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ELECTRONIC FUN with COMPUTERS & GAMES

MONSTER PREVIEW

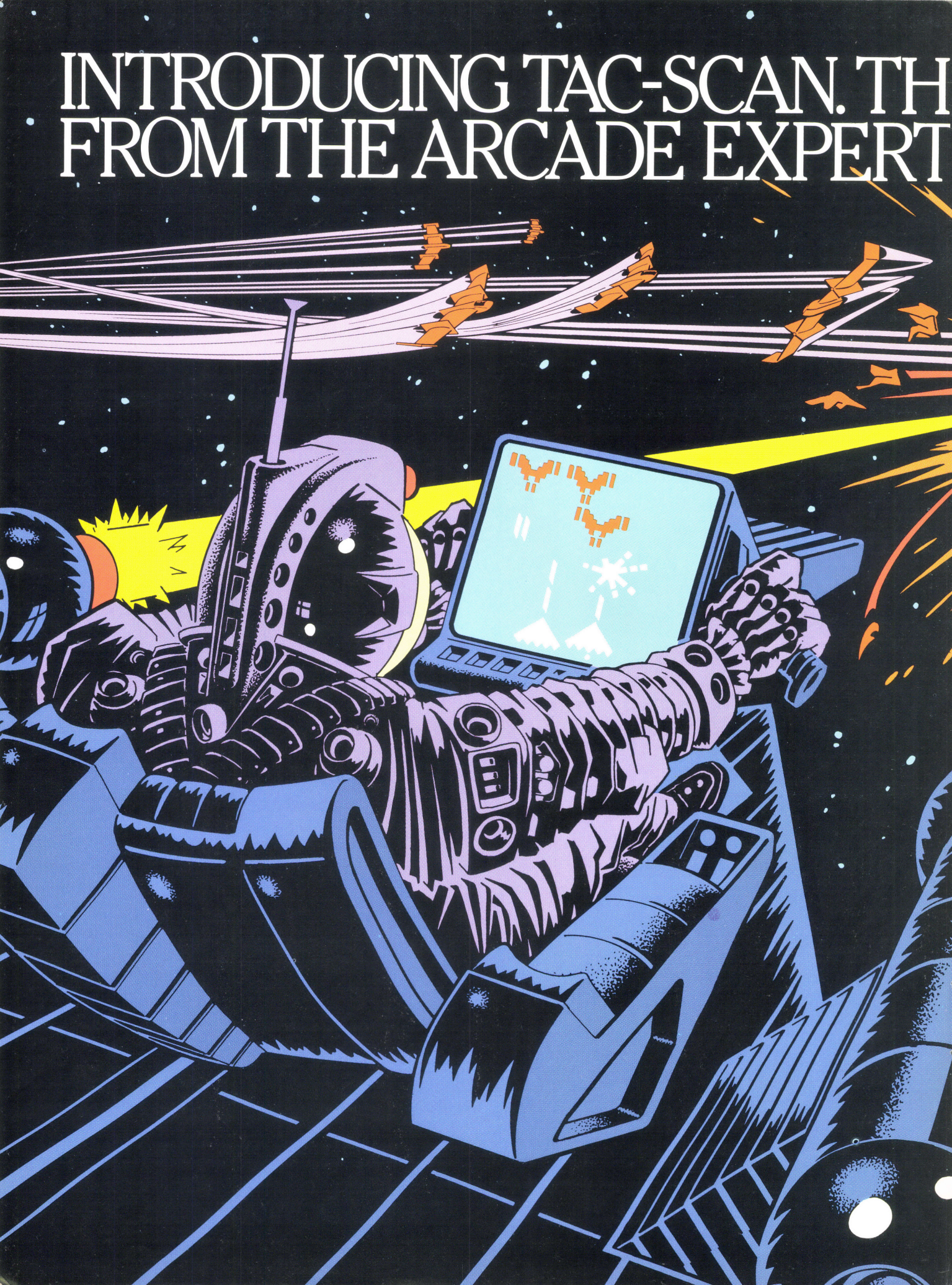
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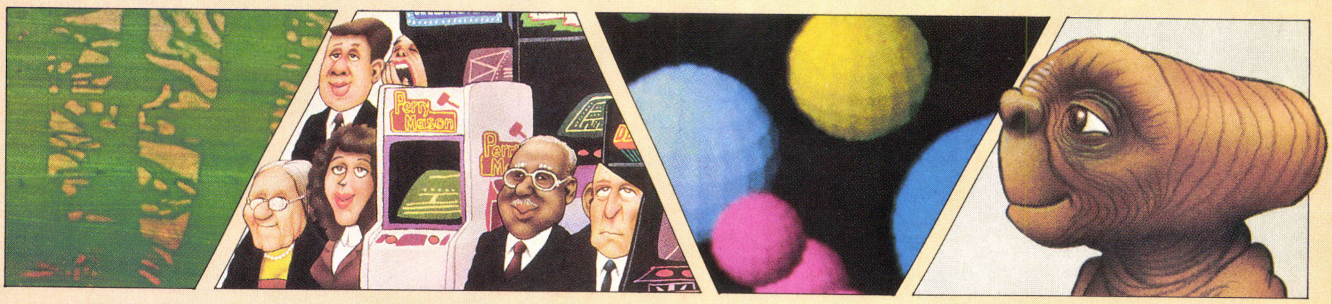
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ELECTRONIC FUN with COMPUTERS & GAMES

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GOING, GOING, GONE! *By Ed Hulse* The way of rights . . . You can't sell the programs without a license. *EF* tells you all there is to know about buying the exclusive rights to characters and games **34**

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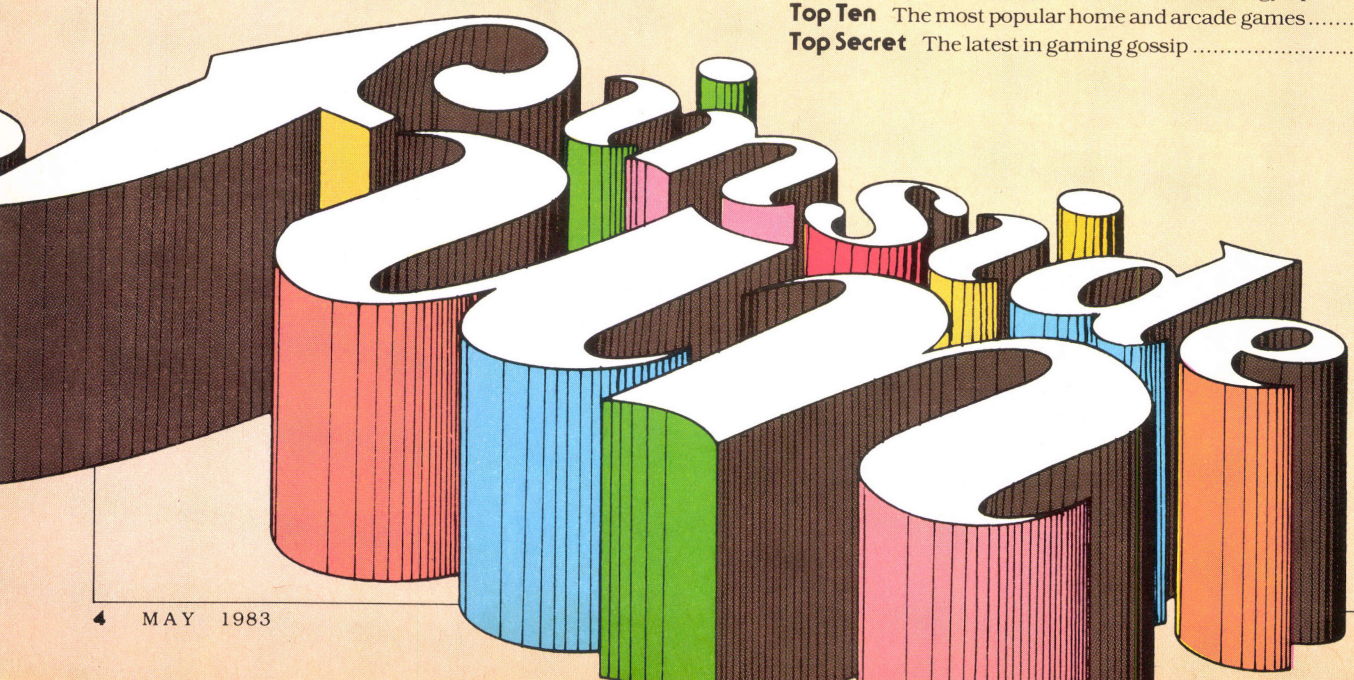
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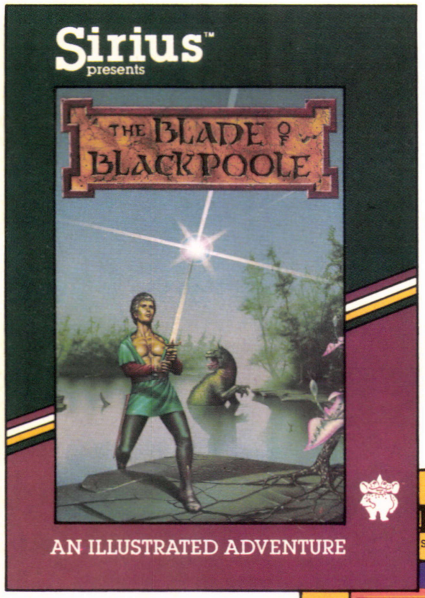
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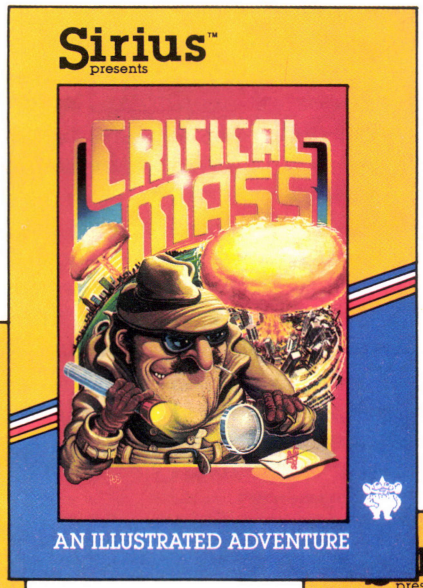
For Heroes Only!



Blade of Blackpoole

Step back in time and join the search for the magical sword of Myraglym. Travel cautiously on your journey for you will encounter dangerous serpents, spine-chilling evils and carnivorous plants that crave human flesh!

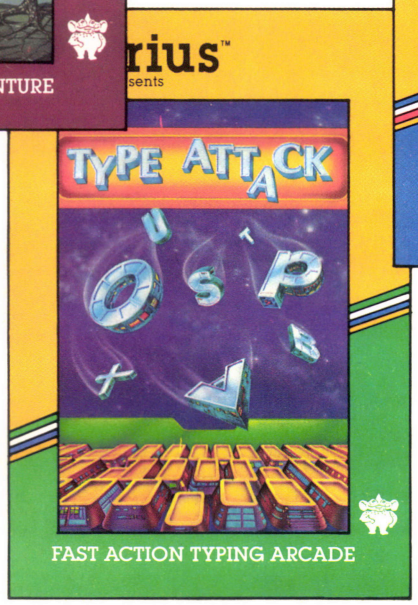
Avail. on disk for the Apple II, II + or IIe and Atari 800 or 1200 and Commodore 64.



Critical Mass

On Jan. 1st at 10:00 am, the U.N. received this message: "Good Morning, in exactly 9 days, the world's 5 largest cities will be destroyed by thermal nuclear weapons." At 10:03 am, you received this assignment: STOP . . . THIS . . . LUNATIC!

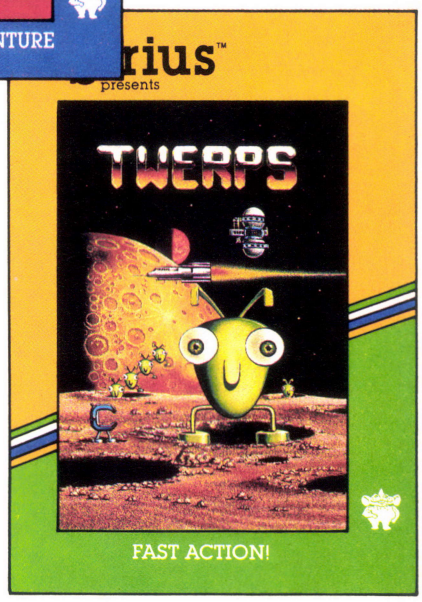
Avail. on disk for the Apple II, II + or IIe and Atari 800 or 1200 and Commodore 64.



Type Attack

The planet Lexicon is under attack! Letters of the alphabet are falling from the sky. To repel them, you must be able to type the letters faster than they can fall. Be quick! An entire civilization is depending on your skill.

Avail. on disk for the Apple II, II + or IIe and Atari 800 or 1200, IBM-PC and Commodore 64 and on cartridge for the VIC-20.



Twerps

The boldest space rescue ever! Defenseless Twerps are stranded on an asteroid. You, Captain Twerp, are to board a Twerp-craft, blast through the Orbiters, land safely and rescue your comrades. Beware of the Glingas and Twerp-eating Gleepnites!

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Editorial

A monster of an issue

Once again the EF *editors have been poking around behind the scenes to find out what's on the way for the mad gamer. Michael Blanchet did a whirlwind tour of Silicon Valley and surrounding areas, and Randi Hacker visited the almost-as-exotic Toy Fair in New York City, proving that your best buy in magazines is also bi-coastal. Read all about their adventures in our "monster" game preview.*

For those of you who may wonder what the Toy Fair is, once a year all the toymakers in the country get together in New York to show their new products. Who gets to see them? All the owners of toy and game stores from all over the country. And us. Everyone showing toys and games at the Toy Fair has a room, and every room has a security guard. And everybody wears a badge, telling who they work for. If you're from Mattel or Atari and you want to see what Coleco has, forget it. Those guards mean business.

Of course, most people buy toys around Christmas, so what we saw won't even be in the stores until the summer. And it's still early, so there'll be even more new games before the year is out. You'll read it here first, and that's a promise.

If you own an Atari computer, or are thinking of getting one, this issue's for you. We've got a complete list of all the people who make games for the 400 and 800, plus their own picks of their favorite games. What? You just bought a VIC-20? Well, every single month *we'll do the same for another computer system, and when we run out . . . maybe we'll just have to start over. Computer games are multiplying like rabbits, but then, it's that time of year.* Electronic Fun *doesn't just give you more for your money—we give you everything.*

The Editors



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FROM Bally MIDWAY

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letters to the editors

TI DECISION

I see a lot of articles on the Commodore VIC-20, Atari 400/800 and TRS-80 computers, but none on the



Texas Instruments TI-99/4A. Is the TI-99/4A a bad computer?

Chris Ransford
Laguna Niguel, CA

We think it's pretty good—but then, whether a computer is "bad" or "good" depends on whether it's right for you. Take a look at our review of the TI 99/4A in the April issue of EF *and you'll be able to make a more informed decision.*

GAMEMASTER SPEAKS!

Congratulations on being the first magazine to offer aspiring young computer programmers assurance of a showcase for their creative ability. We agree that there is an abundance of talent in the electronics field and commend your organization for helping expose the good works of these capable individuals.

A number of our members alerted us to your new publication when they read Dolores Haze's article "Dial M for Modem" in your December issue and noted her clever presentation of GameMaster under "Let Your Fingers Do the Walking." The recognition given us in this article is very much appreciated, and we thank you.

Harlow D. Stevens, Jr.
President, GameMaster

Ed. note: Since "Dial M" was published, Mr. Stevens tells us, GameMaster has changed its pricing structure. You can now join for as little as $10, and the hourly rate for connect time is $3.00—any time, any day of the week.

KEYBOARD KAPERS

I notice that Coleco and Intellivision are making computer keyboards for their systems. Why doesn't Atari make a computer keyboard for their 2600 VCS?

Danny McGowan
Cola, SC

Funny you should ask, Danny. See our "Souped-Up VCS" article in the July '83 issue, and you'll read all about the new Atari keyboard.

GAMES WANTED

I enjoyed the article "Making Your First Million" in the January issue. For the information of your readers who have potential blockbusters for the Commodore 64, Recreational Software Variformat Publishers (RSVP) pays commissions up to 25 percent. You can contact us at RSVP, 1332 Old Bridge Road, North Fort Meyers, FL 33903.

S. Bryan Vaughan
President, RSVP

BASIC HACKER

I just discovered your magazine in my favorite store and enjoyed it very much. I write, however, to commend Randi Hacker (now come on, is that really a computer expert's name? Randi Hacker?!) on the series "Parlez-Vous BASIC?" which started in the February issue. I've read several books on BASIC, and never have I seen anything quite so simple and easy to understand.

J.E. Holmes
Shiprock, NM

Randi replies: I'm very flattered by your lavish compliments on my BASIC article. And about my name. No, Randi Hacker is not my real name. I changed it. From Lisa Hacker. Just kidding.

CARACAS KUDOS

I am probably the strongest Intellivisionist you have ever received a letter from. After having played all other existing video games, I am 100 percent convinced that Mattel's system is the best and most promising system in the world.

I would also like to congratulate you on your fascinating magazine as it is informative, interesting and even irresistible. I really enjoy every page and look forward to each continued issue.

Benjamin Steinmetz
Caracas, Venezuela

SHY DESIGNER

Could you please send me a few of the past computer programs for my VIC-20 from *Electronic Fun* so I can see if the program I wrote is good enough to print in your

Continued on page 92



UMI software...a world of choices

A World of Fun! They're hot! They're new! The exceptional graphics and challenging play of UMI's games have made United Microware the leader in arcade-quality recreational software.

A World of Help! UMI has created programs to help professionals and homeowners "take care of business." UMI can make your life a little easier with word processing, information storage, financial management, hobbyist programs, utilities and communication programs — all with easy-to-understand instructions.

A World of Choices! All programs come on cassettes or UMI's own durable cartridges, depending on your selection. If you're looking for fun, or for an easier way to manage your personal business, look to UMI . . . the leader you can trust. UMI products are available at your favorite computer products store.

Dealer inquiries invited.

umi

United Microware Industries, Inc.
3503-C Temple Avenue
Pomona, California 91768
(714) 594-1351

the EA report

It's how you change the game



By Jens von der Heide

Did you ever think it might be more interesting or more challenging if one or another aspect of your video games were changed? For example, in *River Raid*, what would it be like if the plane could fly over land as well as water? Or how would it be if, in *Pac-Man*, you could have the ghosts move slower than normal speed while you move as quickly as ever? How would you like to be able to make games harder? Or easier? You can. With Answer Software's Personal Game Programming System or PGP-1 for short.

Read And Alter

The PGP-1 has its own 4K of RAM memory and its own cartridge slot and keypad. It slides right over the front of the VCS and the game cartridge you wish to alter is plugged into the cartridge slot on the PGP-1. A special connector cartridge (which contains no memory) is placed in the VCS cartridge slot. You use the keypad to re-program the game.

The PGP-1 takes almost any Atari VCS cartridge and allows you to read through the cartridge's program. Not only are you able to "see" the program, you can also *alter* the program. You can change game characters, sounds, shapes, colors, speed and even program your own strategy. Don't worry though. You won't ruin your cartridge or lose the original game because all the alterations occur in the PGP-1's memory—not the cartridge's. This process is known as "downloading."

Besides allowing you to alter a game, the PGP-1 can help you learn the language that your Atari uses—binary language. Actually, Atari cartridges are written in machine language, but this is closely related to binary language, as well as assembly language.

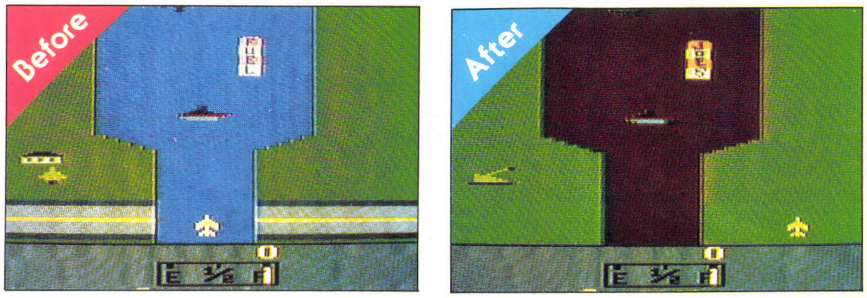
Each command in your cartridge is two letters long. The first or second letter can be made up of hex/dec digits (hex means six, dec means ten, hex/dec means sixteen). The hex/dec digits are zero through nine along with the letters "a" thru "f"—sixteen characters all together.

Because machine language is somewhat complex, Answer Software has come up with its own line of games, complete with special instructions on how to modify them. The first game (which will probably be included with the PGP-1) will be *Malagai*. *Malagai* is a maze game which involves stealing keys from aliens.

Now, about changing that friendly game of *Pac-Man*. Using the PGP-1, just change the steps at lines 1954 through 1959, inclusive, to EA (EA is hex/dec for the numeric value of 234). This will slow down the ghosts to about one-fifth normal speed, while your Pac Man remains as fast as ever. Because the PGP-1 allows you either to select your modified version or the original cartridge, you can easily switch from one to the other.

Eat At Joes

Or, let's take *River Raid* as another example. Look at the pictures below. The first one shows the normal starting conditions of the game. The second one shows the same game after having been modified on the PGP-1. Notice that the river color has changed from blue to brown, the fuel tank has been changed to JOES eating establishment and the house and tree have become a gun emplacement. A change that can't be seen allows the plane to fly over land as well as over the river, instead of crashing upon contact with the river banks as in the original game. By allowing the plane to fly over land as well as water, the entire game strategy changes.

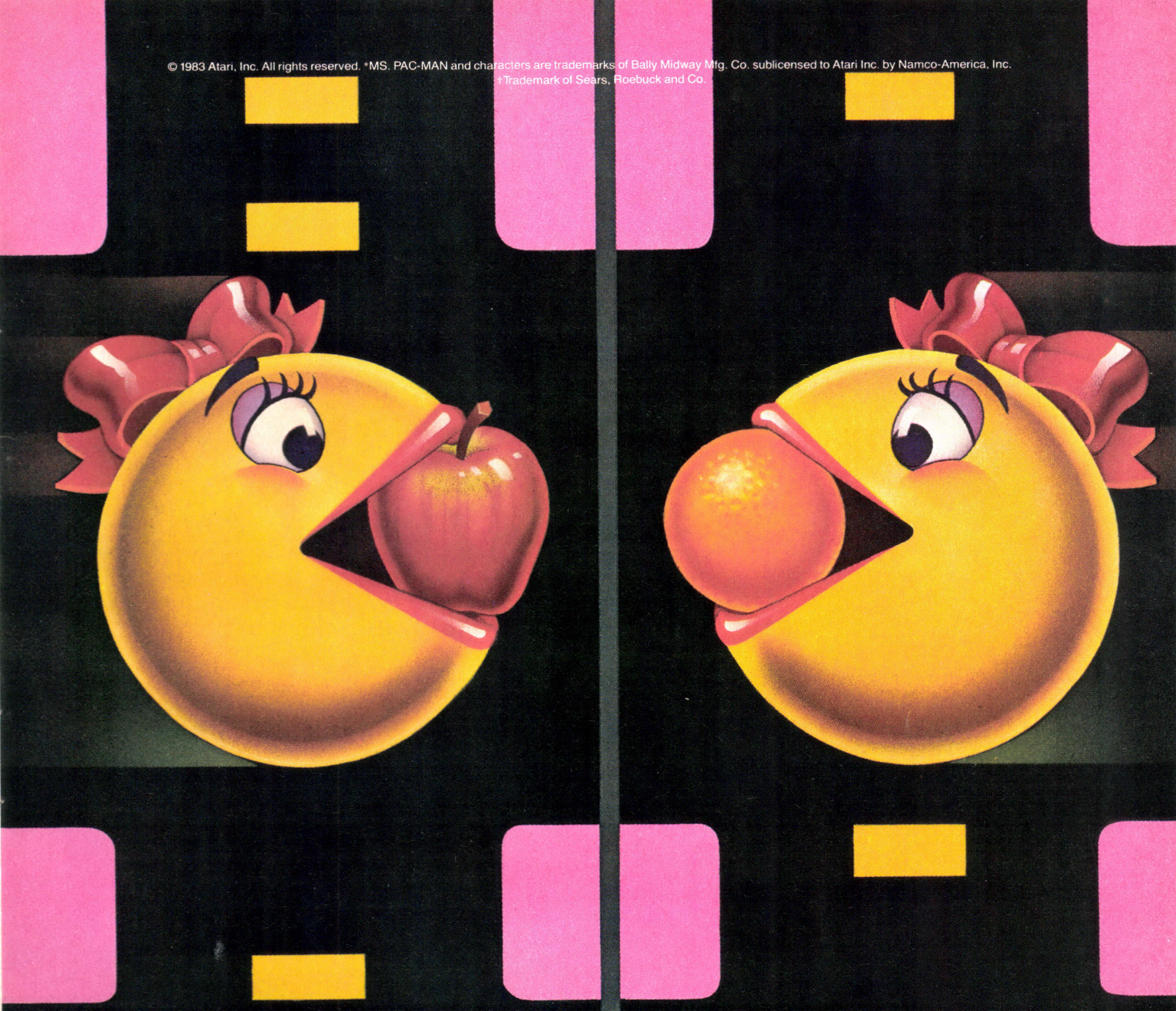


Using the PGP-1, you can change RIVER RAID's river from blue to brown.

In addition, you can alter the

Continued on page 96

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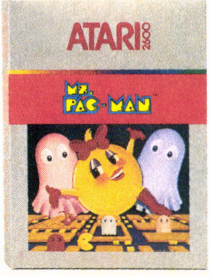


Which player is eating twice as much?

Think fast. Here comes MS. PAC-MAN* from Atari.®

Meet the new home version of MS. PAC-MAN. She looks and plays so much like the arcade, she's unlike any home video game you've ever played before. And she's only from Atari for use with the ATARI® 2600,™ and the Sears Video Arcade† systems.

You get four ghosts. Four mazes. Escape tunnels. And lots of floating munchies. Pears to pretzels, apples to oranges. To get the top banana, worth 5000 points, you have to know your little lady backward and forward.



The way the player on the left does. He gets 1000 points for the apple. While the player on the right gets only half as much for the orange. But plenty of indigestion.

So escort MS. PAC-MAN out of the arcade.

Because this woman's place is in the home.

ATARI

A Warner Communications Company.

Keyboards, keypads and power



WICO

Command Control Keypad (Model 50-1060) $19.95

The Command Control Keypad is Wico's entry in the race to improve the Coleco controllers. Unlike other joysticks which are compatible with the ColecoVision system, the Keypad has, well, a keypad—so you can get the benefit of a more sensitive and responsive joystick without having to switch from one controller to another in order to choose games and levels. In addition, it's got two independent firing buttons which enable you to use it with all the Coleco games that have that option.

Wico
6400 W. Gross Point Rd.
Niles, IL 60648

VIDEO TECHNOLOGY

VZ200 computer under $100

Computerphobia has many people in its ugly grip but, for those of you who are newcomers to computer technology and are just a little intimidated by it all, there's the VZ200. The VZ200 is designed for beginners but can be expanded to accommodate even the most demanding user. It has 4K of RAM and built-in BASIC along with a full-size, moveable-key keyboard with soft rubber keys. It can hook up to any audio cassette recorder for program storage. Peripherals that can be used with the VZ200 include a 16K memory expander, a 64K memory expander, joysticks, printer, light pen, modem and Video Technology



2633 Greenleaf
Elk Grove Village, IL 60007



PALMTEX

PVS $29.95

The advantage of those little dedicated palm-sized games is that, unlike home video games, they are portable. The advantage of home games is that you don't have to play the same game all the time. Palmtex has married the two advantages together and come up with the first palm-sized programmable video game. Due out in March or April, the Palmtex PVS has a liquid crystal display which features color graphics. Not only can you change the games but you can also change the skill level by adjusting the controls on the command console. The first five game cartridges include *Crystals of Morga*, a fantasy game with 49 different mazes; *Spellbound*, a word scramble game with hundreds of possibilities; *Star Trooper*, a spaceship dogfight; *Mayday*, a coastal defense game and *Mine Field*, a game of hidden dangers.



The cartridges sell for about $19.95 each. Palmtex hopes to have at least 12 PVS carts available in 1983.

Palmtex
1167 Chess Drive, Suite E
Foster City, CA 94404

AMIGA

The Power System $44.95

In the old days, all you could plug into your Atari VCS were cartridges and your fingers. Recently, an epidemic of new things that could be plugged in broke out. Among the

Plug-ins

new peripherals is The Power, a plug-in memory expansion module for the 2600. The Power has its own microprocessor and adds 6K of RAM to the VCS. With The Power and any audio cassette player, you can play enhanced games that come on standard audio cassettes and market for as little as $9.95. In addition, using









a modem (purchased separately), two players can play interactive games and can "talk" to each other over any dial phone. Power-Play games also come in 3-D—you play while wearing those red/blue glasses.

Amiga is also offering a new sort of controller called the Joyboard. It plugs into the joystick port of the VCS and you stand on it, moving your "guy" with your feet. Several games will be made for it including *Skiing* and *Surfing*.

Amiga Corporation
3350 Scott Boulevard
Santa Clara CA 95051

DISCWASHER

PointMaster Fire Control $9.95

Continuous fire. That's the dream of many a gamer. But, say you own the PointMaster which doesn't offer you this feature and say you don't want to invest in a new joystick which does. We wouldn't blame you, of course. New joysticks can be expensive. Well, if that's the case, you can buy the PointMaster Fire Control—a joystick enhancer. It connects between your PointMaster and your game console and allows you to fire continuously simply by holding the fire button on the joystick down. About the size of a disposable cigarette lighter, the Fire Control is compatible with the Atari 2600, the Atari 400/800 and the Sears Telegame systems.

Discwasher
1407 North Providence Rd.
Columbia MO 65201

MINDWARE

TS1000 software $9.95 to $24.95

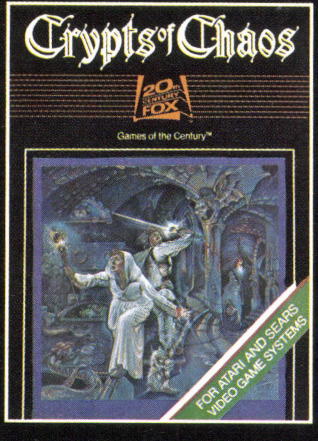
The TS1000 may be a tiny computer but there's lots of software available for it. Now Mindware is adding at least 20 new programs to the list. The series includes business, engineering and programming packages as well as arcade and intellectual games. The key feature of these new programs is their "Quickload" capability. Mindware says they load six times faster than conventional Timex-Sinclair software. The Quickload software also saves program data and verifies whether the computer is loading properly. Among the games offered in this new line-up are *Gulp*, *Labyrinth*, *Pilot*, *Graphic Golf*, *Crossword*, *Anagrams* and *Cosmos*.

Mindware
15 Tech Circle
Natick, MA 01760





IF STRATEGY ISN'T YOUR GAME, CRYPTS OF CHAOS WILL EAT YOU ALIVE.



It took the master at Fox video games to create Crypts of Chaos—the new strategy game that would challenge the mind of a sorcerer. It's a dark fantasy world of wondrous wizards and terrible trolls. There is treasure there. But to win it you will have to be very very clever. For it's guarded by dragons. And they have had their fill of witless players.

FOR YOUR ATARI VCS.

20th CENTURY FOX™

Games of the Century

E.F.C. Times

VOLUME ONE, NUMBER SIX MAY 1983

NEW VIC-20 GAME: RATS CHECK IN

Keeping track of all the animals in video games is a tough business these days, and *EF* has been straining to keep up. First, there were all the games with frogs and various amphibians in them, so we covered that in an article called "Why Frogs?" in December. Then last month we thought we'd sew up any possible new entries with "Hey, What About Us?", which mentioned all the animals that *hadn't* made it to game fame yet, like skunks, snails and goldfish.

We forgot about rats.

But Creative Software didn't. They've got four new VIC-20 game cartridges, among which is *Rat Hotel*, starring you as The Rat. Waldo, the maintenance man at the Hotel Paradisio, doesn't like you, so you have to start out at the top floor of the hotel and scurry to safety through the boiler room floor while Waldo chases you in his atomic elevator.

Any second now we expect to hear about a cartridge called *Cockroach Patrol* or *Flea Quest*.



Rat Hotel: *Of rats and maintenance men.*



Beefsteak tomatoes turn Super Bowl into Salad Bowl

EEEK! Gasp! Blecchhh! Killer Tomatoes on the Rampage

While the Washington Redskins were in the locker room preparing to clobber the Miami Dolphins in Super Bowl XVII, outside in the stadium were two other "redskins" looking for some revenge of their own.

At first we thought this picture had something to do with President Reagan's belief that ketchup ought to be classified as a vegetable in school lunch programs. Maybe the vegetables out of which ketchup is made were picketing for equal time?

But no. It turns out the stunt was part of 20th Century-Fox Games of the Century's promotional campaign for its newest title, *Revenge of the Beefsteak Tomatoes*, in which players have to fight giant tomato bombs.

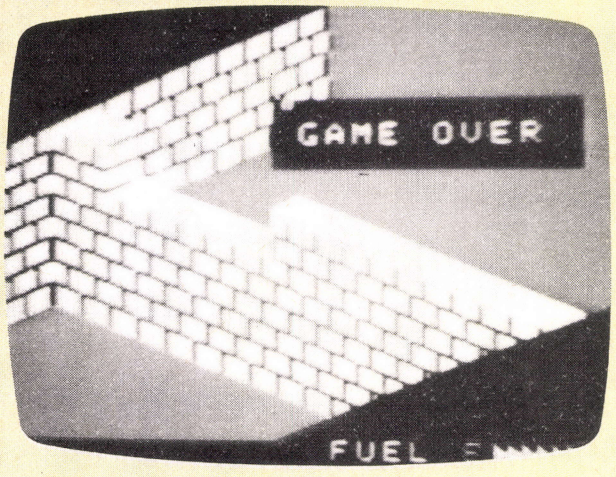
Atari: From Pong to Hong Kong

All of you who have been stocking up on suntan lotion, practicing your surfing and planning to move to California in order to work for Atari had better start brushing up on your Chinese instead. It seems that Atari is planning to shift the bulk of its manufacturing of both computers and video games from California to Hong Kong and Taiwan. About 1,700 people will be put out of work because of this move, which is being implemented because Atari's earnings were sharply lower than expected. Atari will continue its arcade game production and new product development in California.

E.F.G. Times

THIS MONTH'S CONTEST WINNER

The winner of our February *Zaxxon* contest was John Rogers of Stafford, Texas, who rolled the game—as did dozens of the more than 200 competitors who entered the contest! John's winning entry was selected by a random drawing, and we'll be selecting winners that way in all future monthly contests where more than one entry shows the highest possible score.



The winning Zaxxon entry

Each month we pick a home video cartridge and award a free cartridge to the reader who achieves the highest score. This month's game: *Tron Deadly Discs*.

To enter, send us one envelope containing at least one clear photo of your score on a TV screen, and a clearly printed or typed three-by-five card giving your name, address, phone number and the title of the cart you'd like to receive. Send entries to: May Contest, *EF* 350 E. 81 Street, NY, NY 10028.

Quote Of The Month

"Frankly, I don't see video games as being any more mind-controlling than fathers sitting spellbound before 86 football games a week or their mothers mesmerized by 4 hours of soaps a day."

—Erma Bombeck
"At Wit's End"

NEWS WANTED

Have you got an item for the EFG Times? News events, game tips, photos and other information are gladly accepted. Send material to: EF, 350 E. 81st St., New York, New York 10028.

Teaching Teach To Teach

There's no problem involved in teaching kids how to use computers. They're naturals. It's teaching adults—and specifically teachers—that's often the problem. And many kids know more than their teachers. That's why Scholastic Inc. is going to be publishing *Teaching and Computers*, a monthly magazine dedicated exclusively to helping elementary school teachers understand and use the microcomputer in classrooms. It is, according to Scholastic, the first magazine created to provide specific and clearly understandable information for the classroom teacher interested in learning about or teaching with computers. The pilot issue was distributed in late February.

Coleco Goes To The Doctor

Coleco has announced the signing of an exclusive, worldwide licensing agreement with Theodore S. Geisel. Big deal, you say. That's because most of you probably know Theodore Geisel better by his nom de plume, Dr. Seuss. As Dr. Seuss, he created such childhood favorite books as *The Cat in the Hat* and *How the Grinch Stole Christmas*. The agreement between him and Coleco gives the video game company exclusive use of all the Dr. Seuss characters in all toy areas including video games and computer software. Expect to see the Cat and Grinch (and many other Seuss creations) in Coleco's new lines soon. We wonder, will the cartridges rhyme?



Dr. Seuss makes house calls

FOR THE FUN OF IT

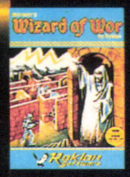
Arcade Excitement for Your Atari® Home Computer



Midway's GORF

"Faithful to the arcade version." —Book of Atari Software 1983

In the dark reaches of hyperspace, confront the fierce Gorfian Empire. Battle Gorfs, Droids, Lasers and Subquark Torpedoes in your attempt to survive. Multi-screen action for one or two players. ROM Cartridge or 24K disk.



Midway's WIZARD OF WOR

"An action-packed shoot-em-up; an outstanding job." —Book of Atari Software 1983

Battle hideous and deadly creatures of doom. Survive the changing mazes and defeat the fiendish Wizard of Wor. Multiple screens, simultaneous one or two-player action. ROM Cartridge or 32K disk.



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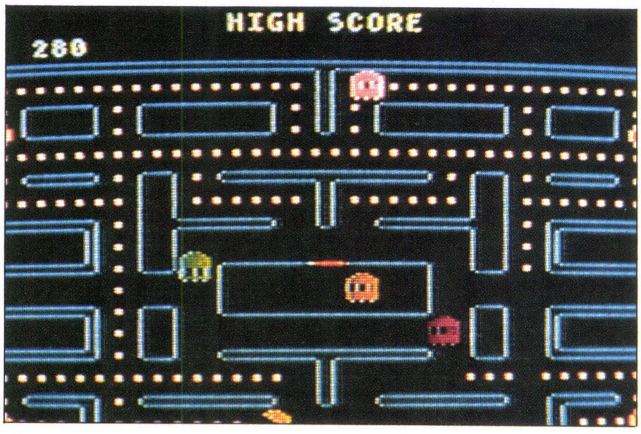
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output input

Let's get back to normal



I would like to know why the Texas Instruments home computer (TI 99/4A) doesn't have normal games like PAC-MAN or CENTIPEDE or DONKEY KONG but games that are very weird and different. And, is there any way that I can obtain a list of the games and software that TI has?

Mike Schoppet
Florissant, MO

If by "normal" you mean arcade translations, the reason TI hasn't got the games you mention above is simply that other companies own the exclusive rights to them and aren't making them for the TI 99/4A. Whether or not they will expand to include other systems is, of course, up to them. As far as obtaining a list of games for the TI, keep watching EF. You may just find what you're looking for. Or you can write to TI at: PO Box 10508, MS 5949, Lubbock, TX 79408, and ask for a catalog.

I have an Atari 2600 and I really enjoy it but it's not fair that ColecoVision can play Atari cartridges but Atari can't play ColecoVision cartridges. Why can't an expansion module be made for Atari?

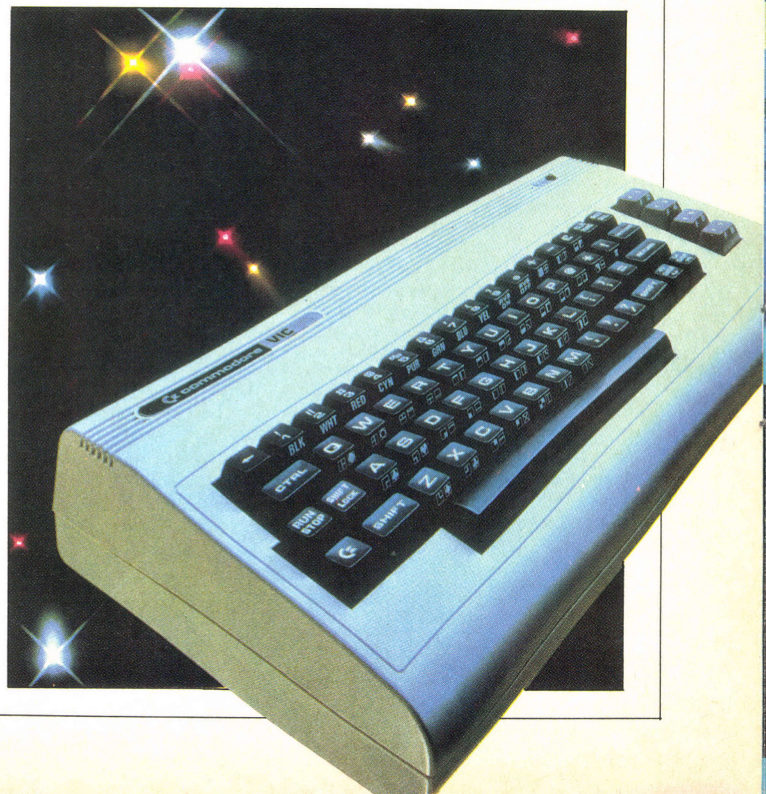
James Kirby
Abington, MA

It's not that an expansion module *can't* be made, it's just that Atari has no plans to make one for ColecoVision games. The only adapter that Atari will be marketing is an expansion module for the 5200 which will allow you to play all the VCS games.

I'd like to know what comes with the VIC-20 home computer, just a keyboard? The reason I need to know is because I want to buy a home computer in the near future and it's a choice of either the VIC or the Atari 400.

Shawn Sivy
Trenton, NJ

When you buy the VIC-20 you get the keyboard and whatever is necessary to attach it to your television set. That's all. But that's all you get with most of the home computers you purchase. All peripherals have to be bought separately. The VIC-20 has 5K of memory to begin with but can be expanded to 16K. The Atari 400 comes with 16K but it doesn't have a typewriter-style keyboard like the VIC does. The Atari keyboard is a membrane, or flat one, which is more difficult to type on. Both the Atari and the VIC accept cartridges (though not the same ones) and both offer a wealth of programs and games. It's up to you to decide how much memory you require right away and how important a real keyboard is to you. Then choose.



I read your magazine often and I find it more informative than any other video game magazine. In your February issue you had an article in the EAT Report about renting video games from stores or clubs. I would like to know more about these stores and where they're located.

Mike Ehmann
Grove City, OH

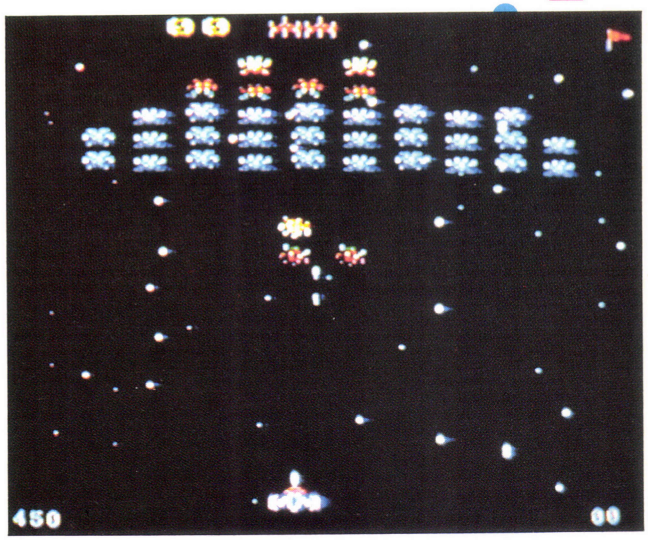
Jens says to tell you that there is, as far as he knows, no centralized video game rental club. Your best bet would be to check the video specialty stores in your city and you're sure to find that most (if not all) of them have already begun a rental club. Jens says that half of the places he contacted in his home town had clubs, and the others were starting them in the immediate future.

How does the VIC-20 computer compare with the Atari 400 in games and programs? Does the future look bright for the VIC-20? Can I write video games with the language that the VIC-20 comes with? Is there another language that I can use to make sophisticated games?

Eric Gordon
Forestville, MD

Well, to begin with, the VIC has 5K of memory (expandable to 32K) while the Atari 400 comes with 16K and is not really expandable at all. Actually, you can expand it further but it requires a technician and if you're going to want more memory, you should go with the 800 as it is a better computer all around. The VIC has a typewriter keyboard while the 400 has one of those flat, membrane jobs—hard to type on and not as good for programming. Naturally, owning the 400 will give you the advantage of having the vast Atari library of games at your disposal and while the VIC has a substantial number of games, you won't be able to play, say, *Pac-Man* or *Missile Command* on it. As far as programming your own games goes, you *can* do it in BASIC but there's a peripheral made for the VIC (called the Promqueen, see April's *New Products*) which not only allows you to make your own games but arranges it so you can make your own game *cartridges*! That's something you can't do with the Atari computers . . . yet.

I own one of the Atari 5200 supersystems and I would like to know if it is alright to hold down the fire button on the GALAXIAN game. Does it harm the



system? Also, is it necessary to turn off the sytem when switching cartridges? Keep up the great magazines.

Derek Thomas
Rigby, ID

Go ahead and hold down the fire button all you want when playing *Galaxian*. It won't harm the system at all. And as far as turning the system off when you change cartridges goes, you don't have to. That's one of the many advantages of the 5200 over the 2600 and other game systems.

In your January issue you had an advertisement for the new Vectrex system which had the video game BERZERK. As far as I know, Atari has licensed BERZERK from Stern. How is it possible for both systems to have the same game?

Michael Parsons
Maryland

This is a very good question which I, in fact, asked GCE long ago. The answer should give you an idea of the complexity of licensing. According to Vectrex, Atari has the rights to *Berzerk* for a home video game that hooks up to a television set while Vectrex has the rights to it for a system that doesn't require a television set. Then there's Coleco, which has the rights to the standalone version.

I have noticed that the Expansion Module 2 plugs into a controller jack on ColecoVision. Will it work with VCS games like NIGHT DRIVER?

Kerry Fidleir
Tarrytown, NY

It would be great if it did, wouldn't it? But, unfortunately, it won't. The Expansion Module 2 (designed for *Turbo*) only accepts ColecoVision cartridges and therefore can't be used with any VCS or Intellivision driving games.



I'm strongly considering buying ColecoVision because my VCS computer isn't good enough. I need a computer for math when we take up BASIC for beginners. My question is, should I get ColecoVision with a 32K memory or keep my VCS with less than a 5K memory?

Marty
New York

If you had asked us this a few months ago it would have been a simple matter of steering you towards a ColecoVision or a good inexpensive home computer like the Atari 400 or 800, but things have changed drastically. There were, at last count, three peripherals available that will turn your humble VCS into a full-fledged home computer with anywhere from 2K to 16K additional RAM and a keyboard. Rather than go into detail here, let me refer you to the article entitled The All-Purpose VCS which will appear in June and list everything that can possibly be plugged into the VCS.

In the January issue of EF you said that the Atari 5200 is an Atari 400 without the keyboard. If this is true, does the 5200 use all of the cartridges made for the 400?

George Fisher
South Bend, IN

No. The cartridges are different sizes and are totally incompatible. What we meant when we said they were the same thing was that the 5200 has as much memory (16K) as the 400 does. All this memory is devoted to game playing which means better graphics, better play and more challenge for you. In addition, the 5200 has more peripherals which can be added on: a trakball controller, a voice synthesizer and the VCS adapter to name just three. The Atari 400 is, however, compatible with all the cartridges that fit both the Atari 800 and the new Atari 1200 computers.

A friend of mine said that the Atari 5200's joystick does not spring back to the middle or center after pushing the joystick left, right, etc. If this is true, why don't they correct it?

Allen Tadeo
San Jose, CA

You're right. As many purchasers of the Atari 5200 have discovered, the controller's joystick is *not* a self-centering one. It doesn't, unfortunately, spring back to the middle after you've moved right, left, up or down. We spoke to Atari and were told that there have been several complaints about this annoying shortcoming. Atari is, of course, aware of the problem and, even as you read this, the company is working on a way to solve it in the most efficient manner. Whether this means a recall, new controllers at a discounted price or something else remains to be seen. Atari wouldn't disclose any specifics at press time.

My uncle says that the Atari 2600 system will be taken off the market because they have too many cartridges and not very many people buying them. I laughed in his face. Am I right?

Bryan Fitch
Westminster, CO

Yes, you were right. The Atari 2600 is still the industry staple with more people owning it than any other system. In addition, Atari has said nothing about discontinuing the system and plans to keep on manufacturing new, better and more sophisticated games for it.

I recently bought the DEMON ATTACK (Imagic) cartridge for the Atari VCS. My question is, is there a Demon Fortress after a certain number of waves or not? If not, is there one on the Intellivision version?

Anthony Wiley
Las Vegas, NV

No. There is no Demon Base on the Atari version of *Demon Attack*. However, there is one on the Intellivision version and, according to Gary "Buzz" Kato, the designer, you reach it after "successfully vanquishing three tough waves."

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.*

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Time Pilot and Pole Position:



By Michael Blanchet

TIME PILOT

As a rule, shoot-em-ups are staged in a period best described as possible but not probable—specifically, a zillion years in the future. Few, if any, game story lines are drawn from historical situations. One coin-op that incorporates five different time periods—past, present and future—into one nifty package is Centuri's *Time Pilot*.

In this game you, as a jet pilot, travel from the year 1910 to 2001, battling aircraft consistent with those actually used during each corresponding time period.

The battle begins in 1910. Here you face World War I biplanes. To advance to the next time period (circa 1940) you must shoot down a minimum of 56 Sopwiths and one mother ship, which in this case is a zeppelin. Once this is done, you're warped ahead 30 years to find yourself smack dab in the middle of a swarm of P-41 Mustangs. The idea here is the same—shoot down at least 56 planes and a mother ship (a B-17 bomber) to move one time period. The remaining waves carry you to 1970 to face Huey Cobras armed with guided missiles; 1983, where its jets are much like your own; and finally to 2001 for—you guessed it—spaceships.

To steer the jet, you use an eight-position joystick which for some unknown reason has been placed on the far left side of the control panel. The fire button is all the way over on the right side. While I prefer firing with the right and steering with the left, some of you south-paws may find the control arrangement a little awkward. Alas, lefties are again the victims of thoughtless engineering.

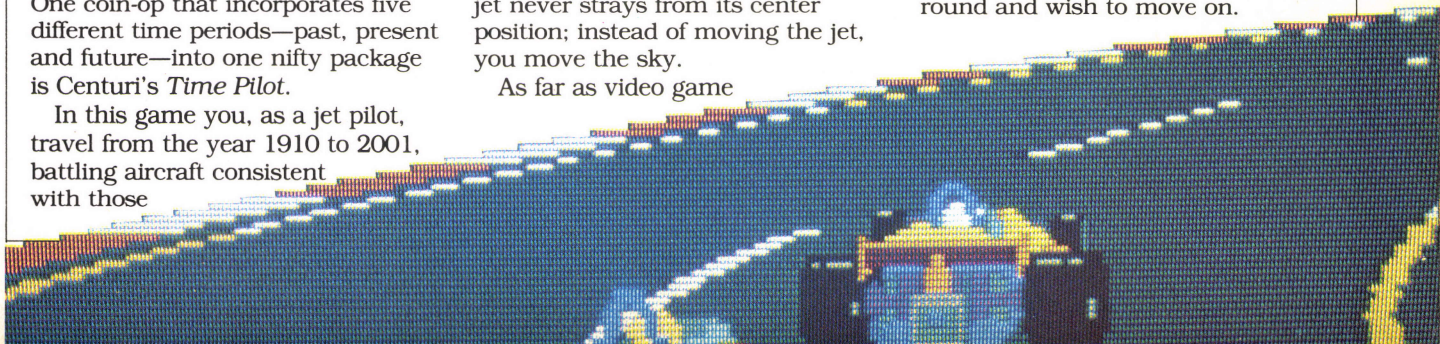
Anyway, the only function the stick performs is to select the direction your ship will face. No thrust or hyperspace here—this jet cruises at a constant speed. When you turn, climb or dive, the playfield rolls to give you the illusion of movement. In reality, the jet never strays from its center position; instead of moving the jet, you move the sky.

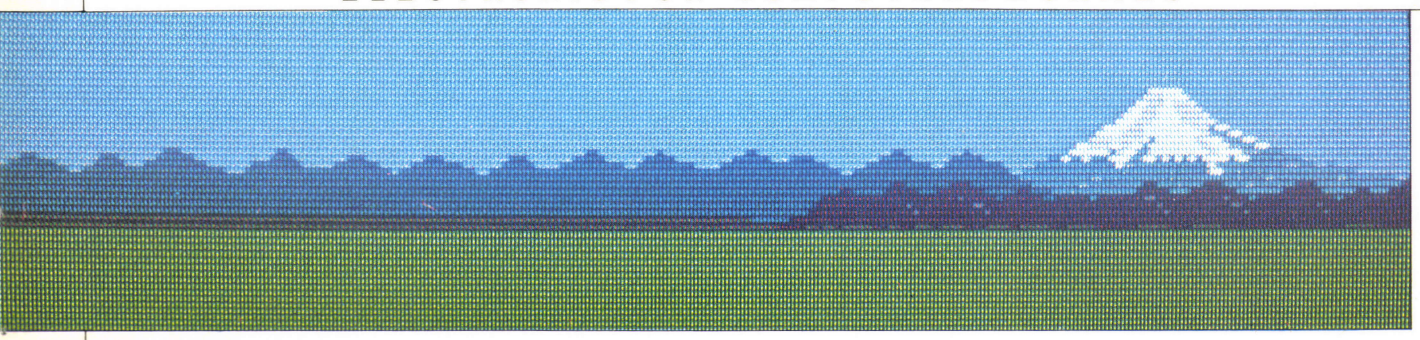
As far as video game vehicles go, your fighter is very maneuverable and armed to the teeth. With each tap of the fire button, your jet spits out a ton of bullets—so many at once that I was unable to count them. Each projectile travels to the border of the screen before fizzling out—none of this limited range or one-shot-on-the-screen-at-a-time stuff.

Milk Run

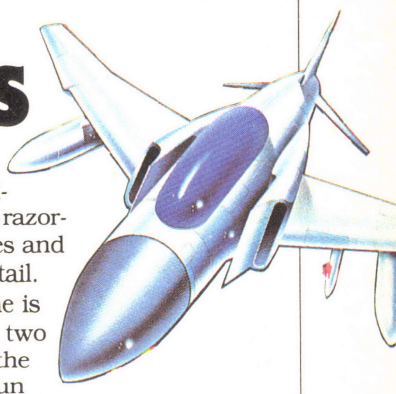
Contrary to what you might think, the biplanes vs. jet battle is not the ludicrous mismatch it would be in real life. They are the weakest of all the foes you'll face, but are by no means pushovers. My advice for this opening round is simple—milk it for all the points it's worth. For some reason, all of the planes in every round through 2001 carry the same point value. Thus there's no incentive to move into the more difficult rounds, except maybe to see what they look like. To advance to 1940 you must, according to the directions, shoot at least 56 planes and then one mother ship. Since there's nothing that says you must advance, you can play the easier round for a while to build up your score—just avoid shooting the mother ship. By the way, you can tell if you've shot down 56 planes by checking the hit gauge at the bottom of the screen. This line, which is made up of a row of planes stacked end to end, shrinks with each plane you destroy.

Eventually you'll tire of the first round and wish to move on.





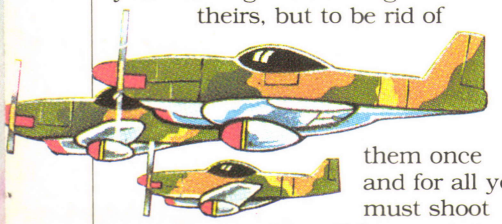
From Fokkers to Ferraris



A good time to hit the zeppelin is when the air is teeming with biplanes. When the mother ship is shot, every ship on the screen is also destroyed. This is an easy way to boost your score.

The World War II planes differ from the biplanes only in appearance. They move the same and fire the same. There is an added bonus in this round in the form of a bomber that occasionally flies across the screen. Shoot it when it appears—it's worth 1,500 points. I'd also suggest chasing down the paratroopers that appear in each round. To retrieve them, just run into them. The first one is worth 1,000 points, the second 2,000 and so on.

In round three the going gets a little tougher. The Vietnam choppers in this wave will launch guided missiles at your jet. These babies just don't quit; they'll circle and chase you until they find their target. You can temporarily elude them by changing direction, since your turning radius is tighter than theirs, but to be rid of them once and for all you must shoot them. I'd suggest doing so as soon as they appear. If left unchecked, you may face a half dozen or more at one time—a tenacious force that is not easily outmaneuvered.



In each round of play, you'll be confronted by both lone ships and squadrons. The squadrons are a juicy target. Consisting of five planes in close formation, these groups are worth an additional 2,000 points if they are destroyed before they exit the screen. Their entrance is announced by a short electronic melody. Once you've located the squadron, turn and face the point ship. To wipe out the whole bunch before they get too close, move the joystick back and forth so that your shots fan out over an area roughly equivalent to a 45-degree triangle. If you miss one of the ships, circle it and attack from the rear.

POLE POSITION

There was a time when all driving games were created equal. You remember—simple, one-dimensional contests where the player viewed the goings-on from overhead. From that vantage point, you were more of a spectator than a participant. Sega shifted the perspective from above to behind the car in *Turbo*. The results were undeniably stupendous, but they almost pale in comparison to what Atari has achieved with *Pole Position*.

Although *Turbo* long stood as the reigning standard for driving games, *Pole Position* has indeed surpassed it. Instead of the behind and overhead perspective used in *Turbo*, *Pole Position* puts you down low behind the car but not quite in the cockpit—as if you hitched a trailer to a Formula One. Graphically *Pole Position* is superb—brilliant colors, razor-sharp images and plenty of detail.

Each game is divided into two segments—the qualifying run and the race. To qualify for the Gran Prix, you must navigate the track (a true replica of the Fuji Speedway) in less than 73 seconds. If you manage it, you've assigned a starting position for the Gran Prix. The better your time, the better your position. Although the number-one pole position (front row, inside lane) is the most prestigious and the most beneficial in terms of points, it provides no meaningful edge in the Gran Prix section of the game.

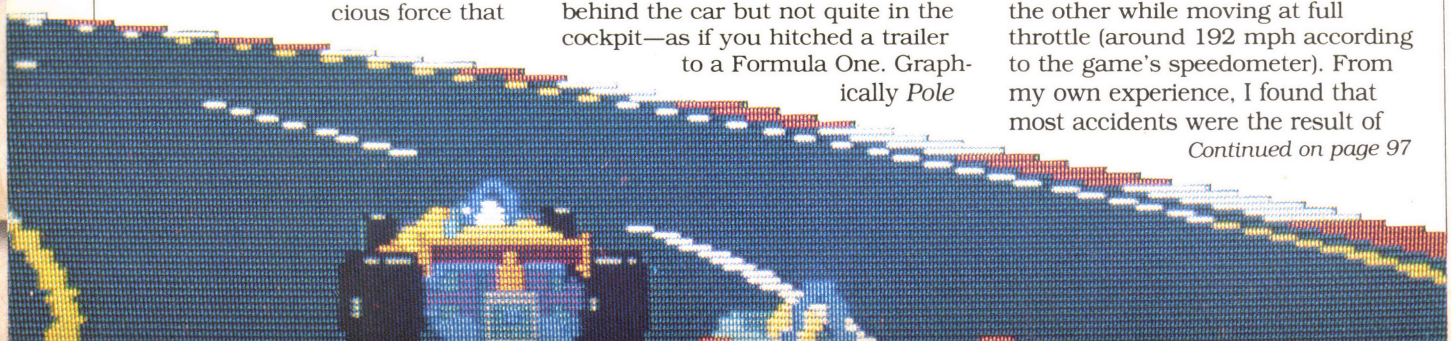
To earn extended time you must complete the course before the timer runs out. Eventually, the clock runs out and the game ends. You are then awarded 50 points for each car you've passed.

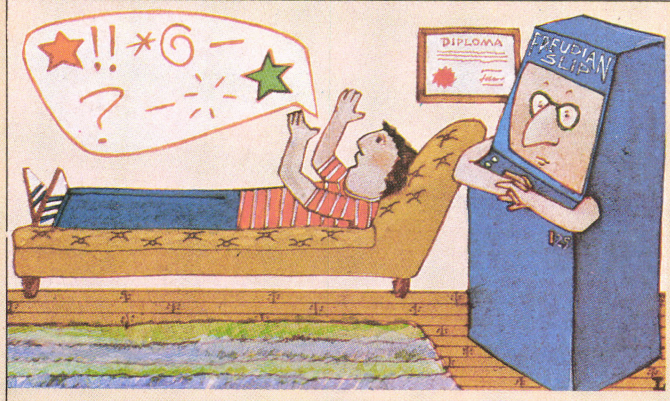
Since *Pole Position* is essentially a test of reflexes, it doesn't lend itself well to strategic analysis. There are a few pointers that you may find helpful, though.

No Speed Limit

One thing to remember is that your car responds better at high speeds. With this in mind, a touch of the wheel is all you'll need to cross from one side of the track to the other while moving at full throttle (around 192 mph according to the game's speedometer). From my own experience, I found that most accidents were the result of

Continued on page 97





Inner space and extra cheese

Freud, Jung and Pac-Man

Are you indecisive? If you answered "Yes . . . no, wait. I don't know" to that question then you are, and rather than spend lots and lots of money on psychotherapy, spend lots and lots of money on *Pac-Man* instead. Why? Because, according to recent research, video games can help you overcome this and any other neuroses from which you might be suffering. Mastery over games could make you a safer driver, more decisive and more alert on the job. In fact, video games might help you improve at any activity that requires quick reactions and coordination. The reason for this, according to Mitchell Robin of the New School for Social Research, is that video games demand prompt responses to unpredictable, speeding and weaving objects. And, if you don't like playing the games, perhaps you could just go down to your local arcade and talk to them. Bring your own couch.

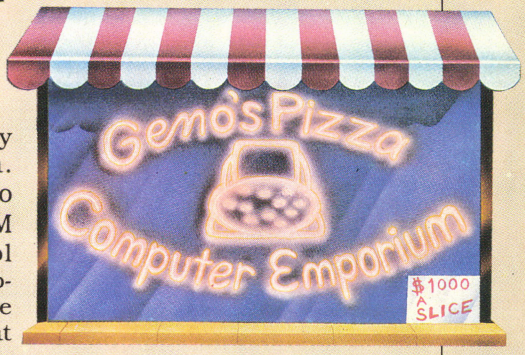
Handheld Grenades

From the world of video games, a deadly new terrorists' weapon emerges—the standalone version of *Pac-Man*. It seems that Army bomb experts in Corpus Christi, Texas, recently detonated a package that was ticking at the post office in the city. X-rays of the package revealed that the box contained wires and electronic components which, coupled with the suspicious sounds, led the police to believe that a bomb might be inside. So they detonated it. It turns out, however, that the package contained a battery-operated *Pac-Man* video game. (We knew the home cartridge had bombed but we'd always heard pretty good reviews of the standalone version.) What is this leading to? Will we see a rash outbreak of criminals carrying handhelds into banks, demanding $500,000 in small quarters and telling the teller to "make it snappy because I've got a *Pac-Man* and it's loaded?" Clearly what we need here is a new handheld control law and a couple of bumper stickers reading "If Pac-Man were outlawed, only outlaws would have Pac-Man." Or something. We'll have to work on that some more.



A Pizza the Action

You may not be able to tell a book by its cover but you can tell a computer owner by his or her pizza. Those of you who thought that CP/M stood for Control Program for Microcomputers are wrong. Ha ha. What it stands for is Cheese, Pepperoni and Mushrooms—at least according to a survey conducted by Kamstra Communications in St. Paul. They discovered that certain types of computer owners prefer certain types of pizzas. For example, people who own IBM personal computers are generally lovers of pepperoni pizzas while those with Apples prefer more exotic variations on the old pie theme. The implications, according to the research firm, are fascinating in that computer salespeople can now seek out potential customers in the local pizza joint—that man over there with the pepperoni could be the next IBM owner. To carry this even further, owners of computer stores need only place a hot, aromatic pizza just outside the door to be used as bait for luring in new buyers.

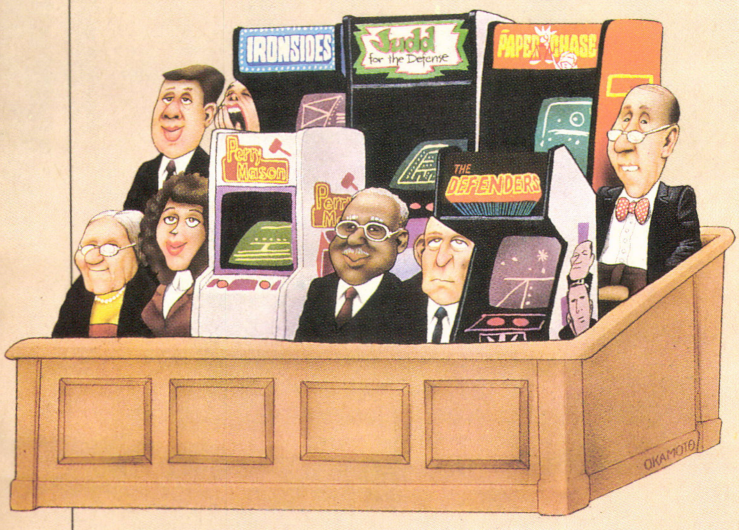


In Medias (HI) Res

Aside from the glamour attached to it *after* it's all over, jury duty can be a pretty dull job. In fact, studies reveal that a disproportionate amount of time is spent simply waiting around to be assigned

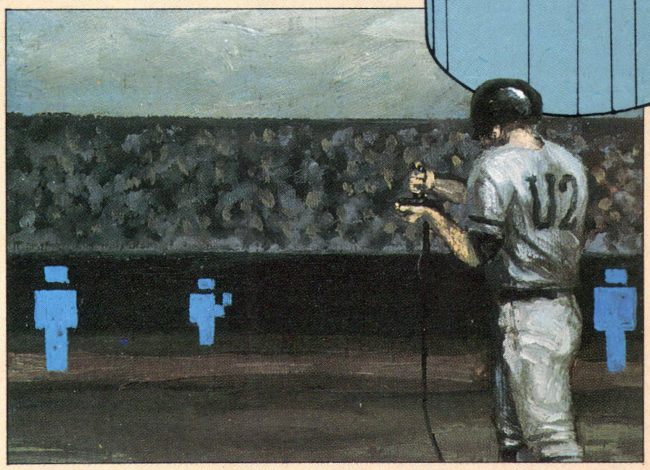
Glitches

to trials. And this waiting time can be very boring, especially when all you've got to do is thumb through outdated magazines such as the 1980 issue of *Casting Engineering & Foundry World*. Well, courts in California have solved this problem by approving the installation of coin-operated video games in the jury room. The idea, it seems, is to keep jurors happy and make money for improving the jury room. This presents at least one problem. If a juror is caught up in a furious game of, say, *Q*bert*, how is any court official going to be able to tear him away from it? Being coaxed away from a back issue of *Adhesive Age* is one story, but no one will give up the chance to enter his or her initials in the all time high scorers list on *Defender*.



RealSports

You'd think some people would know when they're well off. Take Warner Communications, for example. Here they are, giants in the video game field owning cartridges that are representative of all sports—football, soccer and, of course, baseball. But do they stop when they're ahead? No. They go and buy a 48% interest in the Pittsburg Pirates. They should have stopped before this. They have no idea what they're getting themselves into. Video baseball teams are a lot easier to deal with than real ones. In the first place, they never demand higher salaries and in the second place, they hardly ever go on strike. The most they do is get out of focus and that is easily corrected. On the other hand, with a real baseball team, you don't have to worry about making it Mattel-compatible.

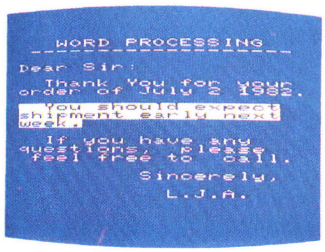


Food and Games Part III

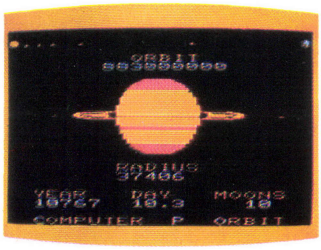
We know by this time that food and video games are inextricably linked and the latest testimony to this state of affairs is a new commercial from Telesys for its video game cartridge *Fast Food*. The object of the game, as you may know, is to eat as many hamburgers, pizzas, french fries and other junk food as you can as it zips past you. You must also avoid eating the dreaded Purple Pickle. The commercial takes place in the local drive-in restaurant in the good old Happy Days of American Graffiti. Boys and girls seated in hotrods are being served hamburgers, french fries and milkshakes by nubile young waitresses on roller skates. The only thing that sets this apart from real life in the Fabulous Fifties is that everything takes place at six times normal speed to emphasize the fact that this is *fast* food. We understand that Telesys is planning to come out with a line of health food video games, the commercial for which will take place in a commune and the whole thing will be filmed in slow motion to emphasize the laid back life.□

Diane Lemasters, Pat Kinsley, Joe Italiano, Michael Okamoto, Bob Winterson

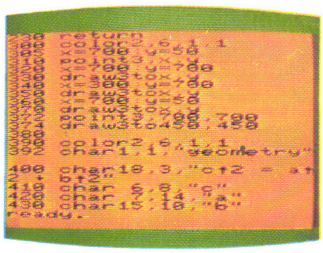
IF YOU OWN A COMMODORE COMPUTER, YOU KNOW IT CAN DO ALL THIS.



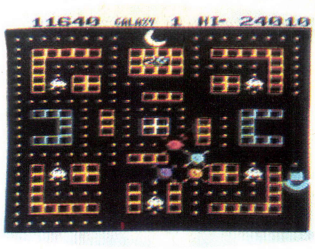
BUSINESS



EDUCATION

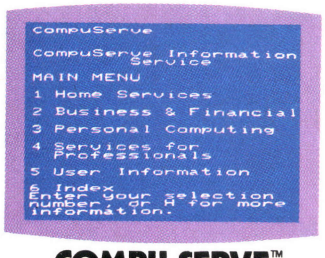


PROGRAMMING

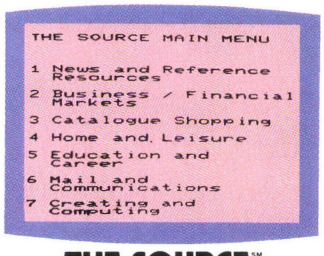


GAMES

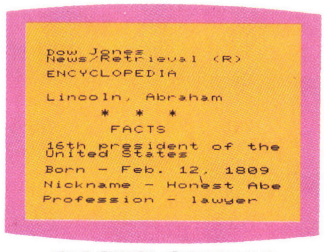
BUT DID YOU KNOW FOR ABOUT $100, YOU CAN ALSO GET IT TO DO ALL THIS?



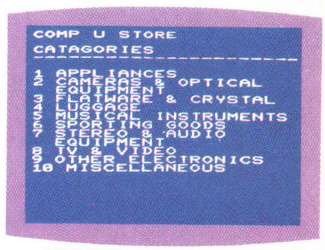
COMPU SERVE™



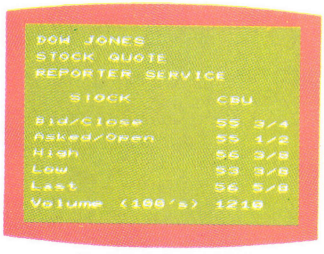
THE SOURCE℠



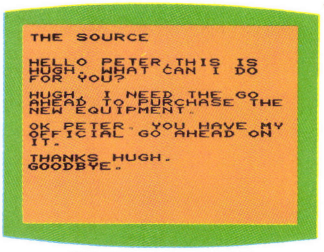
ENCYCLOPEDIA



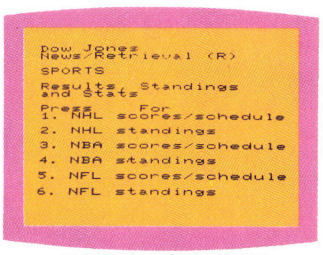
SHOP AT HOME



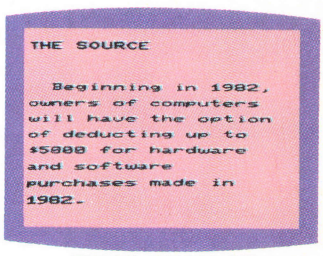
DOW JONES NEWS/RETRIEVAL



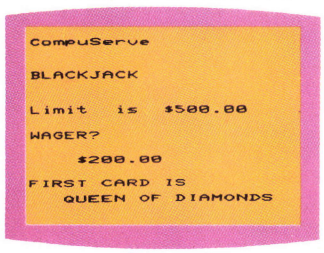
ELECTRONIC MAIL



WIRE SERVICE NEWS



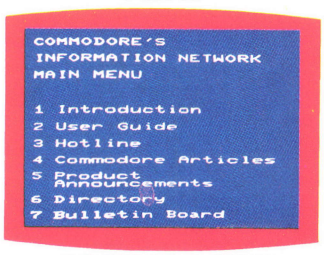
TAX ADVICE



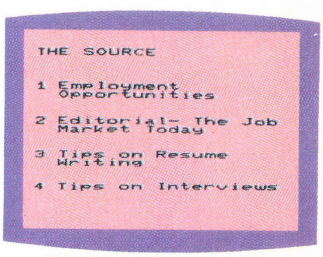
GAMES



TRAVEL INFORMATION



COMMODORE INFO. NETWORK



EMPLOYMENT OPPORTUNITIES



The screens at the top of the page show a few examples of how versatile the VIC 20™ or Commodore 64™ can be with the addition of Commodore software.

The screens below them give you a few examples of how much more versatile they can be with the addition of a Commodore VICMODEM.

For around $100, the Commodore VICMODEM will turn your VIC 20 or Commodore 64 computer into a telecomputer.

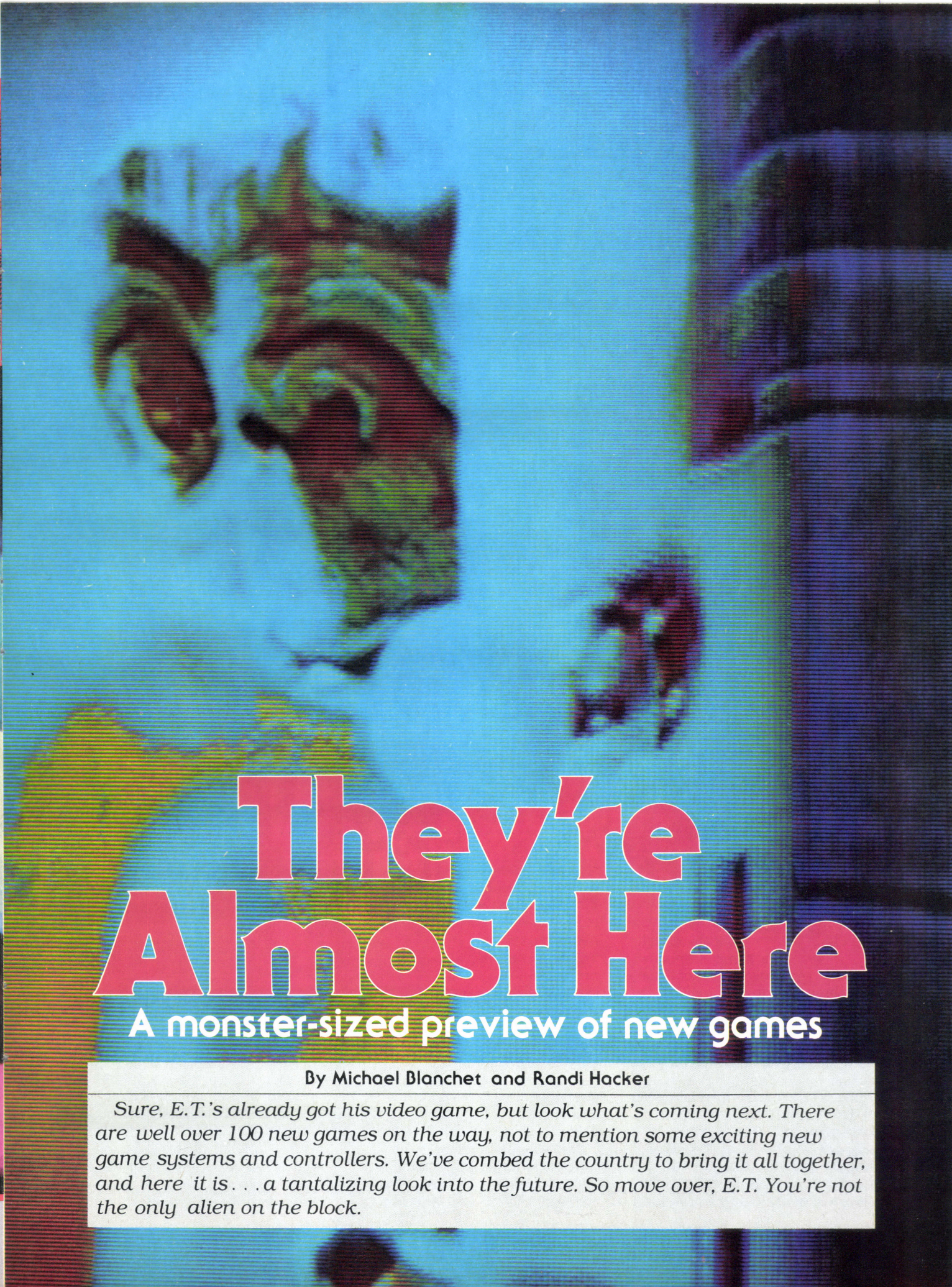
To make matters even better, Commodore includes a few little extras (such as a free hour's time on the two most popular telecomputing services) that add up to a value of $197.50.* A nice return on an investment of about $100.

Most computer companies think it's reasonable to ask as much as $500 for a modem that'll give you telecomputing capabilities such as ours.

However, with a VICMODEM priced at around $100, we think we're being a lot more reasonable. Don't you agree?

commodore COMPUTER

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They're Almost Here

A monster-sized preview of new games

By Michael Blanchet and Randi Hacker

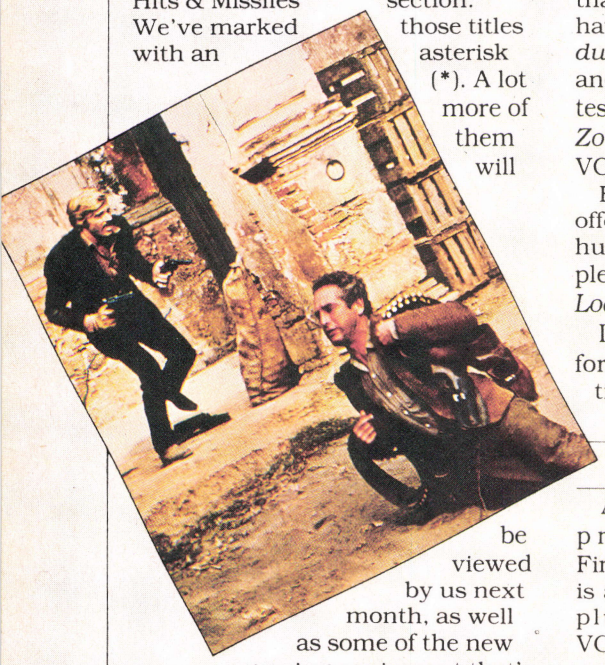
Sure, E.T.'s already got his video game, but look what's coming next. There are well over 100 new games on the way, not to mention some exciting new game systems and controllers. We've combed the country to bring it all together, and here it is. . . a tantalizing look into the future. So move over, E.T. You're not the only alien on the block.

From day shift to night shift...



If variety is the spice of life, you're going to have nothing but the hottest Szechuan food at your favorite video game store this spring and summer. The new games coming out of the West (as well as the East) are arriving with a ferocity close to the awful weather California has been having. Is the play action that intense? You know how it is with video games—you win some, you lose a lot more.

A lot of the games we're previewing here are also reviewed in the Hits & Missiles section. We've marked those titles with an asterisk (*). A lot more of them will be viewed by us next month, as well as some of the new gaming equipment that's coming your way.



ACTIVISION

The Activision folks continue to do what they do best—develop and design original games. Watch for *Oink!*, a video game interpretation of the "big bad wolf and the three little pigs" fairy tale. Also on the way are *Dolphin** and *Keystone Kapers*. *Dolphin* designer Matthew Hubbard, an accomplished musician, has made sound an essential element of game play. In *Kapers* you're a cop chasing a bewhiskered character, fresh from the hoosegow, through a three-story department store that is fraught with obstacles.

Due out in late spring are *Placque Attack* (a Steve Cartwright creation that sounds like a nightmare you'd have after a visit to the dentist), *Enduro* (a *Turbo*-like driving game), and *Robotank*, a first person contest that plays like Atari's *Battle Zone* coin-op. All of these will be VCS compatible.

For Intellivision, Activision will offer *Happy Trails*, a unique and humorous reworking of play principles first seen in the Centuri coin-op *Loco Motion*.

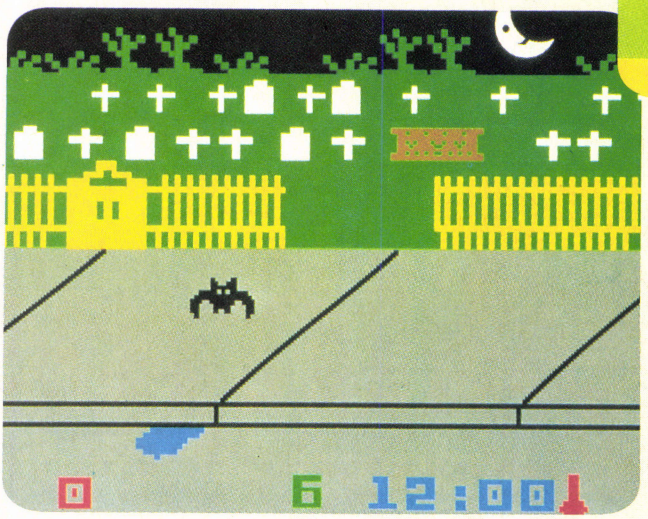
In June, look for the first Activision computer games!

ATARI

Atari's newest product—My First Computer—is an add-on that plugs into the VCS and ups its memory by 8K bytes of RAM. It has a keyboard with raised keys, built-in BASIC and an expansion port which will allow it to be upgraded to 32K. Low-cost printers and disc drives will also be available. It will sell for less than $90.

Also watch out for Atari's new controllers for both the 2600 and 5200 machines. Did I hear you say "At last?" There's the 360 degree Trakball for both available for $79.95 (5200) and $49.95 (2600), the VCS remote control joystick ($74.95) and the VCS Proline Joystick available in July for $19.95. There's also a special controller for kids developed especially for the new Atari/Children's Computer Workshop software. This one will be out in July and will cost about $14.95.

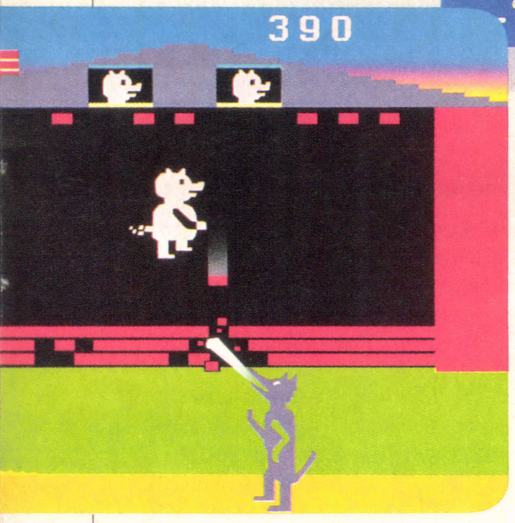
All this and new cartridges, too. Among the games Atari has planned are 2600 and 5200 versions of such arcade hits as *Qix*, *Jungle Hunt*, *Centipede* and *Kangaroo*. *Pole Position* will also be out but only for the 5200 (so far), as well as *Space Dungeon* and *Countermeasure*, a game about terrorists and Washington D.C.



COLECO

ColecoVision's new slogan is "The best is yet to come," but that's hard to believe once you've seen what they already have. The most phenomenal of the recent new products is the Super Game Module, an add-on which plugs into the interface port on your ColecoVision. It adds one million bytes of memory to the existing 32K, and instead of using the standard-sized video game cartridges,





the Super Game uses wafer thin cassettes—just like the ones that top executives record their business notes on. Only instead of orders to "buy low and sell high," you've got *Super Donkey Kong* and *Super Donkey Kong Jr.*, among others. The resolution is breathtaking, with graphics that are as good as—if not better than—those found on their arcade parents. Each Super Game Module comes with *Buck Rogers*.

Other games destined to be available for the Super Game include *Super Buck Rogers Planet of Zoom*, *Super Space Fury*, *Super Slither*, *Super Satan's Hollow*, *Super Football* and *Super Time Pilot*. Coleco has really got something that no gamer will want to be without. The Super Game, scheduled to appear in the stores around July, will cost about $125.

Coleco also has a new Super Action Controller priced at about $70, which comes with its new *Super Action Baseball* cartridge which has got to be seen to be believed. You can practically smell the hot dogs. The new controller is shaped like a handle and has four different colored buttons that correspond to four different fingers. Above this is a complete control panel with a small keypad (used, among other things, for controlling the players on the baseball game) and the joystick. One doesn't ever rest this joystick on a table. It is gripped in the hand to afford the greatest control. The controller also works with *Super Action Rocky*, definitely an uppercut above the rest.

The Roller Controller finally fulfills Coleco's original promise. Not just a controller, it is a "control console" and features a free rolling track ball with 360 degree movement. The





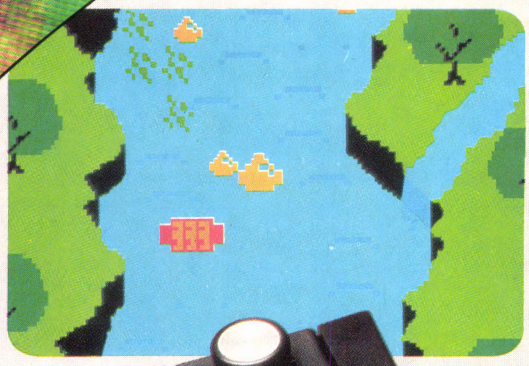


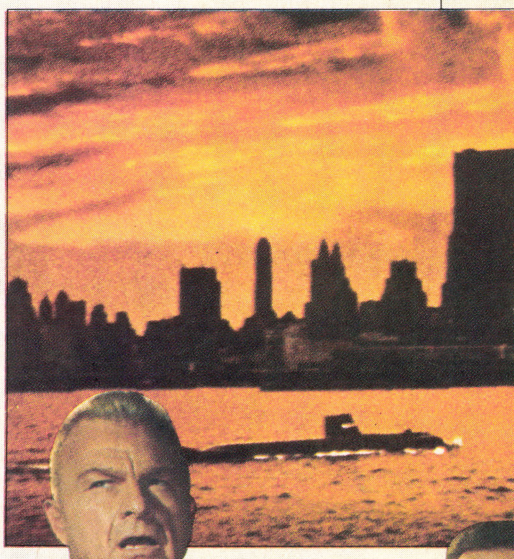
CHOMP CHOMP: Yes, its DRACULA, the dentist's dream, here shown as a bat in the Imagic game. Also on this page are screens from OINK! and DOLPHIN, both from Activision. Those controllers are Amiga's new joysticks, and you movie buffs can look forward to BUTCH CASSIDY and 9 TO 5 from Fox Games. Directly above is the ColecoVision Super Game Module, which will come packed with BUCK ROGERS.

Computer graphics: Larry Gartell

From Star Trek to Ice Trek...











console also provides you with places for the two ColecoVision controllers to rest while being used. Included with the Roller Controller is the home version of the arcade game *Slither*.

Wonders in gameland never cease—get ready for the Coleco Gemini game system. Another super fancy system? No, it's Coleco's Atari 2600 game player. The Gemini will play all 2600-compatible games, cost around $110 and interface with Coleco's own sound module—a modified cassette recorder used with specially designed cartridges and tapes.

IMAGIC

Systems, systems and more systems including computers. By June, Imagic will have games for eight different hardware formats, including ColecoVision, the TI 99/4A and Intellivision III.

For the Odyssey², there's *Demon Attack** and *Atlantis*. For Intellivision, Imagic has developed eight new titles, beginning with *Ice Trek**, which is already out. In this game you've got to sidestep stampeding caribou and build ice bridges to reach the Frost Giant's towering fortress. With *Dracula**, horror movies meet video gaming in a tongue in cheek contest where the player, turned vampire, goes door to door in search of victims.

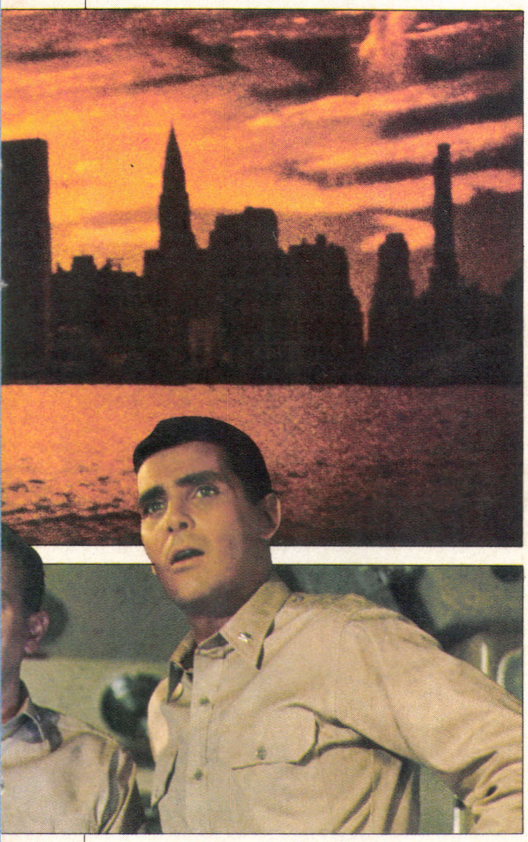
The sequel to *Beauty and the Beast*, *Tropical Trouble* puts the courageous builder scaler on a deserted island. Here again he must chase some form of simian that has kidnapped his girl. There's a raft of raft games, and Imagic's is *White Water*, in which you search for treasure. *Truckin'*, a two-player game, puts a pair of big rigs head to head. The object is to select and transport cargo to different points across the country. With the game you get actual road maps depicting major routes frequented by truckers. But you have to supply your own CB radio.

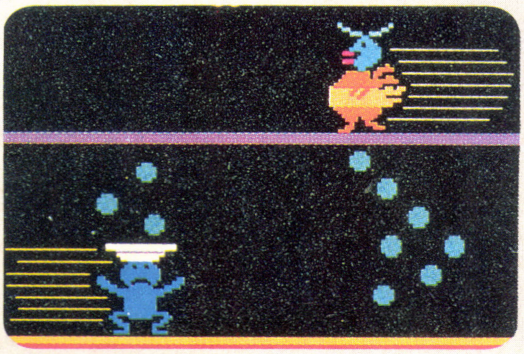
Another game, *Safe Cracker*, is going back to the drawing board for re-theming. The game originally cast the player as a crook who cracks safes while eluding the long arm of the law. Graphically, *Safe Cracker* utilizes an incredibly realistic *Zaxxon*-like perspective.

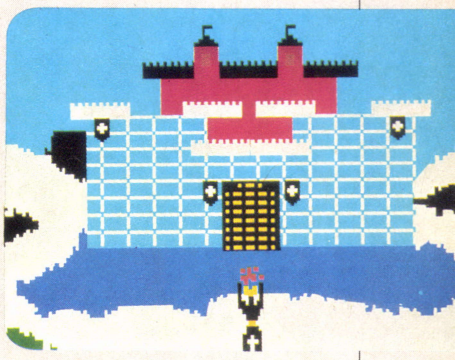
For the Atari VCS, Imagic has three carts waiting in the wings.

For the younger set, Imagic bows the *Carnival*-like *Shooting Gallery*. The second title, *Escape From Argos*, recreates the mythological adventures of Jason and the Furies. The final game, tentatively entitled *Sky Patrol*, is also back on the drawing board.









MATTEL

A latecomer to the licensing game, Mattel has acquired a variety of properties—everything from coin-ops to what may well be the most unusual license ever: the Kool-Aid Pitcher Man. In the games for kids category, there's *Scooby-Doo*, *The Flintstones*, *Rocky and Bullwinkle* and *Masters of the Universe*. Also for Intellivision are *Loco Motion* (licensed from Centuri), *Burgertime*, *XIV Winter Olympics* and *Arctic Squares*.

For the Entertainment Computer System, Mattel will offer four different types of software. In the BASIC programming category, there are *Mr. BASIC Meets Bits 'n' Bytes*, *BASIC Programming* and *Game Maker*, where the user combines preset graphics and game play with his or her own rules. The educational category includes *The Jetsons*, *Way With Words*, *Number Jumble* and *The Flintstones Keyboard Fun*. In the music category there's *Melody Maker*, *Music Conductor* and *Astromusic*. In *Astromusic*, which is the musical version of *Astrosmash*, the player is bombarded with notes falling on the pattern of a popular song. To counter-attack, he must strike the proper key on the Music Synthesizer keyboard. The final series is the *Super Games*, currently including *World Series Baseball*, *Mind Strike* and *Scooby Doo's Maze Chase*.

ODYSSEY

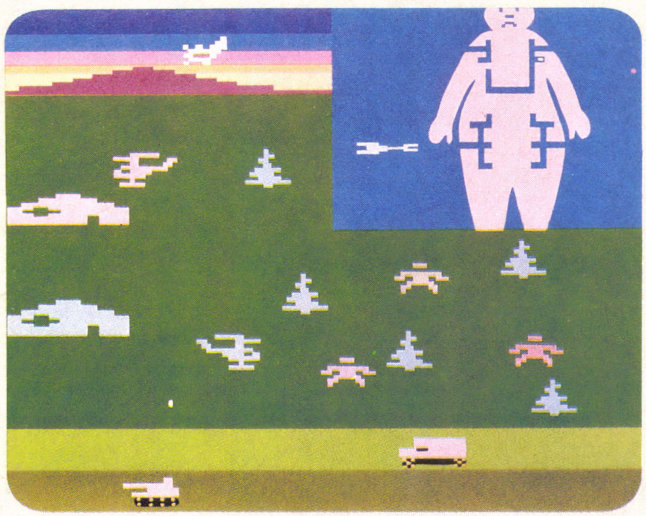
In July, Odyssey will bring the Command Center to the stores. Priced at under $200, the console features a full-stroke typewriter-like keyboard and a pair of detachable joysticks that are equipped with a unique firing bar (as opposed to the usual firing button).

In August a voice and sound effects module will be out, along with a telephone modem, which will allow the user to tap into the growing number of information networks. By year's end, a computer programming module will be available.

The Odyssey library will include some licensed properties this year, including Stern's *Turtles*, as well as *The Adventures of Sherlock Holmes* (for the Odyssey³).

FOX GAMES

Hooray for Hollywood! At least that's the motto of Fox Games, who will debut the much ballyhooed *M*A*S*H* cart. It will be issued in multiple formats for use with many popular home computers and game systems. Also coming from Fox is *Fall Guy*, based on the TV series of the same name, which may turn out to be the most imaginative game since *Megamania*. In a pseudo-celluloid inspiration called *Revenge of the Beefsteak Tomatoes*, you build walls around hostile tomato plants before they take over the world. By June, Fox will unveil three double-feature's worth of movie games in multiple





GLUB GLUB: Water, water everywhere, from VOYAGE TO THE BOTTOM OF THE SEA due from Fox to Imagic's WHITE WATER raft game, second from the left. Other screens: Telesys' RAM IT (far left), U.S. Games' EGGOMANIA (second from right), Imagic's ICE TREK (far right) and Fox Games' M*A*S*H (above). Coleco's Roller Controller and Gemini game system are also shown here. Gemini plays any VCS-compatible cartridge.

From porkers to Porky's



formats, including *9 to 5*, *Butch Cassidy and the Sundance Kid*, *Porky's*, *Voyage to the Bottom of the Sea* and *The Entity*.

Also due from Fox's lair are *Meltdown* and *The Earth Dies Screaming*.

CBS

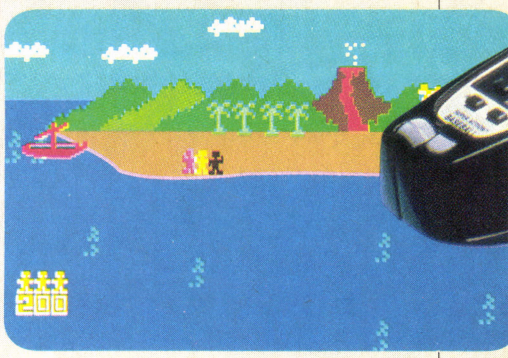
Ironically, CBS has steered clear of the movie and TV game trend. Most of their new carts will spring from their agreement with Bally/Midway, which gives CBS exclusive rights to all Midway coin-ops. Following *Gorf* and *Wizard of Wor* are *Blueprint*, a chivalrous contest that's a true test of your memory, and *Solar Fox*, a shoot-em-up that fizzled in the game rooms. Expect Intellivision versions of these games by June.

CBS will also have two expanded memory games that utilize CBS' proprietary RAM PLUS chip that, according to its maker, triples the capacity of the VCS. The games, both of which pack eight to 12K ROM, are *Wings* and *Tunnel Runner*. *Wings* is a first person perspective flight simulation, while *Tunnel Runner* is a first person maze game similar to Starpath's *Escape From The Mindmaster*. Other proposed titles include *Omega Race* and *John Madden Football* for the VCS, and the *Charles Goren Bridge Series* for use with the Atari and Commodore Home Computers.



SEGA

The first batch of games from the coin-op giant will reach the stores this month. They include *Star Trek II: The Wrath of Khan*, *Subterfuge* and *TacScan*. In July, look for *Buck Rogers*, *Dragonslayer* and *War of the Worlds*. In October *Escape From Alcatraz*, *Mission: Impossible* and *Friday the 13th* will hit the shelves, followed by another *Buck Rogers* game and *Star Trek III* by year's end. Since Paramount and Sega are both owned by Gulf & Western, more movie games are inevitable. Proposed titles include *48 Hours*, *Airplane* and *Marathon Man*.



VECTREX

For you Vectrex fans, watch for a lot of new game cartridges, and a light pen. The games include *Web Wars*, which takes full advantage of the spectacular 3-D effects the Vectrex is capable of, and *Spike*, their first talking game which requires no voice synthesizer. We're told that there will be a huge *Web Wars* contest with big prizes sometime this summer. Look for it.

The light pen will allow you to draw right on the Vectrex by simply placing the pen point against the screen and sketching. If you don't like using a pen, well, you can draw with your finger using their new touch-sensitive cartridge.

In addition to cartridges for the Vectrex itself, GCE has a new line up of Atari-compatible cartridges in the works. The first two released will be *Scramble* and *Star Trek*. Both have high-resolution, very colorful graphics.

MILTON BRADLEY

We've got video games that talk, but what about video games you can talk to? Impossible? Not really. Milton Bradley's got something called The Expander which interfaces with the TI 99/4A and which recognizes your voice and thereby allows you to give verbal commands to the characters in the game instead of having to use a conventional joystick. Used in conjunction with the Milton Bradley baseball cartridge, it is sensational.



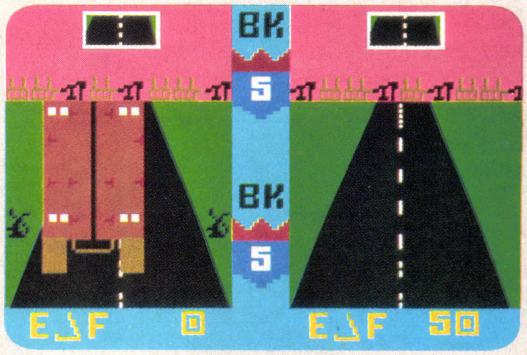
Each time you call out a field position, the ball is automatically thrown there. And you don't have to necessarily use the positions. You can name the players instead. Then each time you call out, say, Gossage, the ball will immediately be thrown to the pitcher. The voice recognition system can be used at the same time as you use the keypad on The Expander, and in this way quick double plays and tricky pitches can be implemented without your opponent's knowing.

PARKER BROTHERS

Parker Brothers, as we know, will have the home version of both *Q*bert* and *Popeye* and has already released *Jedi Arena* as well as Intellivision versions of all its games including *Spider Man*, *Frogger*, *The Empire Strikes Back*, *Reactor* and *Amidar*. We also heard in a late-breaking flash that Parker will release not one but two *Return of the Jedi* games.

DATA AGE

After *Journey-Escape*, what's next? For starters, there's *Mr. Bill's Neighborhood*, a game based on the familiar playdough figure featured on Saturday Night Live. In this game, the player helps Mr. Bill pick up his dimwitted girl friend, his dog and his mother and then escape through the village with Sluggo and Mr. Hands in hot pursuit. For kids, there's *Smokey the Bear*. Although it's targeted primarily at the younger audience it will include skill variations to challenge the more experienced gamer. Although Imagic and Coleco are both unleashing Dracula, Data Age is reviving Frankenstein in a game of the same name. Also on the drawing board is a game featuring Mr. T. who portrayed Clubber Lang in *Rocky III*.



Continued on page 91

NAUGHTY NAUGHTY: Thos bad boys and girls from PORKY'S will star in a Fox game, as will Captain Kirk and Co. in THE WRATH OF KHAN. Two more Imagic games include TROPICAL TROUBLES (a BEAUTY AND THE BEAST sequel) and TRUCKIN' (complete with road maps.) Those pistol grip controllers are new from Coleco, and that's not a doormat on the left—it's Amiga's Joyboard. It'll put you on the slopes.



Going, going, GONE!



Illustration: Michael Okamoto



Big bucks for video game celebrities

When they decided to make the E.T. *video game, the scenario might have gone like this: "Hello, Atari? This is Universal Pictures. We just finished making* E.T. *and we think it's gonna be big. We thought you'd like to turn it into a video game . . . . You would? . . . Fine, we'll send it right over. Bye." Well, it didn't. There's a lot of down and dirty fighting to make those deals, and a lot of money riding on them, too. In fact, the deals are almost as important as designing the games themselves.*

By Ed Hulse

Which of these four characters does not belong: Q-bert, Rocky, Strawberry Shortcake or Pitfall Harry? If you answered Pitfall Harry you win the gold joystick. It's true that all of them appear in home video games, but only one—Pitfall Harry—was created as a home video game character. The rest all got their start someplace else, specifically in the arcade, the movies and . . . well, it's not clear where Strawberry Shortcake got her start, since she was developed with one aim and one aim only—to be licensed. So we have Strawberry Shortcake books, greeting cards, dolls, comic strips . . . and now a game.

When we talk about "licensing" characters, what we mean is quite simple—the creator of the character is paid a certain amount of money by someone else for the permission to use that character in another way. Say I've produced a movie called *Revenge of the Killer Carrots* which ended up only slightly more successful than *E.T.* Naturally, there would be hundreds of people convinced that the video game *Killer Carrots* would put *Demon Attack* to shame. Fortunately for me, there are laws which prevent just anybody from turning out a *Killer Carrots* game. First, they have to come to me and make a deal—they pay me money, and I give them permission to make the game.

Now suppose Lucas and Spielberg wanted to make the blockbuster movie, *Pitfall Harry and the Lost Ark*. They'd have to license Harry from Activision, who created him for *Pitfall*! If that movie was as successful as *Revenge of the Killer Carrots*, Bally-Midway, say, might want to turn it into a coin-op game. In that case *they'd* have to get a license from Lucas and Spielberg, *and* get another license from Activision.

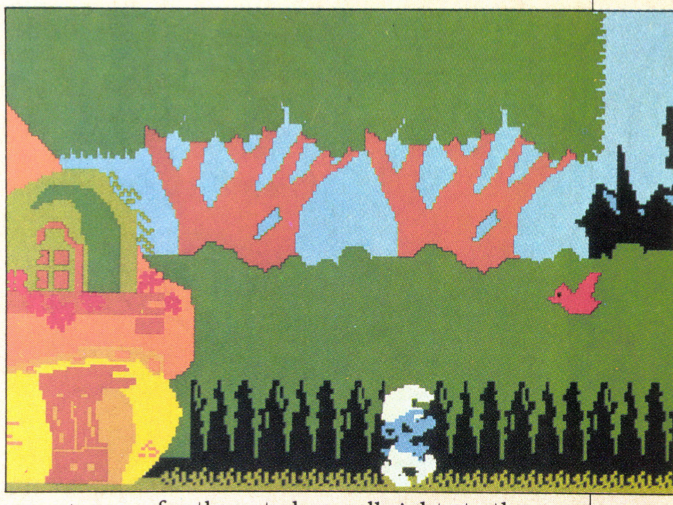
Would Atari, for example, then be able to get a license from Bally-Midway to produce the home game version of the coin-op game based on the movie *Pitfall Harry and the Lost Ark*? Probably not. Activision would almost certainly say that no matter what was done with Pitfall Harry in the movie house and the arcades, that didn't mean another video game company could put out a home game using Pitfall Harry. But if Activision itself wanted to make the home version of the *PH and the LA* arcade game, they *might* have to get a license themselves from Lucas and

Spielberg and Bally-Midway! Then again, they might have made their right to produce the home version part of the original agreement.

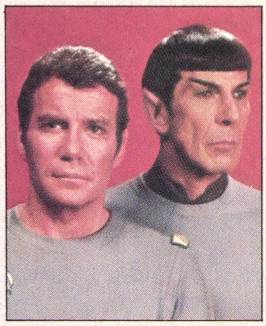
Let's Make A Deal

If this sounds complicated, it is. Licensing is as much a part of video games as laser blasters and although a few companies have made a point of "going solo" (notably Activision and Imagic, which generate all their own game concepts), many more license at least some of their games from other sources. To make it with a licensed product you need not only a good game, you have to cut a sharp bargain as well. If you thought *playing* a game was challenging, try sitting down with a Hollywood producer and making a deal.

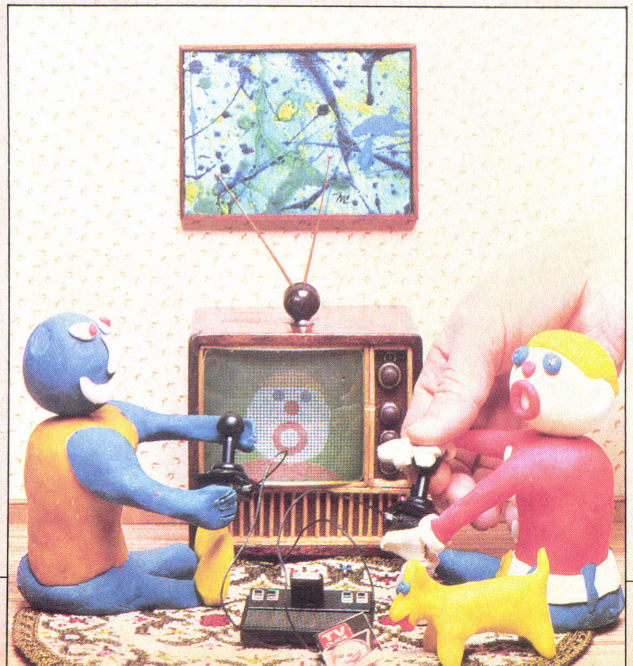
Most of the early video game licenses came from the makers of the top arcade games. David Schoenberg is a lawyer for Stern, which makes such coin-op favorites as *Berzerk* and *Frenzy*. Looking back on the onset of licensing fever, he says: "It really started about 18 months ago. That's when the companies who make home video games finally realized how valuable it would be if they could also make home versions of the top arcade games." Those early licenses meant extra money for the coin-op companies, but most of their revenues were generated by the arcades themselves. "Those quarters in our machines were the meat and potatoes; the licensing fees were just gravy," Schoenberg says. Lately, though, the arcades have been slowing down and according to Schoenberg, "There's been increasing importance attached to licensing and exclusive rights."







Journey (left), Star Trek (right) and Mr. Bill (below).



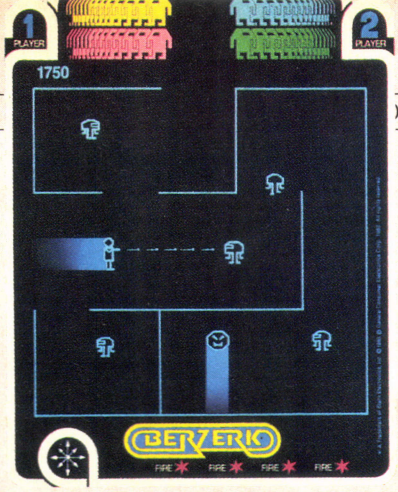
You're not kidding. Witness Coleco's *Donkey Kong* from Nintendo, Datasoft's *Zaxxon* and *Moon Shuttle*, Parker Brothers' *Q*bert* and many, many more recent releases. Schoenberg's company, Stern, has released *Berzerk* to both Atari and Vectrex, and this brings up another of the flukes of the licensing game.

Although it may seem curious that a company would be able to license the same game to two rival systems, the Stern legal eagle says not so. "You can slice up a license any way you want. In the case of *Berzerk*, our agreement with Atari called for them to have all rights to the game on anything that connects to a *home TV*. Since the Vectrex system is self-contained, it wasn't covered under that contract, so we licensed it separately." Schoenberg adds that Atari has since become more savvy in negotiating and now gets complete and exclusive rights when bargaining for a game. How's that for a strategy tip?

How much money is involved here, and how does it get paid off? Well, prices charged for licenses vary greatly depending on the value they have in the market place—the rights to E.T. are obviously more than the rights to *On Golden Pond*—and video game companies are notoriously tight-lipped when it comes to revealing how much they are paid. Recently it was rumored that Atari paid the staggering sum of $22 million for game rights to *E.T.* According to Schoenberg, this can't be accurate. "In my opinion, that number has no credibility at all," he says. "It's just too high."

But money is only part of the story. First, a good businessman must understand the distinction between *gross sales* and *net profits*. Let's say you sell 100,000 games at $30 each. Your *gross sales* are $3 million. But you also have costs—manufacturing costs, packaging costs, advertising costs and so on. Your *net profits* are what you get after you deduct the costs, and if you're selling any product there is a certain point where





More licenses: Smurfs (left), GCE's Berzerk (above) and Dallas.



you begin to make money, called the break-even point. Until you reach that point, you've only spent money—you haven't made a cent. After that point, what you make is *net profit*.

Let's go back to my hit movie, *Revenge of the Killer Carrots*. Let's say I want to make a deal whereby I not only get paid a lot of money right away (what the wheelers and dealers call getting paid "up front") but I also want to get money every time someone buys the *Killer Carrots* game. I would ask for a percentage of the game's *gross sales*. Even if they only sold 14 cartridges in the entire world, I'd make a little more money, although probably not enough to buy a stick of gum.

Pay Later

The game maker, however, would not want to pay me any money (aside from what he paid up front) unless he was making money, too. He would decide what his break-even point was (let's say he had to sell 30,000 games to break even) and he'd say, "Okay, we'll pay you a percentage on all sales *after* we sell 30,000 games."

What do I do? In general, Schoenberg says, "Nobody wants to be tied to anybody else's profits." Going by that rule I'd have to say, "No dice. I want to get paid whether you break even or not." But, If I'm absolutely *convinced* that the *Killer Carrots* game will be a big hit, I might make a deal like

Continued on page 94



Big names, big games: From top: The Hulk, Indiana Jones, Hawkeye, Frogger, Dolly Parton and, of course, Q*bert.

GAME WORKOUT:

ARCADIA 2001

System for the gamer on the go

If E.T. or some other fun-loving alien being came down here and banged on your door looking for a good video game time, you might want to start him/her/it off with an Arcadia 2001 before getting into the upper stratospheres of Atari, Mattel and Coleco. Emerson's answer to the video game is perfect for someone who's never before laid eyes on a system and is thus bound to be astounded by such elegant, yet stark simplicity.

By Suzan D. Prince

For sophisticated gamers-in-the-know the Arcadia may rank as just another me-too contender, and an expensive one at that—list price is $200, although it generally sells for about half that amount (available through Emerson dealers only). Each game costs between $15 and $20 but here too, numerous examples of discounts abound.

Call Arcadia a no-frills, almost generic system—a compact unit with wired-in curly cord hand controllers and very few options. It is, however, pretty smart, with 28K of RAM (only ColecoVision's is larger, with 32K ROM) but the power advantage doesn't mean very much once you realize that most of the available game cartridges use no more than 8K of memory.

Oddly enough, while Mattel and Odyssey were working feverishly to



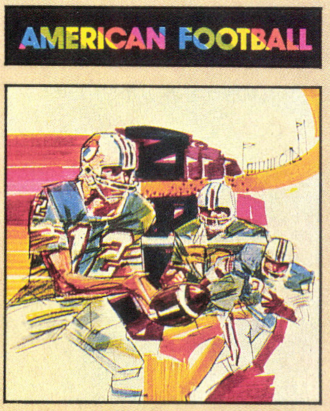
scale down their late generation models to almost pocket-size, Emerson achieved portability right from the start, with a console measuring only 11½ inches long by seven inches wide. The controllers, virtual Intellivision imposters complete with 12-button keypad, overlay slots and discs, fit neatly in place on top of the unit.

The unit itself is packed with the usual television connection switch box for either color or black-and-white operation, AC power supply, output cable and owner's manual. Give Emerson credit for paying close attention to user hand control preferences: Included in the game box are two sticks, which, when screwed into their proper places on the disc mechanisms, create instant joysticks. Thus, you've got discs when you want them and/or joysticks too. For the lefties in the crowd, identical firing buttons on each side of each controller allow ambidextrous action.

Speaking of controllers, along with the channel 3/4 selector, left and right auxiliary jacks are placed at the back of the console for adding two extra controllers (optional). The unit has no other means for expansion. An oversized cartridge slot (more than one-third the length of the console) is at top center; we suppose it's to accommodate giant plastic cartridge shells to small, clumsy hands. Five simple pushbutton controls form a row underneath: reset, select, option (skill level) start and the power on/off button with LED indicator. All sound emits through the TV speaker.

Overall system plusses include the hand controllers, which, since they closely resemble Intellivision's, give you fairly good 360-degree manipulation—although one might quarrel with the occasionally slow fire button reactions. Extra-long output cables afford comfortable reach from table to TV set. On the negative side, the system has no circuitry to either blank the picture after a few minutes of non-play or to vary the colors or intensity of the on-screen image. Overall sound effects and graphics aren't unusual compared with fancier systems you can buy today, but resolution is a definite improvement over the VCS.





The Secaucus Two Dozen

Probably Arcadia's most serious drawback in this increasingly plug-compatible universe—Emerson systems play only Emerson games and—unlike Atari's VCS—nobody else makes Emerson games except Emerson. There are two dozen or so cartridges now available with more to come (including some licensed titles), say the manufacturing folks in Secaucus, NJ, but how can this tiny number even begin to compare with the more than 400 Atari-compatible carts? Very simply, it can't. There's a possibility, although the company vehemently denies it, that the system won't survive unless

Emerson or an outside firm comes up with an Atari adapter, a la the Coleco Module. Otherwise users will find their Arcadia libraries severely limited compared with those of their Atari-owning friends. (Not to be caught entirely unawares, Emerson is preparing to roll out an Atari VCS piggy-back unit, the TCI-16, a keyboard which turns the Atari system into a computer and allows playing of Emerson- as well as Atari-compatible software.)



Games People Replay

As for Emerson Arcadia games, the selection of seven we reviewed were all interesting renditions of previously done, and therefore somewhat hackneyed, themes. For example, *Space Raiders* is a *Defender*-type game with *Space Invaders* thrown in just for show. The object of the game, besides scoring, is for your Spacefighter plane (rendered in attractive high-resolution color with a jet-stream to boot) to destroy the mutants, flying saucers and missile launching bases that appear at the bottom of the screen. There's a satisfactory scrolling effect, as in Defender, and when you move your Spacefighter plane from left to right or vice versa, the computer generates an accelerating sound and a flame appears at the tail of your ship. A digital energy meter on the upper middle portion of the screen starts at 50 and counts down for each of your Spacefighters (you get five). If the Spacefighter runs out of energy and cannot be re-energized by the time the meter reading drops to zero, it explodes into computer-generated flame and ash. Impressive.

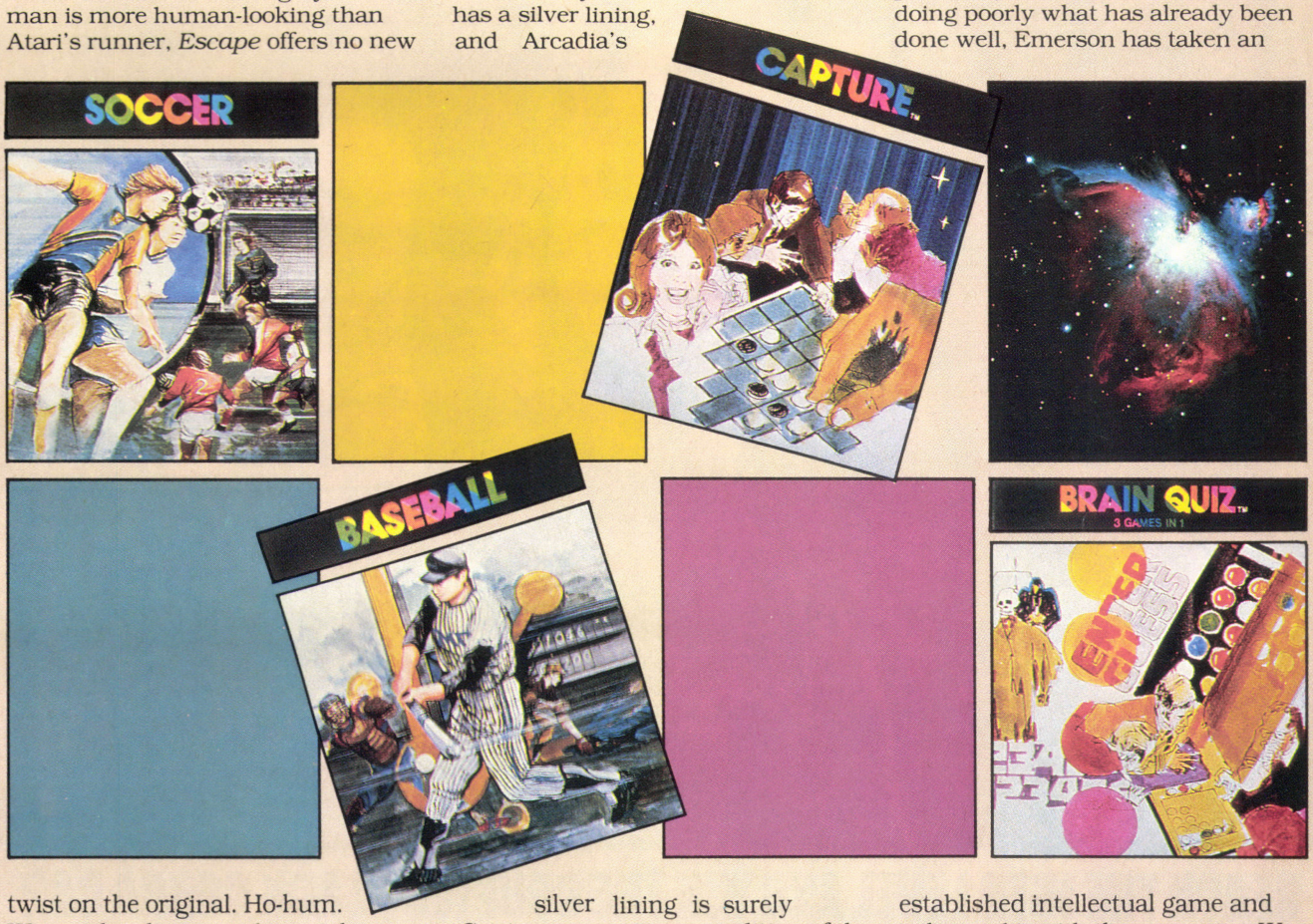
American Football and *Baseball* are adequately depicted on the Arcadia screen. *Football's* mylar keypad overlay includes all the standard game moves (kick/punt, move decoy receiver, pass to upper receiver, pass, snap ball, etc.) but the stadium is a mere rectangle and the players look like termites compared with the famous Mattel version.

Baseball comes a bit closer to the fine Intellivision standard, with a full nine-player team and control of pitching, hitting and running for making realistic plays. When a ball is hit to the outfield, a second screen cleverly appears showing an outline of the outfield and the single player involved. After the player gets the ball, the screen reverts back and the manager can call the play to any baseman.

Tanks A Lot is a complex, war-torn version of *Lady Bug* and/or *Mousetrap*, where you must destroy color-coded enemy tanks with your Bazooka Man before they destroy him or the Commanding Base Vehicle. You have a jumble of options which include opening and closing maze gates and warping (putting into hyperspace) your man or base to save either or both from destruction. After four men are blown to smithereens, the game is over.

Escape is a rather mediocre *Berzerk* which offers players four different games with four options for a total of 16 possible play combinations. Like many Arcadia games,

this one features a freeze (pause action) mode. Although the maze scrolls away to reveal another one when your man escapes the electrified aliens, and although your man is more human-looking than Atari's runner, *Escape* offers no new twist on the original. Ho-hum. Worse, the aliens are downright cute—nothing like the sheer horror and dread evoked by those unfeeling, unseeing robots. Above all, we miss treacherous Otto and his evil grin.



Thinly Disguised

Arcadia shouldn't have wasted its designers' time on *BreakAway*, a thinly disguised *Breakout*. Let's face it, guys, the motto should be, "If you can't improve on it, don't even try it." Although innovative in that it allows varying the paddle speed and includes a vertical version, the game's paddling control was sluggish even at the highest speed. The joysticks wouldn't move vertically in the vertical games, and overall control was rocky, especially in game two where you're supposed to be able to control the direction of the ball with your stick once you've hit it. We had a lot of trouble playing, controlling and mastering this.

But every cloud has a silver lining, and Arcadia's silver lining is surely *Capture*, a computer rendition of the age-old *Reversi*. In this delightful electronic battle of wits, you are pitted against microbrain (or human opponent) on a 64-square board. You must outflank your opponent by surrounding him on at least two sides (vertically, horizontally or diagonally) with your squares and thus win his square or squares over to your side. The one with all the squares captured in his color at the end wins.

It's kind of like Chinese checkers without removing the captured marbles from the board. The game allows you, through options, to set time limits or change difficulty levels. It also keeps the running score and times of each move. No shoot-em-up, this—it takes real strategy to outdo that little ROM chip (we're still fighting the good fight nightly, haven't won yet and loving it!).

Herein, perhaps, lies the real possibility of Emerson: Instead of redoing poorly what has already been done well, Emerson has taken an established intellectual game and enhanced it with the computer. We would hope to see more such "brain" games from the company. Despite some serious deficiencies, the system deserves recognition on the merits of *Capture* alone.

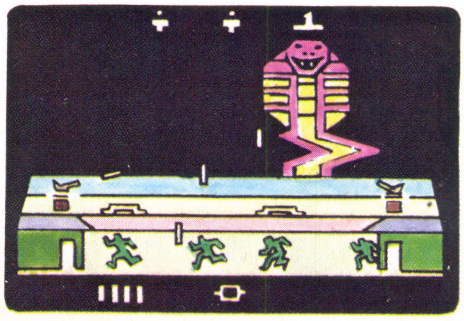
In addition to these seven games, there are a number of others including some arcade licenses. Among those you should be on the lookout for are: *Cat Trax*, a one-player maze game; *Space Attack*, a space shoot-'em-up; *Funky Fish*, an arcade license; *Brain Quiz*, a two-player brain teaser; *Space Vultures*, a space attack; *Space Mission*, a space action game; *Ocean Battle*, a two-player war game; *3-D Bowling*, no explanation necessary; *Star Chess*, a two-player chess, space shooting game; *Pleiades* and *Jungler*. All the newest games are arcade licenses.□

TAKE THE G.I. JOE VIDEO GAME CHALLENGE.



REACH THE 16TH LEVEL AND WIN THE COVETED BLACK COBRA CAP.

Do you have the skill, the speed, and the endurance to reach the ultimate 16th level in Parker Brothers G.I. Joe Video Game? That's the level where the dreaded Black Cobra lurks. To commemorate your achievement, Parker Brothers will award you the Black Cobra Cap and publish your name in *Electronic Games* magazine. Should you accept this challenge, just follow the rules on the coupon.



G.I. JOE BLACK COBRA CONTEST

Rules: All players who reach the black cobra in the one player game will have their names published in *Electronic Games* magazine and will receive a baseball hat with a black cobra on it. To receive your hat you must submit 1) a *color* photograph of the black cobra on the screen with your signature, name and address on the back, 2) the proof of purchase from G.I. Joe video game rule book, and 3) this certificate or a facsimile. All entries are subject to validation by Ventura Associates, Inc., an independent judging organization. Their decisions are final. Please allow 6-8 weeks for delivery. Offer good only in the U.S. Void where taxed or otherwise restricted. Offer expires July 31, 1983. All entries must be postmarked by that date.

Important Instructions for Taking Picture: In order to take a picture of the black cobra, when you reach him, you must let your G.I. Joes get captured. Otherwise you'll proceed back to the 1st level. *The shield must not be touching either flatgun* in the picture. It's best to start the shield to the far left and take the picture as it floats to the right, *before* it touches the gun on the right. DO NOT USE A FLASH.

Name _____ Age _____

Address _____

City/State _____ Zip Code _____

Mail entries to: G.I. Joe Black Cobra Contest
P.O. Box 608
Lowell, IN 46356

I authorize my name be published in *Electronic Games* Magazine.

Signature _____ Signature of Parent or Guardian (required for minors) _____

For your Atari Video Computer System™ and Sears Video Arcade™

® PARKER BROTHERS

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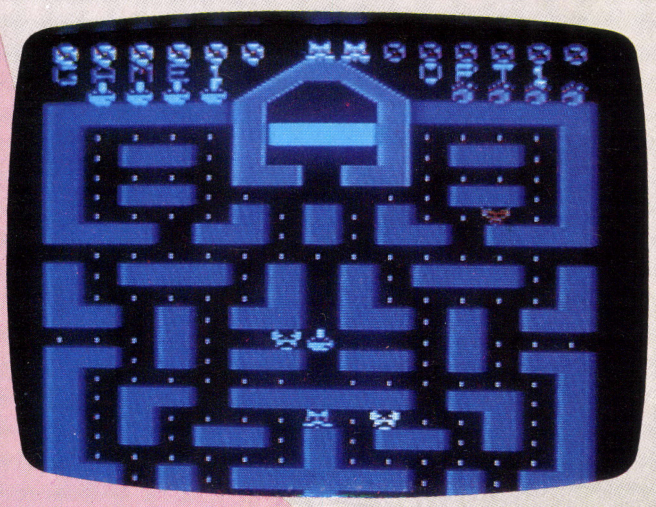
COMPUTER WORKOUT:

COMMODORE 64



Now, the answer to the 64,000-byte question?

For the computer buyer on a budget, it's hard to beat the Commodore 64. With a base price of $595, the 64 could be the answer to all your computer needs. It offers many features not available on machines that cost twice as much. But until there is more software support, it may take a lot of time and effort on your part to get the full benefits of this otherwise excellent computer.



By David B. Thomas

How many times have you bought something that the manufacturer promised would "assemble in minutes, using our simple, easy-to-follow instructions"—only to find that you needed a graduate degree in engineering? Amazingly, many personal computers seem to require this amount of expertise if you should want, for example, to increase the machine's memory.

The first advantage of the Commodore 64 is that all you have to do is plug it in, turn it on and you're set. No internal modification is ever necessary—all hardware and peripherals plug in at the back of the machine. Many other computers tell you to "simply" resolder a few connections to expand your system—usually sending the owner in fear back to his computer store for expert assistance (at an expert's fee).

Everything You Need

For $595, you get a Commodore 64 microcomputer with 64K of RAM, unspectacular but perfectly good PET BASIC in ROM and all the interfaces and hookups necessary to add a TV, a cassette drive ($60), a disk drive ($400), a modem ($109 complete and ready to use—no RS 232 needed, and that's a real savings) game controller and any of Commodore's game cartridges. There are some cartridges from other companies, but not many—not yet, at least.

The keyboard on the 64 offers many advantages that will be appreciated by the novice and the experienced computer owner alike. While not a full ASCII, it is of standard typewriter configuration and has added versatility. Most every key on the 64 can perform four functions—they can be struck alone, shifted, used with the CTRL (control) key or used with the special "Commodore Key" which acts like a second CTRL key.

On most other systems you are glued to a chart that tells you what happens when you press CTRL "F", for example. Why, you might ask, can't they put the information right on the keyboard? Commodore does that on the 64. On the front of each letter key are the two graphics characters associated with that key. On the front of each number key is a corresponding color. Other keys perform such functions as clearing the screen or moving the cursor.

Virtually all basic video control functions and graphics characters can be entered directly via the keyboard. But those graphics characters are only a small part of what the 64 can do graphically. Be prepared, though—the software support is not there yet, and while BASIC and the 64's own capabilities give you a lot of potential, it will take some real effort on your part to get the most out of the machine. What you can get, though, is a lot.

The graphics power of the Commodore 64 can be traced directly to its Video Interface Chip—the VIC that gives the VIC-20 its name. Thanks to the VIC, a dedicated graphics chip, the 64 can keep track of up to eight user-defined shapes called sprites. Drawing a sprite takes some work. Each one is 24 x 21 dots. (The height or width or both can be doubled in size, at the cost of some resolution.) You draw a sprite by first making a sketch—on graph paper, for example—and then telling the machine which dots in your array are to be on and which off, and what colors you want to use (up to four per sprite). You tell the machine this information with a binary code for each row of dots in your array, using simple POKE statements.

Let VIC Worry

As I said, it takes time. Once you finish, though, you never have to worry about your sprite again—and neither does the microprocessor. Instead of wasting valuable computer time and memory keeping track of the sprite, the VIC does it all. The VIC keeps track of the sprite's position on the screen, the colors and its relative distance from the observer. This last allows you to move one sprite "behind" another for 3-D effects. You can also combine sprites and text, if you want a story line to go along with your game, for instance. The text, by the way, smooth scrolls on the 64. From a practical standpoint this may not mean much, but it's certainly a much nicer effect than the herky-jerky scrolling of most computers.



What can sprites do for you? They save you both real time and com-

puter time, that's what. Let's say you want to program a *Space Invaders*-type game. On another computer the BASIC program would have to tell the machine, in however many steps it took, when and where to move the invaders. With sprites, the VIC chip does it for you—not the program and not the microprocessor. The result is a faster game—to move the invader from point A to point B requires one step, as opposed to several for the computer.

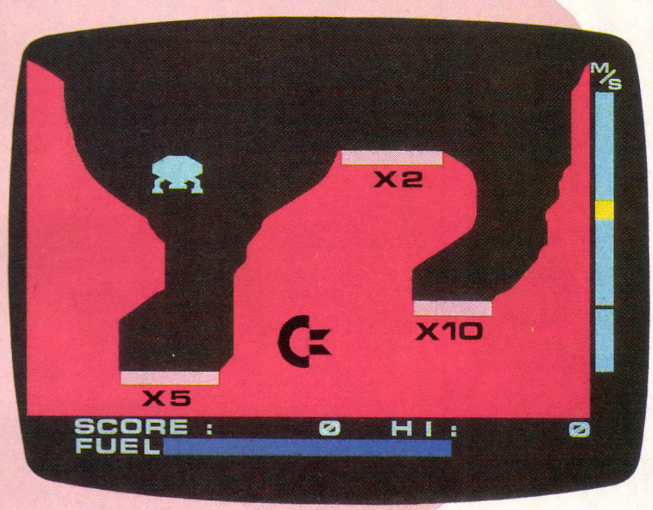
The display format itself is 40x24 for text. The 64 can display 320x200 dot graphics, upper and lower case letters, numerous graphics characters—all this in 16 colors. In addition, the ambitious user can also make his own character sets, though it's tricky. What this means, simply, is that the user can program any graphics character to perform a specific function. In this way you could create a foreign alphabet, say, or 3-D letters or script type. No, it wouldn't come out on a printer, which only has a preset number of characters, but if you wanted to drill yourself in French or German you could program *accents graves* and *umlauts*.

But the amazing VIC isn't the only dedicated chip to grace the Commodore 64. There's also the amazing SID, or Sound Interface Device. Just as the VIC handles graphics, the SID handles sound. It's actually a small music synthesizer contained right in the computer.

The SID Trio

SID has three voices, each of which has a nine octave range—just about the range of a grand piano. You can vary the waveform of each voice as well—roughly the same procedure as changing the stops of an organ. Besides varying the waveform, each voice can also be piped through a variety of complex sound-shaping circuitry which allows you to control its rate of attack, sustain and delay. These terms refer to the amount of time the tone holds full volume and the amount of time it takes for the tone to die out.

There is also a series of filters which further alters the sound. The result of all this, unfortunately, is not as impressive as it might seem at first glance. Theoretically you would be able to do a "switched-on" version of a Bach three-part invention. Practically, that would take maybe a month of solid work. The problem again is software. There just isn't any program to let you take full advantage of the sound capabilities, and writing your own would be a big job. (In fact, if you did write your own, you might be able to sell it to Commodore.)



So what can you do? Using a series of simple POKE statements, I had a great deal of success with realistic screams, gunshots and crying babies. The potential is so great, though, that I'm convinced the proper software will be developed—unless Commodore should decide to cast the 64 adrift and come up with a whole new system, something I think very unlikely.

The only real drawback to the 64 is storage. You can opt for either cassette or disk, but both have their disadvantages. The cassette system is prone to unreliability, as are most cassette systems, unless quality tape is used. Even then, programs should be saved twice and verified as a safety measure. Cassette users well know what a slow and tedious process that can be. If your application does not involve a lot of file access, cassette is a viable—and cheaper—alternative.

Commodore's disk system has its own problem—it's slow. In fact, it's about half the speed of most disk systems in its class. For most users, however, this is not a serious drawback.

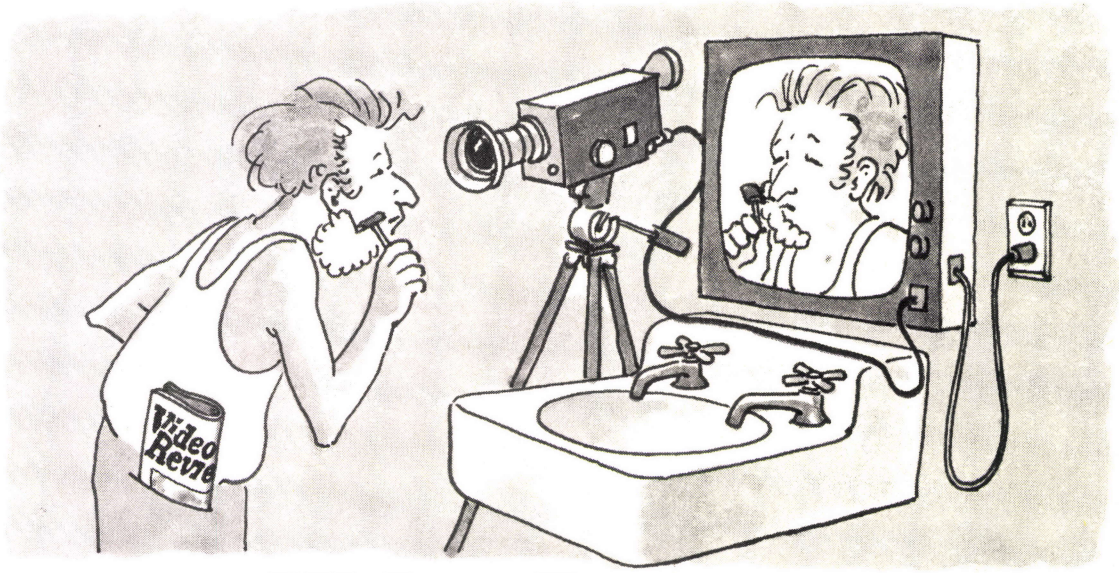
A Few Problems

There is one other problem that should be pointed out—documentation. The user's guide that Commodore supplies with the 64 gives you a basic idea of what the machine could do—if you knew anything about it. Fortunately, Commodore also publishes a programmer's guide to the 64—at $19.95—which is excellent. It gives detailed explanations of sprites and character sets, and even has some information about the chips themselves, if you happen to be a computer hardware freak. For the engineers out there, the guide also contains a full-fledged schematic of the computer.

All in all, I found the Commodore 64 an impressive unit, and for an under-$1,000 computer an obvious choice. Commodore did not make the mistake of allowing anything to spoil the 64's image—there are no evil surprises waiting to jump out at you when you open the box.

The question of game play, though, is certainly important. Although not much of a gambler myself, I would bet that there will soon be many games for the 64, as well as other software packages. When it comes to graphics, sound and easy programmability, the Commodore 64 is potentially superior to the Apple II. It's definitely a system to watch.□

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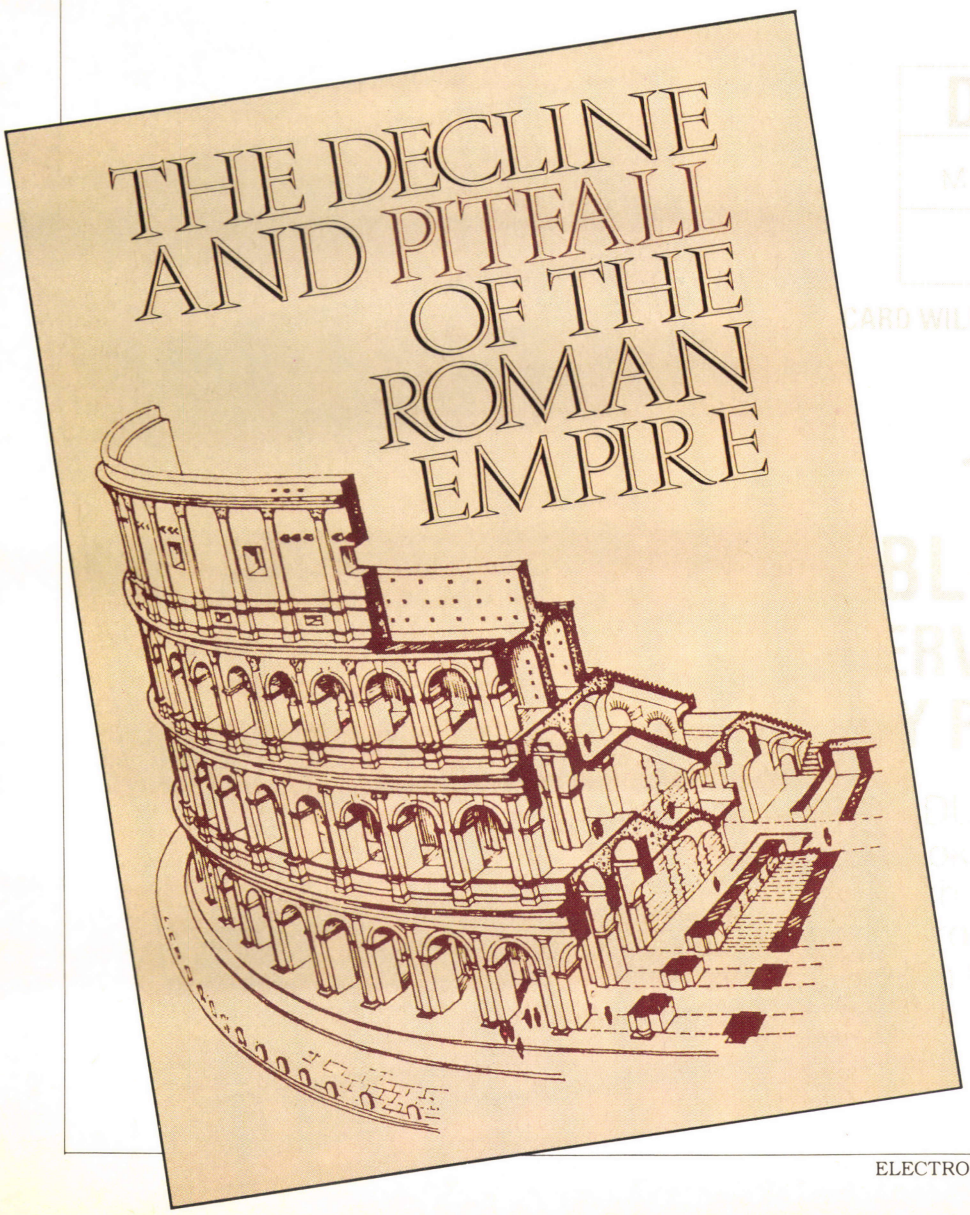
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OVERDUE books

A gamer's best-sellers list

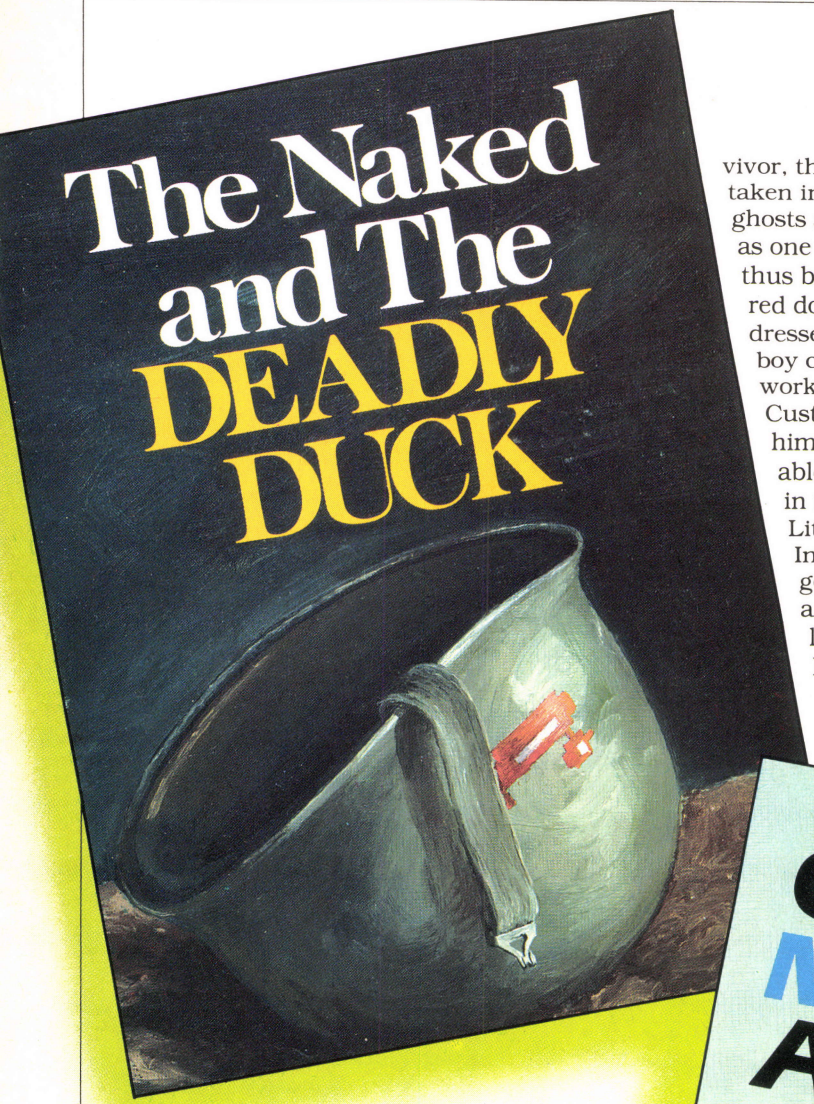


By Randi Hacker

When it comes to video gamers and reading, many people tend to become sarcastic. "Before video games," they say snidely, "there was something known as books. Many of you may be old enough to remember them. No joystick was necessary to use them although it did help to have hands to turn the pages with. (New Word: Pages—that part of a book on which the word appears. We will take up the meaning of 'word' at a future time.) You can still find some books around today. If you're interested, a 'library' is a good place to start."

Some Nerve!

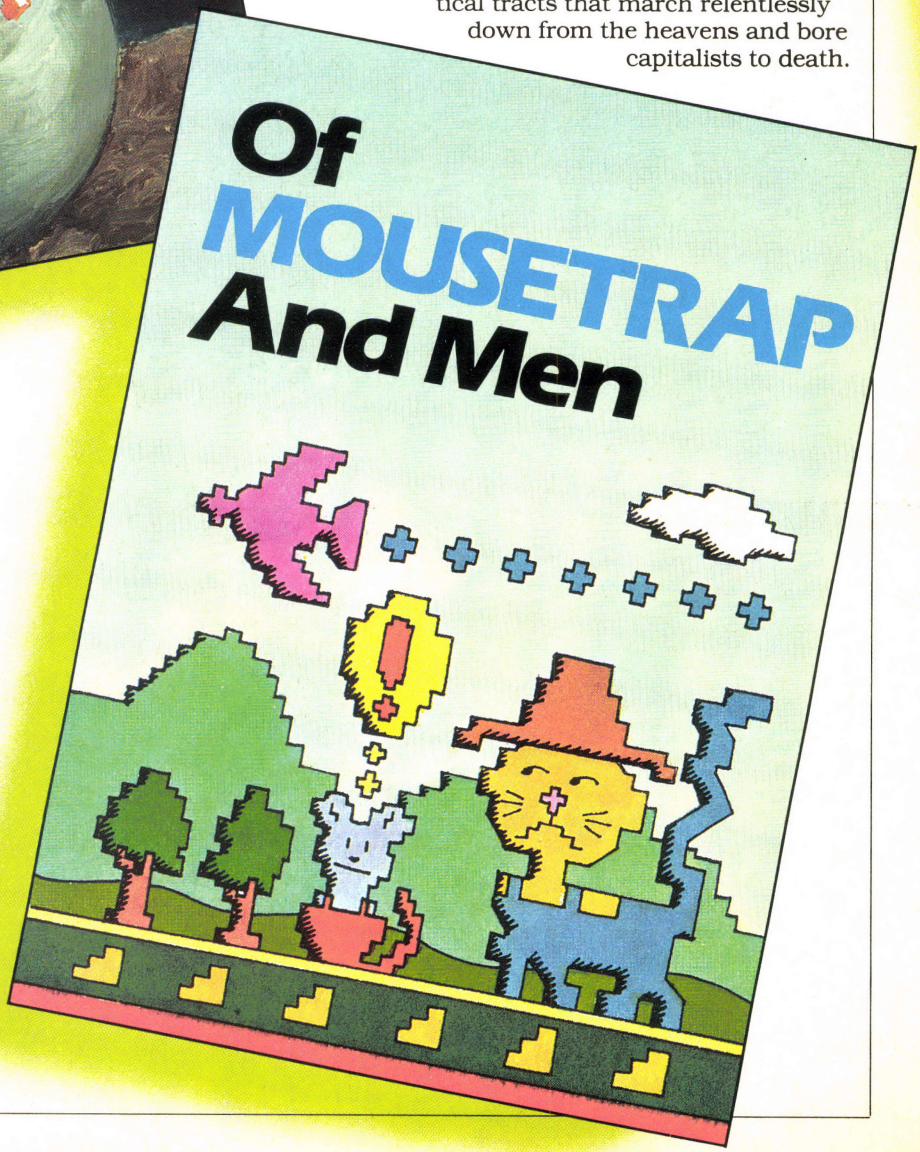
We're not going to take that sort of abuse any more, are we gang? No sirree. And to nip all that malicious brouhaha in the bud—and at the same time prove it utterly false—we've put together a summer reading list that will not only increase your intellectual capacity, broaden your horizons and add to the weight of your book bag, but also add to your storehouse of video game trivia. After all, a book doesn't have to be about a white whale or a boy named Holden Caulfield (although that is a good name) to be good, right? Here then are several books destined to either make the bestseller list or be banned in several major high schools, if not both.



vivor, this dot is taken in by the ghosts and raised as one of them, thus becoming a red dot. Later he dresses up in cowboy clothes and works for General Custer, leading him to his inevitable destruction in the maze at Little Big Horn. In the end he gets very old and wears a lot of makeup. In the sequel he wears a dress.

The Naked and the Deadly Duck Another war novel, only this one is about good old G.I.'s. A bunch of American soldiers are slogging through the mud on what they think is a Japanese-occupied island. Imagine their surprise when they find that the Japanese don't control it but instead it is controlled by a race of flying crabs and mutant ducks who spit bullets. This, of course, disgusts them and let me tell you, if I were in that war I'd just quit. I mean, if they're not going to play by the rules, what's the point? The only reason the word "naked" is in the title is the publisher thought it would help sell the book.

Communist Manifestos From Space A dry book involving an army of political tracts that march relentlessly down from the heavens and bore capitalists to death.



Decline and Pitfall! of the Roman Empire A sweeping historical book, the text covers the First 265 screens of Ancient Roman history. Your narrator is a man in a toga who likes to swing on vines. Occasionally he drops below ground and runs quickly through the Catacombs. Tip: Avoid the lions in the Colosseum.

Of Mousetrap and Men The touching tale of two men—one slightly slow, the other slightly short—trapped in the maze of life. Their destiny is to chase small furry creatures and pet them to death unless these same animals eat power pellets—in which case they attack the two guys and destroy them.

Little Big Pac-Man A rugged wild west adventure concerning a pioneering yellow dot whose whole family is destroyed by hostile ghosts in the prairies. The lone sur-



Zaxxon the Single Girl The subject of some controversy, the book poses the question: Can a single girl playing a 3-D game survive in the big arcade without a man?

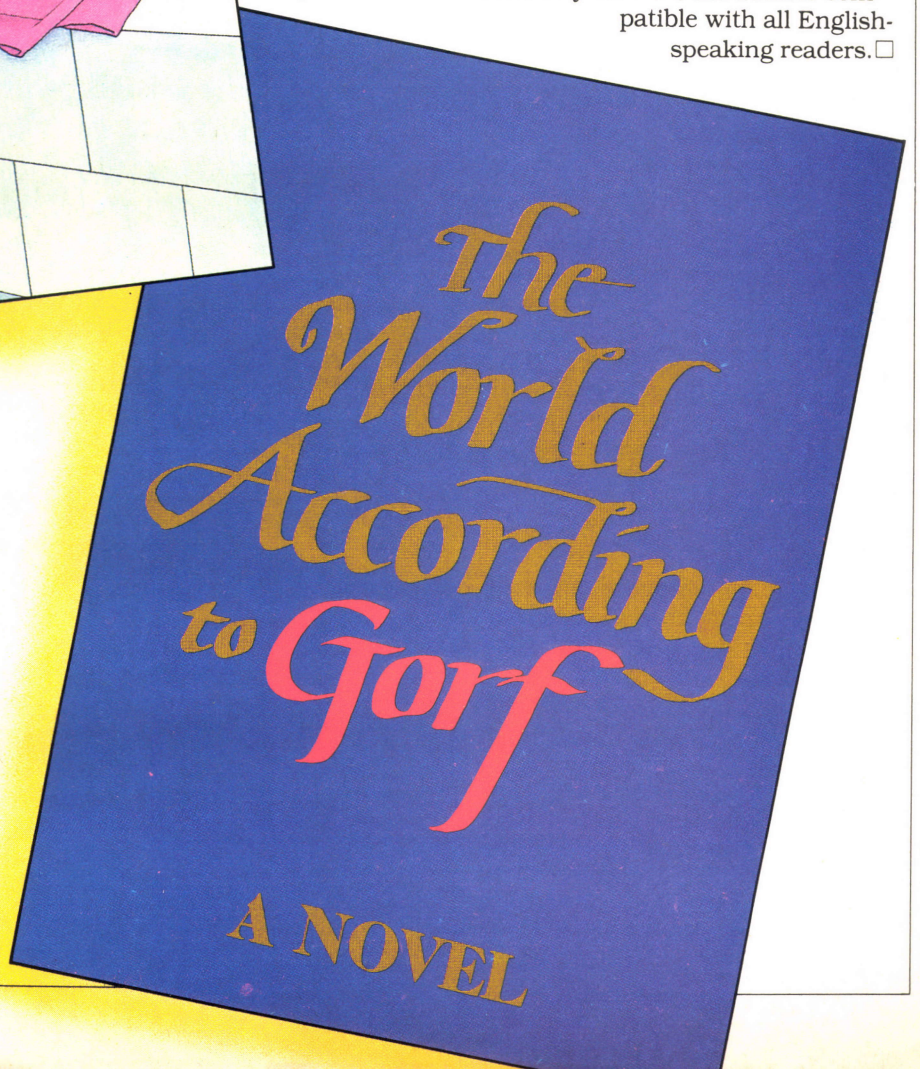
The Seven Percentipede Solution Mystery at its leggiest. Sherlock Holmes goes undercover as a worm with 100 feet in order to bust an international drug ring led by a very jumpy spider. Watson goes along but gets lost among the mushrooms. Dr. Freud also figures prominently in this novel, though it's anybody's guess just what insect he is. Don't miss the surprise ending in which Freud gets Holmes to remember his traumatic larval stage.

The BurgerTime Machine The plot of this science fiction novel involves a chef who travels back in time and makes hamburgers by walking on the buns. He also gets mixed up in a series of political intrigues concerning the Burghers of Calais, the Master of the Rolls and the Frankfurt Symphony Orchestra. Not for weak stomachs.

Bridge Over the River Raid Set during World War II, it is the story of a bunch of Royal Air Force pilots who curse and carry on when they find that their planes have suddenly and inexplicably been rendered incapable of flying over land. This makes winning the war difficult since most of the enemies are not amphibious.

Charlotte's Web Wars One morning, a little girl who lives on a pig farm wakes up to find that aliens have written "Some pig" in a spider's web in the barn. She reads it, sighs and goes back to sleep. If they had written something like "Buy Warner Stock," that might have been interesting.

The World According to Gorf This is the story of an alien who likes to wrestle and write but whose mother ship, a nurse, writes better books than he does.
The object of the book is to get Gorf from page one to the end without getting hit by snipers. Exciting and colorfully written, the book is compatible with all English-speaking readers. □



Computer campout

A summerful of electronic fun

What does camp mean to you? Saying "I can't swim" and being forced to take a water test anyway? Lousy food? Never having a pair of matching socks? Praying for rain? All of the above, no doubt. And, in traditional camps, that's what you grew to expect. But this is the era of specialization and a new generation of camps has grown out of it. Now we have weight loss camps, gymnastics camps, music camps and, most recently, computer camps.



Illustration: Carey Henrie

By Bruce Smith

How much do computer camps differ from "real" camps? Aside from intensive work with computers, not much. Along with courses in BASIC and other languages, there's the usual array of recreational activities: swimming, riding, crafts, etc. Perhaps the greatest difference lies in the fact that the mosquitos are not the only things that "byte."

For those with a casual interest in computers, the American Camping Association has a list of nearly 100 accredited camps across the country that have computer facilities; 37 of them offer three or more hours of instruction a day. At most of them, computer activity is treated in much the same way as other "crafts" such as ceramics, ham radio and jewelry. If you're looking for heavier doses of microcomputing, what you want is a camp that specializes in computers. While the choice here is smaller, there are nevertheless quite a few—among them Atari, Computer Camps International and Timbertech Computer Camp.

Computer Camps

Computer Camps International has five residential sites throughout the country: Connecticut, Wisconsin, Texas (2) and Georgia. While each of the camps offers different recreational activities (such as riding, swimming and golf), 65 percent of the day is devoted to computer-related activities. And, at the end of the summer, instead of a talent show, campers demonstrate the individual projects they've worked on. More about these later.

In the spring, prospective campers fill out a questionnaire sent to them by mail. From the answers received, the staff makes preliminary group breakdowns. The groups are decided upon by experience, not age. Ten-year-olds may find themselves in groups with 18-year-olds and vice versa. Then, when the kids arrive in the summer, the senior instructors on the staff interview each child and place him or her in a group which will have no more than eight members. There are no more than eight campers placed with every one instructor. The computers used are Apple II and Apple IIe, and there's one to every kid.

CCI has very strict requirements which must be met by anyone with aspirations to join the staff. All senior instructors must either have an advanced degree in computer



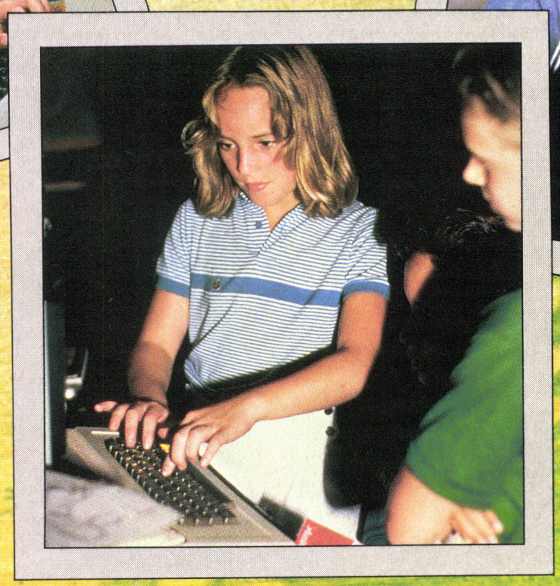
education or be working towards one. Junior instructors are all juniors or seniors in college.



Campers, however, don't have to fulfill these criteria. In fact, campers of *all* levels are welcomed with open arms. CCI has a group for everyone. Groups are broken down like this: 1) Beginners who learn both LOGO and BASIC; 2) A more advanced BASIC and PILOT; 3) An even more advanced BASIC and beginning PASCAL; 4) PASCAL and Assembly Language and 5) Special work and seminars. Don't panic thinking that once you've been placed in a group you're stuck there for two, four, six or eight weeks. No way. CCI prides itself on flexibility. If, after a couple of days, you are progressing more quickly than the other members of your group or if, for example, you've already had BASIC but no LOGO, the instructors will either move you up to the next level or, if there are enough campers with the same needs, create a special group to cater to your special needs. Whatever the case, CCI strives to teach all its campers at least rudimentary programming by the end of a single two week session. And if you stay longer than two weeks, you won't find yourself repeating anything. You'll always be covering new ground.

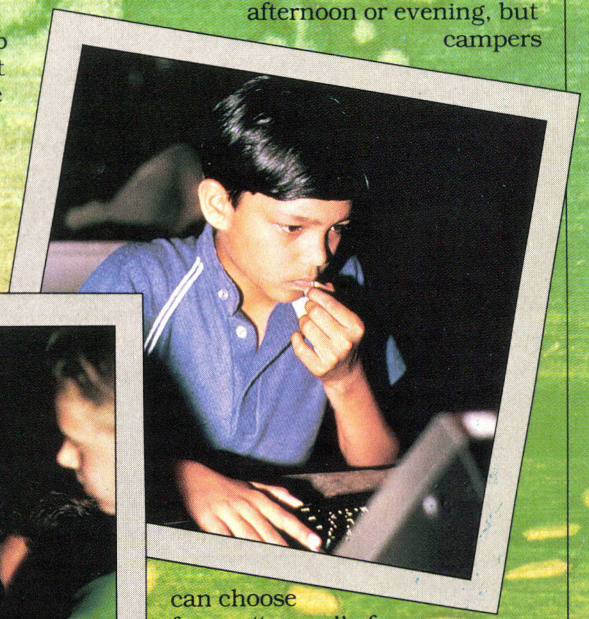
A typical day at one of the CCI camps might go something like this:

7:30 a.m. — Wake up
8:00 - 8:30 — Breakfast
8:30 - 9:00 — Back to the bunks for clean-up
9:00 - 1:00 p.m. — Computer classes and recreational activities — two two-hour periods
Lunch
Afternoon — Four hours divided into two two-hour periods of either computer work or recreational activities
Dinner
Evening Activities — Workshops, speakers or individual work on a computer project



In Or Out

The morning computer classes are done in groups and the two hours of recreational time are mandatory and must be done outside of the computer room. In the camp lexicon, campers are either "in" or "out" — referring, of course, to being either "in" or "out" of the computer area. Unlike the morning, both two-hour periods in the afternoon may be spent in the computer area working on a one-to-one basis with instructors or working on your own on an individual project. There is no formal instruction in either the afternoon or evening, but campers can choose from a "menu" of activities which change daily and which can include electronic music, languages not included in the regular classes and graphics.



We mentioned individual projects. What sort of individual projects are done during a typical two-week session? Well, the most popular is a game program but, warns Clark Adams, the director of computer instruction, most campers are simply not ready to tackle those. "Most games call for techniques not yet mastered by the average camper," he says. "A good video game has to be written in a quick processing language and your standard BASIC is simply too slow." If, however, a camper insists on doing a game, he or she is instructed in how to do a text game. Other projects include graphics programs in LOGO.

The most important concept that CCI tries to teach, no matter what level and no matter how long your stay, is good programming behavior. "We try to get campers to approach programming in a logical way," says Adams. "Think things

out first, develop plans and subroutines and then go ahead. We want every camper to develop good work habits for use later with more complex programs."

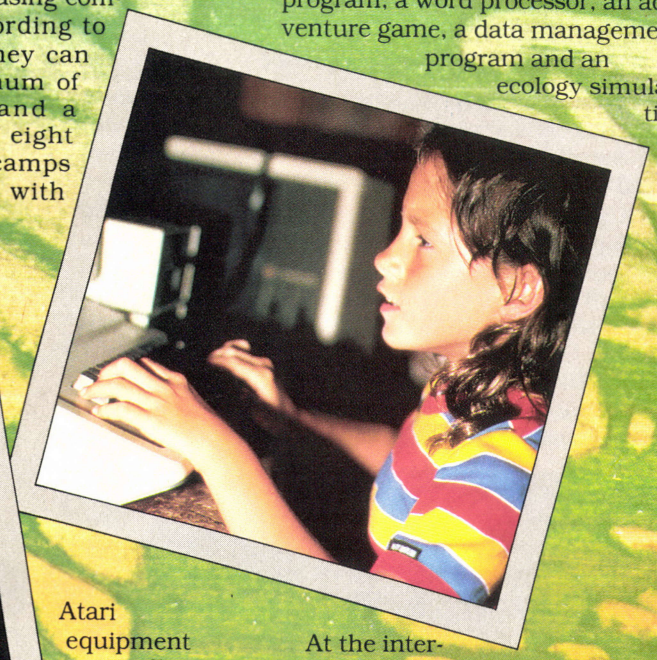
Oddly enough, not many people opt to play games from the camp's software library during their free time. Rather they choose to spend time learning more advanced languages, working on individual projects or working on a more individualized basis with the instructors.

The evening program which runs from 8:00 p.m. until about 9:30 p.m. features many typical camp activities—dances, a talent show, a night swim or, if you choose, special workshops—some computer-related, some not. For example, last year there were workshops offered in meditation, mythology, chess, local geology and future studies. Why? Because, says Adams, CCI strives for the "eclectic."

Two weeks at Computer Camps International costs $835 and campers can attend more than one session. The camps are co-ed and anyone from age eight through 17 may attend. One-week sessions and weekend sessions for adults are also available. For information call (203) 871-9227. Sessions begin June 12.

Atari hasn't missed a trick so far in marketing its products, so it is no surprise that the company operates seven computer camps around the country. The camps are co-educational for ages 10 through 16, and offer computer instruction at beginner, intermediate and advanced levels. At all levels, "campers spend about four hours per day, six days a week, using computers," according to Atari, and, they can stay a minimum of two weeks and a maximum of eight weeks. The camps are equipped with Atari equipment naturally. The hardware consists of Atari 1200XL, 800 and 400 computers; disk drive units and printers; the Atari 830 modem (to create an "electronic bulletin board" between Atari camps); paddles and joysticks; speech synthesizer; graphics tablet; Terrapin Turtle and a library stocked with more than 100 software titles (including *Pac-Man, Defender* and other games) as well as books and magazines on computer topics.





Atari says that every camper is taught to use a word processor, electronic worksheet, file manager and mailing list. At the outset, each person is evaluated to determine his or her level of computer literacy, and placed in an appropriate class. There are two instruction periods each day, plus unsupervised hands-on time.

Pilot Program

At the beginner level, campers use PILOT to learn fundamental programming and graphics and sound applications. Software includes a painting program, a music program, a word processor, an adventure game, a data management program and an ecology simulation.

At the intermediate level, BASIC and PILOT are used to explore four-color graphics, programming joysticks, character graphics, animation and creation of sound effects and music.

Advanced campers pursue an independent study course supervised by instructors. Last summer, according to Atari, advanced camper projects included an airline reservation system, file and data management programs and adventure games with sounds and graphics. Most advanced campers use BASIC, but PASCAL, LISP and Forth are also available. Other areas that can be explored are custom display lists, machine architecture and Atari 6502 Assembly Language. Advanced campers also receive instruction in how to prepare a program for submission

Continued on page 96

Dracula: Fangs for the memories

DRACULA ♪♪♪♪

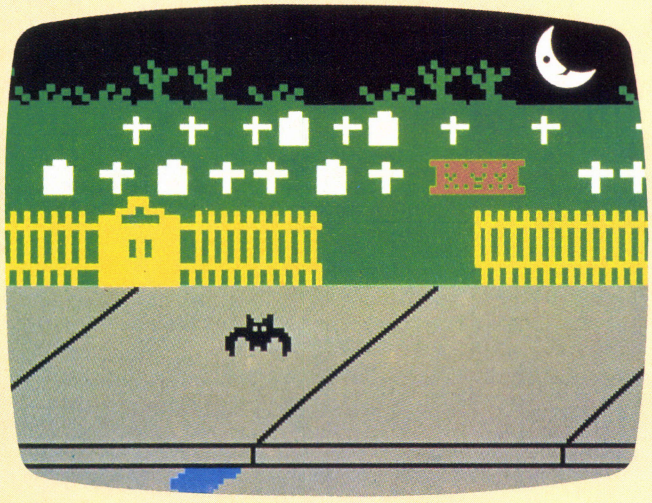
Imagic/Intellivision

By Michael Blanchet

Contrary to the impression you might get from its title, *Dracula* is not a scary game, or a violent one. It's actually quite funny—a tongue in cheek contest where the player, turned vampire, must canvass the town in search of victims.

The game begins in the graveyard. Drac emerges from his tomb in bat form and floats over to the sidewalk. In each round, there are an increasing number of available victims. Theoretically, the Count must find them all, bite them, and then return to his coffin before the timer reads 6:00 AM. I use the word "theoretically" because this isn't as easy as shooting fish in a barrel, or as simple as Frank Langella makes it look, for that matter.

To flush out a victim, Drac needs only to go to their door



and knock. If one emerges, the Count makes chase either as a bat or a man. As a bat, he is capable of swift flight. At the same time, he's also a sitting duck for the vulture that is stalking him. When he wishes to bite his victim, Drac must revert back to human form. At this point, you have two choices—you can either bite or change him into a zombie, who in turn can be dispatched against the bobbies that are hot on the vampire's trail.

The game really heats up when the cops start walking the beat. There's no rest for the weary vampire now. While chasing his victims, he must avoid the cops and the wooden stakes they are tossing at him. If a stake finds its mark, the Count is temporarily immobilized and must wait until it disintegrates before he can move on.

Dracula is best when played by two people. In this mode, the contestants alternate control of Dracula. While one plays the Count, the other plays the victim. When a victim is turned into a zombie, he can be used to attack the cops. In the one-player version, I had a lot of trouble using the zombie to any advantage.

One of the nicest touches in this game is the Count's lumbering walk. He moves a lot more like Dr. Frankenstein's servant than the speedy and swift phantom he is commonly depicted as. The victims are a riot, too. Instead of scurrying around in fear, they nonchalantly stroll their merry way, oblivious to the fact that they are about to lose their jugulars to some maniac.

> Spend as much time as possible as a bat.
> This way you can avoid the cops' stakes.

OINK! ♪♪♪

Activision/Atari VCS

By Michael Blanchet

Wolves have gotten a raw deal, especially in fairy tales. Thanks to over-zealous hunters, wolves are now an endangered species. If life was a fairy tale, they would have died of starvation long ago. Now comes *Oink!* and the Big Bad Wolf gets his revenge.

In *Oink!* you are a pig (no offense) and can rewrite the old story. Instead of sitting in safety as the wolf huffs and puffs at your brick house, you've got to work—and work hard.

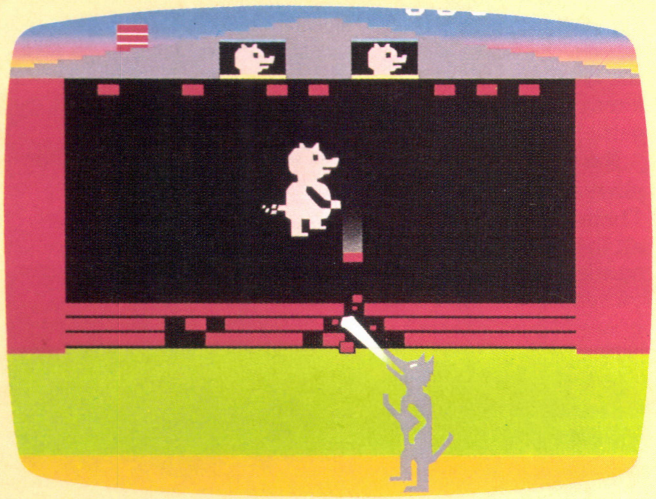
Alas, the wolf never runs out of breath. No need to worry though—you never run out of bricks either. When the game begins, you're inside the first house. The wolf saunters along the bottom of the screen, assumes a General Patton-like stance and begins to blow away at brick after brick. Your job is to pluck a row of stones from the ceiling and toss them down towards the gaps in the floor, one at a time.

A tireless fellow with lungs of steel, the wolf will eventually break through the masonry. When he does, he will try to suck your little hide out like a vacuum cleaner. Fortunately for you though, the pig has not done the Scarsdale diet. The wolf will have to carve a good-sized hole before he can lunch on his prey.

Once a complete set of bricks is laid, another immediately takes its place, and so on. As one famous pig used to say "Th-th-th-th-that's all folks!" Yep, that's all you do—just keep filling the holes as the wolf makes them. Everything gets faster as the game gets longer. Everything except you, of course, and boy, do your hands ever get tired!

Joystick Jockeys

To set a brick, you must first move under it, press the action button to pick it up, move over an open spot and then release the button to drop it. If you have the standard Atari joystick, forget it—your forearms will be completely numb by the time you're on your last pig.



(For this review, I used the hair trigger Discwasher Pointmaster, which happens to be a heck of a lot easier to operate than the Atari stick. Even so, I was only able to reach 20,000 before succumbing to fatigue.)

When the wolf finally manages to syphon you out of your house, don't expect to see bacon and ham all over the screen. The pig merely exits stage right. The game then continues with a new pig in a new home.

Eventually the wolf will get his meal. You on the other hand have only sore fingers and a razed house to show for your exertions. I would have liked this game much better if just once I could konk that wolf in the head with a brick.

Graphically speaking, *Oink!* is what you've come to expect from Activision—rich colors, sharp clear images and painstaking attention to detail. My only beef (or pork) is that *Oink!* gets tedious.

Contrary to the impression the story line and title may give, I don't believe *Oink!* was designed with the younger audience in mind. It's a moderately difficult game that is a true test of stamina. So is running a marathon. Personally, I'd prefer the run to *Oink!* I'd be so busy huffing and puffing, I wouldn't have time to yawn.

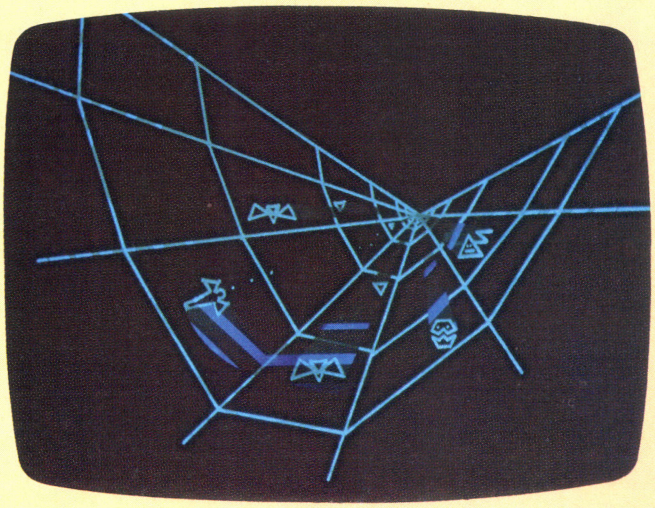
WEB WARS ★★★★

GCE/Vectrex

By William Michael Brown

All hail, 3-D! The illusion of depth—that sense of a new and different world coming at you from just beyond the fringes of your screen—has been the kick in arcade monsters from *Battlezone* to *Zaxxon*. Now GCE has finally given Vectrex system owners a 3-D game that—while it doesn't really have a changing landscape—does indeed leave you with the feeling that you have penetrated a deep and mysterious world behind the glowing phosphors.

Web Wars puts you in control of a bird winding its way down a long, V-shaped corridor that appears to be made out of webbing. This web-corridor recedes off into a vanishing point in the misty distance, and while there's no way to leave the web forever, left and right movements of the joystick can push you up or down the walls of the V. Forward or backward pressure on the joystick also controls the speed of your flight, which starts at a lower limit of 10 (Miles-per-hour? The directions don't say) and tops out at 240.

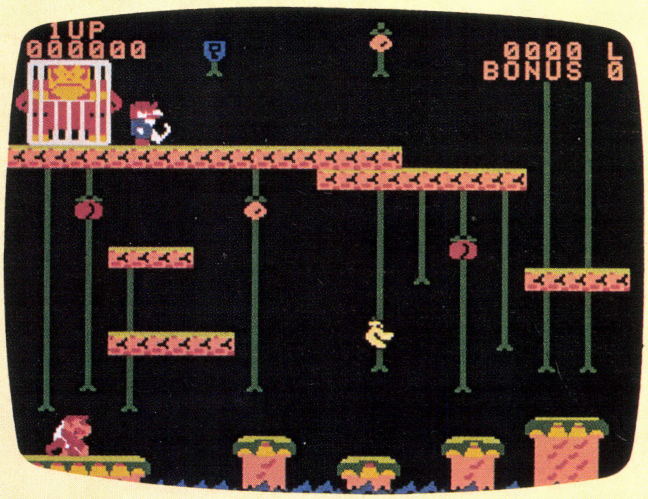


You're in the web to hunt down and capture a weird collection of animals— 20 of them, to be exact, ranging from seagulls and bugs to what look like pieces of industrial machinery and animated home appliances. Once you've snared one of the animals, a door opens in the side of the web and, aiming expertly, you then fly yourself and your prize into the calm of the Trophy Room, where your booty is displayed.

All the while, clusters of stars are rushing at you from the vanishing point. It's fairly easy to mow them down on the approach, but once they pass you they begin creeping up from behind. Miss either the door or the trophy twice and a giant pterodactyl-like bird materializes high above the web, ready to bombard you with fireballs the moment you pass beneath him.

Web Wars is a great combination: All the appeal of *Turbo* and other speed-demon's delights, combined with the destructive interest of a straight shoot-em-up *and* the reward-seeking features of an adventure game.

You can put a following cluster in front of you by alternately speeding up and backing down on the throttle.



DONKEY KONG JR. ★★★★

Coleco/ColecoVision

By Noel Steere

If there is any one game for ColecoVision that will be an instant best-seller, *Donkey Kong Jr.* is it. And, unlike *Pac-Man*, it should stay a best-seller because its graphics, playability and sound are as good as the arcade game.

You are DK Jr., a baby giant ape who jumps like a chimp and walks with not much finesse. Aside from this handicap, there is little fault to be found in the game. You climb up almost exact replicas of the vines and chains found in the arcade parent and you must avoid the same enemies—snapjaws and, later on, birds (both these creatures seem to have taken growth potions because they are huge compared to everything else). Donkey Kong and his son look great but Mario looks like a reject from the factory. Perhaps home games are just not the best climate for him—he's pale.

Although this version doesn't have Mario's Hideout (the second screen at the third level), it has all the other boards which look perfect. The Jump Board screen has everything—the jump board, the conveyor belt with the two chains, the birds and the eggs they lay. Also, the sound is exactly like the arcade game—the jumping noises, the noise the fruit makes, the birds' sounds and the background music (a separate tune for three different boards which are all exactly like the arcade game).

Best of all, when you complete a board the tune that plays in the arcade game also plays in this cartridge. There's a nice touch on the Key Board. When you get all the keys in the locks, DK smiles and raises his hands in victory. This is a must-buy for all ColecoVision owners.

When on the Jump Board mission, walk to the edge and try for the super jump immediately. Then, when you land on the high platform, go for the small chain right away and move to the left as soon as you're on it. This will get you through the very difficult task of switching from the small conveyor belt chain to the chain at its left.

COSMIC CREEPS ★★

Telesys/Atari VCS

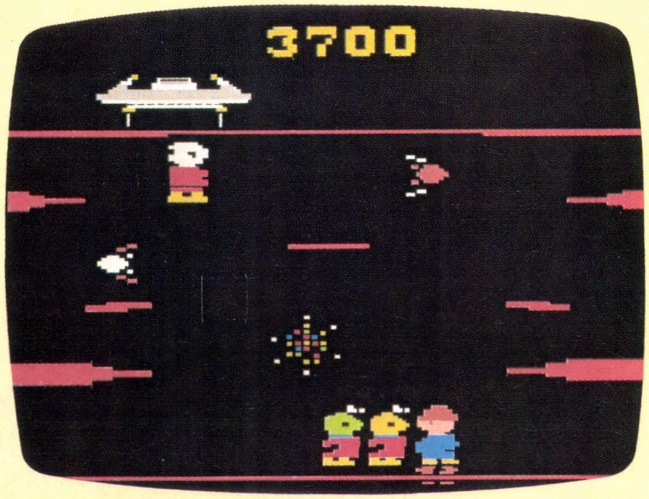
By Marc Berman

SLOW. CHILDREN CROSSING. Very slow children crossing—*Cosmic Creeps* is about some sluggish, pudgy rug rats trying to escape a doomed planet.

The point is to get as many of the little buggers to safety as possible before the planet at the bottom of the screen sinks from view. Each Kid is pursued by a gaggle of goopy green Creeps. You earn 100 points for each Creep you bop. You get 1500 points for each Kid you save.

Each round starts with this big brother called an Orbinaut. What he has to do with the story is anybody's guess, but his mission is to reach the space station without getting propelled into oblivion by meteors or "red plasma." Use your joystick to move the Orbinaut, fire button to bop the Creeps.

This one is strictly kid stuff—Chutes and Ladders in space. There is only one difficulty level but if you get past



1500 points without getting noogied by a creep, the action picks up a little. The Bobsey Twins would like this game.

The graphics are colorful but not very dynamic. The best looking feature is the space station from which you shoot your boppers. It scoots across the top of the screen like a *Pong* paddle, but you can score just as easily by leaving it in one place and waiting for Creeps to get within range.

The Orbinaut, the Kids and the Creeps look pretty much the same except the Orbinaut has a white head, the Creeps have green heads and the Kids are a Caucasian beige.

The best visual comes at the end of the game when the planet sinks or after a Creep gets you. That's when the whole screen strobes for a second, like the end of *Missile Command*. Swell.

Something weird: If you score over 5,000 points, your next game's score will add onto your first one providing you haven't been "creepified." In the instruction manual, Telesys recommends wearing headgear. We assume any fishbowl will do as long as you empty it first.

Actually, campers, there's not much to remember. Try to bop the Creeps closest to the Kids first; they pose the most immediate threat.

DOLPHIN ♪♪♪♪

Activision/Atari VCS

By Michael Blanchet

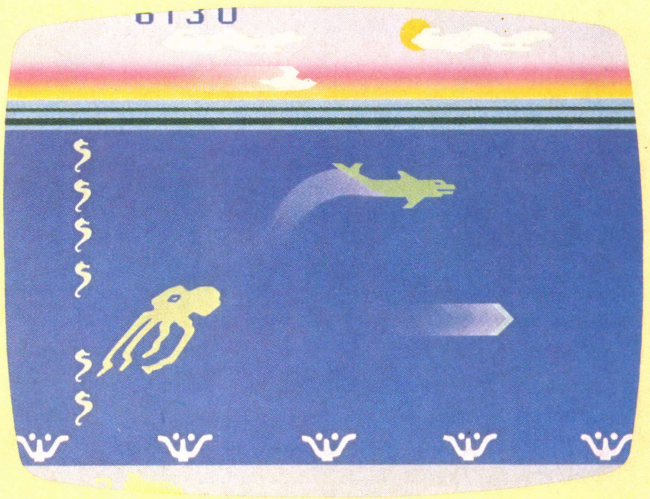
As everyone knows, dolphins are great leapers. As everyone also knows, dolphins use sonar to find their way around the ocean depths, and possibly even to communicate with each other. Are dolphins intelligent? In the game of *Dolphin* they better be, because the dolphin is you—and you've got to use your sonar and your leaping abilities to the fullest.

The sonar brings a new dimension to this game—sound. Although in an ideal game world, sound would always complement the play action, we know that this is seldom the case. Well, it is the case in *Dolphin*.

Your dolphin must elude an octopus who is looking, presumably, for a meal. There are two possible escape routes—East or West. As the dolphin swims (with the octopus in hot pursuit) you'll hear a reverberating tone. Using the pitch of the note as a gauge, you must correct your position to correspond with a gap in an approaching sea wall. Move up for high notes, down for low ones and somewhere in between for the midrange chords. Get the idea? If the dolphin misjudges the location of the opening, he'll still pass through the wall but he'll lose a little ground to the octopus in the process.

The game begins with one dolphin on screen and a trio in reserve. Swimming has never been easier—all you have to do is push the action button, move the joystick either left or right and you're off. As you paddle along, currents, represented here by arrowhead-like figures, pass through the drink. To get a boost, you can position yourself in front of one that is coming up behind you. Likewise, a stream heading toward you should be avoided, since it will slow you down.

But what about leaping? On a fairly regular basis a seagull flies overhead, and that's your chance to turn the tables on the octopus. Leap out of the water and touch the gull when he passes. For a limited time only the hunter becomes the hunted. Turn and catch the octopus for a hefty bonus.



Visually, *Dolphin* is most impressive. The dolphin itself, though not overly animated, is as true a recreation as possible. If you look closely at the barriers, you'll notice that they are actually formed by a chain of little sea horses. To heighten the sensation of movement, the clouds overhead roll past a brilliant sun as you swim along.

Dolphin is a solid game. It's challenging, but not too hard; visually striking, but not at the cost of game play; and above all, it's a game that you can almost beat. What more could you ask for? Maybe a mermaid?

Steer the octopus into the oncoming currents. This will slow him down.

RESCUE TERRA 1 ♪♪♪♪

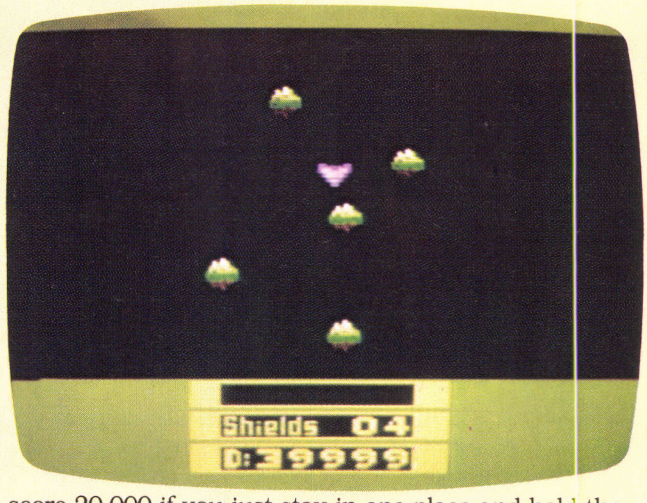
VentureVision/Atari VCS

By Dan Gutman

At first it seems like just another *Asteroids* ripoff in reverse—you're at the top of the screen and rocks come out of the bottom to crash into you or explode in your laser fire. You know the score, right? Well, you are *so* wrong!

Rescue Terra 1 does not put all its cards on the table at once. You may think you're playing *Asteroids*, but when you reach 29,999 light years (you start with 39,999), the asteroids start *shooting* at you. Then, at 19,999 light years, you switch to a side view of your space craft and the game switches from *Asteroids* to *Defender*. If you're still alive at 9,999 light years, you have the misfortune of encountering Fish Force Fields, advancing fishy bars that must be blown away for survival. At that point, you reach Terra 1, your goal. I'd love to tell you what that's like, but the fish won't let me.

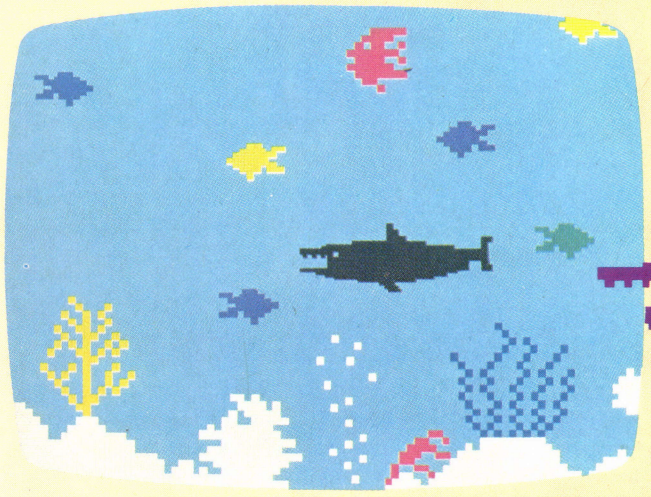
You can't get bored; you're too busy fighting for your life. The graphics are simple but adequate for a space game. My only complaint is that about 30% of the screen is eaten up by your score and number of lives remaining. Points come easy, maybe too easy—you can



score 20,000 if you just stay in one place and hold the fire button down. A nice touch in the game is that the two player versions are *cooperative*. One player moves the ship up and down while the other moves it left and right.

It's been quite a while since any newcomers have dared enter the crowded and competitive video game software field. VentureVision has a good first effort here. Let's hope we'll be seeing more from them.

Do not fire continuously. Punch off shots in bursts of twos.



SHARK SHARK ♪♪♪♪

Mattel/Intellivision

By Mark Brownstein

Having a fish tank is really a drag. First you have to dechlorinate the water. Then you have to make sure it's the right temperature. And you have to feed the fish every morning. If you forget, the fish remind you the next morning by swimming on their backs at the top of the tank. In *Shark Shark*, Mattel saves you all the trouble—and gives you more than just tropical fish. You get a shark, jellyfish, seahorses and assorted crustaceans which hang out in the coral at the bottom. Playing *Shark Shark* is kind of like real life; the big fish eat the little fish, and the littler fish eat those still smaller.

You are in control of a little yellow (or red, in the two-player version) angel fish, which swims around your 19-inch aquarium while trying to stay away from the bigger fish and out of reach of the jumping crabs and lobsters. If you can, you make your fish eat the littler fish (often it's very hard to tell which fish are smaller until you find out the hard way and lose your fish). Every thousand points your fish grows one size larger—and his menu grows accordingly.

Occasionally a big black shark comes onto the screen, eating everything in his path. There are three things you can do when the shark comes around: you can avoid him, you can give up and let him eat you or you can attack him. To kill the shark, you have to nibble at his tail—and let me tell you, it isn't easy. As soon as you bite it the shark is stunned, turns brown, then does a quick U-turn to bite back. Until you get the hang of it, it's curtains every time. The best way to kill him is to wait until the shark has just turned, and then move straight up or down in one quick motion, biting him on the way. Your fish will then end up above or below the angry shark. When he turns, you can strike again. Keep doing this until he curls up and drops to the bottom of the tank. Your reward for killing the shark is one extra fish.

You can't go too near the bottom, or a jumping crab will try to get you. If you go too near the sides, the shark or a bigger fish might come out and eat you.

Your best position is near the middle. If your fish is size one or two, you have to pick your food very carefully. It also takes more bites to kill the shark. A size-three fish can eat the seahorses, and a size-four or bigger fish can eat the jumping crustaceans while they are on their way *down* (which is also worth an extra fish). A size-five fish has the best position—he can eat almost anything except jumping crabs and lobsters, he takes fewer bites to kill the shark and each bite is worth more. To even out this imbalance, a size-five fish has to avoid the lethal jellyfish, which come out to annoy you and generally get in the way.

The graphics are very clean and colorful: bubbles floating on screen, an instantaneous reddening of the water as your fish bites the sand and nice easy fish motions are strong points of this game. The sound effects are fun, from the sound of the bubbles rising to the jingle at the end of the game. *Shark Shark* is amusing, not really violent (there isn't a single shot fired), and almost forces you into playing "just one more game" to beat your high score.

Try "drawing" a box around the shark; this is the best way to kill him.

ICE TREK

Imagic/Intellivision

By Frank Lovece

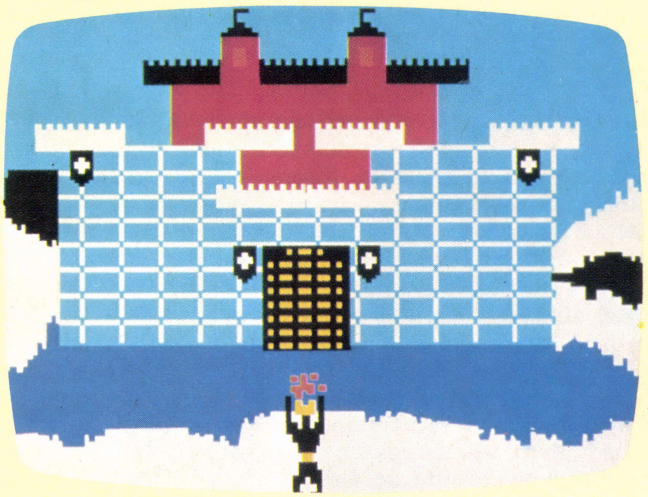
This is the voyage of the Norse god, Thor. His three-part mission: To explore strange new tundra, to seek out icebergs and caribou, to boldly go where no Norse god has gone before—namely, the castle of the Frost Giant and his Ice Beasts.

Ice Trek must mark the latest fad in video game adaptamania—mythological heroes. (Activision's *Oink* has already staked out nursery rhymes. What's next? Proverbs?) Here, the Norse god of thunder must ski (*ski?*) across a frozen wasteland fit only for caribou, traverse an iceberg-filled river (*river?*) and, finally, try to melt the castle of the dreaded Frost Giant. How and when the mighty Thor became a cross-country ski enthusiast, the myths don't tell. What icebergs are doing floating inland, the myths don't touch on either.

The skiing business is the easiest stage, requiring Thor only to dodge oncoming caribou and evergreen trees. Such, I suppose, is the stuff of legends. It's cute, but even in the most advanced of the six difficulty levels it's far too easy to master.

After saying toodle-oo to the caribou, Thor ventures to the river where, armed with grappling hook and torch, he must nab passing icebergs to form a bridge. Pressing either of the lower-side fire buttons on the Intellivision controller makes Thor toss his hook; the upper side fire buttons handle the fireballs from his torch, used to melt icebergs in danger of crashing into his bridge. The controller's disc is meant to handle the trajectory of hook and fireball both, but only succeeds with the latter. (It's getting to be a standard suggestion, but if you want to rack up points, get a replacement controller.) Unless Thor completes the ice-bridge, he can't get to the castle—unlike the caribou segment, where making it through is simply a matter of time.

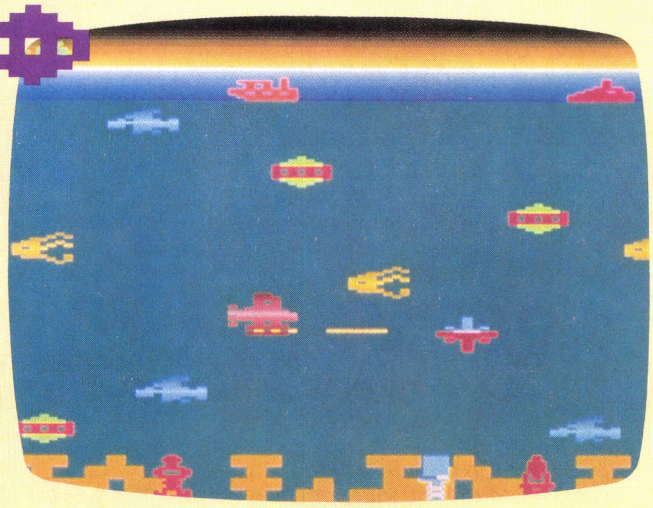
So far so good. Getting penalized for blood-letting and making use of obstacles are novel bits. But



what makes *Ice Trek* less than a masterpiece is the final segment—the graphics are nearly a note-for-note replica of Imagic's Intellivision *Demon Attack*. In both games' final segments, your on-screen fighter confronts the Devil's Castle and all his minions. Myths may spring from the same wells, but it's hard to believe the Devil and the Frost Giant share the same quarters.

The rest of the game is still interesting and ambitious, though any long-lasting appeal eludes me. It's neither a strategy game nor a shoot- em-up. Graphically, Imagic proves once again that it can devise the most beautiful Intellivision-compatible games going. The caribou are sinewy and move realistically and the Frost Giant's castle is nestled amid postcard-perfect mountains that would do the Oslo Chamber of Commerce proud. But for a game with mythic aspirations, *Ice Trek* is ultimately ordinary.

Don't have Thor use his ax to kill a caribou if you can help it. The Goddess of the Wilderness will show up with her bow and arrow, and if you think it's not nice to fool around with Mother Nature, try messing with angry wilderness goddesses.



BERMUDA TRIANGLE ♪♪♪

Data Age/Atari VCS

By Mark Brownstein

Data Age seems to be locked into developing games making use of "wallpaper" (in which the background scrolls past). In *Journey/Escape*, for instance, you maneuvered the character on the screen while he avoided groupies, managers, etc., which were on wallpaper scrolling from the top to the bottom of the screen. Although Bermuda Triangle is another scrolling game, it's really rather good.

You pilot a mini-sub inside the *Bermuda Triangle*. At the bottom of the seascape there are numerous artifacts—evidence of machinery from some long-gone civilization. You must bring your sub down to explore the bottom, use a tractor beam to pick up the artifacts one by one and bring each specimen to your research ship on the surface.

By the way, you aren't alone. On the way up (or down) you have to avoid giant squid, sharks, mines and other obstacles—all of them waiting to steal your valuable artifact, rob you of 100 points and in the case of the mine, destroy your ship. You can't pick up everything on the bottom either; if you touch a Bermuda Bomb, you lose a sub. An enemy ship is also waiting at the surface to steal your cargo and destroy the sub. Therefore, avoiding or shooting obstacles as you climb to the top isn't enough; you have to make a safe rendezvous with your research ship.

You can maneuver your ship anywhere inside a box bounded on the left and right sides of the screen and the top and bottom of the ocean. Your torpedoes can only fire to the right, so staying away from the corners and somewhat closer to the left side than the right seems to be the best way to play this game. In more difficult versions, searchlights illuminate the ocean and you have to avoid laser fire coming from the sea floor.

After you've picked up an artifact, wait until the enemy ship has gone by before surfacing. The research ship always comes after the enemy ship.

DEMON ATTACK ♪♪♪

Imagic/Odyssey²

By Art Levis

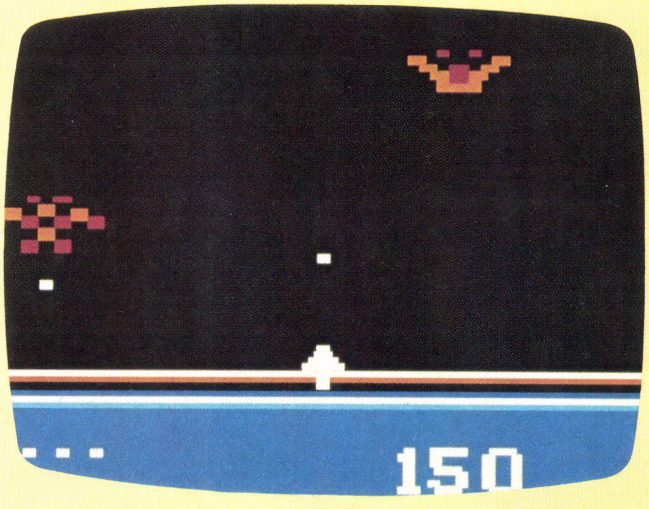
This is one to give you the willies. You're stranded on the frigid and forbidding surface of Krybor, a desolate planet composed entirely of ice. Your only companion is a laser cannon. This is clearly the final frontier. Suddenly, the screen is alive with great swooping creatures resembling prehistoric pterodactyls. Their intention? Your total destruction.

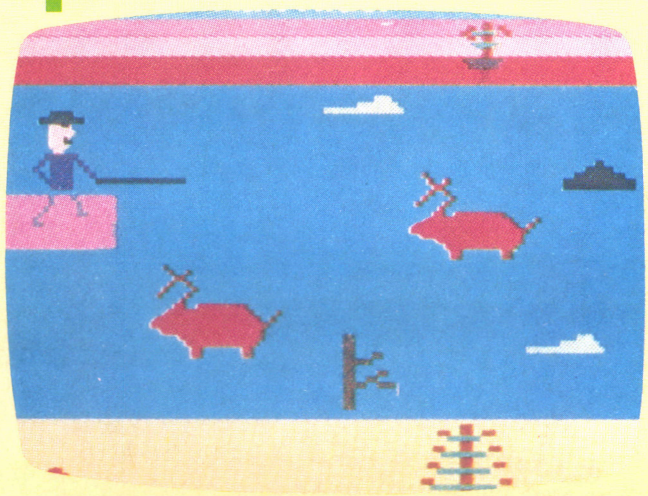
It's the Odyssey version of Imagic's *Demon Attack*. Though not as smoothly colorful or polished as the VCS version as far as graphics go, it's nevertheless challenging and fast and finally offers that rabid band of Odyssey afficionados the chance to pit their hand/eye coordination against something other than games created by the same old cadre of Odyssey programmers.

Players begin *Demon Attack* with three reserve "bunkers" (little squares at the bottom left of the screen), and can accumulate up to three additional bunkers by surviving succeeding Demon assault waves. As long as you've got bunkers, you're still in the game; once they're all gone, a final "coup de glacier" sends you to a cold and icy grave.

Demon Attack offers a range of variations, including one- and two-player versions and an advanced level giving our harried hero control over the laser missile's trajectory once it's fired.

Don't play the waiting game, shivering on the frozen tundra and waiting for Demons to come after you. An aggressive, on-the-go strategy consistently garners more points than a lazy, lie-low approach. Also, don't spend too much time on the more benign high-flying demons, even though they seem to be easier targets.





RAFT RIDER ♪♪

U.S. Games/Atari VCS

By Mark Brownstein

Raft Rider is one of the new games from U.S. Games that fits into their "family" entertainment category. Unfortunately, as is sometimes the case with "family" designated entertainment, it's dull.

In *Raft Rider* you control the movement of the title character who rides a raft as it travels between the bottom and top of your television screen. Aside from going up and down, the only real movement in the game is done by the river, which travels from right to left across your set. The points you earn get higher the farther you go along the river.

There are several obstacles. A beaver runs along the riverbank at the bottom of the screen and tosses wood into the river. Occasionally a moose takes a dip in the river. You also have to avoid rocks and what look like white caps. Run into any of these and you lose one turn.

At entirely random points you'll find a blinking triangle (alias a gold nugget) sitting in the river. Maneuver your raft to the same level, extend your pole and you can pick up a bag of gold which is displayed at the bottom of the screen. Collecting three bags earns you an extra raft, up to the limit of four. If you don't aim well your chances of running into the nugget and losing a raft are excellent. If you pass the nugget, don't bother reaching back for it—you can't pick it up.

This game might have been more fun if the controls worked better. U.S. Games doesn't clearly say so, but controlling the raft involves moving the joystick up or down in the direction you want the raft to go, and immediately stopping any further motion by quickly moving the stick to the left. Getting the hang of this is tricky.

The graphics are fair, the sound effects are not remarkable and game play is S-L-O-W. If you get kicks out of avoiding moose, or hunks of wood thrown by beavers, this game might be worth considering. Otherwise it's too hard for young kids and too boring for adults.

TURBO ♪♪♪

Coleco/Colecovision

By Dan Gutman

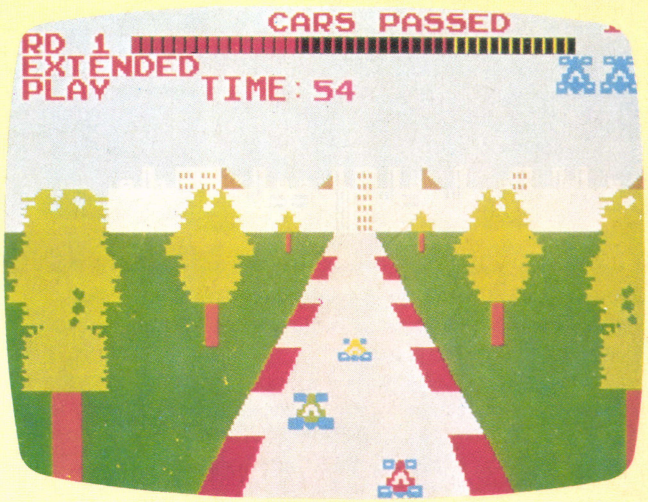
Make no mistake—Coleco games, though incredibly accurate translations, are not identical to the arcade games they imitate. In Sega's *Turbo*, the arcade game is louder than the home game, the colors more brilliant and the scenes change more often. Plus, the arcade game is *much* harder than the Coleco cartridge. A 15,000 point scorer in the arcades can expect to hit 50,000 in his living room. This is not to say home *Turbo* isn't good. In fact, it's terrific—just different.

You are a race car driver, of course. You've purchased your driving expansion module (steering wheel and accelerator) and plugged it into the left joystick port. Your joystick, which functions as a stick shift, plugs into the right. There are four difficulty levels, and don't start at four because it's *impossible*.

The game is not monotonous because the scenery changes every thirty seconds or so. One instant you're driving in a city, the next you're near the ocean. You also have snow driving to deal with (you skid), night driving, sharp corners and patches where the road is covered with oil slicks. You get the feeling, as in *Demon Attack*, that the deeper you get into this game, the more there is to see.

You don't score points by going fast or covering the most miles, but by passing cars. You have 99 seconds to pass 30 cars or more at 50 points apiece. If you pass 30, you get another 99 seconds. This time passed cars are worth 60 points. And so on.

To get around sharp corners safely, try to drive alongside another car at the same speed. That way you won't hit anyone or get hit from behind.



SPIDER FIGHTER ♪♪♪

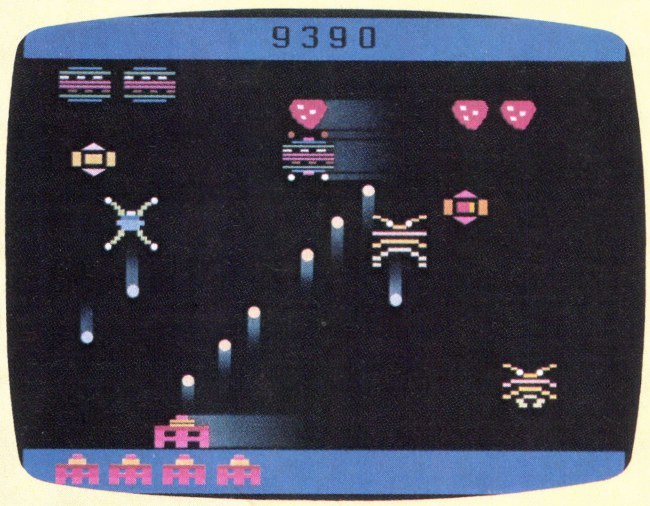
Activision/Atari VCS

By Phil Wiswell

Spider Fighter falls into a familiar, overworked category of video games. You control the side-to-side movement of a cannon along the bottom edge of the screen. Your object is to shoot enemies overhead for points before they destroy your cannons. And every time you annihilate a complete wave of the space attackers, another more deadly wave sets up. If that sounds like *Space Invaders* and other games, it should. But there's a lot more to *Spider Fighter*.

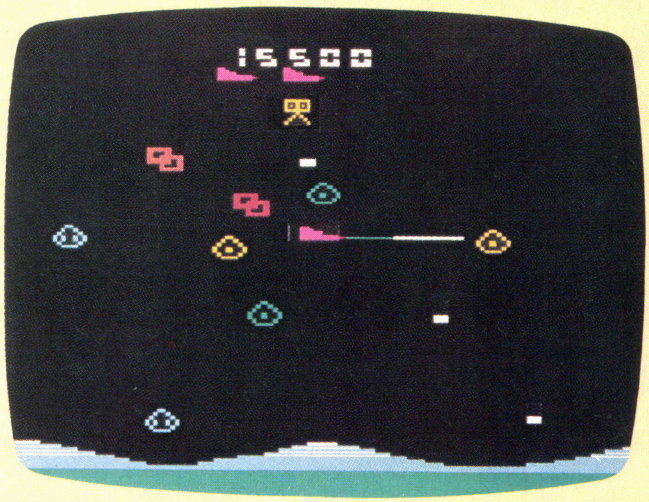
To begin with, there are four different types of enemies. Mother Nests that move and fire rapidly, Pods and Protectors that drift lazily along, and Attack Spiders that dance around like crazy, spreading hailstorms of laser bombs. These last will remind you of *Kaboom!*, except here you've got to dodge all the bombs.

There are also three pieces of fruit in the upper right corner which belong to you. Ten or 15 seconds into a wave, one of your enemies will grab a fruit and try to exit via the left edge. The game ends either when you run out of cannons, or when all your fruit gets stolen. I found that by taking up a position about one-fourth of the way from the left edge just before each wave sets up



and letting go a blast aimed at a point I thought the enemy would move to, I could save the fruit. Your cannon will shoot trios of bullets automatically if you hold down the fire button.

Pods and Protectors turn into spiders as soon as you kill the Mother Nest in each wave. So avoid the deadly Mother Nest until last.



STARGUNNER ♪♪

Telesys/Atari VCS

By Marc Berman

Sharpshooting: a legacy as old as the gun—older, if you count the bow and arrow. The Who's Who of sharpshooters includes Buffalo Bill, Annie Oakley, The Red Baron, Luke Skywalker, and now, *Stargunner*.

The targets here are not defenseless buffalo or even Empire TIE-fighters—they're invading space outlaws, Sphyzygies. You, the stargunner, zoom around in an orange space shuttle look-alike and try to blow them out of the sky before they take over your planet. You have three lives in which to do this, but you get an extra life for every 10,000 points you score. You lose lives when you get hit by bombs from the omnipotent satellite, Bobo, or when you crash into an enemy craft. When a new enemy ship forms, it flies together in four pieces, warning you to get out of the way. If the ship forms on you, it's goodbye, gunner.

There are three waves of gameplay. In the first you have one adversary at a time, in the second wave two at a time, and so forth. After the third wave the dauntless Sphyzygies start the cycle over, but faster than before. Conceptually and visually, *Stargunner* bears some resemblance to *Defender*.

Alas, the graphics are only fair. The landscape passes below, looking as monotonous as an interstate freeway. The two varieties of invaders look like rotating beehives or mah jong tiles. Nothing has much color. Only Bobo has any character; he zips across the top of the screen.

There are slow, medium, fast and beginner levels of play for one or two players. The slow and beginner levels are pretty much the same. For an extra-hard game, flipping the difficulty switch lets you fly and shoot only to the right.

The elaborate story that comes with the cartridge doesn't compensate for the undistinguished gameplay. What detracts even more is the uncreative sound effects which drone on at a constant level without ever enhancing the characters or building tension. It's the kind of incessant, annoying din that brings fathers to their knees and mothers in from the kitchen yelling, "Will you turn that darn thing off!?"

SQUEEZE BOX ♪♪

U.S. Games/Atari VCS

By Suzan D. Prince

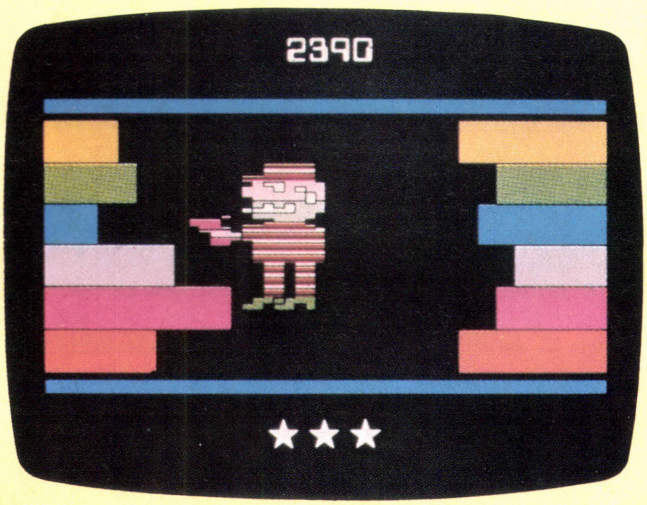
In my opinion, convicts and kids don't mix. Somehow, parcelled in among the Family Fun Series' menagerie of adorable birdies and bucktoothed little gophers, one ornery armed gunman (name of Bungling Barney in our press release, though not in the boxed instruction sheet) managed to slip past the U.S. Games powers that be.

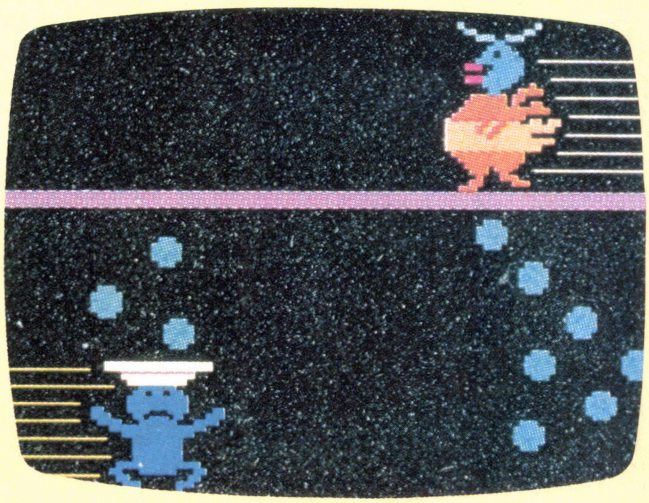
Using his Block-Blasting Pistol, Barney must shoot his way out of jail by knocking out multicolored bars that keep moving in on him in various formations (faster, slower, one wall stationary, etc.). Each time he succeeds, he walks off into another room for points and into the same predicament. Again and again and again.

True, it will take the young audience *Squeeze Box* is obviously targeting a little while to master, but I've a gut suspicion that even very small children will quickly become bored with this cartridge. Besides, there is a very heavy underlying theme here: If Barney gets "electrocuted" three times instead of escaping his jail cell, a little devil with a trident does a *danse macabre* implying that Barney will burn in Hell for all eternity. Is this any kind of a constructive game for kids? Better they should stick with gophers and birdies.

For pure and simple game play, *Squeeze Box* is just a thinly disguised *Breakout* and not a very good one at that. Although its designer touts the game as a skill and judgment test, it offers little in the way of even mildly interesting challenge.

Barney always faces left at the start of each game, so fire left immediately instead of wasting precious time turning right. For quick reaction to swiftly moving walls, you must angle your joystick precisely in the direction of each block.





EGGOMANIA ♪♪♪

U.S. Games/Atari VCS

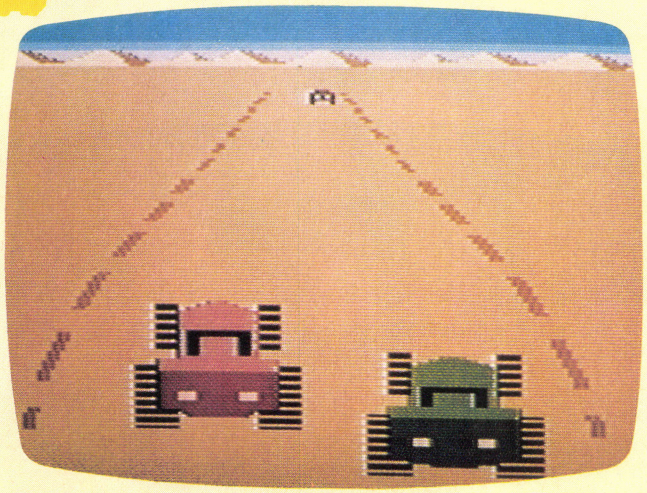
By Sherry Jacobs

After years of being told not to, it's finally time to start putting all your eggs in one basket. Or, rather, one hat. This new game from U.S. Games turns you into a blue bear who balances his hat on top of his head and tries to catch eggs being dropped by a disheveled bird perched above. And you'd better catch them, because the yolk which spills out from the uncaught eggs makes a gooey trap for the bear. Each dropped egg adds depth to the yolk sea, further submerging the bear until there's nothing but his hat moving back and forth, and then . . . no bear at all. Just egg yolk. What a souffle!

If you manage to catch all the eggs before they hit the ground, you get your chance at revenge. Your hat becomes a lethal weapon spewing out egg bullets. If the bear hits the bird, not only do you get extra points but the bird sheds its feathers and flutters upward toward the heavens dressed only in its polka-dotted longjohns. Bye bye birdie. Also, if you shoot the bird, some of the mess on the floor gets cleaned up.

You won't be wearing egg on your face if you buy this top-notch game. In addition to being fun and challenging, the graphics are splendid—bright, exuberant colors with well-defined feathers on the bird. The sound is a victory dance and everytime the bird does the Mexican Hat Dance for dropping a swarm of uncaught eggs, you want to do a turkey trot.

To get the most eggs and the least mess, follow each wave of eggs closely, barely moving the bear and holding the hat directly under the eggs, noting the pattern of the egg drop. When shooting at the bird, keep fire at a minimum since active fire sends the bird into a frenzy. If you want to fry the bird, keep cool.



BAJA BUGGIES ♪♪♪

Gamestar/Atari 400/800

By Steven Slon

You're in a jen-you-wine two-tone green metal-flake dune buggy with a pair of monstro sand haulers in the back and some smaller knobbies up front. You're racing across the Baja desert against a pack of 80 other good old boys and girls.

Right away when you boot up *Baja Buggies*, it appeals to you with some spiffy 3-D visuals. The tires spin and the craggy mountain range in the distance scrolls right and left as you snake through the turns. In front of you the scenery is desert-crisp. A brown expanse of sand extends to the mountain range. Behind the mountains is a fine strip of crimson, suggesting dawn. Above you the sky is a sharp desert-blue, cloudless except for one creamy cumulus, which also scrolls.

This is a racing game of the *Turbo* school. A pair of dotted lines that fade into the middle distance shows you your course. You control right and left movement with the joystick and brake with the red "fire" button. (Rear stopping lights glow when you brake.) As you get up to about 80 (as indicated on the speedometer on the bottom of the screen) you start to pass other drivers.

Baja Buggies is tricky. It's easy to get trapped on the outside of a curve and careen out of control into the pipes of the guy in front of you. There are five levels of difficulty. At the harder levels, the buggies you try to pass leave you less room on the road.

The game would get our top rating except for a few flaws. 1) The sound is drab; a mindless revving engine and a dull white-noise crash. 2) There's no accelerator, only a brake. 3) There's no shift, though this is not so important. 4) Joystick control is not as fast as paddles would be. Why not design this for paddles, since it's only left and right movement?

Keep your eye on the middle of the screen to watch cars appearing instead of watching your own buggy. Look for patterns.

ALIEN GARDEN ♪♪♪♪

Epyx/Atari 400/800

By Phil Wiswell

If you're even slightly bored by endless shoot-em-ups and chase-em-downs; if *Defender* leaves you drained and *Pac-Man* leaves you panting; if you're hungry for some *unusual* electronic fun with computers and games. . . then put on your overalls and take a stroll through the garden—*Alien Garden*, that is.

The world of *Alien Garden* is a graphically stunning geometric wonderland of shapes and colors, consisting of 24 colorful, geometric crystals arranged in four columns. Only a few crystals are on screen at a time because the world constantly scrolls up and down, reversing direction when it hits an edge of the playfield.

The crystal formations in the *Alien Garden* behave according to strict rules, but you'll have to discover them game by game. Each crystal is comprised of perhaps fifty smaller pieces that sometimes yield points. But don't be surprised if you forget about scoring—a good round doesn't necessarily mean lots of points.

Meanwhile, your character—a cosmic insect equipped with mouth, stinger and wings—can move anywhere on screen, shifting the playfield right and left. As a game begins all the crystals are identical, but your critter can change that. You can do three things to a crystal as it passes by: 1) bite it with your mouth, 2) sting it with your tail, or 3) stroke it with your wings. The crystal will react in one of three ways: 1) it will grow geometrically, but retain its general shape and color, 2) it will change shape and color, becoming the next generation of crystal (there are 20 different generations you can put a crystal through), or 3) it will explode, removing the part of your body that caused the damage. Sometimes you die.

How do you know what to do in *Alien Garden*? You don't. You experiment. And you do a lot of dying at first. But a touch of the action button resets the game with the same set of rules, so that everything you learned in the last game applies. If you turn the game off, then back on, the crystals will all be different and will react differently than during the previous game.

Certain generations of crystals will be "edible," meaning you will score points as you carve away pieces with your mouth. But here's the interesting mechanism that really elevates the strategy required: you get one point per piece of crystal you eat *multiplied* by the number of different generations of crystals you have grown in your garden. You will quickly catch onto the "farming" technique of finding a generation of crystal that can be both grown and eaten. First grow it with your wings (increasing its number of edible pieces), then eat it down to size. Believe me, you can create some complicated situations for yourself.

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SERPENTINE ★★★★

Broderbund/Atari 800

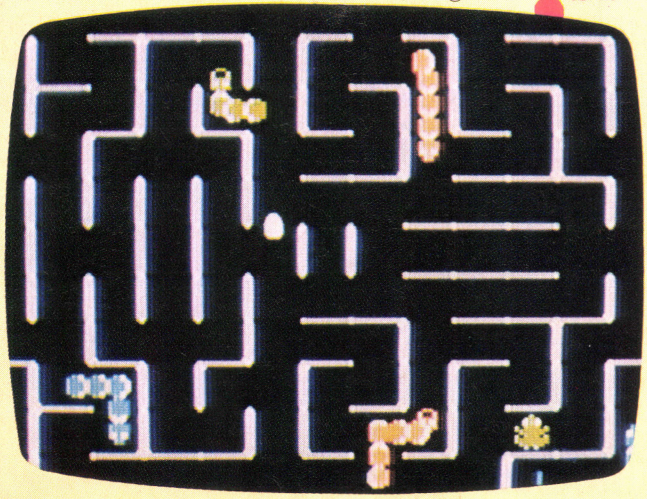
By Paul Backer

Yes, Virginia, there *are* other maze-chase games besides *Pac-Man*. *Serpentine* is a brand new game from Broderbund Software and it doesn't look or play like *Pac-Man* at all. It adds an excellent new touch to maze-chase games—you don't have to clear the maze of dots; all you have to do is kill enemy serpents in a room.

You kill serpents by hitting them head on, providing you are longer than they are. How do you become longer than your opponent? You either eat a frog—which will make you one segment longer—or attack an enemy serpent from the rear, which will make him shorter. Much shorter. When you attack from the rear, size doesn't matter at all. What matters is your ability to avoid the serpents' friends, and your skill with the joystick.

When you attack a smaller serpent from the front, your serpent gains the number of segments your opponent had, up to a maximum of seven. To add more interest to the game, you and your enemy serpents lay eggs. Each time you lay an egg, you lose one segment. If they are allowed to hatch, they become little two-segment friendly or unfriendly serpents, depending on who laid the egg. The unfriendlies can eat your eggs, just as you can eat theirs. They can also eat frogs and receive the same benefits from these amphibious snacks as you do.

The game's overall quality is excellent—the graphics are sharp and the sound effects are fun. For example, the serpents sound like freight trains. You're also able to keep current as well as all-time high scores. My only complaint is that you are not given any degree of control over when or how or where you get to lay an egg. It is rather inconvenient to be chasing somebody who is one segment shorter than you are, and then lay an egg and inadvertently become the same length as he is. And guess who wins all ties? But who ever said nature was fair?



Stay as close to the top or bottom of the screen as you can—that's where the frogs come out. Get them before your enemies do and before they eat your eggs.

WIZARD OF WOR ★★★★

Roklan/Atari 400/800

By Paul Backer

As you probably know, Real Men (or Women, as the case may be) don't run from things with names like Inky and Clyde, unless it's a matter of life or death. Well now there is *Wizard of Wor*—an alternative which means no more humiliation at the hands of some yellow or red sucker. In *Wizard of Wor* you can turn around and vaporize them. *Wizard of Wor* is the game that never really caught on in the arcade because the mazes were somewhat complicated. Despite this, it generated a small cult following wherever it went. Now it's back, and with a vengeance.

The object of *Wizard of Wor* (as in most other action games) is to survive for as long as you can. You are provided with a team of either three Worriors, five Worriors or seven Worriors, and up to two people can play simultaneously. You find yourself in one of several mazes which are roughly as complicated as the *Pac-Man* and change at every new level. You are equipped with a rifle that looks like a small cannon or a very large flame thrower. And you are not alone! There are 18 monsters hunting you and they range from blue Burwors to the Wizard himself, who for some reason resembles a dwarf throwing lightning bolts.

Among maze/action games this one is absolutely unique because it allows two people to play together as a team or against each other. What this means is that you can go out and metaphorically shoot your friend in the back. This game is probably the best maze/action game for the Atari that I have ever seen. The graphics are exquisite, the sounds are good and the monsters are MEAN.

If you are only going to buy one maze game this year, this is definitely the one to get. At earlier levels it is easy enough for a novice but at higher levels it is challenging enough for an expert.

Always look for a corridor that only has two possible entrances, then stand in the middle of it and keep firing back and forth. If you're playing with an ally, then stand in the SAME spot and face different ways.

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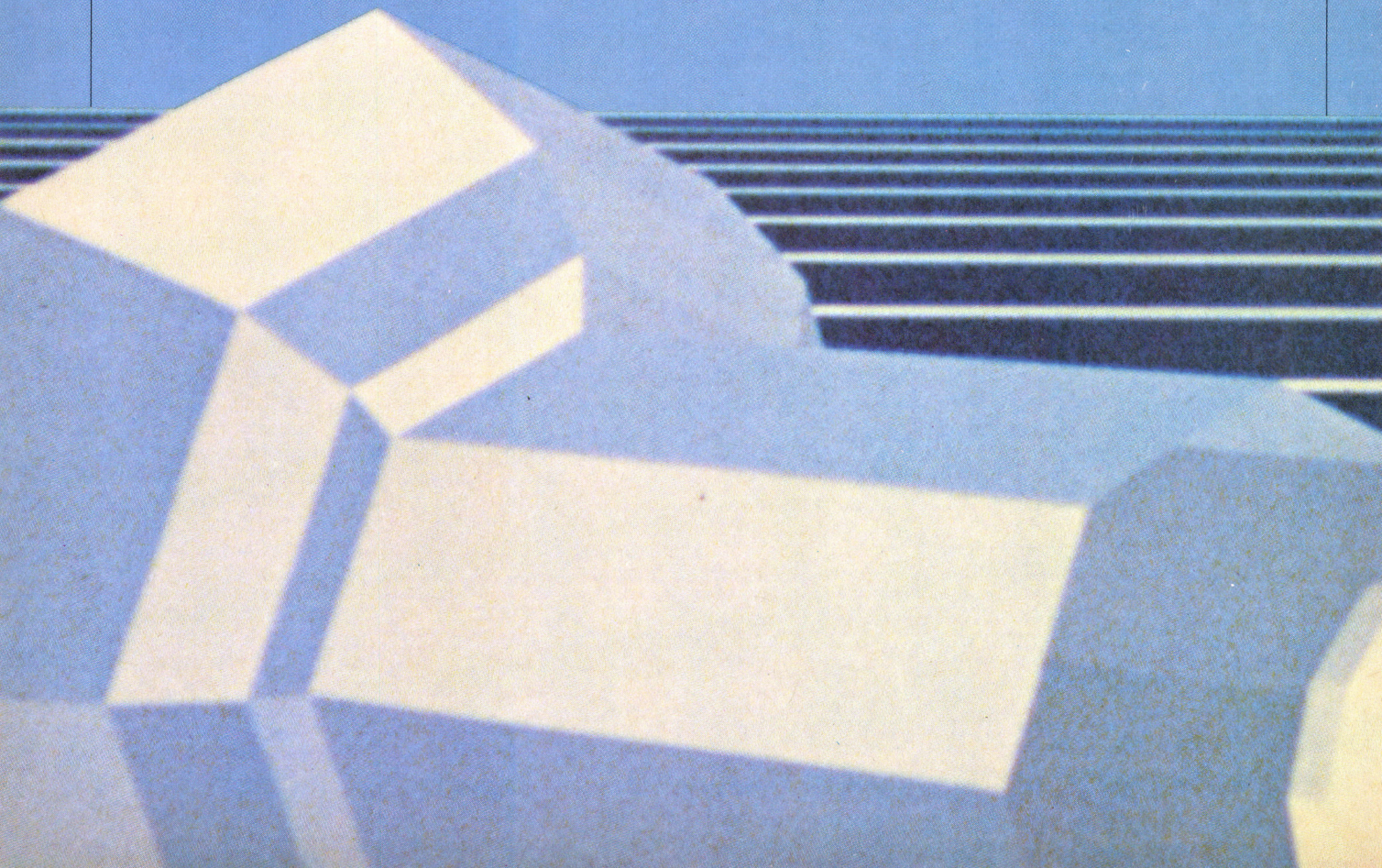
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Masterpiece KEYBOARD

Computer graphics reach the outer limits

Computers are replacing everyone and they're going to replace the artist too, right? No way! The fact is that computer graphics are getting so spectacular that scientists can't keep up. They're trying to design graphics systems that will require no computer training at all to let the real artists have a crack. Meanwhile, it won't be too long before some of the fancier computer graphics systems will be available to the ordinary home computer user at a less than fancy price.



By Frank Moldstad

Diving, whooshing bursts of color, shapes that transmogrify themselves into other shapes, images that the human eye could never see in nature but seem perfectly natural to us now—computer generated graphics are as much a part of our lives now as television itself. From the opening of ABC's Wide World of Sports to the movie *Tron*, the computer is everywhere—the new king of the animation studio. What a contrast from the days of painstaking cel by cel inking that brought drawings to life in the pre-computer era.

And what a contrast in color, too. Old-fashioned animation was limited to whatever colors the artist could mix up in his ink stand—and once the colors had been decided, that was it. You could change a character from, say, red to blue, but to be done smoothly, the process would be so time-consuming and difficult that you'd probably think twice about it.



Scientific American 1979 Designer George Parker Digital Effects

With computer graphics the artist is limited only by his imagination. In fact, the capabilities of current image generators so far surpass the human imagination that the artist has virtually no limits at all. These machines can theoretically generate 16.8 million colors on infinite geometric planes . . . simultaneously.

As spectacular as the computer has proven to be in animation, though, no one discounts the human element. It takes people to create the software, program the computers and make sense out of the unlimited array of visions available. Computer-generated graphics enhance the traditional methods, they don't replace them.

Past productions and those now in the works also prove that computer graphics can stand on their own as an art form. In fact one graphics lab, The New York Institute of Technology, is producing an animated feature-length movie—entitled *The Works*—composed entirely of computer graphic animation. Neither actors nor pens and paper were used in the production, just a lot of human concepts brought to completion with new tools.

Dollars And Senses

How do they do it? It's not just with a keyboard. Many images are generated using a pen-like stylus and an electronic tablet which senses both motion and pressure. Although such systems for professionals now cost over $100,000, some of their elements are incorporated in simple graphics software packages for today's home computers. Designers say advances in software and hardware technology will bring more sophisticated tablet-based systems into your hands in the next few years—units that will give you 3-D images and cost under $1,000.

Says Marco Cardamone, of the Computer Graphics Lab in New York, "Within the next two or three years, there will be home computer graphics systems under $1,000, with a 32-bit microchip. We see an enormous market out there." Cardamone's firm is the marketing end of the New York Institute of Technology. Now it sells a $105,000 professional computer-based graphic tablet system called Images, but the company plans to bring out a home version in two or three years.

The variety of effects available to a designer using a professional computer graphics tablet is mind-boggling, down to the width and characteristics of simple lines drawn with the stylus. He can start by drawing freehand directly onto the electronic tablet. Or, he can select from a menu of geometric shapes programmed into the computer, choosing the shape or shapes which best fit his needs. The geometric shapes can be combined, rotated, blended with hand-drawn animation or with photographic images on the



Times Square Digital Effects Inc. For Columbia Pictures

viewing monitor. Not only shapes, but colors, textures and patterns are retained in the computer's memory. These are called algorithms, mathematical formulae translated into computer language to do a specific task.

Say an animator wants to create a close-up depiction of the hands of two relay racers as they pass a baton. He begins by calling up a baton-like tubular shape from the computer menu. This is done by pressing a point on the tablet corresponding to the place on the computer menu (displayed on a monitor) where the desired information is listed. The baton shape can be reduced or enlarged by degree with the touch of the proper command on one of the other menus.

With the baton displayed on a separate viewing monitor, any desired texture, such as a wood-grain, can be applied by outlining the baton on the tablet and touching the wood-grain code on the menu. Then, on the tablet, a hand is drawn around the baton, and another is drawn poised to receive it. Instead of appearing on the tablet, the hands take shape on the viewing monitor as they are drawn.

Commonly, a palette of 265 color gradations appears at the bottom of the viewing monitor, grouped in a preprogrammed color scheme. Many other palettes are available in the computer's memory, and colors can be mixed to get the necessary hue. If the designer wants to make the hands surreal, he can shade them



red, green or any other color, and put strange textures on the skin. To add color, he touches the shade he likes on the palette, enters it by touching the area to be colored and it's done.

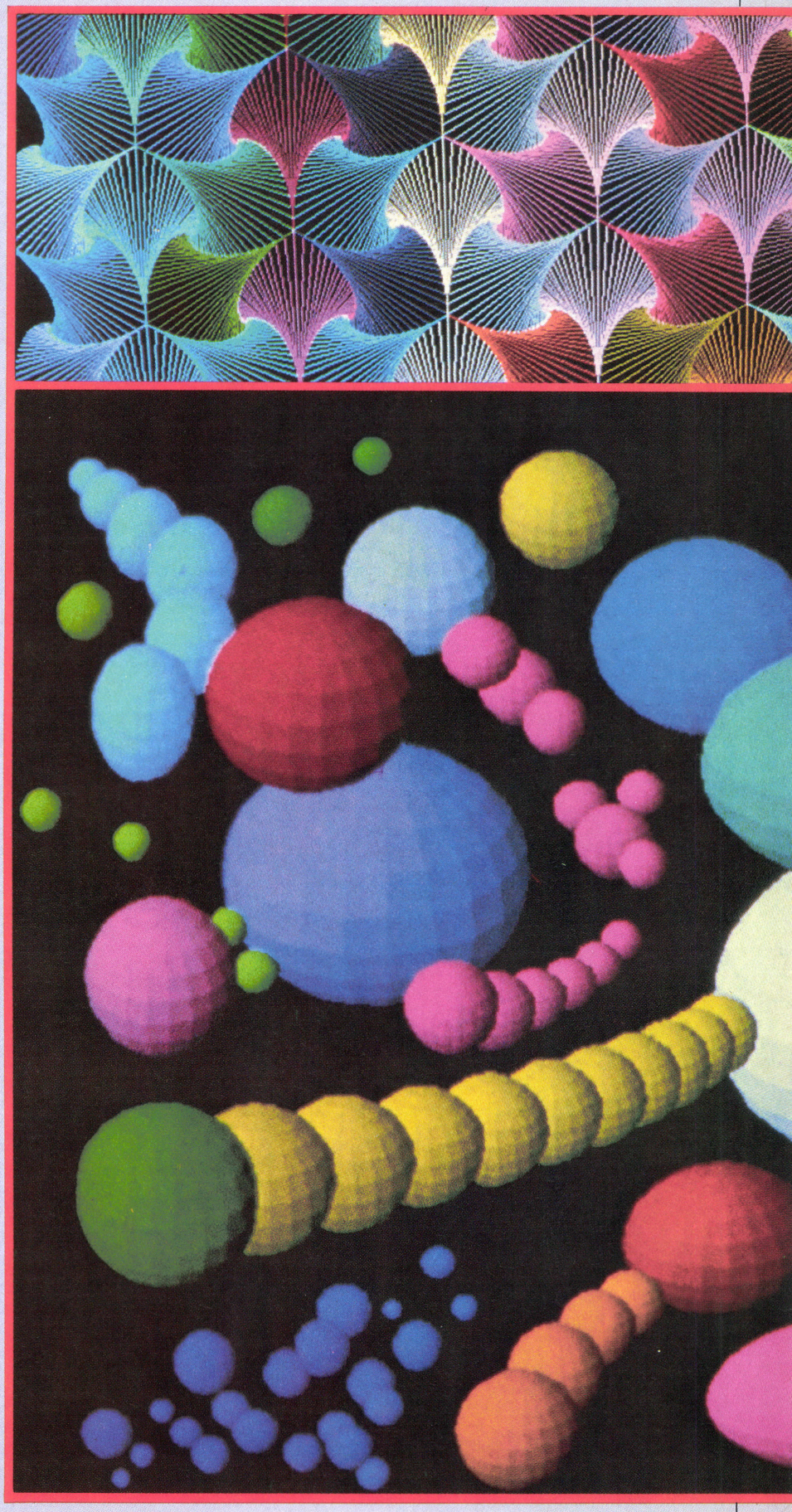
Once the computer animator is satisfied with his initial drawing, there's a radical departure from traditional animation techniques. A traditional animator would draw a series of hands coming closer together for the baton exchange. Not the computer graphics artist. He draws the first drawing and others in the sequence every 10 frames or so, punches in a few commands, and the computer averages out the motions that have occurred in between. It's a vivid example of how computer animation can save time and money in producing quality results.

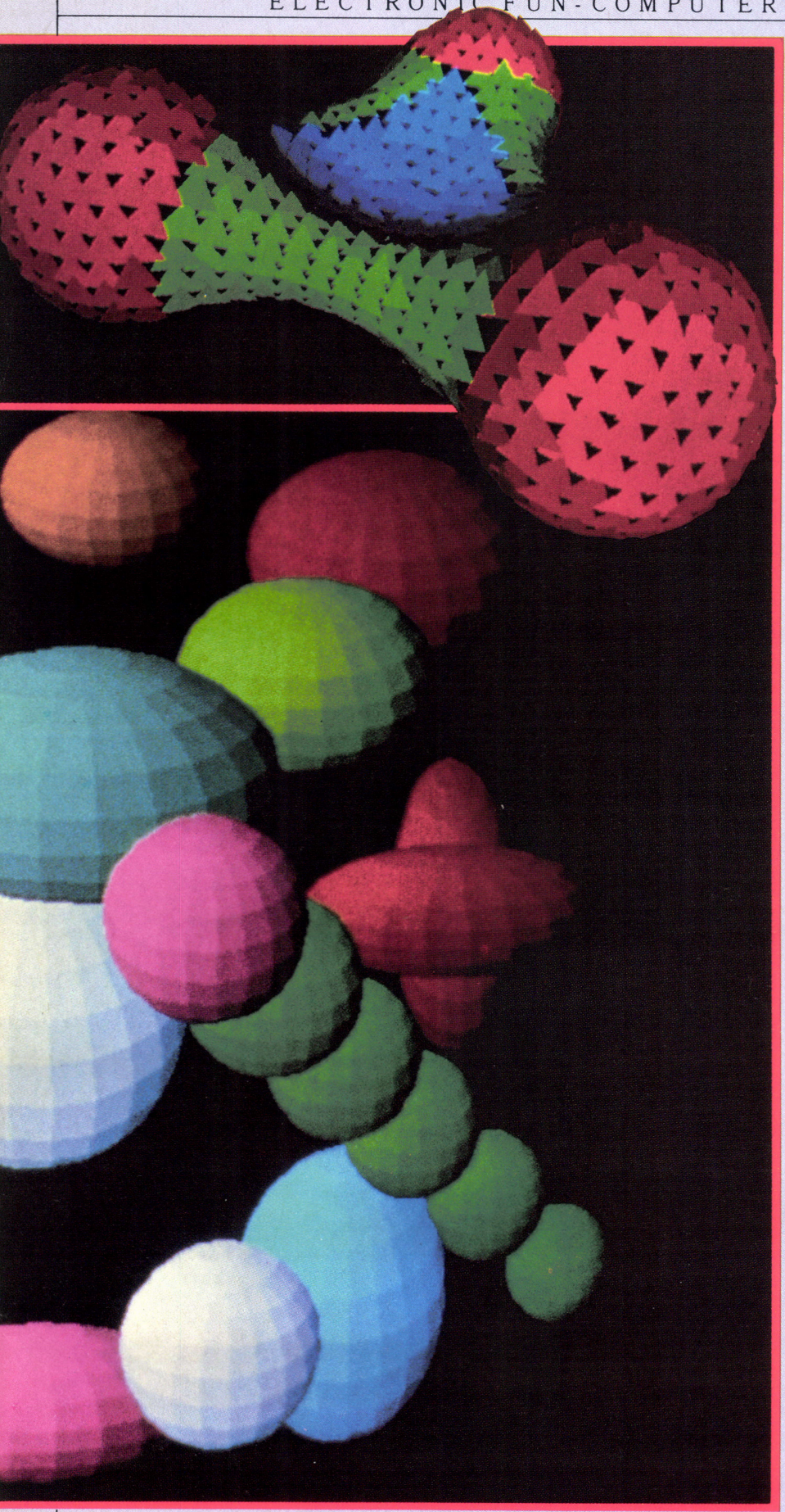
Raging Thunderstorms

Like a painter, the computer animator can select from different brushes. He has a variety of line thicknesses and characteristics from which to choose. For example, one brush enables a designer to draw a line composed of spheres with a simple stroke of the stylus, looking rather like a series of planets in sequence, each sphere obscuring part of the one behind it. Another brush you might see on TV weather programs has a cloudlike stroke, so animators can depict raging thunderstorms over southern California. Any conceivable line can be drawn, from wide textured swashes to delicate pen-strokes.

A computer graphics designer can also integrate holograms or videotaped images into the picture with a digitizer. This device uses a high-resolution camera to feed images into the system and they appear on the viewing monitor. Then the artist can work on them just like any other image, adding or removing colors and lines.

A good computer artist is limited only by design ability, imagination and familiarity with the system he is using. Because artistic ability is so important, creators of the graphics systems are trying hard to make their machines as accessible as





"Aurora" By Richard Katz, Vectrix Corporation. "Three Atoms" courtesy of Greg Abram, University of North Carolina at Chapel Hill. "In the Beginning" By Richard Katz, Vectrix Corporation.

possible to the non-computerphile.

"We're trying to develop a programmable user-friendly unit for people with no computer background," says Larry Ellen, designer with New York-area based Magi, a large contributor to *Tron*. "The idea is to attract more people with an artistic background. We don't want to have an industry full of people with a scientific background."

Although computer-fear might seem to loom as a major impediment to the artistic side of computer graphics, it's not really such a serious problem. For instance, computer graphics systems are already user-friendly to the extent that all four computer graphics designers at Computer Creations, in South Bend, IN, had no computer background when they were hired.

"Our whole philosophy is to provide a system that is easy to use for non-computer people," says Computer Creations president Thomas Klimek. "We bring in people with a design and graphics background and teach them the system. After a while, they're not thinking about bits and bytes. It's not something you'll learn in an afternoon. But assuming you have artistic skill, it's like you're switching from watercolors to oil paint. You have to learn the strengths of the medium."

Bit Part

George Parker, a designer and animator with Digital Effects in New York, creates computer graphic imagery for feature films, TV commercials and a host of other applications. Although he has been working with computers for five years, his background is design. "My function as a designer," he says, "is to be a liaison with art directors and creative people, to tell them what's possible and then to do it. We can do almost anything visually."

In addition to the previously mentioned Magi, a number of companies worked on computer graphics images in *Tron*—Digital Effects and the New York Institute of Technology among them. Digital Effects created the movie's Bit character with a

Continued on page 92

THE COMPLETE

...for all Atari 400/800 computer users—

ACORN has three games for the system in the Strategy and Sports categories. Among the Strategy games are *Lost Colony* and *Everest Expedition*. Company's Pick: *Formula 1 Racing*. Player can test his driving ability on five different tracks with four skill levels. Operated with joystick control simulating five-speed gear shift; added intrigue comes from obstacles (oil slicks, crashes, explosions) that the driver must avoid. Cassette only. 32K required. **$29.95**. *Address: 1945 Gallows Rd., Vienna, VA 22180.*

ADVENTURE INTERNATIONAL has 20 games for the system in the Arcade and Adventure categories. Arcade games include *Preppie II*, *Stratos* and *Rally Speedway*. Among the Adventure games are *Sea Dragon* and *Scott Adams Graphic Adventure*. Company's Pick: *Preppie*. Player guides prepster Wadsworth Overcash through country club playfield to pick up wayward golf balls, avoiding water traps and lawn maintenance machines. **$29.95**. *Address: PO Box 3435, Longwood, FL 32750.*

ARTSCI has 4 games for the system in the Sports and Strategy categories. Strategy games include *Gomokin*, *Reversi* and *Poker/Solitaire*. Company's Pick: *Cypher Bowl*. Realistic football game featuring high resolution graphics and the ability to call up to 256 offensive and defensive plays including running, punting, passing and blocking. **$49.95**. *Address: 10432 Burbank Blvd., North Hollywood, CA 91601.*

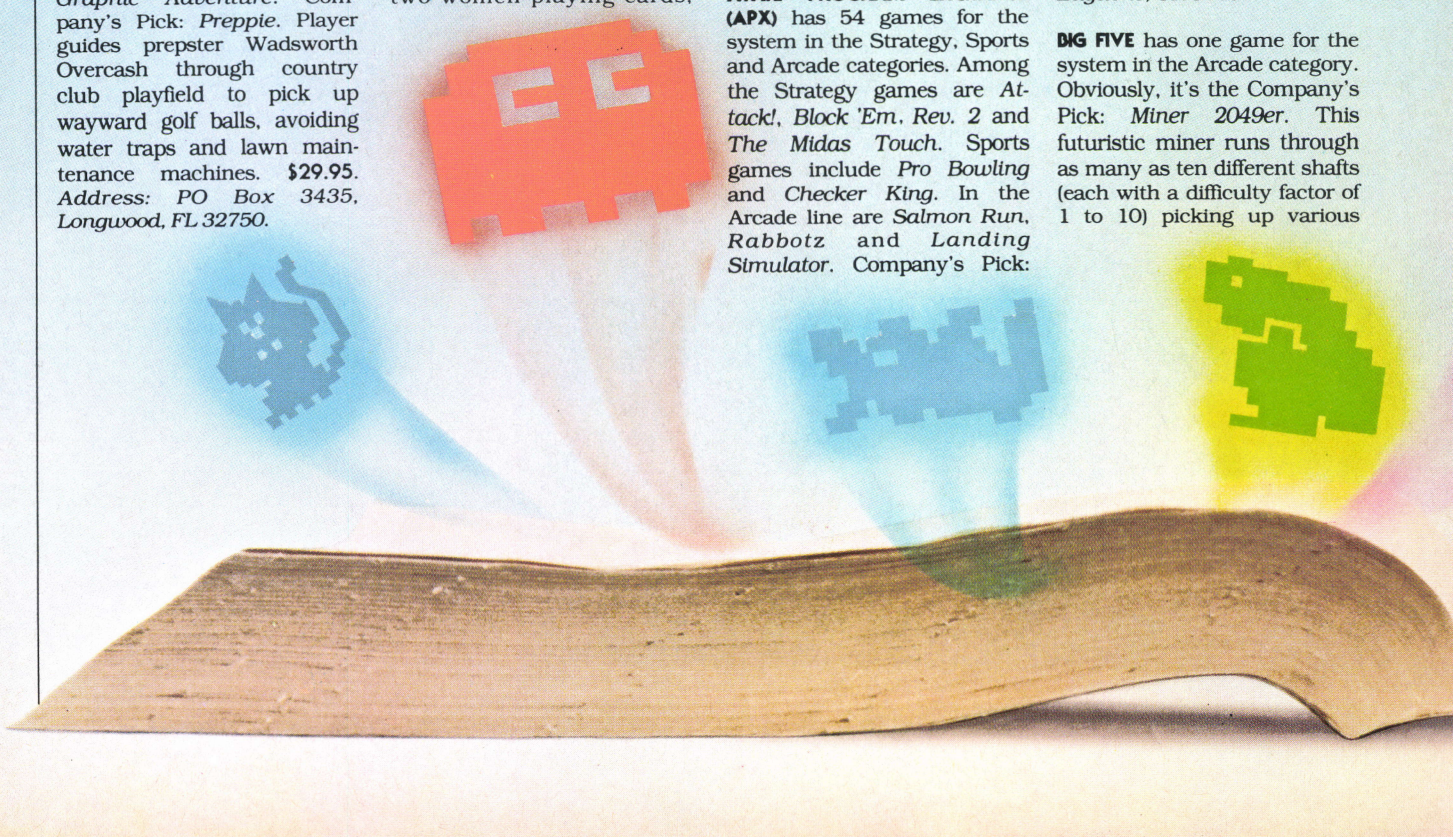
ARTWORX has 18 games for the system in the Arcade, Adventure and Sports categories. Arcade games include *Encounter at Questar IV* and *Hazard Run*. In the Sport areas there's *Golden Gloves*. Among the Adventure games is *The Vaults of Zurish*. Company's Pick: *Strip Poker*. Just what it sounds like—two women playing cards, removing clothing after losing individual rounds. Artworx president Arthur Walsh says, "this game has what may be the highest resolution graphics around, of nearly photographic quality." **$34.95**. *Address: 150 N. Main St., Fairport, NY 14450.*

ATARI has 15 games for the system in the Arcade and Sports categories. Among the Arcade games are *Space Invaders*, *Missile Command* and *Centipede*. In the Sports area the company counts *Computer Chess* and *Basketball*. Company's Pick: *Pac-Man*. The closest adaptation yet of the trend-setting arcade games features the ever-hungry yellow gobbler and his arch-enemies the ghosts. **$44.95**. *Address: PO Box 50047, San Jose, CA 95150.*

ATARI PROGRAM EXCHANGE (APX) has 54 games for the system in the Strategy, Sports and Arcade categories. Among the Strategy games are *Attack!*, *Block 'Em, Rev. 2* and *The Midas Touch*. Sports games include *Pro Bowling* and *Checker King*. In the Arcade line are *Salmon Run*, *Rabbotz* and *Landing Simulator*. Company's Pick: *Dog Daze*. Have you ever wondered what attracts Fido to every hydrant he passes? This game may not tell you but it gives you the chance to put yourself in Fido's place. You are in control of a dog that must beat a rival pooch to a fire hydrant. **$22.95**. *Address: PO Box 3705, Santa Clara, CA 95055.*

AVANT-GARDE CREATIONS has two games for the system in the Arcade and Educational categories. The Educational game is *Word Scrambler and Super Speller*. Company's Pick: *Lazermaze*. It's either you or the monster in this challenging maze game. Trapped in a grid of mirror-like reflectors, you must shoot your lazer at a hidden beastie or take the consequences, namely a fireball! **$29.95**. *Address: 210 E. Third Ave., Euguene, OR 97401.*

BIG FIVE has one game for the system in the Arcade category. Obviously, it's the Company's Pick: *Miner 2049er*. This futuristic miner runs through as many as ten different shafts (each with a difficulty factor of 1 to 10) picking up various



GAMER'S GUIDE

the biggest Who's Who of computer games

objects while trying to avoid collapsing tunnels and cave-ins. "It's a semi-humorous game," says Big Five's Ted Witberg. Cassette only. **$49.95**. *Address: PO Box 9078-185, Van Nuys, CA 91409.*

BRODERBUND SOFTWARE has 11 games for the system in the Arcade, Fantasy and Action categories. Arcade games include *Apple Panic*, *Genetic Drift* and *Stellar Shuttle*. Fantasy games include *Serpentine* and *Labyrinth*. Among the Action games are *Track Attack* and *Sea Fox*. Company's Pick: *Choplifter*. Player operates helicopters which must rescue groups of men from exploding barracks and transport them to a safety zone. Each barrack contains 16 men. **$34.95-$44.95** Disk requires 48K . *Address: 1938 Fourth St., San Rafael, CA 94901.*

BUDGE CO. has one game for the system in the Arcade category. Company's Pick: *Raster Blaster*. Originally designed for the Apple format, this video pinball game simulates the real thing with high graphic resolution and sound effects. Disk only. **$24.95**. *Address: 428 Pala Ave., Piedmont, CA 94611.*

CAVALIER COMPUTER has one game in the Arcade category. Company's Pick: *Bug Attack* Described by Cavalier's Ron Nitchals as a "highly entertaining but often exasperating move'n'shoot game." This entry pits players against numerous insects gradually descending from the top of the playfield. **$29.95**. *Address: PO Box 2032, Del Mar, CA 92014.*

CBS SOFTWARE has six games for the system in the Adventure, Arcade and Action categories. Adventure games include *Boulders & Bombs*. The Arcade division incorporates *K-Razy Shoot-Out*, *K-Razy Antiks* and *K-Razy Kritters*. The Action offering is *K-Star Patrol*. Company's Pick: *Mountain King*. Accompanied by Grieg's "Hall of the Mountain King" music, you guide your man through a mountain in pursuit of a treasure, menaced by bats and spiders. Cassette only. **Open price**. *Address: 41 Madison Ave., New York, NY 10010.*

DATAMOST has three games for the system in the Arcade category. Arcade games include: *Roundabout* and *Pogoman*. Company's Pick: *Air Strike*. Scramble-style space game pits players against death-dealing obstacles from above and below. Programmer Bob Flanagan warns that this is one game not for beginners. "Even the lowest difficulty level (there are five in all) will frustrate the most accomplished player." Cassette only. **$39.95**. *Address: 8943 Fullbright Ave., Chatsworth, Ca 91311.*

DATASOFT has 11 games for the system in the Arcade and Adventure categories. Arcade games include *Canyon Climber*, *Tumble Bugs* and *Moon Shuttle*. Among the Adventure games is *The Sands of Egypt*. Company's Pick: *Zaxxon*. Home computer version of the Sega arcade hit features the familiar 3-D graphics, scrolling screen and the deadly robot...Zaxxon. **$39.95**. *Address: 9421 Winnetka Ave., Chatsworth, CA 91311.*

DYNACOMP has 30 games in the Adventure and Sports categories. Adventure games include *Star Base 3.2* and *Valdez*. Sports offering is *Cactus League Baseball*. Company's Pick: *Valley of Kings*. Adventure game places the player in three unique mazes. Players must accumulate as much treasure as possible while battling fierce princes, marauding bandits and man-eating beasts. Disk only. 48 K required. **$29.95**.



Illustration: Ann Neuman

Address: 1427 Monroe Ave., Rochester, NY 14618.

EDU-WARE has two games for the system in the Educational and Strategy categories. The Educational offering is *Spelling Bee Games*. Company's Pick: *Prisoner II*. Strategy game based on television series has players attempting to escape from an island prison by going through 20 different rooms, each with its own unique challenge. Disk only. 48K required. **$34.95**. *Address: PO Box 22222, 28035 Dorothy Dr., Agoura, CA 91301.*

EPYX has 17 games for the system in the Strategy category. Among them are *Temple of Apshai, Monster Maze, Hellfire Warrior* and *Keys of Acheron*. Company's Pick: *Jumpman*. This multi-level game has players defusing bombs hidden among 30 different screens while avoiding vampire bats, falling bombs and changing landscapes. Disk only. 32K required. **$39.95**. *Address: 1043 Kiel Ct., Sunnyvale, CA 94086.*

FIRST STAR SOFTWARE has 4 games for the system in the Arcade category. Among them are *Dangerous Cargos, Squish* and *Metamorphosis*. Company's Pick: *Astro-Chase*. Sophisticated space action game features 34 levels of difficulty, seven animated intermissions and a unique "Single Thrust Propulsion" system allowing players to fly their craft in one direction and shoot in any other. Designed by Atari software competition award winner Fernando Herrera. **$29.95**. *Address: 22 East 41st St., New York, NY 10017.*

GAMESTAR has three games for the system in the Sports category. Among the Sports titles are *Starbowl, Football* and *The Adventure of Dutch Dugan*. Company's Pick: *Baja Buggies*. Turbo-style 3-D desert road race game features three different tracks and two levels of play. Drivers must steer their cars through hazardous tracks, avoiding rival autos and anticipating deadly curves. **$31.95**. *Address: 1302 State St., Santa Barbara, CA 93101.*

GEBELLI SOFTWARE has seven games for the system in the Arcade category. Among the Arcade games are *Andromeda, Firebird* and *Candy Factory*. Company's Pick: *Embargo*. Fast action Frogger-style obstacle game has players attempting to move boxes from one end of the cargo depot to the other. Ersatz longshoreman must avoid both animate and inanimate objects to reach their objective. Cartridge only. **$44.95**. *Address (1787 Tribute Rd., Suite G., Sacramento, CA 95815.)*

HAYDEN SOFTWARE COMPANY has 4 games for the system in the Strategy and Arcade categories. Games of Strategy include *Reversal* and *Go*. Among the Arcade games is *Bulldog Pinball*. Company's Pick: *Sargon II*. Chess program designed to challenge both beginners and adults with seven difficulty levels. **$29.95—$34.95**. *Address: 600 Suffolk St., Lowell, MA 01853.*

HUMAN ENGINEERING SOFTWARE (HES) currently has a couple of games on both disk and cassette for the Atari 400/800. Among them *Coco I and II* and *The Gridrunner*. Company pick: *The Gridrunner*, in which you have to defend Earth's orbiting solar power station against enemy alien Droids. **$39.95**. *Address: 71 Park Lane, Brisbane, CA 94005.*

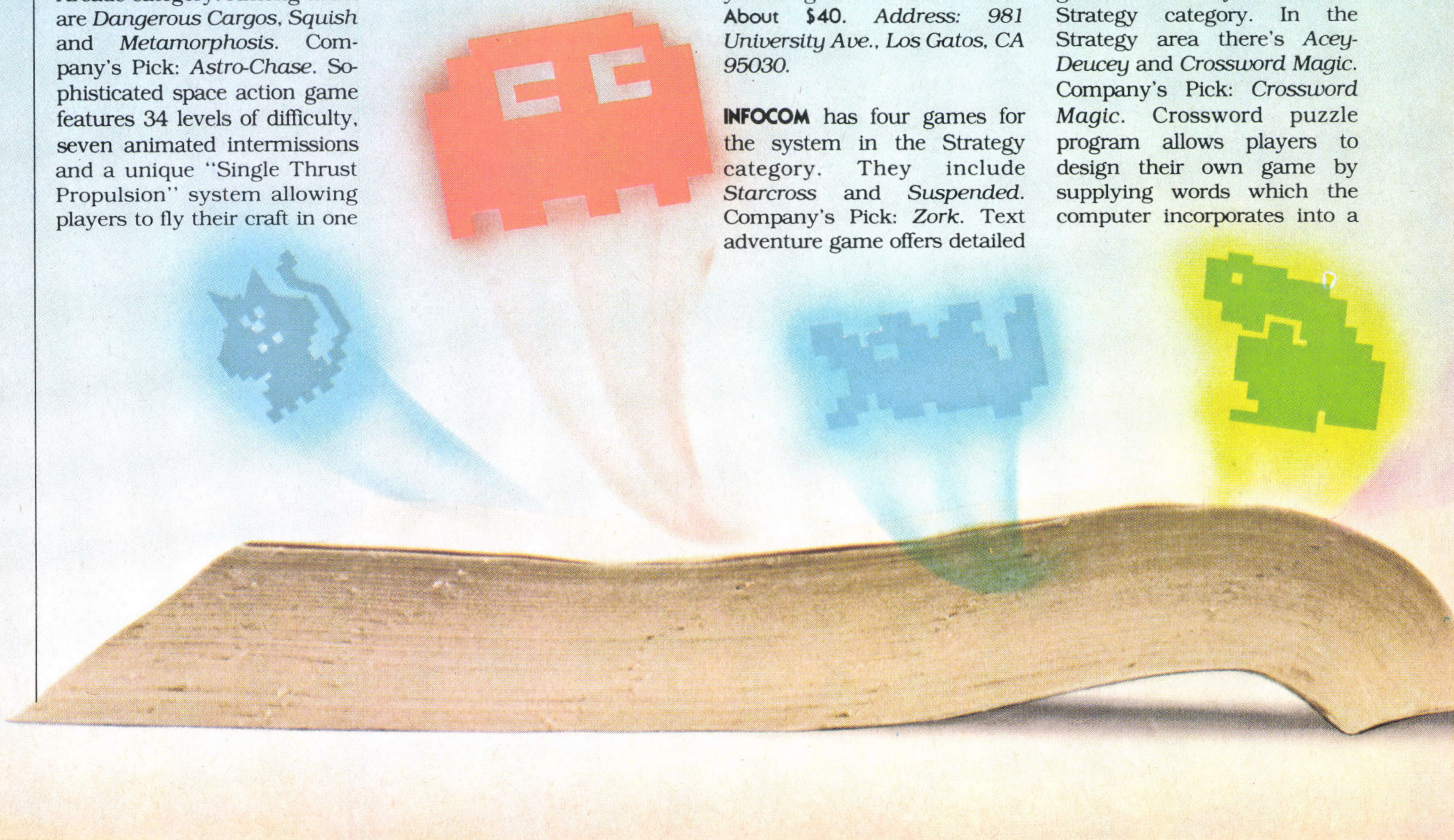
IMAGIC so far has its bright *Demon Attack* and *Atlantis* for the Atari computer systems. Company pick: *Demon Attack*: A strange breed of bifurcated bird is attacking you and you've got to kill them all. About **$40**. *Address: 981 University Ave., Los Gatos, CA 95030.*

INFOCOM has four games for the system in the Strategy category. They include *Starcross* and *Suspended*. Company's Pick: *Zork*. Text adventure game offers detailed novel-style scenario and allows players to choose from a variety of options and outcomes. Disk only. 32K required. **$39.95**. *Address: 55 Wheeler St., Cambridge, MA 02138.*

INTERNATIONAL SOFTWARE MARKETING has one game for the system. Company's Pick: *Prism*. "Story" game features text, graphics and sound effects offering clues to the location of three valuable keys. $19.95 (cassette), **$24.95** (disk). *Address: 120 E. Washington St., Syracuse, NY 13202.*

KRELL has six games for the system in the Adventure category. Among the Adventure games, *Sword of Zedek, Odyssey In Time, Pythagoras & The Dragon*. Company's Pick: *Time Traveller*. Text adventure game transports player to one of 12 time periods where he/she must choose a side (Allies vs. Axis, David vs. Goliath, etc.) and battle to the death. Disk only. 48K required. **$39.95**. *Address: 1320 Stonybrook Rd., Stonybrook, NY 11790.*

LGS COMPUTERWARE has two games for the system in the Strategy category. In the Strategy area there's *Acey-Deucey* and *Crossword Magic*. Company's Pick: *Crossword Magic*. Crossword puzzle program allows players to design their own game by supplying words which the computer incorporates into a



crossword puzzle matrix. Disk only. 44K required. **$49.95.** *Address: 1589 Fraser Dr., Sunnyvale, CA 94087.*

LIGHTNING SOFTWARE has one game for the system in the Educational category. Company Pick: *MasterType*. Zap the enemy word by typing in the correct version or get zapped. Game is a typing instructional program featuring 18 progressive lessons. Disk only. 32K required. **$39.95.** *Address: PO Box 11725, Palo Alto, CA 94306.*

MICROCOMPUTER GAMES has 28 games for the system in the Arcade and Adventure categories. Among the Arcade games are *Space Station Zulu* and *Gypsy*. Adventure games include *Telengard* and G.F.'s *Sorceress*. Company's Pick: *Legionnaire*. You are Julius Caesar in ancient Gaul, battling the barbarian hordes in this board-style strategy game created by Chris Crawford. The program uses scrolling screens, sound and artifical intelligence to enhance game play. **$35-$40.** *Address: 4517 Harford Rd., Baltimore, MD 21214.*

MUSE SOFTWARE has one game for the system in the Arcade category. Company's Pick: *Castle Wolfenstein*: War game finds the player (an American soldier) trying to escape a Nazi prison camp with vital war plans. Field commissions are granted as points accumulate. Disk only. **$29.95.** *Address: 347 N. Charles St., Baltimore, MD 21201.*

PROGRAM DESIGN (PDI) has 10 games for the system in the Arcade category. Among the Arcade titles are *Swamp Chomp, Clipper, Star Crystals* and *Android/Captivity*. Company's Pick: *Moon Base Io*: fast action adventure game featuring voice narration. You must navigate through alien mine fields, land on Jupiter's three moons and destroy the enemy mothership to save the Earth's outposts. **$29.95.** *Address: 95 East Putnam Ave., Greenwich, CT 06830.*

QUALITY SOFTWARE has 15 games for the system in the Adventure, Arcade and Strategy categories. In the Arcade area, *Star Base Hyperion* and *Tank Trap*. Among the Strategy games are *Block Buster* and *Fastgammon*. In Adventure the company offers *Ali Baba*. Company's Pick: *Jeepers Creepers*. Arcade quality maze game requires players to draw lines about boxes while avoiding the omnipresent wasps. When a maze is completed, players move to the next difficulty level (six in all). Disk only: **$29.95.** *Address: 6660 Reseda Blvd. 105, Reseda, CA 91335.*

RANTOM SOFTWARE currently has two games available for the Atari computers: *Thrax Lair* and *Trust*. Company pick: *Thrax Lair*, in which an animated pterodactyl flies around a cave killing insectoids. *Address: PO Box 5480, Avon, CO 81620.*

ROKLAN SOFTWARE has 10 games for the system in the Arcade category. Among the Arcade titles are *Wizard of Wor, Deluxe Invaders* and *Anti-Sub Patrol*. Company's Pick: *Gorf*. High resolution adaptation of the arcade hit pits players against the evil Gorfian Empire. Game incorporates all four screens and seven difficulty levels. Cartridge and Disk only. **$39.95-$44.95.** *Address: 3335 N. Arlington Heights Rd., Arlington Heights, Il 60004.*

SCHOLASTIC has three games for the Atari computers: *Microzine, Turtle Tracks* and *Square Pairs*. *Microzine* is available only on disk, *Turtle Tracks* on both disk and cassette and *Square Pairs* on cassette. Company pick: *Square Pairs*—a simple game based on the old favorite Concentration. An added plus is that in addition to being able to play the pre-programmed games, players can create their own game using the simple authoring language. Address: Scholastic, 730 Broadway, New York, NY 10003.

SENTIENT SOFTWARE has one game for the system in the Adventure category. Company's Pick: *Cyborg*. Science fiction text adventure game that, according to the company, "is written by an actual professional writer!" The story-game asks for player involvement through character development and sophisticated plot line rather than point or treasure accumulation. Disk only. **$34.95.** *Address: PO Box 4929, Aspen, CO 81612.*

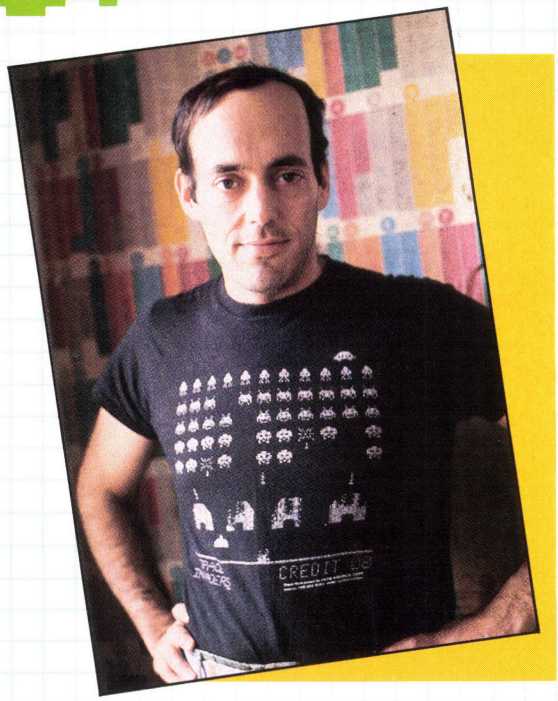
SIERRA ON-LINE has 14 games for the system in the Adventure and Arcade categories. In the Adventure line there's *The Wizard and the Princess, Mystery House* and *Ulysses and the Golden Fleece*. In the Arcade games are *Marauder, Mouse Attack* and *Jawbreaker*. Company's Pick: *Frogger*. Loyal adaptation of the arcade hit has players guiding a hapless frog through a highway and adversary infested pond to reach his/her

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PHIL WISWELL'S GAMEMAKERS

Name This Gamer



Ron Dubren, of the Name This Game team

Forty-year-old Ron Dubren is probably not the only video game designer with a Ph.D., but he may be the only one with a Ph.D. in Clinical Psychology. If that doesn't insure his uniqueness, he's also a fiction writer and playwright. Now he's working with Dave Nutting Associates, a subsidiary of Bally, on a new coin-op that he can't talk about. Fortunately, there's lots he can talk about.

Interview by Phil Wiswell

EF: Have you always been a game player?

DUBREN: You'll like this answer and I swear it's true. My parents had a little grocery store in a country town in Michigan. I couldn't have been more than two years old, but I remember very vividly the pinball machine they had in the store. And I remember not only being enamored with all the lights and sounds, but I remember *playing*. My parents tell me one of my first words was "nickel." If you want to talk about formative influences, maybe that experience is why I wound up doing this interview!

EF: When someone finds out you're making money designing video games and says something like "Gee, I wish I had your job. Playing games all day long must be great!" What does that do to you?

DUBREN: There are all kinds of romantics in the world! At first it was a lark, but the reality is that you are constantly challenged creatively to come up with something that's good and original, but something that also has to be commercial. It's hard creative work—there's no easy thing about it. I've gotten to the point now when I'm playing the games where I spend less and less time enjoying myself. I'm into an analytical point of view about them. I really can't just have fun playing anymore.

EF: But you're still a video game player, right?

DUBREN: Yes, but let's be honest. About two or three months ago was the first time I owned a home video game system. I had played them occasionally, but they didn't excite me—I was a coin-op player. What I saw in terms of production value and play value wasn't as good on the home systems.

EF: What are your favorite coin-ops?

DUBREN: I was weaned on *Space Invaders*, but I never played it well and it isn't a favorite. The first coin-op I really got into was *Scramble*, next was *Pac-Man* and the game after that was *Centipede*. I tried to get into *Defender*, but it's too much. For me, the attraction to video games was not really playing them. It was the same thing that attracted me to design traditional board games. It was the imaginative challenge of coming up with a game that people would like, that would be entertaining, that would have substance and depth and staying power.

EF: The video game industry in general has not used the talents of the traditional game designer, such as yourself, as in the toy and board game industry.

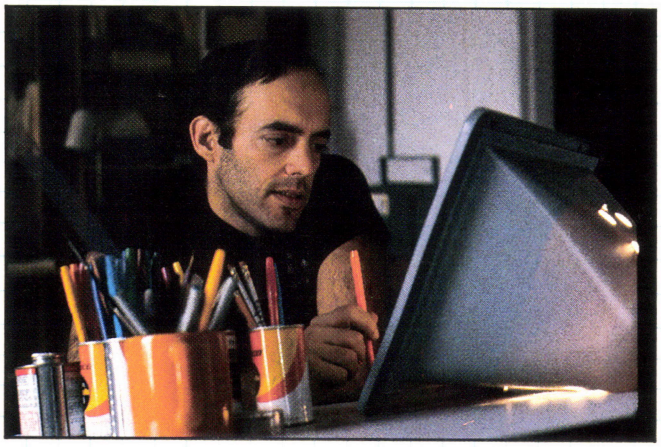
DUBREN: That's changing. Coleco now advertises that it's hiring game designers—not programmers, game designers. Coleco is fully aware that to fill the demand for new games, hiring programmers is not the same thing as hiring game designers.

EF: Is the team approach to video game design the direction the industry is moving in?

DUBREN: Yes, but it's different everywhere. Clearly Activision is taking a "star" approach, where they are only interested in designers who are also programmers, where they locate a single game's conception and development in a single programmer/designer. I don't know how long they can sustain that. It was okay when video games were in their infancy—the criteria by which you would evaluate them were more lenient. Now companies are *beginning* to look for better production value through a production team, using a specialist who knows about graphics, another who knows animation and another who knows about sound.

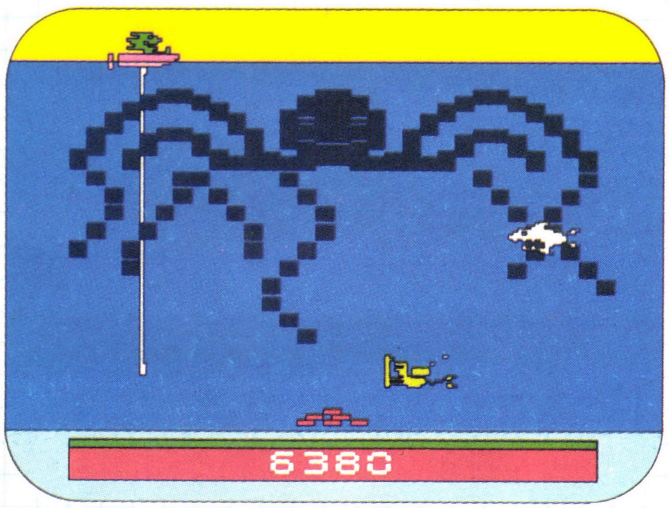
EF: These machines are that complex?

DUBREN: It's not that the machines are that complex. After you've seen a Nintendo game of *Popeye* where the character looks very close to his cartoon cousin, you won't be satisfied with an abstract space invader. As long as the VCS has its built-in 4K limitations, there isn't *too* much you can do graphically. You would get more quality if more memory were available. So now the direction in home video games is towards the 8K chip, and the 12K chip that CBS is doing. One thing that chip is going to allow for is more graphic differentiation. And as it does, I suspect a lot of the individual programmer/designers will be at a loss to express themselves because they are not primarily graphics artists or animators.



EF: As traditional game designers become involved in video games, will there be less copy-cats?

DUBREN: No question about it. But unfortunately, the bottom line for the industry *is* the bottom line—dollars and cents. If Odyssey or TI or Panasonic develops a new system, the first game they're going to do is Odyssey *Invaders* or TI *Invaders* or Panasonic *Invaders*. Why? Because it has a track record of success. There will always be a demand for it, especially while there are people yet to be exposed to this type of game. It's clear that "nothing succeeds like success." Rip-offs are basically the watchword of the industry, but that doesn't mean there won't be more and more of a place for original games.



EF: When did you come up with the concept for *Name This Game*?

DUBREN: Actually, *Name This Game* was developed as a concept in February 1982 to try to sell to Parker to use with their *Jaws* license only Parker lost the license. The upshot was that I had this game partly developed when I showed it to Jim Wickstead, who had done a lot of U.S. Games' VCS software, and he liked it.

EF: At that point the game was nothing more than a story board?

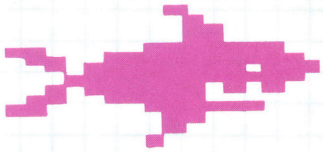
DUBREN: Yes, a story board. This was in July when it was presented to U.S. Games. Approval came in August and the game was developed very quickly. Jim had a very good team that worked on the game as a collaborative effort. So part of the reason it was developed quickly is that five people worked on it. The concept was mine, but development should be credited to James Wickstead Design Associates. If you want to use the analogy with the film industry, for *Name This Game* I played the roles of both writer and director. I had plenty of input.

EF: Did the game change much?

DUBREN: Oh sure. My original concept for the air supply was that the person in the boat would be dropping air tanks and they would settle to the bottom of the sea. The diver would have to catch them instead of just grabbing the end of the air hose. But we couldn't have all that happening with the octopus' tentacles already moving back and forth. We really ask a lot of the VCS to do a game with this much action.

EF: When did you finish work on the game?

DUBREN: October. And no, it wasn't that they wanted it for the Christmas season. It just happened to fall



together more quickly than anyone anticipated.

EF: August to October still seems like a fast schedule.

DUBREN: Well remember, Activision's approach is to have a single designer work on a single game from beginning to end. In terms of man hours, a single designer might take six months, but he's doing everything. We had a graphics designer working on graphics concurrently with two programmers, a sound designer and a game designer to provide fresh ideas.

EF: Once you have the story board worked out you have a lot of the graphics in mind, yet you still want to use a graphics artist?

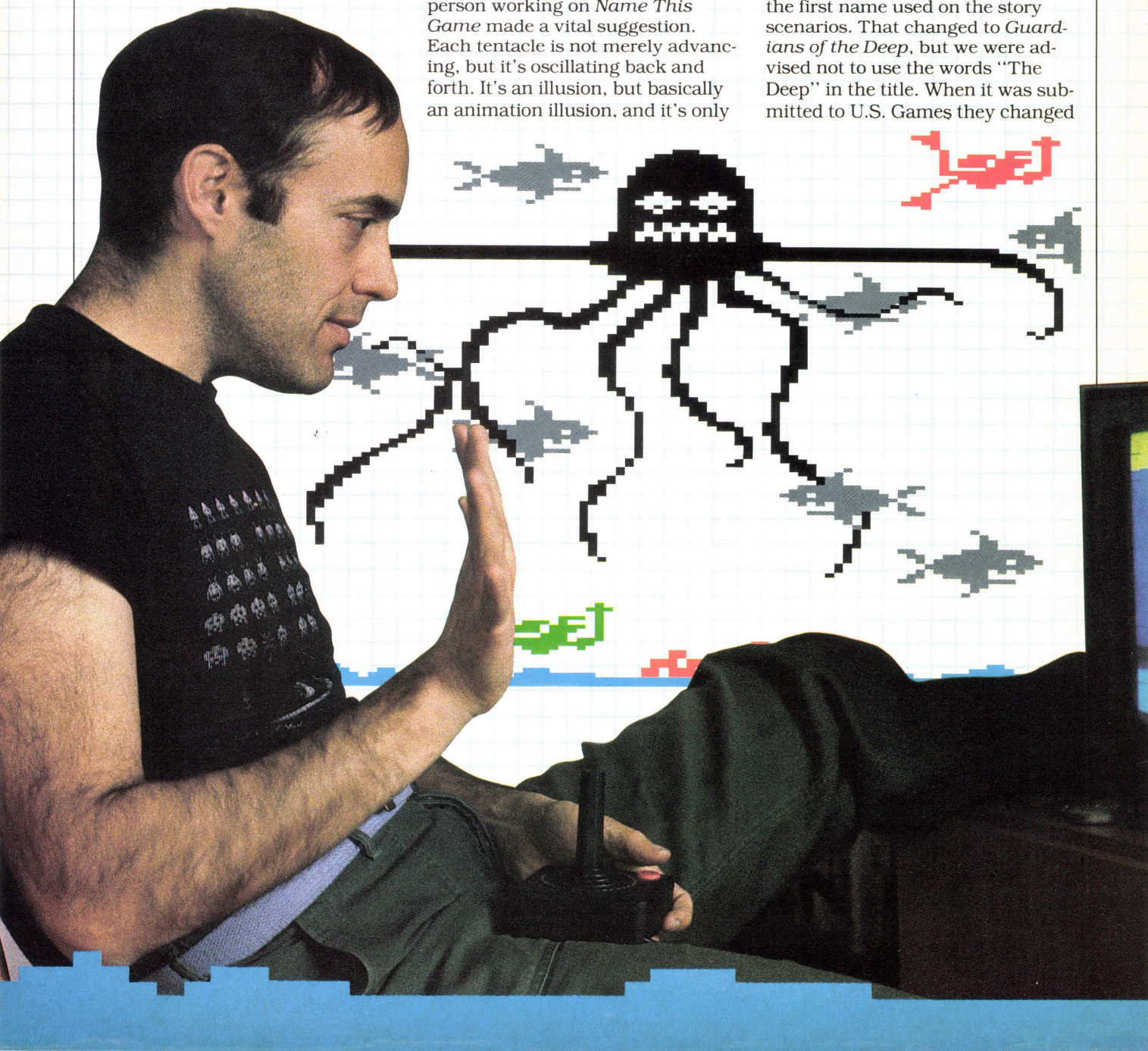
DUBREN: Let's put it this way: If I have a graphics artist available who's better than me, yes. If I don't have a graphics artist available, I'll be happy to do the graphics myself. But I would much prefer to work with someone who's very good.

EF: So you trust the creative instincts of the team?

DUBREN: Absolutely. The graphics person working on *Name This Game* made a vital suggestion. Each tentacle is not merely advancing, but it's oscillating back and forth. It's an illusion, but basically an animation illusion, and it's only an animator who would have come up with that. I wouldn't have thought it possible, so I wouldn't have suggested it, and neither would the programmer. Working with the Atari VCS you have to accept certain things, like pixels—square boxes that make up the octopus' tentacles. That's why the illusion of movement, and the role of the graphics person in this game, was so important.

EF: How did the unusual name come about?

DUBREN: *Treasures of the Deep* was the first name used on the story scenarios. That changed to *Guardians of the Deep*, but we were advised not to use the words "The Deep" in the title. When it was submitted to U.S. Games they changed

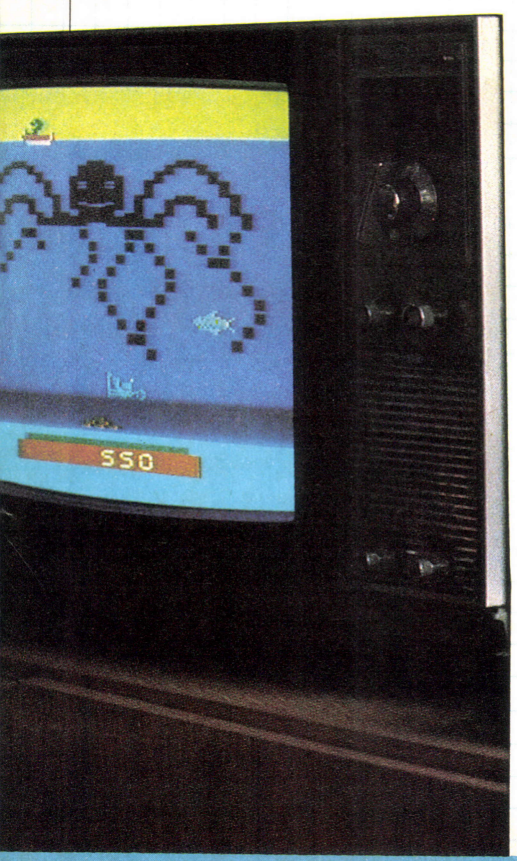


it to *Guardians of Treasure*. But I think when they all took a good look at the history of the name changes, the marketing people came up with the contest idea, calling the cartridge *Name This Game* and challenging the public to do just that.

EF: The first video game you were involved with is the coin-op under development at Dave Nutting Associates for Bally/Midway—the game we can't talk about yet. What major differences do you find in designing games for a home system like the VCS and a coin-op machine?

DUBREN: If you're dealing with the Atari VCS, you're talking about an extremely limiting palette. The VCS is least forgiving for the designer or conceptualizer. This actually makes it the most challenging system, and in some ways the most fulfilling. You can't be lazy. It's such a demanding and limiting system that you have to make up for it with creative thrust. Everything has to be in the gameplay because you don't have too much room left for decoration.

EF: What about coin-op games?



DUBREN: In the coin-op business, the most important limitation you're under is that you must design a game so that the average player gets no more than three minutes for a quarter. The problem that creates is that it limits the type of game you can do, because you have to design a game that will zap a lot of players after 30 seconds to make up for the really good players. No adventure games. No games where time is *not* a factor. And that's the real advantage in the direction I think the home computer revolution is moving us as game designers: Ultimately we are not going to be driven by the coin-op mentality. *Name This Game* was done with a coin-op mentality—a game that would be challenging, not easy to get into on higher levels and might only play for a minute or two. Why not design games that last a lot longer? Because we are appealing to a crowd of arcade players who own home systems. They're playing what they're familiar with. This will change over time as people become more familiar with computers and what they can offer to video gaming.

EF: Do video game designers really deserve the kind of publicity they're getting? Are they really like authors or composers, or just glorified technicians?

DUBREN: Basically, you're talking about another entertainment form when you talk video games—an entertainment form that, right now, nobody's even talking about as an art form. But 10 or 20 years from now perhaps it *will* be looked upon as an art form. Critics may look back to the original *Space Invaders* and proclaim it a classic. And when they try to find out who invented it, they won't be able to locate a name. I think that in the video game industry, over time, specific individuals will be identified with a body of work just like the director or writer or star of popular films has a body of work. When Spielberg gets John Williams to do the music for *E.T.*, he knows that he's getting something that's vital to the whole, without which the whole might not work. And yet it's still Spielberg's vision. I see that as basically the way in which video games are heading. The way interactive entertainment is going to evolve, you'll have a variety of people with roles that are difficult to pigeonhole, but I think there's going to be a core of creative, driving originality, just as in any medium.

EF: What about Clinical Psychology?

DUBREN: Basically, I didn't have the confidence to follow my creative in-

DESIGN DOS AND DON'TS

Ron Dubren tells aspiring video game designers to ask themselves the following five questions:

1. What is the object of the game? To score points—sure. To stay alive as long as possible? Be more specific. Your game should have a clear-cut goal: shooting out a wave of enemies, eating all the dots, etc.
2. Is the game fair? There's no room for chance in a video game. If a player can lose a life through no fault of his own, your game has got a bug. Video games are *active* fun—the player should never be a sitting duck. Skill, however awesome, is what it's about.
3. How is the learning curve? A good game is easy to get into and hard to master. There should be a gradual increase in the challenge; sudden spurts in difficulty only frustrate the player. Even a steep climb is fine, but at no point should the player feel up against a sheer wall.
4. Does the game make sense? A game can be silly, fantastic, realistic—whatever world you want to create. But it must hang together within that world.
5. Is there anything unique about my game? Originality, invention and innovation are the ideals but hard to live up to. There are more than enough stale rip-offs out there. Strive for that breath of fresh air.

ELECTRONIC FUN MAGAZINE'S

top 10

HOME

1. DONKEY KONG (A) (Coleco)
2. PITFALL! (A) (Activision)
3. PAC-MAN (A) (Atari)
4. MS. PAC-MAN (A) (Atari)
5. RIVER RAID (A) (Activision)
6. FROGGER (A) (Parker)
7. SPIDERMAN (A) (Parker)
8. VANGUARD (A) (Atari)
9. DEFENDER (A) (Atari)
10. PITFALL! (I) (Activision)

ARCADE

1. JOUST (Williams)
2. MS. PAC-MAN (Midway)
3. Q*BERT (Gottlieb)
4. POPEYE (Nintendo)
5. MOON PATROL (Williams)
6. FRONT LINE (Taito)
7. JUNGLE HUNT (Taito)
8. SUPER PAC-MAN (Midway)
9. CENTIPEDE (Atari)
10. GALAGA (Midway)

The arcade Top Ten courtesy of REPLAY MAGAZINE, the coin-op Bible. The list of Top Ten home games is the result of an independently conducted survey of retailers across the country. (A) indicates Atari VCS while (I) indicates Intellivision.

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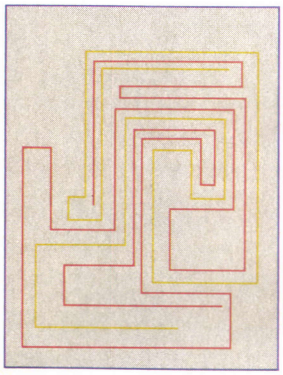
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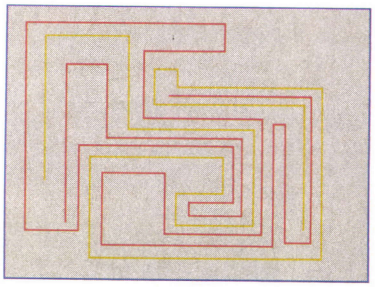
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FIRST SCREENING:

BOXED IN

We're waiting to discover you.

Send us a program that you've written and maybe we'll send you $100. Each month in First Screening *we print a program that one of our readers has written. If you think that you have hidden talent as a designer and you have a program that you think deserves recognition, send it to us. Be sure to let us know which computer it's for and to include the complete computer printout.*

This month's winner is Jon Smith. Jon is 12 years old and attends Sterling Middle School in Sterling, Virginia. He's been programming for two years and would like to be a game designer. His program is called Boxed In *and it was written for any Atari computer with 8K and joysticks.*

How to Play

In this two-player action game of skill and strategy there are eight variations—four in which each player attempts to trap his opponent and force him or her to stop moving, and four others which pit you against your worst enemy . . . yourself. You and your opponent move simultaneously on your own half of the screen until one of you can no longer move. The player that is in motion longest wins.

The Variations

You can choose from straight impenetrable line or diagonal line variations and you have the option of playing with or without sound effects. Use the joysticks to outmaneuver and box in your opponent. There's no time to stop and think. Stop for ten seconds and your opponent wins! Time adds up as you play, so watch out! And, most important, don't box *yourself* in as you try to trap your opponent.

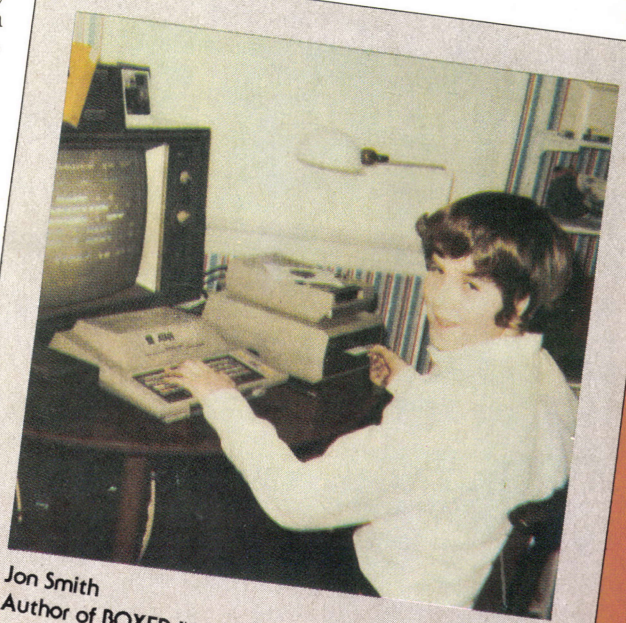
Knowing what peculiarities each of the variations has will help you determine strategies that are best for each. What may work in one variation, may not in another. Learn the characteristics of each and then make your battle plans.

Variation 1: In this variation you can move either vertically or horizontally. Both types of lines are impenetrable and the line you start continues to increase in length all by itself without additional input from the joystick, until such time as you either change direction or are stopped by another line.

Variation 2: As in Variation 1, you may draw both vertical and horizontal lines—both of which are impenetrable—but Variation 2 also permits you to move diagonally. The diagonal lines are not impenetrable and may be passed through if approached from the proper angle.

Variation 3: Similar to Variation 1. You can move horizontally

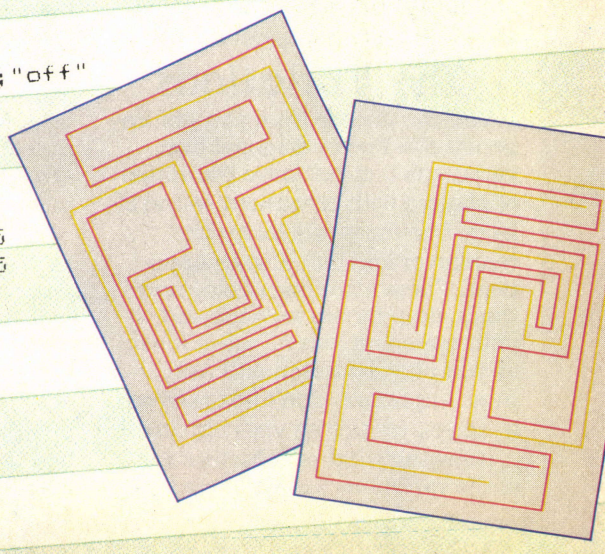
Continued on page 93



Jon Smith
Author of BOXED IN

```
1 REM REVISION 1.0 OF BOXED IN, BY JON M. SMITH
3 OP=1
5 GOTO 1000
10 GRAPHICS 5+16:COLOR 1:PLOT 2,2:DRAWTO 2,43:DRAWTO 78,43:DRAWTO 78,2:DRAWTO 2,
2:XX=10:YY=10:AA=70:BB=10:J1=13
11 J2=13
12 IF OP>=5 THEN PLOT 39,2:DRAWTO 39,43
15 S1=100:S2=100
20 LOCATE XX+X,YY+Y,C1:LOCATE AA+A,BB+B,C2:IF C1<>0 THEN X=0:Y=0
22 IF SO<>1 THEN 30
25 SOUND 0,XX+YY,10,15
26 SOUND 1,AA+BB,10,15
30 IF C2<>0 THEN A=0:B=0
33 IF XX+X=XX AND YY+Y=YY THEN S2=S2-1
34 IF AA+A=AA AND BB+B=BB THEN S1=S1-1
40 XX=XX+X:YY=YY+Y:AA=AA+A:BB=BB+B:COLOR 1:PLOT XX,YY:COLOR 3:PLOT AA,BB:X=0:Y=0
:A=0:B=0
50 IF STICK(0)=15 AND OP<>4 AND OP<>3 AND OP<>7 AND OP<>8 THEN 60
55 J1=STICK(0)
60 IF STICK(1)=15 AND OP<>4 AND OP<>3 AND OP<>7 AND OP<>8 THEN 70
65 J2=STICK(1)
70 X=X+(J1=7)-(J1=11):Y=Y+(J1=13)-(J1=14)
80 A=A+(J2=7)-(J2=11):B=B+(J2=13)-(J2=14)
82 IF S1<=0 OR S2<=0 THEN GOTO 100
85 IF OP=2 OR OP=4 OR OP=6 OR OP=8 THEN GOSUB 500:GOSUB 510
87 IF PEEK(53279)=6 THEN 1000
92 GOTO 20
100 SOUND 0,0,0,0:SOUND 1,0,0,0:SOUND 2,0,0,0:SOUND 3,0,0,0
101 FOR I=1 TO 150:SOUND 0,10,38,15:NEXT I
105 SOUND 0,0,0,0
106 GRAPHICS 2+16
107 POKE 752,1:? #6:? #6:? #6
108 ? #6;"          ";
109 IF S1<=0 AND S2<=0 THEN ? #6;"          ":GOTO 125
110 IF S1<=0 THEN ? #6;"          ":W1=W1+1
120 IF S2<=0 THEN ? #6;"          ":W2=W2+1
125 ? #6:? #6:? #6;"          WINS"
130 ? #6:? #6:? #6;"      press "
140 IF PEEK(53279)=6 THEN 1000
150 GOTO 140
500 X=X+((J1=5)+(J1=6))-((J1=10)+(J1=9))
505 Y=Y+((J1=9)+(J1=5))-((J1=10)+(J1=6)):RETURN
510 A=A+((J2=5)+(J2=6))-((J2=10)+(J2=9))
515 B=B+((J2=9)+(J2=5))-((J2=10)+(J2=6)):RETURN
1000 G1=G1+1:SOUND 0,0,0,0:SOUND 1,0,0,0
1005 GRAPHICS 1+16
1010 ? #6;"    ** BOXED IN **":? #6:? #6
1015 ? #6;"    ";:? #6;"          ":? #6:? #6
1020 ? #6;"      game : ";G1:? #6
1025 IF OP=9 THEN OP=1
1030 ? #6;"    variation : ";OP:? #6
1032 IF SO=2 THEN SO=0
1035 ? #6;"      sound : ";:IF SO=0 THEN ? #6;"off"
1037 IF SO=1 THEN ? #6;"on"
1040 ? #6:? #6;"          ";W1:? #6
1050 ? #6;"          ";W2:? #6:? #6
1060 ? #6;"PRESS          TO BEGIN":? #6:? #6
1062 ? #6;"                "
1070 IF PEEK(53279)=5 THEN OP=OP+1:GOTO 1005
1075 IF PEEK(53279)=3 THEN SO=SO+1:GOTO 1005
1080 IF PEEK(53279)=6 THEN 10
1085 POKE 77,0
1090 GOTO 1070
```

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.*



GAMER'S GUIDE

Continued from page 79

lily pad. **$34.95.** *Address: Sierra On-Line Building, Coarsegold, CA 93614.*

SIRIUS SOFTWARE has 10 games for the system in the Arcade and Adventure categories. Among the Arcade games are *Bumper Bash, Wavy Navy, Final Orbit* and *Spider City*. In the Adventure area are *Blade of Blackpool* and *Critical Mass*. Company's Pick: *Squish 'Em*. *Crazy-Climber*-type game requires players to climb up a series of pipes and squish nasty spiders while avoiding falling bricks. Realistic sound effects (pipes clanging, spider squishing) add to the fun. Cartridge only. **$39.95.** *Address: 10364 Rockingham Dr., Sacramento, CA 95827.*

SPINNAKER makes seven games for the system in the Educational category. Among the Educational games are *Facemaker, Story Machine* and *Delta Drawing*. Company's Pick: *Snooper Troops I*. Mystery games poses the "*Case of the Granite Point Ghost*." Players are asked to solve the puzzle of the mysterious spectre by interviewing *suspects*. **$44.95.** *Address: 215 First St., Cambridge, MA 02142.*

STARPATH, the makers of the Supercharger, are turning their hit VCS games into computer games. The first two available are *Mindmaster* and *Dragonstomper*. Company's pick: *Dragonstomper*, an adventure game in which you find yourself in medieval times and have to gather strength, weapons and magic potions to battle demons, invisible forces and a dragon. **$19.95.** *Address: 324 Martin Ave., Santa Clara, CA 95050.*

STRATEGIC SIMULATIONS has seven games for the system in the Strategy category. Among the Strategy games are *Cytron Masters, Battle of Shiloh* and *Battle for Normandy*. Company's Pick: *Cosmic Balance*; Space action-strategy game inspired by the Star Trek TV series affords players the opportunity to design their own star cruisers. Disk only. **$39.95.** *Address: 465 Fairchild Dr., 108, Mountain View, CA 94043.*

SUBLOGIC CORP. has six games for the system in the Adventure and Arcade categories. Among the Adventure games are *Adventure on a Boat* and *Black Forest*. Arcade games include *Sky Rescue*. Company's Pick: *Night Mission Pinball*. Pinball simulation based on World War II night bombing raid boasts 10 preset pinball designs. Software also allows users to design their own pinball layouts. 32K required. **$29.95.** *Address: 713 Edgebrook Dr., Champaign, Il 61820.*

SYNAPSE has 30 games for the system in the Arcade and Adventure categories. Among the Arcade games are *Dimension X, Picnic Paranoia, Chicken* and *Dodge Racer*. Adventure games include *Nautilus, Fort Apocalypse* and *Necromancer*. Company's Pick: *Pharaoh's Curse*. This fast-paced adventure game offers 15 high resolution screens representing rooms in a tomb. **$34.95.** *Address: 5327 Jacuzzi Street, I, Richmond, CA 94804.*

SYNERGISTIC SOFTWARE has three games for the system in the Arcade and Adventure category. Arcade games include *Crisis Mountain*. In the Adventure area is *Warlock's Revenge*. Company's Pick: *Probe One*. You're an outer space 007. Your mission: Steal all the necessary plans for a vital defense system. Your challenge: 30 different rooms, each with a different layout and crawling with aliens. Disk only. 40K required. **$34.95.** *Address: 830 N. Riverside Dr., 201, Renton, WA 98055.*

UNITED SOFTWARE OF AMERICA has one game for the system in the Arcade category. *Company's Pick: Robot Battle. Robotron*-style game finds a lone gunman trying to save the last Earth colonists from an android invasion. The game features five difficulty levels and can support up to four players. Cassette version requires 32K. Disk version requires 40K. **$29.95.** *Address: 750 Third Ave., New York, NY 10017.*

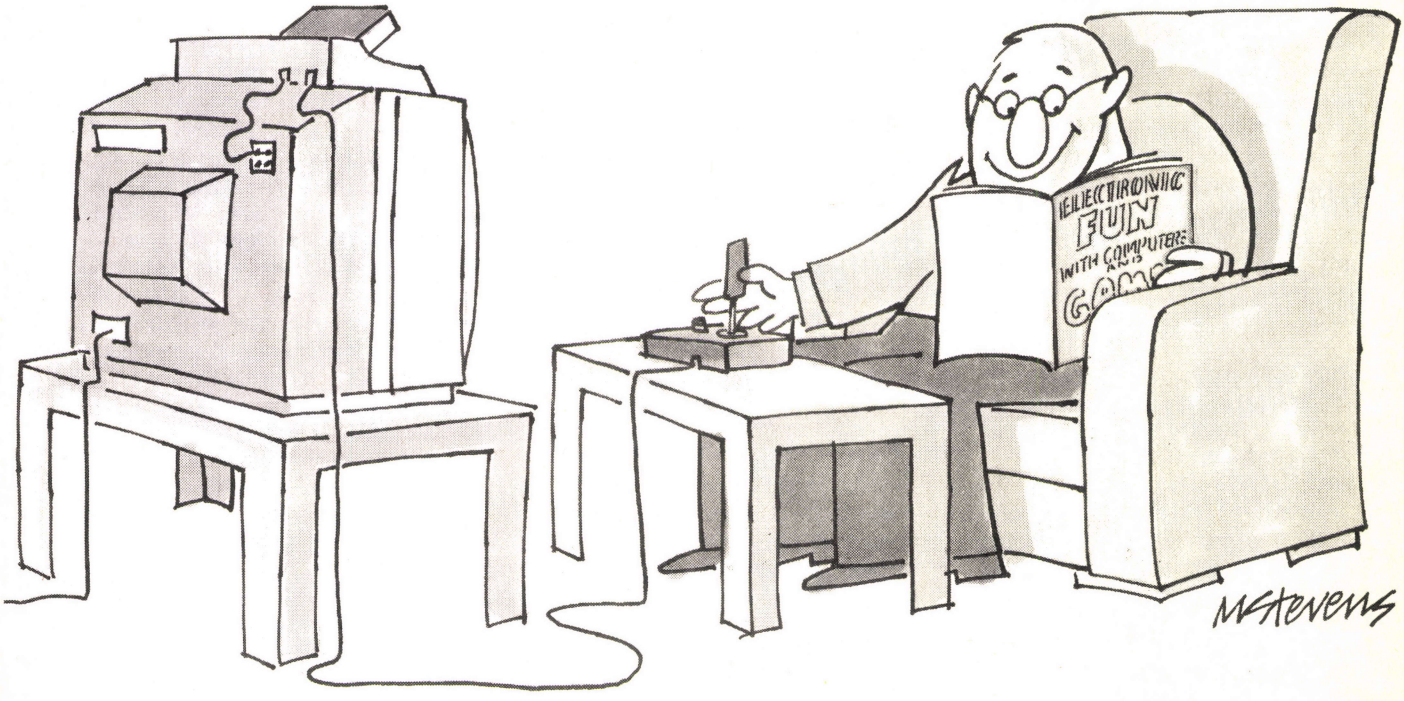
TRONIX has one game for the system in the Arcade category. Company's Pick: *Kid-Grid*. Maze game requires fast moving "Kid" to bolt about the screen attempting to complete the square before destructive monsters take him out of the game. "Kid" can stun, but never destroy, the villains. **$29.95.** *Address: 701 West Manchester, Inglewood, CA 90301.*

THORN EMI has 24 games for the system in the Strategy, Arcade and Sports categories. Strategy games include *Jumbo Jet Pilot* and *Reversi*. Among the Arcade games are *River Rescue* and *Orc Attack*. In Sports there's *Major League Hockey, Soccer* and *Pool*. Company's Pick: *Submarine Commander*. Underwater simulation puts you in the captain's seat as a sub commander out to destroy all enemy merchant ships in Mediterranean waters. Game requires constant vigilance. Cartridges only. **$49.95.** *Address: 1370 Avenue of the Americas, 9th Fl., New York, NY 10019.*

T.H.E.S.I.S. has 15 games in the Educational category. Among the Educational programs are *Preschool Fun, Spatial Relations, Fishing for Homonyms* and *Guessword*. Company's Pick: *Wanted*. Vocabulary game asks players to identify words described in "Wanted Poster" fashion. For example: Wanted: Noun. Distinguishing characteristic: Accent on second vowel. Alias: Toy. Cassette only. **$15.** *Address: PO Box 147, Garden City, MI 48135.*

ZIMAG (Magnetic Tape International) Zimag has many for the Atari computers in all the formats—cartridge, diskette and cassette. Among them are *Kerplop, Coogar File, Outpost, Cat-Nap* and *Quest for Inca Gold*. Company pick: *River Rat*—race your speed boat against the clock and up the river avoiding rafts, ducks, swimmers and other "wildlife." **$39.95** (prices vary according to format). *Zimag, 14600 S. Broadway, Gardena CA 90248.*

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PREVIEW

Continued from page 33

Depending on the success or failure of *Journey Escape*, we could see a number of rock & roll video games in the near future. According to Data Age, groups such as the Rolling Stones, Fleetwood Mac and Styx have already approached the firm with proposals for games. As yet, no deals have been signed.

By June, *Journey Escape* will be issued in formats compatible with Intellivision and ColecoVision. Coleco has been contracted to do the translating for Data Age.

U.S. GAMES

Here come U.S. Games for the whole family—Family Fun series. Watch for *Eggomania** (a spruced up *Kaboom*), *Gopher* (a farmer defends his carrot patch), *Picnic* (swat flies off your burger), *Piece of Cake* (baker stacks cakes on a conveyor belt), *Raft Rider** (a float down an obstacle-strewn river), *Entombed* and *Squeeze Box*,* where an attempted jailbreak always fails and yields a message—crime doesn't pay.

In the action/adventure series, look for *M.A.D.* (Missile Attack and Defense) plus the yet-untitled undersea adventure called *Name This Game*.

U.S. Games' first 8K cartridge will feature the Pink Panther and Inspector Clouseau in the *Trail of the Pink Panther*.

By June, look for an ultra responsive, self centering U.S. Games joystick similar in design to the Coleco Super Action Controller. The joystick will not only move the game characters but will also regulate their speed. Speed is determined by how far the stick is moved from the center position. The new controller will also feature a rocker switch for selection of screens in certain upcoming U.S. Games carts. The yet unnamed joystick will work with the Atari VCS.

TELESYS

Small but innovative Telesys will debut two VCS compatible carts by June. *Ram It**, a nifty variation on *Breakout*, puts the player's Ramroid in the center of the screen against 32 advancing multicolored bars. As each bar is shot, a different musical note is heard. The other title, *Star Gunner**, belongs to the *Defender* school of ships vs. ships games, with impressive X-Y like graphics on the raster monitor.

On the drawing board for possible release in June is *Bouncing Baby Monkeys*. You guide two hospital attendants holding a stretcher. As the bouncing baby monkeys fall from the top of the screen, you've got to catch them and bounce them into a hospital. Also in the works is a VIC 20 version of *Fast Food*.

SPECTRAVIDEO

Along with the SV 318 computer, watch for SpectraVideo's CompuMate 2600 Computer Converter—a keyboard upgrade for the VCS. Priced under $100, CompuMate features built-in BASIC, 16K ROM and a 42-key membrane keyboard. Also included is a Music Composer program and a scribbling exercise called Magic Easel, which allows the user to draw pictures on the screen by moving the joystick.

The first in a series of 3-D games from SpectraVideo, *Vortex* will be issued in multiple formats for use with many popular home computers and game systems. Each cartridge will come with a pair of 3-D glasses.

Shortly after the introduction of the SV 318, SpectraVideo will also unveil the SV 603 ColecoVision adapter. For less than $70, you can play all ColecoVision games through the SV 318.

WIZARD VIDEO

If Dracula and Frankenstein are too tame for your tastes, here come a couple of real horrors. Billed as the first scary and violent video games, *Halloween* and *The Texas Chainsaw Massacre* will be courtesy of Wizard for the Atari 400/800 computer and the VCS. Both games are staged in *Pitfall*-like outdoor scenarios with some form of maniac chasing a hysterical female. "Know the pleasures of total destruction," says Wizard regarding *Chainsaw*. In this game, you are the pursuer, Leatherface.

DISCWASHER

Though no specific systems have been named yet, Discwasher is developing replacement joysticks for formats other than Atari. Likely candidates are ColecoVision and Mattel's Intellivision II. An inexpensive trakball is also on the drawing board.

AMIGA

You don't want to take gaming sitting down? Amiga's also bringing out the Joyboard—a foot-powered controller. You stand on it and control the movements of your character by rocking back and forth. Two games will be available specifically for use with the Joyboard—*Mogul Maniac*, a skiing game, *Surf's Up* (guess) and *Off-Your-Rocker* (who knows?).

GREAT GAME CO.

And finally, TV comes to video games. The Great Game Company is planning to make video versions of such popular TV programs as *Tic Tac Dough*, *The Joker's Wild*, *Family Feud*, *Jeopardy*, *Wheel of Fortune* and *Password*.□

COMING NEXT MONTH

Mayhem in the Arcades—Did you know that arcade operators can change the way a game plays? They can and, what's even more alarming, they sometimes do.

The Souped-Up VCS—There are at least 13 devices you can plug into your VCS (not counting your fingers) that will make it better than it already is.

The Coleco Super Game Module—Tiny little wafers and an add-on that puts one million bytes of power into your hands.

The Complete Gamer's Guide to Commodore Games—All the companies that make games for the Commodore computers.

LETTERS

Continued from page 8

magazine. The program I wrote is called *Stop Thief.* In it, you are a thief trying to rob a bank, going through security guards and trying to work your way through a maze of bank walls.

Steve Jensen
Muskegon, WI

Don't be shy. We haven't received many VIC-20 programs, and would love *to get one called* Stop Thief!

STERN CORRECTION

Just a note of clarification on your excellent response to Stern's new game *Rescue*: The 3-D effects that you attribute to "quantum leaps in arcade technology" are actually the result of the designer/programmer's creativity. The hardware in Rescue is the same as that used in Scramble and Super Cobra. Your magazine is one of the best; keep up the good work.

Chris Oberth
Chicago, IL

Thanks for the clarification and the compliment, Chris. Chris Oberth is a software engineer for Stern and is, in fact, the designer of Rescue.

FUN FAN

I would like to congratulate the editor and staff for their hard work in keeping this magazine going. My favorite part of EF is those game reviews. I would find it exceptionally hard not to read your magazine. Once again, I congratulate you!

Allen Tadeo
San Jose, CA

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*

MASTERPIECE

Continued from page 75

custom-designed computer graphics tablet. "I think he was the only character in the movie who drew a laugh. He was the most human character, interacting with a human actor," says Parker.

Although many of the capabilities of computer generated graphics systems currently in use have not even been tapped, research and development of new techniques is needed. Certain goals, like greater realism and more natural lighting, are priorities. Better software is the main way these goals will be reached, but the constantly falling price of computer hardware with greater memory capacity will help.

Greater realism is just a matter of time, says Laddie Odom, a Chicago-based graphics artist who's been obsessed with computer graphics since taking a college course on the subject.

"It's really just a matter of getting the right algorithm. The model for light is really a simple model, it's a known physical model. Now the software developers are trying to plug in as many physically correct factors as they can."

Meanwhile, the techniques already available are enough to tide over most viewers. Ultra-real or not, they are very effective. Thomas Klimek explains one simple technique which heightens the realism of animation considerably. "Suppose you draw a whole bunch of shapes on the same screen and color them so they are all background colors, gray for example. Then you go back and selectively color some of them. If the rest are the same, the ones that are colored will stand out vividly. This is what's done in weather animation to make raindrops appear as though they're falling. But they're really just turning on and off."

There's a quantum leap from that simple example to the one example nearly everyone cites as the height of current computer graphics techniques, and it's not something you're likely to see in the local movie house: a cockpit simulator. Cockpit simulators are used by the military to train pilots. Explains Klimek, "The instrument panel in the cockpit is functioning as it would in an actual plane, reacting to various circumstances, and when you look out the window and turn the stick, the scenery changes accordingly. Trees, mountains and valleys rush by as if you were flying a jet in real time."

These devices are tagged as "the ultimate video games" by computer graphics researchers. Some go so far as to predict that "mini-adventures" will replace shoot-em-up games.

"I have a feeling that people will get bored with the way video games are currently structured," says Laddie Odom. "Basically, after you learn the maze, you're just trying to beat the clock or better your score. I don't find that as interesting as a game which is constantly a little different than it was before, with different endings and segments that are controlled by the player."

If anyone has developed such a game, they've kept it under wraps so far. But they're coming, no doubt about it. How soon they arrive depends on how fast the price of computer memory declines so that somebody besides the government can afford them. One possible tie-in is the laser videodisc, with its capacity to store over 50,000 images and the ability to shift from frame to frame almost instantly. Tied to a computer, such storage capacity could provide a gamer with hundreds of plot twists.

While you wait for such developments to come home, however, you can check out state-of-the-art graphics in upcoming feature films. Magi is working on a future Disney movie called *Something Wicked This Way Comes*, where computer simulation creates a "magic devil circus" that comes out at night. It's anyone's guess what that looks like. Digital Effects' George Parker must withhold title names for now, but says one feature film is almost ready and another is on the way. The New York Institute of Technology's *The Works* is near completion and will be distributed nationally. □

GAMEMAKERS

Continued from page 83

clinations. It came to me late. I didn't start writing until I was about 19 years old. My first career goal was very modest. A CPA came to my parents' house. He had a nice dog with him, so I wanted to be a CPA. I guess I might as well have wanted to be a dog! I got into college, and after one semester of pre-business I decided I wouldn't be a CPA. Then I got interested in psychology. My first course was really dynamic, taught by a female professor. She made psychology look very interesting, but I found the textbook interesting too. It was full of designs and tests, all playful, and psychology became a game to me—a game of experience and talking about different ways things happen and why they happen. The experiments and the studies all seemed like games. There was something playful there to attract me.

EF: If you don't mind my asking, what made you give up Clinical Psychology?

DUBREN: Well, I don't know if I have given it up. I was in the research end. Let's just say it's something I'm not doing right now.□

FIRST SCREENING

Continued from page 87

or vertically but the lines are not as self-motivated: they stop lengthening if you stop pushing on the joystick.

Variation 4: Similar to Variation 2 in that you have a choice of three types of lines except, as in 3, you must continuously apply pressure to the joystick in order to increase the line lengths.

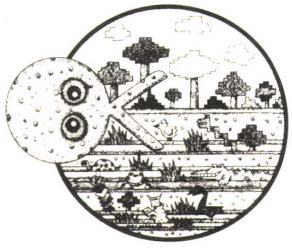
Variations 5, 6, 7 and 8: These are identical to variations 1, 2, 3 and 4 respectively, except that where you and your opponent played on the entire screen in the above variations, you are now separated. The screen is divided into two equal parts and the game becomes a race against time.

In variations 1 through 4, try to trap your opponent by making use of an outside wall. Remember, your op-

Continued on page 96

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LICENSING

Continued from page 37

this: "Okay," I'd say, "either you pay me five percent of all your gross sales, or you pay me 15 percent of your net profits." If I'm right, and the game is a hit, I would stand to make more money getting the 15 percent of the profits. If I'm wrong, though, and the game maker doesn't even break even, I don't get anything.

To give you an idea of how much is at stake, consider this. The movie *Tron*, from Walt Disney Productions, did not even break even at the box office. But Disney licensed the arcade game rights to Midway, and so far that game has earned more money in quarters than the movie did in box office receipts. Depending on the sort of deal the Disney people made with Midway, that one license could push the picture into profitability.

While arcade game adaptations into home formats represent a sizable number of licensed properties, more and more home video games are being patterned after movies, TV shows, comic-book characters and even real people.

Of the major home video game producers, Parker Brothers has embarked upon the most extensive licensing campaign, a strategy which made the company one of America's biggest names in games long before the first quarter was dropped in a Pac-Man coin-op. Richard Stearns, the company's vice president of consumer electronics marketing, explains how Parker Brothers manages to snap up so many valuable licenses: "Our approach has been to maintain weekly contact with the arcade manufacturers, movie studios and other property holders. We familiarize ourselves with the people and the products, and strike up a good working relationship. It's very important to be visible and to have a good track record."

Parker Brothers' visibility has paid off a number of times and Stearns maintains that, in some cases, the company is approached with a potential game prospect before the original property appears—a factor which the Parker exec acknowledges as being very significant: "It's an important consideration," says Stearns. "It's imperative to tie a license down as soon as possible wherever we can. By the time a game hits the arcades, or a big movie breaks across the country, you can bet the home game license is long gone."

When a property has been offered or displayed to the Parker Brothers video games division, it is vigorously discussed and analyzed. "We try to predict which properties would be best suited for us," Stearns says. "There are a number of things to



be considered: compatability with our system, game uniqueness, the quality of game-play, and so on." The company has to gamble on the strength of a given coin-op or movie or TV character, but smash hits are not as important as they were a while back.

"It used to be that an arcade game being considered for home version licensing had to be a smash hit," recalls David Schoenberg, "but that's not necessarily the prime factor anymore. While prospective licensors once wanted only those coin-ops with immediate name recognition—like *Pac-Man*, *Berzerk*, *Asteroids*—now they're more open. The industry has advanced to the point that adaptability to the home screen is valued just as much—maybe more, in some cases—as name value."

Amazingly enough, some arcade games are actually better suited for home play. For instance, a coin-op that plays too slowly in the arcade doesn't offer enough turnaround (translation: doesn't generate enough quarters) and may be much better at home.

An increasing number of cartridges, both for game and computer systems, are being adapted from movies and TV programs. Datasoft, for example, recently licensed the cartoon characters who have appeared in the Terrytoons cartoons for over 40 years. Part of the strategy in picking up home game rights to characters like Heckle and Jeckle, Pearl Pureheart and Deputy Dog stems from the company's desire to produce educational software as well as games utilizing the cartoon favorites. "Cartoon characters can serve as strong learning reinforcers for children," says Datasoft president Pat Ketchum. "That's why we licensed the Terrytoons characters as well as Heathcliff, America's top syndicated cartoon cat."

Datasoft has also snapped up rights to *Dallas*, the prime time soap opera which has been one of CBS' top shows for some years now, and plans to bring out computer games based on Kung Fu favorite Bruce Lee. Datasoft had to license not only Bruce Lee's name, but his likeness and career as well.

Is basing games on movies just a way to hype a new product? Parker Brothers' Stearns says no. "Games from movies—if well done—inspire players to relive their favorite moments from the films, re-experience the fantasy they experience in the theater. A recognizable name is always going to be a draw, but it won't sell the game by itself. A good title, though, can make a good game even better. If you developed a game called *Space Shootout* which featured dueling spaceships, you'd probably do pretty well with it. But if you called it *Star Wars*, you'd do even better."

There are quite a few TV *characters* that have already been licensed, but The Great Game Company, a new comer, has gone one step further by licensing popular TV *game shows* like *The Price Is Right*, *Password Plus*, *Jeopardy* and *The Joker's Wild*. Great Game's creative vice president, Pat McBride (a former consultant to Bally-Midway) believes that the company has latched onto a potential treasure trove of video game prospects. "We've licensed games that weren't obvious to the rest of the industry," he says, "and we're going to be targeting our home versions to a family audience, especially women."

Another TV favorite slated for video game fame is lovable but hapless Mr. Bill, the little clay figure whose adventures (or misadventures) have been orchestrated by filmmaker Walt Williams. Williams created the character in a brief film for *Saturday Night Live* some years ago, and Mr. Bill still hasn't run out of ways to get mangled.

An avid video game fan himself, Williams recently signed with Data Age, licensing his character for a game to be called *Mr. Bill's Neighborhood*.

Williams will work on advertising, publicity and marketing as well as game graphics. He realizes that a character might have name value, but needs more to become a successful video game. "The name is good for a $5 novelty item," he says, "but for a $30 game you need more than that. *Mr. Bill's Neighborhood* has great playability."

Data Age has also had first-hand experience in licensing real live people for game development. Company exec Joan Morra recalls the circumstances that led to the signing of the rock group Journey for translation into a video game.

"It was uncanny. We had the idea to create the first rock-and-roll video game last July, and we knew that however strong our initial concept was, it would be enhanced by the name of a popular group in the title." Data Age conducted research among teenagers to find out which group might prove popular, and Journey consistently placed high on the lists.

Data Age acted immediately—the group was contacted on a Friday, and on the following Monday they made a deal. The result was *Journey Escape*.

The story doesn't end there, however. Interestingly, Bally-Midway—in a history-making event for the game business—licensed *arcade* rights to *Journey Escape* from Data Age. This was the first time an arcade company bought a license for the home game—usually it works the other way around.

And so it goes—licensing fever continues to rage through the video game business, with coin-ops, movies, TV and cartoon characters increasingly finding their way to home playfields. Even mighty Mr. T of *Rocky III* and *A-Team* has been licensed (by Data Age) to provide the basis of a game cartridge.

But as Parker Brothers' Stearns points out, "Licensing provides more exposure and appeal for certain video games, and it's more fun for the player if the game is based on something or someone he's had experience with. It makes gameplay a richer experience. But licensing alone is not enough to sell a bad game; in order for it to remain effective, the industry still has to concentrate on good, sound game development." □

FIRST SCREENING

Continued from page 93

ponent has sometimes formed one or more enclosing lines himself.

In variations 5 through 8, stay as close to the outside as possible and always move in the same direction creating the largest possible space in which to move.

In all the variations *never* go down a one-way street. You can't retrace your own lines. □

CAMPS

Continued from page 55

to the Atari Program Exchange.

Two weeks at an Atari Computer Camp costs $890; four weeks is $1,690; eight weeks is $2,950. The camps are located in Greenfield, MA; Stroudsburg, PA; Glencoe, MD; Asheville, NC; Faibault, MN; Danville, CA and San Diego, CA. For information or reservations, call 800-847-4180. Sessions begin June 25.

TimberTech Computer Camp in Sunnyvale, CA was founded by Nolan Bushnell, Atari's founder. Four hours of formal instruction are offered each day with additional free time for campers to work on programs; and all levels from beginner to advanced are accommodated. There are three classrooms and enough computers so that no more than two campers must work at the same unit.

The camp teaches BASIC, LOGO, PILOT, PASCAL and Assembly language, as well as graphics, sound and electronics. There are computer game tournaments and all the usual other camp activities, including horseback riding. Two-week sessions cost $895; one week is $495. TimberTech is co-ed, for ages 8 through 17. Sessions begin June 12.

These are only three of the many computer camps around. To find others in your area, we suggest writing to the American Camping Assocation, Bradford Woods, Martinsville, IN 46151. Remember, if you go and find machines are less fun than you thought, you can always short sheet the counsellor's bed or put Froggers down the shirts of campers you don't like. □

EAT

Continued from page 10

speed at which the plane flies and the joystick response can be made more or less sensitive. If you're an expert player at *River Raid* as it stands, you could increase your challenge by increasing the flying speed and joystick sensitivity. If you're a novice, you might choose to slow everything down to help you sharpen your skills.

The Personal Game Programming System will be out sometime in June, with a price tag somewhere in

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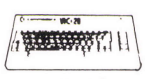
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the range of $170 to $200.

If you're scared off by the machine language stuff, don't be. Once you know the proper commands it'll become fairly easy. To learn these commands there's a variety of books available on how to program the 6502 microprocessor, which is what the Atari VCS and several of the Apple computers use. Almost every computer store carries at least one of these books. One of the better ones is *Programming the 6502* by Rodney Zaks. If you don't know anything at all about machine language try *Apple Machine Language* by Don and Kurt Inman.

If you would like more info on the PGP-1 add-on for the Atari VCS or any other Answer Software product, write to them at: Answer Software Corp., 20863 Stevens Creek Blvd., Building B-2, Suite C, Cupertino, CA 95014.□

SCREENPLAY

Continued from page 23

overreacting. If you find you cut the wheel too hard on occasion, don't worry. Unlike other driving games, you are able to go off the road without automatically crashing. You will, however, lose some speed and you will meet a fiery demise if you collide with one of the many billboards that line the course.

Until you memorize the layout of the speedway, you'll have to rely on the square yellow roadsigns to warn you of impending sharp turns. There are two on this track that require special care. Unless you can take them on the inside lane, I discourage going around them at full speed. A safer method is to downshift as you enter the turn, while keeping the accelerator to the floor. As the turn begins to straighten, shift back into high gear.

Passing cars is easy since they rarely change lanes. If you come upon two cars running side by side, straddle the center line and go between them. If you lack the nerve for this type of maneuver, you can either downshift or momentarily release the accelerator pedal. Doing either of these may cause the two cars to move apart and that isn't something that you want.□

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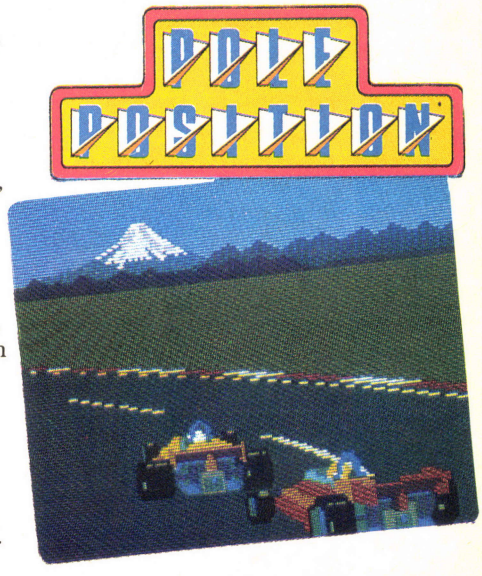


When is **Atari** going to start renting out space on those billboards that flash past your car in **Pole Position**? Right now they've only got ads for Atari's **Dig Dug** and **Millipede**,



BAGMAN busts out

along with Atari itself (on two different billboards!?) and Namco, the game's licensor. After all, they could be making a lot of dough out of this bright idea, and I can't wait to thumb my proboscis at a "55 MPH—That's The Law!" sign while I'm doing 240 on the Fuji Speedway . . . He may be the Master Roboteer now, but watch **Nolan Bushnell** get back in the games business with a vengeance this October (his new company is called **Sente** which, in the game Go, is the response to the challenge "Atari") . . . It's gotta be the blend-of-the-finest-ingredients arcade game of the year: Stern's new **Bagman.** Looks sort of like **Dig Dug**, plays like **Donkey Kong** and has a name that puns on **Pac-Man**. One other nice touch (and shades of **Swordquest**'s clue book): Comic-book style directions on the cabinet panels . . . You'll see a review of it in Hits and Missiles real soon, but don't expect to buy Atari's **Crazy Climber** from a store until July at least. Till then it's only available through the **Atari Club**—and it's only the first of many that will come out that way . . . Know how many cartridges they expect to have sold you guys by the end of this year? Seventy **million**—at **least**! . . . **The Fly**'s been expecting the arcade honchos to come out with their own home games since last December, but now it looks like it will take a little longer. **Stern** says those rumors that it will come out with home games are **not true**, and **Sega** is already cutting back its releases from 15 to 12 (**Tac-Scan** and **Sub-Scan**, the first two, should already be out by the time you read this) . . . Coleco's slogan may be "The best is yet to come," but spend five minutes with their new Super Game Module and you'll be convinced the best is already here. The SGM packs **one million bits** of game info onto little bitty plug-in microcassettes, and their first **Super Donkey Kong** cassette game almost looks **better** than the arcade version. They're planning "Super" versions of **Donkey Kong Junior**, **Buck Rogers Planet of Zoom**, **Turbo**, **Sub Roc**, **Zaxxon** and **Time Pilot** for later in the year . . . Atari 5200 Rumor Number 43: They're redesigning the barf-a-delic **5200 controllers**, recalling all the old ones and replacing them with the new ones, and then packing all new 5200 units with the new controllers. Rumor Number 44: They aren't. All The Fly can learn is that Atari is "addressing the problem." Well, when they finish doing it, they can "address" one to me care of **EF** by **Federal Express**! . . . Are you ready for a $99 **designer** game cart? That's right, boys and girls, one big C-note sent to Video Software Specialists in Dallas will net you a limited-edition VCS cart with your name emblazoned on the first screen and a numbered "certificate of authenticity." Who cares how it looks? What I want to know is will Brooke Shields play it with me . . . . Word is that the average company spends $2 million on advertising each time they release a new game . . . **Reactor** inventor **Tim Skelly** is supposed to be releasing a cartoon book called **Shoot the Robot, Then Shoot Mom.** I really hope Tim is putting us on again . . . **Journey Escape** will be the first home game to make the jump to arcades. Bally/Midway will be bringing the first rock video game to the 25-cent arena this year and Data Age has already been approached by several other groups—**Fleetwood Mac**, **Styx** and **The Rolling Stones**—who want to be in game hits, too . . . Speaking of hits, if **Pitfall!** and **Laser Blast** were rock albums they'd have gone platinum by now. Activision claims each game has sold one million copies, and that **Pitfall!** was the bestselling game last year . . . **Centipede**'s **Donna Bailey** and **River Raid** designer **Carol Shaw** aren't the only female game wizards out there. A **Dark Crystal** game is due out soon, and the designer is Sierra On-Line founder **Roberta Williams** . . .



Well, gang, it's time for my six legs to be a-wanderin'. Keep those cards and letters comin'.

"The Fly"

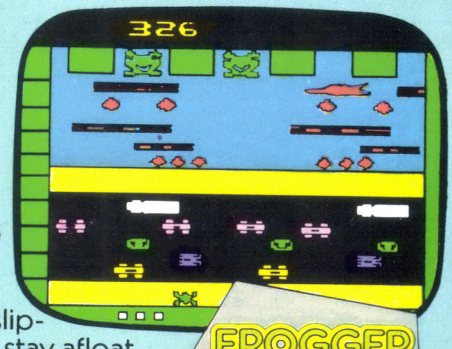
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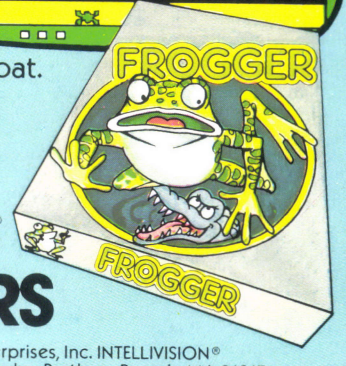
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Frogger still must cross a highway, where reckless hot rods hurtle by, and huge trucks go thundering in his path. Every safe jump is a crucial step home.

Beyond is the raging river where the safety of a slippery log or diving turtle is all Frogger can count on to stay afloat.

Frogger's last leap to his lily pad home must be perfect, or it's back to the road to try again.

Good luck, Intellivision® owners. Frogger's life is in your hands too.



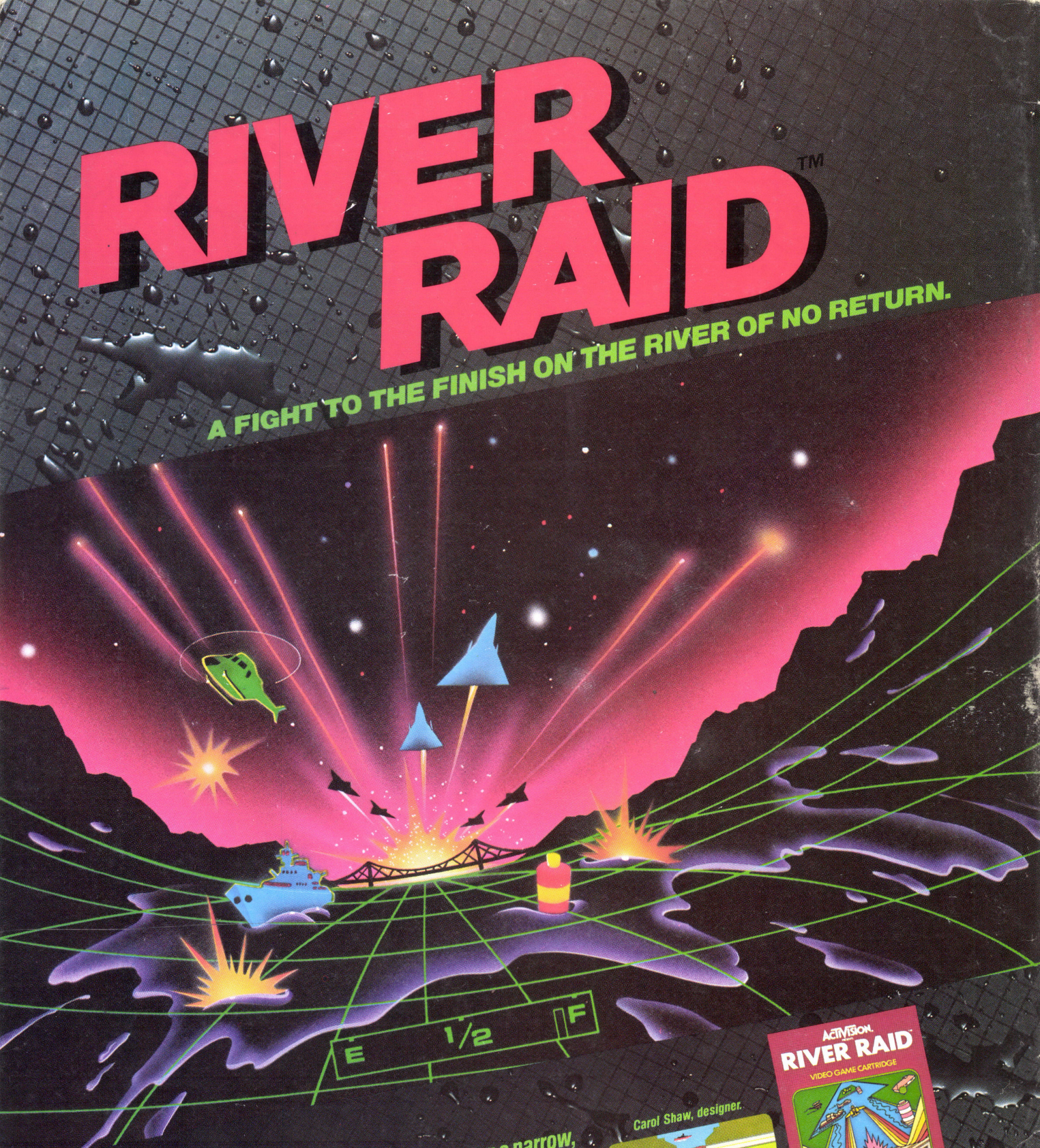
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