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ELECTRONIC FUN

with COMPUTERS AND GAMES

ICD08274 MARCH 1984 VOL. 2 NO. 5

Great Plays Of The Year

Buck Rogers Reviewed For The Adam



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Commodore Software–

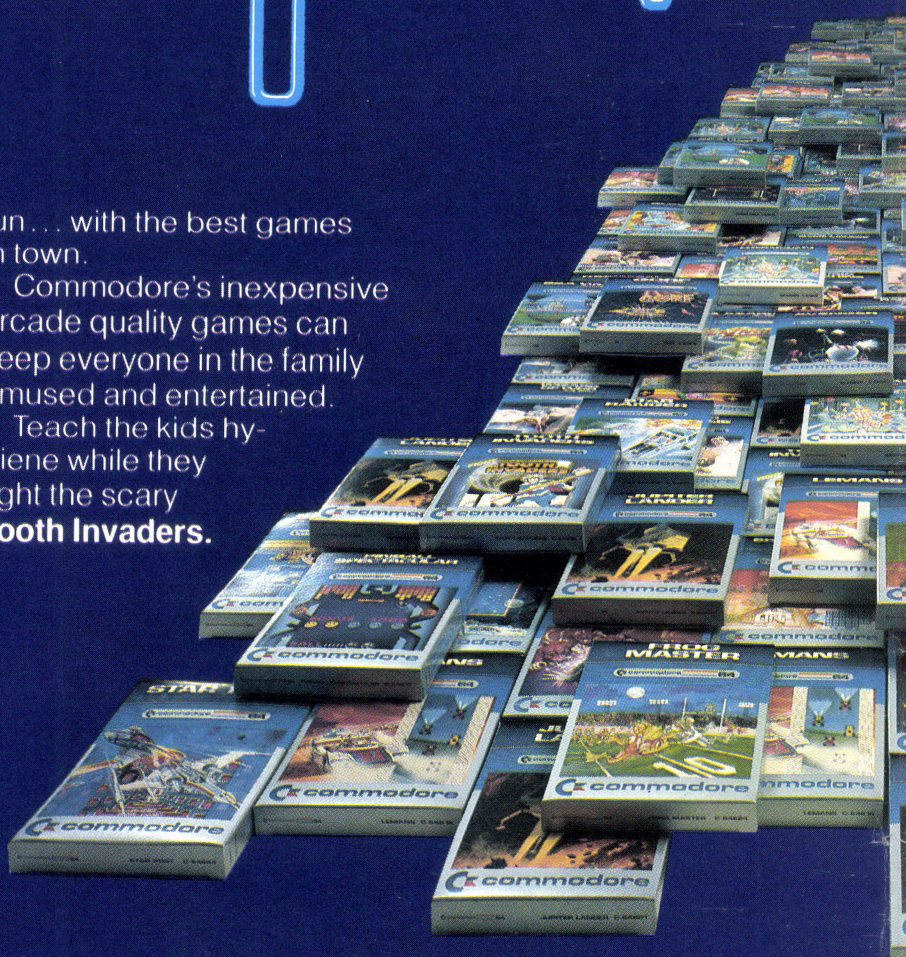
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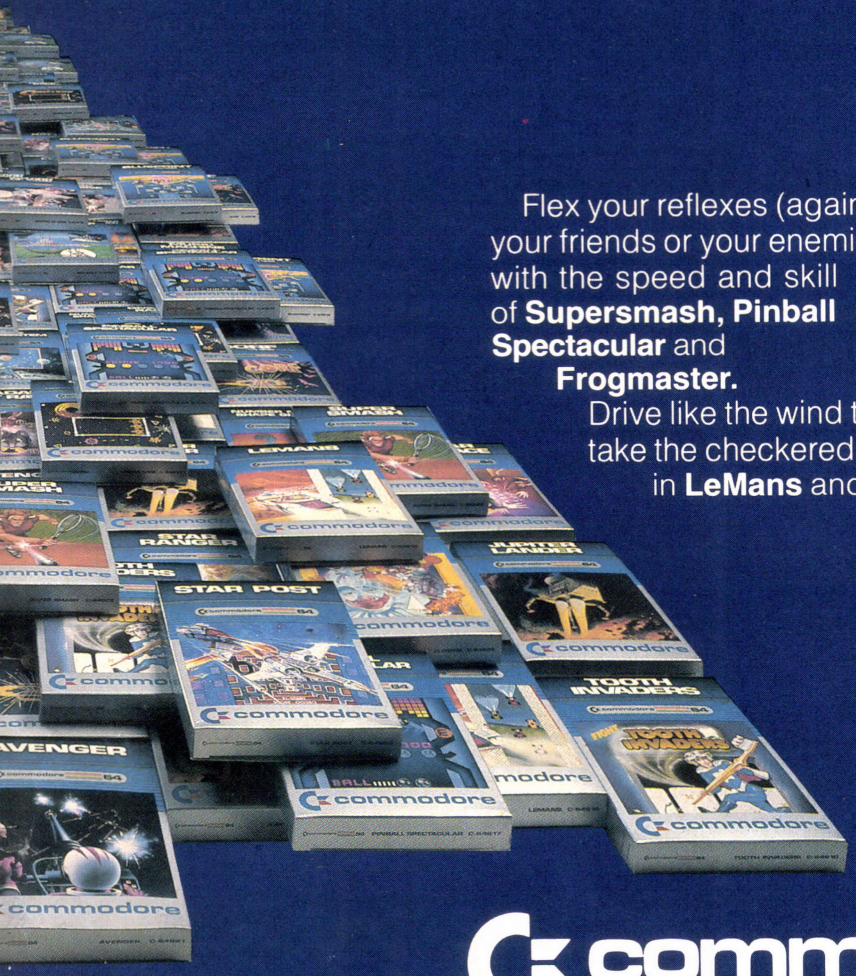
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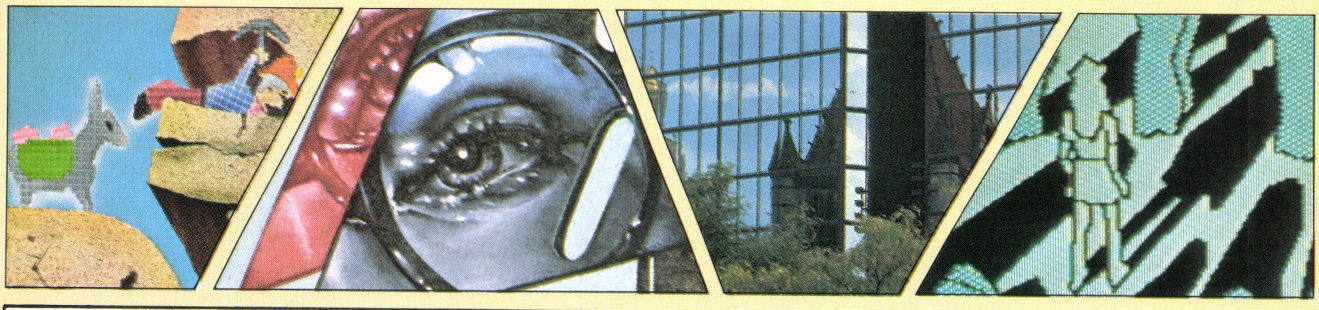
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Special Features

THE FIFTY BEST GAMES *By the EF Staff* You had all the fun when we gave our first annual Hall of Fun awards so we thought it was time we had some fun, too. Here we get to choose our all-time favorite games and tell you why we like them.....**21**

COMPUTER LITERATURE *By the EF Staff* So many books, so little time. Which books should you buy that will best help you make your computer user-friendly? While we couldn't possibly read every single book out there, we did select books that we thought represented a cross-section of what's available.....**34**

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GAMEMAKERS: HI (RES) SIERRA *Interview by Phil Wiswell* Roberta Williams is not one of those people who bellyache about a situation and then do nothing to change it. She didn't like the way adventure games were so she wrote her own and now they're among the most popular.....**30**

HACKER'S HELPER: SCORE AND A-MAZE YOUR FRIENDS *By Robert Alonso* Now that you've got aliens running around, it's time to give them direction and incentive. Robert Alonso shows you how to generate random mazes and rack up the points.....**71**

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COMPUTER WORKOUT: THE 15 STEPS *By Jules H. Gilder* How are you going to learn if you don't ask questions? But in case you don't know the right questions to ask when it comes to deciding which computer you should buy, Jules Gilder asks them for you. And, what's more, he answers them.....**66**

Game Reviews

HITS & MISSILES Michael Blanchet passes the *Buck Rogers* on Adam; Louise Kohl gives *Witness* the third degree; Randi Hacker calls for "Lights! Computer! Action!" in *Movie Maker*; George Kopp encounters *Mr. Robot*, I presume; Phil Oilswell reviews *Wis well*...no, Phil Wiswell reviews *Oil's Well*. That's it; Robert Alonso savesthingsthat go blimp inthe night in *Zeppelin Rescue*; Mike Sheinbaum meets those dancing fools, the Zerks, in *Spare Change* and Craig Holyoak steps on bugs in *Worm Whomper*.....**50**

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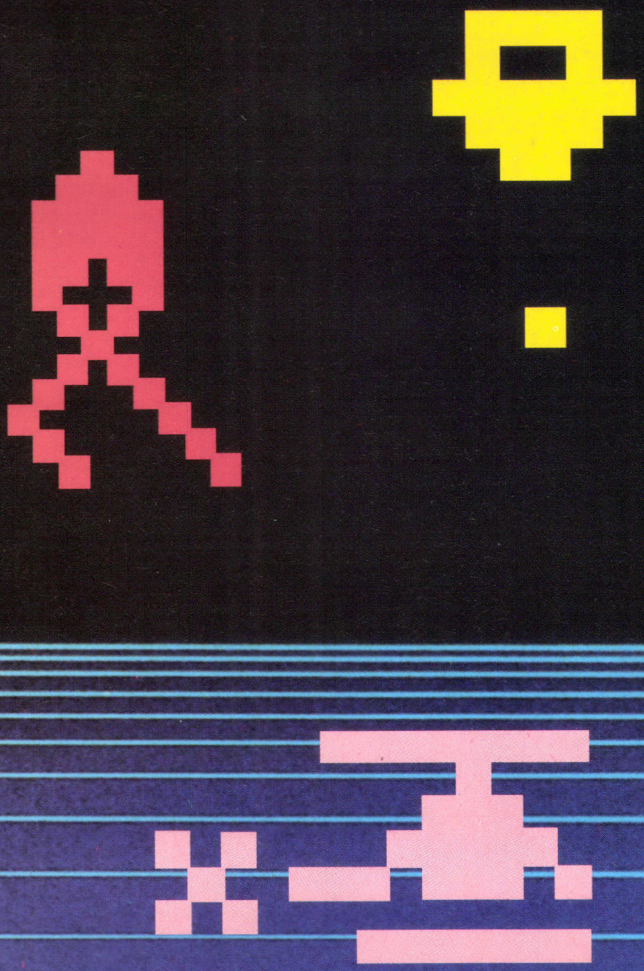
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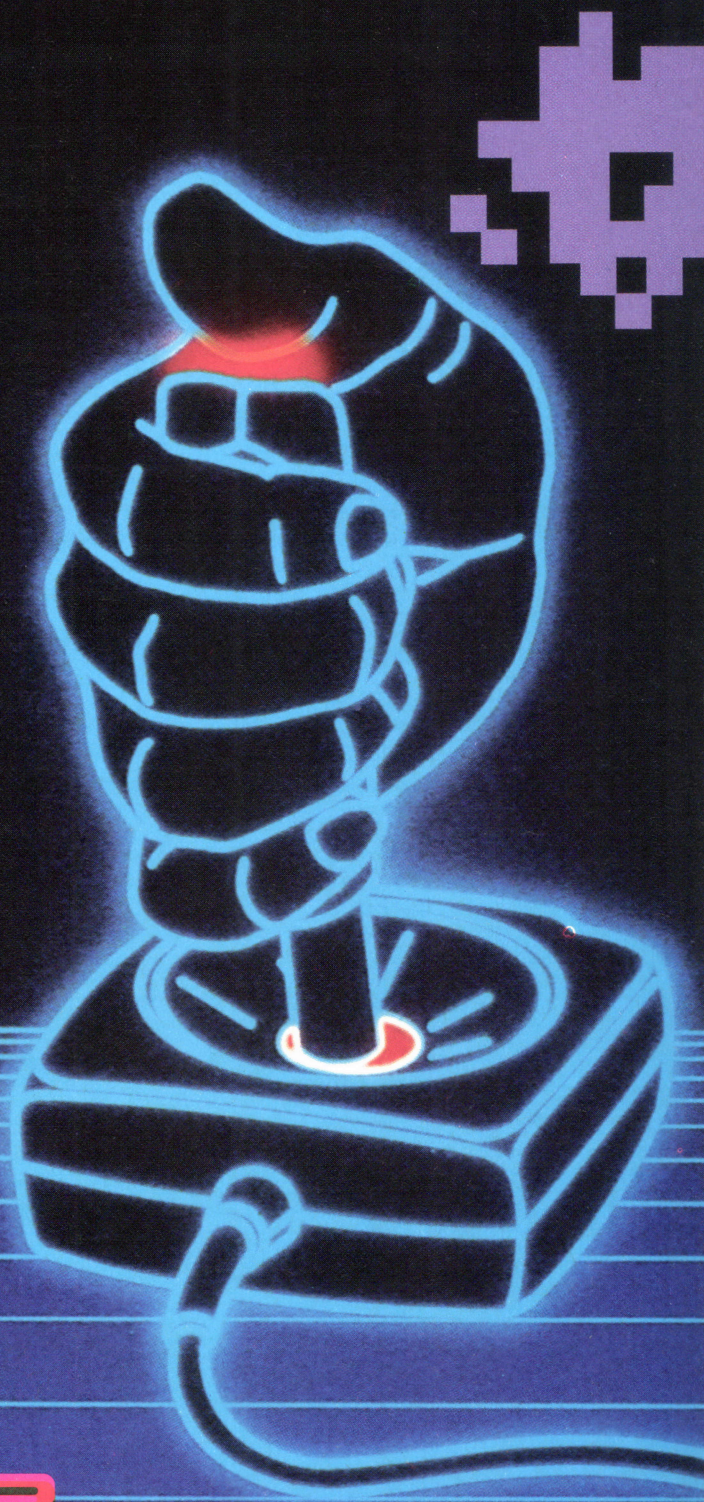
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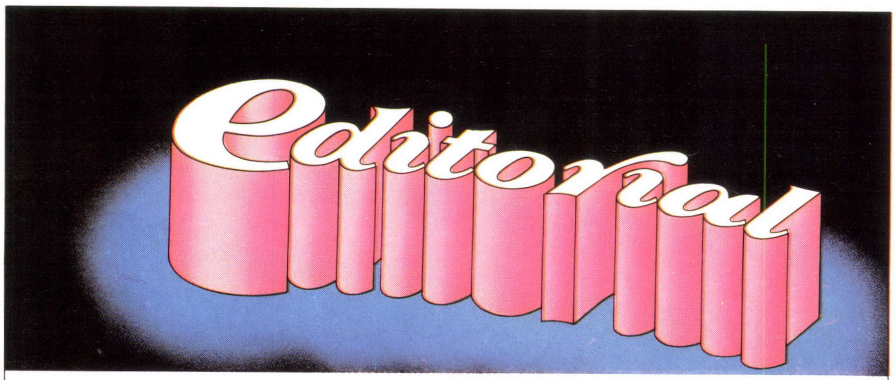


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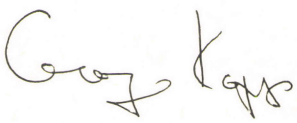
Different Keystrokes

Last year was a lively one for computer owners and the computer business. Millions of more people discovered the fun and benefits of owning their own computers, and millions more will do the same this year. It was quite a year for us, too. When we started Electronic Fun *in November 1982 we had one Atari 800 in the office besides our VCS, Intellivision, ColecoVision and 5200. Now we're overflowing with computers, printers, monitors and disk drives of all descriptions.*

What's happening to us is the same thing that's happening to our readers—we're going computer crazy. Before we boot up our computer shrink program, though, we're going to try to recover our sanity by doing something a little more practical. As of the April issue, Electronic Fun *will have a new look and a new name—* ComputerFun.

Just like Electronic Fun, ComputerFun *will be lively, informative and fun to read every month. We'll still have the biggest review section of any magazine covering computer and video games. We'll still have the same great writers every month. But we'll be chock full of even more articles telling you how to get the most enjoyment out of your home computer.*

If you're a subscriber to Electronic Fun *you'll automatically start receiving* ComputerFun *in the mail. If you're a regular newsstand reader, look for* ComputerFun *next month at the same price you're currently paying for* Electronic Fun. *And tell all your friends!*





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If you own a Commodore VIC 20 or 64, a Texas Instruments 99/4A, an IBM or Apple II, we've got what you've been waiting for!

The biggest arcade hits ever, the classics. DONKEY KONG by Nintendo, CENTIPEDE,™ PAC-MAN, DEFENDER, ROBOTRON: 2084, STARGATE and DIG DUG. (On the TI 99/4A you can also play Protector II, Shamus, Picnic Paranoia and Super Storm.)

And the hits will keep on coming. Soon you'll be able to play JOUST,™ JUNGLE HUNT,™ MOON PATROL,™ POLE POSITION,™ MS. PAC-MAN™ plus others on your home computer. Some games also available on Colecovision and Intellivision.

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letters

OVER THIRTY

You are probably unaware of it, but a large number of your readers are *not* the "shoot-'em-up" under-18 crowd. Most of the monies are in the hands of the "Dads". Evaluate your adventure, sports and mystery entries for the over-30 crowd.

B. Fletcher
Winnipeg, Manitoba

We are aware of that—in fact, a large number of our editors are over 30, too (although none of us will admit how far). Seriously, we try to provide a good balance of reviews that will appeal to every age group, and we think if you read Hits & Missiles closely you'll agree (as long as you don't think being an adult means you can't have a sense of humor, or that being a kid means you can't play a game like Deadline*).*

UNDERWHELMED

I was extremely disappointed when I found out you need to send a program printout in order to enter your First Screening contest. I think this is very unfair; most of your readers (including myself) don't have a printer for their systems.

Howard Uman
Randallstown, MD

We ask for a printout because we receive hundreds of First Screenings every month and we don't always have time to print out every entry on our office computers. However, if you don't have a printer and really are serious about sending us one of your games, please do but be sure to include a cassette or disk with the game program listed on it so that we can read it, check it and print it out ourselves. However, if there's any way you can get it printed out, we'd certainly appreciate it.

WE WANT YOU

Everyone here at Broderbund enjoys your outstanding magazine and looks forward to each new issue, but there was an item in October's EFG Times that we feel deserves some clarification of interest to your readers.

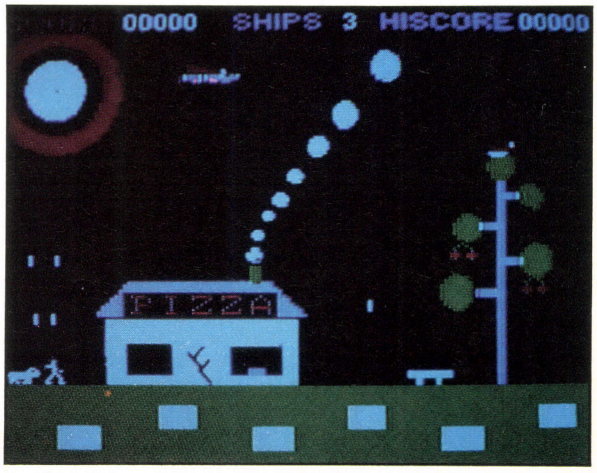
We refer here to the item titled "Calling All Game Designers," which states, "...Getting a major—or even a minor—company to look at your submission...is next to impossible."

To the contrary!

We welcome *all* submissions and spend considerable energy soliciting them and reviewing them. The only "connection" one needs at Broderbund is a phone call and/or a postage stamp—and, of course, the makings of an excellent game!

In fact, Broderbund includes in every game package an open invitation to game designers, encouraging them to submit their games for possible publication. We also have an "Information For Authors" packet available upon request that outlines programming opportunities at Broderbund in even more detail. So, pass it on. If *any*one out there has an original, quality program, send it to us!

Richard Whittaker
Broderbund Software, Inc.



Create your own games with THE ARCADE MACHINE

WE WANT MORE

Count me in with the readers who want to see your First Screening section expanded. I think you should publish two programs every month instead of one, because all of the computer systems will be better represented. I have another suggestion: How about a section on programming tips for computer fans?

Robert Kuligowski
Endwell, NY

Right on time, Robert—see our Hacker's Helper section, which began in the January issue. And as for First Screenings, well, from now on, there'll be at least two a month.

Write to us! We can't promise that we'll answer every letter, but we will read them all. We welcome your comments, advice and questions. Send your letters to: Electronic Fun, *350 E. 81st St., New York, NY 10028*



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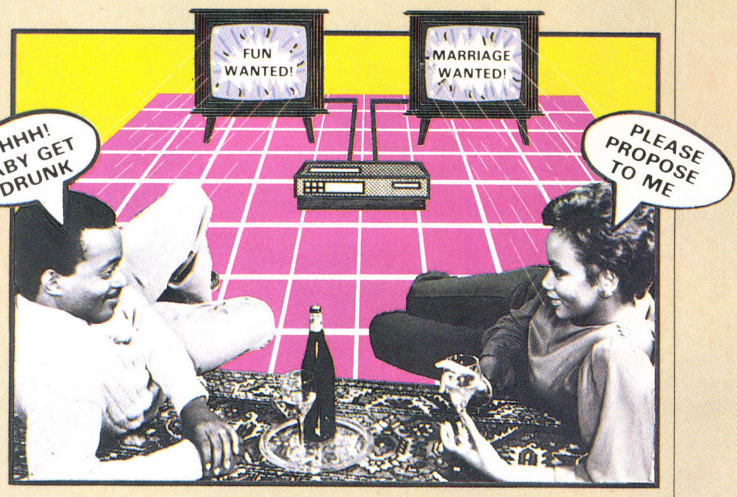
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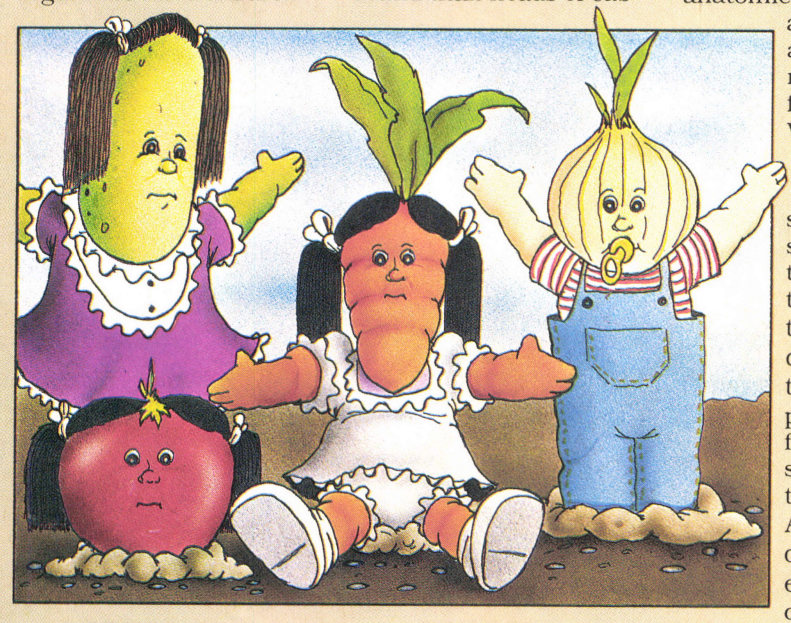
From the ridiculous to the subliminal



Call Any Vegetable

Entirely too much is being said about people's rights and entirely too little attention is being paid to the rights of lower life forms such as vegetables. This is shameful and something must be done. Take, for example, Coleco, whose Cabbage Patch Kids have caused no end of rioting and general uprise and unrest in the recent past. We feel that this choice of the cabbage over other vegetables is unfair. What about equal opportunity? Other vegetables have children and families. How are they supposed to support them if cabbages are getting all the work? This is flagrant food abuse and discrimination. It has to stop. We suggest that you take a good hard look at yourself. Are you a food abuser? Do you beat your eggs, for example? Do you separate them? The separation of the nuclear egg is a barbaric practice that went out with slavery. Don't beat your eggs. Verbally humiliate them if you must, but don't raise a hand to them.

And, as for Cabbage Patch Kids, well, we here at the Legume Welfare League believe that other vegetables can be made into dolls that are just as cute, just as cunning and even more nutritionally sound than heads of cabbage. Corn Patch Kids. Carrot Patch Kids. Onion Patch Kids and the ever popular Sour Kosher Dill Patch Kids. After all, vegetables are people, too.



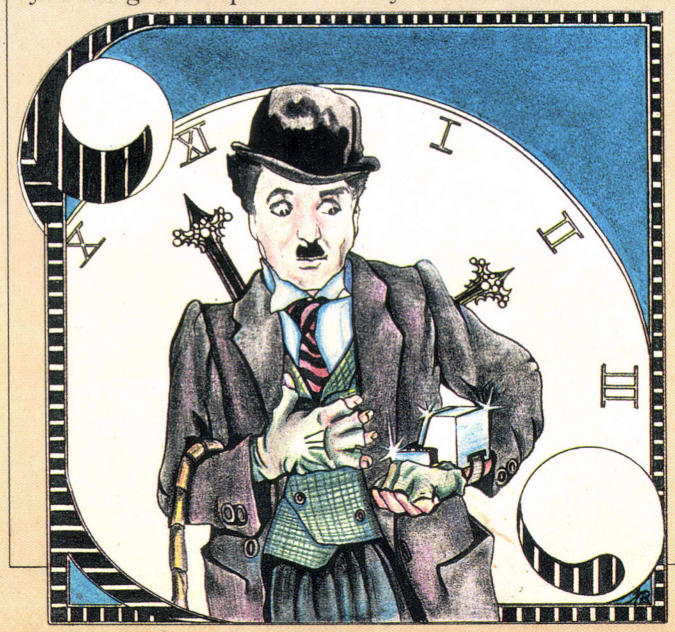
Sublimate The Positive

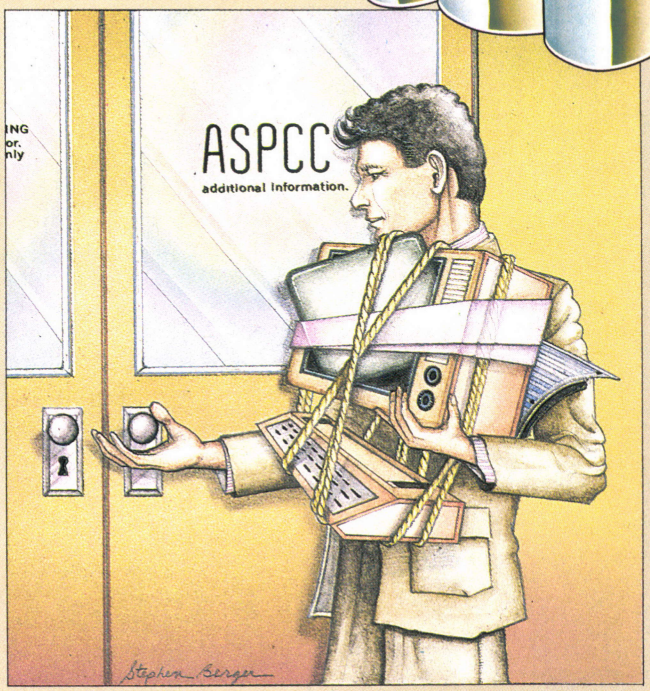
If you're anything like we are, self-hypnosis programs for self-improvement just don't work on you. Either you fall asleep just as you get to "My torso is relaxed, very relaxed," or you forget what anatomical part comes above the ankle and so are stuck relaxing your feet all night. When they first came out with subliminal persuasion, that seemed to be the ticket. At timed intervals throughout a drive-in movie the message "Buy popcorn" would flash for a split second across the screen. After a number of repetitions, everyone got out of their cars and ran to the concession stand. Just when we thought it might help us to quit some of our nastier habits and possibly raise our circulation numbers, it was outlawed. But now it's back thanks to Stimutech, Inc of East Lansing, MI. Stimutech is marketing an $89.95 junction box which interfaces with Atari and Commodore computers and can be linked to any video program. Eight Expando-Vision software programs are available which flash messages about health, memory, stress control and so forth every $\frac{1}{30}$th of a second. The message menu consists of 45 statements such as "I see myself thin" and the company maintains that through the use of this device, you can rid yourself of antisocial behaviours (or, presumably, pick some up if that's what you want). Results occur within a month with two hours of use a day. Other areas, such as staff motivation and possible "private labeling" are being researched now. (Private labelling, huh?) It would be nice if we could program our own subliminal messages such as, say, "I see myself filthy rich," or "I see myself fluent in Italian" or, for the myopic among us, simply, "I see."

Glitches

It's Six O'Clock Computer Standard Time (CST)

There are certain programs you can type in that will turn your very expensive computer into a digital clock or stopwatch but what's the point? They're a little too heavy and unwieldy to take with you when you're running a footrace, for example. And even if you could balance one on your wrist, where would you find a band that fits it? If that was a problem once, it no longer is as Seiko has announced the availability of its new watch computer. Lately it seems it don't mean a thing if it ain't been turned into a watch. Any new product can count its worth by whether or not it's been made wrist-compatible. Radios, for example. You can get a radio wristwatch (AM and FM) now more easily than you can get a simple radio. So it isn't surprising that a wristwatch-sized computer is being readied for sale. The three unit system is composed of a wristwatch, keyboard and processor. It can calculate, retain data, carry out basic program applications and print out data, according to Seiko. The keyboard is small enough to fit in your shirt pocket and the processor has the calculating capacity of a personal computer. The wristwatch unit operates as a normal watch does but also has a display capacity of 2,000 characters. In addition, the watch's LCD can show graphic patterns and can display data on a full-dot matrix. The cost of the three units will be $230. Seiko is already guilty of what smacks of discrimination. What about those of us whose shirts have no pockets? Where will we carry our keyboards?





If I Had a Hammer

Clearly one of the recurring themes in this month's Glitches is cruelty and abuse. Here's another example of man's inhumanity to inanimate objects: The Bit Banger. The Bit Banger is a mallet with which you are encouraged to pulverize your computer each time it comes up with just one syntax error too many. You are told to vent your frustrations on the keyboard and monitor by hitting it with the mallet hard. Oh, we forgot to tell you. The mallet is made of foam rubber. Yes, friends, it's a joke hammer and is being introduced as the "modern cure for computer frustration." Each Bit Banger comes with a 16-page booklet which depicts various computer problems which can be alleviated with the help of a Bit Banger. For example, If the Disk Drive won't boot, beat it. This is all fine and good for the first few times but things of this sort can be habit-forming. Where one good hit will do you for an entire day in the beginning, later you find yourself going back twice, three times and even four until well, pretty soon you're spending your whole day just waiting for the next time you can lay into your computer. Then, suddenly, foam is no good. You needs something stronger. And then, well, it's too horrible. At this point, I make my move. At this point, I plan to come out with a foam rubber computer which can be hit with a real mallet.

Illustrations: Ron Young, Pat Kinsley, Tom Newbury, Stephen Berger

new products

Clothes and clones



VIDEO MANIAC

Electronic Sportswear

"Sure I'd like to go to the arcade tonight, Tommy, but I don't have a thing to wear." Has this been one of the reasons you haven't been seen around the arcade circuit? It no longer has to be. Not if you send for any of these items from the Video Maniac catalog. They've got T-shirts (muscle, long sleeve and bourgeois/conventional styles), video game gloves, sports shirts and more. There's also the double-sleeved shirt and the Video Maniac logo will also be available on shorts and socks in the spring. If clothing is not your problem, there's a line of VM cosmetics or a groovy 22x30 color poster for your room.

Video Maniac
PO Box 2728
Capo Beach, CA 92624

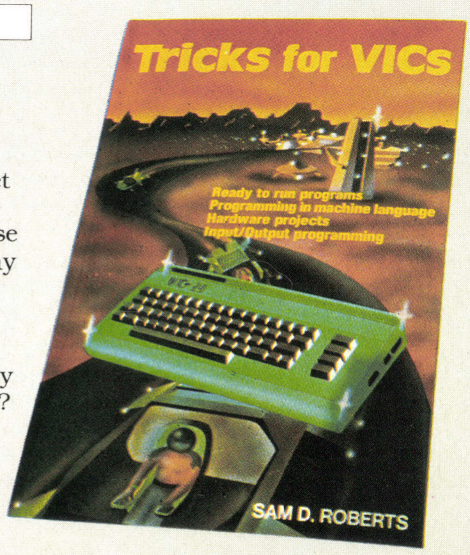
VIDCO

Cartridge Copier $49.95

Let's say your friends have all the game carts you covet but they won't let you borrow them for too long because they like them, too. And let's say that you can't afford to increase your game library as quickly as you'd like. What do you do? You could go into a life of crime but why besmirch the good family name? Buy the Copy Cart instead. The Copy Cart is a device that allows you to copy one video game onto a blank cart and then play it. All you need to do is insert the cartridge to be copied at one end of the Video Game Recorder, the specially designed Copy Cart at the other end, press a button and, voila. It runs on batteries and the Copy Cart can be erased and used over and over again.



Vidco International
1220 Broadway
New York, NY 10001



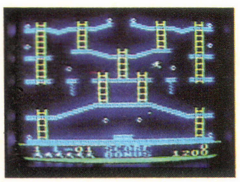
ELCOMP

Tricks for VICs $9.95

Tricks for VICs allows you to perform all sorts of nifty routines on your VIC 20 computer. There are ready-to-run programs, a section on machine language with sample programs, hardware projects and a section which teaches you how to control external devices such as stereo equipment and household appliances using your computer. Complete schematics, and printed circuit board layouts are included.

Elcomp
53 Redrock Lane
Pomona, CA 91766

JUMPMAN'S A GREAT GAME. BUT YOU'VE GOT TO WATCH YOUR STEP.



Meet the Alienators. A fiendish bunch who've planted bombs throughout your Jupiter Command Headquarters.

Your job? Use your lightning speed to scale ladders, scurry across girders, climb ropes and race through 30 levels to defuse the bombs before they go off.

That's the kind of hot, non-stop action we've packed into the award-winning,* best-selling Jumpman,™ and into Jumpman Jr.,™ our new cartridge version with 12 all-new, different and exciting screens.

Both games force you to make tough choices. Should you avoid that Alienator, climb to the top and try to work your way down, or try to hurdle him and defuse the bombs closest to you before they go off?

If you move fast you'll earn extra lives. But if you're not careful, it's a long way down.

So jump to it. And find out why Jumpman and Jumpman Jr. are on a level all their own.

One to four players; 8 speeds; joystick control. Jumpman has 30 screens. Jumpman Jr. has 12 screens.

EPYX COMPUTER SOFTWARE

STRATEGY GAMES FOR THE ACTION-GAME PLAYER.

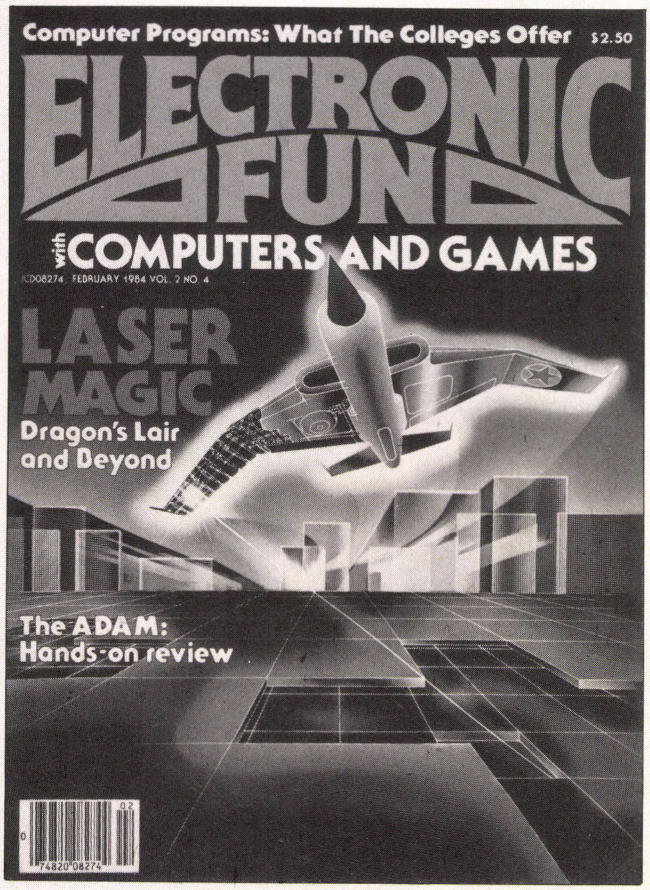


*1983 C.E.S. award winner.

E.F.C. Times

VOLUME TWO, NUMBER FIVE MARCH, 1984

CALL US COMPUTERFUN



Say goodnight, EF. Goodnight, EF

Stop the presses! Bust the wire! Here's a story that's hotter even than man bites dog. This is the last issue of *Electronic Fun*. Repeat: You are currently reading the final issue of *Electronic Fun*. But, before you become too depressed and contemplate defenestration, read the rest of the story.

Say goodbye to *Electronic Fun* and hello to *ComputerFun*. It had to happen sooner or later. In fact, we've been moving toward this since the first issue of the magazine way back in November of 1982. The marketplace has been changing and so have we. Each month our computer coverage grew and grew until it pretty much dominated every issue of *EF*. For this reason, and because we always want to keep on top of what's going on in this rapidly changing field, we've decided to change not only the name of our magazine but much of our format as well. As of the April, 1984 issue, we'll be out under the name of *ComputerFun*.

ComputerFun will cover everything that a computer enthusiast wants to know. No, we will not tell you how to create a working household budget or do your taxes on your home computer. We will, however, cover *every* aspect of recreational computing under the sun. From programming tips to off-the-wall software to mastering Infocom games, *ComputerFun* will have it all. We'll still have the same fine writing style and we'll still have the most extensive and honest software review section of any magazine. The major difference will be the absence of articles that deal exclusively with video games. Video games, however, will have their place in *ComputerFun*. Michael Blanchet will write a column devoted to what's new in video game technology and reviews of new software for dedicated game systems will still be included in our *Hits & Missiles* section.

Our *First Screening* section will be expanded and we will add several other sections geared to the recreational computer hacker—programming tips from our readers, book reviews and articles such as how to set up your own community bulletin board.

In short, *ComputerFun* will be *the* magazine of recreational computing. Look for us on your newsstand around March 20 and spread the word.

MONTHLY CONTEST



One winning score

We expected to receive high scores from *Demon Attack* players on every system but, alas, that wasn't the case. We had to content ourselves with two winners.

The winner on the Atari 2600 system was Craig Young of Baden, PA. He sent in a picture (not printed here) with a whopping 555,520 score showing but claims he scored even higher despite the fact that the screen goes blank after the 84th wave.

The winner on the Intellivision version is Louis Spaner who forgot to tell us what cartridge he wants. Get in touch with us, okay?

**Editor's Note: Although the Monthly Contest is discontinued as of this minute, the winner of the February contest, will* still *receive his or her prize.*

DRAGONRIDERS OF PERN™
FLY THE UNFRIENDLY SKIES.



Shooting down the menacing and constantly multiplying Threads isn't easy, but it's only one of the challenges in this official computer game version of Anne McCaffrey's famous book series.

Your strategy will be put to the test as you try to negotiate alliances with Pern's Lord Holders in an attempt to form the most powerful Weyr on the planet. Should you take a firm stance or compromise? Will asking a Craftmaster for assistance increase your chances for success? Maybe you should invite prospective allies to a Wedding or even a Dragon Hatching. Remember to check the Lord Holders personality traits first. It may be critical to your success.

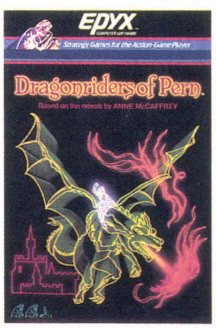
Numerous screens combine to create truly unique and challenging game play. There's even a practice screen to sharpen your Thread Fighting skills.

If you liked the books, you'll love the game. After all, how often do you get the chance to actually fly a dragon?

One to four players, joystick and keyboard controlled.

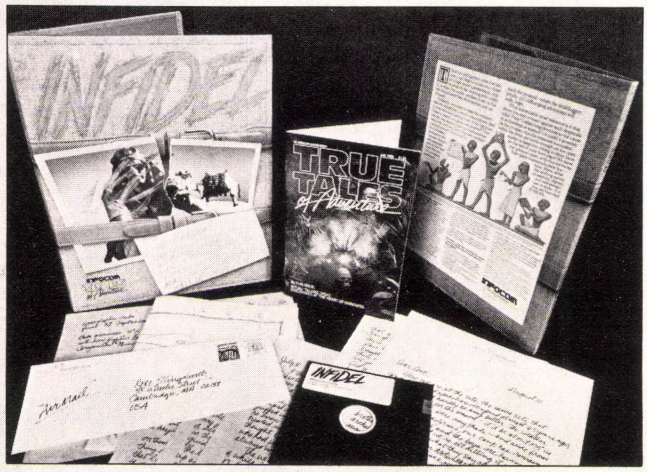
EPYX™
COMPUTER SOFTWARE

Strategy Games for the Action-Game Player



INFOCOM'S INFIDEL'S IN STORE FOR YOU

They all laughed at Christopher Columbus when he said the world was round. They all laughed when Edison recorded sound. They all laughed at whether you solve it or not. And if you're anything like us, you look pantingly forward to every new release from the company. The latest is *Infidel* which is the



Infidel: Will the dunes bury you?

a lot of people including the folks at Infocom when they claimed that there *was* a market for all-text adventures. Well, Infocom has the last laugh now. They manage to get at least three games in any Top Ten list in any given month. Despite the fact that Infocom games are all text, there is no lack of graphics. Like the radio shows of the Thirties and Forties, Infocom adventures let *you* supply the pictures and unlike computers, your memory is not limited by low-res graphics capabilities. The result is a vivid, living game that really re-defines the term "interactive" and which is fun and absorbing

first in Infocom's new *Tales of Adventure* series. *Infidel* casts you as a rather lowdown archaeologist who, in an underhanded way, manages to wrest a pretty lucrative Egyptian assignment from your partner. However, once you get over there, you find that dealing with the natives is not as easy as your partner made it seem and, pretty soon, they're poisoning your kumiss and everything. You've got your own personal Mid East crisis, in fact. As usual, the support material is witty and entertaining and the game promises not to disappoint. It will sell for anywhere from $49.95 to $69.95 depending on the system you have.

Infocom is the company that brought you such wildly imaginative games as *Enchanter*, in which you play an underdog sorceror sent to vanquish Krill, the evil wizard, who has an entire elvish hamlet under his malevolent thumb; *Planetfall*, in which you are the sole survivor of the SPS Feinstein who must revive the cryogenically preserved population of an entire planet and *Deadline*.

Poet's Corner

As this is the swan song of the EFG Times, we've decided to print two poems from budding Allen Ginsburgs. The first is from 10-year-old Alex Holcombe of San Antonio, Texas and it receives the EF Award for the Most Unusual Rhyme for the Word "Also" (see line four). The second is from Marcus Murdoc, of Lewisburg, Tennessee and is entitled "Not My Day."

□ □ □

Video Games

PAC-MAN, FROGGER, DONKEY KONG, too!
These are the best games for me and you.

ZAXXON, TRON, GALAXIAN, also!
They're for people whose fingers are like fossils.

NIGHT DRIVER, TURBO, POLE POSITION, too!
They are for reckless drivers like you.

Not My Day

I played my Atari but it wasn't my day,
The ghosts in my PAC-MAN all got away.
My soccer players kept losing the ball,
And in my BREAKOUT, I couldn't break through the wall.

The SPACE INVADERS landed their force,
The ASTEROIDS destroyed all my ships, of course.
I couldn't break a code no matter how hard I tried,
My COMBAT team just up and died.

Well, I've finally had it. I lost my fight.
So I'm putting my Atari away for the night.
Tomorrow will bring another new day.
I just know I'll win every game that I play.

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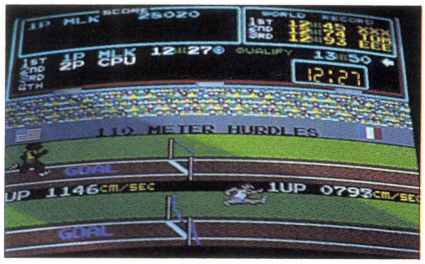
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Congo Bongo and Track and Field:

By Michael Blanchet

TRACK AND FIELD

In a world dominated and deluged by cute maze climbing and just plain dumb games, *Track & Field* comes as a welcome oddity. Here's



a game that's as physically gruelling as the sport it depicts. Now before you stop reading and say, "This sounds just like that Activision game that gives you blisters and makes you sweat like a pig," let me tell you something. You're right—to a point. There's still some heavy slapping involved here. The good news, though, is that all the events included here are the short ones, namely the 100-meter dash, the long jump, the javelin, the hammer throw, the 110-meter hurdles, and finally the high jump. Oh, some more good news: you won't have to jiggle a joystick back and forth in public. Stern, thank goodness, has equipped this piece with two pairs of "run" buttons. The faster you tap them, the faster your man will move.

Veterans of David Crane's home *Decathlon* cart no doubt already have the basics down. For the rest of you, a recap of each event. First up is the 100-meter dash. To continue on to the next event you must finish this race in less than thirteen seconds. This "must qualify" stipulation, by the way, applies to all the events. You get three



chances to better the posted time, height, or distance. Fail and the game is over. But all you have to do here is slap like crazy. Develop a rhythm. Hit one button and then the other.

Jumping For Quarters

Next up is the long jump. Here's where it pays to have a buddy along. The qualifying distance is seven meters. One of you should man the run buttons, the other the white jump/throw switch. For maximum distance (my friend Chris and I topped nine meters doing this) sprint like the devil down the runway. Just before the athlete hits the scratch line the second player should press the jump button and hold it until the number denoting the angle of takeoff reads somewhere between thirty-three and forty degrees: thirty-eight or thirty-nine degrees works best. However, you should at least qualify if the indicator is set at no less than thirty and no more than forty-two.

The same fundamentals apply in the javelin. When you reach the foul line press and hold the throw button until the angle of trajectory is between thirty and forty. Again, the high thirties will yield the best toss.

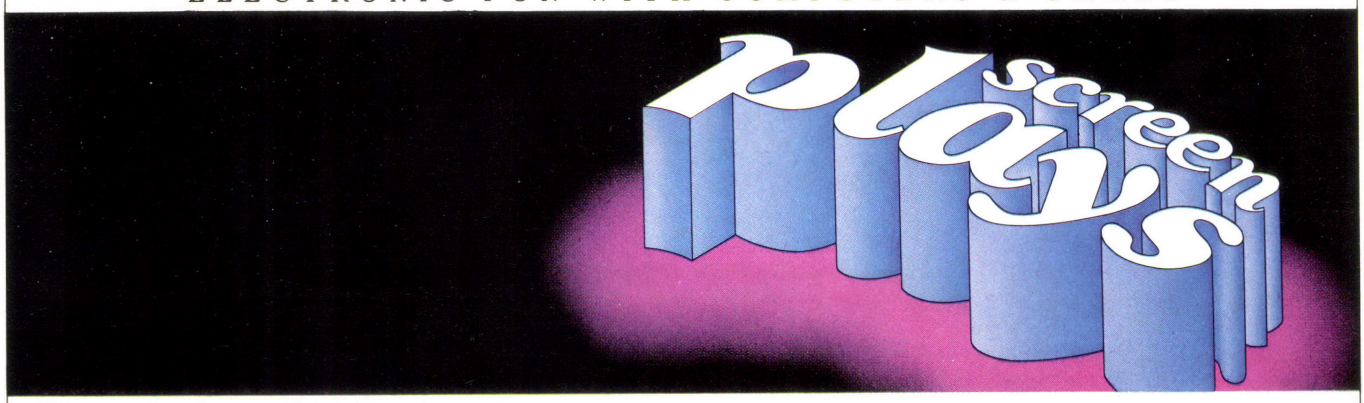
The hurdles should be self-explanatory. Just run and jump. You'll really need a partner here as you will in the next event—the hammer throw. To wind up, briskly



tap both buttons. As the athlete spins he will near the front edge of the circle. The thrower should release the hammer just before it reaches the twelve o'clock position.

Finally, we have the high jump. Here is where you've got your work cut out for you. The standard full-steam-ahead approach is again recommended. The angle of ascent depends on how close you choose to take off. If you're near the bar go for eighty degrees: readjust the athlete's angle as he begins to flatten out.

Of course, none of the above strategy tips can possibly take the place of a regimen of training, clean living and really expensive shoes. You might also try getting corporate sponsorship. You might, for example, be able to interest one of your local merchants into becoming, say, the official dry cleaner of your local video arcade. Get *really* good and maybe you can get a college scholarship or a commercial for razor blades. □



Ape and athlete

CONGO BONGO

Probably the most unabashed *Kong* clone ever, *Congo Bongo* isn't just another climb-the-structure-and-save-the-girl game. The last thing the world needs, particularly gamers, is another damsel in distress. The motive here is revenge and the perspective is *Zaxxon* style. The object? Scale Primate Peak, cross Snake Lake, survive Rhino Ridge, and hopefully, reach the far side of the Lazy Lagoon.

Basic *Donkey Kong* fundamentals still apply here. You climb, you



jump, you duck, and sad to say you start over again from the beginning when you die. Thanks to the *Zaxxon*-esque perspective, you can maneuver along two planes instead of one, and this means there's a lot more margin for error.

Primate Peak is a piece of cake. Just move your man as far left as possible and climb up to the fourth level. Time the falling coconuts properly because now you must cross the bridge to the right side of the screen. From here it's down the ramp and Boof!—kiss that monkey good-bye. Cross the waterfall and climb the steps to the level with all the little simians. You may notice that at this point you've taken on some baggage in the form of monkeys. With the joystick at center repeatedly press the jump button and they'll fall off.

You'll need to make a running approach to clear the waterfall. Once across, move as far left as possible. Climb up until you reach the arrow.

By comparison round two is far more difficult. Logic says that here the best way is the long way. Not



so. Jump straight across stopping briefly at the two middle islands, the hippo's back, and finally the far shore.

In round three the jump button does double duty. When in a hole holding it down will cause you to duck. Here the name of the game is to wait, but not too long. You can squat in each hole for only eight seconds, so get out at the first opportunity that presents itself. And be smart when you do—climb out on the side, not the front or the back.

Hippo Hopping

In the final sequence you get to play *Frogger*. Move over to the leftmost floating leaf. When it passes close get on it and wait for the hippo to come up on its left side. Now board the hippo and stay with him until you reach the small parcel of land that juts out into the lagoon. The far shore is now but a fish ride away. Hit the stairs and you're



home free.

Although graphics in the arcade are, as a rule, very high res, well animated and exciting to watch, *Congo Bongo*'s exceed even these high standards. The little man's knee action when climbing up the 90 degree cliffs is realistic enough to make you wonder why he never needs to have his pants mended. In fact, the graphics in *Congo Bongo* come about as close to a full-length cartoon as you can get without a laser disc. □

Input Output

Space Ace chase case

Could you tell me a little about the new laserdisc game, SPACE ACE?

Matthew A. Hall
Scottsburg, IN

We can and we will. *Space Ace* ought to be in the arcades as you read this. Produced by Magicom (formerly known as Starcom), the people who brought you *Dragon's Lair*, *Space Ace* is the tale of Ace, the macho hero who gets zapped by the evil Borf's Infanto Ray—which reverts him to his younger self, the 90-pound weakling Dexter. Ace is not too thrilled by this (Neither is his girlfriend, Kimberly.) Dexter's mission is to stop Borf, who plans to take over Earth by turning its entire population into babies. The gameplay is said to be 50 percent faster than that of *Lair* and during the game you have more than one play option to choose from—as opposed to *Dragon's Lair* and its only-one-decision-is-the-correct-one format.



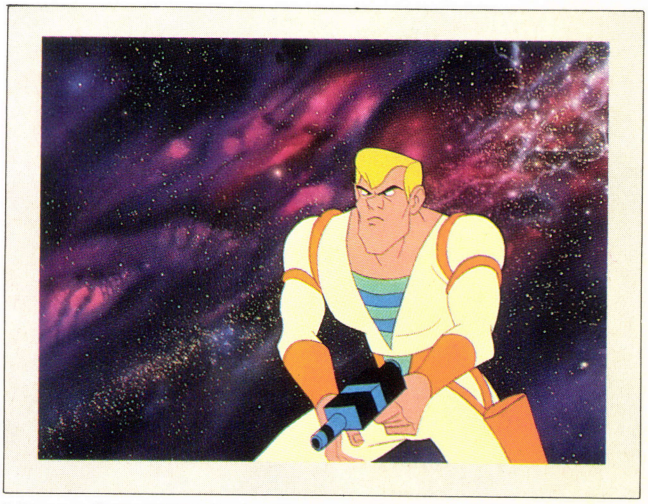
Since the game is in the arcades now, you may know all this already. What you probably don't know is that the people at Don Bluth Animation are currently hard at work on their third laserdisc game, called—are you ready—*Dragon's Lair II*.

In this game, our pal Dirk has married Daphne, and they have 13 kids! No word yet on when *Dragon's Lair II* will be in the arcades. But you can bet your booties that The Fly has something to say about this ambitious plot line. For his immortal prose and inimitable commentary, please see the last page of this issue.

Where is the Commodore 64 made and does it have built-in BASIC? Will Atari make all their software available for the Commodore 64?

Kurt Scherner
Rochester, NY

Although the Commodore 64 is assembled in West Chester, PA, some of the components are made in Japan. The 64 has a built-in version of Microsoft BASIC. As to the second part of your question, by the time you read this, you should be able to walk down to your nearest software store and buy any of the most popular Atari titles in Commodore 64 format, under the Atarisoft label.



I would very much like to know if there is a club for the 5200 system and if so, how do I join, and what's their membership fee?

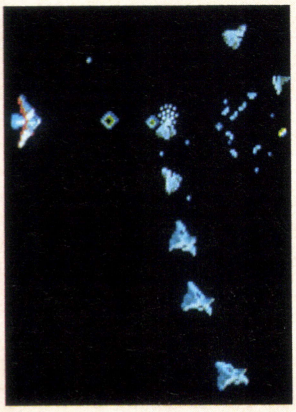
Michael Knight
Anderson, SC

We haven't heard of any club specifically for 5200 owners, but if you'd like you can join *Atari Age*, which covers primarily the 2600 but also has materials of interest to 5200 fans. Their address is *Atari Age*, 120 Brighton Road, P.O. Box 5068, Clifton, NJ, 07015. The fee is only one dollar.

I read in the November Top Secret that Centuri's GYRUSS is now available from Parker Bros. as a home game. Does that include a 5200 version, and does the cart include the music from the arcade game? Is it also true that there are going to be new joysticks for the 5200?

Brian Newsome
Brownstown, MI

Our sources at Parker Bros. tell us that a 5200 version of *Gyruss* will be available in May and, yes, it will include the music from the arcade game. That's the good news. The bad news is that Atari now has no plans to manufacture new joysticks for the 5200. Win a few, lose a few. That's how it goes.



I own an Atari 400 and am interested in expanding it to 64K. I have heard that the Atari 600XL can be expanded to 64K. Can the 400 also be expanded? What do you recommend?

Stephen Mayo
Windsor, VT

The Atari 400 wasn't originally designed to accommodate 64K of memory, but it is expandable. The question is, is it worth the money and what do you expect to gain? A memory expansion board will not make your Atari 400 an Atari 600XL and may cost you just as much as buying the 600XL.

I have to admit, my curiosity is getting the better of me. I recently snapped open the back right side of my Atari 5200 console, and the card and edge connectors I saw in there reminded me of the ColecoVision modular interface. Does Atari has some add-ons planned that would use this interface?

Robert Privitera
Flushing, NY

The people we spoke to at Atari were very impressed by your perceptual acuity, Robert. The features you mention *are* there to accommodate some sort of expansion module, but there have been no definite plans made so far as to what or when is concerned. We'll keep you posted. In the meantime, congratulations on your sharp eyes; have you considered a career as a corporate spy?

Ken Uston gave a very favorable review of GIM Electronics' Fire Command controller console in your November issue. I'm seriously considering buying this controller, but I haven't been able to locate a store in my area that carries it. Could you let me have GIM Electronics' address, so I can obtain a dealer list or ordering information directly from them?

Wayne Chaplin
Gurnee, IL

You can write to GIM Electronics, 164 Glen Cove Road, Carle Place, NY 11514. They'll be happy to forward the name of a dealer near you.

How do the experts write text adventures so that you can't list them? I'm thinking of writing one for my own computer.

R.C. Loveland
Oviedo, FL

That's a big topic, and one we can't really get into here. We *can* tell you that text adventures as a class of game don't really have any kind of copy-protection features that other kinds of games and programs can't use, and that there are almost as many schemes for defeating LIST functions as there are computers, programmers and individual pieces of software. The tricks range from including a function line as part of a REM statement (which has peculiar effects on Commodore computers), to LOAD tricks involving nonexistent memory locations, to flat-out encryption of the whole program. Nearly all we've heard of exploit some special hardware feature. So if you want to get into this, you ought to be a pretty advanced programmer who knows machine language and enough about the internal architecture of your target computer to understand how its LIST function works and where its "weaknesses" are. You don't say what kind of computer you use, but if it's an Atari, a good place to start would be by reading *De Re Atari*, a handbook from the Atari Program Exchange (P.O. Box 3705, Santa Clara, CA 95055).

Do you have a question about video games or computers that needs answering? Send your questions to: Electronic Fun, *350 E. 81st St. New York, NY 10028.*



Video Review's

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You guys think you have all the fun. You get to vote and all we get to do is count. Since numbers aren't our strong suit, we decided to choose our own favorites. Here they are, then, the editors' choice... 50 classic games in alphabetical order.

1 ARCHON
(Electronic Arts)

If you like chess, but it just doesn't make it as a computer action game, relax. Relief is in sight and it's spelled A-R-C-H-O-N. **Archon** is a strategy game like chess but with a new twist. The pieces can not only move and take opponents, they can also cast spells and slug it out with an opponent in a separate action screen. If you emerge as the victor in the action scene you get the space that is being challenged. If not, you lose the piece and your opponent keeps the space. Rats.

2 AZTEC
(Datamost)

Yes, this does, in fact, have to do with Qetzalcoatl, the serpent god of the Aztecs. But it has even more to do with disturbing the final resting places of Aztec royalty. You are someone who admires Indiana Jones. Like him, you are an intrepid adventurer who fears nothing. You enter the pyramid and climb or descend stairs, open chests which may contain treasure, find secret doors and, in general, sport about underground. But you do have to beware of predatory Aztec gods wandering around some levels, large and carnivorous felines that patrol others and other watchtypes.

3 BERZERK
(Atari)

Definitely not a game for someone afraid to face hostile robots. In this classic game you, hapless humanoid, are trapped in an edifice comprised entirely of mazes. And these mazes are populated by robots of varying colors and temperaments. You can shoot them or they can shoot you. It's best to strive for the former. Also, do *not* run into the walls. They will fry you. You can lure robots into them. This is a fine idea. Once in a while Evil Otto, the antithesis of those happy faces, bounces through. He is indestructible and knows it.

4 BLOCKADE RUNNER
(Interplay)

Space shoot-'em-ups may come and go but this Intellivision cartridge is destined for the Rocket Jockey's Hall of Fame. Sporting one of the best first-person 3-D graphic treatments we've seen for any system, the game achieves a great balance between the normal zap-the-bad-guys stuff and the usually overlooked strategy element. Not only do you have to manage the speed of your attack and dodge enemies, but you must refuel by scooping up passing ice crystals and also keep your reactor cooled down. The best touch: your ammunition is so limited that every shot has to count. At last—a space game Intellivision owners can be proud of.

5 BURGERTIME
(Mattel)

Henry Ford meets Ray Kroc. This is a fast food chef's nightmare—while trying to assemble burgers with all the trimmings, our chef is pursued by hot dogs, pickles and fried eggs. The chef can temporarily immobilize his enemies with pepper, but mainly he has to dodge them, outwit them, or crush them with hamburger fixings. Since he makes the hamburgers by walking on top of them, this chef won't win any awards from the Board of Health, but the game doesn't require that you eat them.

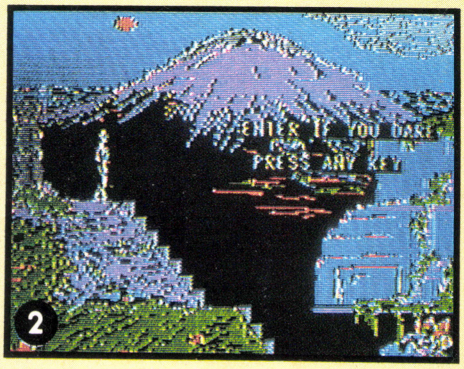
6 CENTIPEDE
(Atari)

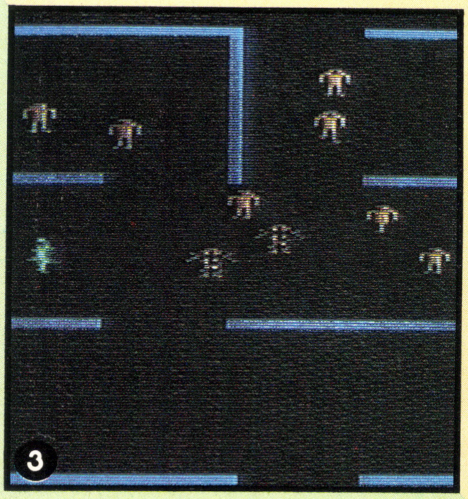
Victorian ladies thrilled (and Victorian gentlemen snored) when the local prodigies recited "There are faeries in the bottom of my garden." *Centipede* is a game to wake up the Victorian gentlemen. The premise is that you control an elf armed with a bug bomb who must destroy centipedes, spiders and scorpions which invade the mushroom patch at breakneck speed. A novice is overwhelmed by the pests, but the experienced 'peder can anticipate the computer's attack and maximize points. Built into the program is a miniscule delay in the firing which adds greatly to the tension.

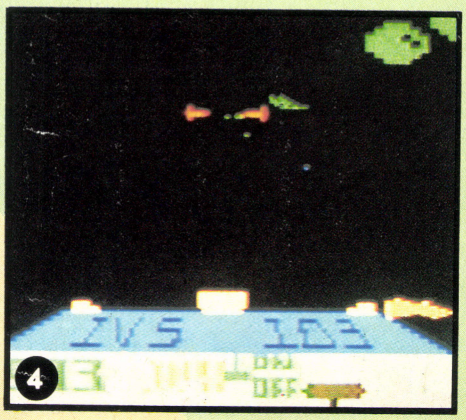
7 CHOPLIFTER
(Creative-Broderbund)

This one's for those of us who are tired of destruction and mutilation. It offers all the excitement of fast action shoot-'em-ups but with a noble cause. You must save stranded servicemen from the enemy while avoiding tank fire and











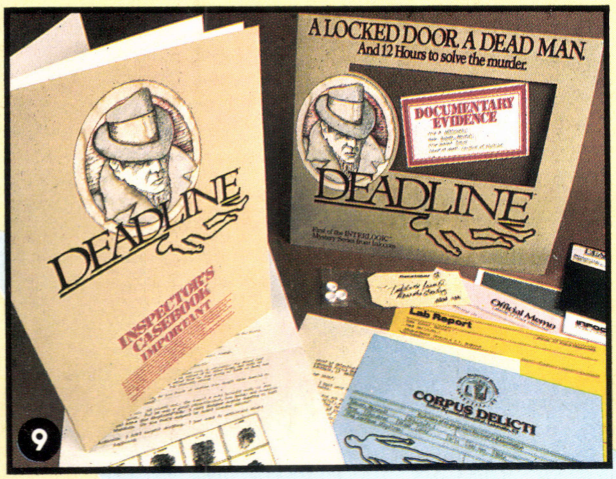




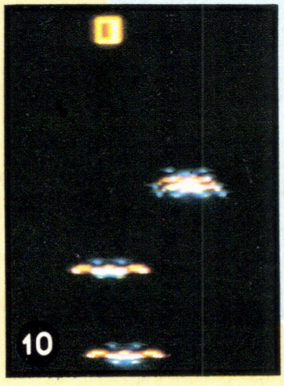


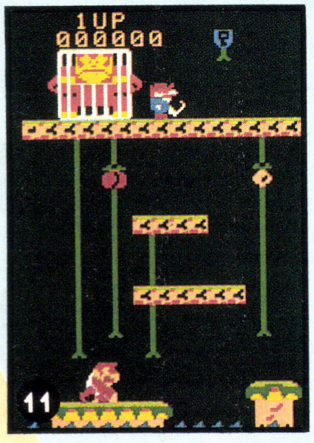
GAMES



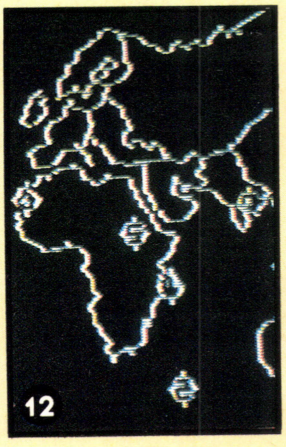


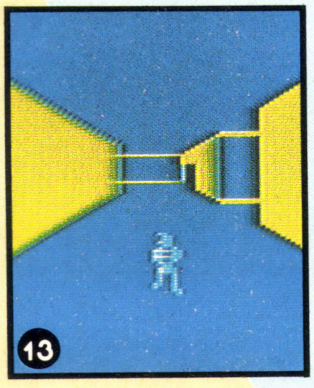


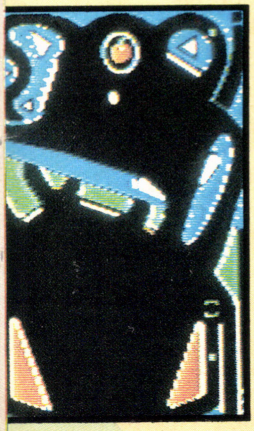


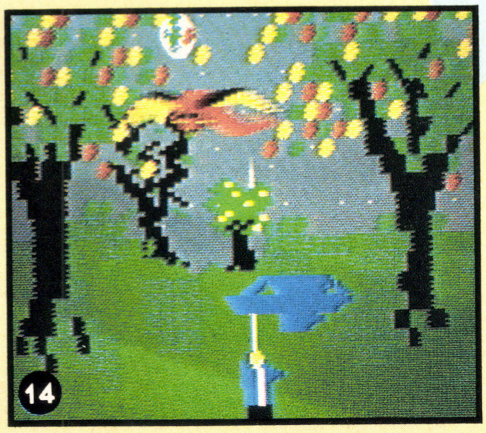












low flying jet fighters. For those who still prefer to blast away, that option is included. However, you only gain points by saving lives!

8 DAVID'S MIDNIGHT MAGIC
(Broderbund)

This game mystically time warps the magic of pinball a decade forward into the eighties. Now you don't have to hunt around for old pinball machines. **Midnight Magic** turns your home computer into a pinball machine so realistic it can even tilt. That player/machine interaction is even preserved here as **DMM** allows the player to activate magnets, adjust the spring and even jostle the machine by hitting the keyboard.

9 DEADLINE
(Infocom)

Mr. Robner is dead and someone has to take the rap for it. Is it George, the dissolute son, a man in years but a child in behavior? Is it Mrs. Robner who's been secretly running around with that rat Steven? Or is it Baxter, Robner's business partner? Your task as the detective in this fine mystery is to find out. You question the suspects, search the house and collect evidence. The game is rich in humor, subplots and action and should keep you sleuthing for weeks.

10 DEMON ATTACK
(Imagic)

This classic shoot-'em-up still ranks among the greats. The attacking demons are birds that swoop, dive, and drift. In addition to that they drop all sorts of bombs. At some levels, hitting the birds just splits them into two smaller targets, doubling their destructive power while making them harder to hit. Adding to the tension is the call of the demons. They sound like the revving up of some mad scientist's machine in a fifties horror movie. **Demon Attack** proves that simple can still be exciting.

11 DONKEY KONG, JR.
(Coleco)

The story goes that **Donkey Kong** was really supposed to be called Monkey Kong but that a misprint in Tokyo changed history. **Donkey Kong, Jr.** was originally to be called Fancourt Babberly, but it wouldn't fit on the side of an arcade machine. So **Donkey Kong, Jr.** it is, and it remains one of the most popular games around. Donkey Kong himself is a great ape, imprisoned by a carpenter named Mario. The son is a lesser ape trying to rescue him. To do this he must climb and jump and avoid the jaws that bite, the claws that snatch and the jub-jub bird.

12 EPIDEMIC
(Strategic Simulations)

You've heard of germ warfare? Well, this game involves warfare on germs. A subtle but nonetheless important difference. In it you are asked to combat a deadly virus which threatens to infect the civilized world as we know it. You've got certain time limitations so you've got to work fast. But, it's not that simple. While you're busy curing, say, Africa, this dreaded epidemic may be spreading to the Middle East, India and China. A doctor's work is never done.

13 ESCAPE FROM THE MINDMASTER
(Starpath)

The very first game to ever let you walk a mile in Pac-Man's shoes, **Mindmaster** still can't be beat when it comes to lemme-outta-here-right-now-please maze game realism. You are placed in a 3-D maze whose walls loom menacingly around you. The exit is not only hidden but locked away, and to get out you must find the proper keys, meanwhile taking arcade tests of your prowess and trying to avoid the vicious Master himself. You also get a small map of the entire layout so you can see just how hopeless your situation is.

14 FORBIDDEN FOREST
(Cosmi)

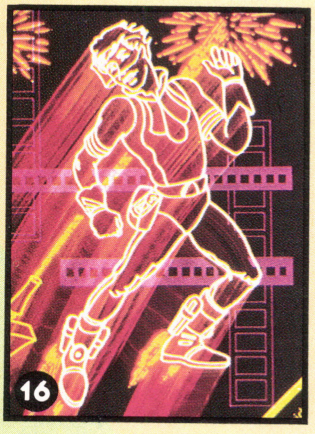
Sinister spiders and killer bees are just some of the dangers that you will encounter in **Forbidden Forest**. Danger lurks everywhere in this game and you have no lasers to defend you. You must fight these creatures using a bow and arrows. Your other weapon is fear. If things get too tough, you can always run away. **Forbidden Forest** has three outstanding qualities: its

ominous sound track, its simulated three-dimensional graphics, and its smooth scrolling action.

15 HAPPY TRAILS
(Activision)

According to designer Carol Shaw, Mattel's Intellivision has a terrific capacity for background graphics. So she set to work to design a game that used the background to the full, and the result, **Happy Trails**, is one of the best games out for the system. In **Happy Trails** you slide blocks of computer graphics around to make trails for a prospector. The game requires intense concentration and is particularly fun for anyone who scores well on those Army induction tests that ask you to mentally assemble boxes.





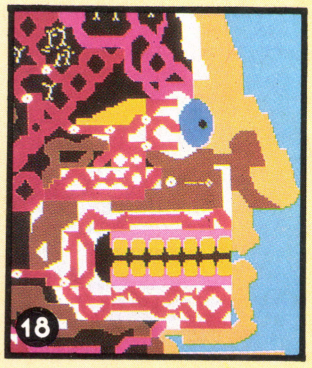
16 JUMPMAN JUNIOR
(Epyx)

The original Jumpman was a fine fellow, but the son is a big improvement over Pop. He can travel at any of eight speeds as he leaps from girder to girder in his effort to disarm mutant bombs. Lots of screens mean lots of challenges and variety for JJ—up ropes, down chains, up and down ladders, leaping from disappearing girders and no overtime.

17 THE LAST GLADIATOR
(Electronic Arts)

Friends, Romans and countrymen... yes, they're all there watching you as you battle beasts imported by Caesar. You must fight using all your wits. You're deposited in the middle of the Coliseum with only a loincloth (or a skimpy dress if you happen to choose to be a gladiatrix instead) and are given the choice of one weapon. All of the weapons require some skill to use and a good deal of strategy must be employed. If you manage to waste all the beasts, you get to face the bloodthirsty emperor.



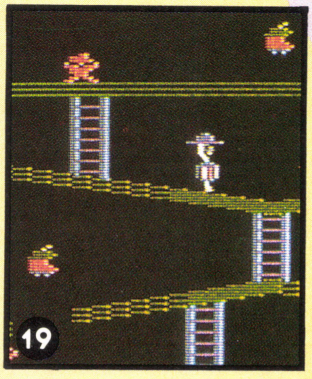


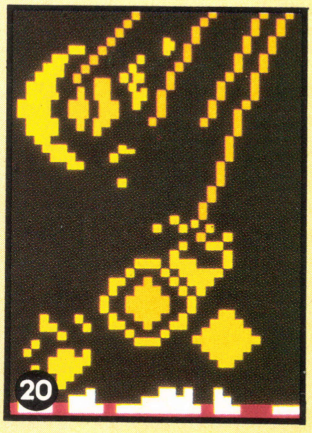
18 MICRO SURGEON
(Imagic)

In **Micro Surgeon** you pilot a small but health-oriented ship through the various systems of the body and cure one of hundreds of patients of one (or several) of hundreds of maladies including brain tumors, cholesterol buildup, nicotine stains and so forth. Your armory consists of aspirin, antibiotics and sonar. The longer you take to cure the patient, the more likely it is that he'll die on the table. The more efficient you are, the more you can charge and the higher your bill, the higher your score.

19 MINER 2049ER
(Microlab)

Years of careless nuclear waste dumping has polluted the mines of the twenty-first century and caused a race of mutants to take charge of the depths. It is up to the redoubtable Bounty Bob to clear the mines. Bob travels from room to room, purifying as he goes. In the final screen Bob must shoot himself out of a cannon after eating TNT. **Miner** has become a cult game and is available for just about every system.



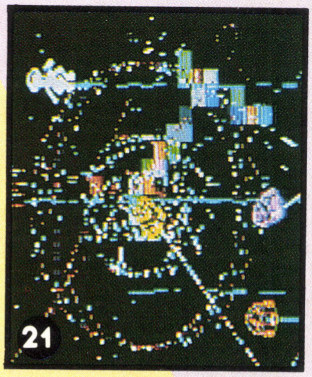


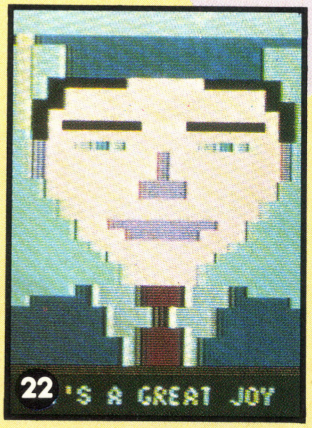
20 MISSILE COMMAND
(Atari)

Missile Command is still one of the all-time best games around. You must defend a city from space invaders who shoot missiles at the impressive skyline. You must intercept these missiles with your missile intercepter (in this case a cursor). You position the cursor at the point in space where the missile is and press the fire button. An explosion occurs. You don't have to stick around for it. In fact, you shouldn't. The instant you hit that fire button, you should move your cursor to intercept the path of the next missile.

21 MOONDUST
(Creative Software)

Never has there been a space game like this one before. No shooting. No evil aliens intent upon destroying Milwaukee. This is a peaceful space game in which you are a spaceman who actually enjoys the zero gravity sensation. You fly around and try to place a seed in the center of a very soft, dusty vortex. You get points and you get to hear some of the most extraterrestrial music ever put on a computer game.

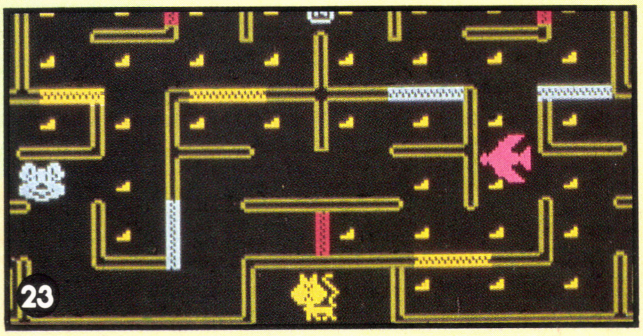




22 MONTY PLAYS SCRABBLE
(Ritam)

If you've got a yen to improve your vocabulary so that it includes several monetary units from obscure desert

nations, then **Monty** is the game for you. **Monty** is a computerized Scrabble game with an awesome vocabulary of 45,000 words. You can play against the computer alone or with two other players. **Monty** is also available in a handheld version with two vocabulary modules to increase his word power.



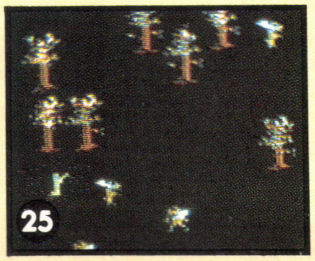
23 MOUSETRAP
(Coleco)

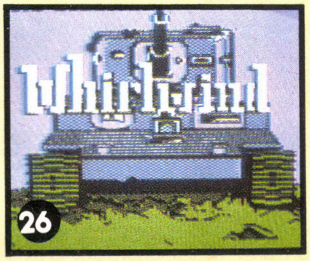
Mousetrap was probably designed by a fugitive from B.F. Skinner's behavior modification research lab—a scientist with a grudging sympathy for the mice that ran the mazes. In this maze, the mouse is chased by a cat, but can also turn himself into a dog and get his revenge. The maze is an ever-changing series of doors and gates littered with dog bones and pieces of cheese.



24 MS. PAC-MAN
(Atari)

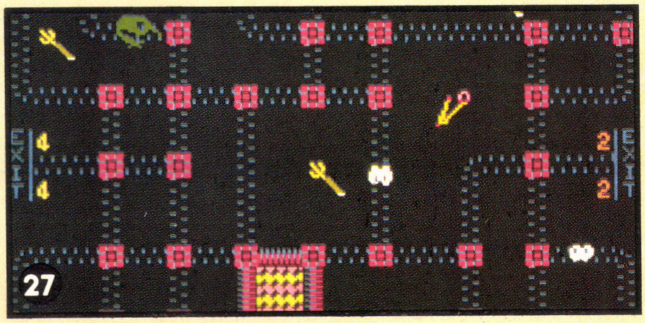
Ms. Pac-Man is more than just Pac-Man with lipstick and a bow. She also wears mascara. But more importantly, she is the star of one of the best arcade adaptations this video game-crazed nation has ever seen. The premise is just about the same as that of **Pac-Man**. You are one of those rare females not worried about every morsel you put in your mouth. You, in fact, spend your whole day eating dots. You also have energizers to ingest which enable you to take revenge on the masher ghosts who pursue you relentlessly, leering, whistling and making advances.

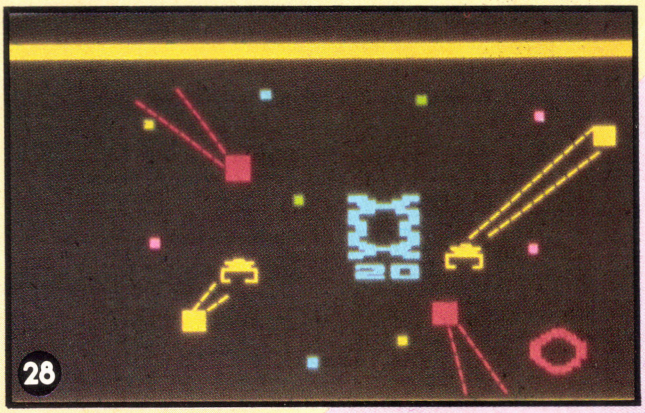




25 NECROMANCER
(Synapse)

The object of this game is very simple. First plant a forest of hyperactive trees. Then make the trees walk over a parapet so that they're in position to take root, eat through the stone wall and crash down on unhatched spider eggs. Finally, you do battle with the Necromancer himself. Sounds easy, right? Well, we didn't mention the trolls that take delight in trampling saplings. The graphics are great, but the music is better.





26 OPERATION WHIRLWIND
(Broderbund)

Tightly conceived, easy to operate and tough to beat, **Operation Whirlwind** is the best one-player computer war game out right now. It's not long on graphics nor is it full of fast-paced action. It does, however, require a great deal of strategy if you're going to make the trek from your army's base to the city you're trying to protect. You do this by first sending out your recon men to scout the area for the enemy bases then positioning your different fighter units in the most strategic pattern. Slow, maybe, but worth the trouble.

27 PEPPER II
(Coleco)

This is a game for compulsive filler-inners. As you zip around maze sections turn a sort of Tim Leary tweed as you complete them. In keeping with the homey character of the zippers, bonus points are symbolized by items such as safety pins, claw hammers, and scissors. At times the maze disappears. It's all quite surreal, and is made no less so by the Zoroastrean make-up of the central character. He plays most of the game as an angel, but can become a devil in order to devour his enemies.

28 PHASER PATROL
(Starpath)

This Supercharger game has been imitated by just about everybody at one time or another, and anybody who's played it can tell you why: great graphics, good sounds, tough strategic challenge and an even rougher space shoot-'em-up section. The strategy screen lets you locate the enemy aliens easily, but when you walk into their sector, you never know whether you're going to face a couple of wimps or an army. And while you're working, their reinforcements are on the way.... The original, and still the greatest.

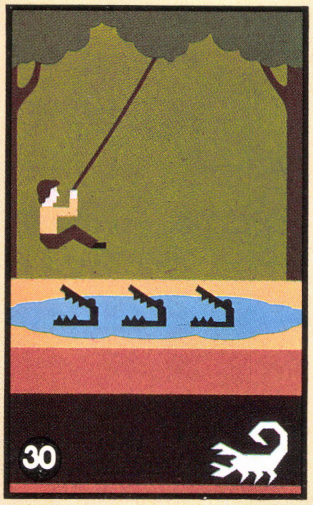
29 PIRATE ADVENTURE
(Adventure International)

If you ever had the urge to roam the high seas in search of Long John Silver's buried

treasure, you can do it. You start out in a flat in London on whose walls is the cryptic inscription "Bring treasures here." This becomes clear later after you've discovered the magic word that transports you to Pirate's Island where you must build a boat and sail away. (Not pictured)

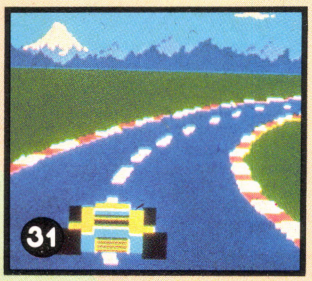
30 PITFALL!
(Activision)

The only transportation you've got in this game is your feet (are your feet?) But you can run above ground and pick up treasures or hop from crocodile to crocodile or, if you've got a bit of the Johnny Weismuller in you, swing on a vine. Or you can run below ground which is a lot faster but filled with dangers such as huge scorpions. It's up to you.



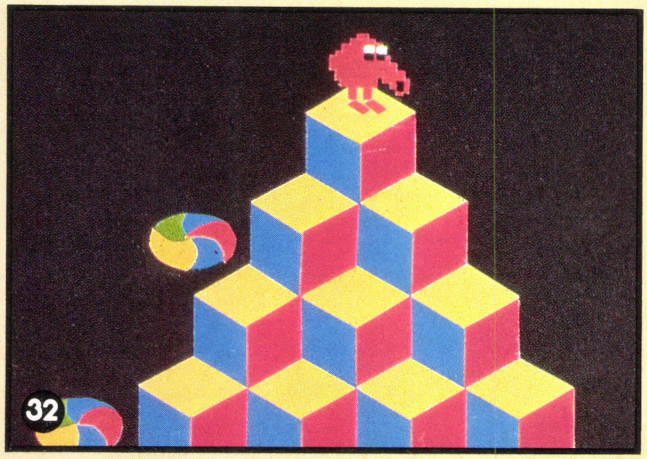
31 POLE POSITION
(Atari)

This fine adaptation of the popular arcade driving game will have you applying for grid space at the Indy 500 before you know it. The illusion of speed and the curving of the road are realistic enough to make you carsick. First there's the qualifying race then, once you've qualified, it's no holds barred, patch out and eat my dust! Shifting is accomplished by joystick. Keep in mind the importance of *not* running into billboards or other cars. On your marks, get set, gentlemen, start your engines.



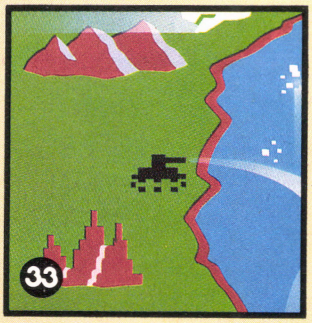
32 Q*BERT
(Parker)

If a cult were ever to grow up around Q*Bert's appearance, it might put plastic surgeons out of business like that. Although he's no sight for sore eyes, he is one heck of an energetic little guy whose sole purpose in life is to change the colors of cubes on a three-dimensional pyramid that defies all physical laws and hangs somewhere in space. He is pursued by a number of unfriendly creatures who can be forced to commit suicide if you know how to persuade them. You also can take a dive into the void if you don't watch out.



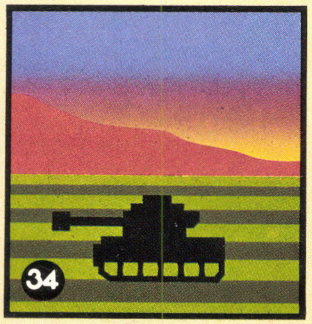
33 RIVER RAID
(Activision)

Start the jet engines and prepare to take off on an endless adventure up the river of no return. Avoid colorful balloons and dangerous jet fighters or your flight will promptly end. Your goal is to knock out bridge after bridge and shoot every ship and helicopter in sight, but more importantly you're expected to have lots of fun. In case you think you can handle this quite easily, think again. There's always the constant danger of running out of fuel.



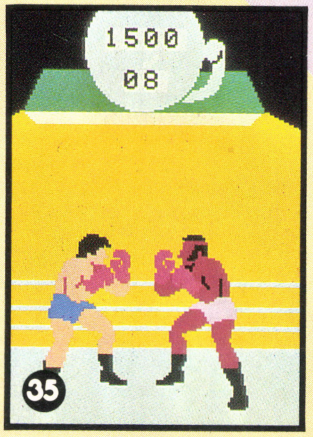
34 ROBOT TANK
(Activision)

Time to head for the Mojave Desert so that we can protect Los Angeles. This is the basic premise of **Robot Tank**. It's a shoot-'em-up and you see no less than a dramatic desert landscape. The weather will adversely affect your maneuvering. What will also affect your maneuvering are enemy bombs which don't necessarily destroy you but could impair you.



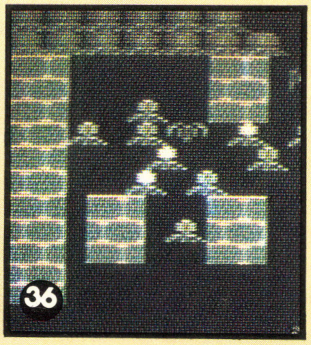
35 ROCKY
(Coleco)

The Super Action Controllers for ColecoVision look like lethal weapons. Held like a pistol, the grip has buttons for each finger while the top holds a keypad, joystick and roller. Surprisingly, learning how to operate them is very simple—and the payoff in **Rocky** is great. Using the several buttons you can throw a variety of punches and perform defensive maneuvers. The graphics are spectacular: the fighters look like cartoon animations of Rocky and Clubber Lang. The crowd cheers when either fighter is closing in on his opponent and the ref will stop the bout if one man is taking it on the chin too often. The computer isn't bad, but this is a real two-player game.



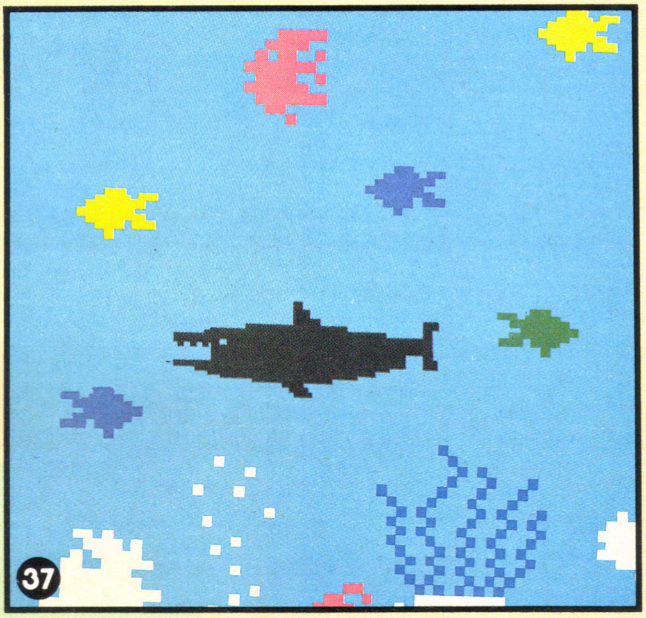
36 SHAMUS
(Synapse)

Shamus has to find his way through countless rooms in pursuit of the Shadow. No matter how many terrible obstacles are thrown in his path, Shamus stays cool and calm under fire. Detective that he is, Shamus must find clues as to the Shadow's whereabouts while clearing the rooms of the Shadow's evil minions. The screen scrolls in all four directions. It was the first of the monstrously scrolling computer games and remains one of the best.



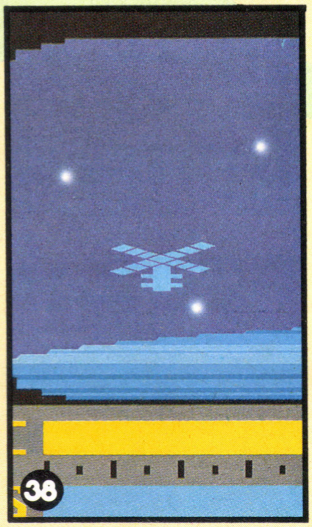
37 SHARK, SHARK
(Mattel)

The big fish eat the little fish, as everyone knows, and that's about all there is to **Shark, Shark**. Played at the lugubrious pace of life at 40 fathoms, it's not what you call lively. The graphics induce a state of calm—it's a game for a deserted tropical lagoon. The sound effects are the sort that go under Jacques Cousteau's voice-overs. But the big surprise is the theme music at the end of the game.



38 SPACE SHUTTLE
(Activision)

Hardly a game, **Space Shuttle** is without a doubt the most advanced cartridge for the Atari VCS. The object is simple—successfully launch and fly your shuttle and rendezvous with a satellite in outer space. Steve Kitchen kept the flight procedures as true-to-life as possible, and NASA gave him all the help he needed in preparing his monstrous (85 pages worth) program. Once the cart is loaded, all the buttons on your VCS take on new functions.

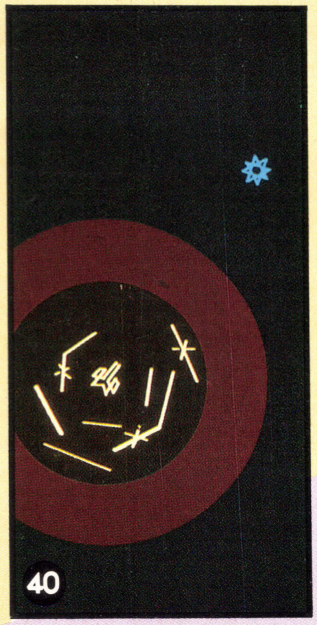


39 SPARE CHANGE
(Broderbund)

Let's start from the beginning. You are the owner of the Spare Change Video Arcade. Things are going along well until two Zerks break loose. That's the end of business as usual. The Zerks are intent upon stealing coins from you, dropkicking or dunking them into a piggy bank. You don't want them to do this. You can distract them in several ways. Here is one: put one of your coins into the jukebox and start some music playing. The Zerks are dancing fools and will drop everything to do the old soft shoe or the Freddy. (Not pictured)

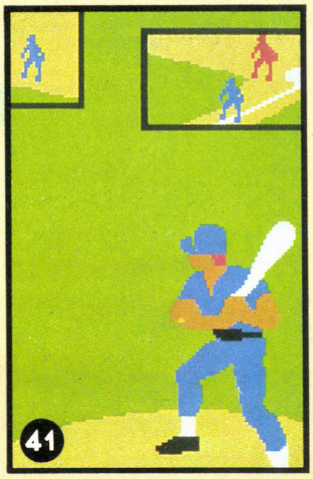
40 STAR CASTLE
(Vectrex)

If you really want to find good arcade-to-home translations, you can. You can even find great ones and **Star Castle** is one of those. Like its arcade parent, the Vectrex version requires strategy, quick thinking, fast action and precision. You are flying a star cruiser and you've got to blast a lone laser cannon out of the sky. But first you've got to blast away the three revolving walls that surround it. And the walls are uncooperative. As soon as you blast one completely to kingdom come, it reforms.



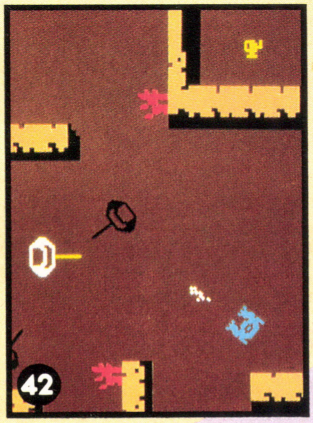
41 SUPER ACTION BASEBALL
(Coleco)

Our National Pastime was a tough one for game designers to put into a computer. On the old versions you always had to perform amazing gyrations of the joystick to get your fielders to throw the ball in the right direction. Thanks to the Super Action Controllers on the ColecoVision these flaws have been eliminated. Plus, you get some nice "camera angles" and split screen effects that previously were the province of ABC Sports.



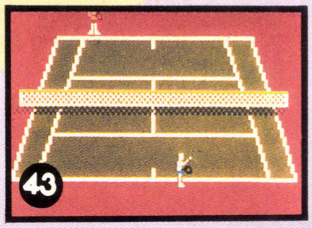
42 SWORDS & SERPENTS
(Imagic)

In most adventure games, it's you against the computer who plays a number of roles including (a) evil wizards, (b) evil knights, (c) evil dragons and (d) evil other. In **Swords & Serpents**, two people get to play and both take on a different character. You can be either the knightly prince or a wizened old wizard. Even the keypad overlays are different. As the knight, you move through a maze-like dungeon armed only with a sword. You pick up treasures, fall down stairways and stumble upon scroll rooms which allow you to warp around the dungeon.



43 5200 TENNIS
(Atari)

There's no need to run out and have your joystick strung. Nevertheless, **Tennis** is filled with real game action and is exciting to play. Your tennis ace moves agilely around the court bringing his racquet back with ease and proper timing. He is never caught with his weight on the wrong foot. If you don't move him fast enough, however, he can miss a shot altogether. The keypad controls what sort of serve you hit and you get to bounce the ball until you're ready to serve just like John McEnroe does. If you get good enough, maybe



50 BEST GAMES

you'll get to do razor commercials.

44 TIME ZONE
(Sierra On-Line)

Crammed into six disks, this game gives you over 1,400 different graphics and spans several eons. You do battle with Ramadu, the ruler of the Neburites, an alien civilization that's been watching Earth since cave days. Ramadu is worried that civilization here is advancing too quickly and that Neburon is threatened. Using your time machine you journey through the ages and into the future, trying to save Earth.

45 TS FLIGHT SIMULATOR
(Timex/Sinclair)

Since computers fly planes almost as well as pilots these days, it's not surprising that flight simulation programs are so popular. This one for the Timex/Sinclair computers is one of the best. You're not on automatic pilot, though. You've got to keep a weather eye on your instruments (which tell you, among other things, the weather) and time your descent just right. If you don't, you crash. It takes a lot of practice to master the controls.

46 TUNNEL RUNNER
(CBS Software)

The 3-D maze game may not be an original idea but when you add a RAM plus chip and great graphics you get one of the finest variations on the maze theme ever. And it's got challenge, too. So much challenge, in fact, that even the most bored maze gamer will find himself drawn to it. You're inside the maze so you've got a first-person perspective of the situation. There's also an overhead view of the entire maze topography to let you know just where you are or aren't. Inhabiting this maze are several monsters who don't like you. A built-in randomizer ensures that you'll get a different maze every time.

47 WAR ROOM
(Odyssey)

The only good nuclear war is a nuclear war that can be stopped at the touch a of a reset button. That's the sort of war you fight in **War Room**. In it you get to nuke the dickens out of most of the northern hemisphere. You get a scrolling map of the continental US with 42 cities scattered around. Each city has its own specialty. Your job is to maneuver your killer satellite so that it intercepts and destroys enemy nuclear missiles. In addition, you've got to keep the entire US economy in the black by protecting the cities that do the most important jobs. War and the Gross National Product are both hell.

48 WIZARDRY
(Sir Tech)

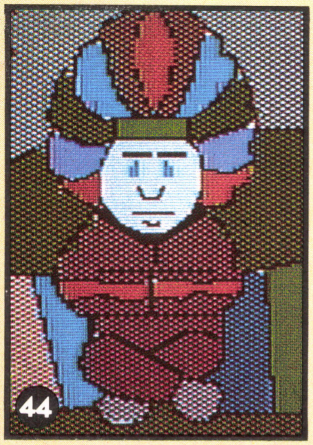
Grab your sword, shield and chain mail, get a few trusty friends and collect all the gold you can—there's evil magic afoot in the kingdom, and you're the only helmeted hero who can possibly beat the devil. The original-and-still-champeen computerized fantasy role-playing adventure game, **Wizardry**'s three volumes form an unequaled cycle of strategy. Abandon Hope, All ye **Pac-Man** freaks who enter here: this is for serious gamers only.

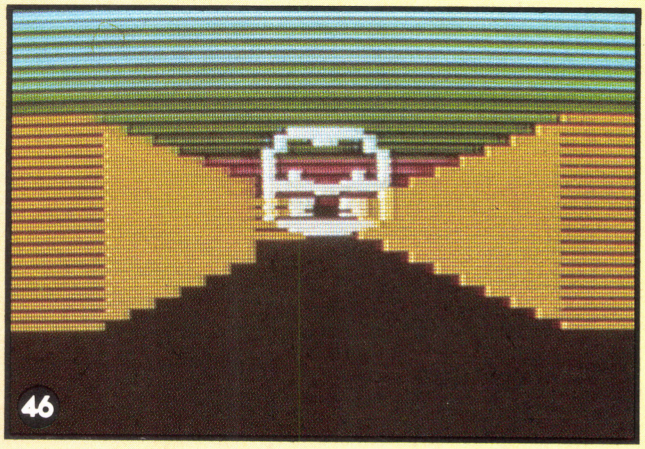
49 ZAXXON
(Coleco, Datasoft)

What can we say about this game that hasn't already been said and a dozen times, too? Nothing really and so we'll simply be forced to repeat ourselves. The graphics on this game are sensational and the 3-D scrolling effect can't be beat. The ship you control can bank in both directions, climb and drop as you pilot it over the militaristic terrain below and bomb the enemy strongholds. In the end, you have to face Zaxxon himself.

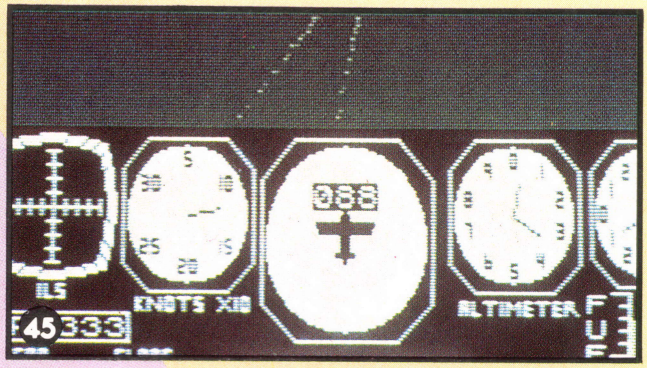
50 ZOMBIES
(Bram)

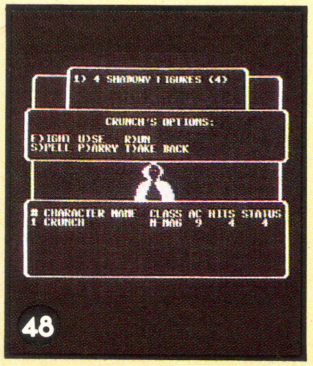
The very first game from this tiny company is something unique: a sword-and-sorcery **Wizardry**-type game that plays in real time like an arcade game. And what *mazes*: 3-D scrolling caverns full of stagnant pools, odd structures, tunnels, and various malefactors. The piece de resistance: The Realm of Impossibility, with weird ladders and tunnels that make M.C. Escher's drawings look downright normal. A brilliant creation. (Not pictured)

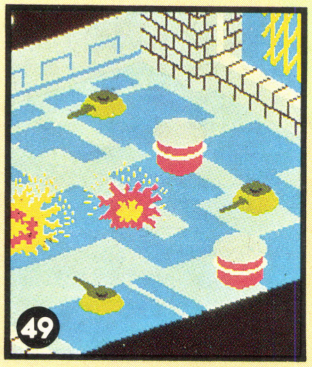












ELECTRONIC FUN'S

Top 10

HOME

1. Q*BERT (Parker)
2. POLE POSITION (Atari)
3. DIG DUG (Atari)
4. POPEYE (Parker)
5. BURGERTIME (Mattel)
6. SPACE SHUTTLE (Activision)
7. PRESSURE COOKER (Activ.)
8. STAR TREK (Sega)
9. MR. DO (Coleco)
10. CONGO BONGO (Sega)

ARCADE

1. ZORK I (Infocom)
2. LODE RUNNER (Broderbund)
3. ZAXXON (Datasoft)
4. CHOPLIFTER (Broderbund)
5. FROGGER (Sierra)
6. DEADLINE (Infocom)
7. ZORK II (Infocom)
8. ULTIMA III (Origin)
9. SNOOPER TROOPS #1 (S'ker)
10. TEMPLE OF APSHAI (Epyx)

COMPUTER

1. POLE POSITION (Atari)
2. MACH 3 (Mylstar)
3. DRAGON'S LAIR (C'tronics)
4. STAR WARS (Atari)
5. DISCS OF TRON (Bally)
6. CRYSTAL CASTLES (Atari)
7. GALAGA (Bally)
8. MS. PAC-MAN (Bally)
9. ELEVATOR ACTION (Taito)
10. MILLIPEDE (Atari)

The arcade Top Ten courtesy of REPLAY MAGAZINE. The computer Top Ten courtesy of SoftSel. The home games Top Ten is the result of a nationwide poll.

Riley

GAMEMAKERS

HI RES SIERRA



Roberta Williams, time traveling adventuress

Sierra On-Line grew from a small ad for a game called Mystery House *placed in* Micro *magazine in 1980. The creators of this game were Ken and Roberta Williams. That was her first venture into the world of adventure games. Since then, she has written and published five other graphics adventures. And the oddest thing about this is: Roberta Williams is not even a computer programmer.*

Interview by Phil Wiswell

EF: Your love of literature is the reason you got into adventure games, but exactly how did it start?

RW: My husband was working as a computer programmer in Los Angeles, and he had a terminal that you could hook into a big IBM in downtown L.A. by using the telephone lines. He would bring it home to do his work, and on that IBM system there were some games. One of them was called *Colossal Caves*, by Crowther and Woods, and it's now known as *Adventure*. They designed the game at Stamford in 1976. Anyway, I played it and immediately got addicted to this type of activity because I'd always been a reader. But to me this was even better because you actually felt like you were part of the story, and that you had some control over what would happen to you. When you discovered a new area in a strange land, you would feel like you were there and were really discovering it on your own. You get all sorts of emotions going that you just don't feel when you read.

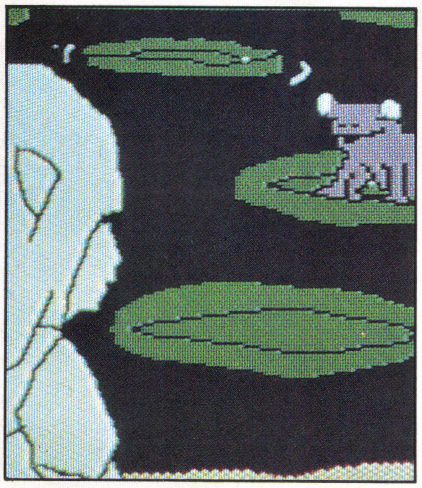
When I finally finished *Adventure* I wanted more, but nobody was writing adventures at the time except Scott Adams. So when we bought our Apple I got some Scott Adams games, and I liked them, too, but I didn't think they were as good as the original *Adventure*. I felt there weren't very many good adventures on the market, and that there wasn't much to choose from outside Scott Adams. And I believed that I couldn't be the only person who would like this kind of game, so I thought I would help out by starting work on my own game!

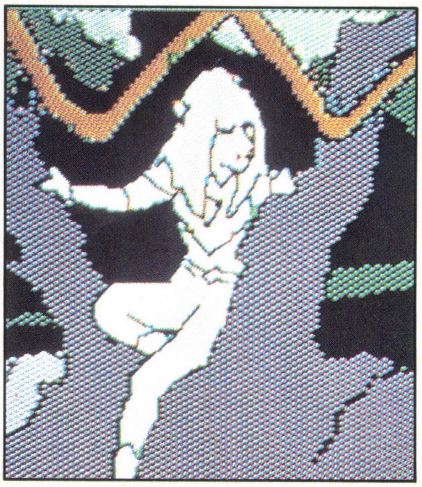
EF: That was MYSTERY HOUSE. Did you write it first as a text adventure and add graphics later?



RW: No, it was never done as a text adventure. *Mystery House* was done as a high-res game. In its infant form it was designed as "an adventure." There was really no thought about exactly what it was going to be. The scenario was designed. But then we decided to put in pictures and changed the design to a graphic adventure.

EF: Did you think it would capture a wider audience with pictures than without?









RW: We thought it would be new and exciting. When I was playing *Adventure* and the early Scott Adams games, I thought it would be nice to see a picture on the screen and not just the brief written description. I don't know why I thought that. I just did. But I didn't realize how limited computer graphics were. I found out when we actually started trying to put the pictures up on screen—that was even before a graphics tablet was available and we had to use this odd thing called a VersaWriter which was very hard to work with. When I look at the graphics on *Mystery House* now, I get embarrassed. But at that time it was quite an accomplishment because there was no way to draw those kinds of pictures on a home computer.

EF: Graphics took a big step forward in your next adventure, THE WIZARD AND THE PRINCESS. Why?

RW: Well, by that time we had gotten a graphics tablet which made things a lot easier. Then we discovered how to add color, and for a good year and a half or maybe two years we had a margin on graphic adventures because nobody else knew how to put that many color pictures, 100 or more, on a disk. At that time, the most anyone could fit was maybe eight or ten. But my husband figured out a way to do it.

EF: How did your adventures progress from THE WIZARD AND THE PRINCESS in terms of what changed?

RW: The next one, *Mission Asteroid*, wasn't part of the progression. Most people have never heard of it because it didn't get much press. It's a beginner's adventure game and I just whipped that one out in a couple of weeks because we wanted it on the market by Christmas. *Mission Asteroid* is pretty easy to play. The big progression came with *Time Zone* which utilizes 12 disk sides.

EF: What prompted that epic?

RW: I aimed it at an audience that I assumed was like me. When I play adventure games I don't want them to end. I was always disappointed to come the end if the game was good. I always wanted them to continue so I could discover even more new places. To me, that was the excitement—to find a whole new region of the game where I had never been, still waiting to be discovered and explored. And when I saw how small the games actually were, I was disappointed. So I thought, well, I'll make a really big one that will go on for a long, long time. And I did. I really set out purposely to make a very big adventure game. It's similar to the circumstances that prompted me to do *Mystery House*—my thought was that I couldn't possibly be the only player who felt that way about the types of games I liked.

To get back to what you asked before... the evolution from *The Wizard and the Princess* to *Time Zone* was obviously the increase in size and the intricacies of the puzzles: *Time Zone* is a very hard game. From that to *The Dark Crystal* I would say the graphics got a little better and my vocabulary style changed—my description of what was going on around the player was more detailed. I was able

From Roberta's first game, MYSTERY HOUSE, to DARK CRYSTAL, (above left) the graphics and vocabulary both improved.

to use more adjectives.

EF: Where will the progression go from here?

RW: My new game is a *big* change! It's going to be on the PCjr.

EF: Why the PCjr?

RW: IBM came to me a long time ago and asked me to write an adventure-type game for the forthcoming PCjr. They said it couldn't be like any other adventure game that had been done and it had to be replayable. And *my* type of game, usually, when you solve it once, that's it. There's no reason to play it again.

EF: That's true of most adventure games, isn't it?

RW: Yes, except the fantasy/role playing games. *Ultima* or *Wizardry* you can replay because you have a character generator and you can make different things happen. But that's not my style. In effect, IBM was asking me to go against my style. And I couldn't think of any way to make *my* kind of game replayable without having a character generator. I thought a long time about this. I'd always wanted to have an animated adventure game, but the game I foresaw really couldn't be done on a computer that existed up to that point in time. Then I found out what the PCjr was capable of. I was really happy when I found out that this comptuer could do things other computers could not do. I could finally have my animated adventure game.

EF: What's so special about the PCjr?

RW: It has 16 solid colors. It's hard to do animation with artifacted colors, but with solid colors things are much easier. Also, it has more memory—128K—and it takes a lot of memory to do animation. My game will be available on the PCjr only until other computers come up to the game's requirements.

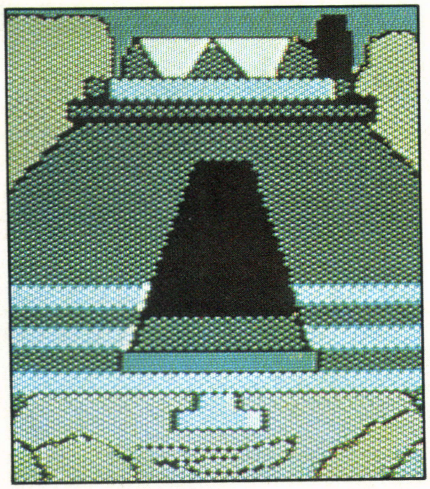
To get back to my original thought, I had to make it replayable. The only way I could think of to do this without using a character generator was to make it so the problems could be solved in more than one way with different outcomes. In point of fact, it's not *totally* replayable but you can play it several times before you see everything, and then you've got to throw it away!

EF: How does the game work?

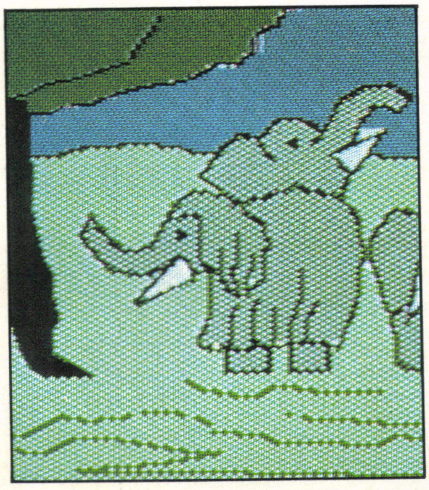
RW: Like the original *Adventure*, you get a score. Certain objects are worth a certain number of points and if you do certain things you can increase your score. If you don't do certain things your score might decrease. If you solve puzzles the more obvious way, you get fewer points than if you solve them the more difficult way. Different things can happen; you can see different things depending on what you do. And this game is in real time. In fact, there are characters roaming around in this game that can appear and get you at any time. Essentially it still has my style; you are still you—you don't generate a character—and you still have to use your wits and logic to solve the puzzles. Plus the story lines still look like my kind of story lines. Yet, the new game has a lot of new qualities. It has animation. Your character walks around and you control him with a joystick, not the keyboard. He can run and walk and swim and jump and stoop...

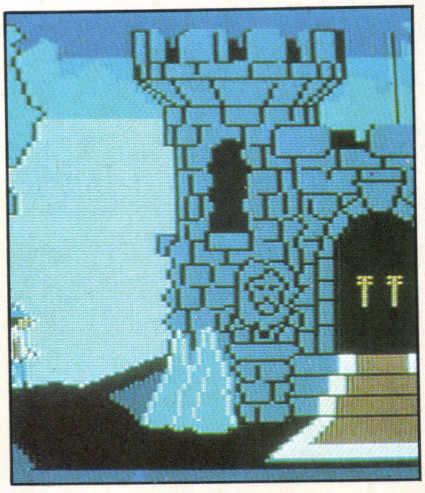
EF: And is all this done with graphics as beautiful as those from THE DARK CRYSTAL?

RW: Better. The graphics are great. Your character is full color and the game has sound going most of the time. You hear little birds singing and doors creaking open and other things like that. And it has three dimensions. You can walk behind objects, in front of them, or bump into them. □









Bottom right, a sneak look at Roberta's newest adventure game for the PCjr. The other three shots are from TIME ZONE.

A GUIDE TO COMPUTER LITERATURE

A reading program for reading programmers

This year, it's "in" to write books about computers. This means there are a lot of books available on this subject. Not all of them are good. Some, in fact, are not good. EF wades through some of the flood of computer literature and tells you which ones enlighten and which ones turn the light right off.

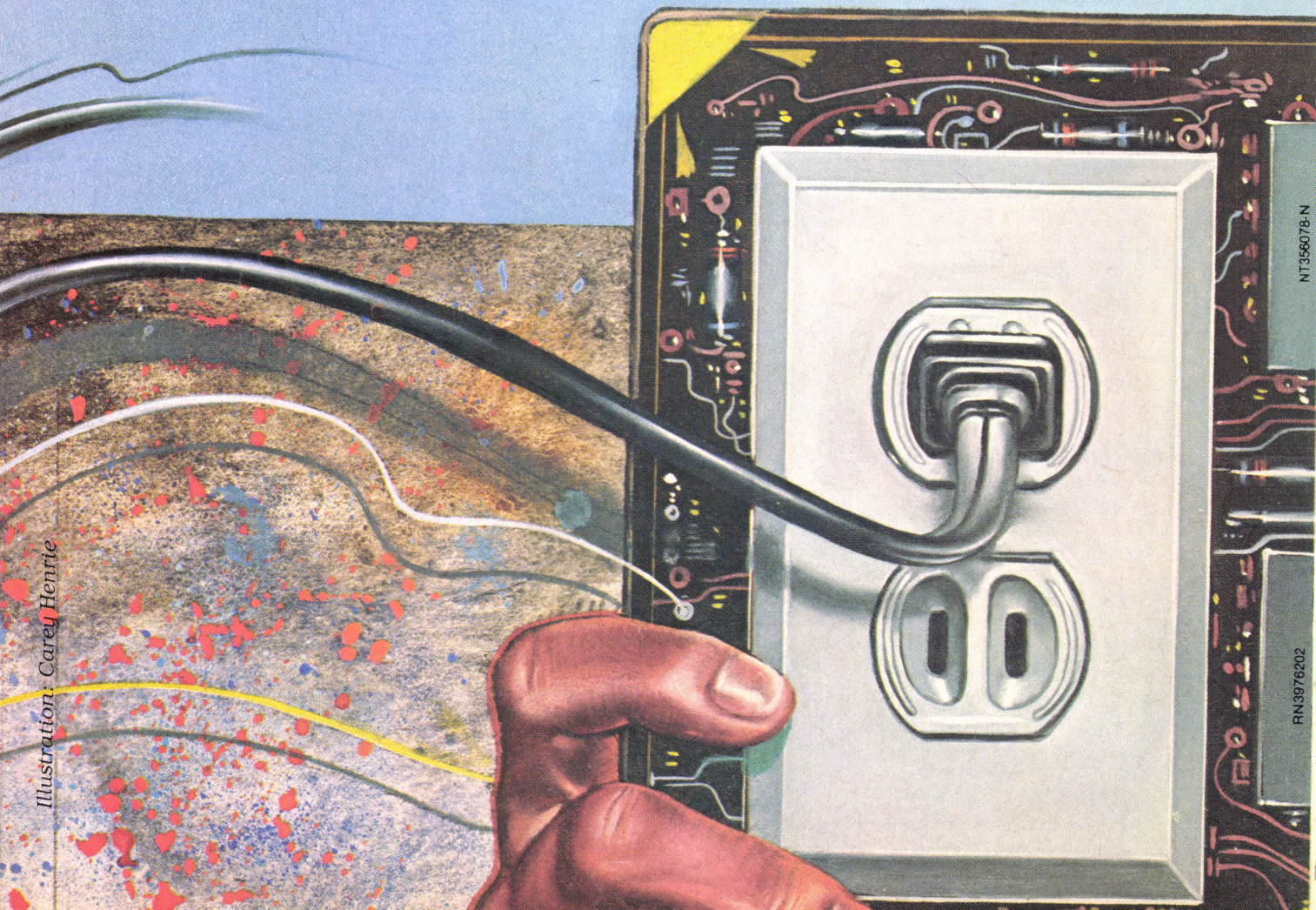


Illustration: Carey Henrie


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SPACE
SHIFT

Go into any bookstore today and ask where the computer section is and you'll probably be shown to the largest section in the store. Chances are good that it will be so prominent that you won't even have to ask. But if you ask the salespeople which books are the best, there's an even better chance that you'll draw a blank.

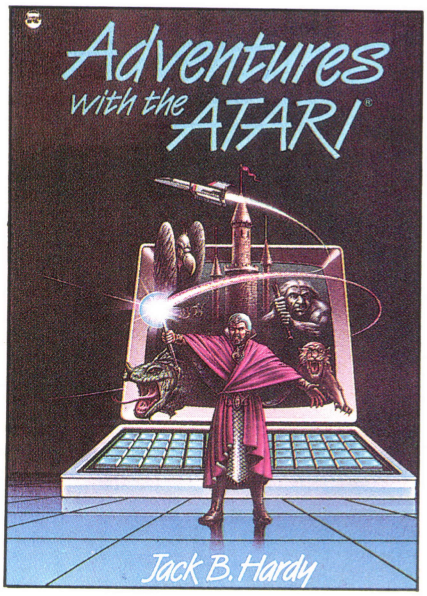
There are many reasons why so many book publishers have come out with computer books. The first is that just about everyone who has recently bought a home computer needs some instruction in how to use it. With so many different computers on the market there is no chance that a general book on computing will be adequate for all of them. Then there's the question of the quick buck. Since the public is so desperate for knowledge—and a second-rate book can usually be produced a lot more quickly than a good one which required real thought and planning—a lot of the books for sale are just not worth the money.

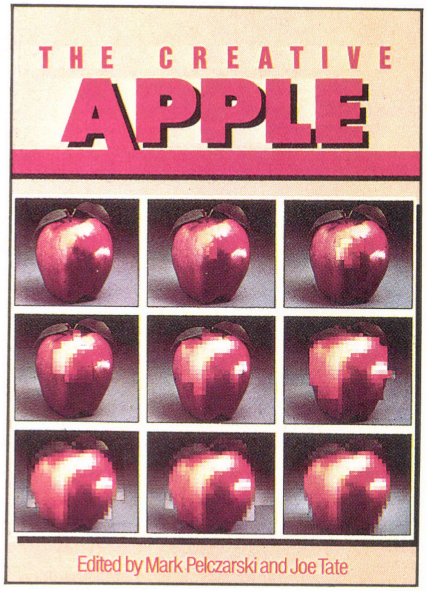
How can you tell which books are best for you without reading them all? Narrow your choices down. Probably you're interested in learning what you can do on *your* machine, rather than about computers in general. So naturally you'd confine your browsing to books about the computer you own or use at school or work. If you have no background in programming your first book should be one about BASIC, since the techniques and vocabulary you learn will be applicable to everything you do after you have learned that language. In other words, you shouldn't start off with a book about graphics without studying BASIC first.

What about other popular languages, like FORTH and LOGO? LOGO is an excellent introduction to computers, especially for young children, and it does teach you some basic programming principles. If you're interested in really getting the most out of your computer, though, BASIC is the language to learn. Once you know it, picking up LOGO is a snap. As for FORTH, it is structured very differently from BASIC and for many applications it is probably better.

We recommend, though, that you think of FORTH as a second language right now. BASIC is still the lingua franca of home computers and you can't get very far if you don't learn it.

Luckily for you, learning BASIC is easier than it looks. Probably the best format for learning the language is with a book that gives

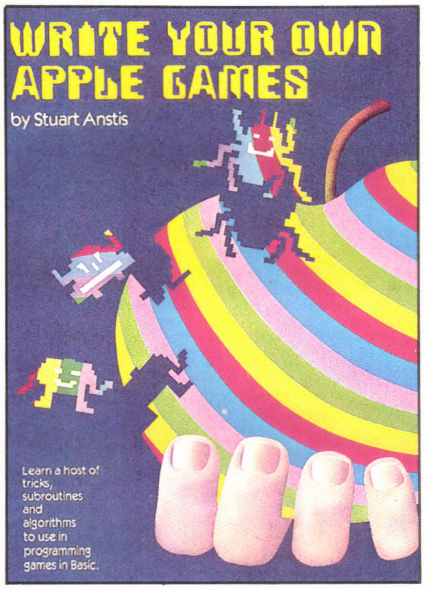


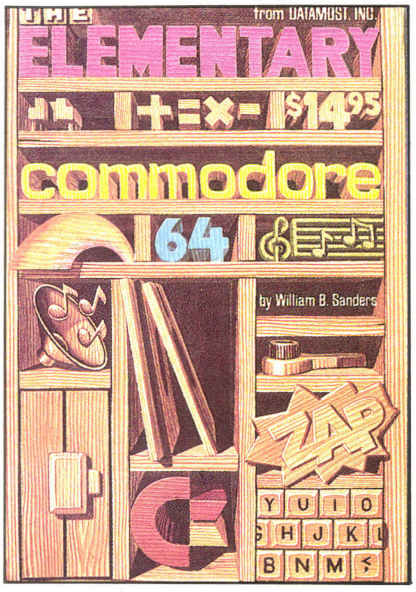




you exercises to do, rather than examples to copy. (One of the beauties of learning on a computer is that you know instantly whether you have given the right answer or not. And if you've made a mistake, it's no big deal as far as the computer is concerned.)

One format we like very much is *The Genie in the Computer* (we've got the TRS-80 edition) by Rachel Kohl, Laura Karp and Ethan Signer, published by John Wiley and Sons. Through the simple trick of drawing a "genie" on the screen and then altering the program systematically, the book teaches you all the BASIC commands and shows you what they do. Once you've learned all that, anything else you do in BASIC will be much easier. It also gets you programming right away, and you can do the whole book perfectly well without an instructor.



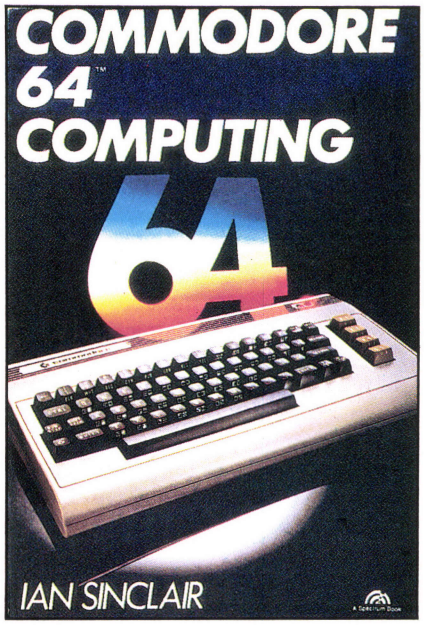


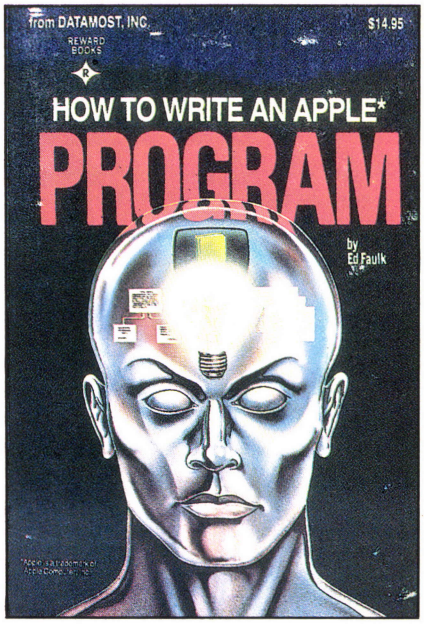


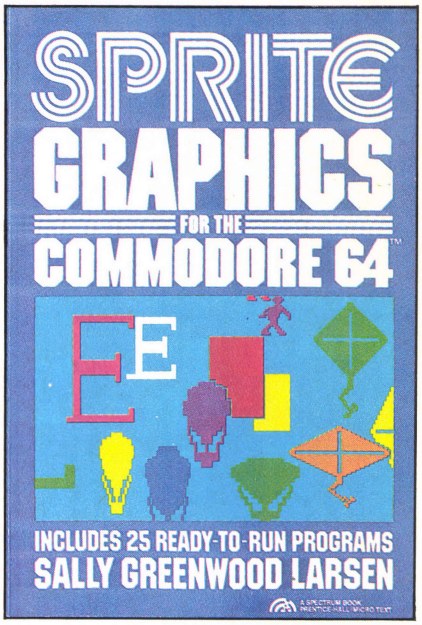
Kids and the Atari by Edward H. Carlson published by Datamost has a similar format but is designed as a teaching aid rather than a self-teaching workbook. Although it's comprehensive in its subject matter—it also takes you through all the BASIC commands—its level of explanation is limited. You'll need a good teacher to go through the book with you if you are really going to learn the many things BASIC can do.

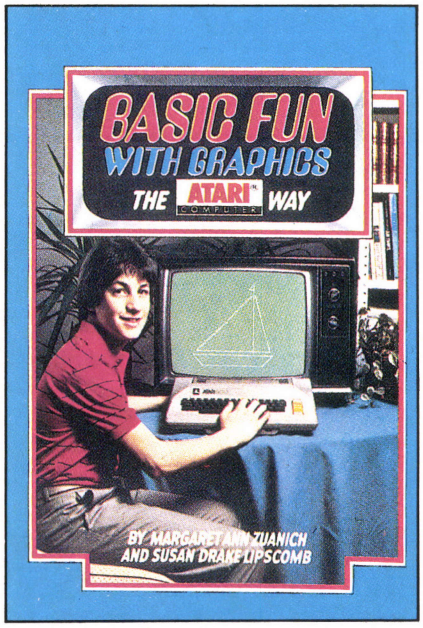
Sometimes it's not so easy to tell a bad book, but there are certain things to look for. In a good book, every chapter will tell you about something different. You should be able to go through from beginning to end, using what you have learned in each chapter to build on in subsequent ones. Bad books are highly repetitive. One series we do not recommend for that reason is the *Basic Fun With Graphics* guides by Margaret Ann Zuanich and Susan Drake Lipscomb, published by Avon/Camelot. This guide is out for many computer systems—we've looked at the Atari and Apple books. The graphics are simply those that can be constructed with print statements using your ordinary typewriter characters lined up in sequence. The subsequent chapters don't add to your knowledge of any of the sophisticated graphics capabilities of your computer, especially the Atari.

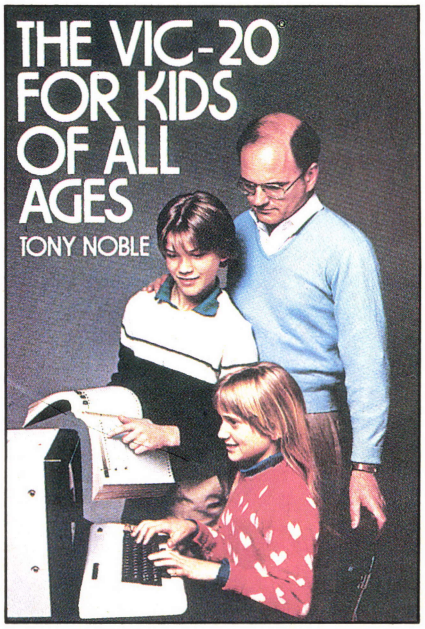
If you've mastered BASIC and are looking for more advanced books on programming and game writing, there are several good ones. One we like very much for the Atari is *Adventures with the Atari* by Jack B. Hardy, published by Reston. This is a comprehensive guide to

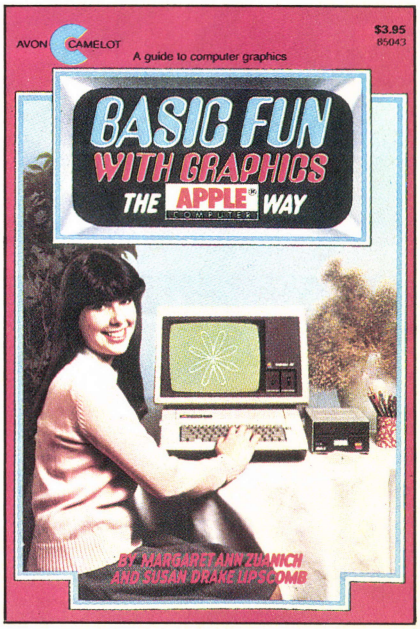












writing text adventures, and includes several complete programs for you to boot up on your computer. In addition to explaining the principles of adventure writing, it analyzes each program, detailing what the subroutines do. Once you've mastered the principles in the book you can go on to write even more complicated adventures.

There is no shortage of books that are Apple specific. They tend to fall into two categories: those that address isolated functions of the Apple such as graphics and those that provide more or less general knowledge. These, in turn, fall into two categories: those that assume some sophistication on the part of the user and those that assume no sophistication whatever. The four books that will be dealt with here are *How to Write an Apple Program, Write Your Own Apple Games, The Elementary Apple* and *The Creative Apple.* These are not the only books out there. By no means. They simply represent a fairly complete cross-section of the types that are available.

How to Write an Apple Program By Ed Faulk, published by Datamost, purports to be a guide to more efficient programming techniques. According to the author, the methods that will be discussed are variously called "modular programming" or, sometimes, "structured programming," or, sometimes, "top-down development." Well, perhaps the programming techniques are structured but the book itself is most definitely not. The author would be wise to look into the guidelines he sets down for programmers and then apply them to his own writing techniques. Whatever valuable information the book may contain is obscured by limitless and annoying prose whose primary purpose, it would appear, is to fill blank space. For example, in the middle of a long tract on the proper breakdown of a program, the author launches into a windy digression which he later acknowledges with a feeble attempt at humor: "But I digress! Back on the ranch, we see the cow...Whoops, wrong book." This sort of wandering is not only unnecessary but distracting and makes the reader's task that much more arduous until it finally discourages him altogether from wanting to plow through all that fluff to get to the good stuff. A guide to more efficient programming techniques could be a very

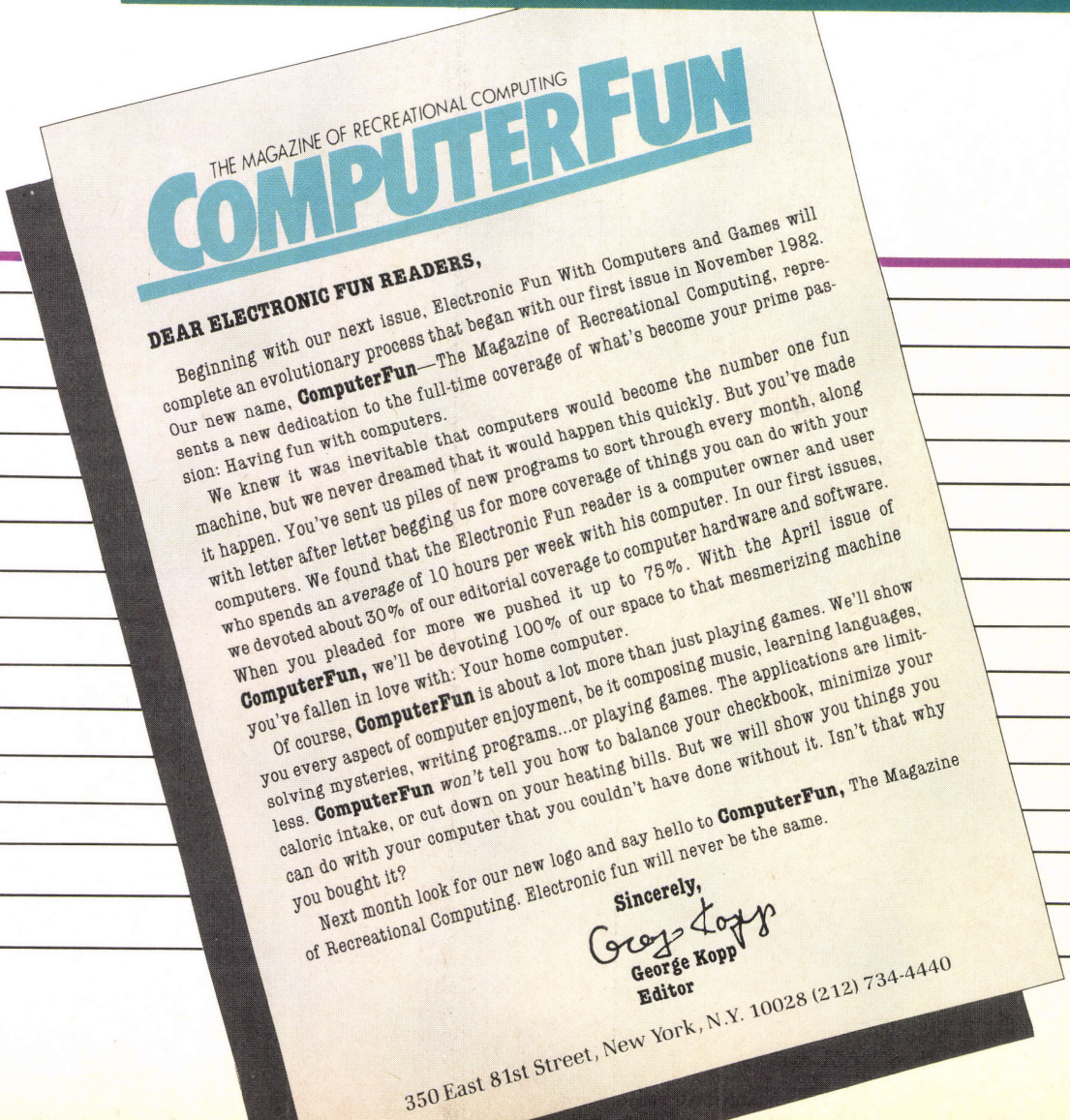
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THE EDITORS OF ELECTRONIC FUN WOULD LIKE TO INTERRUPT THIS MAGAZINE FOR A SPECIAL ANNOUNCEMENT TO THEIR READERS...

BEGINNING WITH TH
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THE MAGAZINE OF RECREATIO

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THE MAGAZINE OF RECREATIONAL COMPUTING

COMPUTERFUN

DEAR ELECTRONIC FUN READERS,

Beginning with our next issue, Electronic Fun With Computers and Games will complete an evolutionary process that began with our first issue in November 1982. Our new name, **ComputerFun**—The Magazine of Recreational Computing, represents a new dedication to the full-time coverage of what's become your prime passion: Having fun with computers.

We knew it was inevitable that computers would become the number one fun machine, but we never dreamed that it would happen this quickly. But you've made it happen. You've sent us piles of new programs to sort through every month, along with letter after letter begging us for more coverage of things you can do with your computers. We found that the Electronic Fun reader is a computer owner and user who spends an *average* of 10 hours per week with his computer. In our first issues, we devoted about 30% of our editorial coverage to computer hardware and software. When you pleaded for more we pushed it up to 75%. With the April issue of **ComputerFun,** we'll be devoting 100% of our space to that mesmerizing machine you've fallen in love with: Your home computer.

Of course, **ComputerFun** is about a lot more than just playing games. We'll show you every aspect of computer enjoyment, be it composing music, learning languages, solving mysteries, writing programs...or playing games. The applications are limitless. **ComputerFun** won't tell you how to balance your checkbook, minimize your caloric intake, or cut down on your heating bills. But we will show you things you can do with your computer that you couldn't have done without it. Isn't that why you bought it?

Next month look for our new logo and say hello to **ComputerFun,** The Magazine of Recreational Computing. Electronic fun will never be the same.

Sincerely,

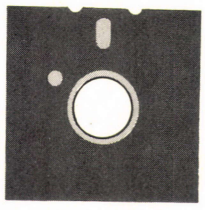
George Kopp
Editor

350 East 81st Street, New York, N.Y. 10028 (212) 734-4440

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WHAT YOU'LL SEE IN THE APRIL ISSUE OF COMPUTERFUN:



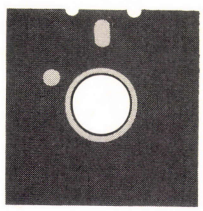
SETTING UP YOUR OWN COMPUTER BULLETIN BOARD
Computer owners with modems can access hundreds of on-line services, on which they can leave messages to buy or sell equipment, trade programs, or just say hi. We'll tell you how to set up your own "bulletin board," including what it might cost and how it could put money in your pocket.

THE ELECTRONIC PAINTBRUSH
How to get the most out of the new graphics programs that help you make beautiful artwork on your computer screen, even if you can't draw a straight line. A step by step, profusely illustrated guide.

THE INFOCOM PHENOMENON
The inside scoop on what makes those best-selling Infocom text-adventure games so good, along with ways for you to beat them quicker.

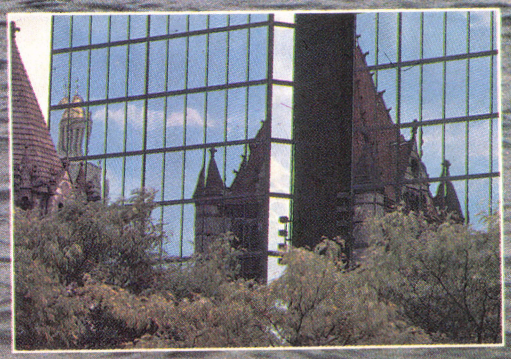
SLIPPED DISKS
A regular **ComputerFun** column that introduces you to the most intriguing and unusual new software programs on the market. In April we'll look at an I Ching program for your Apple computer that puts 4,000 years of Oriental cultural on one 64K disc.

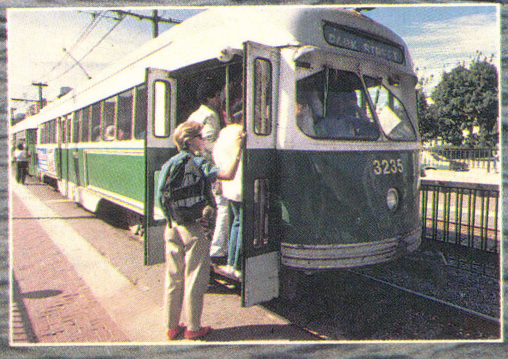
PLUS
your favorite Fun department, like Hacker's Helper, Glitches, Input/Output.



THE UNKNOWN ARCADER

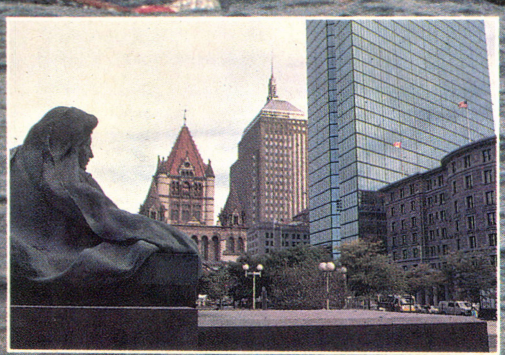
Arcades of BOSTON





Oh, Boston's the land of the bean and the cod where the Cabots speak only to Lodges and the Lodges speak only to God. The Unknown Arcader, however, will speak to just about anyone and has to in his never-ending quest for the ultimate gaming room. Being in Boston was like a blast from the past for UA. This was the city of his innocent youth, the home of his alma mater. Nostalgia for days gone by overwhelmed Our Man but, wiping a tear from his eye, he pushed on, visiting all the arcades and taking notes—notes on which he knew he'd never be tested. That's one thing the life on the road has over the life of a student.

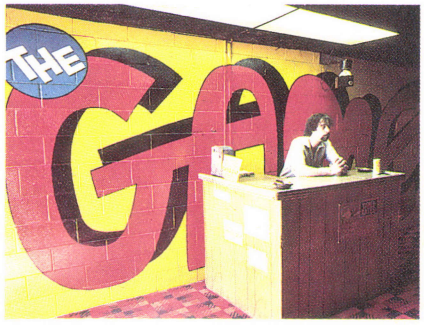














The last time I was in Boston I was preoccupied with choosing an elective for which I wouldn't have to write term papers. Between Fencing, Vegetarian Cooking, Yoga and Intramural Volkswagen Repair, I managed to squeak through my last semester without touching finger to typewriter. Times have changed, so have I and so has Boston. Easy electives now include Intro to Metrics, Dressing for Success and World Aerobics. From fire buttons to "ENTER" key my fingers are seldom idle, and Boston—well, Boston has quietly become host to some of the best arcades in the world. And that ain't baked beans!

The Mass Pike is not a fish. I pointed my radials down the Mass Pike toward the looming Prudential tower, sight of one my many summer jobs while in college. If you took all the Chicken Kievs I cooked high atop the Pru and laid them end to end, they would stretch from Bunker Hill to Harvard—but they'd tie up traffic something awful and leave a heckuva mess.

A few blocks up Huntington Avenue from the Pru was my first stop: The Game Room. This 12-year-old arcade used to be known for its ancient pinballs and the weird mannequin-pilots in the window, but all that is gone. Now this basement-hip establishment features 65 machines including *Dragon's Lair*, *Monster Bash* and *Star Wars*. And it's dark. Very dark—even at high noon. With its black ceiling, cinderblock walls and semi-underground location it's got the feel of a real college hangout.

Which it is. It's practically on Northeastern University campus, and as you walk through it, you have to be careful not to step on bookbags and backpacks.

To get the place shaking I dropped a token in the jukebox. What? *Five* plays for a token! By the time I finished choosing between The Police, Elvis Costello and the Stray Cats, the place had filled up. An anthropology student was exploring *Lost Tomb*. An architecture major was toiling over *Blueprint*; monsters chased housewives all over the suburbs. If these guys' parents knew where their tuition money was going,

Above, the Game Room which, in UA's college days, used to be known for its weird mannequins.









they'd run all over the suburbs too.

As for the clients, they all seemed sort of alike—baby-faced, in oxfords and Walkmans, carrying *The Worldly Philosophers* and humming Joan Jett songs. With my vidiot pallor and roadweary sensibilities I wanted to protect these tender babes from the harsh blows the real world held in store for them. I wanted to block the door, like Holden Caulfield catching the children in the rye. Let these preadults stay here forever in the warm glow of *Jungle King* and *Ms. Pac-Man*, and never experience the desolation of a Motel 6 at midnight or the long stretches of double yellow lines that lead straight to old age.

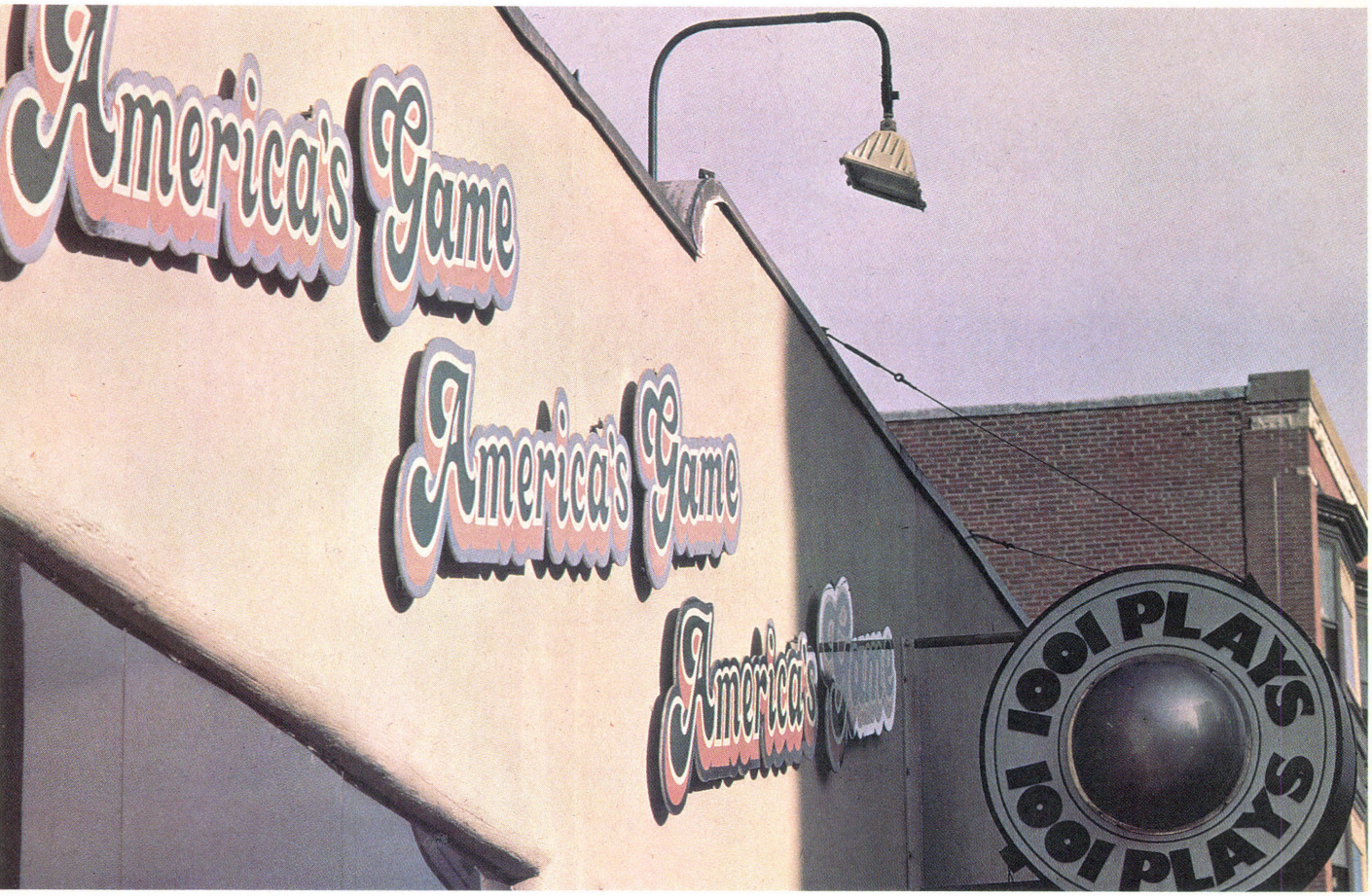
The high scores confirmed my estimation of these tweeks: *Robotron*, only 140,325; *Bump 'N Jump*, 192,536—earnest amateurs. I shed a tear for lost youth, tripped over a bookbag and went out into the light. A trolley rumbled by and students hurried to lecture halls. I gunned my engine and peeled out in my old heap. A cute coed in a new Celica took my parking space immediately.

Next stop The Teddybear Amusement Center. The Teddybear is to a boardwalk arcade what a Volvo is to a dune buggy. In a business district of downtown Boston, it is the essence of corporate chic. Long boardroom curtains block the light and gray carpet blends well with all the gray flannel inside. There are 78 immaculate machines including the incredible *M.A.C.H 3* laser game and a dual-screen *Dragon's Lair*. A beautiful Namco *Shoot Away* skeet shoot simulator looked like a picture window onto a pine forest.

"What a feeeeling..." the theme from *Flashdance* invoked as I skidded through a few rounds of *Discs of Tron*. The glowing cabinet was like a tanning booth; I wished I'd brought my Coppertone.

Brokers and accountants crowded around *Birdie King*, an 18-hole golf game with separate fairway and green screens, and an intercepting blackbird. Other popular machines were *Pole Position*, *Ms. Pac*, *Centipede* and *Front Line*. There was a mint condition *Space Encounters*, a black-and-white *Buck Rogers*-type

The Teddy Bear Amusement Center (above) is the essence of corporate chic: gray carpet and gray flanneled players.









game with built-in colored lights. But the oldest machine (besides the rotating barber pole) was Stratovox. There were both American and Japanese versions of *Pac-Man* and *Pac-Man Plus*.

As soon as *M.A.C.H. 3* became available, I bolted. I must have hit that machine at 60 miles per hour. Dropping in four bits, I selected the fighter option. Mountains, fields and ravines zipped by as I blasted away and dodged flak. Next I tried the bomber option but I couldn't bring myself to bomb the freeways I call home. Neither did I have any inclination to detonate nuclear facilities. But the fighter game was so good I was willing to forgive the questionable taste of the bomber game, as well as the weird sign on the cabinet: "Feel the realism"—whatever that means.

The Teddybear hosted a video game fair to benefit the Massachusetts Association for Mental Health last winter. Gene, the manager, said he also gives away loads of tee shirts and posters for various promotions, and trophies to anyone scoring over a million on *Centipede*. No one came close while I was there, but it was still early. High score on *Robotron* was a measly 113,075 and on *Juno First*, 166,370.

I hated to leave such a world class arcade. Even Frankie Vallee, on the radio advised, "Just hang on to what you got..." But duty called, like Paul Revere. If I'd had a musket I'd have slung it over my shoulder. But I only had a shoulder. And there were no Redcoats to fight, only Klingons and Droids.

If you're on your way to Harvard, stop at 1001 Plays on Mass Ave. In the spirit of higher learning, this sunny storefront arcade has *FAX*. "Who led the Green Mountain Boys against the British?" it asked. The brainy player answered correctly, "Ethan Allen." And I thought he only made furniture. I guess that's why I didn't go to Harvard.

There are 55 machines in all, on two levels, including *Mr. Do's Castle*, the *Lair* and Centuri's *Aztarac*, a round screen, defensive game which plays like a combination of *Space Zap* and *Asteroids*.

Unlike the letter sweaters and

1,001 Plays (above) caters to a younger crowd. Jean jackets replace gray flannel suits. It's very suburban.









pinstripes of the first two arcades, jean jackets were de rigeur here and the crowd was younger. Even though it's only a stone's throw from Hahvahd Yahd, 1001 Plays has got a suburban feel—like your best friend's mom's kitchen. Everywhere you look there's formica and houseplants.

"I used to come here everyday," said Kevin, a gawky guy in wire-rims, as we shared a game of *Krull*. "But I can't anymore, cause I'm saving for college."

"Every quarter counts," I thought as he was flattened by a boulder.

Some of the little kids were play-punching Desmond (the manager), which looked to be pretty much fun. So I took a swing at him myself, but then he frowned, so I hit myself on the head with a Swedish Ivy. That made him smile so I took off while the going was good. On the way out I got a glimpse of some respectable high scores: *Frenzy*, 201,181; *Gyruss*, 202,900; and *Centipede*, a whopping 999,999.

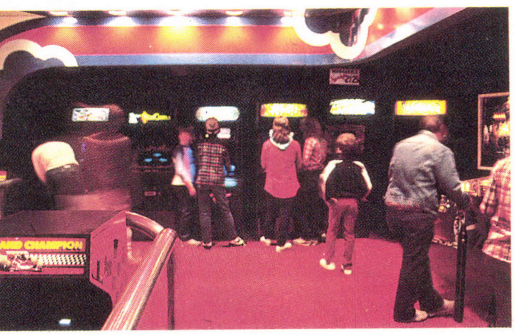
I admit I'm a sucker for a board-walk arcade. give me the smell of the ocean, the rumbling of skeeball and rock 'n' roll over bad speakers and I'm easy. Funland is one of several arcades at Nantasket Beach. It stands in the shadow of the rickety old roller coaster at Paragon Park. While it's big as an airplane hangar (it used to be a roller rink) it only fills up during the tourist season. A lot of machines are removed in the fall, and in the winter it's closed altogether.

From the tin roof to the tile floor, we're talking funky. There's a dusty *Star Fire*, *Super Bug*, *Video Pinball* and *Sprint*, to name a few of the antiques. There's also a *Punch Ball*, skeeball and the accompanying prizes: rabbits' feet, squirt guns and tapestries of The Last Supper. Lest you think this joint is caught in a time warp, there was also *Xevious* (40,000), *Food Fight* (432,400), *Mappy*, *Dragon's Lair* and *Star Wars*.

"They ought to have cuter people working here," complained Kelly, a blonde in a windbreaker. She worked over her fruit-flavored Trident like a piece of tough steak. She's had a grudge against the place ever since they moved out *Pengo*.

Funland (above), like Woody Allen's character's apartment in ANNIE HALL, is located under a roller coaster.









I backed into a remote corner of the arcade and found myself beside the Sex Tester. Bob Seeger belted out "Fire Down Below" as I dropped in a quarter and pressed the button. Nothing happened. No lights went on. No buzzer. No skyrockets. No nothing! "I must have given it such a jolt, it short-circuited," I thought. I wasn't "Romantic," "Wild" or even "Harmless." I didn't dare ask for my quarter back—I preferred not to draw attention to my inadequacies. I took a deep breath of salt air and went looking for my jalopy.

The Dream Machine in Methuen Mall is part of a chain (which includes Funland). It's like a Disney movie, squeaky clean family entertainment. Tucked away in the "Food Court" of the mall, you can run out for a poo-poo platter or Bavarian strudel between games.

There were 49 spotless machines, *Lair* being the newest. The kids were pretty young, around nine to 16. Some parents dump their kids there while they shop. Others come in with the kids to play. Mall employees come around too, in fact, they get two free games a day. It's especially popular with the DDS's from The Dentists Collaborative at the other end of the mall.

"Dream Machine offers special birthday deals and high score contests," said well-trained manager, Tim Haley, as he picked up some lint from the carpet.

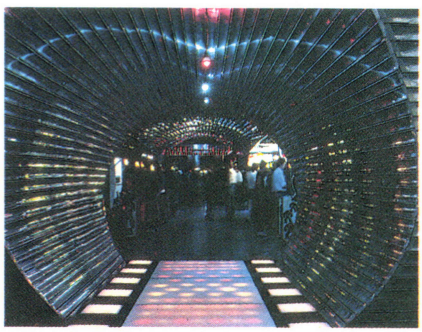
Tim introduced me to the kindly old changemaker, a white-haired gent named John. He works at the Dream Machine to supplement his social security and adds to the ironclad respectability of the wholesome place. If you had to leave a baby on the doorstep of any arcade, this is the one to pick; old Uncle John would treat it right.

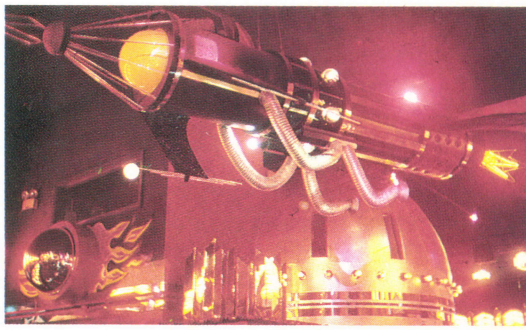
A pubescent Lothario was wacking away at *Chexx*, actually lifting the machine off the floor. The little narcissist was trying to get his friends to bet on the outcome of the game—not exactly in keeping with the arcade's apple-pie image. I snuggled up to *Time Pilot* nearby and made a big show of scoring 280,000, drawing the attention of all of his friends. Finally wiped out in the UFO screen, I turned to the little bully and said, "I'll take that bet if

Part of a chain, the Dream Machine (above) is located in a Boston mall and is as PG as a Disney movie.









you're still game." He made some lame excuse and wandered off to play *Asteroids* (two games for a quarter).

Having restored the moral equilibrium of the place, I pointed the ol' purple sneaks toward the door. Strutting past *Subroc 3-D* (83,400) and *Tempest* (932,800 wow!) I left a sea of grateful little faces in my wake.

It was late when I arrived at Fun & Games on the Golden Mile in Framingham. I was wasted with videovision and too much poo-poo platter. I might have skipped it altogether if I had any regard for my health and well-being but, when you're on a mission, selfish concerns take back seat; but my back seat was full of months of dirty laundry. I forged ahead anyway, and boy am I glad I did.

Listen up! Fun & Games just *may* be the best arcade in the world—I know I haven't seen every arcade, but from what I've seen (and these peepers have seen a few!) this is definitely par excellence.

To walk in is to be dazzled by the lights (some of which come from Elton John's stage show). There is a Flash Gordon-type space ship suspended from the ceiling and a silver alien over the front door on a revolving platform (from Earth Wind and Fire's stage set). High marks in the razzle-dazzle department, but what about substance? Well, it's got over 200 machines in eight rooms and is open 365 days a year. And these aren't surplus machines. In addition to the ubiquitous *Dragon's Lair* and the fabulous *M.A.C.H. 3*, there was *Astron Belt* (first place I'd seen it on this continent), *Bega's Battle* and a prototype soccer game called *Hoccor* (not to be confused with Hacker who edits this magazine). Add a snack bar and a couple of hundred restless teenagers out for a good time, and that's what I call a party. This is a place to strut your studded leathers or pointy boots. The girls wear sweaters, fresh out of Woolite. The boys try to catch their eye in muscle shirts and denims. For anybody too young to get into a disco, this is the happening place on weekends. And sometimes the disco goes there, like

Continued on page 79

Fun & Games COULD be the best arcade in the world. Is this the end of UA's career? Maybe...

Adam: The Buck stops here

BUCK ROGERS ★★

Coleco/Adam

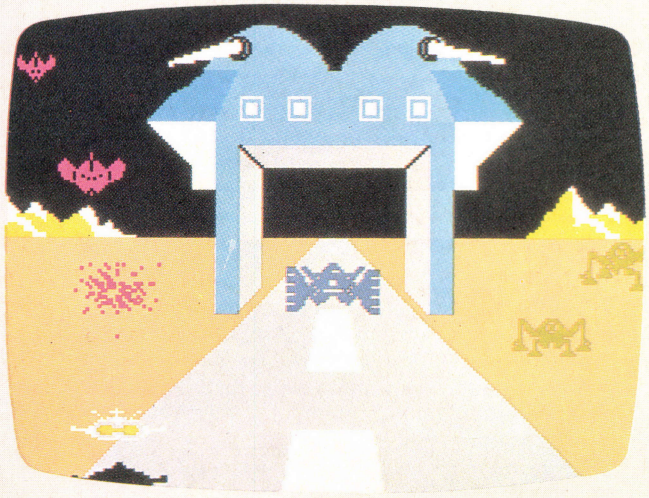
by Michael Blanchet

Coleco's new Adam Computer may be affordable and easy to operate but it is not, contrary to its maker's claim, "the most sophisticated video game playing machine" ever produced. All things considered Adam is really no better than the standard ColecoVision console and in some respects, worse. If this, the premiere offering, is any indication of the quality of games to follow, some Adam owners may be disappointed.

Based on Sega's arcade game, *Buck Rogers*, like all made-for-Adam software is stored on what Coleco calls a digital pack which is essentially an audio cassette. Supposedly each game pack has a memory capacity of 256K. If this game has that much memory, it certainly doesn't show.

As the game's namesake, your mission is to free the Planet Zoom from the tyrannical reign of some unnamed aliens. To complete one cycle of the game you must fight off various alien craft in both landlocked and aerial encounters until you reach the command ship. To destroy this ship you must first hit all four of its engines. Once it is crippled, you then blast away the gates that lead to the space warp. Here you are rewarded with temporary safety and a new, more powerful ship.

The perspective employed here is a clever combination of first and third person orientations. You see your ship as it flies but you view it from behind as you do your racer in *Pole Position*. Your fighter has limited airspace in which to maneuver. It can climb or dive within the bottom third of the screen and do some side to side banking depending on the scenario. Steering this fighter is no joy thanks to the stiff, short-shafted joystick that comes with the Adam package. ColecoVision owners will immediately recognize this ill-designed piece of hardware. It's the same controller that comes with that console only this time it's a creamy beige color.



Your defenses and speed are controlled by the two side buttons on the controller housing. Points are scored in two ways—by shooting ships and by accelerating along the planet's surface. The faster you fly, the more points you'll score.

Since a Super Game Pack offers so much memory, Coleco was able to take great liberties with this game. Additional screens have been added including a Hall Of Fame screen. These embellishments can be welcome, but not if their inclusion is at the expense of basic gameplay. This seems to be the case here. One critical visual element of this game, the illusion of increasing speed, was completely omitted from the home version. Whether you are hovering motionless or moving along under full steam, the playfield scrolls by at the same unchanging pace. Furthermore, the illusion of depth, another critical element in this particular game, is poorly presented and executed. Incoming attackers blink from position to position, leaving you with the feeling that the playfield is jerking forward step by shaky step.

Finally, I am concerned with the durability of the cassette medium. Each time the game is reset the cassette rewinds and replays. There's a lot of friction here and friction means wear. A game cartridge has no moving parts and it's usable lifespan is almost limitless. After playing *Buck Rogers* a scant fifty times, I noticed an ever-increasing number of on-screen glitches. I can only presume they were caused by tape wear.

THE WITNESS ★★★

Infocom/Atari

by Louise Kohl

Any dyed-in-the-wool mystery addict would welcome an opportunity to tackle clues and suspects firsthand and Infocom's *The Witness* certainly gives you that chance. This game is neither as complex nor as littered with red herrings as Infocom's *Deadline*. But while I don't know anyone who's actually solved *Deadline* (yet), a few friends and I cracked this case within a week or so. This is probably much too simple for a hardcore text-adventurer—and it certainly doesn't

overtax your capacity for inventive solutions.

The cast is small, which is not to say limited. You are a police detective called in by Mr. Linder to investigate threats to his life by Ralph Stiles, his wife's lover. Or former lover—Mrs. Linder ("Virginia" to Ralph) has recently committed suicide. There's also Phong, the Oriental butler, and the daughter of the house, Monica of the lamentable vocabulary. She's read too many third-rate imitations of Dashiell Hammett, and is given to calling you "shamus."

As usual, Infocom's support material is imaginative, witty and clever. Your file includes a telegram from Mr. Linder, a copy of Mrs. Linder's suicide note, a local newspaper and a pack of matches with a mysterious number scrawled inside the cover. You also carry a snub-nosed .45 ("gat" or "heat" to Monica) and a pair of handcuffs.

The first thing you have to detect is why you've been called—and getting an answer to this is more time-consuming than such a simple question would seem to warrant. Mr. Linder is evasive, Phong is inscrutable, Monica is largely unintelligible and who knows where Ralph is.

There is what amounts to a mandatory time lapse at the beginning during which you're stuck in one room of the house. *Witness* is flawed, but it's not a bad warm-up to *Deadline*.

Have a drink and look under everything. Don't forget the handcuffs.

MOVIE MAKER ★★★★

Reston/Atari

By Randi Hacker

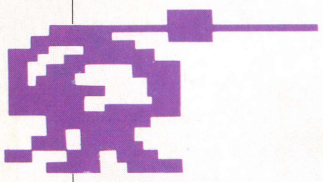
See man's best friend race on screen while remaining in one place! Thrill to the antics of The Little Tramp as he picks a flower for Paulette Goddard! Rejoice as the lonely little robot puts himself together! You'll laugh! You'll cry! You'll roll in the aisles! But most of all you'll have a high ol' time putting together your own short animated cartoons with *Movie Maker*.

Although no huge search lights to announce premieres come packed with this particular program, this won't in any way affect the rave reviews you'll give yourself once you've put together your own film. Unlike other graphics programs, *Movie Maker* allows you to draw a picture and then animate it through the use of sequences. The end result is a technicolor, computer-generated animated feature.

If you're at all familiar with animation, you'll know that each frame is essentially the same drawing with a slight change. When these "cels" are run in sequence, they create the illusion of movement. *Movie Maker* operates on the same concept except it saves you all that trouble of drawing the same shape over and over again which, in turn, relieves you of the worry that you won't be able to do it exactly the same way twice. Using the duplication option, you can simply stamp your original drawing many times on the screen. You then use an edit option to move the elements you want moved as much as you want to move them. After you number the images in the order in which you wish them to run, you only have to make the popcorn, sit back and watch.

Sound effects, color, music; everything you need to make a complete short subject is included on the disk and whether you choose to draw your own characters or select from among the vast collection that comes with *Movie Maker*, you're sure to impress yourself with your end results. You can create more than one sequence, drop in background colors and even save the movie on cassette or disk to show your friends. It sure beats home movies.

Although the directions are very unclear and not particularly accurate in many places, once you've experimented with the various functions, you'll have lots of fun pretending to be a big time Hollywood director. All you need is a beret, jodphurs and an industrial-sized megaphone and you can start barking out directions with the best of them. I'm ready for my close-up now, Mr. DeMille.



DRELBS

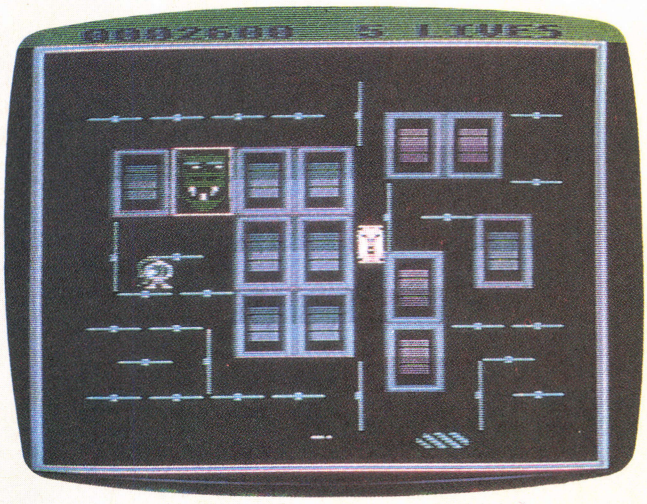
Synapse/Atari 400/800/1200

By George Kopp

Start with a grid of flip gates a la *Ladybug*, add a couple of things to chase each other around inside, throw in a challenge round bonus screen and, voila! Instant computer game. So how from these simple roots did we get a scenario about creatures called Drelbs, who are imprisoned in the time of unicorns and sorcerers by other creatures called Trollaboars and generally harassed by Gorgolytes (sometimes called Gargolytes) and Screwhead Tanks? You can't tell the players apart without a scorecard and none is provided, so just wing it.

Drelbs is an interesting game with many potentials for strategy. You've got to flip your flip grid to make complete squares while avoiding your enemies. Complete enough squares and you've freed a bunch of Drelbs and can go to the next screen to rescue them. But there are other ways to get to Drelbsville. Kissing the beautiful Princess is my favorite. (Don't bother to ask who she is. If you complete the game you get to discover her secret.) The Princess turns into a Gorgolyte (cf. Gargolyte) as soon as you look at her with a twinkle in your eye, though, and kissing a G*rgoltye is a fate equivalent to death.

There are two basic strategies—offensive and defensive. The offensive mode of play involves not only being rude but also chasing the Trollaboar around and



trying to catch him inside a square. The defensive mode calls for a lot of running away from the Trollaboar. Both seem to work just as effectively because so much of the game seems to be random. Sometimes you'll get lots of opportunities to transport yourself into Drelbsville. Other times you'll close off every square and still not get a Drelbish window, the preferred mode of Drelbish dimension travel.

The graphics are excellent and once you get the hang of it, *Drelbs* is a challenging game. A little less luck would have made for a little more interest, though.

> If you're not directly next to the Princess when she appears, forget it. You'll only get a mouthful of Gorgoltye.

BRISTLES

First Star/Atari 800/1200

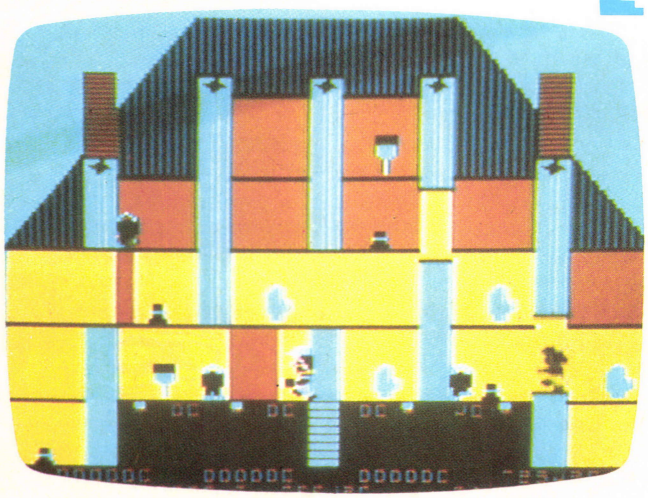
By Randi Hacker

Sysiphus, you will remember, (those of you who have read your Bullfinch, that is) is doomed to spend eternity in Hades pushing a rock up a mountain only to have it roll all the way down to the bottom so he has to start the whole thankless task over again. In *Bristles*, Peter the Painter has to paint a house. At certain levels, Brenda the Brat, a rude little girl, comes along and leaves her chubby handprints all over the walls so that he has to go back and paint those all over again. In this way, your task in *Bristles* is a lot like Sysiphus' task only slightly less rewarding.

There are six levels to *Bristles*, each with eight houses which get progressively larger. You've got to paint all the rooms in each house while avoiding Flying Half-Pints, Dumb Buckets and Bucket Chuckers who will rob you of your paint brushes. Lose all ten and you're out of a job. Four people can play. Each gets a name that starts with a "P" so that the integrity of the alliteration remains intact.

Each house has several storeys which you move between using elevators or stairs. You run across each floor, leaving a trail of paint behind you as you go. You've got to time your split-level dash properly though, or you'll end up falling down an elevator shaft. At some levels, this costs you a brush. At others, it doesn't. The choice is yours. Other choices that are yours include painting the house with a real color or simply going over the wall with clear varnish and seeing the house you're painting or painting an invisible house. After each house is completed, words flash on the screen. These are part of a secret message. Your ultimate goal is to complete all eight houses on all six levels to find out what it says.

Bonus points are earned by collecting paint rollers before the Bucket Chucker carts them away to his private collection. Although Brenda is no threat to you, Flying Half-Pints will knock you into the basement if you don't duck or jump at the right time and the Bucket Chucker will push you down. All of these result in the loss of a brush. According to the directions, there are safe rooms into which the Bucket Chucker won't



come. Half-Pints and Dumb Buckets can, however, wander in. This, to me, is not safe.

There are a number of ways to defeat the Bucket Chucker which involve paint mixers and entrapment in basements and such but they're too silly to go into here. In fact, the whole game is too silly, filled as it is with steampipes and chimneys and candy canes and what not. It makes you want to live in a cave.

Half-Pints always bounce for a while at the side of the screen before they come flying out. Use your peripheral vision.

MR. ROBOT ////

Datamost/Atari 800/1200

By George Kopp

The full name of this Datamost epic is *Mr. Robot and His Robot Factory*, but it could be subtitled *Bounty Bob Meets Lee Iacocca* or *Auto Worker 2049er*. The game play is a direct ripoff of *Miner 2049er*—cover all the ground on each screen, eat energizers and annihilate aliens. There are three important improvements, though, which make *Mr. Robot* a standout by itself. First of all, you get 22 screens. Second, you can start at any screen you choose. Third, and most important, is the Robot Factory section of the game. This enables you to build your own screens and save them to disk.

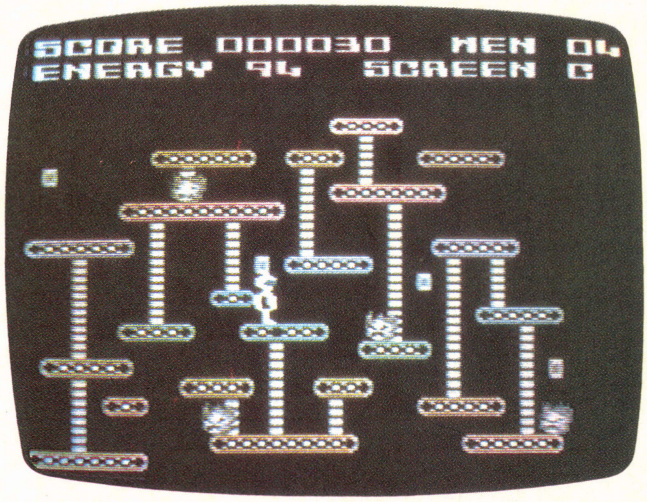
There are loads of nifty devices in *Mr. Robot* which guarantee it will hold interest for innumerable plays. In addition to your basic platform and such familiar components as ladders, fire poles and escalators you also have moving conveyors, transporters (they work like the teleporters that have come to replace elevators in the fully-equipped prime commercial space of 2049) and my own personal favorite, the trampoline. You've also got levels constructed of bombs which blow you sky high if you linger. And did I mention the magnets?

All of these elements can be used when you build your own screens. Simply select the icon of your choice, grab it with the fire button, and either "stamp" it or "paint" it—that lets you run a platform or ladder the length or height of the screen in one easy fluid motion of the joystick. You can test your screen, edit what you've done, and then save it to disk.

As with *Miner*, the tougher screens can only be completed when you tackle them in the right way. Otherwise you'll zap yourself into a corner. Unlike *Miner*, however, *Mr. Robot* lets you start wherever you choose. This is a huge improvement and one that ought to be incorporated into every similar multi-screen game. It's always seemed unfair to me that after you shell out all the money for a computer game you can't see the thing all the way through unless you're willing to sacrifice hour upon hour perfecting your skill. Depending on what line of work you're in, figuring your time on an hourly basis that $30 game could end up costing you thousands.

The graphics are colorful but a little sketchy, probably to save memory for all the amazing things you can do in the Factory. No stinting with the music, though. Credited to Music by Paradise (a couple of composer/programmers in Hawaii) the theme to *Mr. Robot* is the greatest piece of original video game music since *Shark, Shark*. Greater, even. And longer. Except for the first shipment of disks which was rushed to market before the title screen was done, the music backs up some terrific animation of Mr. R strutting his stuff on a conveyor belt. Automation never looked so good.

On the trampoline screen, go for the long leap.



OIL'S WELL ////

Sierra/Atari 400/80

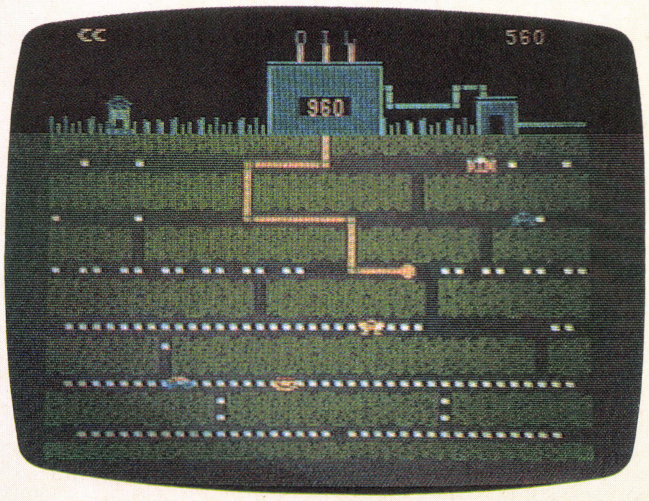
By Phil Wiswell

Oil's Well is one of the most original arcade-style titles published this year for the home computer. Its method of play is refreshingly different from anything else, which is important because the concept of the game (munch the dots) has been overworked. The appeal of *Oil's Well* is the visual puzzle: Can I get there before they do and what route should I take?

This is a maze game, and each of the eight boards consists of six horizontal tunnels connected by vertical tunnels, all of which are strewn with oil pellets to be gobbled. What's really new about *Oil's Well* is that you don't move a single character around the board. Instead, you control the movement of a drilling bit that leaves a trail of pipe behind as it moves from its starting position near the top of the screen. You may not turn the drilling bit back on itself or your pipeline, which means you can't run right through any maze. Using the joystick button, you retract the pipe as far as you want, even all the way back to its starting position.

Of course, while you are busy gobbling oil pellets there are a few nasties roaming the maze, and they enter randomly from the sides of the screen. Oozies will cost you a life if one runs into any section of your pipe, but your drilling bit can go right through them for extra points. Land Mines, on the other hand, will pass harmlessly through your pipes, but will blow up your drilling bit on contact. So you really have to know exactly which of your enemies are where at all times.

Each maze is arranged so that there is no simple path. You drill for some distance, planning your route to "eat" all pipe destroying Oozies, then retract your pipeline and drilling bit to take off in other directions.



Getting down to the bottom tunnel can be impossible without the help of gobbling the rare petromin tablets, which slow your enemies to a crawl and allow you to finish off a board.

Each time you successfully clear all the dots in a maze, you move on to the next level and construction workers on the surface (top of screen) build another section of your refinery. The graphics improve stunningly with each new level and the difficulty of the maze designs escalates in similar fashion. All in all, a well-rounded, polished, frantically-paced challenge with staying power.

You'll be happy to know that the amount of time it takes to extend your pipeline down into the maze is in no way equal to the amount if time it takes to retract it. This means that you can do some fairly impressive daredevil maneuvers. For example, you can snake your way down to one of the lowest levels and wander around while one of the destructive enemies makes his relentless way towards you on a top level. Whistle and go about your business nonchalantly until the eleventh hour then retract quickly into safety.

Gobble small sections of the maze at a time by retracting the drill often. Remember: He who drills and runs away lives to drill another day.

DIG DUG ///

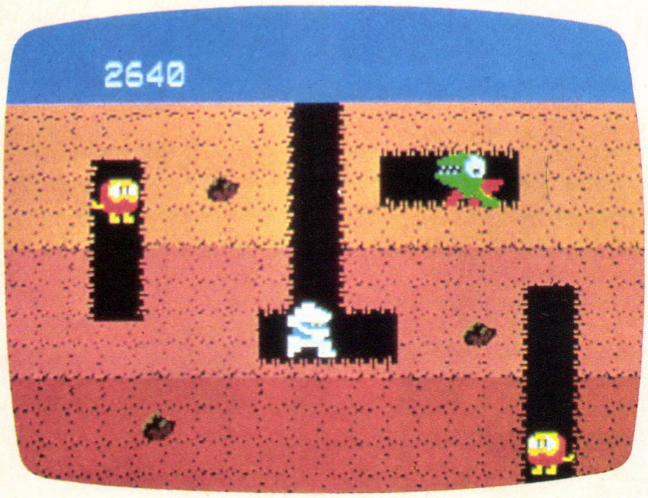
Atari/Atari 400/800/1200

By Charles Ardai

Many nursery rhymes are out of date. "Mary, Mary Quite Contrary," for example. This one, however, is easily updated. Look, "Dig Dug, Dig Dug, quite contrary," (no razzing yet, please. Hear me out). "How does your garden grow? With Pookas and Frygars and tunnels and rocks and vegetables all in a row." The poem may not have a lot of literary merit nor will it, probably, win the Nobel Prize but it was fun to write. Not as much fun as this home version of *Dig Dug* is to play though.

Dig Dug is tremendously enjoyable. In *Dig Dug* you play the cutest protagonist this side of Q*bert, a tiny guy in a miner's outfit named Dig Dug. Dig Dug's task is an arduous one; he must dig tunnels through the various levels of dirt that fill up the screen in order to make his flower garden at the top of the screen grow. (Don't look for logic—there isn't any.) In addition he must pick up the vegetables that periodically appear at the middle of the screen, although how this is supposed to help his garden I have yet to discover.

If only this was all that you had to do! Hidden away in pockets of air are troops of monsters which are fatal



to the touch. Monsters come in two varieties, Pookas and Frygars. The Pookas are tiny bubble-shaped critters wearing goggles. The Frygars resemble tiny dragons, and can shoot out breaths of flame. If you run into any of these monsters you can blow them up with your handy air pump until they pop, or squash them by tunnelling under strategically placed rocks and letting the rocks fall on their heads.

The graphics are every bit as colorful and detailed as on the arcade version. All of the musical themes are very well reproduced and are just as addictive as in the original. An especially good touch was allowing players to start at any level that they want to.

The only problem is with joystick control. Although it seems that you can dig anywhere in the screen, you can actually only dig in several predetermined invisible channels. Since these channels are invisible, you'll often find yourself unable to go in the direction you want, all because you are a millimeter off center. The problem is that in a game like *Dig Dug* even the slightest hesitation can mean the difference between life and death.

Aside from this, *Dig Dug* is marvelous. It stands as a very good arcade-to-home translation, and as an excellent game on its own merits.

If you have to choose between eating a veggie and chasing an escaping monster, choose the veggie.

CONQUERING WORLDS III

Datamost/Apple

By Marc Berman

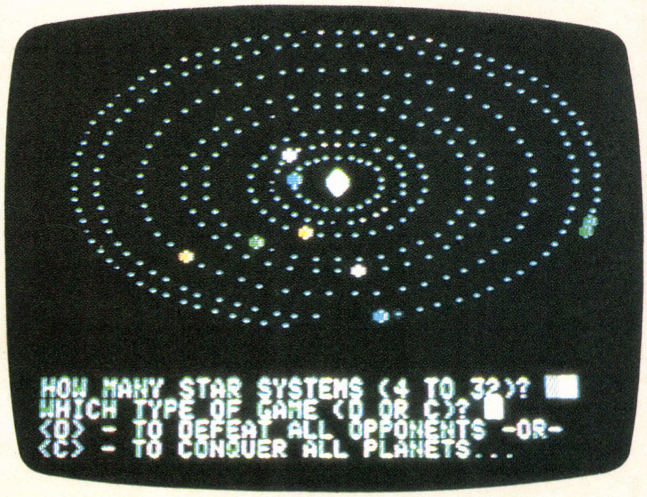
Strategy game freaks take note: this one will keep you busy for light years to come. The point of it is to dominate the galaxy. You can select a galaxy with any number from four to 32 solar systems. Each solar system consists of a star and two to eight planets. The number of ships you have varies—if you dominate solar systems for long enough, new ships get built for you. You lose ships in the arcade-action battle sequences.

There are over 20 basic keyboard commands. When used in different configurations, the gameplay options are endless. To top it off, there are lots of features not mentioned in the instructions. For instance a quirky gravitational field may prevent your ships from conquering a planet, but by relocating your base you may be able to conquer it.

Space travel's not as simple as 3-2-1 either. Careful positioning of your ships and base will provide access to solar systems your opponent can't reach. And the number of ships you leave on each planet may be crucial in case of attack.

If you do get attacked or land on one of your opponent's planets, the gameplay switches to arcade action. And that's where *Conquering Worlds* is weakest. Enemy ships jump around the screen, making a direct hit a lucky and random accident. Firing is sluggish and rapid fire impossible. You'll be glad to return to the tactical format.

You can play against the computer if you can't find anybody with the patience to learn all the commands. And if you don't have hours to spare, you can save the



game you've already started. The graphics are fine, but graphics are not the focus here—if you want "pretty" play *Smurf*. One thing about the graphics, though: you have to have a color monitor to play or you can't tell which planets are yours and which are your opponent's.

When it's not your turn, write down how many ships your opponent has on each of his or her planets. That data is inaccessible during your turn at the keyboard.

MURDER BY THE DOZEN ♪♪♪

CBS Software/Apple

By Michael Blanchet

Had CBS Software released *Murder By the Dozen* a year ago, they might have had an audience for this product. But in the wake of Infocom's *Deadline* and *The Witness*, *Murder By the Dozen* will seem over-simplified and unsophisticated to the mystery fan. As its name suggests, *Murder By the Dozen* is actually twelve games in one. Although the instruction booklet recommends tackling each case in order, players are free to choose from any of the twelve crimes. To its credit, the scenarios used are interesting and, above all, believable.

What surprised me the most about this game is the fact that so much of what goes on takes place not on the computer screen, but inside a pair of booklets which must be passed from sleuth to sleuth as the game



progresses. At the beginning of one's turn, the computer offers the player seven choices, all of which fall into three categories: interviewing people at the scene of the crime, examining physical evidence, or moving to another location. If, for example, the player opts to interview someone at the scene, he types in the number corresponding to his choice and the computer then supplies him with a series of numbers that refer to clues printed in the clue booklet. At this time the player is free to take notes on what he has read. Once the book is closed the player's turn is over and the next contestant takes his turn. With each turn taken, a certain number of minutes are added to the player's game clock. For each clue received, three minutes are added. When physical evidence is examined, five minutes are added. Finally, if the player choses to move to another location, anywhere from one to thirty minutes are added to his tally.

Once any player accumulates a minimum of twenty investigation minutes, he is offered the option of trying to solve the case. To do so he must explain his solution to the other contestants along with all evidence supporting his conclusion. Having done this, the player must privately read the solution from the solutions book. If his solution is wrong in any detail, he has failed to solve the case and must withdraw from further play. The first person to successfully and accurately identify both the murderer and the motive is declared the winner. The computer then awards him a ranking based on the number of minutes it took to solve the case.

In concept, *Murder By the Dozen* is a great idea—a game that is best when played by four people. In execution, though, the problems peculiar to any game that demands multiple players become apparent. The instruction booklet recommends that only the player whose turn it is be allowed to look at the monitor and the clue booklet. Meanwhile, the other contestants are sitting idle. If nothing else, this makes *Murder By the Dozen* a slow and plodding contest.

Another problem is that lack of complexity in the games themselves. Most of them can be solved in fewer than ten turns and once they are solved there's no reason to go back and try them again. I would have enjoyed *Murder by the Dozen* much better if it focused on maybe one or two crimes as opposed to twelve. Then the game or games would have been more challenging. Also, an attempt should have been made to integrate the clues and solutions into the game's program, thereby doing away with the booklets.

As it stands, *Murder By the Dozen* is a good test for the novice detective. Those of you who have already tackled either *Deadline* or *The Witness* may find this one a little too easy and a bit short on long-range appeal and challenge.

WORM WHOMPER ♪♪♪♪

Activision/Intellivision

By Craig Holyoak

Once again Activision has returned to its favorite slide and shoot format but has done so in a way that remains fresh, entertaining, and tailormade for Intellivision's style of graphics and the disk controller. It also poses the question: How you gonna keep 'em down on the farm after they're seen the Giant Horned Caterpillar?

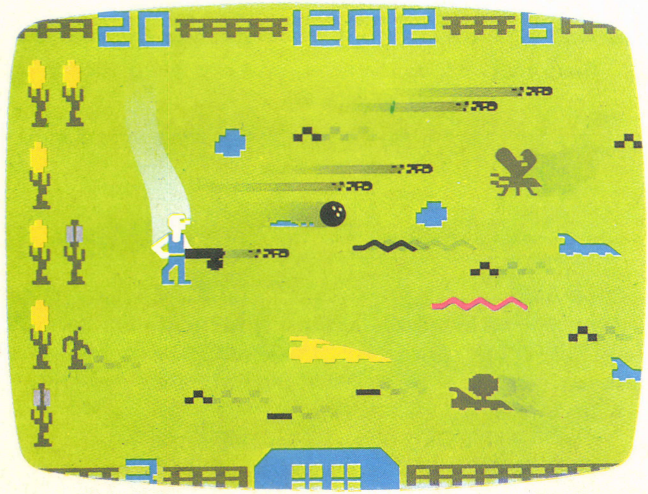
You are Felton Pinkerton, warrior farmer from America's heartland and you're fighting for the life of your cornfield as hundreds of inchworms, caterpillars, snakes, moths, slugs and snails gather from every corner of the county to ravish your crops. The invading

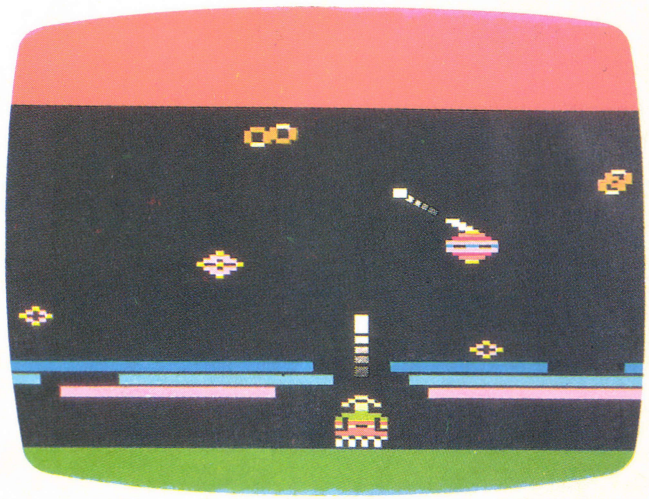
bugs move from right to left as you protect 10 stalks of corn on the far left margin of the screen. You are armed with a rapid firing spray gun that kills inchworms instantly and the larger crawlers with two or three blasts. You can wander over most of the screen but should spend most of your time as close to the crops as possible. In typical Activision fashion, the game progresses in intensity and difficulty and, in later rounds, the bugs and critters get so thick you can't count them. It begins to look like that old movie footage of the Oklahoma land rush where thousands of settlers break their backs trying to beat the other guys to the promised land. With only 10 ears of corn to share, buggy competition gets fierce for the measly morsels.

Pinkerton's secret weapon in this hopeless struggle is the plough ball, of which he is awarded three per round. One of these babies will crush anything in its path from the fearsome Giant Horned Caterpillar to discarded snail shells that provide cover for oncoming invaders. If one of the larger varieties of corn eaters touches Felton's spray gun it will wilt in his hands and he must trot to the toolshed at screen bottom for a replacement. This, of course, means he will find a smaller cornfield to worry about when he returns.

Just when you think you have had it with Activision's love affair with slide and shoot games and you swear you will not be tempted by another one, they come up with something like *Worm Whomper* and you decide to give them one more chance. The miserable little ground huggers in this cartridge are so comically repulsive you can't ignore them and Felton is a meat-and-potatoes kind of guy—the kind of guy you just can't turn your back on.

When using the pesticide, keep the firing button depressed and tap the edge of the disk controller for improved vertical agility and a more accurate aim.





STRONGHOLD 21

CommaVid/VCS

By Mike Sheinbaum

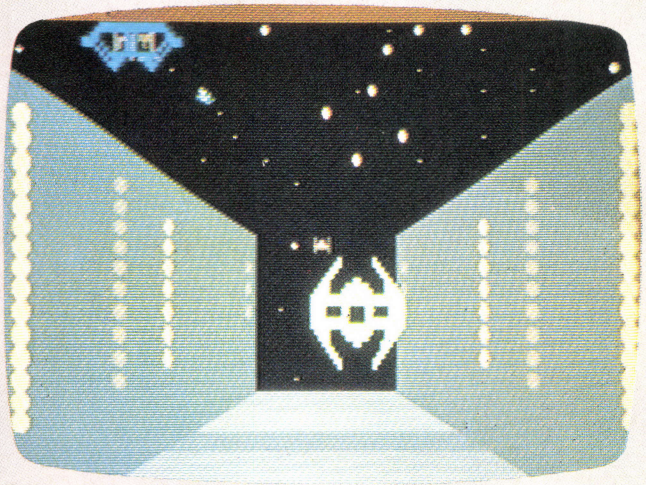
Contrary to mathematical theory, the whole is sometimes less than the sum of its parts. Take *Stronghold*, for example. It combines elements and inspiration from some of the greatest VCS cartridges ever made but winds up being one of the worst space shoot-'em-ups ever produced.

You start off in a *Megamania*-style playfield where you and your spaceship are required to dodge "defense drones" in an effort to stay alive. This is not easy as they move in a very random and chaotic manner. To destroy the drones, you may have to depend on luck more than skill because along with their wild movements you have to contend with awkward joystick control. No matter how many drones you shoot or don't shoot, you still enter screen two after a certain amount of time.

The second half of the game takes place on the dreaded asteroid Stronghold. Employing the elements of *Yar's Revenge*, *Star Castle* and *Defender*, you must now shoot your way through a Command Crawler's defense shield. Every time you open up a section in the shield's three walls, the crawler inside takes a potshot at you. He's not the only enemy you've got to worry about, either. Pulsing patrollers and twirling interceptors try to track you down and blow you to bits. Worse yet, as time passes, a steadily descending "mega field" limits your ship's play space to a very small area.

Scoring in this game is very frugal. Knocking out a defense block in scene two earns you a mere ten points and everything else except the old Command Crawler nets you a piddling 20 points. And the controls go one step beyond bad. They're weird. They shoot in six directions instead of eight and they will not shoot sideways which makes hitting the elusive aliens all the more difficult. With practice, however, you should be able to master the controls.

The only way to destroy the Command Crawler is to move rapidly from side to side and shoot as often as possible. Standing still will make you a sitting duck.



MOTHERSHIP ♪♪♪

Softsync/Commodore 64

By Robert Alonso

Mothership is a super-fast-action-packed three-screen game written completely in machine language. Three screens is nothing new, but in *Mothership* each screen has a different style of play. You get *Star Wars*-style trench warfare, *Jumpman*-style climbing and *Breakout*-style wall battering.

In the trench sequence you have to shoot down 12 drones to be allowed to go to the next screen. The deadly precision of the drones' flight and shooting makes surviving the trench a real challenge.

The second screen features a ladder game with a twist—elevators. The explanation for having a ladder game mixed in with a space shoot-'em-up is that after the player has destroyed the drone ships he enters the mothership and must fight his way up to the control room. Sounds logical.

They aren't kidding when they say you must fight your way up. There are robots to contend with, flying objects and an elevator you must wait forever to catch. Chances are that you may never reach the third screen, in which you blast your way through a force field.

The graphics in *Mothership* are not bad, but could be improved. The star fighter sprite is crude and the drones are not much better. Even the robots and your player in the second screen resemble stick figures. Most of the sprites, if not all, use only one color when four are possible. This lack of attention to the visual impact mars an otherwise excellent game.

Stay low in the first screen so that you can see what's coming at you, then shoot like crazy.

ZEPPELIN RESCUE ♪♪♪

Computer Software Associates/Commodore 64

By Robert Alonso

Zeppelin Rescue, more a work of art than an action game, awes your eyes with five finely detailed screens of city skylines. Each cityscape is colored in baby blue, tones of grey and white and is contrasted against a dark blue sky. One cityscape even has a suspension bridge so well designed that you can see girders. In the sky are many light orange clouds which the instructions describe as acid rain clouds.

Zeppelin Rescue, however, is missing two crucial ingredients. Sound effects are almost nonexistent and the word "action" has no place in the game's description. It's completely written in BASIC and the zeppelin is consequently very slow and hard to manuever.

The object of the game is to rescue stranded people from the tops of buildings in Los Angeles. The people are depicted as tiny white stick figures. They yell for help, but only in the form of a written message over their heads. Your job is to maneuver the zeppelin through the sky, making sure not to hit a cloud or building, and pick up these lost souls by lightly brushing the zeppelin's underside against them. After you've managed to do this you must deliver them to the safety of a base in the fifth screen.

The combination of a crowded sky and an irresponsive blimp make *Zeppelin Rescue* simply too difficult to play and not enough fun. It does have some redeeming qualities though. The animation of the zeppelin turning to face in the opposite direction is truly remarkable. Many sprite images flashed sequentially produce the animation. The best part of the program is that it can be listed. This will allow anyone wishing to learn how to program games on the Commodore 64 to learn from and modify the existing program.

There are two speed settings—slow and slower. Go for slower.

SLITHER ♪♪♪♪

Coleco/ColecoVision

By Noel Steere

You have to like *Slither*. There's nothing here not to like. Coleco has captured every detail of the arcade parent and done it so well that even the toughest critic will find no fault.

You are a spaceship that must destroy snakes, a tyrannosaurus rex and a pterodactyl before they destroy you. Not only do these formidable creatures

look exactly as they did in their coin-op incarnations, their IQ's have made the transition intact as well. They're smart. The snakes, which at times can outnumber you by as many as 20 to one, slither along in every direction and make the playfield more congested than midtown Manhattan at lunch hour. Not only are these guys smart, they're often partially invisible. At times all you can see of them are their heads and tails.

Added to the superb gameplay is the superb graphics. From a sunset background that would make Mother Nature jealous to the incredible details of the creatures, this is art. In addition, the sound track is Top Ten material playing everything from *Flight of the Bumblebee* to *Bury Me Not On the Lone Prairie* with a style even Arthur Fiedler would appreciate.

Last but certainly not least, Coleco even gives you real arcade control. *Slither* plays—and in fact, comes with—the Roller Controller, an arcade-style trackball that has full 360-degree movement. All of these elements combined make *Slither* one of the best home video games this inveterate player has ever seen, heard or played.



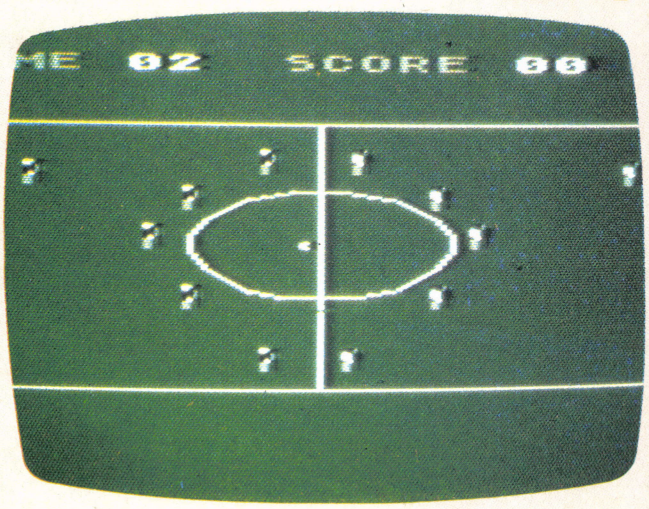
Get behind the snakes and shoot them from there.

SOCCER 111

Thorn EMI/Atari 400/800/1200

By Craig Holyoak

Every feature you could possibly want in a video soccer game has been packed into this cartridge: two teams of 11 players each (they look like little wooden pegs, but so what) trotting up and down the full-length field that scrolls laterally in three sections, kicking and passing a black and white checkered ball, scoring goals



past the hapless goalie... it's all here.

So are the countless play options that allow you and as many as three other players to divide into teams with or without the computer helping out one or both teams. There is even a hopeless option where you attempt to challenge the computer alone. Include the possibilities of other variables such as different time limits and difficulty levels and you will soon decide the only thing left out of this game is a British announcer.

But despite the countless alternatives there are only two of any competitive consequence. First you can watch the computer play itself to a draw, or you can remove the computer from all competition and stick to human opponents. Invite the computer to play against you (he is totally merciless) or be on your team (he is an insufferable showoff) and you immediately become the weakest player on the field. Your team is actually better off without you.

Another problem with the game becomes apparent when you want to gain control of a player. Pushing the fire button will activate the member of your team closest to the ball and he will stop moving and proudly display the number of your joystick port. This means that just as you need the player most he stands still, if only for a fraction of a second. Or say the player you really need to activate is the goalie. If he is not the nearest to the ball, forget it. By the time he has earned that distinction the opponent has probably scored.

Your best chance of enjoying the game is to find some friends of equal talent and go for it. You can play until your thumbs turn stiff and your wrists freeze up but you'll never be able to compete in the computer's league.

Never pass the ball across the front of your own goal. It is an open invitation for the other side to score.

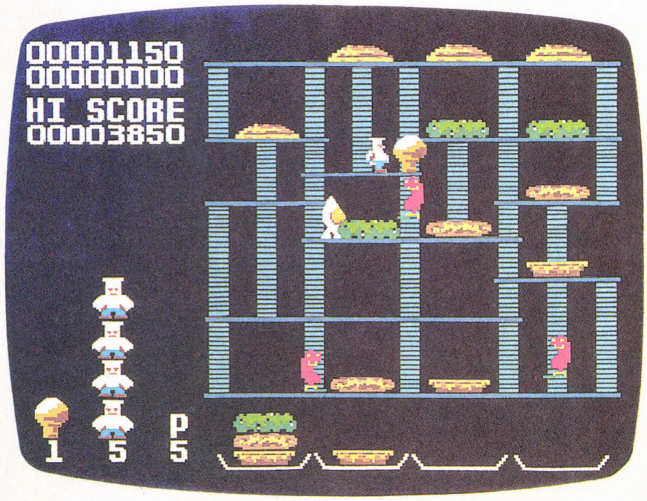


BURGERTIME ★★★★

Mattel M-Network/IBM PC

By Corey Olfe

As we've said in other reviews of this arcade favorite, constructing hamburgers by running over them while wearing your shoes may not be the FDA's idea of good buiness but not only does it prevent you from getting chopped meat and sesame seeds caught between your toes the concept also makes one heck of a good game.



IBM's *Burgertime* plays just like the arcade game, Intellivision game, VCS game, and just about everything else you can find with the same name. You control a little chef who looks like he eats more burgers than he sells. He runs (actually waddles) up ladders and across platforms which form a sort of maze. On many of the platforms lie the important ingredients necessary for making hamburgers. By running across these ingredients you cause them to fall down into the plates that are placed directly below them on the bottom level.

And then there are the so-called "nasties"—pickles, eggs and hotdogs. Their main goal is—what else?—to make your life miserable. They accomplish this by chasing you around in hope of catching you. You can stop them by dropping the ingredients on top of them or by causing the ingredients to fall while the nasties are standing on them. And when worst comes to worst, you have your faithful pepper shaker to stun them with.

There are twelve different levels, each with a different maze. To clear a given level, you must put together all of the hamburgers on the screen. The number of hamburgers changes with every new screen, varying from two to six burgers. The number of ingredients in each burger also varies, going from a mere three to a whopping 10.

The graphics on the IBM are far superior to those on any other home version, as the hamburgers look good enough to eat. (No wonder the chef is so chubby!) My only complaint is how demeaning the instruction booklet is. It claims that if you can come close to the highest possible score—99,999,950—you are a certified "Burger Maniac." Considering that it takes a good half hour to score 100,000 points, it would only take a little over 20 days of straight playing to reach 99,000,000 points! I have only about one hour per day to devote to video games, so I could make it in about one and one half years. Unfortunately you can't save a game!!

> Luring the nasties onto an ingredient is a good strategy but don't wait forever. If they don't come right away, chances are they won't come at all so move off quickly. If you wait too long, they get faster and faster until they're almost twice as fast as you.

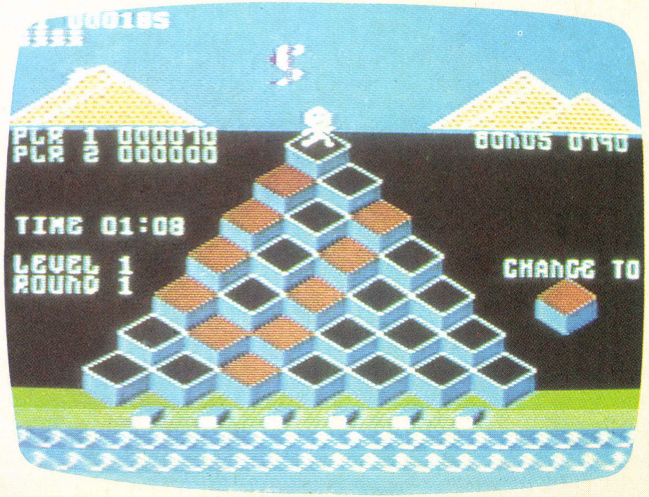
PHARAOH'S PYRAMID ★★★★

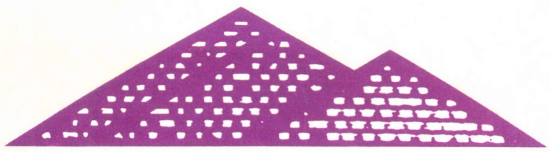
Master Control/Atari 400/800/1200

By William Michael Brown

To be worthy of my time and money, a *Q*Bert* clone has got to offer something the original didn't have—such as a stronger plot, more and/or weirder enemies, and tougher reflex and strategy tests. *Pharaoh's Pyramid* manages to succeed on all three counts, and does so with some of the most colorful and well-animated 48K Atari computer graphics I've ever seen.

The basic *Pyramid* plot casts you as Digger Dan, a solitary grave robber who has been dragooned by the restless ghost of Ramses into completing that monarch's last great pyramid. With the help of his old flame Isis, Ramses transports you back to his heyday, where you become Little Achmed—a trusted slave who must run up and down a long pyramidal staircase,





dragging bricks back up to the top during each trip. Once you've fetched enough to complete one of the six courses of a pyramid, you've then got to go back and finish turning each of the steps to a target color shown in the lower right corner of the screen. Once *that*'s over, you face a challenge from Isis' jealous mate Osiris which, if successfully met, will raise you a level and bring you closer to the goal of completing the whole pyramid and winning Ramses' treasure.

All that would be fairly standard *Q*Bert* revisionism, except that *Pyramid* comes packed with extra features and twists on *Q*Bert* tricks—enough to make this game ten times tougher than its ancestor. For instance: changing the step colors in *Pyramid* takes the most difficult task in *Q*Bert* (completing those screens where the blocks change color every time you step on them) and makes that the standard problem throughout the game. You're also pursued by a veritable host of enemies—nine in all, some of whom are similar to Coily, Sam and the other bozos from *Q*Bert*, and others who are like nothing you've ever met before. There are also no easy outs: Isis does show up every now and then with a magic diamond that'll clear the board for you temporarily, but it doesn't work for long and always brings out Osiris, who'll undo all your careful color change work. There's a lot more, including a cup of life that will add to Achmed's lifespan and a secret message that could win you a T-shirt and poster from Master Control.

More than anything else, though, I can't compliment the *Pyramid* graphics work enough. The colors are wonderfully bright and clear, Little Achmed's jumps are smooth and realistic (including falling off the steps), and the intermission screens featuring Isis and Achmed are quite amusing. If any designers out there are looking for a model Atari computer game, this is it.

If the Plagues and Moses' Snake are just too much for you, hang out on the brick level for awhile until they disappear. They can't get you there.

BLUE MAX 1111

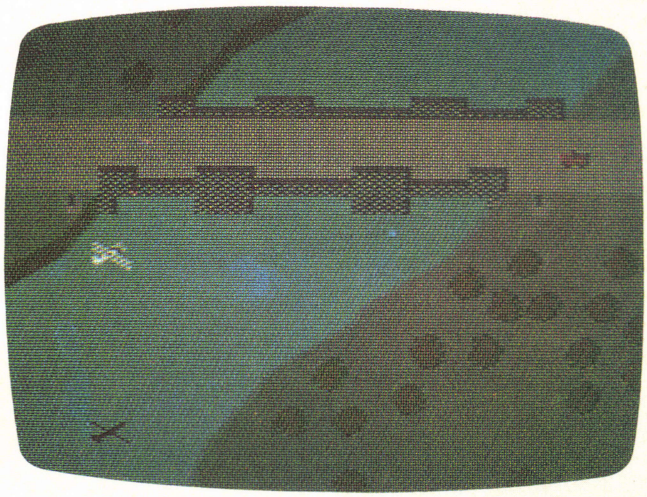
Synapse/Atari 400/800/1200XL

By Craig Holyoak

This is an aerial combat game with more nice touches than the king's party crown. It proves that wartime flying is never easy but when played on a TV screen can at least be entertaining.

As a World War I flying ace, you have the assignment of taking to the air in your biplane and making war hell for the enemy by strafing and bombing everything in sight along the three-quarter *Zaxxon*esque view scrolling landscape. Some targets are necessary to gain you access to the bigtime in the city but everything—both moving and nailed down—is absolute kicks to blast. Not that wholesale destruction is a socially acceptable idea of a great time, but if you can keep this plane in the air long enough to run up a decent score, you deserve to feel good about it.

Few games give a player so many problems to worry about and overcome at the same time. Beside an enemy that flies at you from both ends while shooting anti-aircraft barrages from the ground, the player must keep a constant eye on the plane's sensitive instrument panel to make sure there is enough air space between the craft and the ground so the biplane doesn't end up



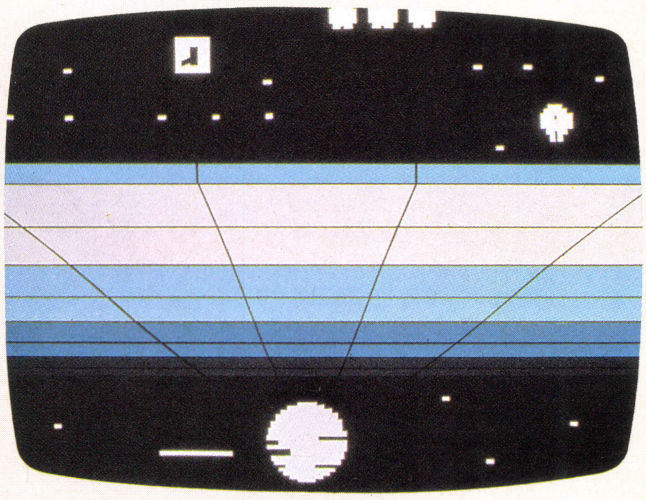
plowing furrows. Yet the plane should remain low enough (about 24 to 27 feet) to be able to strafe, bomb effectively and dogfight.

Landing is perhaps the touchiest maneuver called for in *Blue Max* and requires that the plane be at an altitude of 25 feet when the pilot is alerted to lower the landing gear by pushing the firing button. When the airstrip materializes the plane must land quickly but carefully on the friendly, but inconveniently short, runway leaving enough room for the next takeoff.

While all this is occupying your thoughts you must save room for something else, too—don't let the plane drop below 20 feet or it's curtains.

It is debatable whether the gameplay or the graphics is the crowning achievement of this excellent 32K disk but both are enhanced by a score of "Rule, Britannia" and fine combat sound effects. All things considered, designer Bob Polin has made this a high-flying piece of programming that is pleasantly frustrating, intensely rewarding and, for hours on end, fun.

Try flying in the reverse control mode. This gives the joystick the same guiding functions as an actual airplane.



DEATH STAR BATTLE ★★★★

Parker/VCS

By Noel Steere

The George Lucas saga that took place long, long ago in a galaxy far, far away was a trilogy. First there was *Star Wars*, second came *The Empire Strikes Back* and third there was *Return of the Jedi*. Parker Brothers borrowed not only the theme from the movies but the trinity aspect as well, although they did take some poetic license in the order and titles. First there was *The Empire Strikes Back*, then there was *Jedi Arena* and now there's *Death Star*.

The Millenium Falcon may have looked like a piece of junk but when it came to hyperspacing, well, it had no equal. Since the *Star Wars* trilogy was released, many people, I'd be willing to bet, would give either their eye-teeth or the eye-teeth of someone else, to have the chance to pilot that souped-up space hotrod. *Death Star Battle* gives you your chance.

As in the movie from which it got its theme, the Death Star must be destroyed. You, brave pilot, are given this heroic task. First you've got to pass through the force shield and you don't have any cutesy teddy bears to shut it off for you, either. Instead, you've got to destroy it yourself by blasting a certain number of tie fighters and intercepters that have deadly aim. Once you've met your destruction quota, holes begin to open up in the shield allowing you to breeze right in. Don't dawdle. If you do, you give the death ray time to become operational and the death ray can cut through ships like a hot knife through butter. Unlike the movie, however, instead of being inside the Death Star, this ray follows you from side to side. This is a very challenging scene that could have been a video game by itself.

There's more, though. After you go through the shield you come into the firing range of the Death Star. You never actually enter it. To destroy it, you must shoot a hole through it and then shoot it through its reactor. If you succeed, you're rewarded with a Fourth of July display of fireballs.

Not only is the gameplay exciting but the graphics are impressive, too. The Death Star has been faithfully reproduced from the movie even in its miniaturized state in the first screen. But it's not just faithfulness to the movie that makes this a great game. It's got enough challenge to make it great on its own as well.

To get an extra man the hard way, try to destroy every part of the Death Star except the reactor. This is difficult because the Death Star always tries to repair itself.

PANIC BUTTON ★★★

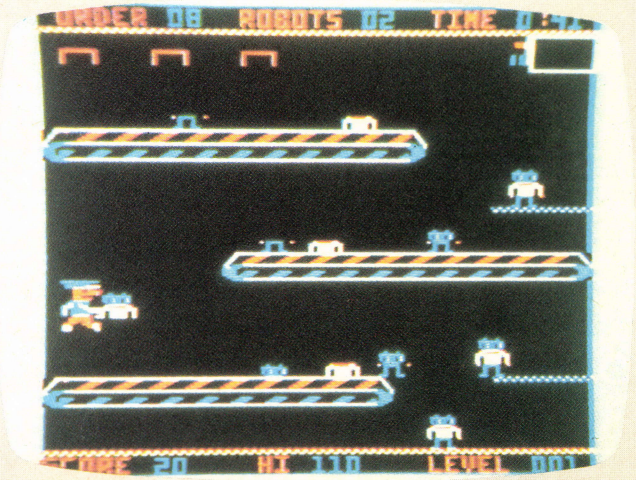
First Star Software/TRS-80 Color Computer

By Darren Jay Hacker

For those of you who have the TRS-80 Color Computer and wish there were some more decent games for it, relief is in sight. *Panic Button*, by First Star Software, is an exciting and rather creative game.

In *Panic Button*, you are an assembly line worker who has to put together assorted items such as robots, telephones and birthday cakes. You are given a quota which must be met within a certain time limit—around two minutes. Failure to meet this quota on time will result in the game's ending and a display of the words "You're fired!"

The elements of the screen are as follows: there are four conveyor belts which carry all objects, except your man, around the screen. As each object falls off a conveyor belt, it is then carried by the one below it. If any uncompleted parts hit the bottom belt, they are either lost or go rebounding all over the place. There is



also a control box with which you can turn off the belts for a short period of time. After a while though, the boss comes in and turns it back on again. You can use this device only twice in any round.

The pieces which you have to work with come out of little chutes placed above the belts. In order to assemble the items needed, you have to stack the pieces in proper order: top on middle, middle on bottom. For example, if you are trying to assemble a robot, you need to place the head on the midsection and that onto the legs and feet. In the event you should place the head right on the feet, that assembly is worthless. When you have completed a robot, telephone, or what have you, let it go onto the bottom conveyor belt, where it will be taken away and you will then receive points.

To move the pieces, all you have to do is touch them with your man. To drop a piece on the rest of the assembly, just push the button. This game can get rather difficult, especially if you have the original Radio Shack joystick, so I recommend that Color Computer owners purchase Radio Shack's new Deluxe Joystick.

I was moderately impressed by *Panic Button*. I feel that it was rather original, but lacked good sound effects and the lustrous graphics that most of us have come to expect. Overall, I consider this to be a good game, and I recommend its purchase for all Color Computer owners.

You should be aware that your man will not move along with the belts, and the pieces will not go through him. Therefore, if you stand at the edge of the belts, there will be a lot of pieces piling up in front of you. Sometimes, the right pieces will fall perfectly in place and that's one less item to worry about!

POLE POSITION III

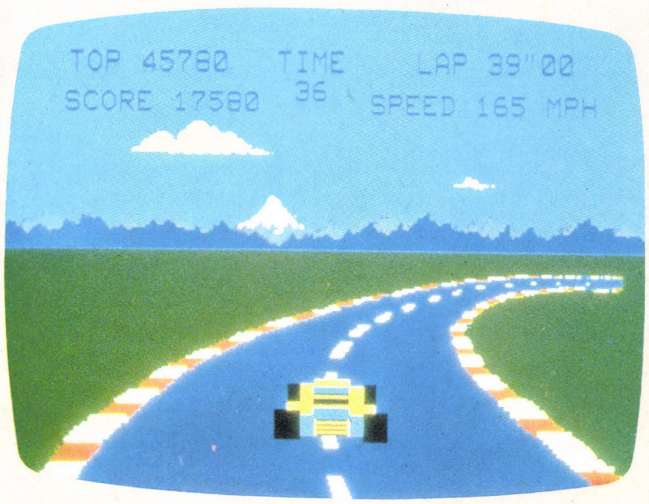
Atari/Atari 400/800/1200

by Marc Berman

Some of us do not care to take our lives into our hands. or feet, for that matter. This is why we would never consider race car driving seriously as a career. Let's face it. Race car drivers court death every time they get into those flimsy little cars that are so low to the ground they're practically underneath it. Never mind that you get to wear helmets and sit beneath roll bars, etc. This is a dangerous sport. One false move and you're up in flames. This is not the sort of blaze of glory we had in mind as a dramatic exit. For us cowards, there's *Pole Position*.

This *Pole Position* is good—very good—but it's not all that it claims to be.

Although there are four courses, they are all the same. You're never shown an overhead view of the tracks. Playing each of them you'll find the same billboards and curves on every one. That sham aside, the game plays and looks almost exactly like the 5200 cart, which is a stripped-down version of the arcade.



There are no oil slicks and no ads on the billboards, but otherwise the features are complete. The clouds remain, as does the blimp which signals the start of each game. Your blue-and-yellow racer, though not up to arcade graphics, is far better than the VCS version.

As in almost every other version of this racing game, you begin with a qualifying run. Based on how well you do while racing around the course, you are then assigned a position in which you will race against other drivers.

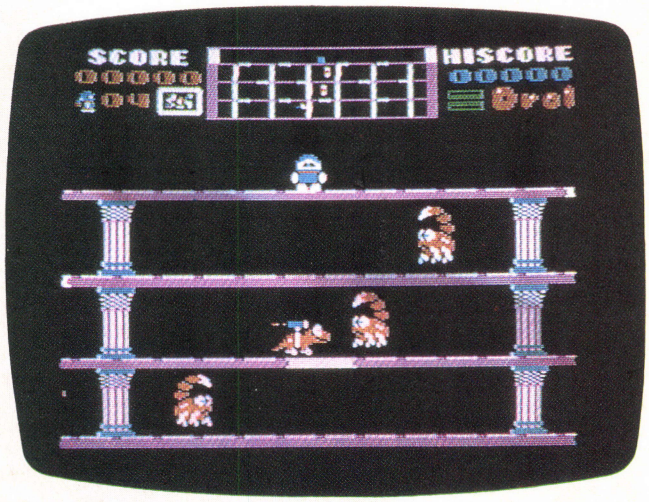
You accelerate automatically at the start of each heat. To shift into second gear, pull the joystick toward you. Tap it from side to side to steer. Your fire button is your brake. A self-centering joystick makes steering easier but requires you to hold the stick down to stay in gear. It's not the most logical controller for a driving game, but it'll do.

The allegedly different courses are the Atari Grand Prix, Namco Speedway, Malibu Grand Prix and Practice Run. (Mt. Fuji must be one heckuva high mountain to be visible all the way from Malibu.)

As long as the machine is on it will store your high score. Current score, time, lap and speed are also clearly displayed at the top of the screen.

The sounds are faithful to the original, from the revving engines to the honking horns.

What's known as the CENTIPEDE turn in the arcade is marked by a red billboard here. You'll know it's coming up immediately after the pink-blue-yellow-and-black billboards. To get past the hairpin, you must brake or downshift.



DROL ★★★★

Broderbund/Apple

By Marc Berman

Once in a while a home game comes along that has hit written all over it. Often it's from an arcade hit or a spinoff of another game. But occasionally it's a totally original idea. Games like that are as rare as honest politicians. *Drol* is one and I heartily endorse it.

First of all, it's for human rights and conservation. Your mission is to rescue a little girl and boy and their tied-up mommy and save their pet lizard and crocodile. It's also for a strong defense against monsters, evil witchdoctors and killer vacuum cleaners. And it upholds traditional values like Thanksgiving by offering up a roast turkey (for extra points).

It's set in a dream world. You are a happy wanderer with jetpack on your back. You can walk along four scrolling, parallel halls, or hover near the ceiling. You move to the other halls through trapdoors. In the first screen, phantom scorpions and homicidal flying turkeys attack you as you search for the girl and her lizard. You can track the movements of the evildoers on a radar-scope at the top of the screen.

In the second screen watch out for monsters, witch-doctors and magnets which prevent you from firing the "reality pellets" that disintegrate the phantoms. Rescue the tranced-out boy and his crocodile and advance to screen three.

This one's really tough. Arsenals of knives and hatchets fly at you at all levels. Trapdoors are fewer so escape is less of an option. Serpents chase you, too, but compared to the Venus flytraps that pop up out of nowhere, they're tame. Unlike the other screens where the kids move around, in this screen, the phantoms have tied up Mommy and left her at the end of the bottom hallway.

If it all sounds droll, it is. But more than that, it has subtlety and more kinks than a Slinky. For instance, you can make the kids stand still by shooting their balloon and toy helicopter. Turkeys have to be shot at ceiling level, but witchdoctors must be shot as you are going through a trapdoor. Monsters jump up and down so they're even more of a moving target.

The controls are responsive, but forethought is as important as fast reflexes here. You start with five lives but for each round of three missions you complete, you earn an extra life.

> Don't venture beyond the extreme left or right trapdoors in the second screen, because if the witchdoctor appears, you will be cornered.

SPARE CHANGE ★★★★

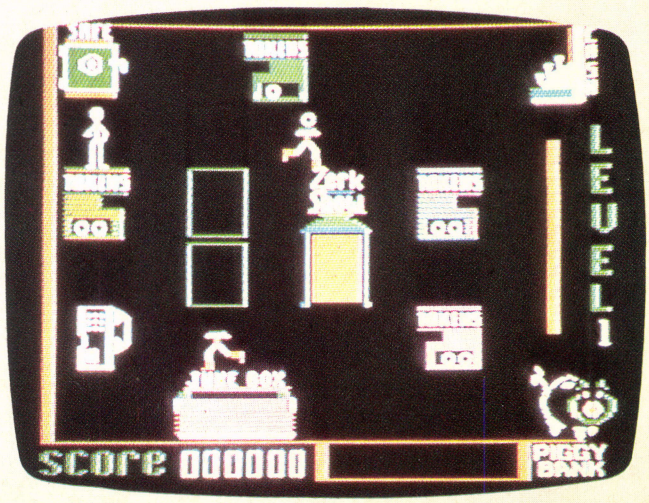
Broderbund/Apple

By Mike Sheinbaum

It was inevitable. Sure as death, taxes and empty coin slots, someone had to come up with an arcade-style game *about* an arcade. Thank the game gods, then, that this one also turned out to be entertaining, original and fun.

Broderbund's latest makes you the owner of the Spare Change Arcade. Your job is to collect as many game tokens as possible and fill up the token bins on the left side of the screen. Your opposition in this frugal task are two escaped video game characters called Zerks. Zerks have a healthy appetite for tokens too, but these bums don't want to have to work for them; as a matter of fact, they're stealing your tokens and stashing them away in their trusty piggybank, hoping to save up enough to retire. If you can fill up the bins before the Zerks can steal five tokens, you score big points, get a great visual reward (more about that later), and advance to the next of four levels (forcing the Zerks to stick around and try again). Fail, and the piggybank explodes, ending the game.

You can acquire tokens in many ways. Scattered



throughout the screen are token machines where you or a smart Zerk can sneak a token for a quick point or two. If a machine is empty, you can refill it by taking money out of the cash register and inserting it into the machine, by doing the same thing with a bag of cash from the safe (you can also replenish the cash register this way), or even by playing a slot machine that pays off in tokens. While you're running around, though, one of the Zerks will have stolen one of your captured tokens. You can run over him and steal his token (making him hop up and down with rage), but since they're elusive and pass tokens to each other frequently, it may be better to distract them. You can do this in screen one by putting a token in a jukebox; the Zerks are dancin' fools, and will find the music irresistible. In later screens, you can distract them by making popcorn or calling them up on the pay phone. This is one gameroom with plenty of surprises!

What makes *Spare Change* a truly super Apple game aside from its unique format are two extra features. One is the Zerk Control Panel, which allows you to change seven different Zerk behavior characteristics at any time, thus changing the game's difficulty range to anything from simple to ridiculously hard. The other is those visual rewards. Before you advance to each new level, you're shown a different, hilarious Zerk Show Cartoon. I've counted eight of these so far (my favorite being "Double Agent"), and once you've passed all four levels, you can buy your own Zerk Show and watch them anytime you like. I never had as much fun in a real gameroom as I'm having at the Spare Change Arcade.

Check out the slots under the phone booths. You never know who's left a token or two behind.

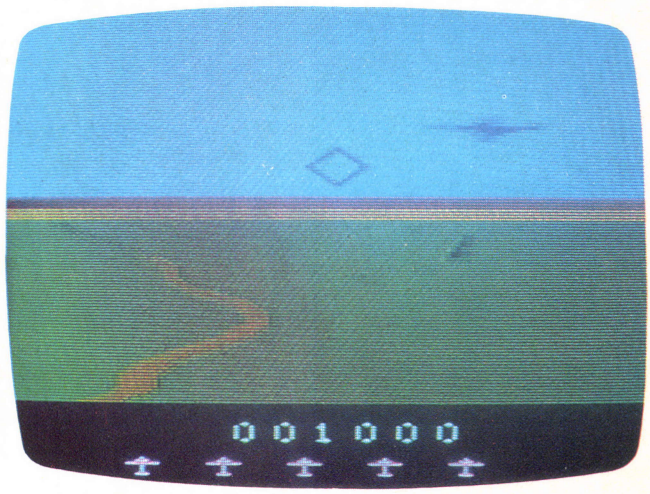
SPITFIRE ATTACK ////

Milton Bradley/Atari VCS

By Marc Berman

All right, troops, I want to tell you about two things. The first is the cartridge, *Spitfire Attack*. The second is the Power Arcade Flight Commander Controller. To get one, you have to buy the other. But we'll get to that later. Now listen up and listen tight.

Spitfire Attack is a flight simulation like the ones you practiced on at the Air Force Academy. Your mission is to blow up enemy anti-aircraft guns, ammo dumps and enemy planes. The screen scrolls in four directions—that's FOUR, the same number as fingers on your hand, not counting the thumb. If you dive too low you crash. There's no altimeter, just a warning buzzer, so good luck. You've got an unlimited fuel supply. There are six skill levels which control your plane's speed.



There are two difficulty levels which control the speed of the enemies'. Pantywaists should use A. Real men will use B, and not carry quiche on board. Unlike real battles you get six lives. Use them wisely.

There's no title screen or transition between the demo mode and actual gameplaying so be ready. What you get here is chills, not frills. Is that understood?

Now, as for the Flight Commander Control, it's this big hunk of plastic with a gunsight on it which looks like aircraft artillery or the hood ornament of a '49 Buick. It is neither. It is a controller that plugs into your Atari VCS or ColecoVision Expansion Module #1. To climb, pull it towards you. To dive, push forward. Don't tilt it up or down, you nimrods! That won't do a thing. To steer, turn it to the left or right if you know which is which. The fire button is on the left handle. Anyone have any questions? Too bad if you do.

What I was about to say before is that you have to buy the controller to get the cart. The controller is more fun than R&R, especially with the batteries in it which make it vibrate and light up. It works even without the batteries and still gives a decent illusion of being airborne. But the cart works equally well with a standard controller; if anything, it may be easier to control. But to get the cart, you have to enlist the whole package.

Comments: The only way to know you're being fired upon is by the sound—you can't see the bullets. So as soon as you hear the enemy guns, dive! Also, anti-aircraft guns are always followed by ammo dumps.

So give 'em heck. Come back in one piece. Smoke if you got 'em.

To shoot enemy aircraft, move from side to side, slightly above the horizon. The enemy planes move from side to side at around that level so it's easier to get them in your sights than trying to swoop down or come up under them.

COMPUTER WORKOUT

THE FIFTEEN STEPS



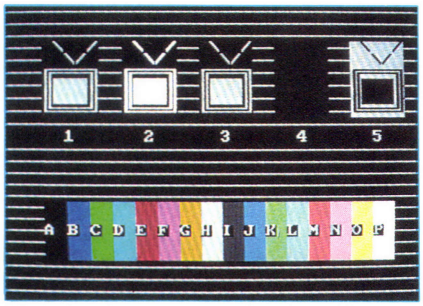
What to ask before you buy your computer

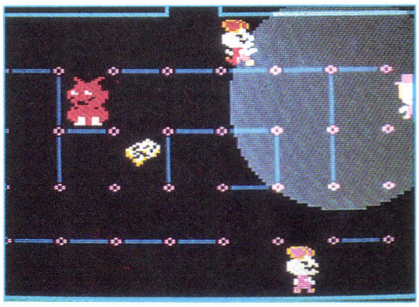
So many systems...So little time. And before you know it, there'll be even more systems than there are now. Salespeople, as you are probably already aware, are not *the people to go to if you have questions. If you have questions,* we're *the people to go to. Here are fifteen things to consider before you take the hi-tech plunge.*

By Jules H. Gilder

Sometimes the more information you have about a subject the less you seem to know about it. This is certainly true when the topic is buying a home computer. One trait computer owners—of whatever system—seem to share is that they only begin to learn what the computer can do after having owned it for a significant period of time. (This period, of course, varies in length from person to person, depending on how much use the machine is put to.) The result can either be a feeling of immense satisfaction with the purchase, or a feeling of frustration. Suddenly you want to buy memory expanders. Suddenly you realize that the program you really need isn't available for your machine.







What follows are 15 questions to ask yourself before you decide which computer to buy. The first task is to try to figure out what you'll use it for. The next is to try to determine what features you'll require. Finally, you'll have to figure out whether the manufacturer of your choice provides good service and lives up to the claims he makes for the machine.

The purpose of this article is not make recommendations—there are too many variables that change from consumer to consumer. Whatever you're looking for, though, these questions should help in determining your final decision. The best people to ask for advice are generally friends who already own computers, and have owned one for a long period of time. They will be able to tell *you* what *you* need—something a salesman usually can't do.

1. What do you want to do with it?

The primary application for the computer has a strong bearing on which machine you should purchase. If you're interested in mainly playing games, you should choose a machine that has a large number of game programs available.

If on the other hand your main application is writing your own games, you'll want to choose a computer that has lots of sound and color graphics capabilities. You'll also want to make sure that the operation and subroutines in the computer's ROM are well documented so that you can take advantage of them. Of the most popular home computers—Atari, Commodore, Texas Instruments, Apple and Radio Shack—all have excellent documentation available, although not necessarily from the manufacturer. The Atari computers have not been given quite the support from book publishers that the other systems have.

If you want to use the computer as a tool to help you do your schoolwork, then you'll want to make sure that a good word processing program is available for it, as well as useful educational programs. Be sure to ask your salesman for a demonstration of these.

2. What features are you interested in?

This question is really an extension of the previous one. You should decide what characteristics



are important to you. Take graphics, for example.

While all the computers mentioned above will give you good color graphics (except the TRS-80 Models III and IV which are black and white only) it is much easier to *program* hi-res graphics on some than on others. The Atari, for example, is a snap for the programmer. The C-64, whose graphics many people consider superior to the Atari's, is much harder to program for graphics. If you just want to buy your software, though, you will be quite happy with the graphics on the C-64. The VIC-20, on the other hand, will not give you hi-res graphics without a memory expander.

Do you want sound? The Apple II has only one channel of sound available, while the Atari and others have three channels of sound and an additional channel of white noise—which is good for gun shots and other sound effects.

The most frequently asked question about computers is "How much memory does it have?" or more simply, "How many K?" Much of this is a "numbers game." A more powerful computer is not necessarily better—for your purposes. For many people a 16K machine actually makes more sense than a 64K computer. (These numbers, by the way, refer to the number of bytes in RAM. The more bytes, the more complicated the programs that can be run.)

The biggest disadvantage with a computer of limited memory is that once you learn more about the machine you may become frustrated with its limitations. All computers, however, can be expanded, but for most people it makes more sense to opt for the more powerful computer with the initial purchase.

3. How much money do you have to spend?

Unfortunately, this is the way most people decide how to buy a computer. Sometimes this approach works, sometimes it doesn't. We're not saying that you should buy a computer that is more expensive than you can afford, but sometimes cheap is dear. An unreliable, inexpensive computer can wind up costing you most than a more expensive, reliable one. One reason is you'll probably give up on the unreliable one and then buy the more expensive one, which you should have gotten in the first place. Reliability isn't always related to price, but frequently it is.

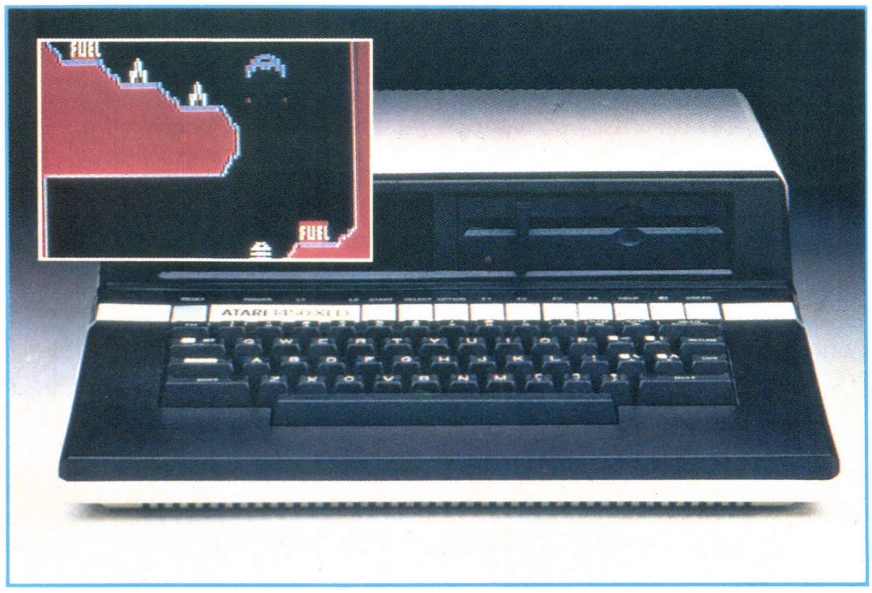
4. Do you have any special compatibility requirements?

The next thing that will help you decide which computer to buy is whether or not you have one—or access to one—already. If you do, you may want your new computer to be compatible with it. If you have an Apple II at work, for example, and you want something compatible with it, your choices are limited to the Apple II, the Franklin or one of the imported "clones."

5. What kind of keyboard does the computer have?

The keyboard is one of the most important parts of the computer. It is generally the only way you will communicate with the computer, telling it what you want and giving it information that it needs. Careful attention should be paid to this part of the machine. Many home computer manufacturers try to keep the cost of their computer low by saving money on the keyboard. They use cheap, "chiclet"-like keys that are smaller than the standard typewriter key and also tend to be unreliable. Many of these keyboards won't register any input unless the key is pressed squarely





in the center. Look for a computer with a standard typewriter-like keyboard. These are generally more reliable and have a better "feel". They also will permit the use of the computer as a touch-typing tutor.

6. Is the computer innovative or just another me-too machine?

If the computer has something interesting and unique to offer, the company offering it has a much better chance of succeeding. If the computer is innovative, it shows that the company is not just in the business for a quick buck, but has invested a lot of time and effort in developing a product. With such a commitment, the company is much more likely to be able to provide customer support. Me-too companies, such as overseas firms that produce the Apple clones, are feeding off of somebody else's hard work and trying to reap benefits that they did not really earn. While their products may be cheaper, ask yourself, "If they are 'clever' enough to avoid the expense of original research and development, are they going to be just as 'clever' in avoiding customer support?"

7. Did the computer get good reviews?

When evaluating computer hardware, listen to what other people have to say. Virtually every new computer that comes out eventually gets written up in several newspapers and magazines. Read as many of these reviews as you can and see if a trend develops. When going over these reviews, however, make sure that the equipment was actually reviewed with thorough hands-on testing. This can easily be determined by the level of detail included. Sometimes a machine is not available for test and a magazine will write "reviews" based on information generated by the manufacturer. This happened quite a bit with the Coleco Adam, where several magazines wrote the machine up even though they never had an opportunity to use it.

8. Is the computer easy to use?

One indication of just how well designed a computer is, is how easy it is to use. For example, if you can load a tape into the computer the first time with no problems, then the computer tape system is probably well designed. But if you have to fiddle with volume and tone controls and must position the tape to a particular point before you try to load it, you're going to have even more trouble later on. Pass this computer by for another, or use an alternate form of storage, such as a disk drive.

9. How long has the manufacturer been in the computer business?

While this whole field is quite young and even the oldest veterans only have about seven years experience, it's important to try and find out how long the company manufacturing the computer under consideration has been in the computer business. If they've been in it less than a year, there's the risk the company doesn't know much about the business and may be overestimating their potential income and underestimating their problems. Such a company cannot exist long in this field. A good example of this is Mattel, which quickly entered the marketplace with the Aquarius computer and just as quickly dropped out of it.

10. Are computers the company's main product?



Preceding page: The PCjr and two examples of its high-res graphics. Above left, Adam and BUCK ROGERS. Below left: Atari 600XL and DIG DUG.

This is another vital question. If the answer is no, the company may try to apply inappropriate marketing techniques to the product. Also, if things go bad, the company may have few qualms about quitting the computer market because its main source of income is from other products anyway. Two good examples of this are Texas Instruments and Mattel. While TI was capable of getting computers sold, they virtually gave them away. They thought they'd make their money back on the software, but many software producers balked at having to let TI produce their products for them and simply ignored the machine. Since TI never recouped the losses it incurred by selling their computer so cheaply, they simply pulled out. They don't need the home computer business because they are one of the most successful semiconductor manufacturers around.

Mattel, on the other hand, designed an unimpressive computer that had some serious problems. When it didn't sell well, they simply picked up their marbles and left the computer business.

11. Does the company seem well organized?

This is easy to determine by following the business press. Are there constant personnel turnovers? Do spokesmen for the company disagree in public? Is the company three or more months behind in its promised delivery? Has the design of the computer changed several times since it was announced? All of these factors indicate that the company has not gotten its act together. Wait.

12. Is the company promising all of the really interesting additions to the computer for some later point in time?

If the answer to this question is yes, be wary. The company may simply be flying a trial balloon to see reaction to the proposed add-ons. If dealers and distributors react negatively, early customers can get stuck.



13. How has the company handled complaints that have arisen?

Talk to people who already own the computer and find out how the company has treated them. Did they listen to their complaints and offer a solution or did they simply ignore the customer after he bought the machine? You want a manufacturer who is going to be responsive to complaints and needs.

14. Is the company trying to squeeze more money out of the customer with specially formatted tapes and discs?

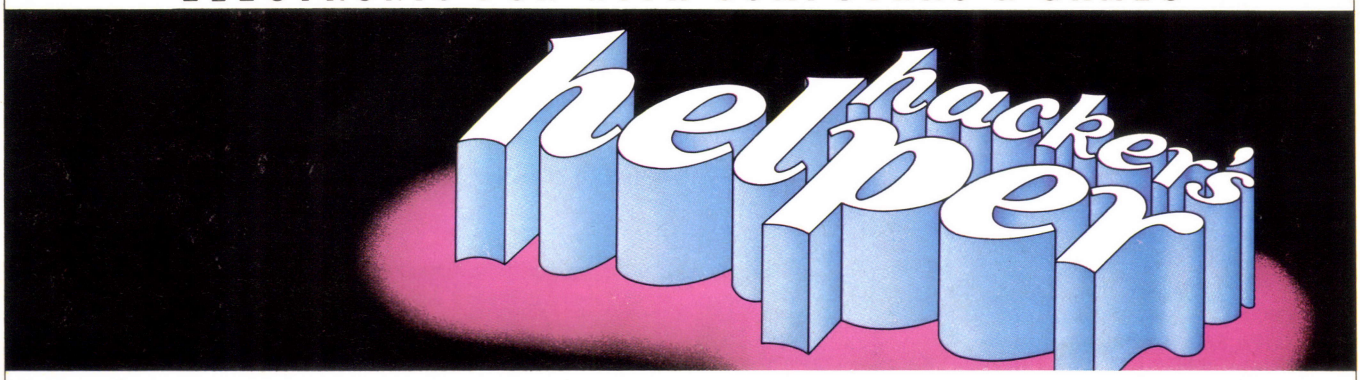
While this is not very common, it does occur. Computer manufacturers design their machine to use special tapes or discs and then limit the number of sources for them. Sometimes they don't even provide additional sources. The result is, the user has no place to go but the company for storage media and these are generally overpriced. This situation has occurred several times already. Digital Equipment Corp. (DEC) which manufactures a personal computer for business applications came out with a machine that used a special format on its diskettes and did not make a program that could format diskettes available. Independent software developers were able to write their own diskette formatters and provide the user with an inexpensive source of blank, formatted disks.

Another company using this technique is Coleco with the Adam. They use a specially modified audio cassette as a storage device. The shell is physically modified so that normal C60 cassettes cannot be used and special formatting information is written on the tape. Since the company does not provide a formatting program for users, they must buy formatted blanks from Coleco at between $10 and $15 each.

15. Are independent software and hardware developers producing products for the computer?

Aside from finding out how many computers have been sold, this is probably the best way to judge the popularity of a computer. If there are a large number of companies producing programs and accessories for the machine, it will probably be around for a while. It also means that the computer manufacturer is supporting outside vendors and thus they are willing to bet that the computer will be a big success. However, if the computer manufacturer is only supporting a few companies, chances of success are greatly reduced.□

Preceding page: above: Atari 1450XL and CAVERNS OF MARS, below the TI and SHAMUS. This page: The Apple and PINBALL CONSTRUCTION SET.

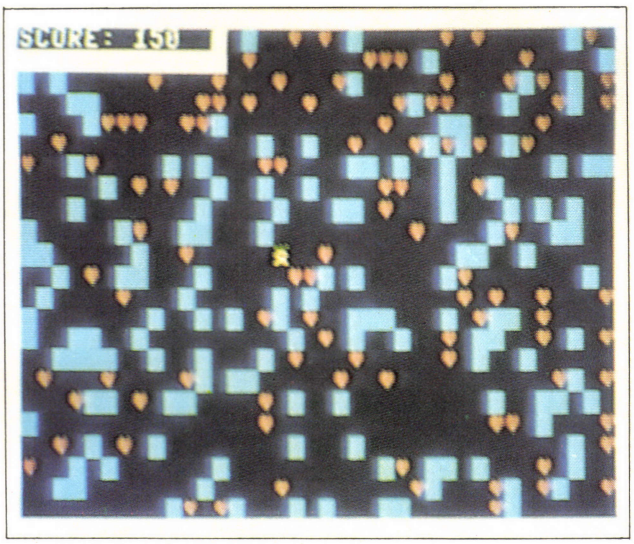


Score and a-maze your friends

By Robert Alonso

The first Hacker's Helper in January showed you how easy it is to design your very own cute little aliens and the second one showed you how easy it is to move the feisty little critters. Well, just in case your little creatures have become a bit too freewheeling, this column will show you how to keep them in line using mazes. All three programs included with this article will strew random blocks and hearts in your alien's path. He can gobble hearts, but he can't cross the blocks. A routine to keep track of your score is also thrown in just for fun.

For your convenience, the routines that have been presented in the previous two issues are included in this month's programs with one difference: only the new routines are highlighted by REM statements in the program listings. The maze and treasure, in this case, hearts, set-up routines are between lines 295 and 315 in each program. This is probably the most interesting part of the programs because it introduces the random number generating capabilities of each computer. A random number between zero and one can be generated on either the Commodore or Atari machines by simply typing: ?RND(1)[Return]. Perhaps this by itself does not make you sit on the edge of your seat with excitement, but it really should. Games in general, and more specifically many computer games use some sort of random number generating to accomplish a task. These numbers can be used to simulate dice or card deals or even the movement of aliens around your screen. I use it in my programs to randomly place blocks and hearts around the screen. A random number between zero or one will just not suffice for the purpose of filling a screen. What I do to make the number or numbers (in the Atari version) larger is to multiply them times the screen size. For example, in the Commodore 64 version, in lines 300 and 310, I multiply the random number generated by RND(1) by one thousand. This, of course, is the screen size of the Commodore 64. The random number generated is then added to the start of screen memory and a block or heart is POKEd into that location. This is repeated within a loop 200 times to insure that enough of the screen is covered. Although the Atari version uses the same principle, it is different because I POSITION and PRINT things instead of POKEing them. To use the POSITION statement you must have an X and Y coordinate for the Atari screen. To further complicate things, these coordinates must never exceed their range of 39 for the X and 23 for the Y. You'll get truly bizarre and infuriating results because screen size is 40 by 24. Your program could be lost from memory altogether.



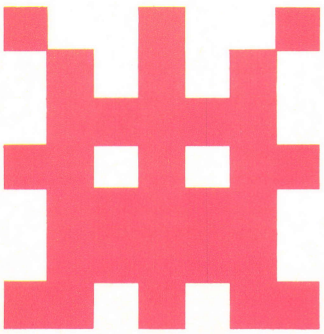
Commodore 64 maze

In addition to the screen set-up routine I've included a short routine in each program that sets up a scoreboard at the top left-hand corner of the screen. It's nothing fancy, it just uses the PRINT statement and a couple of cursor placement commands to print the word, "SCORE:" enclosed within a frame. This routine begins on line 315 of each program. Another simple routine that goes with this one is the score tallying routine which begins at line 195 of each program. The routine just PRINTs the current value of the score variable (PO) positioned right next to the word, "SCORE:." The real tallying, though, takes place at the "Check for Heart" routine of each program. This routine tests the location toward which the alien is moving and if it senses a heart adds five to the score variable and sends the program to the "Check for Heart" subroutine I've described. The "Check for Heart" routine also checks for the blocks. If it finds a block in the alien's path it stops its movement.

You will find that these programs

are almost complete games. You have a routine that generates the alien character, one that moves him under your joystick control, one that generates a random maze-like obstacle course with treasure and one that keeps track of your score. The only thing that keeps these three simple programs from being games is that you have no enemies. Nothing is there to stop you from trying to get all the treasure. I suggest that you have someone time you and that each player have a limited amount of time in which to get the treasures. After a while, even this may become tedious. When it does, you should show off some of the routines you've learned to your friends by designing another alien—perhaps a wicked one trying to stop the first one. You may not think so but you already know enough programming to do this yourself. Simply add another alien and another joystick routine for the Atari or Commodore 64 and have a friend move the second alien around while you try to stay alive. Just keep in mind that you will be reading the second joystick port on each machine. This will require that you PEEK memory location 56320 in the Commodore 64 and that you test STICK(1) on the Atari machine. On the VIC-20 you can put in a routine that uses the TI variable so that you can time your game but it's too difficult to add a second joystick to this machine. Use your creativity and you'll be amazed at what you can develop.

Next month, I'll be leaving alien life forms alone (even they need a little rest!). Instead I will show you how to make some exciting sound effects, like explosions and fanfares. Until then, adios fellow hackers.□



ATARI

```
10 REM BY, ROBERT ALONSO - ATARI
20 GRAPHICS 0:PRINT "↖":POKE 752,1:SETCO
LOR 1,9,14
25 POKE 756,PEEK(106)-8
35 RA=256*(PEEK(106)-8)
40 FOR I=0 TO 1023:POKE RA+I,PEEK(57344+
I):NEXT I
50 FOR J=272 TO 279:READ A:POKE RA+J,A:N
EXT J
65 POKE 106,PEEK(106)-8:REM PROTECTS CHA
RACTER SET
105 GOSUB 500:GOSUB 300:GOSUB 400:L=20:L
1=12
115 POSITION L,L1:? "B"
120 J=STICK(0)
125 D=D(J):D1=D1(J)
126 REM ***CHECK FOR HEART***
127 S=L+D:S1=L1+D1
128 LOCATE S,S1,T:IF T=160 THEN 120
129 IF T=0 THEN PO=PO+5:GOSUB 200
135 POSITION L,L1:? " ":L=L+D:L1=L1+D1
140 POSITION L,L1:? "B":GOTO 120
195 REM ***SCORE TALLYING ROUTINE***
200 POSITION 8,1:PRINT PO:RETURN
295 REM ***TREASURE AND MAZE SET UP ROUT
INE***
300 FOR X=1 TO 200:X1=INT(RND(1)*39):Y1=
INT(RND(1)*23)
305 POSITION X1,Y1:PRINT "■":NEXT X
310 FOR X=1 TO 200:X1=INT(RND(1)*39):Y1=
INT(RND(1)*23)
313 POSITION X1,Y1:PRINT "♥":NEXT X
315 REM ***SCORE BOARD SET UP***
320 POSITION 1,1:PRINT "SCORE:          "
325 COLOR ASC("■"):PLOT 1,2:DRAWTO 14,2:
PLOT 14,1:RETURN
400 COLOR ASC("■"):PLOT 0,0:DRAWTO 39,0
405 DRAWTO 39,23:DRAWTO 0,23
410 DRAWTO 0,0:PLOT 0,0:RETURN
500 DIM D(15):DIM D1(15)
505 FOR X=0 TO 4:D(X)=0:D1(X)=0:NEXT X
510 FOR X=5 TO 15:READ A,B:D(X)=A:D1(X)=
B:NEXT X:RETURN
800 DATA 73,42,62,107,62,62,107,0
900 DATA 1,1,1,-1,1,0,0,0,-1,1,-1,-1
905 DATA -1,0,0,0,0,1,0,-1,0,0
```

VIC-20

```
10 REM BY ROBERT ALONSO - VIC-20
25 POKE36869,255:REM POINTER SET TO POIN
T TO 7168
```

Continued on page 78

readers tips

STAR TREK

For the Atari VCS: Keep your finger on the fire button at all times, thrusting forward and then moving from right to left whenever you approach a Klingon. There's an easy way to get the anti-matter saucer; thrust *away* from it until it's in firing range, then stop, turn around, and shoot. It is always a good idea to shoot the saucer; it's worth 5000 points!

Steve Akyuz
Rochester, NY

GI JOE

Here's a tip for would-be commandos. When you get to the second level stay in the approximate middle of the screen and unleash a series of missiles into the cobra's eyes. From there it's just a short hop to either side if the cobra lets loose with a laser blast.

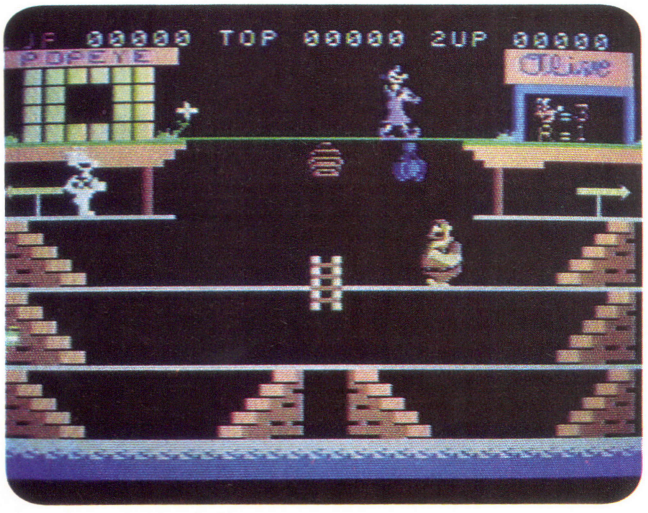
Craig Hopping
Kenvil, NJ

MR. DO!

In the ColecoVision version, you can shoot the monsters with your power ball without being subject to their attack. Dig a tunnel just under or above the monster pit, but be sure to leave a strip of dirt between Mr. Do and the pit. When the monsters start coming out you can fire your power ball *through* the strip of dirt and kill the monsters. But watch out; this places you in a position where some monsters could sneak up behind you.

Brad Robinson
Sacramento, CA

POPEYE



In the coin-op game, when the first screen begins, quickly move Popeye to the first level where the spinach will be positioned. Grab the spinach and punch Bluto; he will fall into the water. Then, move Popeye to the top ledge, where the punching bag is. Hit the bag while Bluto is getting out of the water and bag him for a quick 3,000 points. Timing is critical.

Mike Vasta
Malden, MA

TIME PILOT

ATTENTION 2600 OWNERS! If you don't know how to control your jet, dig that old *Combat* (ugg) cart from under your bed and play the "Jets" game. Now stroll over to your local *Time Pilot* machine and throw a farewell party for your quarter. If at all possible go upwards to get the parachuters, which are worth 1000, 2000, 3000, etc. points consecutively. In 1940, shoot the big planes you see throughout the round. They give you 1500 points and reduce your time a bit. To hit the object that takes you to the next wave, get directly behind it. It can't fire behind itself.

Phil Havel
Findlay, OH

PITFALL

To get by those horrible scorpions, you can "float" over them. This maneuver takes timing, but can be done easily once you get the hang of it. Here's how...you run up to a scorpion and jump. Just before it seems that Harry's going to bite the dust, hit the jump button again, before he makes contact with the scorpion or the ground. Harry will seem to float above and past the scorpion. Harry can float and float until you decide he's getting airsick. This technique doesn't work above ground—only in tunnels. Also, for some reason it doesn't work while using the PointMaster Fire Controller.

Chuck Painter
Cary, NC

Do you have a tip for your favorite game? If it's good, we'll print it in Reader's Tips. *Send tips to:* Electronic Fun, *250 E. 81st St., New York, NY 10028.*

COMPUTER LITERATURE

Continued from 38

valuable sourcebook but not when done in this way.

Write Your Own Apple Games by Stuart Anstis and published by Creative Computing Press, on the other hand, is exactly the sort of book that any computer enthusiast can adopt and love. It is divided into two sections: subroutines and whole game programs. The subroutines are handy little programs that can be inserted into larger programs to add professional finishing touches or embellishments. For example, there are routines that allow you to turn your Apple computer into a digital timer or a stopwatch. There are programs that teach you to animate a small tank, generate a flickering line which can be made to change colors and routines that allow you to access the paddle controllers for use with a game of your own creation. And because the programs are self-contained and sprinkled generously throughout the first section, you can type any one of them in and get some instant results. The book is valuable, therefore, not only for those users who are sophisticated enough to incorporate these subroutines into larger programs, but also for those who have just gotten a computer and want to experiment with programs in general.

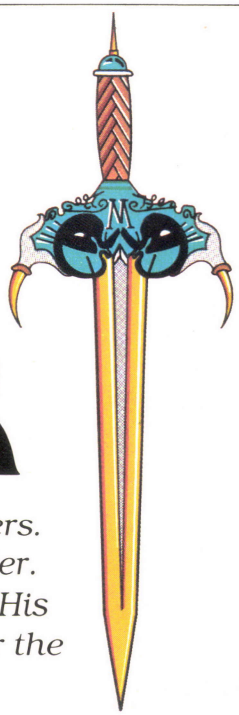
The Creative Apple, edited by mark Pelczarski and Joe Tate, published by Creative Computing Press, is for the hard-core Apple user. More a compilation of Apple-specific articles that once appeared in *Creative Computing* than a sequentially arranged book, it tends to be very technical and very dry. If you are already very famliar with programming and intimate with your Apple, then the subjects included here could be very useful to you. Topics covered include ways to create and save high resolution graphics, picture packing, page flipping, sound effects advice and so forth. And *The Creative Apple* doesn't limit itself solely to BASIC. Some of the articles include programs written in 6502 machine language as well.

If you aren't quite up to machine language yet, if, in fact, you're still puzzling over how to get your Apple to do *anything*, then *The Elementary Apple* by William Sanders (Datamost) could possibly be the best buy for your money. Aimed at rank beginners, *The Elementary Apple* helps you set up the computer, attach the printer, slip expansion and language cards into the right slots and walks you step by step through other tasks that are probably not second nature to you. In addition to having clever illustrations that enhance rather than detract from the text, *The Elementary Apple* is not stingy with hands-on experimentation either. On just about every page there's a short program which brings about immediate results and makes you feel like a seasoned hacker right off the bat. What we found particularly excellent about this book was the fact that the author didn't stop to explain every element in each program the minute it appeared. The printer access program, for example, has a D$ variable in it. Rather than go into a long-winded explanation of D$ right at the beginning of the book when you don't know your arrays from your elbow, he simply instructs you to type in the program. When you do, your printer works. Zut alors! This is reward enough. Mr. Sanders seems to realize that there's time to explain all the cryptic hieroglyphs and code later and he does.

As we said earlier, these are by no means all the books that are available for home computer users. We haven't even touched books for, say, the Timex or IBM systems. Nevertheless, we hope that in reading between the lines, you've gotten some criteria for assessing a book and, in that way, will make a more intelligent purchase. □

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FIRST SCREENING

WARRIOR

Each month we print a computer game written by one of our readers. This month's First Screening program was written by David Hoffmeier. David is an 18-year-old high school senior from Cherryvale, Kansas. His game is entitled Warrior. *It's a fast-paced adventure game written for the TRS-80 Model III computer. It has a time clock and three levels.*

The Game



Warrior is a fantasy adventure game. You would do well to imagine yourself as a knight, dressed in 14th century armor, exploring the ruins of a medieval city. Your chivalric code demands that you rescue a beautiful maiden who is hidden behind one of the doors in this city.

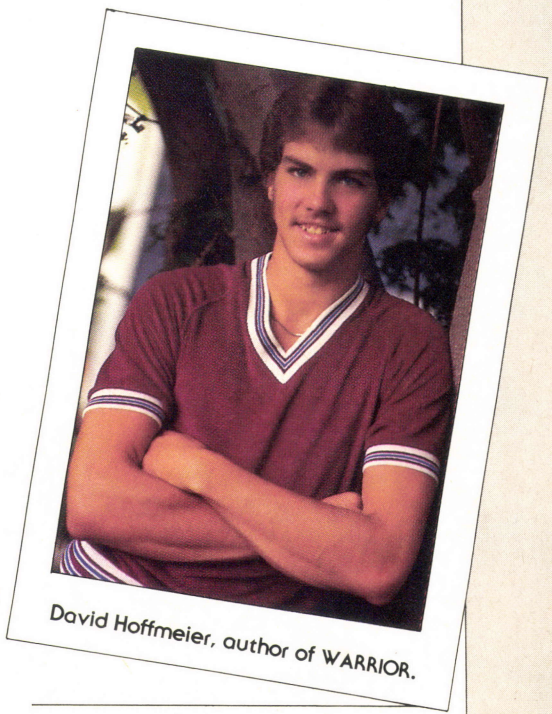
As a knight, you are no slouch. You're a fighter who gets to determine your own difficulty factor by choosing a class. Once that's been done, the ruins of the city appear on screen. In addition to feminine pulchritude, the city is also home to five Orges. According to medieval lore, Orges are huge, fearsome, human-like creatures who stand about eight to 10 feet tall. As a demonstration of their unfriendly nature, they've hidden the key to the door behind which the maiden is trapped. In order to recover the key, you must kill all the Orges. This is done simply by having at them. Your strength will overwhelm them. The Orges are often sneaky. They may put themselves, the key or the maiden in a place that's surrounded by walls. If that happens, you must use the sword that is given to you at the beginning of each game. Legend has it that this sword was a gift from a Wizard who said "With this sword, stone will be dust, but five times of use is all you can trust."

As soon as all the Orges are killed, the key will appear. You must make a dash and grab it. When the key is in your possession, the door will materialize. Take the key and free the maiden. The arrow keys control your movement. Be careful. Don't get too excited or you may move one space too far.

STRATEGY

Since this is a race against time, it's probably best to have a plan of action all set in your mind before you actually start the game. This means that you should study the situation before you actually enter it as a knight.

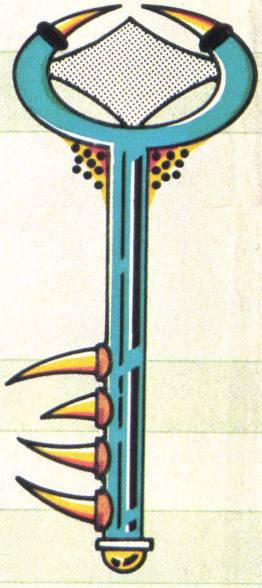
The ruins of the city appear, you remember, right after you choose what class of knight you want to be. Study these ruins well after the city is all assembled on screen. Your fighter will be flashing around and the Orges will be in their places. Make a note of where the Orges are and set up a plan of attack. The clock doesn't start until you press a key. After you press a key, look for your fighter and then move quickly.□



David Hoffmeier, author of WARRIOR.

In order for us to consider your entry, we need the following items: a complete computer program, a brief game description, photographs or drawings of the graphics, a picture of you and a self-addressed, stamped envelope. Send it all to: First Screening, Electronic Fun, *350 East 81st St., New York, NY 10028. Include your phone number so we can reach you.*

```
0 POKE16409,1
2 'Warrior by David Hoffmeier
5 CLS
10 Y=2
20 READX
30 IFX=99THEN60
40 SET(X,Y)
50 GOTO20
60 Y=Y+1:IFY=46THEN90
70 GOTO20
90 PRINT@97,"WARRIOR";
100 PRINT@481,"by David";:PRINT@545,"Hoffmeier";
110 PRINT@989,"instructions (Y/N)";
120 INPUTA$:IFA$="YES"ORA$="Y"THEN930
130 DATA14,18,99,12,15,16,17,20,99,13,14,18,19,99,12,15,16,17,20,99,14,18,99,14,18,99,14,18,
99,14,18,99,14,18,99,5,14,18,27,99,5,13,14,15,16,17,18,19,27,99,5,6,9,12,13,15,17,19,20,23,2
6,27,99,7,8,10,11,12,14,16,18,20,21,22,24,25,99
140 DATA9,12,13,15,17,19,20,23,99,13,14,16,18,19,99,13,14,16,18,19,99,13,14,15,17,18,19,99,
13,14,15,17,18,19,99, 13,14,15,17,18,19,99, 13,14,15,17,18,19,99, 13,14,15,17,18,19,99, 13,1
4,15,17,18,19,99, 13,14,15,17,18,19,99
150 DATA13,14,15,17,18,19,99, 13,14,15,17,18,19,99, 13,14,15,17,18,19,99, 13,14,15,17,18,19,
99, 13,14,15,17,18,19,99, 13,14,15,17,18,19,99, 13,14,15,17,18,19,99
155 DATA13,14,15,17,18,19,99, 13,14,15,17,18,19,99, 13,14,15,17,18,19,99
160 DATA13,14,15,17,18,19,99, 13,14,15,17,18,19,99, 13,14,15,17,18,19,99,14,15,17,18,99,14,1
5,17,18,99,14,15,16,17,18,99,14,15,16,17,18,99,15,16,17,99,15,16,17,99,16,99,16,99
165 CLS
170 RANDOM:CLEAR50
174 NK=1
175 NR=5
178 NB=5
180 RS=79
182 ND=1
184 DR=42
186 KY=75
190 T$=""
200 GOSUB730
210 FORI=1TODF
220 SH=RND(63):LO=RND(1023)
230 LO=LO+15360
240 IFPEEK(LO)<>32THEN220
250 POKELO,SH+128
260 NEXTI
270 FORI=1TONR
280 X=RND(960):IFPEEK(X+15424)<>32THEN280
290 POKEX+15424,RS:NEXTI
300 HI=RND(1023):IFPEEK(HI+15424)<>32THEN300
310 H=H1+15424
320 Q$=INKEY$:IFQ$<>""THEN340
330 POKEH,WR:FORI=1TO50:NEXTI:POKEH,32:GOTO300
340 POKEH,WR
350 IFT$="NO"THEN380
360 IFT1<>0THEN380
370 T$=RIGHT$(TIME$,5):T1=VAL(LEFT$(T$,2))*60+VAL(RIGHT$(T$,2))
380 PRINT@30,"Ogres "NR" You "NB;
390 S$=INKEY$
400 IFT$="NO"THEN430
410 T$=RIGHT$(TIME$,5):T9=VAL(LEFT$(T$,2))*60+VAL(RIGHT$(T$,2))
420 PRINT@50,T9-T1;
430 IFS$=""THEN390
440 F=H
450 X=ASC(S$)
460 IFX=91THENH=H-64:GOTO510
470 IFX=10THENH=H+64:GOTO510
480 IFX=9THENH=H+1:GOTO510
490 IFX=8THENH=H-1:GOTO510
```



```
500 GOTO390
510 IFH<15360THENH=15360:GOTO570
520 IFH>16383THENH=16383:GOTO570
530 IFPEEK(H)=32THEN590
540 IFPEEK(H)=RSTHEN600
550 IFPEEK(H)=KYTHEN600
560 IFPEEK(H)=DRTHEN600
570 POKEF,32:FORI=1TO100:POKEH,32:POKEH,42:NEXTI:POKEH,32
580 NB=NB-1:IFNB<=0THEN615ELSE300
590 POKEF,32:POKEH,WR:GOTO380
600 POKEF,32:FORI=1TO100:POKEH,32:POKEH,WR:NEXTI
610 GOTO870
615 A=RND(2)
620 IFA=1THEN300
630 CLS:PRINTCHR$(23);:IFND=0THEN670
640 PRINT"You have failed your quest"
660 GOTO700
670 PRINT@6,"You have saved the maiden";
680 IFT$="NO"THEN700
690 PRINT@70,"It took you "T9-T1" seconds";
694 FORI=1TO1000:NEXTI
700 PRINT@136,"Press ENTER to continue"
710 Q$=INKEY$:IFQ$=""THEN710
715 PRINT:PRINT
720 GOTO170
730 PRINTCHR$(23);TAB(4)"Enter -G- for Guardian"
735 PRINTTAB(4)"Enter -P- for Protector"
740 PRINTTAB(4)"Enter -W- for Warrior"
750 Q$=INKEY$:IFQ$=""THEN750
760 CLS
770 IFQ$="G"THENDF=100:WR=71:RETURN
780 IFQ$="P"THENDF=200:WR=80:RETURN
790 IFQ$="W"THENDF=300:WR=87:RETURN
800 GOTO730
810 X=RND(960):IFPEEK(X+15424)<>32THEN810
820 POKEX+15424,KY
830 GOTO350
840 X=RND(960):IFPEEK(X+15424)<>32THEN810
850 DR=42:POKEX+15424,DR
860 GOTO350
870 IFNK=0THEN920
880 IFNR=0THEN910
890 NR=NR-1:IFNR=0THEN810
900 GOTO380
910 NK=NK-1:IFNK=0THEN840
920 ND=ND-1:IFND=0THEN630
925 CLS
930 CLS
935 PRINTCHR$(23);
940 PRINTTAB(5);"This game is a quest in   medieval times. Your quest is tosave the maiden.
 First you mustkill the terrible Ogres 'O'. Youare equipped";
950 PRINT" with a magic sword. This sword will enable you to knock down walls.  You may us
e this sword only 5 times. After that you will die."
960 PRINT"  The Ogres carry a key 'K'. Youmust kill all the Ogres, get thekey, open the door
 '*'. Once youget to the door your quest will have ended."
970 PRINTTAB(16)"Press <ENTER>"
980 Q$=INKEY$:IFQ$=""THEN980
982 CLS
989 PRINTCHR$(23);
990 PRINTTAB(5)"The arrows control your          movement."
1000 PRINTTAB(5)"There are three levels."
1010 PRINTTAB(10)"Good Luck!"
1012 PRINT:PRINT:PRINT
1020 GOTO170
```

HACKERS HELPER

Continued from page 72

```
35FORX=7168TO7679:POK
EX,PEEK(X+25600):NEXT
X
45FORY=7184TO7191:REA
DA:POKEY,A:NEXTY
50POKE52,28:POKE56,28
:CLR:REM PROTECTS
CHARACTER SET
105CC=30720:L=7933:PR
INT"■":GOSUB300:GOSUB
400
110POKEL,2:POKEL+CC,7
115POKE37154,127:P=PE
EK(37152)AND128:J0=-(
P=0)
120POKE37154,255:P=PE
EK(37151):J1=-((PAND8
)=0)
125J2=-((PAND16)=0):J
3=-((PAND4)=0)
130IFJ0THEND=D+1
135IFJ1THEND=D+22
140IFJ2THEND=D-1
145IFJ3THEND=D-22
150REM ***CHECK FOR
HEART***
153IFPEEK(L+D)=62THEN
PO=PO+5:GOSUB200
155IFPEEK(L+D)=83THEN
D=0:GOTO115
160POKEL,32:L=L+D:POK
EL,2:POKEL+CC,7:D=0:G
OTO115
195REM ***SCORE
TALLYING ROUTINE***
200PRINT"■■■
```

```
HEART***
127IFPEEK(L+D)=83THEN
PO=PO+5:GOSUB200
123IFPEEK(L+D)=63THEN
D=0:GOTO120
130POKEL,32:L=L+D:POK
EL,2:POKEL+CC,7:D=0:G
OTO120
195REM ***SCORE
TALLYING ROUTINE**
200PRINT"[SHIFT-CLR][SHIFT-*][SHIFT-*][SHIFT-*][SHIFT-*][SHIFT-*][SHIFT-*][SHIFT-*][SHIFT-*][SHIFT-*][SHIFT-*]";
PO:RETURN
255REM ***TREASURE
AND MAZE SET UP
ROUTINE***
300FORX=1TO200:X1=RND
(1)*1000:POKE1024+X1,
83:POKE1024+CC+X1,2:N
EXT
310FORX=1TO200:X1=RND
(1)*1000:POKE1024+X1,
83:POKE1024+CC+X1,14:
NEXT
315REM ***SCORE BOARD
SET UP***
320PRINT"[SHIFT-CLR][SHIFT-*][SHIFT-*]?SCORE
   ?[SHIFT-*][SHIFT-*]?????????????
?":RETURN
400FORX=1279TO1279:
POKEX,255:NEXT
410FORX=1024TO1064:PO
KEX,63:POKEX+960,63:P
OKEX+CC,1:POKEX+CC+96
0,1:NEXT
415FORX=1024TO1984STE
P40:POKEX,63:POKEX+39
,63
420POKEX+CC,1:POKEX+C
C+39,1:NEXT:RETURN
500FORX=0TO7:READA:NE
XT:DIMR(10):FORX=0TO1
0:READA:R(X)=A:NEXTX:
RETURN
510DIMR(10):FORX=0TO1
0:READA:R(X)=A:NEXTX:
RETURN
800DATA73,42,62,107,6
2,62,107,0
900DATA0,-40,40,0,-1,
-41,39,0,1,-39,41
```

UNKNOWN ARCADER

Continued from page 49

when the Village People showed up unannounced. Bobby Orr and various Boston Celtics also stop in to check out the action.

I watched a nubile video princess (I called her Lovely Lynda) testing *Bega's Battle*. A dwarfish angel and devil hounded Bega as he fired upon red skulls and fanged mouths.

"You wanna try?" she asked me, and gently placed my fingers on the controls. I got a lump in my throat and started to sweat.

"Catch me, Bega, catch me," Luna cried from the machine. I was so nervous I dropped her several times and never got beyond the first screen.

Recovering my cool, I roamed the huge arcade. They had practically every machine ever made except the Vegematic, and high scores were competitive: *Nibbler*, 30,856,550; *Star Trek*, 201,850; *Motorace USA*, 106,900. The incredibly ugly *Journey* was there (158,600), as was *Wacko* (32,600). They even had an old Atari *F1* and *Sky Hawk*. I embarrassed myself again by only ranking 27th on *Astron Belt*, but these kids have been practicing. To vent my frustration, I played *Cheeky Mouse*, in which I bashed mice with a hammer to hear them squeak.

I was complete blown away by this gamer's Shangri-la. I wanted to stay forever. I fancied getting a day job across the street at Shopper's World and spending my nights wooing Lynda beneath the big space ship. But a nagging doubt kept after me: Might not there be an even grander arcade? It might be just beyond the next overpass.

And so once again I traded in my bird-in-the-hand for who-know-what's in the bush. And there will be many more bushes before I can rest easy. As Springsteen says, "It's the price you pay."

Wait for me, Lynda. □

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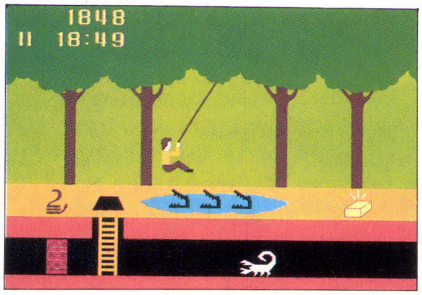
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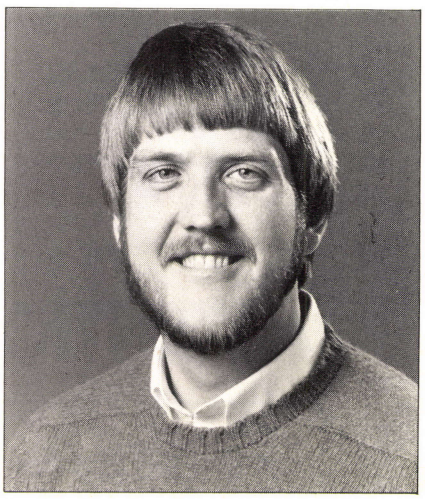
The people at **Activision** let the press peek at some of their new products (a first) at New York's Lotos Club where the literary and theatrical elite meet. Company prez Jim Levy held court over a breakfast of green eggs, no ham... Among the games: **PITFALL II** David Crane's new



masterpiece for the 2600. Hidden in the cartridge is a new silicon chip which gives the machine the sound capabilities of your average digital synthesizer, or something close to that...**PITFALL II** plays the theme song to Harry's Saturday morning cartoon show, scrolls eight screens horizontally and has 22 vertical levels. It's practically impossible to memorize Pitfall Harry's route...so if the original **PITFALL** had you pulling out your hair, you might as well resign yourself to baldness after getting your hot little hands on this one...the other game has a working title of **HELIO** ..also hinted at were a couple of "avant garde" games that'll be unveiled at CES. After hearing one described as "off beat musically and visually; a very new approach to a very old concept" and contemplating the references to punk rock that followed, I began to speculate on what this game could be. **MUSICAL ELECTRIC CHAIRS? TIC TAC TOE** with songs by **X**? Will the game be called **NO FUN**? We'll see...

Magicom has just announced the first stage of their **DRAGON'S LAIR** licensing program. Soon our pal Dirk's heroic mug will be gracing lunch boxes, bubblegum cards (will they have his stats on the back?) French Foreign Legion hats, pyjamas and almost anything else you can name. Marvel Books and Comics will be doing adaptations in a bunch of formats, and there's even talk of a **DRAGON'S LAIR** novel. The Fly suggests **THE NAKED AND THE DIRK** or **MOBY DIRK** as possible titles...

Even as we speak, the folks at Don Bluth Animation are working on the

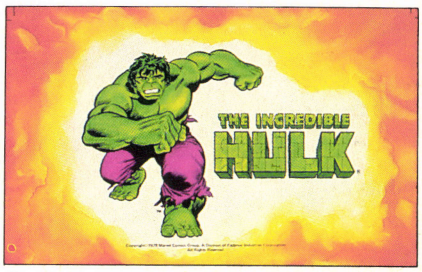


David Crane, author of PITFALL and PITFALL II, the sequel

art for **DRAGON'S LAIR II**! Dirk and Daphne have gotten hitched and have added 13 little ones to the family. Daphne is still **QUITE** the blond bombshell in spite of all this childbearing activity... Dirk will probably look a little **TIRED**... Interrupting this scene of domestic bliss is the **EVIL WIZARD**—see, he does exist—who kidnaps Daph, dragging her through a time warp. Dirk gets his hands on a time machine and sets out to rescue her, using all of world history as a pitstop. My question: who's gonna take care of the **KIDS** while our heroes (and villains) gallivant through the vast panorama of Western Culture?...

Checking in at **Marvel Comics**, we discovered that they just clinched a deal with **Adventure International**, unveiling a new series of computer adventure games called **QUESTPROBE** that'll feature all licensed Marvel super heroes. The games'll be sold in comic specialty shops as well as the usual software outlets and Marvel will be producing comics that will act as guides to each game. The first, as yet untitled, game will feature that big green continent-hopper the **INCREDIBLE HULK** as well as that mystic master of teleportation, spell casting and several extremely complex card tricks, **DOCTOR STRANGE**...

Okay kids, brace yourselves for a shock. This is my final column. No more of this video game stuff for me, no way...it's hurting my vision. If you could see things through my compound eyes, you'd know why.



So I've decided a career change is what I need... I've written my memoirs, which cover the "games years" as I like to call them... Entitled **THE FLY PAPERS**, it's available at exterminator supply shops everywhere...With this phase of my life behind me, I've decided to go Hollywood. I auditioned for a part in the upcoming **METAMORPHOSIS** but I was the wrong genus for the role. However, I did land a juicy part in the **SEQUEL** to one of this year's biggest films. That's correct, I'll be **STARRING** in **THE RIGHT STUFF II** as "Buzz" Aldrin! Let's take a lunch...my agent'll call your agent... you're beautiful, baby, beautiful... love ya....

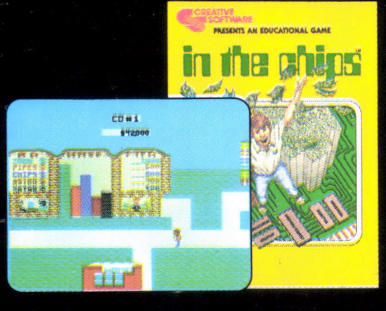
"The Fly"

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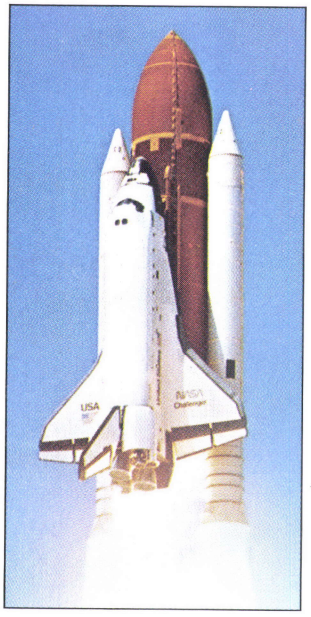
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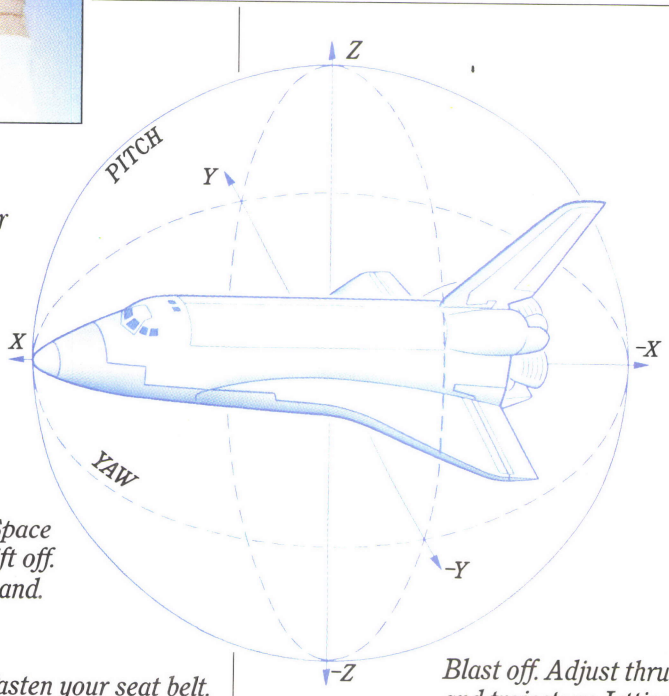
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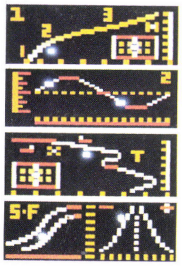


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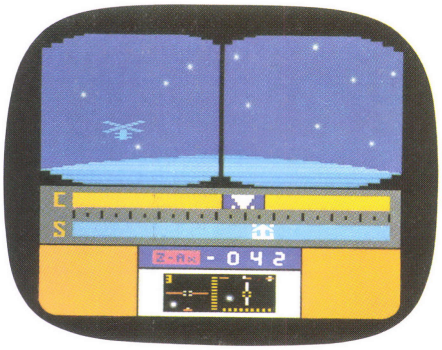
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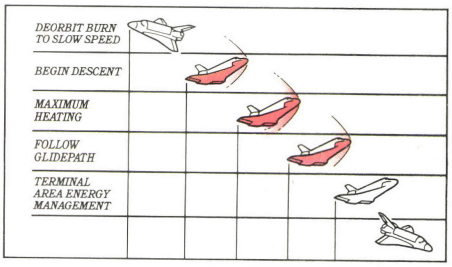


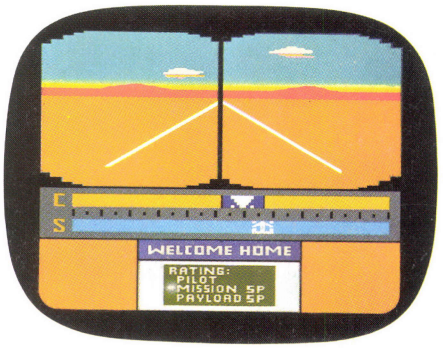
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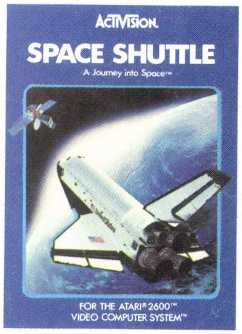




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