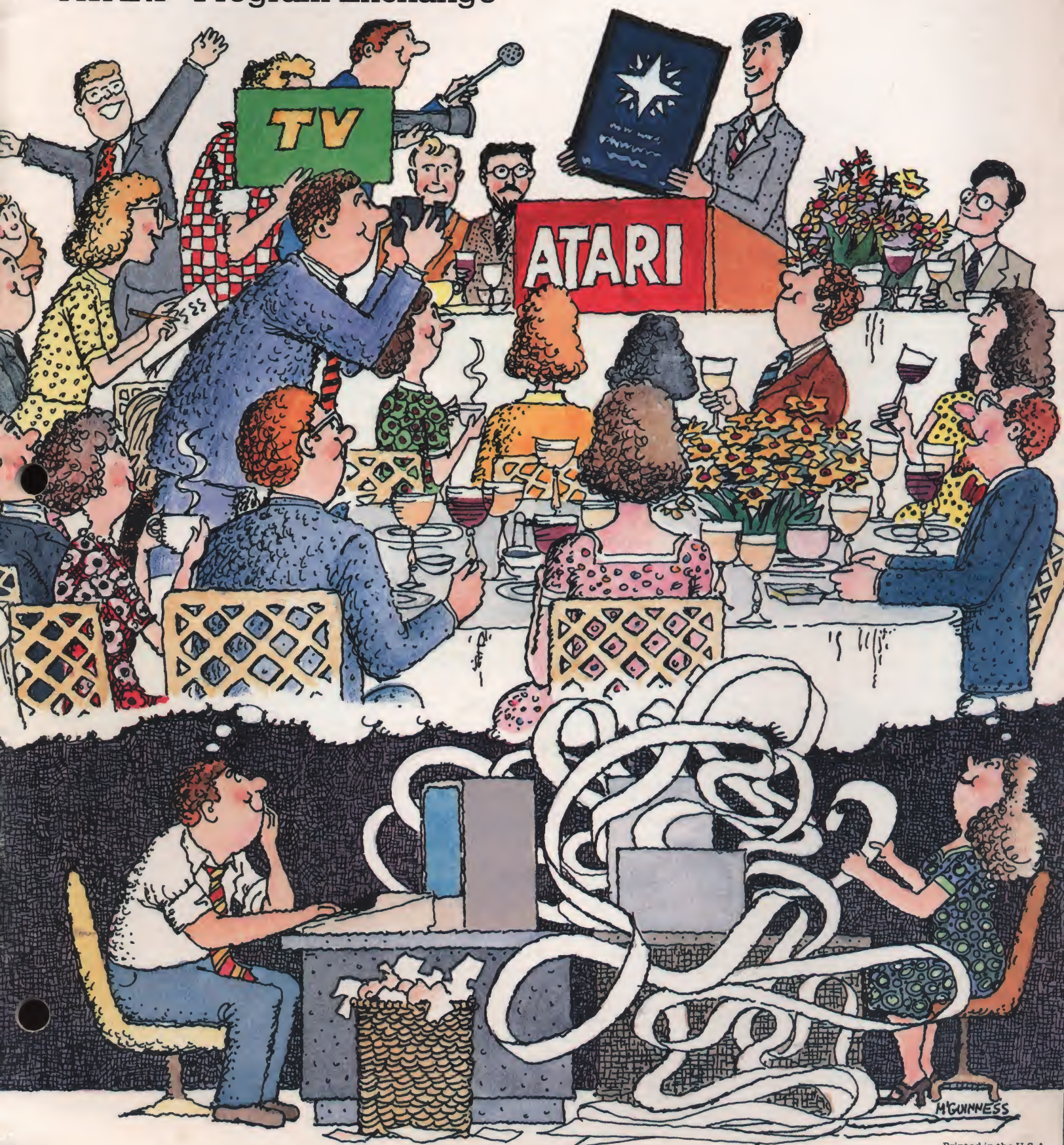# .APX

ATARI® Program Exchange

Product Catalog
Spring Edition 1983
Price $1.00

Consumer-written programs for ATARI Home Computers

M°GUINNESS

Printed in the U.S.A.

Contents

[1] Indicates trademark of The Soft
Warehouse

[2] Indicates trademark of Stephen
Romejko

What is APX?

Atari, Inc., created APX (which is pronounced "apex" and stands for the ATARI Program Exchange) to manufacture, distribute, and promote programs written by consumers for ATARI Home Computers. APX increases the usefulness and enjoyment of ATARI Computers by offering a large collection of high-quality, imaginative programs. Our software appeals to all ages, and it spans a wide range of needs and interests.

The APX catalogs

APX publishes four catalogs yearly. The base issue contains full descriptions of all programs currently available as of that quarter. The 1982-83 winter APX Product Catalog is the base issue. The three quarterly supplements contain full descriptions of all programs new for the quarter, plus condensed descriptions of all programs currently available as of that quarter. To obtain the most recent base issue or quarterly supplements, see your local ATARI Computer retailer. The Publications section contains ordering information.

Where to buy APX programs

You can purchase many APX programs quickly through your local ATARI Home Computer retailer. Look for APX programs both at computer stores and at general retail and discount stores. If you're an ATARI Computer retailer who hasn't yet ordered APX software, contact your ATARI representative. All items in the catalog are also available by mail or by toll-free telephone order. Before ordering by mail or phone, please read all the ordering information elsewhere in this catalog.

Program availability

Programs are available at the prices listed in this catalog starting April 4, 1983.

Program descriptions & review comments

The descriptions and review comments reflect the programs as of the date the catalog went to press. All review comments are the subjective evaluations of staff members who have used the programs. They are included to give you some idea of the relative strengths and weaknesses of different programs. In some cases, authors have improved their programs so that the product shipped differs from that described. However, the minimum computer memory (RAM) required won't increase from the amount published, and any changes will enhance the product.

How to submit programs to APX
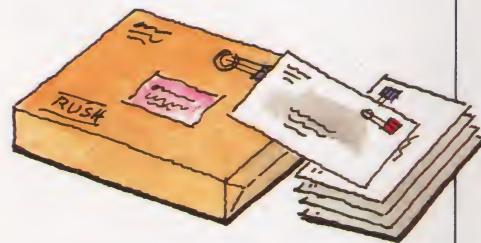
We'd like the opportunity to look at well-written programs you've created for ATARI Home Computers. You'll receive a quarterly payment for sales of your programs through APX. For details, call our toll-free numbers, 800/538-1862 (for calls within the continental U.S., except California), or 800/672-1850 (for calls within California) and request an APX Program Submission Packet.

Symbols used

From the editor

This issue introduces a new format for the APX Product Catalog. Because we now carry more than 170 different programs, publishing a comprehensive quarterly catalog is proving unwieldy. Instead we'll be publishing one cumulative issue a year and three quarterly supplements. The base issue will contain full descriptions of all programs offered that quarter. The 1982-83 winter APX Product Catalog is this year's base issue. If you don't have this issue, check with your local ATARI Computer retailer. The three supplements will contain full descriptions of all programs new for the quarter, together with brief descriptions and current prices of all other APX programs available. Notice that the winter issue and this issue are three-hole punched. We do that to make it easier for you to save your catalogs in a notebook for future reference.

In this issue, we look at the five program authors awarded the ATARI Star Special Award of Merit for 1982. If *you* know of a particularly interesting use of an APX program, or if you have other APX-related stories, we'd like to hear about them. Send them to the Editor, APX, P. O. Box 3705, Santa Clara, CA 95055, U.S.A.

Becoming an APX author can change your life

Several program authors have changed careers as a result of publishing their programs in APX. Two authors, Douglas Crockford, author of *Galahad and the Holy Grail,* and John Palevich, author of *Chameleon CRT Terminal Emulator, Mantis Boot Tape Development System, Deep Blue C Compiler,* and *Deep Blue Secrets,* have joined Atari's Research and Development group. Two others, Bill Williams, author of *Salmon Run,* and Lee Actor, author of *Advanced*

Musicsystem and *Jukebox #1,* have joined other software companies to design programs for computers. And Fernando Herrera, the first annual $25,000 grand prize winner for his program *My First Alphabet,* has had his program added to Atari's main product line and has become the head programmer in a new software company. Becoming an APX author can result in more than extra income; it can change your life!

We've moved to larger facilities

Because of the high demand from ATARI Home Computer owners for APX programs, we've had to move to a larger building and expand our order processing staff — to keep up with the flood of orders while maintaining our commitment to filling orders quickly and accurately. We're also increasing the efficiency of our manufacturing procedures to keep up with demand. You can count on continuing to obtain APX products quickly.
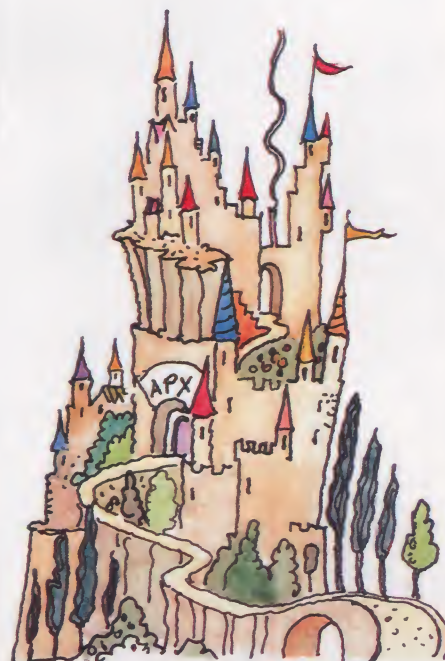
Second annual Atari Star Awards banquet

In December we held a judging to select the $25,000 grand prize-winning program, and in January we spent two days getting to know the program authors chosen to receive the Atari Star Special Award of Merit. After settling the authors and their families in at the elegant Westin St. Francis Hotel on Union Square in San Francisco, we escorted them through some of Atari's manufacturing facilities and showed them the inner workings of APX. Then came the event we were all waiting for — the second annual banquet at which we awarded the $25,000 grand prize for outstanding programming achievement to one author and Atari Star Special Awards of Merit to the other authors.

Seventeen-year-old David Buehler, a high school junior from St. Paul, Minnesota, was voted the 1982 grand prize winner for his APX program, *Typo Attack*. This program combines the excitement of an arcade-style game with learning to touch-type. Both David's parents and his maternal grandparents were on hand to share in David's achievement. We learned that *Typo Attack* was a joint effort. David's younger brother, Ted, was responsible for designing many of the different invading characters used in the program, and we also learned the brothers approached their joint venture in a very businesslike manner. At the time David submitted *Typo Attack* to APX, he and Ted drew up a contractual agreement to share not only all royalties resulting from sales of their program but also any prizes awarded the program. We commend *both* David and Ted for their outstanding program.

We held the festivities not only to award the grand prize but also to recognize the exceptional programming efforts of *five* program authors that day. In addition to David, other authors winning awards were Douglas Crockford, a professional programmer and now a games designer from Cupertino, California, for *Galahad and the Holy Grail*; Harry Koons and Art Prag, two astrophysicists from Los Angeles, California, for three APX programs, *Mapware, Starware, and Astrology*; and Lee Actor, a professional programmer and accomplished musician from San

Jose, California, for *Advanced Musicsystem* and *Jukebox #1*.

These six programs cover a wide range of software characteristics. For example, some are written in machine language and some in ATARI BASIC. They require anywhere from 8K to 40K of computer memory, and they were developed on systems ranging from an ATARI 400 Computer with 16K of memory and an ATARI 410 Program Recorder to an ATARI 800 Computer with 48K of memory and one or two ATARI 810 Disk Drives. They're intended for children as young as eight years old to mature professionals, and they cover entertainment, education, and personal development.

But these six programs have something in common: they rely heavily on the ATARI Computer's sound and graphics capabilities. Immediately evident is their use of the ATARI Computer's ability to create different character sets. For instance, Doug Crockford's *Galahad and the Holy Grail* leads you through a 96-screen graphic adventure in pursuit of the holy grail. Harry Koons and Art Prag's three earth and star programs draw finely detailed maps, constellations, and natal charts. Another graphics feature many of the winning programs use is player-missile graphics, which lets you move a character or marker in the foreground of a display screen without disturbing the picture in the background. In addition, two programs effectively use the ATARI Computer's four independent sound channels. David Buehler's *Typo Attack* uses a variety of passages from John Phillip Sousa's spirited songs to add spark to game play. And perhaps the consummate use of the ATARI Computer's sound potential is in Lee Actor's *Advanced Musicsystem*, a comprehensive music composition tool that has been highly praised in several recently published reviews and that brings Lee daily fan mail from all over the country.

We are pleased to pay tribute to these five accomplished APX authors. We'll continue to promote APX authors in a variety of ways so that they get the recognition they and their programs deserve and so that *you* can enjoy your ATARI Home Computer even more by owning these very fine programs.

Winners of the Atari Special Award of Merit

David Buehler

What can you say about a program author who gets a $25,000 award before he gets a social security number? David Buehler, a high school junior, requested an ATARI Home Computer for the reason so many others do — he wanted to use its graphics features. But before he could begin writing the games and programs he envisioned, his grandfather suggested he learn touch typing. That's how the lively *Typo Attack* was born, and ever since, people have been captivated by the fast-moving game. Setting out to play five minutes of *Typo Attack* is like eating one potato chip or starting an Agatha Christie mystery.

David was introduced to computers when he used them at school. He went beyond the assigned work to learn more about microcomputing by joining a computer club. Known as a disciplined person, he quickly built up his skill with the computer.

As his reputation spread, his teachers would stop him in the halls and ask him for help in making their programs work. But what he really wanted to do was design games.

Other people in his life were developing an interest in computers at about the same time. His grandfather bought a personal computer to use in his business about two years ago. David's best friend also owned one, and the two boys still debate the relative merits of their computers. One thing David appreciated about his ATARI Home Computer was the opportunity to have a program accepted by APX.

David needed only the minimum equipment to design his prizewinning program: his ATARI 400 Home Computer had 16K of memory, and he used an ATARI 410 Program Recorder and an Assembler Editor Cartridge to write *Typo Attack* in assembly language. He's back at work on new games, one of which appears in this issue.

After finishing high school, David is considering studying electrical engineering. He lives in St. Paul, Minnesota, with his parents, Robert and Barbara Buehler, and brother, Ted, 15, and sister, Katie, 6.

Lee Actor

Lee Actor has an imagination that breaks down the barriers between traditional disciplines. He's an accomplished musician who applies his competence in computer technology to musical composition. Lee holds two degrees in electrical engineering from Rensselaer Polytechnic Institute in Troy, New York and is a former concert violinist with the Albany Symphony Orchestra. Many of Lee's compositions have been performed publicly, notably his String Quartet, written in 1980, which was played in both San Jose and Berkeley.

Lee uses the computer to program certain passages and listen to

them. Although the composer has a clear idea of how the music is going to sound before he writes it, he likes to check it by playing it back. He's also able to vary the rhythm and tempo with the program, a feature unique to *Advanced Musicsystem*. Partly because of the success of his program, Lee has joined a software engineering firm that designs video games.

His *Advanced Musicsystem* is the ideal tool for composers. Those conversant with both music and technology praise its ease of use, comprehensiveness, and versatility. Some have told Lee they bought their ATARI Home Computers just to use the program. He has even had to set aside one night a week to answer the volumes of fan mail he receives.

He met his wife, Geri, now a semiconductor processing engineer, in college where they were both in the orchestra. They live in San Jose, California, with their son, Marty, age 3. Marty is almost ready to start the piano, but in the meantime he's been getting some computer experience, starting with *My First Alphabet*.

Douglas Crockford

Galahad and the Holy Grail may be a medieval theme, but Doug Crockford seems more like a Renaissance man. Besides designing video games, Doug's talents include juggling and music. He once played bass guitar with two different rock groups, "Gut" and "Oceanrock." Although neither one is around any more, Doug is still writing songs.

While Doug was earning a degree in radio and television from San Francisco State University, he became interested in computers. He began his career in a timesharing lab at a prestigious bay area research institute. In those days, he could be seen riding to and from work on his unicycle.

For five years, Doug was a programmer at a Southern California minicomputer company where one of his accomplishments was to develop a word processing system. He began to wish for his own computer to try out some ideas at home, and like so many others with dreams of games, he chose an ATARI Home Computer for its graphics capabilities.

The game of ADVENTURE, played on the ATARI Video Computer System, was a favorite of his, and he thought he'd like to convert it to a home computer program. But *Galahad and the Holy Grail* went far beyond what he'd envisioned. He drew on his knowledge of the Middle Ages to embellish his game with lore and legends. Fellow movie buffs will recognize his debt to more contemporary literature, too. The technical complexity underlying the ease of understanding the game dazzles computer experts, and makes everybody think it really is a land of magic.

The game attracted the attention of Atari's Corporate Research and Development Department, and Doug recently joined the staff. He claims that he can't separate his work from his hobby any more. He and his wife, Janice, live in Sunnyvale, California, with their daughter, Jane, 2.

Harry Koons and Art Prag

Although Harry Koons is a research physicist in a highly specialized field, he writes programs that home computer hobbyists, backyard stargazers, amateur geographers, and astrology buffs can enjoy. Professionally, he studies the physics of the space environment around the earth. He uses satellite trajectory maps to plot data in his work. In getting acquainted with the capabilities of his ATARI Home Computer, he realized it could generate maps with lists of coordinate points for home computer use, too. He enlisted the aid of professional colleague Art Prag to work out the mathematical algorithms to make the map-generating program work, and *Mapware* was born. Art is another research scientist, who specializes in the signal processing of data returned from artificial earth satellites.

The two authors share astronomy as a hobby. Harry enjoys watching

the stars through a backyard telescope. They decided to apply what they had learned about cartography to a celestial map. They realized the same mathematics they'd worked out could be used to plot the stars. Thus, collaboration between the two authors produced their second successful program, *Starware*.

Even though Harry and Art weren't astrology buffs themselves, they knew that it was important to astrologers to plot the exact locations of planets and stars at given moments. This was a new use of their precise celestial mapping techniques. Meanwhile, Harry was teaching himself to define character sets with his home computer. He generated the symbols astrologers use for the planets, and recruited Art once again to help with the mathematical calculations. *Astrology* was the result, showing the locations of the planets in relation to the moon and the earth at any moment in the twentieth century.

Harry and his wife, Ann, enjoy using *Astrology* as a parlor game with their friends, plotting everyone's chart and looking up the traits they're supposed to have. They live in Harbor City, California, with their son Tommy, 13, and daughter Julie, 11. Art and his wife, Sheila, live in nearby Van Nuys. They have a son, Pat, 21.

Results of the spring contest

Our spring contest contained exceptional programs in every category. Half the winners are repeat APX authors, and their contributions get better and better. The first-time authors with winning programs all have experience in the subject area of their programs, and their experience is readily apparent in the quality of their programs. In addition, these programs cover a broad range of possible uses of the ATARI Computer's unique graphics and sound capabilities.

The *Learning* category has something for everyone. These winning programs will appeal to preschoolers, to educators, and to everyone from elementary school age upward. First prize goes to Thomas O'Brien, an educator from St. Louis, Missouri, for *Teasers by Tobbs.* This program presents addition and multiplication problems in a setting containing bright colors, animation, and friendly messages that make it a delight for all ages to use. But this game goes far beyond drill and practice. Based on the ideas of Jean Piaget, the father of child developmental psychology, it teaches the important intellectual concept of reversibility, which is the ability to reason forwards from a problem to the solution and backwards from the solution to the elements of a problem. The highest levels of this program pose the additional challenge of having to distinguish between what must be, what can be, and what can't be. *Teasers by Tobbs* is the kind of program that is equally suited to learning at home and at school.

Al Casper of Milwaukee, Wisconsin, captures second prize for *My Spelling Easel.* Al is the author of the popular preschool program, *Counter,* which teaches numbers in four languages. His latest program turns an ATARI Home Computer into an easel that children as young as three can easily fill with all sorts of objects to create more

than a million colorful scenes. *My Spelling Easel* uses lots of color, animation, and music to keep even the youngest computer artist interested. Al designed this program to introduce his two-year-old daughter to his ATARI Home Computer; the Caspers recently had another daughter, who now has an enchanting way to become acquainted with her parents' computer.

Third place goes to Dan Rohr of Los Olivos, California, for *Three R Math Classroom Kit,* a comprehensive arithmetic drill-and-practice package. The kit includes Dan's earlier APX program, *Three R Math System,* and it's a teacher's dream. In addition to creating custom-tailored math problems for elementary through junior high school students, it supplements practice

Teasers by Tobbs
by Thomas O'Brien

on the computer with a variety of printed worksheets, and it records users' progress on both an individual and a class basis. Dan had more than a decade of teaching experience when he designed this package, which rivals similar programs costing far more.

In the *Home Management* category, first prize goes to a program that can rescue all the klutzy typists and poor spellers owning ATARI Computers. *Atspeller* by R. Stanley Kistler, a computer research specialist from Monrovia, California, checks the spelling in any text file against a dictionary containing more than thirty thousand words, and it prints or

displays on your TV screen any words not found in the dictionary. You can also add your own words to the dictionary. The extensive testing the author put this program through is apparent. It's simple to use, and the magnitude of its dictionary demonstrates the power of personal computers, when they have well-designed programs. Insufficient qualifying entries prevented us from awarding the other prizes in this category.

In the *Systems/Telecommuications* category, David Kano, a professional programmer from Lincoln, Massachusetts, wins first prize for *Hex-A-Bug,* which assembly language programmers can use to


Atspeller
by R. Stanley Kistler

help them debug their programs. David's programming experience is reflected in the design of *Hex-A-Bug;* its minimal syntax, well-designed screen display, and ease of use let you concentrate on your program instead of on the debugging tool. David bought his ATARI Computer because he wanted a "good, consumer-oriented microcomputer," and he recently became a free-lance programmer with plans to develop educational games. Now that he has a debugging tool, he can get started doing just that! Insufficient qualifying entries prevented our awarding the remaining prizes in this category.

We saved the *Consumer* category for last because the first-place program is one of the most enticing
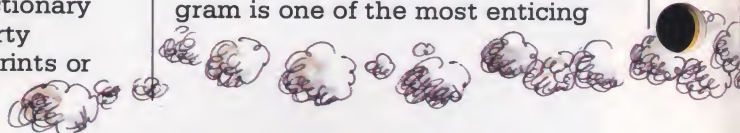
(and nerve-wracking) arcade-style games we've seen. In the interest of thoroughly "testing" this program (at least, that was the excuse most of us used), we gave it a daily workout — and we still love it! The program is *Getaway!* by Mark Reid, a chemical engineer from South Charleston, West Virginia. The premise behind *Getaway!* is to elude the law as you travel through a town covering thirty-five screens and look for treasures and cash to heist. One of the beauties of this game is that it's immediately playable by anyone, and yet it's loaded with little twists and tricks you must master as you progress to higher levels. For example, driving through the roadblocks punctures your gas tank, causing your gas supply to decline more rapidly. And, driving through town becomes more difficult if you take a long time to locate all of one level's treasures, because night sets in, darkening the town!
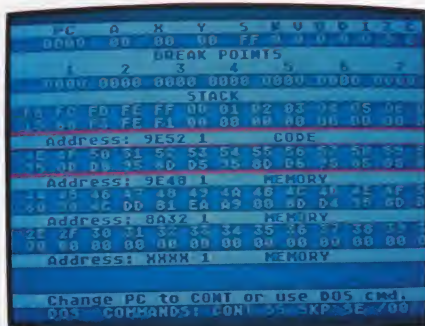

Hex-A-Bug
by David Kano

Getaway!
by Mark Reid

This is Mark's third APX program, his other two being *Solitaire* and *Downhill.* Mark's programs have become progressively more sophisticated as he has mastered various aspects of the ATARI Computer's graphics capabilities. In fact, increasing his knowledge of his ATARI Home Computer has been a major impetus behind Mark's games. His favorite pastime on his computer is programming. For his latest effort, Mark wanted to design an arcade-style game with automatically increasing difficulty levels, and with vertical and horizontal fine scrolling. He reached onto his file of game ideas and decided to develop one based on a childhood car set. As a testimony to his success in designing a game that doesn't wear thin with repeated play, Mark still plays it himself, and he still has a hard time reaching the highest level!

Second place goes to Scott Ludwig of Hickam Air Force Base in Hawaii and author of last quarter's prize winning space game, *Quarxon.* This time he contributes *Caterpiggle,* a colorful and lively chase-and-consume game with wonderfully upbeat melodies. This four-year programming veteran is taking a year out following graduation from high school to try his hand at programming full-time before going to college. He plans to use the income he earns with these APX programs to finance his continued study of electrical engineering and computer science.

Third place in the *Consumer* category goes not to a game, but to an intriguing program that teaches fingerspelling, the art of spelling words with hands. *Fingerspelling* is a multilevel tutorial and practice program written by Dewey Garton, an engineer from Knoxville, Tennessee, whose interest in sign language spans a dozen years. Although the program's intention is to help you learn to communicate with the deaf, it also has a more light-hearted application for kids who want a fun way to speak in code.

These winning programs and program authors admirably carry on the APX tradition of offering a wide selection of top-quality programs for everyone. You can read more about all these fine programs by turning to their individual descriptions. You'll be glad you did!

The quarterly APX contest
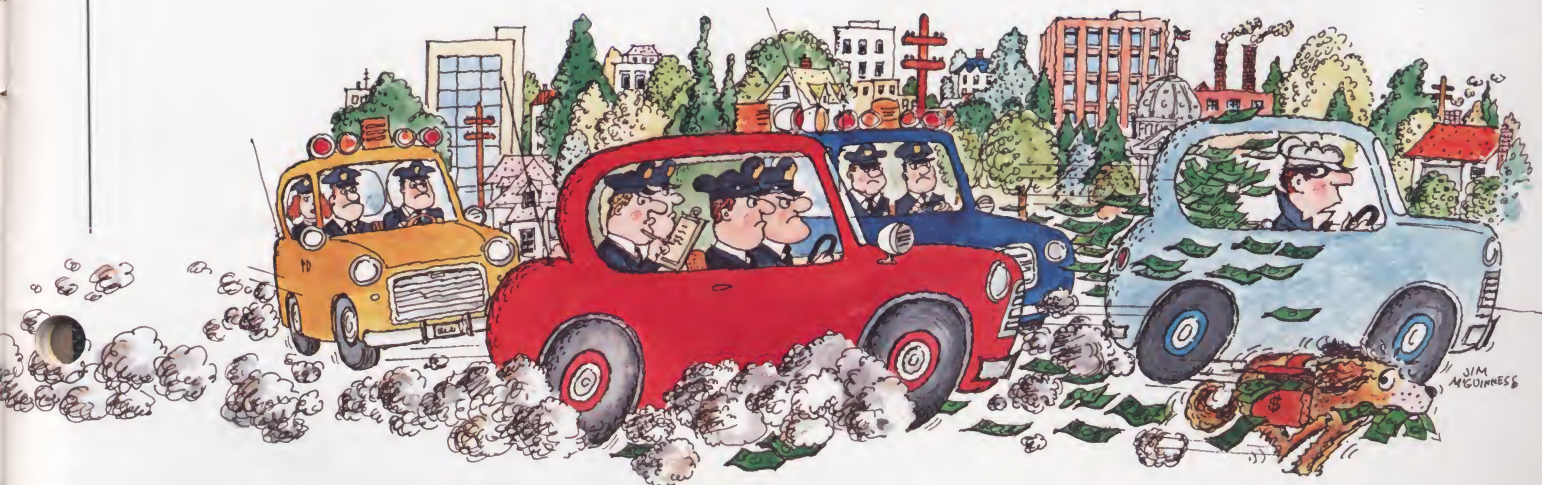
All programs accepted by APX by the deadlines noted below automatically become contestants in that quarter's judging. First, second, and third prize winners in each of four categories receive ATARI hardware and software products (including APX products) as prizes. The *Consumer* category has larger prize values, reflecting our commitment to the home computer user. The categories (we've revised some of these titles for clarity and brevity) and their prize values are*:

1 Consumer (Entertainment and Personal Development)

1st prize $3,000
2nd prize $2,000
3rd prize $1,000

2 Home Management

3 Learning

4 Systems/Telecommunications

1st prize $2,000
2nd prize $1,500
3rd prize $ 750

Programs accepted by APX on or before October 1, 1983 will be eligible for the 1983 grand prize — $25,000 in cash!

To request an APX Program Submission Packet, containing complete instructions for submitting programs, write or call APX.

*Based on manufacturer's suggested retail prices.

Contest rules

1. Only programs accepted by APX are eligible for the contest.

2. A program is eligible for the prizes in the category in which it is accepted. Atari determines this category.

3. A program is eligible for the quarterly prizes awarded in the quarter in which it is first accepted and for the grand prize of the contest year in which the quarter falls.

4. A program qualifies only once for a quarterly prize and once for a grand prize. Revisions and improvements do not qualify a program for another prize in this contest.

5. A program is judged on a variety of factors by a panel of judges selected by Atari. The judges consider a program's

- User interface and overall design
- Originality
- Ease of use
- Implementation
- Documentation
- Interest level

6. Atari employees and their families are not eligible for the contest.

7. Atari pays for shipping prizes anywhere within the United States. Foreign winners are responsible for any additional shipping charges.

8. The decisions of the judges are final.

9. This contest is void where prohibited by law.

1983 closing dates

The dates by which a program must be accepted for a contest judging are as follows:

Date	Contest
January 1	Spring contest
April 1	Summer contest
July 1	Fall contest
October 1	Winter contest and 1983 grand prize

Win a trip for two to the Olympic Games in Los Angeles

Because the ATARI Home Computer is the Official Home Computer of the 1984 Olympics, we're paying special attention to Olympic-related programs. All programs submitted to APX between December 1, 1982, and October 1, 1983, that focus on the summer or winter Olympic games are eligible for a bonus prize in our winter 1983 judging: an all-expense paid trip for two to the Olympics in Los Angeles, plus hotel accommodations and two three-day passes to the games, which take place between July 28 and August 12, 1984.

Authors of Olympic-related APX programs can also benefit from the extensive promotions and advertising planned by Atari throughout 1983 and 1984 to highlight its sponsorship of the Olympic games.

Although we want to see traditional action games, we're especially interested in programs stressing the strategic or instructional elements of Olympic events. For example, the new APX program, *Microsailing,* would be considered an Olympic-related program. We're also looking for programs in all categories, not just in Entertainment. An example of a different Olympic program would be a data base for tracking the results of each stage of each event, or for predicting the future results.

To write these kinds of programs, you'll need a good understanding of the particular sport or sports involved. Also, to avoid lengthy copyright searches and to let us sell your Olympic-related programs outside the United States, don't use the words "Olympic," "sponsor of," or "official product of," or the Olympic five rings, eagle, torch, or star-in-motion symbols either in your program or your user instructions.

We'll be giving special consideration to the Olympic Games in Los Angeles, but we'll also consider programs related to winter Olympic sports. The events in the Los Angeles games are:

- Archery
- Track and Field
- Basketball
- Boxing
- Canoeing
- Rowing
- Cycling
- Equestrian
- Fencing
- Football (Soccer)
- Yachting
- Gymnastics
- Handball
- Field Hockey
- Judo
- Modern Pentathlon
- Shooting
- Swimming
- Volleyball
- Weight Lifting
- Wrestling

The winter games are:
- Skiing: Alpine, Nordic, Ski Jumping
- Biathlon (Cross-Country and Shooting)
- Bobrun
- Luge
- Ice Hockey
- Speed Skating
- Figure Skating: Single, Pair, and Ice Dancing
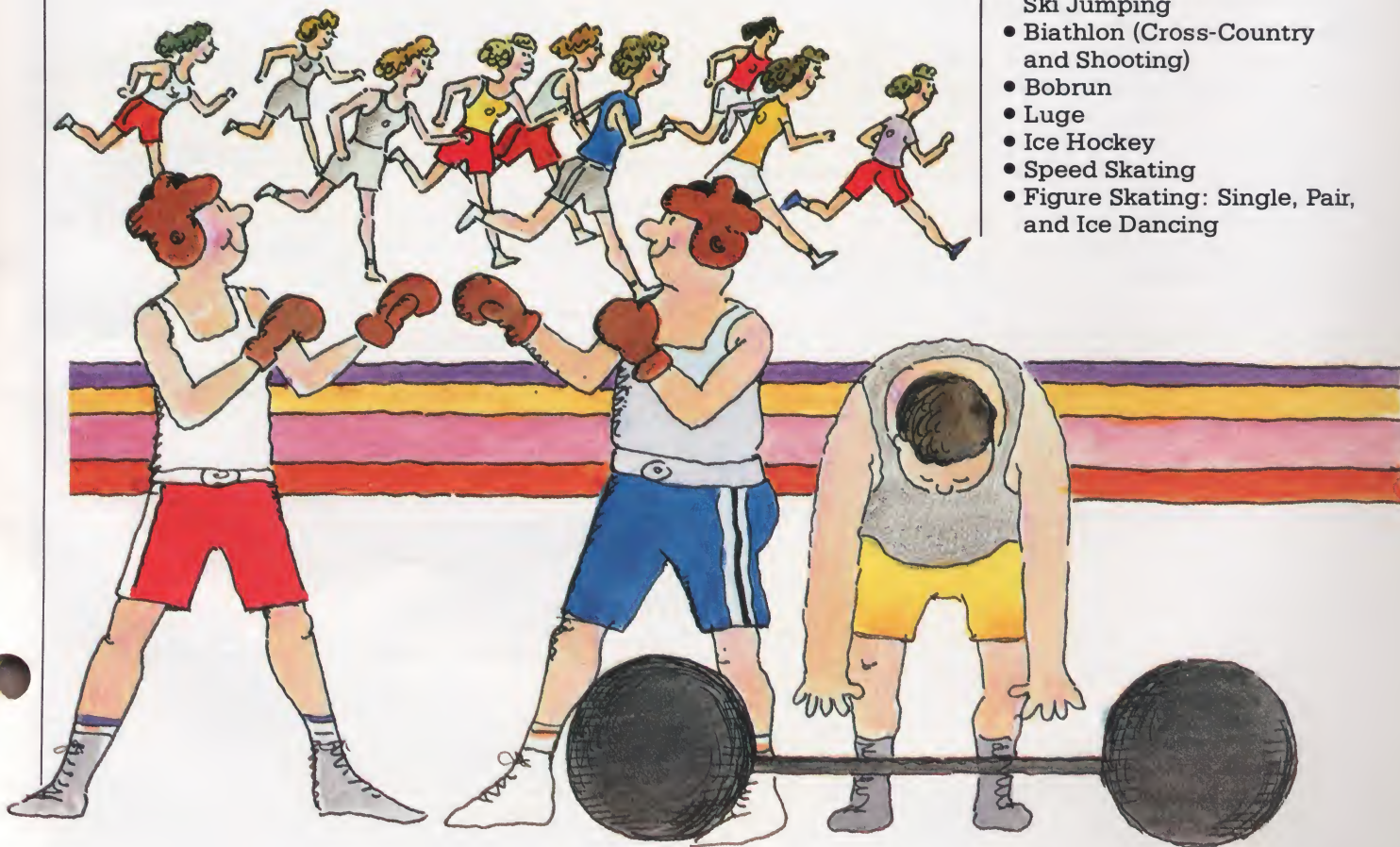
Home Management
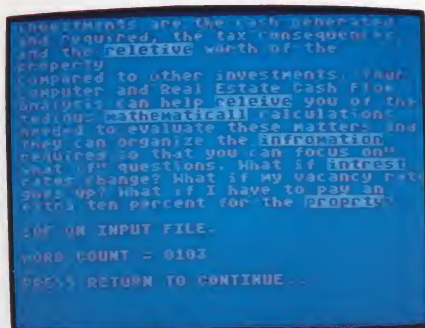
Atspeller
by R. Stanley Kistler

Recommended for ages 12 and up
Written in machine language

Check your documents for correct spelling

How can you look a word up in the dictionary if you can't spell it? At last there's an answer to the perplexing problem of English spelling. *Atspeller* takes any diskette or cassette text file produced by such word processors as *Typit*, the ATARI Word Processor, or any other word processor that creates ATARI DOS-compatible files, and checks it against a dictionary file of more than 30,000 words. If that's not enough, you can create your own dictionary file with even more words. You can have the questionable words highlighted on your TV screen or printed on paper. You can edit as you go along, replacing the incorrect word or leaving it as it is. Finally, if you have too many errors, *Atspeller* can write a new file for you. *Atspeller* takes the drudgery out of proofreading, and gives you confidence that your documents aren't marred by spelling and typing errors.

REVIEW COMMENTS
This is a first for Atari. The author worked on and tested *Atspeller* for more than a year before submitting it to APX.

The user manual is clear and comprehensive.

REQUIRES
Diskette(s) containing text files
Two ATARI 810 Disk Drives

OPTIONAL
ATARI printer or equivalent printer

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	N/A		
Diskette (810)	32K	$39.95	APX-20191
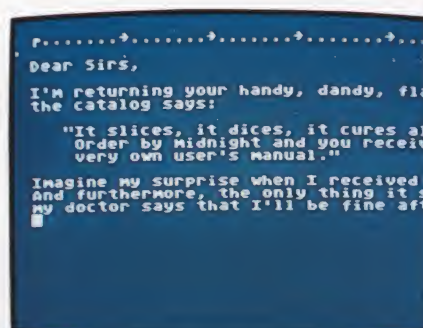
Typit
by Charles E. Balthaser

Recommended for any typist
Written in assembly language

Turn your computer into a typewriter

Ever wish for the good old days when you used to type short papers without having to learn word processing commands and symbols? *Typit* brings back the simplicity of those days — without sacrificing the latest editing capabilities of your computer.

A page of text appears on the screen just the way it will on the printed page, without code symbols. Each line is as long on the screen as it's going to be on the page. There's no "wraparound" of text from line to line. An audio signal sounds when you're at the end of a line. To help you visualize how each page is going to look on paper, *Typit* displays a perforated line every 65 lines, to show the bottom of an 11-inch sheet of paper. *Typit* is a snap to learn. The seventeen editing commands are short and simple. With a system having 48K of computer memory, you have room for about four pages of text. With a system having 24K of computer memory, you can type about one page, making it ideal for memos, letters or short homework assignments, or macros or subroutines for programmers. You can save on diskette anything you write with *Typit*.

The author invites written questions or comments.

REVIEW COMMENTS
This is for ATARI Home Computer owners who want to use their computers as typewriters. *Typit* is very easy to use.

The user manual explains each feature in detail.

REQUIRES
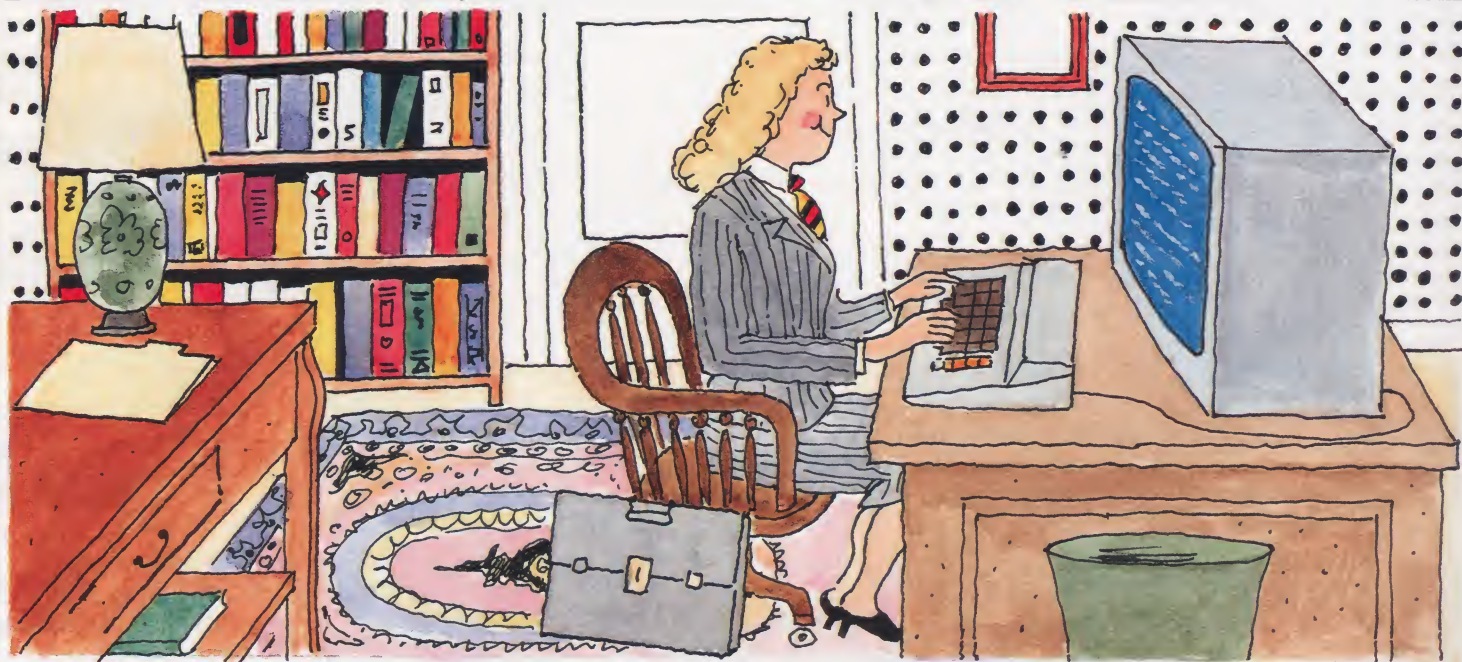ATARI 825 80-column printer or equivalent printer

OPTIONAL
Diskette(s) for storing documents

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	N/A		
Diskette (810)	24K	$17.95	APX-20192

Home management

Program	Accessories	Cassette*		Diskette**		
		RAM	Order No.	RAM	Order No.	Price
Bowler's Database by Jerry White Track individual weekly bowling scores and print scores and averages	[B] • **Diskettes for storing data**	16K	APX-10091	24K	APX-20091	$17.95
Calculator A programmable calculator with storing and printing features (ages 15 and up)		N/A		24K	APX-20130	$29.95
Data Base/Report System ■ by James W. Burley A multifeatured information organizer and reporter for experienced data base users. In the latest version, redefined fields now display in the correct location.	[B] [825] • **Diskettes for storing data** • Epson printer	N/A		40K	APX-20134	$24.95
Data Management System by Ronald and Lynn Marcuse An information organizer and reporter for brief items (ages 15 and up)	[B] [825] • Epson MX-80 Printer	N/A		32K	APX-20059	$24.95

SYMBOLS USED

Cartridges:

[B] ATARI BASIC Language Cartridge

[A] Assembler Editor Cartridge

[P] ATARI PILOT

Accessories listed in boldface type are required.

All others are optional.
Symbols in color are required.
Grey symbols are optional.

Printers:

[820] ATARI 820 40-Column Printer

[822] ATARI 822 Thermal Printer

[825] ATARI 825 80-Column Printer

ATARI printer or equivalent printer

Controllers:

ATARI Joystick Controller

ATARI Paddle Controller

* Requires an ATARI 410 Program Recorder
** Requires an ATARI 810 Disk Drive

★ ATARI Special Award of Merit

11

Program	Accessories	Cassette*		Diskette**		
		RAM	Order No.	RAM	Order No.	Price
Decision Maker by James L. Bruun Make decisions involving as many as ten choices and ten factors (ages 12 and up)	[B]	8K	APX-10044	16K	APX-20044	$17.95
Diskette Mailing List by William Bartlett A multipurpose data manager and label program (ages 16 and up)	[B] 825	N/A		16K	APX-20112	$24.95
Enhancements to Graph It by Howard D. Siebenrock Save plots and charts created by ATARI Graph It (ages 12 and up)	[B] • ATARI 410 Program Recorder • GRAPH IT (CX4109)	N/A		32K	APX-20074	$17.95
Family Budget by Jerry Falkenhan A budget analyzer for use with *Family Cash Flow* (ages 17 and up)	[B] • Family Cash Flow (APX-20080)	N/A		32K	APX-20108	$24.95
Family Cash Flow by Jerry Falkenhan Track income and expenses and print reports (ages 18 and up)	[B]	N/A		32K	APX-20080	$24.95
Family Vehicle Expense by Jerry Falkenhan Track up to nine monthly costs for six vehicles (ages 18 and up)	[B] • Diskettes for storing data	N/A		40K	APX-20128	$24.95
Financial Asset Management System by Robert A. Waldman Organize your asset records and print reports (ages 16 and up)	[B] 825	N/A		40K	APX-20042	$29.95

Home management

Program	Accessories	Cassette*		Diskette**		
		RAM	Order No.	RAM	Order No.	Price
FOG Index by Ingrid Langevin Use the FOG Index to analyze text readability (ages 13 and up)	• A text editor using ATARI DOS	N/A		32K	APX-20185	$17.95
Hydraulic Program by William L. Rice Calculations for sizing hydraulic systems and components (ages 16 and up)		N/A		32K	APX-20066	$24.95
Isopleth Map-making Package by Clyde Spencer Create and display your data as maps (ages 16 and up)		N/A		32K	APX-20103	$24.95
Message Display Program by Dennis Harkins A multifeatured video message system (ages 12 and up)		32K	APX-10153	40K	APX-20153	$17.95
Real Estate Cash Flow Analysis by Richard K. Lindgren Evaluate property investments		N/A		32K	APX-20169	$24.95
Recipe Search 'n Save ▪ by Edward Lehmann Classify, store, and print records (ages 14 and up). The latest version prints complete shopping lists, but the list is sometimes alphabetized incorrectly.	• **Diskettes for storing recipes** • Epson MX-80 Printer	N/A		32K	APX-20114	$24.95
RPN Calculator Simulator by John Crane A Reverse Polish Notation calculator (ages 12 and up)		16K	APX-10105	24K	APX-20105	$24.95
Stock Management ▪ by Greg Thrush Organize stock transaction receipts and print reports (ages 18 and up). The latest version computes stock splits accurately when displaying profit and loss statements.	• Epson 80-Column Printer	N/A		32K	APX-20147	$24.95
Text Analyst by Ingrid Langevin Use the Dale-Chall method to analyze text readability	• ATARI Word Processor • Text Wizard	N/A		40K	APX-20142	$17.95
Text Formatter by Dale Yocum A basic text formatter for use with a text editor (ages 16 and up)	• A compatible text editor	16K	APX-10002	24K	APX-20002	$24.95
Weekly Planner by Ronald and Lynn Marcuse Store and print dates and appointments (ages 15 and up)		N/A		32K	APX-20079	$24.95

Personal Development

Fingerspelling
by Dewey Garton

Recommended for ages 4 and up
Written in BASIC

Practice letter and word fingerspelling

Here's a colorful program to help you learn fingerspelling, the art of speaking with your hands. Although communicating with deaf people is the principal use of fingerspelling, the technique is also useful for situations like communicating while scuba diving, riding a motorcycle, or working in a noisy environment. It can even be a fun way for kids to communicate with each other "in code."

Fingerspelling is easy to use. For example, it takes only one keystroke to select any activity. The program has two parts. In "Show me," you type a letter or a word up to ten letters long, and the program then displays the hand images one at a time, with the letter displayed alongside for reinforcement. In "Test me," you practice reading letters or words. For letter practice, the program displays the hand image for a letter it chooses at random and you press the corresponding letter. When you're ready to practice words, the program displays the hand images for each letter in a word from one of its

word lists, and you type the corresponding letters. You may choose from three levels of word difficulty, and you can select from ten speeds for displaying the hand images in the "Test me" section. The program also keeps count of how many letters and words you get right in this section.

The author invites written questions and comments.

REVIEW COMMENTS
The program's design and its use of graphics and sound accommodate very well both those with and without hearing loss. This program doesn't go into word signing or sentence practice; it focuses just on letters and spelling out words.

The user manual is easy to use and well illustrated.

REQUIRES
ATARI BASIC Language Cartridge

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	16K	$24.95	APX-10197
Diskette (810)	24K	$24.95	APX-20197

Personal Development

Program	Accessories	Cassette*		Diskette**		Price
		RAM	Order No.	RAM	Order No.	
Advanced Musicsystem ★ PAL by Lee Actor A comprehensive music composition tool (ages 11 and up)	[B] (Paddle Controller) • Diskettes for storing music • Stereo cable • Tape Recorder		N/A	32K	APX-20100	$29.95
Astrology ★ by Harry Koons and Art Prag Draw astrological charts based on birth date and birthplace (ages 14 and up)	[B]		N/A	40K	APX-20078	$24.95
Banner Generator by John Daigle and Steve Bittrolff Print one-liners up to 6 inches high and 80 characters long (ages 8 and up)	[B] (printer)	16K	APX-10040	16K	APX-20040	$17.95
Blackjack Tutor by W. H. Northrup A tutorial to improve playing and betting strategy (for adults)	[B]	16K	APX-10057	24K	APX-20057	$24.95
Going to the Dogs by Michael Kirtley A handicapping program for dog races (for adults)	[B] • Diskettes for storing data • A racetrack program		N/A	24K	APX-20123	$24.95
Keyboard Organ by Alan Griesemer and Stephen Bradshaw Simulate a simple organ with vibrato and attack (ages 6 and up)		24K	APX-10094	24K	APX-20094	$24.95
Morse Code Tutor by Richard Watts/Macrotronics Tutorial and drills for recognizing Morse code (ages 7 and up)	[B]	16K	APX-10092	24K	APX-20092	$24.95
Personal Fitness Program by David Getreu Eight self-paced exercises (ages 12 and up)	[B] (Joystick, Paddle)		N/A	24K	APX-20033	$24.95
Player Piano by Jerry White A twenty-note minipiano with music storage features (ages 4 and up)	[B] (printer)	24K	APX-10062	40K	APX-20062	$24.95
Sketchpad PAL by Duane L. King A computerized doodle pad with storage feature (ages 12 and up)	[B] (Joystick) • Diskettes for storing pictures	16K	APX-10107	24K	APX-20107	$24.95

SYMBOLS USED

Cartridges:
[B] ATARI BASIC Language Cartridge
[A] Assembler Editor Cartridge
[P] ATARI PILOT

Accessories listed in boldface type are required.
All others are optional.
Symbols in color are required.
Grey symbols are optional.

Printers:
[820] ATARI 820 40-Column Printer
[822] ATARI 822 Thermal Printer
[825] ATARI 825 80-Column Printer
ATARI printer or equivalent printer

Controllers:
ATARI Joystick Controller
ATARI Paddle Controller

* Requires an ATARI 410 Program Recorder
** Requires an ATARI 810 Disk Drive

★ ATARI Special Award of Merit

Three R Math Classroom Kit
by Dan Rohr

Recommended for educators (for grades K-8)
Written in BASIC

Three R Math System, plus worksheets and gradebook

The *Three R Math System* (APX-20133) has been tested and acclaimed by educators, and now it's available as part of a comprehensive three-part package, *Three R Math Classroom Kit*, which includes a worksheet printing program for practice drills, and a gradebook record keeping program.

The program has 101 difficulty levels covering addition, subtraction, multiplication, and division. Problems range from adding two one-digit numbers through dividing a two-digit number into a four-digit number. The sequentially designed levels let each student work on problems at his or her current ability level.

The system is designed for kindergarten through eighth grade levels. Both students and teachers have found it easy to use. The teacher creates a seven-letter password, one letter representing each selectable drill feature, and gives it to the student. The student types in his name and the password, and the drill begins. A summary of the results displays at the end of the session. The results can also be stored on diskette and later printed out so that the student and teacher have a permanent record of the session. The printout contains all the problems worked, together with the correct answers, the student's answers, and the times required to work the problems. This printout can help to pinpoint weak spots. Ten extra problems also print for more practice.

The worksheet program lets you generate custom-tailored worksheets from the same 101 different levels of math problems to supplement other practice methods. Because it's a rare school district that can provide enough computers for all its students, this part of the kit can give each student more individual practice for the drills he needs. The worksheet program creates practice pages of problems without answers, problems with every other answer given, or keys with all the answers provided. The easy-to-use prompts make combining these options a snap.

The third part of the kit, the gradebook program, offers a means of keeping records for a whole class and for individual students. The gradebook program takes care of hours of painstaking record keeping. This cumulative record lets you and your students check on their progress.

If you've done any comparison shopping for a complete package like this one, you probably think the low price is a misprint. It's not — the decimal point is in the right place! This is one of the most thorough and versatile programs you can find for its purpose, and it costs only a fraction of the price of the few programs like it.

The author invites questions and comments by mail and telephone.

REVIEW COMMENTS
This is a mathematics education package that rivals similar offerings costing hundreds of dollars more.

The user manual is thorough and detailed. The author gives imaginative suggestions for ways to use the worksheets.

REQUIRES
ATARI BASIC Language Cartridge
ATARI 825 80-column Printer or Epson MX-80 Printer
Diskettes for storing records

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	N/A		
Diskette (810)	40K	$49.95	APX-20203

My Spelling Easel
by Al P. Casper

Recommended for ages 3—10
Written in BASIC and machine language

Paint landscapes in your computer by typing letters and spelling words

Have you ever seen an artist set up an easel at the beach? It doesn't take long before a crowd gathers. You can expect the same thing to happen when you set up *My Spelling Easel* for children. The pictures they create are so captivating that everyone wants to get into the act.

Each time a word appears at the bottom of the screen, the child types one or more letters. The word might be "dog" or "hills." A picture representing the word appears, until the child has composed a whole fanciful landscape. And for fun, he can easily change the colors of his picture. Children can play this multilevel game with the keyboard or a Joystick Controller. In the "easy scene," the child can press any letter to add a picture to his landscape. The next level requires a key of a letter in the word. The third level calls for each letter of the word in any order, and the fourth calls for all the letters in order. If nobody's playing, the program automatically creates landscapes.

The author invites written questions and comments.

REVIEW COMMENTS
Al Casper, author of *Counter,* has come up with another unique educational challenge for kids. Beginning readers will love this program. Not only can a non-reader cause a picture to be displayed by touching any key, but newly successful readers can be challenged to type a whole word and display its picture on the TV screen.

The user manual gives simple instructions and includes a Quick Reference.

REQUIRES
ATARI BASIC Language Cartridge

OPTIONAL
One ATARI Joystick Controller

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	16K	$29.95	APX-10200
Diskette (810)	24K	$29.95	APX-20200

Teasers by Tobbs
by Thomas C. O'Brien
and Sunburst Communications

Recommended for ages 8 and up
Written in BASIC

Tell Tobbs how to solve math problems in a puzzle grid

Hours of absorbing, challenging fun are in store when you meet Tobbs and try to solve his "teasers" — puzzles in the form of grids. The puzzle grids are made of three squares across and three squares down. The symbol for addition or multiplication appears in the upper left square, and the other eight work together like a crossword puzzle to show sums or products. At first some of the squares are blank. Tobbs hops about asking what number should fit into each square, based on the relationships among the numbers you can see. He shows his delight when you give him the right number, but he shakes his head firmly when you're wrong.

The program is based on the ideas of Jean Piaget, the father of child developmental psychology. At the easiest level, you supply one-digit answers. But at the higher levels, not only do the squares hold two-digit numbers, but you often have to reason backwards, forwards, and sideways from the sum to the numbers which add or multiply together. For very advanced players, some puzzles have more than one possible answer. If things get too hard for you, Tobbs is always available to give you help. He calculates how many problems you answered correctly at the end of each set of puzzles. Teachers can use the program in the classroom, but parents can also help their children improve their skills. Adults, too, will be challenged by these puzzles!

The author invites questions and comments by telephone.

REVIEW COMMENTS
This program goes far beyond mere computation to tap broad math skills, such as reversibility, a major factor in intellectual development.

The user manual is very thorough, giving educational theory as well as instructions.

REQUIRES
ATARI BASIC Language Cartridge

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	N/A		
Diskette (810)	16K	$29.95	APX-20201

Math Mission
by Dave Kosmal

Recommended for ages 6–10
Written in BASIC

Explore new planets with answers to math problems for fuel

Your kids would rather play *Quarxon* or *Space Chase* than work on their math skills, right? Make their lives a little easier — give them an exciting space game that just happens to provide solid exercises in basic computational skills.

While your spaceship is rocketing across the bottom of the screen, the fuel level is dropping steadily. You can stoke up the spaceship by answering math problems. Enough correct answers will get you to the next planet, where your spaceship refuels completely, and you're off to conquer still more new worlds. Flags on the screen appear to show how many planets you've explored. At the beginning of each game, you can set the kinds of problems (addition, subtraction, multiplication, division, or a mixture of all four). You can also choose one of three levels, depending on how fast you think you can give answers to fuel the spaceship.

Besides being exciting to play, *Math Mission* follows some sound educational principles. Each time you answer incorrectly, the same problem appears again. If you miss it three times, the right answer finally appears. In addition, you're encouraged by surprise bonuses for long strings of correct answers, or for landing at a new planet with lots of fuel left.

The author invites questions and comments.

REVIEW COMMENTS
Math Mission essentially provides drill and practice, but its smooth graphics, space theme, and scoring features make it an unusually appealing education game.

The user manual contains a story line and explains the options and scoring system thoroughly.

REQUIRES
ATARI BASIC Language Cartridge

OPTIONAL
One ATARI Joystick Controller

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	16K	$24.95	APX-10193
Diskette (810)	24K	$24.95	APX-20193

Escape to Equatus
by Thomas Ferguson

Recommended for ages 5 and up
Written in BASIC and machine language

Help the Mathemen escape by solving problems

The Mathemen are desperate. They're the only survivors of the disaster that destroyed their planet, and they've been cruising through space in their robot ship, looking for a new home. They thought the moon Equatus might be just the place — but no! As soon as they land and leave the safety of their robot ship, the dread Equacion battle cruiser attacks. The battle cruiser sends a series of arithmetic problems across the top of the screen. Then a row of numbers from 0 through 9 descends on the Mathemen. Their only chance is to shoot down the correct answers with their lasers. They'll never survive without your help!

In this fast-paced game, you use your Joystick Controller to select correct answers and blast away at them. The four levels start with "trooper," which requires addition and subtraction of the numbers between 1 and 5, and go up to "blaster," which drills addition, subtraction, division, and multiplication for numbers 6 to 24. The speed and complexity increase at each higher level.

If you miss an answer, the Mathemen are immobilized. But don't despair. The battle cruiser returns later in the game with the problem you missed, and if you get it right this time, they come back to life. While you're breathlessly saving Mathemen, you might not notice that you're learning more efficiently with each repetition. The program keeps a score for each game and compares it to your highest score, so that you can measure your progress.

The author invites written questions and comments.

REVIEW COMMENTS
This arcade-style educational game deals with mixed arithmetic problems of up to three digits. Its graphics and sound are well done, involving a story.

The user manual develops the story line in detail.

REQUIRES
ATARI BASIC Language Cartridge
One ATARI Joystick Controller

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	24K	$24.95	APX-10190
Diskette (810)	24K	$24.95	APX-20190

Learning

Program	Accessories	Cassette* RAM	Cassette* Order No.	Diskette** RAM	Diskette** Order No.	Price
Algicalc by The Soft Warehouse Perform symbolic algebra and some calculus (ages 14 and up)	[B]	24K	APX-10126	32K	APX-20126	$24.95
Atlas of Canada Learn the provinces, capitals, and landmarks of Canada (ages 10 and up)	[B]	16K	APX-10093	32K	APX-20093	$24.95
Calculus Demon by The Soft Warehouse Derive symbolic partial derivatives and indefinite integrals of expressions (ages 16 and up)	[B]	32K	APX-10155	40K	APX-20155	$24.95
Counter by Al Casper An introduction to numbers in four languages (ages 3-8)	[B]	16K	APX-10148	24K	APX-20148	$29.95
Cubbyholes by Dale Disharoon An addition game for 1−2 players (ages 5−12)	[PAL] [B]	16K	APX-10101	24K	APX-20101	$24.95
Earth Science by the Minnesota Educational Computing Consortium Lessons on earthquakes, minerals, and the solar system (grades 5−12)	[B]	N/A		16K	APX-20160	$29.95
Easygrader ∎ by Dan Hale of A. D. Enterprises Organize, analyze, and print class records. The latest version prevents users from entering assignment points larger than the program can accept and it now allows up to 255 points for an assignment.	[B] • Diskettes for storing records	N/A		40K	APX-20152	$24.95
Elementary Biology by the Minnesota Educational Computing Consortium A circulatory tutorial and two ecology simulations (grades 4−8)	[B]	N/A		16K	APX-20136	$29.95

SYMBOLS USED

Cartridges:
[B] ATARI BASIC Language Cartridge
[A] Assembler Editor Cartridge
[P] ATARI PILOT

Accessories listed in boldface type are required.
All others are optional.
Symbols in color are required.
Grey symbols are optional.

Printers:
820 ATARI 820 40-Column Printer
822 ATARI 822 Thermal Printer
825 ATARI 825 80-Column Printer
ATARI printer or equivalent printer

Controllers:
ATARI Joystick Controller
ATARI Paddle Controller

* Requires an ATARI 410 Program Recorder
** Requires an ATARI 810 Disk Drive

★ ATARI Special Award of Merit

Program	Accessories	Cassette* RAM	Cassette* Order No.	Diskette** RAM	Diskette** Order No.	Price
Flags of Europe by Gary A. Dacus Two quizzes for identifying flags (ages 8 and up)	[B]		N/A	40K	APX-20149	$24.95
Frogmaster PAL by Michael Crick A fast-moving game for 1−2 players based on behavior modification (ages 9 and up)	[B]		N/A	24K	APX-20131	$24.95
Geography by the Minnesota Educational Computing Consortium Identify capitals, states, countries, and continents (grades 4−10)	[B]		N/A	16K	APX-20164	$29.95
Hickory Dickory by Dale Disharoon Teaches traditional and digital clock reading (ages 5−11)	[B]	16K	APX-10071	24K	APX-20071	$17.95
I'm Different! by Kathleen and Philip Bergh Colorful workbook-style exercises for preschoolers (ages 3−7)	[P]		N/A	32K	APX-20183	$24.95
Instructional Computing Demonstration by the Minnesota Educational Computing Consortium Demonstrations of learning techniques in MECC programs (for teachers)	[B]		N/A	16K	APX-20137	$29.95
Letterman by Ed Stewart and Ray Lyons A friendly hangman for 1−2 players (ages 8 and up)	[B]	16K	APX-10096	32K	APX-20096	$24.95
The Magic Melody Box by W. Wes Horlacher Draw a melody line and hear it play (ages 3 and up)	[B]	16K	APX-10182	24K	APX-20182	$17.95
Mapware ★ by Harry Koons and Art Prag Create and store finely detailed world maps (ages 14 and up)	[B]		N/A	40K	APX-20055	$24.95
The Market Place by the Minnesota Educational Computing Consortium Learn basic economic concepts by managing businesses (grades 3−8)	[B]		N/A	16K	APX-20162	$29.95
Math*UFO by Gregor Novak An arcade-style arithmetic game for 1−2 players (ages 8−12)	[B]	24K	APX-10151	32K	APX-20151	$24.95

Learning

Program	Accessories	Cassette* RAM	Cassette* Order No.	Diskette** RAM	Diskette** Order No.	Price
Mathematic-Tac-Toe by Nadav Caine Two-player arithmetic drills (ages 8—16)	B	16K	APX-10082	24K	APX-20082	$17.95
Metric and Problem Solving by the Minnesota Educational Computing Consortium Practice using the metric system and problem solving techniques (grades 2—6)	B	N/A		16K	APX-20138	$29.95
Monkey Up a Tree by Joe Grande Solve problems so the monkey can reach the bananas (ages 4 and up)	B	24K	APX-10165	24K	APX-20165	$24.95
Music I — Terms & Notations by the Minnesota Educational Computing Consortium Drills for identifying notes, keys, and terms (grades 5—10)	B	N/A		16K	APX-20139	$29.95
Music II — Rhythm & Pitch by the Minnesota Educational Computing Consortium Six drills and practices in rhythm and pitch (grades 5—10)	B	N/A		16K	APX-20172	$29.95
Music III — Scales & Chords by the Minnesota Educational Computing Consortium Five practices for recognizing musical tones (grades 3—10)	B	N/A		16K	APX-20161	$29.95
Musical Computer — The Music Tutor by Computer Applications Tomorrow An overview of the mechanics of music (ages 6 and up)	B	N/A		40K	APX-20098	$17.95
Number Blast by Richard Wiitala A multiplication and addition game for 1—2 players (ages 6—10)	B	16K	APX-10097	24K	APX-20097	$17.95
Polycalc by The Soft Warehouse Perform symbolic algebra and calculus with polynomials (ages 14 and up)	B	24K	APX-10127	32K	APX-20127	$24.95
Prefixes by the Minnesota Educational Computing Consortium Drills and games for learning prefixes (grades 3—6)	B	N/A		16K	APX-20163	$29.95

Learning

Program	Accessories	Cassette*		Diskette**		Price
		RAM	Order No.	RAM	Order No.	
Presidents of the United States by Gary A. Dacus — One-player quizzes on U. S. presidents (ages 10 and up)	B	24K	APX-10068	32K	APX-20068	$17.95
Quiz Master by Ingrid Langevin — Create and use five kinds of computer-assisted quizzes (ages 8 and up)	B	N/A		32K	APX-20081	$24.95
Spelling Genie by Dale Disharoon — Four one-player spelling games using preset lists or your own (ages 5—14)	B	16K	APX-10145	24K	APX-20145	$24.95
Starware ★ PAL by Harry Koons and Art Prag — Sky map generator and constellation quiz (ages 14 and up)	B	N/A		40K	APX-20111	$24.95
Stereo 3-D Graphics Package by Clyde Spencer — Produce wire-frame stereograms (ages 16 and up)	B • Pocket stereoscope • Polaroid camera • Anaglyphic glasses	N/A		32K	APX-20087	$24.95
Three R Math System PAL by Dan Rohr — Create and use customized math drills (ages 5—13)	B 825 • Diskettes for storing records • Epson MX-80 Printer	N/A		40K	APX-20133	$24.95
Typo Attack ■ by David Buehler Grand Prize — Type the right key and hit the typos! (ages 8 and up). The latest version automatically plays tunes.		8K	APX-10180	16K	APX-20180	$29.95
Video Math Flash Cards ■ PAL by Richard S. Waller — Two-minute, one-player math drills (ages 6—10). The latest version contains no discouraging messages.	B	16K	APX-10048	24K	APX-20048	$17.95
Word Search Generator by Max Mulliner — Create and play word search puzzles (ages 6 and up)	B 825	N/A		24K	APX-20140	$24.95
Wordmaker PAL by Dale Disharoon — A vocabulary and spelling game for 1—2 players (ages 6 and up)	B	32K	APX-10099	40K	APX-20099	$24.95

Entertainment

Getaway!
by Mark Reid

Recommended for ages 6 and up
Written in machine language

Find the loot and stash it in your hideout before the law nabs you

Quick! Around the corner! The sheriff is in hot pursuit! You've been racing all over town collecting loot and stashing it in your hideout. At first the heists were easy. As long as it was just a little cash here and there, the law wasn't too interested. But then you knocked off an armored van, and the heat's on. You'd better *Getaway!*

You use your Joystick Controller in this one-player game to drive your getaway car around a colorful town covering a scrolling map filling 35 screens. You can collect as much cash and other prizes as you want before returning to your hideout. However, the more you're carrying around, the keener the law is on tracking you down. If you're planning a big heist, be sure to stop at a gas station beforehand to avoid the embarrassment of running out of gas while making your getaway.

You can use radar blips to detect nearby patrol cars and armored vans, and when you first get caught, you have two other getaway cars at your disposal before you have to call it quits. As soon as you capture the three prizes and the armored van on one level, you automatically

move up to the next level. Each level contains bigger prizes and smarter cops. In the end you'll always learn that crime doesn't pay!

The author invites written questions and comments.

A large, four-color poster of the complete *Getaway!* map is available through your ATARI Computer retailer. The order number is APX-90012.

REVIEW COMMENTS

Getaway! has increasing levels of difficulty, and yet it's easy to learn. This is a masterpiece from an experienced game designer. Mark Reid has used the capabilities of ATARI Computers in every way to create an action game of surprising subtlety.

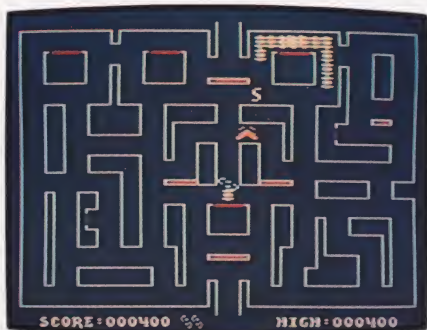The user manual is lively and witty.

REQUIRES
One ATARI Joystick Controller

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	32K	$29.95	APX-10195
Diskette (810)	32K	$29.95	APX-20195

Caterpiggle
by Scott Ludwig

Recommended for ages 7 and up
Written in machine language

Devour the snakes crawling through a maze

Who gobbles up fearsome snakes the way Popeye eats spinach? Who fends off Serpent Security guards the way O.J. scatters tacklers? *Caterpiggle*, that's who!

Using your Joystick Controller, you maneuver Caterpiggle through an intricate maze to eat up long snakes that can appear anywhere. These snakes are tricky. Sometimes they grow longer by segments, even while Caterpiggle is devouring them. If he goes for the snakes in the middle, the two halves go in different directions. The segments can break off and make their own way through the maze, and Caterpiggle has to chase them down. Even after he has eaten them up, they give him trouble, because they slow him down while they're digesting!

Be careful — the snakes are guarded by the super-vigilant Serpent Security force. If Caterpiggle collides with one of these menacing creatures, he's doomed, for the time being. He has three lives, or three chances to move up to the next level. With each succeeding level, the snakes grow longer and move faster, and it takes Caterpiggle longer to eat each segment. But then you get more points for each level. If you maneuver Caterpiggle skillfully enough, he'll earn a bonus for eating any guards touching a snake!

The author invites written questions and comments.

REVIEW COMMENTS
This exciting game gets very difficult at higher levels. The Serpent Security characters are original and cute. The game calls for lots of strategy at higher levels. Music and other sounds are novel and fun.

The user manual is thorough, offering helpful tips to improve your strategy.

REQUIRES
One ATARI Joystick Controller

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	16K	$24.95	APX-10194
Diskette (810)	24K	$24.95	APX-20194

Diggerbonk
by Steve Robinson

Recommended for ages 8 and up
Written in machine language

Bonk everything in your path in a vertically scrolling maze

This just isn't your day. You get a speeding ticket on your way to work, you have a run-in with your boss and your husband forgot to defrost the pork chops. Don't take it out on him! Take it out on the Pulsing Greenies, the Purple Gurple, the Yellow Blinker, and a host of other hostile creatures. Play a game of *Diggerbonk*!

Using your Joystick Controller, you maneuver through a vertically scrolling maze to accumulate points by "bonking," or demolishing, your enemies. If you bonk a Pulsing Greenie, you glow with special powers you can use against the real threats: the Purple Gurple, the Yellow Blinker, or, worst of all, the Aqua Chaser. Of course, they're out to get you, too, so you have to keep your wits about you. There are some last-ditch escape methods, including the Panic Button, which you can use only in the most dire emergency.

Besides your enemies, you have to watch out for some hazards in the landscape. Don't let the Orange Whirlers entice you too far down the screen, or you might be boxed in as the wall scrolls downward. Even if you just bump into the wall, you lose points, unless you can capture a Twirler. That lets you break a path through the wall whenever you like. Sometimes a fog cloud passes across the screen, making it hard to see where you're going. And the dreaded red bomb might go off at any time — its fragments are deadly. Try to bonk as many creatures as possible before your inevitable demise!

The author invites written questions and comments.

REVIEW COMMENTS
This program provides offense, defense, chance, and strategy in a maze game.

The user manual is detailed and helpful.

REQUIRES
One ATARI Joystick Controller

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	16K	$24.95	APX-10202
Diskette (810)	16K	$24.95	APX-20202

Microsailing
by Glenn Faden

Recommended for ages 8 and up
Written in BASIC and machine language

Sail through four courses that teach tacking and gybing (1 or 2 players)

The saying goes that you'll love sailing if you enjoy standing in a cold shower dropping $100 bills down the drain. *Microsailing* can't replace the thrill of gliding through the water on a brisk, sunny day, but it does give you a taste of the skill required to sail a yacht, without the heavy financial investment or the uncomfortable conditions that can dampen your pleasure.

This yacht racing game for one or two players offers four courses of varying difficulty. A yacht runs through the course before the race to show you how to round the marks. You tack and gybe around the buoys on a course using a Joystick Controller as your tiller. Your speed depends on both your helmsmanship and wind conditions. Experienced sailors can even elect to sail in stormy weather. The game offers two sets of rules. Standard rules ignore boat collisions, whereas advanced play follows the right-of-way rules of the North American Yacht Racing Union. The race ends when one player crosses the finish line after rounding all the marks. The program displays the best time for all races and also shows which player has achieved the best time. *Microsailing* is the perfect way to prepare for your next regatta!

The author invites questions and comments by mail and telephone.

REVIEW COMMENTS
This is an enjoyable simulation of a sailing race, and the computer is a tough competitor.

The user manual is very good. It contains diagrams of the four courses.

REQUIRES
ATARI BASIC Language Cartridge
One ATARI Joystick Controller per player

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	N/A		
Diskette (810)	32K	$17.95	APX-20176

Impact
by David Buehler

Recommended for ages 7 and up
Written in machine language

Bump off all your opponents' skimmers but stay out of their way

Play bumper cars in outer space. Between two and four players use joysticks to direct the movement of skimmers in a common field. These skimmers have no drag, so they coast around at the same speed, unless they hit something or change direction. And that's the point of *Impact:* to be the last surviving skimmer by bumping off the others and staying out of their way so they don't bump you off. A player can energize his skimmer for a couple of seconds to bump off another skimmer before entering recharging time, during which he is totally vulnerable. A player can fend off an approaching energized skimmer by energizing his own skimmer. *Impact's* 24 different playing fields contain various bumpers and traps. Some bumpers cause bouncing in random directions, some cause bouncing in predictable directions, and some instantly destroy any skimmer bumping into them. Other game options include individual player handicapping, number of lives, and setting time limits.

The author invites written questions and comments.

REVIEW COMMENTS
The action of the players is a bit difficult at first, but it's really fun with three or four players.

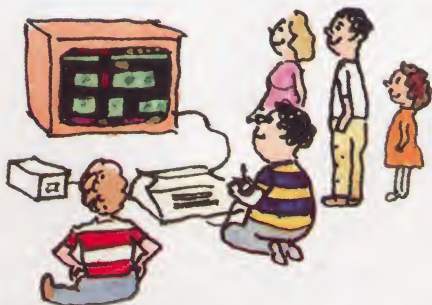The user manual is short, clear, and simple.

REQUIRES
One ATARI Joystick Controller per player

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	8K	$17.95	APX-10196
Diskette (810)	16K	$17.95	APX-20196

Program	Accessories	Cassette* RAM	Cassette* Order No.	Diskette** RAM	Diskette** Order No.	Price
Air-Raid! by Chuck Gibke — Head off the bombers before they reach the city (ages 8 and up)		16K	APX-10187	24K	APX-20187	$29.95
Alien Egg by Robert Zdybel — Return the specimen to the spaceship — a text adventure game (ages 10 and up)	B	N/A		24K	APX-20022	$17.95
Anthill by Steve Bittrolff — Beat your opponent to the top of the maze (ages 8 and up)	B	8K	APX-10024	16K	APX-20024	$17.95
Attank! by Joel Gluck PAL — Destroy your opponent's tanks on the battlefield (ages 10 and up)	B	24K	APX-10072	32K	APX-20072	$24.95
Avalanche by Dennis Koble PAL — Absorb falling rocks with shields (ages 6 and up)		16K	APX-10003	16K	APX-20003	$24.95
Babel by Joel Gluck PAL — Build towers to reach the stars (ages 8 and up)	B	16K	APX-10038	24K	APX-20038	$24.95
Blackjack Casino by Bill Zimmerman — A computerized version of blackjack for 1–4 players (ages 10 and up)		8K	APX-10064	16K	APX-20064	$17.95
Block Buster by Alan Griesemer and Stephen Bradshaw PAL — A cube puzzle and puzzle solver (ages 9 and up)		32K	APX-10110	32K	APX-20110	$17.95
Block 'Em by Jose Suarez — Force your opponent into a wall (ages 8 and up)	B	16K	APX-10090	24K	APX-20090	$17.95

Entertainment

Program	Accessories	Cassette* RAM	Cassette* Order No.	Diskette** RAM	Diskette** Order No.	Price
Bumper Pool by Steve Smith A two-player version of the popular pool hall game (ages 8 and up)	B (joystick)	16K	APX-10053	24K	APX-20053	$17.95
Centurion by Robert Zdybel Destroy the barbarians in this real-time war game (ages 14 and up)	B	16K	APX-10016	24K	APX-20016	$17.95
Checker King by William H. Northrup PAL Computerized checkers for 1–2 players (ages 7 and up)	(joystick)	16K	APX-10129	16K	APX-20129	$24.95
Chinese Puzzle by Dennis Koble Escape a maze of colored rooms — a text adventure game (ages 14 and up)	B		N/A	24K	APX-20023	$17.95
CodeCracker by Jose R. Suarez Break the three- and five-digit code within twelve guesses (ages 12 and up)	B	8K	APX-10052	16K	APX-20052	$17.95
Cribbage by Jose R. Suarez PAL A one-player computerized version of the English card game (ages 12 and up)	B (joystick)	32K	APX-10141	40K	APX-20141	$17.95
Domination by Alan M. Newman A three-stage strategy game of superpowers (ages 12 and up)	B (paddle)	24K	APX-10041	32K	APX-20041	$24.95
Downhill by Mark Reid PAL Steer your skier around trees and through gates (ages 8 and up)	B (paddle)	16K	APX-10063	32K	APX-20063	$24.95
Eastern Front (1941) by Chris Crawford PAL Award-winning one-player simulation of the German invasion of Russia (ages 14 and up)	(joystick)	16K	APX-10050	32K	APX-20050	$29.95

SYMBOLS USED

Cartridges:

B ATARI BASIC Language Cartridge

A Assembler Editor Cartridge

P ATARI PILOT

Accessories listed in boldface type are required.

All others are optional.
Symbols in color are required.
Grey symbols are optional.

Printers:

820 ATARI 820 40-Column Printer

822 ATARI 822 Thermal Printer

825 ATARI 825 80-Column Printer

ATARI printer or equivalent printer

Controllers:

ATARI Joystick Controller

ATARI Paddle Controller

* Requires an ATARI 410 Program Recorder
** Requires an ATARI 810 Disk Drive

★ ATARI Special Award of Merit

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Entertainment

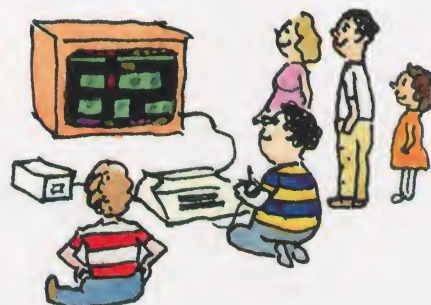| Program	Accessories	Cassette*		Diskette**		Price
		RAM	Order No.	RAM	Order No.	
Galahad and the Holy Grail by Douglas Crockford ★ PAL — A graphic adventure with almost 100 screens (ages 12 and up)			N/A	32K	APX-20132	$29.95
Game Show by Hung A. Pham — Predict the most popular answers to questions (ages 10 and up)			N/A	24K	APX-20168	$17.95
Graphics/Sound Demonstration — Demonstrations of the ATARI Computer's graphics and sound effects (ages 14 and up)			N/A	32K	APX-20028	$17.95
Gridiron Glory by Mike Drury and Bob Graves — Coach your favorite football team to victory (ages 12 and up)			N/A	32K	APX-20188	$24.95
Jax-O by John Ortiz PAL — Computerized jacks for 1–4 players (ages 7 and up)		16K	APX-10121	24K	APX-20121	$17.95
Jukebox #1 ★ by Lee Actor PAL — Eight classical music selections (ages 6 and up)			N/A	32K	APX-20135	$17.95
Lookahead by Johnson Software — Outwit your opponent in this strategy game played on a number grid (ages 8 and up)		24K	APX-10032	24K	APX-20032	$17.95
Mankala by Elizabeth Chase MacRae PAL — A computerized African stone-and-board game for 1- 2 players (ages 8 and up)		16K	APX-10156	16K	APX-20156	$24.95
Melt-Down by Stephen Romejko — Fill a leaking reactor before it melts down (ages 8 and up)		16K	APX-10178	32K	APX-20178	$24.95
Memory Match by Bruce Frumker — One–four players match pairs of objects hidden in a grid (ages 6 and up)		16K	APX-10070	24K	APX-20070	$24.95
The Midas Touch by Duane Bolster PAL — Guess a phrase before time runs out (ages 8 and up)		32K	APX-10115	32K	APX-20115	$17.95
Minotaur by Steven Cavin — Find your way out of a two-dimensional random maze before the Minotaur devours you (ages 9 and up)		24K	APX-10039	32K	APX-20039	$17.95

Program		Accessories	Cassette*		Diskette**		Price
			RAM	Order No.	RAM	Order No.	
Outlaw/Howitzer PAL Two games of marksmanship for 1–2 players (ages 8 and up)			24K	APX-10004	24K	APX-20004	$24.95
Phobos by Greg Christensen Master 16 levels of defense (ages 8 and up)				N/A	16K	APX-20184	$29.95
Pro Bowling by Wesley B. Newell Computerized bowling for 1–4 players (ages 6 and up)	B		16K	APX-10061	24K	APX-20061	$17.95
Pushky by Yakov Epelboim Zap the clouds and your opponent with your pushky (ages 6 and up)				N/A	48K	APX-20186	$24.95
Pushover PAL by Joel Gluck React quickly to push your opponent over a cliff (ages 8 and up)	B		32K	APX-10116	32K	APX-20116	$24.95
Quarxon by Scott Ludwig Break through the boundary and destroy the Droids (ages 7 and up)			16K	APX-10174	24K	APX-20174	$29.95
Rabbotz PAL by Jeff Johannigman Zap the Rabbotz before they reproduce (ages 10 and up)	B		16K	APX-10119	24K	APX-20119	$24.95
Reversi II PAL by Russell Segal Outflank your opponent's squares on two sides (ages 6 and up)			16K	APX-10077	24K	APX-20077	$24.95
Salmon Run PAL by Bill Williams Help Sam the salmon swim upstream to spawn (ages 8 and up)			16K	APX-10120	24K	APX-20120	$24.95
747 Landing Simulator PAL by William J. Graham Land your own 747 jet airliner (ages 12 and up)	B		24K	APX-10043	32K	APX-20043	$24.95

Entertainment

Program		Accessories	Cassette*		Diskette**		Price
			RAM	Order No.	RAM	Order No.	
Seven Card Stud by Monty Webb PAL Play poker with five programmable computer opponents (ages 10 and up)	B	✎	24K	APX-10118	32K	APX-20118	$17.95
Snark Hunt by Jeff Johannigman 1–8 players shoot vorpal beams to find the hidden snarks (ages 8 and up)	B	✎	16K	APX-10154	24K	APX-20154	$24.95
Solitaire by Mark Reid A computerized version of the card game (ages 10 and up)	B	✎	16K	APX-10089	24K	APX-20089	$17.95
Source Code for Eastern Front (1941) by Chris Crawford A behind-the-scenes look at creating a complex war game (for advanced programmers)	A		N/A		40K	APX-20095	$49.95
Space Chase by Fernando Herrera Conquer all the planets to enter the next galaxy (ages 8 and up)	B	✎	16K	APX-10088	24K	APX-20088	$24.95
Space Trek by Bob Polaro Destroy the enemy Oralop spaceships that are threatening the galaxy (ages 14 and up)	B		24K	APX-10015	32K	APX-20015	$17.95
Tact Trek by Robert Zdybel A tactical-level interstellar combat game calling for lots of patience (ages 14 and up)	B		24K	APX-10031	32K	APX-20031	$17.95
Terry by Ingrid Langevin Converse with your very own tongue-in-cheek analyst (ages 10 and up)	B		32K	APX-10047	32K	APX-20047	$17.95
Wizard's Gold Find a hidden bar of gold — a text adventure game (ages 10 and up)	B		N/A		24K	APX-20020	$17.95
Wizard's Revenge by Max Manowski See if you can escape the wizard — a text adventure game (ages 10 and up)	B		N/A		24K	APX-20054	$17.95
Yahtman by Dan Reinhart 1–6 players play dice poker with Yahtman (ages 6 and up)	B	✎	16K	APX-10175	24K	APX-20175	$24.95

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NEW VERSION
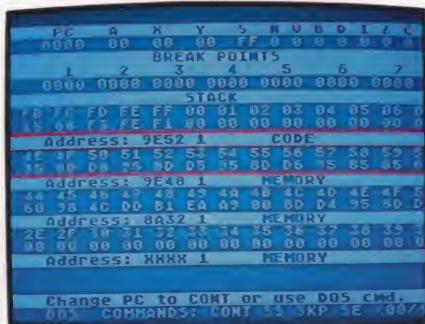
Hex-A-Bug
by David Kano

Recommended for assembly language programmers
Written in machine language

A hexadecimal-based, screen-oriented debugging tool for the ATARI Computer

New programs rarely work as planned on the first run. But finding the errors is difficult at speeds at which the computer usually runs. *Hex-A-Bug* is an easy-to-use tool for stopping your program so you can find and correct the bugs. You load *Hex-A-Bug* and your program into memory, and you use breakpoints to switch control from your program to *Hex-A-Bug*. Being able to determine the intermediate results of your program by studying memory locations and register values can be invaluable for locating errors. Your program's screen display remains intact and you can easily toggle between it and the *Hex-A-Bug* display.

This screen-oriented program uses very few commands. The main screen area consists of "strips" across the screen, each strip being one functional area. You move a flashing cursor from one functional area to another. In this way, you can change the contents of any register, breakpoint, address of a memory strip, or memory location. Horizontal fine scrolling forwards and backwards from any location gives you quick and easy access to all information. In addition, you use simple commands to do such things as go to DOS, single step through your program, search for a string of values, and continue execution of your program.

The author invites written questions and comments.

REVIEW COMMENTS
Hex-A-Bug has the advantages of design consistency, minimal syntax, and ease of use. It needn't be assembled with your program.

The user manual, which assumes knowledge of the internals of the 6502 microprocessor, is clear and comprehensive.

OPTIONAL
ATARI MACRO Assembler or ATARI Assembler Editor
 Cartridge

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	N/A		
Diskette (810)	48K	$39.95	APX-20199

Chameleon CRT Terminal Emulator
by John H. Palevich

Recommended for ages 14 and up
Written in machine language

Convert your computer into a Glass TTY, ADM-3, or VT-52 terminal

With *Chameleon* you can have the best of both worlds — the instant and exclusive availability of a personal computer, together with the additional power of tying into a network or a larger computer system. *Chameleon* converts your ATARI Computer into a computer terminal emulating three widely used types, Glass TTY, ADM-3A, and VT-52. The terminal emulator supports tabs, line feed, form feed, and a visual bell signal. For the ADM-3A and VT-52, it also supports cursor addressing and basic editing features. It doesn't support the special graphics character set of the VT-52 or some rarely used ADM-3A features.

Chameleon's major features are: (1) program uploading and downloading between your computer and a time-sharing system or between two ATARI Computers, using all of available memory as a buffer (up to nine pages); (2) the ability to print all or part of the buffer to a printer or to store it on diskette; (3) support of the CP/M standard MODEM protocol; (4) the full ASCII standard character set; (5) a 134-column (maximum), 24-line character display (displaying 40 columns at a time) with a lock cursor feature for automatic horizontal scrolling; (6) automatic word wrapping in the Glass TTY mode; (7) continuous transmission at baud rates of 75 to 1200 and non-continuous at baud rates of 2400 to 9600; (8) fine scrolling at baud rates of 1200 or less; (9) the ability to save and autoload all *Chameleon* option settings; (10) selectable input/output parity; (11) a BREAK signal; and (12) selectable RS-232C ports. Assembly language programmers with 48K of memory, a disk drive, and the ATARI MACRO Assembler can define new terminal types with *Chameleon* (the diskette version includes the source code).

REVIEW COMMENTS
This is a versatile, well thought-out program. The wide screen emulation is great for large computer systems expecting an 80- or 134-column terminal.

The user manual is clearly written and well organized.

REQUIRES
ATARI 830 Acoustic Modem or an RS-232C device
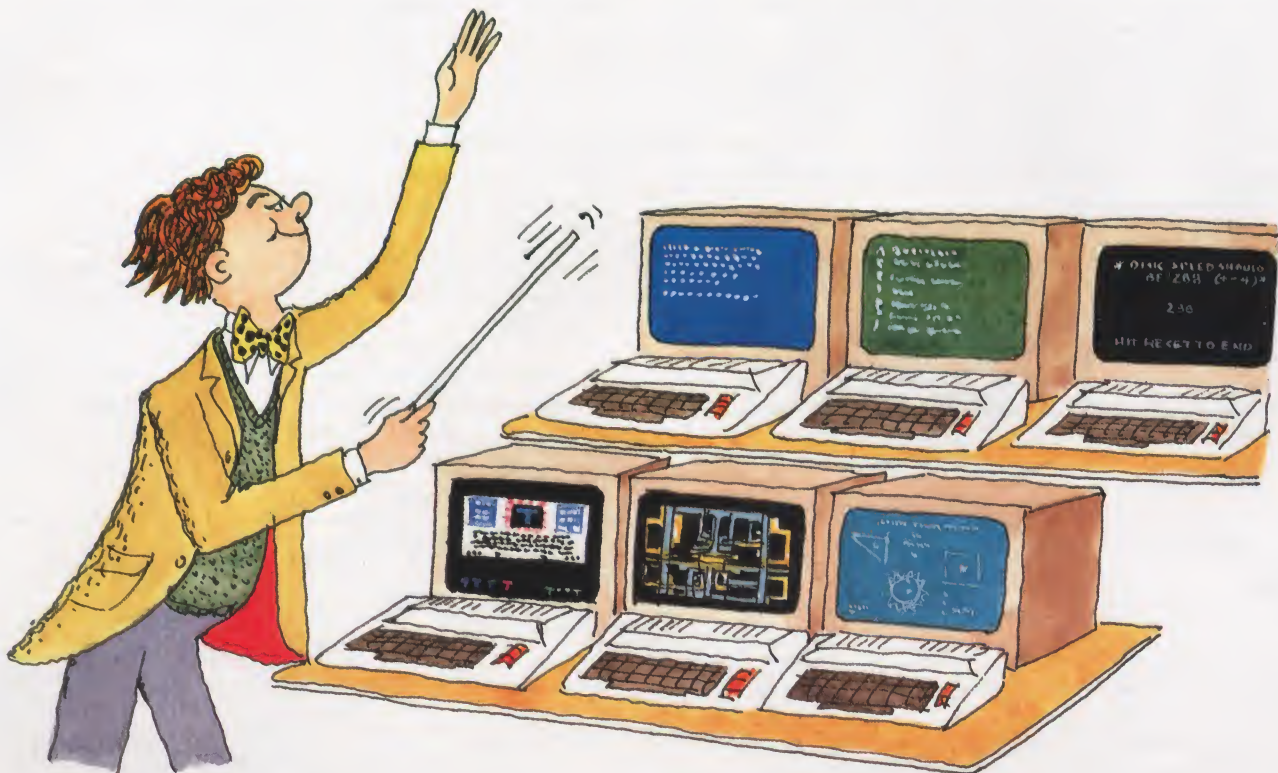ATARI 850 Interface Module

OPTIONAL
ATARI printer or equivalent printer
ATARI MACRO Assembler

ORDER INFORMATION

Media	RAM	Price	Order No.
Cassette (410)	24K	$24.95	APX-10058
Diskette (810)	32K	$24.95	APX-20058

Program	Accessories	Cassette*		Diskette**		
		RAM	Order No.	RAM	Order No.	Price
ATARI Pascal Language System ISO Pascal with many enhancements (for advanced Pascal programmers)	825 • Two ATARI 810 Disk Drives • ATARI Program-Text Editor (APX-20075)		N/A	48K	APX-20102	$49.95
ATARI Program-Text Editor An editor for programs and text files (ages 14 and up)	B		N/A	32K	APX-20075	$39.95
BASIC Program Compressor (MASHER) by Dale Yocum and Jerry White Compress ATARI BASIC programs to free up memory	B		N/A	32K	APX-20008	$17.95
BASIC/XA by Thomas Newton Development tools for ATARI BASIC programmers	B	16K	APX-10177	24K	APX-20177	$29.95
BLIS by Image Marketing Corporation Print ATARI BASIC program listings in an easy-to-read format	B 825		N/A	16K	APX-20049	$24.95
Cosmatic ATARI Development Package by John R. Powers, III A development system for 1802 assembly language (ages 16 and up)	B • ATARI 850 Interface Module • A text editor		N/A	32K	APX-20051	$29.95

Systems/Telecommunications

Program	Accessories		Cassette*		Diskette**		Price
			RAM	Order No.	RAM	Order No.	
Deep Blue C Compiler by John H. Palevich An implementation of the SMALL C language	[A]	• ATARI Program-Text Editor or other non-line oriented text editor • ATARI MACRO Assembler		N/A	48K	APX-20166	$39.95
Deep Blue Secrets by John H. Palevich Source code for *Deep Blue C Compiler* (for advanced C programmers)		• Deep Blue C Compiler (APX-20166) • ATARI MACRO Assembler and Program-Text Editor (CX8121)		N/A	48K	APX-20179	$39.95
Disk Fixer/Load 'n Go Utilities to salvage destroyed diskettes and to autoload ATARI BASIC programs	[B]			N/A	24K	APX-20189	$29.95
Diskette Librarian by Ronald and Lynn Marcuse Catalog, update, search, sort, and print diskette file data (ages 14 and up)	[B] [825]	• Epson MX-80 Printer		N/A	24K	APX-20056	$24.95
Diskmenu by Al Harberg Load BASIC or machine-language programs with a single keystroke (ages 8 and up)	[B]			N/A	16K	APX-20173	$17.95
Dsembler by Volker Multhopp Study and debug assembler routines in ATARI BASIC programs	[B]		24K	APX-10065	24K	APX-20065	$24.95
Dunion's Debugging Tool (DDT) by Jim Dunion A debugging tool for use with the ATARI MACRO Assembler	[B]	• ATARI MACRO Assembler and Program-Text Editor (CX8121)		N/A	16K	APX-20150	$39.95

SYMBOLS USED

Cartridges:

[B] ATARI BASIC Language Cartridge

[A] Assembler Editor Cartridge

[P] ATARI PILOT

Accessories listed in boldface type are required.

All others are optional.
Symbols in color are required.
Grey symbols are optional.

Printers:

[820] ATARI 820 40-Column Printer

[822] ATARI 822 Thermal Printer

[825] ATARI 825 80-Column Printer

ATARI printer or equivalent printer

Controllers:

ATARI Joystick Controller

ATARI Paddle Controller

* Requires an ATARI 410 Program Recorder
** Requires an ATARI 810 Disk Drive

★ ATARI Special Award of Merit

Program	Accessories	Cassette* RAM	Cassette* Order No.	Diskette** RAM	Diskette** Order No.	Price
Extended fig-FORTH by Patrick Mullarky Full implementation of standard fig-FORTH 1.1, with more definitions (for advanced programmers). The cassette version is a subset of the diskette version, is primarily an introduction to FORTH, and is not suitable as a software development system.		16K	APX-10029	24K	APX-20029	$39.95
Extended WSFN by Harry Stewart An educational graphics language for beginning programmers		16K	APX-10026	24K	APX-20026	$24.95
FORTH Turtle Graphics Plus by William D. Volk Turtle graphics for use with *Extended fig-FORTH*	• **Extended fig-FORTH (APX-20029)** • **Epson MX-80 or MX-100 printer with GRAFTRAX**		N/A	24K	APX-20157	$17.95
fun-FORTH by Joel Gluck Sound and graphics commands for use with *Extended fig-FORTH*	• **Extended fig-FORTH (APX-20029)**		N/A	24K	APX-20146	$24.95
GTIA Demonstration Diskette A set of ATARI BASIC programs showing off the graphics power of the GTIA chip	B	• **ATARI Computer with GTIA chip installed**		N/A	24K	APX-20104	$17.95
Insomnia (A Sound Editor) by Bob Fraser Generate up to four-second sounds with up to four voices (for BASIC programmers)	B		N/A	24K	APX-20073	$24.95
Instedit by Sheldon Leemon A character set editor for ATARI BASIC programs	B	16K	APX-10060	24K	APX-20060	$24.95
Instedit by Sheldon Leemon A character set editor for ATARI Microsoft BASIC programs	• **ATARI Microsoft BASIC (CX8126)**		N/A	40K	APX-20113	$24.95
Keypad Controller by Thomas D. Newton Convert ATARI Keyboard Controllers to numeric keypads and a program editor	B or A	• **A pair of ATARI Keyboard Controllers**	8K	APX-10106	24K	APX-20106	$17.95
Mantis Boot Tape Development System by John H. Palevich Develop assembler cassettes on disk-based systems	A	• **ATARI 410 Program Recorder** • **ATARI MACRO Assembler and Program-Text Editor (CX8121)**		N/A	40K	APX-20143	$24.95

Program	Accessories	Cassette*		Diskette**		Price
		RAM	Order No.	RAM	Order No.	
Mapmaker by Stephen W. Hall Create multiscreen, fine-scrolled map displays (ages 13 and up)	B • Instedit (APX-10060 or APX-20060) • Compatible character set editor		N/A	32K	APX-20144	$24.95
Microsoft BASIC Cross-reference Utility by Fred Thorlin A variable tracer for ATARI Microsoft BASIC programs	• ATARI Microsoft BASIC (CX8126)		N/A	40K	APX-20125	$17.95
Music Player by James Bayless A tool to use ATARI Music Composer files with your programs	B • Files created with ATARI Music Composer (CXL4007)		N/A	16K	APX-20181	$24.95
Player Generator by Paul G. Abell Create players, with storage and print features (ages 12 and up)	B	24K	APX-10117	32K	APX-20117	$17.95
Screen Dump Utility Print copies of any screen display			N/A	24K	APX-20045	$17.95
Sound Editor by Bob Smith Create one-second sounds like croaks and rattles	B	16K	APX-10018	24K	APX-20018	$24.95
Speed-O-Disk by Jubal Ragsdale and Dave Henry Test the speed of ATARI 810 Disk Drives			N/A	16K	APX-20109	$24.95
Supersort by Bob Fraser A high-speed sorting subroutine usable in BASIC programs	B A		N/A	24K	APX-20030	$24.95
T: A Text Display Device by Joseph J. Wrobel Intermix text and graphics on the same line in any graphics mode	B	8K	APX-10067	16K	APX-20067	$24.95
Utility Diskette II by RLM Microsystems Five ATARI BASIC file maintenance routines (ages 14 and up)	B 825		N/A	24K	APX-20124	$29.95

Publications

De Re ATARI

by Amy Chen, Jim Cox, Chris Crawford, Jim Dunion, Bob Fraser, Kathleen Pitta, and Lane Winner

Handbook for advanced programmers

$19.95 (APX-90008)
De Re ATARI tells you everything you want to know about the ATARI 400 and ATARI 800 Home Computers, but were afraid to ask. It's an excellent resource and training text for professional programmers who use ATARI Home Computers and for advanced hobbyists who understand ATARI BASIC and assembly language. Neither an introductory manual nor a reference for the computer, De Re ATARI is a tutorial that explains the concepts and principles behind the internal structure of the ATARI Home Computer.

Topics include graphics indirection (i.e., color registers and character sets), player-missile graphics, display list interrupts, scrolling, sound, the Operating System, the Disk Operating System, and ATARI BASIC. Many discussions concern the three special-purpose integrated circuits designed by ATARI — ANTIC (a microprocessor for television display), CTIA (a chip for television display), and POKEY (a chip for input/output and sound generation). Appendices contain information on memory usage, human engineering, the hardware and software used to operate the ATARI 410 Program Recorder, cassette applications, television artifacting, and the GTIA chip (the new television display chip). Sample programs, display screens, and diagrams generously illustrate the discussions on the strengths and versatility of ATARI Computers. A glossary defines and explains some less commonly encountered terms used in De Re ATARI.

An added feature is a laminated Programmer's Card containing the most critical and often needed facts and figures about the computer.

By the way, in case you were wondering, De Re ATARI is Latin for "All About ATARI."

APX Product Catalog
winter 1982-83 edition

$2.00 (APX-90009 Rev. A)
This 88-page, four-color catalog contains sample screens, full descriptions, and review comments for 148 programs and condensed descriptions for 11 other programs. This is the base issue for 1983.

APX Product Catalog
spring 1983 edition

$1.00 (APX-90009 Rev. B)
You can also order more copies of this most recent edition. In addition to containing sample screens, full descriptions, and review comments for programs new to the spring edition, this issue contains condensed descriptions for all other APX programs, along with the publications and hardware, currently available.

Hardware
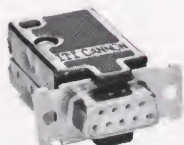
DE-9S WITH DE 110963-1 SHELL (controller plug)

$6.25 (APX-90001)

This connector is suitable for the front joystick ports of the ATARI 400/800 Computers. Because you can program these ports for input or output, they're perfect for many specialized interfacing applications. These 9-pin, female connectors have solder-on, gold-plated contacts in a Nylon insulator. To allow the connector to mate more securely with the computer's port, you may need to file the plastic shell slightly.

5-PIN DIN CONNECTOR

$2.49 (APX-90002)

You can use this connector with the ATARI 800 Computer's video plug to connect your computer to video monitors, or to run the sound through a stereo system.

13-PIN I/O PLUG

$9.95 (APX-90003)

You can use this connector, custom-designed for ATARI Home Computers, to build your own interface cables or devices.

13-PIN I/O SOCKET

$4.95 (APX-90004)

This 13-pin, board-mounted connector with right-angle pins is the connector used inside ATARI Computers and peripherals. You can use it to build your own peripherals, extension cables, and interfaces.

DA-15P WITH DA110963-2 SHELL (850 printer plug)

$5.95 (APX-90005)

Use this 15-pin, male connector to connect your ATARI 850 Interface Module to a compatible parallel printer. These connectors have solder-on, gold-plated pins in a Nylon insulator.

DE-9P WITH DE110963-1 SHELL (850 serial plug)

$5.49 (APX-90006)

Use this 9-pin, male connector to connect your ATARI 850 Interface Module to external RS-232 or current-loop devices. These connectors have solder-on, gold-plated pins in a Nylon insulator.

Ordering Information

APX products only. The ATARI Program Exchange handles orders only for the items described in this catalog. For all standard ATARI Home Computer products, including any software, hardware, or documentation mentioned in this catalog, see your local ATARI Computer retailer.

$10 minimum order, plus shipping and handling charge. We'll fill orders of $10.00 or more. Please add $2.50 to your order to cover shipping and handling.

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Phone orders. For faster service, phone in credit card orders, using our toll-free number, 800/538-1862 (or 800/672-1850 for calls within California). You can also call us at 408/727-5603. Telephone hours are Monday through Saturday, 7 a.m. to 5 p.m. PST.

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No C.O.D. or purchase orders. We regret that we cannot accept orders paid by C.O.D. or by a purchase order.

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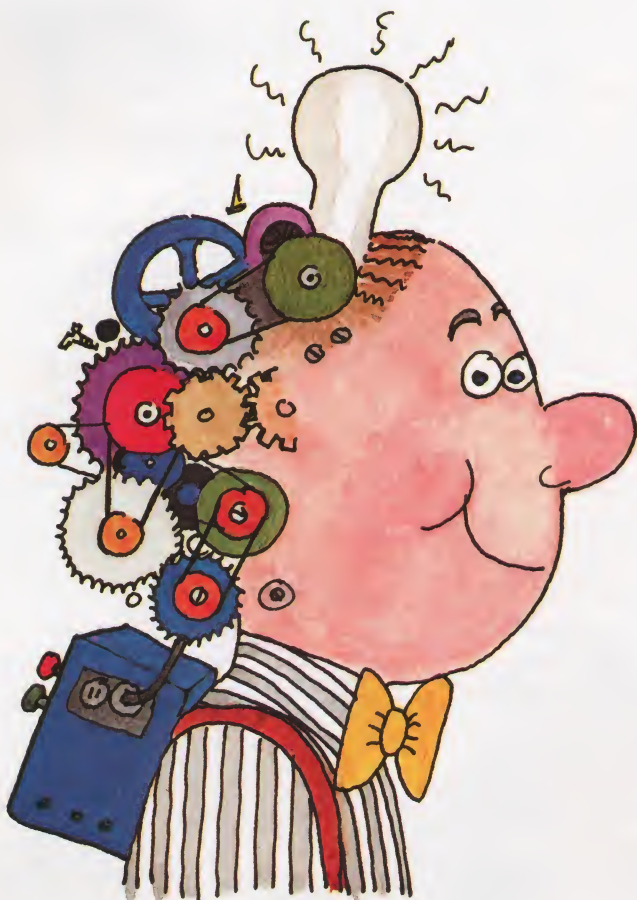   _____Have not used ATARI Computers

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