WPS 38140 Jan. 1983 $2.95

HOW TO WIN AT VIDEO GAMES

Tron and Centipede Strategy
Moon Unit and Zappa on Games
Joust: The Animated Flying Game

Joystik T.M.

Donkey Kong, Jr.— Second Episode in the Kong Cycle

1983 Cartridge Buying Guide: The Newest in Home Video



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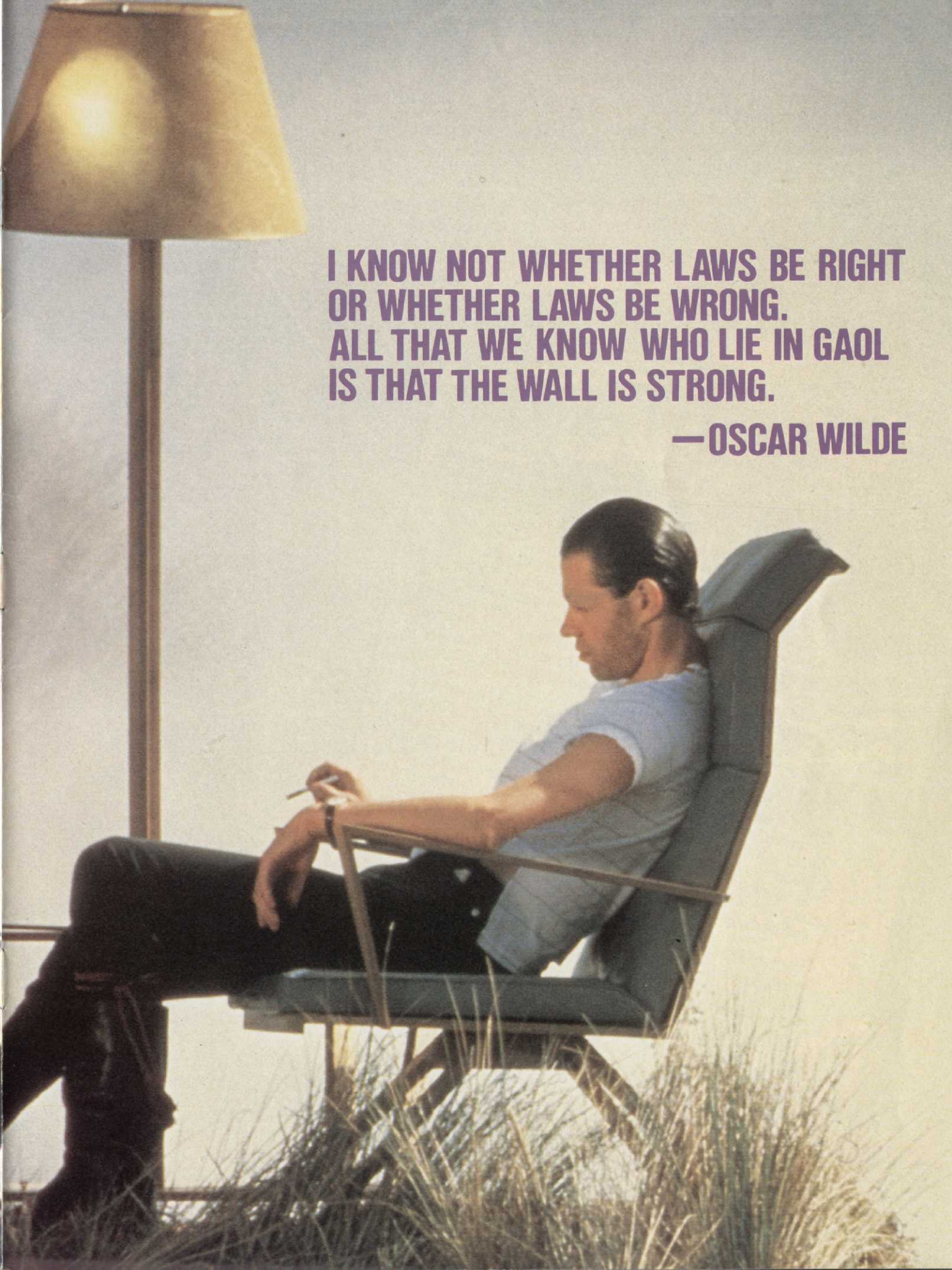
I KNOW NOT WHETHER LAWS BE RIGHT
OR WHETHER LAWS BE WRONG.
ALL THAT WE KNOW WHO LIE IN GAOL
IS THAT THE WALL IS STRONG.
—OSCAR WILDE

MESSAGE

STAFF

JoyStik™

The future of video games depends primarily on a strong and active imagination. Keeping that imagination alive is the subject of this message and, in certain ways, the responsibility of this magazine. We're here to entertain, sure, and to keep you informed and involved and alert. But we're also here to make our mark: to help forge the future path of video games.

The power of the video-game imagination is apparent on every page of this issue. We cover the new games, the strong games, the games with brave new concepts and possibilities. *Joust*, introduced on page 50, is such a game. And *Pitfall* (p. 18) promises to be one of the most original home games of 1983.

But there's more to imagination than new game concepts. There's a rich imagination that goes into the actual playing of the games, as evidenced by Eric Ginner's amazing *Centipede* strategies (p. 38) and Richard Ross' award-winning *Tron* strategies. Other imaginative entries include: a surprising interview with the ever-inventive Frank Zappa and his daughter Moon Unit (p. 8) and a six page insight into the serialization of *Donkey Kong* (p. 32).

We too are getting into the imagination game. Not content to simply report on what's happening, we're taking measures to make *JoyStik* every bit as creative as the games themselves. Art Director Jeff Hapner is blowing the roof off our design, incorporating computer graphics into an already dynamic package. And Syd Mead—the man behind the design of "Tron" (the movie) and "Blade Runner"—is illustrating our first science-fiction story, "Simulation Cut" (p. 22), written by David Brin—a nominee for the 1982 John C. Campbell Award. This is without a doubt the most ambitious piece of writing in any video-game publication to date!

There's a lot of energy out there, a lot of excitement, and a lot of (you guessed it) imagination. We're trying hard to make sense of it all, to direct it, to keep it energetic, imaginative, and alive. There's a future to these video games, a phenomenal future. And that future belongs to those who understand it best.

Editor-in-Chief

JoyStik
How to Win at Video Games
January 1983, Volume 1, No. 4

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PUBLICATIONS INTERNATIONAL, LTD. has no affiliation or contractual agreement with any manufacturer of video games, including the games described in this magazine.

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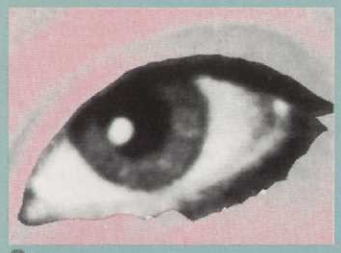
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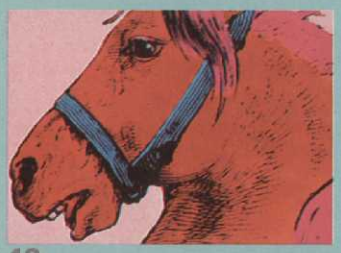
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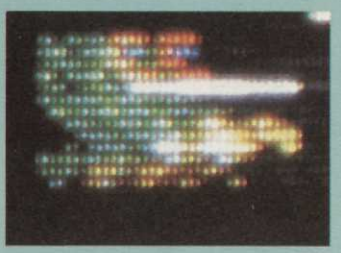
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A tip of the old JoyStik to Silver Sue's Arcade in Chicago

LETTERS

MISGUIDED ON MISSILES

I enjoyed your premier issue....I do disagree with you, however, about the game *Zaxxon.* I feel that it is a fun and challenging game; the graphics only serve to make the game much better. I also noticed that you stated in the *Zaxxon* article that if the robot's missile is launched "you are one dead astronaut." This is not true. I have found that if you skim the ground or dive when it comes on the screen that you have a good chance to survive. I did find your attempt at a joke in the *Zaxxon* article (I, Robot) corny, but amusing.

Sincerely yours,
P. Ferries
Roseville, Michigan

I noticed two areas where your article was lacking proper information. First and foremost, when confronted by the indestructible robot's missile, it may be avoided by moving to the top left corner immediately after the launch of the missile. Wait until the missile is almost on top of you, then drop as low as possible. The missile will pass by and you get another chance when the robot launches another one. Secondly, moving to a height of one and one half (1½) marks on your altimeter will put your ship low enough to destroy the guns and planes on the ground, but just above their firing level.

Respectfully yours,
Michael Conde
South Windsor, CT



Good work. The missile can indeed be avoided (or destroyed) with these maneuvers. However, we still hold true to our original feelings: the game-play is inferior to the graphics.

SPLIT-SCREEN PHENOMENON

My name is Richard Chau, age 26. I started to play *Pac-Man* last December. By February my high score was 1.2 million. At that time this score was not bad. Then they put a new chip in the game. Of course the old patterns won't work. This May I heard the news about an 18-year-old Buffalo, New York man who scored 2,935,590. Then the screen split. About two weeks later, I met a guy from the north of Alberta who said he had split a *Pac-Man* screen when his score was about 3.6 million. I thought, if he can do it, of course I can do it. I played long games every day for a week to build up my strength. Every game was one-million-plus.

On the second of July I started a game to try to split the screen. My first man died at 400,000. I was going to quit but I thought, let's see what I can do for a while longer. My second man got me to 2.5 million. The screen split when I reached 3,180,000. On the left side the picture is normal. On the right there is computer language. I still have two men left but I can't continue. I can't get to the other side of the screen and so eventually must die.

After two men died quickly, it looks normal. The screen shows the usual introductory material but on the bottom it shows only half pictures of the fruits. The bottom of the first board should be a cherry but it shows half of a cherry and half of a key on the same side. After cleaning up the first board the second board is perfectly normal.

In my next attempt I made it to the split screen without losing a Pac-Man. I would say that should be a perfect game.

Yours sincerely,
Richard Chau
Edmonton, Alberta

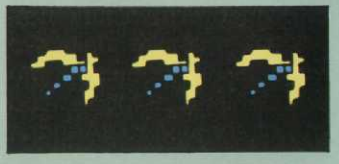
You certainly are a top-notch Pac-Man *player. There are many definitions of the perfect* Pac-Man *game. We have yet to see it done, but a perfect game might be one in which you reach the 9th key on your first* Pac-Man, *having captured every bonus point possible including all four monsters every time that you hit an energizer. To find out more about the split-screen phenomenon in* Pac-Man, *see the article in the* Technocracy *section of this issue, page 70.*

THREE IN A ROW

I must say that my scores on *Phoenix* have soared ever since I read your article. Something unbelievable occurred on level five, the alien ship. Bonus points are awarded when you blow up the ship, but one time what happened to me was ridiculous. The ship was as low as possible. I punched on the forcefield and fired at the ship. My score jumped from 7,000 to 212,000! Talk about bonus points.

Sincerely,
Shawn Howlett
(the "Master Blaster")
Asbury, New Jersey

I have discovered a strategy, a big point strategy, for the video game *Phoenix.* After Warbirds have attacked and they are flying back, with flapping wings, to their stations like this:



You get 200 points for hitting them. But, if three birds are going up like that and you hit all three birds in a very short time (two seconds) you get 200,000 additional points.

Regards,
Mike Kellerer
Ann Arbor, Michigan

Your article on *Phoenix* has two slight mistakes. The orange underbelly need not be shot out to eliminate the Alien. All that needs to be done is to shoot out the purple band. When the

spaceship gets just above the missile base, you can guide the base underneath the ship and shoot the Alien. This will give you 8200 points and in later stages you will get 9200 points. All of the band need not be shot out to eliminate the Alien. You must shoot just enough so that you have a clear shot at him. Also, another thing that was not mentioned in your article, when the Warbirds are returning to the top you can get 200,000 points by shooting three of them in a row. But you can only do this when the Warbirds are flying to the top, not when they are just returning normally. They must be the ones for which you would normally receive two hundred points if you shoot them separately.

Sincerely yours,
Jay Biron
Brian Mead
Greenfield, Indiana

These are but three of the many letters that we have received concerning the bizarre 200,000 point phenomenon in Phoenix.

ASTRO BLASTER TIPS

Here are some special tips on how to get a few thousand extra points. You can get 1000 points for shooting without missing throughout "Fuel Status Marginal," 700 points for demolishing an entire horizontally moving attack force before it reaches the right-hand side of the screen, 600 points for going through an entire sector without hitting "critical" on the laser temperature readout, and 500 points for not losing a ship through an entire sector. In addition, you can get from 400 to 1500 points for docking perfectly without using the directional buttons (try to be right in the center of the word SECTOR before attempting to dock).

Blast away,
Travis Stubstad
Boulder, Colorado

These are but a few of the many ways to get bonus points in Astro Blaster, *a game seemingly designed with bonus points in mind. Although we have yet to do a feature article on* Astro Blaster, *its popularity demands this forum for the views of its proponents. Thanks for the tips.*

GAME DESIGNING FUTURE

Fantastic look into video graphics. Good work! I want to get into video game designing and I don't know which computer to buy. Your interviews with game designers may help me to decide. Keep the *'Stik'* comin'!

Thanks,
Jim Egan
Corvallis, Oregon

This is a common area of interest among our readers. We are planning to have more articles on the workings of the machines and the people who design them. With so many players out there hoping for a game-designing future, it seems likely that the ones who will succeed in the business will need well-rounded preparation in many areas including computer software and hardware, as well as the imagination to make use of those skills once learned.

LOVE LETTERS AND ADVICE

I have read your strategies and I think that they are magnificent. I like your strategies for *Tempest* and *Donkey Kong.* I never used to like *Tempest* because I wasn't good at it, but now that I have read your strategies, I am great at it when I am playing an opponent. I have always been pretty good at *Donkey Kong,* but *JoyStik's* strategy for the conveyor belts helped me to get through it faster. Keep up the good work.

Sincerely yours,
Tim Armstrong
"Strategy Believer"
Taft, California

I enjoyed your first issue of *JoyStik.* I especially liked the pictures of the games and the coverage of Pac-Man Day. I also liked the *Video Debut* by Scott Phillips. I think that you ought to get an "innerview" with the man who won the *Tron* contest in N.Y.C. and made almost three million points.

Sincerely,
Ronnie Garcia
Jacksonville, Florida

We're getting more than an "innerview" with the Tron *master. See Richard Ross' award-winning strategies starting on page 10.*

When Dave and I (both 14) were in the bookstore checking our Vid-books, your magazine totally slipped my vision and I was about to buy a different Video-mag. But then Dave took a copy of *JoyStik* off the shelf and told me to look it over. I glanced through it and tossed the competition on the floor. After I got home I really started to get into what you were doing. Your strategies are great. In the future could you crank out some *Tron.* And if you have some neat tricks to unload about it, feel free to do so, especially fifth level tanks. They can get nasty. Well, got to cruise now, the pizza's here. Take it easy.

Truly "no-ones,"
Danny and Maurer
Amherst, New York

REACT

Your reaction to *JoyStik* is vital—be it hate mail or strategy, comment or exposition. Let us know what you think. Send letters to:

The Editors
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3841 West Oakton Street
Skokie, Illinois
60076

FUTURE WAVES

by David V. Stuart

BABY, IT'S COLD OUTSIDE

Will the serious arcade aficianado go for yet *another* cutesy character? (Remember *Pac-Man, Donkey Kong,* and *Dig Dug?)* Sega/Gremlin, the *Zaxxon* people, seem to think so. Their new game *Pengo* features a "lovable and gallant penguin hero" who "swaggers his ways through an ice block field and into the hearts of players of all ages and both sexes." Sounds like a cross between *Bambi* and *Nanook of the North,* right?

Pengo has to squash ferocious SNO-BEES with ice blocks and avoid being stung. The antarctic hero must also try to line up diamond-shaped blocks for extra bonus points.

To tell the truth, in spite of ourselves, we like this game.

WHEEL DEAL

Big wheel keep on rollin'. Here comes *Radical Radial* from Nichibutsu. Steer the tire through tunnels, mushroom fields, falling rock areas, and so on, all the while avoiding deadly obstacles. If you enjoy "driving" type games, such as *Monaco GP,* then this arcade game could be right up your alley.

COMPUTERS FOR KIDS

Children as young as six years old can learn about computers with the aid of Mattel's new "Children's Discovery System." The battery powered system has its own liquid crystal display screen that provides interesting animated effects. In addition to modules teaching science, language arts, mathematics, and social science, there are *game modules* designed to test the player's reflexes and develop judgement and coordination skills.

LOVE, COMPUTER STYLE

Unlucky at love? You need *Lovers or Strangers,* Alpine Soft-ware's new computer game with a serious side. Developed by two leading psychologists, the "compatability evaluator" gives people an idea of how well suited they are to each other and of how likely they are to have a successful relationship. This is accomplished by exploring the two people's likes and dislikes in seven areas of compatability.

As one of the game's authors explains, "We've developed a fun program to be an ice-breaker for two people who want to get to know each other. But behind the fun is a serious evaluation of how well-matched these two people are. *Lovers or Strangers* will stimulate conversation, laughter, and possibly romance."

Lovers or Strangers retails for $29.95.

IT'S SWELL

You can tell it's Mattel—it's compatible with Atari. Huh?!? That's right. Mattel is introducing the M-Network, a line of eleven Atari-compatible cartridges. The company undoubtedly sees (and wants a chunk of) the money that Imagic, Activision, and other manufacturers are earning by providing games for Atari VCS owners.

Mattel claims that its game cartridges will provide "more action," "vivid colors," "realistic sounds," and "more detail," thereby opening up "a whole new world of fun." The first units include *Tron Deadly Discs, Super Challenge Football, Astroblast,* and *Lock 'N Chase.*

DOES COMPUTE

Why buy just a video-game system when you can have a personal computer for nearly the same price? That's the question Commodore Computer raises, hyping their new VIC-20 system. The computer features a full typewriter-style keyboard, graphics, sound, and color; and a full range of computer applications, including financial planning and word processing.

And, yes, the VIC-20 (which retails for under $300) *does* play games. Early introductions include *Gorf, Omega Race, Cosmic Cruncher,* and *Jupiter Lander.*

Many industry experts predict that within a few years, home computers will become very inexpensive and versatile; "games-only" systems as we know them today will probably disappear. The VIC-20 may signal the beginning of that era.

NOW WE'VE SEEN EVERYTHING

The first "for-adults only" video games recently appeared in stores. The Mystique/Swedish Erotica cartridges are designed for the Atari VCS and retail for $49.95.

Game names include *Bachelor Party* and *Custer's Revenge.* A company spokesman told *JoyStik* that the sexually oriented cartridges, which will not be sold to minors, are designed to "provide laughs, as well as intense game play." What can we say?

SAFETY PINS

Pinball fans can expect to see Gottlieb's newest game *Punk* in arcades soon. Grab some quarters, tie a dead rat to your belt loop, and give the game a whirl.

THE WORMS CRAWL IN

Make way killer tomatoes. Gigantic worms have invaded the nearly defenseless town of Teriyaki. Welcome to *Worm War I.*

The invading crawlers have destroyed much of the city. One weapon can stop the attack—a scrappy little tank armed with deadly worm repellant. Who will maneuver the tank, racing to complete the mission before fuel runs out? You guessed it—climb aboard.

Worm War I is one of the first offerings from Twentieth Century Fox Games of the Century. (Short and catchy name for a company, no?) Other Atari-compatible cartridges include *Deadly Duck, Beany Bopper, Megaforce,* and *Fantastic Voyage.*



THE WORMS CRAWL OUT

And speaking of worms, don't miss Spectravision's new game, *Tapeworm.* "Slinky the Spectraworm" eats fruits that appear on the screen; he grows larger after each meal. The worm must eat as much as he can without getting tangled up or eaten by spiders or birds. Sounds appetizing.



Odyssey2

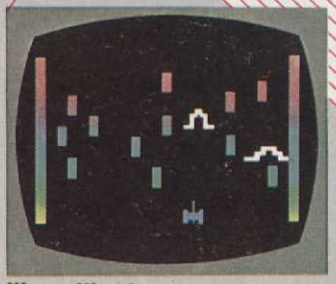


Tapeworm

WAR FARE

Bulletin: Soviet forces are crossing the north German plain. World War III has begun and you are in charge of NATO forces. Can you save the Free World from absolute destruction?

This scenario and twelve others are offered in *Armor Attack*—an EPYX/Automated Simulation game for the Atari 400/800 personal computer. Players choose the scenario and the terrain—jungle, desert, river, city, or mountain ranges. Each side commands six tanks, heavily armed with missiles and guns. Terrain and type of fire selected determine game movement. *Armor Attack* allows players to compete against another human player or against the computer.



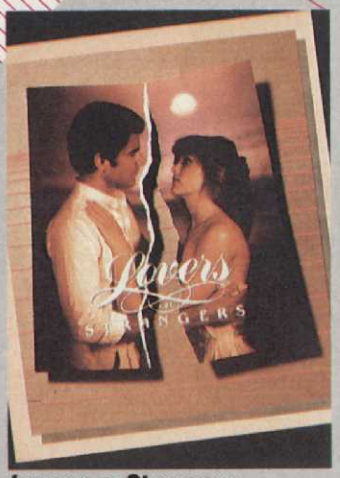
Worm War I



Computers for kids



Pengo



Lovers or Strangers

THE PRIZE IS RIGHT

Home-video game contests are popping up all over the place. And the prizes are nothing to sneeze at. To wit:

Pick Axe Pete Pick-Off: NAP Consumer Electronics Corp. (Odyssey2) awarded a grand prize of a troy pound (12 troy ounces or 5760 grains) of gold bullion. The five finalists competed during an expense-paid three-day trip to the World's Fair in Knoxville, Tennessee.

Greatest American Hero Contest: Six winners of Activision's Starmaster challenge won a three-day trip to Hollywood for the player and two others; a visit with the stars of ABC-TV's "The Greatest American Hero"; a special filming of the winners with cast members and a copy of the videotape; and a videotape recorder to play the tape.

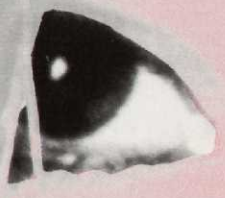
Astrosmash Shootoff: Mattel's contest awarded prizes worth more than $100,000. First prize was $25,000 towards a college education.

Defend Atlantis: Imagic flew the top four *Defend Atlantis* scorers to Bermuda for contest playoffs. First prize winner received $10,000 in gold, with three runners-up each receiving $1,000. More than 200 contestants each received a complete snorkeling set.

As competition increases among home-video game cartridge manufacturers, more contests with even higher stakes will probably be announced. One series of competitions to watch for this fall is Mattel's "Video-challenges," eighteen site contests on sports games; the prizes to be awarded are worth $180,000.

INTERVIEW

THE ZAPPAS ON VIDEO GAMES



by Merl H. Reagle

"YOU KNOW ME, I'M INTO THE CLEAN STUFF, LIKE PAC-MAN AND LIKE, I DON'T KNOW...."
—from "Valley Girl," © 1982 Munchkin Music

He's 41. She's 14. Their ages may be opposite, but the name's the same: Zappa. Father Frank, rock's resident iconoclast, and daughter Moon, Val-Speak authority, are both sharp as phono needles when it comes to observing the human condition. This past summer their hit, "Valley Girl," made household words out of—and this is absolutely the last time you'll hear them here—"grody to the max," "gag me with a spoon," and "like, totally" (not to mention "omiGOD, I'm sherr"). Dubbed a novelty song, but actually a typical Zappa effort, the tune made Frank's "Ship Arriving Too Late To Save a Drowning Witch" album a top seller. And if you don't know what ValSpeak is, you're a foreign spy. A *bad* foreign spy.

The Zappa home in the Hollywood Hills, where this interview took place, is like any other home-sweet-home 24-track-recording-studio-practice-hall. A TV film crew had Dad temporarily occupied, so first stop was Moon's room. The doorway was round. Moon had a rockabilly haircut.

MOON: I'm trying to break the Val mold.

JOYSTIK: Oo, gross! Does this mean you're giving up video games, too?

MOON: No, I still like them. I was addicted to *Pac-Man*. I was pretty bad, though. I never looked at the score. I would just clear boards. I like *Pac-Man Deluxe** because it's more challenging. I can't do games like *Tempest*. I'm too uncoordinated. I like *Donkey Kong*. I like the one where the birds fly over and poo-poo on you.

JOYSTIK: *Crazy Climber*.

MOON: Yeah. I like the cute games with cute little things happening to silly little people.

JOYSTIK: Have you analyzed ValSpeak? What causes it, for example?

MOON: I think there are different reasons for it. It's a form of rebellion against not being able to talk to your parents. Therefore they have to *really* not be able to talk to their parents. It could be just peer pressure. Or maybe some kind of mouth disease.

JOYSTIK: Did you ever really talk it?

MOON: No, I speak English. My parents speak English and I think they did a good job of teaching me English.

JOYSTIK: Why are teenagers so often the targets of your dad's songs?

MOON: It's harder to break attitudes when you're older. Kids are more apt to change than adults, and they're better able to handle change. It's like Willy Wonka and the Chocolate Factory: he couldn't trust an adult.

JOYSTIK: Who would you say his audience is?

MOON: Well, his goal is not to make gold records. He wants his albums to just be available, to provide an alternative to the humdrum stuff. His songs are funny, but they also talk about truth and reality. People don't want to hear about that. That's why his songs aren't played on the radio, and that's why a lot of people don't know about him. "Valley Girl" has given everybody a chance to take a closer look at his stuff.

JOYSTIK: Do you go to public school?

MOON: Yes, and I have very pleasant feelings about school. For "Show and Tell," other kids would bring in rocks, or a pet. I brought in my father. In first grade, I brought in my mother and we made T-shirts.

JOYSTIK: Do you get picked on?

MOON: No! But I've always had a little trouble talking with kids my age. I seem to relate better to adults, including teachers.

JOYSTIK: Are there going to be more dad-and-daughter recordings?

MOON: Well, my first interest is acting. Besides starting all these incredible trends—beach towels, lunch boxes, movies—"Valley Girl" has given me the opportunity to see more scripts. I just got a script in which they want me to play a Val, and while I'm trying to break that image, I don't want someone else to play it, either! The script is about video games, by the way. There are lines in it like: "Daddy, I'm 15 years old! I can play video games if I want to, like, you know?"

(Moon's Mom invites us into the other room where Dad is showing the TV crew a 10-minute clip from "Baby Snakes." This two-hour-plus Zappa movie features lots of music by Frank and lots of eye-popping metamorphic clay animation by Bruce Bickford. After that, we're led into the studio control booth to hear three cuts from an upcoming album. One song is called "You Look Like A Dork." Finally, everyone leaves except Frank and Moon, and although Frank will end up doing most of the talking, Moon curls up with him, listening graciously and displaying immense patience, mainly toward the interviewer. The master tape of "Chunga's Revenge" sits on a table between us.)

Photo by John Livzey



JOYSTIK: Why did you consent to this interview?

FRANK: Because I don't have anything against video games and I do have something against people who keep kids from playing them.

JOYSTIK: Do you ever play them?

FRANK: No, but I love to listen to them. I like rooms full of that sound. It's a very interesting environment. When I was coming back from my European tour I had a layover in New York. I went into the video-game room at the airport and walked around with a tape recorder, recording the whole room going at once. Then I listened to it on earphones on the plane home. It was great. But I'm not interested in "plooking" buttons and blowing things up.

JOYSTIK: Do you think it fritters away quarters that could be better spent elsewhere?

FRANK: No, it's entertainment, and you have to pay for it. You just have to decide if the quarter you spend on a video game is worth the amount of fun you get out of it.

JOYSTIK: How about its effect on poorer families?

FRANK: If you had to choose between spending the afternoon in an unpleasant house with a bunch of other kids, where the family argues all the time, and the air conditioning doesn't work, even if you're poor you're gonna *find* the quarters to go play video games. If you don't have the quarters, you're gonna go hang out there so you can mooch a game from somebody or at least talk to someone, which will make you feel better.

That's the other thing about a video-game parlor: it's a gathering place, which lends a sociology to it that transcends what the games are. And if you're good at video games, it's okay to be smart. An arcade is one place where it's okay to show some intelligence.

JOYSTIK: In what way?

FRANK: Most people in America do everything they can to disguise the fact that they're intelligent. There's no other race of people on earth that wants to pretend so hard that they're stupid. That's because in high school you learn that if you're smart, you're not gonna get laid. The girls pretend just as hard as the guys. "Nobody wants to pooch a smartie." So you pretend to be dumb. Pretty soon, you're *really dumb.*

JOYSTIK: Could this be a cause of Val?

FRANK: No, Val is one manifestation of that sort of self-inflicted dumbness. Americans want to be these things: cute, rich, right, dumb forever, liked by everyone, good at sports, regular guys, and good drivers. Being fat and lazy is what America is all about.

JOYSTIK: You'd think we'd have been invaded by now.

FRANK: Nobody has to. There ain't gonna be no war. Americans are so stupid that they'll let an Arab come in and buy the whole country and they won't even know what happened. We'll be owned by some other government. Drop a bomb and wreck all the real estate? Forget it! The missiles may fly over, but they're not gonna blow us up. They're gonna squirt us with gas.

JOYSTIK: What do you think Philip Habib's been doing in the Mideast?

FRANK: Using up a lot of jet gas. We pay the gas bills, the phone bills, the limo bills, the hotel bills, the security bills.... And when the time comes to really shoot the missiles, they're gonna be too scared to do it. Nobody knows where those missles are gonna go. How can you test all those installations? Each one costs what, 20 million dollars? You don't know what'll happen. It could blow up underground. It could go up and come right back down.

JOYSTIK: Sounds like a good idea for a video game.

FRANK: I'll tell you the only problem with video games —the mentality of the people who are scared of them. Parents who won't let their kids play them. That's the crux of the biscuit.

MOON: There's now a law here that says you can't skip school to play video games. During the school year there's this one place that won't let anyone under 18 play them. I don't know anybody who would skip school to play a game of *Pac-Man.* It's so useless to even worry about it! I mean, get *serri-oss!*

(Moon excuses herself. She's going to her first Van Halen concert.)

FRANK: Listen. I don't like puzzles. I don't do games, don't do sports, don't do chess or checkers, don't do pingpong. I don't jog. But I think everybody should do that stuff if they want to. Same with video games. Any kind of electronic device that a kid can become friends with is good.

**Bootleg version.*



by Richard Ross

Midway's *Tron* is a game that will make the history books. It's a game that set a lot of precedents, that got a lot of people talking. It was the first game, for example, to have such a dynamic relationship with a movie. And it was the first game with celebrity appeal (Barbara Eden! Hank Aaron! Willie Mays!). But more than that, it was the first game to have a championship debut. A seven week nation-wide contest — with over 1,200,000 entrants — culminated in a sensational playoff at Madison Square Garden (see the November issue of *JoyStik*). And Richard Ross — the author of this article — won that contest.

What follows on the next six pages are the award-winning strategies of Richard Ross—in his own words. His competitive totals were: 3,958,901 for three games, with a 1,830,044 single-game high.

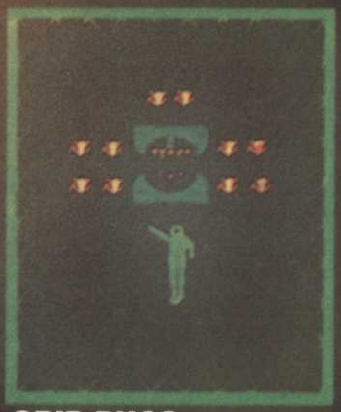
There's a lot of magic in what follows here. A lot of championship information. A diligent study of Ross' competitive techniques will do more than improve your score. It will give you a keen insight into the workings of a championship mind.

Note: As a result of unusually high scores—and thus long playing times—Bally officials introduced a new "computer chip" for Tron *prior to the district playoffs (fifth week of competition). The new computer chip was used for the remainder of the* Tron *tournament on the various "levels of difficulty" designed within the chip.*

The significance of this development is that as of this writing there are two separate computer chips for Tron *in existence. Some Aladdin's Castle game rooms have the original (old) chip, but apparently all other game rooms have the new one. Although it appears that the new chip will eventually supersede the old one in all game rooms in the U.S., the problem is intensified with the existence of nine levels of difficulty within each chip. The only real difference between the nine levels of difficulty is the sequence of the first ten or so waves. The basic program remains the same, and the sequence becomes identical in the advanced waves.*

Throughout this discussion, I will help the reader to determine which computer chip—and level of difficulty—his local game room has set for the obviously conquerable, yet ever-challenging Tron. *My strategies, starting on page 14, are based on the new chip, difficulty level 5 (factory setting).*

The video game *Tron* is based on a classical theme of Good (our hero Tron) vs. Evil (villain Sark and his Master Control Program). To succeed at this game you must wittingly guide Tron in battle against four formidable foes: Tanks, Light Cycles, Grid Bugs, and the central power of Evil, the Master Control Program (MCP Cone). All four games (screens) are contained in each wave. You must successfully complete all four screens in order to advance to the next, more difficult, wave. The four screens are equally divided to test player ability in the two basic video game skills of (1) reaction and quickness (Grid Bug and MCP Cone screens) and (2) pattern learning and recognition (Tank and Light Cycle screens).



GRID BUGS

The Grid Bug screen is probably the easiest of the four. In addition, this screen gives the player the best opportunity to accumulate maximum points. With the exception of the first wave of the new chip, the timer on the Grid Bug screen is the same for all waves. This is the quickest way to determine which computer chip you are playing against. Simply observe how the timer is set on the first wave. If the timer begins at 1000, you are playing the old chip; if it starts at 500, you're playing the new chip. You have about 30 seconds (1000 time units) to collect points on this screen by killing as many Grid Bugs (50 points each) as you can before your time expires. But don't be greedy! When the timer falls to 100 time units (about 3 seconds left) you will hear a loud warning sound. You should then maneuver Tron to safety in the center of the board via one of two side entrances.

Get in the habit of maneuvering Tron in position close to one of the side entrances early in the screen while simultaneously killing Grid Bugs. As soon as you hear the warning, guide Tron to safety before time expires. You will be awarded in points the number of time units left on the timer after successfully completing the screen. With this technique, you won't have to worry about looking at the timer in the center of the screen and you can concentrate on the main objective: zapping Grid Bugs.



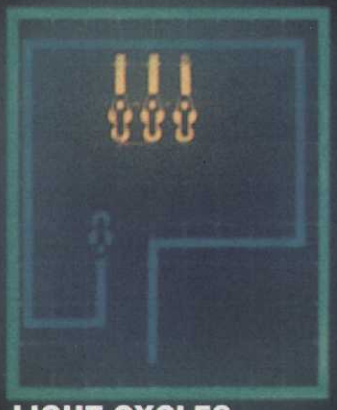
MCP CONE

The MCP Cone screen gives you another prime opportunity to elevate your score with minimum risk. As the MCP Cone descends on you (Tron), maneuver for position while firing continuously at the MCP Blocks (25 points each). The main objective is to blast your way through the MCP

Blocks and enter the top portion of the Cone (1,000 points for entering Cone) without coming into contact with any Blocks.

On the first wave, you will face a slowly descending Cone three MCP Blocks deep (vertically). This rotates from left to right on descent. Maneuver Tron up close to the Blocks on the far right side of the Cone while firing continuously at the Blocks as they move in your direction. On this first wave, you should be able to clear all MCP Blocks (1,000 point bonus) before entering the top portion of the Cone.

The advanced Cone waves are trickier to master as the speed of rotation and speed of descent increases. The direction of rotation also changes — some Cones rotate from right to left, and they also become thicker (up to five Blocks deep). However, in the treacherous advanced Cone waves you are compensated with more rapid fire. To successfully enter the top portion of the Cone in the advanced waves, you must use your rapid fire wisely and economically while correctly positioning Tron. After the first couple of waves, get in the habit of moving Tron against the direction of Cone rotation (i.e., if Cone rotates from left to right, position Tron on the left side, and vice versa) while firing upwards continuously. After blasting an initial pathway, gradually move Tron in the same direction of Cone rotation and finally up to the top portion of the descending Cone while all the time firing behind you to protect yourself from the onslaught of MCP Blocks. This maneuver takes practice and precision timing. But most important of all, you must fire as fast as you can while guiding Tron to safety into the top portion of the Cone.

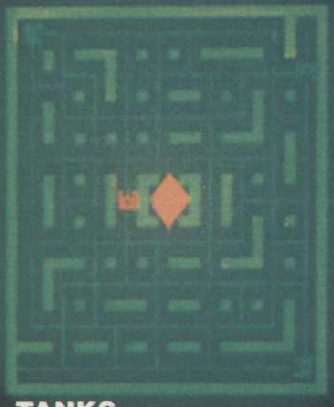


LIGHT CYCLES

The Light Cycle screen is a difficult one to master and a little memory work helps here. After studying the strategy diagrams in this article, it will only be a matter of practice before you gain confidence on this screen. Get in the habit of pushing the joystick and trigger full throttle forward as soon as you see the screen — that is, before the Light Cycles race towards each other. In this way, you know that you are beginning each screen the same way.

All patterns are run to completion with the trigger fully depressed for maximum speed of your Light Cycle (the blue one). As soon as each pattern is completed and all enemy Cycles are trapped, release the trigger and simply guide your Cycle at slow speed to avoid collision with the wall and Light Cycle paths until all trapped enemy Cycles finally crash. Once you train yourself to keep the trigger fully depressed while running each pattern, the only thing you have to concentrate on is where to guide your Light Cycle to wittingly trap all enemy Cycles. You can move your Light Cycle on the grid board in the normal four directions as the enemy Light Cycles react to your movements.

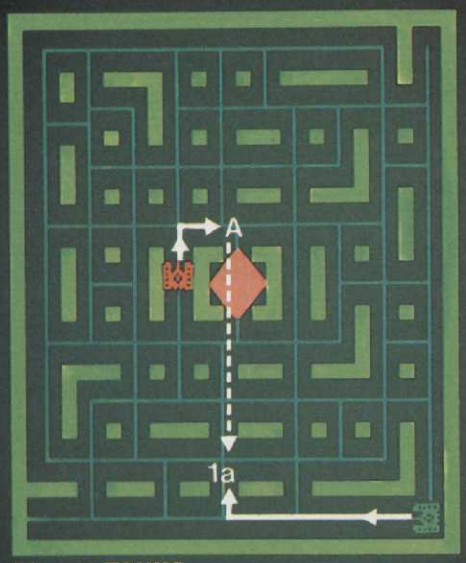
The patterns detailed in this article were derived by simple trial and error experiments. It is important to understand that my patterns are not the only possible solutions to each wave, and it might be fun to experiment on your own. You will notice that many of the Light Cycle patterns detailed in this article are fun all the way to the wall — it just takes practice, and this technique will greatly simplify your patterns.



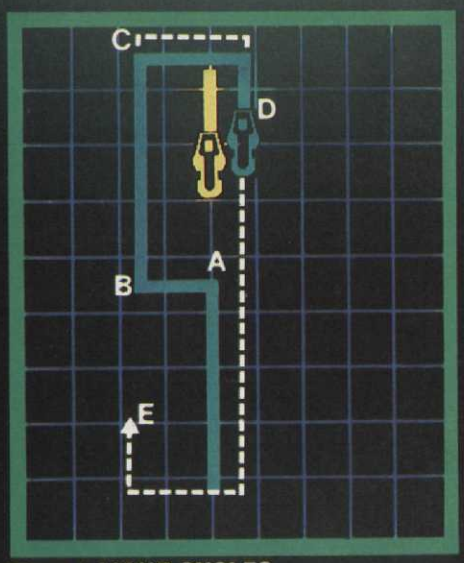
TANKS

The Tank screen is perhaps the most difficult one to master — it takes three shots to destroy each enemy tank while only one enemy shell is enough to wipe you out. It doesn't seem fair, does it? Well quit crying and start practicing. You have the advantage of rapid fire and live bank shots.

The strategy diagrams in this article will help make you a Tank ace with some practice. As in the Light Cycle screen, unless stated otherwise, get in the habit of pushing the joystick full throttle forward as soon as you see the screen — notice that all patterns in this article start your Tank in the same direction. These patterns become easy to run when you learn to rotate your Tank gun (Control Knob) in the correct direction while your Tank is moving. In this way your gun will be in position for rapid fire as soon as possible. Also keep in mind that you can position your Tank halfway out in any aisle without getting fired upon — just make sure you don't cross that halfway line. You must move fast and fire fast to be successful here, but with practice you may find this screen to be the most rewarding and enjoyable of the four. Again, as in the Light Cycle screens, these are not the only possible patterns but only those that I devised, used in the tournament competition, and use today.



Wave 1 TANKS



Wave 1 LIGHT CYCLES



Wave 1 GRID BUGS

Wave 1

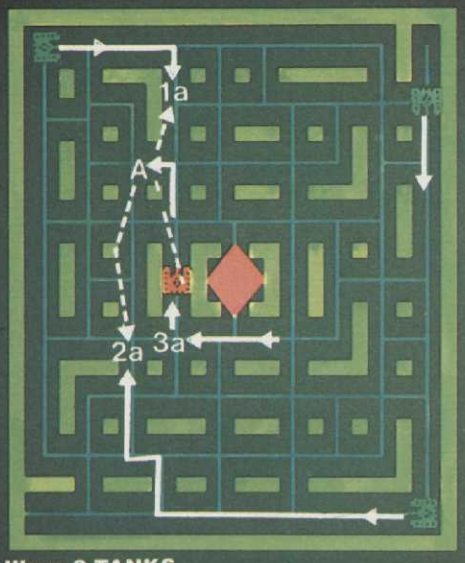
TANKS: Move to A and fire through center partition. Tank (1_A) cannot fire through center partition. The letter subscript for each Tank indicates position from which you hit it (ex: Here Tank 1_A is hit from your position A.)
LIGHT CYCLES: Break off at C to trap enemy Cycle so you can let up on trigger at D. If you overshoot C (dotted line), then keep trigger fully depressed to E to trap Cycle.
MCP CONE: Rotates left to right.
GRID BUGS: Immediately blast your way to gain position in front of a side entrance.

Wave 2

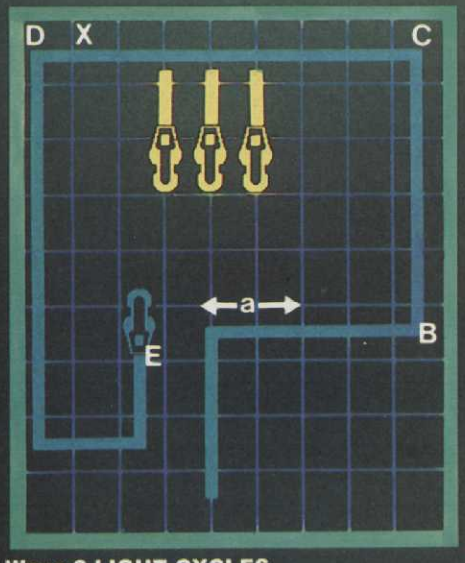
TANKS: Move to A to dispose of Tank 1_A. Rotate gun to blast 2_A via bank shot. Wait in position A for 3_A to approach; fire when in range.
LIGHT CYCLES: *Do not* go all the way to line (a) or pattern will not work. Break off at C; let up on trigger at X to break off at wall (D) at slow speed. Complete route to E.
MCP CONE: Same as 1, except Cone is four Blocks thick and faster.
GRID BUGS: Kill all the Bugs above you before moving to front of a side entrance.

Wave 3

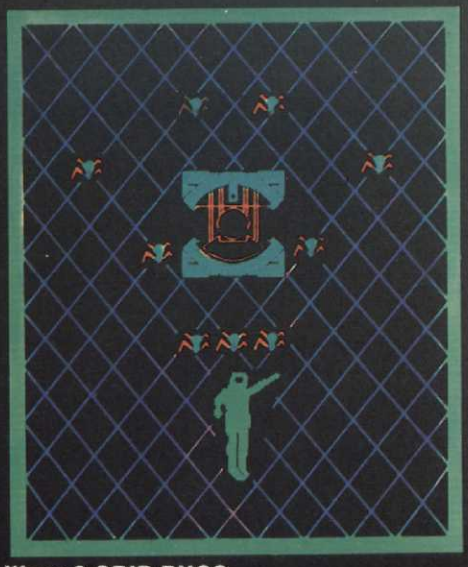
TANKS: Move to A. Hit 1_A, then go to B and eliminate 2_B. Blast 3_B, 4_B, and 5_B. Wait in B and hit 6_B as it approaches.
LIGHT CYCLES: Break off at solid line (A) and wall (B). Three-way crash of all enemy Cycles will take place by the time you reach C. If you miss



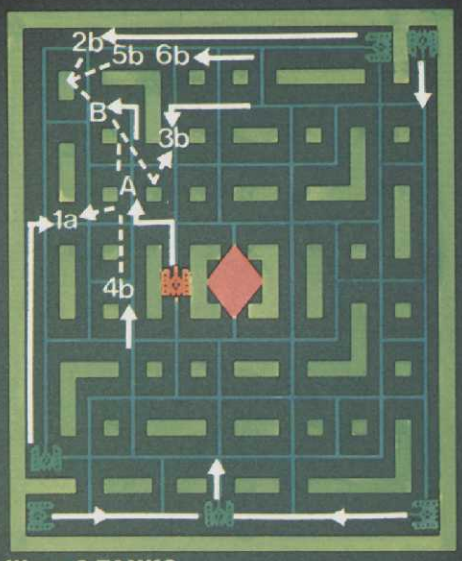
Wave 2 TANKS



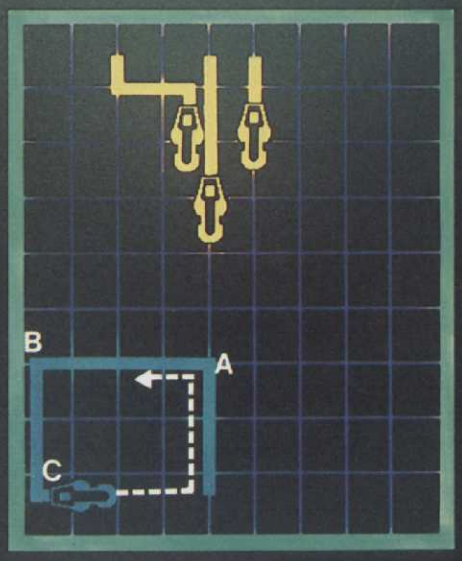
Wave 2 LIGHT CYCLES



Wave 2 GRID BUGS



Wave 3 TANKS



Wave 3 LIGHT CYCLES



Wave 3 GRID BUGS

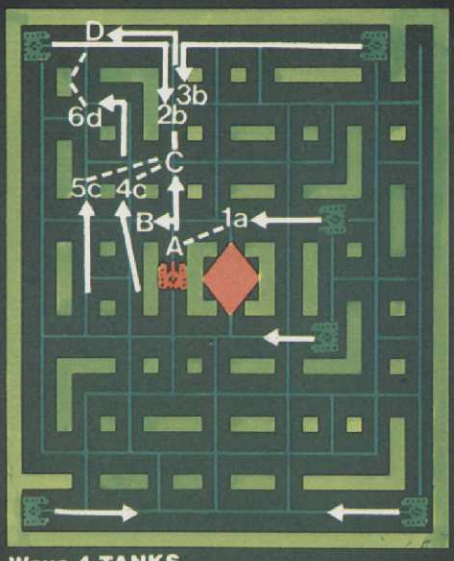
the solid line at A, box yourself in (dotted line).
MCP CONE: Rotates very fast *right to left*. Move up and to far right side, use advanced Cone strategy. Hit Blocks while guiding Tron to safety in top of Cone.
GRID BUGS: Move to right side and up while blasting a path on far right side. Escape to A and fire down on Bugs before entering right side entrance.

Wave 4

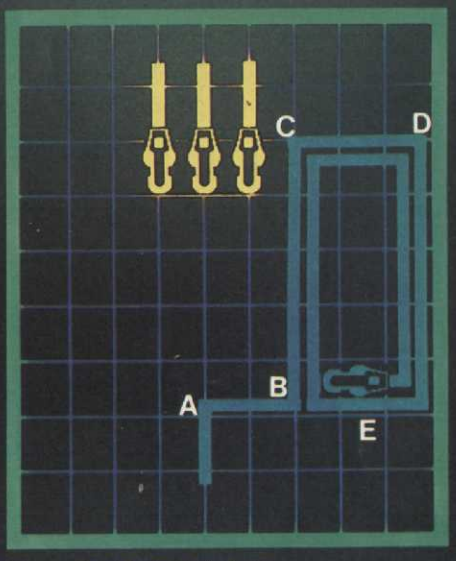
TANKS: Eliminate 1_A from A and proceed to B. Blast 2_B and 3_B, then move to C. Hit 4_C and 5_C; move to D and wait for 6_D.
LIGHT CYCLES: *Don't* go all the way to the wall. If you miss the solid line (BC) at B, the pattern will take longer but still work if you box in. Let up on the trigger at E.
MCP CONE: Rotates fast. Move up and to far left. Use advanced Cone strategy.
GRID BUGS: Escape to the right and up with diagonal movement. Gain position in front of right side entrance.

Wave 5

TANKS: Red Tanks do not fire shells, but move faster than blue Tanks. *Do not* move until you have hit 1. Hit 2 while moving downwards, then rotate gun 180° and fire at 3 and 4 *while* moving back up to A. Hit 5 from A and move back to B to get 6.
LIGHT CYCLES: Go all the way to the wall (D). If you miss, correct against the wall as soon as possible. Let up on trigger as soon as you are running up wall (E). Continue at slow speed.
MCP CONE: Rotates *right to left*. Move up and to far right.



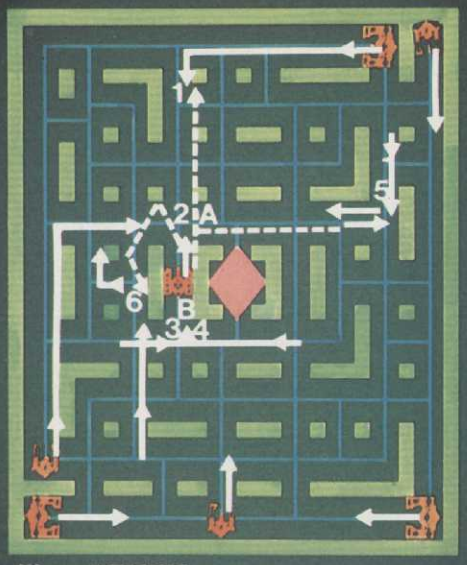
Wave 4 TANKS



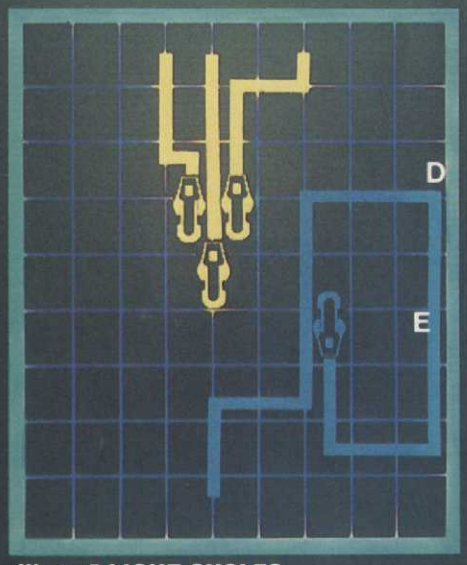
Wave 4 LIGHT CYCLES



Wave 4 GRID BUGS



Wave 5 TANKS



Wave 5 LIGHT CYCLES



Wave 5 GRID BUGS

GRID BUGS: Depress trigger rapidly when screen appears. Knock out any two adjacent Bugs on the right side. Escape to right and up.

Wave 6

TANKS: Hit 1_A from A and go to B. Blast 2_B, then move to C. Hit 3_C, then wait in C to get 5_C as it approaches from below.
LIGHT CYCLES: Same as 4, except Cycles travel faster. Critical move is off point D—leave one space next to the wall and release trigger at E.
MCP CONE: Moves very fast. Move up and to far left.
GRID BUGS: Kill surrounding Bugs. Proceed to side entrance.

Wave 7

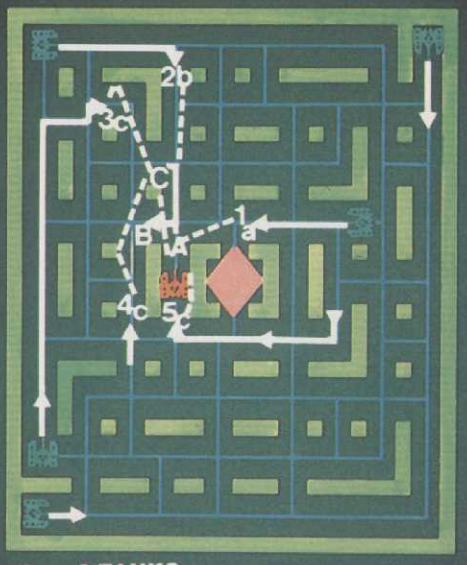
TANKS: Same as 5.
LIGHT CYCLES: Same as 5, except Cycles travel faster. Go to wall (D) and release trigger (E).
MCP CONE: Rotates *right to left*. Move up and to far right.
GRID BUGS: Same as 3.

Wave 8

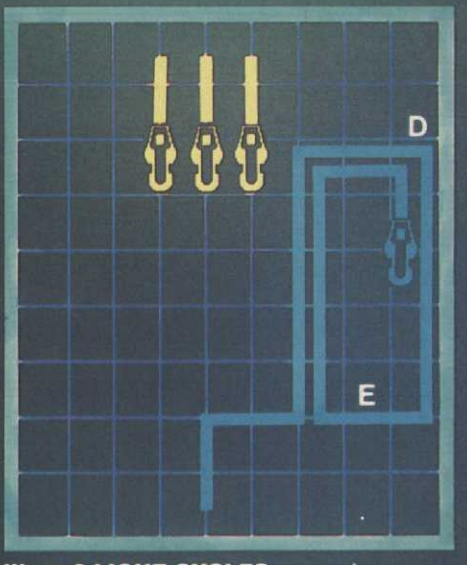
TANKS: Same as 4.
LIGHT CYCLES: Same as 6, except Cycles travel faster.
MCP CONE: Rotates very fast *right to left*. Move up and to far right.
GRID BUGS: Same as 5.

Wave 9

TANKS: Have joystick forward *before* screen starts. Move to A. Dispose of 1_A; proceed to B and fire down on 2_B, then fire up on 3_B. Go to C to get 4_C and 5_C as they approach.
LIGHT CYCLES: Similar to 3. Break off just before solid line at A, run to the wall (B), and form a box at solid line at C. Release trigger at D to close box.
MCP CONE: Same as 7.



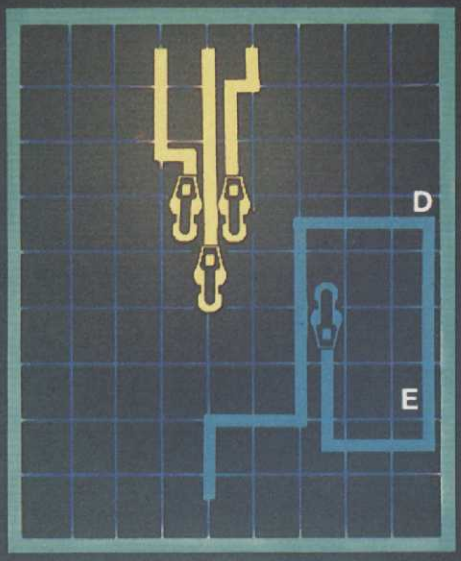
Wave 6 TANKS



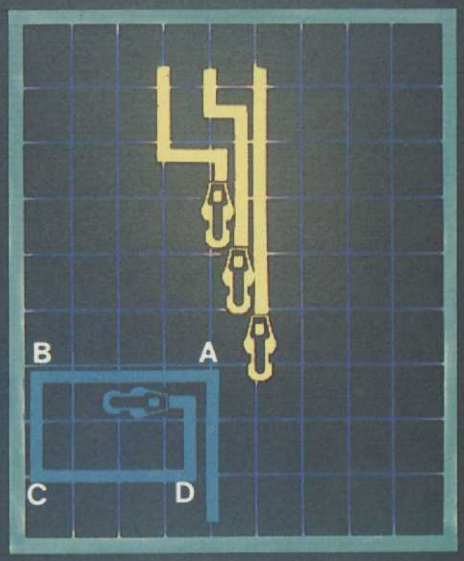
Wave 6 LIGHT CYCLES



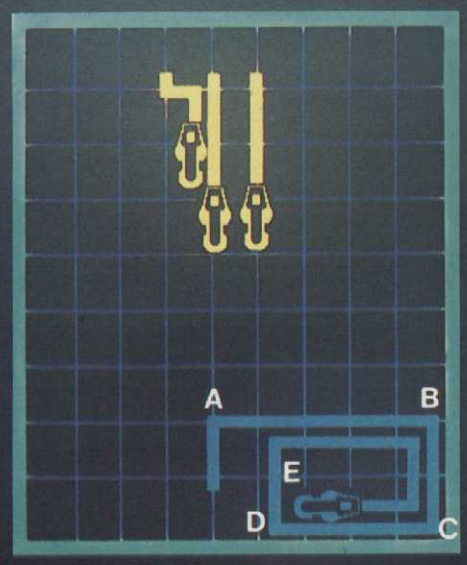
Wave 6 GRID BUGS



Wave 7 LIGHT CYCLES



Wave 9 LIGHT CYCLES



Wave 10 LIGHT CYCLES

GRID BUGS: Same as 6.

Wave 10

TANKS: Same as 3, except Tanks move faster. Have joystick forward *before* screen starts.
LIGHT CYCLES: Break off at the solid line at A and run to wall (B). Run to back wall (line CD) and release trigger (E) after breaking at D to close box.
MCP CONE: Same as 4.
GRID BUGS: Same as 4.

Wave 11

TANKS: Same as 6, except Tanks move faster. Have joystick forward *before* screen starts.
LIGHT CYCLES: Same as 8.
MCP CONE: Rotates slowly *right to left*. Move up and to far left, hitting Blocks.
GRID BUGS: You're already aimed at Bug to your right. Hit it, then move all the way down while firing to hit second Bug on your right. Fire up to the left, blasting a path across the bottom while moving to the left side entrance.

Wave 12

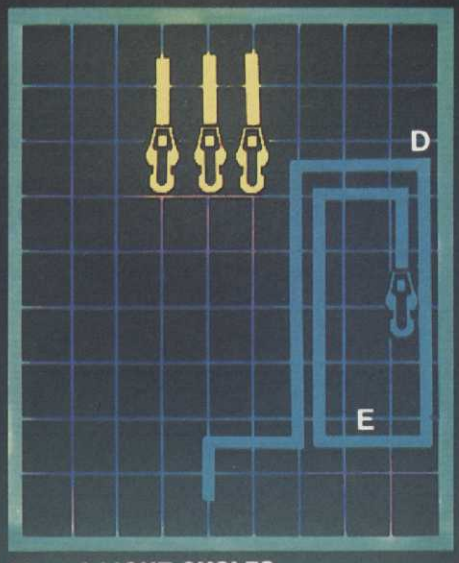
TANKS: Same as 7.
LIGHT CYCLES: Same as 7.
MCP CONE: Same as 6.
GRID BUGS: Same as 6.

Wave 13

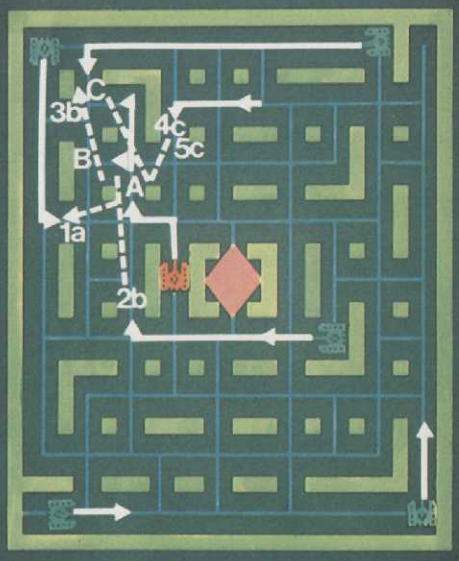
TANKS: Same as 4, and 8 except Tanks move faster. Have joystick forward *before* screen starts.
LIGHT CYCLES: Same as 8.
MCP CONE: Same as 5.
GRID BUGS: Same as 7.

Future Waves

TANKS: 14-18 = 9-13 with Tanks traveling at *regular* speed.
LIGHT CYCLES: 14-18 = 9-13.
MCP CONE: 14-19 = 8-13.
GRID BUGS: 14-19 = 8-13.



Wave 8 LIGHT CYCLES



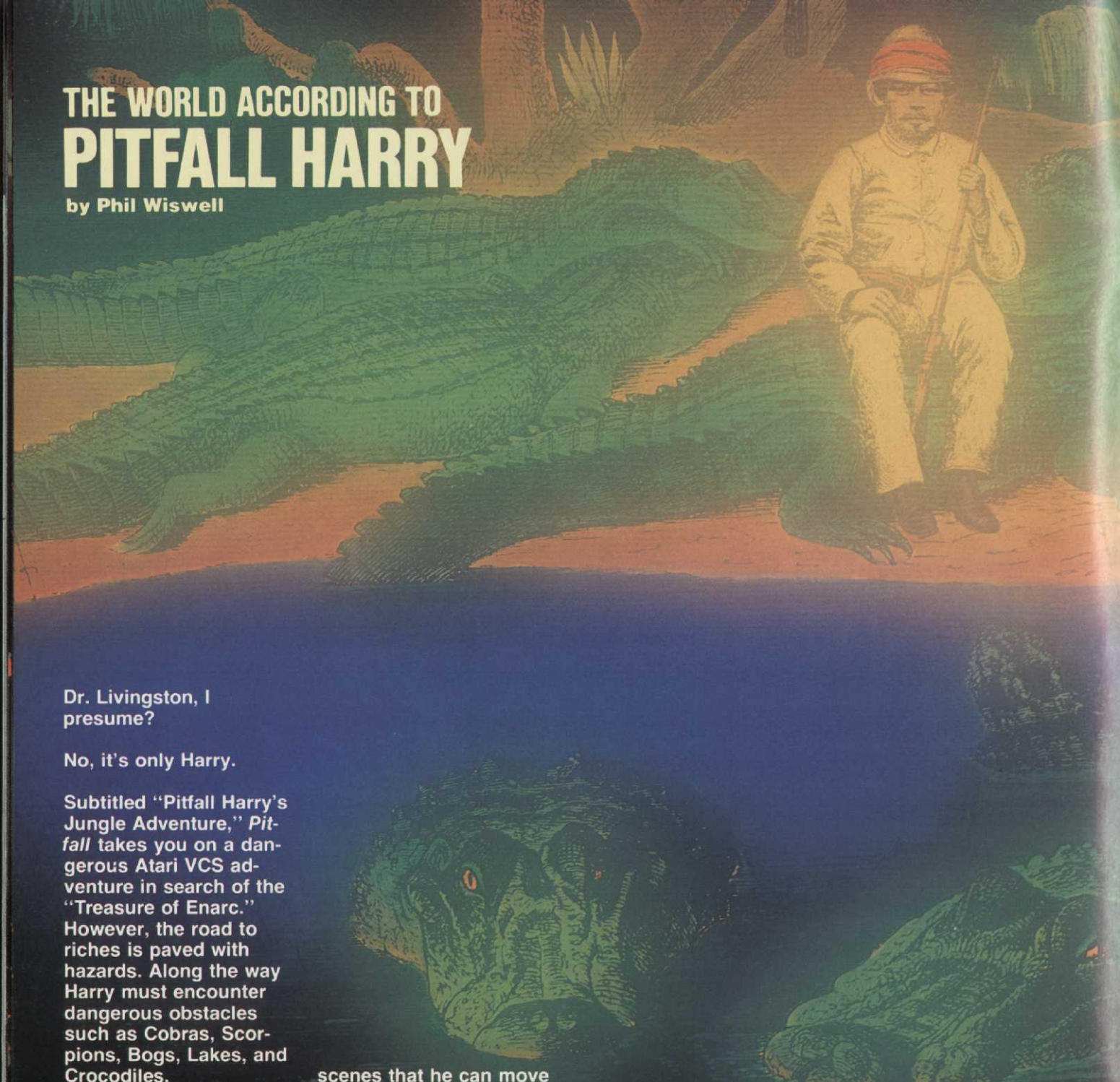
Wave 9 TANKS



Wave 11 GRID BUGS

THE WORLD ACCORDING TO PITFALL HARRY

by Phil Wiswell



Dr. Livingston, I presume?

No, it's only Harry.

Subtitled "Pitfall Harry's Jungle Adventure," *Pitfall* takes you on a dangerous Atari VCS adventure in search of the "Treasure of Enarc." However, the road to riches is paved with hazards. Along the way Harry must encounter dangerous obstacles such as Cobras, Scorpions, Bogs, Lakes, and Crocodiles.

Pitfall is game designer David Crane's sixth cartridge for Activision and, like his others (*Freeway* and *Grand Prix* are among them), is graphically stunning.

The essence of *Pitfall* is timing—if you haven't got it or can't develop it, stay out of the Jungle! Harry's world is made up of 255 different above- and below-ground scenes that he can move through, one at a time, in either direction. Most of the action occurs aboveground—that's where the Treasures, and most of the hazards, are located. The screens appear in a predetermined order; when you've played the game a bit, you can memorize their sequence. It's a good idea to list them out so you always know where you're going and what you'll find when you get there.

Harry starts out with three lives and/or 20 minutes to accumulate all the Treasures he can. You begin the game with 2,000 points. Hitting an obstacle costs you either points or a life; finding one of the 32 Treasures of Enarc gains points. Who is Enarc? Here's a clue: try looking at the word in another way and his identity should be clear.

Pitfall Harry

This is you, brave and strong, decked out in jungle attire. Moving Harry around the Jungle is easy. Pushing the joystick (left controller only) to the right or left moves him in that direction. Pushing it up or down will enable Harry to climb up or down Ladders. Pushing the action button makes him jump. Jumping is the way Harry avoids hazards, reaches



Swinging Vines, and hops across Crocodiles' heads. Harry gets three lives; he can be killed by either: a) touching a Scorpion, Cobra, or Fire; b) falling into a Lake or Bog; or, c) being eaten by a Crocodile.

Holes and Tunnels
Holes are Harry's entrance to the network of Tunnels that run under each screen. Harry can climb into or out of a Hole if there is a Ladder available to him. If he accidentally falls into a Hole, he will lose nothing more than a few points.

Bogs and Lakes
Many *Pitfall* scenes contain these hazards, which must be crossed successfully to avoid losing one of Harry's lives. Some Bogs and Lakes appear and disappear every few seconds; others feature Swinging Vines; certain Lakes contain Harry-hungry Crocodiles. (More on these later.)

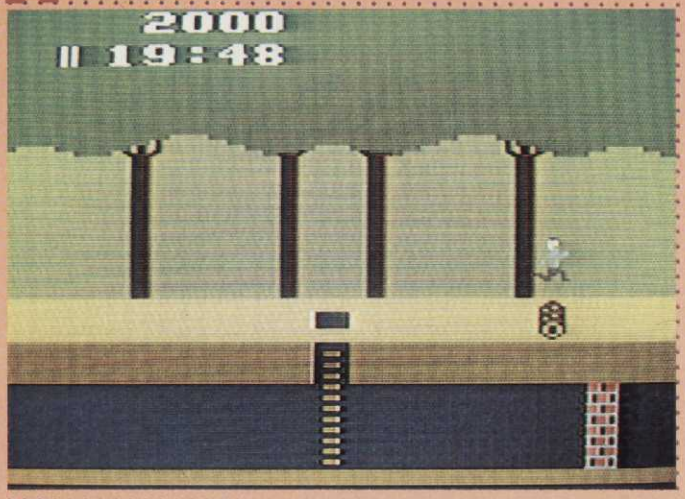
Logs
Logs are the only *Pitfall* hazards that do not cost Harry a life if he runs into them—only points. To avoid losing points, Harry must jump over the Logs. They may either be just blocking the way, or rolling from right-to-left. Logs may appear individually or in groups of up to three.

Cobras and Fires
If Harry so much as touches one of these hazards, he's a dead man! Fortunately, it's relatively easy to jump over them and save your hide. Cobras and Fires always appear in above-ground scenes.

Scorpions
Equally deadly, but more difficult to avoid than other *Pitfall* hazards, Scorpions appear only in below-ground Tunnels. Split-second timing is the key to successful Scorpion-jumping.

Treasures of Enarc
The big payoff—cash, gold, silver, diamonds—this is what makes Harry's dangerous quest worthwhile! Harry need only touch a Treasure to collect its point value. A Moneybag is worth 2,000 points; Silver Bar, 3,000 points; Gold Bar, 4,000 points; and Diamond Ring, 5,000 points. The highest *Pitfall* score we've heard of to date is 114,000 points. Can you score higher? Remember, it's a Jungle out there!

A

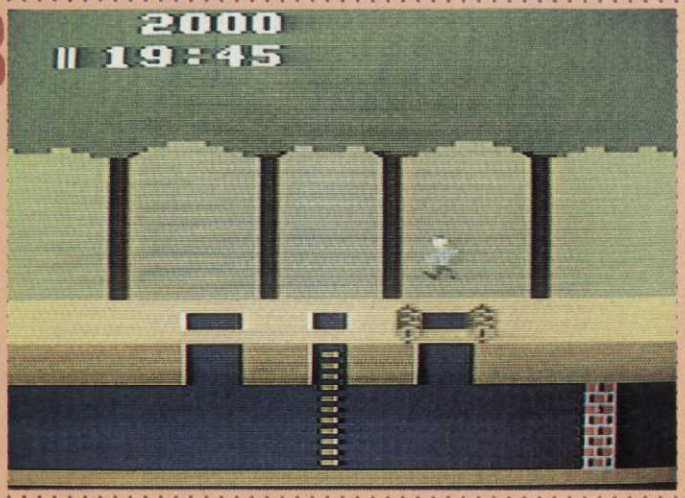


A

Scene 1: This starting scene is one of the easiest type — nothing moves except Harry. You will encounter a Hole and a stationary Log. As mentioned earlier, Holes are Harry's entrance to the network of under-ground Tunnels featured in each scene. Each under-ground screen is equal to three above-ground screens and can thus be used as shortcuts to the Treasures. However, Tunnels may also lead to brick-walled dead ends. All Tunnels are guarded by deadly Scorpions.

While keeping the joystick pressed to the right, you'll need only touch the action button when Harry gets close to the edge of the Hole. He'll jump right over it and continue running to the right. Jump over the stationary Log in the same manner, as illustrated.

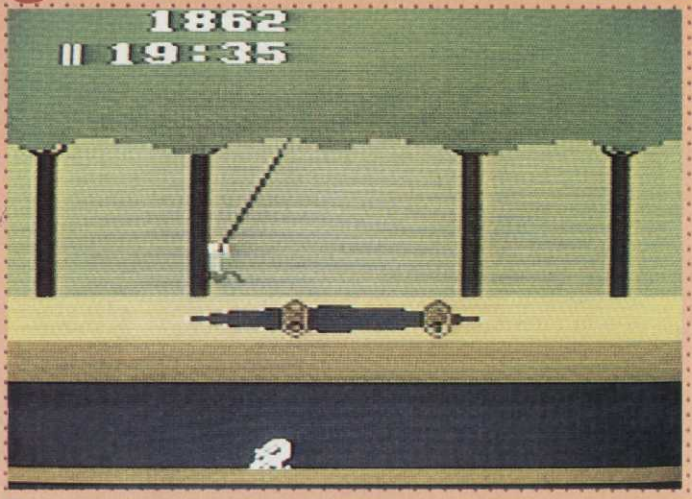
B



B

Scene 2: Here you'll have to deal with three Holes, a Ladder, and two Rolling Logs. Keep the joystick to the right until Harry reaches the first Hole. Wait there until the Logs are about to run over Harry, and then jump over the Logs and the Hole at the same time. Jump over the second Hole (the Ladder is useless; it leads to a brick wall that Harry cannot get past) and stop by the edge of the third Hole. Wait for the Rolling Logs to reappear (they wraparound the screen) before jumping the third Hole. Use the same strategy as before.

C



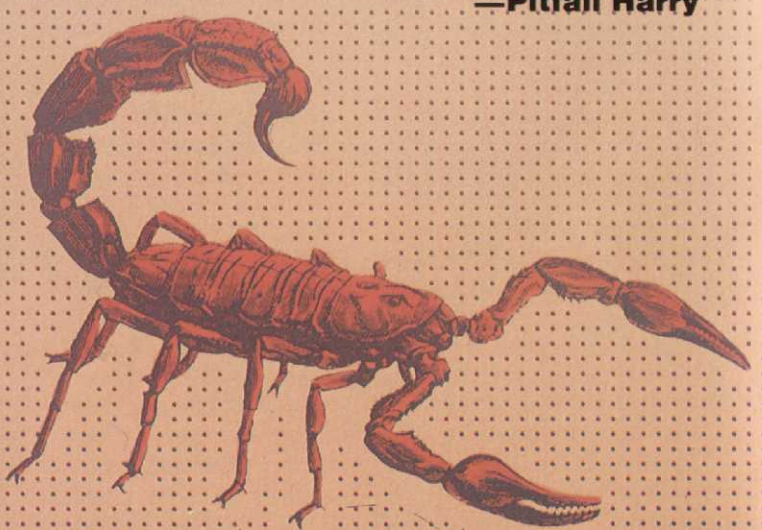
C

Scene 3: In this scene, in addition to two Rolling Logs, you'll encounter your first large hazard, a Bog. Throughout the game, Bogs, as well as Lakes, will appear as either stationary or disappearing hazards.

All stationary Bogs, such as the one in this scene, and many stationary Lakes (those without Crocodiles) must be crossed by Swinging Vines. Run to the edge of the hazard, wait for the Vine, and leap just before the Logs are about to hit Harry's legs. Harry will grab the Vine and swing over the obstacle. You'll be treated to a nifty electronic "Tarzan yell." Push down on the joystick at the farthest point of his swing, and Harry will land safely on the other side. Jump the Rolling Logs, and proceed to the right.

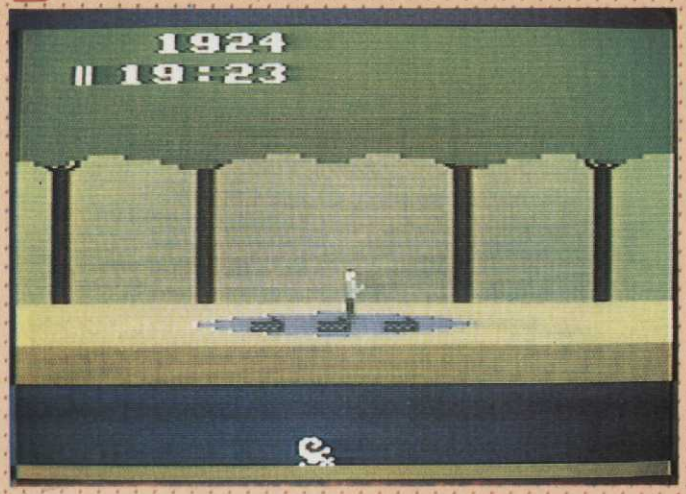
"Scorpions are the most dangerous creatures in the Jungle — split-second timing is the key to jumping over them. Be sure to get a good running start."

—Pitfall Harry



Photography by Donna Preis and George Siede

D



D

Scene 4: This is your introduction to Harry's greatest nemesis: the Crocodiles. There is no way to cross a Crocodile-inhabited Lake (unless there is a Swinging Vine) without using their heads as stepping stones. Unfortunately, the Crocodiles open their mouths every three seconds. Should you land on one of their mouths when it is open, well, they're just wild about (the taste of) Harry! Fortunately, there is a spot at the back of the Crocodiles heads where Harry can safely stand, even when the mouth is open.

There are two ways to deal with the Crocodiles. The first is the fastest and most dangerous; the second is slower but safer.

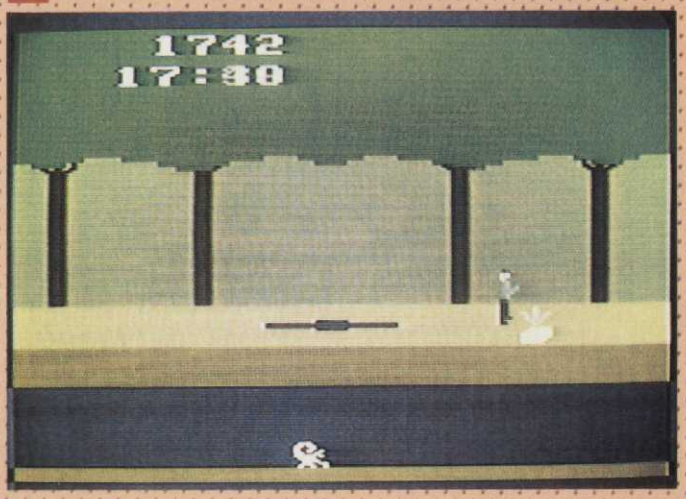
Fast/Dangerous: Time your run towards the Lake so that Harry's last footstep on land occurs as the Crocodiles' mouths begin to close. Keeping the joystick pressed to the right, press the action button as you make contact with each Crocodile's head. If you time it right, Harry pogo-sticks across with four bounces. If not....

Slow/Safe: Run to the edge of the Lake and wait for the Crocodiles to close their mouths. Leap onto the first Crocodile's head and stop at the back. Wait for them to open and close their mouths again, then jump Harry to the second Crocodile and again wait at the back of its head as shown. Repeat this once more after the Crocodiles have again open and closed their mouths. When you are at the back of the third Crocodile's head, you can leap safely to dry land whether its mouth is open or closed.

Scene 5: As soon as you leave the Crocodile scene, jump, because a Rolling Log will be right there at the beginning of this scene. This screen contains three Rolling Logs in all.

Scene 6: This screen features a Bog, a Swinging Vine, and a Cobra. Time Harry's run toward the Bog to coincide with the swinging of the Vine. Don't worry about the snake. There is plenty of room on the other side of the Bog to land—and even take a step—before having to leap over this easy obstacle.

E



E

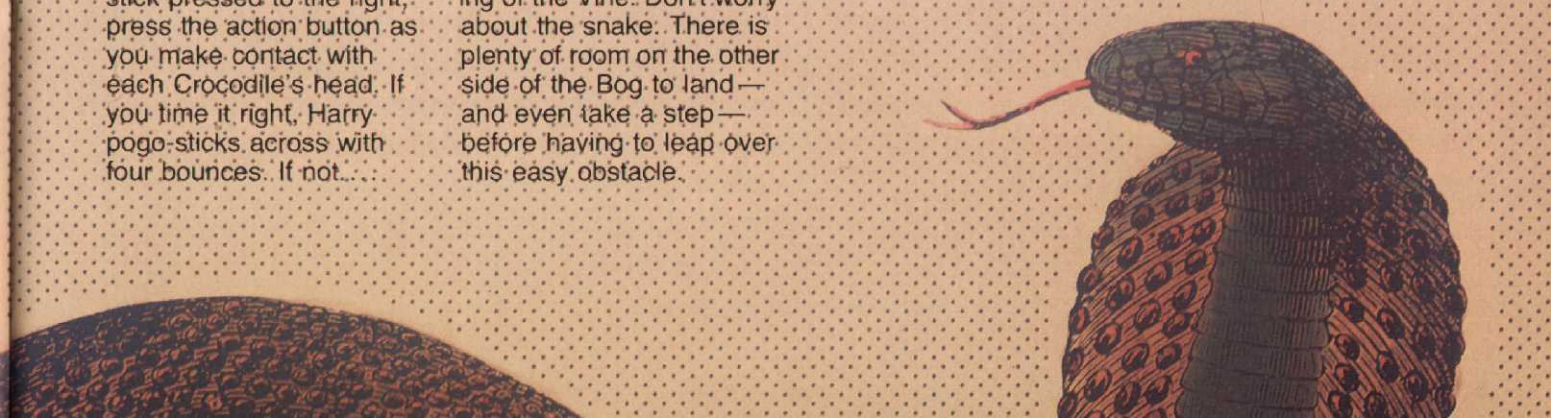
Scene 7: At last, your first piece of Treasure—a Gold Bar! However, to claim your prize—and 4,000 points—you must cross your first Disappearing Bog. Maneuver Harry until he is directly beneath the space between the second number and the colon in the timer and wait for the Bog to appear. The instant it begins to disappear, bolt for the other side. If you think the Bog is about to appear again and you're not quite clear of it, jump! Use this strategy for all Disappearing Bogs and Lakes without Swinging Vines.

Claim your prize, as illustrated, and proceed to the next scene. Enjoy the Gold Bar—your next Treasure (another Gold Bar) won't appear until *Scene 28*.

Scenes 8-255: The remaining *Pitfall* scenes contain variations or combinations of the elements included in the first seven.

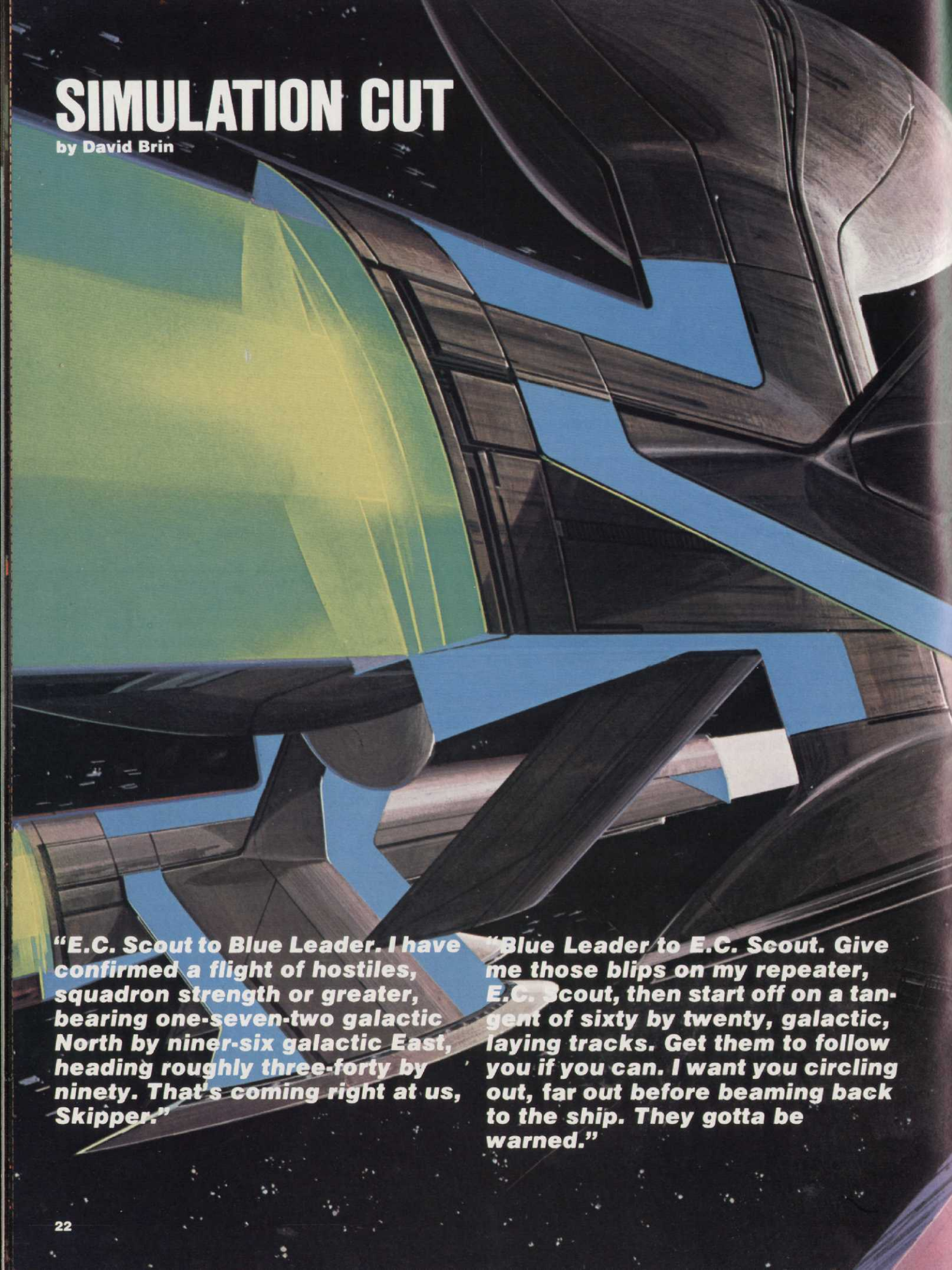
As soon as you become proficient at traveling through the combinations of obstacles in the above-ground scenes, you'll find that you need more than 20 minutes to find all the Treasures. To speed your journey, use the underground shortcuts. Remember, one below-ground scene equals three above-ground scenes. For example, if you take the Ladder in *Scene 14* down to the underground tunnel and follow it to the right, two screens later you'll be able to climb a ladder above ground to *Scene 20*. You will have had to jump two Scorpions on the way, but you will have avoided one Crocodile-infested Lake.

Other worthwhile shortcuts include *Scenes 15-33, 25-37, 38-62, 63-87, 90-99, 133-184, 186-204, 209-224,* and *244-250*. Note, however, that most of these shortcuts will cost you points in the form of missed Treasures.



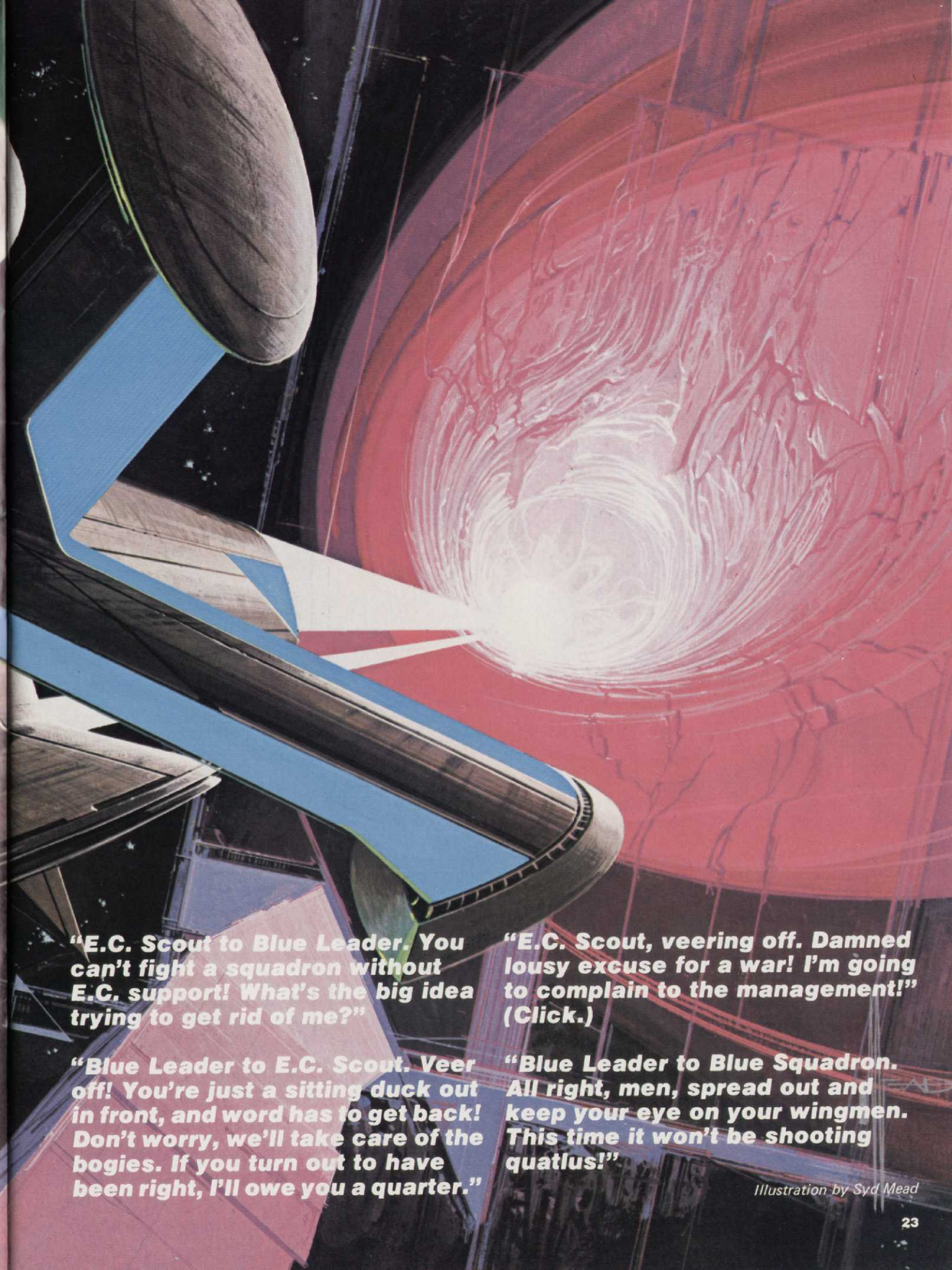
SIMULATION CUT

by David Brin



"E.C. Scout to Blue Leader. I have confirmed a flight of hostiles, squadron strength or greater, bearing one-seven-two galactic North by niner-six galactic East, heading roughly three-forty by ninety. That's coming right at us, Skipper."

"Blue Leader to E.C. Scout. Give me those blips on my repeater, E.C. Scout, then start off on a tangent of sixty by twenty, galactic, laying tracks. Get them to follow you if you can. I want you circling out, far out before beaming back to the ship. They gotta be warned."



"E.C. Scout to Blue Leader. You can't fight a squadron without E.C. support! What's the big idea trying to get rid of me?"

"Blue Leader to E.C. Scout. Veer off! You're just a sitting duck out in front, and word has to get back! Don't worry, we'll take care of the bogies. If you turn out to have been right, I'll owe you a quarter."

"E.C. Scout, veering off. Damned lousy excuse for a war! I'm going to complain to the management!" (Click.)

"Blue Leader to Blue Squadron. All right, men, spread out and keep your eye on your wingmen. This time it won't be shooting quatlus!"

Illustration by Syd Mead

"Aw, Uncle Bryce, do we *have* to?"

Bryce Gamble sighed and gave up trying to divide his attention. He put his work down and closed his eyes for a moment, just to be sure that he wouldn't raise his voice. Ben was usually a level-headed kid, and deserved not to be yelled at when he occasionally acted his age.

"Ben, please don't whine. I can't stay home as I'd planned. As soon as I finish this calculation I've got to drive down to the base. You and Jered are going to have to take Lisa with you to the arcade."

"But she's a noisy brat! I know she's going to want to play with us, I just know it!"

Bryce drummed the fingers of his right hand on the table top. He looked at Ben, wondering if it would ever be possible to explain to the boy why his work kept him away so much. For that matter, he was still having trouble explaining to *himself* how a bachelor uncle suddenly had to start caring for three children ... or why it was possible for the universe to have orphaned them in the first place.

He noticed that Ben's gaze had fallen to take in his drumming right hand, going tap-tap-tap on the formica.

"No sense in arguing, huh?" said Ben.

"A good mind", thought Bryce. "Like Gene's. The kid's sure something."

Bryce grabbed a fistful of his nephew's hair and twisted, gently but firmly, while the boy howled in mock anguish.

"That's right," he growled in his best toughguy voice. "No arguing, see? 'Cause we gotta have *discipline* around here, see? 'Cause without discipline, you know what we got?"

He relaxed his grip for an instant. That was all the time Ben needed. He launched himself at his uncle.

"Mutiny!" the boy answered gleefully.

Bryce would have won the wrestling match, for sure, had not Ben's brother and sister wandered in then. Naturally, the one thing they all agreed on was how much fun it was to topple Uncle Bryce.

"Red Leader, this is Red Five. The last of the new fellows just got burned. Red Ten. I know you asked me to watch out for him, but I just couldn't compensate. He kept trying to orient to some forsaken up-down he had fixed in his brain and they were able to predict a pattern on him. Sorry."

"Red Leader to Red Five. Yeah, it's too bad there's no time to train 'em better. They're going to be upset, back at Sol, when we tell 'em we've lost another class of their best boys."

Major General P. T. Jassler shook Bryce's hand and motioned for him to take a seat. His expression was apologetic.

"Bryce, I'm sorry to do this to you. Lord knows you deserve your day off."

Our pilots just aren't quick enough. They can't adapt to space combat in that amount of time. We're going to have to go over to Plan B.

"That's all right, sir. I'd guess you haven't left this high security compound for weeks. If I didn't have the kids to take care of...."

Jassler shook his head. "Gene's kids. How are they? I still haven't forgiven myself for ordering their father out on that first observation run. I should have chosen someone else after Becky fell ill."

Bryce shrugged.

"He was one of our best astronauts, General," said Bryce. "A logical choice. Now what is it you wanted to see me about today?"

General Jassler appeared to have aged considerably since Bryce had seen him last.

"Bryce, we've just got word from the Andromeda. They've had a major contact. They couldn't annihilate all of the enemy scout mobiles. We've got to assume that the entire swarm will be in this quadrant by next spring."

"Good Lord. So soon? I thought we had a couple of years!"

"That was only our best guess. You remember that first briefing Commander Osiris gave us, just after the Andromeda arrived in '86. He said we'd have four years if we were lucky. We weren't lucky. That's all."

"There will be Woolie swarms entering Sol space in seven months if the Andromeda stays here. They'll probably be here about then, *anyway*, to investigate all the radio noise they must be picking up by now. Everything from Marconi's first dits to 'I Love Lucy'."

Bryce felt numb. He wanted to hate Jassler for telling him this.

"So what do we do now?"

"I'm sorry, Bryce. But we're going to have to operate on the assumption that Earthmen can't be trained to fly the ships the Andromeda is making for us. Our pilots just aren't quick enough. They can't adapt to space combat in that amount of time. We're going to have to go over to Plan B."

"The 'Ostrich' plan? Gen-

eral, have Washington and Moscow gone soft in the head? You saw the tapes Osiris showed us, of when his home world was wrecked. If the Andromeda abandons Earth, the Woolie will tear us to pieces!"

"It'll tear us to pieces if the Andromeda *stays*! They have their own people to take care of..."

"Are we any less human?"

"...and the Andromeda would never stand a chance against a full Woolie swarm, anyway! The *only* hope was for *us* to supply thousands of pilots to man the interceptors that their autofacs produce using our raw materials. And we can't provide the pilots! You should know that better than anybody."

Bryce pounded his fist on the general's desk.

"So we let them enslave us? Or destroy us as they did the Enclavi home world? General, the Woolie *hates* Osiris' people! If it finds out we've helped them, it'll probably burn the whole planet!"

"*That's* what we have to make sure they don't find out. If it never finds out the Enclavi were here, it may settle for enslaving us."

"You'd accept *that*...."

"Colonel, that will be enough!"

Bryce wanted to shout, but slowly he forced himself to settle back into his seat.

Suddenly, Jassler's expression was compassionate.

"Bryce, I can guess how you feel. You're one of the few who's actually lost someone to the Woolie. The work your space medicine team has been doing, figuring out ways to help our men adapt to space combat, has been tremendous. Given time, it might have borne fruit. But it's over. Face it. If we'd had more time we could have found out why our experienced jet pilots can't adapt quickly enough to learn to fly Enclavi ships. Or we'd be able to recruit thousands of younger men and start the long slow process of training them. Unfortunately, we haven't *got* the time! Now we're transferring your department over to the amnesia gas project. With any luck we'll have it perfected in time—so that those of us who've had contact with the Andromeda won't have to commit suicide when the enemy arrives."

"Blue Leader, this is um, Special Shipment Number One. I just got home safe and I have the um, 'cargo' safe too. What now?"

"Blue Leader to Special Shipment One. Understood. Good job. We'll be coming in to baseship, now. This area is clean."

Bryce sat in his car for several minutes, with his hands on the wheel and the engine off. The shopping mall was a madhouse. He had almost hit a kid on a skateboard on the way into the lot. A crazy person driving a propane-powered Corvette had cut him off from an earlier space, nearly causing an accident. "Too bad," he thought, as his nerves settled. "This used to be a nice neighborhood. Now there were all these townhouse developments. And this new mall. All the kids wanted to do, these days, was come down here and play pinball and video games.

"It saves money on sitters. But that all gets used up in 'quarter' money. They eat it up. Ten, twenty, thirty dollars a week... Going to have to put my foot down."

Bryce knew he wouldn't. Soon enough his niece and nephews would learn about reality. And to think the poor kids *liked* space stories!

"Uncle Bryce, I scored over a thousand! I did!" A tiny blonde sunstorm ran to him and threw her arms around his stomach. "Pick me up," she demanded with imperial nonchalance.

"A thousand points for what, Punkin?" He complied by lifting her to piggyback position.

"I was a shuttle pilot. I had to carry the Admiral back from a secret mission, and I didn't say the wrong things over the air, and the bogies attacked but I was fast and got away!"

"Not the first three times, she didn't." Jered, the ten-year-old, gave his sister a scathing look. Already he was almost as tall as Ben, though more solidly built.

"She got herself *fried*, along with most of the rest of the flotilla; they were trying to protect her. I got killed each time."

"But I didn't cry when I got fried!" Lisa shouted, a little too closely to her uncle's ear. "You said I'd cry but I didn't. And Ben was right. I did better and better each time."

"Where *is* Ben?" Bryce stood in the broad entrance to the Magic Arcade. He looked around the portion he could see, but there were so many kids! So many flashing lights, and so much noise!

Three rows of pinball machines led off for thirty feet in front of him... at least a dozen machines per row. More than half of them were in use. A lot of the players were children or high school students, but

He looked around the portion he could see, but there were so many kids! So many flashing lights, and so much noise!

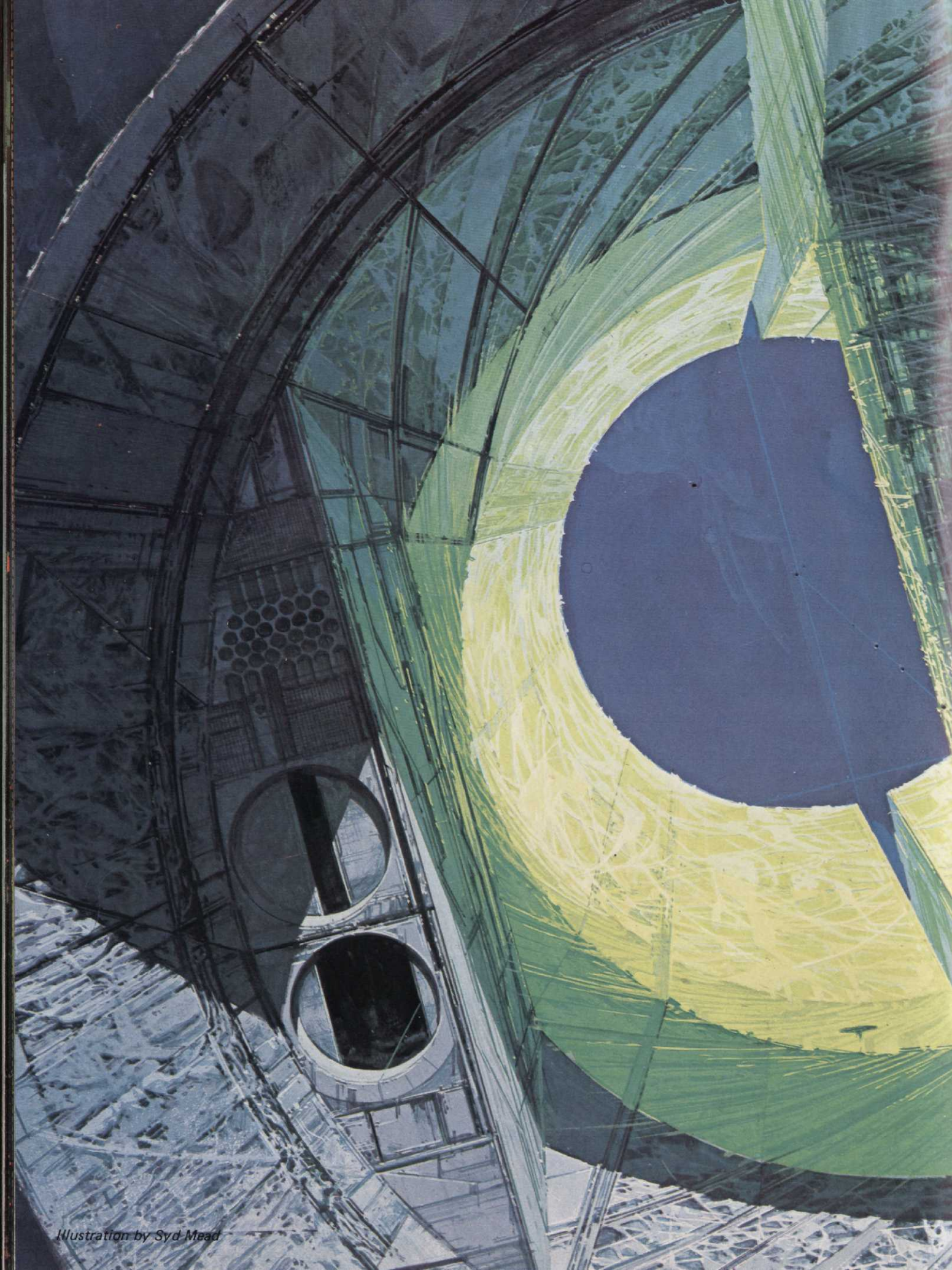


Illustration by Syd Mead





Bryce was a little surprised to see a fair number of businessman types, bent over in concentration, slapping the paddle buttons with keen-eyed intent.

To the left were bank upon bank of ping-pong, billiards, pool, and foosball tables. These were sports Bryce could understand. He'd played most of them in his day.

But in this noise? Who could concentrate?

"Our game is just around the corner, Uncle Bryce ... just past all those old, trashy, one-man video games. Want to see it?" Jered took his hand and started to pull, eagerly.

"Not now, Jered. I'm sorry, but it's been a rough day. Could you get your brother so we can go home?"

"Oh, okay. Wait here. Ben was just finishing up our last game with Boggsie and Alice. He should be done about now."

Jered took off. Bryce put down his niece and took her hand as they walked out to look at the skaters in the ice-rink below. Lisa talked on, excitedly, about her heroic victory.

"You're all going to be heroes, kids" he thought silently. "You're all going to have to learn to cope as slaves of an insatiable alien. For that, it's hard to imagine how the video-game rage of the mid-1980's can ever prepare you."

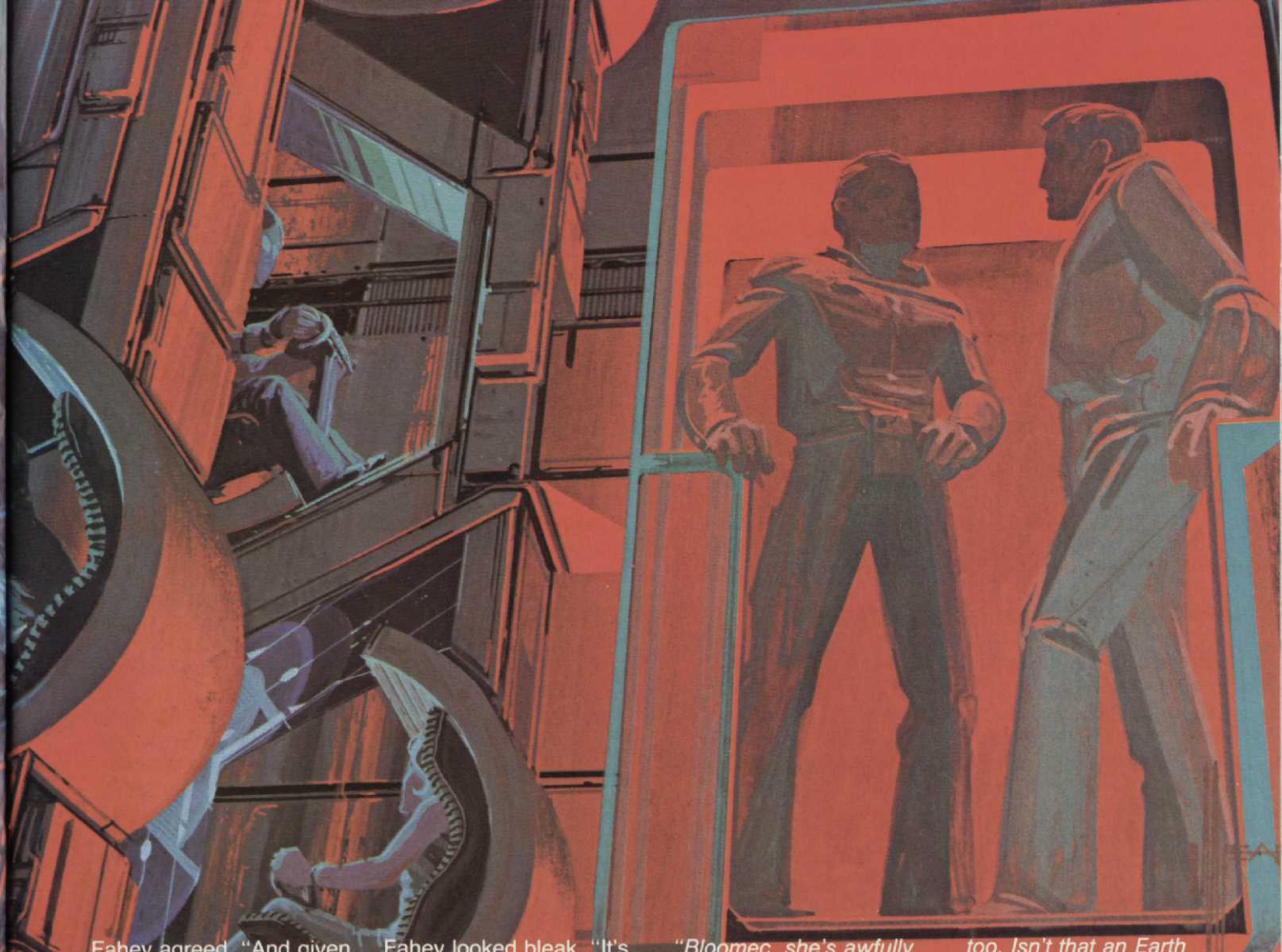
Paul Fahey opened his briefcase and pulled out a thick blue binder with the words, TOPMOST SECRET/PROJECT SALAMIS, embossed in gold lettering. He placed it on the lab bench next to Bryce and said, "Here it is. Just as the Doctor ordered."

"Good job, Paul. I knew you could do it. You've got full demographics on our success/failure modes?"

"As complete as there's been time for." Fahey flipped the pages. "We've known for some time that it's possible for an Earthman to fly an Asir fighter. Your brother was an example of one who made the transition fairly well ... for the initial period." Fahey glanced quickly at Bryce, and hurried on. "But we've had problems with the Air Force and Navy pilots we've been sending up for Osiris to test. It seems *most* of them are simply too stuck in bad habits that relate to having gravity and a horizon. It's only the really young guys that seem to be able to adapt to space combat. And you know as well as I do that the average age of our military pilots is just too high. It takes so long to train them; they're almost middle-aged before they're qualified."

Bryce nodded. "That's why I suggested we skip military pilots and try using Asir simulators here on Earth to train a broader pool of candidates."

"It was a great idea."



Fahey agreed. "And given time it would have worked, I'm sure. All we needed to do was enlarge the pool, you see, and we could pick and choose those candidates with the best resistance to space sickness, the best 3-D orientation, the best...."

"But we *don't* have the time." Bryce growled.

"Nope. And that leaves us stuck with military pilots again. They're the only group familiar enough with the basic concepts such as wingman coverage tactics, fuel conservation, electronics countermeasures, and combat data repeaters, to be trainable in only six months."

"How many can you give me in ninety days?"

Fahey looked bleak. "It's the size of the feed group sample that controls this, Bryce. In ninety days I can give you two hundred. The Enclavi people might accept a dozen of those, if we're lucky."

"Red Five to Red Six. I've got an enemy spy buoy located at sector B6-A niner. Appears to be quiescent. My Tac-Comp gives me a forty-three percent chance that I am now undetected. Have I permission to go in and take out the drone?"

"Red Leader breaking in. Red Five, the answer is negative, repeat, negative. I'm coming in at one-eight-six mark fourteen. E.C. Scout and two wingmen. We'll let E.C. Scout take out the drone."

"Bloomec, she's awfully inexperienced. Do you thing we ought to let her...?"

"I'm the E.C. Scout, here. Please let me do it! I want to try. This mission's been so boring!"

"Boring, she says!"

"Can the jetwash, Novamalard! It's an E.C. job. Besides, people like her deserve a chance to fight. If she's ever going to learn, it had better be before the enemy reaches Sol. Go to it, Scout!"

"Roger, Red Leader! Whoopee!"

"Hey! Watchit! Did you see that, Red One? She just about fried my left dorsal off! She called you Roger, too. Isn't that an Earth name? If you ask me we got one crazy...."

"No one's asking you, Red Five. Now shut up and stand ready to assist. If we're lucky today, we may delay their advance a whole tenday."

In addition to everything else, Bryce was worried about his kids.

"How are they going to react when they're told that their uncle had an 'accident' in the lab and wiped out his entire memory of the past year? How will *I* react to suddenly having three strangely tall and mature orphans to take care of — kids who've already had a year to get used to me and my ways?

Illustration by Syd Mead

"For Jassler, and Fahey, and a few hundred others like me, it'll have to be a complete wipeout. Selective erasure wouldn't do."



"Uncle Bryce, you've been working too hard. I want you to come down to the arcade with us today, and try to relax."

Bruce looked up from his drink. He hadn't noticed Ben come in, so steeped had he been in self pity. The boy stood in front of his chair, solemn and concerned.

Amazing what presence the young fellow is developing, Bryce thought. Look at his bearing, a lot more erect than most young men of thirteen.

"Yes, I've promised to come down and watch your game, haven't I. You've got some sort of week-long tournament going, is that right? I guess I've been reluctant because of all the noise down at the arcade, Ben."

"Oh, it's not so noisy in the *game* itself. It's soundproofed. And I'd really like you to watch, today. We've got a great simulation battle coming up and lately I've had a few ideas I want to try out."

"Ben, what are you going to do when school starts? You won't be able to play these daily, week-long, marathon games then."

"Probably not. I suppose I'll be studying more and playing less. You know I'm doing well in school anyway." Ben grimaced.

"Besides, you're just changing the subject! Both Jered and Lisa want you to come and I... I want to prove to you that it's the sort of thing you'd like to do if you had time!"

Bryce studied his nephew's face and suddenly realized the complexity of the statement he had just made. In one sentence he had combined a child's plea for attention and approval with a message of love and understanding patience that would have done honor to any adult.

Trapped. Bryce sighed with the expected degree of theatrical acceptance, lest anyone take things *too* seriously, and got up to look for his car keys.

"Shuttle Four, I repeat. Shuttle Four, do you copy?"

"Um...Shuttle Four, sorry Blue Leader. I still don't quite understand the controls."

"That's all right, Shuttle Four. Sorry we had to ask an untrained Earthlubber to pilot that ship, but it was that or take an experienced pilot off combat duty."

"I understand... Blue Leader. Now what is it you wanted me to do?"

"Just follow the prearranged flight path and let off the mines one at a time. If we're lucky, that half-flotilla we spotted out there will jump you, but don't worry. We're well hidden, and, for once, we've got 'em outnumbered. We should be able to save your ass."

It had been so real, emotionally. That "enemy fighter" that had careened in to shoot him down...amazingly real, for a simulated death.

"Gee. Thanks. Say! This panel is more complicated than an F-15's! Where the devil...?"

"If you think that's complicated, you should see one of ours!"

"But most of these have *to be dummies! Why the expense? Here, I'll bet this one...."*

"Uncle Bryce! Will you watch it? You almost touched off a mine by extending your landing gear out of sequence!"

Naturally, it didn't take Bryce long to get "killed." Even driving a "shuttle" along a prearranged simulated flight path was too much for him. He stared a little dazedly around the tiny cubicle after removing his helmet, the sounds of the distant space battle still coming from the neighboring booths.

It had been so real, emotionally. That "enemy fighter" that had careened in to shoot him down... amazingly real, for a simulated death.

Yes, he could see how it could be done, now. The complex instrument displays were actually flat pieces of fluorescent plastic. So were the side and front screens. The microcomputer controlling the console probably set them all aglow with a solitary laser beam, tiny and inexpensive, hidden behind the panel.

The complicated images of stars and planets, overlaid with gravity charts, "radar" readings and the like, had been vivid—almost unbelievably so—but nevertheless obviously stylized. The brief glimpses the screens had shown, of his "escorts" and of attacking "enemy" ships, had been marvelously detailed computer generations.

Cheap, heat-sensitive buttons and switches cost next to nothing and lasted forever. The displays were inexpensive. But the *software*... the incredible manipulations of projected points of view in three dimensions, and the magnificent way in which all the consoles interacted, letting the kids "cover" each other and play together as a team; someone had gone to a great deal of effort to program a game as complex as this.

Ben was right. Bryce liked this game. It was too bad the subject matter was so depressing.

"Blue Leader, this is E.C. Scout. I'm sim...simulating an attack by our battle cruiser so she can try to get away. I'm going to make 'em fire at me, all they can give out, so clear out, warriors!"

Amazing. That was little Lisa's voice. Where did she learn that calm, commanding tone?

"Understood, E.C. Blue Leader to Blue Squadron, deploy as if giving wide coverage to Battle Cruiser. When I give the word, try that new deployment I outlined. Careful, now. Let's not spoil her sacrifice by getting ourselves killed cheap."

That was Ben.

Talk about a calm tone of command.

"They're very good, you know."

Bryce looked up. A tall, black-haired man with a pleasant smile leaned slightly into the cubicle, supporting himself with a hand at the edge of the opening. His features were unusual. The cheekbones were prominent and the set of the eyes very wide. Faintly detectable makeup disguised a slight bluish tinge to his features. He nodded toward the space battle depicted on the screen. "They are trying a very difficult maneuver."

Bryce stared. This sudden appearance, at this time and in this place, left him momentarily stupefied.

"As a matter of fact," the tall man went on, "I think your little girl is going to be able to pull it off. Frankly, I'm astonished. Ben is quite a tactician."

Bryce shook his head.

"Not half as astonished as I am to see you here, Commander." He offered his hand. The other's grip was firm and relaxed, but a but hesitant, as if he were unused to using his right hand.

"I'm sorry I didn't recognize you, at first," Bryce went on. "I've never seen you out of uniform before." Bryce felt a sudden suspicion. "Are you responsible for all this?" He cocked his head at the row of hissing, beeping simulators.

There was a distinctive accent in the man's voice.

"I wish I were, Colonel. I'm sorry to say we only found out about your marvelous little... 'games' about thirty pectors ago. That's three of your months. Since then, I admit, we've been using them shamelessly. It really took very little to adapt them to our purposes. Tiny changes in programming."

"You had no right!" Bryce felt a growing outrage. "You were supposed to clear all contact with Earthmen with our Joint Command! They may order me to have all these kids mindgassed! They *never* would have approved your experimenting with our children!"

"You had no right!" Bryce felt a growing outrage. "You were supposed to clear all contact with Earthmen with our Joint Command!"

The alien made an unusual gesture with his head. It conveyed the same indifference as a shrug.

"That is precisely the reason we did not tell you, Colonel. I apologize. But surely you don't think we are going to let the Earth, the last chance for my people, fall to the Woolie simply because of a reluctance on your part to see the obvious."

"They're *children,* for God's sake. You can't seriously expect us to...."

"Just think of it, Colonel. Tens of thousands...*hundreds* of thousands of young men and women in America, Europe, Japan, even Moscow, are playing 'Space War' right now. They are learning all of the basic concepts with a rapidity that only youth is capable of, and they've been at it for months. To some extent, for years.

"I've kept up to date with your problems in testing candidates. You and I both know what this kind of a pool opens up to us. We can have a battle fleet ready in six of your months!"

Bryce fell back against the crude, unpadded plastic of the console chair. "Dear Lord," he moaned. "The children's crusade."

The Enclavi Commander smiled sadly.

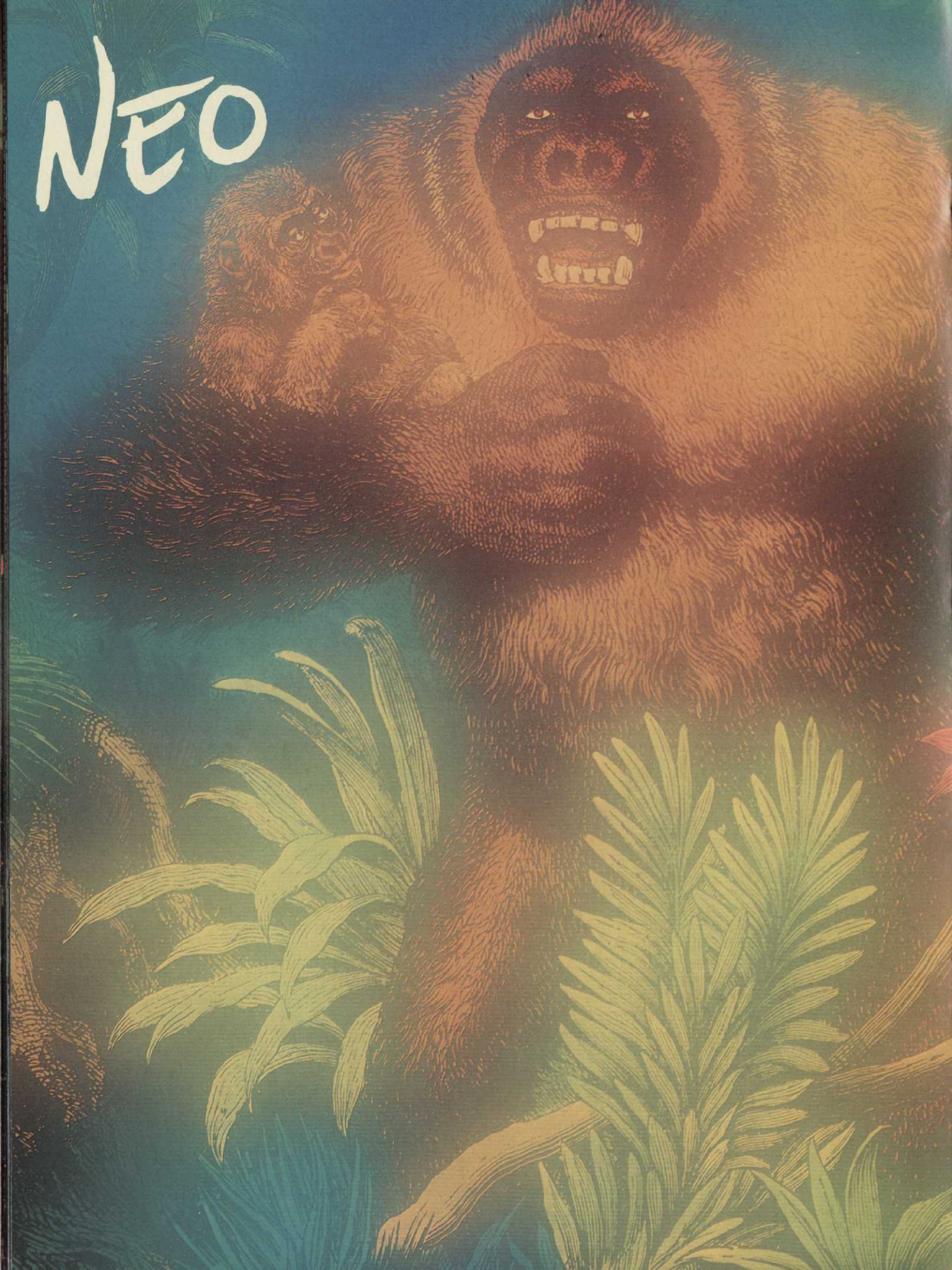
"Don't you think I regret this, as well? It's this or *die,* Colonel Gamble! As a gesture, I sent my own small son down to take training alongside Earth children. I am pleased and relieved to say that he is in your nephew's squadron. It gives me hope that he may survive."

Osiris looked down the row of simulators as a lusty cheer rose out of a dozen squeaky, changing voice-boxes.

"After all, Bryce. Will it not be better for them than slavery or passive death? And don't you think each and every one of them will volunteer?"

Another joyful cheer rang out. Bryce could make out young Jered's voice, higher than the rest.

"Roger, Blue Leader! Let's kick those bastards back where they came from!"


NEO

DONKEY KONG JR:
A GIFTED OFFSPRING

by Matthew White and Wayne Robert Williams

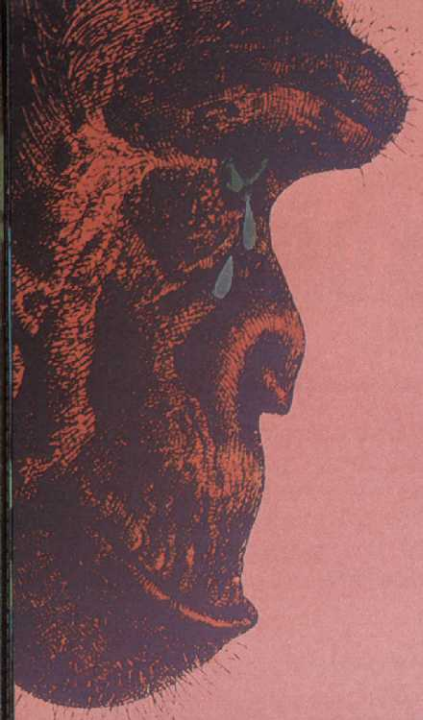
Donkey Kong Jr. is the second episode in the Kong cycle. More will follow. It's a thoroughly entertaining game, one that demands as much respect as its lofty progenitor, *Donkey Kong* (Sr.). To call Jr. Kong a sequel is missing the point. It's the second generation, part of a serial. And it's a powerful illustration of the video-game dynamic.

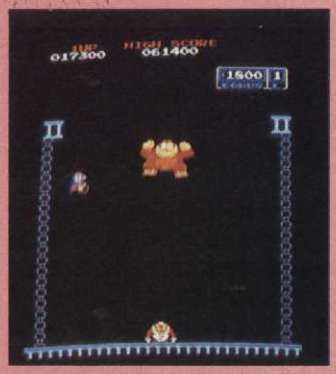
The sequel vs. serial distinction is important. *Frenzy*, for example, is a sequel to *Berzerk; Asteroids Deluxe* is a sequel to *Asteroids;* and *Galaga*, for all intents and purposes, is an updated version (sequel) of *Galaxian.* All of these games are quick-money games. Some of them are entertaining, some aren't. They do not build on a concept so much as they copy it. And the sequel is about as far as the concept can go.

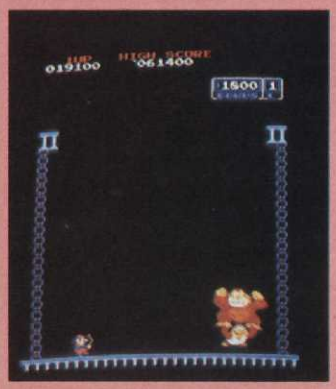
A spin-off game enters the realm of a serial once it adds a new dimension to the original concept. That's what *Ms. Pac-Man* did to *Pac-Man* and what, in a limited sense, *Stargate* did to *Defender.* These games freed the ideas from the limits of the machine. Today, *Pac-Man* and *Ms. Pac-Man* are parts of a continuous series (with *Baby Pac-Man* and *Professor Pac-Man* soon to come). You can't separate them. It would be like trying to isolate an episode of "Flash Gordon" or "Superman" or "All My Children": the individual episode doesn't make any sense by itself. You can certainly experience that episode individually—you can play *Pac-Man* without a *Ms. Pac-Man* machine beside you—but it all makes more sense, and is more entertaining, in terms of the whole.

Donkey Kong Jr. takes the serial concept out of adolescence and into full-fledged adult life. The original *Donkey Kong* had four individual parts of its own. The Elevator Screen was not *Donkey Kong*, neither was the Ramp Screen or the Ziggurat or the Conveyor Belt. It was all four in one that was *Donkey Kong*. And now *Donkey Kong Jr.* offers four more.

Donkey Kong Jr., offers a glimpse into the future. The serial concept may become so strong that you won't be able to play any individual machine through its course. You may simply be introduced to a concept, one rich enough to spin-off new characters and situations—like a Norman Lear comedy. The serial has the potential to become the most powerful form in the industry. And *Donkey Kong Jr.* is no doubt the most intricate and sophisticated serial of the lot.







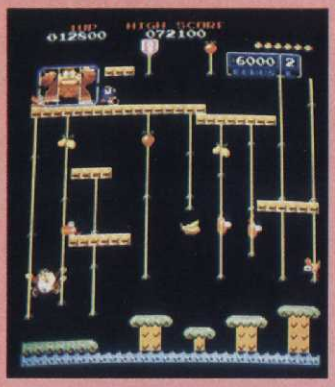


The similarities between Junior and Papa Kong are great—as are the differences. Two of the characters remain intact: Mario and Donkey Kong. The Damsel in Distress is gone, as are all (that's right, *all*) of the original enemies (Barrels, Foxfires, cement Tubs, etc.). We're no longer set in a construction site but, instead, in the jungle. That is, three of the boards are in the jungle. The final board—Mario's Hideout—is more of a science-fiction sewer works. Some of the continuity between screens is gone, although the basic objective is as strong as ever.

That objective is: Save Papa Kong from the clutches of Mario. The monkey doing the saving is you, Donkey Kong Jr., the proud son of Kong. Mario, you see, has locked Papa in a cage at the top of the screen, making him a sort of simian prisoner-of-war. Whatever happened to our Damsel in Distress is up for grabs. Perhaps she succumbed to the (main) squeeze, or perhaps she toppled from the building to her death. Whatever happened, she's gone. And Mario's taking full revenge on his primal enemy, Kong.

The road to rescue is hazardous and varied. Vines have replaced Ramps and Ladders as the passageways to the top. And that's where you're going, as in the original game: to the top of the screen, step by treacherous step. Again, as in the original, there are four distinct boards of play, each appearing in a planned sequence. If we call the Vines setting A, the Chains B, the Jumpboard C, and the Hideout D, the first order of screen progression—as in the original *Donkey Kong*—is ABACBAD.

THE VINES



Junior's answer to the Ramp screen is this hanging Vine screen. Kong is captive in his cage on top, and Junior (you) is ready to go at the bottom. You must swing Vine-to-Vine to get to Papa. Your enemies on this screen are two forms of Snapjaws looking just like they sound. The blue Snapjaws slither down the Vines and then out of the game. The orange Snapjaws move up and down the Vines, remaining in the game until squashed by your fruits. These fruits operate much the way the rocks do in *Dig Dug*. You must wait until your enemy is underneath a fruit, and then nudge the fruit loose with Junior himself. The fruit will then drop, killing your adversary.

The first setting is quite easy to master. The most difficult maneuver occurs at the top step. You must learn how to jump to the top step without bumping hard into the ledge. This is tricky. The thing to watch is your own cockiness. Everything goes just fine—deceptively so—until the final step.

Once you reach the top key, the game goes out of your control. Kong Jr. saunters quickly over to his father's prison, and just before he reaches the cage, of course, Mario pushes the cage away. And you begin a new screen.

THE CHAINS



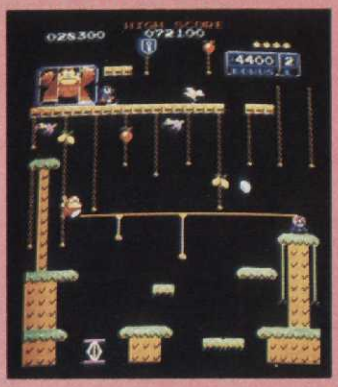
The Chains screen is similar to the Ziggurat (or Rivet) screen in the original *Kong*. Each Chain has a lock positioned at the top of it. Your favorite monkey must push keys up chains to force them into locks. Your enemies on this board are the Snapjaws and Nitpickers. The only Snapjaws are the orange ones; they move down and up the Chains. The Nitpickers are video birds that move across the screen, starting at the top, descending zigzag fashion. Contact with any of these enemies is, of course, deadly.

Once you've unlocked all the necessary locks, the whole gizmo comes tumbling down and your first intermission is awarded. A couple of quick notes before we get on to the next board. You can climb up two Chains at once, speeding up the unlocking process. Also, the Chains at the edges are the most dangerous.



Photography by Donna Preis and George Siede

THE JUMPBOARD

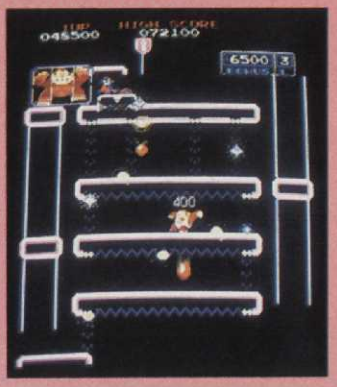


At first glance, you may confuse board three for board one, the Vine board. Don't. This is the Junior version of the Elevator screen, complete with a Springese (Pogo Stick). Roles are reversed, however. You must use the Springese as a Jumpboard.

The screen is broken into two parts: top and bottom. The bottom of the screen is the novel part of this setting. You can spring from the Jumpboard up to one of the moving Vines, hold onto it, and climb—at a critical juncture—to the top part of the screen. The only other obstacles—besides your own carelessness—are the messy droppings from the Nitpickers.

Once at the top of the screen, the game plays similarly to the first setting. There are no Snapjaws, however. Only egg-dropping Nitpickers. Jump Nitpickers until you can jump up and grab the key. Then Mario will move the cage away.

THE HIDEOUT



This is one of the strangest screens in video. It is called "Mario's Hideout." Mario, as you remember from the original game, is a carpenter. For some strange reason, he's taken up his craft in this video sewer—complete with apropos sound effects. The screen is a real challenge, unlike the Conveyor Belt Screen in *Donkey Kong*. It requires full peripheral vision and strategic planning. We have no real idea why it's here, but it's a fitting final setting.

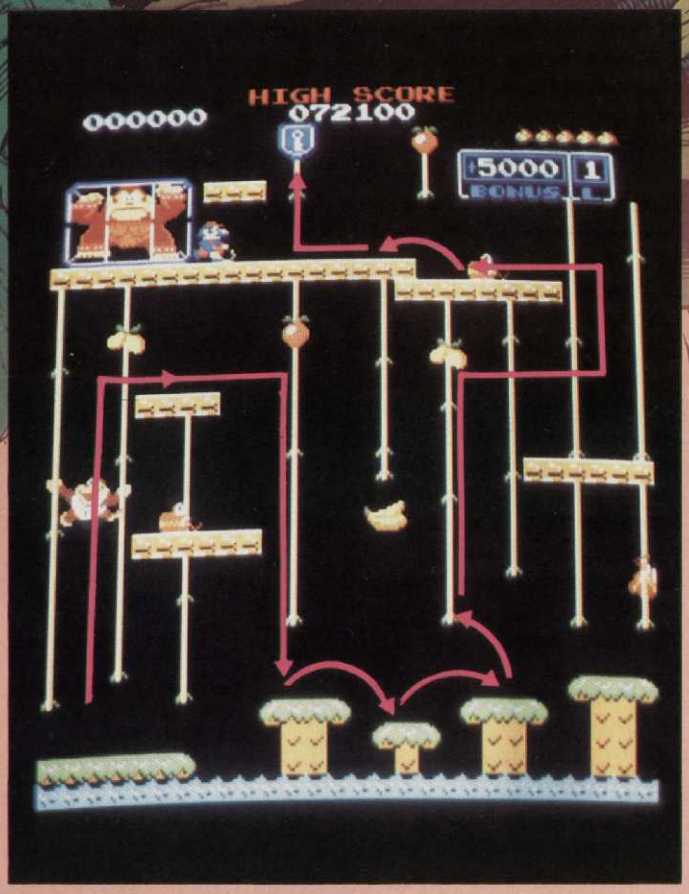
New enemies are introduced in Mario's Hideout. They are Sparks—something like the Sparx in *Qix*. They travel individually about the pipes with full-charged electrical power. You must avoid them, or kill them with—that's right—fruit. Fruit hangs off the plumbing fixtures and can be used to kill Sparks. If you're not up for a big fruit drop, however, you can always jump the Sparks, like you'd jump the Barrels in the game that started it all.

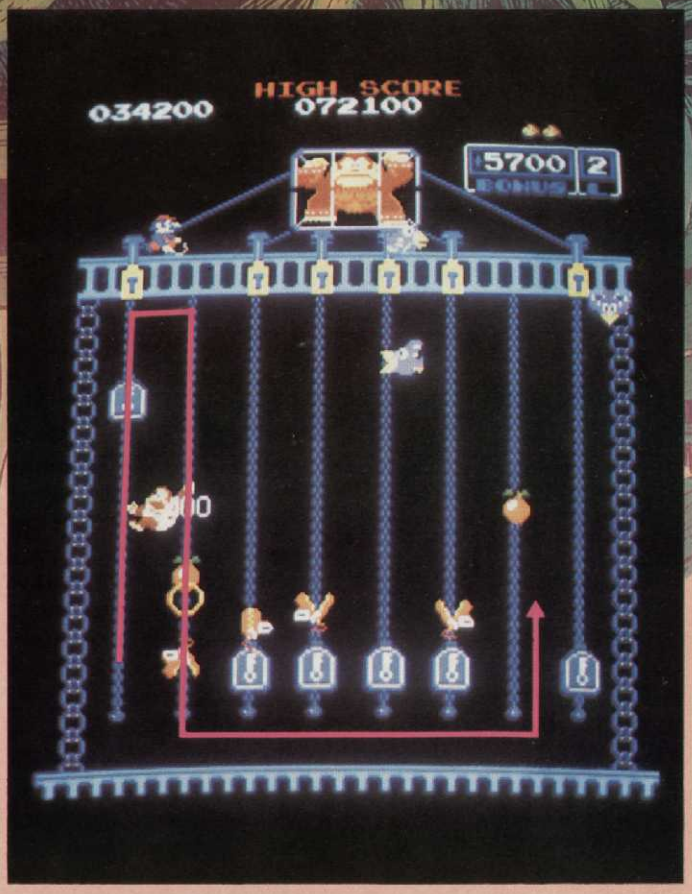
Those are the basics behind the game. You've got the use of the same controls as in *Donkey Kong:* joystick and jump button. There's nowhere near as much time spent on the interludes between plays. And the music is much more original and complex. The honkey-tonk is gone. What you have now is strange science-fiction jungle music, with a lot of water sounds.

A note on the intermissions, illustrated on page 34. They're more intricate, more in line with the *Pac-Man* intermissions. Mario's chasing Kong who's chasing Mario, and on and on, with helicopters and huge feet.

When we first saw a prototype of *Donkey Kong Jr.*, the screen order was different. Instead of Vines/Chains/Jumpboard/Hideout, it went Vines/Jumpboard/Hideout/Chains. Something got changed along the way. The Hideout probably proved itself too hard.

Our thanks to Mike Jardine, of Chicago, Illinois. His quick mastery of Donkey Kong Jr.*—and his ability to perform on command—made this article possible.*



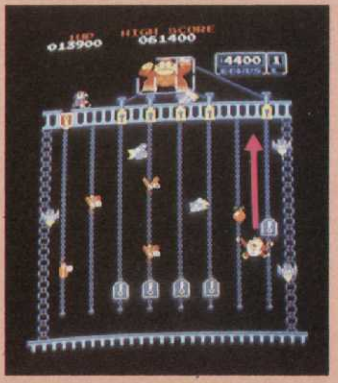


VINE STRATEGY

The basic idea is to get that key up above Mario's platform. Go out of your way to grab fruit and kill a few big-point Snapjaws. The first fruits worth plucking are the pears on the left-most Vine (use two Vines when climbing). Kill an orange Snapjaw below the pears by plucking the pears when the Snapjaws are patrolling underneath you. Move to the fourth Vine and drop the apple on a blue Snapjaw. Slide down the Vine. Counting from the left, move over to Vine 6 and climb toward the pears. Grab the bananas on Vine 5 on your way to the pears. After grabbing the pears make your way up to the top platform located below your score. Here comes the toughest part of the screen: jumping from the platform up to Mario's platform. Move the joystick to the left while hitting the jump button. You cannot jump a Snapjaw and the step at the same time. Make your way to the key and watch Mario move the cage off the screen.

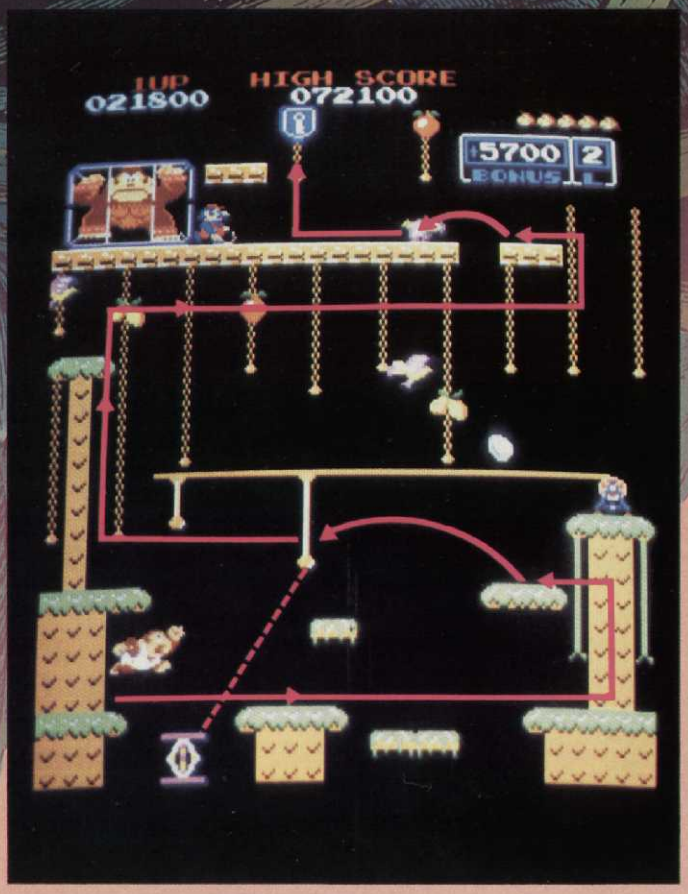
CHAIN STRATEGY

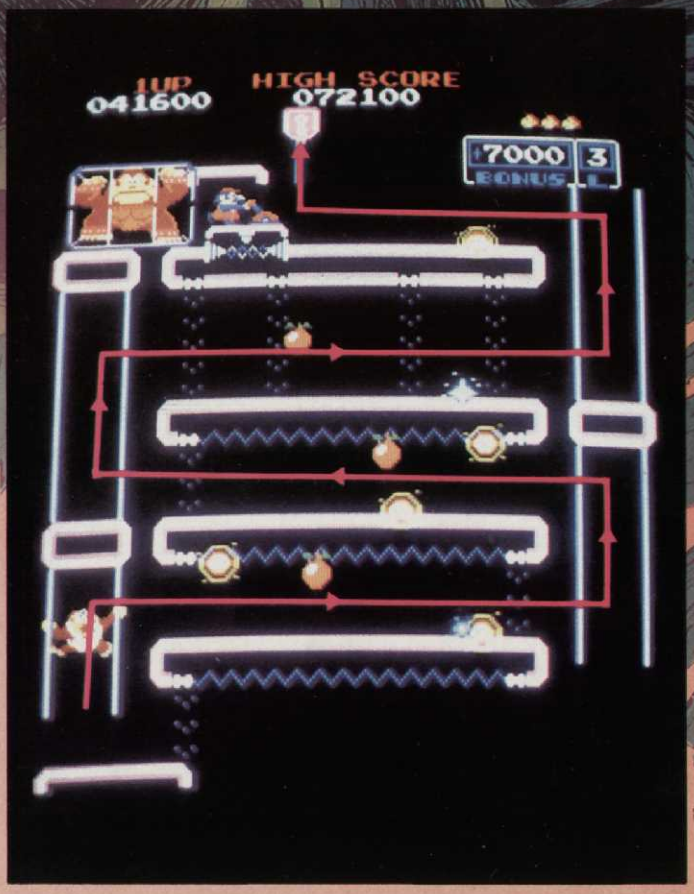
This pattern is a good way to get every key in its proper lock. And that's the object of this screen, to get those keys in those locks. One iron-clad rule: you should always open the locks on the outer-most Chains first. In other words, concentrate initially on the left-most Chains and the right-most Chains. Otherwise, there will soon be too many Nitpickers on the screen. And Nitpickers are never more dangerous than when Kong Jr. is close to the edge of the screen. Here's a high-point trick: if you follow the pattern smoothly, you'll soon find yourself where Kong is in this insert. Try to pluck the apple just as the Nitpicker crosses it. You will kill both that Nitpicker and a second Nitpicker below it. Next, move up an inch on the two Chains and wait for three Nitpickers to enter from the upper right. After they've passed, you have an easy climb to the top. Of the four remaining keys, you should push the two on the left up together and the two on the right up together. Set your priorities by the locations of the Nitpickers. If they're on the two left Chains, push up the Chains on the right-hand side, and vice-versa.





Photography by Donna Preis and George Siede





JUMPBOARD STRATEGY

There are two ways to play this board, and both are illustrated above. The solid line is the long way to do it. The dotted line represents the short cut. One strange observation: the long method is more dangerous than the short method. All you can lose on the short cut is time. (That's right, time; there's a lot of trial and error involved in this maneuver.) When traveling the long way, you've got to watch out for deadly bird droppings. The object, either way, is to get yourself set on that moving platform in the middle, under the apple. The short cut puts you there directly. The longer path takes more finesse, although the timing isn't as critical. Either way, when you're on that moving platform, you've got to grab the left-most rope and let it carry you to the platform under the long Chain.

Climb the Chains, pluck fruit, and avoid Nitpickers. Then make your way to the right of the screen. You can rest safely under the two pears (as shown). No Nitpickers can get you there. It's a good spot to monitor the Nitpickers as they fly down through the gap. Watch that flight. Some dip down further than others. Wait until a high-flying Nitpicker comes through the gap (those that don't dip down so far), and make your way to the extreme right Chains. Climb the Chains to the platform and stand to the right of the gap. To jump the gap, you must time it so that you just clear the top of a diving Nitpicker as it turns down into the gap. That will give you time to land and then jump the next Nitpicker. Jump up and grab the key. Then Mario will move the cage away.

HIDEOUT STRATEGY

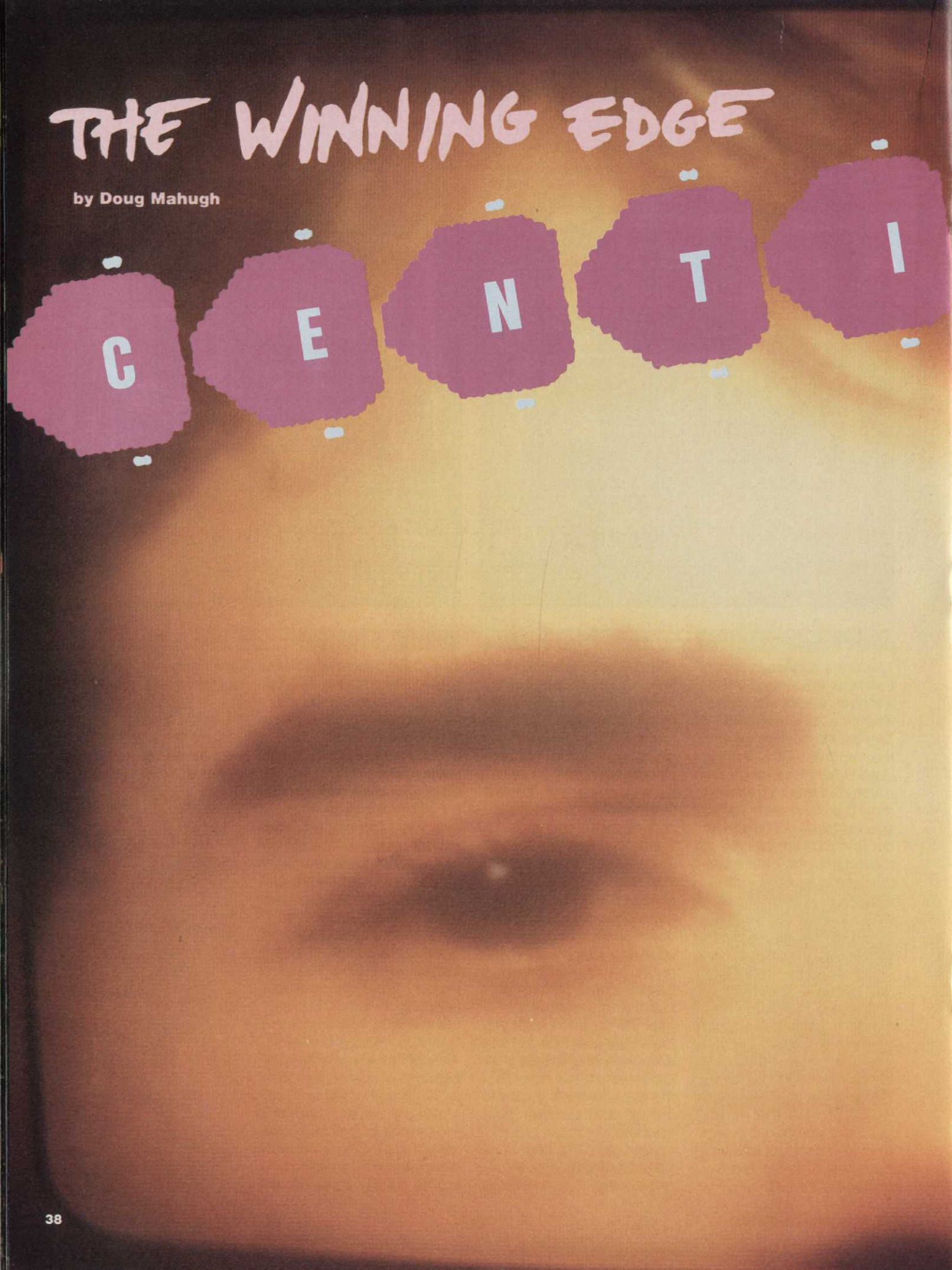
The pattern illustrated here is the only possible way to the top. And that's the only easy aspect of this screen. What makes Mario's Hideout so difficult is the constant monitoring you must do of all the various Sparks on different levels. Whenever you jump a Spark (and you're going to have to jump lots of them to make it), you have to beware of Sparks on the pipes above you and also behind the one you're jumping. The Sparks are similar to the Barrels on the original *Donkey Kong*, but they're harder to avoid. You can always drop a fruit on a Spark, rendering it lifeless. This will give you some bonus points and perhaps a little breathing time. But Mario will surely throw his switch, thereby adding one more Spark to your troubles. Our advice: Get to the top as quickly as possible.

Don't mess around with fruit or bonus points. The longer you take, the harder it's going to get. If you make it through this screen —consistently—you're one genuine video pro.



THE WINNING EDGE

by Doug Mahugh





In the fall of 1981, the Atari World Championship Centipede Contest was held in Chicago. The winner was Eric Ginner, a young man from Mountain View, California. Scoring up to 55,500 points in the 3-minute time limit, Eric beat all comers and took the $12,000 cash prize. Since then, he has appeared in numerous books and magazine articles, and he is the acknowledged national expert on *Centipede* playing.

For this in-depth look at *Centipede* strategy, we flew Eric to Chicago, where we could discuss specific techniques. The results are the strategies presented over the next four pages. How good was his advice? Well, when we asked Eric to show us how these strategies work in a real game, he confidently scored a million points, playing exactly as outlined here.

If you're a casual *Centipede* player or a novice, this article isn't for you. These *Winning Edge* strategies were designed to help players overcome challenges that appear at scores of 100,000 to 1,000,000 points. If you aren't scoring in that range now, these strategies probably won't help your score, although they may open your eyes to the many subtleties of *Centipede*.

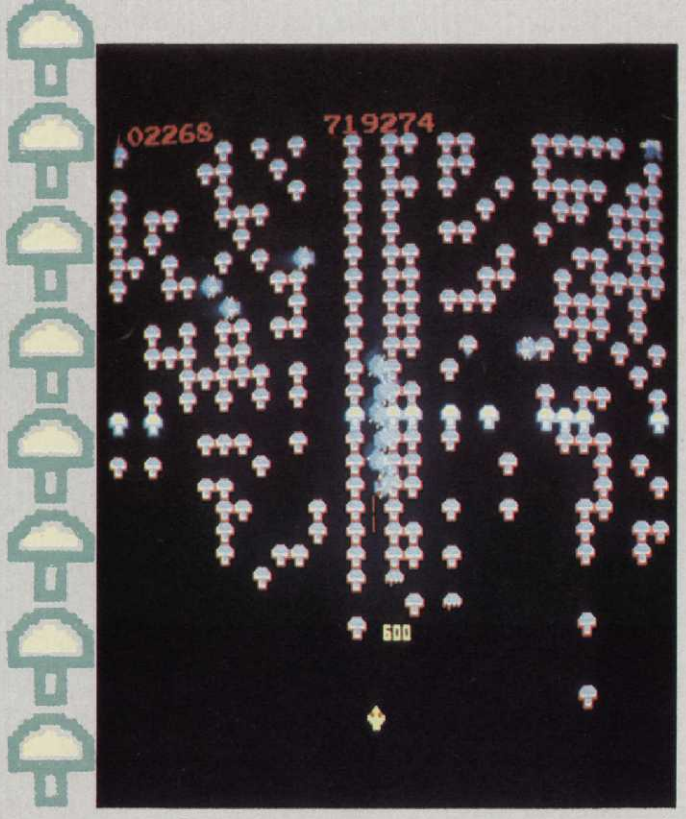
The secret of Eric's successful approach is a keen understanding of how the Mushrooms affect game-play. Mushrooms are only worth one point apiece, and most players view them as harmless targets sprinkled across the screen. But in fact, careful control of the placement of Mushrooms is the key to long games. This is a direct result of the Mushrooms' control over the Centipedes and Fleas.

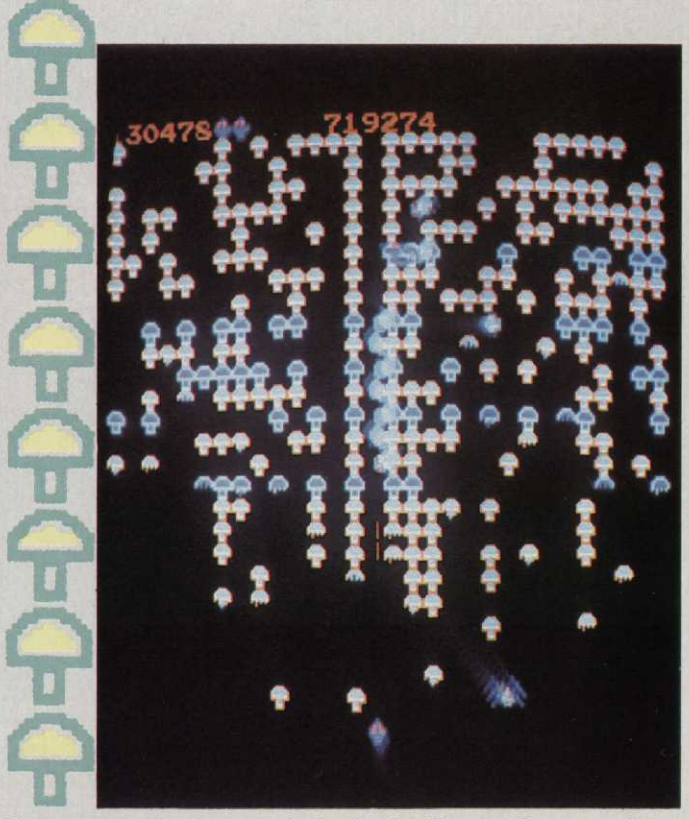
The Mushrooms' control over the Centipede's path is obvious to most players. Upon striking a Mushroom from either side, the Centipede drops one row and reverses direction. This is the cause of the Centipede's switchback descent.

The way that Mushrooms control the dropping of Fleas is not as obvious. Basically, the Fleas all have a common goal—to leave a certain number of Mushrooms in the bottom 12 rows of the screen. If this condition is met, no Fleas will drop. But if you shoot too many of the lower Mushrooms, Fleas will begin falling until they have planted enough Mushrooms to reach their goal again. The number of Mushrooms needed to stop the Fleas increases throughout the game.

Four different strategies are explained over the following four pages: Tunnel Strategy, Blob Strategy, Safety Zone Strategy, and Trap Strategy. Tunnel Strategy is the easiest to understand, and Trap Strategy the hardest, but Eric uses neither of these when going for a high score. He uses the Blob Strategy up to 860,000 points, and then switches to the Safety Zone Strategy until 1,000,000 points. After 1,000,000 points, many of the game counters roll over, and the Blob Strategy can be used again.

Photography by Donna Preis and George Siede





The Tunnel Strategy

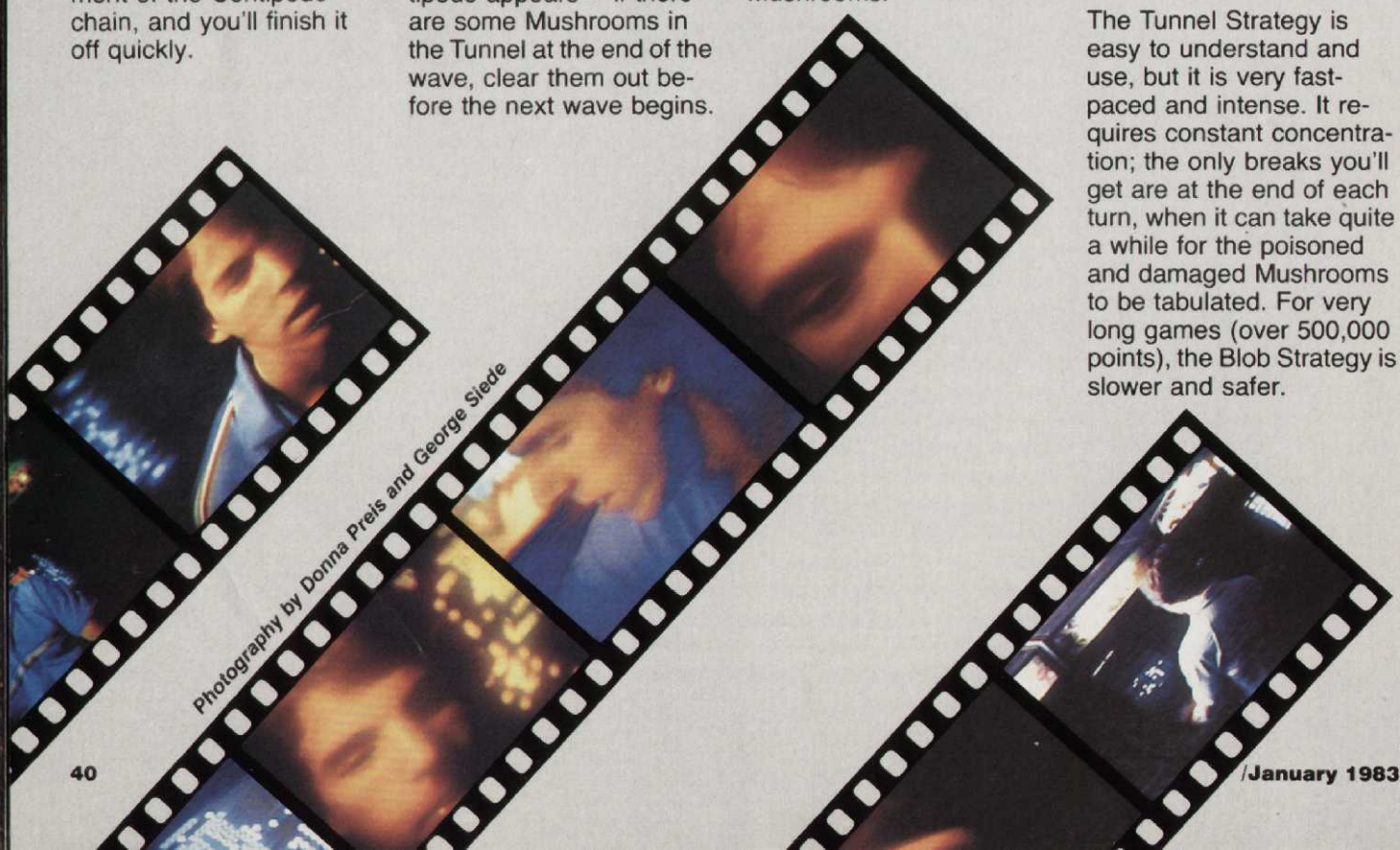
The object of this approach is very simple—create a one-column Tunnel through the Mushroom field. If the rest of the screen is full of Mushrooms, the main Centipede chain will come straight down the Tunnel at the beginning of the wave. By firing up the Tunnel, every shot will hit a segment of the Centipede chain, and you'll finish it off quickly.

The Tunnel should be positioned under the 1000's digit of the high score so that the Centipede will come straight down it when he appears. The bottom six rows should be kept clear of Mushrooms, for good maneuverability while finishing off the Centipede heads. Try to clear the Tunnel before each Centipede appears—if there are some Mushrooms in the Tunnel at the end of the wave, clear them out before the next wave begins.

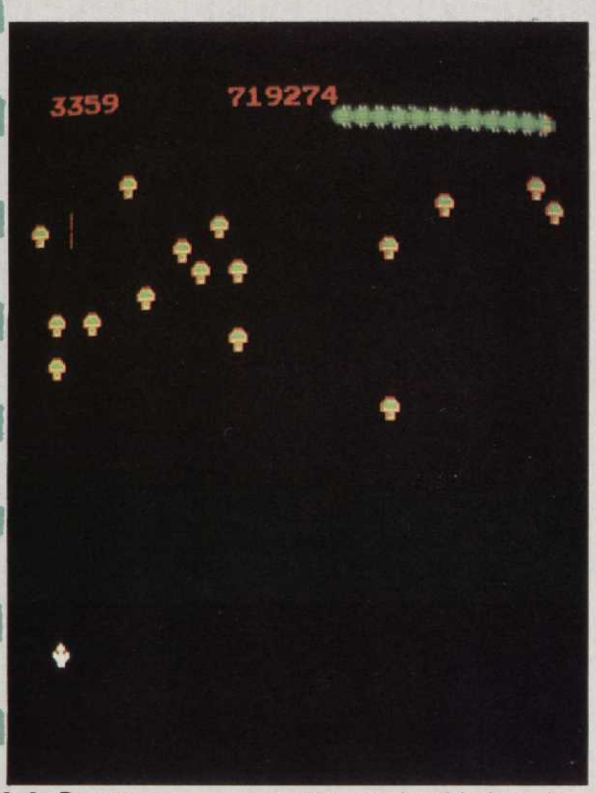
Since a solid background of Mushrooms is necessary for a well-defined Tunnel, you should intentionally allow Fleas to drop during the early attack waves. Whenever there is a break in the action, shoot the lowest Mushrooms until Fleas begin falling. Eventually, this will allow the entire screen to fill with Mushrooms.

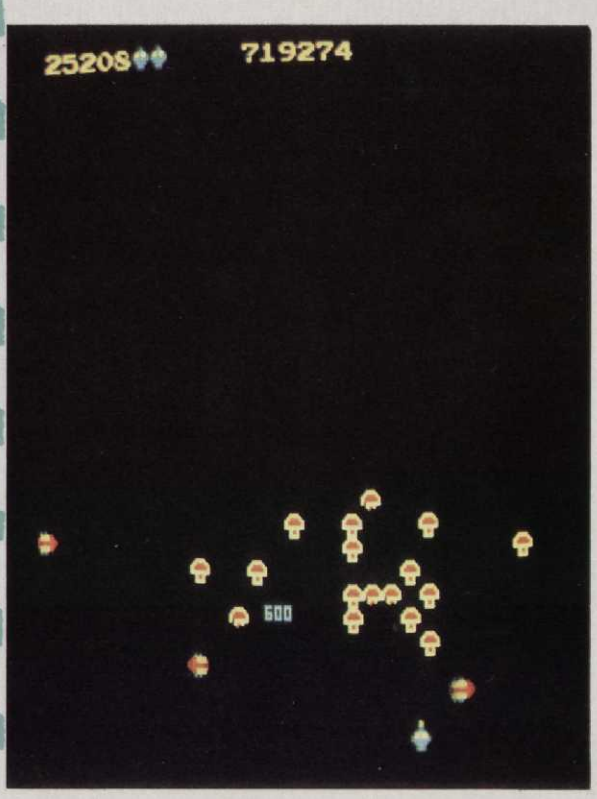
In the Tunnel Strategy, it is best to let Scorpions pass across the screen unmolested. This way the Centipede segments can hit the poisoned Mushrooms, plummet to the bottom, and slowly wind back up and down, giving you three opportunities to shoot them before the side feed begins.

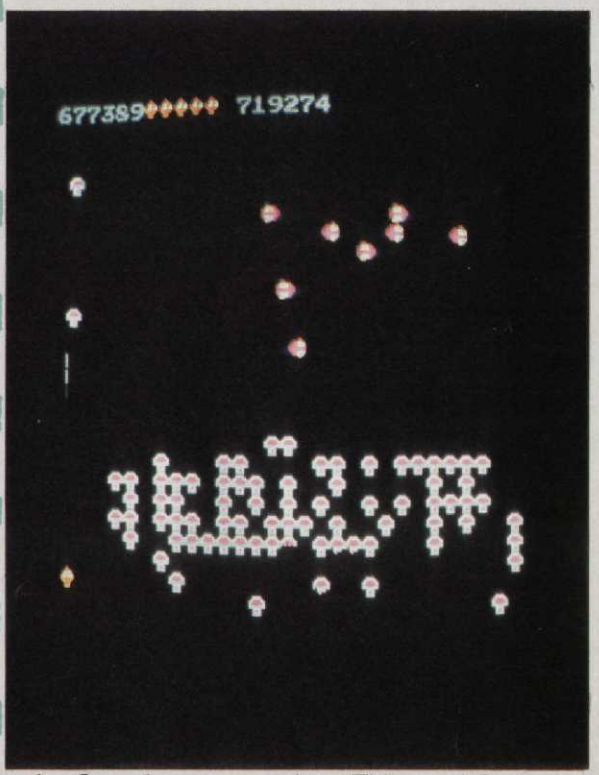
The Tunnel Strategy is easy to understand and use, but it is very fast-paced and intense. It requires constant concentration; the only breaks you'll get are at the end of each turn, when it can take quite a while for the poisoned and damaged Mushrooms to be tabulated. For very long games (over 500,000 points), the Blob Strategy is slower and safer.



Photography by Donna Preis and George Siede







The Blob Strategy

The object of this strategy is to keep enough Mushrooms below level 12 to keep Fleas from coming out. A secondary consequence of this approach is that the Centipede takes a very long time to get to the bottom of the screen because there are no Mushrooms above row 12 and every segment must cross the entire screen on each of those rows.

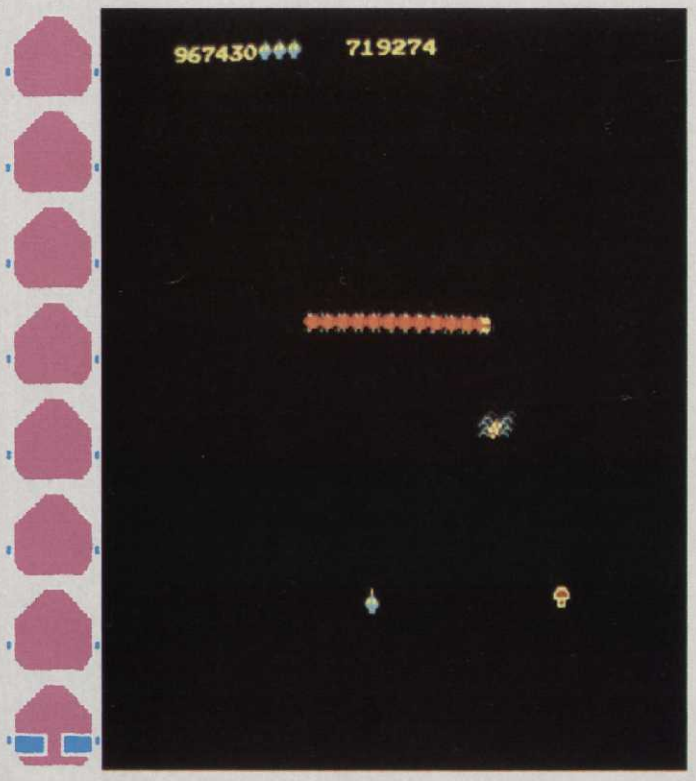
On the first wave, you should try to clear the screen of as many Mushrooms as possible. After the Centipede has reached row 12 or below, shoot it with a sweeping spray of shots that leaves all of the Mushrooms intact.

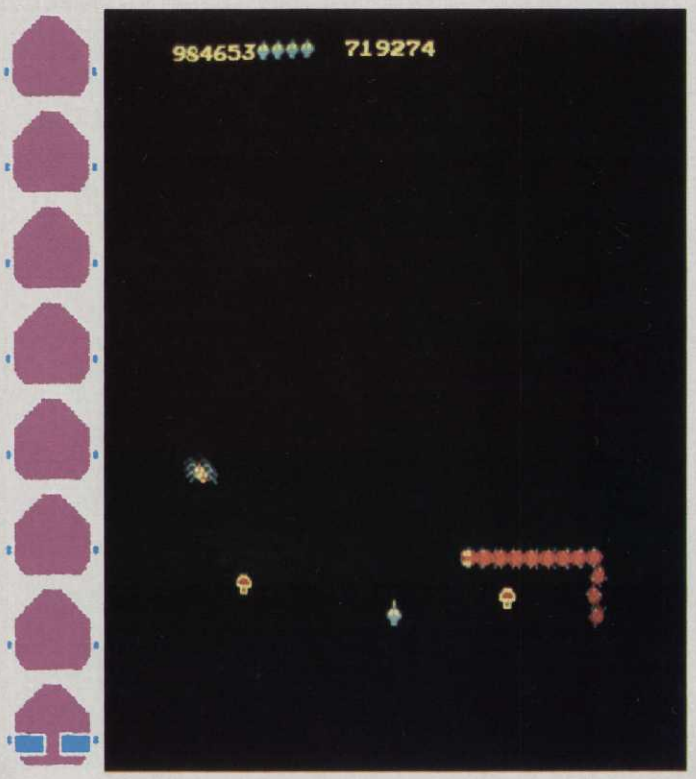
On the second board, shoot as many of the remaining Mushrooms above row 12 as possible by firing around the lower Mushrooms. Don't risk triggering the Fleas by shooting any of the low Mushrooms. (Five or more Mushrooms below row 12 will stop the Fleas at this point.) As in the first wave, when the Centipede reaches rows 7–12 you should shoot it and leave its Mushrooms intact.

You should be able to finish setting up the Blob in the third board by selectively removing just the columns that have Mushrooms above row 12. Leave the left-most 5 columns open—this will give you a "window" through which to aim at the Centipede. On this and subsequent boards, shoot the Centipede near the top of the screen, and remove the resulting Mushrooms when the Centipede moves over to the right edge of the screen. It's a good idea to let the last few segments come all of the way down into the Blob area, so you can be constantly adding Mushrooms there.

Note that the Scorpions can leave no poisoned Mushrooms in this strategy, because there are no Mushrooms above row 12. Also, if you keep your Blob between rows 6 and 12, the Spider cannot eat it because he doesn't rise above row 6 after 180,000 points. This won't last forever, though—at 860,000 points, the Spider will begin jumping all of the way up to row 12, and he will soon eat most of your Blob. So, the Blob Strategy is not effective at scores above 860,000 points.







The Safety Zone Strategy

This strategy was developed in response to the impasse of the increased Spider range at 860,000 points. It makes use of a subtle and important fact: no Fleas fall during the first board of each attack-wave cycle. (An attack-wave cycle is a set of 12 waves, from the full 12-segment Centipede to the 12-heads board.)

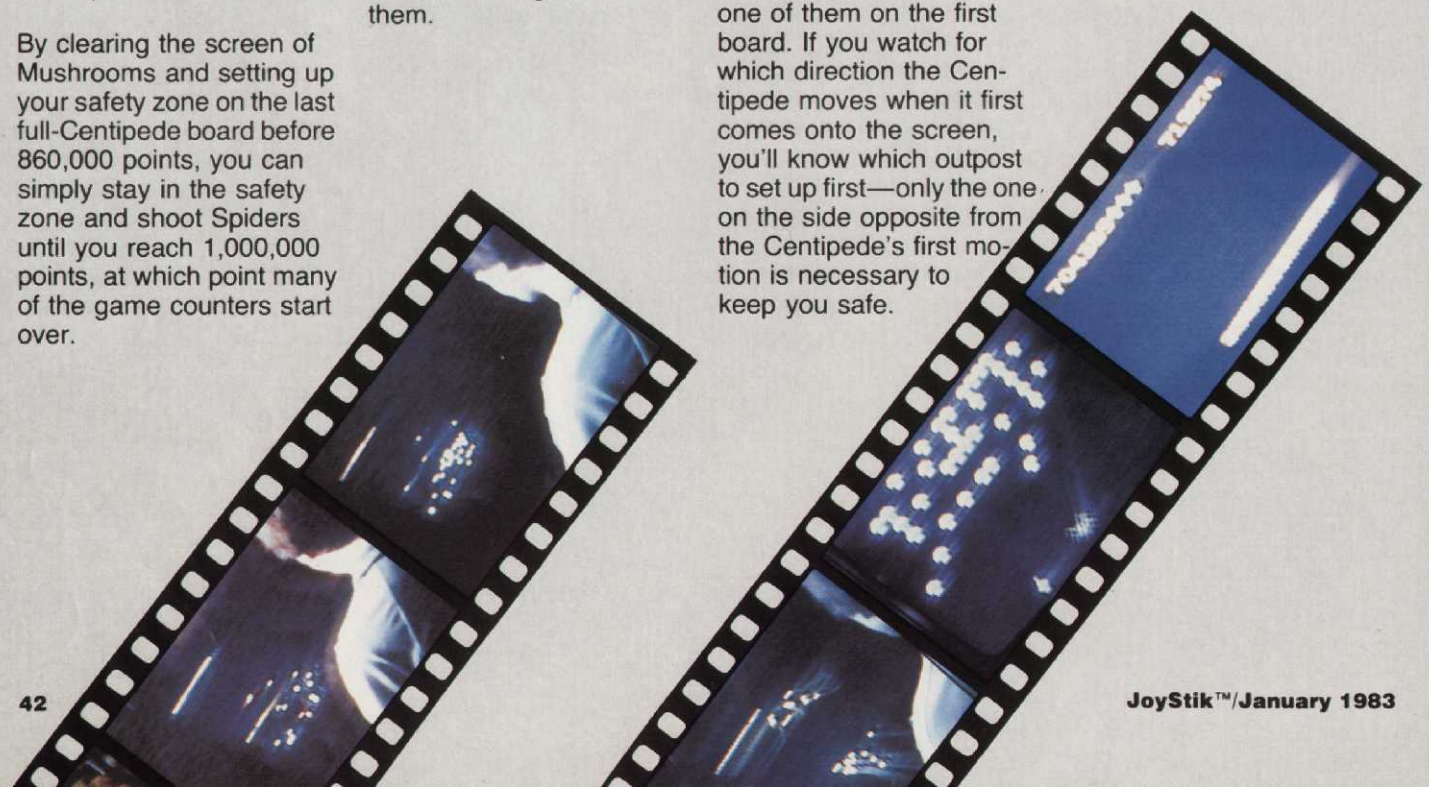
By clearing the screen of Mushrooms and setting up your safety zone on the last full-Centipede board before 860,000 points, you can simply stay in the safety zone and shoot Spiders until you reach 1,000,000 points, at which point many of the game counters start over.

To set up the safety zone, it is only necessary that there be one Mushroom near each edge of row 2. If you keep your shooter in rows 1 and 2, between the two Mushrooms, the Centipede can never hit you. This is because the Centipede chain (or heads) will always hit the bottom row outside of the two "outpost" Mushrooms, and then travel back up to row 6 without coming between them.

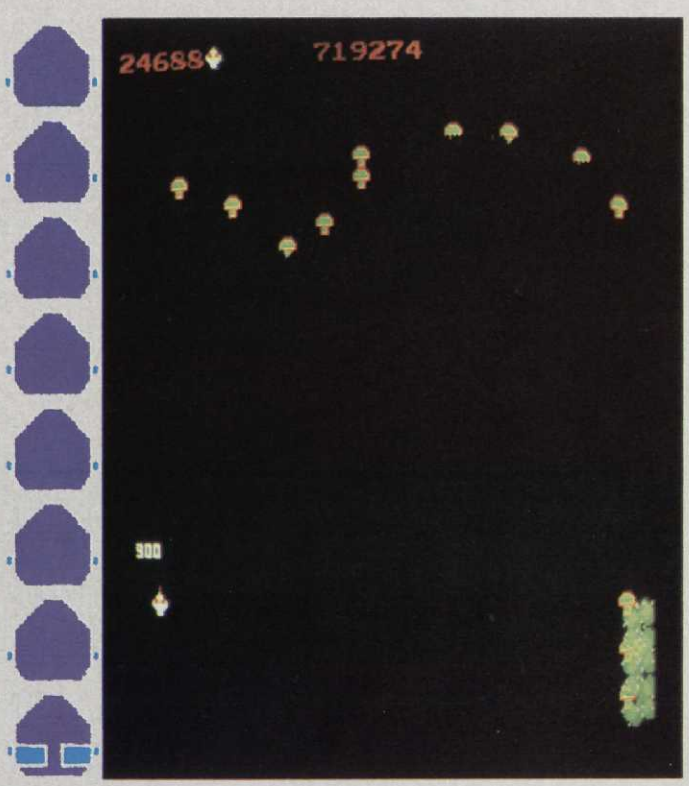
One good way to place a Mushroom in row 2 is to shoot the head of a Centipede chain in row 2 and then move to the far side of the resulting Mushroom. The chain will drop and reverse, avoiding you completely.

Since it is difficult to get both of the outposts set up on the same Centipede board, it is usually more practical to try to set up just one of them on the first board. If you watch for which direction the Centipede moves when it first comes onto the screen, you'll know which outpost to set up first—only the one on the side opposite from the Centipede's first motion is necessary to keep you safe.

The Safety Zone is challenging, but not particularly exciting. It slows the pace of the game down, and the only excitement comes when a Spider eats one of the outposts, at which point you'll have to think for a short while about how to replace it. But the Safety Zone and its derivative Trap Strategy, are the only reliable way to get through the extended Spider-range boards.







The Trap Strategy

In the Safety Zone Strategy, we saw how proper placement of the Mushrooms will divide the bottom 6 rows into two distinct regions: the areas the Centipede can reach, and the areas he can't. In that particular case, however, we were only interested in a quick and reliable method for making that division; the result was that the Centipede was still free to roam the vast majority of the lower screen. By more careful placement of the blocking Mushrooms, it's possible to trap the Centipede in a very small part of the screen: the bottom 6 rows of the left-most or right-most two columns.

Placing a Mushroom in each of rows 2, 4, and 6 of the second column from the edge will trap the Centipede (and all separate heads) in a figure-eight loop there. Then you can just shoot Spiders. If a Spider comes out on the same side as the loop, he will not be able to eat it, because Spiders always jump to the third column from the edge when they appear. In fact, you can get a 900-point Spider every time by waiting at the bottom of the third column. And if a Spider enters from the other side, you have the entire screen width in which to stop him.

It might cost you one or two turns to set up the Trap, but the safety of a well-formed Trap is worth it. Once the Trap is in place, you can concentrate on shooting Spiders. If you set up the Trap on the first wave of an attack-wave cycle, no Fleas will fall, and you can clear the screen of all Mushrooms except the three that constitute the Trap itself.



Photography by Donna Preis and George Siede





CANYON CLIMBER

A MOUNTAIN OF A GAME FOR YOUR ATARI 400/800

They call the Atari computer a game machine. They are right. When you buy an Atari 400 or 800 computer, you bring home the best of two digital worlds: all the uses to which a personal computer can be applied, as well as the most sophisticated gaming machine yet available outside the arcade.

For this reason, Atari owners probably take games more seriously than any other micro owners. They expect more. Their machines, after all, were designed by game experts. The potential is only now being fully explored, and is evolving by leaps and bounds into an art form.

Much of this evolutionary process has been going on outside of Atari. Third-party game designers are quickly grabbing their share of the high-quality computer-game market. Home computer games create the perfect opportunity for independent programming firms (and programmers) to demonstrate their advances in color graphics and sound synthesis. And it is you, the home-computer gamer, that reaps the benefits of these advances.

Datasoft, Inc., located in Northridge, California, is one such independent company. Their standards of color, audio, and game-play have allowed them to compete with older, much larger manufacturers--like Atari.

Our favorite example of Datasoft's programming prowess is Canyon Climber--a mountain of a game with simple controls, clean graphics, and clear objectives. It's a game for video purists that is bound to get your (mountain) goat.

INTRODUCTION SCREEN 1

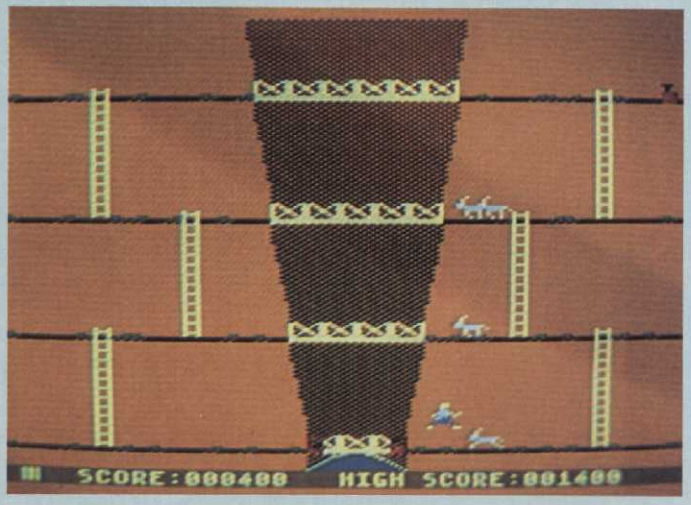
In the tradition of the original "level" game--Donkey Kong--many computer game manufacturers have developed their own games that require the player to climb to progressively higher levels of video excellence. Canyon Climber, written by Tim Ferris of Datasoft, Inc., is one such game. Its colorful graphics (consisting mostly of earth tones) and superior game-play have made it one of the most successful multi-stage games for the Atari home computers.

OBJECTIVE

As in Donkey Kong, each screen in Canyon Climber has a different objective. On the first board, there is a large bridge structure comprised of four separate levels. Your objective is to destroy the bridge by setting a total of eight charges--one at each end of the four levels of the bridge--and then pressing the plunger. If you climb to the second level, you must reach the top of the screen by blocking or avoiding flying arrows. On the third screen the object is to get to the top of the canyon. But you must jump fissures while avoiding the bricks dropped by malevolent birds.

CONTROLS

The joystick moves your man in four directions; up, down, left, and right. When you press the fire button, your man leaps straight up into the air. If you are running at the time you press the button, your figure jumps forward.



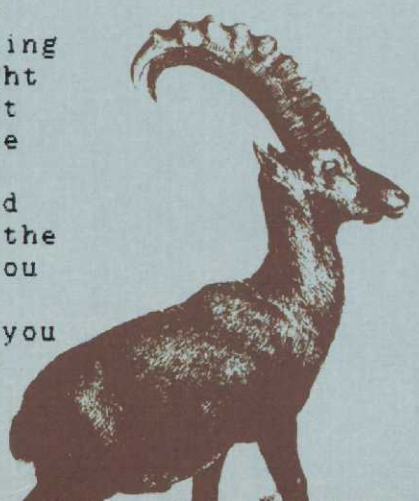
This first screen consists of a four-level bridge with ladders connecting each level.

Your goal is to lay eight "charges" on this bridge and then push the plunger located at the top right of the screen, blowing the bridge to smithereens.

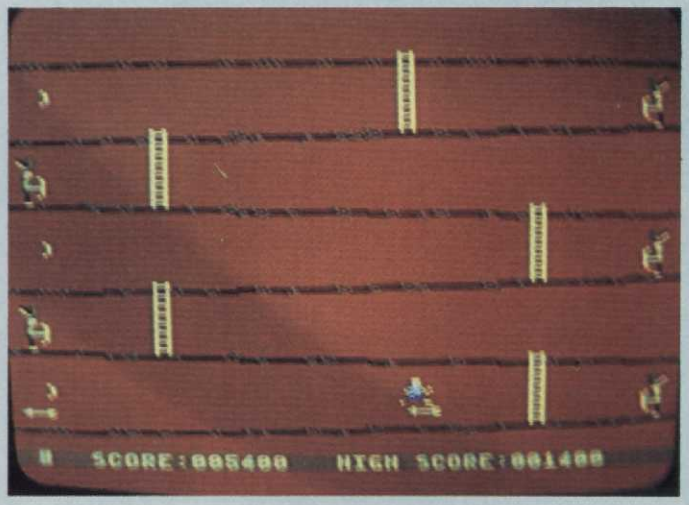
The only things that can kill you on this board are the sheep. There are never more than two sheep on each level, and they are fairly easy to avoid. To jump over a sheep you must have a running start. But watch for it to change directions in the middle of your jump.

When you are on a ladder, you are perfectly safe. The longer you stay on a ladder, however, the faster the remaining sheep become. You should try to place all of the charges as quickly as possible to avoid this problem.

To lay a charge, simply run over the edge of the bridge. You will hear a beep and a charge will appear where the bridge is connected to the land. You must place all eight charges before you can detonate them by pressing the plunger at the top. And remember: you are still vulnerable to sheep attack when you are on the top level, near the plunger. And if you lose a man on the first screen, all of your charges disappear, and you must start over again.



SCREEN 2

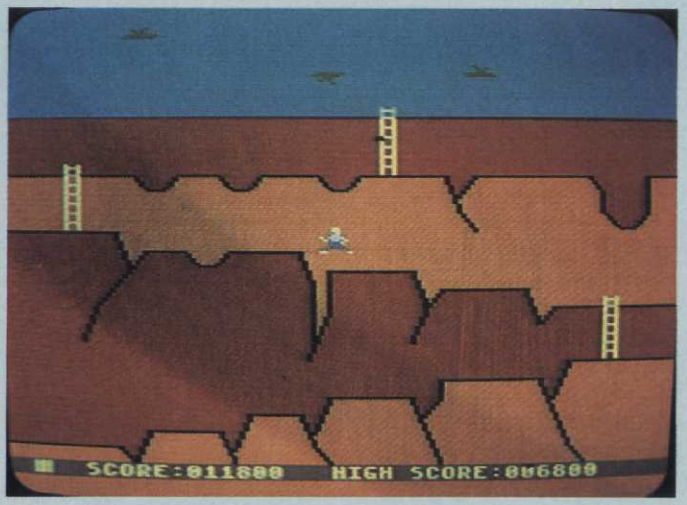


The second screen is a series of ramps connected by ladders. At the far end of each ramp is a large Indian who fires arrows at you. You must either jump these arrows (for 200 points each) or deflect them (for 300 points each) with the shields found at the end of every other ramp.

To obtain a shield, position yourself underneath it and jump. After you grab a shield, face the Indian at the other end of the ramp. Each shield lasts from 8 to 12 seconds; there is no way to tell when the strength of a shield will run out. Because of this, you should always press the jump button (as if you were unprotected) when deflecting an arrow. In this manner, if the shield goes away, you will have a chance of jumping the arrow. And since deflected arrows are worth an extra 100 points each, it is to your advantage to use up all of your available shields.

You cannot climb ladders while carrying a shield. After deflecting all the arrows in a given level, you should wait at the base of a ladder with the joystick in the up position. As the shield disappears, you will be safely on your way up the ladder.

SCREEN 3



The third and final screen represents the top of the canyon. You jump from ledge to ledge, avoiding the falling bricks that birds are dropping from above. If you get to the top, a sheep knocks you back down to the first screen, and you start over.

Jumping from ledge to ledge is relatively simple: run toward the edge and when your foot is even with the edge of the gorge, press the jump button. If you pay careful attention to your footwork, you will never miss a jump. You can't jump down from one gorge to another; if you try you will lose a man. You can, however, climb up or down any ladder at any time.

There are three birds that fly above the canyon trying to drop bricks on you. There will normally be three bricks falling at any given time. Of the three birds, only one has perfect aim. Stand in one place long enough, and he will surely get you.

And be careful when you climb the ladders. This is the most dangerous place to be if a brick is dropped right above you. When you must go up a ladder, wait next to it to draw the fire of the birds away from the ladder. When all the birds have dropped their bricks, run over and climb up the ladder.

ARCADIA'S SUPERCHARGER: BEEFING UP THE OLD WORKHORSE

by Danny Goodman

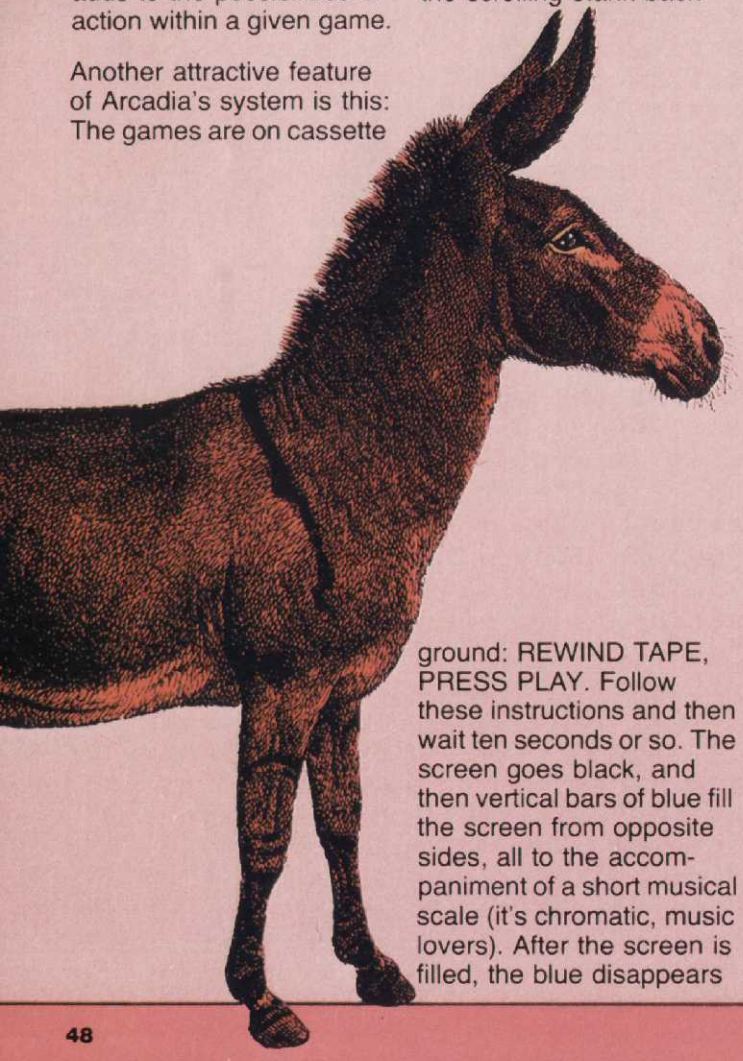
At first report, I was somewhat skeptical of Arcadia and its new Supercharger for Atari's VCS. There's only so much you can do with Atari VCS graphics, right? Wrong!

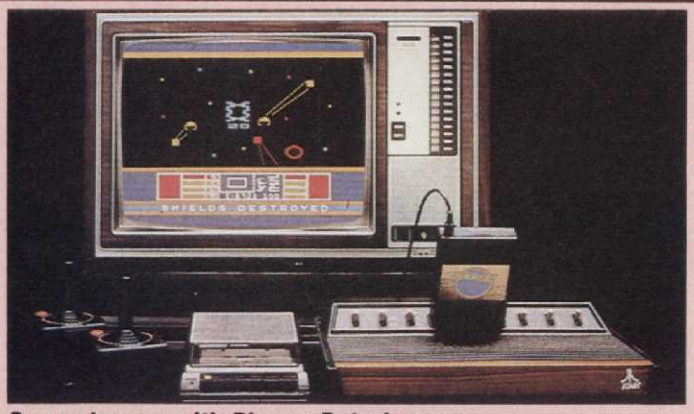
Arcadia's Supercharger—which plugs neatly into the cartridge slot of your Atari VCS system—adds more than 6,000 bytes of RAM (Random Access Memory) to the Atari's circuits. Without the Supercharger, you get only 128 bytes of RAM. More bytes mean more memory. More memory means better resolution and finer detail in the game's graphics. It also adds to the possibilities of action within a given game.

Another attractive feature of Arcadia's system is this: The games are on cassette tapes—not cartridges. And these cassettes are an inviting $14.95 each.

The Supercharger itself looks like an overgrown game cartridge with a built-in handle. It has a 34-inch wire coming out of the top. At the end of the wire is a mini (¼-inch) phone plug that fits snugly into the earphone jack of any portable cassette deck. Adapters are available for Walkman-type stereo players and full-grown cassette decks.

Turn on the VCS with the Supercharger plugged in and instructions appear on the scrolling starlit background: REWIND TAPE, PRESS PLAY. Follow these instructions and then wait ten seconds or so. The screen goes black, and then vertical bars of blue fill the screen from opposite sides, all to the accompaniment of a short musical scale (it's chromatic, music lovers). After the screen is filled, the blue disappears and the instruction STOP TAPE appears. Following the instruction sends the game into "Title Page." That's all there is to it—about 30 seconds from PRESS PLAY to game play.





Supercharger with *Phaser Patrol* game

If you've ever loaded a cassette computer program, you'll be pleased to know that the speed at which these programs load seems to be much faster than the typical home computer. Also, if you have experienced difficulty loading a program because of dirt, wear, or scratches on the tape, you'll appreciate the clean copy available on the flip side of the cassette.

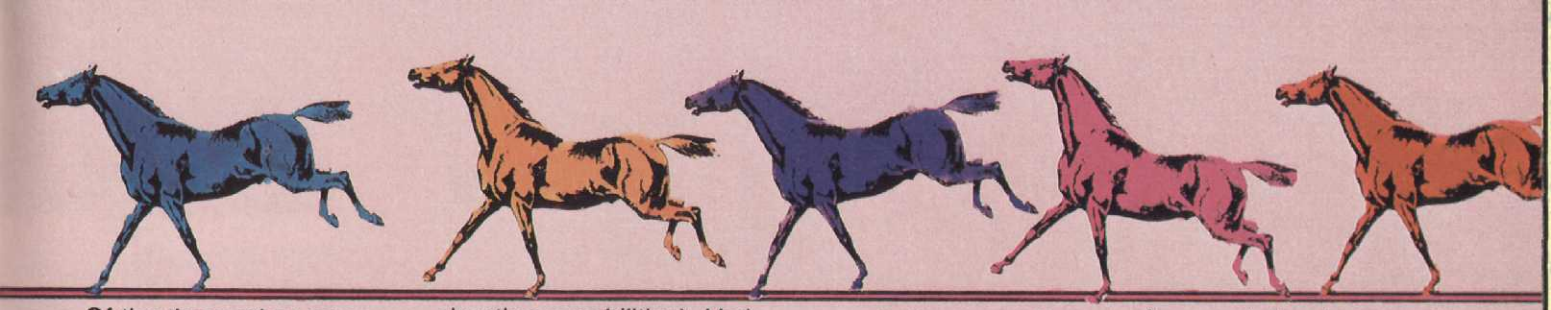
Packed with the Supercharger is one game tape called *Phaser Patrol.* Although it may appear to be just another version of Atari's computer *Star Raiders, Phaser Patrol* is actually a first-rate showcase for Arcadia's supercharged VCS graphics.

The goal of the game is to clear 34 of the 36 sectors of your Sector Map—the other two contain starbases. The left difficulty switch toggles between Sector Map and Cockpit View.

A most intriguing on-screen control panel provides a barrage of pilot data: status indicators for shields, computer, long range scanner, and torpedoes (red, yellow, or green conditions for each); radar screen of the sector; energy level; condition alert (red for enemy in the sector, green for sector clear, and a spectacular "multicolor flow" while warping from sector to sector); a cleverly detailed (but otherwise useless) mission clock; and a message display that warns you of damage and awards you a pilot rating at game's end.

When you're in combat, your computer has a torpedo tracking feature that makes your shots follow the enemy like cruise missiles. If you time your shot just right your torpedo will curve to track that enemy fighter and blow it away.

Perhaps the best graphic features are the shields. When you engage your shields, the cockpit view slowly fills with an almost imperceptible sheet of tiny dots—a feat of graphic display apparently impossible without the Supercharger.



Of the three other tapes currently available for the system, *Fireball* is the best of the lot. *Fireball* is a variation on the classic *Breakout* theme. Rather than bounce a blip of light at a wall with a flat paddle—as you do in *Breakout*—*Fireball* allows you to control a human juggler who catches and throws balls into the wall. The graphics are not as spectacular as they might have been, but the balls are crisply detailed and are easy for your juggler to catch with either hand. That's good, because there can be as many as six balls bouncing around the screen at one time. Like any mediocre act, if your juggler misses a ball he's pulled off the screen by a long hook.

The game contains several variations for one-to-four players. These include cavity blocks (walls with cavities that release extra balls when penetrated) and moving blocks (walls that advance down the screen throughout the game).

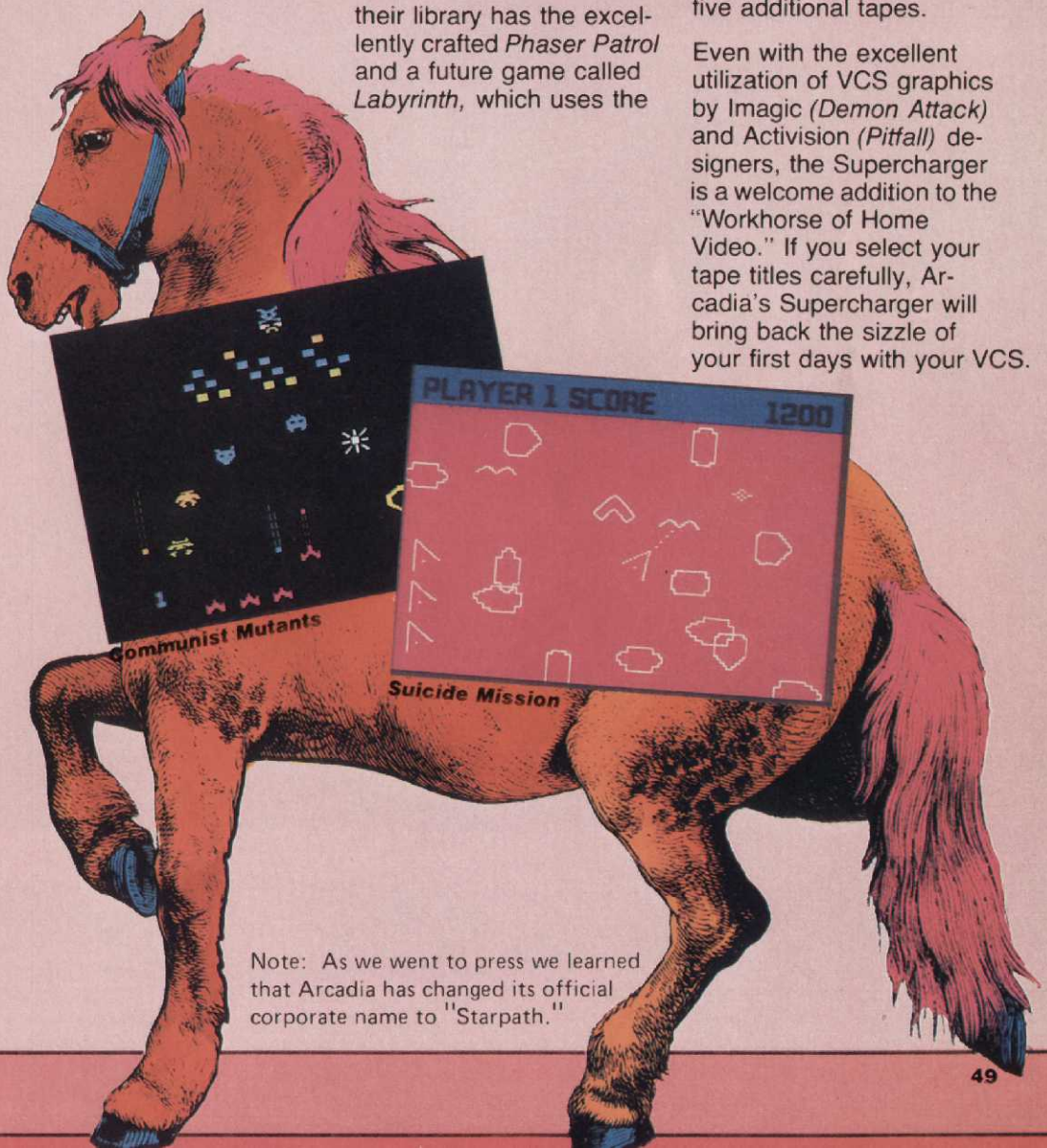
Communist Mutants from Space is a *Space Invaders/Galaxian* variant with a cute package and little more. You shoot from the bottom of the screen and the aliens descend upon you from the top—you've been there before. *Communist Mutants* does, however, offer one-to-four players several game options, such as penetrating fire (bullets that pass through several rows of aliens) and time warp (a once-per-round feature that allows you to momentarily slow the aliens' attack while you retain full speed and shooting capabilities). Variations are selected from an on screen menu at the beginning of each game.

Suicide Mission takes you inside a human body where you fight off viruses that are similar in appearance and behavior to the rocks in the arcade version of *Asteroids.* Arcadia's design staff used the Supercharger's high-resolution graphics to approximate detailed vector scanning (outline) images. Nice try, but it doesn't quite make it. *Suicide Mission* is, however, a better game than Atari's home version of *Asteroids,* at roughly half the price.

Upcoming titles include an adventure-type game called *Excalibur.* Seven more are in the works. With so many video-game cartridges on the market, it's not easy to create original games. Several Arcadia games (such as *Commie Mutants* and *Suicide Mission*) simply grind old themes into the ground without adding any particular new dimension. Yet their library has the excellently crafted *Phaser Patrol* and a future game called *Labyrinth,* which uses the fine resolution to present 3-D effects of walking down corridors. I hope the company will use original game concepts instead of the retreads in tapes to come.

Is Arcadia's Supercharger worth its $69.95 suggested list price? Analytically speaking, since you get the $14.95 *Phaser Patrol* with it, your net cost is $55. At an average saving of more than $10 per game over cartridges (more like $20 for the better ones), you may actually "break even" after purchasing as few as five additional tapes.

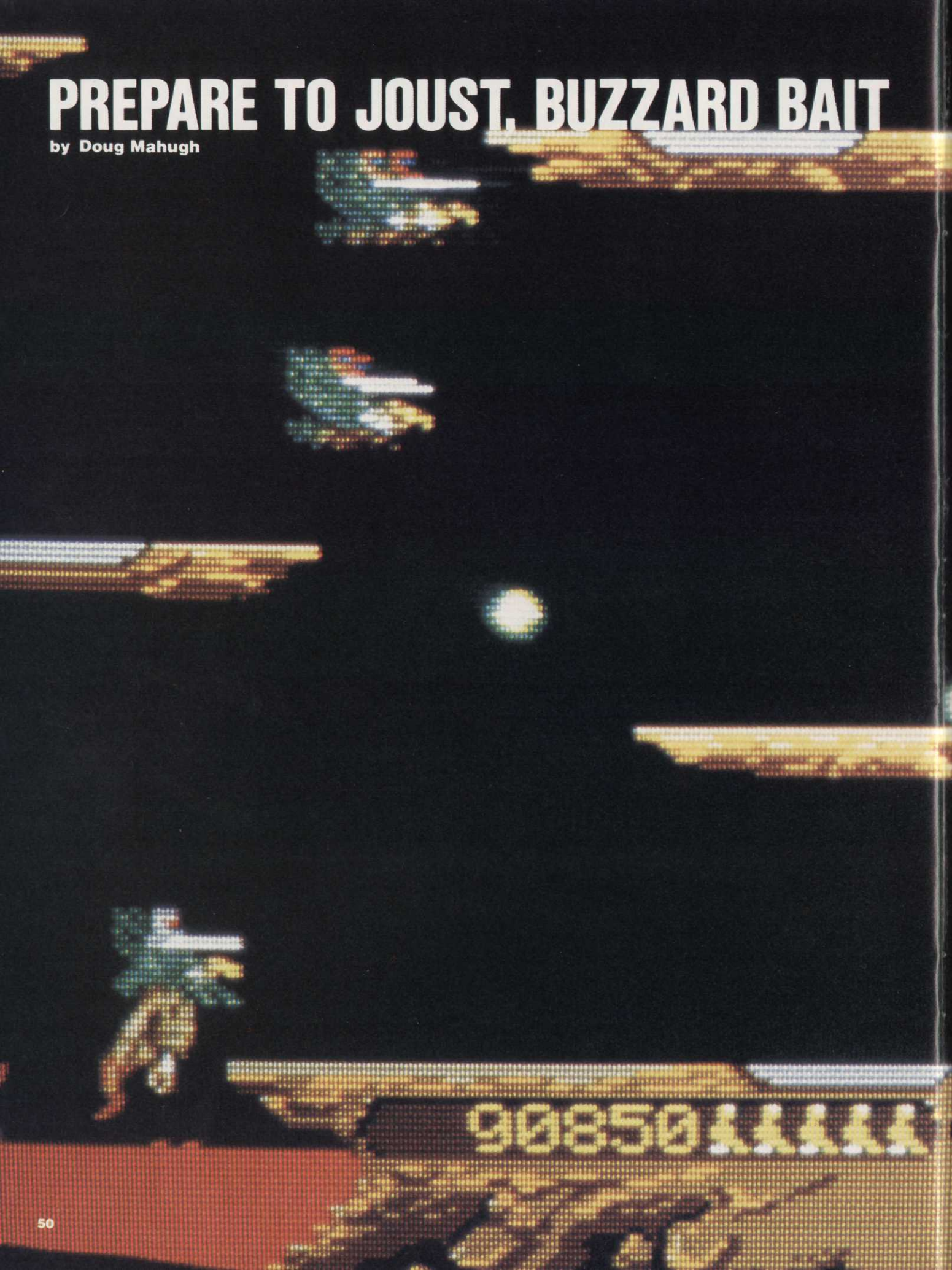
Even with the excellent utilization of VCS graphics by Imagic *(Demon Attack)* and Activision *(Pitfall)* designers, the Supercharger is a welcome addition to the "Workhorse of Home Video." If you select your tape titles carefully, Arcadia's Supercharger will bring back the sizzle of your first days with your VCS.

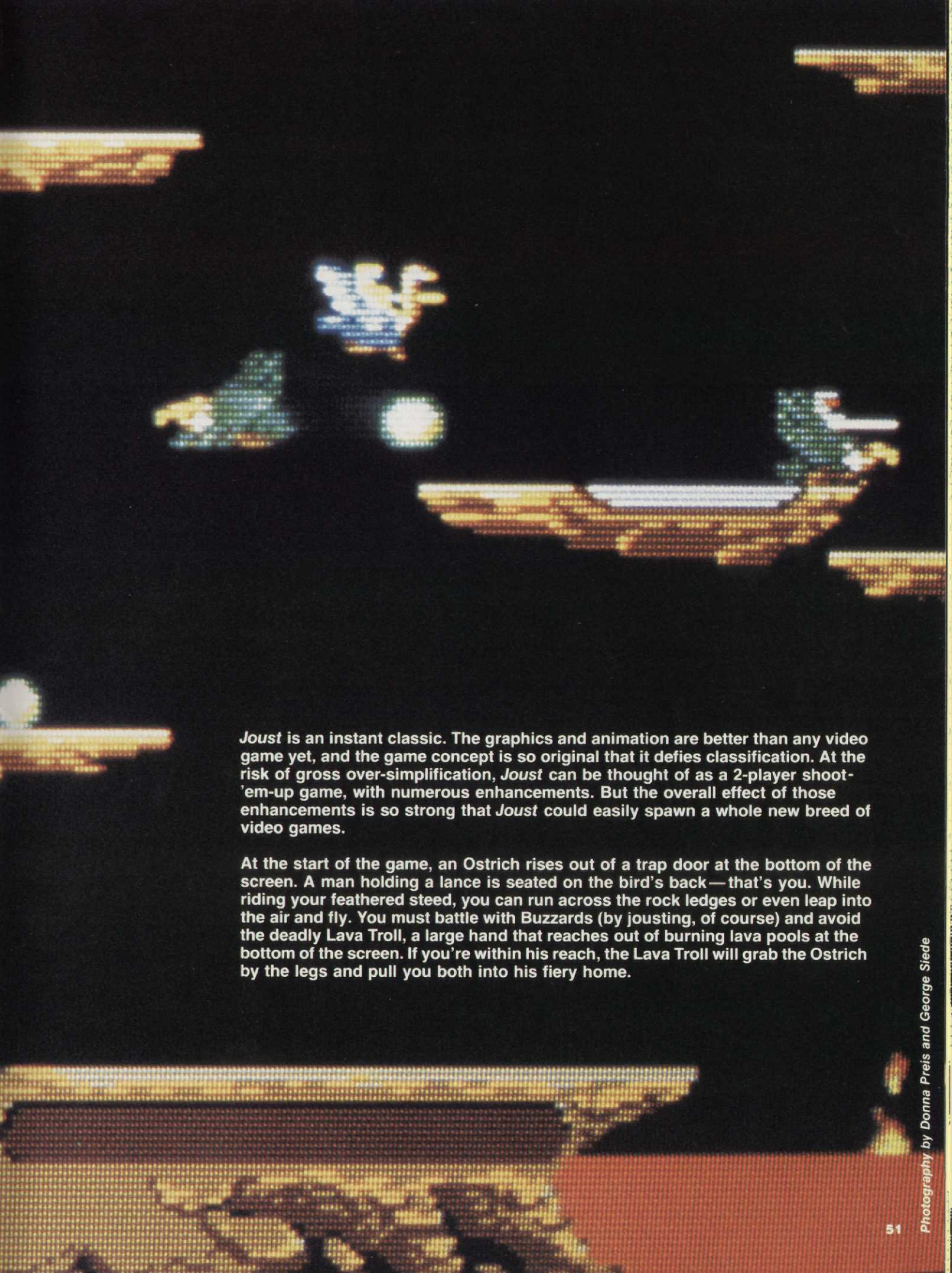


Note: As we went to press we learned that Arcadia has changed its official corporate name to "Starpath."

PREPARE TO JOUST, BUZZARD BAIT

by Doug Mahugh

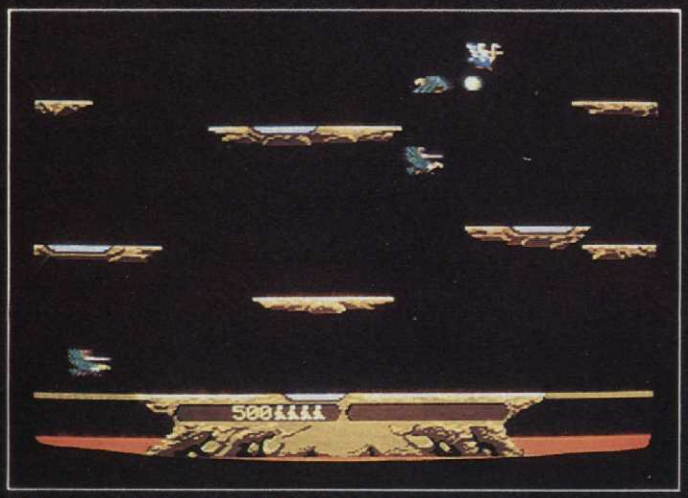




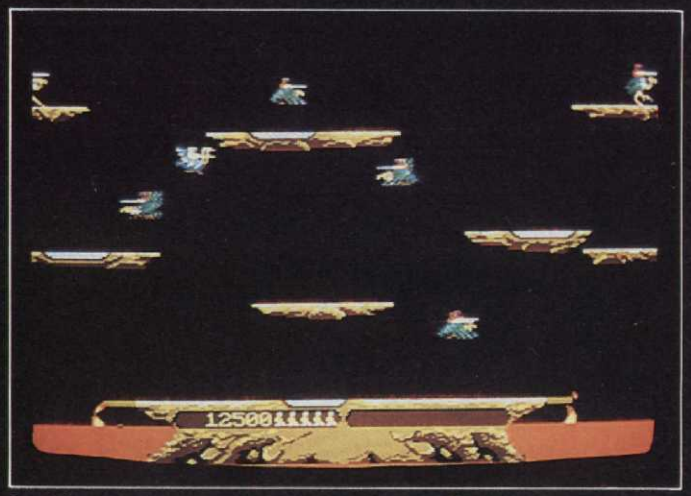
Joust is an instant classic. The graphics and animation are better than any video game yet, and the game concept is so original that it defies classification. At the risk of gross over-simplification, *Joust* can be thought of as a 2-player shoot-'em-up game, with numerous enhancements. But the overall effect of those enhancements is so strong that *Joust* could easily spawn a whole new breed of video games.

At the start of the game, an Ostrich rises out of a trap door at the bottom of the screen. A man holding a lance is seated on the bird's back—that's you. While riding your feathered steed, you can run across the rock ledges or even leap into the air and fly. You must battle with Buzzards (by jousting, of course) and avoid the deadly Lava Troll, a large hand that reaches out of burning lava pools at the bottom of the screen. If you're within his reach, the Lava Troll will grab the Ostrich by the legs and pull you both into his fiery home.

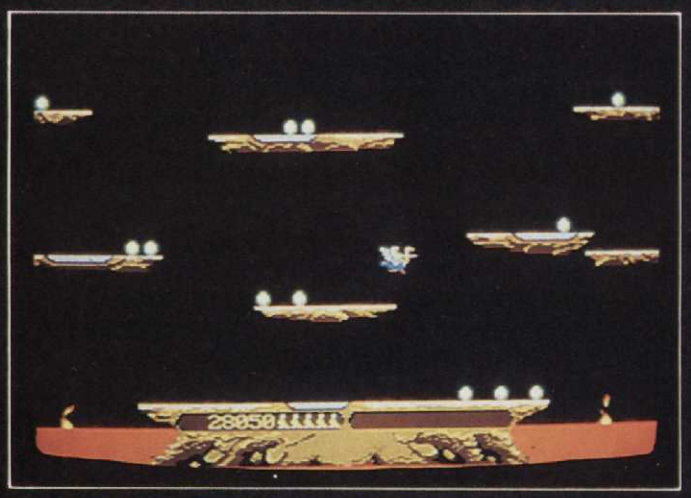
Photography by Donna Preis and George Siede



A successful joust will cause an Egg to drop.



Lurking under a rock prevents attack from above.



The Egg Wave, worth up to 10,500 points.

The most obvious difference between *Joust* and other flying games is the controls: a two-direction joystick and a flap button. The joystick controls your horizontal motion, while the flap button is used to keep your Ostrich airborn. Each time the flap button is pressed, the Ostrich's wings flap. To stay in the air, you must repeatedly hit the flap button. Flapping about two times per second will hold the Ostrich at a constant altitude; flap faster and you'll rise, flap slower and you'll descend slowly.

There are three types of opponents: Bounders, Hunters, and Shadow Lords, worth 500, 750, and 1500 points respectively. They all ride on green flying Buzzards, and the only way to tell them apart (besides their progressively more intelligent behavior) is by the colors of their turbans—Bounders are red, Hunters are grey, and Shadow Lords are light blue.

You destroy opponents by unseating them with your lance. In any collision between you and an opponent, the lower lance loses. If you're both on the same level, it's a "tie", and you bounce off each other.

When you lose a joust, your Ostrich will fly off the screen and then reappear by rising out of a trap door in the least crowded portion of the screen. When you win a joust, your opponent's Buzzard drops an Egg and flies off the screen. These Eggs are very rubbery, and can survive a fall from any height. Collecting an Egg (by landing on it) nets you 250, 500, 750, or 1000 points, in progression. A special 500-point bonus is awarded for catching an Egg in mid-air. If an Egg is left on the ground too long, it will hatch into a small man with a lance, who waits for a Buzzard to land and then climbs aboard. When an opponent is regenerated in this manner, he comes back at the next higher level of intelligence; Bounders become Hunters, and Hunters become Shadow Lords.

Every fifth wave is an Egg Wave. On these waves, there are no opponents, only 12 Eggs randomly strewn across the rock ledges. These Eggs must be collected before they hatch into Bounders, who will wait for Buzzards to land and take them away. If you're quick enough to pick up all 12 Eggs, the wave is worth 10,500 points.

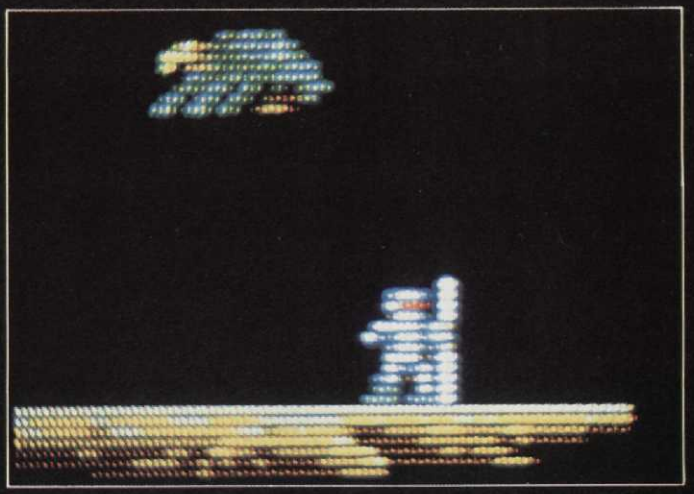
Like most attack-wave oriented games, *Joust* has a "baiter" to keep

you honest and efficient. Called *The "Unbeatable?" Pterodactyl*, it lunges across the screen, occasionally changing direction in mid-air. Contact with any part of the Pterodactyl's body will knock you off your Ostrich, even if you hit it with your lance. The only way to kill a Pterodactyl is to thrust your lance directly down its throat. This is a difficult maneuver, but standing on one of the rock islands in the middle of the screen can give you a stable enough base to pull it off.

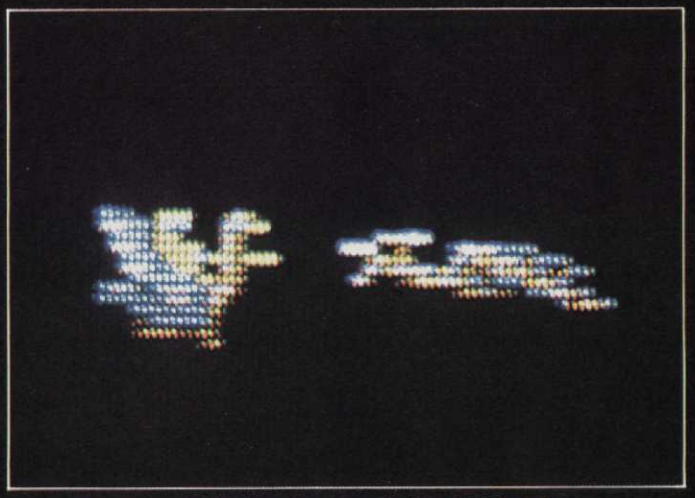
Joust's sound effects are a welcome relief from the hi-tech nickelodians built into most recent games, which provide meaningless musical backgrounds that are usually smothered by game-room sound systems. In *Joust*, every sound—from the flapping of Ostrich wings to the hatching of Eggs—conveys a message. Some of the sounds are borrowed from previous Williams Electronics games (e.g., *Defender)*, while others are completely new. The Pterodactyl's scream is one of the best new sounds: a loud, shrill screech that would put Wendy O. Williams to shame.

In dual-player mode, the second player controls a Stork, and both players fight the opponents at the same time. Wave 3 (and every 5th wave thereafter) is a Team Wave, and Wave 4 (and every 5th wave thereafter) is a Gladiator Wave. On Team Waves, a 3000 point bonus is awarded to both players for finishing the wave without unseating one another (on the screen, of course). During Gladiator Waves, a 3000 point bonus is awarded for unseating the other player.

With the rare exception of a tie, any collision between the players costs one of them a turn, and beginning players tend to have many accidental collisions with each other. This can make dual-player games end very quickly, and is the single most disappointing feature of the game. *Joust's* designers may have thought that the ability to kill one another would make for more aggressive game-play, but it has the exact opposite effect because good players know that a confrontation isn't worth the risk involved, and consequently spend much of their time avoiding each other. And, in addition to this practical reason for avoiding one another, there's one other thing *Joust's* designers seem to have overlooked: most people play games with their friends, and friends tend to help each other.



A Shadow Lord waiting for a Buzzard to land.

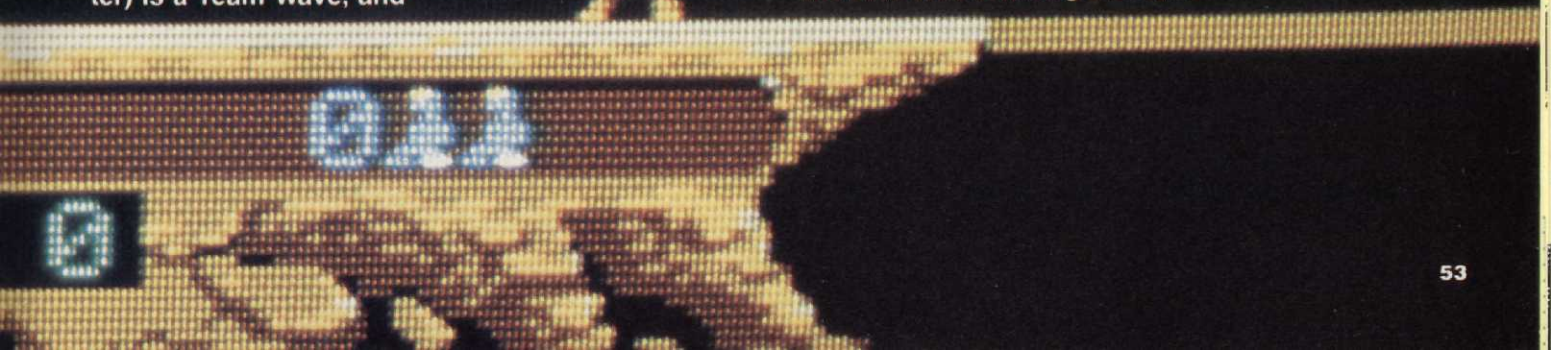


Ram the Pterodactyl in the mouth for 1000 points.

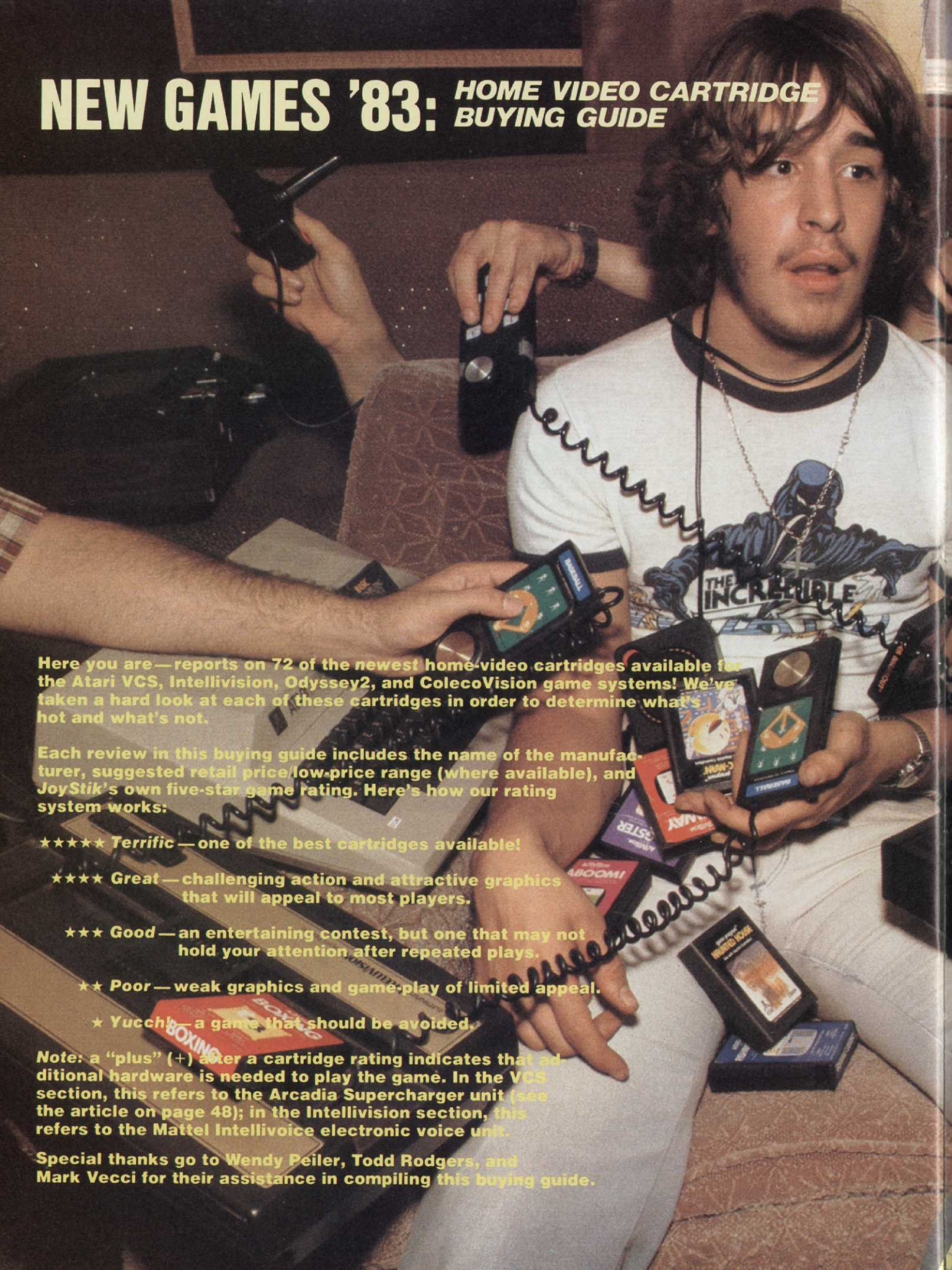


The Lava Troll detaining a Hunter.

Photography by Donna Preis and George Siede



NEW GAMES '83: HOME VIDEO CARTRIDGE BUYING GUIDE



Here you are—reports on 72 of the *newest* home-video cartridges available for the Atari VCS, Intellivision, Odyssey2, and ColecoVision game systems! We've taken a hard look at each of these cartridges in order to determine what's hot and what's not.

Each review in this buying guide includes the name of the manufacturer, suggested retail price/low-price range (where available), and *JoyStik*'s own five-star game rating. Here's how our rating system works:

★★★★★ *Terrific*—one of the best cartridges available!

★★★★ *Great*—challenging action and attractive graphics that will appeal to most players.

★★★ *Good*—an entertaining contest, but one that may not hold your attention after repeated plays.

★★ *Poor*—weak graphics and game-play of limited appeal.

★ *Yucch!*—a game that should be avoided.

***Note:* a "plus" (+) after a cartridge rating indicates that additional hardware is needed to play the game. In the VCS section, this refers to the Arcadia Supercharger unit (see the article on page 48); in the Intellivision section, this refers to the Mattel Intellivoice electronic voice unit.**

Special thanks go to Wendy Peiler, Todd Rodgers, and Mark Vecci for their assistance in compiling this buying guide.



GAMES FOR ATARI VCS

ATLANTIS
Imagic, Inc.
$31.88/$30.00-33.00
★★★★
You defend the lost city of *Atlantis* in this fast-paced game of the same name. Alien attackers pass overhead while you fire at them from three separate positions on the screen. If all of *Atlantis'* seven installations are destroyed, the game is over. The contest is challenging and the graphics are spectacular. A nice twist on the alien invasion theme.

ARMOR AMBUSH
Mattel M-Network
NA/$30.00-33.00
★★★
Good graphics dominate *Armor Ambush,* an entertaining tank battle game. Two players control two tanks each across a detailed landscape. If a player loses both onscreen tanks, then a new, randomly selected playfield appears, and the teams are renewed at equal strength. The game is over when one player's 25-tank battalion is destroyed. Not the most strategic battle, but fun.

BERZERK
Atari, Inc.
$31.95/$24.00-27.00
★★★★
An excellent adaptation of a classic arcade game, *Berzerk* pits you against armies of alien Robots in a never-ending series of maze-like rooms. Along the way, you'll also encounter Evil Otto, a deadly character who resembles, of all things, a "happy face" beach ball! Simple (but effective) graphics and a certain randomness of game-play make this one a winner.

AIRLOCK
Data Age, Inc.
$31.95/NA
★★
In *Airlock,* you must climb to the top of a sunken Submarine before it floods. You must grab a Hatch Key, jump two Barriers, avoid a runaway Torpedo, enter an Elevator, and proceed to a higher level — all in a nearly impossible 10 seconds. The graphics are bland (except for the end, when the sub sinks), and the game is unnecessarily difficult.

ASTROBLAST
Mattel M-Network
NA/$30.00-33.00
★★★
In *Astroblast,* you control a cannon at the bottom of the screen, firing at an assortment of space debris that falls from the top of the screen. The graphics are good, and the game is actually more fun than Mattel's Intellivision original, *Astrosmash.* One nice feature is that you can use either joystick or paddle controllers, depending on which you prefer.

BUGS
Data Age, Inc.
$31.95/NA
★
Three long, leggy insects crawl toward the top of the screen in *Bugs,* and it's up to you to destroy them before they get there. You must also contend with a smaller, crawly thing called a Phylax, which is annoyingly difficult to destroy. Mediocre game-play and dull graphics mess up what could have been an entertaining game.

Photography by Donna Preis and George Siede

GAMES FOR ATARI VCS

CHOPPER COMMAND
Activision, Inc.
$31.95/$26.00-29.00
★★★★
You're a helicopter pilot defending a convoy of ammunition trucks in *Chopper Command,* Activision's earthbound version of *Defender.* You must clear the skies of bomb-and-missile-firing aircraft before they destroy either you or your convoy. Superb graphics and challenging game-play ensure that you'll be playing *Chopper Command* long after its initial purchase.

COSMIC SWARM
CommaVid
$31.95/$26.00-29.00
★★
In *Cosmic Swarm,* you control a spaceship that fights off a group of nest-building galactic insects. You must shoot the bugs and their Nest Blocks to stay alive—if you touch either of them, you explode. You must also periodically dock with a refueling ship when it appears. There's nothing exciting about this game; once you learn how to blast the Blocks, it gets boring.

DONKEY KONG
Coleco, Inc.
$36.97/$28.00-31.00
★
A pale imitation of the original arcade game, VCS *Donkey Kong* offers only two screens—Ramps and Rivets—and little in the way of graphics and sound effects. Game-play is slow and boring, and should appeal only to younger, easily amused players. If you *must* own the game, invest in a ColecoVision system: it includes a far superior version of *Donkey Kong.*

FIREFIGHTER
Imagic, Inc.
$28.97/$24.00-27.00
★★
One of the dullest games to come from Imagic, *Firefighter* gives you the opportunity to extinguish the flames in a burning building. You must also rescue the lone occupant of the building as he climbs to higher and higher floors to escape the fire. The graphics are nice, but the simplistic game-play will probably appeal only to younger players.

COMMUNIST MUTANTS FROM SPACE
Arcadia, Inc.
$14.95/$12.00-14.00
★★★/+
Despite its high-resolution graphics, *Communist Mutants* is little more than a well-constructed copy of *Space Invaders* and *Demon Attack.* A Mother Creature lays eggs that hatch into Marxist aliens who descend and fire upon you from above. It's a good game that, except for the title, lacks originality.

DEFENDER
Atari, Inc.
$37.95/$27.00-30.00
★★★★
A fast-moving, exciting, and colorful arcade adaptation, *Defender* puts you in command of a spaceship protecting a city from alien attack. If all of the city's Humanoids are abducted or killed, the Earth explodes and you're left alone to battle hideous Mutants in free space. The game offers good controller action and plenty of challenge, even after repeated plays.

ENCOUNTER AT L-5
Data Age, Inc.
$31.95/NA
★★
Encounter at L-5 is a weak *Demon Attack* variant in which Warrior Ships zig-zag down the screen and fire at your Antimatter Launcher. There's not much in the way of originality going on here. Graphics and game-play aren't too exciting; quick and accurate firing controls save this game from being a total washout.

FROGGER
Parker Bros. Inc.
$34.95/$27.00-30.00
★★★★★
A near-duplicate of its arcade counterpart, *Frogger* is as entertaining and challenging as it is "cute." You maneuver a Frog across a highway at rush hour; through a river filled with Logs, Turtles, and Alligators; and finally into the safety of a Lily Pad Garden. The game's music and graphics are the best of any available VCS cartridges.

COSMIC ARK
Imagic, Inc.
$31.88/$27.00-30.00
★★★★
Good eye-hand coordination is a must when playing *Cosmic Ark,* an exciting space game with entertaining graphics. First, you must destroy the deadly Meteors that head for your Ark. If you survive the Meteor shower, you can launch a Shuttleship to the surface of a planet and recover alien Beasties for points. A challenging family game with a nonviolent theme.

DEMONS TO DIAMONDS
Atari, Inc.
$26.95/$20.00-23.00
★★★
In *Demons to Diamonds,* one or two players blast Demons as they pass—"shooting-gallery style"—through a colorful void. Hit a "good" Demon, and you're rewarded with a shower of Diamonds you can shoot for extra points. Hit a "bad" Demon, and it will fire back at you. A fast-moving game that is somewhat hampered by repetitive play.

FIREBALL
Arcadia, Inc.
$14.95/$12.00-14.00
★★★★/+
Arcadia's supercharged version of *Breakout* is, for a change, a copy that is better than the original. In *Fireball,* you control a juggler who must keep up to six balls in play while breaking down various wall formations. The game-play and graphics are terrific—the juggler even "gets the hook," and is dragged off-screen when he misses a ball.

GANGSTER ALLEY
Spectra Video, Inc.
NA/$24.00-27.00
★★★
It's you versus the Mob in *Gangster Alley,* an original game with quick action and clever graphics. You must fire at five criminals as they pop up in a number of windows; if you wait too long, they'll blast you first. Occasionally, "Nitro Ed" will drop a bomb on you. Hit a hostage accidentally, and you lose points. Violent, but entertaining.

GRAND PRIX
Activision, Inc.
$31.95/$26.00-29.00
★★
Tedious, overly simple game-play hampers *Grand Prix*, a solo race game with better-than-average graphics. You maneuver a car through a straight race course (no curves) while dodging other cars and avoiding oil slicks. There is no real competition here—all you can beat is your best time or an opponent's. It may appeal to youngsters, but not to serious players.

MATH GRAN PRIX
Atari, Inc.
NA/$20.00-23.00
★★★
A good educational game for young children (ages six through 10), *Math Gran Prix* is designed to teach as well as entertain. One or two players move their cars along a race track by solving arithmetic problems on the screen. A built-in "tutor" responds to incorrect answers by offering easier problems; correct answers trigger more difficult problems.

PITFALL
Activision, Inc.
$31.95/$26.00-29.00
★★★★★
In *Pitfall,* you maneuver an explorer through a jungle made up of 255 different game screens in search of Treasure. Along the way you must avoid deadly hazards: Crocodiles, Bogs, Cobras, etc. A challenging, graphically entertaining game with wide age group appeal. A "must-have" cartridge for all VCS owners.

ROOM OF DOOM
CommaVid
$31.95/$26.00-29.00
★★
Below-average graphics and predictable game-play dominate *Room of Doom*, a sorry *Berzerk* rip-off. You're trapped in a series of rooms; in each room are doors; behind each door is an Assasin; you can shoot an Assasin and he can shoot you only when the door is open. You must also avoid pursuers such as Hydras, Bugs, and Robots. Keep out of the room.

KING KONG
Tigervision, Inc.
$29.97/$26.00-29.00
★
King Kong is a *Donkey Kong* variant that is worse than the otherwise poor VCS version of the arcade game. Kong holds a girl captive at the top of a building and rolls Bombs down at you. You must jump over them and climb Ladders to get to the top—a rip-off if there ever was one! Lousy graphics and repetitive game-play make this cartridge one to avoid.

MEGAMANIA
Activision, Inc.
$31.95/$26.00-29.00
★★★★
In *MegaMania,* you do battle with, of all things, killer objects such as Radial Tires, Bow Ties, Dice, Hamburgers, and so forth. Each enemy attacks from the top of the screen in separate waves. It's one of the best *Space Invaders* variations to date. The graphics are good and the game-play is intense.

PLANET PATROL
Spectra Video, Inc.
NA/$23.00-26.00
★★★
Planet Patrol is an involving fly-and-shoot space game with good, but not spectacular graphics. You fly over the planet Spectra, encountering Missiles, Missile Bases, and Space Debris. Along the way, you must rescue stranded pilots and periodically refuel your ship. The planet's sunsets throw the battle into darkness—a nice touch.

SHARK ATTACK
Games by Apollo, Inc.
$31.95/$26.00-29.00
★★
A below-average *Pac-Man* clone, *Shark Attack* puts the maze under water and turns the yellow gobbler into a Diver. The Diver must collect the Diamonds scattered throughout the seaweed maze and avoid the not-so-deadly Shark, which is annoyingly easy to do. Ho-hum graphics, low scoring, and poor joystick response make this game even more annoying.

LOST LUGGAGE
Games by Apollo, Inc.
$31.95/$26.00-29.00
★★★
An airline traveller's nightmare, *Lost Luggage* has you catching suitcases as they fly off of a crazed baggage carousel. A close copy of *Kaboom!, Lost Luggage* is an equally entertaining test of eye-hand coordination, this time with a non-violent theme. Drop a suitcase, and the remaining bags on the screen open up and scatter your underwear for all to see!

PHASER PATROL
Arcadia, Inc.
NA*
★★★★★/+
Incredible graphics make *Phaser Patrol* something more than just another *Star Raiders* variant. It's still a search-and-destroy-the-aliens game, but this time you're equipped with a richly detailed onscreen instrument panel that monitors each of your ship's functions. Challenging to play and stunning to watch.
*Note: *Phaser Patrol* is packed with Arcadia's Supercharger unit.

RIDDLE OF THE SPHINX
Imagic, Inc.
$31.97/$27.00-30.00
★★★★★
In one of the most elaborate quest/adventure games ever created, *Riddle of the Sphinx* makes you an ancient Egyptian Prince in search of the Temple of Ra. Throughout your journey you must accumulate Treasures, fight Thieves, and make offerings to the Gods. There's a real riddle in this game, and its solution is sure to baffle you for some time to come.

SPACE ATTACK
Mattel M-Network
NA/$30.00-33.00
★★
Yet another *Star Raiders* copy, *Space Attack* is one of the weakest of the bunch. Again, you hop from sector-to-sector of the galaxy while battling aliens. This time, however, instead of defending a number of Starbases, you must protect only one Mother Ship. The game-play and graphics are about average; other games do better with the same theme.

GAMES FOR ATARI VCS

SPACE CAVERN
Games by Apollo, Inc.
$31.95/$26.00-29.00
★★
Space Cavern is yet another bottom-shooting *Space Invaders* copy that does nothing to improve on the original. Although the graphics are nice and splashy, the game-play itself is predicatably boring. Much of the game can be spent sitting in the middle of the screen shooting up at Electrosauri monsters in a straight path. Go play the original.

SSSNAKE
Data Age, Inc.
$31.95/NA
★
In *SSSnake,* you control a center-screen gun, shooting at prehistoric creatures while avoiding deadly Snakes that move across a grid. It looks like the manufacturer originally wanted a *Centipede* clone, but could only come up with this lackluster imitation. The game itself is boring, with graphics that are mere splotches of color. Avoid it.

STAR RAIDERS
Atari, Inc.
$37.95/$27.00-30.00
★★★★★
One of the most popular home computer games ever created, *Star Raiders* makes an amazing transition to the VCS system. You must Hyperwarp from sector-to-sector of the galaxy, battling aliens and defending Starbases. A keyboard that controls the game's many special features is included. The best space strategy/combat game available.

SUBMARINE COMMANDER
Sears Tele-Games
$24.95/NA
★★
Hardly more than a colorful shooting gallery, *Submarine Commander* offers little in the way of challenge or entertainment. You pilot a Submarine through dangerous waters while shooting as many enemy Tankers, P.T. Boats, and Destroyers as possible. Elaborate onscreen gauges are merely window-dressing in this repetitive contest.

SPACECHASE
Games by Apollo, Inc.
$27.97/$26.00-29.00
★★
A variation on a popular video-game theme, *Spacechase* has you battling yet another force of aliens moving down from the top of the screen. The graphics are good and the game allows you to vary the alien formations somewhat. If you already own a *Space Invaders* cartridge, however, there's little going on here that you haven't played before.

STAMPEDE
Activision, Inc.
$22.95/$18.00-21.00
★★★
You're back in the Old West ropin' dogies in *Stampede,* an original, entertaining game. You ride the trail catching an assortment of runaway cows for points. Hit a skull in your path or let three dogies slip by you and the game is over. *Stampede* is easy to play, yet tough to master. Its non-violent nature makes it a good family game.

STAR WARS: THE EMPIRE STRIKES BACK
Parker Bros., Inc.
$34.95/$27.00-30.00
★★
The Empire Strikes Back is little more than a weak *Defender* variant bearing the *Star Wars* name. You pilot a Snowspeeder over the ice planet Hoth, battling the enemy Walkers. The graphics are good, but the game-play should only appeal to younger, less-aggressive players.

SUPER CHALLENGE BASEBALL
Mattel M-Network
NA/$30.00-33.00
★★★★
Super Challenge Baseball is a fine adaptation of the great summer game. Most real baseball rules apply in this two-player contest. The graphics are clean and detailed, but the controls may be difficult to master at first, particularly when playing defense. You'll eventually get the hang of it. Play ball!

SPACE JOCKEY
U.S. Games Corp.
NA/$20.00-23.00
★★★
In *Space Jockey,* you pilot a Flying Saucer over a colorful country landscape while blasting an assortment of obstacles along the way for points. These include attacking Airplanes, Helicopters, and Tanks, as well as passive hot-air Balloons, Houses, and Trees. It's an easy-to-play, fast-moving game that, despite its violent nature, should appeal to the whole family.

STARMASTER
Activision, Inc.
$31.95/$26.00-29.00
★★★★
Starmaster is a close copy of Atari's famous *Star Raiders,* and is every bit as challenging for less money. As with the original, you defend Starbases and battle enemy Starfighters throughout the galaxy. However, rather than employ a separate controller, *Starmaster* uses the VCS's color and difficulty switches to access the game's various functions.

STELLAR TRACK
Sears Tele-Games
$28.00/NA
★★★
In *Stellar Track,* you must use computerized charts, maps, and status reports to plan a theoretical space battle. The computer advises you of your success or failure—you do not personally participate in any alien combat. It's a good game for non-violent strategists, but most others will probably prefer a game with a bit more action, like *Star Raiders.*

SUPER CHALLENGE FOOTBALL
Mattel M-Network
NA/$30.00-33.00
★★★★
Real gridiron action abounds in *Super Challenge Football*—you can run, pass, kick, block, and tackle, just like an actual football team (no player strikes to worry about here). You and your opponent call one of a number of set plays before each scrimage. There are no cheerleaders, but plenty of fun otherwise.

GAMES FOR COLECOVISION

SUICIDE MISSION
Arcadia, Inc.
$14.95/$12.00-14.00
★★★★/+
An entertaining *Asteroids* variant, *Suicide Mission* takes you inside a human body, where you must blast your way through a sea of killer amoebas. Arcadia's Supercharger game does a good job of imitating the vector graphics of arcade *Asteroids*. In fact, it's a better *Asteroids* game than Atari's VCS version.

VOLLEYBALL
Atari, Inc.
$26.95/$20.00-23.00
★★★★
You're at the beach during sunset enjoying a game of *Volleyball* in Atari's cartridge of the same name. You play an opponent or the computer in a regulation game—you can pass between your two players, knock the ball cross-court, spike the ball over the net, and so on. Entertaining graphics and realistic action make this sports game a winner.

COSMIC AVENGER
Coleco, Inc.
NA
★★★
In ColecoVision's answer to *Defender,* you pilot a Spaceship over enemy cities and beneath the ocean. Along the way, you must fire at—and drop bombs on—Flying Saucers, Tanks, Enemy Installations, and Missile Launchers. Despite *Cosmic Avenger*'s high-resolution graphics, it's nothing more than a dressed-up version of the same old shooting game.

LADY BUG
Coleco, Inc.
NA
★★★★
A cutesy *Pac-Man* variant, *Lady Bug* puts you in charge of, what else, a Lady Bug, crawling around a maze, eating dots while avoiding deadly Skulls and Insects. Revolving doors allow you to change the maze at will to thwart your pursuers. Excellent gameplay and graphics/musical effects make this maze game better than the home versions of *Pac-Man* currently available.

THRESHOLD
Tigervision, Inc.
$22.97/$19.00-22.00
★★★★
Finally, a bottom-shoot space game where you can move *vertically,* as well as horizontally! In *Threshold,* you blast away at 11 different waves of bizarre aliens descending upon you in irregular patterns. It's not an original idea, but the relative freedom of movement and firing, combined with brilliant graphics make this game special.

WARPLOCK
Data Age, Inc.
$31.95/NA
★★
A run-of-the-mill bottom-shoot space game, *Warplock* offers little in the way of originality. Invaders travel down the screen in groups of three. You can either dodge them or shoot them for points. If you are hit once, either by an alien or its Lasers, the game is over. Game play and graphics are weak; other games have done much more with this concept.

DONKEY KONG
Coleco, Inc.
NA
★★★★★
You're Mario—the plucky carpenter who must save the girl from the clutches of *Donkey Kong*—in this stunning version of the arcade classic. Mario encounters three separate screens of hazards—Ramps, Rivets, and Elevators—in one of the best home-video games available today. The game-play and graphics are wonderful. *Donkey Kong* is included with the ColecoVision master unit.

VENTURE
Coleco, Inc.
NA
★★★★
You're Winky, the heroic adventurer, in this graphically entertaining arcade adaptation. You must claim the treasures that lie in three different levels of the Dungeon for points. Each prize is hidden in a different room and is guarded by a dangerous Monster. The game is always challenging, and the musical effects alone are worth the price of the cartridge.

VENTURE
Coleco, Inc.
$30.97/$28.00-31.00
★★
A below-average arcade adaptation, *Venture* takes you into two separate levels of Dungeons, where you enter rooms, kill adversaries with a bow and arrow, and recover Treasures for points. The cartridge's graphics are poor and the game is not as entertaining as either the arcade original or the version currently available for the ColecoVision system.

YARS' REVENGE
Atari, Inc.
$31.95/$24.00-27.00
★★★
Mutant outer-space houseflies are the heroes of this Atari original. You must break through a shield and kill the evil Quotile with your Zorlon Cannon, all the while avoiding Destroyer Missiles and killer Swirls. *Yars' Revenge* is colorful and easy to play; it should have great appeal among small children. Adults, however, may find gameplay a bit too repetitive.



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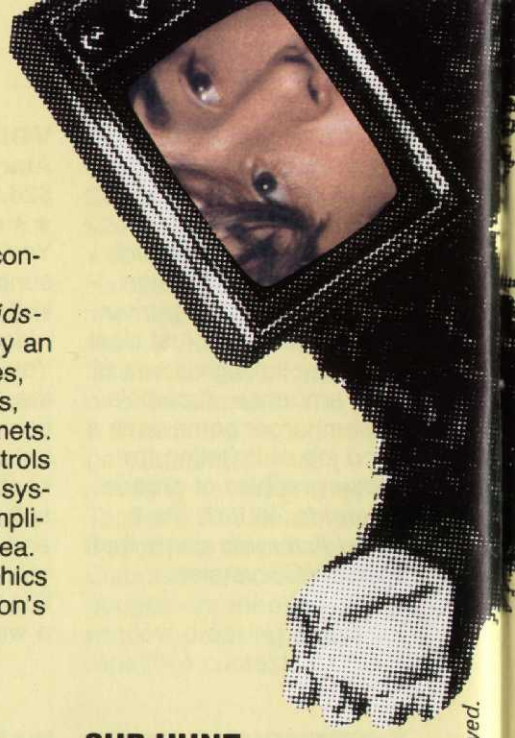
GAMES FOR INTELLIVISION



B-17 BOMBER
Mattel, Inc.
NA/$40.00-43.00
★★★★/+
It's 1943 and you're on a bombing mission deep inside Europe in *B-17 Bomber* — a fast-moving game that effectively utilizes Mattel's voice synthesizer. The computer verbally warns you of enemy attack and congratulates you on a direct hit. Its sophisticated play is reminiscent of *Star Raiders*. Attractive graphics add to the fun.

LOCK 'N CHASE
Mattel, Inc.
NA/$30.00-33.00
★★★
Lock 'n Chase is a *Pac-Man* clone in which you control a bank robber moving through a maze, picking up coins and other treasures. Three policemen chase you, but you can divert them by locking gates behind you. The graphics are nice, but Mattel's "action disc" makes it difficult to maneuver your man through the maze. A joystick would give you better cornering.

SPACE HAWK
Mattel, Inc.
NA/$30.00-33.00
★★
In *Space Hawk,* you control a Hunter drifting through space, *Asteroids*-style. You must destroy an assortment of creatures, including Space Hawks, Gas Bubbles, and Comets. The game's many controls and elaborate scoring system unnecessarily complicate a simple game idea. What's more, the graphics are not up to Intellivision's usual high standards.

DONKEY KONG
Coleco, Inc.
$36.97/$35.00-38.00
★
Coleco's Intellivision *Donkey Kong* isn't a much better arcade adaptation than is its VCS version. The graphics, game-play, and sound effects are weak; they pale in comparison to Coleco's own ColecoVision version. There are only two game screens, and it's annoyingly hard to make Mario jump Barrels and Fireballs. This game is *Donkey Kong* in name only.

NIGHT STALKER
Mattel, Inc.
$36.97/$30.00-35.00
★★★
Intellivision's answer to *Berzerk* takes place at night in a maze of hedges. You control a man trying to escape from the maze, while shooting Bats, Spiders, and Robots with a Laser Gun. When one Gun runs out of ammo, you must pick up another or you're doomed. *Night Stalker* is a challenging, graphically entertaining encounter. Hope you're not afraid of the dark.

SPACE SPARTANS
Mattel, Inc.
NA/$40.00-43.00
★★★★/+
Space Spartans is an exciting *Star Raiders* copy with a difference: electronic voices. The game makes good use of Mattel's voice module. Male, female, and robot voices advise you of the status of your ship's functions. It's a nifty twist on a common game theme, but may not be nifty enough to warrant the expense ($70-$80) of the voice unit.

SUB HUNT
Mattel, Inc.
NA/$30.00-33.00
★★
Intricate graphics add little to the relatively unexciting game-play of *Sub Hunt,* a naval battle game of limited appeal. You're in charge of a fleet of submarines, controlling each one individually. When you have the enemy in your sights, you can blast him out of the water. The many controls and functions are this game's only redeeming feature.

FROG BOG
Mattel, Inc.
NA/$20.00-23.00
★★★
Frog Bog is one of the cutest games ever developed. Like a wicked witch, it turns you into a frog. You and your opponent (or the computer) leap into the air to catch flies for points. The graphics are terrific—the game features both daytime and nighttime swamp scenes. Although it's certainly a kid's game, adults are sure to get a chuckle out of it.

TRON DEADLY DISCS
Mattel, Inc.
NA
★★
Loosely based on the popular movie, *Tron Deadly Discs* puts you in the midst of a life-or-death Frisbee game. You flip killer Discs at computer Warriors, and vice versa. Occasionally, a giant Recognizer will appear, and go for your throat. Uninspired graphics and sluggish controller action hamper what could have been a better game.

STAR STRIKE
Mattel, Inc.
NA/$30.00-33.00
★★
Stunning to look at, yet boring to play, *Star Strike* has you zapping aliens in an effort to save the planet. This weak excuse for a battle takes place in a graphically wonderful launch trench. There's not a lot of game here: if you get blasted or do not eliminate your enemies by the time the Earth is overhead, the game is over. You'll find yourself losing on purpose, just to see the Earth get destroyed.

UTOPIA
Mattel, Inc.
NA/$30.00-35.00
★★★★
Ever wonder what it's like to rule a country? In *Utopia,* you and your opponent (or the computer) each provide for the inhabitants of an island kingdom. You build factories, plant crops, defend your island, and so forth. You must also contend with merciless Pirates, as well as storms and hurricanes. A good strategy game for players of all ages.

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GAMES FOR ODYSSEY2

CONQUEST OF THE WORLD
N.A.P. Co.
$49.95/$41.00-46.00
★★★★★
A variant of the popular board game *Risk*, *Conquest* puts you in the midst of a worldwide power struggle that reflects current economic conditions. Battles take place on your TV screen, while strategic maneuvers take place on a beautiful game board. This fascinating war game successfully combines both board and video action.

INVADERS FROM HYPERSPACE
N.A.P. Co.
$22.95/$18.00-20.00
★★
In this dull space battle game, you and your opponent must protect 10 onscreen "Planets" from alien attack. The first player to shoot 10 invaders wins. Predictable game-play and boring graphics dominate *Invaders from Hyperspace;* it is certainly nothing to get "hyper" about.

MONKEYSHINES
N.A.P. Co.
$32.95/$26.00-29.00
★★★
Monkeyshines is an amusing game of "video tag," played between humans and apes in a series of maze-like Monkey Bars. Your goal is to tag as many Monkeys as possible without being tagged by a red Monkey yourself. The cartridge's graphics and game-play are fairly basic, but the game's many variations should keep it interesting for a while.

QUEST FOR THE RINGS
N.A.P. Co.
$49.95/$41.00-46.00
★★★★★
Quest for the Rings mixes the action of a video maze game with the strategies of a complex board game. Two players work as a team to recover the 10 Rings of Power that are hidden in four separate rooms. Richly packaged and featuring surprisingly good graphics, this game is well worth its steep price.

FREEDOM FIGHTERS
N.A.P. Co.
$32.95/$26.00-29.00
★★★★
In this exciting *Defender* variant, you control a Starship, destroying enemy Warships and Drone Mines, while rescuing human captives from Confinement Crystals. The controller action is superb—both joysticks are used throughout the game to pilot your craft. *Freedom Fighters'* blistering action more than makes up for its barely average graphic presentation.

K.C.'S KRAZY CHASE
N.A.P. Co.
$34.95/$28.00-31.00
★★★★
In this pleasant sequel to *K.C. Munchkin*, K.C. makes his way through a maze, eating away at a moving Dratapillar centipede, while being pursued by colorful Drats. If you own an Odyssey2 voice module, you'll hear K.C. cry "Oh no!" when the game is over, but little else. *K.C.'s Krazy Chase* is lots of fun, with or without the extra expense of the voice unit.

PICK AXE PETE
N.A.P. Co.
$32.95/$26.00-29.00
★★★
Pick Axe Pete is a challenging *Donkey Kong* variant in which you must guide Pete through 10 different levels of the Misty Mountain Mine, searching for gold. Along the way he must climb disappearing Ladders, enter revolving Doors, and smash huge gold Boulders for points before they smash him first. Bare graphics hamper an otherwise entertaining game.

UFO
N.A.P. Co.
$32.95/$26.00-29.00
★★★
Lackluster graphics hamper *UFO*, Odyssey2's otherwise well-done version of *Asteroids*. You're in charge of a Battle Cruiser, blasting your way through a force of both passive and aggressive UFOs. The game's quick firing action allows you to quickly spray Laser fire in all directions in an emergency. It's an entertaining space game, despite the bland graphics.

GREAT WALL ST. FORTUNE HUNT
N.A.P. Co.
$49.95/$41.00-46.00
★★★★★
A truly original board/video game, *Fortune Hunt* gives you $100,000 to invest in a computerized financial world. Your TV acts as both a ticker tape and news service, flashing bulletins that affect the prices of the game's stocks and commodities. A must for amateur—and professional—financiers.

KEYBOARD CREATIONS
N.A.P. Co.
$22.95/$18.00-22.00
★
Beware, this is not a game! *Keyboard Creations* allows you to print colorful messages on your TV screen, but that's it! It features an onscreen digital clock that must be reset each time the cartridge is plugged in. The manufacturer says the cartridge can be used to print and display business messages, but a Magic Marker is cheaper and probably just as effective.



HANDS-ON COLECOVISION

by Danny Goodman

ColecoVision is finally here, bringing high-quality video games into your home at an affordable price (under $200). I've been playing ColecoVision for some time now with the first few cartridges available from the manufacturer: *Donkey Kong, Venture,* and *Cosmic Avenger.* As you can see from even this short list of cartridges, ColecoVision, like Atari, is jumping heavily into the home/arcade game market. Future home adaptations of arcade games for ColecoVision include *Zaxxon, Turbo,* and *Lady Bug,* to name a few.

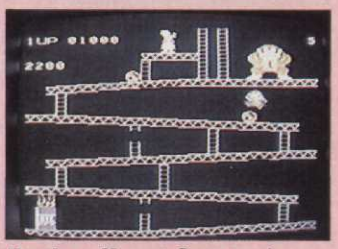
The ColecoVision console is simple and compact. Hand controllers nestle into the console's top, with ample storage room for their coiled cords. (These cords, incidentally, extend further than Intellivision's do.) The top-mounted cartridge slot has a spring-loaded trap door to keep dust out of the connector when no cartridge is in play. Power supply heat is kept away from the main unit by means of a rather large power converter that plugs into the wall outlet. In fact, this converter is so big that it may cover up the second socket, depending on how your outlet is arranged.

ColecoVision struts its magical stuff once the cartridge is loaded into the unit. A full-color title screen for that game cartridge appears; letters and colors are crisp and finely detailed. After 15 seconds a game menu appears that allows you to select the number of players and skill level for the game. Selection is accomplished by pressing one digit from the controller's keypad. Then the game begins.

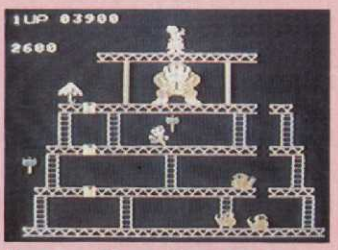
The *Donkey Kong* game (supplied with the unit) begins with the Ramps board, presented in wonderful color and clarity. Virtually everything you liked about the arcade original is right here. The details of Mario's coveralls and mustache show clearly. The girl and Kong are at the top of the girders, and Kong starts rolling barrels (which he appears to grab from off-screen) down at you immediately.

Success on the first board brings you directly to the Rivets board (there's no intermission featuring Kong grabbing the girl and climbing, as in the arcade game). Here, as you'd expect, Fireballs chase Mario as he tries to kick out the Rivets while picking up his girlfriend's scattered belongings for bonus points.

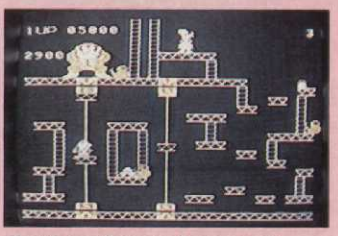
Then, onto the Elevators screen, a home video wonder to behold. Besides the intricate Elevator movement and Fireballs (no Springese from Kong here), you can clearly see the little puffs of dust when Mario jumps from ledge to ledge. Marvelous! The sequence then goes back to Rivets and Elevators before returning to Ramps at Level Two.



Donkey Kong: Screen 1



Donkey Kong: Screen 2



Donkey Kong: Screen 3



Venture



Cosmic Avenger

There were some flaws in our cartridge that you may want to watch out for (though they may be cleared up in later versions); the most grievous of them can be found in two-player games. When two players are going at it, if one player progresses to Level Two, the other player must contend with the same increased degree of difficulty (e.g., four Fireballs instead of three in the Rivets screen). Another flaw is that the bonus countdown timer at the top of the screen begins to tick before you are able to move Mario. This delay may cost you 200 to 300 points per board.

Another *Donkey Kong* quirk occurs in the Rivets screen. Here you can collect the bonus for the girl's hat (on the second floor) by jumping directly beneath it (on the first floor).

I commend Coleco for including their best cartridge (to date) in their master unit package. (Other manufacturers tend to pack the least-exciting games with their units.) *Donkey Kong* is tricky in parts and takes a lot of practice to perfect, especially those jumps in the Elevators screen.

Venture and *Cosmic Avenger* are just as interesting, both from the audio/visual and game-play point of view. In *Venture* you control "Winky," a heroic happy-face armed with a bow and arrow. Winky must descend into level after

level of dungeons, enter guarded chambers, avoid and/or destroy monsters, and recover treasures for points. *Cosmic Avenger* is a *Defender*-type shoot-'em-up game in which you pilot a spaceship over landscapes and under oceans. Along the way you torpedo tanks and flying saucers and bomb enemy missile installations. Both of these games are faithful home versions of their arcade counterparts.

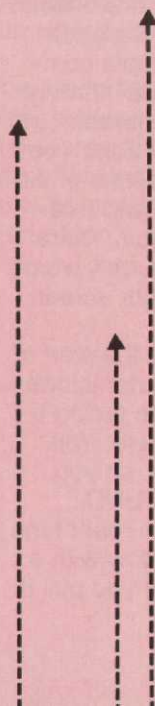
Now for a few words about the ColecoVision controllers. First, the controller may be too wide for smaller hands. In *Cosmic Avenger* the left- and right-hand fire buttons often must be pressed simultaneously, and I got cramps in my controller-holding (left) hand until I got used to it.

To my taste, the joystick could be a little taller, thereby providing a better grip. And in *Venture*, when I'm close to death and most panic-stricken, it's tough to aim Winky's bow-and-arrow on a quick diagonal.

On the positive side, the current ColecoVision controller features a 12-button keypad. Future cartridges will include keyboard overlays similar to Intellivision's. The controller's grid will help you locate the right buttons to press by feel, instead of by sight alone. This way, your eyes can be glued to the screen during the action. (By the way, ColecoVision cartridges are designed with a handy overlay storage space. Somebody was really thinking on that one!)

If you're looking for strategies on playing these games, forget ColecoVision's instruction books. Rather than get into too much detail—which would surely add several pages to each booklet—the company encourages you to experiment and explore. Granted, exploration is a fun part of these games, but more rudimentary advice—such as how to successfully get Mario onto an Elevator—would bring you to the exploration stage much sooner.

As yet there is no mention of a ColecoVision club. That's bound to change. From what I've seen in the way of outstanding graphics and game play, ColecoVision will surely find a large and dedicated following.



10 TOP SOFTWARE GAMES FOR THE NEW YEAR

It's time once again to march boldly out onto that treacherous limb of video-game opinion and recommend software. In this case, I am choosing the ten indispensable cartridges for an Atari VCS system. In alphabetical order, they are:

Asteroids (Atari)
Admitting to another VCS owner that your library lacks this classic is like saying that your house doesn't have indoor plumbing.

Circus Atari (Atari)
It's like *Breakout.* Clowns pop balloons while springing off a teeter-totter. This "old chestnut" is still an amusing and challenging game.

Demon Attack (Imagic)
This is the most inviting, colorful derivation of *Space Invaders* available so far for the VCS.

Dodge 'Em (Atari)
An exciting maze game in a car-eat-dot world. Your enemy is a hazardous automobile. Avoid head-on collisions!

Fireball (Arcadia)
Another good *Breakout*-type game. (See the Arcadia article on page 48.)

Kaboom! (Activision)
A mad bomber drops lighted bombs from above; your job is to catch them from below with one of your three water buckets. A gold-plated classic.

Missile Command (Atari)
Even with its VCS limitations, this is a very good replica of the successful arcade game.

Pitfall (Activision)
Exquisite graphics in an involved adventure-type scenario. (See the *Pitfall* strategy article on page 18.)

Stampede (Activision)
Activision's designers have managed to turn *Space Invaders'* movement on its side, dress everyone up in wild west or animal costumes, and replace the laser cannon with a less violent lasso.

Super Challenge Baseball (Mattel M-Network)
Here you get much the same degree of control over pitching, fielding, and hitting as in Mattel's Intellivision baseball cartridge. The detailed graphics are also similar.

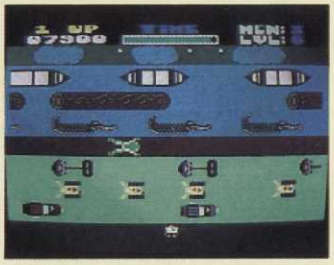
COMPUTER '83

by David & Sandy Small

Well, here it is, the new year. We're only in the third year of this decade, and the choices within the software market are more difficult than ever. There are an incredible amount of programs on the market, usually sold at fairly stiff prices. It is very easy to buy a game for $40 that you'll play once, and then file away forever. We've done this far too many times, and have a notebook full of games we never play anymore.

One way to avoid this problem is to play a game at the store before you buy it; they have demo copies for just this reason. Unfortunately, this doesn't always work. A game can look like a real "grabber" in the store, yet its appeal can wear out quickly once you bring it home and play with it. Sometimes there is just no substitute for solid experience, so we would like to give you invaluable help. We'll recommend some games that are definitely winners. These are games we've played 'til dawn, games whose disks we've worn out by overuse. These are the disks we keep in our desktop disk box and use a lot, as compared to the disks we file away in the "GAMES" notebook/graveyard. The games listed here have been extensively playtested and have held up over time. In short, they're classics.

So, on to our most heavily played, and most recommended, games.



1. *Preppie!*, by Adventure International; available for the Atari 400/800. *Preppie!* is one of the classic games available for the Atari system. It's right up there with *Star Raiders* and *Centipede* in terms of sheer addictive power, yet it has something else, too —an aura perhaps. Just as *Star Raiders* makes you feel like you're really commanding an interstellar fighter, *Preppie!* makes you feel like you're *really* an, umm... Preppie!

That's right, a Preppie. With alligator shirts, expensive cars, girlfriends named "Muffy," and mothers called "Mummy." Get the idea? (If not, see the November *JoyStik* for our review of the game).

The game is laid out much like *Frogger,* the popular arcade game. You must maneuver your Preppie across a golf green, avoiding golf carts, lawnmowers, and so on. Then, you reach a lake, which must be crossed by jumping from boat-to-boat, alligator-to-log, and so forth. The jumping is controlled with a joystick.

The colors are terrific. The computer displays about 28 colors onscreen simultaneously, all of them bright and cheery. In addition, the music is so good it's not to be believed. What's more, the animation is also well done. The little prepster, wearing an alligator T-shirt, runs across the screen. The movement of his hands, feet, and ankles is all detailed.

The last thing we'll say about *Preppie!* is that it's incredibly addictive. Our parents visited us for a week and were hooked! It persuaded them to buy an Atari, a decision they'd been putting off for some time.

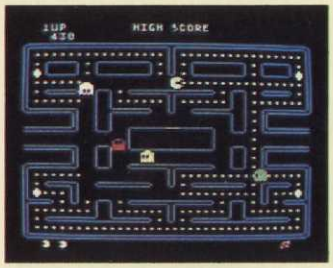
2. *Zork*, by Infocom; available for most systems. As far as we're concerned, *Zork* is *the* ultimate adventure game. It has moved from the M.I.T. PDP computers, where it ate up some 300K of storage, onto an Apple/Atari, where it is (somehow) crammed into only 92K of memory.

This game is terrific. We've been playing it for months and haven't beaten it, but we're still having fun. Adventure games are ones in which you explore a territory through simple commands, and "see" through the eyes of a character in that territory. In *Zork,* you get text descriptions of the area, dangers, and treasures around you. There are no graphics, only words displayed on your screen.

For instance, at the start of *Zork,* the computer informs you that you are facing a boarded-up house. You can't get inside, so you type: "GO AROUND HOUSE." At the rear of the house is a window with a loose board, so you pull it off and discover that the window opens, and so on. You soon end up in a cavern fighting a Troll with the Elven Sword you found in a trophy case in the house!

The area to be mapped is huge. We've got several pieces of paper with intricate mapping lines indicating hundreds of game locations. Of course, there are treasures to be collected in the game that are equally exotic — ivory torches, platinum bars, jewels, and other goodies. This game has an extra attraction: humor. For instance, the dungeon was apparently constructed by one "Lord Dimwit Flathead, the Excessive".

If you're into adventures (and you're burned out on simpler ones), then *Zork* is the challenge you've been looking for. It includes several technical improvements over other available adventure games. The first of them is that you talk to the computer in complete sentences (none of this two-word limit, as in the *Scott Adams* series or *The Wizard and the Princess).* The computer will figure out exactly what you want it to do. For instance, "PICK UP THE SWORD AND KILL THE TROLL" is perfectly legal — and quite useful — unless, of course you've already been beheaded.



3. *Pac-Man*, by Atari; available for the Atari, 400/800 (also available for most systems under different names—e.g., *Snack Attack, Gobbler,* etc.) For the rare individual who hasn't played *Pac-Man,* in this game you're chasing and being chased through a maze by four ghosts. Your Pac-Man is controlled by a joystick. In the maze are a number of dots which must be eaten to complete a screen. There are also four energizer dots which, when eaten, enable the pursued (you) to become the pursuer and eat the ghosts. Alas, this effect is only temporary. The game picks up speed through increasing rounds until it resembles an experiment in which mice are run through a maze after being force fed forty cups of coffee. Eventually your reflexes give out, but until then it is a lot of fun.

The *Pac-Man* game available for the Atari 400/800 is very good, and much like the original. On the Apple, *Tax-Man* and *Snack Attack* are the two to look for, along with a game called *Snoggle.*



4. *Centipede*, by Atari; available for the Atari 400/800 (also available on Atari as *Bug Attack, Myriapedes,* and *Millipedes.* Apple versions exist under the same names). Here's another winner. This game is virtually a look-alike of the extremely popular coin-op game, with the same handling, goodies, and dangers. In this game you're trying to stave off death by shooting a Centipede headed your way from the top of the screen. The Centipede periodically reverses direction when it hits a Mushroom; if you shoot a segment of the Centipede, it breaks into lots of smaller Centipedes. Spiders periodically jump down at you. When a Scorpion hits a Mushroom, the Centipede falls directly down at you.

The Atari versions are superb, and are near-clones of the arcade original. The Apple versions are not quite as good, but are still a lot of fun.

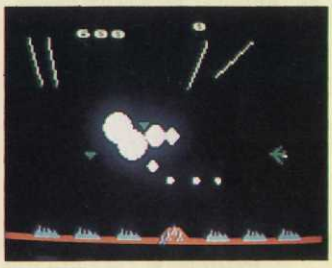


5. *Star Raiders*, by Atari; available for the Atari 400/800 (very similar versions exist for the TRS-80 Color Computer, and for the Apple system). Look, this game has been out since 1978, and it is still the classic space game. That's five years, roughly an "Ice-Age" in terms of computer evolution. We know of no other game that even comes close to *Star Raider's* sheer class and staying power.

Essentially this is a super souped-up version of the *Star Trek* game found on nearly every computer in existence today. Instead of a trivial "top down" map, you look out the front window of an interstellar fighter, viewing stars, planets, and enemies as they whiz by. The jump to hyperspace has to be seen to be believed—remember the Millennium Falcon going into hyperdrive in the movie "Star Wars"? That's the idea. Simply amazing stuff. The ship is controlled with a joystick that smoothly maneuvers the craft; photon torpedoes are fired with the joystick button. Alien craft zoom in and shoot at you regularly.

The overall effect is stunning. *Star Raiders* is probably responsible for selling more Atari computers than anything else. It has the best animation, best sound, best special effects, best EVERYTHING of any space game we know. There is a persistent rumor that parts of the Atari system were designed with *Star Raiders* in mind; we believe it could very well be true.

Perhaps the most amazing thing about this game is that it uses only 8K of memory! If you haven't played *Star Raiders,* you haven't seen what your Atari can do. Try it out.



6. *Missile Command*, by Atari; available for the Atari 400/800 (also available for the Apple as *Missile Defense*). *Missile Command* was Atari's second big coin-op hit, after *Asteroids.* In this game, you use a joystick (or paddles, in one Apple version) to fire anti-ballistic missiles at incoming enemy missiles.

The theme is certainly up to date, given the current debate on nuclear arms. We wonder if the game could have had anything to do with sparking the discussion. Anyway, the versions we've seen are all good and feature bright, rumbling explosions, missiles falling at ever-increasing speeds, and cities destroyed in a blaze of graphics.

7. ***Scott Adams Adventures***, by Adventure International; available for most systems. As with *Zork,* these are text-only adventures (some graphics are added to the Apple versions, however). The entry of command is a bit cruder—you are allowed only two words (e.g., "GO NORTH," "GET KNIFE," "DRINK WATER"). The descriptions, however, are quite colorful, and give a wonderful mental image.

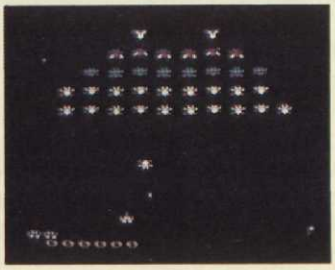
"Adventureland" will take you a while to solve, but you'll have a fine time doing it. Watch out for the dragon! "Mission Impossible" is a real mind-bender, but not as difficult. As for "The Count"... well, we still haven't finished that one. We suspect we need to light the cigarettes near the coffin, but aren't sure. Can you help us?

8. ***The Wizard and the Princess***, by On-Line Systems; available for Apple and the Atari 400/800. This is an adventure game that features graphics—the computer draws a colorful screen image for each episode of the adventure. The pictures are really kind of fun and add pizzazz to the game.

The Wizard and The Princess is a highly addictive, fun game. We spent one Christmas holiday finding a solution to it, and we loved it. This is one of the better adventures on the market, and the graphics are intriguing and enjoyable.

The object of this game is to rescue a Princess who has been stolen by an Evil Wizard. You are offered a reward of half the kingdom should you do so. In order to accomplish this you must cross oceans and chasms and perform other feats.

Again, as in most adventure games, the computer will accept only two-word commands and give text descriptions of your current location.



9. ***Galactic Chase***, by Spectrum Computers; available for Apple and the Atari 400/800 (also available as *Galaxian* for Atari and other versions for Apple). This one was designed by Tony Weber, up in Michigan. Tony's a pleasant, easygoing guy and a very sharp Atari coder. *Galactic Chase* is a clone of the arcade game *Galaxian,* and is super. It features good sound, very good animation, and good game-play. It keeps you coming back to try your hand at it again and again.

In *Galactic Chase* you're pitted "*Space Invaders*-style" against a group of aliens that not only hover above you, but also dive down and attack you, dropping bombs along the way. It's a lot tougher, and much more addictive, than *Space Invaders.* The game also speeds up and gets tougher after you destroy a number of aliens. The player mans a gunner at the bottom of the screen, who can be moved horizontally with a joystick or paddle. Of course, pressing the button will fire a missile at the oncoming aliens.

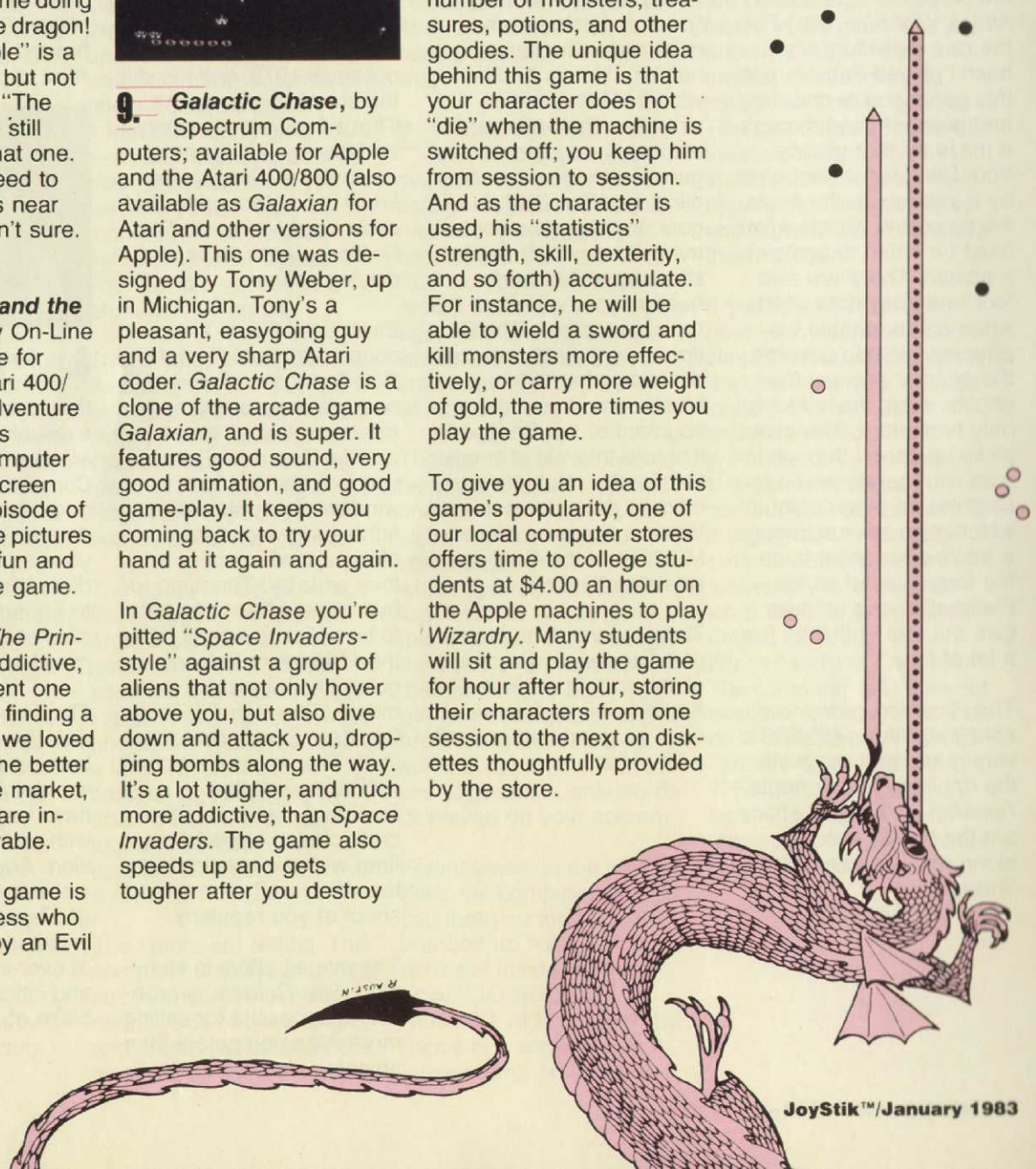
10. ***Wizardry***, by Sir-Tech Software; available for Apple and various UCSD Pascal machines. *Wizardry* is one of the great software success stories of the past few years. In this text-only adventure game, you are in control of a character exploring a dungeon. In this dungeon, there are a number of monsters, treasures, potions, and other goodies. The unique idea behind this game is that your character does not "die" when the machine is switched off; you keep him from session to session. And as the character is used, his "statistics" (strength, skill, dexterity, and so forth) accumulate. For instance, he will be able to wield a sword and kill monsters more effectively, or carry more weight of gold, the more times you play the game.

To give you an idea of this game's popularity, one of our local computer stores offers time to college students at $4.00 an hour on the Apple machines to play *Wizardry.* Many students will sit and play the game for hour after hour, storing their characters from one session to the next on diskettes thoughtfully provided by the store.

Well, there you have it, our pick of the crop for 1983.

As you begin the new year, we hope you spend many happy hours collecting golf balls, meeting the Cyclops, munching energizer dots, dodging spiders, blasting Zylon fighters, stopping nuclear wars, siccing bees on a dragon, figuring out the psychology of an ice wolf, rescuing a Princess, eliminating a wave of alien raiders, or wandering through a dungeon.

Looks like it's going to be a busy year, doesn't it?



THE SWORD OF RAM

BY HILARY BARTA



MEGABYTE VIDEO: *A SATIRICAL LOOK*

by Jim Gorzelany



Boy, are we *red-faced!* After having felt confident that this issue contained product information from every single home-video game manufacturer in the Free World, what do you suppose happened to us? That's right—we learned of yet another new cartridge company just before press time: MegaByte Video, a division of Porker Bros. Games; an AFAB (Anything for a Buck) Industries Company.

Even though they admit to being a late entry in the video marketplace, MegaByte still expects to make its name synonymous with "Making A Fortune In Home Video" by year's end. (At the Harvard School of Business, they refer to this savvy marketing technique as "Grabbing A Piece Of The Pie Before It's All Gone.")

If nothing else, it looks like the company is structured for success. MegaByte's lavishly produced, 800-page press kit names a multitude of Vice-Presidents, Junior Vice-Presidents, Assistants to the Junior Vice-Presidents, Account Executives, Market Researchers, Advertising Specialists, Public Relations Writers, Salespeople, and a huge Clerical Pool.

Oh yes, the company *does* employ a Game Designer, though the press kit does not mention him by name. All we could learn was that he's a sophomore at Cal-Polyester High School in Sunnyvalley, California, where he designs MegaByte's games (based on exhaustive market research) in his afternoon Study Hall.

So then, to make this issue complete, here's a look at MegaByte Video's new line of "socially relevant" home-video games:

With *Bill Blass' Designer Pong,* MegaByte has created the first video game that just gushes with a sense of affluence and upscale, high-tech living. The graphics are tastefully austere (a ball and two flat paddles), the colors are richly selected in trendy black and white, and—most importantly—the Bill Blass signature is prominently displayed on the screen for all to see. Retail price: If you have to ask, you can't afford it.

To quote from MegaByte's press kit about its next cartridge: "In *Valley Game,* y'know, you and your opponent, like, control these two really grody-looking Southern California teenage girls on a *totally awesome* shopping spree down Rodeo Drive. Like, see if you can *handle* getting your toenails done at the Galleria for bonus points. You don't want to look like such a beastie, y'know." Gag me with a joystick, man!

Cashing in on the popular "celebrity diet" fad, MegaByte offers fitness fans the fun and excitement of *Jane Fonda's Incredible Work-*

AT A CORPORATE CARTRIDGE COMPANY

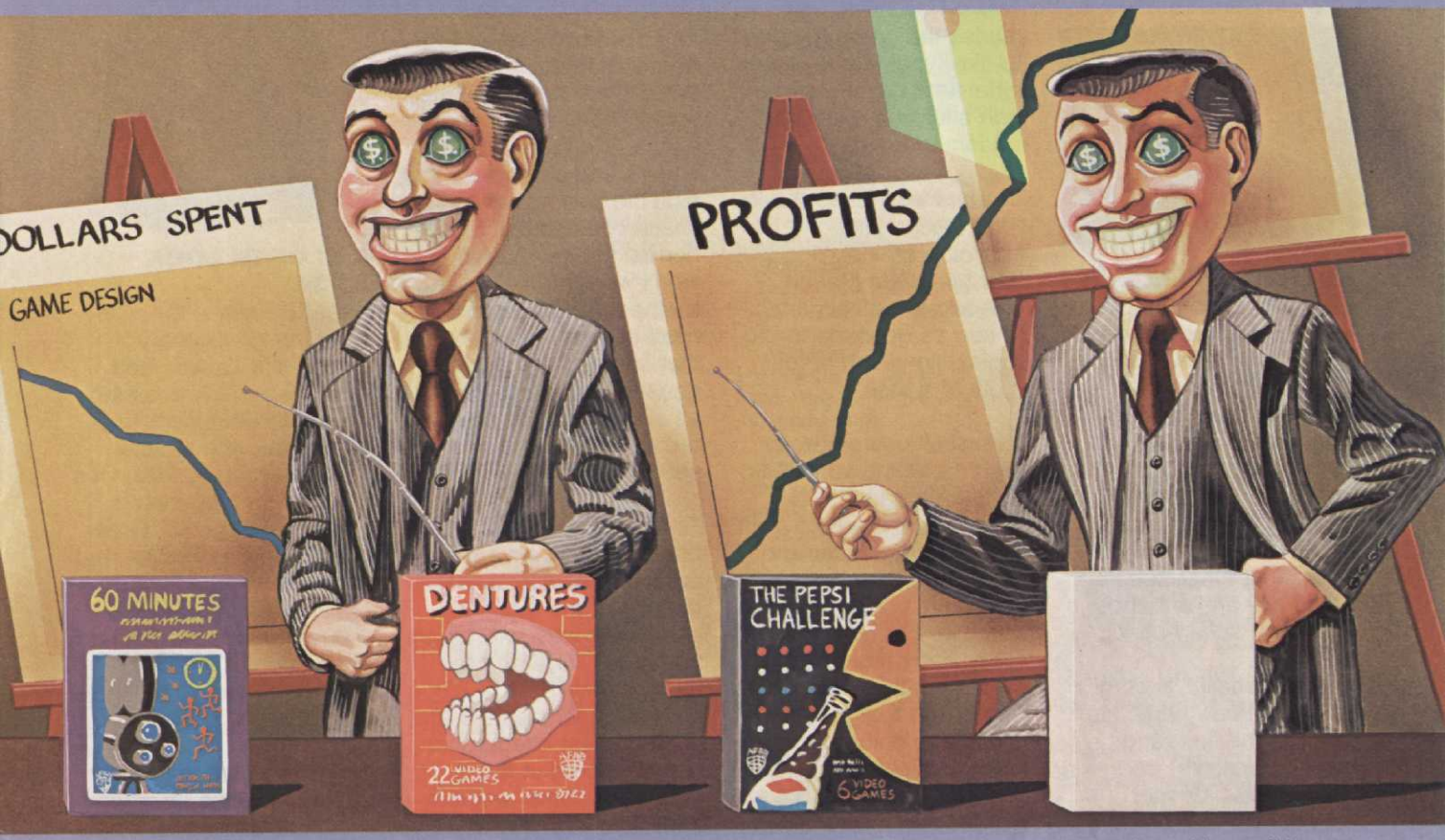


Illustration by Jerry Tiritilli

out Adventure. You're the famous actress in a race against the clock to shed ugly fat. You must lose 20 pounds within the game's 15-minute time limit or face depression and a shattered career. You jog through over 200 screens, doing Aerobic Exercises, taking Saunas, and eating Cottage Cheese for negative-calorie points. Watch out for those hazards, though—if you so much as *touch* a Banana Split, Chocolate Bar, or Pizza, you'll bloat right out of the game!

Elvis: The Video Game puts you in control of "The King," traveling through a maze of hedges on his way "home" to Graceland. To speed his journey and to collect points, Elvis must eat the brightly colored "Power Pills" in his path. Watch out—he's being pursued by four ghostly "Elvis Impersonators." If one of them catches Elvis, he's "All Shook Up," and the game is over. Fortunately, if Elvis eats one of the four "Gold Records" in each of the maze's corners, the Impersonators will turn into "Gold Cadillacs" that Elvis can grab for extra points. A must for all who fondly cherish in their hearts the loving memory of the "King of Rock and Roll."

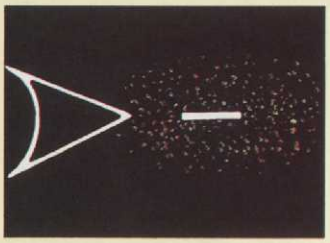
Instead of producing a game based on a famous movie, like all the other manufacturers, MegaByte has created a cartridge based on one of the most popular TV shows of all time. In *60 Minutes,* you're Mike Wallace, chasing News Sources through the maze-like corridors of a large industrial chemical firm. Catch a Source and you're rewarded with a "Scoop"; get caught by one of the Corporate Lawyers chasing you, and you're sued right out of the game.

Dentures is the first video game created to tap the heretofore ignored senior citizens' market. You control a set of False Teeth, walking slowly through a maze, eating glops of Mashed Potatoes. Nothing chases you, but if you accidentally eat an Apple or Ear of Corn, you'll fall off of the screen, ending the game. If, however, you reach the tube of Poly-Grip when it appears at the center of the maze, you can eat these obstacles with confidence for a few seconds.

In *The Pepsi Challenge,* you're giving a cola taste-test in a large shopping mall. The computer/subject picks a cola; you have three seconds in which to switch the bottles so it looks like he picked Pepsi. If you fail to do so more than five-out-of-ten times, you're fired and the game is over. A real test of eye-hand coordination, this game is a good introduction to the world of advertising for younger players.

Finally, borrowing from a popular series of books, MegaByte presents *The Nothing Game.* It features no graphics, no scoring, and no violence—a real family game. Retail price: $69.95.

TECHNOCRACY



ASTEROIDS FACELIFT

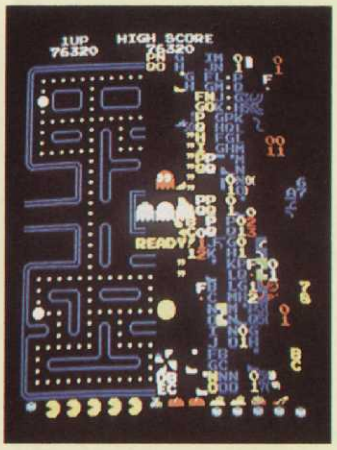
What would you say if we told you that someone with a laser and a few extra parts might have developed an improved version of *Asteroids*? No, it isn't *Asteroids DeLuxe* or *Space Duel.* It's what Avery Petty, of Santa Clara, CA, describes as a "facelift"—what most other people would call an "enhancement" or "speed-up kit."

Petty's "facelift" is composed of three parts. He refers to the first (and most impressive) part as a "Spectrastar Monitor Shield." This is a new piece of plexiglass over the game's screen that causes a rainbow-like spectrum to appear around every shot fired from the spaceship. Petty uses a laser (yes, he *owns* a laser) to cut microscopic, criss-cross etchings in the plexiglass that create a prism effect around pinpoint light—thus the rainbow bullets. Petty told *JoyStik,* "It took me about a year to develop the Spectrastar for *Asteroids*—I'm really into it."

The second part of Petty's kit actually changes the pace of the game. Petty feels it's for the better. "The original *Asteroids* quickly speeds up with each screen you clear, and then stays constant," he said. Petty installs a circuit board in the machine, which causes the game to speed up slowly, ultimately move faster than the original, and then alternate speeds at random intervals.

Finally, Petty alters the firing mechanism of *Asteroids* by installing a "Machine Gun Module." This allows unlimited fire power, as opposed to the original limitation of four shots at a time.

Technically, Avery Petty might be doing something illegal. Although he has submitted his work to Atari, Inc. (the manufacturer of *Asteroids),* they have not granted him a license. But whatever the outcome, Avery Petty has at least come up with an interesting idea—one that just might add a little color to a game that you might have already forgotten.



SPLIT-SCREEN PAC-MAN

A year ago, surviving through the 9th-key board was the goal of top-notch *Pac-Man* players around the country. But now, marathon *Pac-Man* players armed with reliable 9th-key patterns have reached a new impasse—the 256th board, or 244th key. At that point, the right half of the screen becomes covered with a colorful collage of figures and characters that hide the dots and distort the shape of the maze. Since a normal 9th-key pattern won't work for that board, it's the end of the game for most players. We've heard that some players have generated patterns that get all of the invisible dots, but we'll believe it when we see it.

To have problems after 256 boards may seem arbitrary, but it is a simple consequence of the fact that computers work with binary numbers. The *Pac-Man* microprocessor (a Z-80) is an 8-bit machine, and 255 is the largest integer that can be stored in 8 bits. When the game program adds 1 to 255, it gets a value of 0 (the 8-bit register has "rolled over"), and the game thinks it is on the "0" board. This is the cause of the problems described above, and it's a common phenomenon in video games.

Because long *Pac-Man* games are bound by this problem, we think that players should concentrate on scoring as many points as possible before reaching the 256th board. The maximum possible score after 255 boards is 3,326,600 points. Another possible approach would be to see how quickly you can reach the 256th board. In this category, a minimum limit would be hard to determine, although we know that it can be done in under four hours.



A CLOSER LOOK AT 3-D

Sega/Gremlin—the manufacturer of visionary games like *Zaxxon* and *Turbo*—has taken a step toward three-dimensional game-play with its new game, *Subroc-3D.* It's not a big step. In fact, there's nothing going on in three-dimensional technique that hasn't been tried in movies or cameras. But *Subroc 3-D* represents the first real application of standard three-dimensional technology to video games.

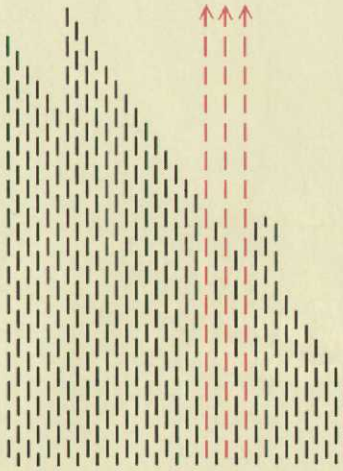
As you can tell from the photograph, the sit-down model of *Subroc-3D* offers an enclosed setting similar to the sit-down versions of *Turbo* and *Omega Race.* The big difference concerns the way you view the playing screen. You actually look into a viewfinder. Images are generated at the speed of thirty images per second, alternating between your right and left eye. This gives the effect of three dimensional game-play.

Subroc-3D is no doubt a primitive attempt at simulating a natural, three-dimensional world. But it's an attempt nonetheless. Real three-dimensional game-play won't be successfully integrated into the arcades until more work is done in the manipulation of holographs and lasers.

JOYSTIK CHARTS

THE MOST DIFFICULT GAMES

We recently asked three veteran coin-op game players which games they found most challenging. Some of their choices were surprising.



TAD PERRY
Seattle, WA

A versatile and competitive player, Tad participates in numerous contests. Last year alone, he won over $5,000 in cash and prizes.

1. *Pac-Man*
"A perfect game through the 9th key—with every possible bonus—is my goal."
2. *Defender*
"The hardest game to completely master, as opposed to just playing indefinitely."
3. *Ms. Pac-Man*
"It's all skill, with very little luck or repetition involved."
4. *Donkey Kong*
"You can never be completely sure about what's going to happen."
5. *Robotron*
"Difficulty 10 and an extra man every 50,000 points is hard."

LEO DANIELS
Wrightsville Beach, NC

Holds the current records on *Gorf, Reactor, Robotron,* and *Tempest.*

1. *Robotron*
"You need complete independence of the two joysticks, so that you can fire in one direction while moving in another."
2. *Stargate*
"The controls are hard to master, and it has even more aliens than *Defender.*"
3. *Tempest*
"It took me six months of playing every day just to break a million."
4. *Tutankham*
"The scoring is very slow, so it takes a long time to get a reasonable score. Also, you have to memorize the four maze configurations to know where to go."
5. *Reactor*
"Using the control ball is hard to get used to. Bouncing off the enemies can throw you off."

ERIC GINNER
Mountain View, CA

Eric is featured in *The Winning Edge* on page 38.

1. *Robotron*
"Can be really easy or really hard, depending on the setting. The opponents can be overwhelming, but there's usually a way out."
2. *Ms. Pac-Man*
"You need to know lots of tricks. The screens with *Pac-Man* 9th-key speeds are the hardest."
3. *Tempest*
"I've spent more money to get good at *Tempest* than any other game. It's frustrating, because it shows you the next level before you can get through it."
4. *Space Duel*
"It gets very fast on late waves of a single-ship game, where you bounce around like a bumper car."
5. *Defender*
"It's tough to get coordinated with the controls, and there are a lot of things to worry about."

Once again, we present the *JoyStik* list of top scorers and scores for the games *you* play, as compiled by Walter Day of the Twin Galaxies Entertainment Centers. Submit new records to him at: 226 E. Main St., Ottumwa, IA, 52501.

Game	Player	High Score	Date	Arcade Location
Alpine Ski	Warren Conner	389,000	9/3	Aladdin's Castle: W. Burlington, IA
Amidar	Joe Barrette	18,210,100	8/13	Pot of Gold: Kenosha, WI
Carnival	Michael Buck	282,370	8/4	The Fun Machine: Casselberry, FL
Centipede	Mike Baird	12,311,126	8/30	Phil's Family Center: Lakewood, CA
Defender	Jeff Manfroi	52,151,450	9/4	Mr. Video: Concord, CA
Dig Dug	Antonio Medina	6,198,490	8/13	Cosmic Palace: Napa, CA
Donkey Kong	Steve Sanders	3,151,800	9/11	U-Totem: Kansas City, MO
Donkey Kong, Jr.	Tony Henson	220,900	9/26	Zap Video Arcade: Ames, IA
Eyes	Roogie Elliot	6,792,480	8/2	Fun Center: Lake Odessa, MI
Galaga	Richard Rook	9,093,570	9/7	Electromania: Santee, CA
Gorf	Leo Daniels	565,100	8/4	Light Years Amusement: Wrightsville Beach, NC
Jack the Giant Killer	Mike Klaeger	9,401,050	10/2	Play It Again Inc.: New Lenox, IL
Kangaroo	Phillipe Blanchard	267,600	9/13	Nathan's Game Room: Miami Beach, FL
Ms. Pac-Man	Michael Lepkosky	286,410	9/18	Family Fun & Games: Houston, TX
Omega Race	Jim Banbury	2,056,100	9/14	Amusement Crossing: Charlotte, NC
Pac-Man	James Anderson	6,248,810	7/25	Funway Freeway: Houston, TX
Rally X	Bob Risley	135,790	2/23	Fun Spot: Weirs Beach, NH
Reactor	Leo Daniels	295,400	8/6	Light Years Amusement: Wrightsville Beach, NC
Robotron	Leo Daniels	169,595,225	9/21	Light Years Amusement: Wrightsville Beach, NC
Stargate	Ben Gold	40,001,150	4/25	Pro Video Game Center: Dallas, TX
Tempest	Leo Daniels	3,086,355	8/2	Light Years Amusement: Wrightsville Beach, NC
Tron	Sterling Ouchi	3,195,329	8/30	Phil's Family Center: Lakewood, CA
Turbo	Paul Huggins	90,667	6/14	I'm Game: Chatsworth, GA
Tutankham	Paul Barrette	168,000	9/17	Pot of Gold: Kenosha, WI
Zaxxon	Robert Wykoff	1,793,500	8/17	Games Galore: Downey, CA

NEXT...


JoyStik Goes to the West Coast
Join JoyStik in its Pacific tour. Our next issue will be packed with inside info from Atari, Sega/Gremlin, Activision and more. With a special report: The Arcades of Seattle.
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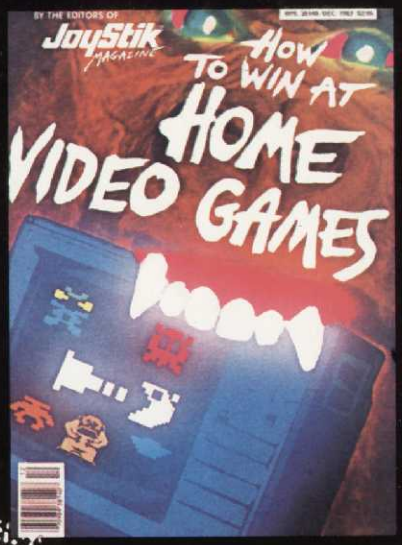

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A Tribute to the Powers of the Imagination

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Chilling Science-Fiction by David Brin
Powerful Illustrations by *Blade Runner* Artist Syd Mead
The World According to Pitfall Harry
Authoritative Reports on Arcadia & ColecoVision
The Top Home-Computer Games
And More!

