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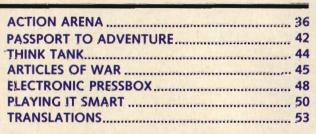
electronic

CONTENTS



SWITCH ON!	6
HOTLINE	8
READERS REPLAY	18
THE GREAT GAME DESIGNER HUNT	20
WHAT'S NEW IN EDUCATIONAL GAMES? A look at the latest in learning fun.	26
TOUCHDOWN	30

COMPUTER GAMING SECTION







STRATEGY SESSION	54
ALL ABOARD	56
How computers keep railroads on the right track.	
INSERT COIN HERE	
ARCADE AMERICA	60
PLAYERS GUIDE TO PROGRAMMABLE VIDEO GAME SYSTEMS	63
INSIDE GAMING	
PROGRAMMABLE PARADE	70
ALL-STAR QUIRKS	74
SUB HUNT	76
GAME OF THE MONTH	78
TEST LAB	80
Q&A	
STAND ALONE SCENE	86
READER POLL	
COMING ATTRACTIONS	



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CAN YOU PEDAL FAST ENOUGH TO WIN THE GREAT MANCOPTER RACE?





By ARNIE KATZ

Arnie the Iconoclast

n this month's editorial, I'm going to expose computer myths," I told executive editor Bill Kunkel. He was not impressed. In fact, he looked bored, maybe even hostile.

"Old hat," he sneered. "60% of our readers already

have computers."

I countered that this still left 40% in need of help. "How can you let so many precious readers — hallowed be their names — wander through the wilderness of ignorance?"

"Let 'em wander," came his verdict. "Most gamers could use the exercise."

"I can hardly believe my ears," I said, not believing them. "Is this really Bill Kunkel, guru of gamers everywhere?" I shed one small tear for the tragedy of it all. He seemed unyielding, but I sensed my stubbornness was wearing him down. Another hour of my best salesmanship finally got him to at least listen to my pitch.

I first attacked the "heavy

science" mystique by giving my dazzling analogy which compares the disk drive to the phonograph. I stressed obvious similarities between a floppy disk and an LP.

I next explained my warning to prospective buyers to try before they spend, and to make sure that the software they want is compatible with the system.

"That's just common sense," Bill interjected. I said he might be right, but I also insisted that gamers need protection against undertrained clerks who might dispense misinformation about the products.

Finally, I delivered the coup de grace to the idea that people will someday program all their own software. I mean, who bothers? No one cuts a record every time they want to listen to music

"What about the impact of computer literacy?" Bill asked. I then compared computer education with language training. Everyone takes a language in school, but how many adults are fluent in anything but their native tongue? The closest most former students come to Italian is ordering a pizza. Similarly, only a few of those who learn computer fundamentals will go on to produce significant work.

"What about the hobbyists?" Bill asked.

"Programming is a good hobby," I said, "but most don't have the time, dedication and creativity to compete with Russ Whetmore or Dan Bunten. Amateur musicians enjoy playing, but no one expects them to give concerts at Carnegie Hall."

"So basically, you're going to say that computers are easier to use and require far less technical knowledge than many might think," Bill summed up. "Well, if you feel you gotta. . ."

"Yup, that's my editorial," I said with satisfaction.
"... at least keep it light," he finished. I told him I'd try.

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CAN FLYING FEET AND FISTS CONQUER THE EVIL WIZARD'S FORTRESS?

What's it like to have the lightning feet and fatal fists of Bruce Lee? You'll find out in this death-defying game. You have to kick, slash and punch your way through an array of deadly chambers. Where the brutal Green Yamo, terrible Ninja, exploding bushes and other dangers lurk.

Even if you survive all that, the Evil Wizard is waiting to do you in with an arsenal of flaming fireballs.

Destroy him and his fortune is yours.

Now, have you got what it takes to play Bruce Lee?

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GAMES ARE HIS 'GUIDING LIGHT'

The introduction of 12year-old Jonathan Brooks (portrayed by Damion Scheller) this summer on the popular soap opera, "The Guiding Light," lived up to the excitement anticipated, as this mature, somewhat lonely child met up with some of the more colorful characters of Springfield, the fictitious city in which GL's action is based.

His work with renowned computer expert-college professor Quinton Chamberlain (Michael Tylo) will eventually



Damion Scheller.

lead to a big surprise for the confident Brooks. Also upcoming are some interesting confrontations with his hostess, the outspoken, child-like Nola (Lisa Brown), Quinton's wife.



SHADOWKEEP (TRILLIUM)

GAME INSPIRES BOOK

In a novel turn-around. Spinnaker's role-playing fantasy game Shadowkeep provided the inspiration for an Alan Dean Foster book, Foster is well-known for numerous science fiction books, such as Alien, The Spellsigner Series,

and the famous Star Trek Log books. The motif of the novel is provided by the interactive game, which lets up to nine players form expeditions to explore a mysterious tower in the Land of Legends.

HOME **SUBLIMINAL SUGGESTION**

Subliminal suggestion, the periodic flashing of messages seen only by the subconscious, has come home after being banned in movie theaters across the country.

Stimutech's Expando-Vision interface works with an ordinary TV set and inexpensive computers such as the VIC 20, Commodore 64, and Atari home computers. As regular shows are viewed, constructive messages are flashed on the screen too fast to be seen consciously. The inner workings of our minds are supposed to be positively influenced by these invisible prompts.

The eight programs avail-

able include weight and stress control, athletic and sexual confidence, and memory enhancement and career/ success motivation. The last two are designed to control smoking and drinking.

Installation is easy, requiring nothing more than a screwdriver.

ONE IN FOUR **HOMES HAS** COMPUTER-USER

According to the latest study by TALMIS, 25% of all households in the U.S. contain at least one member who uses a personal computer at work or school, and more than 20% of all families with children have a child using a computer in school.

INTERNATIONAL **EXCHANGE**

Sales records accumulated by the Electronic Industries Assn. show that Canada and Great Britain are the top export markets for American electronic manufacturers, with Japan, West Germany, France and Mexico following in the list of big spenders. Countries from which the U.S. imports electronic products are led by Japan, followed by Taiwan, Singapore and Hong

The long-awaited MSX home computers from Japan, designed to be programcompatible even though manufactured by different companies, won't be coming to America this year. They'll get their introduction to the Western World in Europe this Christmas. Sony, Canon, Fujitsu and Sharp are just some of the companies planning to market MSX machines in the USA early in 1985.

Meanwhile, Canada-based Interphase Technologies is responding to the Japanese interest in Western-style computer games by converting Sewer Sam and Aquattack to the MSX standard for sale in the island nation.

According to figures recently compiled, home computers are even more popular in Great Britain than in the USA. Roughly 7% of all homes in the U.S. now have a computer, compared with 11% of British homes.

Meanwhile, Acorn Computer Corp. has opened a U.S. headquarters to explore the American market, and made pacts with companies such as CBS, Krell, Intelligent Software and Microsoft for distribution rights to games for conversion to their Acorn BBC Microcomputer.

1983 WAS RECORD-BREAKING YEAR

According to figures from the Electronic Industries Assoc., 1983 sales of electronic equipment reached an all-time high of nearly \$144 billion, up 13% from the 1982 figure. Of this total, computers and industrial electronic products accounted for almost 40% of U.S. sales last year. Consumer electronic sales were the hottest growth area—they jumped nearly 20% over the 1982 level.

THE NAMES CHANGE, BUT THE FACES STAY THE SAME

You can't tell the players without a program in the popular name-changing game. Sierra On-Line has changed its name to Sierra, and introduced a new logo — a circle containing a mountain. It's featured prominently on all products, which have been repackaged to show off the new moniker.

Children's Computer Workshop has been retitled CTW Software, which will operate as a non-profit division of the Children's Television Workshop.

Counterpoint Software changed its name to Springboard Software, saying that the new name reflects the company's intent to "provide an educational springboard to enjoyment and learning."

Dynatech Microsoftware, recently purchased by its founder Warren Shore, has been renamed CodeWriter Corporation with its main line of business, the CodeWriter programs that allow novices to design home and business application software using English language commands.



Winner Paula Boge.

IOWA FEMME WINS KRAFT KIDEO GAME CONTEST

Score one for the girls! The grand prize winner of the Kraft Kideo Game Contest is Paula Boge, age 16, Dubuque, Iowa. Over 800 entries were submitted by students 18 and under, each describing a nutrition-oriented game concept. Paula's entry helps kids 3 to 8 learn good health habits by guiding the onscreen hero Nibbles though food choices. Overeat, and Nibbles gets fat, slows down and must exercise to return to normal. Villains include Cavity Creatures and Plaque Monsters which can only be eluded by brushing Nibbles' teeth.

Paula won a trip to EPCOT Center / Walt Disney World for herself and her family, but opted to take the cash equivalent (\$4000) to buy a home computer setup.

Second place honors went to Michele Barr (age 12) of Springfield, Va., for her concept of a program that requires the player to make Vita-Man, the onscreen hero, eat various foods, exercise and get enough sleep to score points.

ANNIVERSARY

This issue of EG marks the third anniversary. The editors and staff would like to thank our loyal readers for keeping the original magazine for game-lovers on top of the heap.

PITFALL HARRY COMES HOME

"If you can turn on your machine, you can program Pitfall Harry into it," promises David Crane, creator of the popular character and author of "Programming Pitfall Harry". The folder, available for 25 cents from Activision, allows anyone with a Commodore 64 to program a likeness of the famed electronic explorer. The folder also gives suggestions for adjusting the animation, changing the speed and fine-tuning the color.

Copies of "Programming Pitfall Harry" may be ordered from: Activision Commodore 64 Club, P.O. Box 7287, Mountain View, Ca. 94039.



SCARBOROUGH SENDS SOFTWARE TO SCHOOLS

Scarborough, in a campaign titled "Be A Hero and Software A School", is footing the bill for software purchasers to donate programs to the schools and teachers they designate. Anyone buying a Scarborough program be-

tween Sept. 15 and Dec. 15 gets a "donation certificate" to complete and return with warranty card and \$3.50 mailing fee; then the company sends the program chosen by the customer to the school selected.

Scarborough president Francis Pandolfi explained the giveaway program, saying "Although a majority of schools. . . have a least one microcomputer. . . schools are woefully ill-supplied with quality software."

Scarborough programs included in the donation include Mastertype, Phi Beta Filer, Run for the Money, Songwriter, Picturewriter, Patternmaker and Laser Shapes for Apple, C-64 and IBM PCjr and Atari computers.



THE THREE STOOGES (MYLSTAR)

THE THREE STOOGES **GET OWN COIN-OP**

Moe Howard, Larry Fine and Curly Howard signed with Columbia Pictures in 1934, and in celebration of this Golden Anniversary, Mylstar Electronics introduced the Three Stooges coin-op game. The slap-stick comedians are locked in a room



and must locate color-coded keys to escape. Obstacles include Beauregard and Muffy, and an army of billy clubbing cops, as players man joysticks to deliver slaps and throw pies at the villains. The trio are trying to rescue their brides from a mad doctor, through 28 rounds that are soundpunctuated with splats, smashes and punches, plus Stooge-dialogue such as "Oh, a wise guy,", "Knucklehead" and others.

In keeping with the motif, the coin-snatcher comes equipped with three joysticks, for one to three arcaders to play simultaneously.

The Three Stooges were vaudeville stars before they signed to make movies. Their careers continued until the early seventies, although because of illness Curly Howard was replaced in the Forties by brother Shemp Howard (who was one of the original vaudevillian Stooges), next by Joe Besser and then by Joe De-Rita.

STAR-BYTE TO DISTRIBUTE **VICTORY** SOFTWARE

Victory Software has made a deal for Star-Byte to take over publishing and distribution chores for its complete line of adventure, strategy and arcade-style games. The company, with over 13 programs in the fall line-up, has disks and cassettes for the VIC-20 and C-64, and digital tapes for use with the Coleco Adam. Games on tape retail

for \$19.95, disks are \$22.95, and Adam digital tapes are \$24.95. According to Walter Friedrich, spokesman for Star-Byte, the company plans to distribute a "reasonably priced, complete line of quality entertainment and educational software for the home market.'

SOFTWARE BEAT

The software shortage for the Adam is beginning to ease, but don't look for a quick end to the scarcity of games which are specially designed for play on the modular computer system. Coleco should have data pack versions of Donkey Kong and Donkey Kong Junior in stores by the time you read this, but there are no definite plans for more titles in this controversial configuration. A spokesman for the company points out that it has published numerous games on cartridge which are compatible with the Adam as well as the ColecoVision. . .

Trivia Mania (Professional Software/Apple, Commodore 64, IBM PC, TRS-80) tests the mettle of obscure fact fiends in the categories of science and technology, geography, history, sports, films and entertainment, nature and animals, and film. There are three levels of questions—the toughest is capable of leaving even a master of trivia stuck for the right response. Up to eight players or teams can participate. .

Robert A. Heinlein, Ray Bradbury and Arthur C. Clarke are just three of the notable science fiction writers who are providing the meat of a new line of computer adventure games from Trillium, a new Spinnaker division. Scheduled for publication during the third-quarter of 1984, the programs combine extensive text with some of the most sophisticated graphics ever produced for an illustrated adventure. Several of the play-mechanics differ somewhat from the usual adventure game in that accurately playing the role of the protagonist is much more important than solving a string of puzzles. In Michael Crichton's Amazon, for instance, the computerist must assume the persona of an intrepid field agent assigned to find out what kind of catastrophe wiped out an expedition to the heart of the South American jungle. . .



AMAZON (TRILLIUM)

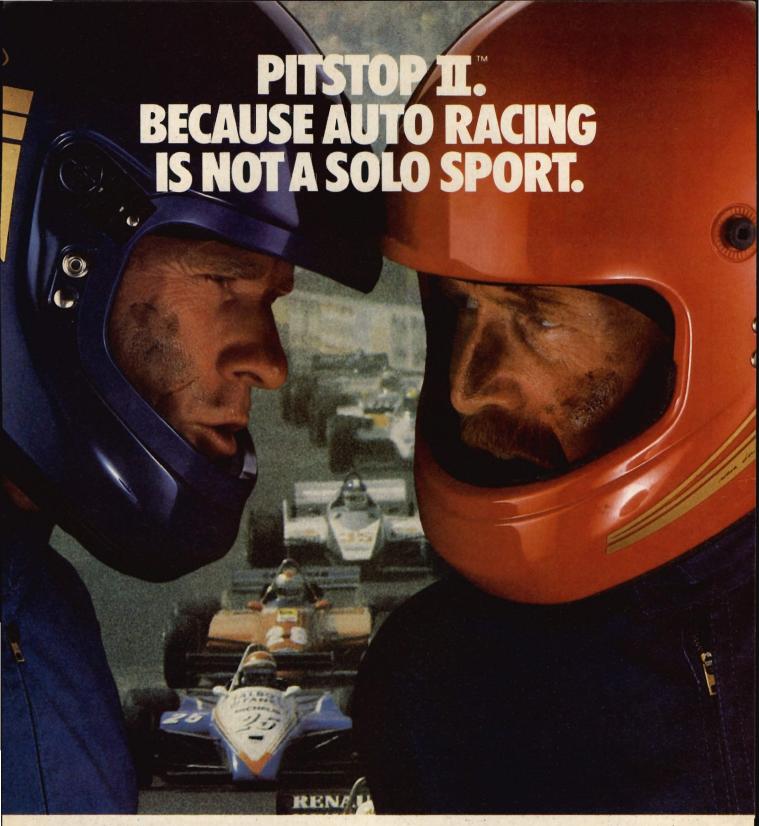
TYPING TUTOR SETS SALES RECORD

Having logged sales of more than 200,000 copies, Mastertype (Apple, Atari, Commodore 64, IBM PC) has become the best-selling edu-

cational game of all time.

Mastertype is published by Scarborough Software, which bought the title from its original owner in September 1983. The company plans to bring out an enhanced version for the Apple IIc which will contain five additional lessons which are applicable to the Dvorak keyboard configuration.







When we introduced Pitstop, we created action in the pits. Now, with PITSTOP II, EPYX introduces true competitive auto racing, both on the track and in the pits. Auto racing is not a one man sport. With PITSTOP II, you can now experience the thrill

of speed and competition as you battle your opponent in a race against the clock. Now, more than ever, the strategy of when you make a pit stop and your pit crew's speed and performance, combined with your skill on the track, will determine the winner.

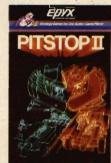
A split screen shows you your position and that of your

opponent, a digital clock displays time and a lap counter gives you your race position as you race against each other in pursuit of the checkered flag. You can also play against the computer and take a practice lap or race against the computer controlled pace car as you prepare for real head-to-head competition. Step up to PITSTOP II because auto racing is not a solo sport.

One or two players: joystick controlled.



Strategy Games for the Action-Game Player



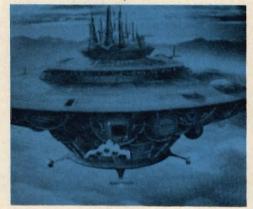




The battle rages over American cities and countryside.

Below, a live action sequence and the Alien Mothership.





LASER GAME USES LIVE ACTORS

Mylstar Electronics' new conversion kit turns the M.A.C.H. 3 laser-coin-op game into Us vs. Them, a science-fiction adventure. Live-action film footage combines with superimposed computer graphics to create near-movie effects, as players assume roles of pilots defending the USA from alien invaders. Actors take the roles of

frightened citizens and military command personnel, as the combat takes players over San Francisco, Chicago and Hollywood, as well as through forest, mountain and desert terrain. Arcaders have a joystick to bank the plane sideways, shoot forward or backward, and move in and out of the game's depth perspective, through four different playing

angles that include profile views of the action and even shots from behind the plane.

The secret of winning the game is said to lie inside the Alien Mothership, and players can use additional coins to continue a game. Special sound effects, visual treats, orchestral score and even built-in seat vibration make the illusion of flight more realistic.

COIN-OP BEAT

The distinctive feature of Bally's Two Tigers is that, though it can be enjoyed solitaire, it is also playable by two arcaders working either together or competing head-to-head. Sinking a ship with air power is the goal in the one-player mode. Gamers can elect to attack or defend the vessel if two participate...

Cobra Command, from Data East, is a play-for-pay device designed to capitalize on the current popularity of super-helicopter movies and TV shows. It challenges would-be airaces to complete

10 dangerous missions which range in location from the skyline of New York to Easter Island . . .

WICO is producing Treasure Cove, an electromechanical gun game under license from Stanley Levin & Associates. The company, best known for its coin-op and home system command control devices, has previously offered conversion kits for rehabilitating existing games, but this is WICO's first complete machine.

EG's readers in the United Kingdom can expect to see more visability from Konami. The Japanese gamemaker has established a U.K. subsidiary in Middlesex, England, with Kenji Hiraoko as managing director. . .



CODEWRITER CONTEST OFFERS PRIZES FOR ADVENTURE, ARCADE GAMES

CodeWriter Corp. is sponsoring a computer game-writing contest, to run until mid-1985. Prizes will be awarded for the best original adventure and arcade-style games written with CodeWriter's AdventureWriter and ActionWriter, which allow users to produce their own software even without programming knowledge, using English language inputs to create interactive entertainments.

The grand prize is an Apple Macintosh computer and Imagewriter, plus \$50 in software. First prize is a 4-day trip to Disneyworld for two. Other prizes include Commodore 64 computers, Sony Walkman cassette tape players, and software packages. Additionally, the winning games are to be marketed by CodeWriter, and the authors will receive royalty payments for each copy sold.

CodeWriter programs are available for most popular home computer systems.

WHAT'S HOT

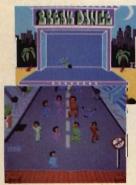
Statistically-oriented boxing games are punching their way into the hearts of electronic gamers. Computer Boxing (Sierra/PCjr, Ilc) is the most sophisticated of a group of recent releases which also includes Ringside Seat (Strategic Simulations/Apple, C-64) and Computer Title Bout (Avalon Hill/Atari computers).

These games use statistical analysis to reproduce life-like actions based on the actual abilities of real fighters, stored on the disk. You can refight classic matchups, stage exciting "what-if" pairings or even create your own pugilist and take on all comers for the world championship.

Now, who's going to be first to apply all this lovely programming expertise to simulating professional wrestling?

BREAKDANCE. BREAKIN' MADE EASY.





The hottest craze in the U.S. this fall is Breakdancing, and you don't have to miss it. Now anyone can Breakdance. Just grab your joystick and control your Breakdancer in poppin, moon walking, stretching and breaking ... all on your computer

Breakdance, the game, includes an action game in which your dancer tries to break through a gang of Breakers descending on him, a "simon-like" game where your dancer has to duplicate the steps of the computer-controlled dancer and the free-dance segment where you develop your own dance routines and the

computer plays them back for you to see. There's even a game that challenges you to figure out the right sequence of steps to perform a backspin, suicide or other moves without getting "wacked."

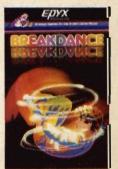
Learn to Breakdance today! Epyx

makes it easy!

One or two players; joystick controlled.



Strategy Games for the Action-Game Player



GAMELORDS INVADE THE

The top publisher of computer games in the United Kingdom is taking a whack at the U.S. market. Through its new American subsidiary, Quicksilva Inc., Quicksilva Ltd. has already begun marketing some programs for the Commodore 64 in this country and will be expanding its activities from its new stateside headquarters in Texas. Bugaboo and Quintic Warrior are the first to reach stores.

Quicksilva will also distribute a line of software from



BUGABOO (QUICKSILVA)

Virgin Games, a subsidiary of Virgin Records, the maverick record label which gave the world such acts as the Sex Pistols and Boy George. The first three titles in the line to make their debut on these shores are Hideous Bill and the Gi-Gants, Falcon Patrol and Space Ambush.

HARDWARE BEAT



THE SPEEDEMON (MCT)

The SpeeDemon, from Micro Computer Technologies, lets Apple owners speed up their machines. Games become three times as hard when they run three times faster; utility programs, such as word processing, accounting, and Visicalc also operate at 3-1/2 times their original speed. The speed-up card fits into any Apple II computer, and costs \$295. . .

Okidata is offering the Okimate 10 color printer that allows printing in more than 40 shades, at 60 characters per second (240 words per minute). The Okimate 10 prints in four character sizes, on plain or thermal printing paper, either single sheets or on computer paper rolls. Indicators let the user know when it's out of paper or out of ribbon, and a special control even sets the darkness of the print. The \$239 letterquality printer comes with a Plug 'n Print package that contains connecting cable, operating module, cartridge ribbons, paper to get you started, and programs to teach novices how it works. It



OKIMATE 10 (OKIDATA)

works with C-64 and Atari computers, and versions for other systems will be available soon. . .

GIM Electronics has an RF Modulator that allows Apple owners to connect their computer to a TV screen. Until now, Apple systems had to be connected to monitors, but The ARF set (\$29.95), including the modulator, a computer/TV switch and 8-foot shielded cable, permits the use of either B&W or color TV sets...

McPen, a high-resolution light pen for use with VIC-20, C-64, IBM-PC, IBM-PCjr and Atari computers, sells for \$49.95 (\$69.95 for IBM-compatibles). It comes packaged with software, either on cassette or diskette, and provides vertical horizontal positioning on screen without "fluttering". A sensitivity control lets the user fine-tune



joystick port, and boasts a ready-light on the stand.

Continued on next page

STAY NEAT AND STOW THE CLUTTER

Stor-A-Bit lets computerists keep the work station clear for

action by gathering all the disks, cassettes, cartridges, pens, pencils, rubber bands, and other junk that accumulates around the computer.

The smoked plastic holder attaches to any solid surface (like the side of your computer) with velcro strips, then provides a convenient storage spot for all the items needed for a day's computer gaming. Retailing for \$9.95, Stor-A-Bit is available at most computer stores.

DISCWASHER BITES APPLE

Discwasher's new Apple-compatible peripherals and accessories make the Apple IIc easier to live—and travel—with. The Discwasher Cari turns the compact computer into a fully portable unit. This carrying case with built-in rechargeable power system hold the IIc and all peripherals and supplies. When fully loaded with all equipment, the Cari weighs about 20 lbs. Made of durable nylon, it's



The Cari from Discwasher.

equipped with metal and foam supports to protect the Apple and monitor, and has several storage pockets for controllers, cords, etc. There's even a shoulder strap. The rechargeable power system runs the unit up to five hours, and also functions as protection from interrupted power supplies by continuing to deliver current even if the wall outlet fails. It even has a warning signal so users will know when power is running low and it's time to recharge the batteries.





Now, for the first time, you can become Earth's most famous science fiction detective, Elijah Baley. In this text adventure, you're the hero of Isaac Asimov's top-selling novel, Robots of Dawn.™

Travel to Asimov's world of the future in an epic quest to discover the answer to the eternal question ... Who done it? On a planet where robots outnumber people, try to learn who is lying, who is telling the truth and, most important of all, who is the murderer.

The victim is a friend of yours, a famous scientist who invented history's most advanced robot, more

human than machine. With this sophisticated robot at your side, you piece together elusive clues scattered across a hostile planet whose government is determined to do you in. Can you stay on the case? Can you solve the mystery? Who do you trust? Your success depends on the answer.

Asimov created the story. We created the game. Now you can live it.

One player.



Strategy Games for the Action-Game Piayer



ROBERTS OF BANKS &

HARDWARE BEAT

The Electra Guard 3 surge protector, \$18.95, guards electronic equipment from power surges up to 6,000 volts, and also filters electronic noise. A red light tells the computer owner it's on.



Keeping computer systems operating properly requires housecleaning at regular intervals. Floppiclene is a completely disposable wet/dry cleaning system that maintains disk drive heads by eliminating contaminants. It comes in a binder that contains 20 cleaning disks, aerosol cleaning solution, an easyinsert jacket, and absorbant wipes, for \$34.95. A \$19.95 Floppiclene kit contains cleaning solution, easy-insert jacket and 10 cleaning disks.

CHINA EXPORTS

Cullinet Software, Westwood, Mass., has received permission to sell software in China. Distribution rights were granted to Cullinet by the China Computer Technical Service Corp., of the Chinese Ministry of Electronics, making this the first software company to obtain such an agreement. Cullinet makes software for mainframe and IBM personal computers.

AT&T LAUNCHES COMPUTER

American Telephone & Telegraph unveiled its new PC 6300, an IBM-compatible personal computer which the company says operates up to 80% faster than the IBM-PC. Said to be "almost completely" software-compatible to the IBM machine, the AT&T 6300 sells for \$2745 complete with dual disk drive. Company spokesmen say the new machine "offers more capacity for future expansion and a better display screen" than the IBM-PC.

EG Readers Pick Their Favorite Games

Most Popular Computer Games

Position T		Times			
This Month	Last Month	on List	Game	System	Manufacturer
1	1	3	Zork I	Most Systems	Infocom
2	9	3	Buck Rogers	Coleco Adam	Coleco
2	New	New	Flight Simulator II	Most Systems	SubLogic
4	New	New	Pole Position	Most Systems	Atari, Atarisoft
5	4	2	Ultima III	Most Systems	Origin Systems
6	New	New	Archon	Atari, C-64	Flectronic Arts
7	<u> </u>	4	Loderunner	Most Systems	Broderbund
8	2	13	Miner 2049er	Most Systems	Big 5, MicroLab, Reston
9	New	New	Jumpman	Atari, C-64	Epyx
10	New	New	Zork II	Most Systems	Infocom

Most Popular Videogame Cartridges

Position		Times			
This	Last	on			
Month	Month	List	Game Title	System	Manufacturer
1	1	2	Pitfall! II	Atari 2600	Activision
2	9	6	Miner 2049er	ColecoVision	MicroLab
3	_	8	Advanced Dungeons		
			& Dragons	Intellivision	Mattel
4	8	13	River Raid	Atari 2600	Activision
5	10	19	Pitfall!	Atari 2600	Activision
6	12	4	Mr. Do!	ColecoVision	Coleco
7	New	New	Super Action	ColecoVision	Coleco
			Baseball		
8		15	Donkey Kong	ColecoVision	Coleco
9	3	17	Zaxxon	ColecoVision	Coleco
10	6	3	Space Shuttle	Atari 2600	Activision
11	14	2	Decathlon	Atari 2600	Activision
12	_	2	Baseball	Atari 5200	Atari
13	7	8	Ms. Pac Man	Atari 2600	Atari
14	New	New	Pengo	Atari 5200	Atari
15	1	5	Centipede	Atari 5200	Atari

Most Popular Coin-Op Videogames

Position		Times		
This Month	Last Month	On List	Game	Manufacture
1	1	6	Dragon's Lair	Starcom
2	2	7	Star Wars	Atari
3	5	3	M.A.C.H. 3	Mylstar
4	6	3	Track & Field	Konami
5	New	New	Space Ace	Starcom
6	10	3	Pole Position II	Atari
7	New	New	Spy Hunter	Bally/Midway
8	New	New	Firefox	Atari
9	3	10	Pole Position	Atari
10	New	15	Ms. Pac Man	Bally/Midway

The man who becomes a monster has just become a software game.

Commodore introduces QUESTPROBE™ a series of adventures that begin where comics leave off, starring your favorite
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monster). Use every bit of logic, reason, imagination and cunning you possess (this is why educators like this series) to unlock the mystery of the chief examiner and his strength sapping door.

We couldn't have captured the Hulk without the help of Marvel Comics™ and Scott Adams of Adventures International.

> But a puny human like you can pick up the Hulk all by yourself at any software

store. (It's just a diskette.) And while you're there look at all the other Commodore software programs for fun and profit,

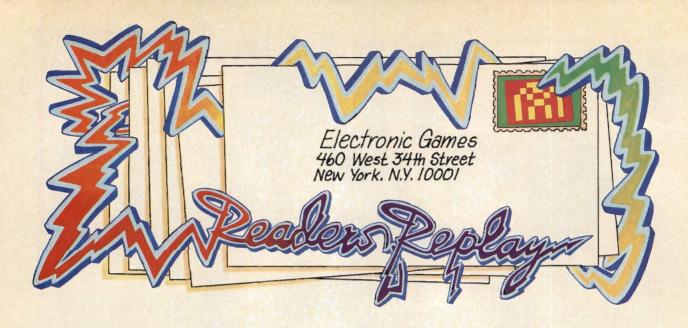
home, business and monkey business.

You'll see why Commodore is quickly becoming a software giant.









ADAMITES UNITE

The September issue of EG had a letter which really degraded the ADAM computer. In my opinion, the ADAM is an excellent computer that's well worth the price. I own one and am having no problems with it. If my computer were to break down suddenly, all I would have to do to get it repaired would be to call Coleco and find out the address of the nearest service center. Honeywell is now an authorized service center, and combined with Coleco's new six-month warranty, it's a hard combination to beat. Most other computer companies only offer three-month protection, which shows the consumer Coleco's confidence in its new ADAM system.

I am very satisfied with my ADAM and hope that it will be given a fair chance in the ever-expanding computer market.

> Jeff Kramer Pembroke Pines, FL

I've had enough! After reading the September issue (the letters from Ben Stein and David Lenske), I've come to the conclusion that most people are just bad-mouthing a really fine computer. After the Christmas rush was over, Coleco cleaned up its act and revised the entire ADAM line. The ADAMs put out after March have much better documentation, and are not laden with defects. I know five people other than myself who bought an ADAM within the last three months and have had no problems whatsoever.

There is another point I'd like to make. The Data Storage Drive was not meant to compete with floppy disk drives, but to be an improvement over conventional tape drives. In this respect, it's a tremendous improvement. Quite a few companies are already selling games and programs on Digital Data Packs, and the list grows longer all the time. ColecoVision cartridges will be around for quite some time, and once a disk drive comes out, the major companies will definitely support the ADAM system.

I leave you with this to ponder on: When the Commodore 64 first hit the market, stores across the country had thousands of them that were defective. Irregardless, the C-64 has gone on to become one of the hottest-selling computers in the country.

Give ADAM a break.

Michael J. Gratis Sr. Buzzards Bay, MA Ed: Whoa, Jeff and Mike, let's not

degenerate into name-calling. Those

September letter writers were certainly as sincere about their gripes as you are about your praise. Since your personal experiences with the Adam differ greatly, it's not surprising that you've developed divergent viewpoints. There's a lot to like — and dislike — about the Adam, and it's this kind of exchange of lively reasonable opinions that will ultimately help the electronic gaming field make up its collective mind about this highly controversial micro.

7800 ALREADY GONE?

Your article about Atari's 7800 looked great. But Newsweek's July 15th issue paints a completely different picture.

Jack Tramiel, formerly head of Commodore International, engineered the Atari purchase, and the 7800 machine



Atari 7800 keyboard.

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attached Holiday Order Card, fill it out, and drop it in the mail.

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gift card in your name to each recipient.

READER REPLAY

looks as far away as ever. It may never see retail purchase at all.

How about doing a little digging on it?

Clarence Brown Zion, IL

Ed: Because of the lag between the final copy deadline and a magazine's on-sale date-called "lead time" in the publishing business, we must put EG together several months before readers see it. The September issue was already in distribution when Tramiel's Atari take-over shook the electronics world. As we go to press, Atari still hasn't announced its plans for the 7800 and other pending projects, but the decision will be widely publicized long before you read this page. And we're much too cagey to make predictions in front of an audience that already knows the outcome.

OUT IN THE COLD

I am an owner of an Atari 5200 and I recently read your article about the Atari 7800. I was hoping Atari would make a computer or something as an upgrade for the 5200, but now it seems Atari has scrapped the 5200 entirely.

I was really hoping that the 5200 would be the best, but it now seems that Atari doesn't care about 5200 owners. I feel now that I should have bought a ColecoVision.

Michael Freeman Congers, NY

PRAISES MULTIPLE FORMATS

I would like to commend Atari for putting its hit games out for ColecoVision and other home computers and videogame systems. Now maybe Coleco will return the favor and make Coleco games for the 5200 and 7800.

There's no reason why all the big game companies can't make all the big hits for all systems. That way, everybody has a chance to enjoy the great games.

Ted Vinson Fithian, IL

QUIRK OF THE MONTH

I found an interesting quirk in the Atari computer version of B.C.'s Quest for Tires. When in the volcano/falling rock scenario, evade all the rocks and race to the farthest right point of the screen. When you get to



BC'S QUEST FOR TIRES (SIERRA)

the turtles/dinosaur screen, you can just jump through, without worrying about either obstacle.

P.S. If the object of the game is to rescue the Cute Chick, why is it titled Quest for Tires?

Jeff Lunn Whitefield, NH Ed: Well, nobody knows the Cute Chick's name. . . Maybe it's Goodyear?

PSST...WANNA BUY A PROGRAM?

We call ourselves SubSoft and make computer game programs. I'd like to ask if you want to buy a game made for the Apple at a cheap price. We have about 150 games.

Greg Candido Purchase, NY

Ed: Greg, we're a magazine about gaming—not a game manufacturer or distributor. We don't buy or sell any computer games, but rather, tell devoted gamers what's new about their favorite hobby each month. Good luck on selling your programs to a game manufacturer, though.

A REAL HOME ARCADE

This letter concerns all the people who love coin-ops. First, you don't have to have a lot of money to buy your own arcade machine. You can pick up a **Space Invaders** (from the right person) for \$50.00, or a brandnew, never-used **M.A.C.H. 3** for

\$1695.00. I own a total of five arcade games, which are Space Odyssey, Jack the Giantkiller, Reactor, Asteroids Deluxe, and Tempest.

I've been collecting coin-ops for only seven months, and have spent a total \$810.00 on my games. All of them are in great shape. So you don't



M.A.C.H. 3 (MYLSTAR)

have to dish out a lot of money to buy your own game.

If anyone would like some information on buying arcade games for home use, or would like some prices, write to me at 829 E. Mill, Santa Marie, CA 93454.

Stephen Beall Santa Marie, CA



THE GREAT GAME DESIGNER TALENT HUNT

By BILL KUNKEL
And the EG Editorial Staff

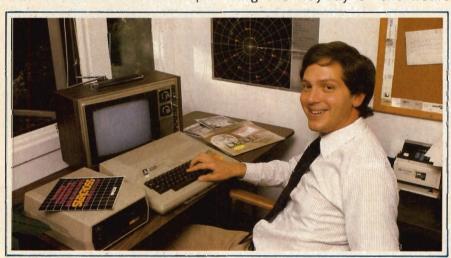
How Software Publishers Woo, Win and Keep the Top Talent

he media have lionized game designers as the superstars of the electronic entertainment world and cruelly satirized them as nerds who lurk in squalid bedrooms and garages. Some creators have accumulated six-figure bank accounts in a matter of a few years, while others must do odd jobs for neighbors to eke out a living. And though software publishers frequently have trouble getting along with the folks who create the pro-

yet discovered a way to keep a rotten game at the top of the best seller list or to get savvy electronic gamers to purchase another disk from the same company if the first one is a dud.

And the key to getting the right products is to corral the best group of designers. The competition among companies to attract—and then keep—the leading lights in the design world grew steadily more intense during the heyday of the home

tracts, but today's game creators are not too different from other artists. Some find money the prime motivator, but other considerations can also prove decisive. For instance, loyalty keeps some designers with outfits



Mark Blanc, one of Infocom's top designers.

ducts, they know all too well that life without them is impossible.

Since all but a few cynical fly-bynights depend on repeat business from
game buyers, developing the right
products is the single most important
ingredient for software publishing
success. Good marketing and
merchandising — broad headings
which include everything from
packaging to point-of-purchase displays — are both vital, but no one has

videogame cartridge (1981-1983). Now that computer gaming has become the most dynamic segment of the electronic gaming field, the behind-the-scenes maneuvering is focusing on that arena.

Money isn't everything. It does comes in handy, however, when you've got to write the monthly rent check. Some software company presidents have attempted to tie up the design stars by dangling lucrative con-



20 Electronic Games

which would otherwise be outbid for their services in an open auction. "I might've left Commodore a year ago," admits one anonymous codebasher, "but I admire John Mathias and enjoy working with him."

The local setting can be a pivotal factor when publishers vie for the best and brightest. The chance to relocate to the now-legendary Silicon Valley has gotten more than one designer to the contract table with a northern California software house. Activision, Parker Brothers and First Star have made just as effective use of the attractions of the New York City area to lure talent.

Sometimes, one designer's Garden of Eden is another's Devil's Island. Companies based far off the beaten track frequently face this one. Older and more settled employees may glory in small town or rural society, but footloose game-inventors may find the

same setting lonely. One publisher reportedly solved the problem of a scarcity of single women in its vicinity by establishing a corporate account at its town's best little whorehouse.

Whether or not to identify game designers publicly has divided the industry for years. Even today, some coin-op and videogame manufacturers cloak their design departments in secrecy. Proponents of this strategy claim that it inhibits job changing keeping key people from coming to the notice of prospective hijackers.

Yet a consensus in favor of crediting game creators has clearly developed in the industry over the last two years. Designers are artists and artists have egos, goes the rationale. Massaging those egos with a generous dose of public recognition promotes the kind of job satisfaction that keeps programmers from roving.

(It doesn't hurt that printing game credits has some solid marketing benefits.)

Putting together a roster of good designers is only part of the story. The way in which that talent is used can make a publisher successful or shove it into Chapter 11. Each company has a distinctive system for handling the design function, but most subscribe to one of the five most popular strategies. These are:



GREAT GAME DESIGNER HUNT-



Don Bluth, designer of Dragon's Lair and Space Ace.



John Freeman and Anne Westfall of Freefall Assoc.

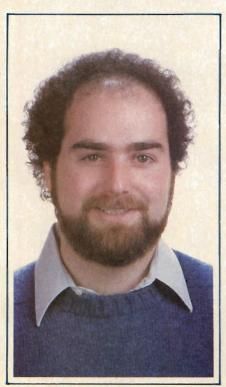
- 1. Over the Transom. This method, favored by Sirius Software and others, consists of buying the best games which show up at the publisher's office. This avoids the hassle of trying to cut deals with established stars, since most of the work is done by relative newcomers who haven't entered into a long-term relationship with another company yet.
- 2. Open Market. Broderbund and Parker Brothers are two of many companies which usually follow this approach. When a likely-looking program comes in, it is turned over to a developer, who whips it into publishable shape. Two plusses: The pub-

lished games are invariably better than if they had been marketed "as is", and the interplay between the original designer and the in-house guru can lead to a continuing contract between publisher and designer.

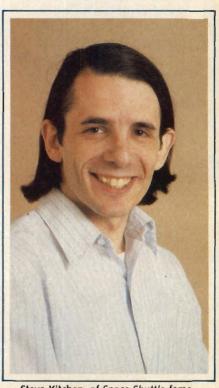
- 3. Producer System. Electronic Arts invented this arrangement to solve the problems which arise from the differing viewpoints of the designer and the manufacturer. According to EA chief Trip Hawkins, some publishers have trouble retaining creative talent because they try to make designers toe the corporate line. "A nine-to-five workday and dress standards are all right for business people," he states, "but not for artists." This arrangement pairs a designer or team with an inhouse producer on an ad hoc basis until the project comes to market. The author and publisher agree on the general outline of the piece of software to be developed, and the programmer then implements these decisions with the producer acting as allaround backstop and troubleshooter. Flexibility is a major advantage of this strategy, since it lets a company watchdog oversee the work in progress and, when necessary, bring in specialists to upgrade aspects of the game even before it reaches the test stage.
- 4. Outside Design Groups. Four years ago, it looked like every programmer wanted to turn entrepreneur by starting a company. Some did well, but others stumbled because the ability to design a saleable game doesn't imply the ability to market it—or run a multi-million-dollar company, for that matter. Some game creators wisely decided to leave selling the goods ex-

perts and concentrate on establishing studios specializing in software design. Outfits such as Action Graphics, IPS and Tom Snyder and Associates generate a significant percentage of new game titles

5. In-House Design. Some publishers use it exclusively, and almost all use it to some extent. This system involves the maintenance of design teams or individual designers right on the premises (or at an easily accessible location). It allows company executives and supervisers to stay closer to the product and gives them more opportunity to shape the creation along more commercial lines, if necessary.



David Snider of Midnight Magic fame.



Steve Kitchen, of Space Shuttle fame.

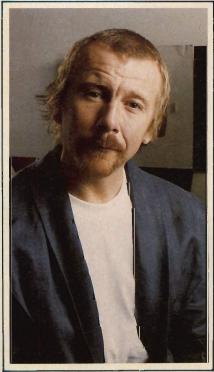
On the other hand, putting a designer on salary may cut into output by removing the freelancer's need to work in order to keep eating.

One man with definite ideas about how to catch and hold talent — and an impressive track record to back his view — is Richard Spitalny, president of New York City-based First Star Software. "You keep your designers the same way you attract them in the first place. Generally, it's your reputation, your history of aggressive marketing.

"We give authors full credit on the games, in the advertising and on the promotional pieces. We play up the authors. We respect what makes them unique. And we're interested in new things. When a designer comes to us with a game, we never ask, 'What's it like?'.

"Also, we're not putting out 25 programs a year. Anything we publish is a major release, not just a catalog item.

"Of course, there are financial considerations. But while some designers work simply to earn a livelihood and many newer people may be looking to get rich quick, the true auteurs — such as a Bill Budge or a Fernando Herrera — got into this field to find creative satisfaction and because of basic curiosity about how this technology could be used to create a new art form."



John O'Neill, creator of Lifespan.

THE CHANGING ROLE OF THE DESIGNER

Back when **Pong** was still the best game we had, designers were a varied, mysterious and largely unheralded lot. A few luminaries like freelance genius Ralph Baer and master marketer Nolan Bushnell shone forth brightly, but most of the rest simply drifted in from other fields. Part-timers and hobbyists, whose curiosity and imagination propelled them into the uncharted world of the computer, did most of the work. Few thought of game design as a legitimate career.

The toy business never bothered to credit product inventors, and this philosophy found ready acceptance in electronic gaming. As a result, those who played coin-ops, stand-alones and hard-wired videogames during the 1970's seldom knew the name of the programmer who had made the experience possible.

The story was different in computer gaming. Since many designers marketed their own products, pride of authorship got a higher priority. Title pages with full credits have thus been the norm right up to the present day. Most responsible for spreading this gospel is Activision, the first videogame publisher to identify its authors.

Before the advent of Pac-Man and big-bucks licensing, copyright protection was nonexistent. Some designers from this period found inspiration for computer programs as close as the nearest family amusement center. "I stole them," admits one programmer. "I'd wander around the arcades and rip off the ideas."

When the boom erupted in 1978, it ushered in a more entrepreneurial designer. Since learning to program a microcomputer in BASIC proved to be fairly simple, it wasn't long before many one-person companies began hawking their wares through direct mail, small-space advertising in hobby magazines and other, similar avenues.

BASIC, though easy to learn and use, didn't produce the best-looking graphics or quickest response for joystick-controlled programs. By 1981, machine language programming for commercial software had be-

come common. Within a year, it had become the industry standard. Just as some actors couldn't make the move from silent films to talkies in the 1930's, some programmers had their careers ended abruptly because they couldn't master machine language.

In the home market, at least, memory limitations became the most important consideration for authors. This led to the emergence of the acrobats, code-crunchers who totally mastered one or more systems so thoroughly that they could make the machines perform seemingly impossible feats within the available memory capacity. The Apple was the main creative forum, and the typical designer had to produce a complete game with little, if any, outside aid.

But the Apple didn't give much scope for sound or graphics. That was good for most designers of the period, but the players wanted the caliber of audio-visuals which had become commonplace in the arcades (where memory limitations are largely irrelevant). Though solo designers have produced many games for systems such as the Atari and the Commodore 64, it's a rare author who is equally adept at conceiving and implementing entertaining play-action and drawing beautiful pictures.

Enter the design team. A squad of specialists, each an expert in one phase of game creation, can often do things no single author could accomplish. The superstar designer/programmer who can do it all is not unknown, but more and more titles are reaching market as a result of a group effort.

The next turn of the wheel? It's hard to say, but one possibility is that larger computers will be more user-transparent and thus lots easier to program. This could open the way for much more direct participation in computer game design by artists from other fields who now must work secondhand because of the need for technical assistance. Bigger computers could also increase the use of design teams, as huge projects are split up into more manageable pieces to promote productivity.

GREAT GAME DESIGNER HUNT-



The Ozark Software group.

Dan Bunten of Ozark Softscape offers a view of the situation from the designer's perspective. As an established creator who has been involved in the programming of computer software for several years, Dan wrote such titles as Computer Quarterback and Cartels and Cutthroats for Strategic Simulations and, more recently, worked on M.U.L.E. and Seven Cities of Gold which have appeared under the aegis of Electronic Arts.

He points out that finding qualified designers is sometimes even tougher than keeping them. "It's hard to know who the top designers are, and even after you've found them, they may wind up not having any more good ideas. A company could end up paying an awful lot of money to someone who ends up not producing anything." Once the talent's in the fold, however, Bunten sees some effective

strategies for keeping them there. "You have to have a lot of concern for the artist. Money is part of it, but not the main thing. We at Ozark Softscape have had other careers, but we look at game designing as a great chance to do something interesting and creative.

"As a publisher, I think it's important to know when to let a project go. It's like the baseball pitcher who wants to throw a strike so badly he wants to walk the ball right into the catcher's mitt. You have to know when to let go of the ball."

Not surprisingly, in view of his current association with Electronic Arts, Bunten is very high on that firm's method for handling game authors. "I think the major innovation made by Electronic Arts, the thing a lot of other publishers will be doing five years from now, is the "producer". The producer is the one who sees a project through

from start to finish, who gets you money when there's nothing to eat, who contributes ideas when you're stuck."

Analyzing Bunten's perspective provides additional evidence to prove something we've known all along: Every designer is different. The loose rein of the producer system may be ideal for a knowledgeable and experienced self-motivator like Dan Bunten, but the reason Electronic Arts doesn't totally dominate talent acquisition is that each author has different needs. Some like the security of having someplace definite to go each day, while others prefer to do their electronic creating in remote locations, surfacing only long enough to find a publisher to take the latest title to the public.

Designers of electronic games are, after all, genuine creative artists. And like artists of all types, they are mighty hard to classify like so many butterflies pinned to the page. As the growth of the home computer market brings

SUBSIDIARY RIGHTS: THE NEXT BATTLE?

Most designers have achieved good compensation for their programming activities, but a new factor threatens to disrupt the harmonious climate which has prevailed since jobs got scarcer in the wake of the Big Shake-out of 1983. The potential powderkeg is revenues from licensing and other merchandising.

Characters derived from popular electronic games have become stars of stage, screen and television. In some other fields, such as comic books, merchandising income generated by top-of-the-line characters far exceeds the dollar sales volume of the publications in which they actually appear. There are signs, such as the wholesale migration of game characters to Saturday morning TV, that something along the same line could be happening to electronic gaming.

The question: To what extent should the designer of a game share in the merchandising revenues produced by that game? It may take a lot of debate between designers and publishers to arrive at a just answer.



more and more publishers into the sales competition, the most successful publishers are likely to be those who

display the greatest ability to attract satisfy and hold the gilt-edged authors.

BRIDGING THE QUALITY GAP

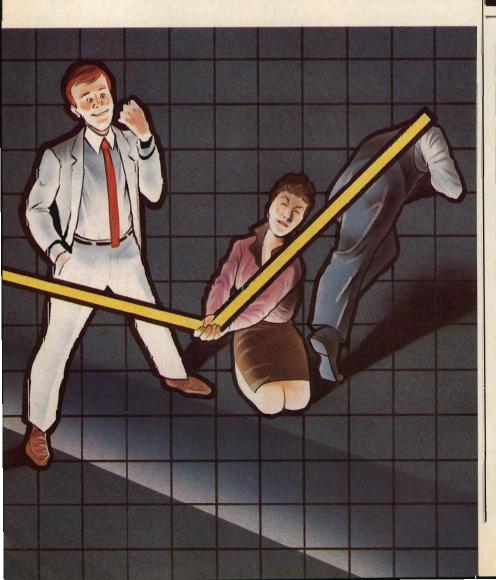
An enterprising amateur could, as recently as 1982, program a game in his or her spare time and then market it in some kind of utilitarian, low-cost package. The software produced by this type of cottage industry was not noticeable inferior to the average title issued by the commercial houses.

Once, programmers were like college football players. The cream of the crop could jump into regular slots in the National Football League directly from the campus. Now programmers are more like college baseball players, even the best of whom must serve an apprenticeship in the minors.

The knack for growing talent to

maturity may soon become more valuable than the ability to spot a fullblown star. Companies are, in a sense, setting up their own farm systems for programmers by giving the less experienced ones translation work and putting novices into design groups where veterans can teach them.

A few software houses are even taking a cue from print publishers by releasing promising, but slightly flawed, first games from designers who they hope will produce a best seller by their second or third try. What retailers - many already complaining about mediocre products will make of this remains to be seen.



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EDUCATIONAL GAMES?

Here's the Latest in Learning Fun

By JOYCE WORLEY



STICKY BEAR ABC'S (WEEKLY READER)

here certainly are lots of educational games these days, especially considering that the category only solidified in 1983. It sometimes seems as though every publisher and design studio is bending its efforts to produce software of this type.

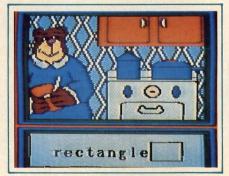
The big impetus comes from the very fact that it is a new class of product. That means there's a pipeline to fill—and plenty of companies that want to fill it. This could lead to a shake-out when supply must directly reflect actual consumer demand, but right now, we've got a bumper crop of new products.

Nursery, kindergarten and grammer school topics are still the most popular. Colorful displays and simple contests help pre-literate toddlers learn to count and recite the alphabet. Action/strategy games on almost any subject desired entertain — and inform — young readers. These pro-

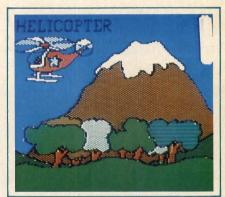
grams aren't meant to replace classroom learning, but they do help make tough topics easier to absorb.

Educational games are available for even the very youngest child. One title, **Peek-A-Boo**, by child psychologist Dr. Lee Salk (Atari/2600 & 7800) is suitable for infants as young as one year old. It uses the Atari Kids' Controller, and stars a cute kitty in a game of peek-a-boo that teaches directions, colors and shapes to the tot sitting in its mother's lap. According to Dr. Salk, it "involves reasoning and logical thinking presented in a manner that gives a child self-esteem and mastery."

Most pre-reader software is aimed at kids 2 or 3 years old or over. There are quite a few "head start" programs to teach preschoolers shapes, colors, letters and numbers. Most use special characters, or even familiar faces licensed from other media, as onscreen tutors to guide the youthful computerists through colorful dis-



STICKY BEAR SHAPES (WEEKLY READER)



STICKY BEAR ABC'S (WEEKLY READER)

plays. The Weekly Reader Family Software library of Stickybear games (Stickybear ABC, Stickybear Shapes, Stickybear Numbers, Stickybear Opposites) for the Apple, Atari and Commodore 64 computers, features the lovable bruin as on-screen tutor. Highres storybook-style animated graphics help youngsters acquire the important building blocks to literacy.

Alphabet programs are a popular starting place for parents wanting to build an educational software library for their kids. Random House's Charlie Brown's ABC's uses Peanuts characters to illustrate each letter. Romper Room I Love My Alphabet, by First Star, lets kids choose a letter, then see a descriptive object in cutely-drawn graphics.

Software for slightly older prereaders places less stress on familiar faces as guides, and more on game motifs to hold the learner's interest.



WELCOME ABOARD (BRODERBUND)

Springboard Software's Easy as ABC contains five games for youngsters aged 3-6 to play while learning the alphabet. It uses a picture menu so non-readers can choose Match Letters, Dot-to-dot, Leapfrog, Lunar Letters or Honey Hunt.

Early Games For Young Children is a multi-game package from Springboard for kids 2½ to 6. Nine diversions, each accessed from a picture menu, teach letters, how to add and subtract, how to type and draw with the computer, the alphabet, and how to spell their own names, all with no adult supervision.

Dance Fantasy by Fisher Price lets tots create a dance to music. They get to choose the length of the dance, where the on-screen dancers move, and how they work together. It's designed to help sharpen youthful artistic senses and creative skills.

Tonk In The Land Of Buddy-Bots, written by Mercer Mayer for Mindscape, is a two-part program with four skill levels in each section, for ages 4-8. Tink! Tonk!, the on-screen computer character, leads kids on an adventure as they travel through Buddy-Bot land collecting different parts of a Buddy-Bot robot, then guides them through games that help develop visual discrimination, critical thinking and computer literacy.

Kermit's Electronic Storymaker, by Simon & Schuster, uses Muppet



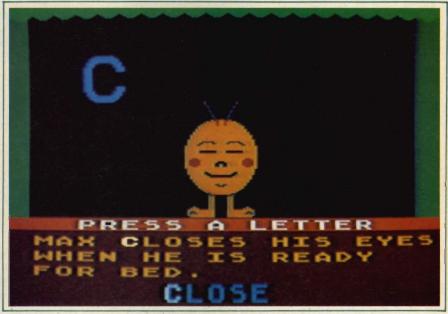
TONK IN THE LAND OF BUDDY-BOTS (MINDSCAPE)

characters to help beginning readers ages 6-9 make sentences which are then acted out on screen. Kids choose a noun, verb and descriptive word or phrase, drawing from a large menu of objects. For example, choose "the bed", then choose a verb, like "dances", and a phrase, such as "on the moon". The bed is pictured against a lunar landscape, then dances gaily across the screen.

The Muppets also star in Welcome Aboard from Broderbund, for kids 9 and over. It uses Kermit as narrator, with word balloons at the top of the screen giving instructions, as young computerists learn the basics of word

Math-based games for older students use many of the standard ingredients of action arcade entertainments, though the speed is scaled down to accommodate slow readers. Upper skill levels may be slightly faster, but are more likely to feature tougher arithmetic problems.

Fish-Metic by Commodore is an arcade-style game for ages 7-13. Using a joystick, kids swim a numbered goldfish upstream, passing over, under or next to other fish depending on whether their numbers are higher, lower or equal to the player's minnow. Sixteen difficulty levels, each with three agility settings, teach positive



ROMPER ROOM I LOVE MY ALPHABET (FIRST STAR)

processing, telecommunications, graphics, and programming.

Arithmetic lends itself well to actionenhanced games, and almost every company offers a variety of math instruction games covering every age and skill group. Games for the youngest computerists feature very simple displays or counting activities. Arithmetic skill builders are often based on flash-card technology that is incorporated into a game-like framework to make it more fun to practice doing sums.

Hop Along Counting and Number Tumblers, both under the Fisher Price banner, teach number skills. The first title is for preschoolers 3-6, and helps them count clever on-screen bunnies. Number Tumblers is for grammar school students. By jumping a cute Wumble Chum from number to number, they get practice solving math problems.

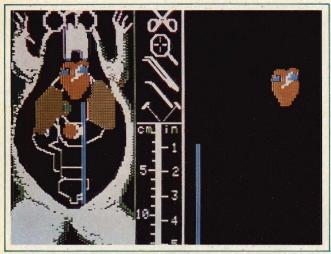
and negative whole numbers, fractions and decimals.

Number Builder by Commodore is a climbing and jumping game that uses familiar motifs from high-skill games to challenge young learners. A construction worker races around the job collecting number blocks to reach a target digit as users learn to do sums without pencil, paper or calculator. It



HOP ALONG COUNTING (FISHER PRICE)

What's New In Educational Games?



OPERATION FROG (IPS/SCHOLASTIC)



AMERICA COAST-TO-COAST (CBS)

starts easy, for kids age 7, then grows with them through 12 levels that cover addition, subtraction, multiplication and division.

This year there are more games for secondary school students as designers turn their attention to science, vocabulary building, geography and other subjects that dominate junior and senior high school. One unusual offering by Scholastic takes the mess out of biology with Operation Frog, designed by Interactive Picture Systems (the same folks that created MovieMaker, Aerobics and Trains). It's a computerized dissection simulation. Pick the instrument (such as scissors or scapel) from a tray, then go to work on the on-screen toad. After removing an organ, a magnifying glass option lets the student get a closer look. It offers a feature that no real dissection can: after the internal exploration, students can reassemble the frog to see it come back to life and hop away.

Most word and vocabulary-building games are entertaining for all ages. Because of the necessity of providing for slow readers, action-based word games seems less predominant and many feature quiz-show or trivia contest formats that make them fun for everyone.

Shifty Sam from Random House is for one or two players. Sam deals a 7-letter word to each player, who then bets on how many words he/she can create from those letters in 90 seconds. The amount in the pot varies depending on the length and number of words made by the players, and

how often Sam doubles the bet. *Shifty Sam* lets computerists enter their own word lists, so this program can provide unlimited gaming opportunities.

Random House's **Thwart!** is another all-age vocabulary builder, but with a different twist. Choose one of 12 word categories, then come up with as many words as possible in that division, putting them all together like a crossword puzzle.

History and geography are new topics for game designs, and it seems certain that more diversions built on these subjects will appear in months to



OPERATION FROG (IPS/SCHOLASTIC)



U.S. ADVENTURE (FIRST STAR)

come. America Coast to Coast by CBS Software uses a keyboard overlay so that even computerists who can't type will be to easily enter their answers to quizzes, mysteries, puzzles and travel games about the USA. It's for anyone 8 or over.

Ú.S. Adventure by First Star is a geography tutor for all ages. The gamer uses a joystick to travel around the country. Each time a new state is entered, the computerist guesses the order of its entrance into the Union, then learns other significant events about it. Taking events through a time tunnel creates animated displays chock full of facts that teach American history, geography and other U.S. facts, such as states and capitals and the country's presidents.

The tide of educational titles has not even begun to recede. It seems safe to predict that manufacturers will continue to flood computer stores with instructional software until a Great Shakeout occurs in the educational arena, just as it did in action games last year. There is a lot of duplication of effort from company to company, which no doubt will sort itself out in the months to come. But until then, parents have a great diversity of programs to choose from.

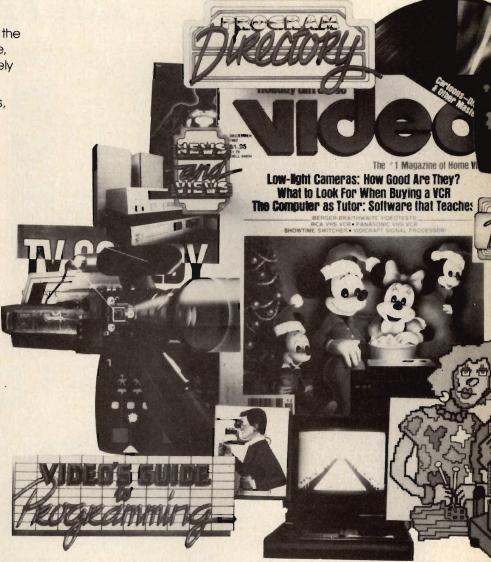
At the worst, these learning games help kids get a handle on knowledge. But at the best, the new curriculuminspired titles are so entertaining that the whole family will want to get involved in the fun, and the educational payload is so subtly introduced that no one will notice that they're learning while playing the games.

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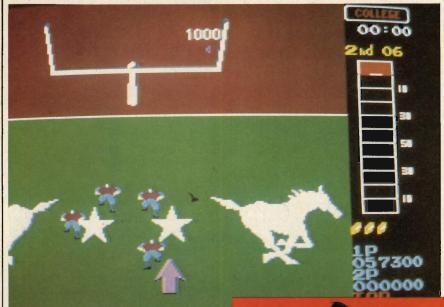
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EG's Annual Guide to



including the first two football games to utilize laserdisc technology.

Bally/Midway's N.F.L. Football has the honor of being the first sports game on laserdisc. Players can compete against each other or against the machine. The game uses old highlights from San Diego Chargers/Los Angeles Raiders match-ups, and while the game is exciting to watch, it does not require much skill to play. Players seeking a challenge will probably become bored with it quickly.

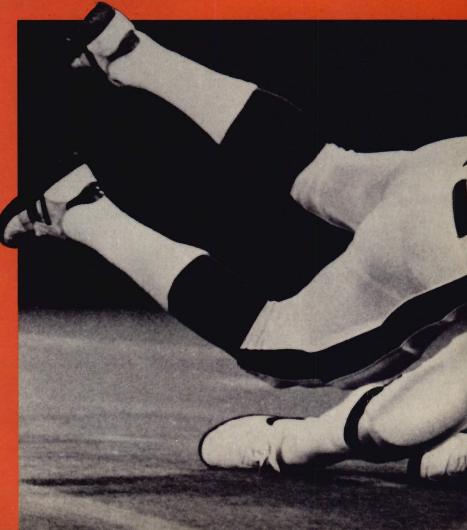
Stern's **Goal to Go** is another laserdisc football game pitting the gamer's gold team against the green team. This game requires a little more skill than N.F.L. Football; the player has to move his ball carrier with the joystick,

10 YARD FIGHT (TAITO)

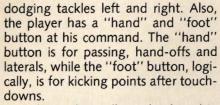
By MICHAEL MEYERS

he game of the gridiron has discovered a newfound popularity with young and old electrogamer fans alike. Some of the credit for this happening has to be given to the USFL, whose war with the NFL has generated a lot of public interest.

Since Electronic Games' last "Players Guide to Electronic Football' (Oct., 1982), five new football simulations have been produced for the home and three new games have found their way to the arcades.



Electronic Football Games



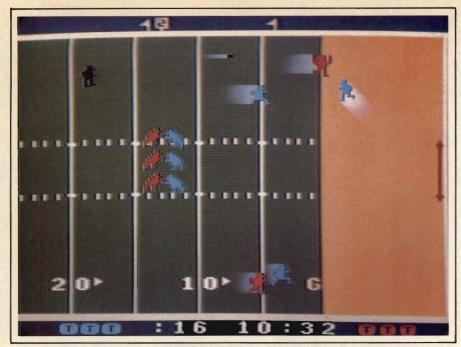
A classic that still can be found in many arcades is Atari Football, one of the first games ever to use a trackball. In Atari Football, players compete head to head with full eleven-man teams (represented graphically by X's and O's). Atari Football may be the first video football game, but it's still one of the best.

The newest pigskin simulation in the arcades is 10 Yard

Fight (Taito). Like

most football simulations, the object of this game is to score a touchdown. However, in order to lengthen your playing time, you must achieve a first down (10yds.). After gaining first down on your first play from scrimmage, the player is awarded another 10 minutes playing time (simulated). The more plays it takes to achieve a first down, the less bonus time is awarded. When the game clock reaches 0:00, the game is over.

One of the unique qualities of 10 Yard Fight is the ball carrier's ability to shake tackles. When the ball carrier is



STARBOWL FOOTBALL (GAMESTAR)

TOUCHDOWN

in the clutches of a defensive player, a mere jiggle of the joystick will set him free. Unfortunately, the ball carrier can only do this three times per play.

COMPUTER FOOTBALL

There are two types of computer football games: those that are action-oriented — depending more on the joystick than the players knowledge of football — and those that are statistically-oriented, which take actual N.F.L. team statistics and include

them in the game.

Starbowl Football (Gamestar) would be filed under the "action" category. Players need good hand-eye coordination to complete passes from quarterback to receiver. Unless timed correctly, the receiver will bobble the ball and drop it, or a pass will be intercepted by the opposition.

Tuesday Morning Quarterback (Epyx) provides all of the teams from the 1982 N.F.L. season, (when the S.F. 49er's were kings of the N.F.L.), along

2600 REALSPORTS FOOTBALL (ATARI)

with two All-Star squads. Players can choose from sixteen offensive plays and six defensive plays. Each player chooses a play and the computer, taking into account such things as team stats and momentum, prints out the results. Game outcomes can be altered significantly by injuries to key players or penalties (which occur about once every thirteen plays).

TMQ is very dependent on statistics but the program does provide a little arcade-style action when it comes to the kicking aspects of the game. Field goals and punts are far from automatic in TMQ, and timing is essential. Luckily there is a "kicking practice" option

in the game.

SSI's Computer Quarterback provides a unique approach to football simulations. In CQ, the player must purchase a team with the three million dollars the computer has granted. Will you spend all your money on a star quarterback and offensive backfield, while playing with a mediocre defense? Or perhaps a balanced team with an average defense and offensive would suit you better? The choice is entirely yours.

There are two speeds at which to play CQ, Semi-pro and Pro. The Semi-pro game provides you with eighteen offensive plays and fourteen defensive plays. The Pro game has thirty-six offensive plays and twenty-four defensive plays. If you don't have an opponent, CQ can be played solo against a computer "robot" team.

VIDEOGAME FOOTBALL

Flicker, Flicker, Flicker that pretty much sums up the problem with Atari VCS Football. Considering the limitations of the VCS, this game isn't all that bad. But that darned screen flicker just ruins the game. It's hard to keep track of a team when they're blinking on and off like athletic ghosts.

Atari 2600 RealSports Football was an improvement over Atari VCS Football. Atari attempted something that no other videogame manufacturer has yet to attempt; they made RealSports Football playable against the computer. How playable is the solitaire version of this game? Unfortunately, not very.

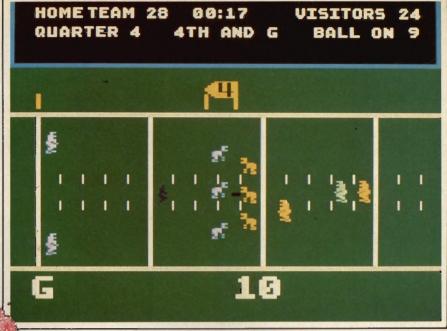
Because of the Atari VCS limitations, the computer player is very predictable in this contest (usually the computer will run on first and second down, and pass on third and fourth down). But kudos to Atari for the effort.

Being a true-blue armchair quar-

terback at heart, I literally drooled in anticipation on seeing previews of Mattel N.F.L. Football. And while there is a lot more competition in the football videogame category today, N.F.L. Football still remains one of the finest adaptions of the sport.

In N.F.L. Football, players each control one player on a five-man team. There are nine offensive and nine defensive formations to choose from, and the offensive player can choose between two receivers to pass to. The number of play combinations is only limited by imagination.

Mattel was considering updating N.F.L. Football a few years back, but



5200 REALSPORTS FOOTBALL (ATARI)

'scrolling playfield. The offense has eighteen different formations to choose from; the defense has six. Video quarterbacks will love the ability to choose between two eligible receivers on every down. The defensive player controls the middle linebacker. However, by pushing the lower fire button before the ball is snapped, the middle linebacker can be repositioned anywhere on the field. This is useful for blitzing the quarterback or operating in a prevent defense.

The only flaw in this game is the weakness of the defense when there are two skilled players competing. Be-

cause the computer-controlled players on defense aren't as skilled as the joystick-controlled players, certain offensive plays cannot be stopped — no matter how skilled the defense is. I leave it to you to discover exactly which plays I mean.

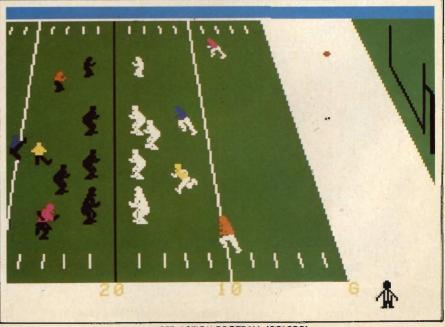
Coleco Football — after almost a year's delay — looks like it may finally reach the market. This excellent football contest boasts superior graphics and the ability to control up to four players at once (by way of the Coleco Super Action Controlers). Coleco Football should make a big splash in the sports game market.

these plans never came to be. Still, most sports gamers are content with Mattel N.F.L. Football the way it is.

Mattel's M Network Football, compatible with the Atari 2600, is more than just an adaption of Mattel's N.F.L. Football. Unlike the Intellivision version, M Network Football allows you to determine who will block and who will go out for a pass during any given play. M Network Football may not be as visually perfect as N.F.L. Football, but it's certainly just as playable.

You know what they say — "third time's a charm!" Well, Atari's third attempt at a pigskin simulation is just that — a charm!

In Atari 5200 Football, players drive their six-man teams down a beautiful



SUPER ACTION FOOTBALL (COLECO)

OUR ARCADE GAMES WE BROUGHT



Bally Midway's Spy Hunter puts you in the driver's seat of the hottest machine on four wheels. You're after enemy spies. The situation is life and death. You'll need every weapon you've got – machine guns, and guided missiles, oil slicks and smoke screens. But the enemy is everywhere. On the road, in the water, even in the air. So you'll have to be more than fast to stay alive in Spy Hunter. You'll need brains and guts, too.

Do you have what it takes?



Bally Midway's Tapper would like to welcome you to the fastest game in the universe.

You're serving up drinks in some of the craziest places you've ever seen. And the service better be good, or else. You'll work your way through the wild Western Saloon to the Sports Bar. From there to the slam dancing Punk Bar and on into the Space Bar full of customers who are, literally, out of this world.'

Are you fast enough to play Tapper? If you have to ask, you probably already know the answer.



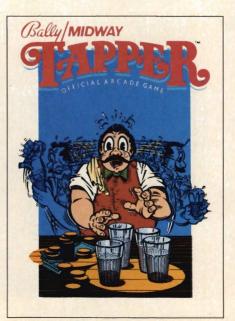
Bally Midway's Up 'N Down by Sega. In this game, a crash is no accident.

In fact, it's the whole object of the game. You'll race your baja bug over some of the worst roads south of any border. Leap dead ends, gaping canyons and oncoming traffic in a single bound. And if anyone gets in your way, crush 'em.

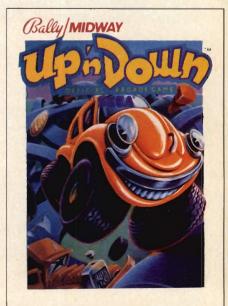
Crashing, bashing Up 'N Down. It's one smash hit that really is a smash.



The #1 Arcade Game of 1984.



Nominated as Most Innovative Coin-Op Game of 1984 by *Electronic Games* magazine.



#1 Arcade Hit, *Play Meter* Conversions Poll, 8/1/84.

WERE SUCH BIG HITS, THEM HOME.



Sega's Congo Bongo rocked the home game world when it shot up to Number 3 on the Billboard chart this summer.

And now it's available for even more home systems. So check the chart and get ready for jungle action. You'll pursue the mighty ape Congo up Monkey Mountain and across the Mighty River. Do battle with dangerous jungle creatures. Ride hippos, dodge charging rhinos and try to avoid becoming a snack for a man-eating fish.

Congo Bongo. It's fast and it's fun. But be careful. It's a jungle in there.



Sega's Zaxxon. If you haven't played Zaxxon, you must have been living on another planet for the past few years.

And now the ultimate space combat game is available for even more home systems. You'll pilot a space fighter through force fields and enemy fire on your way to do battle with the mighty Zaxxon robot. Countless others have gone before you in this Hall of Fame game. But this time your life is in your own hands.

Zaxxon killed them in the arcades. But compared to what it will do to you at home, that was child's play.





One of only ten games ever to make Electronic Games' Hall of Fame.



Arcade and Home Smash. Hit #3 on Billboard magazine's Top Video Games survey.

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 Action Arena Passport to Adventure Think Tank Articles of War Electronic Pressbox 	36		
	42 44 45 48		
		■ Playing It Smart	50
		■ Translations	53

ACTION ARENA

ARCADE BOOT CAMP

Designed by John Besnard Penguin Software/Apple II/48K Disk

Considering the popularity of computerized tutorials, it's amazing that no publisher until Penguin has produced an interactive training system for improving skill at arcade action games. Frivolous subject? Sure. But no more so than blackjack.

The computerist marches a cute little cartoon character into the right section of the training ground to pick one of the five fields of study. Choose quickly, or the drill sergeant will give you a boot in the rump to hasten your decision.

In driving, one of the five fields, the player tries to keep a jeep on a twisty road for 25 scale miles. Each crash costs a rank, counting down from Sergeant Major. If the driver travels the required distance before losing the

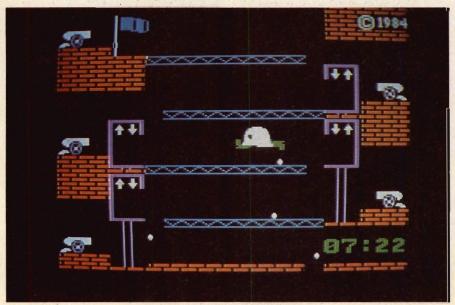
last stripe, the next task is to stay on a similar road — but this time it's covered with slippery ice! As the trainee becomes more proficient, the tests grow more demanding.

The program helps the player master the various play-mechanics which are the basis of most electronic action games. Only time will tell if it works, but it certainly is an intriguing concept.

The computerist logs onto the disk prior to the first play-session. By entering a code number at the start of each subsequent boot, the recruit tells the program that a familiar student is back for more training.

None of the modules sparkles as a game, but the idea is so ingenious — and is carried off in such high style — that most blast brigaders will want Arcade Boot Camp for their software library.

(Arnie Katz)



ARCADE BOOT CAMP (PENGUIN)

ZOMBIES

Designed by Mike Edwards Bram/Atari computers/48K Disk

When Wistrik hid the crowns of the Middle Kingdoms in seven dungeons, he created an action quest worthy of any armchair hero. Only the most skillful joystick jockeys will be able to explore the seven realms, each depicted in striking pseudo-3-D perspective, and emerge bearing the crowns without exhausting the initial supply of 50 hit points.

Since Wistrik protected his seven dungeons with a spell that negates standard weapons, the hero must utilize two main magical helps — and a deft hand on the stick to steer the onscreen figure away from dangers which can't be out-fought.

The ability to cast spells is the player's most powerful resource. A scroll either gives the character five additional hit points or makes it possible to work one of three types of incantations. Pushing the action button while the character stands still lets the computerist choose one of three spells by throwing the stick in the appropriate direction. (Pulling the stick down casts the most recently acquired spell.)

Spells are great stuff, but getting past the zombies, snakes and flying eyes which pollute the seven realms requires mastery of the 32 Talismans of Rhadamanthus. The hero drops a cross when the gamer hits the action button while the character is moving. During its four-second life span, a Talisman acts like mystic fly paper, immobilizing any being which touches it. The hero has 32 such crosses, although they can be reused once their period of effectiveness ends and they disappear from the playfield.

The graphics are brilliantly conceived. Although the drawings aren't very complex, inspired use of color and shape gives each realm an individualized look.

Zombies can be played solitaire, or two adventurers can cooperate. As in the Odyssey videogame Quest for the Rings, a pair of on-screen worthies can pool their efforts to collect all the prizes.

Good games are common these days. Those which also display originality are much rarer. Zombies is such a game.

(Steve Davidson)

ZEPPELIN

Designed by William Mataga Synapse Software/ Atari computers/48K Disk

Successfully piloting a stolen zeppelin through a multi-chambered cave complex is the only way to escape the prison of the Timelords in this omnidirectional scroller.

The craft can put out a lot of fire-power in response to hitting the action button, which is fortunate, because the complex bristles with stationary and mobile weapons. The gamer can improve the odds of survival by selectively shooting switches embedded into the cave walls. Each switch controls a specific weapon. Zapping the right switch can remove a flight of attack helicopters, turn off a rock fall or nullify a laser gate. This puts a premium on accurate marksmanship, while not negating the advantage of a quick trigger-finger.

Multiple skill levels keep the game interesting even after repeated play, but frankly, many home arcaders will be a long time working up to "expert"

status.

Bill Mataga, who also created the **Shamus** series, has designed another great action computer game.

(Arnie Katz)

SARGON II

Hayden/Commodore 64/Disk

Is anyone looking for a chessplaying soulmate available any time, an easy way to examine possible moves or past games, or a way to compete with a challenger that can grow in ability as they do?

If so, then search no more! Hayden's Sargon II provides all that and then some. Experienced chess players can practice involved strategies while novices, with the aid of a beginner's book, can learn from the computer's moves or the advice it gives.

Before Sargon II this reviewer had forgotten how entertaining a good, stimulating game of chess could be!

It is astoundingly easy to use. Even the edit function (for setting up developed games) can be learned in minutes. Want to take back a move? No problem at all! A few edit keystrokes take care of the whole matter.

Would-be Bobby Fischers select color as well as level of difficulty. As the easiest, zero is a cakewalk in which the computer responds immediately. Level nine allows the computer an average of four hours per move. In most levels the computer plans ahead, considering possible countermoves and their responses. Thus the depth of Sargon II becomes apparent.

The board, seen from above, depicts



ZEPPELIN (SYNAPSE)



SARGON II CHESS (HAYDEN)

standard chess figures. Audio signals alert players to illegal moves as well as checkmate.

Two-entry alphanumeric notation is used to move the pieces about. En passant capturing and castling (either side) are also incorporated. Need some advice? Just press F3 and the silicon opponent provides what it thinks is a good move although there are no guarantees!

Well-planned, nicely presented, a joy to play. What more could one ask for? Sargon II, check (mate) it out!

(Ted Salamone)

SUPER BUNNY

Datamost/Apple II/48K Disk

To get a little pre-game inspiration, start by paging through the comic book that depicts the growth of Reggie Rabbit from a philosophical weakling into the heroic Super Bunny. Dale Kranz, who put the Super Bunny legend together out of a concept by Gary Koffler, should get some credit for the comic book rendition of the story. It is impossible to read this tale without wanting to get on the screen and help Super Bunny destroy the villians and grab great glory.

In the trip from the comic book to the computer screen, some of the magic slips away. The graphics by Thomas Spears, however, are as good as anything you'd want to see on such an outing. Reggie Rabbit looks very vulnerable as he dodges the bad guys on his way across the screen to get to the magic carrots that will transform him into Super Bunny.

Once he makes it across the screen, his worries aren't over yet as the gremlin holding the carrots shifts randomly to one of three positions on the right-hand side of the screen.

Once Reggie has chomped the carrots the cowering coney turns Super. He must then make the same trip back across the screen, this time trying to run into and eliminate as many of the



SUPER BUNNY (DATAMOST)

wolves, snakes, owls, vultures and so on as he can before time runs out on the carrots' power.

At the first level, the hero has 45 seconds of Super Bunny powers during which to vanquish the foes. At each successive level the magic power lasts for five fewer seconds until only 20 seconds remain at the sixth level.

What is disappointing about the game is the manner in which Reggie or Super Bunny must avoid or chase the enemies. Across the main section of the screen are several rows of vertically moving elevators. Some are empty and some are full of meanies. But while many of the better and more challenging games require a multitude of skills to achieve high scores and upper levels, Super Bunny requires only a good sense of timing to get inside each elevator compartment.

That isn't to say the game is easy, it's just rather one-dimensional. Super Bunny can be played with keyboard, joystick or paddle, and the disk saves the top 10 scores. For graphics and cuteness of story alone, Super Bunny might have enough positives to be worth the purchase, but the games' excitement level isn't sky-high.

(Rick Teverbaugh)

FROGGER II: THREEDEEP

Parker Brothers/

Commodore 64/Cartridge

This sequel to Frogger is better than its predecessor in more ways than one. While the play-mechanic remains the same-maneuvering the title character across rows of moving hazardsplenty of new twists have been added. The question remains, however, how many Froggers does a gamer need?

Frogger II begins underwater, but play occurs on three different screens, so he also sees action on the water's surface and in the air. Realism is obviously not an issue here. Not only does this frog go airborne, but the collection of creatures encountered on the surface screen would give Marlin Perkins the willies!

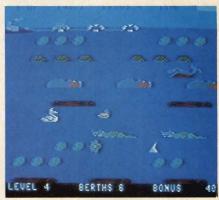
On the first level, the gamer must guide three frogs home to logs floating across the top of the screen while avoiding the snapping jaws (and tails) of alligators and barracudas, which run in packs across the screen.

So far this sounds like Frogger I, but there is an added hazard here: the water current. Frogs can't sit and wait for openings — the current sweeps Frogger off screen to certain death. Treading water is fine, though, and there is help available in the form of a friendly turtle who can carry our hero piggyback almost to the top of the screen. If he goes off-screen with frog attached, both simply reappear on the opposite side of the screen, alive and well. This does eat up time, so joyriding on the turtle is not recommended.

Gamers can move between the three screens without logging all the frogs on any one. Downwards movement is accomplished by falling into either water or air with no penalty except wasted time. If a frog jumps onto the end of a log or onto an occupied log at the top of the undersea playfield, he ends up on the surface. Here he must hop amongst a peculiar collection of aquatic fauna, including hippos, alligators (non-lethal), ducks and whales, on the way to a life preserver towed across the top of the screen. Be wary of the Mama duck; she has a Jekyll-and-Hyde personality. If she passes while the frog is hitching a ride on her ducklings, that's one life gone. However, hopping onto her back takes the frog to the third screen.

In the air, Frogger bounces on trampoline-like clouds until he catches a passing bird, and then leap from bird to pterodactyl to bird in order to reach a niche in the clouds. Avoid the flying dinosaur-bouncing into his underside is lethal. Fill all the berths on all screens and the game gets harder and faster, with more dangerous, and fewer useful, creatures.

Bonus points are available on all screens, including a super bonus on the surface. Underwater, the air bubbles which rise from the bottom are



FROGGER II: THREEDEEP (PARKER BROS.)

worth 100 points, as are the butterflies flitting among the clouds. Every 10,000 points, a stork appears on the air screen—hitching a ride on it nets a baby frog and an extra life.

Frogger II is a good game of its kind, although it has a somewhat oldfashioned air about it. Certainly fans of the original Frogger will be very pleased with its successor, and newer fans should find it appealing and challenging as well. About the only really negative thing to say about this game is that the timing of its release is off. A year ago, before the rise of computer action games with their greater emphasis on strategy, this would have been a more exciting release.

(Louise Kohl)

JUNGLE HUNT

AtariSoft/Apple II/48K Disk

This edition of the Taito coin-op may prove shocking at first, because it certainly doesn't look like other editions of the multi-scenario actionadventure. The programmer knew that it would be impossible to duplicate the familiar visuals and wisely didn't try. Instead, this version sports a totally new graphic look which employs the capabilities of the Apple to good purpose.

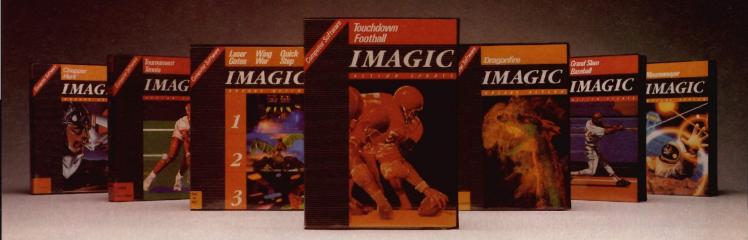
The play is basically unchanged from the other arcade-to-home translations. That is, the player uses the joystick to guide an on-screen explorer through the jungle, across the river and up the hill to rescue a princess

from the cannibals.

If Jungle Hunt is a favorite, this edition should be fairly pleasing. It's a solid production with most of the virtues — and flaws, too — of the playfor-pay machine.

(Steve Davidson)

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Touchdown Football

Tournament Tennis

Grand Slam Baseball

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per Hunt Dragonfire



ARCADE ACTION

IMAGIC 1-2-3 Mo



Moonsweeper

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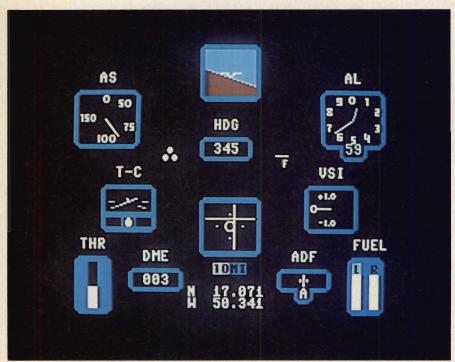
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IMAGIC



IFR FLIGHT SIMULATOR (ACADEMY)

IFR FLIGHT SIMULATOR

Academy/Commodore 64/Disk

Academy's IFR Flight Simulator for the C-64 allows compugamers to take total control of a light plane similar to a Cessna 172RG.

The screen depicts a working instrument panel consisting of compass, air speed indicator, altimeter, fuel gauges, flaps and turn indicators, artificial horizon, and other navigational aids. It has an extremely realistic look.

Combination joystick/keyed input controls all flying and steering functions. Push the craft beyond its limits and it's curtains for all on board!

Failure to read the maps correctly or fully understand the instrumentation can cause dire consequences in the real-time flights between four airports.

IFR provides many of the challenges of actual flight, and consequently it has a longer-than-average learning curve. Luckily, the pleasure derived from it makes the extra effort worth-while.

(Ted Salamone)

PINBALL WIZARD

Microdigital/VIC-20/Cassette

There's something about playing a pinball game on a computer that's magical. Maybe it's the bells ringing — more likely though, it's the bouncing

ball. Whatever it is, **Pinball Wizard** has that magic.

Players start the game with five balls. (Extra balls are awarded at 50,000 and 75,000 points.) As in other pinball games, the ball has bounce, gravity and speed. Points, of course, are accumulated by rolling over dots and hitting bumpers and bonus arrows.

Since all play is conducted through the keyboard, joystick jockeys may have some trouble getting used to the game. But die-hard pinball wizards shouldn't have any problem. The player pulls back on the plunger by depressing the F5 key, and releases the ball by hitting the F7 key. The cursor key controls the right flipper, and the CBM key corresponds to the two flippers on the left.

In addition to hitting the ball with the flippers, players can use the equivalent of body English. By touching the spacebar, the ball is kept in action a little longer. Watch out, though — depress the bar too much and the game will tilt.

Pinball Wizard also comes with a BSM (Basic Score Multiplier). Each time the ball rolls over one of the five dots, it changes color. The BSM is equal to the number of same-colored dots.

The only drawback to *Pinball Wizard* is that the ball can't be held on the outside edge of the flipper, bounced and then whacked back up through the chutes.

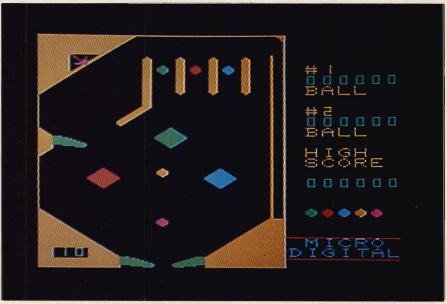
(Vincent Puglia)

COSMIC TUNNELS

by Tim Ferris

DataMost/Atari computers

As in the "Star Wars" saga, the first episode of Captain Sticky's adventures in space to become public is dubbed "part four" of a larger series. Cosmic Tunnels puts the player in the role of the corpulent captain himself as he aids the planet Siref in its war against the Jebs.



PINBALL WIZARD (MICRODIGITAL)

It seems the Jebs have cut Siref off from its energy-producing asteroid belt, and only Captain Sticky can save the day! His first mission: to maneuver his spacecraft from its home base to one of the four square Cosmic Tunnel gates at the top of the screen, while dodging falling meteors.

Once through the gate, the ship enters a space warp. Mines appear in the distance, hurtling towards the ship at lightning speed. Shoot as many of these as possible. Allowing a mine to hit the ship — or even get past without being destroyed — drains the space-

ship of precious energy.

After leaving the tunnel, Captain Sticky must successfully land on the asteroid's surface. Enemy bases shoot energy-sapping bombs, so it's advisable to destroy them all before touching down on the landing pad.

Once on the asteroid, the caped crime-buster faces his toughest challenge yet: to retrieve the two glowing energy bars and place them in the ship. His progress is slowed by the presence of Dynobots, Electric Lizards, Monstrous Minchers, or even the dreaded Space Turkeys. If a critter touches the captain, he loses a life. Luckily, four x-marked launch pads help him whizz over their heads in relative safety. When both energy bars are safely in the ship, it's on to the next tunnel—and the next asteroid.

Cosmic Tunnels is a well-planned, enjoyable game with a cohesive plot line, nice visuals and sound, and varied play-action. It's not the most enthralling game on the block, but it's an interesting addition to a game library.

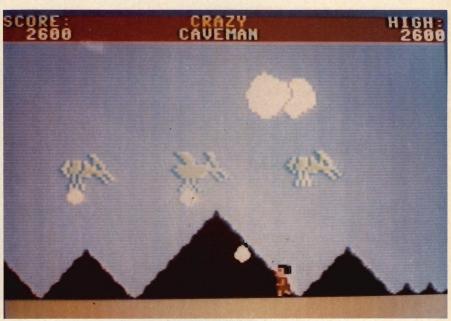
(Tracie Forman)

CRAZY CAVEMAN

Merlin/Commodore 64/Disk

As a cave dweller separated from his hunting party, the player's goal is to regain friends and family. Traveling left, the only way permitted except for momentary backtracking, arcaders jump rolling boulders by pushing the joystick forward. If any of the three game lives survive this ordeal, it's on to the march of the dinosaurs.

These solid green sprites attack in single-file waves of four. Pressing the fire button swings the one offensive weapon the caveman left the cave with — a stone axe. There's no real violence though, because the ravenous reptiles are merely chopped



CRAZY CAVEMAN (MERLIN-3R)

down to size.

Other dangers include flightless dodo birds which travel by leaps and bounds. Needless to say they are to be avoided — a task that's much easier said than done.

Last, but not least, pterodactyls fly overhead, dropping rocks on the weary traveler. Do well enough (10,000 points) and another game life is earned.

The graphics, except for the caveman, are lackluster. The play-action is fluid, though selectable difficulty levels would have made it a better game. Crazy Caveman is so difficult at first, it's downright disheartening.

The sound effects are minimal, mostly indicating the wanderer's footsteps or his demise. The funeral is celebrated with a flashing rainbow of colors replacing the blue sky above the monocolored mountains. Unusual, to say the least.

Overall, Crazy Caveman is an average offering — not worth the time needed to become accomplished at rejoining the tribe.

(Ted Salamone)

O'RILEY'S MINE

Programmed by Mark Riley Datasoft/Atari computers/ 16K Disk or Cassette

This one-screen tunneling game may not add anything earthshaking to the genre, but what it does, it does exceptionally well.

Thematically, O'Riley's Mine is

much too familiar. The gamer unearth all the buried treasures before the raging subterranean river submerges the mine shaft of the miner, O'Riley, is caught by one of the three riled river monsters. The intrepid miner, however, is prepared with dynamite sticks, which he can use to cave in the shaft behind him and temporarily block the monsters.

The river rises at a faster pace at higher levels, and the river monsters have their own timer, of sorts. Whenever the moon rises above ground, they get more aggressive. To make matters worse for O'Riley, one of the treasures becomes a skull and crossbones.

There's really only one complaint possible: that of aesthetics. Why did the designer feel it necessary to include so many diverse lodes (oil, gold bars, diamonds, rubies, coal and uranium in the same mine shaft? It may be a trite complaint, but it's the little things such as this that prevent a



O'RILEY'S MINE (DATAMOST)

good game, like O'Riley's Mine, from becoming a great one.

(Vincent Puglia)

BLUE MOON

Merlin-3R Imports/Commodore 64/Disk Blue Moon is proof that outer space-themed slide and shoots have international appeal. Made in England by Merlin Software and imported by 3R Import and Export Corp. of Syracuse, New York, this multiscreen arcade-style game is a blast with a Lime(y) twist.

As pilot of an intergalactic space vessel, compugamers must defeat various enemies before rescuing the crew of a sister ship and returning to land on the Blue Moon. Choosing from fifteen difficulty settings, players use the joystick to steer, and the fire button to annihilate.

First the two components of the ship must be mated. Failure to do so results in loss of one of the five vessels available at game start. Nex some furiously-moving comets have to be dispatched. These are good-looking sprites which mostly travel across the top of the screen. Occasionally they drop straight down, or cut across diagonally at extreme angles. Tricky, very tricky.

Blue bouncers then show up. They move helter-skelter across the screen



BLUE MOON (MERLIN-3R)

at almost light speed. They fire back and have an annoying habit of changing directions without warning. Thank goodness for the ship's unlimited rapid-fire weaponry!

The Tecom man appears next, dropping deadly droids and yellow eggs, which hatch into plasma-firing bell birds. Beware of this combo. After that, a successful landing on the moonbase earns players another life, causes the Union Jack to unfurl to the strains of "Hail Britannia", and ad-

vances gamers to the next level automatically. Quite effective. Besides this brief musical interlude and the gaming audio effects, the tune "Blue Moon" is artfully rendered when the title page is displayed. The graphics are good, too—colorful, well-detailed (the droids particularly so), and extremely varied.

Blue Moon is a well-rounded package which should put new life into a pretty worn theme. Highly recommended!

(Ted Salamone)

PASSPORT TO ADVENTURE

QUESTRON

Strategic Simulations/Apple II/48K Disk

The life of a Geraldtown serf isn't much to write home about. It's even less to write a fantasy adventure about. But fear not, you won't stay a lonely serf for long once you venture from Geraldtown to seek and destroy the foes of the crown in Questron.

Questron is actually an actionadventure that combines the best features of both the text and graphic adventures, but with a real emphasis on playability.

To make a computer game playable, the first major step is to make the

documentation easy to read and comprehend. With Questron, Strategic Simulations has even gone a step further. Besides being informative, the book is written with a flair for the dramatic, the bizarre and the humorous.

After a close inspection of this document, it will become obvious what the historical perspective of your important journey is, as well as what troubles fate likely has planned for your character, who's being forced to take on this trek without partners—although not necessarily without help.

The first section details the history of

Questron, both before and after the Baron Rebellion. Excerpts from several letters and a diary provide the information on a personal first-hand basis.

When the quest begins, players start with a section of the game known as outdoor play. The outdoor adventure is shown on a large and only slightly detailed map. It is akin to the type of map found on SSI's war games. Movement at this level is accomplished by using the joystick or keyboard commands.

Each type of terrain differs in its physical aspects and types of indigenous monsters. For instance, on the ocean you might meet the Hydro Snake. It's your common water snake — except that it's 300 feet long and 20 feet thick. It secretes a substance which causes water to burn, but it also secretes a substance which causes water not to burn. So, it is vital to not





QUESTRON (STRATEGIC SIMULATIONS)

kill such a snake if it has started a fire until it has also put the fire out!

In the jungle, one might wander upon the Irish Stalker. This horned creature is deadly in clearings, but can become entangled in the underbrush due to its massive rack of nearly 14 feet. It can be a deadly foe, but is thought to be susceptible to the mace.

This brings us to another part of the game, which is journeying through the towns, cathedrals, and castles. These are marked merely as special squares on the outdoor map, but once making contact the area will be identified and the gamer is asked if he/she wishes to enter. If the answer is yes, the scale expands to allow a fuller view of the area.

By making contact with the people and vendors in these places, players have a chance to buy food and other essential items, as well as being able to win money in games of chance like roulette or blackjack. Experimentation and innovation are the keys to getting the most out of each of these visits. A key piece of advice is to be sure to buy enough food.

A third type of display is the dungeon, shown in a three-dimensional perspective. There are 32 different monsters to be found here and it takes some accumulated tricks and quick wits to survive.

The player's status is kept up to date on the screen in areas like hit points, food, time and gold. Each player starts with 15 points each for attributes such as strength, stamina, dexterity, intelligence and charisma. What the character does during the quest will determine whether these totals are raised or lowered.

Characters can be saved at any time to disk for a later adventure. There is an on-screen command list which enables gamers to arm themselves, climb, dismount, fight, change game speed, hold items, inventory items, rob, speak, use magic, vacate a town or cathedral, put on armour or examine the surroundings — with the touch of one key.

In a game with so many positive elements, it is difficult to find any faults. If there is a flaw it could be in the tendency to starve to death often

until the importance of getting vitals at each stop becomes firmly imbedded. When one of the hardest gaming decisions is whether to play a text or a graphic adventure or just an actionarcade tussle, Questron could be one of the best choices of all.

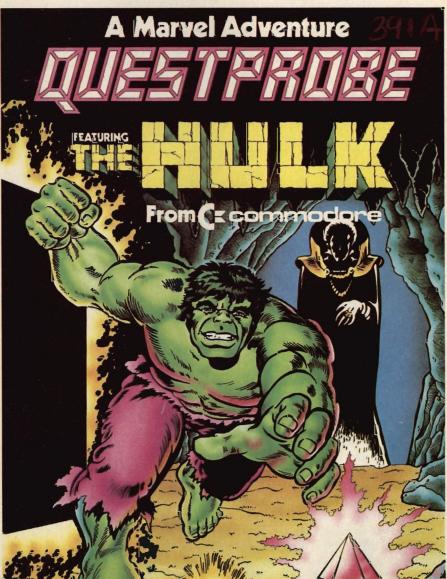
(Rick Teverbaugh)

THE HULK

Commodore-Adventure Int'l/ Apple II/48K Disk

This illustrated adventure is the first installment of a 12-part series which parallels a run of comic books, "Quest Probe", that Marvel Comics will publish over the next four years.

The idea of portraying a superhero is attractive, and no one can fault the project's ambitious scope, but the first chapter is not encouraging.



THE HULK. TM & (c) 1984 Marvel Comics Groups. All rights eserved.

The problems begin with the choice of the Hulk as the protagonist of the game. The idea of the bestial behemoth unraveling a string of knotty puzzles is ludicrous. The greenskinned gargantua shouldn't have to do anything more complicated than bellow, "Hulk smash! Hulk smash you all!" Dr. Strange, the Sorcerer Supreme who also stars in this adventure, would've made a more convincing — and satisfying — viewpoint character.

Every author is permitted a degree of artistic license, but the writing in this program goes beyond the usual bounds of acceptability. An adventure that strands the player in the brute's banal secret identity of Bruce Banner is not likely to thrill Hulkophiles. The way that the author resorts to heavy-handed deus ex machina tactics to keep the course of the action straight-jacketed only frustrates the computerist.

This brings up a fairly basic defect. As an adventure, it is at least a year behind current state-of-the-art. The primitive sentence parser simply doesn't allow a large enough vocab-

ulary compared to other contemporary adventure software, and the puzzle-oriented, lock-step construction of the story makes the program seem claustrophobic.

The artwork, done by John Romita Sr. and several other Marvel vets, is very good. It's important in a game of this type that the on-screen images actually look like the characters that they're supposed to represent. In **The Hulk**, the artwork is comparable to what Marvelites are accustomed to seeing on the four-color page.

The plot line will not be discussed here, because to do so would remove much of the interest. Suffice it to say that the Hulk must figure out why he's awakened in an unbreakable dome while trying to extricate himself from the trap.

A superhero adventure is an applause-worthy idea, but it is hoped that better programming and greater attention to comic book verisimilitude will make future installments more exciting and faithful to the Marvel universe.

(Arnie Katz)



TYCOON (BLUE CHIP)

there is demonstration mode on the disk that will give the new player a glimpse at what the program can do and what is expected of him in terms of output once the game is started. This mode does have one drawback though—it seems to be aimed at someone on about the third grade reading level, making what should take 5-10 minutes take much longer.

The documentation carefully explains the commodity market, including the difference between speculators and hedgers, as well as long and short positions. Also included are price change factors and predicting price change factors. Price changes in the game are far from random, but are reflective of what is going on in the world. The gamer is kept up to date on the news with a scan through the financial journal before each turn's transactions.

When you first play *Tycoon*, you start with a \$10,000 net worth and novice status. As your worth grows, you advance to investor, speculator, professional, broker and tycoon. At the first two levels only long positions are available and only commodities like wheat, cattle, coffee, heating oil and lumber are available.

When you get to speculator, the short positions become an option. Even further up the ladder gold and silver are possibilities.

Up to 14 different players can save game status to the disk. Game status will save only your status and your net worth. One game can be saved at a time, and that will keep the complete game status, including the market environment.

Menu selection for the gamer at each turn makes it easy to pick whether to display graphs, take or liquidate positions, display portfolio, display prices or the news or save the game.

THINK TANK

TYCOON

Blue Chip Software/Apple II/48K Disk

Watching the stock market can be a frustrating experience. It always seems to take so much money to make money; the rich get richer while us poor folks...well, you know how that saying goes.

But Blue Chip Software has found an intelligent alternative which makes it possible for those of us less fortunate economically to put together big deals and come away with huge profits.

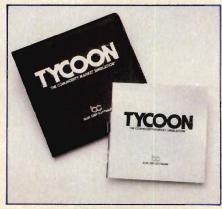
Tycoon allows the gamer to step into the fascinating world of commodity market trading. While Blue Chip's Millionaire worked with the stock market and Baron dealt with real estate, Tycoon concerns itself with the speculative world of futures trading in the world's raw materials.

These raw materials range from the more traditional items like soybeans and the infamous pork bellies, to the more glamorous gold, silver, oil and

foreign currencies.

The first thing to notice about the game is the well-written documentation. Sometimes the rule books included in such a complex simulation are more difficult to understand than the game. This time around, there is even a page of the rules telling the best way to use the rule book.

As an even better player-aid idea,



TYCOON (BLUE CHIP)

The graphics for this game won't be anything to send your friends ooohing and aaahing in front of your monitor, but once it becomes familiar what each graph is and what it represents, they are most helpful and quite easy to follow.

Tycoon is hardly a quick hour's fun. It could even be over the head of some who haven't paid attention closely enough to the financial pages. But those who wish they had money to risk can now see how wisely they could invest in say . . . pork bellies?

(Rick Teverbaugh)

RAILS WEST

Strategic Simulations/Apple II/48K Disk

The fascination for trains often surfaces at an early age. Some children are fortunate enough to be able to drift off to sleep with the sound of the locomotive whistle whining in the distance.

That early attraction often manifests itself in the hobby of model railroading. The collection of scale trains has recently enjoyed an upswing in popularity.

But what of the men who first plotted the real railroads' progress across this nation? What were the problems, physically and financially, that put obstacles in the paths of the iron horses' trek westward at the end of the 19th century?

Certainly the money problems were among the worst. It took a great deal of cash outlay before any profits could be realized.

Rails West attempts to uncover the problems of financing these ventures, while putting the difficulties into a game form. The game does tend to simplify some rather complex situations for the sake of making the game playable for those without a detailed historical background in the time period.

Probably the best game plan is for the player to try and help a railroad that he owns all of or part of into financial well-being. Investments can be made in low price bonds of railroads that are close to reorganization and the gamer can play the stock market without trying to control any of the railroads, always keeping a watchful eye on any who are facing impending reorganization.

The game has two scenarios. The

longer one covers a 30-year period and has two winners—one who accumulates the greatest wealth over that time period and one who accumulates the greatest number of adjusted points. The shorter scenario deals with a five-year period and the winner is the one with greatest wealth.

A railroad makes money mostly by carrying traffic and the more cities that are connected to an existing railroad, the more traffic that line will be able to carry. But sometimes the buying and selling of bonds at the right times is just as reliable a way to get cash.

The player will also want to strike a solid balance between his railroad's viability and his own net worth. A railroad's viability is based on a healthy ratio of its ability to make money and on its debts.

In Rails West, one to eight players can play at a time, with the computer controlling up to four players. The game map shows 33 cities connected by 68 potential or actual rail lines.

In a player action phase, the gamer might buy or sell securities, buy or sell stock, sell bonds, apply for or repay a loan, start a new railroad, read a map, read an account, control a railroad or recall a railroad loan.

Then in the railroad action phase the gamer might sell or buy stocks and loans, repay bank loans, resign control charter a line, raise efficiency, build new lines, change dividend, pay interest, float securities or merge.

Like most of the complex SSI games, every attempt has been made to work the gamer into things slowly and with as much background as possible, starting with a well-written rules booklet and some playing aid cards. There are two pages of short rules just to get you started and eight pages of full rules once you get the hang of the game.

Also included is a concise historical background, a glossary and an appendix. The game's graphics won't be the life of the party, but the maps that are included do exactly the job needed.

Perhaps Rails West doesn't quite substitute for hauling out the old Lionel set, but it is a challenging taste of the financial workings of the late 19th century railroads.

(Rick Teverbaugh)

ARTICLES OF WAR

UNDER SOUTHERN SKIES

Avalon Hill/Apple II/48K Disk

In December of 1936, in the waters of the south Atlantic, the German battleship *Graf Spree* prowled Allied shipping like a wolf following a tasty flock of sheep. In this case, the shepherds, in the form of ten full battle groups, saved the day.

The Graf Spree would later face the challenge of the combined might of



UNDER SOUTHERN SKIES (AVALON HILL)

H.M.S. Exeter, Ajax and Achilles. It did not survive.

Avalon Hill's simulation of the final battle, played either as the *Graf Spree* in solitaire mode against the computer or as a full two-player game, is one of the most interesting re-creations of that battle we have seen. It is both playable and varied, although with some rough edges.

There are two interrelated games—the strategic and the tactical — which may be played separately or sequentially as a campaign game. The units involved may be strictly historical, or the British player can choose or be assigned ships which were historically available, although were not a part of the real-life mission. The strategic game, played on a video map of the south Atlantic, is a sort of hide-and-seek-and-destroy wherein the *Graf Spree* and its supply ship, the *Altmark*, maneuver and patrol while the English try to find them. The tactical game

simulates the actual ship-to-ship combat following the outcome of the strategic portion.

The first thing one can't help but notice on the strategic display is that almost no advantage at all has been taken of the Apple II's hi-res color display capabilities. The map is a simple outline drawing of the region of the South Atlantic, a most primitive whiteon-black graphic compared to what other games now offer. But this lack of graphic sophistication need not necessarily detract from game-play.

An invisible gridwork divides the sea into squares which the Graf Spree and Altmark sail through in the course of a turn, which simulates 12 real-time hours. A pad of maps that comes with the game has the grid drawn in so that the gamer may better see the coordinates of each square, as well as plot movement and track the enemy as ships become revealed.

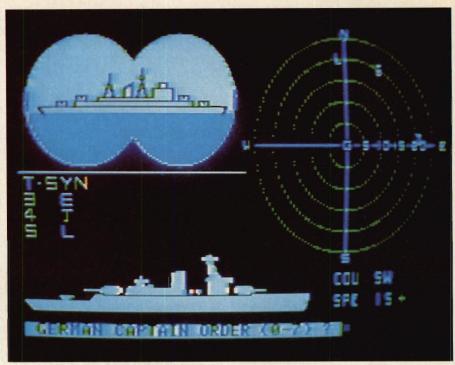
Strategically, in this phase, the Graf Spree is out to sink as many prize ships as she can. To help her resupply and rearm are the two neutral ports of Rio and Montevideo as well as the Altmark. While the Admiral playing the Graf Spree side must orchestrate his movements to reflect the supply situation, supply is not ordinarily a problem unless the British player sinks the Altmark.

The German player may enter five commands during the strategic phase. He may patrol within a current sea zone, hoping for a target vessel, change course and speed, resupply from Altmark, sink a prize ship with torpedo or gun, receive a status report of fuel reserves, damage status and grid location, or establish a rendezvous point with the Altmark via conference in the same seazone or by the risky route of radio.

The pursuing Brit may also patrol, change course and speed, receive status reports, and can also see the location of all ships in the British battle group.

Speeds range from 10 knots (stay in zone) to 15 knots (move a sea zone) to 25 knots (move two sea zones). There is a charted correlation between damage and the ability to maintain speed, as well as a realistic relation between speed and amount of fuel consumed.

Other things "factored into" the Brit's search include special rules for aircraft carrier group operations, as the result of the combats on an in-



UNDER SOUTHERN SKIES (AVALON HILL)

well as air search (from the Falkland and Ascension islands as well as South Africa). And, of course, a merchant ship in trouble will scream for help usually successfully. Weather, in the form of fog, is also a variable.

Once the ships have found each other and are in the same sea zone, play shifts from the strategic display to the tactical display. The tactical display, far more colorful than the strategic mode, includes a silhouette of the player's own ship, a "radar screen" showing the relative locations of the vessels, and a view of the enemy through binoculars.

Hits are recorded on the ships visually as the hits are achieved. Again, however, the graphics tend to be schematic rather than realistic.

There are only eight commands to use during tactical combat, but using them properly and at the right time can be a true juggling act. A captain may change course and speed, select which ship to shoot at (in the case of running into the Graf Spee), fire main and secondary guns, launch torpedoes, disengage, display present course and speed and get a report from Damage Control. There is also the option of making smoke during movement, which decreases the chances for all ship's gunners.

The computer, of course, decides

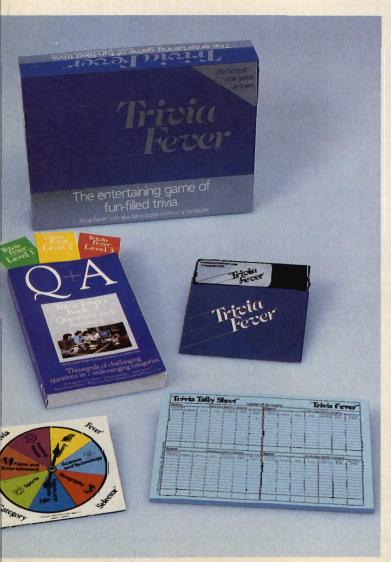
dividual shot-by-shot basis. But, unlike many computer game manuals which, I believe improperly, try to keep secret what the computer is doing, this manual spells it out so that the player may make his decisions based on knowledge. Intricate rules govern the effect of each shell.

Called out in the manual are the relative strengths of the various shells fired by the different ships, and even by different guns aboard the various combatants. Range of both shells and torpedoes is historically true. Damage to ships is calculated by dividing each ship into ten specific stations or areas, each of which can sustain so many hits. The midships level is most important, as excess hits from other stations are applied here and it is when the midships damage reaches maximum that the ship is considered sunk.

Actually obtaining a hit on the enemy means that the computer will calculate and relate the enemy's speed, range, number of guns firing, and the status of your own damage control. And, of course, there's the proverbial "lucky hit" which is a 2% chance of hitting the target's magazine (ammunition stores).

If you have ever stared in disbelief at a condescending rules book with a quote similar to "... finding out what the computer is doing is half the fun", you will be as thrilled with this man-

Catch COLUMN The Hottest New Game In Town"



At \$39.95, Trivia Fever comes complete with Question and Answer Book, Category Selector, and Tally Sheets to be used when played without a computer.

Trivia Fever is absolutely unique — it's the only software entertainment package that can be enjoyed *with* or *without* a home computer! When played on your home computer, Trivia Fever is a refreshing alternative to all those shoot'em up games. An elected "Master of the Game" uses the computer to randomly select subject categories, handicap players, generate questions and answers, keep score automatically, and more! Instructive by its very nature, Trivia Fever can be enjoyed by up to 8 individuals or teams. And when played without a computer, Trivia Fever has all the best features of the "popular" trivia games plus more — all without the cumbersome board, cards, and little game pieces. You can play in a car, on vacation, anytime, anywhere! And Trivia Fever is by far the best Trivia game available anywhere. Here's why:

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games to multi-hour party marathons!

Trivia Fever is unique, entertaining, educational, and most of all FUN. And at \$39.95, Trivia Fever is destined to quickly become the lbest selling software entertainment package of all time. There's even a \$5 rebate available to any non-computer users who return the computer diskette.

Trivia Fever can be enjoyed on the Commodore 64, IBM PC & PCjr and compatibles, Apple II series, and others. So don't delay. Catch Trivia Fever at your favorite software retailer today!

For additional information call 617-444-5224, or write to:





UNDER SOUTHERN SKIES (AVALON HILL)

ual as I was. Avalon Hill, at least, understands that gamers should be not be kept in the dark solely to make up for what might be inadequate programming of the computer opponent.

In this case, the computer opponent is a tenacious old sea dog that will harry you from port to port and send you to the bottom of the briny many times until you finally get even.

Victory conditions are achieved in both the strategic and tactical phases and are combined in the campaign game.

Strategically, the German must sink merchant shipping, sink Brit warships, complete a month-long cruise, not be damaged, and even return to Ger-

many if possible at the end of the month. The British player must try to protect merchants and either close with the *Graf Spree* or keep it bottled up in a neutral port.

Once the tactical phase begins, the British get various victory points for damage to the *Graf Spree*'s damage stations, with a bonus for sinking the *Graf Spree*. The German player earns points for sinking each of the various ships opposing, or fewer points for forcing a disengagement.

As an overall strategy, the German player should not lose sight of the fact that it is best to avoid tactical combat. If the German gets through undiscovered he has a fully-won game. Of course, then you don't get to see the tactical display, but the priority should be winning. The British player must close, and so must develop a better-than-random search pattern.

Under Southern Skies is an excellent game with much play value and reward in the form of historical simulation. If only the graphics were slightly better, it could be rated as a wargaming classic.

(Neil Shapiro)

What's so outstanding about this program is its scope. Fighters can be matched in straight computer simulations, or the strategy mode. One gamer manages against the computer, or two may go head to head. Players choose the fighter's strategy before the round ("Work on the head", "jab, keep him away from you," etc.), but once the bell rings all they can do is order either a KO blitz or have their gladiators cover up. As the fight progresses, options change. After a rough round, you may only be able to work on a cut and have to forget strategy. Like the way your boy's doing? Pat him on the back - or else dump ice water down his trunks!

Finally, for really skilled arcaders, there's a mode in which the player must select each move.

The realism is awesome. A fighter's strength is always taken into consideration. Got a man fighting Cooney? Then "Stay away from his left" will likely turn up as an early option.

The graphics are extraordinary. Although the boxers only move left and right, their articulated movement demands great amounts of ring savvy. Boxers so closely mimic the styles of the men they're represent that, they begin to look like them.

Players quickly learn that the "tale of the tape" can be highly misleading. Marciano is a 4-5 underdog and looks like he shouldn't even be in the ring with Gerry Cooney, but Rocky dumped him in the ninth round. Just running tournaments can be a blast. Jack Johnson, under my guidance, is current kingpin, having finally taken the measure of Ali, dominating the

ELECTRONIC PRESSBOX

CHAMPIONSHIP BOXING

Sierra/IBM PCjr/128K Disk

Sports simulations take one gigantic step forward with the debut of this knockout boxing simulation by Dave and Barry Murry. This is the dream-come-true for every pacifistic armchair pugilist — all the primal thrills of men committing legalized assault and mayhem along with the soul-easing knowledge that none of it is real!

It will also, of course, appeal to blood-thirsty savages.

The program features a library of the heavyweight champions, plus all the modern contenders and the champions from the other divisions. There's also room for self-created warriors—the gym holds over fifty fighters. Boxers' stats encompass 21 separate categories, rating everything from physical dimensions to endurance and

killer instinct. Scoring ("10 point must" or "rounds"), time of rounds, number of rounds, mode and lots more can be modified with the flick of a key.





CHAMPIONSHIP BOXING (SIERRA)

Brown Bomber and out-pointing the Rock. You can also have the perverted thrill of letting Smokin' Joe Frazier obliterate his son, Marvis.

There are a few gripes. Why do we get the Duran of today instead of the legendery *Manos de Piedras?* And instand replays, even if they're not in slow motion, would be great!

But there's so much here, only a grouch could really find serious fault with this program. The documentation is excellent: a detailed How-To-Play booklet, a boxing clinic, a special list of the PCjr commands, and a well-researched history of the sport (to familiarize gamers with older fighters) are included in the package.

Championship Boxing is a state-ofthe-art masterpiece that will leave you begging for an update disk next year when a new crop of bashers has invaded the squared circle.

(Bill Kunkel)

FOOTBALL

Atari/Atari computers/Cartridge

Computer football games run the gamut from straight, arcade-style action to pure strategy and play calling. Most, however, settle somewhere in between, such as Atari's new cartridge contest for its computer line.

Football offers gamers a wide selection of plays (presented here on sheets using upside/rightside graphics so that both team captains can scan them simultaneously) both on offense and defense. The running game, in particular, gets a workout here, since backs can be moved with a fluid ease not seen on any other version of the pigskin classic. For the first time, players can feel the simulated movement along the line as the ball is snapped. Backs can go end around or look for a hole to open up and then punch through. So much latitude is given to runners, in fact, that

they can stop-and-start, or even run backwards a few yards, without the certainty of being dumped for a loss. Change-of-direction plays work especially well since this program clearly favors the offense. Defenders can't simply make contact with a ball carrier and expect to bring him down, but must make a clean hit.

Football uses an overhead view, with players seen from the side. The gridiron scrolls horizontally, and a run all the way down field takes about as long as the real thing. The graphics are unspectacular, but in this contest, the play's the thing. Screen passes, bombs, interceptions and runbacks, punts and field goals are all integrated into the action sufficiently well to rank this as the most complete, non-strategic football simulation on the market (though some players will still prefer Gamestar's version).

This is primarily a two-player game, but gamers wishing to practice their offense can do so solitaire against the computer. Football games are a matter of taste, more so than arcade or strategy contests even, but Atari's version should please most of the people most of the time.

(Will Richardson)

SUMMER GAMES

Epyx/Commodore 64/Disk

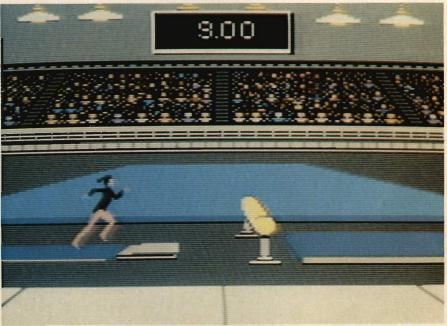
The next summer Olympics is four years away, but this finely-crafted program gives home arcaders the chance reflexes.

to test their mettle in eight varied sporting events. Most of the contests involve one on-screen athlete at a time, but two humans can go head-to-head in swimming and running events.

Platform diving is probably the most aesthetically pleasing portion of Summer Games. Manipulating the joystick puts the diver through a succession of tucks, spins and pikes on the way to splashdown, after which each judge rates the performance on the usual 10.0-to-1.0 scale. Gymnastics, which focuses on the horse, is similarly appealing.

The play-mechanic for the two swimming events is especially clever. The arcader presses the action button each time a swimmer's arm is about to slice into the water. Good timing produces a more powerful stroke and a better time. Although the 100meter dash utilizes the left-right-left joystick jiggle, the relay works on a more intriguing principle. The runner with the baton goes all-out when the stick is left at the center position and coasts when it is moved left. A fatigue bar located at the bottom of the screen helps the gamer judge how each runner gains and loses energy during the course of the race.

The other events on the disk are pole vault and skeet shooting. The former, a test of coordination, is the more captivating. Getting above 5.1 meters on a vault takes a great set of reflexes.



SUMMER GAMES (EPYX)

From the opening ceremony with its stirring theme and sophisticated animation, Summer Games is a joy to the eyes and ears. The programmers have even included an abridged version of the national anthem for each of the 18 countries which the gamer can choose

to represent. (Actually, there are only 17 countries. The 18th is Epyx, with the music from **Jumpman** as its official song.)

Summer Games definitely earns a gold medal.

(Arnie Katz)

PLAYING IT SMART

AEGEAN VOYAGE

By Joyce Hakansson Assoc. Spinnaker/C-64/Cartridge

Feel like a cruise to the Greek Islands? Aegean Voyage puts players at the helm of a sailing ship, then sends them on a journey to collect lost treasures. This Mediterranean action adventure for one seafarer, age 8 to adult, or two people taking turns, introduces characters and places in Greek mythology. But its educational value is subtle. It helps players learn to keep notes and plan strategies, as they choose which Greek islands to search and which to pass over.

The explorer uses a joystick to steer a nicely depicted skiff over azure waters and dock at mountainous island ports. The musical score by Ed Bogas provides a pleasant background to the voyage. At each anchorage, the Oracle offers a clue about the other ports — Oracles never talk about their own homes. There are two kinds of clues. One type tells about another island; for example, "Rhodes is mysterious." Other clues reveal what monsters enjoy or hate; for example, "Creatures avoid grungy islands."

Then the adventurer must choose whether to seach that island. There are fabulous treasures hidden on some of



AEGEAN VOYAGE (SPINNAKER)

them, but if the isle is occupied by one of the mythological beasts that roam this part of the world, the ship is sunk.

The object is to locate nine lost antiquities, such as the Chariot of Apollo, the Golden Apples, the Shield of Achilles, and other famous treasures. By keeping track of the clues, the gamer can predict which isles are safe and which are inhabited by monsters. Clues and treasures are randomly redistributed after each game, to keep the contest fresh.

Among the obstacles to successful completion of the hunt is Zeus, who still reigns in the Aegean. He periodically appears in the sky, hurling lightning bolts which travelers must dodge.

The Aegean Sea is a treacherous place, and sudden storms have dashed many good ships against its rocky coastlines. The best way to weather one of these tempests is to hold the boat steady in deep water, well away from the island ports, until the weather clears.

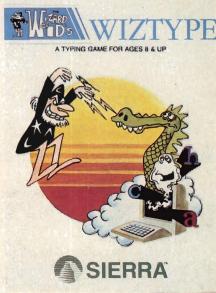
(Joyce Worley)

WIZTYPE

By Sydney Development Corp. Sierra/Ap, At, C-64, IBM PC/Disk or Cartridge

Johnny Hart's famous cartoon strip "The Wizard of Id" provides the onscreen personnel to help computerists polish their typing skills. Letters or words are thrown onto the screen by the Spirit, to be matched by the would-be typist. If successful, the Wizard hurls a lightning bolt at the Spirit. But if the typist fails to duplicate the lessons assigned by the Spirit, that crusty character turns into a firebreathing dragon who crisps the Wizard until he's just a pile of ash.

The gamer enters his name when starting each lesson — the program



WIZTYPE (SIERRA)

can keep track of up to 60 separate students — then sees a graph of personal statistics from previous sessions. The program features first drill, practice, word and game modes, each with 20 difficulty levels. Once the typist has acquired some skill, it's time to move on to paragraph mode, or to create his or her own lessons.

The drill, practice, word and game mode all work similiarly—the student must type the letters thrown by the Spirit. The game starts at 10 words per minute, and increases by 5 WPM for each level completed. The other modes allow the practicing typist to set the level of speed.

The paragraphs are drawn from classic literature, such as Tale of Two Cities, Hamlet and Mother Goose, and the student sets the rate of speed. Then Bung, the King's Jester from the cartoon strip, jumps from letter to letter on a pogo stick as he paces the typist.

This is an excellent typing tutor that's particularly suitable for young people. The cartoon graphics look exactly as they do in the funny papers, and the on-screen antics of Johnny Hart's characters add an element of pleasure to the lessons. Special jokes, randomly appearing as word balloons from the Spirit and Wizard, help keep the practice sessions lively. The program follows standard typing tutoring methods. Letter combinations are designed to teach beginners to touchtype without looking at the keyboard.



WIZTYPE (SIERRA)

The program constantly monitors the typist's speed so the student can see how well he/she is doing.

The statistical records are a little disappointing. The gamer's high score in the game is displayed and a line graph showing high and low speeds from the lessons. It would have been better if the graph were replaced by the actual words per minute typed. The documentation, too, is a bit weak. It's designed to be entertaining and inviting to students, but gives very little real information. One plus: the package includes a handy reference card with a finger placement chart so beginners will know exactly which finger to use on each key.

Despite these minor shortcomings, The Wizard of Id's WizType is a guaranteed winner for anyone who'd like to learn to touch-type, or even for experienced typists who what to brush up their speed.

(Joyce Worley)

QWERTY'S ALPHABET ADVENTURE

By Shadow Lawn Press

Hayden Book/Software/Apple/48K Disk

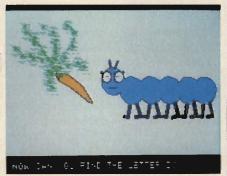
Qwerty the caterpillar guides youngsters through the alphabet, in this storybook/computer software combination. It helps kids learn their letters, while teaching them a little about the computer keyboard, as they hunt for the next character to make a new scene appear.

The program runs through the alphabet letter by letter. First Qwerty asks the child to push "A", and a large block-print character appears onscreen, along with the smiling caterpillar. Then he asks the child to push "A" again to see a picture of an apple. After the apple is displayed, Qwerty says, "Now can you find the letter B?"

The child moves through the alphabet in this way. Each letter is illustrated by some kind of food (except for X, where they took some liberties.) When Qwerty has completed all 26 letters, he slowly metamorphoses into a butterfly to complete the adventure.

The accompanying book is a story for parents to read to the child while the program runs. It is all about Qwerty and his adventures, and leads step by step through the program by instructing the user to push letters at appropriate times to make on-screen pictures. The story reinforces the learning experience, as well as providing some colorful pictures and drawing the child's attention to other words starting with the same letter.

The graphics are simple and uncomplicated with no animation beyond the caterpillar's fetching smile. The designers wanted the computer graphics to add a degree of excitement



QWERTY'S ALPHABET ADVENTURE (HAYDEN)

to the book, rather than the other way around, so **Qwerty's Alphabet Adventure** is less ornate than some other alphabet tutors. Yet most children will probably end up playing with the computer alone after going through the text once or twice with a parent, and the program does stand alone, with an ease of operation that makes it suitable for beginners.

(Joyce Worley)

ERNIE'S MAGIC SHAPES

By Children's Television Workshop CBS Software/Atari, C-64/Disk

It's Ernie from Sesame Street, and this time he's helping kids ages 3 to 6 acquire visual discrimination as they match colors and shapes under his gentle tutorage.

Parents choose one of six games, each a trifle harder than the last. Then Ernie appears on stage to do his magic



ERNIE'S MAGIC SHAPES (CBS)

act. First he waves his baton and a shape appears above his head. Another flourish of the wand, and a form appears on the table beside him. The child pushes one key if the two are the same and another if they're different. If the youngster makes a wrong choice, Ernie just shakes his head no, then waits for the child to push the other button. A correct response makes Ernie nod his head, smile, and move the shape from the table up beside its mate over his head. Then Ernie conjures up a bunny, with a wave of his magic wand. It appears on the table and does a celebration dance..

The beginning levels of the game feature simple shapes, like a block, circle or triangle. In advanced levels, the constructions are more complex, made of several shapes and colors together.

This is an extremely easy program for very young children to use with a parent's help. Graphics are spare and uncomplicated. The stage is framed by attractive blue drapes, with a red ceiling and floor. The brightly colored geometrics in each match-game stand out boldly against the white background. Ernie is completely recognizable, and his engaging grin as he nods approval to the child is very encouraging. There's no hand-eye coordination skill needed, so Ernie's Magic Shapes is usable by even the youngest computerists.

Very young children will need parental assistance to load the program. Rather than using the standard LOAD "*", 8, 1, the disk requires the computerist to type LOAD "ERNIE", 8, 1. Then instead of merely typing "run", the computerist must key in SYS 28672 to make the program boot. Fortunately, a convenient Reference Card includes these instructions.

(Joyce Worley)

ENTERTAINMENTS

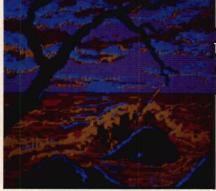
PAINT MAGIC

By Mark Riley Datamost/C-64/Disk

Anybody can be an artist using **Paint Magic.** This joystick-operated art program offers would-be illustrators plenty of options to make it easy to create on-screen spectaculars.

The command menu offers 15 colors. Among the many options are drawing straight lines, boxes, circles, rays and points. Fill in with solid colors, horizontal, vertical or diagonal stripes, or even patterns (such as tweed or checks, or your own design.) The program lets you transpose scenes from one painting to another or even merge two canvasses together. One unusual mode lets the computerist enter a Magnify Mode, then create pixel by pixel detail. Color Mask lets the artist change the hue of each detail by painting over colors with new ones. A "grab" option lets the computerist pick up an image from one canvas, then stamp it onto another screen. There are eleven pictures on disk for the computerist to play around with before starting on one of his/her own.

Paint Magic is easy to use. An onscreen command menu helps computerists remember the options, and the manual is clear and concise. The many special effects available make it



PAINT MAGIC (DATAMOST)

a snap to create a good-looking picture, even for someone who is normally all thumbs artistically.

(Joyce Worley)

STUDIO 64

En-Tech Software/C-64/Disk

Studio 64 turns the Commodore 64 into a music studio and makes every key-puncher a composer. Even someone who has no musical training can have fun experimenting with the keyboard tones, then hearing them played back by the computer. But the program works best for musicians who can read music.

The would-be composer enters notes by playing them on the console just like stroking piano keys, and the computer writes them onto a bass or treble clef. A built-in music processor works just like a word processor to let



But Studio 64 does more than just let the computerist enter a line of melody. It actually permits the entry of three voices, for a melody, harmony and bass line. Each voice line is entered separately, and the composer can use eight octaves and four different waveforms to introduce varied tonal qualities while playing the keyboard.

When the composer has finished keying in the voice lines, the computer offers a choice of how fast to play it and how many times to repeat the composition. Then it combines the three voice lines and plays them back with the tonal colorations entered by the computerist.

The composer can enter music by playing the keyboard in real time or note by note. The attack, decay, sustain and release settings can be adjusted to create various instrument or synthesizer sounds. The filters and resonance can also be reset, so the computer can produce an almost limitless variety of tones. The computerist also chooses the background color and character hue to suit, so the notations



STUDIO 64 (ENTECH)

will be colorful and pleasing to the eye.

Only the voice line being entered is shown on-screen, although the computerist can call up one note at a time from the other voices to use for editing purposes. It would make music writing a tad simpler if all three voice lines could be displayed at the same time.

The "help" screen contains full instructions and a diagram to aid computerists in remembering the keyboard. Since this isn't visible while entering music, it would also have been helpful if the documentation had included a printout of this information.

The disk contains five sample songs to show what the program can do in the right hands. They're all super ("Sweet Dreams" is a real piece of virtuosity), and provide real inspiration to beginners.

The Commodore 64 has sound capabilities that equal and surpass many synthesizers. Studio 64 helps musicians unlock these tonal qualities, to create songs of their own that make use of all these varied possibilities.

(Joyce Worley)

STORYTREE

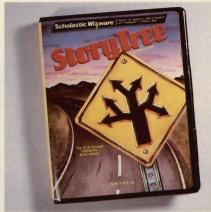
By George Brackett

Scholastic Wizware/Apple/48K Disk

StoryTree is just the thing for fans of do-it-yourself interactive fiction. This program lets computerists pen stories up to 100 pages long — with many "branches" — to create different plots leading to varied endings. Designed to help kids 8 and over learn to write compositions, StoryTree is an entertainment that even adults will enjoy.

Computerists can read one of three tales included on the disk, or work on a yarn of their own. Reading a twistaplot adventure is child's play. The computer offers a choice of directions the plot can take at the end of each page then the narrative unfolds accordingly, turning every story into interactive fiction.

But the real fun starts when the computerist writes his own. On-screen prompts guide the computerist each step of the way, and the built-in word processor makes it easy to edit and correct mistakes. At the end of each



STORYTREE (SCHOLASTIC)

page the writer chooses whether to continue with no branchings, or to offer choices of how the plot should turn. The program takes care of everything. All the creator has to do is key in the story, so it's all fun and no work.

It's easy to start creating stories, mysteries, games or even data bases using StoryTree. The on-screen prompts are sufficient to lead a beginner through the creative process. But advanced computertists will find lots of help and suggestions for different ways to use the program in the well-written manual that comes with it.

StoryTree is a helpful tool for beginning authors that provides hours of fun for anyone who enjoys creating their own text adventures.

(Joyce Worley)

tion back in Europe. Mapping the geography, interacting with the natives and founding missions earn the globetrotter fame and fortune upon return to his or her homeland. You can either encounter North and South America as Columbus found them in 1492 or allow the program to generate a totally new hemisphere to tame. There's provision for saving current status between play-sessions, so most players will want to make a whole series of transoceanic voyages before starting all over again with fresh continents.

Bon Voyage!

(Arnie Katz)

ROBOTRON: 2084

AtariSoft/VIC-20/Cartridge

The situation is grave indeed. The last bastion of the American ideal, the family, is under attack by an overwhelming army of robots bent on the destruction of the human race. It is up to you, brave soldier, to destroy the evil Robotrons and rescue Mommy, Daddy, and Mikey before they are either ground under the oppressive heels of the robots, or turned into soulless, deadly Progs. That's the plot behind Robotron 2084.

Essentially an update of Berzerk, Robotron takes the paranoid atmosphere of the Stern classic and increases it tenfold by literally cramming the board with more robots than you can shake a laser at. Atari's adaptation is quite faithful to the original, given the VIC-20's limitations. Graphics are colorful and reasonably well-detailed, although the family has lost the '50s textbook look that helped identify the victims from the bad guys.

The only place that this version really fails is in a particularly slow delay between hitting the action button and the firing of the hero's laser weapon. Players are best off leaning on the button to take advantage of the laser's rapid-fire capability to survive.

Fans of the arcade game may grumble over being limited to one joystick to control this version (the arcade original uses two). But, besides that restriction, there's a good chance gamers will find this *Robotron* well up to the high standards set by other Atarisoft titles. If you're looking for action, then *Robotron 2084* is a must.

(Dan Persons)

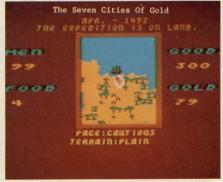
TRANSLATIONS

SEVEN CITIES OF GOLD

Designed by Ozark Softscape Electronic Arts/Commodore 64/Disk

The royal court should bestow full honors on the electronic conquistadors who sailed this program to a new system and landed it in such fine shape. The C-64 edition is essentially the same as the one which delighted Atarians early this year, which means it's one of the best action-strategy games you can feed into a disk drive.

The graphics are a little different than the first version, but they're certainly attractive in their own right. Even the great amount of disk activity which occurs during the course of play doesn't seem to have caused much of



SEVEN CITIES OF GOLD (ELECTRONIC ARTS)

a problem.

In Seven Cities, the player-explorer sails to the New World after securing patronage and outfitting an expedi-



Shoot Now and Ask Questions Later

By FRANK TETRO, JR.

TIME PILOT

Coleco/ColecoVision

Time Pilot asks players to pilot a jet through time, destroying various types of enemy aircraft. The first wave consists of World War I biplanes. After that, WWII planes are encountered. The next attack is from sophisticated helicopters, and the final battle is with advanced and dangerous jet fighters.

The optimal strategy for Time Pilot isn't terribly intricate. The main tip is to keep changing course constantly. The longer your plane stays fixed in any one direction, the better the enemy tracks your ship and fires on it. If you constantly change directions, they have less chance of picking you off.

It's a good idea to fire constantly, instead of just firing when you think someone's in range. Although this gets tiring, it gives you a better chance of unexpectedly hitting a target who may suddenly appear from a border or turn into your line of fire.

Once the main target appears, focus your attention on destroying him. Don't risk your life to hit him all 5 times at once. If you miss you can always turn around and attack from the other side as long as you don't let him leave the screen border.

Paratroopers are worth a lot of points, and should be blasted whenever possible. However, if you're headed for one and a whole squadron suddenly appears behind him, forget the hero bit and save your neck!

Once the helicopter level is reached, the player is assaulted with a very powerful weapon — the homing missile. These babies track you relentlessly and should be shot down as soon as possible. If one is on your trail, swing around quickly (you can turn faster than they can), come back around behind the missile and shoot it down.

Time Pilot is a fast game, which requires good coordination, and alot of practice. Just remember you have an unlimited ammo supply and a swarm of enemy planes to defeat — so shoot now, and ask questions later!

POPEYE

Parker Brothers/Atari 800

Popeye pits the player against the arch enemies Brutus and Seahag as he tries to catch presents thrown at him by his love Olive Oyl. It is necessary to catch a certain number of these prizes on each level before the player may advance to a new level.

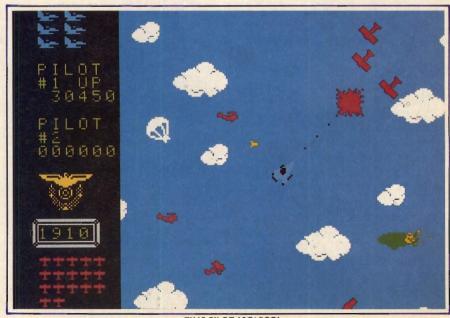
Screen 1: The main strategy in this screen (as with all of them) is to keep on the move. Never stay in any spot too long. Your main enemy is of course, Brutus. Try to avoid being directly above or below him. Even being on the same level is safe because you can still punch the bottles he throws at you. Try not to let the hearts fall into the water because then Popeye has to scramble for it, and because sometimes Brutus just won't leave the bottom level, it often causes death.

Try never to clear a screen without using the spinach, as punching out Brutus is worth a lot of bonus points. The same holds true for the falling barrel trick.

Screen 2: This screen is a touch more difficult since there are a lot of ways to accidentally fall through the floor. In this level, if you stay on the bottom screen and go back and forth, Brutus won't come down after you. He'll just try to reach down to grab you.

Avoid his arm (which can be detected by his sudden stop) and keep moving back and forth catching the notes. Try and grab the sweet pea sign if you think you can time it right, but don't risk your life for it, it's not worth it!

Screen 3: The third and final screen



TIME PILOT (COLECO)

is by far the most difficult because it adds a new enemy—the hawk.

Although the hawk can be punched out, he still can be quite a nuisance. In this screen, it's even more important that you constantly keep moving. Brutus is at his smartest now and will track our favorite spinach-eater relentlessly Catch all the letters, and watch out for Seahag's bottles, which are almost camouflaged in the brown background. If the hawk attacks, you should either get off the level or turn and punch him out.

When Popeye completes the third screen, the game will start back at screen 1 at an accelerated speed and difficulty. Don't panic, Popeye! Just keep on the move, and stay strong to the finish!

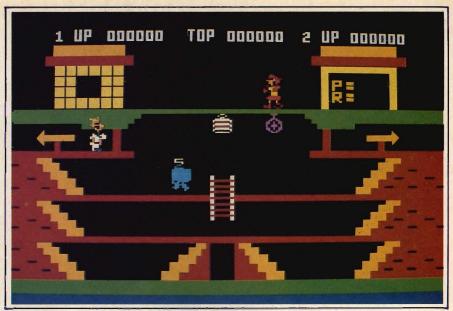
BURGERTIME

Mattel Electronics/IBM-PC, PCjr

The object of **BurgerTime** is to build hamburgers as fast as possible, while avoiding the killer sausages, eggs and pickles. The key strategy here is to learn the patterns of the enemy. The killer foods never seem to move up more than one ladder at a time. They will go up a ladder, move across a floor, and then go up another ladder, etc. Use this to your advantage. Try to crush the enemy food with a falling hamburger piece, as this not only gets you points, but it gets them off your trail temporarily.

The best way to clear a screen is to start at the top and work your way down. This is far easier than haphazardly running around the screen, and it will tend to help you squish the monsters as they come up after you. Try to tempt the nasties out onto a burger piece and then drop it, causing the nasty to fall. Not only does this earn a lot of bonus points, but it also forces the foodstuff to make the grueling climb back up in order to get you.

Use your pepper only as a last resort, as it will be desperately needed in the higher levels. When a bonus prize appears in the middle, make every effort to get it — it earns you an extra



POPEYE (PARKER BROS.)

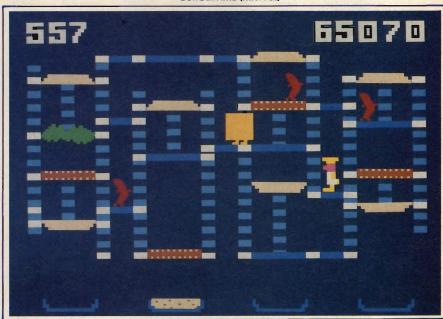
pepper unit.

Above all, avoid going into dead ends when the nasties are on your trail. Try to take care of tricky areas in the beginning of the game, because there are fewer nasties around then.

The key to success in BurgerTime is

a lot of practice. Don't become frustrated if you push a key and the burger chef doesn't seem to respond instantly. This is normal, and in time you will learn to cope with it. With a little practice you'll be a burger maniac in no time!

BURGERTIME (MATTEL)





Railroad Simulator Keeps Engineers on the Track

By DAVID LUSTIG

ou're the engineer of a fast-moving Santa Fe freight train. At your fingertips is the throttle that controls four diesel-electric locomotives, each one generating 3,600 horsepower. Between you and the caboose, some half-mile behind are 75 refrigerator cars loaded with west coast perishables — lettuce, potatoes and melons — being rushed to east coast markets. The speedometer needle sits contentedly at 69 miles per hour as the train hurtles through the flat Kansas countryside.

The slight pitch and roll of the 200ton locomotive is relaxing as you reach for the air horn cord to sound for an upcoming highway crossing. Two long blasts, followed by a short one and another long echo from the claxton as the horizontal crossing gates whiz by, their red lights and bells quickly railroad—Santa Fe, Southern Pacific, Burlington Northern, Norfolk Southern — and you find a simulator. While all are slightly different depending on the specific needs of the individual railroad, all are in use to provide the same end results: to safely train new employees and retrain grizzled veterans.

One such simulator is used by the Santa Fe Railway. While having the added capability of being mobile —

the computer create a visual experience so vivid that thinking it's the "real thing" is commonplace.

This conhisticated piece of imitation

This sophisticated piece of imitation is from the Link Group of Singer-General Precision, Inc., the people who have made airplane trainers for both military and civilian applications almost since the dawn of aviation. Almost every pilot has had experience with a Link trainer at one point in his or her career, and messing up on the ground has always provided invaluable experience for the real thing in the wild blue yonder.

But back to the Santa Fe.

Located inside this converted passenger car, its windows blanked out to allow no outside light to distract from the operation, sits the complete cab and front hood of a modern dieselelectric locomotive. When the en-

ALL

ABOARD!

drowned out by the roar of the locomotives.

An alarm bell rings on the control stand next to you. The third unit has developed a malfunction and won't produce the horsepower it's supposed to. From your seat you push levers on the control panel that electrically shut down the offending diesel, hoping the remaining three can keep up the pace and keep you on schedule.

As you look up, there's a stalled automobile on the railroad tracks! Grabbing the air horn handle, you sound the alarm, jam the brakes into full emergency and watch as, depending on the inertia of 6800 tons of freight train, you may or may not hit the auto. Did you react fast enough? Did the ailing third diesel distract you from seeing the car a second earlier and perhaps avert tragedy?

Welcome to the world of railroad locomotive simulators. Name a major

not all simulators are — the unit is usually stationed at Topeka, Kansas.

In reality, you weren't rocketing across the farmlands, but were motionless inside a converted railroad passenger car. Projection screens depicting real situations actually photographed on the Santa Fe and cued to



Camera car used to photograph scenes for the railroad simulator.

gineer looks straight ahead or to the left or to the right, it is a perfect duplicate. If he turns around in the real McCoy, the engineer will see the electrical cabinet and rear wall of the cab. If he turns around in the simulator, however, he will see the extra panels and instrument boards located at the instructor station.

No, there's no slot for quarters or tokens, but at an initial cost of \$750,000, both engineer and railroad had better be able to have this videogame show not only what it feels like to be in a locomotive cab, but how to react when an emergency comes up.

To make the "videogame" as realistic as possible, five major components of the simulator have to come together at the same time.

First and second are the aforementioned simulated locomotive cab and instructor's station. Then there is the

motion system, an hydraulic affair that simulates fore and aft shock, side sway and roll and cab floor vibrations. As with airplane simulators, the motion system provides important cues to which an engineer responds when controlling his train.

Then there's the all-important visual system, scenes of exactly what the en-

learn their skills the hard way; out in the field. That's fine if you're the only train on the track and there are no civilians to stall their cars in front of you. But on a railroad such as the Santa Fe. a mainline may have dozens of trains, in two directions, in a stretch of

what happens when trouble occurs, which lets the operator make all the mistakes possible and hurt nothing. The railroad isn't tied up, the engineer hasn't put his train all over the countryside because he applied the brakes too hard too fast and sent box cars flying in all directions, and most importantly, mistakes can be made and



Above, a class in procedures and train handling; below, the passenger car housing the simulator. The scene, right, is the remarkably realistic view of the track from the simulator.



gineer would see during an actual run,

viewed on a rear projection screen. A 16mm projector shows 4,000 feet of uninterrupted film, depicting a normal run. A collimating lens is mounted before the front window of the cab to provide a virtual image display, images up to infinity and with realistic depth. The lens forces the viewer to refocus his eyes as he would in the real world when looking at objects at various distances.

And finally there is the stereophonic sound system, duplicating the air sounds within the cab.

Historically, engineers have had to



track as short as 150 miles. And there are many highway crossings, blind curves and "less-than-ideal" sections of track on even the best of railroads.

"The simulator is a perfect way to introduce fledgling engineers to train operation," explains Michael A. Martin, of the Santa Fe's Public Relations Department, "as well as retrain veterans when new techniques or locomotives are being brought into the system.

"The beauty of the simulator is that we can provide an environment that is 99 percent realistic as far as bouncing up and down, the feeling of speed, nobody is injured."

But simulated operation, no matter how real, can't replace the real thing.

'Of course not," continues Martin, "and the Santa Fe is keenly aware of this. What the simulator does is give the new engineer a better idea of what he or she can expect in the real world.'

After a grinding course through the railroad's simulator program, the Santa Fe knows their students will be better prepared to safely handle a speeding freight train - as well as play Donkey Kong — thanks to a video 'game." Casey Jones should have been so lucky.

INSER COINTERNATION OF THE PARTY OF THE PART

By BILL KUNKEL

Punch-Out Scores A Coin-Op KO!

PUNCH-OUT

Nintendo

At a time when most of the arcade scene is about as exciting as watching Larry Holmes drub Marvis Frazier, Nintendo has scored a surprise knockout with its latest coin-op arrival.

Punch-Out is inquestionably the hottest of the spring coin-op releases, Utilizing a dual screen — one static, picturing the combatants and running their stats, and the other, the action playfield. Gamers are cast in the role of pretender to the title and must battle their way through a variety of skilled and sometimes awesome contenders. Take the title and your task becomes keeping it, and *Punch Out* is definitely *not* a boxer's game. This is brawl time, kiddies, and only a 10-count KO will satisfy this blood-thirsty token-eater.

The fighters sport monickers such as "Glass Joe" (boxing slang for an opponent), "Mr. Sandman", "Pistol Hurricane" and the massive "Bald Bull". The player, facing an opponent headon, is treated to a most interesting perspective—the surrogate fighter is almost invisible, his body represented by widely-spaced matrix lines. This allows arcaders to see their foe more clearly, and permits the dubious delight of watching Mr. Sandman deliver a shuddering right hook to their protege's midsection.

Graphics are excellent and the program allows virtual full-ring movement. Check out the look of astonish-

ment on Sandman's kisser when you clock him with a short right. There's fan reaction and even occasional appearances by the referee. There are also extensive audio frills — a voice-over announces each blow and where

PUNCEE LUE!

it landed. Players also get to name their sluggers and are occasionally taunted by their opponent ("Come on! Come on!").

The entire contest lasts for one three-minute round and, again, you must dump your man for a 10-count. The momentum is tracked at the top of the action screen, with damage indicator arrows sweeping back and forth across the topmost horizontal column. As the arrows move ever more swiftly left to right, the player's man draws near to scoring a knockout.

A tiny joystick — subject to quick breakage, judging by those we tested — is used for left/right movement and for raising or dropping the boxer's guard. Two small buttons are employed to throw lefts and rights, while a large, spring-type palm-sized switch throws a potential knockout punch.

This game is not recommended for extended play sessions, since the fighters don't get any better once the arcader has completed the circuit. The game just continues running a loop, with the machine waiting for you to get bored and make a mistake.

Don't feel too bad when you make that mistake, either. If you're still game to go head-to-dome with, say, Bald Bull after he's cleaned your clock, Punch Out has a rematch option.

Good action, excellent graphics and a fun play-action number *Punch-Out* among the best new games in the arcades today.

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Welcome to Arnie's Place

By STEVE MADWED

what is being dubbed "the great arcade slump", who opens a high-tech emporium full of coin-ops in the middle of an area not exactly famous for their arcades of any size?

Answer: a fellow from Westport, Connecticut named Arnie, and the incredible inside-a-jukebox style arcade he has opened is known, prosaically enough, as "Arnie's Place".

Arnie acknowledges that there is a slump, that there are virtually no luxury arcades in the Northeast, and he has opinions on everything from kids-'n'-coin-ops to convertible videogames. Take her away, Arnie.

"There is no doubt that there is a slump in the coin-op field, but I don't think it is unique to our industry. I think that due to "pie-in-the-sky" reports by the media, many people jumped into operating videogame arcades, which, for one thing, spread the number of game players thinner and, secondly, the great demand for large numbers of games caused the factories to gear up production. As a former manufacturer I can tell you that once you gear up you have to keep production flowing; hence, the circulation of some not-very-good games with poor return on your investment."

Any suggestions?

"With the high cost of new equip-

ment and the decline in business, many of the new operators will fall by the wayside, leaving the players to consolidate in the larger, more up-todate, better run facilities."

One look around Arnie's Place and you've got a nearly-perfect idea of what the man is talking about. The arcade is lush, magnificently styled from its spacious, impeccably gardened parking lot to its lavish interior. Copper ceilings, festooned with goldpiping track-lights, cast a discreet golden glow on the scene below. The coin-ops and foosball tables are encased in white wood casings. While purists may be disappointed to find the gorgeous lathework and decal

stands", step-up podiums that give tyro arcaders the same overview of the

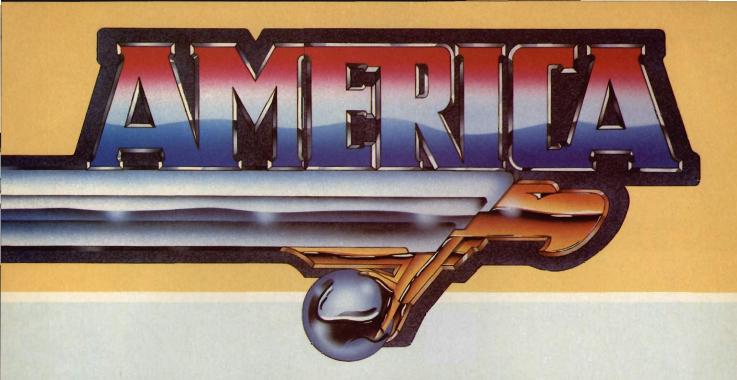
art from their favorite coin-ops obscured by the game-separating, perfectly shaped wooden arches, they

give the game emporium a coherent, undeniably stylish overall ambience. There are even coordinated "child





Photos taken courtesy of Capitol Photos, Bridgeport, CT.



console as the average adult gamer.

The most striking thing about a truly striking arcade, however, is its uniqueness. Why aren't there more coinop palaces like this in the Northeast?

"To open and maintain an arcade of our calibre," Arnie explains, "takes a great capital outlay and most people





do not have the funds. A reason we were able to make it economically feasible was due to the fact that we did most of the work ourselves — designing, construction, etc."

In order to make sure that Westport loves Arnie's Place, there are strict, scrupulously-enforced rules. No smoking, drinking, or any profane lan-guage. "At all times," Arnie adds, there are a minimum of three uniformed attendants on duty to insure this. We have contacted all the schools within a 25 mile radius and asked them for their school calendars. When a young person unaccompanied by an adult enters we ask them: 'No school today?' If they say 'no' we find out which school they attend and then check the calendar to see if it checks. Some schools vary from others for holiday or break schedules.'

Games are selected by a trio of



methods. "One is by player request. If a great number of our patrons request a particular game we will usually purchase one or two. Second is to rely on some of our distributors — factory reps — based on reported income at other operations. Last, but least reliable, is 'hit and miss'. We purchase a game and hope our clientele will be attracted to it. The success of a game varies from location to location depending on the type of customer; their age, education and cultural background. A game may earn big in one location and die in another."

Now warming to his subject, Arnie gave his opinion on a subject that's shaking the arcade industry to its foundations: convertible games. They are so-called "generic videogames" in which new games are not purchased complete, merely new program boards are obtained to replace those in yesterday's model. The old title marquees and side decals are interchanged and, voila!, instant new coinop.

op.
"Convertible games," according to
Arnie, "have various effects depending whether you are looking at it from
a manufacturer's outlook or an operator's (the person placing the game on
location). For the most part I think it
will help the industry in general."

Finally, we wondered whether or not ol' Arnie was an arcader himself. Ever the diplomat, after confessing that he was, Arnie refused to name a favorite. "I derive a pleasure from observing my patrons having fun, especially young children."





PLAYERS GUIDE TO

PROGRAMMABLE VIDEOGAME SYSTEMS

ATARI 2600:

STRENGTH IN NUMBERS

Of the pioneer programmable videogame systems, only Atari's 2600 remains in production. It has outlasted such competition as Bally's Astrocade, the Odyssey 2, Fairchild Channel F, the Arcadia 2001, and even Mattel's Intellivision. The overwhelming support from third-party game manufacturers is the key factor in the 2600's popularity, though its durability, availability and low price contribute heavily.

The availability of Coleco's 2600 adapter for its ColecoVision had a strong impact on that machine's early sales figures. Atari later marketed an add-on for the Atari 5200 in its own bid to attract a tradeup audience. Both modules are configured a bit differently from the buttonand-switch arrays on the standard 2600, making a few of the system's more spectacular efforts, like Activision's Space Shuttle, harder to master.

The Atari 2600 set the standard in controllers, introducing the nine-pin connector plug still used on most videogames and low-end home computers. But the proposed line-up of 2600 peripherals, including several



ATARI 2600 (VCS)

planned 2600 keyboards, has faded into oblivion.

THE 2600 TODAY

When the 2600 was first introduced, many wondered what game designers could possibly find to do with so much — 4K — memory. Companies like Activision built their reputations by stretching the 2600 to its furthest possible limits. As time passed and newer, more sophisticated pro-

grammables like the ColecoVision and Atari 5200



SOLAR FOX (CBS)

appeared, the 2600's memory limitations became apparent.

CBS Videogames spent undisclosed amounts of time and money researching a new type of cartridge chip, which it dubbed the RAM-cram. These games contained resident memory housed within the cartridge itself, which added to memory already built into the machine to effectively double the 2600's memory. After producing just

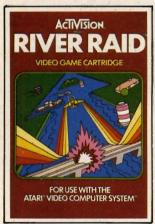
two 8K games, Tunnel Runner and Solar Fox, CBS abandoned its entire videogame department to concentrate on producing computer software.

This year, Atari itself picked up the ball, introducing its own line of 8K 2600 games. Among the releases are Stargate, Crystal Castles, Millipede and Track & Field, the latter packaged with a special controller developed by joystick giant, Wico.

WHAT'S NEXT FOR THE VCS

As consumers trade up from videogames to full-fledged computer systems, they're passing their old 2600s along to siblings or children. As a result, the 2600 is now oriented towards younger players.

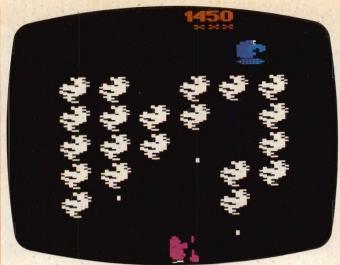
Not that many games aren't fast-paced and challenging enough for any adult: Joust (Atari), River Raid (Activision) and Star Wars (Parker Brothers) are just a sampling of the excellent arcade-action games that are available. Even programs with an emphasis on strategy, like Space Shuttle (Activision), have found a niche in the 2600 software library. But the big news on the VCS is kideogames, which



RIVER RAID (ACTIVISION)

are now coming into their prime with titles like Pigs in Space, Cookie Monster Munch and Snoopy and the Red Baron.

Even six-month-old babies can play **Peek-A-Boo**, Dr. Lee Salk's educational entertainment for use with the Atari Kids' Controller. The game, which stars a cute kitten who



PIGS IN SPACE (ATARI)

hides behind colorful blocks, discourages competition and is designed to avoid frustrating tiny players. If the child doesn't find the cat in a reasonable amount of time, the feline sticks out a paw or an ear to offer a helpful hint. With difficulty levels ranging widely (at the lowest level all the child has to do is touch the controller — anywhere — to earn the reward), this game accommodates the full spectrum of toddler players.

As far as third-party software support goes, last year's tidal wave of cartridges has ebbed to a comparative trickle. There are plenty of excellent games to be had, many at bargain prices, though the days of the 2600 blockbusters are quickly fading, having really peaked two years ago with Activision's Pitfall!. Though there are still a number of VCS megahits, like Pitfall II, most third-party software developers — including even Activision — are throwing their major efforts into designing computer games — or at least, programs that are intended for multiple systems.

Because of its rock-bottom price, the 2600 is still a good choice for the economyminded shopper. There's a veritable treasure trove of bargain cartridges, many of which are left over from the 2600 games glut of last year. But after the current stock of 2600 games are exhausted, expect far fewer new titles to take their places on the shelves—and third-party software support will fall off.

sion module interface has been used to plug in Coleco's 2600 adapter; the steering wheel for use with **Turbo** and other driving games; and the controversial computer addon, the Adam. The port was also ready to be used to plug in the now-defunct Supergame module as well as a home laserdisc module that never quite materialized.

The hardware hasn't changed since its introduction more than two years ago, with the Colecovision's major drawback still its controllers. Though several recent Coleco games for the system have been unexciting at best, the library of good cartridges is large, bolstered by third-party games like Epyx's Gateway to Apshai and Interphase's talking Squish 'Em. Activision, Parker Brothers, AtariSoft and Sierra are just a few of the game developers actively pursuing the ColecoVision customer. Colecovisionaries can now enjoy arcade-tohome translations like Centipede (AtariSoft), Q*bert (Parker Brothers), Star Wars (Parker Brothers) and Front Line (Coleco), a luxury unheard of in the days of system exclusivity.

CONTROLLING THE COLECOVISION

As a result of the Colecovision's enormous popularity, there's been no shortage of controllers to replace those hand-cramping standard joysticks. Wico, High



SQUISH 'EM (INTERPHASE)

Score, Suncom, Gim Electronics and Championship Electronics all produce two-button joysticks for use with the system. Championship Elecany standard nine-pin controller. For games that don't require two action buttons or a keypad, any Ataricompatible joystick will do.

Coleco itself makes a trackball that comes packaged

MASTER OF MODULARITY

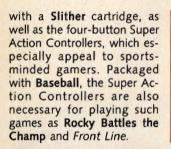
With its excellent graphics and sound, the ColecoVision would have been a success even without its expansion possibilities. Still, that little port at the front of the unit was what first caught the im-

aginations of visionary game lovers. The idea of a constantly-upgradeable unit that would never be completely obsolete had a definite appeal to thrift-conscious shoppers. So far, the expan-





SUPER ACTION CONTROLLERS (COLECO)



OUTLOOK FOR COLECOVISION

With many first-time electronic gamers being enticed by low-priced computers, the eventual future of the ColecoVision is linked to the Adam, its add-on computer. Despite initial production and



The ColecoVision game system.

image problems, the revamped Adam has been praised by its owners. Software support is still sketchy, consisting mostly of cartridges that are marked "ColecoVision/Adam compatible.

At least for the time being, the ColecoVision has plenty

of thunder left. With its existing library of outstanding games — many of which are finally being marked down after selling for two years at list price — the ColecoVision offers a vast selection of choice games that appeal to home arcaders of every taste and gaming persuasion.

THE SUPERSYSTEM BOWS OUT

Until the introduction of Atari's 7800, this sleek, hightech unit was Atari's top-ofthe-line game player. Production of the 5200 was officially discontinued last spring, though Atari announced plans to provide software support for the 5200, at least for the foreseeable future. An adapter that plugs into the 7800 and allows it to play 5200 cartridges is soon to be available. In spite of these optimistic signs from Atari, 5200 owners have written in to EG to express feelings of abandonment.

The 5200's controllers made at least some contribution to the game system's eventual demise. While Atari's original intention was to set a new state of the art by providing an analog joystick complete with remote start, pause and reset functions, the non-centering joysticks proved frustratingly difficult

to use — especially in light of the 5200's strong game base of action-oriented arcade translations like Pac-Man, Centipede, Qix and Robotron. Some joystick manufacturers, like Wico, High Score and Coin Controls, designed good, self-centering 5200 replacement controllers,

but the effort was too little, too late.

The 5200 had overtaken the ColecoVision in sales when Atari made the decision to stop production in favor of the 7800's new graphics technology. Since the 7800 won't list for much more than the 5200, the choice for Atari was

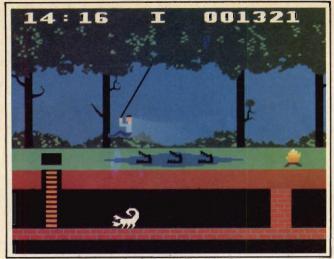
one of simple economics. But for game players, a new choice is required: to enjoy the 5200 and its complete games library now, knowing that it's effectively closedended; or to wait for the next step up, to either a computer or the 7800.



Atari's own lineup of 5200 titles is downright boggling. Defender, Pac-Man, Joust, Space Dungeon, Star Raiders, Pole Position, Pengo and Robotron are just a few of the solid wall of hits. Gremlins, Atari's cartridge rendition of Steven Speilberg's hit film, is a brand-new action/strategy contest with outstanding graphics, sound and playability, while Lucasfilm's Ballblazer and Rescue on Fractalus set new standards in their



ATARI 5200



PITFALL! (ACTIVISION)

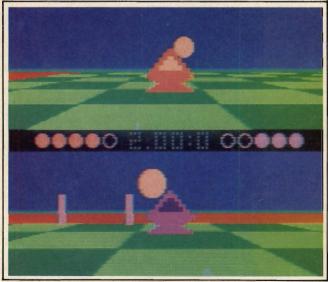
respective ways. These and other great games first appeared on the 5200. Add classic computer game titles like Dan Gorlin's Choplifter!, complete with full two-button control, and it's clear that the Atari software folks have put in more than a little overtime in the think tanks.

But the story from thirdparty game developers isn't quite as rosy. Many companies who design for the ColecoVision never even glanced at the 5200, despite its proven capabilities. There are a few bright spots among the clouds, though: Parker Brothers has its full line of games, including the whimsical Frogger II: Threedeep, Star Wars and Montezuma's Revenge, on cartridge for the 5200. Activision has Beamrider, Pitfall and a host of other titles, and Big Five has Miner 2049er. The 5200 has never enjoyed the third-party support evidenced for other programmable videogames.

Even without these independently-produced games, as of now the Atari 5200 already sports what is probably the strongest selection of good games.

Now that Atari pulled the plug on its razzle-dazzle game player, the 5200's future is bleak. Gamers shouldn't expect many third-party cartridges coming down the pike, but rather should try to enjoy what's out there now. While Atari will keep releasing new titles in 5200 format, the system will eventually be replaced by the 7800.

Still, the 5200 — like GCE's now-extinct Vectrex—will be remembered fondly, especially by those who own or have owned it, as one of the red-hot home arcades.



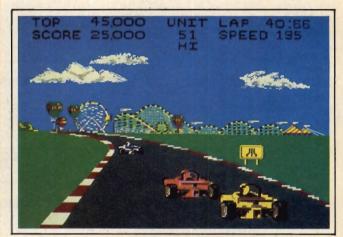
BALLBLAZER (ATARI/LUCASFILM)

INTRODUCING THE 7800

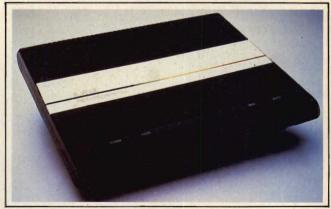
This fall. Atari stunned the electronic gaming industry by introducing its brand-new, state of the art programmable videogame machine, the 7800 - a step in the wrong direction, according to the market analysts, who forecast the future of electro-gaming as founded firmly in the computer era. Can a dedicated videogame, no matter how spectacular, hope to compete against low-end gameplaying computers like the Atari 800XL and the Commodore 64? Atari, for one,

hopes so.

The 7800 looks like a miniature replica of Atari's sleek, modern-looking 5200. The latter's bulky, uncontrollable joystick/keyboards have been replaced by attractive, easy-to-use two-button joystick, comparable with standard nine-pin controllers. Theoretically, any two-button joystick that works on a ColecoVision should work on the 7800, though there is no more need for a keypad, start, reset or pause key. These extra frills have been eliminated



7800 POLE POSITION (ATARI)



7800 PRO SYSTEM (ATARI)





7800 JOUST (ATARI)

in an effort to keep the controllers lightweight, desirable and accurate. From EG's early testing, all three seem to be characteristics of the 7800 joysticks, which are shaped like slim cylinders to fit easily in most palms.

The Atari 7800 is compatible with Atari computer peripherals, though Atari disks will not work with the new system. Due to its brand-new "Marie" graphics chip, the 7800 speaks a different computer language. Atari plans to introduce a 7800 computer keyboard if there's enough demand for it, so that peripheral-compatibility could come in handy in a year or so.

The 7800 comes packaged with a high-quality Centipede cartridge, which gives gamers a hint of goodies to come. The game's graphics are even better than the 5200 version's showing off the 7800's graphics capability. The new game machine lists at \$120, just about what the 5200 sold for last year. It accepts 2600 cartridges without the added expense of a plugin module, making it the perfect trade-up for 2600 owners with large game libraries. A 5200 adapter is due soon as

THE FIRST 7800 GAMES

Atari premiered a host of arcade hits for its new top-of-the-line videogame, including souped-up versions of Joust, Centipede, Pole Position II, Asteroids, Ms. Pac Man, Robotron and Food Fight. Desert Falcon, formerly titled Nile Flier, is the first game produced especially for the

7800. This high-resolution action/strategy game features **Zaxxon's** three-quarters perspective and adds the ability to land, plus the chance to find and use mystical powers.

Ballblazer and Rescue on Fractalus are also due out for the 7800, with Gremlins being translated as of this writing

Third-party software support is uncertain at best, with companies adopting a waitand-see attitude about Atari's newest addition. In the meanwhile, Atari is trying to take up the slack by keeping those megahits flowing to gamers.

CAN ATARI DO IT?

The 7800 was launched at a time when game manufacturers, designers, and some industry analysts were predicting a wholesale swing towards computers and their more sophisticated diskbased software. There are a lot of home arcaders out there who don't feel ready to take on the expense of a full computer set-up. Whether they'll succumb to computermania or choose the best videogame ever put on the market is a guestion to be answered with this holiday season.

One thing is certain — if a programmable videogame player is still going to sell, Atari's 7800 is the top-of-the-line system. With its built-in 2600 compatibility and graphics resolution surpassing even the high priced personal computers, the 7800 is the best videogame there is.

The Atari takeover by Commodore founder Jack Tramiel has made the status of the 7800 uncertain as of now.



7800 DESERT FALCON (ATARI)

VIDEOGAMING OUTLOOK

VIDEOGAMES VS. COMPUTERS

The rise of the home computer — more than 15% of American families now own one — raises the question of whether there's any sense buying a videogame system. One persuasive argument is that a computer is a much more versatile tool than a videogame machine, thanks largely to its keyboard, and also plays excellent games.

The fact that computers are more sophisticated and powerful need not mean, however, that videogames have come to the end of their usefulness. It's hard to name a toy priced comparably to the 2600, for instance, that affords the variety of play and mental stimulation to be found in this mini-player. Even if the household already has a microcomputer, there's no reason why one or more family members couldn't also own personal home game machines.

Another point to consider is that many of the videogame systems are equal to — or even superior to — many lowend computers in sound, graphics and memory. You'd have to spend a bundle to get a computer capable of rivaling the 7800's game graphics. The ColecoVision's library of games includes numerous titles which offer just as much excitement as anything on cartridge for computer.

Then, too, the surviving videogame systems are all supported with extensive libraries of cartridge software. If you buy a videogame unit, you'll never have to worry about finding enough good games. There are dozens for every system. Another way to look at this aspect is that once you purchase a system and some software, you've got a self-sufficient entertainment device that can provide many hours of pleasure even if the manufacturer decides to slow or stop new product introductions a year or so from now.

Some people are simply not ready, for one of a host of reasons, to get into home computing. For these folks, the videogame system can be a pleasant and easy way to make first contact with the world of interactive electronic entertainment.

And, of course, highly transportable videogame systems are excellent takealongs on trips and vacations. They connect to any TV set in a jiffy with no esoteric hardware (beyond the RF box).

Are these reasons compelling enough to get you to buy a videogame system? That, of course, is an individual choice. What can be said with some certainty, is that videogame systems have many attractive points and are not going to disappear overnight as a result of the popularity of computers.



By TRACIE FORMAN

Software King Of The Ozarks

ou're not going to belly laugh or really cry playing a computer game," muses Dan Bunten, head designer of Ozark Softscape, the game design house behind M.U.L.E. and Seven Cities of Gold. "The best we can hope for is empathy with your character.

The lanky, 35-year-old Arkansas resident is in New York, wrapping up a promotion tour for Seven Cities. Like Ozark Softscape's earlier effort M.U.L.E., Seven Cities places the character in a more active role than many strategy games.

The conquistador-age exploration adventure is the first in a projected "Ages of Man" series. "That kind of tickles me," laughs Dan, referring to the series' lofty title, "it's so pretentious!"

Dan Bunten is anything but pretentious. A former conscientious objector and '60's radical, he's fiercely proud of the dents and broken windshield on his old Volkswagon, but "I felt like I sold out when I bought a 25-inch color TV."

Dan was born in St, Louis, the eldest of six children, Since

the family moved around a lot, the children learned to rely on each other for companionship. "We had readymade teams," he recalls. Dan and brother Bill, now an Ozark team member as well, would modify board games to keep themselves entertained.

It was Dan's interest in multi-player

contests that led him to design Wheeler Dealers (Speakeasy Software) in 1979, as a 16K Apple cassette. He and his brothers rigged special buttons to allow four people to play the full-text stock market simulation at once. They manufactured 500 copies to sell through Speakeasy, only 100 of which sold. "It was really pretty goofy," grins Dan.

That same year, Bunten hooked up with Strategic Simulations, which marketed his next three designs, Computer Quarterback, Cytron Masters and Cartels & Cutthroats. He credits Cytron Masters as the forerunner of M.U.L.E. in many ways.

"With M.U.L.E. we tried to build a framework through which people could socialize. Our family doesn't talk much, or say how we like to spend time together. M.U.L.E. builds that flexible environment.

"We consider ourselves conceptual designers," he adds. We don't come up with a theme and then write a game. We come up with elements that will make a good play encounter.

"For us, Seven Cities was a real departure. It gives players the moral dilemma of the Spanish conquistadors, with the

delicate balance between negotiation and might. The whole design is built around entertaining you, the individual."

Soon after his return to Arkansas, Dan joined the rest of Ozark Softscape (brother Bill Bunten, Alan Watson and Jim Rushing) for a week-long retreat to brainstorm their next major project. "The most fun is sitting around coming up with the ideas, saying 'Well, now, what's it gonna be?'

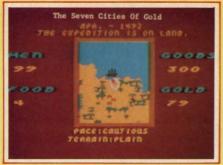
"We're really just scratching the surface of what a computer can do," he notes. "We don't even know how to be dramatic yet. The most inexperienced writers know how to develop characters, underline plots, etc., but we're at the first-grade level. Programs are great in comparison to what they used to be, but they don't compare to real art."

Each member of Ozark Softscape is excited at the new project for a different reason. While Dan tries to instill a meaningful message in each program, Jim Rushing likes the programming challenge. Bill Bunten, the only nonprogrammer on the team, enjoys working out the secrets and subtleties behind the obvious game elements. Alan Watson, a would-be cartoonist, likes to animate the sequences.

The design team is a varied and very educated crew, indeed—Dan has a BS in industrial engineering and a masters degree in science operations research. Bill, the only part-timer (he works for the Parks Department), has an MBA, as well as several certificates in leisure planning. Alan, an ex-junior high school teacher, has a B.S. in math, and Jim, whose first job is with Ozark, has an MBA.

Despite Ivy League backgrounds, the gang looks downright grungy in their official Electronic Arts photo. "We don't wear suits," notes Dan, though before the picture was taken they were told not to shave, to wear dirty clothes, and to mess up their hair "to be remembered as being unique." (The woman Bill Bunten is leering at in the shot is actually Theresa Bunten, their sister. Roy Glover, the musician/ computer repairman who penned the M.U.L.E. anthem, was not in the picture.)

Despite Ozark Softscape's seemingly meteoric rise, Dan refutes the



SEVEN CITIES OF GOLD (ELECTRONIC ARTS)

stereotype of the young, nouveau riche game designer. "People have this perception that we're all really rich," he says. "But my family of four lives on a pretty modest income. If I hadn't picked up a little job here and there, I couldn't have gone into (game designing) full time."

Instead of being in it for the money, Dan finds he likes his work. "In one sense, (a garne designer) is a technologist who has to work out every detail of every line of code. The other side of my personality is creative, artistic. This is a chance to put both aspects into one job.'

Dan asked Electronic Games Magazine to spread the word to would-be game designers that Ozark Softscape is looking for apprentices willing to relocate to the Arkansas area. Would he advise new programmers to go into game design?

"In comparison to what else?" he replies. "I wouldn't tell them to throw away other opportunities that come by. Young designers are too tightly focused and don't leave themselves options to do other things."



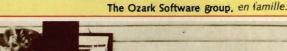
CARTELS & CUTTHROATS (SSI)

As for the glamor of game designing professionally, Dan says, "The people I admire are the people who went to jail instead of Vietnam, or who go to India to do some good, or who are really committed to the environment. Those



M.U.L.E. (ELECTRONIC ARTS)

are the people who are really admirable. What I'm doing seems less important. If we can develop enough real tools in the medium, like maybe a world energy model, maybe I can do something to change some of that. I want to make a significant impact in a person's life. Then I'll feel like an







Don't Go Near The Water: Gremlins On Parade

GREMLINS

Atari/Atari 5200

The only similarity between this edition of Gremlins and the 2600 cartridge is its movie-based title. Whereas the 2600 game uses the hit summer flick's plot as mere background for an old-hat play-mechanic, the 5200 game has all the thrills, chills, and offbeat sense of humor that kept the lines so long at the box office.

Anyone who survived the summer

ing Mogwais, each of which must be deposited into a stationary on-screen cage to keep it from finding a midnight snack. With each progressive level, the room starts out littered with more fully-formed Gremlins — which are fatal to the touch — along with more water puddles and more food.

One some screens, the Gremlins make a dash for the refrigerator, tossing out bits of food to tempt alwayshungry Mogwais. Meanwhile, other



5200 GREMLINS (ATARI)

"Gremlins" invasion knows that there are two things one must never do to cute, gentle little Mogwais: get them wet, which causes them to multiply; and feed them after midnight, after which they hatch into dangerously malevolent Gremlins. This game starts the hero out in a houseful of wander-

Gremlins try to reach the Mogwai cage to free all the trapped beasties for new temptations.

The game's sense of humor is especially obvious at higher levels. For example, Gremlins and Mogwais alike love television, and are likely to turn it on and sit transfixed in front of it if



they get the chance. And, like constant dieters, Mogwais create their own culinary temptations, turning on the popcorn machines even after the player has turned them off.

The creatures seem to have definite personalities, detailed down to the frightened shaking of the Mogwais being teased by their Gremlin cousins Mogwais tend to run straight to the on-screen hero, as if anxious to retreat to the cage's relative safety.

Gremlins is a rare find for action lovers, requiring split-second decision-making and skillful swordplay to survive. Add to that an outstanding theme song and graphics, plus more than twenty-five different screens,

and the end result is one of the best games ever made for the 5200. This cartridge can keep gamers happily occupied — even long after midnight.

(Tracie Forman)

GREMLINS

Atari/Atari 2600

After such spectacular disasters as its game versions of E.T. and Raiders of the Lost Ark, one might think Atari would shy away from licensing games from the silver screen. Gremlins, in the 2600 version, only reinforces the fact that a great movie doesn't necessaily make a great game.

In Gremlins, the idea is simple enough. The first screen involves

catching falling Mogwais (the sweet little critters that only turn evil when they're fed after midnight) before they reach the floor, where tasty midnight snacks lie waiting. After that phase ends, the player must try to shoot the Mogwais-turned-Gremlins as they advance down the screen. If a Gremlin manages to land at ground level, it has a human snack — and one life is lost.

The real problem with this game is that it's so blatantly derivative it's downright embarrassing. The playmechanic was first seen about two years ago in Activision's Kaboom!, then again six months later in U.S. Games' humorous Eggomania. Atari 2600 owners who want a catch-the falling-object play-mechanic probably already have one.

On the up side, Gremlins is one of Atari's new superchip games, which effectively double the 2600's game-playing memory to a full 8K, so the graphics are beautiful. But pretty pictures aren't enough in a game that has little else that's new.

(Tracie Forman)



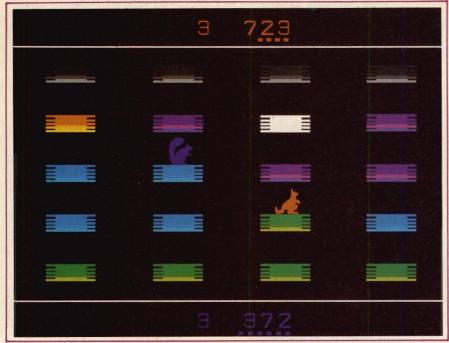
Imagic/Atari 2600

Add Imagic's Quick Step to the growing number of color-changing contests. In this version of the Q*bert mania, gamers, in the guise of a kangaroo (or a squirrel in the two-player version), jump from one trampoline to another while they are scrolling down off the screen. Whenever a player lands on one of the trampolines, it changes to his color. However, the opposing player can change it back. This goes on as long as the trampolines are on-screen.

Not all of the trampolines are alike, however. Some of them (the white trampolines) are called magic mats. Just before their appearance on the screen, music is heard. If the gamer can claim one of these mats, it changes to his color and bestows upon him the power to freeze his opponent for awhile. All the player has to do is land on the same trampoline as his opponent. (It's a good idea to freeze the player near the bottom of the screen so that he loses a life when the trampoline slides off-screen.)

In addition to the magic mats, gamers are armed with tricky traps. These traps, released by pressing the joystick button, cause the trampoline the player last stood on to disappear. This, in effect, prevents the opponent from





QUICK STEP (IMAGIC)

hopping onto that space. Judicious use of tricky traps can isolate the opponent from the rest of the screen. Although players begin with six traps, they can accumulate more by landing on gold mats.

When the first wave of trampolines is nearing an end, the gamer will hear five beeps. This signals the beginning of the ladder sequence and the approach of another level. The ladder sequence differs from the usual wave of trampolines in that only one trampoline (instead of the normal four) appears at a time. And yes, tricky traps are especially effective on the ladders.

All in all, Quick Step is a fast-paced strategy game that works well on the 2600.

(Vincent Puglia)

PITSTOP

Epyx/ColecoVision

Pitstop is the driving videogame for purists.

Pitstop isn't the next Turbo. It isn't trying to be. This program is for folks who want to vicariously feel the roar of heavy metal (Pitstop has the best driving sounds in the genre), and taste the grit of imaginary dust. This is for you electronic-age Cale Yarboroughs who want to test grit and skill behind a steering wheel and accelerator (unless, poor thing, you don't have a Coleco steering module, in which case a joystick and action button will do).

This cart's for gamers who want to put the pedal to the metal!

Wow, are there options: number of drivers (1-4, but no head-to-head); level of difficulty (rookie, semi-pro and pro); single, mini- or grand circuit; and the course you'd prefer to drive (Monaco, Le Mans, Kyalami, Albi, Jarama, and St. Jovite are available).

People who enjoy Pitstop will appreciate these true-to-life touches, especially with each course rendered

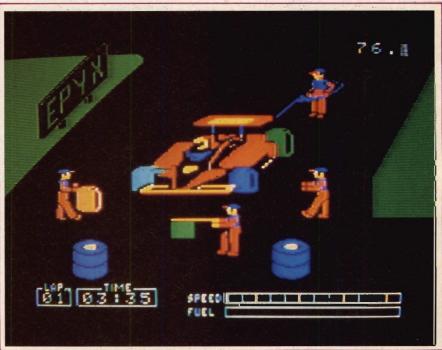
at the lower left of the playfield with a cursor indicating the player's current status.

The optical effects won't blow your mind, but this is racing, y'all, not Ascot! Keep your grandstands and flag-waving, this game creates the feel of moving through a pack with a quality that just feels so right.

In terms of realism, Pitstop goes even further. Unlike other racing games, in which you either blow up with each contact — with another car or the side of the road - or bump endlessly, this game creates limitations. No, there's no frustrating explosion and scratch start with every mistake, but bump too many times and the car or tires might get damaged. Then there's fuel to consider — speed eats diesel in great gulps, not to mention wearing down tire treads. When times of trouble loom ahead, wait for one of the spots where the road widens and take an off-ramp into the pitstop, where, via joystick manipulation, a four man crew gasses her up, fixes the engine, replaces a tire, and signals the reentry into the race. These stops cost time, but add a marvelous depth to the contest.

At the end of each race, the giant board flashes the results. First comes the finish of the previous race: position, laps, time and purse. The circuit standings follow.

Pitstop is the real thing. For owners



PLTSTOP (EPYX.)

of the steering module, this will prove an exhilarating experience. Remember to read the directions! There's so much here, it would be a shame to miss any of it.

(Will Richardson)

NOVA BLAST

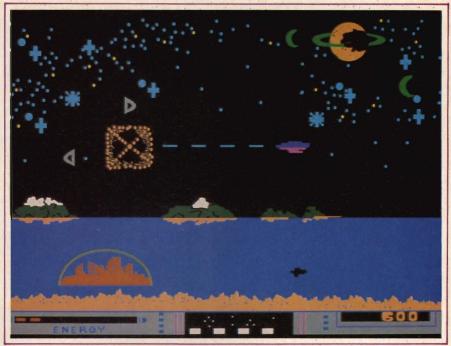
Imagic/ColecoVision

The best description of Nova Blast would be: Defender meets Missile Command by way of Demon Attack.

Players defend a quartet of domed cities from wave after wave of assault by different types of alien attackers. Hence, players must deal with orion fighters, Gravitines, Astro Sailors, Quemens, Diving Drones, Sonads, etc., and, as in *Demon Attack*, half the fun is in seeing all these different creatures each rack — sort of like a prolonged Cantina sequence.

The player controls a horizontally-scrolling ship that fires lasers and drops bombs in a manner some cynics may feel derives overly much from Defender. The ship is there to defend four cities, whose energy shields can absorb a certain number of hits before disappearing. At the end of each assault round, the player picks up bonus points determined by the number of cities left standing.

Imagic added an intriguing wrinkle or two to Nova Blast. There are exceedingly neat ground-based assault vehicles the player's craft must kayo



NOVA BLAST (IMAGIC)

via bombing. These tread-bearing, well-armed land-crawlers are a magnificent graphic touch and add an element of genuine harrassment to the proceedings.

Best of all, there are periodically appearing power stations — they resemble the electric arcs that buzzed so happily in all those mad doctor flicks — which the defending ship can tap into and absorb power from. Once the power is taken into the ship's storage

cells, it can be discharged into a weakened city and recharge its defensive dome.

Nova Blast isn't going to set the world on fire, but it's a nice addition to the Coleco library.

(Bill Kunkel)

ROBOTRON: 2084

Atari/Atari 5200

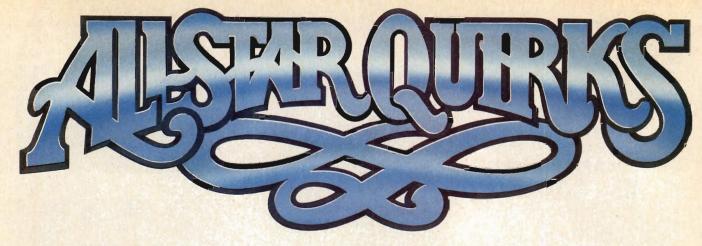
This cartridge has the colorful graphics and shoot-from-the-hip play-action that first attracted fans at the arcades. But the non-centering 5200 joysticks would have rendered Robotron unplayable if Atari hadn't had the foresight to include an anchoring base for its controllers in the package. Even with the base, Robotron's new non-centered control scheme takes a lot of getting used to, especially by those used to the arcade game — especially between rounds, when the sticks have to be set back to center to avoid a fatal first step.

Players with the patience to work through early difficulties — or those with two self-centering 5200 controllers — will find all the game's elements intact, from the hi-res human family in distress to the progressively more lethal droids. Once you get past the "new" control scheme, Robotron turns out to be all a fast-action fan could want in a game.

(Tracie Forman)



ROBOTRON 2084 (ATARI)



By TRACIE FORMAN

Find the Glitches, Easter Eggs and Bugs in Your Favorite Programs

o electronic gamer ever has a good word for program bugs, those pesky coding mistakes that crash the game just as you're about to zap the wizard, but glitches and easter eggs are a different story. When Rob Fulop fixed up the home edition of Missile Command to display his initials under special circumstances, he couldn't have known he was starting a major craze within the hobby.

ers are on the cutting edge of quirkquesters. The "Glitch of the Month" section has brought an avalanche of incredible easter eggs and glitches of every description.

So here's our salute to the inventive programmers who hide the goodies and the equally ingenious players who find them.

PITFALL — FALL NO MORE

To go into a pit without losing 100 points, simply approach a ladder leading underground. If you're moving left to right, push the joystick southeast (southwest if you're moving left) as soon as Harry begins to fall in. He'll grab the ladder and safely descend. (Atari 2600 version.)

Frank Townsend San Jose, CA

KEEP ON TREKKIN'

On my Commodore 64 version of Star Trek, I found a way to produce an unlimited score. By using the following keys: X: Rotate Right; Z: Rotate Left; Slash (/): Fire; and M: Warp, you can maneuver without being destroyed.



You can achieve this only by using up all your warp energy. Then press the slash and M keys simultaneously while maneuvering with the X and Z keys. This allows you to maneuver without docking or getting destroyed. The only problem is that after a long time it gets boring!

Joe Drabek Cheektowaga, NY

THE (REALLY) HIGH JUMP

During the pole vault sequence in Decathlon for the 2600, if you press the button more than once after letting the pole go, your man will keep rising and clear the pole entirely. After a few moments in mid-air, my man floated across the screen to the left-Steve Kelly

Kansas City, MÓ

Q*BERT QUIRKS

In Q*bert for the Atari 2600, wait on the top cube of the pyramid and let Coily approach. When he's just about to leap onto the top cube, hop Q*bert off the right side. He'll fall off, but Coily will be eliminated (heh-heh). You'll get the usual 500 points for eliminating Coily, and a new Q*bert will appear at the top of the pyramid without costing the player a life. This can be repeated indefinitely.

Tom E. Swingle Waterford, OH

Wait till Coily jumps on the immediate diagonal neighbor cube. When he's about to jump on Q*bert, jump onto him. You won't die. You will only trade places.

Eduardo Molon Miami, FL

GHOSTLY DOTS

Set the 5200 Pac-Man cartridge on the cherry screen, take off from the right, and head up into the right-hand tunnel. As you go off-screen, you'll hear a chomp. Freeze the action and inspect the dots to the left of the starting point, and you'll find a missing dot where no Pac-Man has gone before.

Bill Ajello Newark, NJ

WIZARDRY MAGIC

I found a glitch on my Wizardry program for the Apple computer. You can make any character know all the spells, and you can make the character's level higher than level 200. His or her hit points will also be above 700.



Just a hapless neophyte.



Note experience points.

To do this, go to the Training Grounds and create a bishop (12 piety and 12 I.Q.). After creating the character, take it into the maze. When you're at your camp, inspect the bishop. Then press the letter I for identify an item. The computer will then ask what number item you wish identified. Push 9. If it says "failure," try again. When it says "success," it will give you one hundred million experience points. Then go back into the castle and go to the Adventurer's Inn. Keep staying in the stables until you learn all the spells and gain as many hit points as desired. Your strength, I.Q., piety, vitality, agility and luck should all equal 18. Then you can go back to the maze and cast a new spell to make your hit points equal to your status. (If your character is of the right alignment, use the change-class option in the Training Grounds to become a Ninja, Samurai or Lord. After the new characters make it to their experience level 2, they can use every spell for both mages and priests.)

David Schwantes Huntington Beach, CA

TUT-TUT TUTANKHAM

In **Tutankham** for the VIC-20, you can shoot through walls that are one layer thick. You have to be moving toward the wall and shooting for the bullets to go through.

David Bye Portland, IN

JUNIOR GETS A LIFT

In **Donkey Kong Junior** for the Colecovision, go to the top platform next to the hole where the birds come through. Then walk into the hole. Junior will grab an invisible vine by himself and can move up right through the top of the platform.

Doug Gritman, Stratford, CT

On the spring board screen, position Junior on the right-hand side of the moving chain, at the bottom. Wait until the top moving platform passes. When it's almost past, pull the stick down and left. Junior will fall onto the spot where the platform used to be, and sits there until the platform is moved back under him, or the control is moved.

Jim Elliott Moose Jaw, Saskatchewan

SLAPPING SMURFS

In Smurf: Rescue in Gargamel's Castle for the Colecovision, get as close as you can to Smurfette without touching her, then wait for Smurf's energy to run out. Smurfette moves her lower arm and seems to punch him out!

Bill Westerhoff New Caanan, CT

There's a way to keep Smurfette's dress off until your energy runs out. You need the Roller Controller, or two joysticks plugged into one port through a Y-adapter. Stand on the



Ready for the punch. . .



Lead-in to stripping Smurfette.

skull and push one joystick down and the other up. Smurf gets lower and lower. When he disappears, the lady does her striptease act. Smurf will reappear at the top of the screen.

> Ramey Gonzales Merced, CA

OFF THE BEATEN PATH

In Bump 'N' Jump for the Intellivision, you can jump off one side of the TV screen and land before you can be seen on the other side. If done right, the player's car lands on an invisible highway between the sides of the TV screen. You must jump off and on to the "real" road before reaching a gas pump. To leave the invisible road, just press the jump button and one side of the disk. Do not press the disk while on the invisible highway or you crash. I achieved over a million points using this glitch.

David Foulke Maroa, IL

WHAT'S A GLITCH?

To clear up misunderstandings among our readers, here's a definition of the three types of quirks found in programs:

A glitch is an unexpected subroutine that turns up in a program, like Smurfette's surprise striptease.

An easter egg is a hidden message in a program, such as a designer's initials.

A bug is a defect in programming that causes the game to malfunction.



WHAM!



Topless Smurfette.

The Game World Meets the Real World

SUB

f subhunt games are your passions, the ultimate device belongs to the U.S. Navy. Calling it a "game" is really a misnomer, but a game of hide and seek it turns out to be. For our first-hand look at how the Navy plays a subhunt game for real, we went along on a West Coast training flight from Moffett Field near Palo Alto, Calif. with squadron VP-31.

Sound like an interesting experience? You bet. Say hello to the U.S. Navy's P3 Orion, a four-engine airliner-size turbo-prop aircraft that, with its dozen or so crewmen, forms part of the best defense against the threat of enemy submarines by constantly patrolling our coasts and the sealanes and

waterways of the world.

Navy P3 Orion crews are part of a videogamer's dream. Using radar and sonar scopes, including their own version of joysticks, the sensor operators search for enemy submarines. The quarry, of course, is not just hanging around below the surface trying not to be noticed. It's actively working at not being caught. There are underwater valleys and rock formations under which to hide, and decoys that can be sent out to confuse the Orion operators. And to compound the problem, the P3 crew has to make sure that they have, indeed, found a foreign sub and not accidently given away the secret hiding place of one of our own. It makes for an interesting situation.

The playing field can be any of the oceans and navigable seas in the world. Your mission is to detect, keep track of, and, if necesssary, destroy enemy submarines before they have a chance to launch their missiles against the major population areas and military installations of the United States and other countries you are assigned to protect. In addition, it is your job to help keep the sealanes open and clear of marauding attack submarines and if assigned to convoy duty, to insure the ocean path ahead is free of a lurking underwater enemy.

Let's look at a possible scenario.

Somewhere off the coast of the United States are foreign submarines.





Almost all are submerged and in hiding.

On your side is sonar (for underwater detection) and radar — just in case you might find a submarine on the surface or with one of its motherships, getting supplies. Your mission can also include checking out various surface vessels to make sure they are, indeed, friendly to the United States.

For weapons, your P3 is equipped with depth-charges and Harpoon anti-ship/submarines missiles. Depth-charges are updated versions of what you might see in an old war movie on the late show, but the Harpoon missile is a creature of another sort.



Resembling in name only the instrument Capt. Ahab had to launch against Moby Dick, the Harpoons carried by a P3 are sophisticated missiles that, once locked on to their target by the Orion crew, are fast, deadly, and extremely accurate.

In addition, you have mines that can be dropped in the path of a ship. You can fly fast or slow, and, if needed, call in jet aircraft and friendly Navy vessels to help you in the destruction of your targets.

Now, just in case this sounds easy so far, let's throw in a couple of tricks the enemy has up his sleeves.

He has the entire ocean for a hiding

By DAVID LUSTIG







The crew of the P3 Orion at work: Computer games may simulate, but this is the real thing.



place, possibly sitting in one of those aforementioned underwater valleys or perhaps cuddling under a surface ship. He has equipment to tell him you're searching for him, decoys to fool you, and worse, the prospect of antiaircraft missiles of his own to turn the hunter into the hunted. In addition, he may have nearby surface ships keeping him in contact with the outside world. He can outwait you until your airplane leaves the area and then fire his missiles and torpedos. He can be just as tricky and sophisticated as you.

Now let's throw in still another problem; the weather. Imagine doing all of this not on a clear day with the

sun shining and calm air currents gently skimming under your airplane, but in a rain squall, or at night, with choppy seas and limited visibility. And all the muck you're flying through makes even an aircraft the size of a P3 buck and bounce like a toy.

It can be an exacting, sometimes exciting, mission. And the actions of the crew, once given the go-ahead to engage the enemy, creates the mission's success or failure. No second chances here, no confident knowledge that blowing this try can be rectified by pulling another quarter or token from your pocket and starting over again.

When on patrol in a specific area, the crew of the Orion uses the airplane's radar to detect any oceangoing vessels. Checking surface ships is another part of the Orion's job — as well as any submarines caught offguard on the surface.

If the presence of a submarine is suspected in the area, the Orion gently drops a sonabuoy into the ocean. From the minute it hits, sonar impulses begin. The electronic returns, automatically signaled back to the aircraft are carefully monitored. Ever see an old World War II movie with the sonar operator aboard a Navy destroyer listening for pings from the hull of the submerged sub? Basically, the same thing.

Except a destroyer, limited by its speed, can cover only about 700 square miles of ocean in an hour. But a P3 Orion, skimming a couple of hundred feet over the ocean, can take a look at over 95,000 square miles of ocean in that same hour, searching and laying a "pattern" of sonabuoys that create an electronic net to snare the "pings" of an underwater intruder.

Once the intruder is located, additional sonabuoys are dropped to pinpoint the exact position and then the hunt becomes the kill.

Usually, the Orion's job is to locate and keep track of the submarine while jets from a nearby aircraft carrier or land-base are guided into the area and pursue the attack.

Once one of the sonar operators locks the submarine's position into the computer and transmits it to the missile, it's only a few moments after firing that another submarine can be scratched from the active inventory.

Sound interesting? The crew I flew with was not only enthusiastic, but dedicated. The mission put them on the "frontline" of defense and provided a challenge.

And what do these joystick and sonar operators do on their time off? "Relax with my family," says one, "And then set up the home videogame and play Zaxxon."



By BILL KUNKEL

Bruce Lee: Enter the Joystick!

BRUCE LEE

Designed by Ron Fortier

Datamost/Apple, Atari, C-64/32K Disk

With software development houses busy fighting for licenses for the latest Muppet, Superman or Indiana Jones projects, Datasoft seemed to be moving in its own, unique direction when they announced a game starring. . . Bruce Lee??

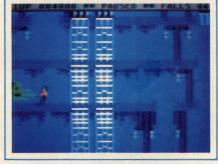
"Let's face it," admits designer Ron Fortier, "The whole Bruce Lee phenomenon was pretty much dead at the time — no morbid pun intended," he quickly adds. "It took a lot of vision on the part of these guys (Datasoft) to pick up this property."

What Datasoft and the creators proved with the resulting game entry is that any viable license can be a success. The alchemy is simple: create a good, playable product that reflects the ambiance of the property being adapted.

A multi-level, puzzle-solving action game with plenty of martial arts added to the brew; this program is a textbook example of how to adapt a film character to the world of electronic



Left to right: Ninja, Bruce and Yamo.



Bruce Lee on the receiving end.

entertainment without losing anything in the translation. Lee, under the gamer's control, must move through a series of interconnected, multi-level chambers beneath a temple ensconced deep in the Himalayas.

Lee must jump up and collect a series of hanging lamp-like objects, while avoiding the non-stop aggression being thrown at him by the tag team of a sword-hefting Ninja and the Green Yamo, a massive Sumo wrestler with a kick that would intimidate a mule and a punch that can knock out an RV.

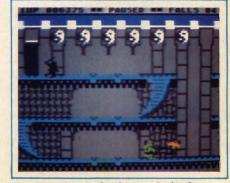
The contest begins with Bruce moving across a horizontal scenario three playfields wide. Once all the treasures are plucked, the martial arts legend must return to the center screen and drop through a now-opened trapdoor into a lower level, with even more dangerous obstacles. Of course, the Ninja and Yamo make reprise appearances.

Bruce Lee is the sort of game that appeals to almost all types of game players. For straight out, kick-the-door-down action, its 20 play screens offer enough flying kicks, swinging

swords, mazes, obstacles, puzzles and treasures to satisfy fans of everything from Lode Runner to the Apshai series. On the other fist, this game reflects a lot of thought in its design. This was no discard program sitting on the shelf waiting to be form-fitted around whatever license happened to fall into Datasoft's lap. The creators put eight months into this game—and it shows.

The game reflects its Oriental genesis in many ways. It's almost Zen gaming: puzzles within puzzles, and not all need to be solved in order to move further into the depths. Others have more than one resolution.

Several of the chambers are so formidable that the Ninja and Green Yamo don't even try to follow. This doesn't mean things are any easier for our hero, though. In these places the master of martial arts must leap and creep and figure out exactly how to get through these scenarios—most of which look like the co-creations of Confucius and Rube Goldberg. Bold and alone, Bruce will eventually work it out—if the gamer's up to it, that is!



Bruce Lee in the dungeon's depths.

THE MEN BEHIND THE COMPUTERIZED NINJA: FORTIER AND DAY

Prior to the release of Bruce Lee, designer Ron Fortier and graphics expert Kelly Day were known primarily for their work on the popular translation of Sega's Zaxxon for the Atari computers. The success of Bruce Lee, however, insures that there will be further collaborations. They happily admit that they have very little choice.

The program's extraordinary graphics were no mere stroke of luck. Even the audio is perfect — especially the theme music and the exaggerated martial arts-flick body contact, with kicks and blows sounding like gunshots.

"We watched all the Bruce Lee movies," explained Fortier, "as well as other martial arts films on videotape. We had this idea of utilizing really fantastic graphics to create a sort of computer-movie with the player as a character. We wanted the animation in particular to be outstanding."

As with all great games, many of the best elements evolved by accident.

"That was the real fun part," confesses Kelly. "Some of the best things in this game just. . .happened! We had gotten all of Bruce Lee's moves down and Ron was just sort of playing around, using a joystick to control the Green Yamo. . ."

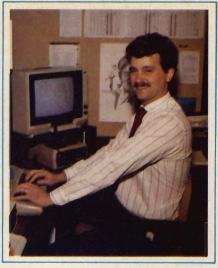
Eureka!

Thus was born the unique idea of a two-player game wherein both gamers take turns at playing the hero, while manipulating the adversary in between rounds. In fact, Kelly warns, "You can do a lot of things with the Yamo on a joystick that the computer can't."

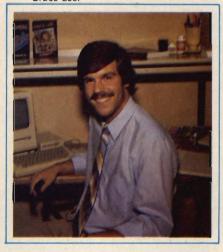
There is certainly very little in gaming that can equal the feeling of controlling the Yamo as he stands at the edge of a ladder which Bruce has to climb. The anticipation of throwing the punch which will knock the



Bruce Lee in mid-quest.



Graphics expert Kelly Day (above) and designer Ron Fortier, whose happy collaboration resulted in Bruce Lee.



redoubtable martial arts wizard into next week is even more pleasurable than the act itself!

The program's bold new look cannot to overemphasized. Kelly read extensively of Oriental architecture, and, "I attempted to integrate the visual effects I saw in the films."

Mitch Junkins, one of the program's producer/godfathers, added that in order to create the proper spiritual deportment for creating such a game, the team also "ate a lot of sushi."

Now that's dedication!

Bruce Lee is hot, and when a game is hot, the inevitable question of a sequel arises. The folks at Datasoft are mum, but remember: the Dragon always seems to return, no?

LIFE AND DEATH IN THE HIDDEN TEMPLE

Surviving in the garden of the Himalayan temple, much less in the mazelike chambers below, will require more than the typical run of hand-eye coordination skills. One must learn timing to deal with the many laser charges that flow periodically between levels and most importantly, acquire almost Zen-like patience.

One of the many hazards of the underground is the moving latticed walls. Often, the player is attempting to move a character up a ladder now in the process of scrolling down. Keep at it. Let fly with an "Ohm!" or two and keep the joystick pointed up. Perserverance will triumph!

Good puzzle solving skills are essential. Freeze the scenarios and examine them. Where are the treasures? How can they be reached? Is there an obvious way out once the item is taken?

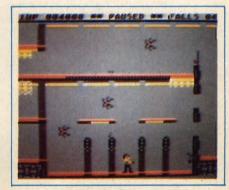
Only play time will teach the bulk of this knowledge. Bear in mind, however, that those spots where treasure hangs can always be escaped from. Even when it seems impossible, taking the trinket often opens a hidden gateway.

Ás Bruce Lee, remember that a good defense is the best offense. In other words: duck frequently. Let the Ninja's sword sing its executioner's song inches above your head while clumsy Green Yamo misses you entirely with his crude jump-kick. Then make fast tracks out of there.

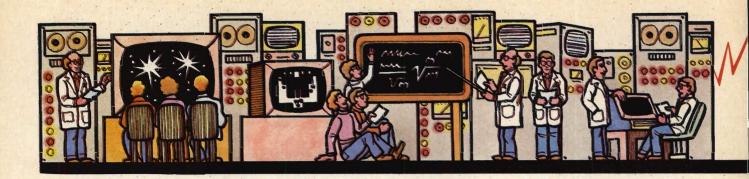
As Yamo, put your icon in a position where you know Bruce must eventually appear (the ledge of a precipice is good) and wait for him. When he shows, punch him in the head and watch him tumble.

Green Yamo's human alter ego must always remember: "Bruce Lee can take only so many shots — Green Yamo always come back!" (Found in a computer fortune cookie.)

There's another way to operate this game, by the way, for noncompetitive types interested primarily in seeing all 20 levels: when running Yamo, use him on the Ninja, freeing Lee to explore uninhibited.



Where Ninjas fear to tread.



The Atari 800XL: A Lot Of Computer For The Price

hen Atari introduced its first "XL" computer, the 1200, the new machine met with anything but unanimous acclaim. Notwithstanding its lukewarm reception, the computer sported a few promising touches, including a systems checkout on cold boot, a "HELP" key, an easily accessible ROM cartridge slot and a hightech, low profile look. Had its price been a tad lower than the original \$1000.00 asked, and had it been capable of running then-current Atari software, it might have had a chance. So much for history. The 1200XL has seemingly reincarnated (sans function keys) as the 800XL, which boasts a host of valuable features, is priced right, and represents to EG's editors the best home computer at anywhere near its cost.

Not that the new machine is flawless. But if asked to recommend a home computer that is ideal for gamers, has sufficient power for programmers, is solidly built and beautifully finished, we'd sing the praises of the 800XL. (As an aside, stay clear of the 600XL. It has neither the memory nor the video output of its superior stablemate.)

Of course, we recognize that many readers might vehemently argue for the C-64, the 800XL's closest competitor. It's currently more popular, and everybody and their uncle is writing programs for it, but this writer strongly believes the 800XL to be superior in virtually every respect.

That said, let's start our tour of the 800XL with the keyboard, which is still a subject of debate among Atari fans everywhere. Although it feels different the 800's, it's not necessarily better.

The Atari 800XL, while not flawless, is ideal for gamers, has sufficient power for programmers and is solidly built.

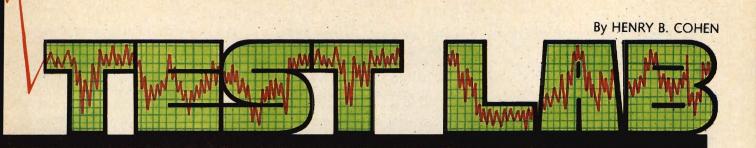
The touch is a little tighter and more heavily sprung, but proficient typists will find it an effortless adjustment, even if they've spent much time on the 800. Best of all, it doesn't feel cheap, loose, and bouncy like many of its competitors. While not in the IBM PC league, it's about as good as a vintage Apple and considering the price that's some achievement.

As mentioned, a "HELP" key has been added but none of our game software used this function, so we don't really know how well this works. The "RESET" key, which used to perform a "warm boot", has been redefined to "cold boot" or "system reset"

the machine. As a result, some experimentation is called for. (In other words if you're programming, don't reset without saving the material first or it probably will be gone for good.) This function can be of benefit to the gamer, since it removes the burden of constantly reaching behind the machine and fumbling for the on/off switch to reset.

Another difference between the 800 and the 800XL is the loss of two joystick ports and the right cartridge slot. While we realize that few quartets ever play games, some software was written to accommodate such a configuration. The ever-popular M.U.L.E.





can only be played by two on the XL, with the computer handling the difference. This is not the best of all worlds, nor does the represent upwards compatibility. The right cartridge slot will be missed primarily by programmers who used to put non-Atari published utility packages into it. Since these features were rarely used by our readers, few people will actually miss them.

The centrally-located and readily accessible cartridge slot is a double-edged sword. It's easy to get at, but it's a bit tricky fitting some cartridges into it. We prefer the old system which offered a higher degree of protection for the cartridge, easier installation and most important, turned the power off when the "trap door" was opened.

For those who frequently change cartridges, the new arrangement means much fumbling to get at the rear mounted on/off switch, which should be thrown every time a cartridge is changed.

Perhaps the most significant departure from the past is the XL operating system. This is computer jargon for the program that 'keeps house', but it impacts the user directly, sometimes right between the eyes.

When Atari changed its operating system many programs became unbootable. The fault is not Atari's but is a by-product of the creativity of programmers who broke Atari's stringent rules and used "tricks" to achieve various ends. The new system does not

accommodate these programming excursions, instead sending an error message to the operator. In other words, it quits. To make matters worse, the system in the 600 and 800XL is a bit more refined than in the 1200XL.

For the past year Atari loyalists have rightfully been screaming their heads off about this predictable problem which could have been avoided had Atari only built in 800 emulation. Unfortunately, they didn't but instead came up with a dynamic duo of "Translator" diskettes (priced at \$9.95) that can be booted into the computer on power-up, allowing the machine to operate about 80% of the 400/800 disk software extant. In engineering terms this solution is anything but "elegant", but it does work. The emulation stops at the disk level, so that cartridge and cassette loading is not effected. For now, or possibly forever, if you own numerous ROM carts or cassette programs you're out of luck. The translators come in heavyduty and industrial strength and should handle almost any problem the user may encounter. An obviously superior approach would have been to write the instructions into ROM (memory contained within the hardware) and make them userswitchable.

Atari BASIC is now contained in ROM, so that the machine normally boots ready for programming. This is certainly a welcome change as it saves users the cost of a cartridge (about \$60.00 list) and BASIC is necessary for many adventure and educational games. But a far greater number of games do not require BASIC and to disable it the OPTION button must be held down during the entire loading process, according to Atari. Our experience indicates that a quick hit to get you started is usually all that's needed. Perhaps a DIP switch hidden underneath the cabinet would have done



the trick, and it would certainly have overcome most of our criticisms of an otherwise superb machine.

Atari computers have always featured superior graphics, and the XL line is no exception. Alphanumerics (letters and numbers) are better formed and easier to read than on virtually any other 40-column machine, and the RF (TV) signals are exemplary. Hooked up to a good TV set it's hard to tell the picture from that of a monitor.

One esthetic, if not downright practical, touch is the use of connectors (jacks) for all wiring leading into or out of the computer. This allows a much "clearer" installation than previously.

When the new XL line was introduced a good deal of praise was heaped on Atari for finally providing an expansion bus. In the old days of the 800 you had two options. One was to reconfigure the internals of the machine through specialty cards, the other was to replace certain chips. (integrated circuits) and draw signals from the joystick connectors. The bus does away with the need to make internal changes and brings all necessary signal lines outside to a single location. (This is a matter of personal preference, as some people like to have all working components purring cheerfully away, safely housed within a single package, while others prefer the freedom of external card slots.)

Actually it was probably more a matter of reducing cost than anything else, but the bus is there for "them that wants" and maybe it's a better mousetrap after all.

A nifty feature of the new XL's is the self-test (diagnostic) routine This program is used by holding down the OPTION key on power-up, or by

SOME THINGS LOST IN TRANSLATION

During the course of preparing this article we loaded a number of ROM cart and disk-based programs. While the "Translator" certainly solved the disk problems, the 400/800 cartridge version of **Demon Attack** was unbootable. Given that we began with 20 cartridges, and that six were manufactured by Atari, this 5% failure rate isn't too bad, but we expect those with larger game collections, especially of third-party software, to have a problem.

typing BYE at the BASIC "READY" prompt. It allows the user to test up to three key functions of the computer. There's a memory test, an audio-visual test and a keyboard test. The audio-visual test is cute, as it paints notes on the screen and plays them to you—shades of "Close Encounters." The keyboard test proves that what you strike is what you'll get.

Documentation for getting the computer up and running is excellent, and like Alan Alda says, will have you going in minutes if not seconds. But if you want to learn BASIC or merely a good deal about the computer itself, you're going to have to buy a book or two on the subject. Remember that the dialect furnished is ATARI BASIC so don't run out and learn MBASIC. It won't work.

Is the 800XL is a competent game player? It's the equal of the old 800, but can be a bit more difficult to use if you need the translator diskettes or have to hold down the OPTION button forever. Although rated at 64K there is no more memory in the new machine than in the old 48K 800. The difference is in the rating system, which used to exclude RAM that only the computer could access. Today all RAM is included in the final statistic. With BASIC booted you get the same 37,902K (plus or minus) of user space as always.

Frankly, for gamers the 800 is a slightly better bet, as all the old programs will run on it without effort. But as these same programs are upgraded the XL will come into its own. Other internal improvements bode well for the future and should enable even better entertainment programs to be written. With built-in emulation this machine would be almost perfect at its street price of \$240.00.

With the 800XL Atari is providing a great deal of computer for the money and complementary peripherals that match its overall superb quality.

The 1050 disk drive, to be reviewed in an upcoming issue, is a good example, as are Atari's printers. These components are a bit more expensive then some competitors, but they are quality products built to take it.

And speaking of quality, take a look at the massive power supplied with the 800XL. It is among the largest we've seen in capacity and should power the computer and host of peripherals effortlessly.

If you're considering the purchase of a moderately-priced home computer, the 800XL should be your first choice. Given Atari's turnaround in attitude, superb product quality and value, we can't imagine buying or recommending anything else.



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By THE GAME DOCTOR

Welcome to the Computer Clinic!

reeting, silicon survivors, and goodness, haven't we got a crowded waiting room? Please, sir, stop pushing that little boy against the window — I'll see you all, I promise!

Well, things are getting a touch out of hand here, so let's skip the T-shirt and see if we can do something about the cause of these hostilities!

I have been an owner of an Intellivision system since the unit was first produced and was greatly distressed to hear that Mattel was leaving the electronic games field. Will the group of investors who purchased the business produce new software for the system? Will third party software companies continue to support the Intellivision?

(Thomas Lynch, Yonkers, NY)

As a viable system, with continued software support, the Intellivision is a dead issue, barring a rise from the grave. But hey, you got plenty of good years out of the thing, and third-party software will almost certainly continue at its present rate: nearly nonexistent.

Move along, brothers, wider horizons await you!

**I read in EG that Coleco's ADAM was going to get a disk drive. I was going to buy a Commodore-64. Can ADAM's drive play everything the C-64 can?

(Allen McClue, "The Video Wiz", Wichita, KS)

A: I really think you should know by now that it's rare enough for two pieces of hardware from the same



Coleco's Adam computer.

company to be compatible — just ask owners of VIC 20 and C-64 systems — without expecting products from independent manufacturers to work in sync. Ah, hope springs eternal. . .

In any case, disk-based software for the ADAM is still rare, while C-64 software is exploding. Several companies, including Sirius and Sierra, have produced Data Storage format software, however, which may be converted for ADAM's floppy disk drive.

• I have a few questions concerning memory and programming expertise. Considering games such as Millipede, Galaga and Sinistar, what would be the average memory today of a coin-

op arcade game?

Secondly, how does Atari manage to cram so much information (Robotron, Centipede) into a 16K cartridge? (Brian S. Johnson, Chicago, IL)

A Paverage memory on modern coin-ops varies greatly (though the games you mention aren't exactly new and require anywhere from 32 to 64K). Further, it's very important to realize that the amount of "K" a game possesses is not necessarily correlated to its eventual quality. If two writers are given books to write and both have 100 pages to tell the story, one may emerge chock full of characters, suspense and plot, while the second au-

thor may fill his pages with mundane plots and two-dimensional protagonist. Although there are technical RAMifications to memory capacity (the machine's ability to simultaneously and independently manipulate a multitude of characters, for example), the fact is that the memory size is just like a painter's canvas. Large or small, it's what goes *into* the painting that makes the real difference.

Q&A QUICKIES: Frank James of St. Albans, NY, wonders when Coleco will be making an adapter for Atari 5200 games. Don't hold your breath, Frank . . Reg Gallant of the Great White North wonders why the same game can be 32K on disk but only 16K on cassette. Good question, boy-o! Actually, it takes 16K to operate the drive, or DOS, but it sure is a lot quicker, no?....To all those folks inquiring into the health of the 5200, I hate to be the one to have to tell you, but . . will you have a seat? Nurse Angela? Could you get these folks some water and a mild sedative! I'm afraid. . .the 5200 is a dead issue. Yes, the worst fears of 5200 owners have come to pass. But there should be 5200 software filling up the pipeline for the next six months regardless. . . Yes, John



Animator Don Bluth and friends.

Morrett, the Don Bluth you saw listed as animation meister for the film "Xanadu" is the self-same creator of **Dragon's Lair, Space Ace,** several Disney films and his own full-length animation film, "The Secret of NIMH"... Elie Isha, come on down! That C-V Football game you've been waiting for is out! Alas, you have to use the "improved" controllers to play it, sigh. ... To the Zappa (Tom Simmons), it's true, the Intellivision II has built-in

voice capability! Get 'em while you can. Who knows, by the time you read this, the units may be given away free with rolls of film . . . Meanwhile, Gregg Black of Santa Barbara, CA wonders why his spanking-new ADAM (converted from the ColecoVision via Expansion Module #3) doesn't have an expansion port for a monitor when his TV reception is so awful! The answer is: when you run the ADAM off your CV, the CV becomes the sole medium which can be run through a CRT. Thanks for sounding the alert! By the way, EG is back on a monthly track, for the benefit of Gregg and the many others who wondered. Thanks, folks. We were the first magazine to cover electronic gaming exclusively, and now we're the only publication "still standing." That's because we've never forgotten that this is a constantly changing field, and you have to change with it to survive. I also think EG has kept faith with you - and you have more than returned the favor.

Okay, enough with the getting out the handkerchiefs. See you all back here next month, and remember to keep those cards and letters coming in — and don't let your game gremlins

get wet!

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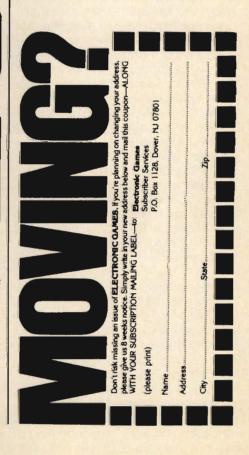
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By JOYCE WORLEY

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They said it couldn't be done. . .but here it is! For years, it was considered impossible to have a moving object in color on an LCD screen. Barriers like that are just meant to be overcome in the world of high technology, and Nintendo's SuperColor games prove that color graphics on an LCD are possible — with a little ingenuity.

Spitball Sparky is a wall-bashing contest with a new twist. Sparky has a honker on him that makes Jimmy Durante's nose look small. By positioning Sparky under a ball, he literally blows it toward the wall of blocks. Then when it rebounds, Sparky keeps the ball in play by using his proud proboscis to shoot it back into the air.

When Spitball Sparky sneezes away the first row of blocks, another wall takes its place, until Sparky misses three balls and the game ends.

Wall bashing has long been a favorite sport of electronic arcaders. Although there have been many attempts to reduce the game to pocketsize, the results have usually been dismal because of the lack of color to brighten up the playfield. This handsome handheld has overcome the problem. Sparky, the big-nosed athlete, occupies a purple field, and

bands of color fill the screen over his head. This is, of course, how the magic is done. It's all an illusion created by clever overlays. But the result is a colorful field that enhances the contest.

Game A is the standard version, with rules familiar to everyone who's ever played one of these Pong-



SPITBALL SPARKY (NINTENDO)

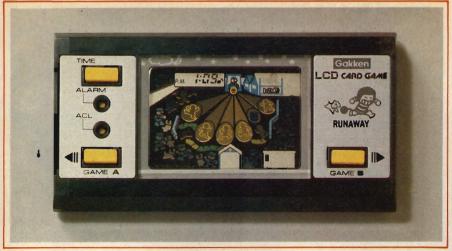
inspired games. Game B is more challenging, since some blocks must be hit twice to eliminate them from the screen. Gamers have to use strategy to decide which block to blow away first, then move Sparky into position to catch the rebounding ball. It starts out easy enough for a novice, but speeds up as the game goes on.

Spitball Sparky is packed in a slim, silver-toned pocket cabinet that looks like a million dollars. Combine this sleek cabinet with the high-skill, colorful on-screen action, and the result is one of the most attractive pocket action games available.

SPITBALL SPARKY: HOW IT PLAYS

Choose Game A or B, then use the switch on the right to move Sparky left and right on-screen. When Sparky is directly under the ball, use the shooter button to fire it up toward the wall of blocks. Sparky cannot hold the ball on his nose, and must blow it away immediately after catching it or it will drop to the ground and break. Three losses, and Sparky is out of the game, Bashing blocks scores points according to their color, and when 300 points are tallied, all misses are cancelled.

Spitball Sparky is also a clock and alarm, and is powered by two LR44 button batteries.



RUNAWAY (GAKKEN)

RUNAWAY

Gakken/about \$30

The arcader stars in a prison camp escape in this pocket wonder from Gakken. The on-screen protagonist should be sleeping in his prison cell, but when the guard turns his back there's just barely time to beat a quick retreat — if the gamer is fast enough to stay ahead of the search beams and avoid the prowling patrols.

The adventure begins when all the jailbirds are lying asleep in their bunks. The control buttons move the convict from his cot across the prison yard. At the wall, landing three blows with his hammer busts him out of captivity and wins the game.

It would all be simple if pesky guards, some with dogs, weren't busily patrolling through the night. Worst of all, there's that beam of light constantly combing the yard. Get caught in the glare and it's all over, and three such losses end the game.

It's actually an easy contest, so no experienced game player will have much difficulty in hopping his escapee from point to point, avoiding those beams of light and the roving guards. The movement is straight-forward and uncomplicated, and it's all a matter of timing each leap and hiding in the shadows from the searchlight.

What makes this game special is the graphic treatment of the spotlight as it swings over the prison yard. The light beams cut a path of golden glare, moving back and forth across the inky black enclosure, making this one of the prettiest, most dramatic-looking miniature playfields in the pocket-game field.

Runaway will never in any award for being the most difficult game in town. But it belongs in every collector's cabinet, because of the innovative use of simple ingredients to produce one of the best graphic displays seen to date in a single-screen LCD game.

RUNAWAY: HOW IT PLAYS

Select Game A (easiest) or Game B, then use the right and left button controllers to hop the prisoner from point to point, forward or backward. Then use the left button to hit the fence with the hammer. Three strikes and you're out in Game A. Game B requires five hits of the sledgehammer to bust the escapee out of the prison camp.

Runaway also functions as a clock an alarm and uses two LR44 button batteries for power.

SNOW WHITE

Inventa/\$14.95

The wicked queen has captured Snow White and the Seven Dwarfs. There's no way to help unless some Prince Charming comes along to rescue them all and remove the evil curse placed on the princess.



back to a safe grassy knoll. It takes seven hair-raising trips to save them all, then it's back once again for the princess.

But as every one who read the story knows, the princess fell into a deep coma after eating a poisoned apple given to her by the queen. The prince must remove four of these deadly fruits before he can approach Snow White.

The right and left buttons move the prince back and forth across the screen, as he dodges spears and knives thrown by the evil queen. After all seven dwarfs have been removed, the princess appears in the queen's house surrounded by the four poisoned apples, and the prince must move these away one by one, in order to finally free the maiden.

The moving objects are all black line drawings against the white backdrop of the screen. Snow White's prison-cottage, the mountain and the queen's castle are all painted right onto the glass in green, gold and red, to add spots of color to what would otherwise be an overly-sparse field.

There haven't been many pocket games designed especially for little girls. Inventa's **Sleeping Beauty** was the first in this line of fairy-tale inspired diversions. Snow White uses the same type of animation and control as that game, to create an easy-play contest with special appeal for the ladies of all ages.

SNOW WHITE: HOW IT PLAYS

The left and right buttons move Prince Charming across the screen to where the dwarf stands, then touching the right button again makes the prince take the dwarf's hand to lead him back to the safe knoll. Move all seven dwarfs to make the princess appear, then remove all the apples in order to free the lady.

Snow White is also a clock and alarm, and operates on button cell batteries.

Electronic Games 87



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* ANSWER: Al Hodge played Captain Video; Don Hastings was Ranger.

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nteraction between the readers and editors of Electronic Games helps make this a better magazine. The more we here at EG know about who you are and what you want to read, the better we can satisfy your needs and desires. That's why we run a Reader Poll in every single issue of this magazine. Rest assured that even though we protect the anonymity of every respondent to our survey, the editor personally reads each and every ballot received. And of course, this is also your ballot for casting your vote for the most popular videogames, computer game programs and coin-op arcade machines.

popular videogames, computer game programs and coin-op arcade machines.

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THE PLAYERS GUIDE TO GAMING MICROCOMPUTERS

Our December magazine-within-a-magazine is a hard-hitting report on the leading microcomputers from a gamer's perspective. If you're ready to pick your first micro — or just upgrading what you already have — here's the information you need to make this difficult buying decision.

GAME OF THE MONTH: MONTEZUMA'S REVENGE

The intriguing new action-adventure from Parker Brothers gets the star treatment next issue. You'll read what the game critics are saying, meet designer Robert Jaeger and get some score-building strategy tips.

ENTERTAINMENT SOFTWARE — THE NEW WAY TO PLAY

There's more than one way to enjoy your computer. Publishers are introduc-

ing a slew of entertainment titles which are redefining leisure time software. Find out about the many fascinating programs in this hot category in the next EG.

GIFTS FOR GAMERS

It's holiday time again, which means it's time for everyone to start thinking about the presents they'd most like to give and receive. Once again, EG presents a photo-packed compendium of great gift ideas which are sure to gladden the heart of any electronic gamer.

SHOPPING FOR DISK DRIVES

Want to boost the capabilities of your Atari computer by adding a disk drive? Our top techie tells you what's on the market and, more importantly, how to get the best drive for the buck.

There'll be plenty of other exciting articles and features of interest to arcaders, plus these regular columns:

- * Passport to Adventure
- # Q&A
- * Inside Gaming
- * Arcade America
- * Software Showcase
- * Programmable Parade
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- * Test Lab
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MpAURLKSEET

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Bally MIDWAY



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with Bung,
the jester,
from line
to line. In fact,
you can even
put in your
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foul up your friends.

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You decide.
WizType™ is a
challenge every step
of the way, so you
won't have to worry
about another game
packing it in.





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Available on Apple II Series, Atari Home Computers, Commodore 64, and IBM PC* & PCjr.