well. Anyone who will be doing a lot of programming will need it. Also, any school which teaches more than just beginning programming will need a second disk operating system to show how different disk operating systems can be.

This program includes several extra commands or programming aids. The user can have a REFERENCE list of variables and line numbers in a program displayed or printed. He can RENUMBER program lines but cannot move blocks of lines from one area of the program to another.

The BASIC command "CMD" has been expanded to allow the use of more disk operating commands from BASIC. For example, the user can request a directory of the files on a disk before saving a new file or killing an old one.

DIRCHECK checks the directory of files on the disk and displays or prints a complete list of the names and size of the files. The DIRCHECK on NEWDOS+ is printed in alphabetic order. This is an advantage over a

similar program on NEWDOS/80 which is not alphabetic. Although NEWDOS/80 will print the directory as well as display it, it is still not in alphabetic order. But DIRCHECK on NEWDOS/80 lets the user say how many tracks are on the target disk while NEWDOS+ does not.

SUPERZAP can change information already stored on the disk - but I suggest you also buy the book "TRS-80 Disk & Other Mysteries" by H. C. Pennington, which thoroughly explains SUPERZAP and how to use it. In fact, SUPERZAP is one of those programs that makes disk users wonder how in the world they ever got along without it.

If you have wondered how the information is stored on the disk, SUPERZAP shows you. It can show you the directory entry and also the program itself. It can show you what happens when a program or file is renamed. It can be used to fix errors and change the information on the disk. But learn how to use it on a backup copy of a disk. Don't learn on an original disk. SUPERZAP is pretty powerful.

BASIC1 and LV1DSKSL allow many programs written in Level I language and stored on either disk or cassette to be run on a Level II machine.

Programming aids for the machine language user include EDTASM, an editor/assembler which allows disk as well as cassette use. DISASSEM uses as source either a standard TRS-80 load module on disk or a previously loaded object module in main memory. LMOFFSET temporarily changes the storage location of a machine language routine so that the disk operating system will operate properly.

A drawback to NEWDOS+ for a beginner is that the documentation is technical and written for the more experienced computer operator. A beginner must read it, try to absorb it, and read it again and again. Each time, he learns a little more.

Also, a specific warning is needed in the original documentation about the changes needed to major programs of others (PENCIL, Microsoft's EDIT, or Radio Shack's SCRIPSIT) to make NEWDOS+ work properly with them or with an upper/lower case modification. However, Apparatus quickly sent a list of these changes after they were requested.

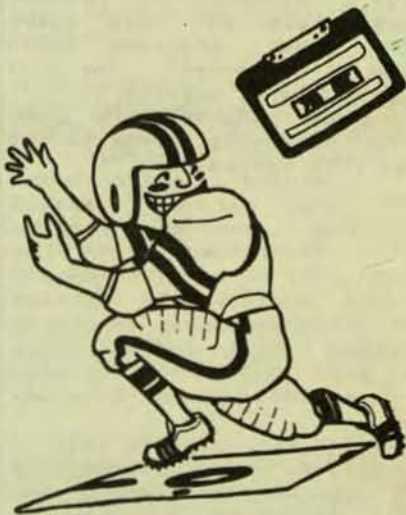
I recommend NEWDOS+ as a disk operating system that works.

NEWDOS 12/19/81

BASIC1.COM	IP=6	EOF = 19/119	2 EXTS	20 SECTORS
BOOT.SYS	SIP=6	EOF = 5/4	1 EXTS	5 SECTORS
COPY.COM	IP=6	EOF = 4/253	1 EXTS	5 SECTORS
DIR.SYS	SIP=5	EOF = 10/4	1 EXTS	10 SECTORS
DIRCHECK.COM		EOF = 12/226	3 EXTS	15 SECTORS
DISASSEM.COM		EOF = 19/134	1 EXTS	20 SECTORS
DISKCOPY.BAS		EOF = 9/202	1 EXTS	10 SECTORS
EDIT.COM		EOF = 31/154	1 EXTS	35 SECTORS
FORMAT.COM	IP=6	EOF = 14/4	1 EXTS	15 SECTORS
LEVEL1.COM		EOF = 13/4	3 EXTS	20 SECTORS
LMOFFSET.COM		EOF = 6/224	1 EXTS	10 SECTORS
LV1DSKSL.COM		EOF = 2/141	1 EXTS	5 SECTORS
SCRIPSIT.LC		EOF = 42/4	5 EXTS	45 SECTORS

DIRCHECK

The Dircheck program prints all this information about the disk directory.



VITAFACTS SERIES
Apple II 16K tape
Level II 16K tape
from Personal Software

Each of the personal education packages in this series includes an audio tape, a computer program to test the listener's memory, and a booklet. The program BIRTH CONTROL is reviewed separately in this issue. The other programs follow the same format. The audio tapes are excellent. The computer programs are poor. The following programs are in this series.



YOUR BLOOD PRESSURE

This program about BLOOD PRESSURE comes with a booklet giving the meanings of the medical terms used in the program and showing a simplified diagram of the body's blood system and heart.

The audio tape takes the form of a discussion between several people and their doctor about the causes, symptoms, and risks of high blood pressure. A narrator explains what blood pressure is and gives the medical terms used and simple explanations of them. A question and answer session talks about what can be done to lower high blood pressure. Since high blood pressure often has no particular symptoms, the tape stresses that the listener should see his or her family doctor for a checkup.

This program may be used more by doctors to give information to a patient who has high blood pressure. It would also be valuable to individuals. It could help people who know someone else with high blood pressure, or who might have it themselves but don't want to go to a doctor or follow the doctor's orders. The material would help them understand some of the reasons for getting high blood pressure, and the reasons for the treatment the doctor recommends.



HEART ATTACKS

This program about HEART ATTACKS comes with a booklet similar to that in YOUR BLOOD PRESSURE. The audio tape takes the form of a discussion between several people and their doctor about the causes, symptoms, and treatment of heart attacks. A narrator explains what happens to the heart during an attack and gives the medical terms used and simple explanations of them. A question and answer session discusses many of the questions a heart attack patient and his family have. Examples are given of how to tell if it is a heart attack, and what to do and why. The audio tape also talks about preventing future attacks, and what a patient and his family can expect afterwards. It emphasizes that the listener should immediately get help from a doctor or hospital if there is any possibility that someone has had a heart attack.

Like YOUR BLOOD PRESSURE, this program may be used more by doctors to provide information to a heart attack patient and his family. However, much of this information would also help individuals. It would benefit people who know someone else who has had a heart attack, or who just want to know what to do if they themselves should have one. It would help anyone who might be present when someone else had a heart attack. And sometimes, just knowing in advance what might happen and all the help that is available could benefit a person during an attack.

GROWING UP

This program about GROWING UP is written for both parents and their children. The accompanying booklet gives the meanings of the medical terms used in the program and shows diagrams of the human reproductive system. The computer program also includes a section on the food needs of adolescents. This information is described in the booklet instead of on the audio tape.

The audio tape listener hears familiar-sounding arguments between parents and their teenage children. The arguments are about being out late, or the young person's wanting to stay in his or her room for a while, or similar things. The parents talk between themselves about their child's behavior. Then the teenager talks with friends about the parents' behavior. A narrator gives ideas about the cause of the behavior and explains that most of it is normal. He also gives ideas about how parents and young people can cope with the changes of growing up.

The narrator also talks about some of the other information needed by a young person as he or she reaches puberty. He uses medical terms to explain the physical changes as well as the emotional. He gives an impartial explanation of some of the basics of contraception, sex and love, the risk of pregnancy, and sexual desire.

The information is given in a factual manner. It doesn't blame either the parents or the teenagers for their behavior. Sometimes parents don't feel comfortable talking to their son or daughter about sex, but they want the child to know what to expect. If parents bought the program, they might want to go through it first. It might open up frank and more comfortable talks with the teenager after he or she has also gone through the program. The very impartiality of the speaker might help relieve any embarrassment.



TALKING ABOUT SEX

This personal education program was written to correct misunderstandings and give information about sex. It was developed with the help of the College of Family Physicians of Canada. The information on the audio tape is given under the guidance of two well-known experts in the area of sexual problems, William and Carolyn Chernenkoff. An accompanying booklet gives the meanings of the medical and sexual terms used in the program and shows diagrams of the human reproductive system.

A narrator presents factual information about the body's sexual responses. The listener then hears a conversation between a couple, seeking help for marital problems, and Dr. and Mrs. Chernenkoff. The Chernenkoffs go on to a discussion of various sexual problems, misconceptions and myths. They also suggest possible help for some of the more common problems.

This program may provide information in an impersonal and blame-free manner to someone who needs it but can't easily talk about his or her feelings. The material may also help couples who have problems or who just want to know more. The impartiality of the discussion may help relieve any embarrassment.

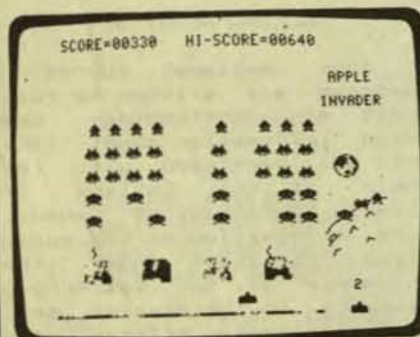
DRINKING AND DRUGS

This personal education program about DRINKING AND DRUGS is written for both parents and teenagers. It comes with a booklet giving definitions of the medical terms used in the program. The audio tape is a discussion between two parents and their 16-year old daughter about her drinking. It also includes questions by the mother to a worker at a drug center about the effects of alcohol or other soft or hard drugs. A narrator gives even more information.

The information is given in a factual manner. It doesn't scream about how bad taking drugs or drinking is. It presents the facts and risks in an impersonal way that I think a teenager or anyone else could accept. Also, it suggests getting more information at a local drug center, or seeing a family doctor for help. This could be a way to get information across to someone who wouldn't otherwise try to find out more.



SUPER INVADERS
Apple II disk
from Creative Computing
Software



Review by Tom Dolezal

Available from Creative Computing Software for a 32K Apple II or Apple II-Plus. Also available on disk for Apples with 48K.

Apple Invaders is one version, probably the best, of the popular arcade game of Space Invaders. There are several versions of this game available for the Apple at this time, each with different features. At the outset, I would point out that Apple Invaders most closely resembles the Atari arcade game.

The object is to destroy the moon creatures, which attack in five waves of eleven, with your three laser cannons. As the moon creatures advance toward you, moving back and forth across the screen, your cannons are bombarded by laser fire. Further complicating the situation is an alien saucer which flies across the top of the screen

from time to time. Hitting this saucer scores from zero to 200 points. However, it is sometimes dangerous to go after it since your attention is drawn away from the moon creatures, which can often result in a destroyed cannon. By hitting moon creatures further back in the ranks, higher scores are more quickly built up. This is important, since 1200 points rewards you with an extra laser cannon. However, it is important to get the closer ones too since the closer they get, the more difficult it is to hit them. If a creature reaches the level of your laser cannon, the game ends.

When a cannon is destroyed, a moon critter cheering section jumps up and down and applauds their fellow beings. However, if you manage to succeed in wiping out an entire screen full of the little guys, they groan and perspire with apprehension. After their little tantrum, another 55 creatures appear, this time one row closer, and the battle is on again. This sequence goes on and on until all of your laser cannons are destroyed or the creatures overrun your position.

This game is written in machine language which provides very smooth graphics animation and which does, in fact, result in a faster and more challenging game than the dedicated arcade units. One bug which does exist is that when a moon creature and a laser cannon are hit at the very same time by fire, the game locks up. The only way out of this situation is to reset the computer. While this occurs only rarely, any bug which crashes an entire program is a major one.

On the more positive side: in addition to the graphics, Invaders keeps track of high scores and gives the game a very competitive edge. This is an excellent adaptation of a popular arcade game and is a classic that everyone should have in their software library.

Tom Dolezal



ELECTRONIC BIRD
Apple II cassette
from Dandelion Micro
Products

This is a demonstration program. It randomly produces bird-like sounds. While the program is running, it shows the words "Electronic Bird" on the screen.

The bird sounds are nice. However, I did not feel that this program lived up to my expectations. The program does very little. It is without any educational value. I do not recommend it.



WHAT YOU SEE
This is what you see on the screen while listening to the bird sounds.



INTERLUDE

From Syntonic Software

Reviewed by
Tom Dolezal

Available from Syntonic Software for 16K Apple II and TRS-80 Level II, on cassette or disk.

Most personal computer programs can be classified as either scientific, business, educational, a simulation or a game. While INTERLUDE does not precisely fall into any of these categories, it comes closest to being a game, albeit a game for adults. The manual says that "sex is adult's play", and in this way INTERLUDE may be thought of as a game. If you have a warped sense of humor, it is also fun -- another criteria for games.

INTERLUDE starts out by asking how many are using the program. The answer to this will be either one or two, depending on whether you and your partner both wish to be interviewed by the computer. The computer then proceeds to ask various questions of each player. The purpose here is to establish the moods and desires of the players. After completing the interview(s), the computer will select an INTERLUDE based upon the players' answers. After looking up the selected INTERLUDE in the manual, you may elect to accept it or ask for an alternative. If you refuse all the suggested INTERLUDES, the computer tells you that you are "too hard to please" and the program ends. If you accept the chosen INTERLUDE, the computer will usually simply wish you a good time, ending

the program. Occasionally, however, it will ask to be left on during the INTERLUDE and will from time to time make remarks or suggestions.

The INTERLUDES include a wide variety of situations ranging from "A Bed of Roses" to "Love in the Afternoon" to "Strip Poker." There are even several INTERLUDES buried in the program and are only presented when the right combination of responses are input. So, there is probably something here to satisfy everyone. The program is well-written and user-oriented. But, the usefulness is something you will have to decide on for yourself. Remember that INTERLUDE is in no way meant to be a substitute for professional help or a cure for sexual dysfunction; rather, it is purely for fun (and by the way, it makes a great ice-breaker or conversation piece).

NOTE: Be warned that the INTERLUDE program and manual contain explicit sexual language (done in good taste) and is not intended for children's use.

Tom Dolezal

I HAVE SELECTED INTERLUDE #58

<RETURN> OR X TO EXIT,
D FOR DIFFERENT INTERLUDE

Editor's Note:

We just couldn't pass up reviewing this one. Probably no other program has caused as much of a stir as INTERLUDE.

Be sure to read our exclusive interview with Louise Cody, the INTERLUDE Girl. Parts of that review were censored to allow our magazine to be placed on school library shelves.

The INTERLUDE Apple disk version cannot be run using the BASICS disk under DOS 3.3. The Apple program is protected and must be used with a 13-sector disk.

I found the manual that comes with INTERLUDE to be comparable with similar type sex manuals on the market. I believe that most of the criticism of INTERLUDE (see Reader Comment section) is based on the buyer's expectation that the entire manual would have been put on the computer.

INTERLUDE is an interesting conversation piece and well suited to liven up a party.

I believe that INTERLUDE has done more to change the image of the home computer than any other program. Until INTERLUDE, most people think of accounting and arcade games as the only things that a computer can do. With the wide press and radio coverage that INTERLUDE has received, people are beginning to realize that a family computer can do far more than we first dreamed. Syntonic Software, I salute you!

HOW COMPLEX DO YOU WANT THIS INTERLUDE?
1. BACK TO BASICS, PLEASE
2. KEEP IT FAIRLY SIMPLE
3. I'M NOT CHOOSING
4. MAYBE A SMALL PRODUCTION
5. I'M READY FOR A REALLY BIG SHOW

ON EACH FACTOR, INDICATE YOUR PREFERENCE
1. SHOULD NOT INCLUDE
2. IT'S OKAY
3. I'M NEUTRAL
4. I'D LIKE THAT
5. PLEASE, PLEASE INCLUDE IT!

MESSAGE

4

WHICH MOVIE WOULD YOU BE?
1. PILLOW TALK
2. TOM JONES
3. GONE WITH THE WIND
4. SUPERMAN
5. A STREETCAR NAMED DESIRE
6. PELLINI'S SATYRICON



LUNAR LANDER Level II 16K Tape from Peter W. Frey

LUNAR LANDER is a simulation of landing a space ship on the moon. The pilot relies on radar information showing his altitude and vertical and horizontal velocity and burn. He has limited fuel and time. He uses the arrow keys on the computer to control the direction of his thrust toward or away from the moon. He uses two other keys to increase or decrease his downward velocity. He must decrease his velocity downward and sideways to a safe speed before actually touching the moon's surface. Otherwise, he bores a hole in the moon, leaving no survivors.

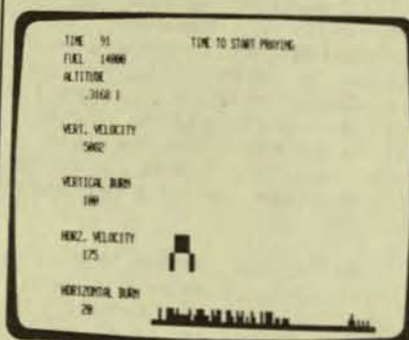
LUNAR LANDER was one of the first simulations that was popular on computers. Hundreds of versions have been written. Yet, few have been very good. Unfortunately, this program is no exception. The idea behind the program is to simulate the landing of a space ship on the moon. Yet the simulation of this program is not very accurate. As a game it is equally mediocre. You can quickly master landing so the only objective from then on is to reduce fuel consumption. The graphics are typical of most Lunar Landers. So I really see no reason to buy this program over any other Lunar Lander.

PUSH THE ARROW KEYS AND THE Q AND A KEYS TO CONTROL THE LEM
UP-ARROW (↑) INCREASES YOUR DOWNWARD THRUST
DOWN-ARROW DECREASES YOUR DOWNWARD THRUST
RIGHT-ARROW INCREASES THRUST TO THE LEFT
LEFT-ARROW INCREASES THRUST TO THE RIGHT
THE Q KEY INCREASES DOWNWARD THRUST BY 10
THE A KEY DECREASES DOWNWARD THRUST BY 10
HOLD THE KEY DOWN UNTIL THE DESIRED CHANGE OCCURS
TO LAND SAFELY YOU SHOULD TOUCHDOWN WITH
A VERTICAL VELOCITY LESS THAN 20
A HORIZONTAL VELOCITY LESS THAN 3
YOU SHOULD ALSO TRY TO LAND ON LEVEL TERRAIN
GOOD LUCK, COMMANDER, OUR PRAYERS GO WITH YOU

HIT THE SPACE BAR TO INITIATE YOUR MISSION

DIRECTIONS

The instructions show which keys to press to control the downward and sideways thrust.



DESCENT

The ship is getting closer to the moon's surface. The speed and burn rates are shown at the side. It is time to start praying.

YOU HAVE BORED A HOLE INTO THE MOON
THERE ARE NO SURVIVORS
MAYBE YOU SHOULD WAIT FOR COMMERCIAL AIR SERVICE
VELOCITY ON IMPACT 0000 5042.22 KM/H
ELAPSED TIME 000000 92 SECONDS
REMAINING FUEL 00000 13800 KG
BREAK IN 620
READY
>RUN

THE END

The ship made a new crater in the surface of the moon. I wish I could have played again. Nothing happened until I pressed the "Break" key.



WORDO Level II 16K tape from Micro-Fantastic Programming

WORDO is a game for one or two players. The computer picks a five-letter word at random. The player must guess what the word is in 30 guesses. He enters groups of five letters. The computer tells him how many of these letters are in the secret word. By elimination, the player finds out what letters are in the secret word. He must then form the letters into the right word.

The computer's word is a real word and not just a combination of letters. If the player enters a group of four or six letters, the message "Your word has not five letters" is displayed. If he enters a group of letters that does not contain a vowel or "Y", the message "Your word is not valid" appears. His guesses are listed on the screen for him to keep track of.

This game would be more interesting for two players. If one person plays, only an average number of guesses in each game is shown. If there are two players, the computer keeps a score for each of them. Bonus points are given for guessing the word in the first 8 guesses. Points are given for the correct letters in each of his words.

A good feature is that each player usually has a separate word to guess. Another good feature is showing the list of words already guessed. Also good is the scratch pad idea to keep track of what letters are definitely in or out. It eliminates the need for paper and pencil. The player must keep a sharp eye on the scratch pad of letters, though, since the computer is slow to eliminate or add the letters. However, it is easy to change the scratch pad list.

If the player likes this kind of game, then he might consider this one. The grammar of "Your word has not five letters" seems to be the only area that wasn't well thought out. It's just not that appealing for one player.

MARY ANN	+ ABCDEFGHIJKLMNOPQRSTUVWXYZ		
LINDA	+ ABCDEFGHIJKLMNOPQRSTUVWXYZ		
MARY ANN ENTER YOUR FIVE LETTER WORD ? WORD PTS 100			
<table border="1"> <tr> <td> </td> <td> </td> </tr> </table>			

WORK SHEET

This is the work sheet at the beginning of the game. The computer has chosen a word for each of the two players to guess. This is the first guess.

MARY ANN	+ ABCDEFGHIJKLMNOPQRSTUVWXYZ				
LINDA	+ ABCDEFGHIJKLMNOPQRSTUVWXYZ				
LINDA 1=DELETE 2=ADD 3=WORD 4=LETTERS KNOWN					
<table border="1"> <tr> <td>ABCDE 1</td> <td>FGHIJ 1</td> </tr> </table>	ABCDE 1	FGHIJ 1	<table border="1"> <tr> <td>ABCDE 2</td> <td>FGHIJ 2</td> </tr> </table>	ABCDE 2	FGHIJ 2
ABCDE 1	FGHIJ 1				
ABCDE 2	FGHIJ 2				

SECOND GUESS

It is Linda's turn. She has guessed the letters ABCDE. This is not the right word since the computer uses only real words. Two of these letters are in the real word. Her first guess did not include any correct letters. She has deleted them from the letters at the top of the page near her name.

MARY ANN	+ DEFGHIJKLMNOPQRSTUVWXYZ																				
LINDA	+ ABCDE KLMNO VWXYZ																				
LINDA 1=DELETE 2=ADD 3=WORD 4=LETTERS KNOWN																					
<table border="1"> <tr> <td>ABCDE 1</td> <td>FGHIJ 1</td> </tr> <tr> <td>FGHIJ 1</td> <td>ABCDE 2</td> </tr> <tr> <td>KLMNO 1</td> <td>KLMNO 2</td> </tr> <tr> <td>PQRSTU 2</td> <td>PQRSTU 1</td> </tr> <tr> <td>VWXYZ 1</td> <td>VWXYZ 2</td> </tr> </table>	ABCDE 1	FGHIJ 1	FGHIJ 1	ABCDE 2	KLMNO 1	KLMNO 2	PQRSTU 2	PQRSTU 1	VWXYZ 1	VWXYZ 2	<table border="1"> <tr> <td>FGHIJ 2</td> <td>ABCDE 1</td> </tr> <tr> <td>ABCDE 2</td> <td>FGHIJ 1</td> </tr> <tr> <td>KLMNO 2</td> <td>KLMNO 1</td> </tr> <tr> <td>PQRSTU 1</td> <td>PQRSTU 2</td> </tr> <tr> <td>VWXYZ 2</td> <td>VWXYZ 1</td> </tr> </table>	FGHIJ 2	ABCDE 1	ABCDE 2	FGHIJ 1	KLMNO 2	KLMNO 1	PQRSTU 1	PQRSTU 2	VWXYZ 2	VWXYZ 1
ABCDE 1	FGHIJ 1																				
FGHIJ 1	ABCDE 2																				
KLMNO 1	KLMNO 2																				
PQRSTU 2	PQRSTU 1																				
VWXYZ 1	VWXYZ 2																				
FGHIJ 2	ABCDE 1																				
ABCDE 2	FGHIJ 1																				
KLMNO 2	KLMNO 1																				
PQRSTU 1	PQRSTU 2																				
VWXYZ 2	VWXYZ 1																				

SIXTH GUESS

Each player has made six guesses. Mary Ann knows that her word has an "E" in it. This letter is listed at the top after the arrow. She has eliminated several letters from her list. Linda has eliminated more letters but she does not know yet which letters are definitely in her word.

RAF: The Battle of Britain



By
David L. Arneson, David A. Wesely and
Ross W. Maker

RAF: THE BATTLE OF BRITAIN
Level II 16K tape
Apple II 16K tape
from Discovery Games

This program is a simulation game of the Battle of Britain in 1940. The commander of the British fighter squadron wants to intercept and destroy enemy bombers heading for England. His squadron tries to attack the bombers and avoid the enemy fighter escort. The squadron can climb or dive in the attacks and can also engage in dogfights with the enemy bombers or fighters.

Our reviewer likes this game. It is simple. The graphics in the game itself are not much. But the game is OK.

36 32 28 24 20 16 12 8 4 0 LONDON 4 5 6 7 8 10 12 14 16 18 20 22 24 26 28 MILES ENEMY IN SIGHT! 8 FIGHTERS AT 10000 FEET, RANGE 17.5 MI. 14 BOMBERS AT 10000 FEET, RANGE 17.5 MI. YOUR 12 AIRCRAFT ARE AT 11500 FEET, RANGE 11.5 MI. ENTER CL FOR COMMAND LIST OR SV FOR SIREVIEW.

STATUS REPORT

The status report of the enemy bombers and fighters heading for London. There are 8 fighters and 14 bombers below your 12 aircraft.

PG-START NEW GAME 10-10000 AIRCRAFT SH-SHOW SIREVIEW BL-FLY TOWARDS BOMBERS BC-FLY TOWARDS FIGHTERS & CLIMB EF-ATTEMPT TO ENGAGE ENEMY FIGHTERS FL-FLY AWAY FROM FIGHTERS FC-FLY AWAY FROM FIGHTERS & CLIMB F1-FLY AWAY FROM FIGHTERS & DIVE 1000 F2-FLY AWAY FROM FIGHTERS & DIVE 2000 F3-FLY AWAY FROM FIGHTERS & DIVE 3000 F4-FLY AWAY FROM FIGHTERS & DIVE 4000 DB-DOG FIGHT WITH BOMBERS D4-MAKE A FIRING PASS & DIVE 4000 D3-MAKE A FIRING PASS & DIVE 3000 D2-MAKE A FIRING PASS & DIVE 2000 D1-MAKE A FIRING PASS AT BOMBER ALT.
--

FIGHT OR FLIGHT

Your planes can do all these things to fight off the enemy. Should you have your planes engage the enemy? Or should you carefully try to separate the fighters from the bombers?

I am extremely interested in this press release. It is an example of what can be done with SCRIPSIT if you do not have the upper/lower case modification. After receiving a printout of this press release, I asked Mr. Cushing to send me a disk copy of this letter along with his photo. I am reproducing this letter as I received it with only minor editing. It shows that even if you do not have the upper/lower case modification, you too can use SCRIPSIT.



FROM HUGH CUSHING
6 PRIDES CIRCLE
ANDOVER, MA 01810
OCTOBER 26, 1980

A LOT OF YOU OUT THERE PROBABLY THINK THAT THERE ARE NO REALLY GOOD REASONS TO GO OUT AND BUY A MODEM LIKE RADIO SHACK'S TELEPHONE INTERFACE II FOR 200 DOLLARS. RECENTLY, RADIO SHACK STARTED SELLING ACCESS TO COMPUERVE INFORMATION SERVICE, A "NET" OF COMPUTERS FEATURING PROGRAMS YOU CAN RUN OVER THE PHONE, YOUR OWN DISK FILE SPACE IN THEIR COMPUTERS, AND THE ABILITY TO PURCHASE PROGRAMS ELECTRONICALLY. BUT THIS STILL MIGHT NOT BE ENOUGH TO CONVINCE SOME OF YOU. WELL, THERE IS A LOT MORE OUT THERE THAN JUST COMPUERVE AND THIS REVIEW IS WRITTEN TO TELL YOU ABOUT A PROGRAM THAT ALLOWS YOU TO REACH IT ALL.

THE ST80-III SMART TERMINAL PROGRAM WAS WRITTEN BY LANCE MICKLUS AND IS DISTRIBUTED THROUGHOUT THE U.S. BY THE SMALL BUSINESS SYSTEMS GROUP. WHAT THIS PROGRAM ALLOWS YOU TO DO IS TO CONNECT UP TO NEARLY EVERY COMPUTER AVAILABLE OVER THE PHONE. THESE INCLUDE COMPUTERIZED BULLETIN BOARD SYSTEMS, WHICH ALLOW YOU TO POST NOTICES TO OTHER COMPUTER USERS OR TO ONE SPECIFIC USER FREE OF CHARGE. THESE BULLETIN BOARDS OFTEN HAVE COMPUTER PROGRAMS THAT YOU CAN "DOWNLOAD" (THAT IS, TRANSFER THEM FROM THE BULLETIN BOARD SYSTEM TO

YOUR COMPUTER'S MEMORY), WHICH ARE ALSO FREE OF CHARGE. THE ABILITY OF ST80-III TO HANDLE DOWNLOADED PROGRAMS QUICKLY AND EASILY IS ONE OF THE FEATURES THAT MAKE IT SO SPECIAL. ONCE YOU LOAD A PROGRAM OR DATA INTO MEMORY (WHICH ST80-III DOES ALMOST AUTOMATICALLY), YOU CAN SAVE THE PROGRAM ON DISK. IN THIS FASHION YOU CAN ALSO DOWNLOAD PROGRAMS FROM A TIME SHARING COMPUTER. IN SHORT, YOU CAN GET GOOD SOFTWARE FOR ONLY THE COST OF THE TELEPHONE CALL!

ALTHOUGH THIS IS A VERY USEFUL APPLICATION OF ST80-III, IT IS BY NO MEANS THE ONLY ONE. WITH THE PROGRAM, YOU CAN ALSO TRANSFER FILES FROM YOUR COMPUTER TO THE COMPUTER YOU ARE CALLING. WITH THIS FEATURE, IF YOU ARE CONNECTED TO A TIME-SHARING COMPUTER SYSTEM, YOU CAN STORE A PROGRAM THAT YOU HAVE ON DISK ON THE "HOST" COMPUTER (COMPUTERISE FOR THE DISTANT COMPUTER YOU ARE CALLING). AND BECAUSE ST80-III IS SO FLEXIBLE, YOU CAN TRANSFER A PROGRAM ON YOUR TRS-80 TO A FRIEND WHO HAS ALMOST ANY KIND OF COMPUTER. WITH THE RADIO SHACK SOFTWARE, YOU CAN ONLY DO THIS IF YOUR FRIEND HAS ANOTHER TRS-80.

NOW THAT I HAVE TOLD YOU WHAT ST80-III IS FOR, I WILL TELL YOU ITS FEATURES. FIRST OF ALL, SOME COMPUTER SYSTEMS REQUIRE THE USE OF SOME KEYS THAT THE TRS-80 KEYBOARD DOESN'T HAVE. ST80-III ALLOWS YOU TO USE KEYS THAT ARE NOT USED IN COMMUNICATING WITH DISTANT COMPUTERS (E.G. CLEAR, UP ARROW) TO REPRESENT THE NEEDED KEYS. AS I ALREADY MENTIONED, THE SECOND, AND PROBABLY MOST USEFUL FEATURE OF ST80-III IS THE ABILITY TO TRANSFER FILES TO AND FROM THE HOST COMPUTER. THIS IS EASY TO DO, WITH THE HELP OF THE CLEARLY WRITTEN INSTRUCTION MANUAL. YOU CAN TRANSFER ANY FILE, BASIC OR NOT, JUST SO LONG AS THE HOST COMPUTER KNOWS WHAT TO DO WITH IT. ANOTHER FEATURE, WHICH IS VERY IMPORTANT FOR THE USER WHO IS NOT FAMILIAR WITH DATA COMMUNICATION PRACTICES, IS THE ABILITY OF ST80-III TO HANDLE SPECIAL SIGNALS SENT OUT BY THE COMPUTER THAT CONTROL ITS OPERATION. FOR EXAMPLE, ON SOME SYSTEMS, WHEN YOU WANT TO DOWNLOAD A PROGRAM, THE HOST COMPUTER WILL SEND OUT A SIGNAL THAT TELLS ST80-III THAT IT IS GOING TO START SENDING OUT THE PROGRAM NOW, AND THAT IT HAD BETTER GET READY. ST80-III CAN HANDLE THIS SIGNAL. WITH THIS FEATURE, THERE IS NO HASSLE OF PRESSING BUTTONS WHEN YOU WANT TO START LOADING A PROGRAM, POSSIBLY MISSING THE FIRST FEW LINES OF IT.

WHILE A SMART TERMINAL PROGRAM COULD EASILY GET BY WITH THESE FEATURES, LANCE MICKLUS HAS MADE LIFE EASIER FOR US ALL BY ADDING MANY LITTLE FEATURES THAT ARE VERY CONVENIENT, AND IN SOME CASES, ALMOST ESSENTIAL. FIRST OF ALL, SOME COMPUTERS AUTOMATICALLY SEND OUT LINE FEEDS AT THE END OF EACH LINE. HOWEVER, SOME OTHERS DON'T, AND IF YOU DON'T HAVE ST80-III, TEXT SENT OUT BY THE HOST COMPUTER WILL

WRITE OVER TEXT ON THE SCREEN BEFORE YOU CAN READ IT. ST80-III GIVES YOU THE OPTION OF HAVING THE PROGRAM SUPPLY THE LINE FEEDS, IF THE COMPUTER YOU ARE CONNECTED TO DOESN'T. THE NEXT FEATURE IS ONE OF THE MOST IMPORTANT IN THE PROGRAM. THINGS CALLED PARITY, STOP BITS, AND BAUD RATES ARE USED TO TIME THE INFORMATION SENT FROM ONE COMPUTER TO ANOTHER, AND IT IS ESSENTIAL THAT YOUR PARITY, ETC. BE SET THE SAME AS THE COMPUTER YOU ARE "TALKING" TO. THERE ARE SOME SWITCHES ON THE RS-232-C CIRCUIT BOARD INSIDE THE EXPANSION INTERFACE THAT CAN BE SET TO NEARLY ANY CONFIGURATION OF PARITY, ETC. THAT YOU NEED, AND THIS IS FINE IF YOU ONLY CALL ONE COMPUTER SYSTEM, BUT UNFORTUNATELY, STANDARDIZATION IS ALMOST NON-EXISTENT IN THE WORLD OF DATA COMMUNICATION, AND SO ALMOST EVERY TIME YOU CALL A DIFFERENT COMPUTER YOU NEED A DIFFERENT PARITY, STOP BIT, AND BAUD RATE SETTING AS WELL. DOING THIS WITH THE RS-232-C SWITCHES WOULD MEAN TAKING APART YOUR EXPANSION INTERFACE EVERY TIME YOU CALLED A NEW COMPUTER. NO, THANK YOU! BUT WITH A FEATURE BUILT INTO THE PROGRAM, YOU CAN CHANGE THESE SETTINGS SIMPLY BY PRESSING A FEW KEYS. AGAIN, YOU ARE CLEARLY TOLD HOW TO BY THE INSTRUCTION MANUAL. THIS MAKES CALLING COMPUTERS THE ULTIMATE IN SIMPLICITY.

BUT EVEN ALL THIS DOESN'T INCLUDE ALL OF ST80-III'S FEATURES. WHEN YOU ARE CONNECTED TO A DISTANT COMPUTER, THERE IS NO SUCH THING AS A SHIFT-Q TO STOP THE COMPUTER FROM PRINTING. THE TEXT COMES THICK AND FAST, AND IF YOU CAN'T READ IT, TOUGH LUCK! THAT IS WHY ST80-III INCLUDES A PRINTER FEATURE. BY PRESSING A BUTTON, YOU CAN HAVE THE PROGRAM SEND ALL THE TEXT IT RECEIVES OUT TO YOUR PRINTER. THE PROGRAM ALSO SUPPORTS AN UPPER/LOWER CASE MODIFICATION. ANOTHER FEATURE ALLOWS YOU TO AUTOMATICALLY "LOG ON" TO A COMPUTER (THAT IS, TELL IT YOUR NAME, YOUR CITY AND STATE AND, IF YOU ARE CONNECTED TO A TIME-SHARING COMPUTER, YOUR ACCOUNT NUMBER) BY JUST PRESSING A KEY. YOU CAN ALSO HAVE THE TRSDOS CLOCK AUTOMATICALLY COUNT HOW LONG YOU HAVE BEEN CONNECTED TO THE HOST COMPUTER, SO YOU CAN KEEP TRACK OF YOUR PHONE BILL. AND FINALLY, YOU CAN USE VARIOUS USEFUL UTILITY PROGRAMS INCLUDED WITH THE PROGRAM PACKAGE, INCLUDING ONE THAT ALLOWS YOU TO MAKE YOURSELF COMPATIBLE TO NEARLY ANY COMPUTER IN THE WORLD.

IF YOU HAVE STUCK WITH THIS ARTICLE THIS LONG, I KNOW YOU ARE INTERESTED. LET ME TELL YOU NOW THAT THERE IS A WHOLE NEW WORLD OF COMPUTING OUT THERE THAT YOU PROBABLY NEVER KNEW EXISTED, AND IN MY OPINION, THIS PROGRAM IS THE BEST WAY IN THE WORLD TO GET STARTED. FOR MORE INFORMATION, WRITE:

Hugh Cushing
THE SMALL BUSINESS SYSTEMS GROUP
6 CARLISLE ROAD
WESTFORD, MASS 01886

THE LOWEST

prices on this high-quality software. Buy direct and save 50%. Now, also available for CBASIC on CP/M and MBASIC on HEATH HDOS.

DATA BASE MANAGER

Mod-I \$69 Mod-II \$199

You can use it to maintain a data base & produce reports without any user programming. Define file parameters & report formats on-line. Key random access, fast multi-key sort, field arith., label, audit log. No time-consuming overlays. 500 happy users in a year. Mod-II version with over 50 enhancements.

A/R

Mod-I \$69 Mod-II \$149

Invoices, statements, aging, sales analysis, credit checking, form input, order entry. As opposed to most other A/R, ours can be used by doctors, store managers, etc.

WORD PROCESSOR

Mod-I \$49 Mod-II \$49

Center, justification, page numbering... Used for letters, manuals, and reports. Mod-I version features upper/lower case without hardware change!

MAILING LIST

Mod-I \$59 Mod-II \$99

The best! Compare and be selective. Form input, 5-digit selection code, zip code ext., sort any field, multiple labels. Who else offers a report writer?

INVENTORY

Mod-I \$99 Mod-II \$149

Fast, key random access. Reports include order info, performance summary, E.O.Q., and user-specified reports. Many converted their inventory to ours!

PAYROLL, A/R, A/P, and GL available for the Mod-II DOS and CP/M.

L216, a cassette package of 10 business programs for Level II 16K systems, \$59.

All programs are on-line, interactive, random access, virtually bug free, documented and delivered on disks. Mod-I programs require 32K TRSDOS, and credit is allowed when you upgrade to Mod-II. We challenge all software vendors to offer low cost manuals so you can compare and avoid those high-priced, undocumented, 'on-memory' programs. Manuals alone \$5 for Mod-I, \$10 for Mod-II. Don't let our low prices fool you!

Mod-II programs are extensively modified, guaranteed to run with 1 year newsletter and updates. 10% off for ordering more than 1 Mod-II program.

MICRO ARCHITECT, INC.

96 Dothan St., Arlington, MA 02174

QUALITY TRS-80 SOFTWARE

KEYWORD Indexing System

A series of programs that will create a data file on disc, build an index of all occurrences of "Keywords" in the text of the data file and allow inquiries or searches into the file using the indexed keywords. The system features:

- *Flexible record lengths with location pointers
- *Deletion of non keywords from index by system
- *"and" "or" "not" logic for inquiries
- *Interface for user written inquiries

KEYWORD INDEX—2 disc 32K DOS system \$39.95

SORTS for HOME and BUSINESS

No computer user should be without a versatile, easy to use sort program. The Northeast Microware in memory sort programs are written in Level II BASIC and have the following features:

- *Sort ALPHA or NUMERIC data
- *Sort on up to 5 fields simultaneously
- *In ascending or descending sequence
- *Supports kb, video or tape I/O
- *Supports seq. disk and printer I/O (SORT-III)
- *Supports user I/O routines
- *User exits (SORT-III only)

SORT-II—16K Level II in memory sort \$19.95
SORT-III—32K DOS in memory sort \$29.95

FOR the SERIOUS GAMBLER

BLACKJACK SIMULATOR. Allows you to simulate the playing of thousands of hands of BJ and analyze the results on tape in Level II BASIC. \$19.95

Manuals for all programs available for \$3.00 ea.
(price deductible on purchase of program)

"TRS-80 is a registered trademark of TANDY CORP."

Northeast MICROWARE

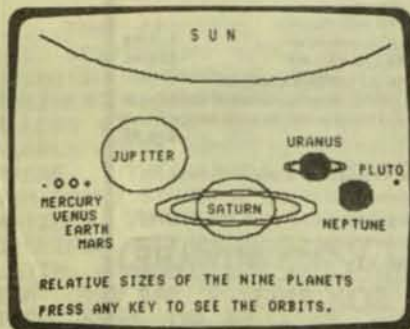
BOX 2133,
BOSTON, MA. 02106



PLANETS
Apple II Applesoft
from Programma
International, Inc.

This program is written to display information about THE PLANETS in our solar system. It shows each planet and give a brief description of the major features of the planet. The program also shows the relative size, temperatures, and the orbits of the planets. In addition, it gives some information about the Earth's moon and the moons of the other planets.

The program does not use any of the advantages of the computer. No animation. No interaction. No programmed learning. The entire program (which is rather short) could have been printed in a book for far less money and with better graphics. One bug in the program prevents you from reading all the captions. They are erased almost as soon as they appear on the screen. A similar program has been written by the same author. It is called SIRIUS and is far better.



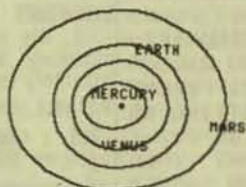
THERE ARE TWO GROUPS OF PLANETS.

INNER PLANETS (SMALL ORBITS)
MERCURY
VENUS
EARTH
MARS

OUTER PLANETS (BIG ORBITS)
JUPITER
SATURN
URANUS
NEPTUNE
PLUTO

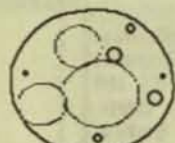
PRESS ANY KEY TO SEE THE INNER ORBITS. ■

THE ORBITS OF THE INNER PLANETS



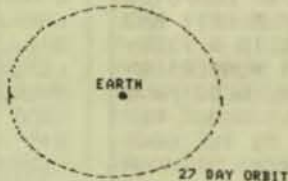
CLOSE-UP PICTURE OF MERCURY COMING NEXT.
PRESS ANY KEY TO SEE MERCURY.

MERCURY



THE ROMAN GOD MERCURY WAS THE FAST MESSENGER OF THE GODS.
PRESS ANY KEY TO SEE VENUS IN 22.1.1.
MERCURY IS THE SMALLEST AND FASTEST.
IT IS NOT THE HOTTEST.

MOON'S ORBIT IN SCALE



THE AVERAGE TEMPERATURE OF THE EARTH IS 14 CELSIUS. MOON IS -156 TO +132 C.
PRESS ANY KEY AND YOU'LL SEE MARS.

MARS AND MOONS

DEIMOS

PHOBOS



PRESS ANY KEY TO GO ON.

IRON OXIDE (RUST) IN ITS ROCKS.
NAME: MARS, GOD OF WAR, BECAUSE IT IS BLOODY RED.

VENUS



THE ATMOSPHERE IS 100 TIMES DENSER THAN EARTH'S. IT IS CARBON DIOXIDE AND ACIDS.
PRESS ANY KEY TO GO ON TO EARTH.

YOU CAN'T SEE JUPITER UNTIL YOU ANSWER THIS.

HOW MANY MOONS DOES JUPITER HAVE?
TYPE THE NUMBER AND PRESS RETURN. 58

JUPITER



IT WAS A VERY FAINT RING.
PRESS ANY KEY TO SEE SATURN.
JUPITER SENDS OUT INFRARED HEAT.
IT IS THE HOTTEST PLANET ON THE INSIDE.

SATURN



SATURN IS YELLOW WITH BANDS LIKE JUPITER.
THE ATMOSPHERE IS HYDROGEN AND METHANE.
SATURN HAS TEN MOONS.
PRESS ANY KEY TO GO ON.

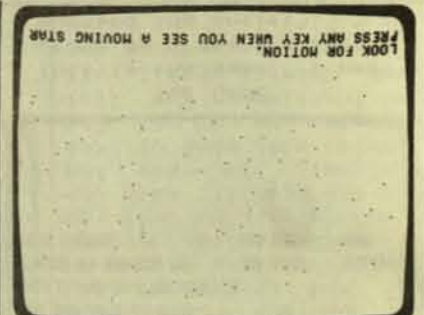
NEPTUNE

URANUS



TRITON

THE RINGS WERE DISCOVERED IN 1977.
BOTH URANUS AND NEPTUNE ARE GAS GIANTS.
THE MOON TRITON IS BIGGER THAN MERCURY OR PLUTO.
PRESS ANY KEY TO GO ON.

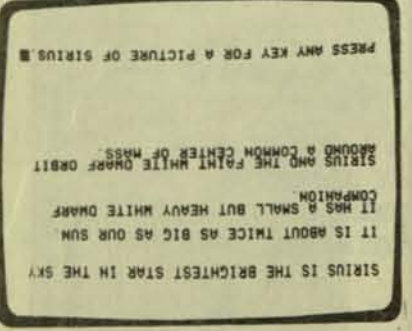
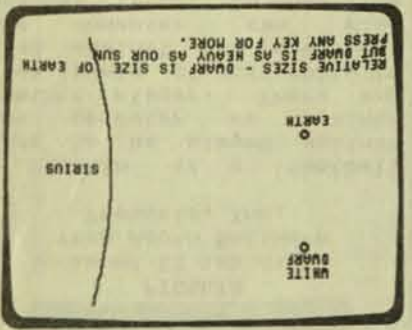
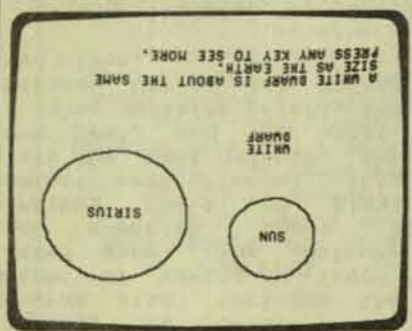
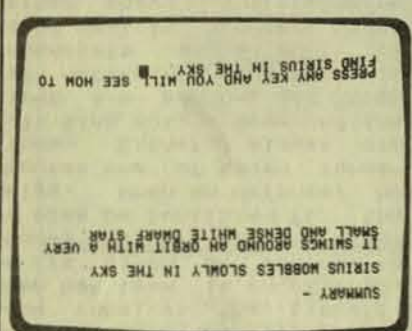
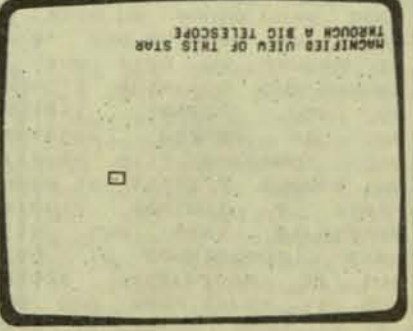
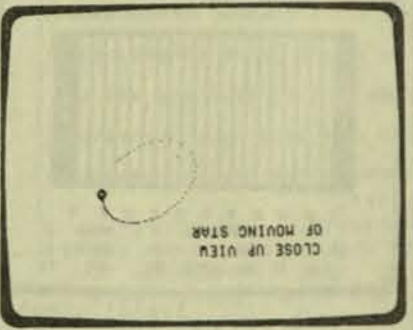
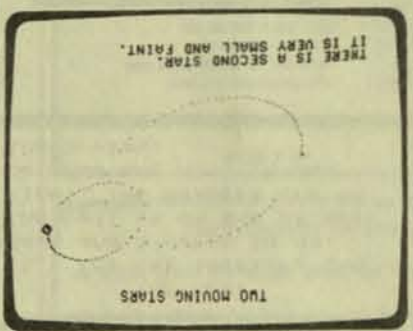
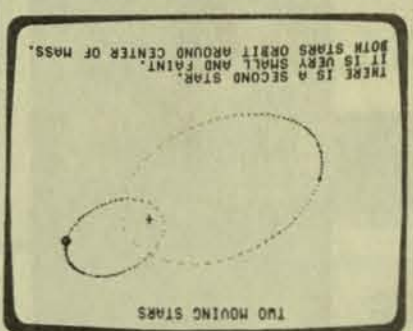
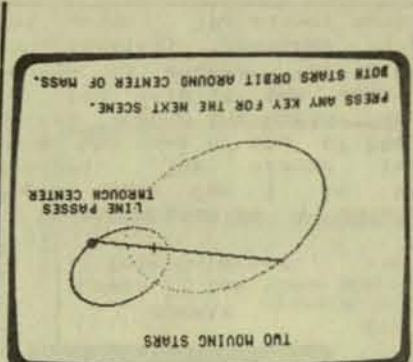


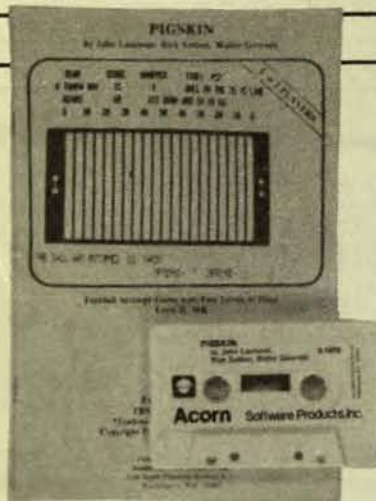
LOOK FOR NOTION.
PRESS ANY KEY WHEN YOU SEE A MOVING STAR

The program is written by Mark Cross. He is noted for his unusual programs. This program is no exception. The idea for this program is good. The program is animated to take good advantage of the Apple computer's graphics capability. The program is a little short for the price.

Apple II AppleSoft from Programs International, Inc.

SIRIUS





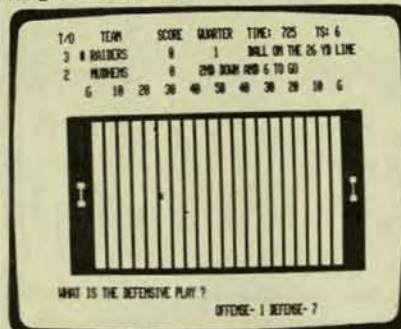
PIGSKIN
Level II 16K disk
from Acorn Software
Products, Inc.

Pigskin is a football game to be played against the computer or against another player. There are five levels of difficulty in play against the computer. The computer can play against itself to show the strategy it uses. The program also includes the option of saving an incomplete game. The instruction pamphlet shows a strategy chart of plays against each offense. This lists the best defense, the next best, and the worst. It also explains briefly the strategy behind the defensive plays.

If the player's team wins the toss of the coin, his team receives the kickoff. When his team is on offense, he is given 30 seconds to choose one of eleven plays or else be penalized for the delay. When on defense, he chooses one of seven formations. Either player can call time out. Some of the plays are random, and luck can determine if a pass is incomplete or a punt or field goal is blocked. The screen shows the playing field with end zones and yard lines, and the smoothly moving ball. It also gives the time remaining, the downs, yards to go, and the score. After the player's offensive or defensive play, the screen gives the number of both plays, how many yards gained or lost, and any other results of the play. The program includes a special command to clear the play or to redraw the screen.

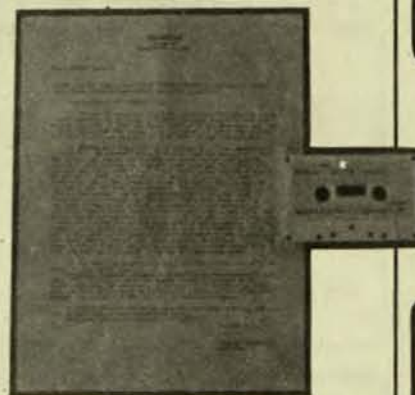
PURSER'S MAGAZINE

The computer uses logical plays depending on where the ball is, which down it is, and how many yards to go. Chance determines if the play is completed. Even with the best strategic defense against a play, there is still a chance the offense will succeed. Our reviewer played at the easiest level, had no trouble entering the number of the play he wanted to make, and enjoyed the game. He said he would have been dead if he had played at the highest level.



THE PLAY

It's the 1st quarter, 2nd down and 6 yards to go. The ball is on the 26 yard line. The Raiders are on defense and must choose their play.



SUNMAX
Level II 16K tape
from Solartek

This program is a solar energy game for 1 to 9 players. The player is given the name of one of 200 cities around the world. He is also told if the solar energy is needed for air conditioning, heating, or hot water. The player must

guess the angle to tilt a solar collector to make the best use of it. The program then gives the correct angle. The score is the difference between the correct angle and the player's guess. The player with the lowest total score wins.

I am disappointed with this game. The program is written by an expert in the solar energy field. I have reviewed many of the other programs by Solartek. They are all excellent. Their SUNSIM is one of the best continual demonstrations for the Level II.

Yet, I feel that this program is not the best of games and not very educational. Little or no information comes with the game. You are expected to figure out the ideal placement of three types of solar equipment based on your score. The author does not share his knowledge with you. An informative instruction booklet would help.

YOU WILL BE GIVEN A LOCATION.
(FOR EXAMPLE ALBANY NY USA)
YOU WILL ALSO BE GIVEN A SOLAR ENERGY JOB.
(FOR EXAMPLE HOT WATER HEATING, HOME HEATING, OR HOME AIR CONDITIONING.)

THE OBJECT OF THIS GAME IS TO GUESS THE CORRECT ANGLE AT WHICH TO SET THE SOLAR COLLECTOR TO GET THE MAXIMUM ENERGY FOR THE GIVEN JOB.

THE VALUE OF THE ANGLE YOU WILL ENTER SHOULD BE IN DEGREES (A NUMBER BETWEEN 0 AND 90).

PRESS ENTER TO CONTINUE.

INSTRUCTIONS

These are the game instructions. They explain that the object of the game is to guess the angle to tilt the solar collector to get the maximum energy.

MARY, YOUR LOCATION IS CONCORD NEW HAMPSHIRE USA
AND YOUR JOB IS HOT WATER
WHAT IS YOUR COLLECTOR ANGLE? 39
CONCORD NEW HAMPSHIRE USA YOUR ERROR YOUR TOTAL
IS AT LATITUDE THIS TURN ERROR
43 4 4

THE GAME

This is the game. I was wrong by 4 degrees when I guessed the angle.



PERSONAL PROPERTY INVENTORY
Level II 16K tape
from Hayden Book Co., Inc.

This is a program to help the user make a list of his personal property. The list would be valuable in case of fire or theft, or for insurance or tax records. The program lists the item name, description, serial number, and value. It allows entering items from the keyboard or from a data tape. The list may be added to or changed, or an item deleted. The items may be sorted by name, description, serial number, or value. The screen listing will show the total value of the objects. The list may be sent to an 80-column printer or to a data tape. The program is written to allow 100 items to be stored on one list. If the user has more than 16K of computer memory, the accompanying booklet gives directions for changing the three program line numbers to store 300 or 500 items.

The only thing that our reviewer found missing was that the total value is not printed out on the printed list. However, the user can easily pencil in that figure if he wants it. The list stored on the data tape easily, and read back in, added to the list still in memory. The screen directions were clear on what to do, and the booklet gave the limitations. In case the user wants only some of the items listed, he can use the "Erase" function. The list of items doesn't scroll off the screen - it is shown one page at a time.

The program works simply and smoothly. If the user enters several items at a time, and then can't remember if he entered something, he can always check. Or if it gets entered twice, one of the entries can be deleted. The values of the items can be changed at any time. The only limitation is the 16 characters allowed in the names of the item and description, and in the serial number.

Our reviewer comments: "I'm tempted to get this one myself. I've typed lists of things for insurance purposes and didn't even try to alphabetize the list. I like it."

THIS IS A PERSONAL PROPERTY INVENTORY FILE SYSTEM DESIGNED BY SOUTHERN SYSTEMS. THIS PERSONAL PROPERTY PROGRAM WILL PERMIT YOU TO DEVELOP FILES, SORT ON THE VARIOUS FIELDS AND OUTPUT THE RESULTS TO TAPE OR PRINTER. DATA TAPES CAN BE LATER ENTERED BACK INTO THE PROGRAM FOR ADDITIONS OR MODIFICATIONS. WHEN YOU HAVE FINISHED ENTERING DATA FROM THE KEYBOARD, TYPE "END" IN THE FIRST FIELD OF THE NEXT ENTRY.

LIST OF FUNCTIONS

```

*****
(CINPUT - INPUT DATA FROM TAPE OR KEYBOARD
(CADD - ADD NEW DATA FROM KEYBOARD (SINGLE ENTRY)
(CERASE - DELETE ITEM FROM INVENTORY
(CMODIFY - MODIFY DATA IN INVENTORY ENTRY
(CSORT - SORT DATA IN SPECIFIED FIELD
(CPRINT - DISPLAY DATA ON SCREEN
(COUTPUT - OUTPUT DATA TO CASSETTE OR PRINTER
(CRETURN - RETURN TO LIST OF FUNCTIONS
*****

```

FUNCTION DESIRED (TYPE CR TO RETURN TO LIST OF FUNCTIONS)?

This is the entire list of options available. If you type "R", you just get this.

ENTER THE FOLLOWING DATA:

ITEM? PRINTER
DESCRIPTION? LINE PRINTER IV
SER. NO.? 9876543
VALUE? 989.14

FUNCTION DESIRED (TYPE CR TO RETURN TO LIST OF FUNCTIONS)?

An item recorded by the program looks like this.

TYPE "END" FOR ITEM TO EXIT.

ITEM? COMPUTER
DESCRIPTION? TRS-80
SER. NO.? 123456
VALUE? 885.10

With the limit of 16 letters for the descriptions, you cannot say much.

NAME	DESCRIPTION	SER. NO.	VALUE
COMPUTER	TRS-80	123456	885.10
PRINTER	LINE PRINTER IV	9876543	989.14
PRINTER	LINE PRINTER IV	9876543	989.14
PRINTER	LINE PRINTER IV	9876543	989.14
PRINTER	LINE PRINTER IV	9876543	989.14
PRINTER	LINE PRINTER IV	9876543	989.14
PRINTER	LINE PRINTER IV	9876543	989.14
PRINTER	LINE PRINTER IV	9876543	989.14
PRINTER	LINE PRINTER IV	9876543	989.14
PRINTER	LINE PRINTER IV	9876543	989.14

PRINTOUT

This is the printed list of the items. I should not have added in the items saved on tape because I had just entered the same items. Now I will need to delete them. This list is printed out in the order the items were entered. I could have had an alphabetical list or a list in order of the description or the serial number.



CLOAD MAGAZINE
Level II tape

CLOAD is a magazine on cassette. It includes a table of contents program and about 4 other programs. The programs are excellent for every new computer owner. I personally recommend that you buy at least one issue.

In the last issue, I reproduced a list of the programs that CLOAD had published up through August 1980. Here is an update to this list.

I am publishing this for one very important reason. Each of these tapes is \$4. Each tape contains 4 programs or more. At a dollar a program, you can see that this is the best bargain around. Not only that, some of CLOAD's programs are good and a few are absolutely great. It is so wonderful to find such good quality at such a reasonable price! Buy an issue and see what I mean.

CLOAD CONTENTS

September 80

Dest.Inst. (Level I) Instructions for
Destruction (Level I) Blast your way to
the fuel depot.
Hex Display Examine computer memory 256
bytes at a time. Display is
in hex.
Organ Inst. Instructions for
Organ Audio program to play computer
like an organ.
Lgame Game to arrange objects to fit
an L-shaped area.
Shop.Spreed Go on a shopping spree with a
limited budget and time.

October 80

Atomic Tbl. Lists elements in atomic table
and names elements in a
formula.
CIA Adven. Become a secret agent for the
CIA.
Coder For disk systems. Copies into
code a BASIC program so it
will not list and decodes
previously coded programs.
Tiar Determine the rules of this
game to score.
Tiar Notes Hints to rules in Tiar.
Load N Save Utility program to save on
tape a game in progress. Will
not work with DOS BASIC.
Escape Similar to "Chase". Avoid
crazed robots in closed room
until they destroy each other.
Maze System program - find your way
out.

November 80

Time Teller Learn to tell time by the moon
and stars.
Monster Cross a room of obstacles
while avoiding a monster after
you.
Audio System program to let you add
sound to your programs.

FoxN'Hounds

Hounds try to trap fox. Uses
sound from Audio.

Ledger

Applications program to handle
accounts. Will list to screen
or printer, print trial
balance, and load or save data
to tape.

Find

Utility program to find lines
in BASIC program containing a
certain line number, variable,
or command statement.

December 80

LTC-21 Inst

Learn how to
Fly the latest jumbo-jet.

LTC-21

Rearrange the scrambled
alphabet in fewer tries than
the computer.

Alpha

Bubble Sort

Demonstration of bubble sort.

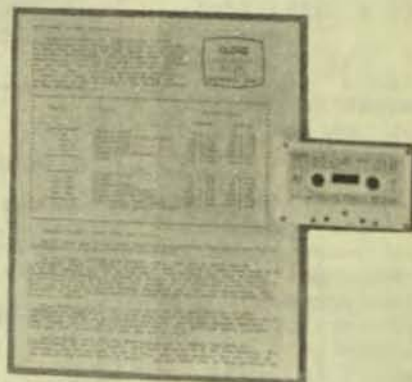
StarFighter

Shoot-em-up in space with
sound.

Bill. Demo

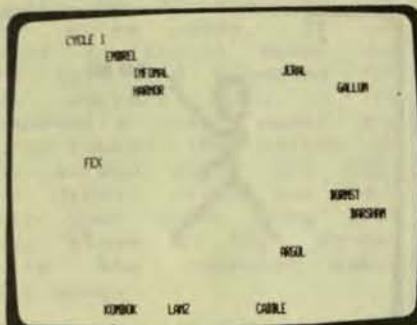
Demonstration of
Program to display message by
sideways, up or down scroll.
Also reverse video.

Billboard

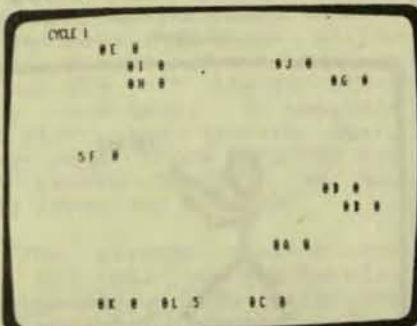


RELOAD A SAVED GAME? N
LARGE GAME OR SMALL? S
1 PLAYER OR 2? 1
DIFFICULTY 0 - 10 ? 0
VICTORY CONDITION? 5
PLAYER'S EMPIRE NAME? GOOD GUYS
PROGRAM'S EMPIRE NAME? OTHER GUYS
INITIAL PARITY (Y/N)? Y

At the start of the game, you may reload a saved game. You may play a longer or more difficult game. The Victory Condition of 5 means that you must control the star systems for at least 5 turns after getting control of all of them. You and the computer start even.



This is a map of the star system giving the names of the planets.



This map shows you who owns which planets. It also shows how many units are on each planet. Planet Informal "I" has 6 of the Good Guys' units. Planet Algol "A" has 6 of the Other Guys' units.

"I like the game because there is really no violence or shoot-em-up involved. There are no long blanks on the screen since the computer says when it is thinking and flashes the names of the star systems. The program also works under a disk system."

```

))) GOOD GUYS HOLDINGS (((
FEX 4      HARMOR 1
))) OTHER GUYS HOLDINGS (((
ARGOL 5    LAKE 4
-- UNEXPLORED --
BARSHAM    CARBLE    BOKHST    EMBREL
GALLUM     THORVAL    JESOL     KOHMOK
COMMANT?

```

The summary shows who owns which planet. It also shows how many units are on each planet. There are eight planets which are still unexplored.

```

TRAVEL TIMES:
  A B C D E F G H I J K L
A 0 1 1 1 1 1 1 2 3 2 3 1
B 1 0 1 2 1 1 2 3 2 3 3 1
C 1 1 0 2 1 1 1 2 3 3 2 1
D 1 2 0 2 2 1 3 1 2 1 1
E 1 1 1 2 0 1 1 2 2 3 1
F 1 1 1 2 1 0 1 2 2 2 1
G 1 2 1 1 1 1 0 1 1 1 1
H 3 3 3 2 2 1 2 0 1 2 1
I 2 2 3 1 2 1 2 0 1 2 1
J 3 3 3 2 2 2 1 1 1 0 2 2
K 2 3 2 1 3 2 1 2 2 0 2
L 1 1 1 1 1 1 1 2 1 2 2 0
CIPHER?

```

This chart gives the time it takes to travel between planets. It takes 2 turns to go from Planet Algol "A" to Planet Barsham "B".

GOOD GUYS FORCES IN HYPERSPACE:
BORNST-IMFOMAL: 6 UNITS, ARRIVAL AT CYCLE 2
BORNST-KOMBOK: 2 UNITS, ARRIVAL AT CYCLE 2
8 UNITS TOTAL IN TRANSIT
OTHER GUYS FORCES IN HYPERSPACE:
5 UNITS TOTAL IN TRANSIT

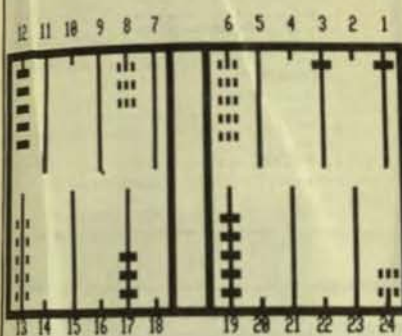
COMMAND?

The report shows how many units are in transit between two planets. It does not show where they are going. You do not know your opponent's destination until he arrives.

STARCLASH is a game of strategy for one player against the computer or two players against each other. The level of difficulty and size of the game can be set. Each player has a home star system with a certain number of ships. He sends his ships to other systems to try to gain control over them. The player can look at charts showing the travel time (number of complete plays) between systems and how many ships of which player occupy which system. Each occupied system produces more ships which can be sent to other systems. If two players or the player and the computer both land ships on the same system, a battle results with random outcome. If there is a battle winner, he controls the system. The object of the game is for one player to occupy all the systems.

This is also a game of memory. Each player must try to remember how many ships he has sent where, and how many turns it takes, so he can decide his next move. Even with the help of the charts, he must juggle more than a dozen names and figures. He can only look at one chart at a time. If the game is played against the computer, the player does not know where the computer has sent its ships. If there are two human players, the first player has the advantage of landing his ships on a planet first. The second player has the advantage of knowing the first player's moves. Each turn or cycle is made up of commands first from one player and then from the other. The cycle then shows the results of both players' commands.

Our reviewer comments: "I don't know how long the game would interest someone just against the computer. I played level 0 of difficulty in the short game, and the game was very easy. Prob-



INPUT 2ND MOVE FROM :1 TO :3

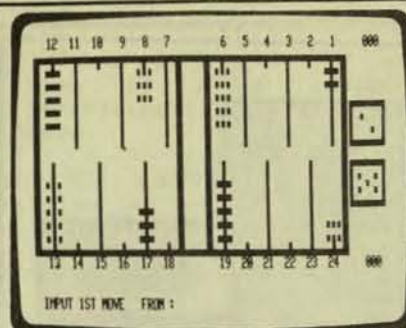


computer's are broken bars. The "bar" is an area in the center of the playing board. Up to seven pieces will be displayed on a point, although the computer will keep track of the excess.

Moves are made by entering the number of the point you are leaving and then the point to which you are going. Either move can be changed or corrected as long as the ENTER key has not been pressed after the destination point. If the piece is leaving the bar, the starting point is entered as "BR" instead of a point number. If the piece is bearing off, the destination is entered as "OF" instead of the point number. The dice are shown at one side. As a move is made for one of the dice, the corner of that die is clipped. You are prompted for your moves, one at a time. If you have rolled a double, you are prompted for your extra moves. If you enter an illegal move, you are told and prompted for the correct move. The computer's last moves are shown toward the bottom of the screen until you roll the dice. After you have made your move, your last move stays on the screen while the computer makes it's move.

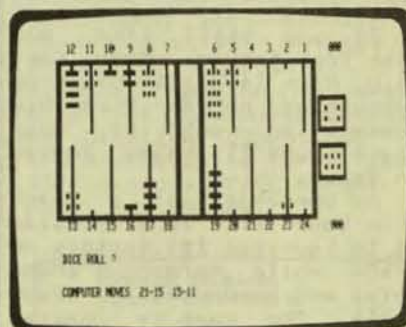
When all the winning side's pieces are off the board, the message "I won" or "You won" is shown. The scores for that game are added to the running scores shown near the dice. At the end of each game, you may press the "!" key to start the next game. If you want to start the scoring over, you must press another key to return to BASIC so you may rerun the program.

The printed instructions do not tell you how to play Backgammon. They tell you how to enter commands. They also tell you how the game is scored. The computer moves quickly and BACK-40 will be a challenge to those that already know how to play.



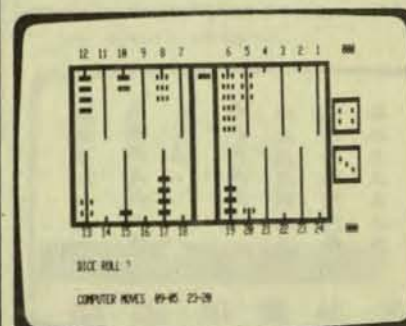
FIRST MOVE

I have made my first move and the corner of the die was clipped. Now I am ready to enter my second move.



COMPUTER'S MOVE

The computer has made it's move. Those moves will stay on the screen until I roll the dice by pressing the space bar. I can study the moves until then.



ON THE BAR

My piece is on the bar in the center of the board. Now I must get it back onto the playing board.

BACK 40
Level II 16K tape
from Adventure International

BACK 40 is a fast backgammon opponent. The game includes rolling the dice for first move and doubling the cube for both the player and the computer. The player rolls the dice to determine who moves first. The player's pieces are solid bars and the



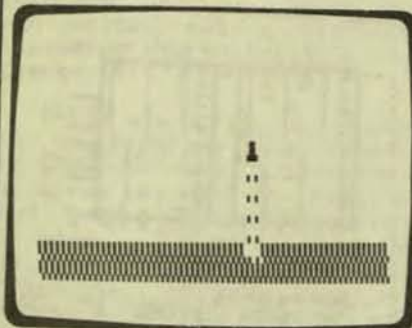
ZOSSED IN SPACE

Level I or II 15K tape
from Adventure International

If you still like old Star Trek reruns where Captain Kirk is busily blasting everything he can fire his phasers on out of deep space, you'll enjoy Zossed in Space.

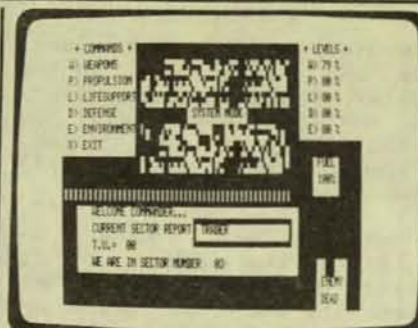
As commander of a starship your life long mission is to survive 100 sectors of space while defeating enemy ships and accumulating trade units. The game is complex and packed with graphics. You can die in over 20 different ways and converse with Communications and Engineering Sections from the Bridge while monitoring 5 internal systems.

The game is quick paced and requires little strategy or memorization, the main objective in becoming a good player being to develop techniques for avoiding certain obstacles which block the space lanes.



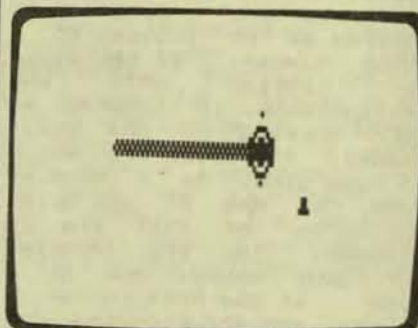
BLAST-OFF

Your ship begins its journey through various sectors of space. Each time you successfully skirt pass such deadlies as black holes, mine fields or enemy ships and leave the screen, you enter a new sector of space.



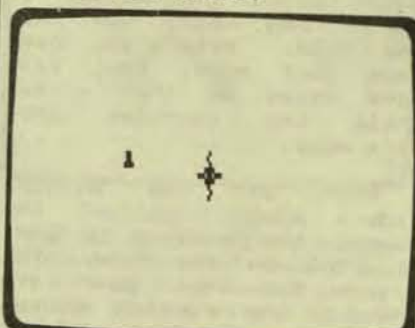
MAIN CONTROL DECK

Gives status reports on fuel levels in weapons, propulsion, lifesupport and environmental systems.



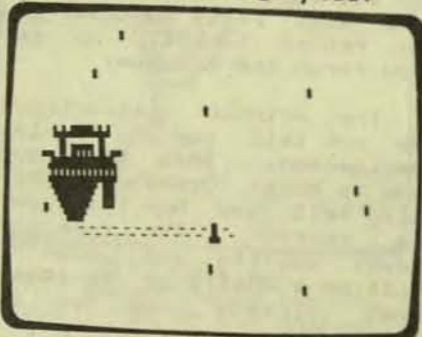
AUTO MINES

a) can go faster than your ship, b) can shoot faster than you, c) know where you are at all times.



XENON POD

This intergalactic garbage disposal not only vaporizes anti-matter, but you, too.



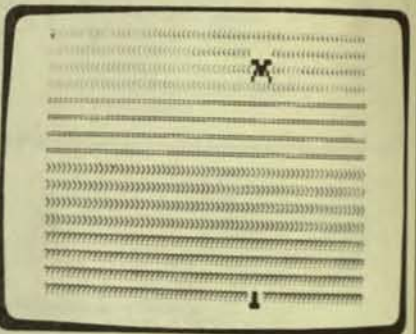
BASE STATION

What a relief, a gas station! And you thought we'd have to call Triple-A.



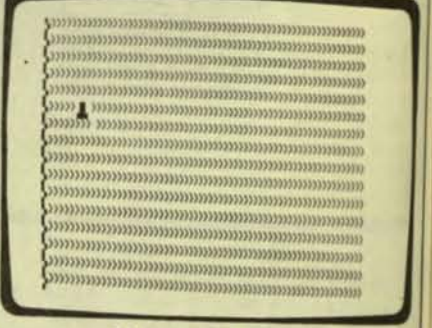
TRADER APPROACHES

Hail him on which frequency, sir? The communications deck lists four.



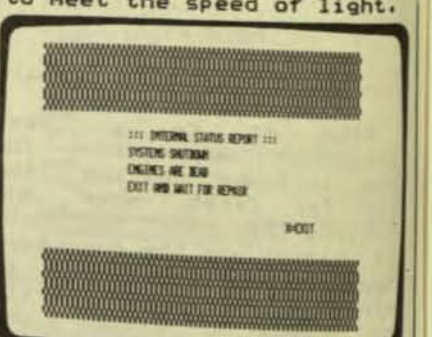
ENEMY SHIP

Get under him and fire main phaser banks before he breaks through your shields.



BLACK HOLE

The ship's horizontal controls just can't compete. Jetison forward or prepare to meet the speed of light.



REPORT FROM ENGINEERING
You've blown your engines. Death usually follows this warning.

Level II 16K tape
from Adventure International

The user sets up a playing strategy of split, stand, double or hit decisions based on what cards were dealt to the player and the dealer. This strategy can be reviewed or modified for later tests. The user also sets up the playing rules used in different casinos. He chooses the number of games for the test run, the number of decks, the reshuffling point, and any cards to be deleted. The computer then goes to work, showing briefly the results of each deal, and giving the total results. Tests run at about 2000 games an hour. The test can be stopped during the run to display the current results. The strategy can be saved or loaded on tape to revise for the next time.

- 1 - REVIEW AND CHANGE STRATEGY CHARTS.
- 2 - LIST STRATEGY CHANGES MADE SINCE LAST RESET.
OPTION - SAVE REVISIONS ON TAPE.
- 3 - REVIEW QUIZ.
- 4 - HIGH SPEED TEST RUN.
- 5 - RESET BASIC STRATEGY.
OPTION - LOAD REVISIONS FROM TAPE.

— WHICH MODE?

These are the things you can do in this program. You can even save your strategy on tape if you feel it works best for you.

PLAYER PAIR	SEAL POUND									
	1	2	3	4	5	6	7	8	9	10
2	=	0	=	1	=	1	=	1	=	1
3	=	0	=	1	=	1	=	1	=	1
4	=	0	=	0	=	0	=	1	=	1
5	=	0	=	0	=	0	=	0	=	0
6	=	0	=	1	=	1	=	1	=	1
7	=	0	=	1	=	1	=	1	=	1
8	=	1	=	1	=	1	=	1	=	1
9	=	0	=	1	=	1	=	1	=	1
10	=	0	=	0	=	0	=	0	=	0

These are the strategy options in use right now. This strategy shows when to split a pair. There is a chance to change this strategy.

Level II 16K tape
from Adventure International

Dozens of versions of this program have been written. The original game has been very popular in Japan so it was adapted to personal computers. The original version is available for the Apple Computer by Creative Computing. If you are looking for a Level II version, SPACE COLONY is not a bad choice.

These are the instructions. The player may move from side to side under the blocks as well as shoot upward.

[illegible]

The space ships and creatures are descending. The player must shoot at them before they hit him or touch the blocks.



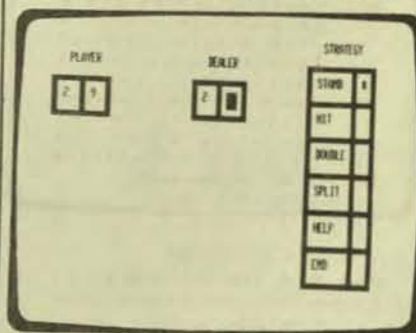
BLACKJACK MASTER
Level II 16K disk
from Hayden Book Co., Inc.

This program is written to let a player design his own Blackjack strategies and try them out. The program has a built-in strategy. The manual explains how the player can change the program to try different strategies. The playing or playing/betting sections ask how many hands are to be dealt. The screen shows how many of these hands were won or lost by the dealer and the player. The tutor section shows the hand dealt the player and one of the dealer's cards. The user enters the type of play he would make, for example, double, hit, stand, and so on. The screen then shows if this play was correct. If it was not, the correct play is shown. A score is kept of the percent of correct plays. The playing section allows the player to place bets on each hand and decide how to play that hand. The manual gives directions on how to save various strategies on the disk.

This program has one limitation. I do not like the idea of the player having to make extensive changes to the program's data statements. The manual includes filled-in worksheets showing how the data statements are made, and blank worksheets for the user/player. Even so, someone who does not know how to program may not be able to make the changes correctly. He may forget a comma, or have one too many. Any mistake and the player may not ever know what went wrong.

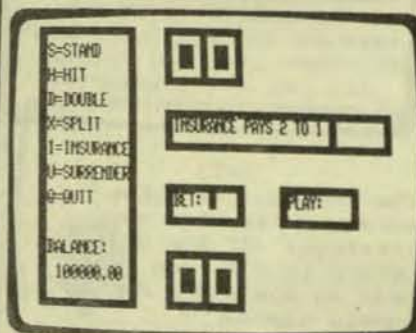
I can understand why this approach was taken. Since the program uses all of the 16K memory, it could not allow for extensive input of strategy. This way, the user has a written record of exactly what strategy he tried out. The tutor section then drills him in using it.

If you are going to compare blackjack strategy programs, **BLACKJACK MASTER** from Hayden Book Co. has a tutor section and a playing section. **THE AMAZING BLACKJACK MACHINE** from Adventure International does not, but it does allow inputting various strategies easily. Someone who can change a program would be ahead to buy **BLACKJACK MASTER**. Someone who cannot might prefer **THE AMAZING BLACKJACK MACHINE**.



LESSONS

This section of the program drills you on your playing strategy. Your cards are shown at the left and the dealer's face card in the middle. The strategies are listed on the right. You move the asterisk down to the correct answer.



THE GAME

This is the way the game is played. The player and dealer are dealt cards. You then choose what play you want to make from the choices at the left.

3/

PLAYING STRATEGY

DEALER	PLAYER
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	11
11	12
12	13
13	14
14	15
15	16
16	17
17	18
18	19
19	20
20	21
21	22

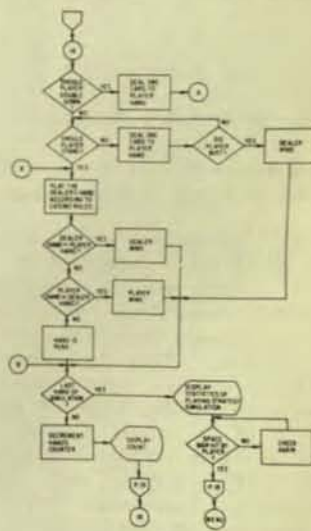
DEALER	PLAYER
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	11
11	12
12	13
13	14
14	15
15	16
16	17
17	18
18	19
19	20
20	21
21	22

DEALER	PLAYER
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	11
11	12
12	13
13	14
14	15
15	16
16	17
17	18
18	19
19	20
20	21
21	22

WORKSHEET

WORKSHEET

This is a Playing Strategy worksheet. It lets you decide your strategy and keep track of it. If the strategy does not win often enough, you can make out another strategy worksheet and try again.



FLOW CHART

The manual contains this "flow chart" to show how the program works.

PLAYING STRATEGY RESULTS

PLAYER						
WON	LOST	BUSTS	B/S	SPLITS	DOUBLES	
4	1	1	0	0	1	

DEALER						
WON	LOST	BUSTS	B/S	PUSHES	WINS	
1	4	3	0	0	5	

RESULTS

These are the playing strategy results after five hands. The player won 4 hands using this strategy.

The BLOCKS AUTHOR LANGUAGE System, the GRAPHICS LIBRARY, and all collateral programs from the California School for the Deaf, Fremont, may be ordered from:

SOFTSWAP
Microcomputer Center
San Mateo Co. Office of Education
333 Main Street
Redwood City, California 94063

This computer-assisted instruction software will be ready on January 1, 1982. Prices include the cost of the disks, postage, handling, and all appropriate documentation. All orders must be prepaid; no CODs or Purchase Orders can be processed. Purchasers outside the United States may need to provide an additional fee for postage. More detailed descriptions are available from SOFTSWAP.

Disk packets include:

BLOCKS - Containing seven disks, the BLOCKS AUTHOR, BLOCKS LESSON, CLASS DISK, BLOCKS LESSON SAMPLER, CSDF UTILITES, COPYCAT, and a GRAPHICS LIBRARY Demo Disk. Cost = \$70

GRAPHICS CREATION - Three programs, three disks, to be used to create and handle graphic images for use in the BLOCKS System. Includes EDU-PAINT, SHAPER, & PAINT CHIP. Cost = \$30

MATH I and MATH II - Two disks containing seventeen math and logic development programs suitable for a wide range of ages and abilities. Cost = \$20

GRAPHICS LIBRARY - The Library has been broken into six groups each containing four disks totalling more than one hundred images per group. For each group = \$30

Group 1: Symbols (51 images), Food (48), Cartoons (6), and Decorative Arts (5); total = 110 images

Group 2: Manual Communication, (54 images), Holidays (44), Earth Sciences (13), and Astronomy (2); total = 113

Group 3: Animals (53 images), Math (29), Time (21), and Plants (7); total = 110 images

Group 4: People, disks 1 and 2 (60 images), Applied Science (26), and Transportation (19); total = 105 images

Group 5: Tools, disks 1 and 2 (86 images), Recreation (20), and Buildings (4); total = 110 images

Group 6: Maps, disks 1, 2, and 3 (149 images) and Scenery (2); total = 151 images

This GRAPHICS LIBRARY now contains 699 images and is ready for you to add more images of your own. All six groups = \$180

STARDATE: 28

EXISTING GALACTICA

CARGO:

SILICATES: 2
FEELIES: 2
PLATES: 2

ENTER DESTINATION: DRASSA 2
ENTER PROPOSED CARGO WEIGHT: 1645

TOTAL WEIGHT = 1,655 MGS
X 8 MILLITS/MGS
EQUALS 13,240 MILLITS FUEL

ENTER =1= TO CHANGE DESTINATION
ENTER =2= TO CHANGE CARGO WEIGHT

FUEL CALCULATION

Before leaving for planet Drassa 2, you have to decide if you have enough gas.

STARDATE: 28

EXISTING DRASSA 2

CARGO:

SILICATES: 2
HEMPITES: 1
FEELIES: 1
PLATES: 2

DRASSA 2

OUR OFFER	THEIR OFFER
1 PLATES	1 HEMPITES
1 PLATES	1 MICROBES
1 SILICATES	1 FEELIES
1 SILICATES	1 MICROBES

CARGO: 082 CR
FUEL: 175 ML

WHAT WOULD YOU LIKE IN THERE, THEN?

DICKERING TIME

The folks on Drassa 2 are real star suckers. Don't let them sell you a bad microbe.

STARDATE: 28

COMPUTER CENTRAL REPORTING

DESTINATION: JAVINY
ESTIMATED ARRIVAL: STARDATE 30

CARGO: 082 CR
FUEL: 745 ML

JOURNEY TO JAVINY

You're off with your feelies and silicates for some brisk trade across the galaxy.

STARDATE: 29

EXISTING JAVINY

CARGO:

SILICATES: 2
HEMPITES: 2
FEELIES: 1
PLATES: 1

COMPUTER CENTRAL REPORTING

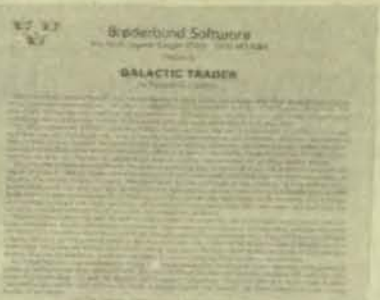
SHIP UNDER ATTACK

CARGO: 082 CR
FUEL: 792 ML

I'LL OFFER 10 MILLITS FOR THEM.
DO YOU ACCEPT?

DUMP CARGO

Unfriendlys are attacking your ship. Sell your junk and blast out of there.



GALACTIC EMPIRE
GALACTIC TRADER
GALACTIC REVOLUTION
Level II 16K tape
from Broderbund Software

GALACTIC EMPIRE is the first strategy game in a series. It takes place in the far future. You start from Galactica and try to gain military and manufacturing bases on other worlds. You may send scouts to other worlds, levy taxes, recruit new troops, and construct new vessels. You have the help of star maps and a planetary directory. The object of the game is to conquer and hold other worlds within a time limit. The game in progress may be stored on tape.

You first see the command console. From it you may call up the computer and look at star maps, ask for a planetary directory, and receive status reports on planets that you are orbiting or have scouted. When you look at the star maps, you may move your ship's marker to any of the planets and ask for their name. You may call up your officers for orders. Lt. Starbuck will send a scout ship to the system you select. Lt. Bayliss is responsible for construction of additional ships if you can afford them, enlisting soldiers, and taxing a planet's population after you have gained control of it. You may ask Navigator Kirman for the travel time to go to another planet. If you decide to go there, you return to the command console and order the ship to embark. When giving orders to your officers, Dr. Henderson will put your ship's crew in suspended animation if you have to orbit a planet for very long. When at the command

GALACTIC REVOLUTION
(C) 1988 DOUGLAS G. CARLSON
BOX 3294
EAGLEVILLE, IN 47840

SCORER: 100

NEW PLAYERS (1 TO 3)?

GAME BEGINS

1 to 3 people can play this game with players taking on various revolutionaries' identities.

CASH ON HAND: 18,548
ARMY: 19
SHIPS: 175
YOUR MANUFACTURERS CAN MAKE 10 ITEMS THIS YEAR.

SCORER: 100

NEW PARTY SHIPS DO YOU WANT?

MANUFACTURE WARSHIPS?

Du Buque (the good guy) must decide how many ships to build this turn.

SCORER: 100

NEGOTIATIONS
ADMINISTRATIVE ACTIONS
SANCTIONS

ROBBING THE PEASANTS

Tax the poor. Draft everyone. Start galactic war. In REVOLUTION you're the boss.

ALHAMBRA RELATIVE INFLUENCE

MANUFACTURERS: 100
MILITARY: 100
PEASANTS: 100
TRADERS: 100
BUREAUCRATS: 100

SCORER: 100

KNOXIA: 1 - ENTER NEXT SYSTEM OR 4 - RETURN

CANNON FODDER

Demographic surveys of different parties on Alhambra show too many peasants vs. soldiers.

console, you may order an attack on a hostile world.

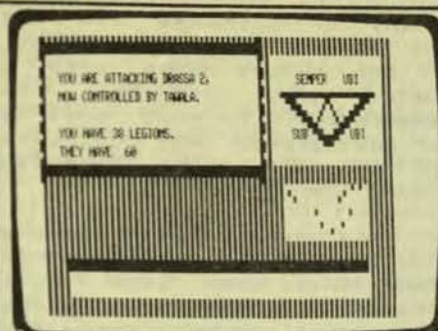
The game is a little slow since you must go through several commands for each step. To go to another planet, you must first press "O" for Orders. Then you press "K" for Navigator Kirman. Then you press the initial of the desired planet. Then you press "R" to return to the Orders mode. Then you press "R" to return to the command console. Then you press "E" to embark.

However, the game does require strategy to win over the planets. Some of the planets are more advanced than others. The more primitive planets are useful to raise money and manpower, but they cannot build more ships for you. Some planets are too advanced until you become stronger. The longer you wait to take over some of the planets, the more advanced they become -- but they may get too advanced. You must weigh all these factors and more when deciding on your strategy.

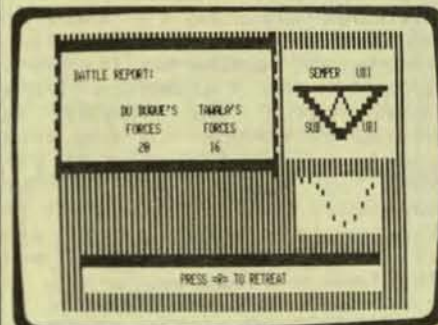
GALACTIC TRADER is the second strategy game in the series. You start with cash and a full tank of fuel and must buy merchandise. You then go to other worlds to trade. The object of the game is to make a profit on trading the merchandise within a time limit. Each world has different values for the goods. You must be sure you have enough fuel to get where you want to go. Fuel is needed, based on the distance and how much cargo you have. You can buy fuel or trade for it. If you run out in midspace, your ship is lost and the game is over.

This is a complex game with many rules. You may travel to most worlds only once. You should be careful what you trade for and where, in case you make a losing trade. The value of the goods varies on different worlds. You must figure out by experience many of the values.

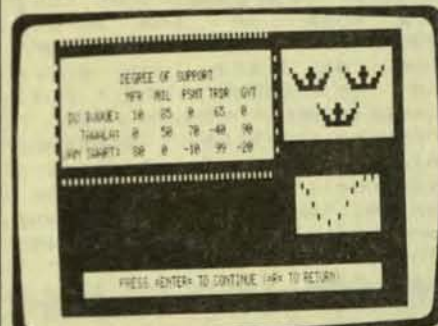
The computer is slow to accept a No or Yes or other



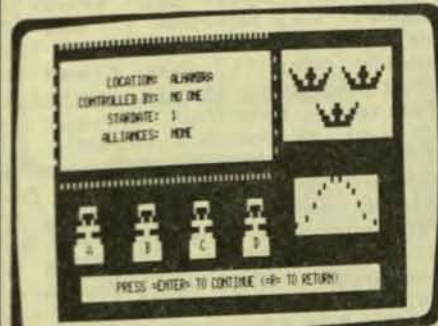
GALACTIC WINDMILLS
Attacking Drassa 2 with only 38 legions to the bad guy's 60 is a fool's cause.



SURPRISE!
The good guy's pulled through. Tawala's troops are biting space dust.



WHO OWNS WHO
A summary of who owns who displays "bought" officials and loyal peasants, etc.



EXPLOIT AWAY!
An unowned planet invites conquest and plunder in the name of the cause.

letter key. The instructions say that pressing the "Enter" key will speed this up but it is not vital. Each number must have the "Enter" key pressed, though.

This game is not quite so involved because you do not have to go through so many steps to take an action. Consequently, it is a little easier to play than GALACTIC EMPIRE in this respect. But it still requires complicated strategy.

GALACTIC REVOLUTION is the third strategy game in the series. It may be played by one to three players. Each player takes the part of one of the main characters in the scenario. Each of the three has control over several inhabited worlds and differing resources. These resources include credits, arms, troops and ships. You may offer to make an alliance with one of the other characters or may attack other worlds. You may travel to other worlds. If the world is independent, you may tax it as well as your own worlds, or make other changes for your benefit. You have the assistance of reports on your own and the other players' resources and worlds already controlled or independent. The rules and playing are complex. The object of the game is to win control over the 18 worlds of the system.

GALACTIC REVOLUTION has improvements over the earlier games. You have more help on the screen. You are told the keys to press for your choices so you don't have to refer so frequently to the instruction sheet. Also, the response to the pressed keys is quicker.

The games in the GALACTIC series are challenging because they are involved. These are games for someone who likes strategy. They are complex enough to remain challenging for quite a while. The versions reviewed here were early versions. Broderbund says they have had no reports of bugs in the games since July, 1980.



SEVEN-GAME PACK
Level II tape
from Britt Monk

This is a group of seven game programs. The age levels suggested are from children to adults. MISSILES starts at age 6, STAR TREK at age 8, and the others at age 12 or 14.

MISSILES VS. BOMBERS is a game written for a child to play. A row of numbered missiles or arrows are along the bottom of the screen. A bomber comes from the left side at random heights, going toward the right of the screen. As he passes overhead, he can drop down closer to the missiles or rise higher. He drops bombs at random on the missiles. The player holds down the number key representing the missile he wants to fire upward toward the bomber. This isn't as easy as it sounds. The bomber can change heights or speed. The player tries to second-guess if the bomber and the missile will be at the same place at the same time. The missiles are slow, and the key has to be held down at least one second before the missile will fire. In the meantime, the bomber may have moved past the missile.

The game of TANK TRAP could be a good one. The player's tank, various obstructions, and enemy land mines are inside a wall lined with enemy artillery. The enemy is firing at the tank. The player must destroy the enemy artillery. He can move his tank up,

down, or sideways and fire in those four directions. If the player moves onto a land mine, his tank is destroyed. He must destroy or move around any obstacles in his path so his fire can reach the enemy.

This game seems to have a few flaws. The instructions warn that your tank will frequently be hit by enemy fire until you learn the firing sequence. But when your tank is hit, the game doesn't give you a chance to start over. You must run the program again. And although nothing is said in the instructions, the tank can start moving on its own. Also, the graphics are confusing. The tank is placed at random in the area and is hard to spot. It can even be right next to an obstacle. There are lots of land mines shown, too, and it isn't easy to pick out the tank quickly.

DICE GAME is a gambling game. The player bets on the roll of dice. I'm not sure of the exact rules of this game. The printed instructions say the rules are shown on the screen. But when they are shown, they don't stay long enough to be read and fully understood. There is no "Press ENTER to Continue" nicety. The first page of instructions is shown for a while, then the second page, and then the third page. There is a chance later to read them again, but they do the same thing. It would be better if they just stayed put until they could be understood. The printed instructions do warn that nothing happens when you type "RUN" until you press a number key between 1 and 5 to select the odds. The screen doesn't even clear to indicate that it is waiting for you. Nothing!

DIGITAL MASTERMIND is a number guessing game. The player selects from 4 to 10 numbers to guess. The screen shows a row of X's to represent that many numbers. Under this row appears the number of the player's guess -- "1" for first guess, and so on. One at a time, under each X, the player types his guess of the correct number.

At the end of his row of guesses, he is shown how many numbers he has guessed right, and how many of them are under the right "X" or in sequence. At the end of each row of guesses, the player has the chance to give up and see the answers. This is not an easy game. But it is confusing because of the question marks for each number guess. It would also help if the X's were A, B, C, D.

CONNECT 4 is similar to Tic-Tac-Toe. But it is different. The object is to line up four markers in a row. Picture a row of seven test tubes in a rack. Each tube can hold seven marbles. The two players or the computer and the human have black or white marbles. First one and then the other drops a marble into a tube. The first marble goes all the way to the bottom, or the first row. The next marble in the same tube would be on the second row. And all the way to the top. The player tries to line up his marbles in a row of four -- across, up and down, or diagonally. The computer's moves are somewhat random, but it is possible to win. It isn't easy (I haven't figured out how to beat the computer yet). However, the computer can take up to 25 seconds to decide on its move.

Included in this package is a program called STAR TREK. Britt Monk in his instruction booklet describes the program as follows: "This is a video game that embodies most of the objectives of other "Star Trek" computer games, but is faster-paced, and more easily understood. The star ship Enterprise is on a five-hundred star date mission to explore the galaxy and destroy as many Klingon warships as possible, using friendly star bases to refuel."

From this description, you would think that this is a typical "Star Trek" game. Actually, it is quite similar to a "road race" program. It has no similarity to the traditional Star Trek games. The program itself is nice.

Another program is STAR FIGHTERS. The beginning action shows the player's six fighters on the right side of a nearly empty screen. The opposing six fighters are lined up on the left side of the screen. The player issues commands to his ships, one ship at a time. The commands can be for more than one thing -- to move, fire, or put up shields against enemy fire. After all the commands have been issued to all of the player's ships, the computer's ships move or fire one at a time. Then the player has another round of issuing commands. Each command to do anything counts as one point, or "energy unit," for that ship. It takes 16 "move" commands to move each ship from one side of the screen to the other. The player is allowed a total of 24 commands or energy units for each ship.

This game uses a "split screen". If one of the player's ships survives to reach the left side of the screen, the entire screen changes. It now shows the player's ship on the right again. On the left is part of a huge enemy transport ship. The player must fire at a certain part of this ship to destroy it and win the game.

The only problem with this game is that it is slow. There is no way to see the result of any action until after all the player's commands are given to all his ships. Then after a delay, the computer's ships each make their first move or fire. The player then enters all his commands for each of his surviving ships. And so on. Once the commands were given to the player's ships, I had the feeling the program had hung up. It just took a long time for a small blinking dot representing a missile to start going from one of the computer's ships toward my ships.

The programs in SEVEN-GAME PACK, such as STAR FIGHTERS, are nice programs

but not great programs. Most of the programs suffer from a lack of polish and lack of sophistication in the design. A trivial example of a lack of polish is the poorly laid out messages on the screen. Britt must have one of the old keyboards which produces extra spaces between words. Anyway, he didn't correct these minor typos. The rest of the programs have similar small annoyances.

The SEVEN-GAME PACK is a nice collection of simple programs. They would perhaps be better suited to a novice or amateur game player than someone who has long played computer games. Britt Monk is a talented programmer. In time I think he will be producing some excellent programs.

COMMANDER, GAMMA-RED STABFIGHTER SQUADRON

THE STAR TRANSPORT—AN ORANGE—IS DELIVERING FUEL AND SUPPLIES TO THE HOSTILE STAR FLEET AT SECTOR (1133,1219). WE WANT YOUR SQUADRON TO INTERCEPT AND DESTROY HER. SHE IS ARMED WITH ROBOT FIGHTERS, AND SHORT-RADIUS CYCLE-BEAMS. YOU MUST GET A STAR-FIGHTER THRU HER ROBOT DEFENSE AND OFF THE LEFT OF THE VIEWING SCREEN TO SEE AND DESTROY HER. HIT THE TARGETED '1' FIGURE TO PENETRATE HER SHIELDS.

GOOD LUCK,
SECTOR-GENERAL NAME

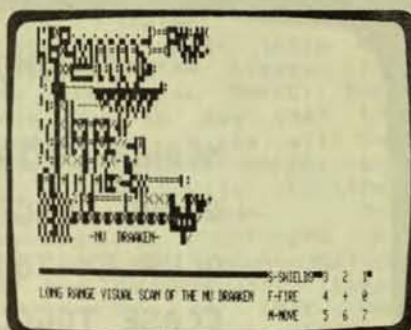
STAR FIGHTER

This is the mission in
"Star Fighter."

XCI-	-BC
XCI-	-BC
XCI-	-BC
XCI-	-BC
XCI-	-BC
XCI-	-BC
XCI-	-BC
<hr/>	
GROUND? S.	S-SIDE RD#3 2 P
	F-TIME 4 8
GARY COOPERATION OF C.M.F. IN CASE FOR HENRY IN-MOVE	5 6 7

FIGHTER SHIPS

The enemy ships are on the right and the player's ships are on the left. The numbers in the lower right corner are the directions the ships can fire or move.



TRANSPORT SHIP

This is the part of the huge transport ship which is shown on the left of the screen. If your ship survives to reach this screen, he may fire at it.

GUESSING GAME

THIS GAME IS PATTERNED AFTER A POPULAR 5-DIGIT ELECTRONIC GAME EXCEPT THAT WE ARE NOT LIMITED TO 5 DIGITS, BUT MAY USE FROM 1 TO 10 DIGITS, DEPENDING ON YOUR SKILL.

FIRST, YOU WILL CHOOSE THE NUMBER OF DIGITS THAT YOU DESIRE TO GUESS.

THEY WILL RESPOND TO THE PROMPTS(?) VERTICALLY BENEATH THE WISHED DIGITS(X). THE COMPUTER WILL TELL YOU HOW MANY DIGITS YOU GUESSED CORRECTLY, AND HOW MANY ARE IN SEQUENCE. FROM THESE NON-SPECIFIC CLUES YOU MUST USE LOGIC TO INDUCE THE ANSWER. DIGITS ARE INTEGERS, 0-9.

NOTE: EACH DIGIT CHOSEN BY THE COMPUTER IS UNIQUE, AND WILL BE IN THE NUMBER ONLY ONCE.

GUESSING GAME

This is the first part of the directions for "Digital Mastermind."

NAME	X	X	X	X	RIGHT	SEQUENCE
1	5	6	2	6	3	0
2	6	1	5	6	3	0

+ 3 2 5 2 2

DO YOU GIVE UP ("Y", OR "N")? NEVER

DIGITAL MASTERMIND

I am on the third row of guesses. I guessed three of the numbers right in my earlier guesses. None of those numbers were guessed in the right order.

Issue #12 contains a review of this program for the TRS-80 Model I, Level II, computer. After publication of that issue, we received a letter from Mr. Don Taylor of Express Marketing voicing his misgivings about our review. He first reminded us that although the program we reviewed was for the TRS-80 computer, the program is also available for the Apple II computer. We failed to mention this in the review and apologize for the oversight. You Apple II owners may also be interested in the program. Be sure to look at the review in Issue #12.

The copy of PSA/1 that we reviewed arrived on tape with a good instruction manual for using the program. The manual also included instructions for converting it to disk. Since we look at programs from the standpoint of a non-programmer, our review included as the next-to-last paragraph:

"A sheet comes with the program to show you how to modify the program into a disk version of the program. Instructions are not given as to how the cassette version stores and uses data from the tape. The program, as it is, will not work with disk BASIC. The tape write routines produce garbage. If you are a programmer you will know how to fix this with CMD"T".

Mr. Taylor had several comments about this particular paragraph and felt it might be misleading. We are reproducing his comments about this in full:

"First, it's true that we supply no information as to how the cassette version stores and retrieves data from the tape (neither do we do this with the disk version). The program is using the standard TRS-80 tape save routines (in loops, to cut down on the time-consuming leader-writing routines) to save memory arrays. The process is very straightforward."

"Second, the reviewer first states that an instruction sheet tells how to modify the program for use with disk BASIC, then goes on to say that the program as it is will not work with disk BASIC, and the tape write routines produce garbage. The implication (reinforced by the lack of recommendation to buy because of 'these problems') is that the program won't work with disk BASIC even after the recommended changes are made, and in any event, the tape routines won't work unless the purchaser is an expert programmer who knows how to fix it. Since this little bit of poor technical writing is going to cost me a great number of sales, let me set it straight: The tape write routines shipped with the program work, and WORK RELIABLY. I knew that many of the purchasers of PSA/1 would like to use it with their disk, and the TRS-80's little quirk of confusing the tape read/write routines when the real-time clock was running would cause much confusion. The result was a sheet that described modifications to the cassette version to convert it for disk operation. This sheet specifies changes that completely replace the tape read/save routines with DOS commands, and eliminate any concern with the real-time clock (and any need for the CMD"T" command). The program and the manual make no claim that the tape routines will work with the disk, and in fact describe in detail the modifications necessary to make the program work with DOS."

We hope that Mr. Taylor's explanation will help set the record straight.

PSA/1 PROJECT SCHEDULE ANALYSIS

from Express Marketing
P. O. Box 1736
Poulsbo, WA 98370

PSA/1 is a program designed to help schedule a complicated task. When a project becomes so complex that you cannot plan out the project in your head, you can use this program. The program uses a management tool called a PERT chart. Putting a PERT chart into the computer makes creating such a chart easier and it is faster to interpret the chart.



DEMO II Level II 4K and 16K tape from Instant Software

This is a demonstration cassette of simple games for the computer. It includes Tic-Tac-Toe, Time Trial, Maze, and Hangman for 4K memory. It includes Wheel of Fortune, Hurricane, Bugsy, and Horse Race for 16K memory.

It is not very often that we can bring you so many mediocre programs on a single cassette. I believe the idea was to publish a series of programs on just one cassette for a very low price. However, the quality of these programs is so mediocre that I do not recommend this cassette. Even simple programs should be well programmed. Even simple programs should be made easy-to-use. These programs fail almost every test of good programming. If you want such a demo, see the review of CLOAD magazine. CLOAD has simple programs which are usually well-written.

Hangman lets the user play the old game of guessing the letters in a word. It also lets the user select the word. If the word is too long, it is continued on the next line. It has several levels of difficulty. Also you can select your own word.

Bugsy is the old dice game to attach a head, legs, and a tail to a body. For a "fun game", this program is a little hard to use.

Hurricane lets the user enter his latitude and longitude, and the name, present location, direction of travel, and speed of a hurricane. The program then tells you if the hurricane is traveling in your direction and how soon, or if, it will reach you. It is better than some other similar programs because the messages are clearer.

Wheel of Fortune is a humorous game of roulette. The graphics are good and imitate the ball going around a circle and numbers appearing. The game lets the player cheat with a rigged wheel or play a straight wheel. The comments are funny - particularly when the player is playing the rigged wheel. After about three plays on the rigged wheel, the player wins the casino and is given a deed to it. This game is the saving grace of the programs.

*** HURRICANE LOCATION AND DISTANCE CALCULATOR ***

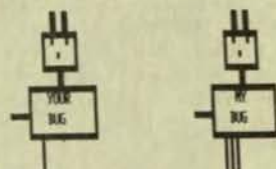
```

=====
HURRICANE JEAN IS CURRENTLY 911 MILES SOUTHEAST OF
NEW ORLEANS. BEARING FROM NEW ORLEANS
IS 110 DEGREES FROM TRUE NORTH.
=====
IF HURRICANE JEAN MAINTAINS HER CURRENT SPEED OF 40
MILES PER HOUR AND DIRECTION OF 30 DEGREES FROM TRUE NORTH
THERE IS NO CAUSE FOR ALARM. PLEASE CONTINUE TO MONITOR
HURRICANE JEAN CLOSELY.
=====

```

PRESS ENTER TO INPUT NEW STATUS ON HURRICANE JEAN.

HURRICANE INFORMATION

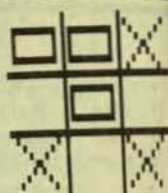


YOU ROLLED A 1
1-BODY YOU DON'T NEED A BODY
1 ROLLED A 5
5-TAIL I DON'T NEED A TAIL

1 TO ROLL, 2 NEW GAME?

BUGSY

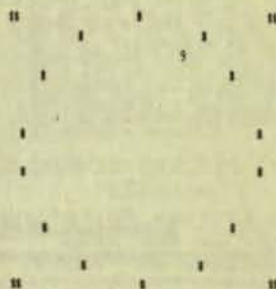
These are the bugs after one player has won a head, tail, and one leg. The other player has won a head, tail, and three legs. But why is the tail on a side instead of opposite the head? It's an awfully funny bug.



ENTER NUMBER OF YOUR MOVE (1-9)?

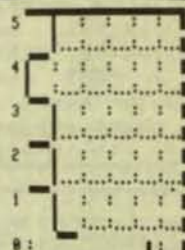
TIC-TAC-TOE

It is the player's turn to enter his move.



WHEEL OF FORTUNE

This is the roulette wheel. The ball is stopped on Number 9.



MAZE

Robert has found the hidden block in the maze and has won.

*** HANGMAN ***

MISSSES LEFT: 1

ENTER NEXT GUESS

I _ L _ A _ N _ D
A E I N L C O U D U

HANGMAN

The word was guessed correctly. Now there is a chance to try again.

1. ENROLL STUDENTS.
2. LOOK AT A STUDENT ROSTER.
3. ENTER A NEW SPELLING LIST
4. GET A REPORT ON STUDENT PROGRESS.
5. CREATE A NEW STUDENT DISK.
6. CORRECT STUDENT RECORDS OR PERHAPS
RECOVER FROM A CLOBBERED DISK.
7. QUIT.

from Cook's Computer Company

DRILL II is a practice and drill program for 5th grade students. It covers addition, subtraction, multiplication, and speed reading (spelling).

Picture 1 shows the main menu for the teacher's disk while picture 2 has the menu for the students' disk. The teacher uses both the teacher's disk and the students' disk to prepare for the students. However, the students need only the one, totally automatic, disk. Before a student can use the drill, he or she must be listed in the roster for that particular exercise. Pictures 3 and 4 show how a student is added to the roster for the addition drill. The teacher can then review any of the four rosters. A typical roster is shown in picture 5. The math drills are a fixed set of random problems. They do not appear to vary based on the level of the student. However, the speed reading/spelling drill can be varied and must be entered by the teacher on the students' disk. Preparing a spelling drill is done with a special program shown in picture 6.

A teacher may want to use more than one student disk. Additional student disks are created by a special program. Part of this procedure is shown in picture 7. Another option is supposed to recover "clobbered" disks (see picture 8).

For a student to use the drill, he or she boots the disk and selects the type of drill to be used. A typical math drill is shown in picture 9. The spelling drill is actually a speed reading drill where the student types the words after they are flashed on the screen. The scores are recorded so that the instructor can check on a student's progress. In picture 10, the program tells the teacher how each student has done on the spelling drill.

PROGRAM BUILDS A SPELLING
ON FIVE WORDS WILL
CHOOSE THE FIRST STUDENTS WHEN
USE THE **INFINITY** PROGRAM

HOW MANY WORDS WILL ON YOUR LIST 718

ENTER WORD NUMBER 22 ORGANIC
ENTER WORD NUMBER 23 CORRECTLY
ENTER WORD NUMBER 24 SYSTEMATIC
ENTER WORD NUMBER 25 CONSIGN
ENTER WORD NUMBER 26 CONSERVE
ENTER WORD NUMBER 27 CONSERVE
ENTER WORD NUMBER 28 INFIRMITY
ENTER WORD NUMBER 29 INFIRMITY
ENTER WORD NUMBER 30 PRECESSION
ENTER WORD NUMBER 77

4554

1 MULTIPLICATION
2 ADDITION
3 SUBTRACTION
4 SPELLING

THIS PROGRAM ENROLLS STUDENTS FOR
ANY ONE OF SEVERAL DRILL AND
PRACTICE PROGRAMS.

DO YOU WANT TO ENROLL STUDENTS
FOR ADDITION, SUBTRACTION,
MULTIPLICATION, OR SPELLING?

FIRST NAME LAST NAME STUDENT NUMBER

LATTER CHRIS
LATTER CHRIS
LATTER CHRIS
LATTER CHRIS
SMITH BEVERLY
JOHNSON MARY ANN
FURBER ROBERT

HOW MANY NAMES DO YOU WISH TO ADD?

STUDENT NUMBER 6
NAME JOHN E
CORRECT 7Y
NAME JOHN E
CORRECT 7Y

ROSTER

CHRIS	LATTER
CHRIS	LATTER
SEVERLY	SMITH
MARY ANN	DOBSON
ROBERT	FURGER
JOHN	WHITE
STEVE	MATILICH
DAVID	FOX
STEVEN	NORTH
PAUL	ALBERTS

THAT COMPLETES THE ROSTER
PRESS ANY KEY TO CONTINUE

DIRECTIONS TO CREATE A NEW STUDENT DISK

IF YOU ARE FAMILIAR WITH LOADING
RUNNING AND SAVING PROGRAMS ON THE
APPLE, IT WILL BE EASIER TO CREATE
A STUDENT DISK BY DIRECTIONS.

IF THE ABOVE LOOKS HARD, IT WILL
BE EASIER TO FOLLOW A PROGRAM WHICH
TAKES STEPS ONE AT A TIME.

TYPE *D* IF YOU WANT DIRECTIONS.

TYPE *P* IF YOU WANT TO FOLLOW A PROGRAM

THIS MAY NOT WORK!

A DISK IS "CLOBBEED" WHEN THE
MAGNETIC RECORDING ON IT IS IN DISARRAY.

THIS OFTEN OCCURS WHEN THE "RESET" KEY
IS PRESSED WHILE THE APPLE IS RECORDING
INFORMATION ON THE DISK

IF ONLY THE STUDENT RECORDS WERE
RUINED, THIS WILL WORK.

IF NOT -- GO BACK TO THE MENU,
CREATE A NEW STUDENT DISK, AND
RETURN TO THIS PROGRAM.

RETURN TO THIS PROGRAM
PRESS ANY KEY TO CONTINUE

THIS IS DAY 1
YOU WILL HAVE SIX (6) MINUTES
TO GET AS MANY ADDITION
FACTS AS YOU CAN. YOUR TIME
STARTS WHEN YOU STRIKE THE FIRST
KEY. GOOD LUCK, CARL!

$$\begin{array}{r} 2 \\ 5 \\ 00PS \\ 8 \end{array} \begin{array}{r} + \\ + \\ + \\ + \end{array} \begin{array}{r} 2 \\ 2 \\ 1 \\ 2 \end{array} \begin{array}{r} = \\ = \\ = \\ = \end{array} \begin{array}{r} 4 \\ \\ \\ \end{array}$$

BEVERLY BLANCHFIELD

ORGANIC DAY 2 MISSED 1
SYSTEMATIC DAY 2 MISSED 1
CONSIGN DAY 1 MISSED 2
INFIRMITY DAY 1 MISSED 3 DAY 2 MISSED 3
SEX DAY 2 MISSED 1
SIN DAY 1 MISSED 6 DAY 2 MISSED 1
PRESS RETURN TO CONTINUE 20



STOCK MARKET GAME
Level II 16K tape
from Acorn Software
Products, Inc

STOCK MARKET GAME is a game for one to four players. Each player starts with \$5,000 to buy stock. The game covers a one to 25 year period. The beginning price of each of the ten stocks listed is \$100 and changes during the game. The computer decides at random if it will be a bull or a bear year on the stock market. The computer also decides if a special news item will affect the price of a particular stock. The computer flashes these messages on the screen.

The player's portfolio is shown on the screen. He selects which stocks he wishes to buy. The computer then gives a summary of the year's market on the ten stocks. It next gives the messages about the next year's market. It again shows the player's portfolio, his total cash

including dividends from the stock, and the total book value of his stock. The player can now make the year's changes in his stock.

He can buy on margin at 12% interest if he already has stock. If the price of a stock reached \$150 a share, it is split 2 for 1. If it dropped to 0, the player has lost his stock. However, the next year the stock price goes back to \$100, and the player can buy it again.

After each year's trading by the players, the computer gives a summary of the stock prices up to the current year. If the game is for more than ten years, it gives a summary for the latest ten years. The player who amassed the largest value of stock is the winner.

This game is for a speed reader. The bull or bear market conditions and an event affecting a particular stock stay on the screen only a short time. The summary chart stays on the screen only a short time. It is especially difficult to try to read a chart of ten stocks for ten years when the headings don't line up with the rest of the columns.

Our reviewer comments: "I think the author is trying a new technique which is not very effective. The input for the number of shares to be bought or sold uses a period to enter the data instead of the ENTER key, and a slash instead of the left arrow key to correct the entry. If the player is selling stock, he enters a minus in front of his figure. It is faster to make the entries for buying or selling, but confusing. The program allows the player to make more changes by asking if he has completed his portfolio adjustments. This calls for the normal YES/NO answer and pressing the ENTER key.

Although THE STOCK EXCHANGE from Micro-Fantastic is frustrating in its delays, it is more challenging than STOCK MARKET GAME from Acorn Software.

100 YEARLY PRICES 000

	1	2	3	4	5	6	7	8	9	10
MY CITY BOND	100	100	100	100	100	100	100	100	100	100
TANDY CORP	94	115	109	104	106	100	100	118	131	
METRO RAIL	102	132	135	77	00	93	120	79		
JOHNSTON FUND	105	130	110	129	117	105	107	132		
CITY MORTGAGE	85	100	90	101	94	87	99	114		
GULF OIL	130	82	106	121	145	04	64	99		
GREYHOUND	108	138	143	131	136	141	01	111		
FORD MOTOR	107	139	145	147	76	82	109	75		
MC BEERS BOTT	105	136	125	133	122	111	105	136		
DELMARVA PUL	97	111	114	109	98	101	130	144		

PRICES

The average prices for the last ten years are listed for the ten stocks. The * beside a figure shows that the stock was split.

100 POSITIONS 000

YEAR 2	STV	PREV	PREP	SHARES HELD
MY CITY BOND	52	100	100	100
TANDY CORP	12	94	115	5
METRO RAIL	—	102	132	5
JOHNSTON FUND	42	105	130	8
CITY MORTGAGE	72	85	100	6
GULF OIL	—	130	82	16
GREYHOUND	—	108	138	4
FORD MOTOR	22	107	139	6
MC BEERS BOTT	62	105	136	7
DELMARVA PUL	32	97	111	8

PAPER VALUE = \$ 793

BOD—YOU HAVE \$ 1425 IN YOUR ACCOUNT

POSITIONS

It is the 2nd year. I have bought a total of 65 shares of these ten stocks. Now I have a chance to buy or sell each one.



go to the order room to buy or sell stocks. In the meantime, the prices may change.

When he buys or sells stock, the stocks are listed one at a time on the screen. The buyer must first type the shares of this stock he wants to buy, or press ENTER if he doesn't want to buy. He must then type the shares he wants to sell, or press ENTER. This is repeated for each of the ten stocks.

The procedure for buying long or short is confusing. You are given the opportunity to do all sorts of illegal actions. Yet the computer will only accept certain transactions. If you buy long when you have already sold short the computer ignores you without printing any error messages. If the computer is doing this type of error checking, it should have not asked you if you wanted to make an illegal move to begin with.

After the player is through buying or selling stocks, he cannot go directly to the market listing. He must first review his portfolio of stocks.

At the end of the playing time, the player may choose to continue with another day's trading. If he does, his portfolio stays the same. If he does not, the game ends.

THE STOCK EXCHANGE could be a challenging game for those interested in the stock market. It is a good way to win or lose a pretended fortune on the computer's screen. However, the time delays would be frustrating if two players were trying to beat each other.

STOCK	PRICE	SHARES HELD	BUY ORDER	SELL ORDER
IBM	382.875	300	?	?
ITC	26.25	100	?	?
HEM	61.75	100	?	?
PRD	57.125	100	?	?
CBS	46.875	100	?	?
AMD	8.25	100	?	?
ROM	18.25	100	?	?
APR	12.875	100	?	?
PLN	9.625	100	?	?
TAM	24.25	100	?	?

STOCK MARKET

The stock market is down 1.12 points from the previous day's trading. The present Dow Jones Index stands at 879.52. The current prices of the ten stocks are given.

STOCK	LAST	HIGH	LOW	PREV. CLOSE
IBM	382.875	383.75	382.75	383
ITC	26.25	26.625	26.25	26.5
HEM	61.75	62.5	61.75	62.75
PRD	57.125	57.875	57	58.25
CBS	46.875	48.125	46.875	48
AMD	8.25	8.625	8.25	8.75
ROM	18.25	19	18.25	18.25
APR	12.875	13.5	12.875	13.5
PLN	9.625	9.75	9.375	9.25
TAM	24.25	24.5	24.25	24.75

M: MARKET P: PORTFOLIO

SUMMARY

The market is down a little more. These are the day's highs and lows. The previous closing prices and the last price are also shown.

ROBERT'S PORTFOLIO				
CASH AVAILABLE		56,773.40		
TOTAL ASSETS		56,823.99		
STOCK	SHARES	TL. COST	NET VALUE	CHG. PCT/ASS
IBM	100	31051.30	31468.00	-28.65
ITC	100	2644.30	2688.00	-4.30
HEM	100	602.00	595.00	-7.98
PRD	100	5634.50	6325.00	-69.58
CBS	100	8.00	8.00	11.63
AMD	100	-81.26	-185.00	-23.74
ROM	100	8.00	8.00	46.32
APR	100	65.34	55.00	-16.34
PLN	100	48.05	32.50	-32.47
TAM	100	123.67	127.50	4.40

M: MARKET, L: LONG, S: SHORT

PORTFOLIO

I have over \$58,000 left in cash which I can invest in more stocks. This shows the present value of all my stocks. It also shows the profit or loss since I bought them.

ROBERT'S CASH AVAILABLE: 46,721.10 LONG 4%				
STOCK	PRICE	CHARGE	SHARES HELD	BUY ORDER
IBM	382.875	1.125	95	?
ITC	26	.625	100	?
HEM	58.5	.625	100	?
PRD	62.25	.375	100	?
CBS	46.875	1.125	100	?
AMD	18.5	1.125	100	?
ROM	14.625	.125	100	?
APR	11	.625	100	?
PLN	18.5	.375	15	?
TAM	25.5	.375	15	?

L: LONG, S: SHORT, P: PORTFOLIO

BUY OR SELL

I have already looked at my portfolio. Now I can buy or sell some shares of the stocks. Next I have to look at the portfolio again before I can see what the market is doing.

THE STOCK EXCHANGE

Level II 16K tape
from Micro-Fantastic
Programming

THE STOCK EXCHANGE is a simulation game for one or two players. The player or players start with \$100,000 cash with which to buy stock. Ten stocks are tracked by the computer. The market is open for 6 hours, and the time changes every two minutes. This is about 4 seconds in real time.

The player watches the list of stock prices change as the Dow Jones Industrial Index goes higher or lower. When he thinks the time is right, he looks at his portfolio and decides whether to buy or sell stock. He may also sell short or cover the short by buying back the stock. He is charged a commission each time he buys or sells. He looks at his portfolio again and then can go back to the market listing. From the market listing, the player can also look at a summary of the stocks and their price changes.

Occasionally, a news item will cross the bottom of the screen on the ticker tape. This may influence the price of a stock. The stock prices tend to follow the DJII but the price of some of the stocks fluctuates even more.

The game can be frustrating. When watching the market listing, the player must wait for all the stock prices to change before he can look at his portfolio. He must look at his portfolio before he can



DDT DISC DRIVE TIMER
Level II 32K disk
from Disco-Tech/Morton
Technologies Inc.

This is a program to check the speed on disc drives to make sure it is right. If the speed is wrong, there will be problems loading or saving on the disc. The program comes with a reference manual giving good directions on using the program. The program runs the disc drive and then displays the speed of the drive, the percent of error from the ideal 300 revolutions per minute, and whether the drive is too fast or too slow. If the speed is off, the manual explains how to remove the cover from the disc drive and find the motor speed adjustment screw. An option in the program runs the drive and displays a small blip moving below a numbered scale. This shows the exact speed of the drive. The user turns the small screw until the blip is at or very close to the 300 RPM mark.

The only tools needed with this program are a screwdriver to remove the cover, and a very tiny screwdriver to turn the adjustment screw. The manual is very explicit except in one area. It does not show with a diagram exactly where the adjustment screw is.

WARNING: Don't try to adjust the speed of your drives unless you know where the adjustment screw is. Get someone who knows what they are doing to show you exactly which screw to turn.

For example, the Vista disk drives have another little box with a screw in it. To an amateur, this looks like it could be the right screw. It isn't! (Editor's Note: After the reviewer found out the right screw to turn, she bought her own personal copy of this program. She says she wants to sleep easy at night, knowing the speed of her drives is right.)

0000 DISCO-TECH (TM) DDT 0000

LIST OF FUNCTIONS

- A - ANALYZE MOTOR SPEED OF ALL DISC DRIVES
- D - ANALYZE MOTOR SPEED OF ONE DISC DRIVE
- G - GRAPHIC DISPLAY OF MOTOR SPEED OF ONE DISC DRIVE
- X - EXIT FROM THIS PROGRAM
- L - DISPLAY THIS LIST

FUNCTION (TYPE 'L' FOR A LIST) -

FUNCTIONS

This program will do all these things.

0000 DISCO-TECH (TM) DDT 0000

MOTOR SPEED ANALYSIS

DRIVE 0 - TOO FAST	DRIVE 1 - TOO FAST
SPEED (RPM).....283.2	SPEED (RPM).....284.8
ERROR FROM 300 RPM.....2 1.1	ERROR FROM 300 RPM.....2 1.6

FUNCTION (TYPE 'L' FOR A LIST) -

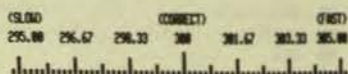
RESULTS

Both drives are too fast.

0000 DISCO-TECH (TM) DDT 0000

GRAPHIC DISPLAY OF MOTOR SPEED (HOLD DOWN ANY KEY TO RETURN TO FUNCTION LIST.)

DRIVE NO.: 0 RPM RANGE: 10
EACH MARK REPRESENTS 0.17 RPM



SPEED

The motor speed is shown by the little dot under the scale. It moves if the speed changes.



STAR TREK 3.5
Level II 16K tape
from Adventure International

This version of the spaceship game includes sound effects and faster action time. The mission of the Star Ship Enterprise is to gather information about Omega VI, an unexplored area of space. This includes locating planets and orbiting them. The ship must also avoid some deadly areas in this region.

Another part of his mission is to stop a Klingon invasion of the area by destroying their warships. The commander of the ship has the help of reports about the ship's condition and scanner reports about other areas of space. The mission has a time limit.

This program was written by Lance Micklus. This is a name I have heard of for a long time. After seeing a few of his programs, I have come to a disappointing conclusion. Even though his programs are better than average, I have yet to see one which is outstanding. The most annoying feature of his programs is the lack of regard for non-programmers. Perhaps he has been programming so long that he does not realize that non-programmers like to use computers too. One of the obvious features is the ending of his programs. They just die. You are not asked if you want to play again. Instead all you see is >READY. This is typical of the lack of conveniences in his programs.

A well-written program requires a minimum of key-strokes to use. Lance Micklus often requires you to hit two keys when one would do. I see no reason for this. He is obviously a good programmer but poor on human interaction and design.

ENTERPRISE AND CREW
AWAITING YOUR ORDERS, CAPTAIN.

- 0 STATUS
- 1 DAMAGE CONTROL
- 2 SCIENCE COMPUTER
- 3 SHIP'S COMPUTER
- 4 LR SENSORS
- 5 SR SENSORS
- 6 IMPULSE ENGINES
- 7 WARP DRIVE
- 8 PHASERS
- 9 PHOTON TORPEDOES
- 10 ALERT
- 11 REPAIR

ORDERS? _

ORDERS

These are all the orders you can give. You can look at a status report or reports on parts of the ship.

6	7	8	
WED	WED	UNDEMAN QUADRANT	1
WED	18885272	UNDEMAN QUADRANT	2 6
UNDEMAN QUADRANT	UNDEMAN QUADRANT	UNDEMAN QUADRANT	3
WED	WED	UNDEMAN QUADRANT	1
WED	STAR FLEET HQ	UNDEMAN QUADRANT	2 7
UNDEMAN QUADRANT	UNDEMAN QUADRANT	UNDEMAN QUADRANT	3
UNDEMAN QUADRANT	UNDEMAN QUADRANT	UNDEMAN QUADRANT	1
UNDEMAN QUADRANT	UNDEMAN QUADRANT	UNDEMAN QUADRANT	2 8
UNDEMAN QUADRANT	UNDEMAN QUADRANT	UNDEMAN QUADRANT	3

LONG RANGE SENSOR SCAN QUADRANT 7 7 2
(ENTER) TO CONTINUE. >7<

LONG RANGE SCAN

The report of the nearby quadrants looks like this. Most of the quadrants are still unexplored.

ON STARBORD 225.15, AFTER FLYING INTO A LARGE BLACK HOLE,
THE ENTERPRISE & CREW WERE LOST TO SPACE.

READY
3.

GAME'S END

We flew into a black hole and the game ended. To continue the program you must type "RUN" and press Enter.

TYPING

Apple II disk
from Cook's Computer Company

This program is designed to provide drills to help the user become more accustomed to touch-typing. The home-base letter section provides practice on the home row keys. The words section provides practice in short words. The phrases section allows practice of two-word phrases. These sections keep track of accuracy and speed. The section on finger placement shows a picture of the Apple's keyboard and flashes those keys to be used by each finger.

The section on speed asks that the user copy a paragraph from other material. It sounds a beep as the typist approaches the end of the line. The typist then presses RETURN to go to the next line. At the end of the paragraph, the typist presses the ESCAPE key. The computer shows how many times each key is typed, the hesitation time before pressing that key, and the total words per minute. The computer cannot check for accuracy since the typist is not copying its material.

TYPING from Cook's Computer Co. provides two-word phrases to copy and practice that make sense. The practice paragraphs in Microsoft's TYPING TUTOR are strings of words at random. Microsoft's TYPING TUTOR provides material to copy and test for accuracy and speed. TYPING from Cook's Computer Co. does not, and can only check for speed. Fast typists aren't much good unless they are also accurate.

Another reviewer said, "TYPING DRILL is a misnomer. APPLE KEYBOARD TYPING is a more accurate title. The program flows very smoothly except that any time you change drills, you have to see the title of the program again, a minor inconvenience. Actually, it is simple to use. The instructions are adequate. Finger placement charts are graphically displayed on the screen. There is no manual to my knowledge. But I did not find that a hindrance at

all to using the program."

"The section on speed works like this. You supply your own text. When you strike your first key, the machine starts timing you. It warns you when you are approaching the end of a line by a beeping sound. When you complete the document, you hit escape and it stops the timing. It then gives you a run-down on which keys you took the longest to hit. Actually, it lists every key available and exactly how long you took to hit each key. Then it gives you a words-per-minute average."

"In the section titled 'Words', you are given a choice of 3-letter words, left-handed words, right-handed words, numbers, or just specific letters to drill on."

In this issue, I am reviewing three typing programs. The typing program from Instant Software is dreadful. The typing program from Microsoft is fantastic. This program, TYPING, is somewhere in between. I like some of its features. Much of the programming is excellent. Yet, the program as a whole is by no means as good as TYPING TUTOR from Microsoft.

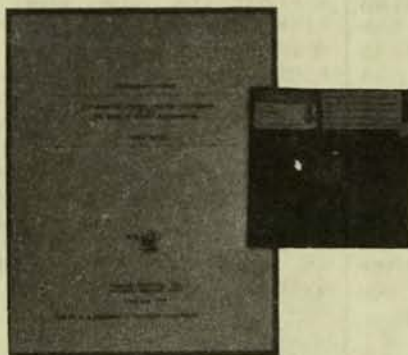
USE

TYPE THE WORD THEN PRESS THE SPACE BAR
TYPE 'Q' TO QUIT
USE

Q, T, H
C
Q, COMMA
7
7
0
LETTER WORDS
LEFT HAND WORDS {1}
RIGHT HAND WORDS {2}
BASIC WORDS

(A-57) 1

SYNTAX ERROR
BREAK IN 2060



CAIWARE-2D Version 9.
Level II 16K disk
SUPER-CAI Version 22
CAIWARE Version 20
Level II 16K tape
from MicroGnome

These Computer Assisted Instruction (CAI) programs are designed to help teachers make up tests. These tests are then used by the students on a computer.

The tests can be true/false, multiple choice, fill in the blank, or completion. The teacher enters the questions and the correct answers or key words which must be in the answers.

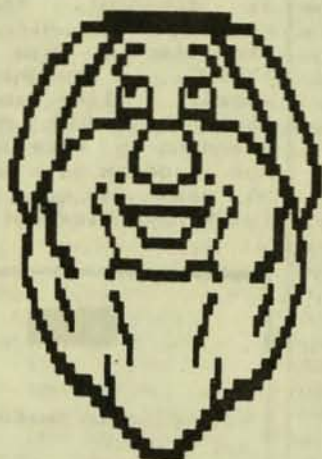
The teacher can tailor each part of the test to fit his special needs. He can identify instructional text that may be skipped if the student has answered earlier questions correctly. He can prepare detailed questions, and specify which ones can be skipped in a general or intermediate review. The student knows after he or she answers each question if the answer is right or not. After a wrong answer, the student is given a certain number of tries before the right answer is shown. The computer keeps track of the total number of questions tried, the attempts, and points given for a right answer on the first try.

The tape version of SUPER-CAI allows the tests to be saved on tape in a compressed format so the tape can hold more. It also allows updating an old test. CAIWARE-2D is the disk version of this program. None of the programs will work yet with the Radio Shack upper/lower case modification.

Believing that teachers are the best judges of educational programs, we contacted teachers who had purchased CAIWARE. Here is what they told us:

From Tempe, Arizona

This reader uses CAIWARE on Disk to build university tutorial programs by the authoring capability, and to show school teachers a valuable type of microcomputer software available for their use. He uses it for about a week at a time, as often as about once a month. He rates it good in using the full capabilities of his computer and in using graphics. He rates it excellent in ease of use and in the subject matter's having been well written and researched.



HELLO!
I AM THE MICROGNOME.

He likes it because it gives the educator a great range of tutorial authoring capability for a microcomputer. However, the user is apparently having to help get the bugs out in a few instances. He says, "All in all, CAIWARE is a great contribution to educational software, perhaps the greatest to date for microcomputers."

From Sweet Briar, Virginia

"I have MicroGnome but found it so cumbersome to use tape cassettes that I have given up. Now that we have one TRS-80 with 2 disk drives, I am sorry not to have got the program in that form. We are using the Perception and Cognition Laboratory for disk. I find so far that it is very effective."

From Tempe, Arizona

This reader uses MicroGnome as an educational program. Students are assigned units of study in their course. These units are broken down into smaller sections. They write instructional programs to help other students learn the material more effectively. So they are writing their own instructional programs using CAIWARE system. The reader says they use the program daily, and that students use it an hour a day. He rates it good in using the full capabilities of the computer and in the author language having been well written and researched. He rates it excellent in ease of use. He rates the graphics as not used at all.

He likes the program because students can easily write their own study program which other students can use the following semester. However, it needs more room for essay type answers. The class they are writing programs for is Speech Pathology.

From Corpus Christi, Texas

This reader uses CAIWARE for educational purposes in preparing instructional tapes for many different classes in a religious school. He uses it two or three times a week, for three or four hours a session. He rates it excellent in using the full capabilities of his computer, in ease of use, and in having been well written and researched. He rates the graphics as not used. He likes the program because of the ability to create and use question and answer tapes for students which are ideally tied to each student's learning level.

He comments: "Constantly improving! One should definitely be on the subscription program. If one purchases this system then I heartily recommend 'SuperCAI',

giving the user the ability to change screens, review data tapes and copy data tapes. Also, the subscription plan is very worthwhile, as Donald Coyne (the author) is constantly upgrading and improving the system. MicroGnome is the best C.A.I. system on the market for the TRS-80. It has my complete support and recommendation."

From Carbondale, Colorado

This reader does not recommend CAIWARE. When asked how he used the program, he said "As a paper weight!" He uses the program for "5 nanoseconds" at a time. He rates it poor in using the full capabilities of his computer and in ease of use. He rates it fair in the use of graphics. He says the subject matter was not well written and researched -- it has bugs. He likes nothing about the program.

He comments: "A program of this nature should have been fully debugged before being sold to unsuspecting consumers. If not debugged, then they should have at least had the courtesy to support their own software. After attempting to use the software and giving up on it, I received a notice from MicroGnome that I was welcome to obtain the fixes for a price. For a summer job I write business programs. Would it make sense for me to turn the programs over to my clients, and then when they discovered they didn't work I could charge them an additional fee to fix the bugs!! I have used lots of the currently available software and out of all of it CAIWARE is at the bottom of the list. It's interesting that MicroGnome is willing to give out my name but isn't willing to support their own software."

From Chicago, Illinois

This reader sums up Computer Assisted Instruction:

"I try to introduce my elementary education students to many different programs. We discuss how each program might be used -- and then, what modifications or minor adjustments might be made to the listing so as to increase the flexibility and usefulness of the program in classroom settings. Most software are acceptable from the computer science/programming point of view but lack sufficient educational/curricular expertise. Thus, instructions are written at too difficult a reading level. Activities wind up being no more than fill-in's or multiple choice with some kind of "flashing" graphics that actually interfere with learning, etc. So far, most CAI-Ware is, at best, fair to inadequate. Perhaps before better quality CAI-Ware can be achieved, some curricular design principles about microprocessor software need to be established."

The Marin Computer Center, 50 El Camino Drive, Corte Madera, CA 94925, phone (415) 924-1955, has been helping us very much in reviewing games. The kids that go there fill out a game review sheet each time they play one of the games. The following is the information the Marin Computer Center and our readers have provided us with during the last three months.

The meanings of the different columns are:

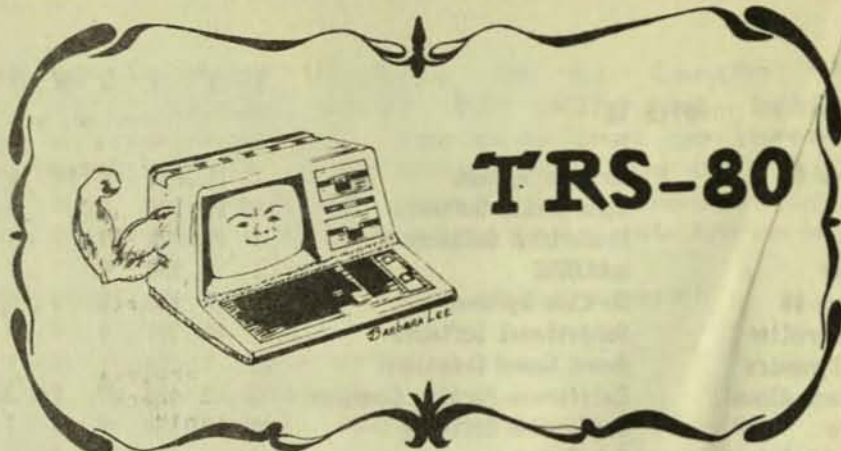
- # Number of review sheets
- 1. Level of challenge
- 2. Level of interest (average minutes played)
- 3. Ease of use
- 4. Originality and creativity
- 5. Educational value
- 6. Program polish
- 7. Program documentation
- 8. Special Features
- 9. Overall Value

LEVEL II

		#	1	2	3	4	5	6	7	8	9
Deathlon	Microsoft	1	10	180	9	10	8	10	9	10	10
Galaxy Invasion	Big Five Software	3	7	220	9	7	2	9	10	10	9
Dancing Demon	Radio Shack	3	5	70	8	10	8	9	8	10	9
Pinball	Acorn	1	5	60	10	7	1	10	10	8	9
Super Nova	Big Five Software	3	8	120	8	7	4	8	8	9	8
Six Micro Stories	Adventure International	3	8	120	8	9	7	8	8	6	8
Othello	Peter W. Frey	1	8	120	6	7	6	6	6	2	8
On Her Majesty's Ship Impetus	Adventure International	3	7	100	8	8	8	8	8	6	8
Asteroid	Adventure International	1	7	60	7	7	5	7	-	7	8
Kid Venture #1	Adventure International	2	5	20	8	9	8	8	8	8	8
Star Trek	Britt Monk	2	6	30	8	6	3	8	8	6	7
Quad	Acorn Software Products	1	6	15	3	2	2	9	9	9	7
Space War	Acorn Software Products	1	6	20	5	5	3	7	6	-	6
Ting Tong	Acorn Software Products	1	6	15	6	3	1	-	-	-	6
Lunar Lander	Peter W. Frey	1	5	20	4	3	2	-	5	6	6
Frog	Adventure International	4	5	20	8	7	4	8	9	8	6
Connect 4	Britt Monk	2	7	20	8	7	6	7	8	4	6
Dice Game	Britt Monk	2	6	20	5	6	3	6	3	5	6
Star Fighters	Britt Monk	2	4	50	6	6	3	8	8	7	6
Tank Trap	Britt Monk	2	6	25	6	6	3	7	6	6	6
Digit Mastermind	Britt Monk	2	7	30	6	4	4	6	6	3	6
Missiles	Britt Monk	2	4	20	5	4	3	8	8	5	5
Seven Game Pack 1.5	Britt Monk	1	6	120	8	6	4	7	6	5	5
Bowling	Instant Software	1	3	15	5	3	1	4	4	2	5
Whereami	Micro-Fantastic	1	2	10	6	4	1	-	6	3	5
Parsector V	Synergistic Solar Inc.	1	3	30	3	2	2	2	5	5	5
Mean Checkers Machine	Adventure International	1	10	15	5	5	5	5	6	5	5

APPLE II

		#	1	2	3	4	5	6	7	8	9
Hi-Res Adventure #2	On-Line Systems	2	10	690	9	10	8	8	8	9	10
Odessey	Synergistic Software	1	10	300	6	9	1	10	8	10	10
Apple Galaxian	Broderbund Software	1	10	120	10	8	3	10	9	10	10
Flight Simulator	subLOGIC	1	9	180	9	9	9	9	9	10	10
Hi-Res Adventure #0	On-Line Systems	4	7	255	8	8	6	9	6	8	9
Air Traffic Controller	Sensational Software	1	10	300	9	9	4	9	7	5	9
Creative Life Dynamics	Avant Guard Creations	1	5	180	8	9	1	8	8	8	9
Death Star (Space Album)	California Pacific Computer	2	8	120	9	9	3	10	7	10	9
Galactic Empire	Broderbund Software	1	10	180	9	10	7	10	7	9	9
Micro Painter (Utility)	Bob Bishop	1	-	120	9	8	5	10	-	8	9
Sargon II	Hayden Book Co.	1	10	180	9	9	8	10	10	10	9
Six Micro Stories	Adventure International	3	8	130	9	9	7	9	8	7	9
Bill Budge's Space Album	California Pacific Computer	2	8	120	10	9	2	10	7	10	9
Super Invader	Creative Computing Software	1	9	240	10	8	1	8	1	8	9
Tail Gunner (Space Album)	California Pacific Computer	2	8	75	9	8	3	10	8	10	9
Hellfire Warrior	Automated Simulations	1	10	240	9	10	3	9	10	9	9
Space Game Album	CA Pacific Computer	1	9	120	9	6	3	9	9	10	9
Air Traffic Controller	Creative Computing	1	10	240	8	9	5	9	8	5	9
Star Cruiser	Sirius Software	3	7	110	8	7	3	9	7	9	8
Paddle Graphics	On-Line Systems	2	-	30	7	6	4	7	7	7	8
On Her Majesty's Ship Impetus	Adventure International	2	8	90	9	9	9	9	10	7	8
Micro League Baseball	Stoneware	2	9	90	8	8	2	9	8	7	8
Hi-Res Adventure #1	On-Line Systems	1	10	120	9	8	7	7	8	8	8
Elementary Math	Muse Software	1	4	30	7	7	9	7	9	7	8
Coloring Program	Bishop	2	2	255	6	8	1	8	1	8	8
Asteroids	California Pacific Computer	2	8	50	8	8	5	9	7	9	8
Asteroids	Adventure International	4	8	70	6	5	1	8	8	9	8
Windfall	Edu-Mare	1	8	60	7	9	9	9	8	8	8
Adventure	Microsoft	1	10	300	6	10	8	7	5	2	8
Tuesday Night Football	Shoestring Software	1	8	60	7	8	4	8	6	8	7
Windfall	Edu-Mare	1	8	20	4	9	7	5	6	6	7
Solar Shootout	California Pacific Computer	2	8	30	8	10	3	8	8	8	7
Space	Edu-Mare	1	8	90	8	10	6	7	8	3	7
Network	Edu-Mare	1	7	30	3	9	8	4	5	6	7
E-Z Draw	Sirius Software	2	2	60	7	7	5	7	8	7	7
Dart Room	Programma International	2	8	30	7	9	4	8	8	8	7
Both Barrels	Sirius Software	3	5	40	7	7	4	8	8	9	7
Bloody Murder	Stoneware	3	6	40	7	9	2	9	7	9	7
Bazooka	Programma International	2	7	25	7	8	2	9	7	8	7
Stellar Invaders	Apple Computer, Inc.	1	8	60	7	4	3	8	9	10	7
Space	Edu-Mare	1	6	120	7	9	7	8	7	6	7
Adventure	Programma International	2	9	240	7	3	6	6	6	6	6
Teletennis	AZD Microware	1	6	30	9	4	5	8	8	8	6
A Stellar Trek	Rainbow Computing	1	9	60	4	6	4	4	8	7	6
Terrorist	Edu-Mare	1	5	45	7	9	8	7	7	7	6
Air Flight Simulator	Instant Software, Inc.	1	6	45	6	6	7	7	7	6	6
Animal Bingo	Avant Guard Creations	1	5	45	5	8	4	5	6	7	6
Cyberstrike	Sirius Software	1	4	20	7	7	3	9	9	9	5
Oil Tycoon	Instant Software, Inc.	1	4	30	8	6	4	4	6	5	4
Terrorist	Edu-Mare	1	7	10	4	10	6	8	8	3	2



From Sacramento, California

- Q: What program do you use most?
A: "Scripsit tape"
- Q: Why do you like it?
A: "Composing correspondence."
- Q: Other programs you recommend?
A: "Typing Tutor"
- Q: Worst program you have bought?
A: "Personal Budget, Radio Shack"

A: "Cursor Tapes"

- Q: Why do you like it?
A: "Most programs we write ourselves, for record keeping, general ledger and data processing. Cursor tapes are great for the children's recreation."

- Q: Worst program you have bought?
A: "Turkey Buzzard for TRS-80."

From Oakland, California

- Q: What program do you use most?
A: "Electric Pencil"
- Q: Why do you like it?
A: "It is relatively simple to learn and use. Much of what I do involves writing and I use it for almost all text preparation. I also have Scripsit but use Electric Pencil because it is easier and I would seldom need the extra capabilities of Scripsit. I use it with TRS-80 48K and Exatron Stringy Floppy."

From O'Leary, P.E.I., Canada

- Q: What program do you use most?
A: "Teacher (Instant Software)"
- Q: Why do you like it?
A: "Test, and reviewing for test. Very good simple program for teachers. I use it in Industrial Art."
- Q: Other programs you recommend?
A: "Nightflight. I fly planes and this is a good practice program."
- Q: Worst program you have bought?
A: "Astrology (by Radio Shack). Gives you all the information but the chart doesn't really explain the information. I guess the program is not for a beginner."

From Hampden, Massachusetts

- Q: What program do you use most?
A: "Radio Shack Mailing List"
- Q: Why do you like it?
A: "Sorts and prints lists of names."
- Q: Other programs you recommend?
A: "Printing programs for Teletype Mod #33 by Small System Hardware"
- Q: Worst program you have bought?
A: "None - made careful selection."

From Holland, Michigan

- Q: What program do you use most?
A: "MTC Aids III"
- Q: Why do you like it?
A: "It works very well. It is highly adaptable to many applications. It is easy to use."
- Q: Other programs you recommend?
A: "Visicalc - Microfiles"
- Q: Worst program you have bought?
A: "Radio Shack's Accts. Rec."

From Portage La Prairie, Manitoba

- Q: What program do you use most?

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From Des Moines, Iowa

- Q: What program do you use most?
A: "Rent Accounts - copywrite 1978 by Kenneth W. Harris."
- Q: Why do you like it?
A: "It is simple to run and operates as advertised. To keep track of 27 rental properties. (I would like the number of accounts available expanded and faster and more data entries permitted - but I have looked elsewhere and continue to retreat to this program for daily use."
- Q: Other programs you recommend?
A: "Pencil, Scripsit, Radio Shack's Real Estate programs."
- Q: Worst program you have bought?
A: "Those that I can't get to work on my machine."

From Palatine, Illinois

- Q: What program do you use most?
A: "Duplik"
- Q: Why do you like it?
A: "Ease of use in copying, assembler language programs."
- Q: Other programs you recommend?
A: "Flight Simulator / subLOGIC"
- Q: Worst program you have bought?
A: "Pigskin"

From Ben Lomond, California

- Q: What program do you use most?
A: "VisiCalc"
- Q: Why do you like it?
A: "Useful for small business calculations."
- Q: Other programs you recommend?
A: "Dancing Demon, Galactic Empire, Taipan, Sargon II."
- Q: Worst program you have bought?
A: "I can't decide - I have too many candidates."

From Mountain View, California

- Q: What program do you use most?
A: "Sargon II, Chess, TRS-80"
- Q: Why do you like it?
A: "It's a very challenging game."

From Western Springs, Illinois

- Q: What program do you use most?
A: "Client Write-up System (3.1) by Creative Solutions, Inc."
- Q: Why do you like it?
A: "Very complete - only a few disadvantages."
- Q: Other programs you recommend?
A: "No"
- Q: Worst program you have bought?
A: "Radio Shack Payroll System (Model II version)"

From Old Greenwich, Connecticut

- Q: What program do you use most?
A: "Sargon II"
- Q: Why do you like it?
A: "Excellent chess game."
- Q: Other programs you recommend?
A: "No"
- Q: Worst program you have bought?
A: "Only have purchased 3 so worst is unfair categorization."

From Lockport, Illinois

I haven't really bought that many programs. I refuse to buy anything I haven't seen endorsed or recommended or something I've seen demonstrated. Most programs I have bought have seen very little use. Games are great, for a little while, but few hold their appeal very long. Scott Adam's Adventures are a little better in this respect, but once you've banged your head against the same wall many times you eventually give up and the tape lies dormant.

What do I use my computer for then - to write programs, mostly games. Ironic isn't it that I would spend so much time writing a game that I've already admitted will hold only temporary interest. Yet programming is itself a game - perhaps the ultimate one. Nothing can match the satisfaction of making the infernal machine do what YOU want it to do. So I would not recommend that anyone buy a personal computer, (at least not the bare bones model), unless he was also going to get involved in programming. Expanded models with disk drives, printers etc. are another story, but I have neither the money or inclination or reason to get involved with such a system.

Concerning your dropping the Atari - I subscribed mainly to keep up with what

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was available for the Atari. I also have a TRS-80 but it screws up the TV when I'm using it and results in domestic tension. As a result I've converted almost entirely to working on the Atari. This TVI problem seems to have been ignored by most computer magazines and seems a good reason for not buying a Model I TRS-80 or Apple (I'm assuming the problem is similar). Maybe the problem doesn't exist for others."

From Davis, California

Q: What program do you use most?

A: "I am currently using TRAKCESS by Roxton Baker"

Q: Why do you like it?

A: "It is allowing me to learn a great deal about disk structure, as well as easily allowing me to make working copies of protected disks so there is no chance of blowing the originals."

Q: Other programs you recommend?

A: "PROP by Prosoft - allows use of proportional capability of Line Printer IV."

Q: Worst program you have bought?

A: "Interlude. If the manual had been included as text files accessed by the program, it would have been better."

From Denver, Colorado

Q: What program do you use most?

A: "NEWDOS80 and Scripsit"

Q: Why do you like it?

A: "Provides directory for Scripsit, data recovery, loading system tapes to disk, printing of graphics and disk repair, and all personal correspondence. Without the Mini-Dos feature of NEWDOS80 I would use Pencil instead of Scripsit."

Q: Other programs you recommend?

A: "Munford Disk Directory, BFU"

Q: Worst program you have bought?

A: "Tiny Pascal"

From Salinas, California

Q: What program do you use most?

A: "CP/M and WordMaster on a TRS-80 Model II"

Q: Why do you like it?

A: "CP/M beats TRSDOS all hollow on memory efficiency, although TRSDOS is faster on some applications. WordMaster is the best low-cost video editor on the market."

Q: Other programs you recommend?

A: "Digital Research's PL/I-80 - Fast!"

Q: Worst program you have bought?

A: "The Osborne Accounting programs - many bugs"

Q: Other comments?

A: "The Model II is my personal computer. We have a tape-based TRS-80 Model I, Level II, 16K in a 6th grade classroom. We're using your magazine to evaluate software for this machine. We haven't bought any yet."

From Arlington, Virginia

Q: What program do you use most?

A: "Aterm by Acorn"

Q: Why do you like it?

A: "It allows me to change the effective RS-232C dip switch settings with software instead of having to open the expansion interface all the time. This is a great convenience. It is a terminal program used to access bulletin boards, SOURCE, etc."

Q: Worst program you have bought?

A: "R.S. Terminal Program"

From Greenwich, Connecticut

Q: What program do you use most?

A: "Budget Management, VisiCalc, Taipan, Checkers, Scripsit"

Q: Why do you like it?

A: "I like Scripsit because it is versatile and my handwriting is so bad. It also allows me to correct my mistakes. And with the improvements from Superscript I am able to take full advantage of my Epson printer."

Q: Other programs you recommend?

A: "VisiCalc is one of the best programs to come on the market. Without knowing any programming you can set up an electronic pad and manipulate numbers."

Q: Worst program you have bought?

A: "The Analysis Pad from the Bottom Shelf."

From Cape Girardeau, Missouri

Q: What program do you use most?

A: "Radio Shack's Scripsit Word Processing Program."

Q: Why do you like it?

A: "Versatile, with many excellent editorial features. Use for typesetting copy, original copies (for multiple addresses)."

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Q: Other programs you recommend?
 A: "Matrix Horoscope Calculation by Erlewine, Android NIM"
 Q: Worst program you have bought?
 A: "Radio Shack's In Memory file system has not been useful."

above page center in your Summer, 1980, issue. A follow-up letter to Taylor on 12/19/80 has gone unanswered and I have stopped payment on our check."

From Andover, Maine

Q: What program do you use most?
 A: "Radio Shack's General Ledger"
 Q: Why do you like it?
 A: "Use it for my professional records. It is slow, but sure and saves many hours and money for D.P. time. Cuts accounting bills and is fun to use."
 Q: Other programs you recommend?
 A: "MMSFORTH, Balrog Sampler, all Adventures (including Microsoft)"
 Q: Worst program you have bought?
 A: "Microchess"

From Ann Arbor, Michigan

Q: What program do you use most?
 A: "UCSD Pascal operating system & programming language"
 Q: Why do you like it?
 A: "Good operating system. Pascal language makes it easy to write good programs."
 Q: Other programs you recommend?
 A: "Programs by Stanley Smith distributed by Apple, programs for PET by William Butler, programs for TRS-80 by Daniel Bishop (Custom Comp.)"
 Q: Worst program you have bought?
 A: "Programs for chemistry instruction provided by Commodore for the PET"

From Glendale, California

Q: What program do you use most?
 A: "NEWDOS utilities (Superzap)"
 Q: Why do you like it?
 A: "I like it because it will do what no other program I've seen will do. I use Superzap mostly to copy files from disk to tape."
 Q: Other programs you recommend?
 A: "TRCopy, Android NIM, TDisk"
 Q: Worst program you have bought?
 A: "I haven't purchased one I don't like."

From El Granada, California

Q: What program do you use most?
 A: "Supermath"
 Q: Why do you like it?
 A: "Children"
 Q: Other programs you recommend?
 A: "I have not yet purchased many programs. 'Grapple' interests my children."

From Corpus Christi, Texas

Q: What program do you use most?
 A: "TRS-80 Math"
 Q: Why do you like it?
 A: "Education - teaching"
 Q: Other programs you recommend?
 A: "Miliken Math Sequence, TRS-80"
 Q: Worst program you have bought?
 A: "Miliken's Math Sequence (Apple), cannot make it work yet."

From Andover, Massachusetts

Q: What program do you use most?
 A: "Scriptit Disk"
 Q: Why do you like it?
 A: "Writing letters, school work. The best feature is that unless you specify otherwise, everything you type is considered part of the text. Also like justification and hyphenation."
 Q: Other programs you recommend?
 A: "Data Handler by Miller Microcomputer Services, Natick, MA"
 Q: Worst program you have bought?
 A: "Radio Shack Personal Finance (Level I converted with Conv to Level II)"

From Lansing, Michigan

Q: Other comments?
 A: "We ordered the LII 16K Math Pak 5 - curve fitting program listed by Taylor" (P.O. Box 1180, Plattsburgh, N.Y. 12901), center column, slightly

From Newberg, Oregon

Q: What program do you use most?
 A: "Packer, by Cottage Software"

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St., Merritt Island, FL"

Q: Why do you like it?
A: "It does several things: Pack, sort, rename, move. I use it on every program I write to make it the most efficient."

Q: Other programs you recommend?
A: "Adventure"

Q: Worst program you have bought?
A: "Unlist B"

From San Bernardino, California

Q: What program do you use most?
A: "Computronics Master Pac 100"

Q: Why do you like it?
A: "The variety of math programs it offers. I use it for the remedial math and intermediate math programs."

Q: Other programs you recommend?
A: "H. C. Ward's"

Q: Worst program you have bought?
A: "Stekette Educational Software"

From La Grange, Georgia

Q: What program do you use most?
A: "Beginning Parts of Speech Series, by Applied Microsystems, Dallas"

Q: Why do you like it?
A: "Teaches recognition of various parts of speech in a thorough, attention holding format that my children use constantly (ages 4 and 7). Achievement feedback is excellent. Additional 'sentence files' are available for additional challenge. This program is responsible for my second grader developing skills of a sixth grader in this area."

Q: Other programs you recommend?
A: "All educational programs from Applied Microsystems - Alphabetizing, Concentration"

Q: Other comments?
A: "I enjoy your magazine and especially your program reviews - looking forward to the next edition."

From Titusville, Florida

Q: What program do you use most?
A: "R/S Stock Pack"

Q: Why do you like it?
A: "Business"

Q: Other programs you recommend?
A: "No"

Q: Worst program you have bought?
A: "Morse Code, I. Hennessy, 1555 Salem

From Fairfield, Connecticut

Q: What program do you use most?
A: "Micro Chess"

Q: Why do you like it?
A: "Fun, learning chess, entertaining guests and showing powers of computer."

Q: Other programs you recommend?
A: "Beginner Reader - Intellectual Software"

From Cincinnati, Ohio

Q: What program do you use most?
A: "Salewine's Astrology Programs"

Q: Why do you like it?
A: "High quality."

Q: Other comments?
A: "Sorry you eliminated PET."

From Comptche, California

Q: What program do you use most?
A: "Electric Pencil for TRS-80. (My husband uses T80-FSI Flight Simulator.)"

Q: Why do you like it?
A: "Would like to try Scripsit but my disk version doesn't seem to work properly. Use Electric Pencil to prepare course materials for college level courses. T80-FSI Flight Sim. used for recreation; he considers it very realistic."

Q: Other programs you recommend?
A: "Mail Plane or Air Mail Pilot (can't remember name), Newdos"

Q: Worst program you have bought?
A: "Teacher"

Q: Other comments?
A: "Keep up the good work - use your magazine to recommend programs for teachers."

From Germantown, Maryland

Q: What program do you use most?
A: "Scripsit"

Q: Why do you like it?
A: "All writing"

Q: Other programs you recommend?
A: "Packer, Remodel & Proload, Flexi, Library 100, Cloud subscription."

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Q: Worst program you have bought?
A: "Basic Toolkit. I will never again purchase a program that I cannot make a backup copy!!"

Q: Other comments?
A: "I find your reviews very useful which is why I have been a subscriber since Issue #5."

From Clinton, New York

Q: What program do you use most?
A: "Scripsit"

Q: Why do you like it?
A: "Practical, efficient, enormously time-saving. 1. Prepare newsletters; 2. Do mailing lists & print up envelopes directly (no labels); 3. Handle correspondence, produce error-free letters; 4. Cuts excellent, uniform stencils & ditto masters."

Q: Other programs you recommend?
A: "Taipan, Adventure, Typing Tutor (Microsoft)."

Q: Worst program you have bought?
A: "Radio Shack's Personal Finance Program. Less efficient than doing check balancing by hand."

From Chicago, Illinois

Q: What program do you use most?
A: "Scripsit from Radio Shack, (Cassette version, 32K+ recommended)"

Q: Why do you like it?
A: "Ease of use and good documentation! Uses: writing letters, newsletter articles, computer club notes, keep list of bulletin board members, magazines, etc."

Q: Other programs you recommend?
A: "Keyplus from SJW Inc., many useful utilities and shorthand graphics and basic keywords"

Q: Worst program you have bought?
A: "In Memory Management System from Radio Shack."

From San Francisco, California

Q: What program do you use most?
A: "Cload, Oct. 80?, the CIA Adventure one."

Q: Why do you like it?
A: "It's written in Basic and kids like it. Gets them playing on the computer."

Q: Other programs you recommend?
A: "Sargon, Santa Paravia - Fiumaccio."

Haven't purchased it but Olympic Decathlon is a good one. Sargon is good to get chessplayers interested in the microcomputer."

Q: Worst program you have bought?
A: "Probably Inventory 'S' but I haven't used it. Just wanted to have something to show business people. It might be a good program."

From West Palm Beach, Florida

Q: What program do you use most?
A: "Level II Basic Instruction Course Part I and II, Tapeword Processor - both Radio Shack; Microchess Level I and Level II, Radio Shack"

Q: Why do you like it?
A: "Level II Basic I & II and Word Processor used for learning."

Q: Other programs you recommend?
A: "Do not know enough to recommend anything."

Q: Worst program you have bought?
A: "Did not buy enough to form an opinion."

From Fresno, California

Q: What program do you use most?
A: "TRS-80 Level II Basic"

Q: Why do you like it?
A: "I use it for instructional purposes. I appreciate the method used - light and tinged with humor."

Q: Other programs you recommend?
A: "No - not really."

Q: Worst program you have bought?
A: "None. I have not bought a real loser; but then again, I haven't bought a real winner."

From Kensington, California

Q: What program do you use most?
A: "Visicalc"

Q: Why do you like it?
A: "Tax and financial planning. Very well documented, very well thought out."

Q: Other programs you recommend?
A: "For education - Spelling Bee (Instant Software); Little Professor (Med Systems)."

Q: Worst program you have bought?
A: "Tape 8 - CIE (programs were vastly overstated)."



From Menlo Park, California

- Q: Worst program you have bought?
 A: "I purchased business programs from Software Mart; Inventory, Accts. Rec. & Payable, & Letter Writer. The documentation is a joke. I can't get Letter Writer or Accts Payable to work. I attempted to send it back & they are trying to get me into Small Claims Court & refuse to refund & cancel the account. A warning to your other 'naive' readers who believe their ads."

- Q: Why do you like it?
 A: "Personal need. In using the microcomputer accuracy on the keyboard becomes highly important. This is on tape and is worth putting on disc. Of course, it is write protected so I can not change it over."

- Q: Other programs you recommend?
 A: "Since I am interested in educational uses, programs from MECC have, so far, been the most impressive. I have Apple II microcomputers with single disc drive."

From Tacoma, Washington

- Q: What program do you use most?
 A: "P.I.M.S."
 Q: Why do you like it?
 A: "Only database program, easy to use but not too fast on sort. Am getting another database program."

- Q: Worst program you have bought?
 A: "#5 Adventure, 'The Count'"

- Q: Other programs you recommend?
 A: "Visicalc, Stock Market utilities"

- Q: Worst program you have bought?
 A: "Interlude"

From Honolulu, Hawaii

- Q: What program do you use most?
 A: "The Electronic Card File - Softape"

- Q: Why do you like it?
 A: "Accurate - simple to use for filing data."

- Q: Other programs you recommend?
 A: "Personal Software, CCA Data Mgt. more complex & versatile."

From Laughuntown, Pennsylvania

- Q: What program do you use most?
 A: "Apple Writer"

- Q: Why do you like it?
 A: "Simple to use, reliable. I use it to write articles, reports, proposals, direction sheets, occasional letters, etc."

- Q: Other programs you recommend?
 A: "My husband and sons enjoy the subLOGIC A2-F81 Flight Simulator."

- Q: Worst program you have bought?
 A: "None really awful (haven't purchased many)"

From San Francisco, California

- Q: What program do you use most?
 A: "Mystery House & Wizard & Princess (On Line Systems)"

- Q: Why do you like it?
 A: "The graphics are great, there is challenge and the 3 - 6th graders at our school have loved playing them."

- Q: Other programs you recommend?
 A: "Visicalc, HiRes Baseball (Programs), Apple Pie"

- Q: Worst program you have bought?
 A: "Higher Text & Higher Graphics has terrible documentation for the novice programmer. Any program which cannot be copied to make a backup disk!!!"

From Oroville, California

- Q: What program do you use most?
 A: "Typing Tutor, from Microsoft"

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From Marina Del Rey, California

Q: What program do you use most?
A: "Mathware, by MathCity (for Apple II)"

Q: Why do you like it?
A: "I use it to teach my son mathematics. I love it for several reasons: 1) Very easy for my son to understand (without my help!). 2) Questions are very interesting - not boring. 3) No gimmicks. 4) Rate that the difficulty of the questions changes is controlled by how well my son is understanding the material."

Q: Other programs you recommend?
A: "Sargon (Apple) is great."

Q: Worst program you have bought?
A: "Edu-Ware Math Series"

From Alexandria, Virginia

Q: What program do you use most?
A: "Appleworld"

Q: Why do you like it?
A: "The program is used to draw 3D images on the screen. I like it because it's easy to use and the display offers one a new dimension to appreciate."

Q: Other programs you recommend?
A: "Tellstar - The Correspondent - Versawriter - Crystal Cat"

Q: Worst program you have bought?
A: "Home Budget - Spectrum Software"

From Fort Myers, Florida

Q: What program do you use most?
A: "Super Text II"

Q: Why do you like it?
A: "Powerful - bug free (altho' documentation is poor). I use it to revise bylaws, application forms, etc. of various organizations I'm associated with; to maintain lists requiring frequent updating; & for correspondence."

Q: Other programs you recommend?
A: "Air Traffic Controller (Creative Computing); Microsoft Adventure"

Q: Worst program you have bought?
A: "Space II (Edu-Ware) - full of misspellings, several bugs."

From Denver, Colorado

Q: What program do you use most?
A: "Market Charter by RTR"

Q: Why do you like it?
A: "Still not that great, but can do multiple stock analyses, fairly good data entry & data. Have had to end up having own program done."

Q: Worst program you have bought?
A: "Stock Tracker by H & H Trading, Stock Analyst by R.E.M."

From Kailua, Hawaii

Q: What program do you use most?
A: "A2-FS1 Flight Simulator"

Q: Why do you like it?
A: "There is no other program like it with the 'out the window' display that is so realistic and so unique. The complexity of it gives it so much challenge that it is almost impossible to get tired of it. Flight Simulator is the pick of the litter. Only problem is my Programm joystick has to be turned left 90 degrees to play by joystick. I also wish the enemy planes were more than dots. Other than that, it's perfect."

Q: Other programs you recommend?
A: "Yes. Temple of Apshai, but I would think Hell Fire Warrior was better, though I don't have it. Apple Invaders was good but it gets boring quick."

Q: Worst program you have bought?
A: "Gunslinger from G2 Program Library"

From E. Longmeadow, MA

Q: What program do you use most?
A: "Milliken Sequences"

Q: Why do you like it?
A: "It is an example of 'good' educational software and I use it for demonstration purposes."

Q: Other programs you recommend?
A: "Edu-Soft (Speed Drill, Plot), MECC (Elementary Math programs), Edu-Ware (Compu-Math, Fractions)."

Q: Worst program you have bought?
A: "Edu-Ware (Compu-Read)"

From Baltimore, Maryland

Q: What program do you use most?
A: "UCSD Pascal"

Q: Why do you like it?
A: "Excellent screen editor, but poor customer support & documentation from Softech."

Q: Other programs you recommend?
A: "Dec-Rt-II, Version 4.0"

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Q: Worst program you have bought?
A: "Heath-Ht-II"

From Livonia, Michigan

Q: What program do you use most?
A: "None bought"

Q: Why do you like it?
A: "I have used the Visicalc program and was impressed by its capabilities allowing me to create my own records and statistics."

From Houston, Texas

Q: What program do you use most?
A: "Sargon II"

Q: Why do you like it?
A: "It plays a pretty good game of chess. Am testing its capabilities in correspondence play while at same time seeing if I could do better and how program could be improved. Have spent considerable time disassembling it to see how it works and now have my own version with many added features."

Q: Other programs you recommend?
A: "subLOGIC Flight Simulator, Moser's Macro Assembler"

Q: Worst program you have bought?
A: "Adventure by Adv. Intl. (Note: I've only bought 5 pgs & consider my choices quite lucky)."

From Kansas City, Missouri

Q: What program do you use most?
A: "Those connected with education."

Q: Why do you like it?
A: "Those which I have purchased are usable in the classroom situations or I have been able to alter them for my use."

From Fairfield, California

Q: What program do you use most?
A: "Modifiable Data Base - Synergistic Software"

Q: Why do you like it?
A: "Well designed and relatively easy to use. Very flexible for differing applications. For simpler applications it works very well with one disk drive. Instructions are not highly technical in nature."

Q: Other programs you recommend?
A: "Typing Tutor from Microsoft; 3 Mile Island; Sargon II"

Q: Worst program you have bought?
A: "Fortunately none. Part in thanks to Purser's Journal."

From Santa Ana, California

Q: What program do you use most?
A: "Temple of Apshai"

Q: Why do you like it?
A: "Variety & understandability & capable of sustaining interest, fun."

Q: Other programs you recommend?
A: "CCA Data Ms. System"

Q: Worst program you have bought?
A: "Interlude"

From Steelton, Pennsylvania

Q: What program do you use most?
A: "Three Mile Island (MUSE)"

Q: Why do you like it?
A: "1. Excellent use of computer capabilities. 2. Well organized and presented. 3. Good instruction booklet. 4. Interesting and logical sequence presentation. 5. Math and physical science classes."

Q: Other programs you recommend?
A: "No educational programs to highly recommend."

Q: Worst program you have bought?
A: "Science Research Associates Series Returned same"

From New York, New York

Q: What program do you use most?
A: "Uncle Sam's Jigsaw from MUSE"

Q: Why do you like it?
A: "Teaching U.S. geography. Fine graphics, trouble free operation."

Q: Other programs you recommend?
A: "Not as much."

Q: Worst program you have bought?
A: "School Days, from Monument Computer Service"

From Oak Brook, Illinois

Q: What program do you use most?
A: "Adventure International's Voodoo Castle"

Q: Why do you like it?
A: "For my middle school students it presents a challenge that is within their grasp."

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Q: Other programs you recommend?
A: "Air Flight Simulator, Datestones of Ryn, MP Graphics"

Q: Worst program you have bought?
A: "Apple's Applebowl was a disappointment."

From Brooklyn, New York

Q: What program do you use most?
A: "Applesoft Tutorial and Applesoft II+"

Q: Why do you like it?
A: "They are unlimited for beginners. Note: When my sons (8, 10 & 11) program a new idea from something they read in Apple manuals they think it's 'neat.' They are sick of the games listed below (after 10 hours)."

Q: Other programs you recommend?
A: "None"

Q: Worst program you have bought?
A: "Adventure Land 1 to 9 and Coney Island and Game Playing with Basic and Breakthru."

From Research Triangle Park, N.C.

Q: What program do you use most?
A: "Visicalc, Moonshadow Text Formatter, Apple Pascal Operating System"

Q: Why do you like it?
A: "Apple Pascal Operating System - Text Processing - off-line job preparation for submission to mainframe, Pascal programming. Moonshadow Text Formatter - text processing in conjunction with Apple Pascal Operating System Editor. Visicalc - record keeping such as income tax deductions."

Q: Other programs you recommend?
A: "Conduit instructional package, Apple Skill Games, Bridge (available from Ron Parker, Analytic Solutions Inc., P.O. Box 13092, Research Triangle Park, N.C. 27067)"

Q: Worst program you have bought?
A: "Applewriter"

From Columbus, Ohio

Q: What program do you use most?
A: "Visicalc. I have also recently purchased Easywriter Professional and 'Data Factory' - for business use."

Q: Why do you like it?
A: "Visicalc is an excellent and very powerful program, and the documentation is excellent. Will be

used for business financial record keeping. I bought Easywriter Professional (used with Videx 80 col. card) for use in word processing and report writing. Documentation is good, but needs amplification - should tell what program will not do as well as what it will do. I bought 'The Data Factory' for use as an all-around, flexible, data management program. Program had an obvious bug - the 'available disk space' option did not work. Documentation pretty good, but needs more amplification, examples. Visicalc is the only program I have seen whose documentation does justice to the power and sophistication of the program. Most software vendors seem to underestimate the amount of documentation needed to make their programs truly useful."

Q: Other programs you recommend?
A: "Visicalc I would recommend to anyone who does financial or accounting work. Apmail II is a good value for a mailing list program."

Q: Worst program you have bought?
A: "Whatsit. I thought that the pseudo-folksy conversational mode quickly became irritating and the program was too slow to be useful for business (serious) use."

From New York, New York

Q: What program do the kids use most?
A: "Apple Invaders."

Q: Other programs you recommend?
A: "Uncle Sam's Jigsaw - Muse"

From St. Louis, Missouri

Q: What program do you use most?
A: "I use Hi-res Break-out, of my own creation, the most."

Q: Why do you like it?
A: "This program is strictly for entertainment, but is still used the most, however it is apparent that other programs, such as various disk utilities I have written are also used frequently."

Q: Other programs you recommend?
A: "I highly recommend Odyssey by Synergistic Software and also Hellfire Warrior by Automated Simulations."

Q: Worst program you have bought?
A: "The worst program purchased was Akalabeth by California Computing."

Q: Other comments?
A: "Keep up the great work!"

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From Livonia, Michigan

Q: What program do you use most?

A: "Synergistic Line Editor"

Q: Why do you like it?

A: "Programming - saves about 35-40% of the programming time."

Q: Other programs you recommend?

A: "Apple Writer, 99% of MECC software."

Q: Worst program you have bought?

A: "Eduware - Apple Teacher."

From Nevada City, California

Q: What program do you use most?

A: "Super Text II"

Q: Why do you like it?

A: "I like it for all its features (it does have its faults). It's used for all the personal and professional writing I do."

From Grand Rapids, Michigan

Q: What program do you use most?

A: "MECC - Elem. Vol. I. Math"

Q: Why do you like it?

A: "The Pedagogy is top notch. Drill and practice and motivation."

Q: Other programs you recommend?

A: "All MECC Elem. programs, Hartley Software 'Clock'"

Q: Worst program you have bought?

A: "Tie (1) Compu-Read, Apple II, S. Steffin, and (2) Microphys. PET, Math Program - simplistic overpriced drill & practice."

From Chevy Chase, Maryland

Q: What program do you use most?

A: "Super-Text"

Q: Why do you like it?

A: "It is a versatile word processor."

Q: Other programs you recommend?

A: "No"

Q: Worst program you have bought?

A: "I can't make Apple Post work."

From La Jolla, California

Q: What program do you use most?

A: "SuperText for the Apple II"

Q: Why do you like it?

A: "It is a good text editor - though I sometimes wish more of the commands were single key strokes. It does many different useful things for me. The most important use is in writing a book which I am presently doing. It also is good for letter writing and record keeping for various projects. I use it in conjunction with a printer."

Q: Other programs you recommend?

A: "Typing Tutor, Paddle Graphics (though it has a few shortcomings)."

From Urbana, Illinois

Q: What program do you use most?

A: "Synergistic Software's Program Line Editor."

Q: Why do you like it?

A: "The Apple Basic Line Editor is quite unsatisfactory for serious programming. The Syn. Soft. Editor is a TREMENDOUS improvement. We use it for all programming in Basic."

Q: Other programs you recommend?

A: "Mystery House Hi Res Adventure (French)"

From Newton, Massachusetts

Q: What program do you use most?

A: "Visicalc"

Q: Why do you like it?

A: "It's undoubtedly the most elegant program around. It has a great many applications. I have fun just figuring out new uses for this marvelous tool."

Q: Other programs you recommend?

A: "DB Master, Whatsit."

Q: Worst program you have bought?

A: "Songs in the Key of Apple."

From Cadillac, Michigan

Q: What program do you use most?

A: "Milliken Math Sequences"

Q: Why do you like it?

A: "It includes everything an instructional lab could ask for in a package. Guide, manager program, scope of sequence, step by step instructions. We use it for reinforcement, drill & practice."

Q: Worst program you have bought?

A: "The early PET programs."

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From Ft. Lauderdale, Florida

Q: What program have you sold most?
A: "Milliken Math"

Q: Why do you like it?
A: "Teachers and students enjoy."

Q: Other programs you have sold and recommend?
A: "B & H Genie I"

Q: Worst program you have sold?
A: "Compunath"

From New Haven, Connecticut

Q: What program do you use most?
A: "Super Invaders"

Q: Why do you like it?
A: "Fun"

Q: Other programs you recommend?
A: "No"

Q: Worst program you have bought?
A: "Math Tutor"

From El Centro, California

Q: What program do you use most?
A: "Cal Pacific Computer 'Both Barrels' (1980)"

Q: Why do you like it?
A: "As an instructor and parent I see great possibilities for this graphics game."

Q: Other programs you recommend?
A: "Higher Text by Synergistic Software"

From Highland Park, New Jersey

Q: What program do you use most?
A: "Space Invaders"

Q: Why do you like it?
A: "An enjoyable game"

Q: Other programs you recommend?
A: "Asteroids"

From Gresham, Oregon

Q: What program do you use most?
A: "Visicalc"

Q: Why do you like it?
A: "Many record keeping applications."

Q: Other programs you recommend?
A: "Mountain Hardware's Music System"

Q: Worst program you have bought?
A: "Interlude"

From Wayne, Michigan

Q: What program do you use most?
A: "Applewriter"

Q: Why do you like it?
A: "Easy to use, does everything I need. I use it to write and revise personal and business correspondence, speeches and articles, and even notes and lists. I encourage my friends to use the system, and have found they can learn it in just a few minutes."

Q: Other programs you recommend?
A: "Adventures from Scott Adams and On-Line Systems, B.I.T.S., Super Disk Copy, Typing Tutor, Super Invaders, Head On"

Q: Worst program you have bought?
A: "Planet, Mimic"

From Mission Viejo, California

Q: What program do you use most?
A: "Impossible to answer"

Q: Why do you like it?
A: "I have over 5000 programs for the Apple."

Q: Other programs you recommend?
A: "Phone Secretary, Terminal Program, by Ed Magnin"

Q: Worst program you have bought?
A: "Most of Programs"

From Poughkeepsie, New York

Q: What program do you use most?
A: "Visicalc, ALF with ALF board"

Q: Why do you like it?
A: "ALF board is used daily for my daughter's violin practice. It has become almost indispensable. Visicalc is used for my work to do financial analysis, including present value, cash flow, etc."

Q: Other programs you recommend?
A: "Pascal language, Flight Simulator from Sublogic. Pascal has a useful text editor."

Q: Worst program you have bought?
A: "Well, I do not dislike any."

From Toronto, Ontario, Canada

Q: What program do you use most?
A: "Visicalc"

Q: Why do you like it?
A: "Business - Price lists, inventory,

aged A/R, other calculations."

Q: Other programs you recommend?

A: "Cyber Strike, Odyssey"

Q: Worst program you have bought?

A: "No comment"

From Davenport, Iowa

Q: What program do you use most?

A: "Visicalc"

Q: Why do you like it?

A: "Several different office programs, keeping records, etc."

Q: Other programs you recommend?

A: "Market Charter and Stock Tracker"

Q: Worst program you have bought?

A: "Many."

From Urbana, Illinois

Q: What program do you use most?

A: "Program Line Editor (Synergistic Software)"

Q: Why do you like it?

A: "Makes edition Basic on Apple possible."

From Houston, Texas

Q: What program do you use most?

A: "Applewriter, Applepost"

Q: Why do you like it?

A: "Very functional programs for my administrative duties - I also like these CAI programs: Compuread (Edu-Ware), Circulation (Microprei & light science & soc. stud. (MECC)), Compax Math K-8 (Comput)."

Q: Other programs you recommend?

A: "Creative Programmers - Math Grades 5-9"

Q: Worst program you have bought?

A: "Singer Corporation's new kit Bas A Math program (2 disks for the Apple II) which we have recently evaluated."

From Akron, Ohio

Q: What program do you use most?

A: "ASCII Express II, Apple-Writer"

Q: Why do you like it?

A: "ASCII Express II -- modem communications management. Apple-Writer -- Correspondence & general word processor."

Q: Other programs you recommend?

A: "Sargon II, Dakin Disks, Visicalc, PLE (Prog. Line Editor), Whatsit, Dans Disk Utility, Space Invaders (M. Hato Vers.), & many, many other fine progs."

Q: Worst program you have bought?

A: "Many compete for this honor."

From Marietta, Georgia

Q: What program do you use most?

A: "Visicalc"

Q: Why do you like it?

A: "Flexibility; financial planning, budgeting, review."

Q: Other programs you recommend?

A: "Apple Writer"

Q: Worst program you have bought?

A: "Programma's 'Realty Package' - had errors. Next worse was Apple's Dow Jones Portfolio Evaluator."

From Princeton, New Jersey

Q: What program do you use most?

A: "Typing Tutor, Microchess"

Q: Why do you like it?

A: "Typing Tutor - sharpen my typing skills and teach my daughter to type; Microchess - recreation."

Q: Other programs you recommend?

A: "MECC diskettes are EXCELLENT!"

From Royal Oak, Michigan

Q: What program do you use most?

A: "Mentor's Math Word Problems (Apple II)"

Q: Why do you like it?

A: "Demonstration at workshops for elementary teachers - uses of microcomputers in teaching mathematics"

Q: Other programs you recommend?

A: "Micro Power & Light Co. - Circulation - Organs."

From Ogden, Utah

Q: What program do you use most?

A: "Visicalc"

Q: Why do you like it?

A: "Demos, Projected P/L, R/O Models"

Q: Other programs you recommend?

A: "Apple Plot, Apple Writer"

PURSER'S MAGAZINE

From Oconomowoc, Wisconsin

Q: What program do you use most?
A: "Sargon II"

Q: Why do you like it?
A: "Pleasure, challenge. 95% of my computer time is spent writing my own software for school use or with programs traded among user groups."

Q: Other programs you recommend?
A: "Blocks author language for Apple - write Ted Perry, San Juan School District, 6141 Sutter Street, Carmichael, CA 95608 (916-944-3650). Hi-Res color is one of many mind blowing features."

Q: Worst program you have bought?
A: "Early Pet software, everything I got was poor."

From North Suburban, Illinois

Q: What program do you use most?
A: "Super Invaders (Apple II Plus)"

Q: Why do you like it?
A: "Since I write all my applications software, I buy only games. Super Invaders is addictive but can be played as a reflex game when you don't want to have to think. It also has a goal (higher score) so that it's not trivial. But why doesn't it make better use of color?"

Q: Other programs you recommend?
A: "None"

Q: Worst program you have bought?
A: "Biorhythms, The Plots are virtually unreadable."

From Fresno, California

Q: What program do you use most?
A: "Apple Writer"

Q: Why do you like it?
A: "I use it for writing articles, software reviews, letters, everything. It's so much more satisfying and easier to write when one uses a word processor."

Q: Other programs you recommend?
A: "Apple Post - great for anyone keeping a mailing list."

From Wheaton, Illinois

Q: What program do you use most?
A: "Apple PIE"

Q: Why do you like it?
A: "It is reasonably complete word processing - I write."

Q: Other programs you recommend?
A: "Scott Adams Adventures - Microsoft Adventure - Microsoft Typing Tutor"

Q: Worst program you have bought?
A: "Microlab Data Factory"

From Philadelphia, Pennsylvania

Q: What program do you use most?
A: "Hellfire Warrior by Automated Simulations"

Q: Why do you like it?
A: "I think it is very entertaining and is an enjoyable way to pass the time. I find this type of game more interesting than just seeing how many objects I can destroy, as in some other games."

Q: Other programs you recommend?
A: "Program Line Editor, Typing Tutor, Apple 21, Higher Graphics II."

Q: Worst program you have bought?
A: "Bomber by Softape"

Lethbridge, Alta Canada

Q: What program do you use most?
A: "Edu-Soft number line"

Q: Why do you like it?
A: "Both interactive and instructional. Very good programming. Has never locked up or failed to run. Teachers and students are impressed with it."

Q: Other programs you recommend?
A: "Charles Mann Stats Pac"

Q: Worst program you have bought?
A: "Instant Software Math Tutor"

From Covina, California

Q: What program do you use most?
A: "Visicalc for Apple II"

Q: Why do you like it?
A: "(a) The boss is putting the books on it; (b) paint pricing (manufacturer and retailer); (c) inventory next, I think. Like it for its flexibility, think there is a risk of losing the data if we're not careful."

Q: Worst program you have bought?
A: "Bought 3 programs from Mad Hatter last year. None of the three would run and only two would load (Pilot, Pilot tutorial, and a small editor) for TRS-80."

Q: Other comments?
A: "I quote your advice to every novice who comes in -- either the TRS80 Level II 16K or the Apple II Plus with one disk, and beat it to death for a year. We sell books and software, do not sell hardware."

From Calgary, Alberta, Canada

Q: What program do you use most?
A: "Space Invaders"

Q: Why do you like it?
A: "Use of graphics is excellent, has sound and is challenging."

Q: Other programs you recommend?
A: "Swordquest, Escape from the Death Planet"

Q: Worst program you have bought?
A: "Dungeon of Death"

From Saint Paul, Minnesota

Q: What program do you use most?
A: "Invaders"

Q: Why do you like it?
A: "Fun."

Q: Other programs you recommend?
A: "Visicalc, Program Line Editor, Higher Text, Blitzkreig, Depth Charge."

Q: Worst program you have bought?
A: "Apple Talker, Visicalc because no backup except at a rip-off price."

From Setauket, New York

Q: What program do you use most?
A: "Apple File Cabinet"

Q: Why do you like it?
A: "Filing records. I've bought a few business programs but have found them hard to use."

From Chapel Hill, North Carolina

Q: What program do you use most?
A: "Textcast"

Q: Why do you like it?
A: "Convenient word processor"

Q: Other programs you recommend?
A: "Lisp-Forth"

Q: Worst program you have bought?
A: "Some cheap games"

From Indianapolis, Indiana

Q: What program do you use most?
A: "Disk Copy 3.2 as a Utility but Apple Bowl is used as a program."

Q: Why do you like it?
A: "Disk Copy 3.2 allows me to copy diskettes with only one drive. Apple Bowl is used to show off my Apple because of the Hi-Res and color. Bowling is a game everyone can relate to whether they are computer oriented or not."

Q: Other programs you recommend?
A: "Yes. Visicalc and Desk Top Plan were highly recommended to me, but I have not used them much yet."

From Marina Del Rey, California

Q: What program do you use most?
A: "Apple Pie"

Q: Why do you like it?
A: "Powerful - word processing."

Q: Other programs you recommend?
A: "Delta Software's The Bookkeeper"

From Boston, Massachusetts

Q: What program do you use most?
A: "E-Z Writer, VisiCalc"

Q: Why do you like it?
A: "Customer acceptance."

Q: Other programs you recommend?
A: "See above."

Q: Worst program you have bought?
A: "Too many to answer."

From Santa Ana, California

Q: What program do you use most?
A: "Applewriter"

Q: Why do you like it?
A: "I like it because it is simple yet effective enough for my needs. I use it for drafting documents and writing letters. Even if the document needs to be retyped (since I don't own a letter quality printer), it's easier to retype from a relatively clean copy."

Q: Other programs you recommend?
A: "I like E-Z Draw although I don't have a practical use for it at this time."

From Killeen, Texas

Q: What program do you use most?
A: "Super-Text and Super-Text II"

Q: Why do you like it?
A: "Reasonably good word processor. Preparing letters, bids, lists."

Q: Other programs you recommend?
A: "The Data Factory, Apple P.I.E. and Format"

Q: Worst program you have bought?
A: "All programs from Charles Mann & Associates."

Q: Other comments?

A: "Good luck on your new approach. Hope Apple Computer Inc. DOES get off the stick and do something they said they would 18 months ago! I don't provide copies of programs to others, but would sure like to backup the 'locked' copies I have purchased. Please send vendor info on programs that will copy such 'protected' disks and 'load & go' tapes."

READERS - can you help?



From Herkimer, NY

Q: What program do you use most?
A: "Wordpro I"

Q: Why do you like it?
A: "Letters, reports, magazine articles. (There is one difficulty, it is the 2nd program on the tape and I cannot make a copy for my disc or to get it in first place on the tape. The 53 line limit is also a pain but it is an easy processor to use."

Q: Other programs you recommend?
A: "The Cursor (for PET) tapes have gems of programs."

Q: Worst program you have bought?
A: "Microphys tapes are awful."

From Dayton, Ohio

Q: What program do you use most?
A: "Visicalc"

Q: Why do you like it?
A: "Cost analysis for product line."

Excellent and 'pure' program."

Q: Other programs you recommend?
A: "Wordpro 4"

Q: Worst program you have bought?
A: "Gen Data Base from USA (United Software)"

Q: Other comments?
A: "Bad man to drop Commodore from your mag.!"

From Manhasset, New York

Q: What program do you use most?
A: "Study Made Easy"

Q: Why do you like it?
A: "One could develop many tapes without knowledge of programming and much consumption of time."

Q: Other programs you recommend?
A: "Yes, but they're all for the PET"

EDUCATIONAL SOFTWARE No One Uses It!

The following is a horror story. The problem is not that a well-known and respected company sold a defective product. The real problem is that none of the schools that bought the program had ever used it.

Educational programs are being evaluated by almost every school district in the country. This is marvelous! The only problem is that once the studies are done, all those wonderful educational programs apparently sit on a shelf gathering dust. They are never used.

Unfortunately, I have firsthand knowledge of this problem. I wrote a program that no one is using!

A dull but very practical application of computers in education is for rote memorization. The obvious example is foreign language vocabulary lessons. Every week all French students, for example, are given a vocabulary assignment. These are 20 to 50 words which must be memorized during that week.

Drilling students is an ideal application for the family's or school's computer. In the USA alone, there are at least ten million students who can use such help. With this in mind, I wrote a program called STUDY MADE EASY for the old PET computer. It drilled students in any subject. The student or teacher simply typed in a set of questions and answers and the computer drilled the student, concentrating on the questions the student missed most frequently. It was a simple program, almost trivial.

STUDY MADE EASY had one key feature. It let the teacher save any study drill on tape. This way the teacher could make up drills in advance.

But here was where the problem arose. When someone at Creative Computing modified my program to make it more efficient, they

accidentally eliminated the ability to save a study drill on tape. Bad show!

But did anyone complain? No. For six months there was not a single complaint. School Districts all over the country bought this program. I have a royalty check to prove it. Yet no one was actually using the program.

Finally one day, someone called and said, "Help!" The problem was simple to fix and I have been assured that in the future all copies of this program will be correct. Yet it still astounds me to learn that in six months no one had ever used the program.



STUDY MADE EASY
PROGRAM CORRECTIONS
PET (old ROMs)

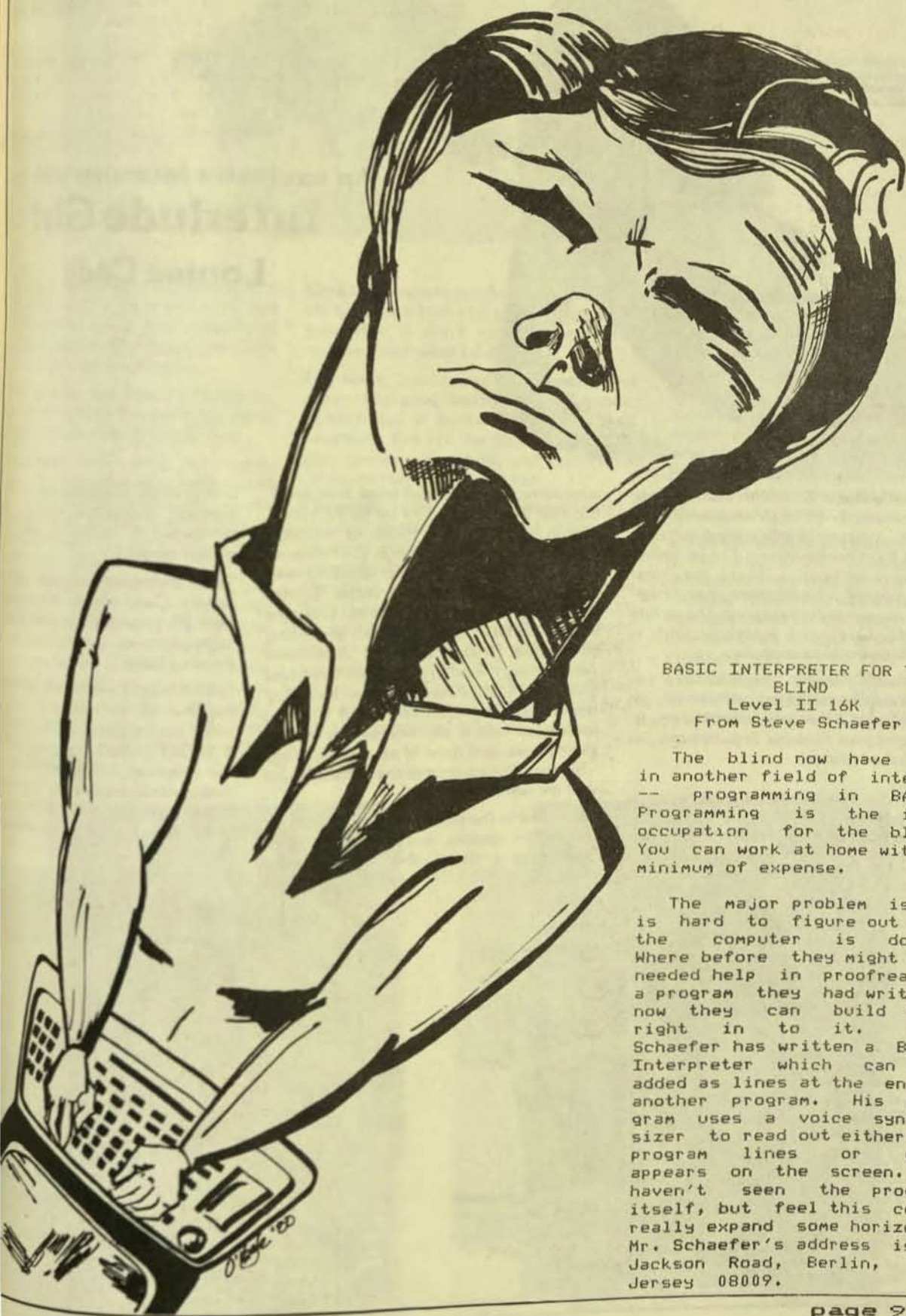
A problem has been found in some of the versions of STUDY MADE EASY. The fourth program, which creates the study drills, was modified

by Creative Computing apparently for increased efficiency. Unfortunately, this also prevents the program from saving study drills correctly.

STUDY MADE EASY program has two parts. The first part is the program. It is the same for all version of STUDY MADE EASY. The second part is the data file (or the question and answer file.) This file controls the behavior of the STUDY MADE EASY program. If the question and answer file is empty, STUDY MADE EASY asks you to create a series of questions and answers. Otherwise STUDY MADE EASY uses the question and answer file to give you a drill.

To make a master STUDY MADE EASY program (which is what the fourth program plus data file was supposed to be), try the following procedure:

1. "LOAD" any of the first three programs. All of the four programs are supposed to be identical. Only the fourth was "improved". The easiest way to do this, rewind the tape, type "LOAD" and press RETURN.
2. Type "RUN 10" and press the RETURN button. By starting at line ten of the program, the program ignores the data file that follows.
3. The program should ask you to type in the first part of the question. Type nothing and only press the RETURN button.
4. The program will ask for the first question. Again type nothing and press only the RETURN button.
5. The program will ask for the first answer. Press only the RETURN button.
6. The program will ask if there are any more questions. Type "N".
7. The program will give you the opportunity to save the study drill. Do this as many times as you wish. Each copy will be a master copy of the program and the data file. It will let you create and save study drills.



BASIC INTERPRETER FOR THE
BLIND
Level II 16K
From Steve Schaefer

The blind now have help in another field of interest -- programming in BASIC. Programming is the ideal occupation for the blind. You can work at home with a minimum of expense.

The major problem is it is hard to figure out what the computer is doing. Where before they might have needed help in proofreading a program they had written, now they can build help right in to it. Mr. Schaefer has written a BASIC Interpreter which can be added as lines at the end of another program. His program uses a voice synthesizer to read out either the program lines or what appears on the screen. We haven't seen the program itself, but feel this could really expand some horizons. Mr. Schaefer's address is 33 Jackson Road, Berlin, New Jersey 08009.



An exclusive interview with the Interlude Girl Louise Cody

Editor's Note: When the first Interlude advertisement hit the newstands, the family computer finally added the only thing it did not have: sex. The advertisement is without a doubt the most controversial advertisement ever to appear in a computer magazine. The picture of Ms. Cody, the Interlude Girl, is definitely the most appealing.

Naturally, Purser's Magazine was immediately interested to learn who this girl is and what is the story behind Interlude. We contacted Syntonic Software and this is what we learned.

When the principals of Syntonic Software Corporation met with its advertising agency to discuss the initial ad for a new adult computer game, they had one major

requirement: The model must look sexy, but that sexiness had to be laced with a certain playfulness, a touch of vulnerability. They poured through portfolios of beautiful Houston women, selecting over a dozen for personal interviews. Louise Cody, the now-famous Interlude Girl, was the first to be interviewed and, according to Sandra Brown, head of Westchase Advertising, the other girls never even had a chance. Louise had a certain look that the camera captured over and over—a look filled with a shy sexiness, a hint of playfulness, and most of all, vulnerability. "She was the essence of the Interlude Girl that we wanted."

Everyone in the office wanted to be in on the photo session, but to keep it from becoming a circus, the viewers were

limited to Ms. Brown and the president of Syntonic Software Corporation. ("He threatened to fire his ad agency if he couldn't attend!")

"The photograph we chose," says Ms. Brown, "was actually less provocative than 95 percent of the ones shot. The expression on Louise's face was the deciding factor."

Even though it was the least provocative, the final ad was rejected by the largest computer magazine in the field. However, it did run in three other magazines, and the response was overwhelming. One customer commented that "Your model is better than anything Mr. Hefner has put out in several years." Take note of that, Mr. Hefner.





This page was typed using Radio Shack's **Scriptit™** word processing program. The typesetting was done directly from a **Scriptit™** disk by **Brown Graphics, 2488 Summit Street, Columbus, Ohio, 43202 (614) 262-3491**.

As a result of requests from customers, a 20" x 24" full color poster of Louise has been produced and is now available at software stores and by direct mail from Syntonic Software Corporation.

In an interview with Purser's Magazine, Louise revealed some interesting facets of the woman behind the Interlude eyes.

On Herself: I'm an artist. Not professional, but I majored in art in college, and I've done several lithographs. My favorite form of art is life drawing. I love the look of the human body. I'm very sensitive, both with regard to my own feelings and others. Maybe it's because I'm a Moonchild (she was born on July 2). I'm very outgoing socially. Sometimes I like to shock people with the things I say—just to keep them on their toes. But I'm really a very private person. I don't trust a lot of people, but if I'm really close to someone I really treasure that friendship a lot. My best friend is probably my sister who is three years older than me.

On Life: I want to get the most I can out of life because if I were lying in a hospital bed tomorrow, I don't want to have any regrets about what I didn't do.

On men: Looks aren't as important as other features, such as intelligence, sensitivity, a sense of humor, and creativity. I'm not the type of person to play games with others, and I don't like others to play games with me.

On work: I take my work very seriously. I strive for perfection, but I'm a realist. I do my best and then accept it, rather than worrying about whether or not it was good enough. I love modeling—it's really more fun than work. But you have to be professional about it. I run to stay in shape and I watch what I eat—which is mostly vegetables, salads, fruit, seafood, and natural foods. I'm a real estate agent as well because it's nearly impossible to be a full-time model in Houston.

On the Interlude ad: When I was first approached about posing for the ad, I was a little concerned about the attitude the ad would convey about sex—whether it would be really heavy and intense or lighthearted, but after talking with the Interlude staff, they conveyed their excitement to me and made me feel it would be a lot of fun. I love doing anything that involves having a good time as long as it doesn't hurt anyone, and I thought this was a very fun project.

On the Interlude program: I think sex is beautiful if both people express themselves and participate fully in it, and Interlude really helps you communicate. Interlude makes sex light-hearted and fun. The interviews themselves are great fun, especially watching the other person's reaction to your answers. Sometimes they learn something they didn't know about you, and they can watch how your moods change.



Ken and Roberta Williams
ON-LINE SYSTEMS
36575 Midge Ranch Road
Coarsegold, CA 93614
Phone (209) 683-6858

On-Line Systems sent us samples of the "unique" form of mail they receive from purchasers of their programs:

"The graphics are outstanding! The programming represents a new advance in adventure gaming!"

From New York: "I am very disappointed! Disappointed that the other Adventure disks on the market are not up to the level of yours (especially #2) in the Hi-Res Department. New to the Apple, I slowly found out what I liked. And that is basically not so-called shoot-out space games. It IS Adventure. To me this is an intellectual challenge between you and me ... frustrating at times, yes, but usually stimulating (unless TOO frustrating). There is a satisfaction upon conclusion unless too many hints have been used (shame on me). Your #2 was my first, and I am now spoiled. I naively thought all had some graphics (even lo-res), but nothing touches your quality. We do pay more, true, but a lot is added. I assume that you two have now set state-of-the-art standards that others will strive to meet."

From Canoga Park, California: "Thanks a bunch for the info!!!! We NEVER would have gotten xxxxxx (Ed. note: Sorry, no clues). We found Daisy (I figured the xxxxxx would appear in that part of the mystery). Now we're trying to find xxxxxx and we

should just about have it. Forgot to ask you - what is that thing in the cemetery? We never have been able to figure it out. I can't believe that it's just another gravestone. Well, we're gluttons for punishment!!! We plan to get the Wizard and the Princess. You made up a good game!!!"

From Pontiac, Michigan: "The ... Department purchased a copy of the 'Mystery House' adventure to preview last spring. As was to have been expected, in previewing the adventure, my colleagues and I have gotten caught up in trying to 'solve' it. Unfortunately we have reached a point from which there appears to be little chance of completing the adventure."

"We have found both the treasure and Daisy - in that order. Finding the treasure evidently does not end the adventure and killing Daisy appears to be impossible without using the xxxxxx (which we have been unable to locate)."

"It would ease our frustration if you could tell us if there is indeed any closure on this adventure or whether, by finding the treasure before finding/killing Daisy we have somehow denied ourselves of an ending to the program. I believe we have explored just about every permutation of the program and any information you would be willing to share at this juncture would be greatly appreciated."

From Shaker Heights, Ohio: "Today I solved your 'Wizard and the Princess' hi-res game. It was challenging, and it took me 17 days from the day of the purchase to return the princess to Serenia. My chief problems were: Getting out of the desert. Crossing the chasm. Finding the place where the gnome took my stuff. Where to use the vial (not xxxxxxx). De- ducing xxxxxxx instead of xxxxxxx. Bargaining with the peddler. Finding the door

in the maze. "These problems took less and less time to get out of as I progressed. The desert took a few days, the chasm a couple, and the crevice a trick two, but after that began to take days and hours. Finally, on January 20, just as the hostage was touchdowned at Algiers ... kissed the princess."

"I thought the game was difficult, and innovative. The graphics were excellent. The pictures were very realistic. I found every piece of inventory had a function. Sometimes I wondered xxxxxx."

"The Wizard and the Princess had a good vocabulary. I liked the bluntness of getting killed: 'You fall to your death at the bottom of the gorge,' or 'Your boat sinks at sea and you drown. What irritated me was 'No Way' too often."

"All in all I thought the game was excellent, and I hope you come out with more fantasy games after your Football."

From Riviere-Du-Loup, P. Quebec, Canada: "On-Line Systems, CA. YOU! I bought your game 'Wizard and the Princess' and I'm frustrated. They told 'this is the best game for Apple' -- hundreds of beautiful hi-res pictures. After days, all I saw is a village, a desert, a scorpion, and a rattle snake (drawings)! 4 PICTURES! That's all. The computer told that my knife is too small to kill the snake. I tried everything but it didn't work. I read all the dictionary to find all the possible verbs, but 'No Way' is the most answer. Je suis tannée! Tabarnak! I think that On-Line must give more instructions on that game. I can't even do a CATALOG or a LIST. That's frustrating!"

"I need all the ways to accomplish the adventure. I live in Quebec and that will cost me a fortune to call by phone in Calif. You'll understand that I don't want to write a letter each time I'm stuck. I think that I

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have a I.Q. about normal. I involved many people in this game but nobody found how to kill this snake.

"I want that you give me all the clues (words, etc.) to be able to play. I planned to bring my computer at home at Christmas to show some good programs but by now, your game seems a rip-off to all my friends and when I'll get an answer, Christmas will be pass. Do you have a French version because I can't make a Control-C to change the line text in the program. I hope that your other product have a more effective instr. sheet. Everybody is able to invent a game and give it to somebody and say 'Here's the game, the object is to find the rules', but that's not everybody who will accept to play such 'rules.' That's what you've done and if you don't want answer to my letter, I will ask for a money refund. I've paid custom fees and I regret my purchase. I should have choose a less graphically game but a playable game!"

"A frustrated and angry customer"

From Riviere-Du-Loup, P. Quebec, Canada: "Thank you for debugging me with the snake. I finally found the game more interesting now. I have make a length of road but I'm stuck again. This time, it's with the giant. I try to xxxxxx, to xxxxxx, to xxxxxx, but nothing works. Can you give me the solution, please, to kill the giant. I'm disappointed not to be able to get the (program to) list because I should try to translate it in French. Can you give me the tool you use to do and store all these pictures. They seems to be drawn at hand. I love the results. I promise you to try Mystery House and Mission Asteroid as soon I will finish Wizard."

From Wadsworth, Ohio: "This is all your doing! The Wizard & The Princess is tearing me apart! I know that if I don't find a way

to get across the cavern I will commit suicide. Please tell me! I'm desperate! If I don't get the answer by Saturday all is lost."

From Levittown, New York: "I have just purchased and run three of your 'mystery' disk programs. I say run, because I and my family were curious to see what entertainment they would provide. Well, after using them for only minutes, I must say that I was simply astounded!"

"I recently sold my Atari Computer and purchased the Apple, and I am certainly glad I did. The Apple can run circles around the Atari, and the type of software you have provided, certainly has helped the Apple reach its present state."

"I am enclosing the guarantee cards for the three programs. I noticed that you mention that if 'you are stumped', to call for 'a tip.' Well, we tried the programs, and it sure does look like we will be busy for quite some time to come. For example, in the 'WIZARD & THE PRINCESS', we have not been able to pass the snake yet. But we're still trying."

"If we continue to be stumped I will write and ask for help."

"Please continue the great work you are turning out, and if you maintain a mailing list for your customers, I would appreciate being placed on it."

From Bergenfield, New Jersey: "An update on the three disk Adventure games: WIZARD & PRINCESS has been completely solved long before, when I found that xxxxxx and xxxxxx. The rescue of the princess is a cinch afterwards."

"There are a few bugs in the program. I have NO 13-sector INIT disks, and thus could not save a game, but had to chart and memorize the whole procedure. (It has 6 distinct sections: scorpion maze, snake desert,

woods, island, north mountains, and castle). Also, if I had a real good error and got killed and the game ended, by keying RESET I bounced back into the game, cancelling only the last bum command and resumed play. This came in handy when trying to cross the rickety bridge. I have the APPLE-SOFT ROM card with the programmable reset, extra editing power, and auto-start. When the game is over and I say NO to PLAY AGAIN?, it does not recognize my answer, but starts again. The situation once I returned to SERENIA with the princess, was constant, congratulating me for the rescue, whatever I inputted."

"MYSTERY HOUSE has been ALMOST solved. I got the xxx but Sally's fate remains a mystery. Joe is digging graves (and is hostile), Daisy waits in the tower with a knife to kill! The other men lie dead in various places. Obscenities crash the program. The forest maze is simply xxxxxx, but xxxxxx will not xxxxxx until xxxxx. However, xxxxxx. I wonder if xxxxxxxx. I may check. With unlimited carrying ability I can map the entire grid. I think xxxxxxx is a clue ... to the identity of the mass murderer."

"In Adventure, I awhile back overcame all but ONE obstacle, and have procured 14 treasures. Only if xxxxxx will the Final Problem be offered. I do not want to know what it is, but just how to xxxxxxx. The mapping of the terrible maze of the chest was hampered by xxxxxx. The Pit I reasoned must be a xxxxxx. To map the 2nd maze, I had to xxxxxxx. The 3rd maze, Wits' End, proves to be xxxxxxx. I will check further." (Ed. note: Too many clues in this letter.)

I hope these letters have not been too frustrating. We just could not give too many clues. To get their catalog, write Ken and Roberta William in care of On-Line Systems. Then let us know how you react to these programs."

Blocks II Author Language

The Blocks II Author Language was developed for the Apple II to help fill the gap between available programs and desired programs. It was built for the teacher who has little or no programming experience. The Author Language has been piloted in more than thirty-five school districts and colleges and sold for use in over 1100 school districts.

The Author Language consists of several programs. The Teacher Authoring Program allows the teacher to make use of the graphics library and to combine graphic images with text for presentation to the student. The teacher also inputs the correct and incorrect answers and feedback appropriate to each response. The Student Presentation Program presents the lesson to the student and allows a student to interact with the previously authored program. The Graphics Development Program develops graphic images for the library. With the Graphics Library Program the teacher requests images from the graphics library and puts them into the lesson being written. The Data Management Program keeps track of student progress and enables the teacher to set up a sequence of lessons that match the students' needs.

The price of the Authoring Language system is \$500. For further information, contact Ted Perry, San Juan Unified School District, Computer Project, 6141 Sutter Avenue, Carmichael, CA 95608.

or, better yet,
see page 57.

