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HOW TO WIN AT VIDEO GAMES

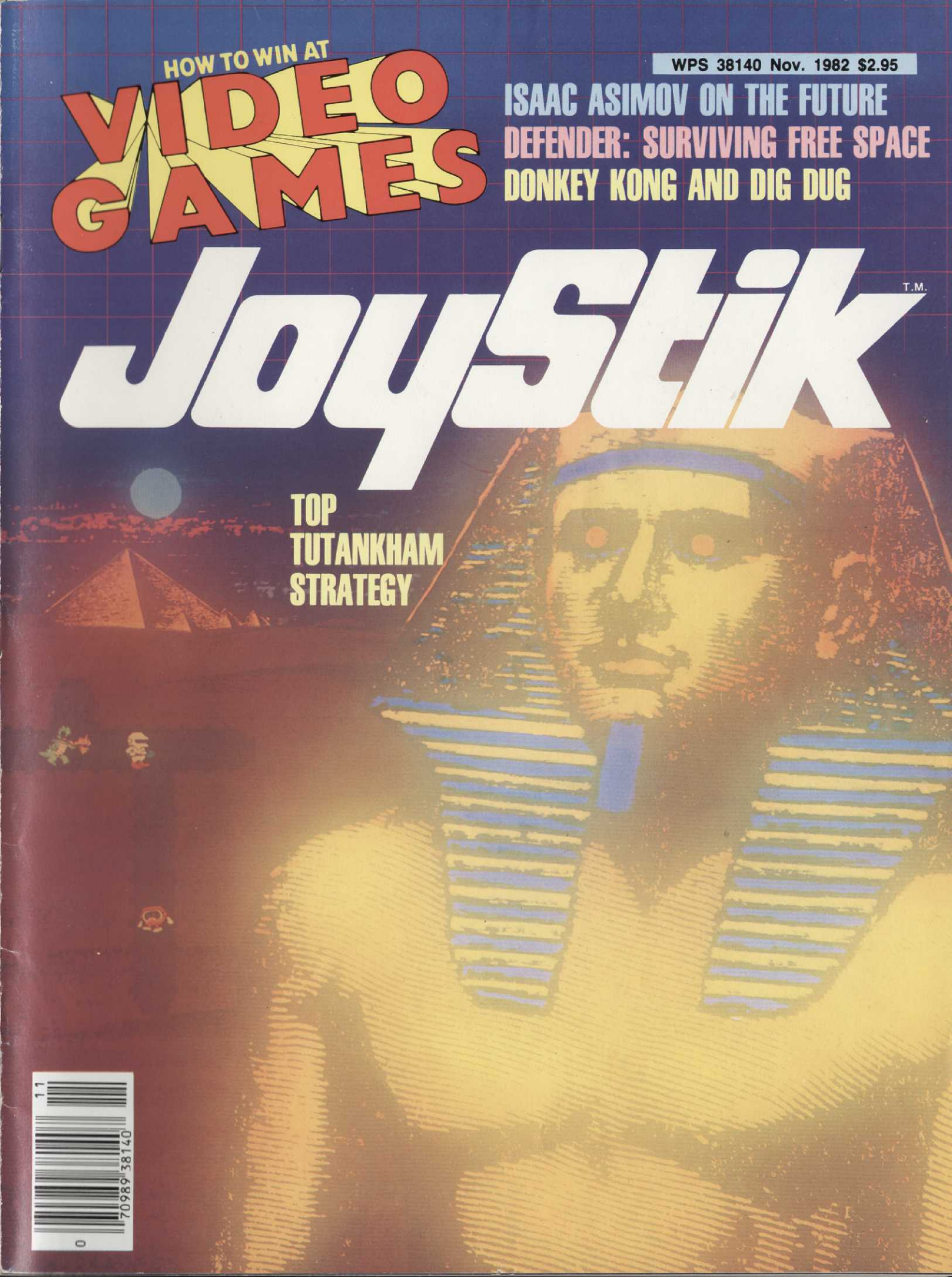
ISAAC ASIMOV ON THE FUTURE

DEFENDER: SURVIVING FREE SPACE

DONKEY KONG AND DIG DUG

JoyStik T.M.

TOP TUTANKHAM STRATEGY



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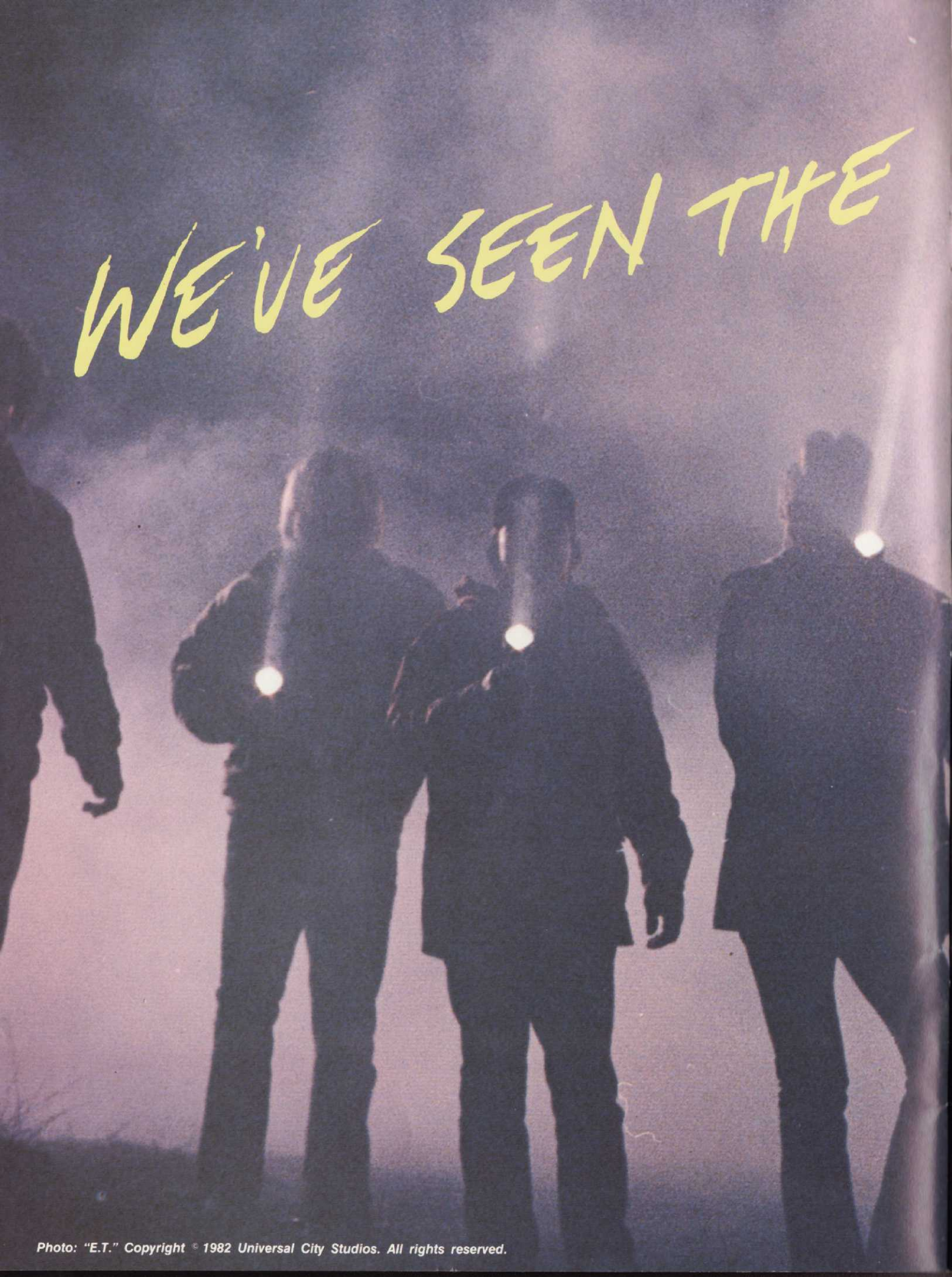
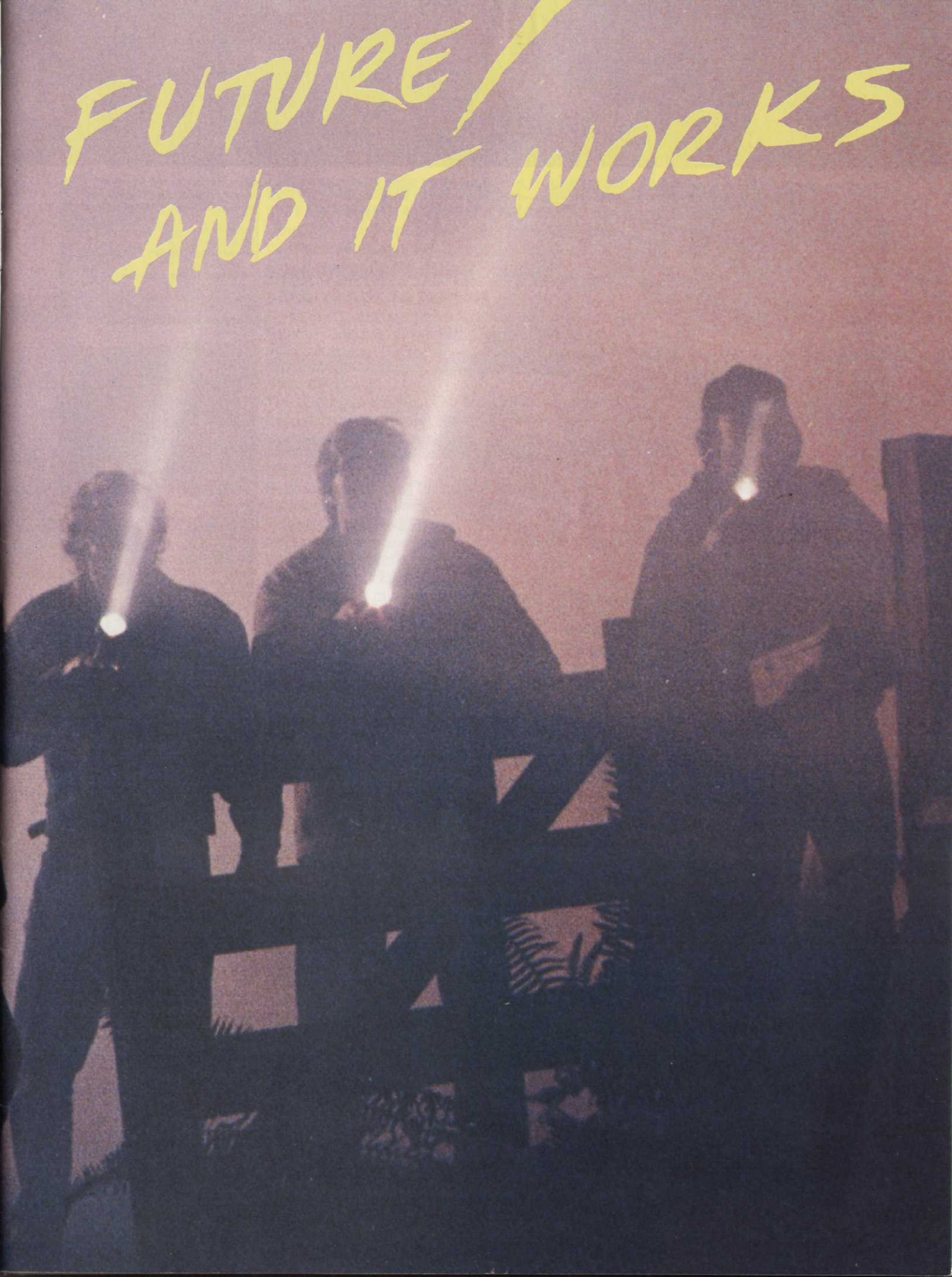


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FUTURE/
AND IT WORKS

MESSAGE

JoyStik™

Few moments appeal as strongly or satisfy as deeply as those moments on stage. And that stage, the big one—the world as stage—is making lots of room these days for the video-game athlete.

The Tron Contest in New York (p. 20) wasn't the first video-game contest, but it was the most impressive. Scores were accurately monitored, difficulty settings were standardized, and contestants were given adequate time to strut their stuff. The fact that the contest was held in Madison Square Garden—and that numerous celebrities attended—attests to the new power of the video-game pro.

All the recognition and hoopla is fun, no doubt, and fascinating. What's got to be stressed in all this celebrity madness, however—and stressed hard—is that every arcade, every drugstore, every minor establishment with a video game is a mini stage of its own. And that's the reason for this magazine.

JoyStik teaches the art of video-game success—for both stages, big and small. Our new strategies for Tutankham (p. 32) and Dig Dug (p. 48) are one major aspect of that teaching. But you need more than strategies to compete, to turn a good game into a great one. The *Innerview* with Tim Skelly (p. 6), for instance, and the study on computer graphics (p. 38) are designed to mesh the workings of your mind with the workings of the machine. They add one more fundamental aspect to your play.

We're in this together, you see. We're here to direct and develop your athletic skills. You're on stage, every day, and you're out there to perform. Every performer must know his or her lines, and must rely on a skilled director—a Hitchcock or a Spielberg—for guidance. You hold such a skilled director in your hands. And you couldn't have made a better choice.

Editor-in-Chief

JoyStik
How to Win at Video Games
November 1982, Volume 1, No. 2

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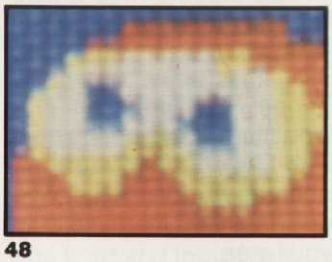
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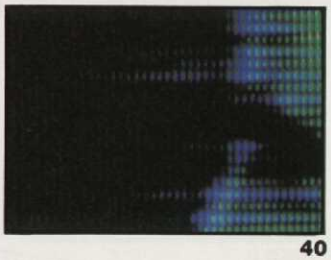
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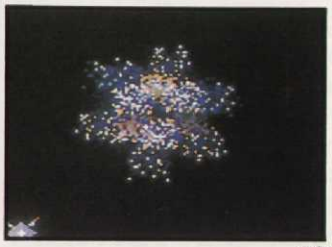
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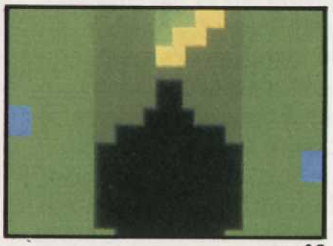
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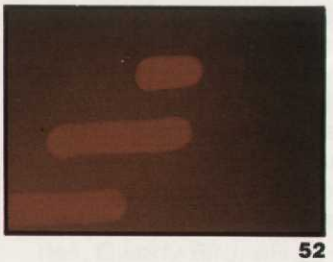
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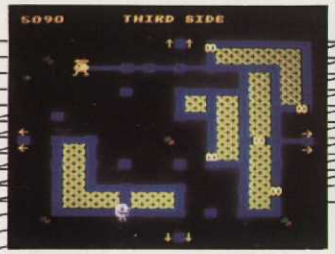

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FUTURE WAVES

by Scott Phillips



PEPPER II

ARCADE PEPPER

One of the cutest of the new "cutsey" games is *Pepper II,* by Exidy (manufacturers of *Venture* and *Mousetrap).* Based on the classic angel/devil theme, *Pepper II* seems to successfully blend *Pac-Man*-style maze/chase action with a *Qix*-type scoring system.

The main character, Pepper, waddles around four sides of a cube (four screens) dressed as an angel (complete with halo), leaving zipper-like tracks behind him. Once he's enclosed an area with these tracks, it is filled with a colorful pattern, and you are awarded points.

There are only two enemies to contend with in this joystick-controlled game. Roaming Eyes are just what they sound like. Avoid them to keep Pepper alive. The Whippersnapper is a fat, red smiley face that will "unzip" any of Pepper's incomplete tracks.

Enclosing an area that contains a Pitchfork (there are three or four of them per screen) temporarily transforms angelic Pepper into a devil. He can then capture the Roaming Eyes for points, although he must continue to avoid the Whippersnapper.


COLECO'S COLECOVISION

COLECO'S INTERFACE

Coleco Industries, Inc., best known for their table-top mini arcade games, recently joined the ranks of programmable home video games with their new system, ColecoVision. Unveiled at the June Consumer Electronics Show in Chicago, ColecoVision warrants a hard look by both first-time buyers and those wishing to upgrade their present system.

The graphics resolution of Coleco's new system is comparable to any system already on the market, and better than many. But its most inviting feature by far is a built-in expansion module interface — essentially a big hole in the front of the unit that provides add-on capabilities for plug-in expansion modules. There are currently only two modules available. Coleco, however, *promises* more of them in the future.

Expansion Module #1, when plugged into the interface, allows the ColecoVision to accept cartridges made for the Atari Video Computer System and the Sears Video Arcade — perhaps a forerunner to a universal cartridge system of the future.

Expansion Module #2 is actually a table-top console that turns ColecoVision into "the cockpit of a high-performance race car . . . ," complete with a large steering wheel and a foot-operated accelerator pedal.

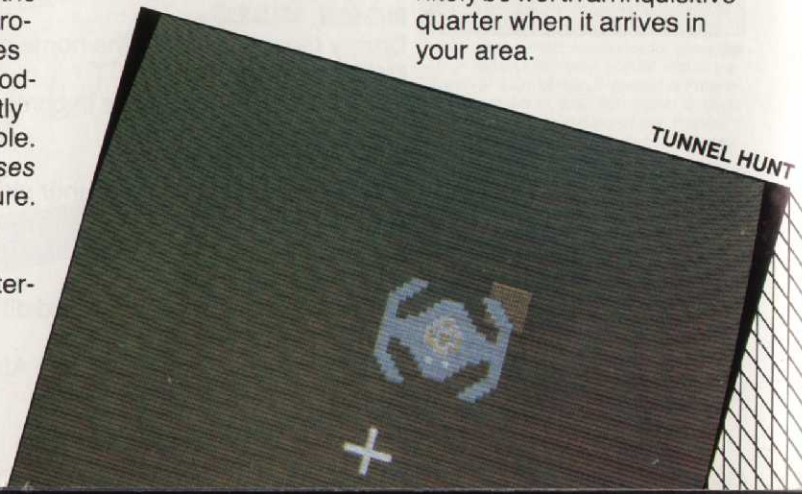
Coleco has also obtained licenses from arcade game manufacturers like Sega/Gremlin, Exidy, and Nintendo, and has been able to successfully reproduce cartridge versions of Donkey Kong (it comes with the system), Venture, Mouse Trap, Turbo, Zaxxon, Lady Bug, and more.

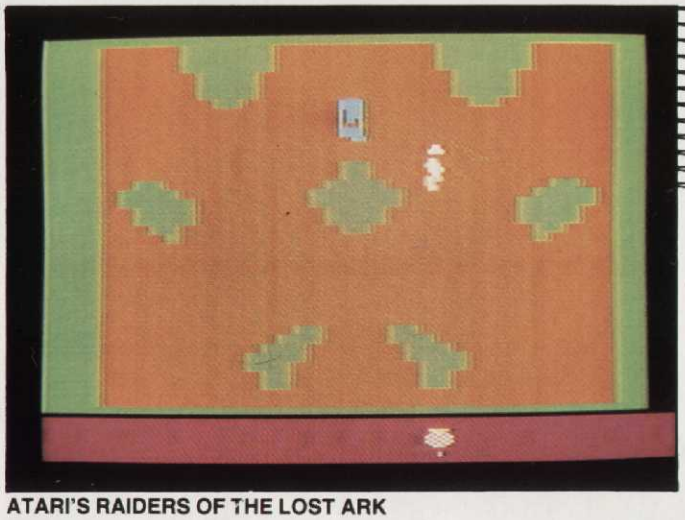
TUNNEL HUNT

Here's one to keep an eye out for. Licensed to Centuri, Inc. by Atari, Inc., *Tunnel Hunt* is very reminiscent of Star Wars' final scene — Luke Skywalker blazing through a narrow canyon while being attacked by Darth Vader's squadron of Tie Fighters. The sensation of "tunnel vision" is creatively enhanced by the wrap-around design of the cabinet — video blinders, so to speak.

The object of *Tunnel Hunt* is simple. Maneuver your craft through the tunnel and shoot as many enemy ships as possible without being zapped by their fire. In doing this, you must also monitor your laser temperature and your hull temperature — overheating either one is deadly. You can keep your cool by firing only when necessary and bouncing off walls to control your acceleration.

Tunnel Hunt probably won't turn out to be the next Pac-Man, but it will definitely be worth an inquisitive quarter when it arrives in your area.





ATARI'S RAIDERS OF THE LOST ARK



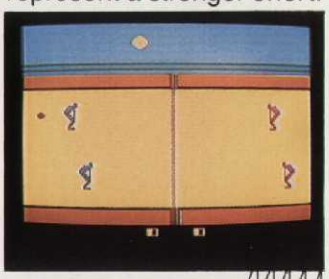
THE EPYX CARTRIDGE COLLECTION

NEW ATARI GAMES

Atari, Inc. plans to introduce 11 new cartridges in the months to come. These games will be available for both the standard VCS and new 5200. The most promising of their future games is the *SwordQuest* series — a four-part epic mystery that, believe it or not, may take a full year to unravel. Each of the four cartridges will utilize a game story book, specially created by DC Comics. The player must master all four carts in their proper order to ultimately solve the mystery of the "elemental world" — earth, fire, water, and air. The first game of the video quartet, *EarthWorld,* will be available in October. The second, *FireWorld,* will be available in November. The third and fourth cartridges in the series, tentatively titled *WaterWorld* and *AirWorld,* are scheduled to appear sometime in 1983. Each cartridge is priced at $37.95.

And in keeping with what seems to be a current trend in home video, Atari is creating a new movie game: *Raiders of the Lost Ark.* The roguish film hero, Indiana Jones, must journey through 13 different rooms (screens) while battling snakes, whips, pits, knives, etc., and collecting the equipment he needs to rescue the ark (whatever that might require). Available in December, *Raiders* will sell for $37.95.

Atari also plans to introduce revamped versions of their four most popular sports games. They claim the new cartridges are "more true to life than any similar game cartridge on the market" — that's stretching it a bit, but they're worth a look. The first of the series, *Baseball,* will appear in October — we hope it will represent a stronger effort.



ATARI'S VOLLEYBALL

Volleyball will follow in November. We played a prototype of this one, and although it offers the luxury of "setting up" your shots, the graphics are still less than exciting. The third and fourth games, *Football* and *Soccer,* will be available in December and early 1983, respectively. These cartridges will sell for $26.95 each.

Two more games that will appear in October and November are *Failsafe* (another tank war), and *Frog Pond* (a fly eating contest). They will sell for $26.95 each.

VIDEO CRYSTALS

We haven't played them ourselves, but we have received excellent reports on six new EPYX computer games designed specifically for the Atari 400/800. Graphically speaking, these cartridges are rumored to offer spectacular displays of both color and form, combined with out-of-the-ordinary game ideas.

Alien Garden, the first of the series — and the game we've heard so much about — takes place in a crystalline world. The player must determine which of the growing crystals are edible, which are poisonous, and which are explosive in order to eliminate them quickly. Look for it in September.

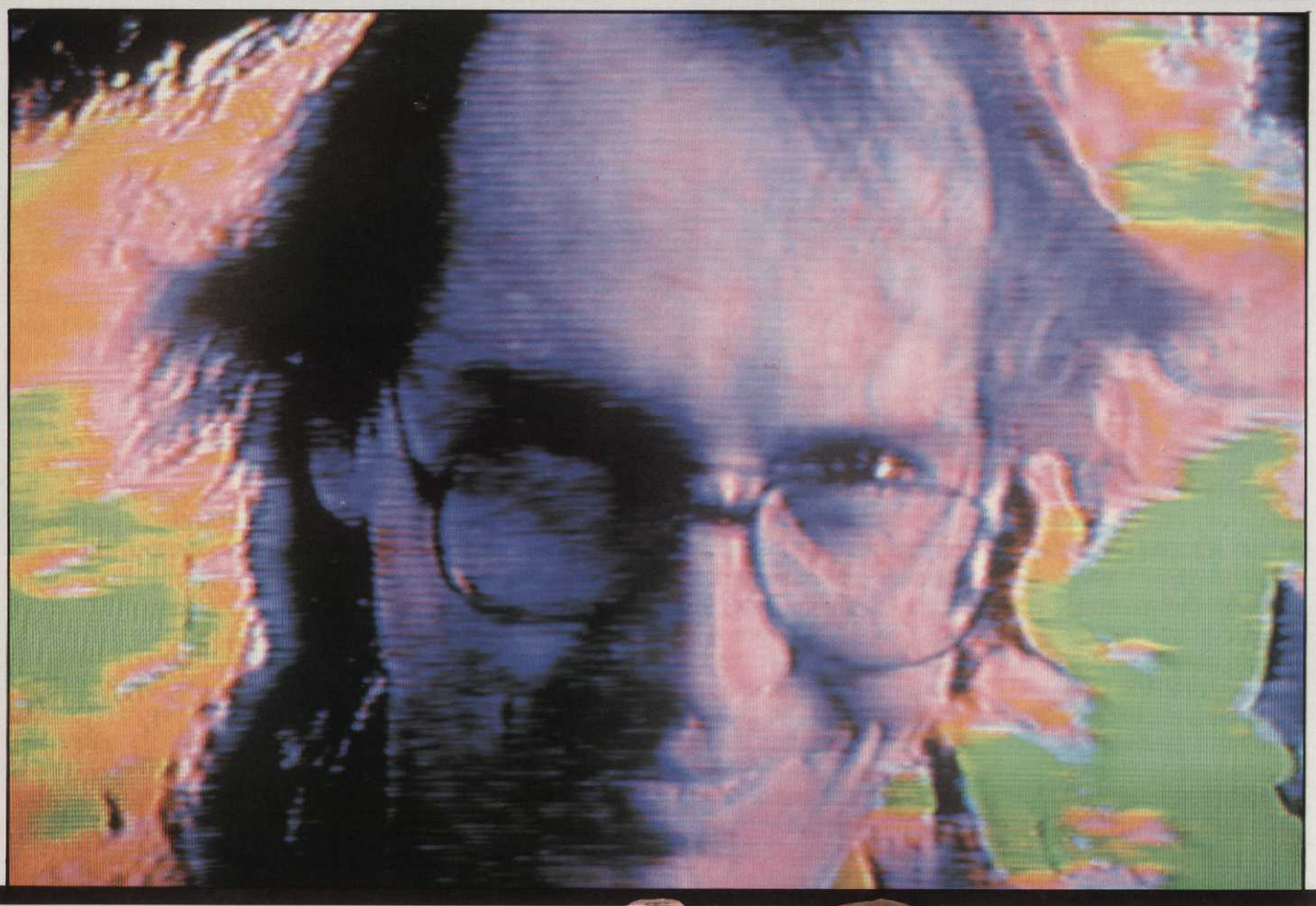
Plattermania (number two in the series) is a take-off on the old stage act of spinning plates, balanced on tall, skinny poles. The player has the option of maintaining three to 18 plates. Look for it in October.

Three more EPYX cartridges are due for release in November. *Soldiers of Sorcery* will offer multi-player capabilities, with a dungeons 'n dragons theme — warriors and wizards versus wolves, bats, dragons, etc. *Far Protector* will use shoot-em-up skills as a last-chance defense against nuclear attack. *Fishes* is said to offer the "pleasures and perils of oceanic life." Your school of fish will feed and grow if you can avoid sharks and other predatory fish.

The final game in the series, *Qwerty Bird,* will be one for computer minded kids. It's said to feature a letter dropping bird that teaches keyboard recognition.

All six games are joystick controlled, and will cost from $39.95 to $59.95 each.

INNERVIEW



Tim Skelly: a jazz musician in the rock and roll world of video games

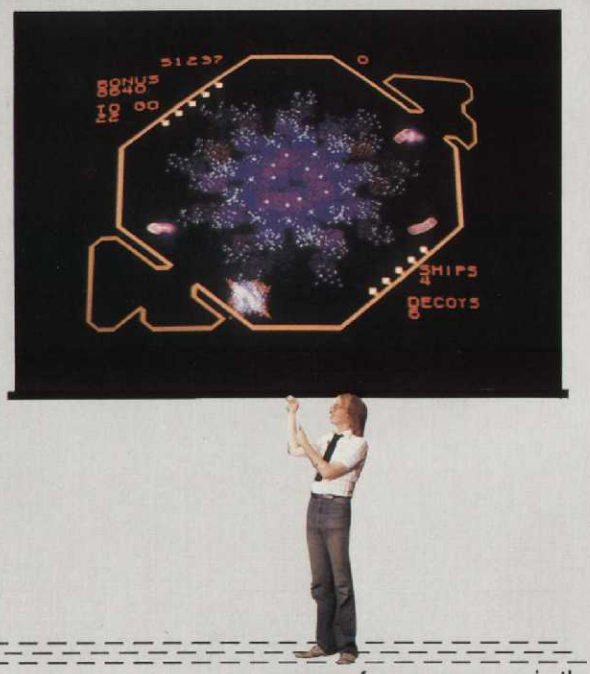
by Eric Zorn

The man, the wizard, the *artist* behind Reactor is Tim Skelly, one of the arcade game industry's legendary designers. A freelance genius, he's a hired gun in the war between the dozen companies now fighting for a share of the more than 20 billion quarters stuffed into video games each year. Have circuitry, will travel.

A good game designer is to an electronics company what a good quarterback is to a football team: Without him — no matter how clever the front-line programmers or how brilliant the teammates in graphics and sound — the game will go badly. It will not be, in Skelly's words, a "quarter sucker."



But good game designers do not usually get lots of publicity. Many of them are under long-term contract or obligation to specific companies, such as Williams Electronics or Atari, and the companies keep their designers under wraps fearing personnel raids and forms of industrial espionage.



Consequently, though the designers have become bright stars in the corporate sky, their salaries and profiles have remained rather low. Tim Skelly was one man who grew frustrated with the system — crummy royalties, long hours, and pay that didn't match his skill level — and set out on his own.

D. Gottlieb and Co., one of Chicago's giant pinball manufacturers, called Skelly in from Southern California to produce their first in-house video game from scratch. "They wanted someone with a proven track record," says Skelly proudly. "They knew I'd turn out a quality game on time."

Gottlieb, like many small companies, could not afford the hit-and-miss, monkeys-and-typewriters process employed by the very biggest companies. They could not hire a mass of programmers in the hopes that one of them would design a decent game. Gottlieb had one shot and they wanted it to count.

None of Skelly's previous games had been widely distributed — they included "Armor Attack," "Rip-off," "Tailgunner," and "Starcastle" — but most of them had made money, a rarity. Skelly, with characteristic frankness, describes himself as "the closest thing to a sure bet in the business."

In August of last year, under a $40,000 per-game contract, Skelly set to work full-time on "the game," whatever it was to be. He worked practically nonstop — sometimes all night — planning, rejecting, calculating, and drawing. It was three months before he ever so much as touched a silicon chip.

Visiting arcades and playing the games of other designers is part of Skelly's ongoing research (he is a lousy Defender player and only passable at Pac-Man), and in these visits he noticed that, in today's pantheon of popular video games, players generally shoot something, eat something, dig through something, or dodge something in order to score points. The idea for Reactor came about when Skelly saw there was no good game in which a player sees his own character as a projectile, ramming opponents into a wall in order to vanquish them.

The first prototype, "Ram It," was built.

"It didn't work. It played awfully," he remembers as he sits in a spare, cluttered office in Gottlieb's manufacturing plant in suburban Chicago. "You kept creaming yourself, but I was in love with the idea of a non-aggressive game where you just push opponents away instead of blasting them; something entirely novel."

He reworked the concept, down to the fine points, again and again.

"It's an excruciating process," he says. "It used to take me three to four months to do a game, and now it's up to nine months or more," he says. "They are getting more and more sophisticated, require incredibly complex programming, and it's harder than ever to think up original games."



The creative process demands all of Skelly's expertise as a graphic artist as well as his knowledge of the industry and of computer electronics. Unlike many other video game creators, Skelly is not a white-socks-and-loafers, slide-rule-in-the-shirt-pocket nerd who is getting revenge on the teenaged thugs who once brutalized him but now pay homage to his skills with every quarter slipped into the slot: He grew up obsessed with science fiction comic books and took a degree in radio/TV from Northwestern University. He hoped for a career as a serious video artist — museums and all — but ended up working as a cartoonist, cab driver, book illustrator, and sandwich maker.

He turned his back on a possible career in advertising graphic arts because he considered the field "insidious," and instead pursued an interest in computers. Now, ironically, he's one of the premier creators of what some people say is one of the insidious forces pulling society down the drain.

The first games he created were for a small computer business in Kansas City, where he had drifted after returning to his home town of Canton, Ohio, after graduation. He had just completed courses in programming at the University of Akron, and his first efforts were long-playing, contemplative excursions into home-computer fantasy, such as Dungeons and Dragons-type games. He worked at that trade from 1975 to 1978, the years when electronic arcade games were still in their infancy and simple, primitive games such as "Pong" and "Breakout" complemented a mighty line of pinball machines and foosball tables.

After Space Invaders and the subsequent rush of popularity for arcade video games, Skelly hired on with two California firms and produced his early games in two to three months each. The industry has matured along with Skelly, however, and as a bitter winter settled onto Chicago he was still hard at work at "Expander," which was the new name for "Ram It."

He was faced with escalating the challenge to make the game get harder as you go along, choosing the proper colors and animation techniques, figuring out a pre-game, action-packed instructional sequence, and overcoming the literally hundreds of other logistical obstacles to making the game play "as if it were alive."

Skelly, who wears a tie to work, chain smokes, and through all the pressure retains a cheerful, easygoing nature, claims there is much more to making video games than being a computer whiz: "Ideally, a designer should have a background in art, music, filmmaking, and magic," he says. "Programming is the least important end of it."

Once "Expander" was conceptually finished and a total prototype built — complete with a full range of hard-rock sound effects — Skelly and a technical crew under his direction played it, discussed pros and cons, added features, subtracted others, perfected their version of Atari's tracball control, and wondered if they had built themselves a quarter-sucker or not.

"The final stages are a very exciting time with a game," he says, chewing obsessively on red plastic coffee stirrers and arranging them in geometric patterns in front of him. "I feel an adversarial relationship with the kids — I shouldn't say 'kids,' make that 'people' — who are going to play the game. It's an intellectual challenge to tailor the game for them; to get their money; to beat them."

In March of this year, the game, by then dubbed "Reactor" owing to the gameboard's graphic resemblance to the inside of a dangerously expanding nuclear reactor, was test-marketed. It fizzled. Meltdown. Because the game violates some of the sacred arcade conventions, such as the one that says anything moving toward you kills You, and the one that says the more you hit your "fire" button the better you will do, it was not intuitively obvious to most people how to play.





Most wizards and aficionados tried the game once, got creamed, and walked away baffled. Those who caught on to the game's finer points seemed to be bored.

Back to the drawing board. Skelly programmed additional playing hints into the game, added a rapid-fire button, speeded up the action to make things more exciting, and otherwise juiced up Reactor while making it easier for novices to understand. These adjustments took him just one long night in the lab.

After his tinkering, the game tested somewhat better, but Gottlieb only shipped 1100 units when Reactor was officially released in May (compared to close to 100,000 units of Pac-Man released to date) and Skelly optimistically says it's "too soon to tell" if the game will become a fad or a fade.

"It could be a sleeper," he notes. "To have a winning game you need to attract a certain number of hardcore players who learn how to play well. Their success challenges others, who become familiar with some of the finer points themselves. It builds from there, and if we never reach that point, we wipe out."

Skelly shrugs. "Reactor may simply be too cerebral and cool. I'm a jazz musician in a rock and roll world is what it boils down to. This is a jazz game. It requires neat riffs and nice moves. You have to understand it. To win, you have to use brains instead of guns."

Skelly is something of a philosopher about video games, believing very strongly that they are positive influences on young Americans: "I put you into a light hypnotic, meditative trance, balancing out your aggression and anxiety. You forget about your problems. For three minutes, you're King of the World. If you do particularly well, you walk away feeling euphoric. Games are all part of the drive in human beings to alter the state of consciousness.

"I make drugs without the drugs."

He thinks games in the future will feature improved imagery, but he declines to speculate on the possibility of 3-D point-of-view games involving laser-disc technology. Such games, which would electronically simulate real-life images in a game situation, are reportedly in the works at all the major companies, but no one has quite perfected them yet.

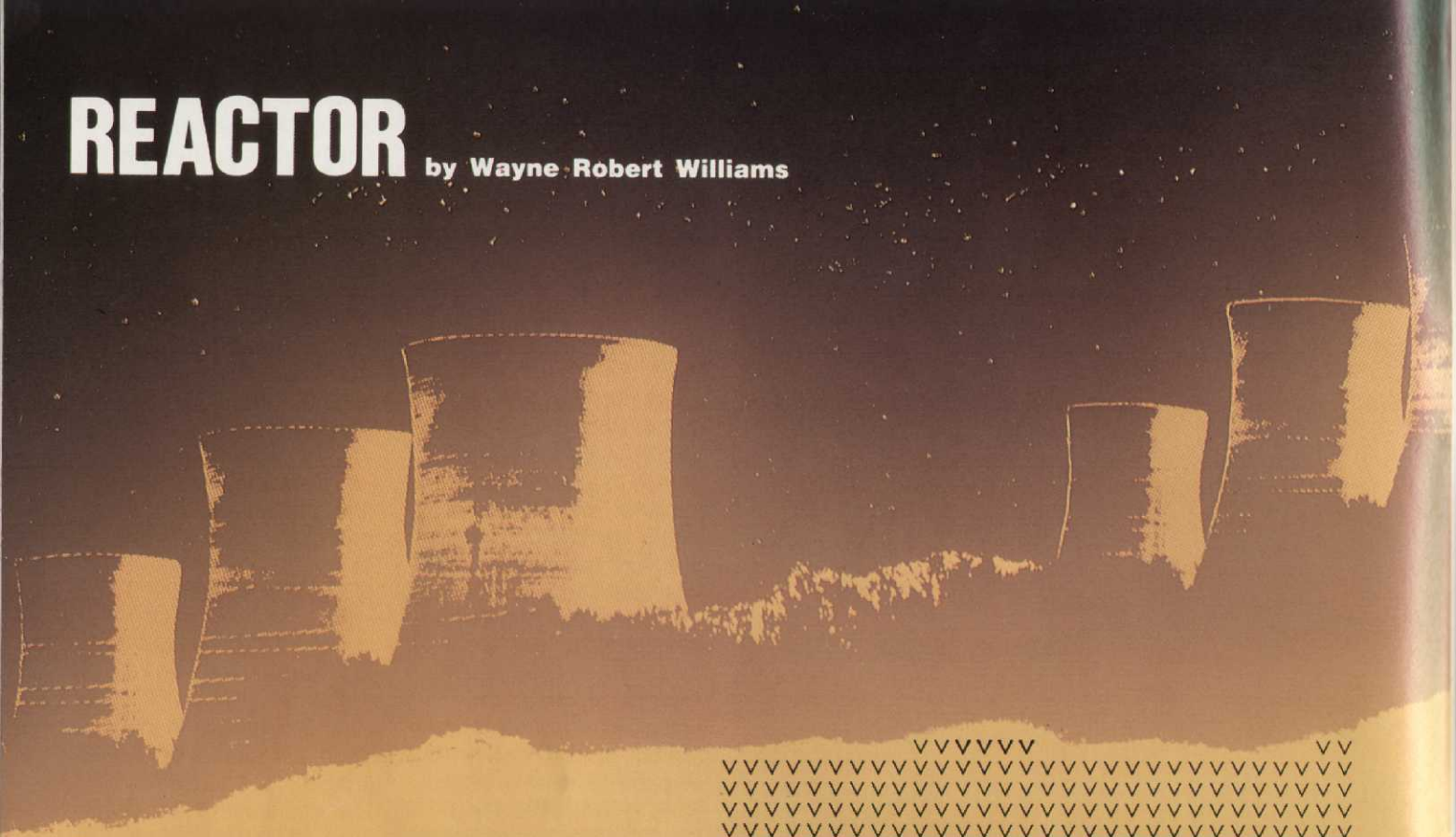
"Actually, my view of the future is pretty mundane," says Skelly. "I do see the games diversifying and getting more specialized. You'll probably see some intellectual, classical games, punk games, pop games . . . that sort of thing."

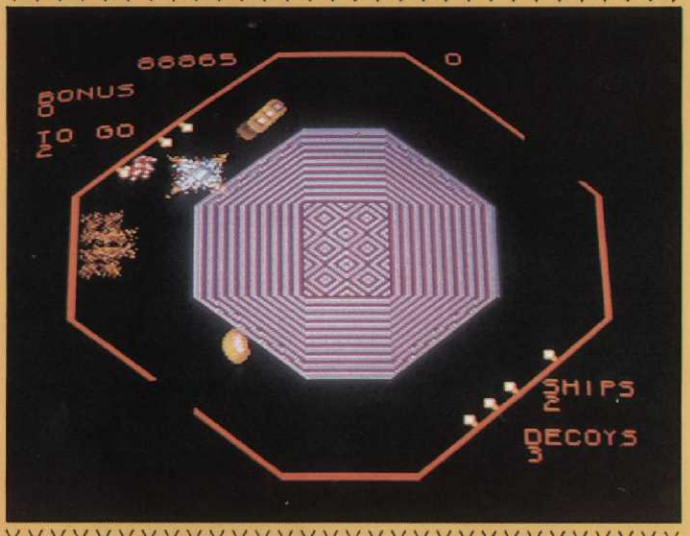
As for his own future, Skelly is hard at work on another potential quarter sucker, yet-unnamed, for D. Gottlieb and Co. For now, he's had enough of the pacifist, philosophical games that violate conventions and cause even hot-shot players to gnash their teeth in frustration.

"This one," he confides, "has a lot of shooting in it."

REACTOR

by Wayne Robert Williams





STRATEGY ONE

Reactor may just be too subtle a game to survive in the "play-me" world of video arcades. The most impressive visual display of the game — the Vortex — is not even seen until the ninth board. If the game featured the Vortex from the beginning, it would surely attract eager crowds of gamesters. And that crowd — playing again and again — would get deeper into the subtleties of concept and action, which are no doubt this game's best features.

Reactor is not a shoot-em-up, it's a push-around. Your enemies can be pushed into the kill-walls that surround the play area for points. But this should not be your primary goal. You should learn to deal effectively with control rods and the bounce chambers.

Enemies can be pushed against control rods. Although the enemies aren't destroyed, the elimination of the control rods gets you on your way to the next board. Enemies can also be decoyed into a bounce chamber. The walls of the bounce chambers, unlike the regular kill-walls, do not destroy enemies. You do earn points, however, with each enemy bounce.

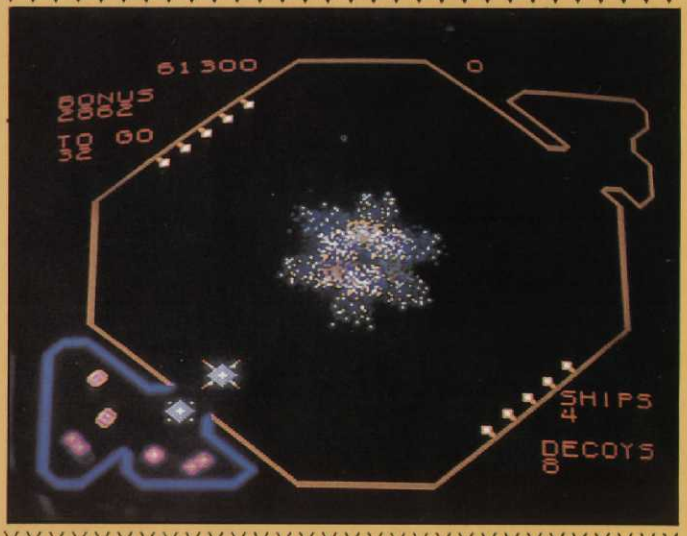
You earn a new man with each 15,000 points scored. With each board cleared, you earn an additional decoy (three are given at the start of the game). Decoys are effective in luring enemies into high-score areas — like bounce chambers. When the decoy button is pushed, a decoy will emerge from your playing piece and remain stationary at that point.

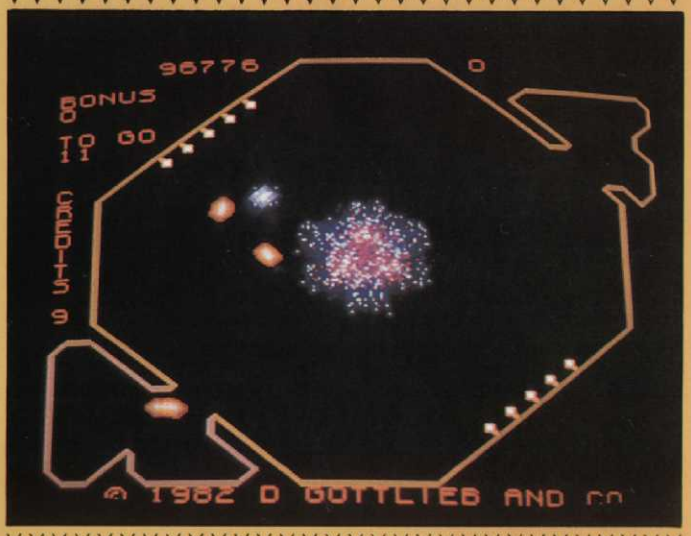
It takes some time to consistently get through the first eight Reactor boards. Once you've played a few Vortex boards, you'll certainly be back for more. We may have a "Sleeper" here.

The first eight boards feature an expanding reactor core. This core contracts when all control rods are eliminated. A new board then appears. Control rods increase from 3 to 5 to 7 per bank (2 banks per board) through successive boards. You are in no danger of being sucked into the core. On later Vortex boards (ninth screen on), you'll fight a constant force that is trying to pull you into the swirling death at the center of the Vortex.



Charles Steiner/SYGMA





STRATEGY TWO

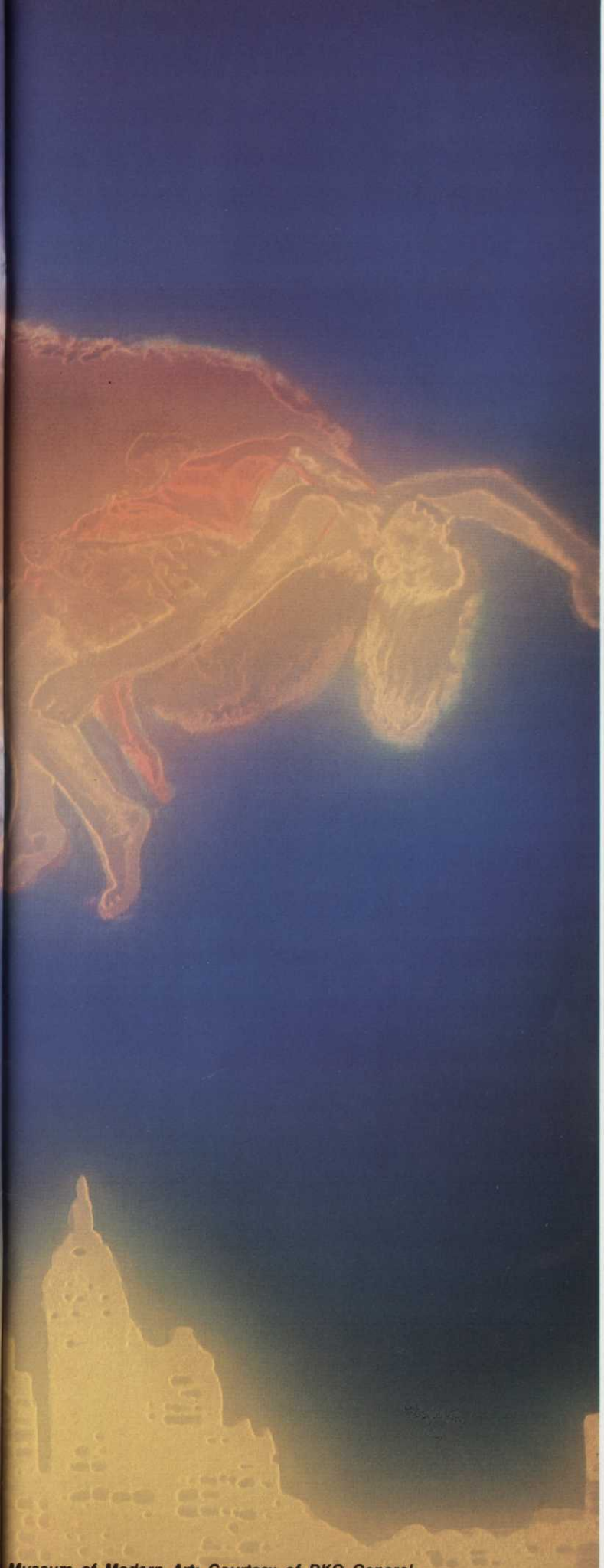
One of the best places to leave a decoy is just inside the entrance to a bounce chamber (the lower left chamber is better designed to keep the enemies bouncing longer). Decoys confuse enemies. Enemies will attack a decoy and leave you free to circle around behind and push them at will. Keep the enemies in the bounce chamber by standing guard at the entrance once the decoy has faded.

STRATEGY THREE

A most effective way to push enemies into a control rod is this: When located between an enemy and a rod, make a swift and precise 180° arc around the enemy, positioning the enemy between you and the rod. This state of affairs will not last more than a moment. You must be quick, therefore, to push that enemy into the rod.

DONKEY KONG





Museum of Modern Art: Courtesy of RKO General

It loses something in the translation. The name Donkey Kong translates loosely into Japanese as *Stupid Kong*, or *Dumb Kong*. However, Nintendo of America — the manufacturers of the game — are anything but stupid. As early as October 1981, Donkey Kong had already set a new weekly earnings record ($288) according to *Play Meter*, the video arcade industry trade magazine. One year later, and there's no sign of the big Monkey losing popularity.

The reasoning behind this growing popularity is clear. Most people will talk about the fantastic animation, with Donkey Kong beating his hairy chest, grabbing the damsel in distress, and dragging her to the top of a building. Others might talk about the sound effects, the growling ape, the honky-tonk music. These two elements — animation and sound — might force a few quarters out of your pocket and into the machine. But to keep pumping those quarters into Donkey Kong, there must be something else, a bigger payoff — and there is.

Donkey Kong actually gives you four different games for your quarter (providing you're good enough). If you can manage to master an entire screen of play, you are rewarded with a totally new game to play.

Achieving these rewards is no easy task. While most video games require either coordination skills *or* strategy, a good Donkey Kong gamer must have both. You must become adept at running, climbing, jumping, and hammering, *and* you must carefully plan your path to the top.

Scott Bohnenkamp — a recent college grad from Southern Illinois University — provided the patterns for this article. Scott is, simply, the best Donkey Kong player we've ever seen. His unofficial high score is close to 500,000 points. We watched him go over 300,000.

Scott's pattern-play is easy enough to learn. Keep in mind, however, that a built-in, random element of chance is always lurking dangerously behind every Donkey Kong maneuver. These patterns are definitely the right road toward high scores. There will be times — and you can't predict them — when a random Barrel or aggressive Foxfire will lead you astray. The mark of a truly creative and powerful Donkey Kong master is the ability to deal properly with this situation, to get back on track. It will take some practice, but you'll figure it out. And good luck!

DONKEY KONG



(King Kong, Monkey Man, Chimp Face, Bonzo). The king of the video simians makes his grand entrance seconds after you insert your quarter. Stuffing the helpless Damsel under his arm, he climbs his way up a ladder to the top of the iron-girder framework, and sets his captive at the top. Roaring loudly and beating his chest, he stomps back and forth, collapsing the girders into diagonal Ramps. From this moment forth, he is a constant, jeering adversary. During the Ramp screens, he continually rolls Barrels and Beams down the Ramps at Mario, the brave carpenter. He'll even occasionally throw a renegade Barrel or Beam that bounces down the girders at our hero. On other screens he stands guard near the screaming Damsel, all the while growling and thumping his chest in rage.

HELPLESS DAMSEL



(Fay Wray, Ms. Mario, Monkey Woman). Alas, our heroine's video life is but an animated nightmare, speckled with fleeting moments of happiness. Each time she appears to have been rescued by Mario, Kong snatches her away and carries her to yet a higher level of the game's structure. During the Ziggurat screen, her location is a clue as to which side the Foxfires will enter from.

MARIO



(Brave Carpenter, Jumpman). This is our hero, the only possible competitor to the animated ape. Mario makes his way up the various levels of the building's framework by running up Ramps, leaping over obstacles, climbing Ladders, jumping on moving Elevators, and riding Conveyor Belts — anything for the main squeeze. His direction (up, down, left, or right) is controlled by the Joystick. His ability to jump is controlled, of course, by the Jump Button. He can even perform running broad jumps with the help of both controls. About the only thing Mario can't do is fly. Even a short fall off the end of a girder will put him out of commission.

LADDERS



Three kinds of Ladders appear in the game Donkey Kong: full Ladders, broken Ladders, and extension Ladders. Full Ladders of varying heights connect the girders on all screens. Mario must be directly under these before going up them, and all the way to the top before attempting to move left or right. Broken Ladders appear on the Ramp screen only. Mario can't climb all the way up them, but Barrels and Beams can fall down them. Extension Ladders come into play on the Conveyor Belt screen.

BARRELS



(Nail Kegs, Bombs, Monkey Barrels). Throwing Barrels is Kong's way of telling Mario he's in the wrong neighborhood. Kong rolls or throws Barrels at Mario on the Ramp screen only. Barrels can roll down Ramps or Ladders, or can bounce wildly if thrown downward by Kong. Contact with a Barrel spells TKO for Mario. He must either jump over them for 100 points or smash them for 300 points.

BEAMS



(Water Bombs, Rain Barrels, Water Barrels). Beams act generally like Barrels, although they're blue. The difference between Beams and Barrels is point value. Beams are worth 300 to 800 points when smashed.

HAMMER



(Sledge Hammer, Mallet, Thumper). With this simple construction tool Mario can smash Barrels, Beams, Cement Tubs, Fireballs, and Foxfires. He must jump to grab it, and can use it for about 11 seconds (roughly 22 swings) while standing or running. Caution must be used during a running smash attack on Barrels. Barrels and Beams can sneak under Mario's Hammer when it's at the top of the swing. Timing is important.

INVISIBLE WALL

(Force Field, Rubber Wall). Each screen has an invisible wall on both sides of it. To get the Hammer on the third level of the Ziggurat screen, Mario must jump, grab the Hammer, bounce off the Invisible Wall, and land safely back on the girder. This giant rubber band takes practice to master.

FIREBALL



(Butane Ball, Burning Barrel). Two of these burning enemies appear on the Ramp screens and up to five appear on the Conveyor Belt screens. Mario can jump them or smash them with the Hammer, but he can't survive a direct collision.

PLUGS



(Rivets, Girder Supports, Corks). Mario eliminates these Plugs by simply running or jumping over them. When eliminated, they leave Gaps in the girders. Mario must then jump over the Gaps to cross them, or take a fall. These Gaps can, however, keep Mario safe from this screen's main source of trouble, the Foxfires. When all eight of the Plugs have been removed, Kong falls headfirst to the bottom of the screen, and you move on to the next screen.

FOXFIRES



(Flaming Chickens, Will-o'-the-Wisps). Foxfires differ from Fireballs in both their appearance and personality. Foxfires actually have tiny faces and what looks like hair and tails. They also seem to closely track Mario and attempt to gang up on him. Five of them appear on the Ziggurat screen. They always enter from the side opposite of Mario. Two of them appear with the arrival of the Elevator screen. They can climb up and down full Ladders, but can't cross unplugged Gaps. They can also be smashed with Mario's Hammer.

PRIZES



(100-800 points). There are four prizes that appear at various points in the game. They are: Telephone, Umbrella, Lunch Pail, and Birthday Cake. Their point value is not always worth the time and risk involved in their capture.

SPRINGESE



(Shock Absorbers, Boing-Boings). They bounce like mad, but only on the Elevator screen. Contact with them makes history out of Mario. They follow three paths, each very close to the other. Their specific path is determined by how far in they land when first entering the screen.

CEMENT TUBS



(Pies, Bread Pans, Coal Pans). These little concrete containers appear only on the Conveyor Belt screen. They travel with the Conveyor Belts and can eliminate Mario on contact. Mario has three choices in dealing with Cement Tubs: He can jump over them, smash them with the Hammer for 300 to 800 points, or try to keep out of their way.



Museum of Modern Art: Courtesy of RKO General

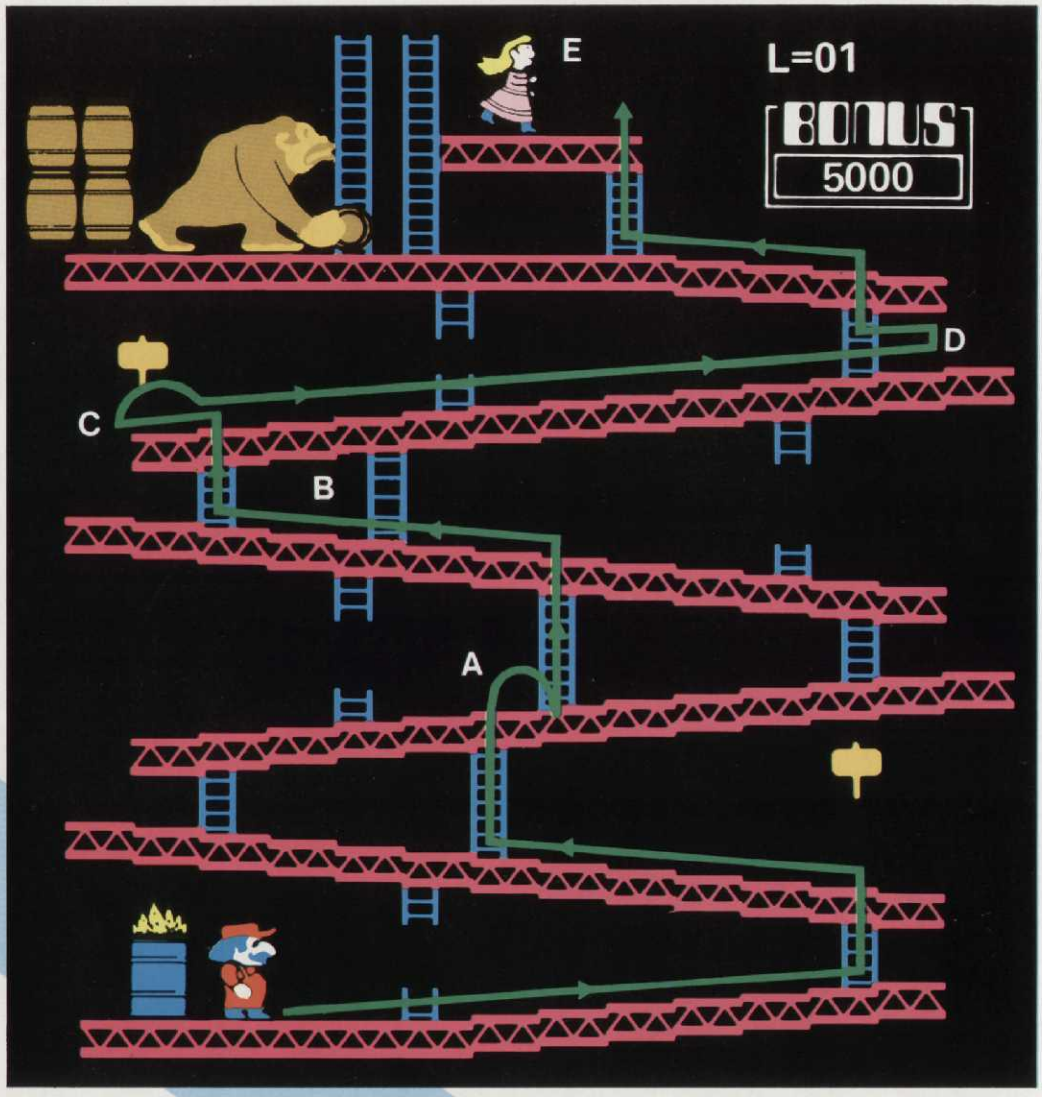
STRATEGY

Donkey Kong is a tough game to learn. These strategies are designed to get you as quickly as possible from the first Ramp screen to the first Conveyor Belt screen. That's seven total screens! And — as you probably already realize — getting through those first seven screens is a major video accomplishment.

You'll be surprised at how quickly these seven screens can be mastered. If you follow our patterns carefully, you'll be at the Conveyor Belts sooner than you can say Fay Wray. But remember: Although these patterns are amazingly simple and accurate, there's always the chance that Kong will toss a wild Barrel or an unpredictable Foxfire will demonstrate its unpredictability. That's part of the game. And learning how to deal with that randomness is the distinguished mark of a pro.

The most basic Donkey Kong skills must be learned before these strategies can be employed. You must be able to consistently and accurately climb Ladders, jump Barrels, jump on and off Elevators, broad-jump Gaps, and grab the Hammer. If you haven't already learned the basic movements, practice like mad. Then test out our patterns.

One final note. Prepare to move Mario before he appears on the screen. That means pre-positioning the Joystick. Pre-position it to the left on the Ziggurat pattern; pre-position it to the right on all other patterns.



RAMP PATTERN: LEVEL ONE

Your first Donkey Kong confrontation is the Ramp Pattern. It is the most important pattern to master. Two fundamental skills are involved: Barrel-jumping and Hammering. And, as always, you must be skilled at climbing Ladders. The Level-One Ramp Pattern is the easiest Ramp Pattern to complete. Follow these steps:

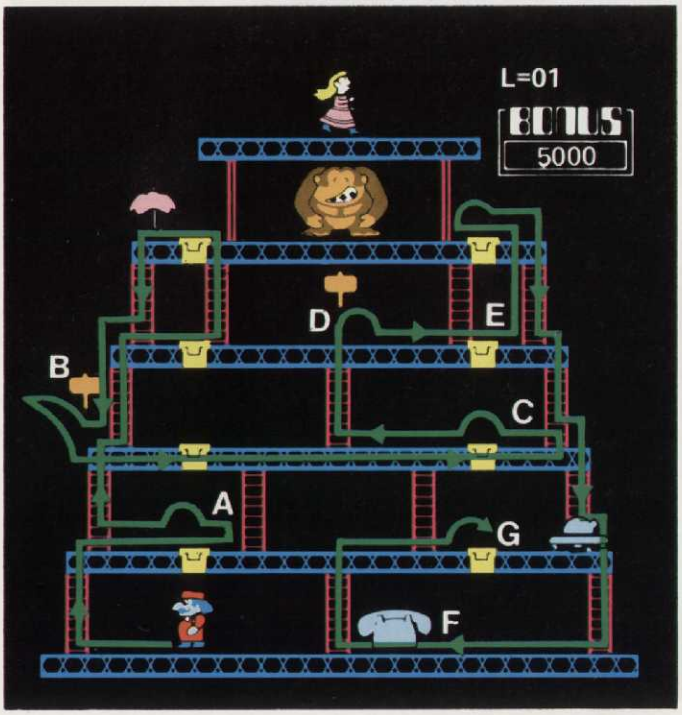
Point A. Run without hesitation to this point and immediately jump the oncoming Barrel. If you have hesitated — or if the Barrel took a short-cut down the right-hand Ladder — wait to the right of this Ladder for the Barrel to pass overhead. Then resume the pattern.

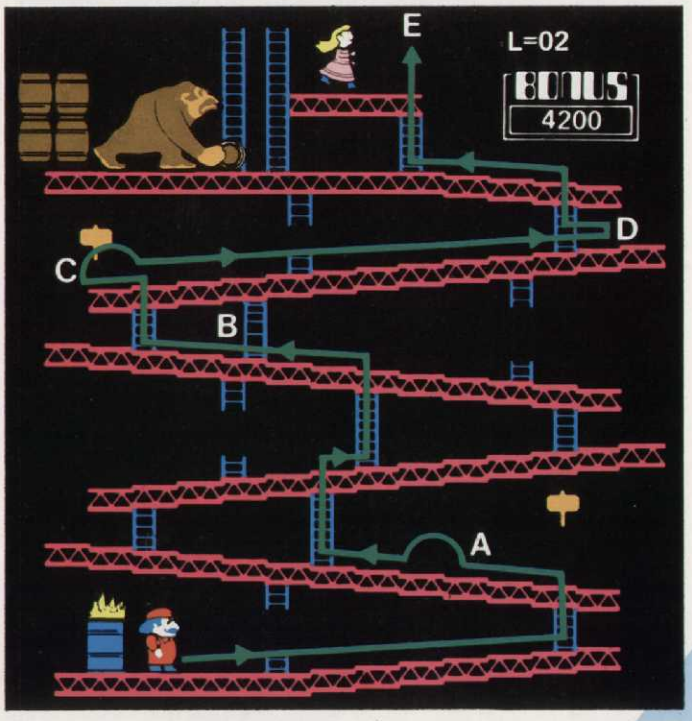
Point B. Wait between these Ladders, jumping Barrels as necessary. When you spot your chance, run up the Ladder on the far left. If traffic becomes congested, you may have to zip up the Ladder on the right. Your prime aim is making it safely to the Hammer at Point C.

Point C. Jump and grab the Hammer, killing Barrels as you make your way to Point D. Always make sure to stop before destroying a Barrel. Otherwise, the Barrel may slip under your Hammer — killing Jumpman dead. Exercise caution when approaching Ladders — a Barrel may turn down on you.

Point D. Wait at this spot until your Hammer runs out. When the music stops, and the Hammer disappears, run to Point E — if you can do it safely. Otherwise, stay at Point D, jumping Barrels as necessary. When you see your chance, scoot up the Ladder and run to Point E, broad-jumping Barrels as necessary.

Point E. Prepare for a new screen.





ZIGGURAT PATTERN: LEVEL ONE

The Ziggurat Pattern is one of the easiest patterns to master — especially with our secrets. The object here is to clear all the Plugs. Once all the Plugs are removed the structure collapses, and Kong crashes head-first to the bottom of the screen. Your only enemies are the unpredictable Foxfires, greed, and carelessness. The Foxfires always enter opposite the side that Jumpman is on.

Point A. Run to this point without hesitation. Then quickly retreat, jumping the Gap, to resume the pattern.

Point B. Grab the Hammer after returning from the top of the Ziggurat.

Here's how to do it. Stand on the edge of the platform. Press the Jump Button and — at the same time — move the Joystick to the left. You won't fall. Instead, you'll bounce off the Invisible Wall, grab the Hammer, and return safely to the platform. Once you're back on the platform, make your way over to Point C, killing Foxfires as you move.

Point C. Wait here until your Hammer runs out. Then retreat, jumping the Gap, and climbing the middle Ladder to Point D.

Point D. Grab this Hammer and move to the right, killing Foxfires as you go.

Point E. Wait here until your Hammer runs out.

Point F. If you have enough time, come down and grab the prize. If any threatening Foxfires remain, forget the prize and head directly for Point G.

Point G. Cross or jump this Plug. Prepare for the next screen.

RAMP PATTERN: LEVEL TWO

The Level-Two Ramp Pattern is played similarly to the first. The big difference concerns the way you start the game. Barrels and Beams are much more aggressive than in the Level-One Ramp Pattern. Your objective is still the same: Get to the top as fast as possible.

Point A. Sprint to this point. Jump the Barrel that comes down the Ladder. Hesitate. Monitor the next overhead Barrel before climbing the Ladder. Once the path is clear, continue the pattern.

Point B. Wait between the Ladders until you have a chance to reach Point C. Jump Barrels.

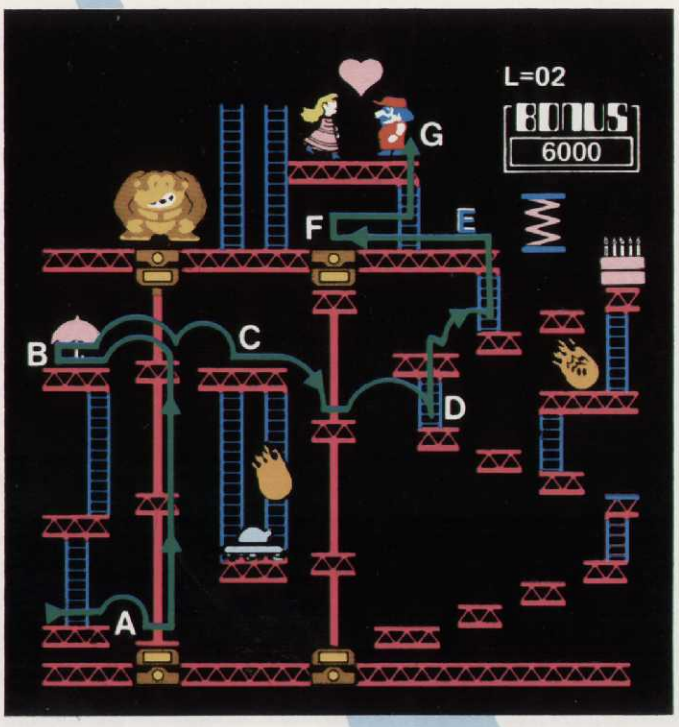
Point C. Jump and grab the Hammer. Make your way to Point D, killing Barrels and Beams on your way. Remember: Always stop before destroying Barrels or Beams and beware of Barrels falling down Ladders.

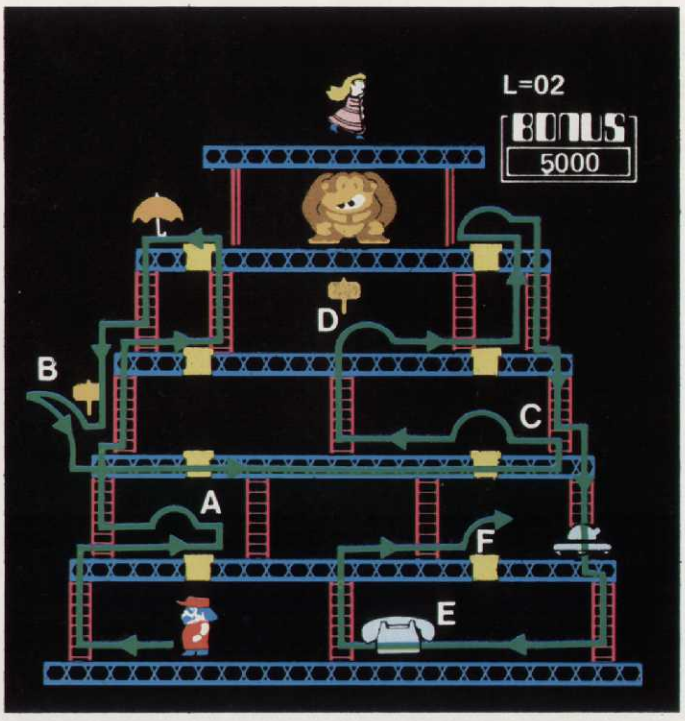
Point D. Wait here until your Hammer runs out, as before. Then, when you see an opening above, run to Point E.

Point E. Prepare for a new screen.



Museum of Modern Art: Courtesy of RKO General





ELEVATOR PATTERN: LEVEL TWO

The amazing Elevator Pattern is a video wonder to behold. It is also the most difficult pattern to master. You must learn new ways of jumping and maneuvering Mario. Once the basic skills are learned, you should be able to follow this pattern swiftly to the top.

Point A. You've got to move fast for this pattern to work. Don't even think: Move your Joystick to the right before Jumpman appears. Once he appears, take two steps and jump on the "up" Elevator. It'll be there. Don't worry.

Points B & C. Jump over the platform at Point B, grab the Umbrella, and then — quickly — jump from Point B to the "up" Elevator to Point C. Make it two quick jumps. **Caution:** If the Foxfire is at Point C, wait at Point B until it starts moving down one of the Ladders. Then resume the pattern.

Points C & D. As quickly as you worked before, jump from Point C to the "down" Elevator, to Point D. Yes! You can jump from the edge of the "down" Elevator to Point D. Be brave! Then scoot up to Point E.

Point E. Stand up straight at this point. No Springese can get you. Watch the Springese bounce pattern. When you see your chance, move it to Point F.

Point F. Stand straight here for a Springese to pass over you. When a Springese is directly over your head, sprint to Point G.

Point G. Prepare for a new screen.

ZIGGURAT PATTERN: LEVEL TWO

There is no real difference between the Level-One Ziggurat Pattern and the Level-Two Ziggurat Pattern. Point values are up. And the Foxfires are more aggressive. In review:

Point A. Speed to this point and then jump back over the Gap. If a Foxfire sits waiting for you, you may have to hesitate for a few seconds. Wait for it to get safely out of the way, then resume the pattern.

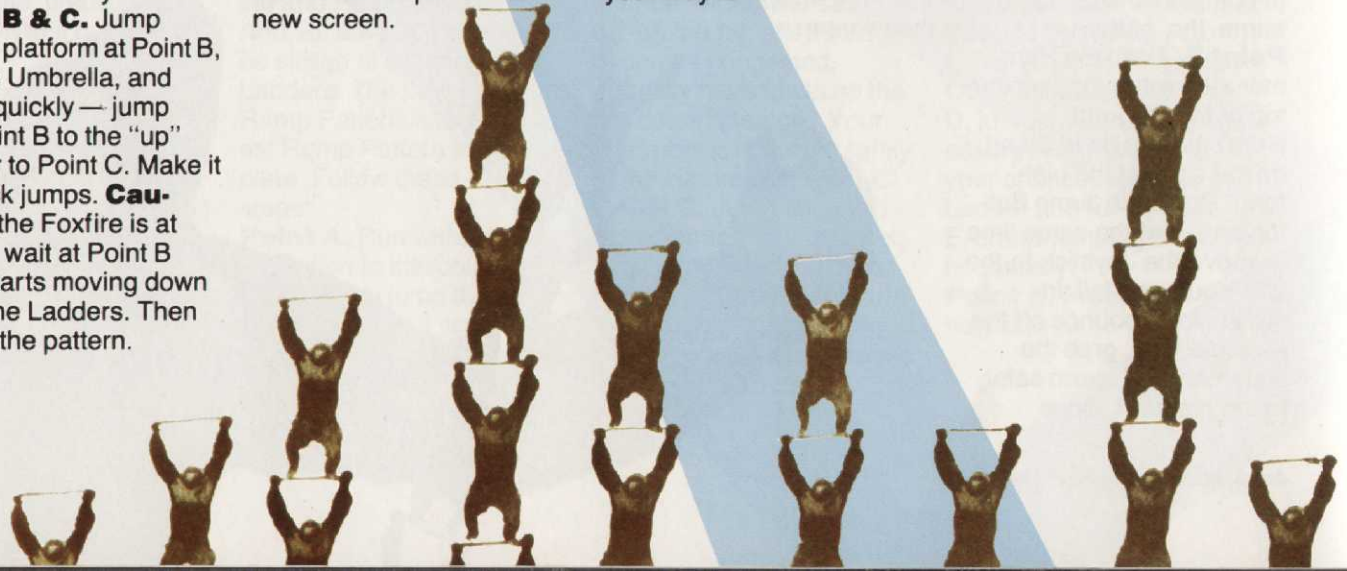
Point B. Again, bounce off the Invisible Wall to grab the Hammer. Then make your way to Point C.

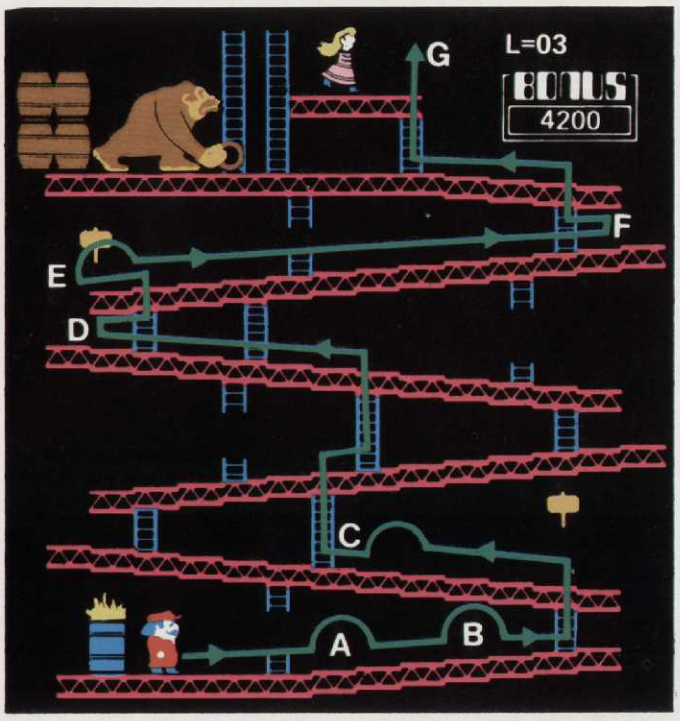
Point C. Wait here until your Hammer dies. Then make your way to Point D.

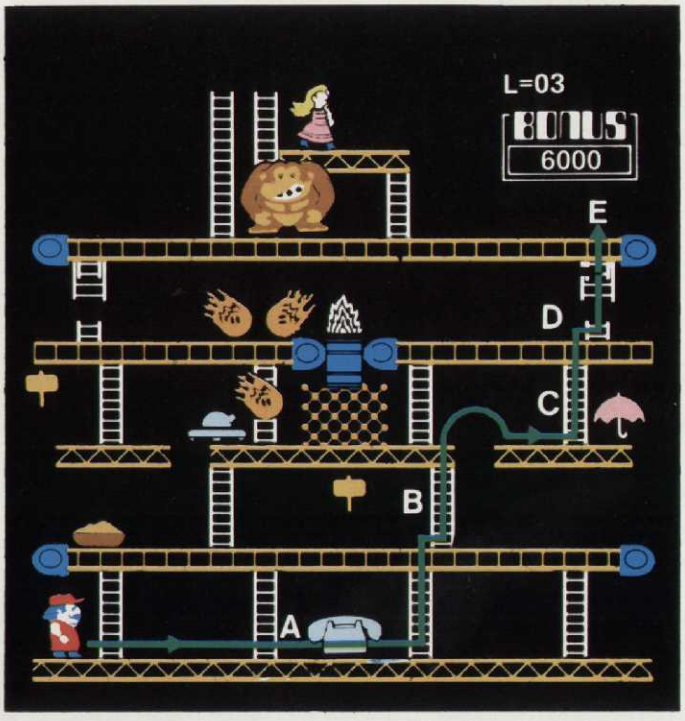
Point D. Grab the Hammer and move to your right. Get mad and kill Foxfires. Let the Hammer run out and resume the pattern.

Point E. It may be more dangerous on this level to grab the Telephone. If you're safe, do it. If you're in any danger, forget it. Don't get greedy. Go directly to Point F.

Point F. Jump or cross this Plug. Prepare for a new screen.







RAMP PATTERN: LEVEL THREE

The Level-Three Ramp Pattern is the toughest Ramp Pattern of all. All future Ramp Patterns are equally tough. Again, get to the top as quickly as possible.

Point A. You don't have to jump immediately, but jump sometime before you get to Point B.

Point B. Jump the Barrel. Climb the Ladder.

Point C. Run to this point, jumping Barrels as necessary. Wait here for Barrels to pass overhead. When it's safe, run up the Ladder and head for Point D. You'll be doing a lot of Barrel-jumping on your way.

Point D. Instead of waiting between the Ladders, wait on the far left of this Ladder. Wait for an opportunity to climb up the Ladder. Jump Barrels as necessary.

Point E. Grab the Hammer, as on Levels One and Two. Make your way to Point F, pounding Barrels and Beams as you go.

Point F. Wait here until your Hammer runs out, as before. Then, when you see an opening above, run to Point G.

Point G. Prepare for a new screen.

CONVEYOR BELT PATTERN: LEVEL THREE

The Conveyor Belt pattern is a breeze. Believe us. With a little practice, you'll find this screen smooth sailing. Your primary enemies are Fireballs. They always enter on the side Jumpman is on. We'll show you how to use this to your advantage. The object is to get to Kong's Conveyor Belt, i.e. the top level — not the Damsel's platform.

Point A. Wait here to the left of the Telephone for all three Fireballs to come out on the left-hand side. Once you've counted three, grab the Prize and continue the pattern up the Ladder. On successive levels the number of Fireballs will increase (3 on L=03, 4 on L=04, and 5 on L=05).

Point B. If a Fireball is above you (once every 6 or 7 times you play) don't climb the Ladder. Grab the Hammer instead. Kill any Fireballs. Then resume the pattern.

Point C. After jumping the Gap, wait here. After a Cement Tub goes over at Point D, climb the Ladder.

Point D. You'll be running against the grain here. Wait for a Concrete Tub and jump it. Your jump should place you at the bottom of the Ladder. Climb the Ladder to Point E.

Point E. Congratulate yourself on doing what few people can do. Look smug. You deserve it. Prepare for a new screen.

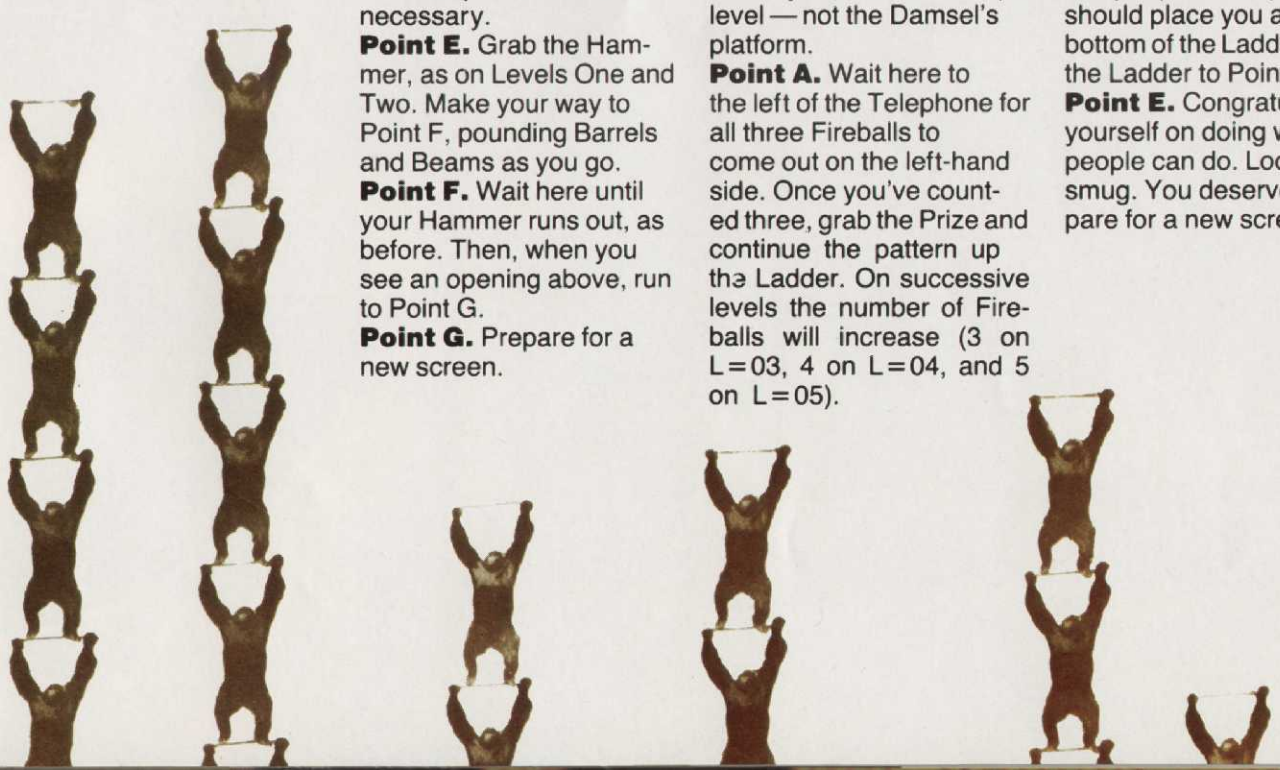


Photo: Museum of Modern Art: Courtesy of RKO General

ON STAGE: THE TRON VIDEO-GAME CONTEST

by Gary Zanke

Day One. New York City. Ballroom "B" of the Grand Hyatt Hotel. The Tron Tournament. Video game history in the making. The first officially tabulated national competition ever. Anywhere.

Eight Tron machines rev up. Sounds like some weird futuristic soundtrack. Each machine has two video screens. One for them, one for us. Sixteen screens! The players make it look easy.

16 competitors are being briefed. Two rounds of competition today. Finals tomorrow kicked off by a Celebrity Competition. The lure of celebrity contact . . . "We're expecting Hank Aaron, Willie Mays, and Diana Ross. Remember, these people want to meet *you*." Eight silent Tron machines stand waiting; eight players in identical blue Tron t-shirts man their machines. Anxious parents peer from behind. Kid standing by scoreboard smiles and points to brother's name while Mom snaps picture. The competition begins.



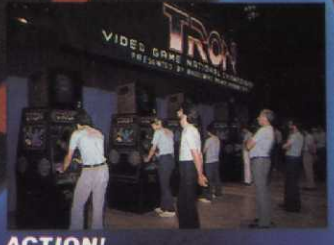
ALL SET!



LIGHTS!



CAMERA!



ACTION!





THE JUDGES

Deceptively so. Contestant #8—18-year-old Sterling Ouchi from Torrence, CA—chokes at under 50,000 points. And he scored over a million points in the Regionals. Not as easy as it looks, guys. Lots of pressure. Scott MacDonald—17-year-old video cowboy from Houston—takes this half of the first round with a respectable 294,358 points.

The second round begins much like the first, except this one holds a real surprise: Richard Ross. Older than most of the competitors (29), he's got a low-key, easy style. Wears baseball cap and shorts. Comfortable, but determined. Two hours. Everyone is finished. Except Ross! And he's nowhere near done. Players talk about game strategies. Light Cycles the hardest (requires lightening fast reflexes). Spider configuration racks up points.

Three hours. Ross is still going strong and he's still got two men left! He sips some water, stretches some leg. No other signs of fatigue. Ross annoyed with photographer (from the venerable *New York Times* and the only photographer allowed into the playing area). He's going for broke.

Join others for lunch in adjoining Ballroom "C." Watching one guy play Tron for over 3 hours is monotonous. Impressive spread. Thirty plus feet of everything—seafood salad, fresh kiwi, chocolate mousse. Other players, some wearing Pac-Man antennae (this summer's tourist rage) growing restless and a little nervous. No lack of healthy competition, though. "I'm going to have to cut that guy's hand off," quips MacDonald.



THE FOOD



THE RAGE

Photo: © 1982 Walt Disney Productions

Finally — after an amazing four hours and 22 minutes — Ross goes out with a whopping 1,830,044 points. He's hot after the prize ($4,000 Commodore Home Computer and a Tron Video Game valued at $2,500). According to Ross, "The game falls into a predictable pattern. After the #7 Tank it's simply a matter of memorization." (And endurance!)

The second round gives Ouchi a chance to recoup his losses. He plays well: 331,669 points. MacDonald bombs out with 59,891. His machine (#7) had a "fuzzy screen and a sticky joystick." Yeah, sure. And here comes Scott Katkin — 19 years old from E. Greenwich, RI — racking up a healthy 1,052,592. But then there's Ross, true to form, playing another four hours. Taking a combined score of 3,399,980 points into the Finals. And that's not even counting the 40,000 points lost when a photographer (not the *Times*) tripped over the cord!

Day Two. The Finals. Madison Square Garden's Felt Forum. Special press badges. Today is different. Today is the Celebrity Competition. Lots of press here, so keep smiling (but why are we here?). A photog from Associated Press (cameras nearly, but not quite, covering his racetrack plaid sport jacket) leads us to Hank Aaron. And Willie Mays. And they're practicing their Tron techniques. And so is Doug McKeon ("On Golden Pond") and Robin Leach with his "Entertainment Tonight" crew, and David Warner and Cindy Morgan from the Disney movie. Warner wearing a racy pair of leather driving gloves (maybe helps his game?) saying something about not having anything against video games, "As long as people continue to do other things like read books." Rumor: Bianca Jagger and Robert Duvall are supposed to show. But Diana hasn't shown. And if Bob and Bianca do I'd be surprised. This is fun.

Attention focused on celebs. Competitors fading into the background. That is, most of them. Not MacDonald. Ever the ham, he coaches Cindy Morgan on the subtleties of the game. Tron. "Scott taught me everything I know about Tron," says Cindy. Scott Katkin coaches soap actress Melinda Fee ("Days of Our Lives"). Fat photographer yells at Katkin (get out of the way!). Then fatty does some coaching himself ("Melinda, could you look this way? David, over here").

Everyone milling about banquet table. Hungry, but not wanting to eat. Today's luncheon disappointing. Food service. Chicken Chow Mein, wilted salad, cardboard cake. Suddenly, there's a commotion at the entrance. *Someone* has arrived. Could it be . . . everyone rushes towards the door. And in pops . . . Barbara Eden! Cameras clicking and she's smiling away. Looks great. Short pink skirt (no harem pants) and she's still got great legs. Accompanied by bodyguard and assistants. She approaches a Tron machine. Barbara needs coaching. Lots of coaching. She needs the best. She needs — Richard Ross.

The first round of Celebrity Competition begins. For each winner, Disney will



PAUSE!



HANK!



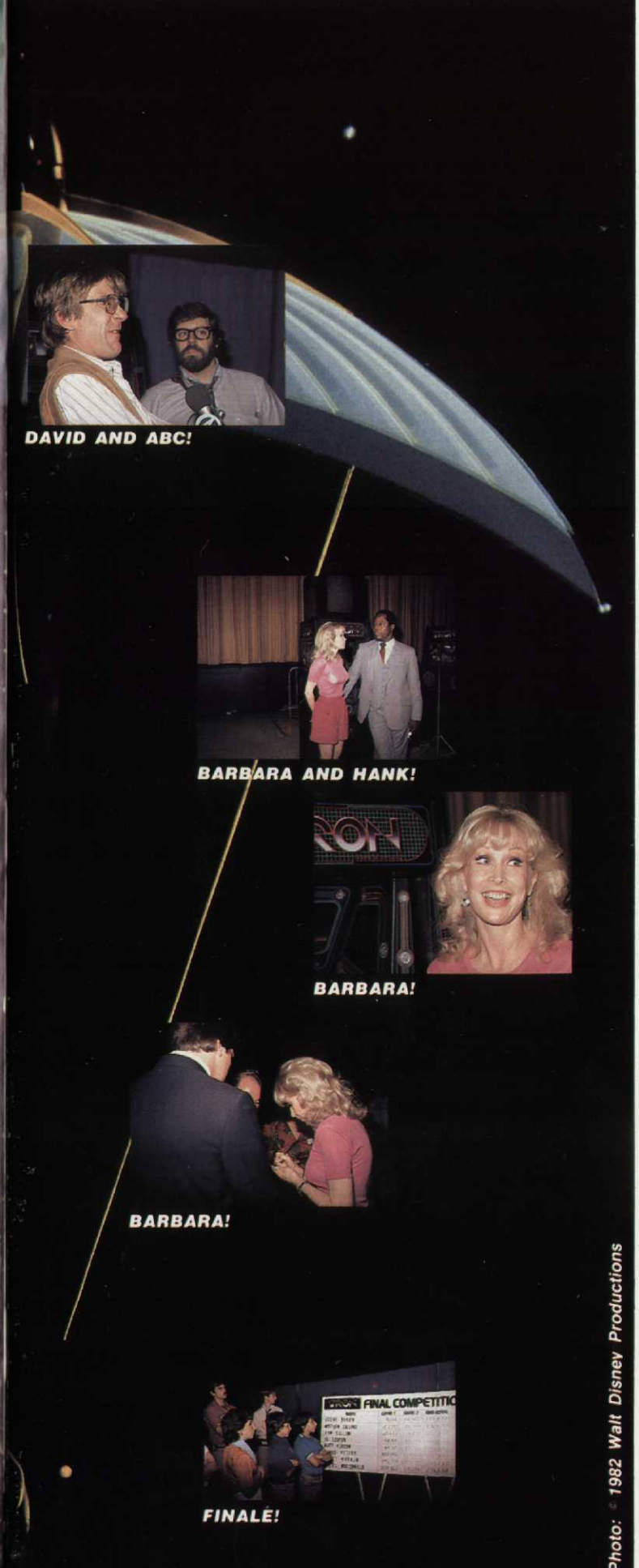
WILLIE!



CINDY AND DOUG!



CINDY AND DAVID!



DAVID AND ABC!

BARBARA AND HANK!

BARBARA!

BARBARA!

FINALE!

Photo: © 1982 Walt Disney Productions

donate $2,000 to the charity of their choice. Doug McKeon beats Hank Aaron 9,268 to 3,826. He donates to the American Cancer Society. Melinda Fee tops Willie Mays 1,975 to 278. Great baseball does not a video pro make. Two Disney people, a special effects man Harrison Ellenshaw and producer Don Kushner reap impressive scores — 11,280 and 13,126 respectively. Barbara signs autographs.

At last, to the strains of the "Tron" soundtrack (very ethereal, heavenly choir-type stuff) the three real pros — Ouchi, Katkin, and Ross — make their bid for video fame. Ouchi and Katkin give it their all. Ouchi goes out with a final total of 1,158,085, earning him third place. A slight twist: Ross goes down before Katkin (we secretly hoped this wouldn't be another marathon play). Ross has it in the bag, but Katkin still tries. He's a trooper. He finally goes down with a total of 2,731,770. Cheers. Katkin manages a weak smile. It's been an exhausting two days of Tron. More pictures, more questions. Ouchi's favorite game: Centipede. Highest score: 3,500,000. Will they continue to play Tron? Not for a *long* time. Group shot of the winners shaking hands closes another chapter for the chronicles of video history. And we're off to the "Tron" preview.



The Winners! From left to right: Sterling Ouchi, Scott Katkin, Richard Ross. Ross' winning strategies will appear in the next issue of JoyStik.

16 Finalists
Tron Video Game Tournament Finals
July 6-7, New York City

Name	Combined Score*	Age	City	State
Richard Ross	3,958,901	29	Jacksonville	FL
Scott Katkin	2,731,770	19	E. Greenwich	RI
Sterling Ouchi	1,158,085	18	Torrance	CA
James E. Hatley	835,196	17	Taylors	SC
Tim Collum	604,187	19	Boyd	TX
Scott MacDonald	535,197	17	Houston	TX
Walt Marchard	400,174	33	Leeds	AL
Matthew John Collins	343,604	15	Bowling Green	KY
Rick Storer	333,433	20	E. Grand Rapids	MI
Steve Baker	237,905	23	Abingdon	IL
Matt Gordon	231,506	13	Missoula	MO
Robert Withers Morgan	212,705	21	Alexandria	VA
Allen Waits	190,364	15	Moore	OK
Scott W. Starkey	190,183	23	Fort Wayne	IN
Mike Simmons	173,517	17	Sioux Falls	SD
Al Cooper	145,065	27	Butler	PA

*Three championship games

THE ARCADE AT HOME:

A HANDS-ON REVIEW OF THE VECTREX SYSTEM

by Danny Goodman

There are arcade video-game purists out there — maybe you're one. Come on, admit it. It's nothing to be ashamed of. You've played the coin-op boxes for hours and hours, perhaps ever since the first Space Invader tromped across a screen.

After hundreds — make that thousands — of quarters, you've come to expect the detailed graphics resolution of the arcade videos: resolution you're simply not going to get on a home video game or personal computer using a color TV as the monitor. So, the purists have shunned the amateurish home video game. I fully understand.

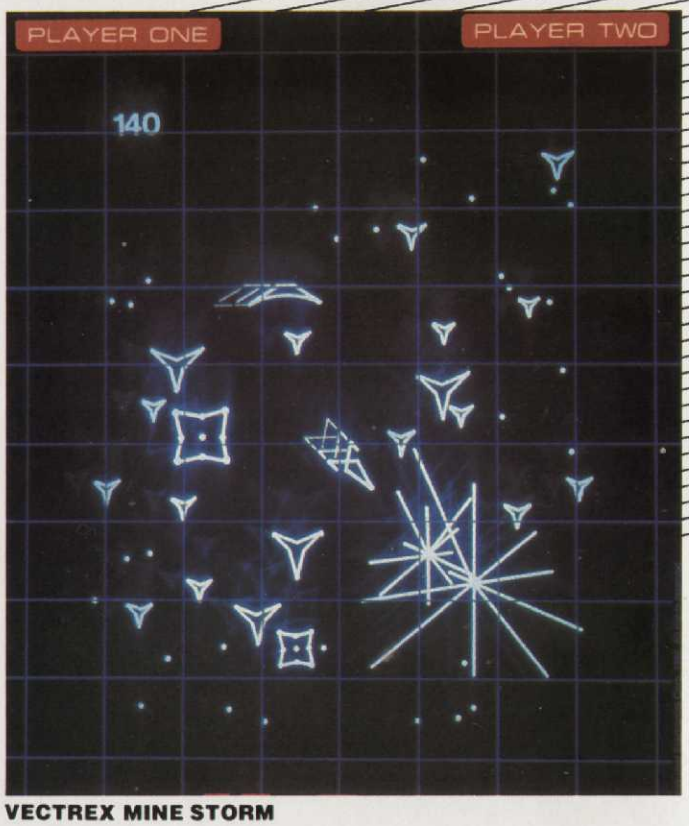
But now, there is a new home system, due in limited markets beginning in October, a system that will turn arcade purists into home game believers, a home system that uses the speedy, detailed graphics technique made famous by Atari's *Asteroids* and several games thereafter: vector scanning.

The game is called Vectrex, a self-contained, plug-in cartridge-based home game offered by General Consumer Electronics Corp. (GCE) in California. The most obvious and unusual feature of this home system is that the very reasonable $200 price includes a 9-inch vector scanning video monitor — you're not tied to a TV set to play video games. Moreover, the monitor is vertically oriented as most videos are in the arcades.

Vectrex is designed for use on a table top, with the screen at approximately eye level. The black molded cabinet has a recessed slot at the rear of the top allowing easy grip for carrying the unit around. Held in by a plastic pressure tab under the screen is a complete control panel, consisting of a joystick and four pushbuttons. Yes, that's *four* pushbuttons. The control box is connected to the unit via a coil cord and a multi-connection plug. A second jack is built in for the addition of an optional, second control panel (although two people can share a single controller in alternate-play 2-player games). Near the controller jacks are knobs for ON-OFF/VOLUME and RESET. A speaker is located behind a plastic grill in this under-screen compartment. When the controller is put back in its place, there are no loose cables dangling about, nor buttons for uninitiated passersby to fool with. The game cartridge slot is located at the bottom right.

The only other control is a brightness adjustment on the rear of the cabinet, but this rarely needs resetting.

Although the monitor is black-and-white, each game comes with a colored overlay designed specifically for the action of that game. Overlays are held in place both by scarcely noticeable plastic tabs at the bottom, and by gravity, as the translucent screens lean away from the player.

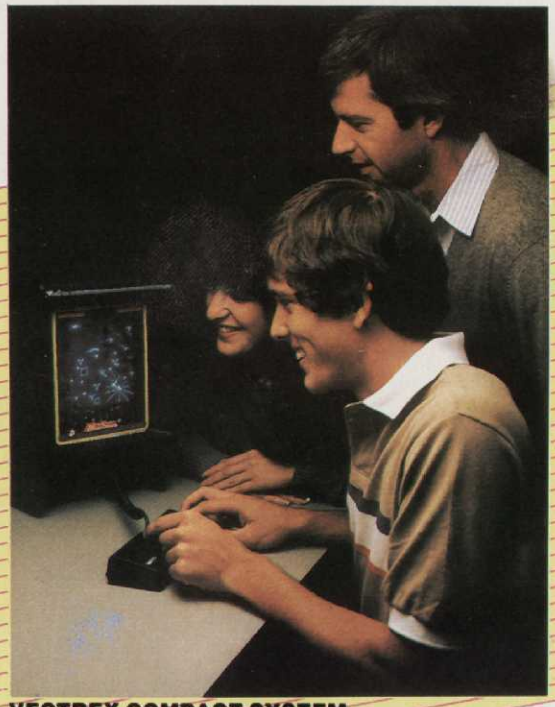


VECTREX MINE STORM

For the base price, you receive the Vectrex unit (complete with one controller box), a "resident" game (i.e., one you don't need an extra cartridge for), and its overlay. The game, called *Mine Storm*, is an *Asteroids* variant. At the opening of the game, an enemy space vessel lays several dozen mines in the field of view. These turn out to be harmless, and turn into a star-like backdrop to the playfield. Your space fighter, in the screen center, is then surrounded by real mines of various sizes and shapes (in higher levels) with occasional UFO-type ships coming at you. The joystick rotates the craft left or right, and three controller panel buttons are used: FIRE, THRUST, and ESCAPE (better know as hyperspace).

Graphic representations are certainly as good as the big box screens. For example, when your ship gets hit, it doesn't just explode in a puff of bright light or light spikes. It literally breaks up into several distinct, heart-rending pieces. And the game difficulty levels progress rather quickly, making the higher levels at least as challenging as arcade games.

The sound chip used in Vectrex is said to be the same as that used in arcade quality games. In *Mine*



VECTREX COMPACT SYSTEM



VECTREX SCRAMBLE



VECTREX HYPERCHASE

Storm, for example, the opening musical theme is generated with a mysterious echo to it — something you'd expect to hear in an arcade.

From the system's initial library of 13 cartridges ($30 each), I tested eight: *Solar Conqueror* and *Rip Off* (two rotating space ship, *Asteroids*-type games); *Armor Attack* (from the arcade game pitting your armed jeep against enemy tanks and helicopters); *Clean Sweep* (a dot-sweeping maze type game); *Hyperchase* (a Turbo-like car race); *Berzerk; Scramble;* and *Star Trek.*

I'm partial to episodic games, so *Scramble* and *Star Trek* were particularly appealing to me.

Scramble's overlay utilizes interlaced stripes in three different colors to help give you a feeling of when you're reaching the high and low altitudes, and when you're in the central action area. The sequence of events matches the arcade game exactly — and the Vectrex version is just as hard as the coin-op *Scramble.* Aside from the score digits and play action, the lower portion of the screen shows a fuel gauge in the form of an ever-shrinking horizontal line. Hitting an enemy fuel tank restores ⅛ of lost energy. An additional ship is awarded at 10,000 points. I still haven't made it all the way through Sector 5 yet, but I'm gonna get it!*

Star Trek is another journey, this time through a succession of nine sectors littered with hostile Klingon and Romulan ships. Temporary shields can thwart impending hits by enemy torpedos, but your laser and shield energy levels are constantly going down. Only a tricky docking maneuver with a space station, while under fire no less, can get you back to full strength. Now, I am certainly not a Trekkie, but the game instructions would be more enjoyable if more Trekkie lingo was used, like "phasers" for "lasers" or "starbase" for "space station." The screen view is from your front window. If you're hit, huge, agonizing cracks will form on the screen.

Cartridges, like *Hyperchase* and others I saw at the June electronics show, give marvelous 3-D effects.

All is not perfect with the Vectrex, however. For all its arcade-smart design, the joystick is too small and difficult to control accurately. It would be worth the extra money for a professional-quality Wico red-ball joystick you can really get your callouses on.

I also detect a lot of potential in the sound circuits yet to be exploited in the first group of cartridges. Any chip that can produce raspy, explosive sounds one minute, and the squeak of tank treads (in *Armor Attack*) the next indicates there is a gold-filled mine of sound just waiting to be explored. I would also like to have a low-level output jack so I could put the game sounds through my stereo amplifier.

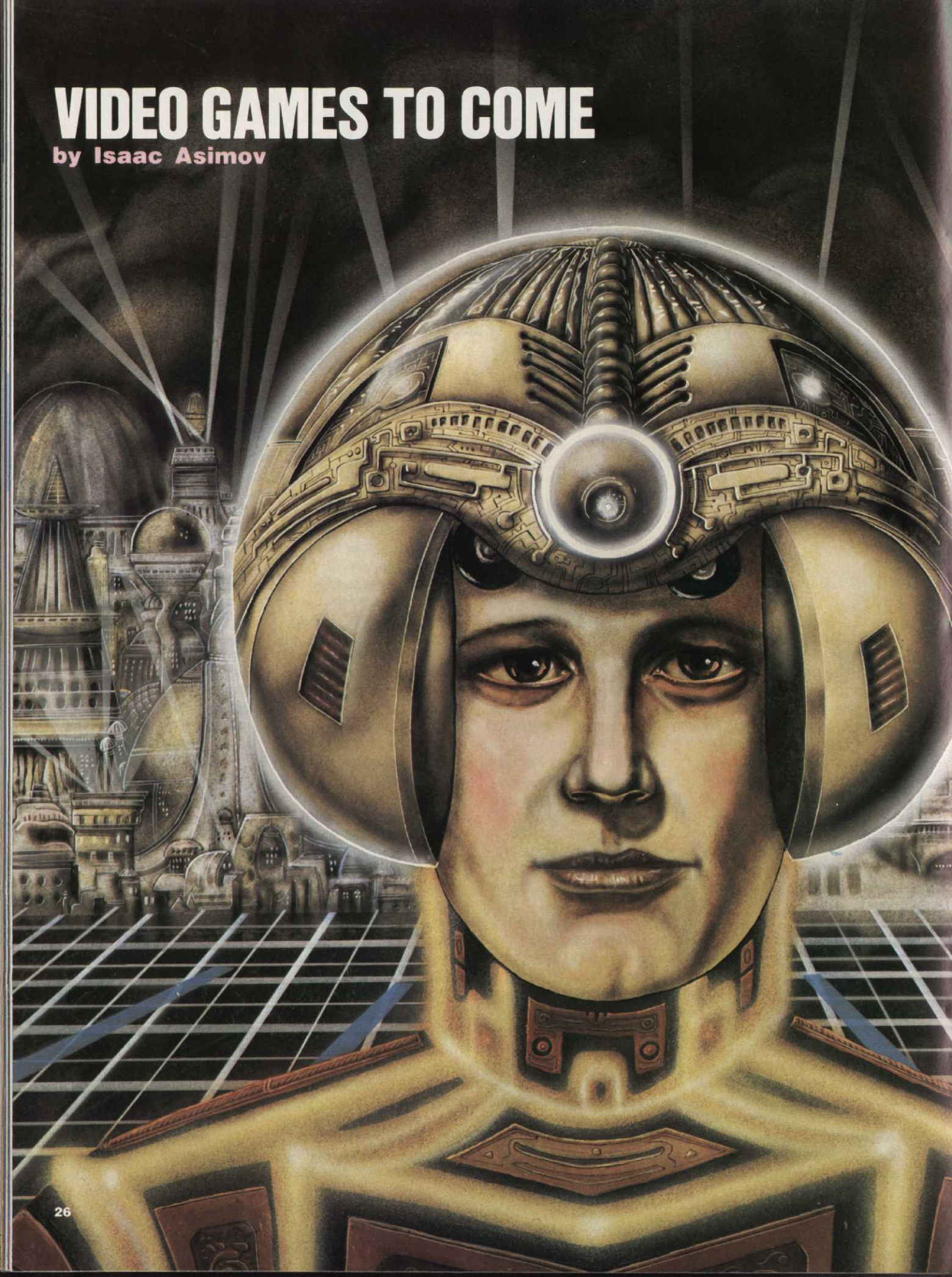
Overlays have never been a favorite of mine. They take me back to 1972 and the first Magnavox Odyssey TV game, for which playfield overlays were taped to the TV set to show us that the dot and two paddles were playing soccer, not tennis. But the Vectrex overlays, first of all, are sturdy and easy to handle. And secondly, they add a great deal to the graphic interest of the game. You forget they're there, yet they have pertinent information clearly printed on them — like which controller pushbutton does what.

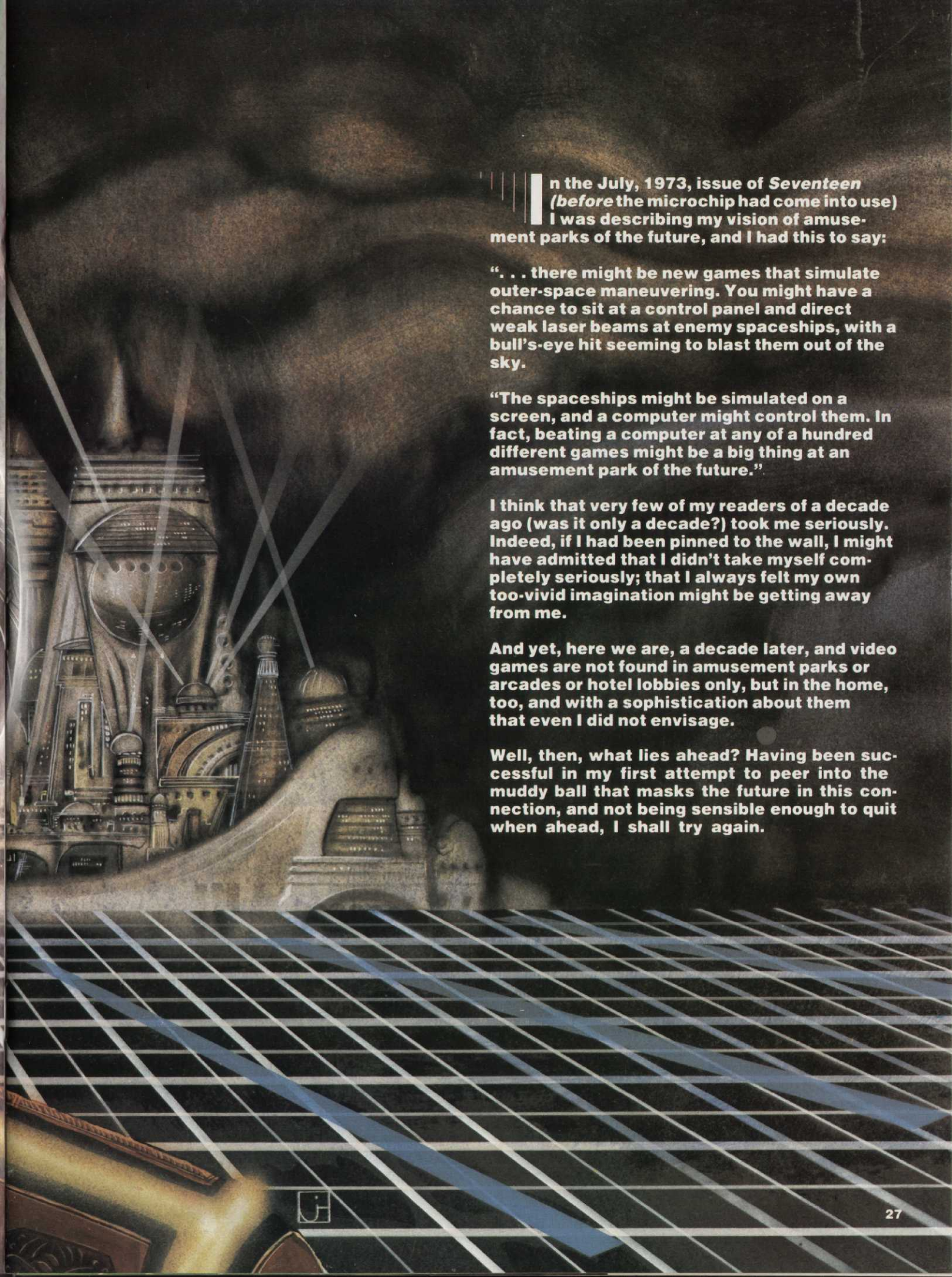
So to all you pure arcaders, I say save up your quarters — 800 to be exact. There *is* a home game that can measure up to your expectations and your skill.

**At press time, Danny had finally made it through Sector 5 — Ed.*

VIDEO GAMES TO COME

by Isaac Asimov





In the July, 1973, issue of *Seventeen (before* the microchip had come into use) I was describing my vision of amusement parks of the future, and I had this to say:

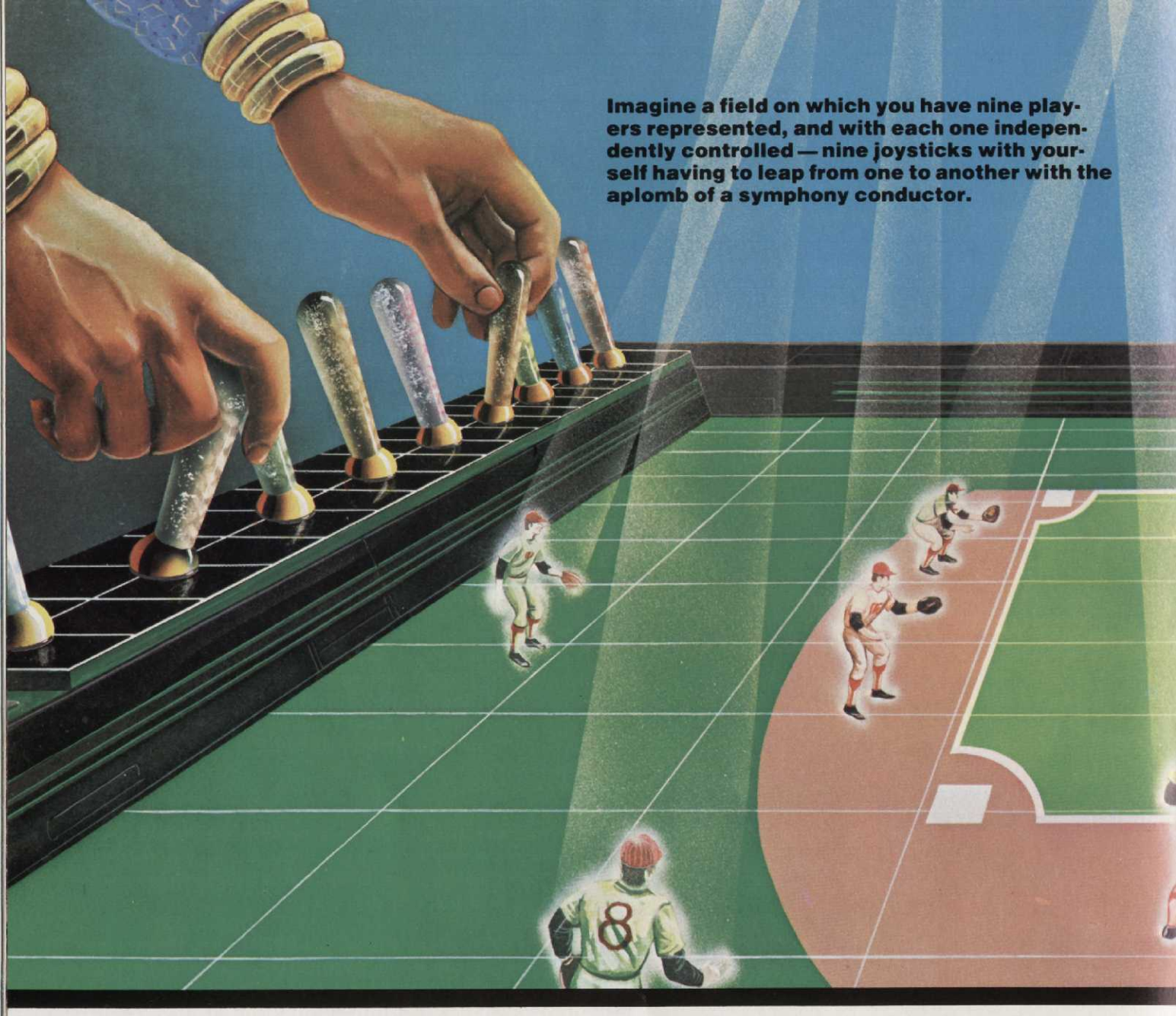
". . . there might be new games that simulate outer-space maneuvering. You might have a chance to sit at a control panel and direct weak laser beams at enemy spaceships, with a bull's-eye hit seeming to blast them out of the sky.

"The spaceships might be simulated on a screen, and a computer might control them. In fact, beating a computer at any of a hundred different games might be a big thing at an amusement park of the future."

I think that very few of my readers of a decade ago (was it only a decade?) took me seriously. Indeed, if I had been pinned to the wall, I might have admitted that I didn't take myself completely seriously; that I always felt my own too-vivid imagination might be getting away from me.

And yet, here we are, a decade later, and video games are not found in amusement parks or arcades or hotel lobbies only, but in the home, too, and with a sophistication about them that even I did not envisage.

Well, then, what lies ahead? Having been successful in my first attempt to peer into the muddy ball that masks the future in this connection, and not being sensible enough to quit when ahead, I shall try again.



Imagine a field on which you have nine players represented, and with each one independently controlled — nine joysticks with yourself having to leap from one to another with the aplomb of a symphony conductor.

ADDING A DIMENSION

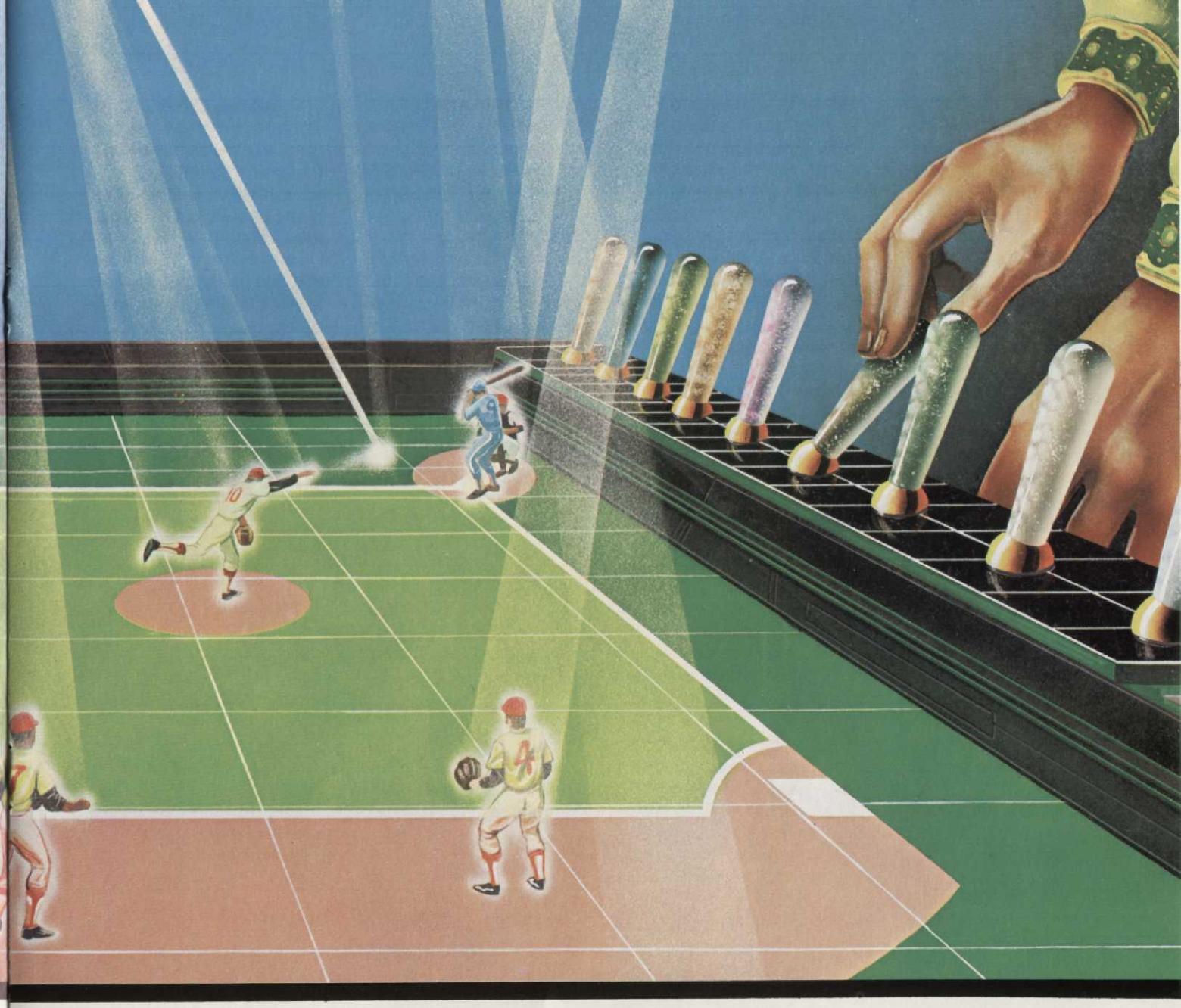
The video games of the present are essentially exercises in two dimensions, and are geometrically simple even within that limitation. Objects move at constant speeds in straight lines. Even when they turn, it is from one straight line into another. In this sense, the games are less complex than the old-fashioned pinball games, where the balls moved in curved paths and where they accelerated as they slid down the incline of the board.

Surely, in the hot competition to produce ever stronger challenges to the player as he grows in videogame-sophistication, the computerized mechanics of the game will be enhanced to produce objects that curve and accelerate, too.

The fairest way of doing that would be to simulate a gravitational field like that of Earth, with objects moving in a parabolic path. We have grown up with experience in such things and we can imagine a video baseball game in which the batter must strike a ball travelling in a realistic path, and in which an outfielder must then quickly move across the field to be under a ball moving in an arcing parabola.

Such videogames, once they manage to imitate nature, will surely come to outdo nature, too. The motion of balls in the air is parabolic because the gravitational field is constant, but what if the field were not constant, but weakened rapidly with height above the ground (as it would in a rotating space settlement)? What if there were the video equivalent of randomly produced gusts of wind that would unexpectedly hasten the ball or slow it in its flight, with the outfielder forced to adjust his own movements to suit?

We might imagine a baseball game in full complexity. The player may be forced to consider, for instance, when and whether the pitcher would attempt to pick off a threatening base stealer. Yet all of this would be sharply limited



as long as we cling to two dimensions.

We can imagine a variety of devices for simulating a third dimension by means of perspective — or by motion varying according to the rules of projective geometry — but none of this will compete with anyone who develops the real thing.

Will the time come when the videogame controls will deal not with a television screen but with a flat area upon which images are projected holographically? Imagine a field on which you have nine players represented, and with each one independently controlled — nine joysticks with yourself having to leap from one to another with the aplomb of a symphony conductor. The computer itself controls the batter or, better yet, a second player does.

In fact, if we want to become grandiloquent indeed, we can imagine the living-room floor cleared, and nine players on a side. Different people come to bat (that is, different people come to the batter's joystick, and in fixed order) while the nine players of the team in the field each grip his or her own joystick. The computer itself is the umpire and from its decisions there is, of course, no appeal.

Football, basketball, hockey, soccer, tennis — every game might be simulated three-dimensionally, and what heart-stopping events might be experienced by players who, in real life, would never think of themselves as athletes.

It might well kill "real" sports or, at least, reduce their importance in the scheme of things — and this might not be a colossal tragedy, either. It could easily be argued that in "real" sports, the average American is nothing but a passive spectator, whereas in 3-D videosports, he or she would be a participant and a strategist, even if not through direct muscular intervention. Remember, too, that in videosports, women and youngsters of both sexes could compete in full equality with male adults.

SUBTRACTING THE HAND

In the present-day videogames, it is the hand that is the mediator of the motion. It pushes the joystick this way or that. To be sure, the hand is under the control of the brain, but it is the very essence of the game that true skill and success comes only when the control ceases to be conscious. The hand has to exert pressure in this direction or that in response to what you see on the screen — and must do so without conscious volition on your part.

Yet even the most skilled and independent hand cannot respond with total perfection.

Will the time come when the hand will be short-circuited out of competition? Will it be possible that a headset of some part can be donned with electrodes fitting closely at two or more parts of the skull so that the feeble brain impulses can themselves act to produce the necessary motion on the screen or in the holographic field?

This will represent an enormous increase in freedom. Where the brain is used directly in bringing about action, we become scarcely aware of our own interference.

We can imagine the players at the videosport (to return to our earlier vision), each controlling his (or her) player so intimately as to be convinced that the player is engaging in independent action. The hands are freed to wave excitedly and the voice to yell encouragement.

It will be increasingly difficult, under such circumstances, to distinguish



between the computer game and reality, and it is not impossible that many enthusiasts may much prefer the world of the computer. It could seem to them the only worthwhile world, and we would have a real-life parallel to the motion picture *Tron.*

This may raise the possibility of social pathology to many. (There are those, after all, who fear the social damage of present-day videogames even at the very primitive level at which they now exist.) But then there has always been a tendency to wish to escape from reality at least temporarily, and no doubt there were hard-headed realists in 800 B.C. who objected to people sitting around the dining table, listening to Homer smiting his lyre, and losing themselves in his recitation of impossible tales concerning the Trojan War.

Then the videogame of "story" begins to approach the complexity of life itself, and the viewer can *live* the story, and begin to pay some of the penalties, as well as experiencing some of the joys, of life itself.

MULTIPLYING THE POSSIBILITIES

So far I have talked only of games in which there are a severely limited number of options. If we return to baseball, the ball may be struck in many different ways, and the number of possible situations may seem infinite, and yet they are all controlled by definite rules of an excessively simple kind. The players must come up in order; they must progress about the bases in a particular way; they must, in the field, catch and throw according to clear directives, for there is a distinct and easily judged dividing line at every point between moves that are permissible and those that are not.

Fiction, however, is also a game, but a much more complicated one. The fiction writer can, in constructing his story, deal with as many or as few players as he wishes; can make up his own rules entirely according to his own wishes — for action does not even have to be "true to life," especially if he writes science fiction or fantasy; he can stretch out time or telescope it; move from place to place at will; introduce surprises at every moment; and end happily, sadly, ironically, sardonically, or in tragedy, comedy, farce, triumph, or disaster.

Eventually, out of infinite possibilities, the writer chooses one, only one, and that final version might then appear in a book or on a screen. This, the reader or viewer must experience more or less passively, and without the reasonable possibility of variation. But what if the story is presented not as a single line (however complexly it may curve) but as a "tree," in which there are fork-points at which the story may go this way or that depending on the choice of the viewer.

The viewer would then be an active participant, and could live a life of excitement, or of emotion, or of cerebration, that is divorced from "reality." He can live the same story over again, making different choices at various fork-points, uncovering new fork-points perhaps that had remained totally hidden before. This will add enormous complexity to something we have all experienced — that of re-reading a favorite story or re-seeing a favorite movie. We will be re-viewing not one tale, but a large family of related tales, and choosing our favorite from among them. A thousand people viewing the same story-tree may each end up with a different favorite version, and have the feeling that that version is peculiarly their own since, in a sense, their own choices — mediated by their likes and dislikes — have created it.

Indeed, as programmers become more skilled and computers more elaborate, it might be possible to insert variabilities that are not spelled out completely. Uncertainties and potentialities may not be totally defined so that, in a sense, a story might go its own way in a manner that no one has, or could, predict. Then the videogame of "story" begins to approach the complexity of life itself, and the viewer can *live* the story, and begin to pay some of the penalties, as well as experiencing some of the joys.

The penalty may not be final. The player may not actually die, if the character into whose role he or she has slipped dies, or experience a violent accident or a debilitating disease — but he may experience love and frustration to the full, and he might be wise to end a story if it begins to cut too near the bone.

DIVIDING THE RISK

And, finally, the game of "story" might deliberately set up a "real" situation. In "real life," we are constantly making high-risk moves in which the consequences are pure gamble, and in which the stakes can be anything from the gain or loss of a few dollars to the salvation or destruction of a nation or (these days) of the planet.

It might be useful to set up a game that duplicates, as nearly as possible, the variables that actually exist and then lay it out to see what might happen. These days, life is not necessarily a zero-sum game. If the Soviet Union loses, we don't necessarily win in direct proportion to their loss (or vice versa). It may well be that some actions will lead to a win for most or all of the world, or a loss for most or all of the world.

Think how useful it would have been this year if Argentina could have set up a game in which it sent troops into the Falklands and then played out the consequences; or if Israel had set up a game called "Lebanese invasion" to see what would, or might, happen; or if the American administration and Congress could play an annual game called "Fiddling the Budget."

Who knows? We might end up relying for our prosperity and safety, for the very life of the planet and of civilization, on how well we can set up appropriate videogames, and how carefully and honestly we play them.

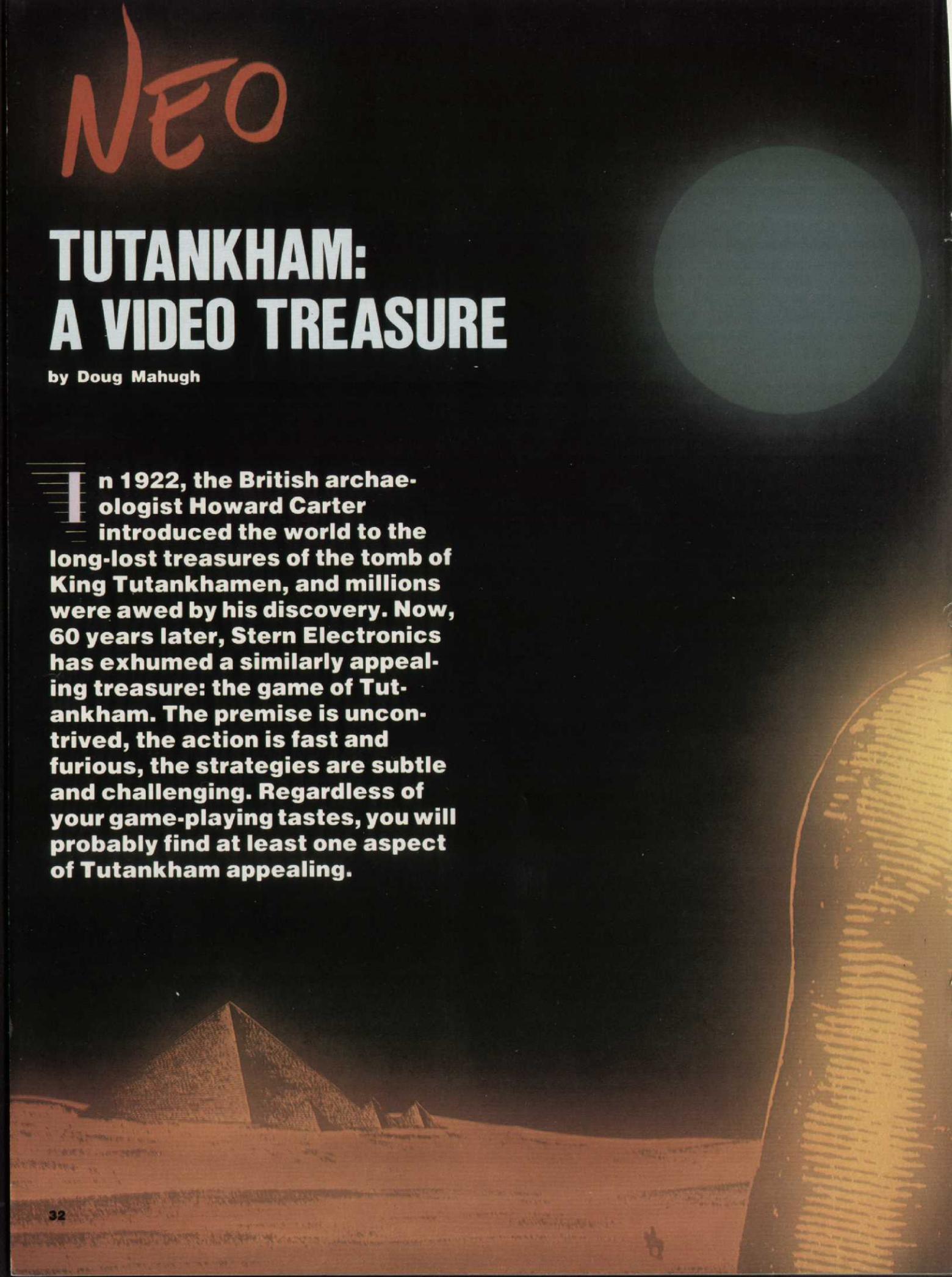
It would certainly be better than the game of "war," as we have played it for five thousand years.

NEO

TUTANKHAM: A VIDEO TREASURE

by Doug Mahugh

In 1922, the British archaeologist Howard Carter introduced the world to the long-lost treasures of the tomb of King Tutankhamen, and millions were awed by his discovery. Now, 60 years later, Stern Electronics has exhumed a similarly appealing treasure: the game of Tutankham. The premise is uncontrived, the action is fast and furious, the strategies are subtle and challenging. Regardless of your game-playing tastes, you will probably find at least one aspect of Tutankham appealing.





Parrot
40 Points



Curse
60 Points



Ring
500-4000 Points



Crown
500-4000 Points



Explorer



joystick. The only other control is the flash bomb button, located just to the left of the firing joystick. Unfortunately, this button is hard to find without taking your eyes off the screen. Shorter joystick handles, as used for the Defender up/down lever, could have solved this problem.

The motion control responds quickly and smoothly. There is only one speed available, as in most other maze games. The only place you'll have trouble with the motion control is in large open areas, where the explorer's movements are constrained by an invisible background grid. This will reverse a common intuition you might have — to feel safe out in the open. In Tutankham, it's always better to be stuck in a dark corner with your opponents than to have to face them out in the open.

The fire control only allows horizontal firing. This will at first seem unfair, but it is really the only way to make a shoot-em-up maze game challenging; if you could fire in any direction, it would be ridiculously easy to just blast your way through the maze. The only other limitation of the fire control is that only one shot may be active at a time — in other words, you can't fire again until your first shot has hit something. This is only a factor in long corridors and large rooms, where your shots must travel very far before hitting a wall.

A unique and useful feature of Tutankham's firing control is that both the bullet and its trailing streak can destroy enemies. Hence, it is even possible to shoot an enemy in a vertical corridor, by firing into the wall while he's following you closely. The bullet's trailing flash will linger for a fraction of a second and destroy him as he passes through it.

As for Tutankham's effects: they're great. Color and detail are tastefully used in all of the mazes, and the golden mask at the end of maze 4 is particularly impressive. The only graphic effect that isn't top-flight is the character animation, which is sometimes crude. Bats, for example, look more like flying peanuts, potatoes, or pairs of dice.

The sound effects, like the graphics, are well done. At the start of the game, a frenzied quasi-Egyptian riff



plays, and later a haunting melody accompanies the unveiling of each treasure. Musket shots have just enough phony reverberation to sound realistic for a closed room, and the tunnels have an interesting sound all their own.

All in all, Tutankham is a well-planned game with great mass-appeal potential. It combines simplicity of play with a strong story line, which means that players are able to understand and enjoy the game very quickly. And even after playing it for a while, the challenge of opening the multiple-locked doors of the higher mazes will keep players interested in the richly varied game of Tutankham.



The First Maze
At the start of the first maze, quickly shoot your way past the lair at the center of the screen. If you're timid here, the asps and vultures will block your path. Once you reach the top, go past the tunnel entrance and grab the key (just off this screen), and then drop through the tunnel. After emerging from the tunnel, pick up the 500-point crown to your left and then continue to the right.

Follow the path to the top, as drawn. Detour just enough to grab the 1000-point ring near the center of the screen. Be wary of bats, which will begin flying out of the lair above you.

This is the toughest part of the first maze. A 1500-point ring resides in the deep well to the right of the last lair. Defend the entrance until the coast is clear, and then rush down and snatch it, as the explorer shown here has done.

If you make it safely to the treasure room, your key will unlock the doors, which slide open to reveal a map. This map, unfortunately, bears no resemblance to the catacombs ahead. (This may be why it's worth 0 points).

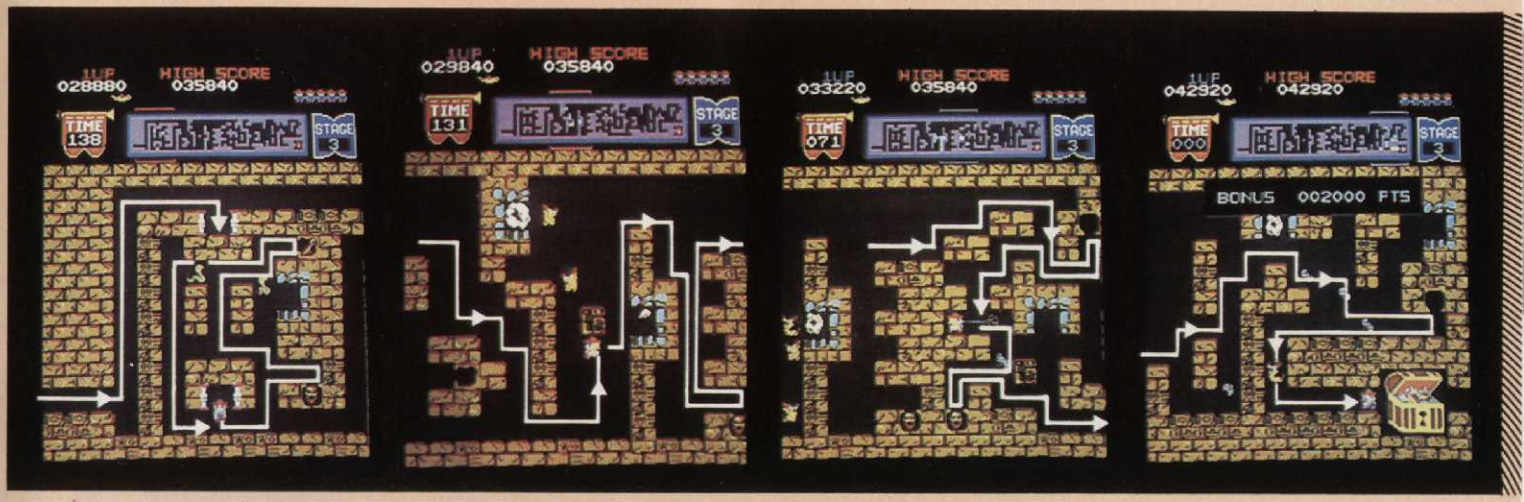


The Second Maze
At the beginning of the second maze, a ring will appear in the opening just below the first lair. Get it quickly, and then go through the tunnel to the top of the screen. Once there, move to the right to find a key and another prize, then go back through the tunnel and continue to the right.

Ignore the second key—you can only carry one at a time—and continue toward the lock at the right. Sometimes the safest path to the lock is up through the tunnel and then up the entire vertical corridor to the right. Try to get through this stage without using a flash bomb, if possible—you'll be needing it later on.

Now you must return for the second key. Coming back down the corridor is more difficult than getting up it, so you may want to use a flash bomb. Or, you can use the small opening halfway up to sit out the storm, as the explorer shown here is doing. Eventually, there will be enough of a gap in the bats and vultures to allow you to continue.

Cross the open area and pick up the last prize. If many monsters have followed from the invisible lair, stop with your back to the wall and shoot them before moving down to the door. The lair is off-screen at this point, so no additional monsters will come out.

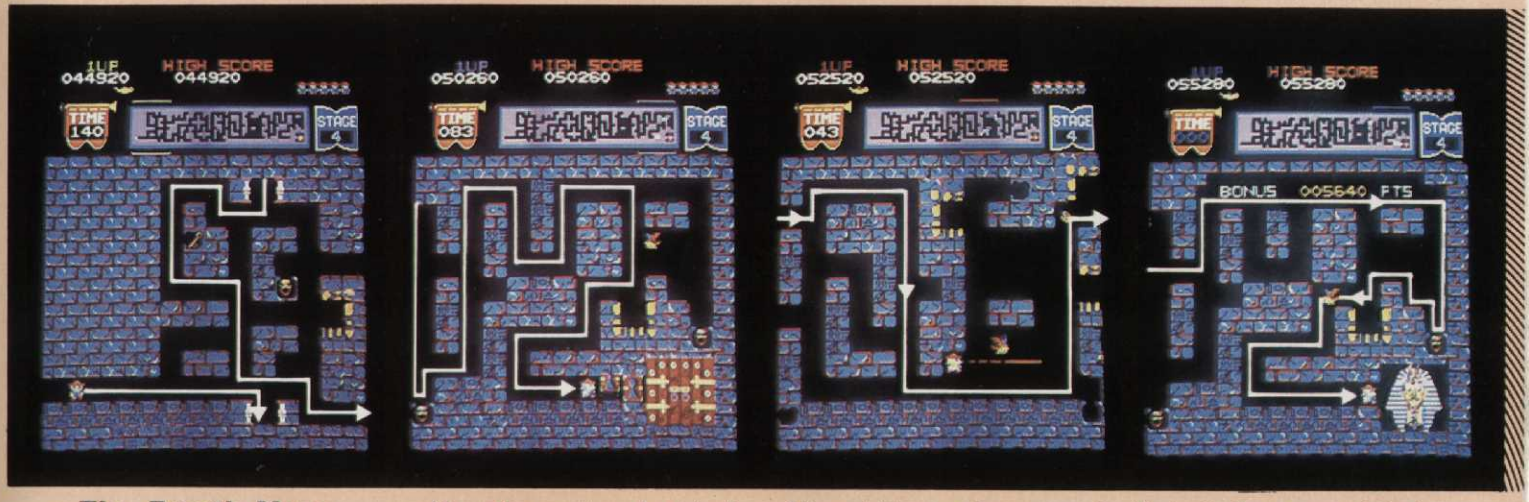


The Third Maze
At the start of the third maze, go through the tunnel and try to get the ring and key before returning to the top of the screen. This is a dangerous maneuver, but use your flash bomb only as a last resort — you'll need it just ahead. Remember, if you skip this key you'll still have to come back for it later, when the game is even faster.

This is the hardest spot in the third maze, because you must pass through an open area with lairs on both sides. Sitting just under the bricks at the center, as this explorer is doing, is a good way to ambush the bats and lions as they pass by. But even that doesn't always work, and you may want to use a flash bomb here.

Notice the two rings at the bottom of this screen. They're hard to get, but leaving them behind can cost you 7000 points. Try to get them both early — possibly even before unlocking the first door. Otherwise, you may not be able to get them at all, after the bats and lions start coming out faster.

Completing the third maze will bring you to a chest full of gold and jewels. You now need only one more treasure to make your collection complete — the golden mask of Tut himself.



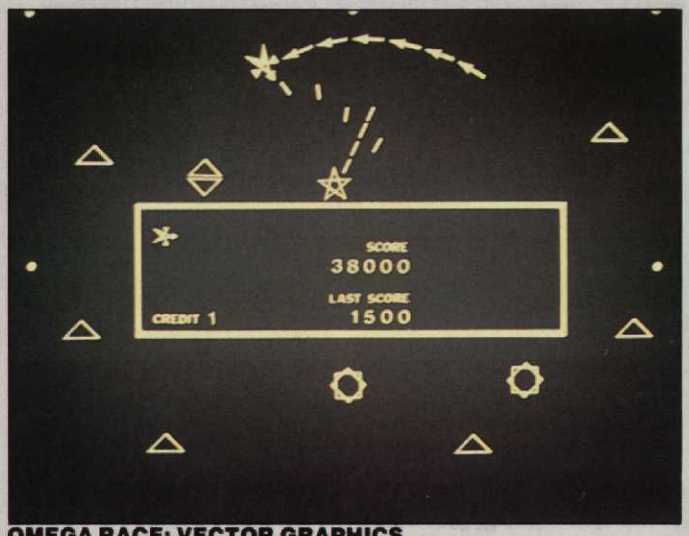
The Fourth Maze
Drop through the tunnel and pick up the key to the left. If possible, go down and get the prize also. But don't worry too much about it — the bonus for finishing the fourth maze is big enough that the prizes are no longer worth great risks. Just try to get through the maze with that first key.

Here the explorer is unlocking the first of two locks on the fourth maze's treasure room. Now he must return back through the maze to get the second key. The ring at the right is easier to get than some of the others — you may want to grab it if you get the chance.

After picking up the second key, this section of the screen will be your biggest challenge. Three lairs surround this vulnerable open area. If you have a flash bomb, this is a great place to use it.

Unlock the second lock, and you've reached your final goal: the golden mask. The bonus for completing this maze is a whopping 5000 points. But don't start celebrating yet — now you must go through the same four mazes, each with an additional key. And all of the opponents will be even faster than before. Happy exploring!

ARCADE ART: A STUDY IN COMPUTER GRAPHICS



OMEGA RACE: VECTOR GRAPHICS



DEFENDER: 256 COLOR POSSIBILITIES



ROBOTRON: DYNAMIC COLOR

The first and most important development in arcade graphics was simple motion. After all of the graphic activity in the past decade, it's hard to appreciate the fact that, in 1970 — when *Computer Space* came on the market as the first coin-operated video game — controlling the motion of an image on a video screen was an exciting new sensation. After 20 years of passively watching television, Americans were endowed with the ability to control the picture, and the video game industry was born. And once things started moving — literally — new graphic effects have been showing up at a dizzying pace.

Space Invaders came out eight years after *Computer Space*, but the graphics technology used was quite similar. It was more realistic, mainly because of a higher resolution screen, and had a more interesting game concept. *Asteroids*, a year after *Space Invaders*, introduced two important developments (1) complete freedom of movement in two dimensions, and (2) the use of vector graphics.

Vector graphics is a method of drawing objects on a video screen that uses all straight lines. If you can draw an object with a pencil and a ruler, you can draw it with vector graphics. This type of graphics is found in *Asteroids*, *Omega Race*, and a few other games. But by far the most common method of creating objects on a video screen is raster graphics. In raster graphics, the screen is divided into many small rectangles, like a brick wall, and each rectangle is turned either on or off. This is the approach used in video games from *Space Invaders* to *Reactor*.

Color came into the picture with *Galaxian*, in early 1980. *Galaxian* sold 50,000 units — only *Defender*, *Pac-Man*, and *Ms. Pac-man* have sold more since — and a great part of that popularity can be attributed to the fact that *Galaxian* introduced color to video games. Without color, *Galaxian* would have been a *Space Invaders* clone; with color, it was an important step in the evolution of arcade graphics.

By the end of 1980, a whole slew of colorful new games had been introduced. Up to this point, developments in arcade graphics had been fairly simple, from the player's point of view. But then a game came along that used color as only a computer can use color. The game was *Defender*, and there were two major advances it brought with it: overwhelming variety of color (256 distinct shades), and the use of *dynamic color*.

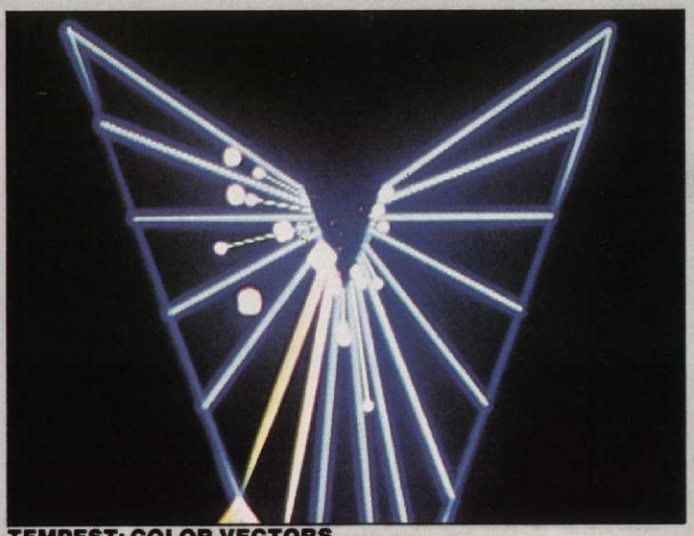
Dynamic color is always changing, cycling through many different colors every second. In *Defender,* the score box and laser shots are dynamically colored. Dynamic color is also used to bring an eyecatching glow to the attract modes of *Tutankham* and *Stargate,* or to give *Robotron's* border its incessant visual throb. If the number of colors is great enough, and the cycle time fast enough, the overall effect is a shimmering white (white being the combination of all colors). This effect occurs in *Robotron's* Brain Wave. The stop-action shot shown here has caught a single frame of green and purple, just two of the many colors being cycled through to give the impression of white.

Until a year ago, all of the vector graphics in the arcades were black and white. This is because color vectors are much more difficult to generate than color rasters. But then came *Tempest* and *Space Fury.* Each of these games are limited to eight colors in one area of the screen at a time. But the effect of color vectors is impressive nonetheless. The reason for the eight color limit is that, for a line to be clear and bright, it must be a simple combination of the three basic colors: red, green, and blue. The exact set of eight colors can be changed by adding more green, red, or blue to all of them, but there will still be only eight hues. Watch for more use of color vectors in the future.

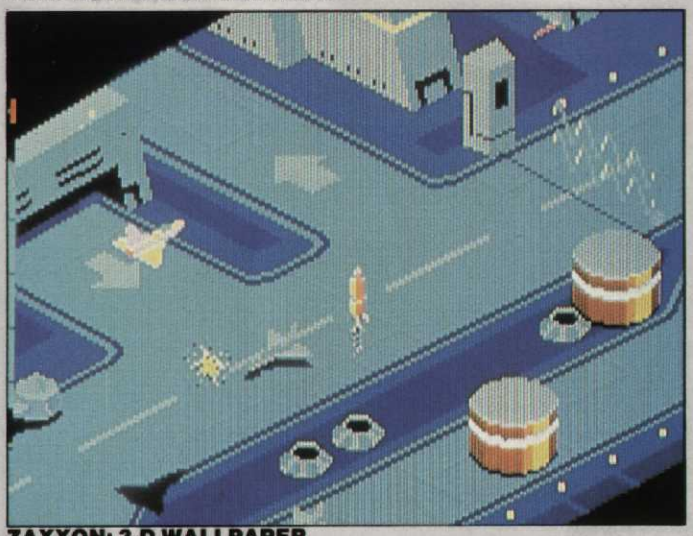
The next major development in arcade graphics was the use of wallpaper — not on the walls, but on the screen. "Wallpaper" is an elaborate background scrolled across the screen while the game is in play. The background is simply for decoration, since the player's ship can't interact with it. "Wallpapering" has been brought to a new high by *Zaxxon. Zaxxon's* wallpaper is so convincing that many players think of *Zaxxon* as a 3-dimensional game.

Another subtle development in arcade graphics is the use of color animation. *Reactor* is a good example of color animation. In color animation, a pattern is drawn, and then each shaded area is constantly cycled through a set of colors, one color out of step with the adjacent areas. The net effect is that the colors themselves appear to move through the object. This provides the "expanding core" effect in *Reactor.*

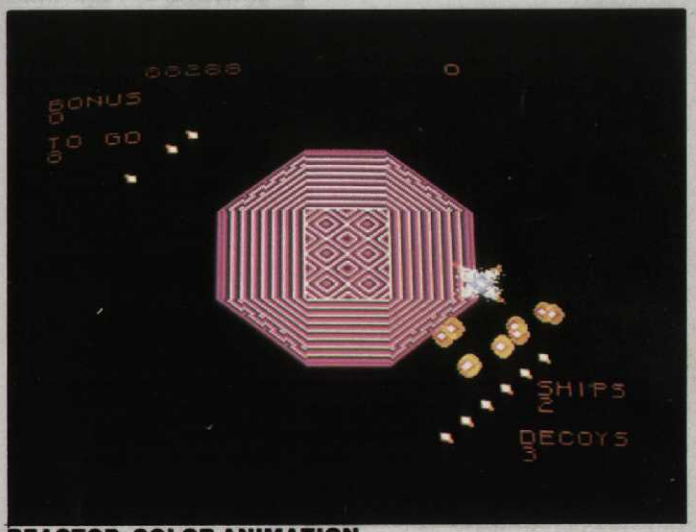




TEMPEST: COLOR VECTORS

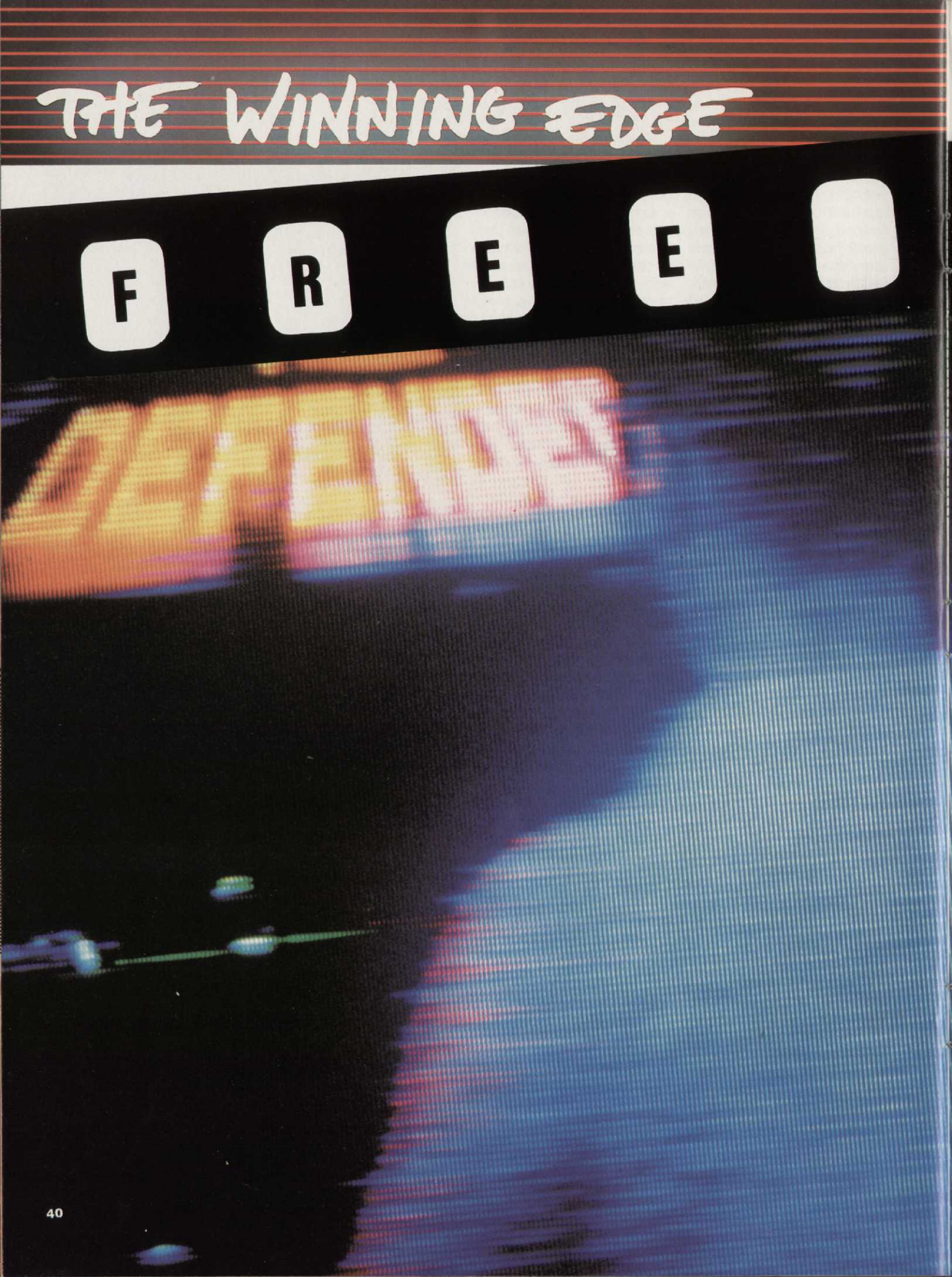


ZAXXON: 3-D WALLPAPER

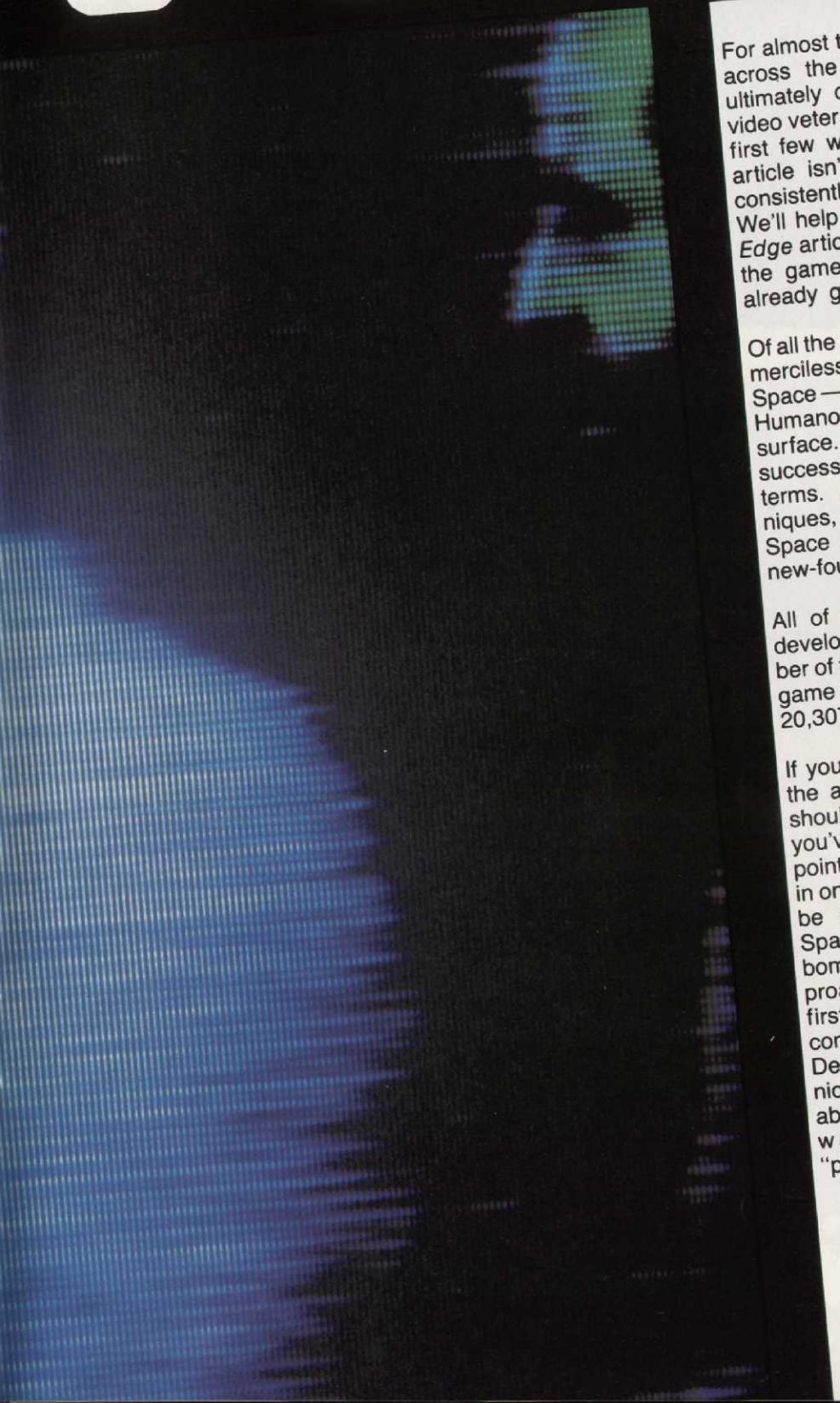


REACTOR: COLOR ANIMATION

THE WINNING EDGE



S P A C E



For almost two years now, 50,000 Defender machines across the U.S. have attracted, challenged, and ultimately defeated even the most experienced of video veterans. If you're still trying to get through the first few waves of Defender, turn the page. This article isn't for you. If, on the other hand, you consistently get past ten or fifteen waves, read on. We'll help you play indefinitely. As in all *Winning Edge* articles, we are not teaching you how to play the game. We are helping you to improve an already good score.

Of all the many retributions dealt the player by this merciless game, none is more brutal than Free Space — the punishment for failing to protect the Humanoids that wander across the planet's surface. The purpose of this article is to reduce successful Free Space play to its simplest terms. After you've mastered these techniques, you may find yourself going into Free Space intentionally — just to show off your new-found prowess.

All of the strategies presented here were developed by Doug Mahugh — a new member of the *JoyStik* staff. His record Defender game went 24 hours long. His high score is 20,307,600.

If you stay calm, think clearly, and follow the advice presented here, Free Space should never be a problem again. Once you've fine-tuned your approach to the point where you can get through a wave in one turn with one bomb, you'll actually be able to play indefinitely in Free Space, building up extra ships and bombs all the while. Before this approach was perfected, surviving the first four waves of Free Space was considered a minor miracle by most Defender players. By using this technique, however, players have been able to breeze through dozens of waves of this so-called "punishment."



GENERAL RULES

There are four general rules that are essential to Free Space success. Learn them by heart. These are the most common mistakes among *good* Defender players. Once you know the general rules, you can begin the specific strategy.

DON'T USE SMART BOMBS FOR SURVIVAL

When in Free Space, it's better to lose a ship — by inevitable collision or unsuccessful hyperspace — than to waste a Smart Bomb. Use Smart Bombs in strategic situations only. The one possible exception is when you have more bombs than ships in reserve. You can then afford to be more liberal with the Smart Bombs.

SLOW DOWN

There's no surer sign of a Free Space rookie than flying along at full speed and firing at anything that moves. Free Space is best approached slowly — for two reasons. First, the speed of the Mutants' bullets will be determined by your speed. If you're moving fast, their bullets move fast; slow down, and their bullets will be proportionately slower. Second, slowing down allows the Mutants and Swarmers to cluster together in separate groups, which is important in the next observation.

FOLLOW PRIORITIES

Rather than haphazardly retaliating against opponents in the order they come onto the screen, try to eliminate them one class at a time. Mixed crowds are hard to handle; most players do best by clearing Swarmers first, Bombers second, and Mutants last.

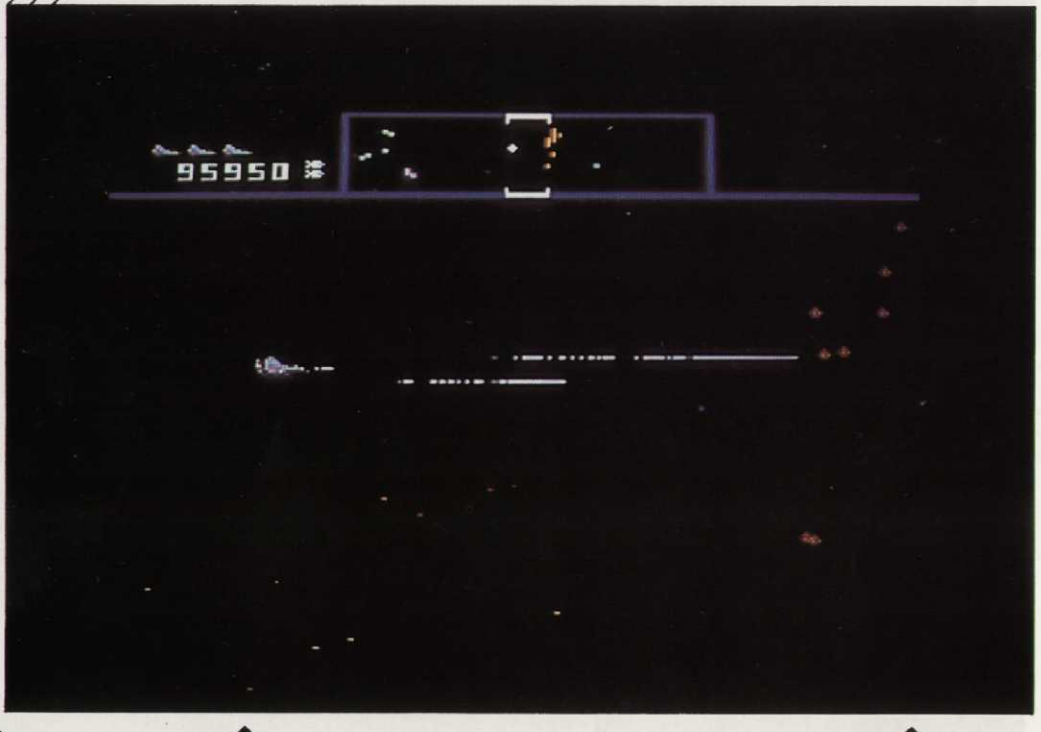


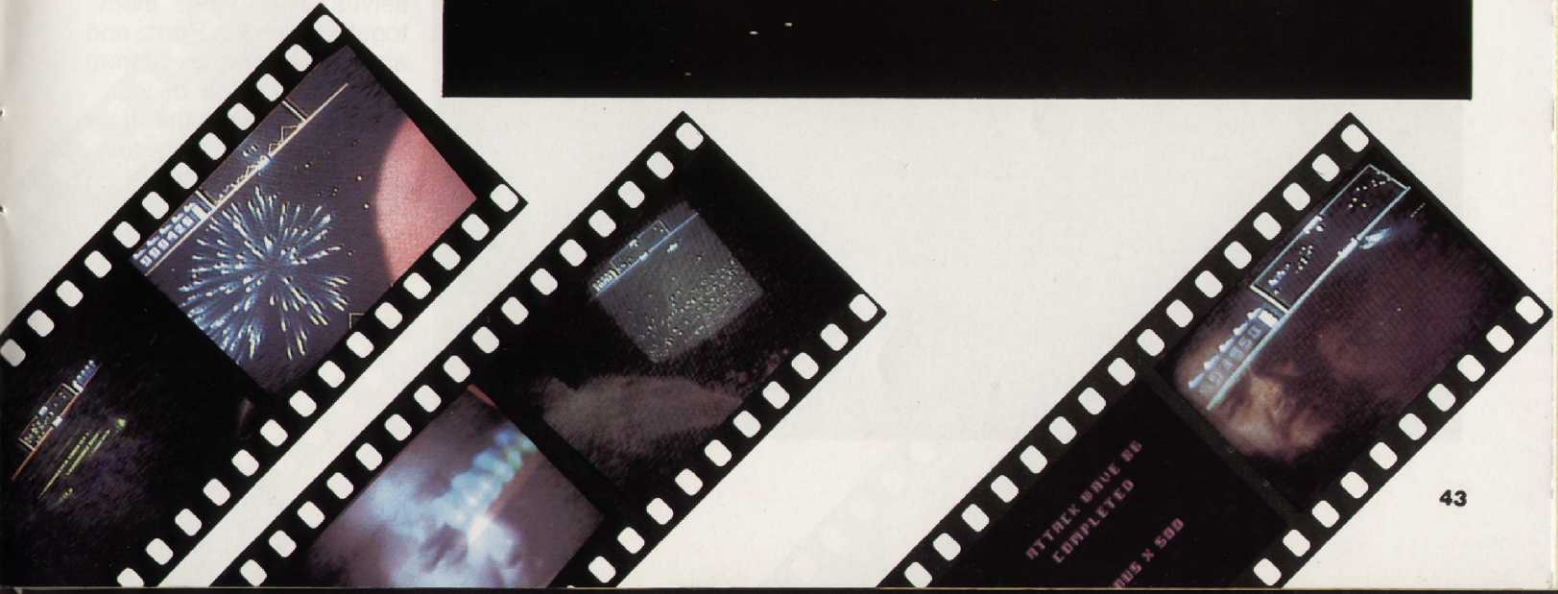
USE THE REVERSE LINE

Mutants don't always follow the shortest path to your ship; there is an invisible vertical barrier at one spot in the planet's terrain that Mutants will never pass through. When you cross this line, all of the Mutants will immediately turn and run the other direction, knowing that they can't pass through the Mutant Reverse Line. By staying near the Reverse Line, you can use its power to keep the Mutants at bay while finishing off the Swarmers and Bombers.

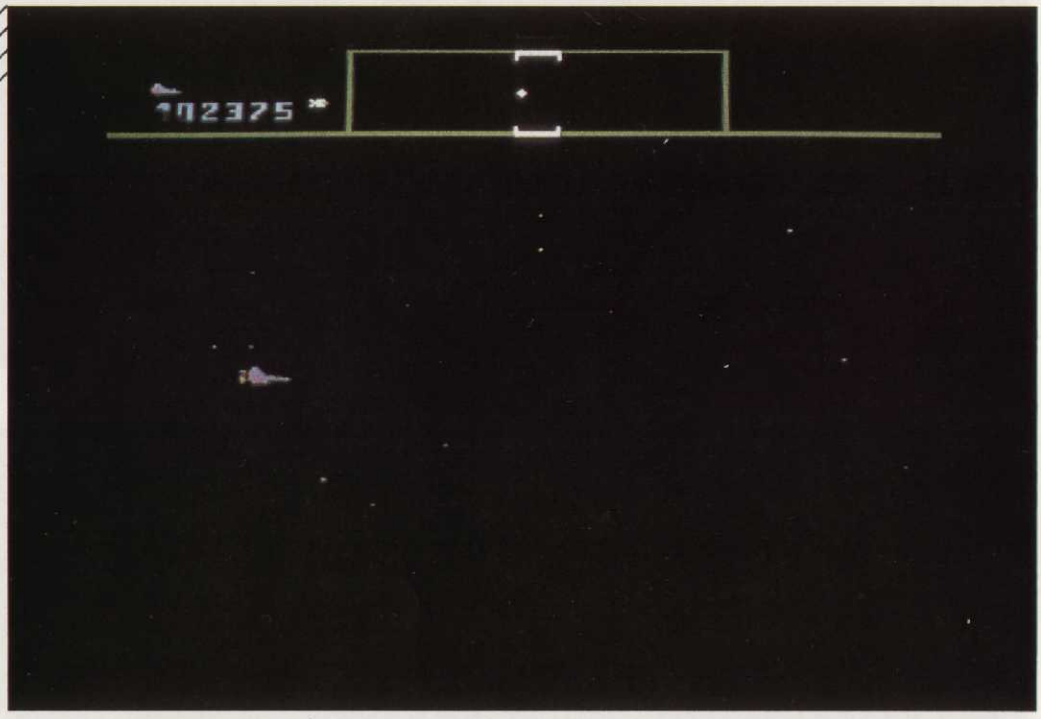


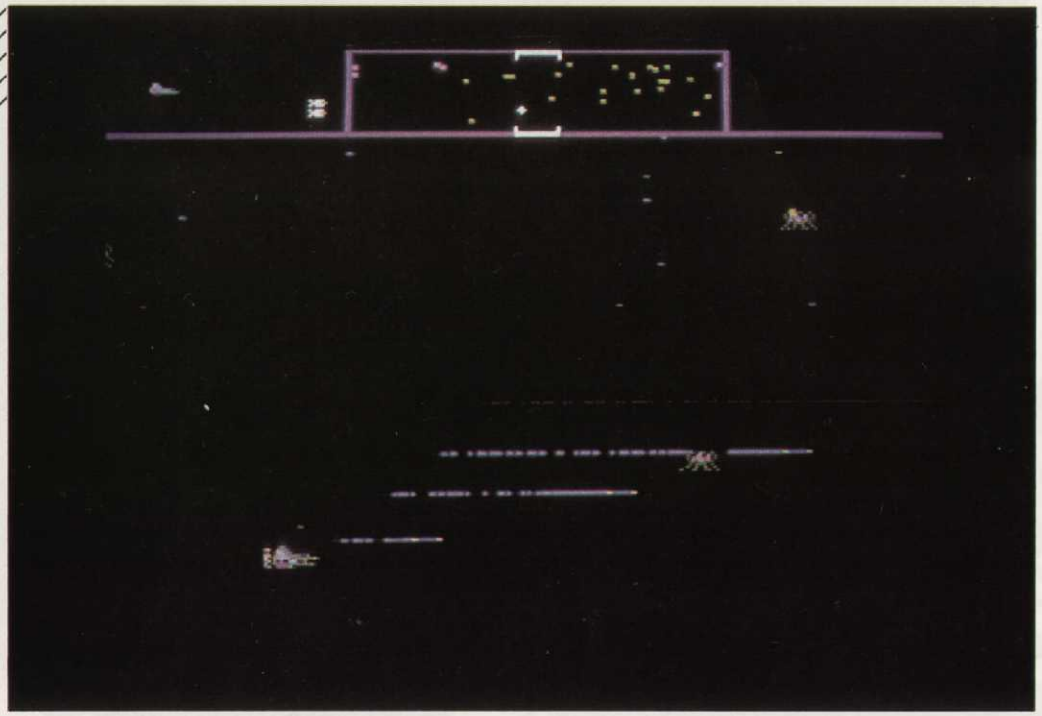
Although the Mutant Reverse line is in the same location in Free Space as in normal play, it's easy to lost track of without a terrain to guide you. If you aren't sure where the Reverse Line is, keep moving in one direction until all of the Mutants reverse. This will give an accurate indication of the line's position.











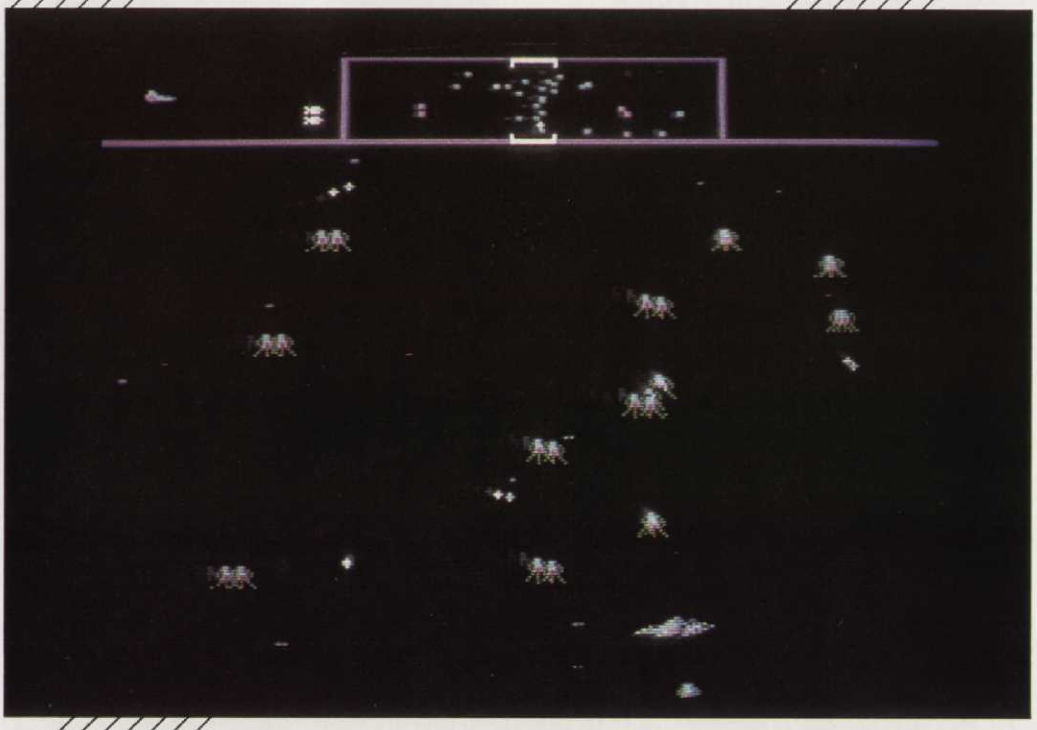
SPECIFIC STRATEGY

So far, we've been looking at general techniques — now it's time to get specific. A very reliable Free Space strategy is presented over these two pages. This approach is most helpful at the start of an Attack Wave, but it can be used anytime there are a large number of Mutants left in the wave.

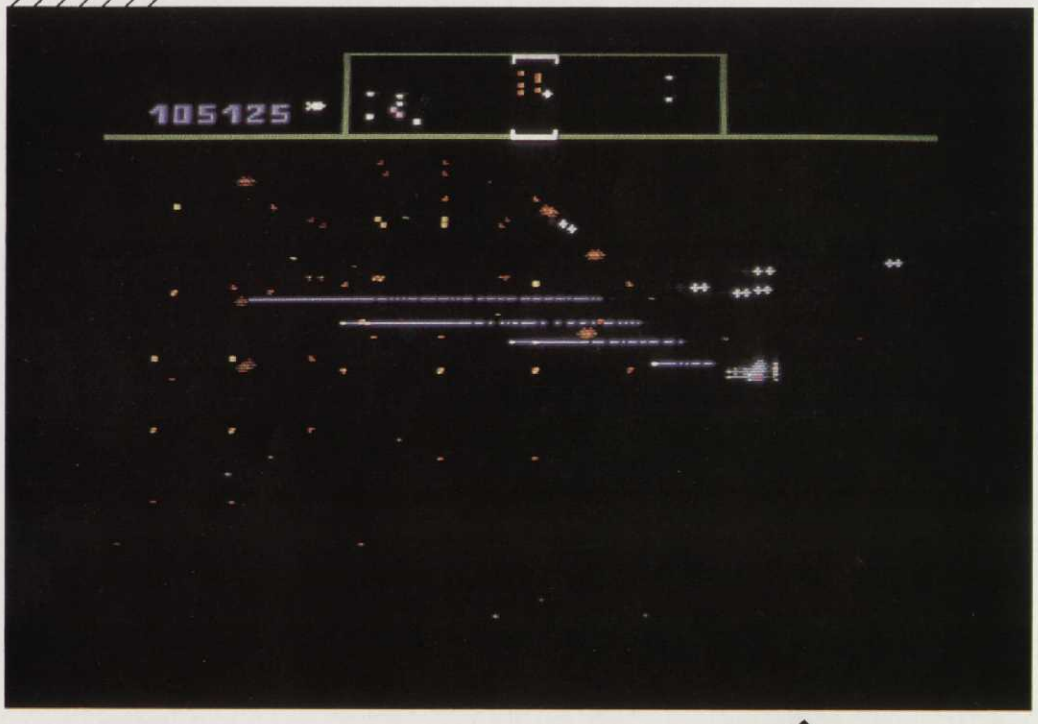
The first step is to get into position. At the start of your turn, you will have approximately one second of free time between when your ship appears and when the Attack Wave beams in. During this time — a second is a long time in high-speed games like Defender — move to the left and up to the top of the screen. Then turn back to the right and wait for the opponents to appear.

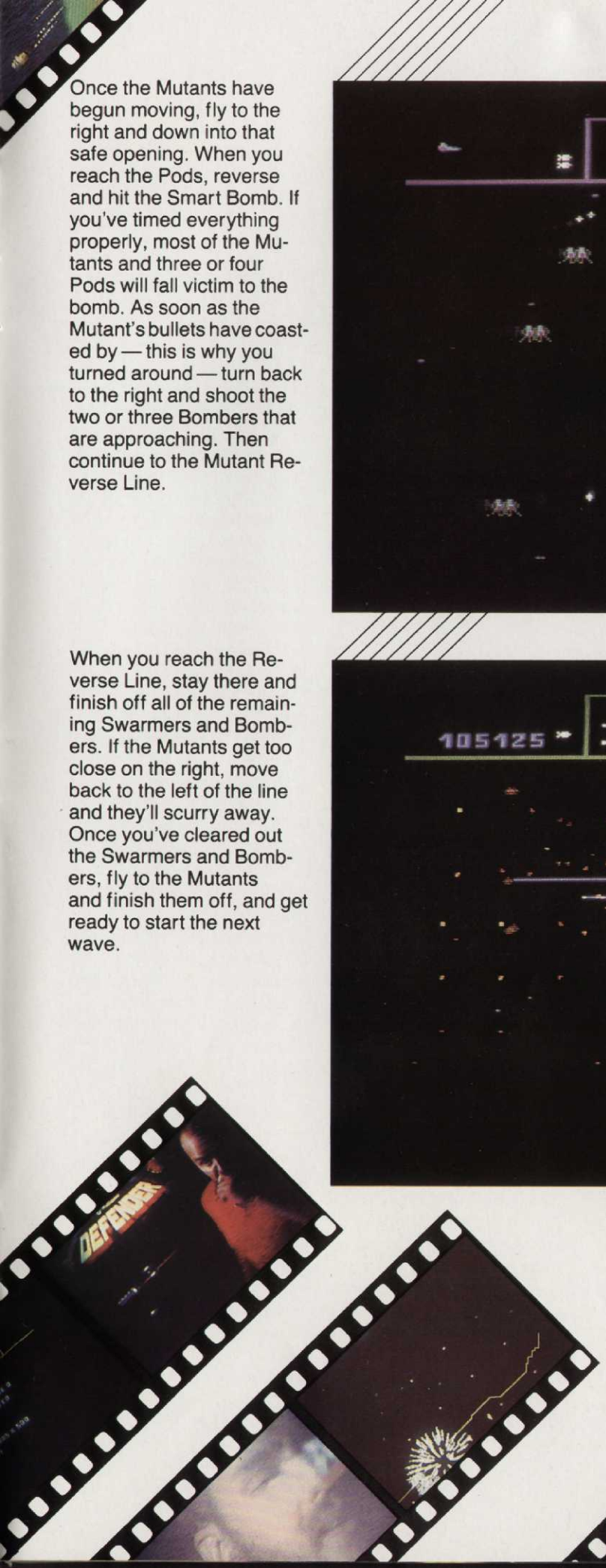
When the Mutants appear, they will react to your position by moving upward and to the left themselves. This brings them together with the Pods, and also draws them away from the bottom edge of the screen. You are therefore left with a relatively safe path into their midst.

Once the Mutants have begun moving, fly to the right and down into that safe opening. When you reach the Pods, reverse and hit the Smart Bomb. If you've timed everything properly, most of the Mutants and three or four Pods will fall victim to the bomb. As soon as the Mutant's bullets have coasted by — this is why you turned around — turn back to the right and shoot the two or three Bombers that are approaching. Then continue to the Mutant Reverse Line.



When you reach the Reverse Line, stay there and finish off all of the remaining Swarmers and Bombers. If the Mutants get too close on the right, move back to the left of the line and they'll scurry away. Once you've cleared out the Swarmers and Bombers, fly to the Mutants and finish them off, and get ready to start the next wave.





KABOOM!



KABOOM!

Activision Cartridge for the Atari VCS System

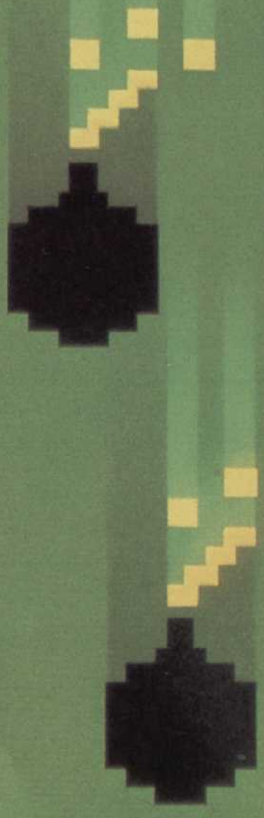


Although Kaboom! at first appears to be another run-of-the-mill, oh-so-cute home video game, it is in fact both funny and — surprisingly — addictive. In it, a Mad Bomber (in black and white striped garb) stands at the top of the screen moving back and forth. This "Mad Bomber" has a maniacal penchant for dropping bombs, which you in turn must catch in your buckets of water in order to score points and stay in the game. Your water buckets are controlled by the left paddle controller. Difficulty setting "a" halves the width of the buckets, making the game very difficult indeed! We recommend setting "b."

GAME PLAY

Initially, you are provided three buckets, stacked on top of each other, which cut a fairly large swath in the screen. This makes it reasonably easy to catch the first few sets of bombs. Also, the Bomber starts out slowly. As he becomes more skilled in the art of lighting and pitching bombs, his speed increases — as does the number of bombs he drops before stopping for a break. The bombs in each successive set are worth progressively more points. There are eight waves of bombs starting with 10 bombs in Wave 1 and increasing to 150 in Wave 8.

If a bomb hits the ground, it explodes, along with all the other bombs on the screen. At this point, the Bomber giggles momentarily and you lose one bucket (the bottom-most one).



You then drop back to the previous level and the next set of bombs comes a little more slowly again. This gives you a chance to catch your breath, which is important since with one less bucket you must be all the more precise in your movements. When you get down to just one bucket, it is such a small target for the bombs, that catching only a few bombs is an impressive accomplishment.

STRATEGY

Success at Kaboom! is achieved by not trying to catch each individual bomb, but by thinking of the screen as a connect-the-dot picture, with the buckets following the pattern. Do not concentrate on any one part of the screen, but take in the whole picture. You should echo the movements of the Bomber with your paddle. It takes a while to get the feel of it.

The Bomber uses random patterns, and some seem to be harder than others. No matter how fast the bombs are dropped, if they are fairly close together, it is relatively easy to catch them all. When the bombs scatter across the screen, however, the difficulty increases. The trick is to observe the pattern by which the bombs are falling and to move your bucket accordingly. A smooth movement of the buckets works better than jerky starts and stops, although some of this is necessary at various points in the game.

The first bomb in each new wave will be dropped from the place the Mad Bomber ended up after the previous wave or game.

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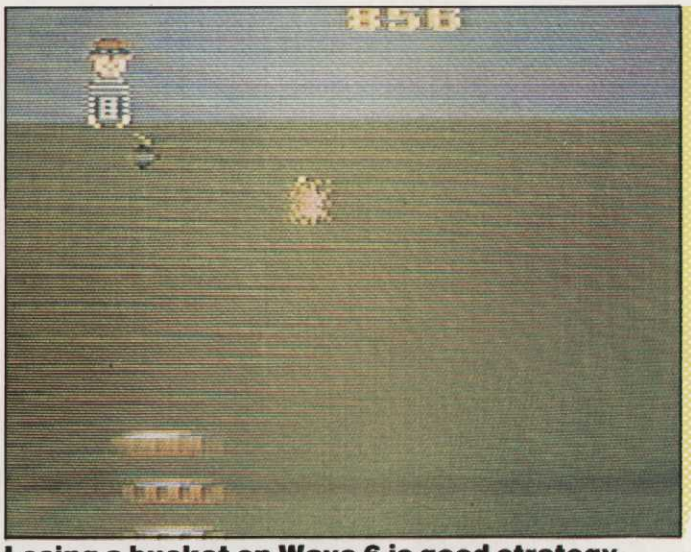
Note: Don't simply move your buckets under the position of the Bomber — especially if the Bomber is on the far edge of the screen. Move the buckets first to the center of the screen and then position them under the Bomber. This will protect you from the inaccuracy of control near the edge of the screen.

To start each new wave of bombs, press the paddle button. Do this immediately after the previous wave has finished to keep the pace and momentum going. Above all, don't let go of the knob. You'll invariably re-grasp it slightly differently and thus throw off your movement.

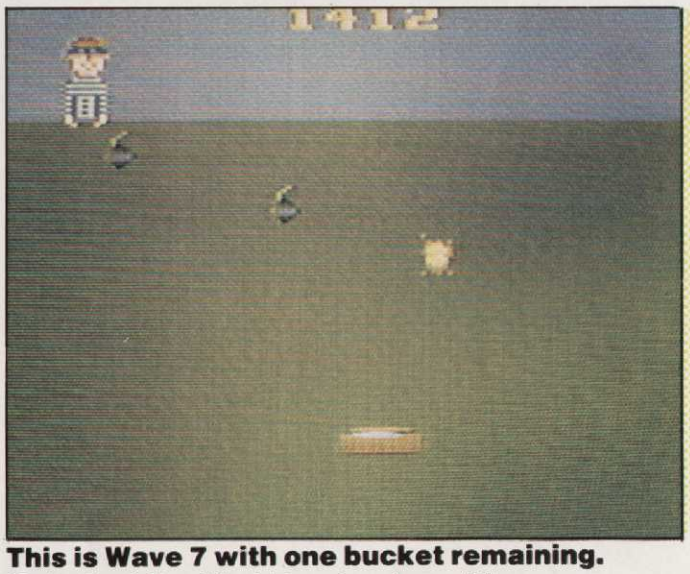
One feature of Kaboom! is that as you pass each 1000 points (2000, 3000, etc.) you get an extra bucket. However, you can never have more than three buckets at any one time. In other words, if you lost a bucket, the 1000 point plateaus will get it back for you. If you make it all the way to 550 with three buckets, the next set of bombs will bring you to exactly 1000. The idea here is to miss the very last (or close to the last) bomb in this set. This drops the speed of the bombs down a little in the next set and you get the bucket as you pass 1000. If you can manage to drop a bomb somewhere in the 1900s, 2900s, etc. it will work to your advantage.



Wave 1 is a snap. Use it to practice connect-the-dots strategy.



Losing a bucket on Wave 6 is good strategy. You'll earn a replacement at 1000 points.

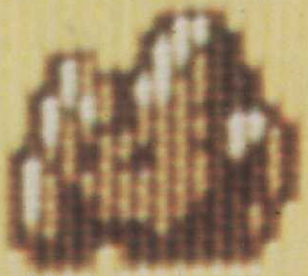


This is Wave 7 with one bucket remaining. Note that the Mad Bomber is smiling.

DIG DUG

by Doug Mahugh

If Atari ever sells the rights to a movie based on the game Dig Dug, Rodney Dangerfield would be a natural for the lead role. Dig Dug — as Rodney has whined for years — gets no respect. There's no respect from the public (one reviewer called it "generic video, a mental pacifier like prime-time TV"), and — even worse —



there's no respect from Dig Dug's on-screen adversaries. If his opponents haven't been eliminated in the allotted time, they haughtily saunter off the screen, denying Dig Dug even the martyr's glory of a fight to the finish. The Pookahs and Fygars, it seems, are too proud to fight with pathetic Dig Dug.

If Atari indeed based Dig Dug on the life and times of Rodney Dangerfield, they succeeded in an important way: they accurately copied Rodney's tremendous appeal. Whether they'll admit it or not, enough arcaders play Dig Dug regularly to make it one of 1982's most popular games. Dig Dug's popularity is a result of many proven mass-appeal game elements — a relaxed playing pace, simple controls, pleasant background music, and a non-violent theme. Although Atari's claim that "this is no ordinary garden-variety video game" is debatable, Dig Dug has proven itself a clever combination of traditional themes and subtle innovations. And *that* deserves a little respect.

ELEMENTS

Dig Dug

This small, white, burrowing robot is under your control. His purported task is to protect a vegetable garden from two varieties of burrowing monsters: Pookahs and Fygars. But in reality, Dig Dug's mission is to simply stay alive — Pookahs and Fygars are more intent on destroying him than eating the vegetables that grow in his garden.



Fygar



Dig Dug



Pookah

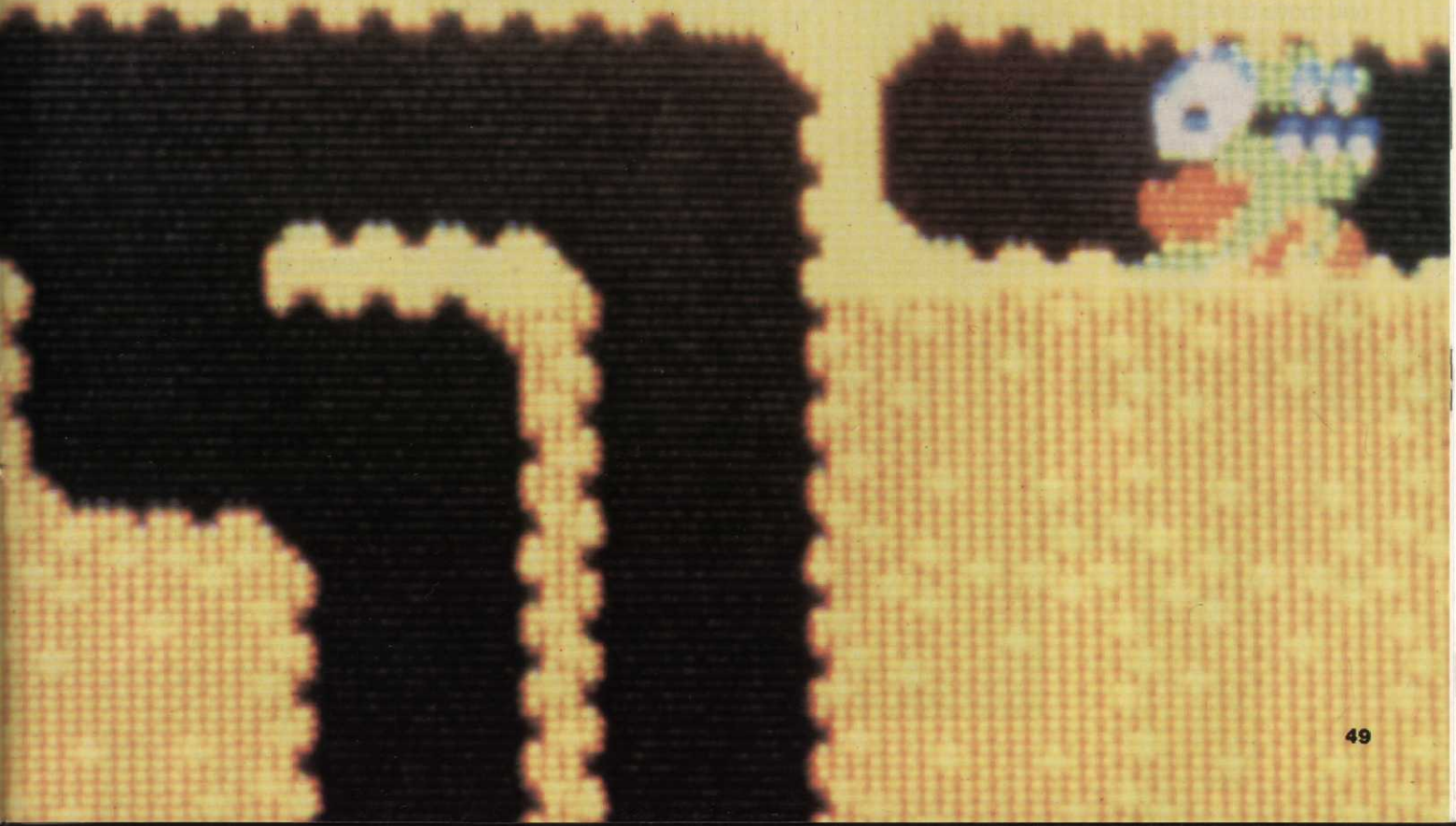
Pookahs
These burrowing tomatoes with yellow sunglasses are the less dangerous of Dig Dug's two adversaries. Pookahs can be destroyed by (1) pumping them so full of air that they explode, or (2) dropping rocks on their heads. A Pookah is worth anywhere from 100-500 points when exploded, depending on the depth at which he is caught. Dropping a rock on Pookahs makes them even more valuable — one is worth 1000 points, two at a time nets 2500, and a third crushed Pookah will bring a whopping 4000-point bonus.

Fygars
Fygars are green dragons that can burn Dig Dug to a crisp with a single, searing breath. They can be destroyed in the same manner as Pookahs, and are worth the same number of points. A Fygar's flame can pass through up to two thin walls of dirt, so be very careful when one looks in Dig Dug's direction. Fygars can only blow flames in the direction they're facing.

Vegetables
After Dig Dug has dropped two rocks during a single board, a vegetable will appear in the center of the field: first a 400-point carrot, and then turnips, mushrooms, cucumbers, and a 2000-point purple squash. These vegetables can be devoured when passing over them. You're only allowed ten seconds before they disappear, so follow the lessons of your childhood and "eat vegetables first."

Rocks
In the game of Dig Dug, as in real life, rocks have little more than a functional value. No points are scored for unearthing a rock, but clearing out an area under the rock will cause it to drop and crush everything in its path — even Dig Dug himself. So, when setting a trap for unsuspecting Pookahs and Fygars, move aside once the rock is free to fall.

Caves
All of the characters start out in their own caves, and Dig Dug is the only one that can enlarge his. Although Pookahs and Fygars can travel through virgin dirt (in the form of a disembodied pair of eyes), they prefer to move through the caves. By building a cleverly shaped cave, you can lure Pookahs and Fygars to certain destruction.



CONTROLS

Dig Direction

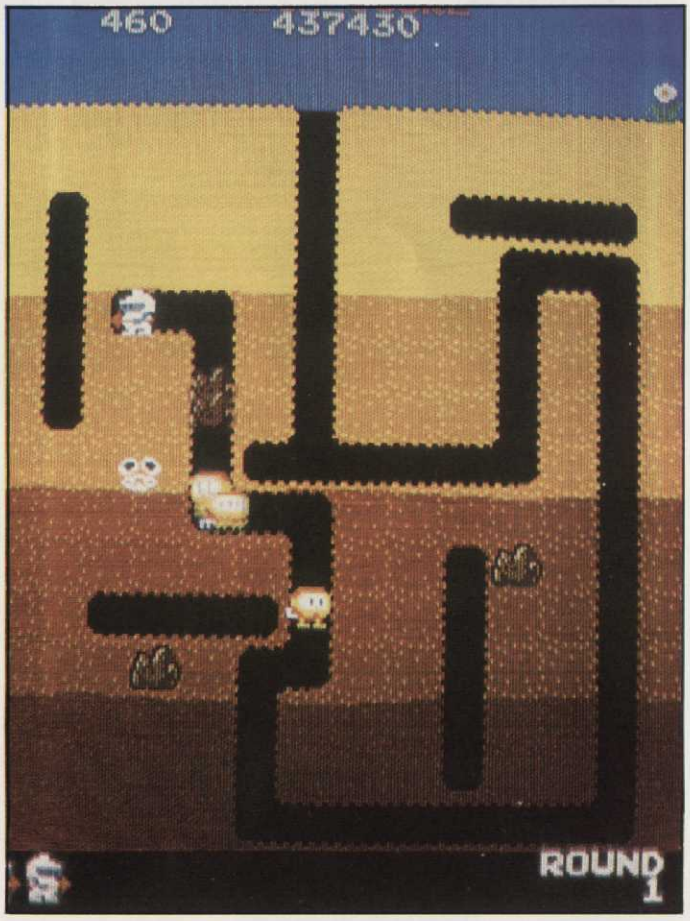
This four-position joystick allows Dig Dug to dig in four directions. If the handle is released, Dig Dug will stop moving. But even moving at full speed won't allow Dig Dug to outrun Pookahs or Fygars.

One important observation about the joystick is this: it doesn't allow fine control of Dig Dug's movement. Although it appears differently, there are really only a limited number of paths on the board that Dig Dug can follow. If you think of Dig Dug as traveling on 15 × 15 lattice of tracks covered by dirt, you'll understand his motion perfectly.

Pump Button

This is similar to the fire button in many other video games, with several limitations built in. First off, the pumping mechanism is aimed in the direction Dig Dug is moving. If you want to attack a monster behind you, you must turn and move towards him. Also, it takes several pumps to explode a Pookah or Fygar. If you stop pumping too soon, the monster will deflate and survive. Finally, the pump hose has a limited length, so get close before trying to use it.





STRATEGIES

The Pump Stall

Having two or more Pookahs on your tail can present you with a problem: if you try to explode one Pookah, the next one in line will pass right through his inflated friend and get you. The problem is that your pump line remains hooked to the first Pookah, and the other Pookah is not affected by your pumping.

The solution is to release the pump button, breaking the connection, and then start pumping again. Your renewed pumping action will affect the closest Pookah. Meanwhile, the other Pookah will be immobile until he has completely deflated. Repeating the process one or more times will put plenty of distance between Dig Dug and his pursuers.

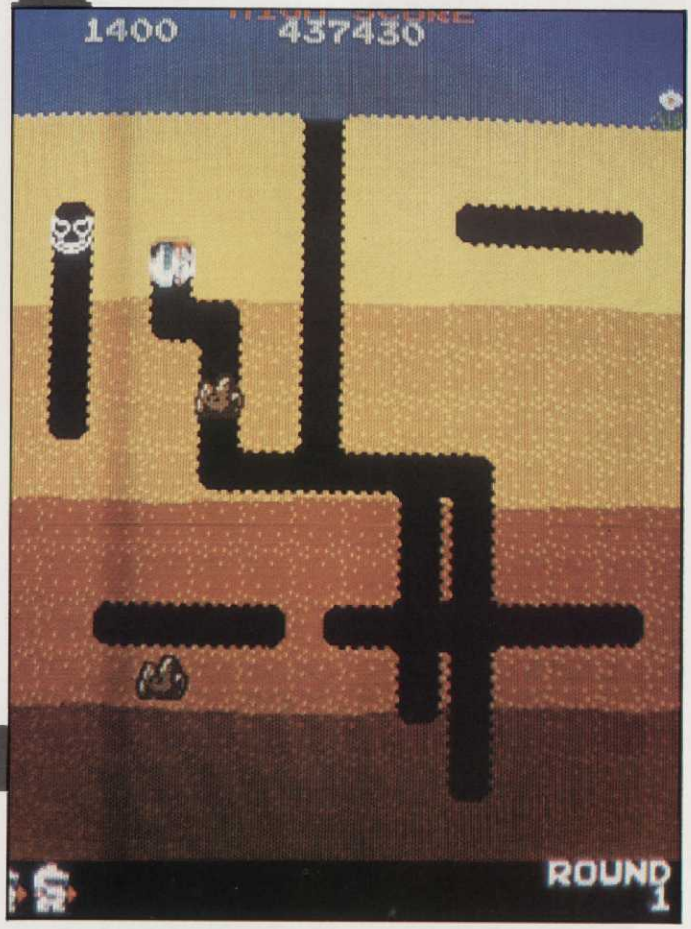
Using Rocks

The rocks are a great asset, once you understand how to use them. Some important observations about the fine art of rock-dropping follow:

1. Never turn down after passing under a rock; it will fall on your back.
2. You can hold a rock in place by staying directly under it. Wait there until a Pookah or Fygar comes up from below, move to either side, and the rock will crush him.
3. Rocks can fall through thin walls of dirt, so you can drop a rock on a Pookah or Fygar without ever entering his cave.
4. Pookahs and Fygars will sidestep a falling rock if they can. Try to time your drop so that there isn't a close escape route for the intended victim.

Be Greedy Near The End

When time is running out, and the Pookahs and Fygars head for the surface, grab whatever points you can. This may mean eating the vegetable bonus, or waiting on the surface for fleeing Fygars. If you're too far from the surface to get there in time, just keep burrowing and score a few extra "dirt points." These free points can make a difference — next time your game ends 10 points short of an extra turn, you'll probably wish you had been more greedy with them.



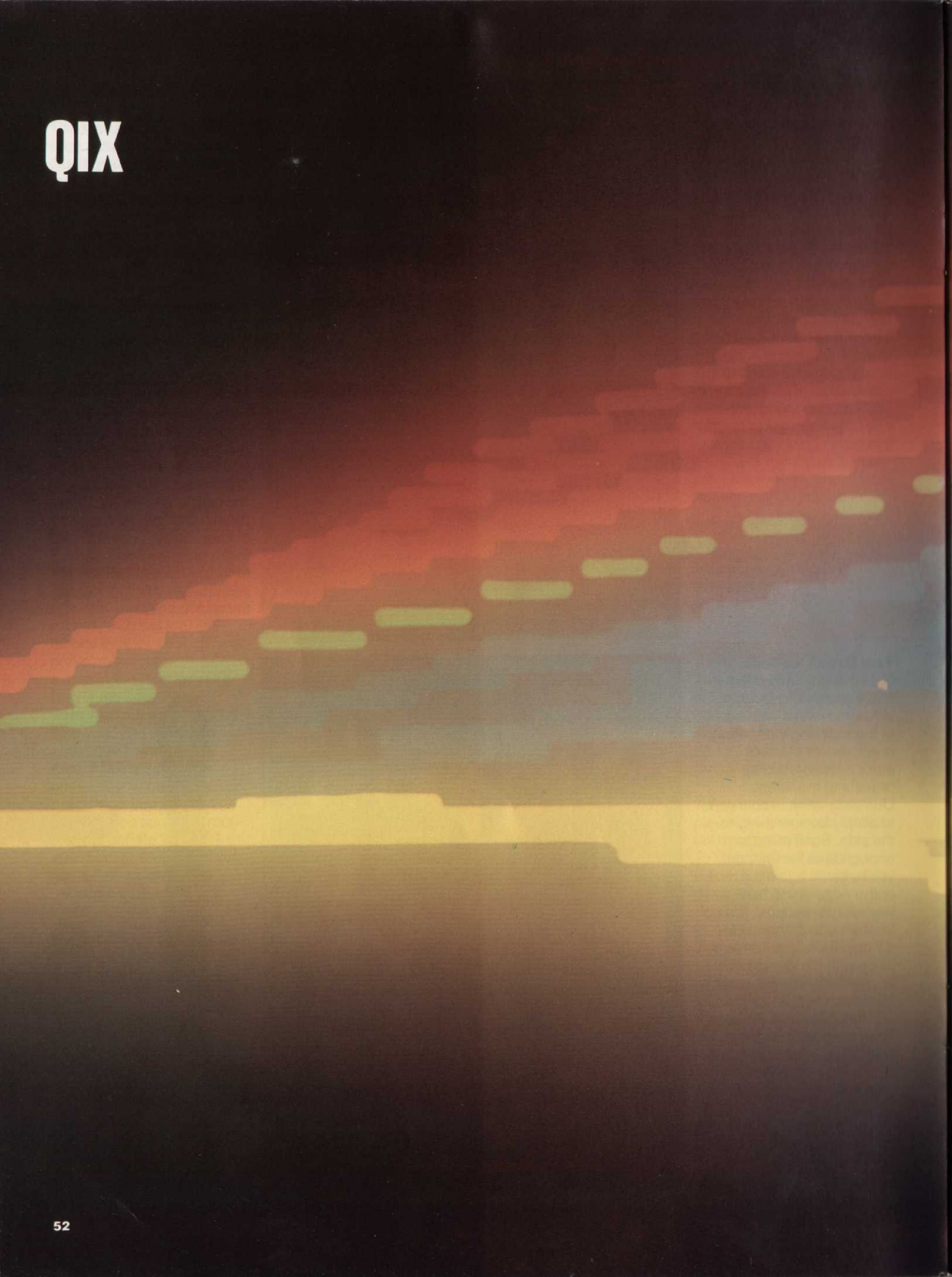
In Missile Command, you *must* save cities. In Pac-Man, you *must* eat dots. And in Asteroids, you *must* shoot rocks. It's the object of the game, and the setting and characters makes it a worthwhile goal. But the game of Dig Dug, by presenting a meaningless character (a hookah-equipped miner?) in a meaningless role (patrolling a vegetable garden?) against meaningless opponents (tomatoes wearing sunglasses?) frees us from the burden of logical behavior. You don't *have* to do *anything*. The strategies outlined here will improve your score, but they aren't the only way to play the game. You can approach Dig Dug as a game of keep-away, or even make patterns with your tunnels — use your imagination. After all, you're there to have fun.

The Great Escape

Unlike almost any other maze game, Dig Dug provides you with a way out of the seemingly hopeless predicament of being stuck between two approaching monsters. One possibility, of course, is to simply burrow away to the side. But if there isn't enough time for that, or you're stuck against a rock or the edge of the screen, you can still escape; just go through one of them. Hit a Pookah or Fygar once or twice with the pump button, and you can pass safely through him, as long as you do it before he deflates. This trick comes in handy very often — don't forget it.



QIX



The programmers at Taito (pronounced Tie-toe) were the masterminds behind the Japanese Spade Invaders. Qix (pronounced Kicks) is their first totally American game.

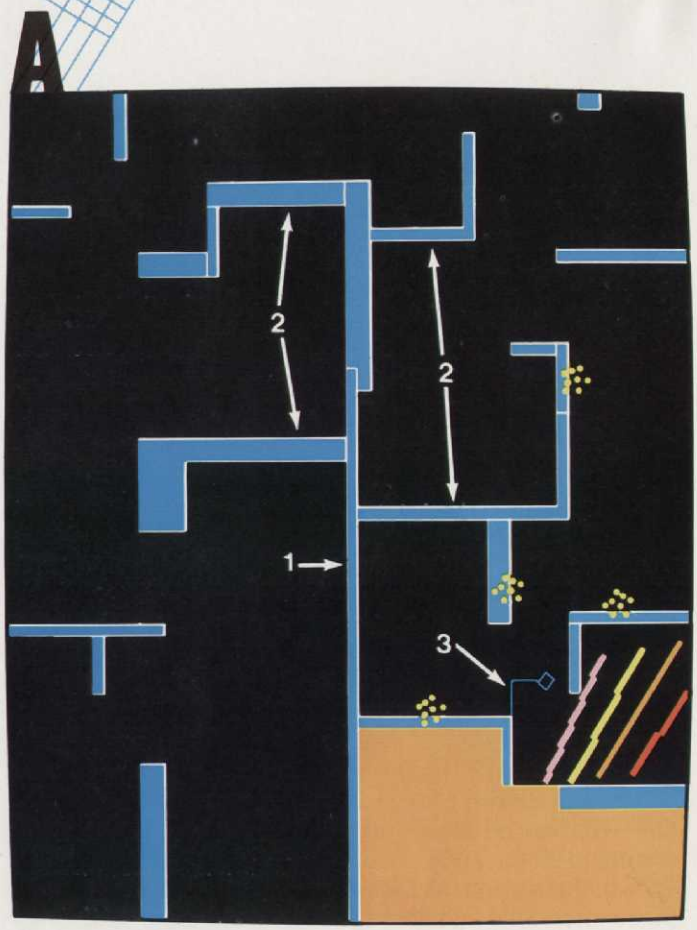
Qix is, without a doubt, the most revolutionary video game to hit the arcades since Pac-Man. According to Mike Von Kennel, Marketing Director for Taito, the concept started with the whirling of the Qix. And then "one bright-eyed programmer looked at it and decided to fill in boxes." None of the engineers liked it at first. But then they started playing it. According to Von Kennel, no work was getting done, and Taito had to remove the machine from Engineering and hide it in the factory. After a prolonged and detailed testing period, the machine was unleashed on the public.

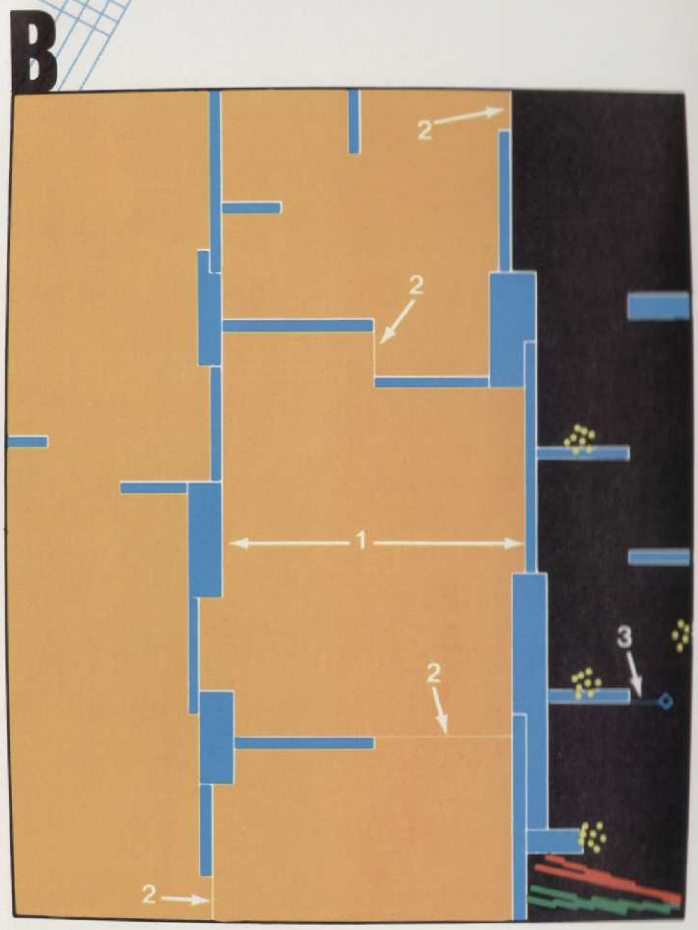
What's going on? The game could be described as a space-age Etch-A-Sketch. A strange video image — the Qix — moves erratically around the screen, constantly changing shape and speed. Your job is to block off at least 75% of the screen, all the while dodging the Qix and those feisty little agitators called Sparx. You're safe from the Qix when traveling along the border of its territory. It's when you cross that border and create a new line that the Qix will get you.

Don't just doodle around. Sparx constantly patrol the border of the Qix territory. If you hit a Sparx, you're dead. This forces you to draw new lines, making you susceptible to the death-kiss of the Qix. You can draw your lines fast or slow. Slow is more dangerous, but yields double the points.

The magic of Qix is that no two games are ever the same. There is a googolplex (a 1 followed by 10^{100} zeros) of combinations that you can draw, yielding 75% of the screen or better. Qix is thus a game of thought. Skill plays a role, but a minor role. Strategy is the key game element.

Strategy is 90% of the game Qix. There are basically two things to keep in mind, no matter what type of strategy you play: (1) Complete the screens as fast as possible (the longer you lag, the more aggressive the Sparx become, and the panic factor multiplies) and (2) Get as much of the screen as possible. 75% gives you a new screen, but no bonus points. You get 1000 bonus points for every percentage point beyond 75%. In other words, 85% will yield 10,000 bonus points. Another thing to keep in mind is the Slow *vs.* Fast Draw. The general rule is: Use the Fast Draw to set up your pattern; use the Slow Draw to complete your pattern. Slow Draw areas yield twice the point value of the Fast.





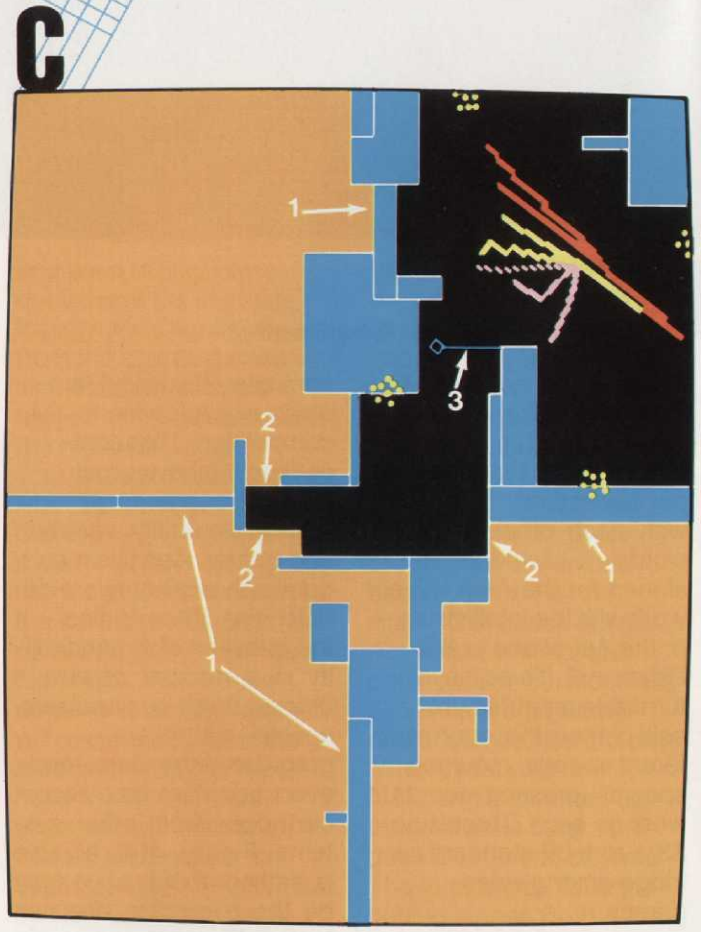
STRATEGY
Listed below are four different strategies. The first three are basically designed for one Qix. The fourth pattern is especially designed for a twin Qix.

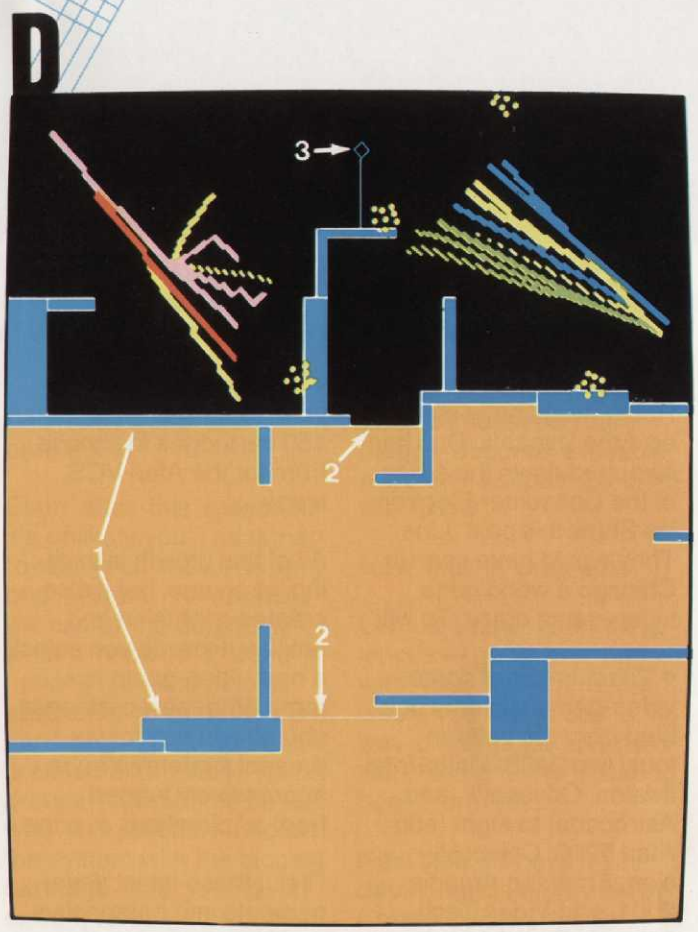
A. TREE-BRANCH (OR HANGMAN'S) STRATEGY.
The theory behind the Tree-Branch Strategy is this: If you create enough small open areas, the Qix will eventually get trapped in one. You can then seal off the Qix and claim the rest of the area — preferably beyond 75%.
1. Erect a tree trunk. Start your pattern with a trunk nearly to the top of the screen. It may take up to six or seven moves. It may take only one. Be careful.

2. Create as many branches as possible. It may be better to think of these as Hangman's gallows. Create them everywhere — from the trunk and from all sides of the machine. Your primary aim is to leave as small a space as possible. It should be big enough for the Qix to enter, yet small enough to seal off quickly.
3. Trap the Qix. Once a Qix slips into one of the gallows, head down toward him — dodging Sparx as you go. Then seal him off with the Slow Draw, if possible. You will then get double the points you would for the Fast. If you left a small enough opening, the Slow should be possible. If you've planned properly, and the Qix is trapped in a small area, you will have claimed way beyond 75% of the screen.

B. TRIPLE ARENA STRATEGY
Another highly successful strategy follows a more structured method than the tree-branch strategy.
1. With the Fast Draw, build two columns — one from the top and one from the bottom — to split the screen into three vertical rectangles. Create horizontal blocks from time to time as you go up or down.
2. The Qix must choose one of the three areas. Go to the areas where the Qix is not, and begin blocking them off with Slow Draws.

3. Eventually, only one rectangle will remain. Move toward the Qix. Wait for an opportune time, and then block him into as small a space as possible. Once you block him, the screen will clear, giving you mucho bonus points.





C. THE QUADRANT STRATEGY.
Another highly successful, very simple strategy is the Quadrant. In effect, your aim is to divide the screen into four separate parts.

1. Construct four columns. Place one in the center of each side, with the Fast Draw. Be careful. Take your time.
2. The Qix will claim one quarter. Try to force the Qix into a small area of his claimed quadrant by continually claiming pieces.
3. Wait for an opportune time to seal off the Qix. When he is in a small space, seal him off and claim more than 75% of the total screen.

D. TWIN-QIX STRATEGY.
Twin Qix require special handling. You get double the points for splitting the two Qix on the third screen, triple on the fourth, etc. If you split it too early, however, with only, say, 13% of the board claimed, you get double that 13%. Big deal. Plan on getting as much of the board as possible — up to 74%. Then split the two Qix for big points. You can use either the Triple Arena or the Quadrant strategy for splitting the Qix. Just claim as much of the board as possible, box the two Qix into limited areas, and split them. Don't use the Tree-Branch strategy. You won't get enough points.

1. Build horizontal columns. Start at the bottom of the board. The two Qix will try to get into the largest space possible. The idea is to keep forcing both Qix toward the top of the machine.
2. Use the Slow Draw. Claim the bottom section of the board as you continue up.
3. Claim up to 74% of the screen. You can then try to split the Qix. The best way is to keep inching upward from the center. Once the Qix split to each side of your column, Fast Draw a line to the top. You've thus split the Qix and made top points.

HOME VIDEO

HOW DO YOU CHOOSE?

by Danny Goodman

"Holy joysticks, Batman!" Robin would have shouted if the Dynamic Duo had swooped down the aisles of the Consumer Electronics Show this past June. They would have seen in Chicago a world gone video-game crazy. To wit:

- The number of home video-game systems doubled from the veteran four (Atari VCS, Mattel Intellivision, Odyssey2, and Astrocade) to eight (add Atari 5200, ColecoVision, Emerson Arcadia 2001, and Video Technology's Creativision).
- About 80 new Atari VCS-compatible cartridges and 18 Intellivision-compatible cartridges were introduced by 16 outside (third-party) game companies — many of whom didn't exist six months earlier.
- By Christmas of this year, there will be more than 150 cartridges to choose from for the Atari VCS, alone.

All of this growth is exciting, of course, but it also creates confusion and anxiety. How do you select a new video-game system? What new cartridges should you buy for your present system? You're aggressively tugged from all directions at once.

I'll put these latest developments into perspective and help you make the right decisions — whether you're selecting your first system, upgrading to an advanced unit, or adding to your game library.

First-time shoppers are confronted with a baffling selection of systems. The difficulty is that — unlike buying a stereo system — video game systems are not necessarily compatible with each other. In other words, a cartridge designed for the Atari will not work with the Intellivision — or the Astrocade or the Odyssey2. It's as if every turntable manufacturer sold platters that spun at different speeds, requiring specially pressed records to work on each. There's no 33⅓ rpm LP standard cartridge among video games.

Remember, too, that you're shopping for a system — a set consisting of the console (hardware) and cartridges (software). In some systems, the hardware capabilities (e.g., graphics resolution, hand controller flexibility) are obviously superior to the competition. That competition, however, may offer more in terms of software quantity, variety, and quality. And this may outweigh any hardware deficiencies. There's also the question of expandability in a number of machines; voice synthesizers, special controllers, graphics enhancers, and even adapters that accept cartridges from other systems. Finally, after all else is battled about, price may be the overriding decision factor. The accompanying chart is my personal tabulation of each system's strengths and weaknesses.

A careful study of each system's cartridge library is important. For example, if you like arcade games

DANNY GOODMAN'S COMPARISON OF HOME VIDEO GAME SYSTEMS

Hardware System	Suggested Retail Price	Controllers	Graphics Resolution	Sound Variety	Value Comparison
Atari VCS	$199.95	★★★	★★	★★★	★★★
Atari 5200	$299.95	★★★	★★★★	★★★★	★★
Intellivision	$279.95	★★	★★★	★★★	★★★
Odyssey2	$199.95	★★	★★	★	★★
Astrocade	$300.00	★★★★	★★★★	★★★★	★★★
ColecoVision	under $200.00	★★★★	★★★★	—[3]	★★★★
Emerson 2001	$199.95	★★★	★★	—[3]	★★
Creativision/4	under $200.00	—[3]	★★★★	—[3]	—[3]
Vectrex	about $200.00	★★	★★★★	★★★★	★★★★

★★★★ Excellent ★★★ Good ★★ Fair ★ Poor

7-12-82


ATARI'S SYSTEM X


N.A.P.'S ODYSSEY2


BALLY'S ASTROCADE


MATTEL'S INTELLIVISION

and want to play reproductions of the originals, look for titles licensed from the arcade games you like. Then play the cartridges at the stores to see if the replicas live up to your expectations. As many Atari VCS owners soon discovered, "Pac-Man" on the box doesn't mean there's a good Pac-Man in the cartridge. Keep in mind that going from the high resolution arcade screen to the home color TV will sacrifice some of the arcade graphics and perhaps multiple screens (Astrocade's *Incredible Wizard* is a notable exception on both counts). But by playing arcade translations on a few systems, you'll also have a chance to compare hardware features, such as graphics resolution, the "feel" of the controllers, etc.

The same advice goes for sports cartridges. Advanced systems have the capability of responding to more strategy variations. Yet sometimes the dependence on the hand controllers during play (as on Intellivison) can be distracting.

Then, consider the cartridges that are unique to each system. For the Atari VCS, check out the Activision, Imagic, and other outside cartridge suppliers' catalogs. Some newer companies are dedicated to less addictive, more family-oriented cartridges, while others produce a balanced offering. The Intellivision library is getting bigger. Both Activision and Imagic are designing fascinating Intellivision games and Mattell itself is offering synthesized speech cartridges for use with their Intellivoice module. Odyssey2's keyboard is the keystone for a series of expensive, but generally well done strategy/action games. Creative geniuses will be attracted to Astrocade's high-res graphics and music generation cartridges.

Even after this research, it's unlikely you'll have narrowed your choice to only one system. Fortunately, we are at the beginning of what I hope is a trend in making game consoles adaptable to other system cartridges. This approach is aimed at two video-game groups: (1) first-time buyers who will probably choose the system with the biggest cartridge library; and (2) current video-game owners who, having invested hundreds of dollars in software, would upgrade to a more sophisticated system only if they could still play their old cartridges, too.

And so, Coleco was the first to reveal an Atari VCS cartridge adapter for ColecoVision. Atari is promising the same next year for their 5200 system. It is also likely that as more unique Intellivision cartridges become available, a Coleco adapter for them will follow.

Now that is progress!

Let us know your experiences — good and bad — with your system. What would you like to see in the way of cartridge and hardware design? We'd love to hear from you.

Next time, I'll have an in-depth, hands-on review of ColecoVision. I'm also going out on a limb to list the first ten cartridges I would buy for each of the top video game systems: Atari VCS, Intellivision, Odyssey2, Astrocade, and ColecoVision.

Expandability	Cartridge Library
Several controllers, graphics enhancer	Biggest and broadest from the most sources.
Voice synthesis/[1], VCS cartr. adapter/[1]	Small now; popular arcade titles, including Pac-Man.
Voice synthesis, computer module/[2]	Long on sports & strategy, short on space action.
Voice synthesis	Master Strategy series truly unique.
Computer module/[1]	Too slow to grow; some outstanding titles.
VCS cartr. adapter, computer module/[2]	Small now; adaptable to huge Atari VCS library.
//	Many renditions of popular VCS games.
Computer module/[2]	Similar to popular arcade themes.
//	Clever arcade game translations.

[1] / Accessories announced for 1983 delivery.

[2] / Accessories introduced, but exact delivery time unknown.

[3] / Units and/or cartridges not fully available at presstime for adequate testing.

[4] / Not available until December 1982.

"LOOK, MUFFY -- A COMPUTER GAME FOR US!"

by David and Sandy Small

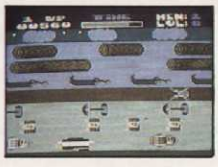
Now look, I want you to understand. I have absolutely nothing against preppies.

Heck, all I knew about preppies until a year or so ago was that Jenny called Ollie a "preppie" in the tear-jerker "Love Story."

But about a year ago this sinister movement settled over our country. Girls began to wear . . . well, you wouldn't believe it, but these pleated, Kelly green skirts. They began to have "coming-out" parties. Worse yet, the guys became super clean-cut and started wearing penny loafers, and these expensive polo shirts with alligators on them.

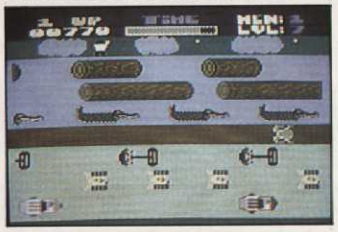
It all reminded me of some of the high society girls that went to my high school. These girls wouldn't go out with me because my dad made less than, oh, $500,000 a year. They weren't allowed to be *seen* with me. Nothing personal, you understand.

So imagine my glee when an exceptionally good game called "PREPPIE!" showed up one day in my mailbox. The packaging alone is hilarious. There's a huge alligator on the cover, with a little preppie on his shirt. He's holding a golf club, watching this nerdy-looking prepster crossing a group of floating logs. And at the top of the cover, there are two obvious high school prepsters, one saying to the other . . . "Look, Muffy, a computer game for us!" (If you didn't know, Muffy is the ultimate name for young preppettes).



So, I put in the diskette and boot the game. Shortly, the classy PREPPIE! title page flashes up, cycling through some 128 colors at high speed. And this wonderful, absolutely upper-middle-class preparatory school music begins . . . "As I was strolling through the park one day . . ."

So the game begins. Ever played Frogger at the arcades? This is very much like it. The hero of the game, named Wadsworth Overcash (no kidding), must be maneuvered through lawnmowers, golf carts, and bulldozers to the center of

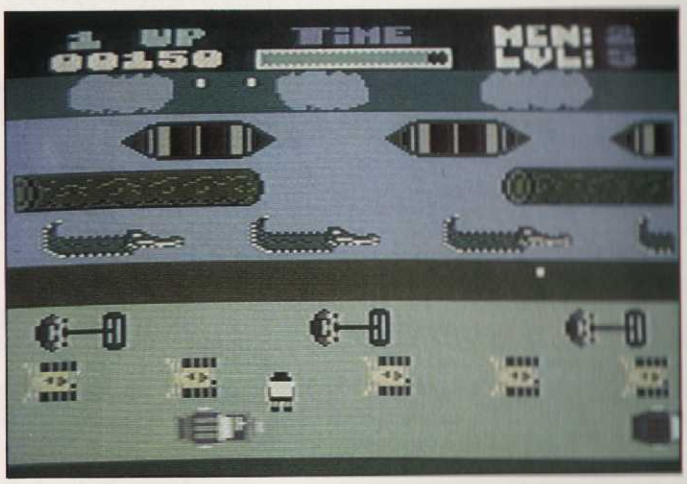


the screen. Then, canoes, logs, alligators, and frogs must be jumped to cross a stream. The object? Why, to retrieve golf balls (what else?) and return them to the bottom of the screen.

Now, let's say the prep gets run down. He gets flattened. No, I don't mean figuratively; I mean literally. Imagine someone thrown under an asphalt roller and you'll have the idea: ten feet wide and one inch thick. (And, of course, the music plays a suitable dirge.)

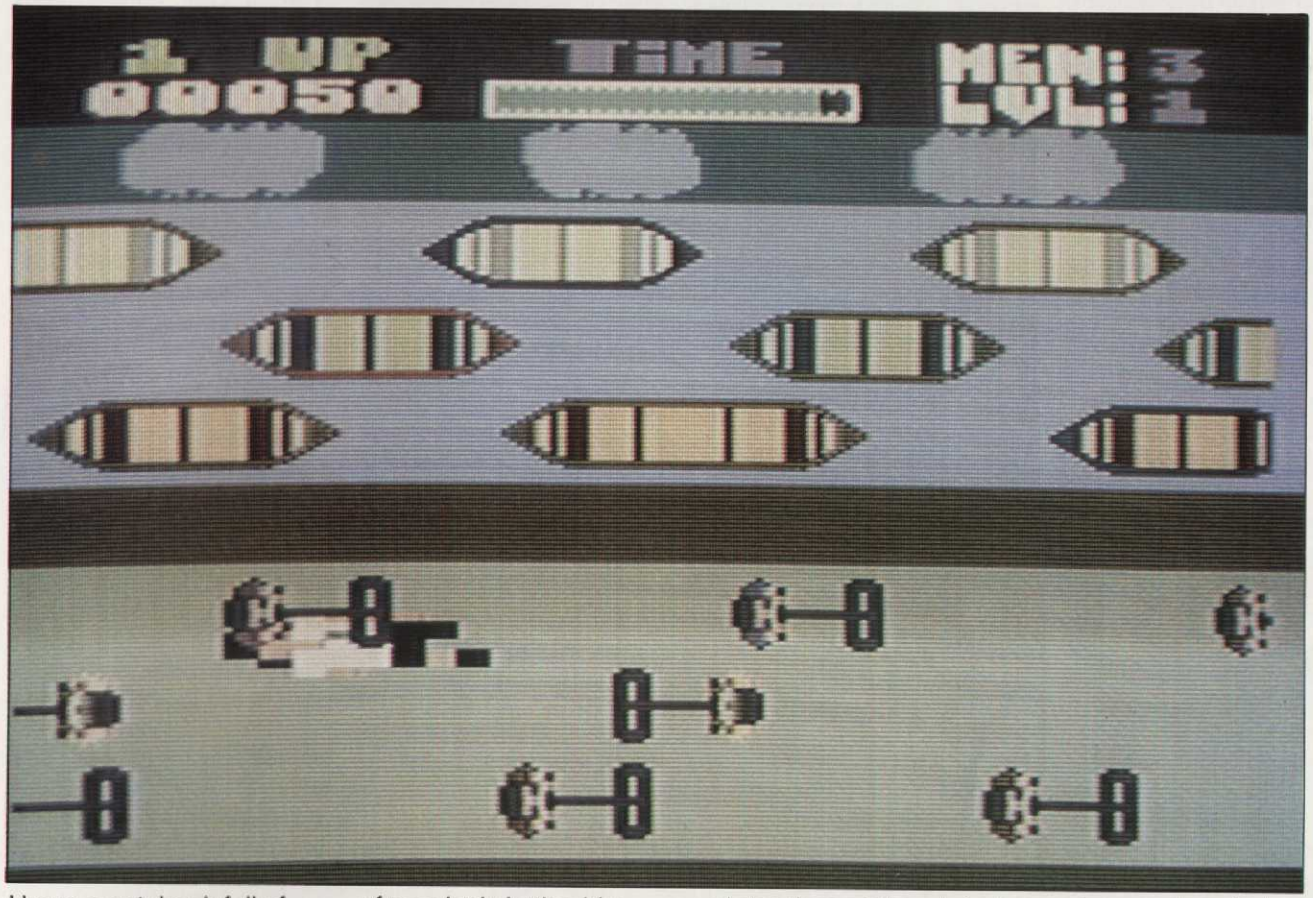
You haven't really lived until you've seen a flat preppie!

Insults to preppies abound throughout the game. The programmer, Russ Wetmore (who now joins the ranks of top Atari coders) must really have it in for preppies. You'll recall in the game Frogger that the frog can be run over? Well, in PREPPIE! the frog runs over Wadsworth Overcash. Wadsworth is dressed in your typical Vacationing Rich Family dress (white shorts, no-sun-tan legs, and a shirt with an alligator on it). The world's record for Impressions of a Nerd Preppie is clearly won by this game.



Now, I'm kind of a burned out computer gamer. Star Trek? You bet I've played it. Star Raiders? Pac-Man? Centipede? Done them all. But I keep going on because every now and then someone like Russ comes up with a PREPPIE!. The game is the result of at least six month's work — two weeks went into working out the color scheme, for instance. The music, done with the aid of the Atari's four built-in synthesizers, just couldn't be better. (I have my machine rigged to play through a stereo system, and PREPPIE!'s music is better than all but a few computer music pieces I have heard.)

Let me put it another way.



I have a notebook full of games I only pull out for a room full of guests. You know the ones — the endless recreations of Star Trek, worn-out Adventures, and the like. Then I have a very few games I keep handy because I actually play them, nearly daily, when taking a break from writing or programming. And PREPPIE! now stands at the front of those games.

Another nice thing about PREPPIE! is that it starts off slow, then picks up. This gives even rank beginners something to play. But the difficulty continually increases. Everything moves faster. The alligators try to devour the preppie as they swim along instead of passively letting him jump on their backs. The logs become shorter and move faster. And, of course, there's the frog — aiming to run down the PREPPIE!

I can't say enough about the graphics on this game. Everything is done dead perfectly. There are numerous colors on the screen, the result of very difficult labor. All the boats, lawnmowers, and whatnot have at least two and sometimes three colors in them — all bright, all cheery, all undeniably preppie. And say that with your nose in the air! (After all, you are going to Hahvahd, right?)

The synthesis of the theme, the sound, and the graphics make for a complete winner. There's just nothing missing; I can't think of a way to improve the game.

Finally, this game has what arcade games have to have to be successful. You feel — believe — that you are the cause of any mistakes — not the machine or joystick. This makes the player want to go back and try, try again. I couldn't tell you within a hundred how many times I've snarled at the game, as my Preppie was eaten — and tried again.

In short, I love the game. How about other people? Will it be a success?

To find out, I took the game to a local computer store, and ran it. Immediately the music attracted a crowd, and the graphics held them there. In the hour I spent at the store many matches were played, numerous people asked me where they could buy the game, and everyone invariably loved it. I think this game is going to be one of the all-time winners for the Atari, right up there with Star Raiders or Pac-Man.

My congratulations to Russ Wetmore and Adventure International for bringing us this very fine game.

PREPPIE!
Adventure International
P.O. Box 3445
Longwood, FL 32750

COUNTERPOINT

Introducing a new column where JoyStik *gives voice to, well, the other side. This guy Al Blastmoore has been on our back for months now ranting and raving about the end of the world and video games to boot. We thought we'd get him off our backs — and onto yours. One final note: The opinions expressed in this column are not necessarily those of* JoyStik *magazine. In fact, they're nowhere close to what we think. Without further ado, Mr. Al Blastmoore.*



ATARI'S KANGAROO

"Does this person really expect me to shove my hard-earned money into a machine, so that I can pretend to be a female marsupial in combat with a gang of marauding chimpanzees . . ."

It's probably blasphemous for me to think this way these days, but every time I get within 20 feet of a video game, I feel like shoving a mirror in front of the person playing it and shouting, "Aren't you just a little embarrassed? Do you realize that you look like you're trying to relive birth? Your face is all red and screwed up, and you're yanking on that joystick like it was some kind of umbilical cord!" I see it all the time — little kids, adolescent punks, *grown men and women* paying money to look like morons in public.

And the only thing that bugs me more than the way these people look is the games they choose to play. The latest one to get my goat is a video game called *Kangaroo.* My brother-in-law, the PhD, thinks it's the greatest thing since sliced bread. But as far as I'm concerned, this new game, like most video games, is a complete course in "How to Look Stupid for 25 Cents."

Kangaroo is about a baby kangaroo (naturally) that's stolen from its mother's pouch by a band of terrorist monkeys (guerrillas, probably). Kid Kangaroo is blindfolded, stuffed into a cage and held in a generic video jungle, until some chump comes along willing to pay 25 cents for a shot at rescuing him. Should you choose to accept this moronic mission, you're supposed to guide his mother up rope ladders, across log steps, and through a barrage of crazed monkeys — just to save *her* kid! Supposedly, your odds of succeeding are improved by Mom's ability to jump and the fact that she has been blessed with big, red boxing gloves where her hands should be.

Ah, but Mama isn't the only kid on the block with talent. The residents of Chimp City are well versed in that centuries old art of apple flinging — that's right, they throw apples at her. And so the battle begins.

It's a four round fight with four different settings. In the first round, Mama must climb a series of rope ladders to reach her captive kid. I never knew kangaroos could do that. Her second-round objective leads her hopping up a stairway of log steps. *That's* what I always thought kangaroos were good at. The third round is my favorite, probably because it's the most realistic. Junior's cage is held aloft by a tower of monkeys standing on each others' heads (just like Curly, Larry, and Moe). Mama Kangaroo has to start at the bottom and knock out each monkee, shortening the tower until she is able to grab Junior. Finally, in the fourth round, her mission is to scale an acrophobiac's nightmare of long and short ladders.

Now, if your feeble little mind is incapable of performing these tasks and you fail miserably — Mama Kangaroo will fall to the ground and a little halo will appear over her head. That's video talk for "dead Kangaroo." However, if you succeed, and Mama reaches the little darling, you are highly rewarded: the word "MOM" flashes on the screen to the tune of "Oh Susannah." Sound like a good way to spend a pay check?

Well, I don't know about you, but it makes me wonder how much respect the designer of this game really has for the human race. Does this person really expect me to shove my hard-earned money into a machine, so that I can pretend to be a female marsupial in combat with a gang of marauding chimpanzees that kidnapped my baby? Puhleeease!

The only thing more degrading would be admitting to my family and friends how I spent my day off. If I told even a casual acquaintance that I just spent the afternoon playing a video game that let me punch out monkeys, he'd probably spend the rest of his life trying to discover what I had *really* done that afternoon.

And God only knows what could happen if an old friend were to actually see me doing such things in public. I can only hope that he would have enough sense to shove a mirror in front of me and shout "Aren't you just a little embarrassed?"

CARTOONS

JIM RAND, A VIDEO GAME EXPERT IS TRANSPORTED TO THE PLANET *ARN* BY *AZERON*, A WIZARD.

TO WIN PASSAGE BACK TO EARTH HE MUST FIGHT HIS WAY TO THE CASTLE OF *KANT* AN EVIL WIZARD, TO STEAL...

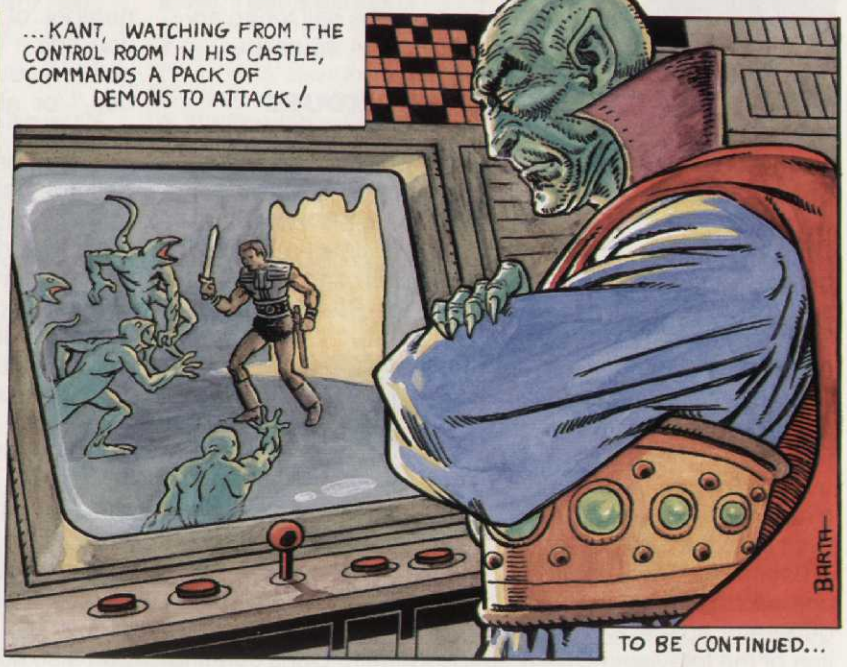
THE SWORD OF RAM

WITH THE SWORD, AZERON COULD GAIN ACCESS TO THE COMPUTER WITH WHICH KANT CONTROLS THE PLANET BY MEANS OF COMPUTER-GENERATED MONSTERS, DEMONS, AND... DRAGONS!









ARCHAIC ARCADE 2205 A.D.

BY JERRY TIRITILLI ©82







TECHNOCRACY

SUPERCHARGED COMMUNIST MUTANTS

The new kids in the home-video neighborhood — Arcadia Corp. of Santa Clara, California — recently unveiled two new pieces of hardware/software made to expand the capabilities of your Atari Video Computer System.



ARCADIA'S SUPERCHARGER

The backbone of Arcadia's system is a "Supercharger" that looks like a game cartridge and is inserted into your Atari (or Sears) system. This dummy cart is actually a mass of electrical components that expands the Atari RAM (Random Access Memory) from 128 bytes to 6,272 bytes. Alan Bayley — president and chief executive officer of Arcadia — told *JoyStik* that "the graphics generator now scans every line of the television screen, not every other line, resulting in far sharper images."

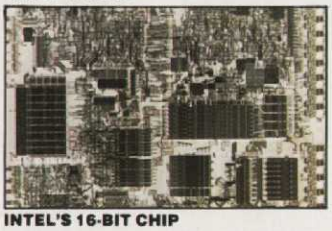
The software aspect of the add-on system is a simple audio-style cassette tape that now acts as your game cartridge. Information on the tape is transmitted to the unit via a cable that runs from the Supercharger to the earphone jack on any cassette tape player. The player selects game options from a "menu" that appears on the screen.

Arcadia currently offers four video games on tape. Our favorite is called *Communist Mutants From Space.* The format is similar to *Space Invaders,* but the visual resolution and playfield complexity are far superior.

One further note. Although the Supercharger has a suggested retail price of $69.95, it includes one game tape. And the tape-type games sell for an appealing $14.95 each.

16 BIT EXCUSE

Are you the kind of video game player that always has an excuse for losing? Well, here's a new one for the next time you lose a pocket full of quarters to the game of *Reactor* — the Intel 8088.



INTEL'S 16-BIT CHIP

The Intel 8088 is a 16 bit microcomputer chip that, according to Chris Jenning, Field Rep. for D. Gottlieb & Co., permits *Reactor* to react much quicker to the players' actions.

In that it has a 128K memory (instead of 64K for a standard 8 bit chip) the Intel 8088 can direct 32 objects independently on one screen.

Although the use of 16 bit chips is very new in the video games business, Jenning told *JoyStik,* "We are mainly using it for future expansion for a faster game." Looks like you'd better take advantage of this excuse while it's still a good one.

LET THE PLAYER BEWARE

Let's just call them the manufacturers' built-in speed-up kits — difficulty settings of varying degrees that can be set or reset in just a few seconds by the owner of the machine. These settings can dictate the speed of the game, the number of ships or men you begin with, how many points you need for a "bonus," or all of the above.

The games are usually delivered at a recommended or "factory" setting, but then they're also usually delivered with cardboard covers. So, the next time you don't do so hot on the game you usually turn over, remember this:

Qix, by Taito America Corp., has a difficulty level that can be set from 0 to 3 for each of four screens (factory settings are 0 for screen 1, and 1 for screens 2, 3, and 4). The operator can also adjust the percentage of the screen that must be filled — from 0 to 99 percent (factory setting is 75 percent). And the timeline that determines how often sparks are released can also be set for 0 to 99 seconds (factory setting is 37 seconds).

Defender, by Williams Electronics, has a setting of 0 to 99 for starting difficulty (factory setting is 5), and a progressive wave difficulty setting of 0 to 99 (factory is 15). A free ship can be obtained with anywhere from 1,000 to 999,000 points in units of 1,000 (factory is 10,000).



ROBOTRON'S ADJUSTMENT SCREEN

Robotron, by the same people, is similar, with a difficulty range of 1 to 10 (factory setting is 2). An interesting point about this game, however, is how the difficulty setting is judged. The operator can hit the right button and flash the "bookkeeping" screen on the monitor. One element presented on this screen is the "average time per play." According to Jim Kline, of Williams' service department, if the gamers are playing Robotron for more than one minute, Williams recommends a more "conservative" or difficult setting. Settings for a bonus man on Robotron are 20,000; 25,000; or 50,000 (factory setting is 25,000).

Donkey Kong, by Nintendo America, also has a variable bonus setting that can be set at 7,000; 10,000; 15,000; or 20,000 points (factory setting is 7,000). The operator can also determine how many Marios you begin with — from 1 to 6 (factory is 3).

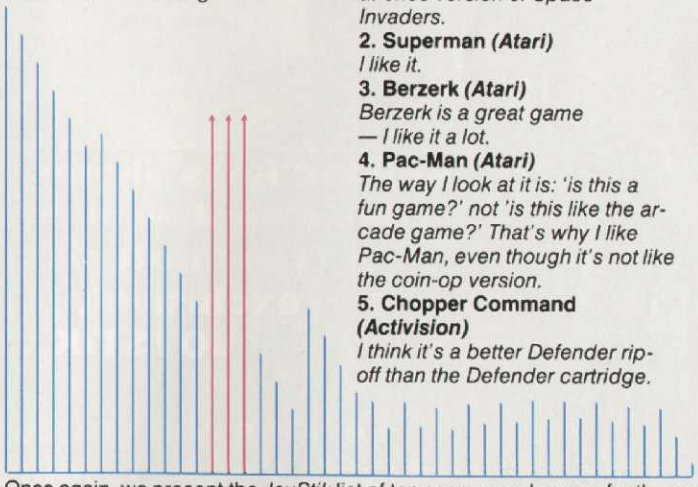
CORRECTION

The illustration identified as Midway's video game *Tron* that appeared on this page in September's issue was actually Rock-Ola's game *Eyes.* We regret the mistake.

Chip Photo: Courtesy of Intel Corp.

JOYSTIK CHARTS

In our constant effort to keep you informed on both the good and not so good things happening in the world of home video, *JoyStik* asked three top arcade game designers, "Which of the game cartridges designed for the Atari home system do you like to play?" See if you agree with the men who know their games.



EUGENE JARVIS
Responsible for such Williams greats as Defender, Stargate, and Robotron, Jarvis is now one half of the Chicago-based game designers, Vid Kidz.

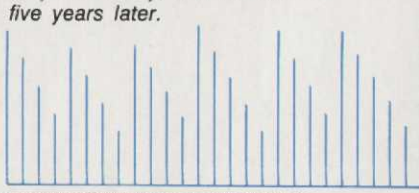
1. Space Invaders *(Atari)*
I mostly play the two-players-at-once version of Space Invaders.
2. Superman *(Atari)*
I like it.
3. Berzerk *(Atari)*
Berzerk is a great game — I like it a lot.
4. Pac-Man *(Atari)*
The way I look at it is: 'is this a fun game?' not 'is this like the arcade game?' That's why I like Pac-Man, even though it's not like the coin-op version.
5. Chopper Command *(Activision)*
I think it's a better Defender rip-off than the Defender cartridge.

GARY SHANNON
Designer of Astro Blaster for Sega/Gremlin, Shannon is now the manager of software programming for S/G's consumer electronics division.

1. Starmaster *(Activision)*
It's got a whole lot more variety of play than others I've seen. It's also new, so I'm still playing around with it a lot.
2. Kaboom (Activision)
It's a good, simple game — there are no complexities, just straightforward eye-hand coordination.
3. Adventure *(Atari)*
That one's totally open-ended. It leaves you a lot of freedom to just play around.
4. Pac-Man *(Atari)*
I'm not crazy about the graphics, but I like the game.
5. Star Trek *(Sega/Gremlin)*
It hasn't been released yet, so I can't tell you anything about it. (He did say that it would be coming from S/G in November).

LARRY DEMAR
Co-designer of Robotron, DeMar is the other half of the game design firm, Vid Kidz.

1. Superman *(Atari)*
The best thing they've ever done.
2. Space Invaders *(Atari)*
A very, very playable game — number 33 is both competitive and collaborative.
3. Adventure *(Atari)*
It's fun to outwit the ducks.
4. Indy 500 *(Atari)*
It's very similar to the early Atari coin-op games. My biggest problem is finding good players since it's so old — I dare anyone to beat me at Crash-and-Score.
5. Air/Sea Battle *(Atari)*
Very Sea Wolfy, and it's still fun five years later.



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.

Game	Player	High Score	Date	Arcade: Location
Alpine Ski	Ray Bersabe	221,000	6/7	Militas Golfland: Militas, CA
Berzerk	Ron Bailey	59,980	6/23	Championship Video: Gaffney, SC
Bosconian	Peter Zenke	442,400	6/23	Bun n' Games IV: Racine, WI
Centipede	Rijanto Joesoef	4,421,232	4/7	Captain Video: Los Angeles, CA
Defender	Marvin Norton	49,367,750	7/3-4	Captain Video: Safford, AZ
Dig Dug	Mark Hunt	2,360,000	7/10	Cosmic Endeavors: Seattle, WA
Donkey Kong	Steve Sanders	863,500	7/10	Meadow Lark Lanes: Clinton, MO
Galaga	Eric Bolduc	4,715,720	7/19	Cucamonga, CA
Gorf	Keven Winter	154,260	5/27	The Dungeon: Butte, MT
Kangaroo	Tim McVey	50,800	7/11	Twin Galaxies: Ottumwa, IA
Lock n' Chase	Jerry Nickerson	78,180	4/20	Central Video: Dunkirk, NY
Mousetrap	Briggs Miller	35,067,410	6/20	Central Video: Dunkirk, NY
Ms. Pac-Man	Jody Cagle	283,680	7/19	Tilt Arcade #1: Las Vegas, NV
Omega Race	Rick Klin	1,215,200	6/27	Video Magic: Corvallis, MT
Pac-Man	Ken French	5,971,440	7/19	Space Station 7: Hichland, CA
Phoenix	Orlando Funderburk	466,462	6/23	Galaxy Video Games: Charlotte, NC
Qix	Gary Daley	532,628	6/17	2001 Video Arcade: Missoula, MT
Red Baron	Rick Johnson	98,780	6/11	Video Village: Fredonia, NY
Robotron	Dennis Felland	76,223,720	6/14	Voyager I: Madison, WI
Space Fury	Loren Hawkinson	222,590	4/20	Fun 'n Games: Hamilton, MT
Stargate	Joe Startz	20,449,975	7/7-8	Bun n' Games: Kenosha, WI
Super Cobra	Eric Bolduc	187,550	7/19	J.J's: Cucamonga, CA
Thief	Mark Kiminski	1,512,970	6/1	Video Mania: Bloomfield, NJ
Tempest	Robert Nelson	916,113	4/14	Video Mania: Bloomfield, NJ
Zaxxon	Greg Porter	520,650	7/19	Lancaster Recreation: Lancaster, MO

NEXT...



Courtesy of Bally's Aladdin's Castle

Richard Ross shares his award-winning Tron strategies exclusively in JOYSTIK™.

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