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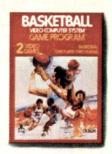












































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Find out which games have attained arcade immortality—and help

Special Section THE PLAYERS GUIDE TO ELECTRONIC ADVENTURES.....

Now everyone can be a Conan or Luke Skywalker with electronic role-playing games!



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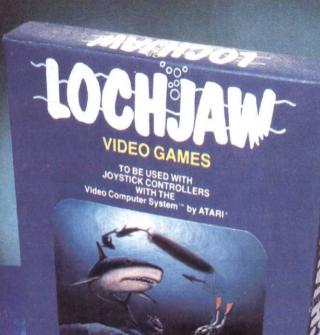
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Can you accane the rampaging publing

induct your personal favorites. Readers Poll

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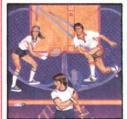
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SWITCH ON!



By Arnie Katz

he manufacturers of coin-op and home electronic games mince no words when they state their opinion of software pirates. They hate 'em. Several large companies, including Williams and Atari, are currently making strenuous efforts to stop this disreputable practice and bring the perpetrators to justice.

Who can blame them for their concern? Software suppliers have a right to get hot under the corporate collar when someone starts ripping off the merchandise. And let's make no mistake about it, piracy is stealing.

Bootlegging copies of an electronic game is just as much of a theft of the designer's creative energies as publishing an unauthorized edition of a novel would be a crime against the writer of an original work. How would you like to spend six or eight months programming a new game only to have someone steal your work? That's exactly what happens when people make illegal copies.

Of course, pirates are also commiting a crime against every electronic arcader. Hearing some thief use the high price of software as an excuse to steal

A Tale of Pirates and Copycats



makes my blood boil. It's like the case of the teenager who chopped up his parents with an ax — and then asked the court for leniency on the grounds that he was now an orphan!

Piracy is a major factor contributing to those high prices everyone would like to see reduced. Every bootleg copy is one less legitmate sale for the rightful owners. Smaller print runs mean that the profit on each unit sold must be greater to defray the development and production costs which the manufacturer incurs — and to provide a decent return on the supplier's investment.

Although manufacturers like to clothe themselves in righteousness on the subject of piracy, some are not exactly covering themselves with glory in another area, the excessive publication of "me, too" games. There's a vast difference between producing a new title in the same general category as an existing hit and distributing a blatant knock-off. Selling a computer game on a copyguarded disk when that game is only infinitesimally different than an already existing program is an insult to the intelligence of every participant in this hobby.

More to the point, this type of copycat software publishing fosters the disregard for the rights of game originators that inevitably leads to piracy. Manufacturers who want their copyrights respected must show a similar respect. Sure, cribbing a game whole-hog is easy, but it can only do severe harm to the electronic gaming hobby in the long run. When suppliers show more interest in producing the next big hit instead of cloning the most recent one, everyone will benefit.

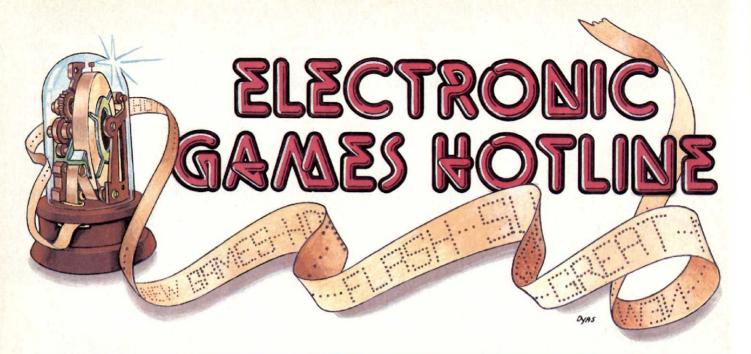
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Atari Report

★ Gamers who had so much fun tracking down the secret message in the Atari VCS game Adventure will have plenty more exploring to do in the upcoming year. In addition to the presence of the designer's initials squirrelled away within Missile

Command, Atari promises that virtually every cartridge in its 1982 line up will feature similar "easter egg" messages.

★ Greg Christensen, an 18-year-old student from Anaheim, Calif., was selected one of the first winners in the Atari 400/ 800 "Atari Star Award" program. His entry, Caverns of Mars, is a graphically impressive game program now available through the 400/800 Program Exchange.

Fernando Herrera, designer of **Space Chase** and **Timebomb** from Swifty Software for the Atari computers was also a winner. His design for **My First Alphabet** has drawn universal praise as a masterful combination of

fun and learning elements in a single program.

* Atari Coin-Op has just inked a deal with Namco, the red hot Japanese videogame house which, in the past, has created Pac-Man, Galaxian and Galaga. Namco's next major release, as yet untitled, will be licensed in the U.S. by Atari.



Disney's 'Tron' Sparks Arcade Excitement

The first major motion picture made with electronic gamers in mind, Walt Disney's "Tron," has already created considerable interest among all segments of the gaming industry. This modern retelling of "The Wizard of Oz" from an arcader's point of view is expected to be this summer's "hot"

film property, and rights to the various types of "Tron" games have already been selling fast and furious.

Midway looks to have wrapped up the coin-op rights, while Intellivision will be turning out at least two home videogames based on sequences within the film. Even the standalones are getting into the act, with Tomy producing a hand-held version, also scheduled for summer release.

Coleco Debuts New Senior Videogame System

Coleco stunned the videogame world with the announcement that it will introduce a new, senior programmable system sometime this summer. The system, dubbed ColecoVision, is a major technical breakthrough owing mainly to its vastly increased screen-RAM, which facilitates movement of graphic elements on the game playfield. ColecoVision's screen RAM is approximately ten times Intellivision's and allows as many as 48 objects to be simultaneously manipulated on screen. The sys-



Atari and Activision Bury Hatchet

The long-standing feud between Atari and Activision, the Santa Clara software producers, has finally reached an amicable, out-of-court settlement. The original bones of contention concerned Activision's title **Dragster** and the very concept of producing and selling Ataricompatible software.

In any case, with several new companies, such as Imagic and Games by Apollo, already producing VCS software and an entire herd of manufacturers poised to jump on the VCS bandwagon, the original litigants agreed to a long term licensing arrangement that allows Activision to go ahead with the Sunnyvale game titans' full approval and leaves unsettled the question of VCS-software licensing.



EG GoesMonthly!

Responding to the overwhelming demand from readers, **Electronic Games** magazine will be published on a monthly basis, beginning with this June '82 issue. EG has now made the leap from quarterly to bi-monthly, and now to monthly, all in the space of four issues — a pretty good indication of the mushrooming interest in the electronic games field

Subscribers to EG will have their schedules readjusted so that they will still be getting every issue to which they are entitled, but because of the doubled frequency, they can look forward to receiving EG twice as often.

We appreciate your support, and we'll keep on doing our best to keep you informed and up to date regarding the hottest games in town — the electronic ones!



tem uses a combination joystick/touch-actuated keypad controllers which also features a small speed-wheel and can play games containing up to 32K ROM.

Game titles on the schedule for this senior programmable include: Mouse Trap, Venture and Spectar (Exidy), Turbo and Carnival (Sega) and Lady Bug and Cosmic Avenger (Universal). Packed with each system will be a version of Nintendo's smash Donkey Kong, and future cartridges will include a game based on the Smurf toys.

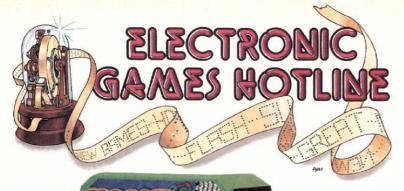
ColecoVision will retail at around the \$200. price point and is already offer-



ing a highly intriguing peripheral attachment — a special component that allows the system to play all Atari VCS—compatible software!

According to a company

spokesman, the introduction of ColecoVision will not in any way affect the previously-announced line of software Coleco will produce for the VCS and Intellivision.





The Tabletop Arcade

Coleco's tabletop line of popular coin-op translations is going to be much more extensive than originally announced (see EG #2). The well-known toy-maker will follow its debut titles, **Pac-Man** and **Galaxian**, with several more portable units based on some of the most popular commercial quarter-snatchers.

Scheduled for distribution in summer 1982 are games such as **Berzerk**, **Frogger**, **Omega Race** and **Donkey Kong**.

Famous Board Games Go Electronic

Parker Brothers and Milton Bradley, two household names in the gaming field, have added an exciting electronic dimension to two of the most popular boardgames of all time.

Monopoly fanatics will want to investigate Monopoly Playmaster, an electronic enhancement to the standard game. It sits in the middle of the regulation board and



Inside Mattel

Mattel Electronics, now an independent division of the toy giant, is exploding with activity. Over a dozen new game titles, including Pinball, Advanced **Dungeons & Dragons**, Tron I and II and Chess have been announced, in addition to a trio of games designed exclusively for use with the new Intellivoice system. A synthesis module capable generating both male and female voices, the audio is blended skillfully into the game action. Initial releases are B-17 Bomber. **Space Spartans (Space** Battle with voices) and **Bomb Squad.**

Mattel is also producing expanded line-up of hand-helds at a variety of price points and is even jumping into the home music field with a set of electronic drums the size of a small wooden board. The

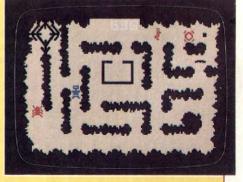
unit, which contains its own internal speaker but can be used with headphones or run through a stereo, has four pads representing snare, cymbal and two tom-toms.

After much delay, Mat-

tel has finally introduced the Intellivision keyboard. It's now in several test markets and may appear nationally by summer. So far no games are offered for keyboard play.



SUB HUNT



NIGHT STALKER

adds several new play elements to the traditional rules that greatly shorten the time it takes to complete a game. Set to retail for \$65, it also dresses up the Monopoly experience with a variety of lights, sounds and visual effects.

Coming from Milton Bradley is a stand-alone electronic edition of Stratego. The addition of a computerized referee should make this classic, in which the true strength of the pieces remains hidden from the opposing player, even more fun.



Atari Buys Coin-Op Quartet from Centuri

Atari Consumer Division President Michael Moone has announced his company's purchase of home videogame rights to four coin-op titles from Centuri. The acquired Centuri games, previously thought to be under Coleco's lock and key, were announced at a special press conference Atari held during the annual Toy Fair in New York.

The games involved are Phoenix, Vanguard, Challenger and Round-Up.

The public is sometimes fickle, but this was definitely the month for sticking with games that have already proved their popularity. All three of the games which readers voted into the number-one positions in last issue's standings maintained their placings this time.

VORITES HOLD TOP SLOTS ONON

In fact, the four top finishers in the videogame category repeated in exactly the same order. Kaboom! and Astrosmash made the largest gains. The former moved up strongly within the top 10, while Intellivision's space-themed action game cracked the list for the first time.

Star Raiders is still king of the hill among computer game software programs. It actually tallied five times as many votes as second-place Missile Command. The word is evidently getting around about Empire of the Over-Mind, since the Arcade Award winner vaulted onto the list.

Pac-Man fever is a virulent as ever, but everyone's favorite maze-chase almost got nipped by Atari's hard-charging Tempest. Other titles makes their debuts this months are Berzerk, Crazy Climber and Donkey Kong.

ELECTRONIC GAMES' PICKED HITS

Most Popular Videogame Cartridges

Position

This	La	st			
Week	W	eek Game	System	Manufacturer	
1	1	Asteroids	Atari VCS	Atari	
2	2	Missile Command	Atari VCS	Atari	
3	3	Adventure	Atari VCS	Atari	
4	4	Space Invaders	Atari VCS	Atari	
5	9	Kaboom!	Atari VCS	Activision	
6	7	NFL Football	Intellivision	Mattel	
7	m-oil	Astrosmash	Intellivision	Mattel	
8		Quest for Rings	Odyssey ²	Odyssey	
9	-	Stampede	Atari VCS	Activision	
10		Ice Hockey	Atari VCS	Activision	

Most Popular Computer Software Programs

Position

This Week		ast 'eek Game	System(s)	Manufacturer
1	1	Star Raiders	Atari 400/800	Atari
2	3	Missile Command	Atari 400/800	Atari
3	5	Jawbreaker	Atari 400/800	On-Line
4		Asteroids	Atari 400/800	Atari
5	rae gr	Empire of the Over-Mind	Atari, TRS-80, Apple II	Avalon-Hill

Most Popular Coin-Op Videogames

Position

rosition			
This	Las	st	
Week	W	eek Game	Manufacturer
1	1	Pac-Man	Namco/Midway
2		Tempest	Atari
3	3	Defender	Williams
4	2	Asteroids	Atari
5	4	Centipede	Atari
6	6	Battelzone	Atari
7		Berzerk	Stern
8		Crazy Climber	Nichibutsu
9	-	Wizard of Wor	Midway
10		Donkey Kong	Nintendo

Readers Choose Top Games

Since mere quantity of play doesn't necessarily equal actual popularity, Electronic Games bases its standings on the votes of its readers. These lists of most popular games are based on the more than 600 Reader Polls returned on the first issue. We will update the "picked hits" lists in every future issue of Electronic Games.

So send in your votes!

SOUTH PACIFIC VIDEO

MORE FOR

INTRODUCING THE ULTIMATE VIDEO GAME SYSTEM!

COLECO VISION

"The noise is made by the estimated 20 billion quarters that poured last year into the arcade monsters. This is a figure that may be the public relations roar of a healthy young industry beating its chest."

healthy young industry beating its chest, but one that investment analysts who specialize in the entertainment industry agree is not far wrong. While they spent this \$5 billion, video-game addicts also were spending 75,000 man-years play-

THE GAMES PEOPLE PLAY!

ing the machines.

These figures do not include an estimated \$1 billion that consumers paid for video-game consoles that hook up to home television sets and for the expensive cassettes that make them work. For comparison, \$5 billion is exactly twice the reported take in the last fiscal year of all of the casinos in Nevada. It is almost twice the \$2.8 billion gross of the U.S. movie industry. And its three times more than the combined television revenues and gate receipts last year of major league baseball, basketball and football".

-Time Magazine, January 18, 1982



Never before in the history of the video game industry has technology taken such a quantum leap forward . . . Colecovision offers you the finest video game entertainment system available today – one so revolutionary and so versatile in design that you will never need to replace it. In other words, Colecovision makes video games obsolescence obsolete.



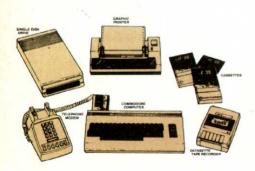
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Colecovision offers four completely separate control modes, integrated into two single detachable hand controllers for the ultimate in Real Game Play!

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Smurf Donkey Kong Carnival Zaxxon Ripcord Sidetrack Mouse Trap Colecovision's revolutionary new Roller Controller which enables you to change speed and position when it counts – never before available in any videogame system, regardless of price.

Colecovision Presents The Hits

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FROM COLECO



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Donkey Kong for Intellivision,



Donkey Kong for Atari VCS,





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eat me?



NIGHT STALKER





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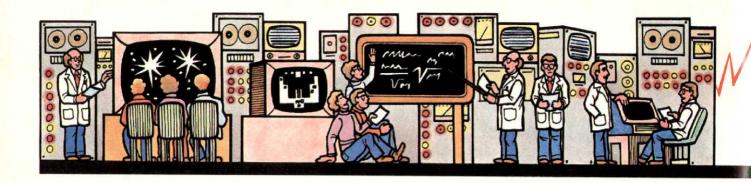
1. What Rock & Roll song contains this quote?

"The course may change, but rivers always reach the sea!"

2. Which band?

N	3. What year was arount releases.
1	Name
1	Address
	Phone Number
7	Please send all entries to: LTS, P.O. Bot 1278 Glenneyre, Laguna Beach, CA. 92

x 221, 2657 Be sure to include your Name, Address, and Phone Number Drawing will be held Saturday, June 20th ,1982.



By Henry B. Cohen

strovision's Astro
Professional Arcade,
originally introduced by
Bally in 1976,
was the
first of the
current
breed of home
video computer
systems. The product, a bit
ahead of its time, was forced

off the market by competition from Atari (priced considerably lower), reliability problems (which have since been corrected) and a lack of clear identity in the mind of the consumer.

Was it a computer that played games or a game that could function as a computer? Back in 1976 this point was far more worrisome than it is today. In a world of Atari 400s and 800s, TRS-80 Color Computers and TI 99/4As, being a crossbreed is an advantage, not a source of puzzlement or confusion.

Of all the video game systems on the market, the closest competitor to the Astro Arcade is Mattel's Intellivision.



ASTRO CONSOLE

But the comparison ends abruptly when Bally Basic is mentioned. Without any additions, the Professional Arcade is a 4K color computer and therefore leaves all competition behind.

Astro Professional Arcade: Has Its Time Come?

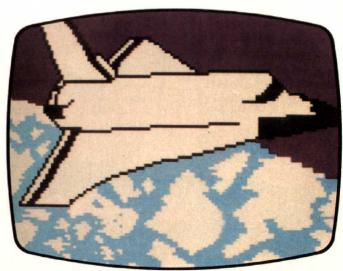
As a pure game playing machine, the Astro is almost without peer. It is simply superb. Graphics are on a par with the best of Intellivision, particularly in the area of sports simulations. Needless to thev say, superior to Atari and Odyssey2 in just about all cases. Unlike Intellivision. speed does not ap-

pear to be sacrificed for graphics or complexity. Nevertheless, game playing variations are few (unlike Atari) and solo games (those pitting you against the computer) are currently limited. On the plus side the controllers are the best we've seen. They combine paddle, joystick and trigger into a single, compact and comfortable unit. This results in eight-way control and makes mastering a game function almost instantaneous.

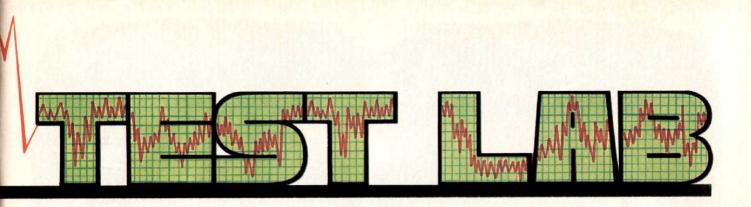
The Arcade console, a contempor-



SOLAR CONQUEROR



COLORING BOOK



ary mixture of woodgrain, black and smoke glass styling, includes three microprocessor units: a Z-80 CPU, a custom designed video processor and I/O. In addition three separate synthesizers produce outrageous and realistic sound effects. A game cartridge port and calculator-type keypad complete the Astro Arcade save for reset and eject buttons.

The console features two built-in games — **Gunfight** and **Checkmate**, a line-building game, as well as an on-screen calculator and a video scribbling program. The latter lets you draw anything you like onscreen or allows the computer to scribe its random patterns if you're feeling a bit lazy. The patterns could also be used as title backgrounds for a home video production.

As if all this self-containment wasn't enough, the unit also stores up to fifteen game programs without the need of accessory lids or the like.

There is not much to criticize about the Astro Arcade. The on/off switch hidden below and behind the console is a continuing source of problems. Women with long fingernails will find it all but impossible to turn the unit on or off without breaking them. Because all inputs and outputs except for the cartridge slot are located on the back panel almost at the bottom of the machine, connecting any controllers and/or peripherals may become troublesome. A lesson could be learned from Atari which has moved its connectors to the more accessible upper lip of the rear of their newer machines. These are small points, however, and should not be a determining factor in the decision to purchase this machine. While we're nitpicking, two other points are worth mentioning. Because the game cartridges fit so neatly into the storage compartment of the console it would be more convenient to have them labeled on their spines for quick identification. In addition, because so many people now own TVs with 75 Ohm inputs, why not produce a game switch with a 75 Ohm output instead of the 300 Ohm twinlead supplied as standard in the industry.

Which brings us to Bally BASIC. This is a must cartridge for the system. Even if you have absolutely no interest in computers or programming, the BASIC cart allows you to key in any of the many games already written for the Professional Arcade. Better yet, if you can find a friend with, or source of, the



CONTROLLERS & BASIC

Astro game programs on cassette tape, the built-in interface will allow you to program your Arcade using just five simple keystrokes. Some of the games are presented in the instruction book that comes with the BASIC cartridge. Others are available through computer magazines or from the Arcadian. the Pro Arcade users publication that has been one of the best kept electronics games secrets of the past few years. A membership/order form comes with every new Arcade console for those who are interested in receiving the publication or their programmed tape cassettes.

Without going into much detail, to program the Astro Arcade through its calculator type keypad requires great patience. An overlay, supplied with the BASIC cartridge, provides identification of the keys, but because many of them are multi-function, two keystrokes must be used before inputting almost any character to the machine. It takes time and practice but eventually you will be able to program fairly quickly.

Editing can be somewhat frustrating, because once you enter a line the cursor can only move forward without erasing. So plan to make very few mistakes as correcting them can take as long as entering the original program. This is, nevertheless, a major improvement over the original Bally BASIC program which did not contain an editing feature and required complete re-entry of each line containing an error.

The instruction manual, rewritten from the original Bally version, is unclear on many points. It is being rewritten again, but will have to suffice for now. Read it thoroughly several times before you begin to program, or you may think that something is amiss when it is not. Of utmost importance; when using the cassette interface the instructions tell you to type in a command. They fail to mention that you must precede this command with a colon (:) and then key in the word. Do not type it in letter by letter. Also, if you have trouble loading a program be sure that the tone or treble control of the recorder is set to its midpoint. Too much audio "noise" caused by a "hot" tape or highly set treble control will confound the computer's input. As the built-in interface does not have an automatic volume control, you must first calibrate the volume control of your recorder to the Astro's input level requirements. To help do this, the cartridge contains an LED indicator. Once it glows steadily, the volume control level is properly set — a handy feature. And once things are set correctly, loading programs is a pleasure as the unit works perfectly and consistently.



h, yes, it's a pleasure to see all those eager faces. It seems my office hours have begun. Well, since you're all just bubbling over with questions, let's get right on with the examination. Our t-shirt winner this time out is not a reader with the best question — in fact, he didn't have a question at all. Rather, gamer John E. Bursee took the trouble to assemble instructions on converting an Atari joystick for left-handed use. Unfortunately, by the time John's letter arrived, we had already finished running Cliff Blake's excellent piece on that very same subject. Nonetheless, for his efforts above and beyond the call of arcading we'll be sending John our Electronic Games t-shirt this month. Now, on to questions! PM: Hey, Doc, when I run my Intellivision for 10 or 12 hours, its brains get hot. Should I give it a break and move its power supply outside, leaving the brains more room? (from Mo Janes, Brampton, Ontario)

A: 10 or 12 hours!?! Holy hi-res, Mo, you really ought to give that poor master component a rest cure. Maybe send it to Saskatoon – or someplace else cool – for prolonged vacation. Ten or 12 hours!!??!!

Even today's more durable computers are extremely sensitive to heat, and running them for marathon play sessions such as yours would melt anyone's brains. Remember, moderation is the key to enjoyment and happiness. There is a danger in too much of a good thing. Consider it a little Rx from the Game Doc. You'll get my bill next week.

Q: I was planning on buying an Atari VCS, but read in **EG** #2 that Atari's soon beginning production on a super videogame system. Should I wait and buy the new 16 Electronic Games

By the Game Doctor

system or go ahead and get the available VCS? (from Joseph Wehmeyer, Ste. Genevieve, Mo.)

A: Ah, how fickle are these electronic gamers! Sure, the new Atari Supergame looks great, but that shouldn't diminish the luster of the VCS, which still boasts the largest videogame library. By our best estimate, anywhere from 40 to 75 new games for the Atari VCS will be making their bows in 1982, including games from Activision Chopper Command, Grand Prix

and Starmaster among other, Apollo Spacechase. Imagic Trickshot, Demon Attack, U.S. Games Space Jockey, Parker Brothers The Empire Strikes Back, Frogger and Coleco Denkey Kong, not to mention Atari itself Defender, Yar's Revenge, Haunted House, Pac-Man, Berzerk and Super-Breakout and produced cartridges for the Sears system Sub Commander, Steeplechase, Stellar Track. This listing only scratches the surface. By the end of the year, VCS owners will find their hardest decisions running along the lines of: "Which of these fantastic games should I get?"

No, doubting Joseph, while the Supergame is a fine addition to the Atari line at a premium pricepoint, the VCS is still the home arcader's meat and potatoes.

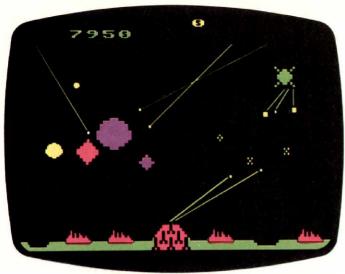
Q: Could you explain to me why the graphics displayed on my TV via my home programmable do not compare to the videogames in the arcades? (from G. R. Mitchell, Chicago, Ill.)

A: The difference, my demanding friend, between a coin-op and a home programmable is the difference between a machine constructed to play a single game and a system designed to run a theoretically infinite variety.

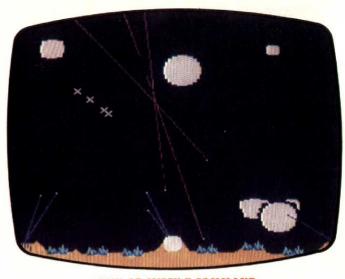
Remember that arcade machines use speciallyconstructed monitars with far higher resolution and greater technical capabilities. Brightly colored plastic sheets are also laid over the monitor screens, to create instant graphics that even the most sophisticated computer can't match. Other bells & whistles include computer voice chips and customized controllers, such as the trak ball.

Home programmables currently









COIN-OP MISSILE COMMAND

make do with a maximum of 4K – except where the bank-switch technology can be utilized – and, in terms of their design, must be flexible enough to allow space games, gunfights, sports simulations, adventures and boardgame-type conests. Also, keep in mind that the current programmbable systems such as the VCR

were all created several years ago, and the hardware has come quite a long way since.

Q: What exactly is the difference between highresolution and low-resolution? (from Danny Giglio, Glendale, N.Y.)

A: Good question! If you look very closely at your monitor or TV sc-

reen, you will see that the images are actually composed of a series of small dots, like the dots that make up photographs. These little blocks are called "pixels" and the more pixels that comprise the graphics image, the higher the resolution, or clarity, of the picture being presented.

The strict definition for high resolution is 1,000 by 1,000x pixels, but for videogames, the standards are not nearly so exacting. Anything approximating 150 by 250 pixels is regarded as "hi-res". Most programmable videogames are low-res, while others, such as Intellivision's sports games, are regarded as high-

resolution in terms of their graphics.

Q: Lately I have heard that **Centipede** and **Tempest** will soon be available for the Atari VCS but I did not think this could be so since they are both relatively new games. (from Tom English, Woodlands, TX.)

A: While members of the trade and

hardware or software that would allow an Apple cassette to be played on an Atari 400/800? (from Jamison Taylor, Brooklyn, N.Y.)

A: Sorry, Jamison, but just as with the programmable videogames, the various personal computer systems on the market are not compatable. The use

different processors and even speak different languages.

As for that device that would allow Apple software to work on Atari computers, there was actually talk to such an emulator about a vear ago. An ad even appeared ballyhooing the great technological advance. Alas, the creators were premature, and as

premature, and as of the moment no such wonder machine has been developed.

There may be hope, however. Coleco has promised a peripheral for its new videogame system that would allow their ColecoVision to play all Atari-compatable software.

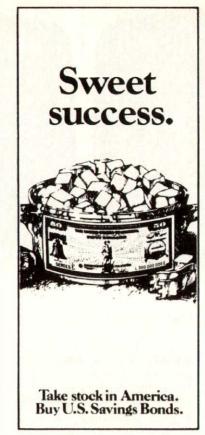
Well, gamers and gamettes, it look like the old doctor's game watch is telling him it's time to pack it in for this issue's installment of Q&A. But remember to keep those questions coming in. And for those of you having trouble with your joysticks, don't miss Cliff Blake's upcoming article on the care and feeding of game controllers. Till next time, then, happy gaming!



press were given an opportunity to play a version of Centipede on the new, Atari Supergame system, no such cartridge is presently in the works for the VCS. Tempest, however, is unlikely to turn up in any home format for the forseeable future. As this coin-op classic not only employs a special Quadrascan, vector-graphics monitor, but a color monitor at that, it would be virtually impossible to do it justice in any home format with current technology.

Q: On certain computer games the cassette program for one computer system won't work in another computer. Why is this? Also, is there any





Q: I own an Atari 800 and would like to know if I can use a Quadrascan monitor for it. If I can, does it have to be black and white or can it be color? Also, what implications would I face (i.e., memory expansion, peripherals, cost of screen, etc.)? (from Scott Goodwin, Lakenheath AFB, England) A: Sorry, Scott old boy, but home computers and programmable videogames have to be specifically designed for the type of monitor on which they will appear. Systems such as the Atari, Apple II, TRS-80 Color Computer and the VIC-20 are built to interface with standard television sets. which use raster-scan technology, rather than the vector-beam type graphics employed by Quadrascan.

Also, as you may already know, color vector-beam monitors already exist and are being used extensively in coin-op games (Sega's Eliminator, Atari's Tempest and Space Duel, etc.), but their scanning technology is far removed from the raster type and is therefore incompatible with it.

There have been rumors within the electronic games industry that someone may produce a videogame system that will come with its own vector-graphics type monitor. The only downside to this intriguing idea is that the monitors would almost certainly be black and white.

Q: How much does it cost to rent an arcade game and how often does he or she have to pay? (from Christopher Robinson, Pittsburgh, PA)

A: Today's coin-op superhits are so popular that the manufacturers almost never have to rent out their masterpieces. The demand among arcade operators, candy stores, bowling alleys, convenience stores — virtually every sort of retail establishment, with the possible exception of funeral homes — for the hit games is so great that anyone who wants one has to buy it, and then wait on line to do even that

There are, however, several retailers who will sell you a real, live coin-op, such as G.A.M.E.S. on the West Coast, and Interlogic in the Midwest.

Q: I am an Intellivision owner and I like it very much. Recently, however, I've noticed that other companies are producing arcade-style games and I was wondering if Mattel had any future plans to do likewise.

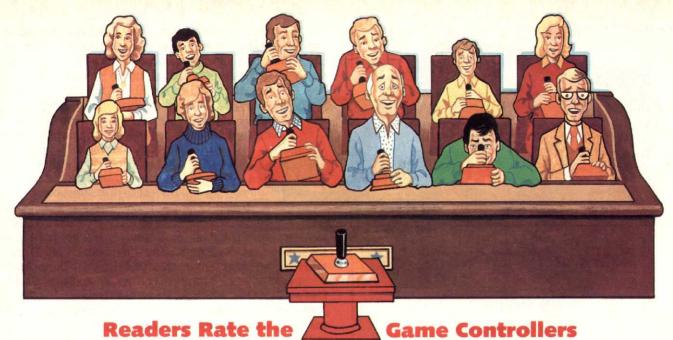
Also, I was wondering if multi-phase games, such as **Gorf** are possible for home programmables? (from Dan

Continued on page 44



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JOUSTICIS JURU

o one ever accused gamers of lacking opinions. We expected a good response when we announced the creation of the "Joystick Jury", but even we did not anticipate the more than 100 mini-essays our first topic, game controllers, generated.

Although our jurists really out-did themselves, our choice for the \$25 prize this time goes to John McGuire of Spencer, Ind., for his cogent comments about interchangeability of controllers.

And so, without further preamble, let's call for order in the court and get our jury's verdict.

I for one do not like the coin-op games that have so many buttons, such as **Defender.** I find them to be unnecessary and confusing in play, although I do find the game fascinating. I also have similarly negative feelings

toward Mattel's Intellivision, because of its disappointing controller and the manner in which I have to constantly

keep looking at it in order to do anything. (Edwin Tuazon, Troy, Michigan)

I believe the Atari controllers and the Odyssey joysticks rate the best because they give the best responses. Intellivision is very hard to control and takes more time to learn than play the game. TRS-80 has very poor response and I

find their joysticks to be rather small. This is also the case with Bally's joystick/paddle controller, along with its poor grip. Because of Atari's and Odyssey's ease in handling and grip, I find these give the best responses of all. (Richard Allen, Brooklyn, New York)

I think Odyssey joysticks rate best because they allow one to do hard maneuvers with relative ease. My only reason for putting Odyssey's joystick ahead of Atari's is because Atari's joysticks seem to break more easily. I find Atari's paddles to be better than Intellivision's controllers (especially for driving), because Atari's are easier to maneuver. I would generally rather have joysticks for most of Intellivision's games than a disk, again, because it is much easier to use and gives much more excitement. (Michael Lencioni, Newton, Massachusetts)

Most coin-op games have a type of controller designed to work optimally with one particular machine. In order

to keep realism in the original home videogames, I feel that controls should be interchangeable, such as the case with Atari. This concept allows individual piece repair without loss of the total unit. I would also like to see Atari introduce several other controllers that allow for even more accurate control and sturdier

ATARI CONTROLLERS





ASTRO CONTROLLERS

existing controllers as they seem to be short-lived in their mechanical existence.

(John McGuire, Spencer, Indiana)

I prefer the Atari and Intellivision controllers because Atari is simple to use and Intellivision gives you unlimited flexibility. Unfortunately, they also both have drawbacks: Atari games may sometimes be too simple while Intellivision's get too difficult. Atari has more controllers, which means spending more money. The common bond between the two is their unfortunate tendency to break so easily. (Scott Engel, Flushing, New York)

I feel controllers should be complex, and that a perfect controller would have a joystick with three buttons. A modular key-pad with custom overlays would help simplify the game and remote-control operation could untangle the sets. Atari and Odyssey both have excellent systems but lack the graphics and key-pad of Intellivision. A combination of all of the aforementioned units would, in my opinion, result in the ultimate home arcade system. (Paul Kelly, St. Clair Shores, Missouri)

Having previously played the three major programmable videogames extensively, I feel justified in stating that Atari has made the right decision by using interchangeable controls with the VCS. I think Odyssey and Intellivision have unfortunately limited themselves by using hard-wired controls. In many instances, a good game such as Intellivision's **Auto Racing** is turned sour by having to use the disk to steer. (Matt Myers, Coniopolis, Pennsylvania)

Regarding the commercial Arcade games, I like the Trak-ball and push-button controllers. I find these give me more accurate control than the others.

I dislike some of the joysticks and paddle controllers because sometimes they stick in the middle of a game, thereby blowing your quarter. I also like the unique type of joystick with a built-in trigger which enables your defending object to move forward, back, left, right, and fire with the same hand, as in Bally. (Kevin Crawford, Lexington, Massachusetts)

I have just recently purchased an Intellivision system and have to admit that the controls are very effective and essential in its sports games. At the same time I feel that Intellivision should have also furnished an additional set of controls for its space action games (**Space Armada, Astrosmash**). Your fingers become numb after continually pressing the small side buttons which fire shots at the invaders. Firing shots would be much easier if a larger push

button was installed, as found on the Atari joystick. Other than this slight problem, I feel that Intellivision has done a good job of keeping its controls compact and easy operated. (Kevin

Miller, Bay City, Michigan)

My opinion concerning home video controllers is that there is no perfect controller. I do feel that the best one on the market belongs to the Astro Professional Arcade because it allows much greater movement

than does the Atari or Odyssey². The controllers for Intellivision are too complex and this makes it hard to react when the action gets more intense. I also think there should be special joysticks for such games as **Asteroids** and **Defender**. (Jon Whitfield, Dearbourn Heights, Michigan)

In today's arcade, the simplicity of a game's controllers may very well determine its success. As an example, I refer to the track-ball type control on such games as **Centipede** and **Missile Command**, which are my favorites for accuracy and speed. In both games, the ball is used as an aiming device, making accuracy essential and speed necessary for those high scores. However, in the home arcade it is important to have a controller that will work well with many games. I especially like the controller on Mattel's Intellivision. The 12 keys, four buttons and disk give Intellivision a much higher capability than other systems, leading to more interesting and action-filled games. (Tony Kremer, Matteson, Illinois)

I purchased an Odyssey in December, 1978 and after three years of exciting two-player fun, one of my joysticks broke. I then tried buying another at numerous stores and was told that my particular type of joystick was being discontinued, and that the new Odyssey² systems had the joysticks already wired in. Since Magnavox stopped making the old line of joysticks that I needed, I was left with a "bum" controller. I think Magnavox should still produce the old joysticks for all the owners of the original Odyssey version. (Lenny Mcabee, Hammond, Indiana)

The most effective controller for videogames should be designed to be "gripped" by the entire hand. Once the player raps his hand around a joystick, knob, etc., he has involved himself in a psychological manner.

The arcader now becomes an effective and interacting part of the game and will develop "body english" as a subconscious gesture. The graphics on the screen react to the player's actions and are no longer simply a case of the game playing the player.

In effect, the player has put himself into the game and is not only involved mentally but physically as well. (John

Sisker, Huntington Beach, California)

Many controllers of coin-operated games affect the way we play. For example, levers are most useful for battle games and some space games. Track-balls and/or cursorballs are also very useful for games dealing with speed and fast reflexes. I prefer the track balls for certain games that mostly involve speed. As for home videogames, Intellivision offers the paddle-type keyboard, which annoys me because in certain games such as **Baseball** and **Football**, you must be able to press certain buttons to make the players move while also using the paddle at the same time. (Vijay Reddy, Jackson Heights, New York)

No matter which of the major videogame companies are investigated, the problems with controllers cannot be escaped. The fancy metal-framed controllers manufactured by Intellivision are sleek looking and styled in calculator fashion complete with buttons, but are also permanently connected to the back of the unit. This will pose a problem to the owner, should anything break and need repair, because the whole game unit must then be checked into the shop.

The Odyssey² controllers seem to be the best made with their ball-socket design, but they, too, are hard-wired to the back of the computer, so one must hope they may never need repair.

Atari's controllers are interchangeable into the system and I think that this is just great. However, they are not made as well as the others and if a small plastic part inside of the system breaks, the entire controller is rendered completely worthless.

I feel that inside parts should be sold and the warranty on the controllers should be voided, so people won't have to pay the price of another cartridge to get a new one. If the controllers are permanently connected, the tops of them should be made interchangeable so as to fit every game situation. (Ron Kramer, Glassport, Pennsylvania)

If the tremendous response to **Electronic Games** proves anything, it's that you are an unusually knowledgeable and opinionated bunch. That's good. It means you care about this hobby and really feel strongly about the things that affect it.

Here's your chance to air your views on electronic arcading in front of this magazine's entire readership. "Joystick Jury", a column of reviews by readers, will begin publication in the next issue.

All you've got to do to participate is follow few simple rules.

- 1.Type (or clearly print) your comment on a separate sheet of paper that also includes your name and full address
- 2.Keep comments brief and to the point—no more than 100 words.
- 3. Observe the rules of fairness and courtesy. "Joystick Jury" should be a forum for reasoned opinions, not an arena for name-calling.

Each issue we'll print the most interesting responses to create a symposium on the topic under examination by the jury. The issue's best comment, as judged by the editors of **Electronic Games**, will win a cash prize of \$25. (All submissions become the property of **EG**, and none can be returned.)

Here are the next two installments of "Joystick Jury"

"Joystick Jury #(for Electronic Games #): One of the biggest current trends in home arcading is the translation of games that have found success in the commercial amusement centers to cartridges for programmable videogame systems and home computers. Would you prefer to see more and more of such transplants, or is your primary interest in games created especially for the home market? What do you think about the quality of some of the home versions of famous coin-op hits? Is this the way you'd like to see the hobby go on the future?

Deadline: June 1, 1982

Joystick Jury #4 (for Electronic Games, September). Every electronic arcader has his or her particular set of likes and dislikes. Of all the great videogames available these days, which is your personal favorite, and what exactly is it about that particular title that keeps you coming back for more.

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ARCADE CONTROLLER

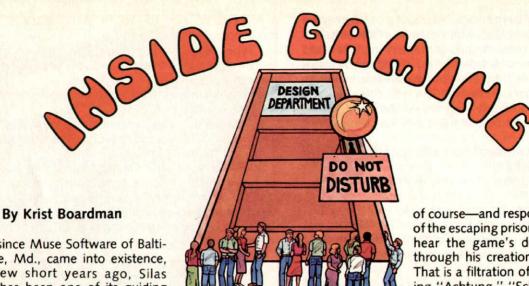


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ver since Muse Software of Baltimore, Md., came into existence, just a few short years ago, Silas Warner has been one of its guiding writers of software. He has developed programs of all kinds, including games, music, voice and educational discs. But the single program that has attracted the widest attention recently, is his **Castle Wolfenstein** game. Its success can be attributed to the way Warner amalgamates familiar gaming elements around an exciting new objective.

The goal in Castle Wolfenstein is for the captured Allied war prisoner to get out of the fortress alive, hopefully with the purloined Nazi war plans. If successful, it is a daring and bold escape, surmounting myriad difficulties and

risks along the way.

Of course, Nazi board strategy games and novels about doing battle with the armies of the Third Reich are legion, but this game is really unlike anything that has ever come along. The closest parallel is the movie *The Guns of Navarone*. After Silas Warner watched the movie, he became enthralled with the commandos' dash through the impregnable Navarone fortress on their mission to skrag the guns before the German troopers destroyed them.

Space invasion games, pong-style contests and technological warfare simulations all fell within his previous experience. In fact, he had already designed his own technological warfare game, **ABM**, which was then heading to market under the Muse insignia.

But Castle Wolfenstein was to be entirely different.

"I didn't want to have a space game. There are so many on the market," Warner recalls. "And I didn't want a tank attack. This was a different thing to do.

"It started out as a guy running around the rooms. I had that set up in

mid-1980. Then the problem became what to do with it, and I was working with this high risk character generator. Then I saw *The Guns of Navarone...*"

The simple shoot-'em-out game, in which arcaders attempt to dodge enemies while trying to zap them first, is a theme that has been repeated in many variations. But in Castle Wolfenstein, the object is to escape the enemy guards and their castle, not necessarily to kill and destroy. Shooting the guards is simply a means to the end, escape with the plans, and not an end in itself.

This is underscored by the absence of any point-scoring system. The object is to slip through all 60 functioning rooms of the castle alive and with the plans. Anything less than that—

The Man in Muse's Castle

death—is total failure. This, acknowledges Warner, is one drastic game.

The protagonist is a distinct human entity. He's a prisoner of war who awaits interrogation and torture by the dreaded SS guards, and not just some revolving gun turret. This gives the game recognizable human dimensions. Perhaps that's why some of Silas' critics have taken the game to task for being relentlessly violent.

Similarly, the German guards aren't just human facsimiles patrolling the castle's rooms and corridors. Using the computer's voice simulators, they speak their own language—German,

of course—and respond to the actions of the escaping prisoner. If you want to hear the game's designer speaking through his creation, listen carefully: That is a filtration of Silas' voice barking "Achtung," "Schweinhund," and "Halt!" and five other commands.

Lest we become too chummy with these human forms in Nazi uniforms it's best to keep in mind that the escaping prisoner's business is difficult and frequently bloody. There's no time here for the expression of regrets over fallen foes. Those bodies should be searched quickly for keys, grenades, and bullet clips. Without keys, doors may remain unlocked while guards roam the corridors and threaten to kill the prisoner. Without the right key, the escapee may have to waste a few shots of precious ammunition to spring the lock. This constant need for ammo makes recovering grenades or bullets from the fallen guards a necessity.

In most rooms there is a chest which may contain more ammunition, a bullet-proof vest or a German uniform. Without protective coloration of the uniform, the guards will identify, pursue and perhaps destroy the prisoner immediately. Occasionally an SS guard detects a prisoner disguised in a German uniform and follows him from room to room until he loses the trail, or one of the two is killed. Without the bullet-proof vest, the prisoner may not survive the next exchange of gunfire. Yet if he accidently shoots open a chest that contains a cache of grenades, the resulting explosion could be the end of the prisoner and the castle.

The conquest of the castle is not predictable. After the title page display, there is a visual read out on the object of the game which takes from 35 to 60 seconds to complete before the action can proceed. While those who have already played the game may complain about this short delay, during this time the computer is actually hard at work shuffling the 64 floor plans and producing a sequenced mix

22 Electronic Games

of 60 rooms for the next romp through the castle. Castle Wolfenstein may always look the same from the outside, but inside the arrangement of floors and rooms is nearly always different.

There are eight difficulty levels, starting from private and advancing to general and one rank above. A player cannot play a higher difficulty level until he has been "promoted" from a lower rank. That happy event doesn't occur until he has successfully escaped from the castle."

What is the rank above general? Silas was asked.

"You'll find out when you get it," he says with a wink.

We did at least get a peek at the back of the castle when the prisoner escapes as a private. For those who haven't yet made it out alive, a pleasing visual display awaits them on the completion of a successful mission.

For those who have the patience and develop the skill, there are unexpected rewards of an as-yet undisclosed nature.

"There are certain 'cheats', but I haven't take them out," admits Warner, because I have a soft spot deep in my

Robotwar also from Muse, is an earlier Silas Warner creation. The game has attained cult status among computerists.

heart for cheats."

To design the game, he built three separate program discs which were then integrated onto one disc. The first

established the set-up of the castle including the graphics for the front and back, plus the 64 interchangeable floor plans. The second disc provided a program for what the guards do in the castle, and the third governed what the prisoner does.

"It took a lot of work to get the interfaces between them," Warner says. But he is obviously satisfied with the result. This is a highly involving game that presents complex interactions and ever-increasing levels of difficulty.

The best news is that there's more to come. The voice simulations may lead to the introduction of passwords to enter doors where keys and bullets alone may not suffice, and Silas and his associate Tom Jackson are working to develop a historical scenario along the lines of World War II. It's not inconceivable that future editions of Castle Wolfenstein may include escapes from multiple castles, each with only a portion of the war plans, which when pieced together can win the war. But Warner's private plans for Castle Wolfenstein will remain secret until Muse is ready to make them public.



A GLOSSARY FOR GAMERS

Just about every hobby eventually develops its own language of specialized terms and slang expressions. Although electronic gaming is a relatively new pastime, there are already a few words and phrases that may be unfamiliar to newcomers. To dispel the fog, here's a list of terms in general use.

Action Button: The stud on a home arcade hand controller. In action

games, it is frequently used to initiate firing.

Arcader: A participant in the hobby of electronic gaming.

BASIC: A high-level language that is frequently used by programmers of microcomputers.

Chess computer: This device utilizes a microprocessor to play the classic strategy game. It is, in general, not usable for other computer applica-

Computer Game: An entertainment software program created for use on a computer. Technically, videogames and coin-op games are also computer games, but this term is generally used only to refer to game programs for microcomputers.

Disk: One of the three principal media on which game programs are stored. Floppy disks can hold more information and loads faster than tape. Machine Language: This is the binary code directly understandable by a computer and does not need to be "translated" by the machine before the program is implemented. The result is a program that executes faster. Monoplanar Keyboard: A flat, pressure-sensitive board often used in lower-priced computers (and also on the Odyssey² videogame).

Programmable Videogame: A system which allows the operator to switch cartridges and thus play a variety of games with the same basic machine.

ROM Cartridge: A medium for the presentation of programs. Although ROM carts are somewhat more expensive, they have several advantages including virtually instantaneous loading and a resistance to physical abuse.

programmable unit with more then 4K of resident memory and highresolution graphics capability. These machines are priced at \$200 and up. Software: Programs for videogame systems and computers. They are the instructions that tell these machines

Senior Videogame System: A

what they are supposed to do. Standard Videogame System: A programmable videogame unit with less than 4K of resident memory and low-resolution graphics capability. These machines are priced under \$200.

Stand-Alone Games: Portablehandheld and tabletop—games which do not have to be attached to a television set or monitor to work.

Tape: The least expensive method of storing programs for use with a computer. The drawback is the long loading time.

Videogame: This term almost always means a programmable videogame. Actually, it could be used to refer to any game that requires a video monitor, but the more restricted definition is more popular.

Voice Synthesizer: A peripheral device which enables a computer or videogame, to produce an artificial, but human-sounding voice.



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What's in a Name?

I keep hearing rumors about a new game for the Atari VCS called **Graves Manor.** Is such a game really being developed or is this just more hot air passing for fact?

Dennis Wolfe Brooklyn, N.Y.

Ed: The whole process of titling videogames is much the same as in the naming of books, songs and films. Did you know, for instance, that "Gone With the Wind" was originally scheduled to be dubbed "Tomorrow Is Another Day"?

The game that was developed under the name **Graves Manor** is, in fact, the forthcoming **Haunted House**, which involves a fascinating scavenger hunt through the infamous mansion of Old Man Graves. A similar nameswitch has occured with yet another future Atari cartridge, by the way. Originally dubbed "Foxbat", this Atari adventure has been totally restructured and will ultimately be released under the title **Raiders of the Lost Ark** — and that's one name you can be fairly certain will stick.

No, No, a Thousand Times No

You printed a letter in your mag about an **Adventure** player who found a hidden message in that Atari VCS game. I am an **Adventure** player who would like to find that message but I missed your first issue with the clue.

Anthony Cucciniello Maplewood, N.J. Ed: Actually, Tony, there was no clue in our first issue regarding how to find the secret message — only that such a message exists. Since first validating the rumor concerning such hidden "Easter Eggs" in the Atari cartridges we have been deluged with letters and phone calls requesting,



pleading and even demanding step by step instructions regarding how to find these hidden messages.

In response we must tell you that both Atari and **EG** believe that the fun is in the finding of these little goodies and that detailed directions would ruin the hunt. Moreover, even if we wanted to, we have given Atari our word that we would not disseminate the information, and a good gamer

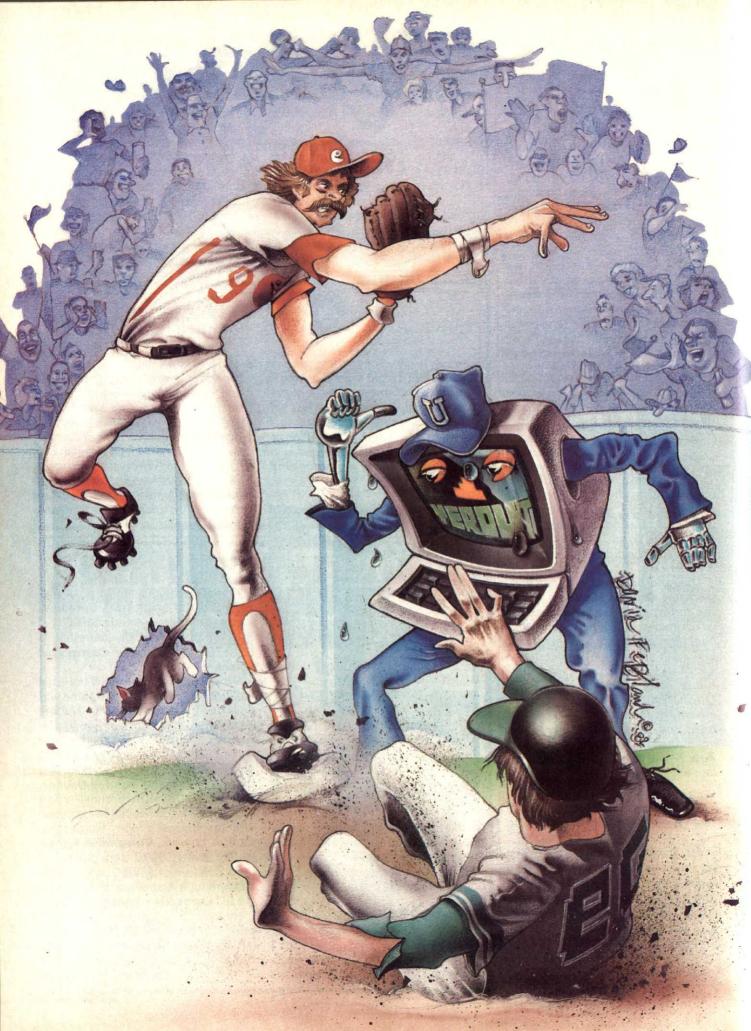
never breaks his word.

However, giving credit where credit is due, several of our more enterprising readers have discovered secret messages not only in **Adventure**, but **Missile Command** as well (take a bow, Tom Daley). In fact, Naaman Bell of Huntington, West Va., not only found the message, but provided us with exact diagrams. So stop asking us, folks, and go plead with Tom and Naaman for the answers.

More On History

In regard to your "history" of videogames in the article "A Decade of Programmable Videogames", ithought you might be interested in some facts concerning Computer Space.

While Nolan Bushnell was the chief engineer on the project, the game was developed and introduced by Nutting Associates of Mountain View, Ca. Another engineer who should receive some credit for the hours of work spent on his own time, while working full time on another job, was Ted Dabney. Ted was with Nolan Bushnell when Pong was first developed but left soon after for personal reasons. Nutting Associates unveiled Computer Space in November, 1970 and ultimately produced well over 2000 units, hardly a failure for a first effort. In fact there are still Computer Space games out there collecting quarters from dedicated fans even though there is no one left to service them. I worked with ACEM Inc., a company formed in 1973 Continued on page 35



aseball has inspired more games of all types than any other team sport. Although some experts claim that football has already become our true National Pastime, the gridiron is still a long way from replacing the diamond as the game-player's best friend.

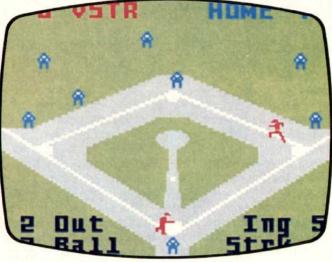
The sport that Abner Doubleday is honored for inventing has always proven a popular subject for tabletop entertainment. Mechanical devices like Electric Baseball (Coleco), tactical

duels such as Baseball Strategy (Avalon Hill) and statistical replays like APBA Baseball have helped millions of diehard fanatics survive through long winters, rain-outs and union strikes during most of the 20th century.

The coming of the electronic gaming age hasn't changed anything. Baseball lovers can choose from four programmable videogame cartridges, several microcomputer software titles and more than a dozen hand-held and tab-

letop units modeled on the sport.

Just as football's routine of play is particularly conducive to telecasting, baseball's rules and pace make it nearly ideal for reproducing in game form. The pause after each bit of action, the clearly identified decision points faced by managers and coaches, the highly channeled nature of both pitching and baserunning all make it relatively easy for designers to present the essentials of the sport within



MAJOR LEAGUE BASEBALL

the limitations of the electronic simulation.

A programmable videogame system without a baseball cartridge in its game library is about as common as a joystick without an action button. That's why baseball contests are so frequently used as a comparison point in manufacturers' advertising.

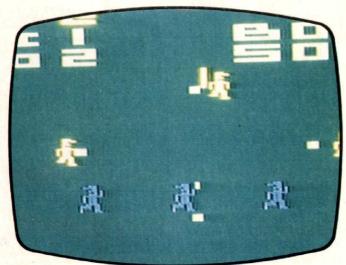
The pennant winner in a strong division is Mattel's **Major League Baseball** for the Intellivision. The company's marketing department wanted a cartridge

with graphics so outstanding that it would turn heads across a crowded department store selling floor, and that's exactly what the designers delivered. A few may guarrel with our choice of Major League Baseball as the best all-around baseball simulation, but few will deny that it boasts the best visuals.

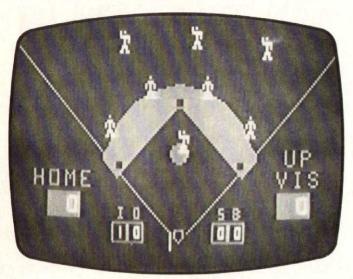
A pair of human managers, one home (blue) and the other visitor (red) square off in this head-to-head contest.

> The direction disk is used by the player whose team is in the field to pitch. Pressing 12:00 produces a fast ball, while holding down 6:00 yields a slow change-up. Inside and outside curvers are generated by pushing points along the left and right sides of the metallic circle.

> The batter bunts or swings away, depending whether the manager pushes the upper or lower action button. All batted balls are considered grounders, so every time the hitter



HOME RUN



TORNADO BASEBALL

strokes the horsehide into fair territory, the fielders will have to retire him by beating him to first base with the ball. When the arcader takes control of one of the nine fielders by pressing the appropriate spot on the overlay, the onscreen athlete turns black to indicate that he can now be directed using the direction disk.

The running game is detailed more fully in Major League Baseball than in any other video baseball cartridge. The lead runner, depicted as solid black on the screen, is maneuvered using the direction disk. Pushing the right side will make him take a lead before the pitch or advance to an extra base when the opportunity arises. Steals may be attempted, but the other team's catcher may throw you out at second if your man doesn't get a good jump.

Defects are minor. It would have been more convenient if the controls for the running game were reversed, and the total absence of fly outs is a lack. These are really very small complaints about a game that packs so much real diamond strategy.

Baseball for the Odyssey² is another excellent twoplayer simulation, probably the best available for any of the three standard programmable videogame systems. Its graphics aren't quite as overpowering as those in *Major League Baseball*, but they are attractive and certainly get the job done.

After releasing the pitch by pressing the action button, the defensive manager controls the flight of the ball by moving the stick forward for fast, back for slow and to either the left or right for a curve. (Prior to throwing to the batter, the arcader can use the stick to position the outfield.)

The batter swings by pressing the action button and automatically runs toward first base if he makes contact with the pitch. Pushing the stick in any direction will send the lead runner off to the next base. There is, however, no way to reverse direction once such a move is begun, so managers planning to utilize Billy Martin's baserunning strategies will have to learn to distinguish good opportunities from bad ones.

Fielding, though important in *Baseball*, is relatively streamlined. Fly balls are automatic outs. Only ground balls to the outfield must be picked up by a fielder under the manager's direct control and thrown to the right base. Such a toss is accomplished by positioning the joystick's shaft so that it points to the desired base and then hitting the action button to release the ball.

Tornado Baseball is not as full-bodied a simulation as purists might wish, but the cartridge rates as a solid value. Besides *Tornado Baseball*, it also includes video versions of tennis, handball and hockey.

Pitching is the centerpiece, much as it is in the real sport. The joystick on the Astro Professional Arcade controller is used to speed, slow or curve the pitch as desired. The manager of the defensive team can also shift his outfield by twirling the paddle knob in hopes of anticipating where the batter will stroke the ball.

Home Run by Atari for the VCS depicts an arcadeoriented approach to simulating baseball on the TV screen. Depending on the variation selected, each team has one, two or three fielders, one of which doubles as the hurler.

The duel between hitter and pitcher is the main theme of *Home Run*. By skillfully jiggling the joystick, the defensive manager can put more dips, darts and spins on the ball than even Don Sutton on a damp spring day.

If the batter gets good wood on the pitch, the rival manager's joystick instantly switches to control of the fielders. These players move in any of the eight possible directions as a unit. No swift throws to nip the runner; the player who catches the ball must carry it to the appropriate base to retire a runner.

Home Run is unique in one respect: It's the only videogame baseball cartridge that can be played solo. Its lack of the "feel" of real sports action, however, ultimately relegates it to a benchwarmer's role on this team of all-star sports videogame cartridges.

Statistical replay games provide a special brand of excitement for fans of non-electronic games. These games



O2 BASEBALL



base the performance of players in the game on the batting, fielding and pitching statistics the athlete's real-life counterpart compiled in the previous major league season. Stat games provide the exciting chance to see whether you could manage Baltimore Orioles better than Earl Weaver or the Los Angeles Dodgers better than Tommy Lasorda.

In this age of the personal computer, it was only a matter of time before major software publishing houses got into

the act. Avalon Hill and Strategic Simulations have both recently released stat games. The latter company's creation is only available for the Apple II at the present time, while the Avalon Hill comes on cassette or disk for the TRS-80 and Apple.

The two games are as different as a pop up and a line drive. Computer Baseball (SSI), every good thing one expect from software, while Major League Baseball does not live up to the reputation for quality Avalon Hill has earned in the non-electronic gaming field.

SSI's Computer Baseball has surprisingly good graphic trimmings and plays very realistically in the two-player mode. Managers choose teams from among the 13 greatest match-ups in World Series history. The '27 Yankees and Pirates, the '34 Tigers and Cardinals and the '78 Yankees and Dodgers are just a few of the great teams represented.

Managers construct their team's line-ups from a complete roster shown on the screen. The game even allows for increased fatigue for a pitcher who is toiling too frequently. And for the first time in any stat game, electronic or tabletop, relief pitchers must be warmed up in the bullpen to be really effective. But if you get that relief ace heating up too long, he could leave his game on the sidelines!

Running speed and fielding ability by position are rated for all players. In short, this game takes into account

most of the important elements of the actual sport.

While the graphics in Computer Baseball aren't exactly of arcade quality, they are more than sufficient to visually portray the results of the interaction between offense and defense as it occurs. The ball is pitched to the on-screen batter and fielded according to the actual result of the play

taking place.

Computer Baseball is fairly easy to set up and surprisingly simple to play. A complete game takes an hour or less and it can even be enjoyed solitaire. The automatic manager, "Casey", isn't the smartest skipper in the league, but he makes sensible moves most of the time.

Avalon Hill's Major League Baseball has problems, many of which seem to originate in sloppy programming. Player's names are misspelled, and screen layouts are messy and hard to read. The program routine begins

> by prompting the entry of the name of the two teams. Any mistake at this point crashes the program and sends you back to BASIC. If the team names are correctly entered, the

disk input/output operations are displayed on the screen. This is just lazy programming, since one simple BASIC command can avoid this problem.

There are no visuals in this game, and the text presentation is not very effective. Four cursors are laid out as bases, surrounded by a somewhat confusing parade of players' names.

The real pity is that Major League Baseball has a lot of potential a stronger design effort could still bring out. It supports all the basic strategies of real baseball. Managers can have players steal and bunt, insert pinch hitters and shuffle

the line-up in interesting ways. The game rates satimina for pitchers and both speed and power for batters.

On the plus side, Major League Baseball can be used to play

a game in less than a half hour. This can come in handy if you're attempting to replay an entire season. The comprehensive box

score the program prints after the completion of a game provides the information for keeping extensive statistical records, something stat game fans often like to do.

Video baseball fans have additional treats on the way. Atari is expected to produce a diamond cartridge for its

new Supergame. The Sunnyvale manufacturer will un-

doubtedly be looking to silence long-standing complaints from sports simulation connoisseurs about Home Run by producing a true state-of-the-art piece of software.

Add in the upcoming baseball cartridge for Coleco-Vision and the outlook for electronic baseball fans looks as sunny as rightfield in Yankee Stadium in mid-July.





ecent polls of arcades across the country show clearly that Pac-Man is the number one coin-op videogame. Players are putting 48 million quarters per week into Pac-Man

machines. That's a cool \$12 million or, to put it on an annual basis, \$600 million a year. That's half of what all seven multi-million dollar Atlantic City casinos are winning from the public over the same period!

What's behind Pac-Man fever? It's probably impossible to know for certain why Pac-Man has surpassed all other games in history. If anyone actually knew the formula, they could consistently produce top-selling games and all of the manufacturers have had their share of clunkers.

One reason - often stated and probably true - is that it appeals to women more than games like Defender and Stargate because it's not a macho-type shoot-'em-up. Some amateur psychologists have even theorized that the gobbling Pac-Man has freudian overtones that contribute to its popularity.

Pac-Man's controls are about the simplest found on any of the current coin-op winners. Everything is handled by a single four-direction joy-stick. (This is also true of Frogger and Make Trax.) By contrast, Asteroids has five controls, Defender has six and Stargate, with its incredible seven controls, is as tough to pilot as a DC-8.

Another reason for Pac-Man's success. I believe, is that it's a game in which pre-determined knowledge is far, far more important than hand-eye coordination. I'd estimate that pure skill accounts for 80% of player success, versus 20% for hand-eye control. (By way of comparison, Space Invaders falls into the 50-50 category, while Defender may be no more than 15% mental agility.)

Midway, which markets Pac-Man coin-op machines in the United States, has created some new variations on the original designed to make life just a little more difficult for dedicated



pattern-runners. Some of the chips used in these new units lend themselves to pattern analysis, but others have a random selection process that makes the monsters move unpredictably.

There are also a couple of new games:

1. The Disappearing Board game. In this version, the outline of the board disappears either when the gobbler hits an energizer or throughout the entire course of play. The maze in this one is also more difficult to clear. Frustrating one-dot detours are required to complete a round. It's still possible to score high, but it will be necessary to perfectly memorize the layout. You've got to have the maze memorized completely or you'll face major difficulties here.

2. Ms. Pac-Man. As described in the last issue of Electronic Games, this switch on the classic theme features a Pac-ette with long eyelashes and a bow in her hair.

Ms. Pac-Man is especially challenging, because the maze changes every other board. It starts with a simple pink maze, then a difficult blue labyrinth, then orange, back to blue and so forth. The monsters move randomly so the patterns won't work.

Despite the changing chips and the additional complexities such as multiple tunnels which Midway has introduced, arcade aces will still be able to rack up big numbers on Pac-Man. My book, Mastering Pac-Man, delves deeply into the intricacies of pattern play, but here are some general playing tips that may help improve your game:

The gobbler can out-run the monsters by cruising through the tunnel(s). If you reverse flick the joystick just before entering one, the goblins will sometimes back off and let you proceed unpursued.

Pac-Man corners better than the gang of four. Although the monsters will sometimes catch the gobbler on a straightaway, it can elude them by turning frequently. The more turns, the further behind the monsters fall.

Pac-Man moves at variable speeds. Many gamers don't realize this, but the gobbler scoots more

without dots than on ones where some remain to be eaten. So when danger threatens, always attempt to escape on a dotless pathway if at all possible. Eating an energizer causes the monsters to reverse direction in all edi-

Eating an energizer causes the monsters to reverse direction in all editions of Pac-Man. This means you can actually cause the goblins to move in certain directions. If you use this knowledge judiciously, you'll end up eating more blue



For Pac-Maniacs

By Ken Uston

of a lot more points!

Finally, refer to the final two chapters of Mastering Pac-Man for pointers on how to improvise and, even more importantly, how to develop patterns for the new versions now reaching the coin-op arcades.

Read, study, practice — and then go out there and clear some mazes! 6

Ken Uston, author of Mastering Pac-Man (Signet Books) and this issue's "Tips for Pac-Maniacs" is also publisher of the monthly newsletter Video Games. This seven-page monthly covers the field of videogaming with special emphasis on Pac-Man. Subscriptions are \$9.95 per year. For more information write to Ken Uston at Box 8080 Walnut Creek, Ca. 94596





Pac-Trivia

*Do you know how Pac-Man got its name? The world's most popular coin-op first saw the light of day in Japan where "paku" means "to open the mouth and to gobble". In fact, the game is called Paku-Paku in the land

of the rising sun.

*Did you know that Pac-Man "tops out"? Though many players have assumed that scoring would rise without limit, a Pac-maniac named Kevin Fischer of Silver Springs, Md., has now proved differently on several occasions. He played through about 250 boards - good for scores as high as 3.2 million points - on the way to making his notable discovery.

What happens is that the left side of the screen continues to display the familiar maze, but a test pattern covers the right half. The dots on the left can be cleared, and the bonus target (a key) can be munched twice. After that the player can dodge the goblins "forever" - or wait in a safe hiding place on the board.

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t has probably happened to almost every coin-opper at one time or another. The videogame you've been vearning to tackle all afternoon is suddenly vacant. You rush over to it with a quarter gripped in your nimble fingers. Triumphantly, you slam the coin into the slot and-nothing. The dreaded Blank Screen Syndrome has struck again!

Nothing can spoil the enjoyment of arcading more thoroughly than malfunctioning equipment. Yet such breakdowns are obviously inevitable. Manufacturers build their commercial entertainment devices to stand up under an abnormal amount of wear and tear, but we fallible humans are still not capable of constructing anything that lasts forever.

Fixing a coin-op videogame isn't quite as easy as changing a burned-out lightbulb. It takes training backed by some in-thefield experience to produce a qualified game doctor.

Randy Fromm's Arcade Schools, Inc., headquartered in San Diego, Ca., is one of the only organizations currently engaged in educating the legion of repair personnel needed by the explosively expanding commercial arcade industry. Since Fromm and his cohorts have been holding classes from coast to coast the last year, it wouldn't be surprising if the last person you saw perform minor surgery on a Pac-Man or Qix got his diploma from this college of videogame knowledge.

Love of arcading drew the 29-year-old Fromm to his present career. "When Los Angeles legalized pinball in

Audit a Class at the College of **Videogame Knowledge**

1972," he recalls, "I really got hooked on those flipper games."

At the time, Randy was working as a stock room man for an electronics manufacturer. It wasn't a bad job, but he wanted something more. "I looked at the machines and thought to myself, 'I could repair those',' he says. "There's always been a shortage of people who can repair these games, so approached Associated Coin Amusements in Los Angeles.'

Associated put Fromm into a workshop full of knowledgeable veterans. The apprentice picked up a generous share of repair lore from his co-workers and, within two months, was out in the area's arcades helping sick pinball machines regain their health.

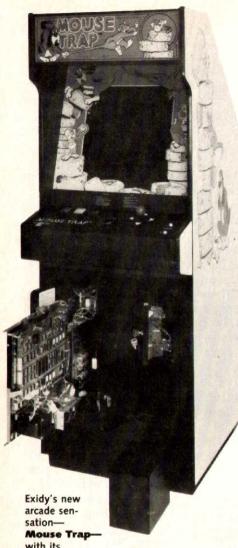
Fromm terms his move from the pinball machines to videogames "a natural progression." When the videogames began to dethrone King Flipper, says Fromm, "It was a do or die situation. Any pinball mechanic who didn't learn how to fix a videogame didn't stay viable.'

The idea of starting a school came to Fromm in June 1980, while he was working as an independent videogame repair technician. "It came about by popular demand," says Fromm. "The companies kept asking me to give their people training classes in videogame repair." Captivated by the notion of getting into the seminar business in a more serious way, the ace repairman began assembling the materials for the ideal course. Even with the often-enthusiastic cooperation of the coin-op manufacturers, it took him a year to get things ready to his satisfaction.

The Arcade School started small, holding its



Electronic Games 33



front hatch opened, displaying the sophisticated coin-triggering mechanism and the game's program boards

seminars in San Diego on a periodic basis. "The first eight months or so we were fine-tuning and building up a reputation within the industry," Fromm explains. "Now we're getting the sons of some of the guys who attended the earliest seminars coming to us to learn how to repair the videogames."

Because of the geographic remoteness of San Diego, classes there are currently being phased out in favor of taking the show on the road to major cities in every region of the United States. Because of its central location, Dallas is now the site of a permanent unit of the school. There, under the tutelage of Nathan Bush, a long-time mechanic, would-be game doctors from all the sunbelt states learn their stuff.

Some of the cities on Fromm's itinerary this year include Chicago, San 34 Electronic Games

Francisco, Atlanta, Baltimore, Toronto, Phoenix, Wichita, New Orleans, Minneapolis and Salt Lake City. The Arcade School will be going even further from home this fall, when Fromm crosses the Atlantic for a series of three seminars in England and Scotland. And he's currently mulling a request from the U.S. Army that he take his traveling show to Korea to teach the people who must maintain videogame machines at government installations there.

Recognizing that commercial arcade machine repair is a job that might appeal to many who are already employed in some other line of work, Fromm has structured the course to pack the maximum amount of useful information into the shortest possible timespan.

The course is generally given in a major hotel located in the host city. It runs from Monday through Saturday. School begins at 8:00 a.m. and, except the lunch break, meets straight through to five o'clock every day except the last one. "We only go until 3:00 p.m. on Saturday," he says, "so our students can head home."

"We go through the basic electronic systems," says Fromm with reference to the curriculum, "and we teach people to troubleshoot problems without getting bogged down in much math or theory.

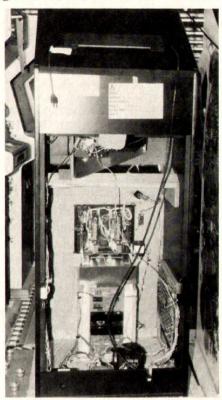
"Most of the problems are quite simple," Fromm explains, "and involve things like the power supply. We cover the video monitor, the sound system and just about everything else except the microprocessor." Only about one malfunction in five, according to Fromm, actually occur in the electronic brain of the machine.

Another important point for those considering a new life as a game doctor is that the techniques taught by the Arcade School can be practiced without a lot of costly and complicated equipment. "We only use one gadget," Fromm notes, "a digital multimeter that costs approximately \$145." While he doesn't knock the more sophisticated diagnostic devices, the young repair veteran sincerely believes that graduates of his program can perform very nicely without them.

Yes, there is a final exam. Those who pass are awarded a diploma and a certificate of excellence. Those who fail are given a certificate of attendance. Any student, regardless of performance, is allowed to take the \$400-course of instruction again free of charge. "Actually," Fromm says,

"we rarely have failures."

What about getting a job? Randy Fromm's Arcade Schools do operate an informal placement service for graduates, but the demand for skilled



At the school for game doctors, tomorrow's coin-op medics get a closeup, inside look at the game business.

people is so tremendous that this additional aid is seldom needed.

Those who desire more advanced training will soon have an opportunity to take a second course which Fromm is now developing. He hopes to introduce a second seminar series dealing with the mysteries of the microprocessor sometime later this year.

For more information

Electronic Games has received numerous letters from readers asking about the availability of training in the field of videogame maintenance. Randy Fromm's Arcade School will provide free information about its six-day courses which are scheduled for many major cities.

Those wishing to get more specific data on what the program involves may write to: Randy Fromm's Arcade School, 6123 El Cajon Blvd., San Diego, Ca. 92115. For faster response, phone in your inquiry. The number is: (714) 286-0172.

Readers Replay

Continued from page 25



to own and operate **Computer Space** and another Nutting Associate game, **Computer Quiz,** in business locations throughout Northern California. From this experience I can tell you that it was not unusual to find the coin box jammed with quarters, another sign that the game was far from unsuccessful. If there was any problem at all, it was that Bill Nutting,

President of Nutting Associates, was not totally dedicated to the game business and that he probably did not market it as effectively as he could have. Two interesting asides:

- Computer Quiz and its precursor (which I believe was called The Knowledge Game) had already been introduced years before by Nutting Associates. Both gave the impression of computer control.
- Bill Nutting closed his company in the middle '70's and is today involved in Christian Missionary work with his wife.

I hope you found this information interesting; I believe it is important to "keep the record straight".

Brad Fregger Mgr., Employee Development, Atari

Ed: Brad we can't thank you enough for taking the time to write and fill in some of the gaps in our historical perspective.

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Introducing.... The National Arcade Scoreboard

★ "How do I stack up against other players?" is the question more and more readers are asking these days. To help find out, **Electronic Games** is establishing the National Arcade Scoreboard.

Beginning with July issue, we will publish a list of high scorers for some of the most popular home arcade games. Don't worry if your particular favorite isn't among the first group of games we're announcing this issue; We'll be adding more as soon as we get the basic mechanics of administrating the scoreboard down pat.

To enter this competition, just follow these simple rules:

1. Every score must be accompanied by a photograph of the TV screen showing the score. These photos do not have to be of publishable quality, just readable by our judges.

2. All photographs received become the property of **Electronic Games** and none can be returned.

3. Be sure to include your complete name and address. (We will print only the name and city in the magazine, but we may want to contact high scorers for helpful gaming hints.)

The games which will be listed in the National Arcade Scoreboard are:

- 1. UFO (Odvssev)
- Asteroids (Atari VCS)— Game #6
- Grand Prix (Activision) course #4
- Galactic Invasion
 (Astrovision)—difficulty #1
- 5. USAC Auto Racing (Mattel)—course #1
- 6. Spacechase (Apollo)—game #1

The National Arcade Scoreboard will list the two or three top players for each of the games. All standings will be updated every issue.

ARGANG

By Les Paul Robley

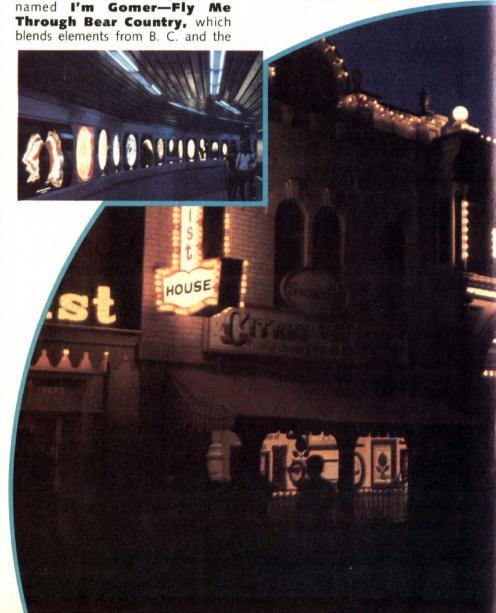
s you drift through the gates of the Magic Kingdom, hearing the "tick-tick" of the telegraph land line above announcing the arrival of the Disneyland Railroad, you are transported back in time to a memory of a bygone era.

You smell the chocolatev fragrance of the Candy Palace, hear the clipclopping of Clydesdales pulling the clanking wheels of a horsedrawn carriage, and see the rows of daintily odd two-story buildings which make up the single block of Main Street, U.S.A. The timelessness of the moment makes you wonder if the second floors are in fact real, or just decorated with trimmings in the window to get the effect of someone actually living there. Then you hear the chimes of a steeple bell and the jingle of old time cash registers, and you know you're back in a small town 80 years past. And where would a proper turn-of-the-century village be without the lighted globes of a hometown Penny Arcade to light the way?

Dominating the entrance is a glassenclosed lady with the name Esmeralda painted on her window. She turns her head, speaks, and tells your fortune all for a dime. Behind her stretch two rows of 20 authentic Cail 'O Scope flip-viewers which can show you a silent comedy, Tom Mix western, or maybe an old Felix the Cat cartoon for a penny. Surrounding these are steam shovels that hoist out trinkets, hands of lead for testing strength, a "Love Tester" to measure your virility, and player pianos that show everything inside except the little person moving the keys. It all comes magically together, endowing the Main Street Penny Arcade with just the right touch of old time nostalgia.

Disney's Arcade

The second stop is Teddi Barra's Haunted Mansion Ride. The player Swingin' Arcade in Bear Country, controls a departed denizen of the earth (or "ghost" if you're a believer), Frontierland. Here are found some quaintly unique 3-dimensional and with the aid of a joystick, flies him machines that are available exclusively over tombstones and under bridges, in this park and Walt Disney World in collecting all kinds of points for good Florida. Some are directly descended piloting. The interesting thing about from Disney motion pictures and the game is that Gomer is truly a others based on attractions in the park. spirit-you can see through him. He One extremely addicting game is comes complete with auto-reverse and



AMERICA

Wonderland

does a vanishing act when the game is over.

Other entertaining ones are **Brer Bear** (from Song of the South) where he and Brer Fox try to pop basketballs into a beehive basket, and **Swing Along With Big Al** (the huge "Bearitone-singing" bear from Bear Country Jamboree) in which you control his attempts on the golf course

using his twangin' guitbox as a club.

The arcade is nestled amidst a forest of fragrant pine trees. The Old West atmosphere is quite authentic, and if you get tired of flying ghouls, shooting skunks, or playing *Totem-Up*, you can rest your fingers and settle down for a non-alcoholic beverage at the Mile-Long Bar next door. But the niftiest thing about the place is: Where can you play arcade games these days at the shockingly low price of five or 10 cents?

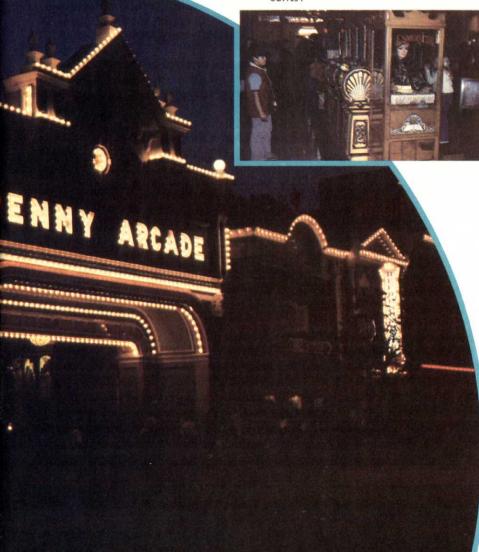
Upon exiting the stellar vastness of Tomorrowland's Space Mountain attraction, the exhausted rider is next greeted by NASA shots depicting the planets, sun, moon, and other outer space spectaculars. Walking down the shiplike corridor, you are almost forced to say to yourself, "Gee, this would be a super atmosphere in which to take on the cosmos in a video game battle for world supremacy." And just around the corner your wish is fulfilled.

The Tomorrowland Starcade is Disneyland's homage to the world of electronic arcading. The two-level Starcade has over 200 coin-ops, including almost every electronic game conceivable—from 3-D sit-ins to cabaret-style **Pac-Mans** and **Deluxe Asteroids**, to large wall screens featuring **Missile Command.** The entire arcade can see how skillful or terrible you really are at deflecting a rocket attack from space.

New games like **Frogger**, **Tempest**, and **Qix** start their Starcade careers on the top level, and then work their way to the bottom to compete with the establishment's three favorites: **Starcade 500**, **Space Chase**, and **Gorf**. There are also six air hockey tables up above for the more athletically-gifted.

On the lower level there's a bigscreen horseracing game called **Space Chase.** Here, six players control horses named after planets. They compete against one another and the computer-controlled pacer horse in leaping over hurdles to get to the finish line.

After the expected success of *Tron*, it seems likely that WED Enterprises will expand the Starcade into a *Tron*-oriented one. If they do, you can bet it'll be chock full of Bally/Midway **Tron** coin-ops.



Electronic Games Magazine Presents the Greatest Videogames of All Time!

What are the top videogames of all time? This is a question heard over and over again from the media, the manufacturers and even the players themselves. Because the editors of Electronic Games believe that every hobby should honor its own outstanding achievements, we decided to establish a continuing monument to the best videogames ever created.

Even a forward-looking pastime like electronic gaming should not forget its own glorious past. The stunning coin-ops, programmable videogame cartridges and microcomputer software programs that astound us today didn't just pop into existence out of thin air. They are the result of a decade of ceaseless testing and experimentation by a corps of highly motivated and talented designers. Many game creators have contibuted small — and sometimes not so small -innovations that have paved the way for the immense worldwide popularity electronic arcades have won in the last couple of years. Today's designers are standing on the shoulders of electronic gaming's pioneers.

Once it was agreed that Electronic Games would establish a Videogame Hall of Fame, the next logical question became: Which of the many fine designs should be selected as charter members? After consulting with leading executives of videogame manufacturing companies, acknowledged arcade aces of the first rank and our own group of experts, we narrowed the list of selections to the half-dozen titles which are honored on these pages.

But this is not the end of the Videogame Hall of Fame project, but rather just the beginning. For this memorial to have any meaning, it might be a true expression of the feelings of the 25 million people who regularly participate in some form of electronic gaming.

Future additions to the Hall of Fame, therefore, will be

New York, N.Y. 10003.

made by a vote of this magazine's readers. We will administer the awarding of this honor, but you will decide which games are worthy for inclusion among this select company.

So if you want to see your favorite videogame honored in this fashion, the best way to insure it happening is to vote in the annual poll which will elect two games a year to the Videogame Hall of Fame.

Rules for Voting for the Videogame Hall of Fame

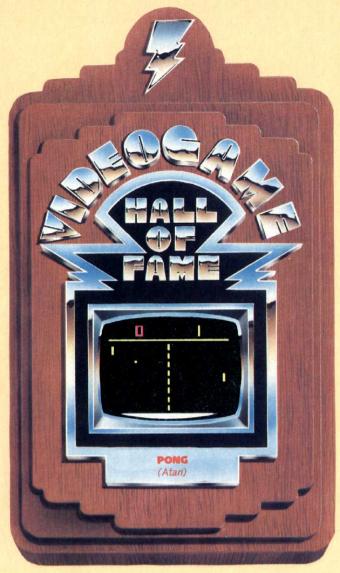
- Any knowledgeable electronic gamer is eligible to vote.
- Only one nomination shall be made by any one person.
- 3. Any commercially published programmable videogame cartridge, coin-operated electronic game or microcomputer game software program is eligible for
- All nominations must be received on the ballot included in Electronic Games magazine. A copy or facsimile is perfectly acceptable, if you do not wish to deface your copy of the magazine.
- 5. The deadline for nominations for the 1982 Videogame Hall of Fame election is July 1, 1982.
- 6. All ballots should be sent to: Electronic Games, Hall of Fame, 235 Park Avenue South, Sixth Floor, New York, N.Y. 10003. Ballots received become the property of Electronic Games Magazine and none can be returned.

Sound simple? It is. The two games which receive the highest number of nominations will be inducted into the Videogame Hall of Fame. A complete report of the voting, along with some selected comments from readers about the games will appear in the October 1982 issue of Electronic Games Magazine.

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I would like to nominate the following programmable videogame, coin-op game or microcomputer software program for inclusion in the Videogame Hall of Fame: The main reason I feel this game merits such an honor is: My Name____ Address_

Send all ballots, including copies and facsimiles to: electronic Games, Hall of Fame, 235 Park Avenue South, Sixth Floor,

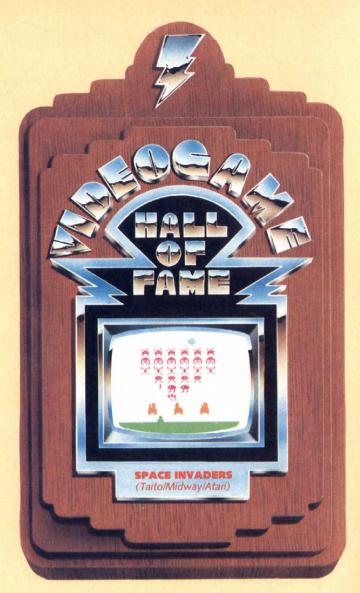


Pong (Atari)

The doubters said there was no future in the coin operated arcades for the new-fangled videogames. Pong proved them wrong. This ultra-simple version of video tennis, designed by Atari founder Nolas Bushnell, proved incredibly fascinating to a pinball-weary public when placed in taverns and other such establishments.

Pong may look crude to us today, in 1982, but the concepts it introduced were bold and original a decade ago. The idea of manipulating a vertically mobile onscreen bat with a paddle controller formed the basis for hundreds of subsequent videogames.

Pong is also worthy of inclusion in the Videogame Hall of Fame because of the entertainment revolution it embodies. Before Pong, videogames could not really have been said to exist. Its popularity opened the door to the introduction of more and more videogames, eventually leading to the popularity of such games both at home and in commercial amusement centers. And make no mistake, it was the arrival on the scene of videogames that transformed the arcades from seedy, ill-lit dens into the comfortable family entertainment centers of today.

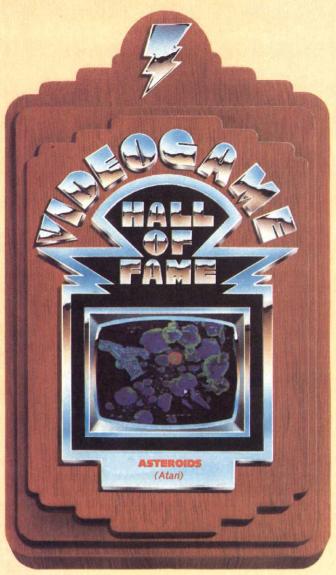


Space Invaders (Taito)

Space Invaders, invented in 1978, proved the biggest arrival from the Orient since Godzilla. It broke the ball-and-paddle game mold forever by offering arcaders an incredible new kind of action — a target game in which the targets could and did fire back!

Space Invaders introduced a play-mechanics that is still the most copied in the videogame world. The idea of the arcader manipulating a horizontally mobile cannon can be found in numerous other videogames, from Centipede to Sneakers. And Space Invaders is the most relentlessly imitated and copied videogame creation in the world. You can't walk into an arcade in America and not find at least one example of the invasion game genre spawned by this landmark title.

Space Invaders, itself, has proved irresistably popular in every possible electronic game format. Its fans can enjoy the struggle to defeat the marching alien horde by playing Space Invaders as a handheld, a tabletop unit, a home videogame, a microcomputer program, a coin-op machine or even as a watch or a pocket calculator. Space Invaders has penetrated the fabric of our society as have few other games of any type.

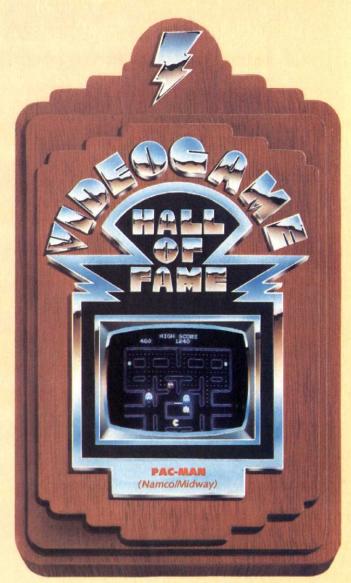


Asteroids (Atari)

When Asteroids supplanted Space Invaders at the top of the coin-op popularity chart in 1980, it signalled the dawn of a new era of creativity within the world of videogames. Space Invaders broke the old restraints, but the highly patterned nature of its play-mechanic threatened to set up a new set of rules that would've proven very nearly as restrictive. By departing so completely from the Space Invaders success formula of the horizontally mobile cannon firing upward at advancing targets, Asteroids showed manufacturers that electronic gamers were appreciative of new ideas and didn't want endless rehashes of the same game.

The speed and unpredictability of Asteroids has made it a classic in its original quadrascan arcade configuration. The game has also proven a winner as a hand-held, a microcomputer program and a home programmable videogame. Succeeded in the market by the current **Asteroids Deluxe**, the original version is still seen here and there, one of the sternest challenges to the ability and stamina of coin-oppers.

Americans aren't the only ones who love Asteroids. An Atari tournament in 1981 drew entrants from many foreign nations anxious to show their prowess at clearing the space lanes.



Pac-Man (Namco/Midway)

Pac-Man didn't introduce the idea of a maze or even use it for the first time in an electronic game. What this mega-hit did do was incorporate the strategic possibilities suggested by a labyrinth into an overall scheme of play better than any electronic maze game ever designed.

The maze-chase format is as brilliant as it is simple. The idea of including point-scoring and a game of tag that go on simultaneously produces a richly complex contest that is, at the same time, one of the easiest of the major videogames to learn how to play.

Another reason to salute Pac-Man is that it is the game that, more than any other, has brought women into the arcade revolution. It's charming graphics, jolly tunes and generally light-hearted approach to gaming have provided an introduction to the hobby of electronic gaming for millions of female players who might not have bothered otherwise.

Finally, Pac-Man is the game which proved conclusively to all but the most thick-headed that there's more to videogames than a simple challenge to hand-eye coordination. The many words Pac-Man has generated about its near-mystical patterns have proved that the arcading challenge is mental as well as physical.



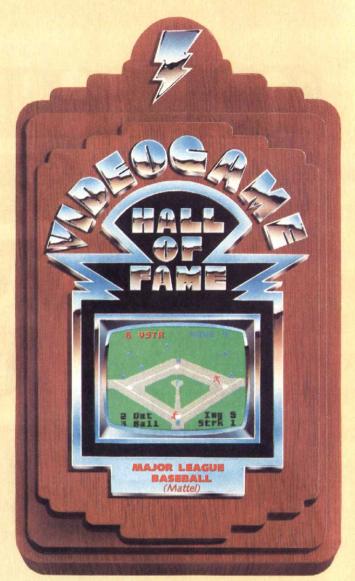
Quest for the Rings

Sometimes a game is more important for historical reasons. Other times, it's because it is simply a great game. Quest for the Rings is entering the Videogame Hall of Fame as a charter member because it is both of these things.

It is certainly of seminal importance in the history of videogames. For the first time, a single design blended elements of both the boardgame and the videogame in one title. By taking some of the burden for movement and record-keeping off the computer and assigning it to the human participants, designers Avreritt and Lehner create a contest with much more scope and depth than the typical videogame cartridge.

Yet Quest for the Ring also shines as a game. Its clever arrangement, whereby the two human players must team up to accomplish the common goal of collecting all the rings instead of competing against each other gives this a decidedly different flavor than the run-of-the-mill program. The animation of the monsters and on-screen heroes is also exemplary.

Even the instruction manual for Quest is noteworthy. It sets forth the rules and nuance so clearly that a game that could've seemed forbiddingly complex is instead easy to learn and play. A triumph of the first magnitude.



Major League Baseball (Mattel)

Major League Baseball has been widely acclaimed as the finest videogame sports cartridge ever produced, and rightly so. No other program for a programmable home arcade system — or for the current generation of microcomputers for that matter — so successfully captures the essence of the National Pastime.

Every important phase of real-life baseball is reflected in this stunning design. Gamers have come to expect a detailed pitching routine in electronic baseball games, but the inclusion of finely detailed fielding, running and hitting in the same cartridge is a feat no other simulator of sporting events has yet proved able to top.

And then there is the eye-popping graphic treatment. Major League Baseball broke exciting new ground with its high-resolution visuals when it first reached market as one of the original cartridge releases for the then-new Intellivision system. It has rarely, if ever, been surpassed since. That's quite a feat in a field in which technology seems to make breakthroughs once an hour.

Major League Baseball belongs in the Videogame Hall of Fame because it is, quite simply, the best of its type. Play ball!

"EITHER THIS SPACE GA OR MY LIVI GOING 1



ISTHEIR BEST ME EVER, NG ROOM IS 65 MPH."

Aliens up ahead. Aliens attacking from the rear. Alien ships on every side. Meanwhile, the earth is moving steadily into range of enemy missiles, as the alien planet rushes by below.

Presenting Star Strike. The exciting new space game complete with brilliant colors, gripping tension, and special effects so realistic they appear three-dimensional. So you almost feel like you're flying.

Be careful, though, and don't lose your concentration. You've got to destroy the enemy planet. Before it

destroys the earth.

Play Intellivision Star Strike. Then, when the battle's over and the dust is clear, compare it to other space games. We think you'll agree that color, excitement and special effects make

Star Strike the clear winner.

INTELLIVISION

Intelligent Television

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Rescue at Rigel (Automated Simulations) 32K Ten people from the Orion colony at Ultima Thule (including your favorite female) have been captured. Your mother ship must leave in 60 minutes. As "Sudden" Smith, you must find and release them, but it won't be easy in the maze of corridors, rooms

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and levels. Oh, by the way, the place is crawling with tollahs, High Tollahs and robots. Will you make it? Cassette \$29.95.

(New!) K-Razy Shoot-Out (K-Byte) The exciting new ROM cartridge the ATARI soft world is buzzing about. Arcade quality, graphics and sounds. You manuever your rapid fire space age gunfighter through sector mazes eliminating droids as you go. The further you go the tougher the droids. Shades of the old west and the 21st century! Reg. \$49.95. Special price \$44.95!

(New!) Rear Guard (Adventure International) 16K-T, 24 K-D This space battle puts you in charge of a speeding jet skimming an alien surface battling waves of enemy vessels. Advanced features include running high score, two player option, advanced difficulty levels. Full uses of ATARI graphics and sounds. Superb horizontal scrolling. Intro price \$17.95 tape, \$22.95 disc.

Crush, Crumble and Chomp (Automated Simulations) 32K Tired of destroying countless monsters? This one is for you. You are the monster. Pick from six. You may be the giant amphibian, Goshilla. Knock down the Golden Gate bridge or tip over the Empire State Building. But look out for the National Guard. You pick the goal and see if you can make it. Five objectives. Cassette or disc \$29.95

Bridge 2.0 (Dynacomp) 24K Now you can practice your bridge at home before you have to embarrass yourself at the neighbors. Bridge 2.0 bids (Goren) and plays both contract and duplicate bridge. It even doubles if you get carried away with your bidding. No graphics,

but clearly arranged format makes playing easy. Cassette \$17.95

Adventureland (Adventure International) 24K Designed for the novice at adventuring and a great way to get hooked on the world of adventure. As you make your way through an enchanted world you will encounter wild animals, spell-ridden critters and more. Your task is to avoid the perils as you try to collect the 13 lost treasures. Cassette \$14.95

Mission Impossible (Adventure International) 24K Another adventure from the great Scott Adams. Beginning "Good morning, your mission is...", your task is to save a nuclear reactor from destruction. This adventure game is not easy. Cassette \$16.95

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Kosko, Weirton, W.Va.)

A: The battle for the home rights to the coin-op winners is a fierce one indeed. Recent months have seen Atari sign titles from Namco and Centuri,



while the folks from Commodore just inked a deal with Midway for VIC-20 versions of the very game you mention, **Gorf**, as well as **Omega Race** and many others.

Mattel, however, has been satisfied with their own creative efforts, such as **Space Battle** and the new **Star Strike**, which are arcade-style contests adapted to accentuate the Intellivision's strengths. But keep an eye out for **Tron I** and **II**, a pair of home games based on the Disney videogame super-flick, for which Midway owns the coin-op game rights.

Q: I am writing to ask about the new Atari Supergame system scheduled for release in September. Will the VCS cartridges fit this system, and how much memory will it have? (from Wade Williams, Lake Jackson, TX)

A: Sorry, Wade, but Atari's new senior programmable system will not be compatible with the VCS-or the Atari 400/800 either, for that matter. The system uses a totally different processor, which would make it necessary to rewire the entire Supergame in order to render the systems compatible.

Sigh. When it comes to videogames, Wade, it sometimes seems as if nothing is compatible.

THE PLAYERS GUIDE TO ELECTRONIC ADVENTURES





Birth of a Phenomenon

Just about everyone has participated in role-playing, at least to some extent. Even if you've never been exposed to psychoanalytical techniques like role-reversal or psychodrama, you probably spent at least one afternoon as a child emersed in cops and robbers. cowboys and indians or doctor and patient.

All these experiences have one thing in common: They're informal, with the participants more or less making up the "rules" as events proceed. Role-playing games, in the generally understood sense, rely on a more objective structure. There is a set of rules and guidelines, usually administered by a referee (sometimes called the dungeonmaster).

Dungeons & Dragons, the first true role-playing adventure game,

by-product of a miniatures campaign. The wargamers began sketching in the background of all their tabletop armies. and the next thing they knew, they were devoting more attention to

the comings and goings of individual characters than to the mass battles. A collaboration between two leading gamers, Dave

Arneson and E. Gary Gygax, brought forth Dungeons and Dragons as a boxed set of three booklets. Elaborations on D&D-as well as other role-playing games such as Tunnels Trolls.

Runequest and Chivalry & Sorcery — have followed until there are hundreds of thousands of folks vicariously plunging into worlds of fantasy where magic works and only strong swords keep evil at arm's length.

Role-Playing Goes Electronic

Willy Crowther and Don Wood of M.I.T. text adventure with roleplaying overtones onto a mainframe computer about a decade ago. Working these convoluted puzzles quickly became a favorite after-hours and between-assignments re-

creation for programmers in the know. Things might have stayed that way had technology not leapt forward in the computer industry at such a

breakneck

pace. The availability of microcomputers with 16K of ROM (read only memory) for under \$1,000 encouraged designers like the legendary Scott Adams to translate the adventure games played on the mainframes into brainchallengers that can be booted up by anyone with a TRS-80, Apple II or Atari 400/ 800.

The continued move toward ever greater memory capacity for personal computers has loosened many of the restrictions that bound the pioneering designers. The newest adventure game titles feature sound, color graphics. multi-player options and much, much more.

That hasn't made text adventures obsolete, though. Many gamers declare that they still prefer the words-only format, because it allows them to give full vent to their imagination when enmeshed in an electronic quest without the distraction of someone else's visualizations.

From Mainframe to Micro with **Scott Adams**

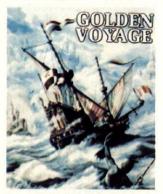
There's no better place to start with adventure gaming than one of the fine programs produced by Adventure Interthe national, company founded by Scott Adams. These are extremely wellpuzzle-adventures wonderfully free





programming glitches that can instantly ruin any player's fun.

Cornerstone of the Al line is the continuing series of Scott Adams Adventures which has reached an even dozen at latest count. **Adventure-land** is a good place to begin, and from there the gamer can choose from a nice variety of situations ranging from a bout with Count Dracula to a quest for pirate gold.



One of the best things about these game programs is that there are versions for just about all the popular micros.

Overthrow the Over-Mind's Mad Tyranny!

Avalon Hill's

Empire of the Over-Mind

proved to be the text adventure hit of 1981, even copping an Arcade

Award in tribute to its excellence. Available on cassette or disk for most popular personal computers, it is the kind of marvelously complex, wheelswithin-wheels game that is meat and drink to the hardcore electronic adventurer.

The concept, in brief, is that the player is a hero who is prompted to attempt to battle the evil Over-mind: a mystic/mechanical despot who has enslaved the twin worlds that provide the setting for this struggle. Perhaps the best thing about *Empire* of the Over-Mind is that the surroundings have been worked out in such depth that there is more than one possible way to accomplish this mighty feat.

TEXT ADVENTURES UNLEASH THE IMAGINATION

This makes it awfully interesting to listen to a pair of dedicated *Over-Mind* players compare notes with each other

Anyone figured out what to do with the dwarf yet?

Caught in a World You Never Made

Many gamers have speculated about what would happen if a software publisher paired a professional storyteller with a code-cracking programmer to develop electronic adventures. Michael Berlyn, a successful science fiction writer, has now helped create two titles for Sentient Software. The fruits of his labors are sweet to behold.

Oo-Topos is an exciting SF

adventure, but the laurels must go to the newer **Cyborg.** The player assumes the role of a half-human, half-robot hero who finds himself suddenly awake in a world of which he has no memory. By inputting two-word commands, the gamer sends the Cyborg on a journey of exploration through this unknown land. It is a search for the secret of the hero's own existence, a pretty sophisticated notion for a game.



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Adventure Gaming Meets Action-Arcading

Electronic adventuring has always posed a sterner test for the player's mental faculties than for his or her motor reflexes.
By combining elements of the arcade game — mainly

joystick movement and firing with the action button — with the basic adventure concept, some publishers are now releasing programs that challenge both mind and body to the utmost.

While these games must, of necessity, prune away some of the complexities found in straight adventures, the blend of mental and physical activity is, for some gamers, even more absorbing than the type

of quest game that accepts player input only in the form of two-word orders.

Will Your Nerves Stand... the House of Usher?

The macabre world of Edgar Allen Poe lives (?) again in this action-adventure from Crystalware. Although

this

supplier has caught its share of consumer flak for error-filled programming, this is definitely a happy exception. The copy tested at EG ran cleanly the first and every succeeding time it was booted.

House of Usher dares the player to explore its many rooms and areas in a race against time to unearth its fell mysteries. You must get into the mansion, make your investigation and leave again before the first light of dawn.

Saving Damsels in Distress

More cosmic-minded adventurers will want to soar along the spacelanes and find adventure in an unearthly setting with Automated Simulations' Rescue at Rigel. Players employ the joystick to move their on-screen representative forward, ever forward in his mission to extricate the prin-





allows considerable latitude when it comes to designing the battle armor to be worn by the on-screen character. A combination of joystick control and one-letter commands makes it easy for the gamers to perform a surprisingly wide range of movement and firing routines in a matter of seconds.

For Adults Only

Adventure gaming isn't all slaying dragons and freeing planets. For those old enough to handle a decidedly R-rated game, On-Line Systems has produced Softporn Adventure. The goal in this one is to explore a futuristic Las

Vegas-type sin city of the next century.

There's a variety of pleasurable activities available, including lots of pliant females and a casino that features slot machines and blackjack. To win at Softporn Adventure, the arcader must meet, woo and successfully seduce three women.

Not exactly "Lord of the Rings", but a lively changeof-pace nevertheless.

cess from her alien prison

Although this is one of the earlier action-adventures produced by the firm, it certainly holds up well. In fact, it is just as fresh and exciting today as when the first copy reached store shelves in 1980. Attractive graphics further enhance the play value of this excellent program, which is available for the Apple II or Atari 400/800.

The Interstellar Avenger Fights Alone!

Can one lone hero, no matter how well equipped,

actually strike a blow for freedom against a planet-wide dictatorship? He or she can—if they are a member of the select organization known as the Furies. Star Warrior offers the gamer the chance to see how a futuristic one-human-army in battle armor can right wrongs and dispense retribution even against

The program offers a choice of two different missions and

over whelming odds.





As the nimble thief Ali Baba, the player must attempt to fulfill the orders of the King and find and free the princess from her kidnappers. There are danger a-plenty along the way, as powerful enemies. fiersome beasts and arcane magic combine to set obstacles in front of this relatively non-violent hero. Among the game's most unusual features is that a number of gamers can play at the same time, each controlling a character with a separate joystick.

The graphics are high resolution, with the screen presenting an overhead perspective of the characters' immediate surroundings. There are even animation sequences to further enliven the action!

Multi-Player Adventures Arrive

One of the most enjoyable aspects of non-electronic role-playing games is that they allow a whole group of people to play together, functioning as a well-knit team to accomplish common goals. Until recently, this element was absent from electronic adventures, because the memory limitation encouraged designers to focus on the doings of a single player-character.

Wizardry, by Sir-Tech, is perhaps the closest approach to authentic group role-playing so far. Up to six humans, each controlling a character, can participate. There is a choice of classes, and each has special benefits and drawbacks that make cooperation among members of a party necessary for survival.

There's plenty to look at in Wizardry, too. Any monsters encountered by the party are shown as full-color illustrations, and the maze itself is depicted from a mouse's eye view in crisp linework. The fact that it was programmed in

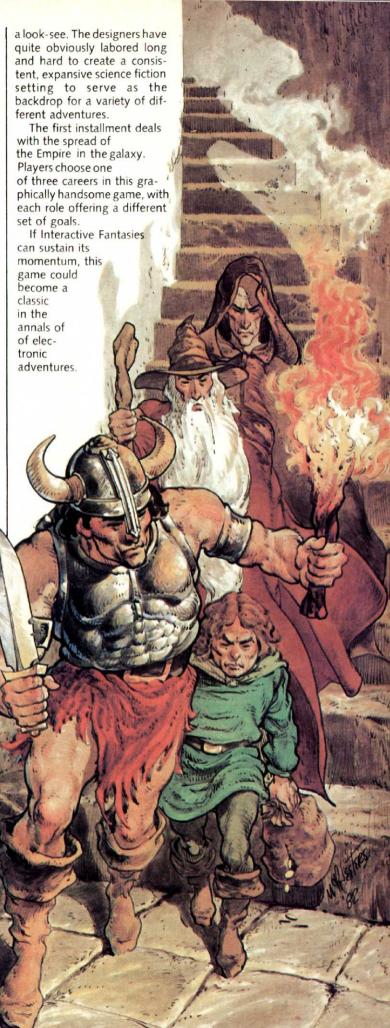
run-time Pascal (nothing special is needed to run the program on the Apple II) results in a game in which the various databases can be manipulated



with unbelievable speed. If you like adventuring and own an Apple II, Wizardry belongs on your shopping list.

Exploring the Known Universe

If you prefer science fiction to fantasy as a setting for thrilling exploits, **Empire 1: World Builders**, the first game in a projected trilogy from Interactive Fantasies (Edu-Ware) is certainly worth





VIDEOGAME ADVENTURES: CARTRIDGES OF WORDER

Of Castles and Mystic Keys

Although the Atari VCS is best known for the many fine



arcade-action games available for it, it also holds the distinction of being the first system to have an adventure game. Titled **Adventure**, it features a quest through a magic land in a search for a magical chalice which the hero must return to its rightful owner.

The explorer, symbolized by a cursor, is moved through the various mazes and castles using the joystick. There are magical aids available, including a bridge that allows passage through otherwise solid walls, but only one device can be carried at a time. Also adding to the difficulty of completing this quest suc-

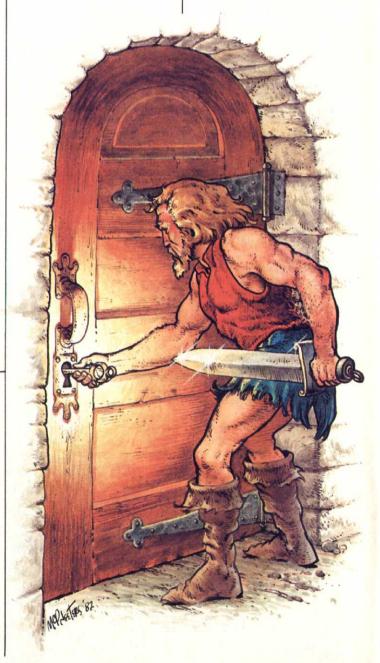
cessfully is that there are a number of intermediate goals which the hero must achieve before the chalice is obtainable.

Monsters also attempt to bar the way. If the three dragons don't kill the hero, the bat is likely to swoop across the screen to snatch a prize away.

Thwart the Ringmaster's Dark Design

Quest for the Rings, the boardgame/videogame hybrid from Odyssey for its Odyssey² system, is the closest approach to the adventure gaming thrills provided by the microcomputer game programs. Two players team up, each controlling a character with unique powers, to explore a mysterious land and collect the eldritch rings which lie beneath its castles.

Although the game probably plays best with three participants — the extra person conducts business on behalf of the evil Ringmaster — it plays quite well with two. The game is enjoyable either in its full form or as a quickie arcadestyle free-for-all if there isn't enough time for a regulation game.



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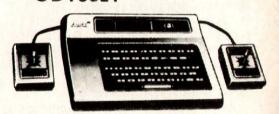
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By Bill Kunkel

equels are a way of life in the popular arts, whether the subject is books, movies, records or TV mini-series. If something does well once, the reasoning goes, it should do just as well the second time.

Well, the sequel-mania that has afflicted the rest of our culture has recently turned up in the world of videogames with a couple of follow-ups to coin-op classics.

The re-make, or "deluxe" versions of popular games began with a souped up **Space Invaders** unit from Midway. Next, Atari turned out the incredibly challenging **Deluxe Asteroids**. They had a rather prosaic reason; there was a flaw in the programming of the initial version that allowed astute arcaders to play for hours on a single quarter.

Now, however, the arcades are filling up with new and different games that are either direct sequels—such as William's brilliant **Defender** follow-up, **Stargate**—or new games featuring recognizable characters from previous coin-op hits. Exidy, for example, plans a series of adventure coin-ops using their "Winky" character from **Ven-ture**.

Finally, the most popular arcade game of all-time, **Pac-Man**, has begun turning up in deluxe editions featuring such options as an invisible maze and six scrolling points instead of two. But even

more interesting is Midway's special "thank you" to all the arcaders who took the Pac-Man gobbler into their hearts.

Ms. Pac-Man/Midway

Ms. Pac-Man is a maze game quite similar to the original, with some vital variations. For one thing, our

gobbler is a gobblette, a Ms. Pac-Man if you please. She's a darling shade of pink and wears a bow atop her head.

Ms. Pac-Man offers a quartet of mazes to keep players from becoming either bored or overly familiar with the labyrinth. Moreover, the action of the goblins is so random

development of patterns becomes a virtual impossibility.

From the throngs of players huddling around the available machines in the New York City arcades, it looks as if the distaff gobbler may wind up as big a hit as her male counterpart. In release less than two weeks as this column is written, Ms. Pac-Man is already in the "top ten" list in Play Meter magazine.

Among the other graphic goodies in this delightful videogame is a scene in which a stork appears on screen carrying a tiny pink bundle of hungry joy—a tiny, squeaking Pac-Baby!

Eliminator/Sega-Gremlin

One of several new vector-graphics coin-ops utilizing color monitors, Sega's **Eliminator** is both a treat for the eyes and an interesting game. Arcaders steer a cannon-armed spaceship around the Eliminator base, a titanic space station ringed with a destructive forcefield that can be breached only through the small corridor in the circumference of the mighty shield.

In addition to dealing with the Eliminator base, gamers must cope

with an ever-increasing number of alien spaceships. These pesky little ships repeatedly fire on the player's spacecraft, pushing it back and bouncing it against the border of the playfield in an attempt to send it careening into the forcefield of the Eliminator base. Any ship, whether it is controlled by the player or the alien, making contact is









TURBO



instantly incinerated.

Players divide their time and concentration between dealing with the pesky alien ships and maneuvering into position to take a clear shot down the empty corridor. Hits on the unprotected area of the base result in one of the most astonishing explosions in the history of arcade games.

The only real complaint with Eliminator is that it becomes too difficult too quickly. Also, a joystick would have been a far more functional control device than the bevy of befuddling buttons regulating everything from rotation to thrust and firing.

Still, the graphics and innovative game concept make *Eliminator* a real contender for the coin-op big time.

Turbo/Sega-Gremlin

Also from Sega, Turbo is, flat out, the most graphically outstanding car race videogame ever created. Gamers control on-screen formula racers and roar over an eyepopping array of terrain. One second, the driver is moving over an ordinary, tree-lined highway, with beautiful mountains visible in the distance. Then the city looms ahead. Moments later, the car is streaking

down urban streets. Night falls and the street lights on either side of the road flare into life. Suddenly, the road becomes increasingly hilly. Cars moving toward the gamer rise and fall from view as they climb and descend the mountainous geography. Players are then startled to find themselves in tunnels, the luminous lane-markers and scant underground lighting serving as the only guideposts.

Gamers control a traditional steering wheel, shift gears, and determine speed by pressing down on the gas peddle attached to the base of each machine. The action is realistic, and each scenario calls for specific driving skills. When you abruptly discover yourself high atop an incredibly winding mountain road, you must cut speed on the turns. In another segment, drivers must pilot their vehicles over a roadway of solid—and very slick—ice.

Graphically, in terms of audio and as a plain old videogame, Turbo is the goods. Check this one out.

Armored Car/Stern

Drawing inspiration from games such as **Dodge 'Em** and **Pac-Man,** Stern has come up with a fairly unique, and highly interesting, game concept.

Players drive an armored car



through the streets of a large city, seen from high above. While avoiding the other, man-hunting vehicles that also prowl these streets; the armored car must pick up the various moneybags—symbolized by dollar signs—located at random spots on the playfield, and take as much of the loot as possible to the local bank.

The playfield scrolls horizontally, giving the action more scope. The gamer can also pick up extra gas at the gas station, and even collect bonus items, such as the keys that are occasionally discovered on the streets.

Armored Car is a delightful, fun contest that utilizes interesting audio and graphics to create a game that even young arcaders should enjoy.

Kick-man/Midway

To get back to the subject of sequels, Midway's **Kick-Man** is a follow-up of another sort. In this one, which may not yet be available in your area, players control a character on a unicycle, moving him back and forth to break or catch the balloons that fall from the top of the playfield.

As to the game's title, well, when a balloon gets past our hero, a special

control called the "kick button" allows him to kick the colored globe back atop the row of balloons on his head.

How does it work in as a sequel? The ubiquitous gobbler turns up to help out the gamer by devouring some of the balloons piling up on the cyclist's dome. But then, you know that gobbler—he'll eat anything.

Okay, boys and girls, that's "game over" for this install-

ment. Make sure you turn up next issue, though when the subjects will include the latest coin-op conten-

der from Atari, a fantastic new videogame by Centuri, and other new entries in the coin-op sweepstakes.

By the way, fellow coin-oppers, we'd love to hear any comments you readers might have on your favorite coin-op arcade games.

We're also interested in the subject of "vanity boards", those lists that many arcade games flash after each contest displaying the top scorers on that machine. All over the country, the top players are leaving their marks on all the hottest machines. Are you a top arcader? If so, let us know your monicker, both full name (for top score) and three letter initials.

So keep those cards and letters coming in now, ya hear?



ELIMINATOR





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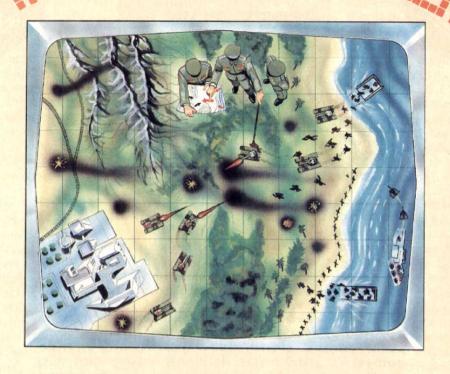
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Blast Off for Outer Space Gaming!

By Frank Tetro Jr.

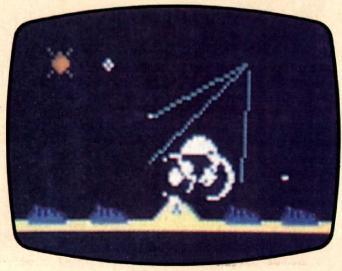
n the surface **Warlords** may appear to the gamer to be a minor variation on the Atari classic **Breakout**. Not so. The paddle, bouncing ball and bricks are going to be familiar to any electronic gamer, but the strategic approach here is considerably altered by the game's more dominant, and totally unique play elements.

Perhaps the most significant difference is the "catch and catapult" action of the player's shield. By depressing the paddle controller's action button, the shield will trap and hold the flying rock that endangers his castle, rather than merely deflecting it. It's also going to take even skilled Breakout artistes a while to get used to the shield's expanded mobility. As your monarch's defender, players can maneuver their shield/catapult freely in front of the castle's horizontal and vertical planes — quite a change from the normal back-and-forth action of most ball and paddle contests. Also, it is crucial to remember that destroying bricks doesn't score a gamer any points in Warlords. Even being the next-to-last player on the board merits no numerical consideration from the game's do-ordie play mechanic.

The catch/throw feature is used to best advantage early on by targeting solely on those castles directly vertical or horizontal to the player's position. Diagonal catapulting will be far more effective later in the round, when more bricks have been cleared from the playfield. After luring your intended target out of position, quickly swing your 58 Electronic Games

now-loaded catapult to either of its playfield boundaries and aim straight across the screen at the row of bricks at the playfield limits.

As we mentioned, should the combatants be reduced to your castle and a diagonal one late in the game, it is possible to put some real "english" on your shots — provided there aren't too many bricks from already-eliminated castles clogging up the works. By launching your rock on a directly horizontal line, then, in the best tradition of the



MISSILE COMMAND

videogame guided missile, arcing your paddle controller either up or down — as desired — it will become possible to "bend" the angle of your trajectory and catch your opposition unguarded.

Again, destroying bricks means nothing unless the castle's king is also obliterated. And whether you or your opponent's do the dirty work similarly has no bearing on the game's point totals. A cagey player may prefer to try the waiting game, simply defending his castle when neccessary while the other feudal barons knock off the another.

Warlords is a game that is infinitely improved by human play. As a solitaire contest, the VCS's lords can be a trifle predictable. Especially, for some reason, the computer-operated individual in the lower left of the playfield. Each VCS-controlled kingdom has its own distinct personality, and this guy's family was obviously involved in incestuous marriage at some point, because he's a complete idiot. Left to his own devices, this unfit character will destroy his own castle and king virtually every time. In over fifty playtest sessions, he was the first eliminated an incredible 80% of the time and he never won a single round.

Perhaps he simply dislikes war and would prefer to forget his royal responsibilities by personally dispatching them. Whatever his motives, just give this fool the ball and he'll take himself out of the action quicker than you could.

As dull-witted as the lower left — we'll call him "Sir Dim" — computer-controlled lord is, however, the upper right kingdom, when driven by the VCS, is clever. The lower right hand kingdom seems the shrewdest in computer-controlled battle, but he has an achilles heal as well — a tendency toward almost foolhardy offensives. Lower right — Sir Macho, perhaps? — is also especially vulnerable to the previously-described "guided missile" launch from the upper left—which is generally controlled by the human player.

All right, then, lords and ladies, let's see those rocks flying and those castles breached! Excelsior!

Spacechase/Games by Apollo/Atari VCS

In Spacechase, an earth ship at the base of the playfield is suddenly attacked by a fleet of enemy raiders armed with neutron missiles and deadly heat-seeking projectiles. The invaders warp mysteriously into Earth air space from the eather.

The joystick controller is used to maneuver up, down and to either side with the action button acting as missile launcher. Players begin with three lives but accrue bonus ships for every 10,000 points scored.

Beginning game 1, a quartet of enemy ships appears at the top of the playfield on two horizontal levels. They move in independent, random patterns.

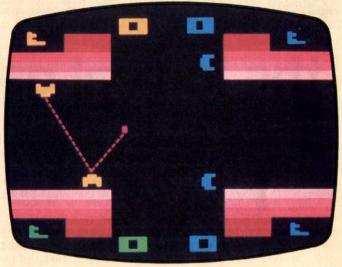
terns. The player's ship is limited to the lower third of the playfield.

When the alien craft first materialize, always eliminate the lowest first, as they have a better chance of hitting you, especially when they launch a heat-seeker. Although points can be scored by obliterating incoming missiles, it is wisest to destroy the aliens quickly since the heat-seekers are launched on a basis of probabilities, approximately one for every 250 bombs dropped until the first 10,000 points are tallied. Therefore, the fewer bombs the aliens drop, the fewer heat-seekers you should have to deal with

Heat-seeking missiles can be distinguished in two ways. First, they blink in and out of sight as they speed toward your ship, and they also emit a loud "whooping" sound. Similarly, there are two ways of dealing with these devilish weapons. One is to simply run. If you are near the center of the playfield, you may be able to reach the side of the screen before the missile can hit you. Otherwise, wait until it homes in on your ship and, as it poises for an instant directly above you, destroy it.

Many gamers will prefer to simply hold down the action button throughout play, creating an automatic fire effect. Others will fire frequently, but will occasionally pause to get their timing together.

At 10,000 points, the screen is abruptly filled with five attackers, the fifth occupying a horizontal plane below the other four ships. At 40,000 points, a sixth enemy ship joins



WARLORDS

the fray.

Each new type of attack — the red cannons, green ovals and black crosses — is swifter and deadlier than the one it follows, with a proportionally greater number of heat-seeking missiles. At these advanced levels especially, it is imperative to eliminate the aliens from the bottom up. Also, avoid the temptation to raise your ship as far up the screen as it will go — these only gives you less time to react to a heat-seeker.

Space Battle/Mattel/Intellivision

In this game, your mothership is under attack by five alien squadrons (though the number will vary game to game). These groups move toward your base ship at different speeds, but once they reach the perimeter of the mothership's shield ring, a claxxon alert will sound, warning that only seconds remain to save the game.

The player has three squadrons at his command, which he can dispatch toward any of the alien fleets he chooses. As the game begins, see which of the invading formations is closest and send a squadron to meet it. You may also want to launch a second group of fighters, but work this so that both contingents will not meet the enemy at the same time. When this happens, while you're battling one group of aliens, the computer takes on the other. Unfortunately, the old computer isn't much of a battle-hardened veteran. Your electronic assistant will be only too happy to sacrifice ship after ship in a war of attrition that you can't win. Always give yourself leeway between battles, so that you can oversee them personally.

When in combat with the enemy, keep the cursor moving, for any hit taken by an alien laser will lose you one of

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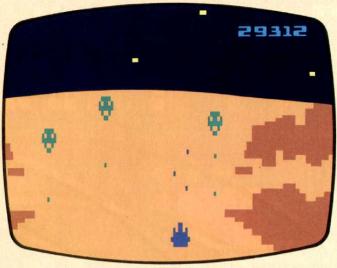
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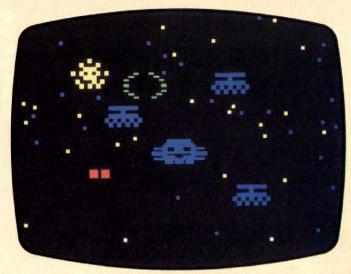
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SPACECHASE



SPACE BATTLE

the squadron's three ships. Try to fire at the Cylon-like alien space crafts when they are grouped together, since fragments from one exploding spaceship will often take out several others in a wonderful sequence of pyrotechnics.

Always leave at least one squadron back at the mothership. This way, should an enemy squadron get by your protective shield and endanger the base, you can dispatch the last squadron and intercept the attackers within seconds.

When firing at the enemy, hold down the firing button and simply move the cursor. You have an unlimited supply of laser bolts in any case, and this gives you a much better shot at hitting something.

Some players may find that they are actually able to engage in the game's dogfight sequences more capably at the higher — and theoretically more difficult — speeds. The slower moving aliens in the early versions are complimented by a just-as-slow-moving targeting cursor. Gamers who prefer to zip around the playfield should do much better at the slam-bang levels.

Another advantage to the faster speeds is the greater likelihood that alien ships will converge more frequently. This, of course, also makes it easier to take out several aliens with a single burst. And saving ammunition — not to mention time — is something a gamer can always appreciate.

With these hints and a little patience, you should be able to save the universe.

Missile Command/Atari/Atari 400 & 800

In order to defend the six cities under your protection, you must efficiently control a missile base armed with 30 ABMs (Anti-Ballistic Missiles). With each wave of incoming missiles, the speed of the airborne attack increases. After the successful completion of every pair of waves, the point value of each enemy missile, plane and satellite increases. Reach a certain level (2X and beyond), and intelligent or "smart" missiles join in the fun. At each 10,000-point-scoring interval, you are awarded a bonus city.

A scattering of incoming bombs appears at the top of the screen. They streak down the playfield, along with either a plane or satellite. Always eliminate the satellite first. If you wait too long it drops a batch of its own bombs, adding to the havoc.

Learn to lead the enemy missiles with the cursor rather

than placing it atop your target. A missile takes a few seconds to reach its goal and detonate. Therefore, allow for the distance you think the missile will travel — and plot your ABM's destination with that in mind. The faster the wave, the more you should lead your target. Keep in mind that your ABM explodes in a wide circular shape that will destroy any missile making contact with it for about three seconds, so always attempt to take out more than one missile whenever possible. Unlike other space target games in which players are granted unlimited firepower, make shots count here. Bonus points are earned for all leftover ABMs.

If you don't strike a missile in time, it either lands — probably on a city — or breaks up into several, equally deadly rockets. Hitting them while they are still high in the sky is always preferable. If a bomb does split up, fire at it immediately, in hopes of obliterating several of the just-germinating bombs.

When and if you reach the 2X points plateau—where missiles and such have twice their original value — you will be assaulted by smart bombs, resembling inverted pyramids. These are considerably more difficult to lead and must be hit dead on, or they will simply deflect your explosion.

At the higher-level waves, it's wise to set up a protective "umbrella" of explosions over your remaining cities by beginning at the left and dotting the sky over your population centers. The sequential detonations should stave off most enemy assaults. This futuristic Maginot Line should prove impervious to anything but the smart missiles.

When things start to look dark and you realize you're about to be overwhelmed, allow the outermost cities to be destroyed and protect just the pair to the left and right of your command center. This territory will be far easier to defend than those far away, outlying cities. Don't bother picking off missiles destined to land harmlessly. Just worry about the ones heading for your two final cities and your command center.

Should the enemy destroy your last city, while you still have ammo remaining, don't give up the planet! Shoot for the next 10,000-point milestone so one of the lost cities is restored. Just hope the computer doesn't recreate one too far from the center of the playfield.

Good luck, and remember that the fate of the world lies in your hands, oh master of the misguided missiles.

By Joyce Worley

ince the invention of the cuckoo clock, people have loved timepieces that do more than just tell the hour. Having a watch that also told the day of the week and month added status as well as utility in the 1970's. Later, as technology adcorrect time to the second.

General Consumer Electronics successfully combines electronic games and wristwatches in three of the hottest new items of the year, each selling for \$39.95. Game-Time plays four

electronic contests-Firing Squad,



Nintendo cleverly combines animation and color overlays in its gaming timepieces.

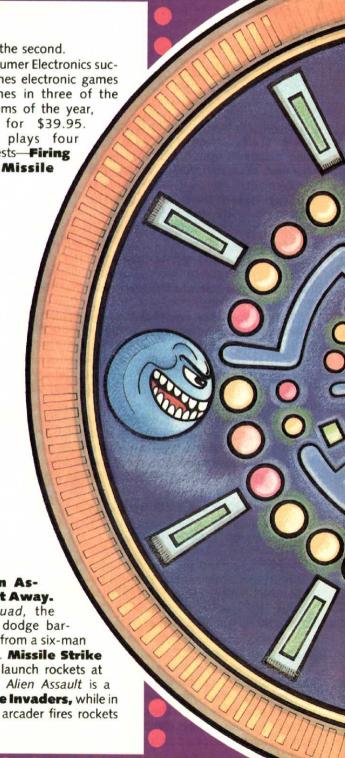


vanced, some timepieces expanded their functions to also serve as stop watches and alarm clocks.

But the 1980's have brought a new concept-the idea that a watch should also provide fun. Computer technology makes possible wonder-

ful games in diminutive form, while letting people know the Strike, Alien Assault and Blast Away.

In Firing Squad, the victim tries to dodge barrages of bullets from a six-man execution team. Missile Strike has the gamer launch rockets at enemy missiles. Alien Assault is a version of Space Invaders, while in Blast Away the arcader fires rockets







GCE is following up on the success of its Game-Time watch with two more models, Sports-Time and Arcade-Time, later this Spring.

Monkey Business, since it's done with the same external operation buttons used in game play.

But technology hasn't paused with these wristwatch games. A second category of timepiece has emerged, in the form of electronic calculators that also tell time and play games. Casio, a pioneer in the field of game-playing wristwatches, now offers two versions of useful pocket-sized calculators.

The Casio **BG-15** has a full-function calculator with time and alarm modes, plus a built-in boxing game. The user directs his man against the computer-controlled boxer, moving his arms up or down to punch out the contender. The unit keeps score and times the rounds. It retails for \$29.95.

The Casio MG-777 is a multigame unit also selling for \$29.95. In the first game, digits from one to nine are displayed in nine blocks, and the arcader tries to make the same number appear in all the squares. Game #2 is a numerical slot machine. Three vertical drums spin, then stop automatically. All that's missing is the hatful of quarters pouring from the machine when you get lucky! The third game is for arcaders with quick reflexes. A "baby mole" (symbolized by a small zero) appears in one of the blocks, and the player quickly presses the corresponding key on the calculator. A number then flashes in that square. The player pushes the indicated number on the calculator, and another baby mole appears somewhere on the screen. When the player scores 1,000 points, another level of play begins, and the moles appear and disappear more rapidly.

Marcia Company distributes the **Shuttle Voyage Game.** This hand-held calculator with clock, alarm and game functions, sells for \$34.95. Try to land a shuttle plane while avoiding a bombardment of

missiles and invaders' ships, coming from above and below. The animation is linework on a large screen decorated with a painted-on planet.

There is a third category of timepieces filling up the marketplace with fun and games. Space-age technology has made possible a delightful series of pocketwatches like nothing grandpa ever imagined! These devices have already conquered Europe and the Orient. Now they're taking over the USA, but it's a pleasure to surrender to appreciation of these new toys!

The Play Watch, distributed by Marcia Company, measures about 41/2 by 21/2 in., and it's thin enough to slip into a vest pocket. As well as telling time and functioning as an alarm, it plays **Blackjack**. The arcader can bet from a pool of 1,000 points, take hits, or stand. The computer deals the cards, then indicates who won and keeps track of the points left in the kitty. Play Watch also plays onechance Poker, dealing five cards at random. Compete with friends by taking turns. But the most unique function is the Fortune Teller. Input your date of birth and the date you want to know about. The computer deals five cards, and the instruction booklet assigns values to each one that show how your luck is running.

The Play Watch isn't great shakes at Poker, since all it does is deal a pat hand. Blackjack is a good, if overly simple game. It doesn't allow for any complications, such as splits or insurance. The Fortune Teller, however, is really unusual, and may make this unit worth its price of \$34.95.

Playtime Electronics offers three delightful pocketwatches in the \$25-30 range. **Trojan Horse Soldiers** storm through the castle gate with the help of the horse, and attack the enemies with spears. **Towering**

Rescue explores the fun to be had following an earthquake: Buildings are on fire and the player must rescue the victims by helicopter without colliding with anything. The third timepiece is **Fishing.** This bucolic scenario has fish jumping out of the sea trying to escape attacking sharks. The player may catch them in a net or in the boat, but must avoid the shark, who can end the game with his dorsal fin if he gets below the boat and sinks it.

Accutime Products distributes four marvelous midgets (2½ by 3¾ in.) These **Time & Fun** pocketwatches sell for \$29.95. In **Escape,** a prisoner tries to sneak out of jail. It's harder than expected, since the guard catches the prisoner if he sees him.

Tiger Electronic Toys is getting into the act, too, with four pocketwatch games. **Caveman** requires the player to pass a dinosaur blocking the entrance to the cave. **King Kong** has the arcader rescuing the lady from the top of the Empire State Building. In **Space Fight,** the player defends a spaceship from invaders.

Nintendo's **Parachute** features skydivers jumping from a helicopter. The arcader operates a lifeboat and tries to catch them. In **Octopus**, divers attempt to bring up treasure from the ocean floor, while avoiding the many-legged monster. **Popeye** tries to catch spinach thrown to him by Olive, while avoiding Bluto's punches.

Sources in the industry predict that we haven't seen the end of developments in game-playing watches. Technology will soon make possible miniature masterpieces that are also programmable! Imagine having a dime-sized disk that can be slipped into the watch to change the game.

I think I'll pass the time waiting for it by playing with my watch!

6

LeStick Datasoft, Inc. (16606 Schoenborn St., Sepulveda Ca. 91343) compatible with all systems using Atari joysticks/\$39.95 each.

This is a new, improved version of DataSoft's innovative alternative to the traditional joystick controller. The gamer grips the aviation-type control shaft and uses a thumb to work the action button, conveniently placed on top of the stick. (There is no mounting base.)

The direction in which the arcader tilts LeStick determines the direction of on-

screen movement.

This technological feat is accomplished through the use of mercury-filled "incline switches." These are extremely sensitive to any change in the orientation of the stick which takes it away from the per-

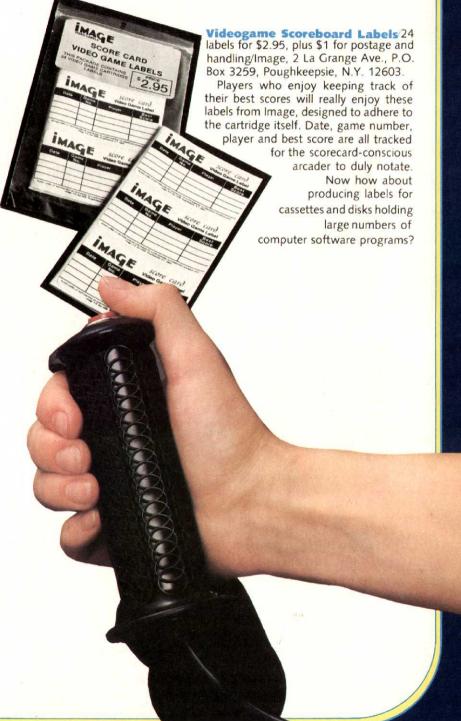
Despite improvements in this latest model, LeStick, regrettably, still has a way to go on the road toward becoming the perfect home arcade input device.

The main problem: Even the most self-possessed gamer will find it difficult to hold LeStick perfectly straight in the fiery heat of actual play. Those who are in the habit of urging their on-screen surrogates on to victory with a generous application of body english may occasionally find LeStick just as responsive to random motions as it is to planned ones.

As noted in an earlier look at the original version of LeStick, it substantially improves some games, especially those contests involving aircrafts — such as the biplane battles in Atari's Combat — and Missile Command is a revelation, allowing arcaders near trackball speed.

Alas, though, on many games-Asteroids is one example — this joystick is totally unworkable.

LeStick is attractive, well-constructed, extremely durable and, on some games, a lot of fun.



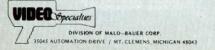
Electronic Games 65

Organize Your Video Game!



Vid-Lid-Plus is a video game storage unit and dust cover which attractively protects video games from harmful dust PLUS stores 10 game cartridges (12 with Intellivision), (2) controllers and instruction booklets. Vid-Lid-Plus is made of durable impact plastic, attractive grained finish matches game console and resists finger prints. Vid-Lid-Plus is a must for all video game buffs. Models to fit (A) Atari by Atari, Inc., (B) Odyssey by Magnavox and (C) Intellivision by Mattel Electronics.







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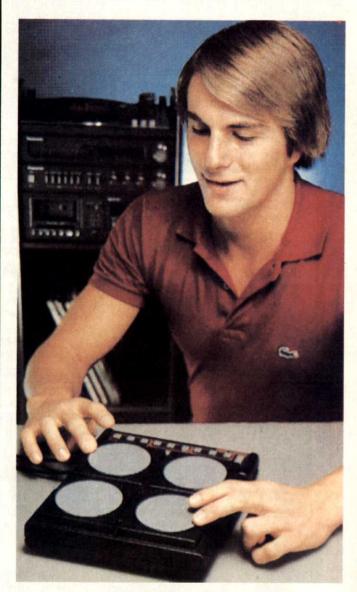
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DIVISION OF MALO BAUER CORP.

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Synsonics (Mattel Electronics/Price unavailable)

The latest in electronic musical instruments is Mattel's Synsonics drums, a system small enough for a child to hold on his lap but which is capable of turning out virtually professional quality sound.

The system consists of four, round pads, representing snare drum, two tom-toms and a cymbal, with modulation controls and even an accent switch. Synsonics has its own internal speaker, and can easily be patched through any amplifier or home stereo system. But perhaps the unit's finest feature — at least for the sensitive ears of parents is that it can be run through standard headphones, allowing the drummer to bash away at will without disturbing any unwilling music-lovers. Synsonics can be played with drumsticks, pencils or even fingers.

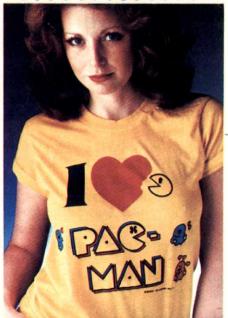
(Atari, Inc./for Atari 400/800 computers)

Is your computer lonely when you go off to work, or parties or vacations? Does it sit around the house humming pitifully to itself while you're out having a fine time? Perhaps it's lonely, and would like to chat with other computers when you're not home. If so, this









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in your arcade to wear this winning shirt. And get a "You'll Eat It Up" Bumper Sticker too! PAC-MAN TM of MIDWAY Mfg. Co. © MIDWAY

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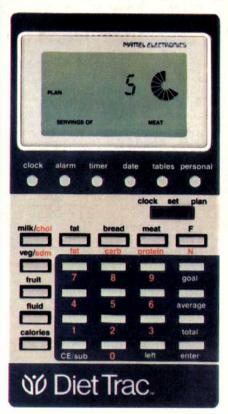
Atari Acoustic Modem is just the ticket and, all kidding aside, it will prove a tremendous asset to the computer owner, as well.

Modems allow your home micro to access computers anywhere in the world over standard telephone wires. Computerists can subscribe to special services such as the Source, and Compuserve, which make available news, stock prices, games and more through their big mainframes. Gamers can even exchange programs instantly across the street or around the world.

The 830 is UL approved and operates at up to 300 bits per second.

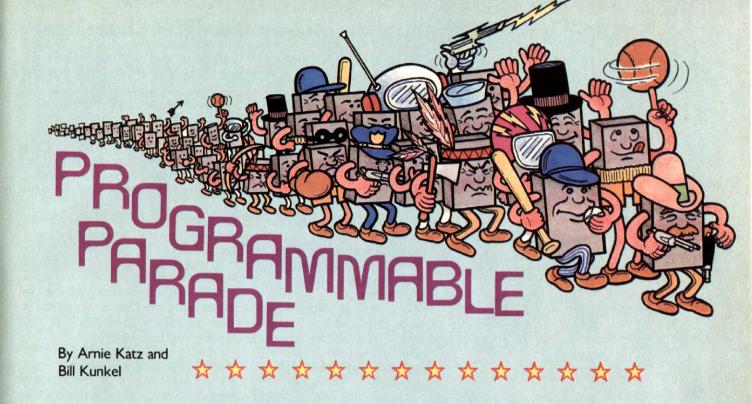
Diet Trac (Mattel Electronics/Price unavailable)

As Mattel continues to expand its electronics line, the company is striking



out into new and unexplored territory. At a recent trade show, in addition to showing off its latest videogames and hand-helds, Mattel announced the creation of two experimental items: electronic drums and this brand new pocket diet computer system.

Diet Trac is an electronic brain that computes every calorie its owner consumes. By pre-setting the calculatorsized computer to the appropriate sex, frame, age and height, the entire messy business of monitoring calories is dumped in Diet Trac's lap. This clever device comes with its own, well-documented owner's manual.



Grand Prix/Activision/Atari VCS

The latest from the creator of Fishing Derby, Laser Blast and Freeway—David Crane of Activision—has finally given VCS owners an auto race game they can love. Grand Prix blends the most sophisticated graphics ever seen in a VCS program with superior action, sound and playability.

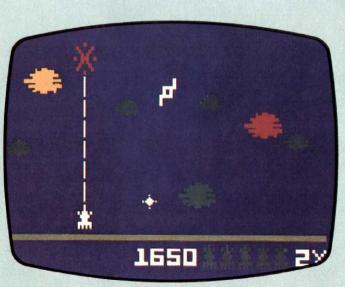
An overhead view of the gamer's brightly colored racer appears at the starting line as the game begins. Arcaders can choose from any of four courses—Watkins Glen, Brands Hatch (which has one bridge), Le Mans (two bridges) and, of course, the Monaco Grand Prix, with its three famous over-

passes. The jaunt down the attractive, tree-lined route starts slowly as the gamer hits the action button/ accelerator to get things going. A timer is instantly activated and the race is on. The longer the accelerator is depressed, the faster the racer will travel. Players can steer to the left or right by moving the joystick up or down-though any turning cuts speed and should be avoided except when a collision is imminent. By removing pressure from the action button and pushing the joystick hard left, the racer's breaks cut in.

Gamers zip along this

scenic trail, swerving to avoid other cars, navigating through the oil slicks (which cause autos to skid and lose control) and lining up when a bridge seems near. A number of oil slicks in a single area indicate either the finish line or an upcoming overpass. When a player crosses the bridge cleanly, his time while passing over it does not advance. Once the gamer leaves the bridge, the clock re-starts. Obviously, crashing into the bridge must be avoided at all costs.

Can You Stop the Sky from Falling?



ASTROSMASH

The wisest strategy when racing is to start off fast. Once you pass a car, it is out of the picture and will cause no further trouble. All danger lies ahead. So travel at a good clip, but develop a sense of timing as to how frequently other autos show up. At those times, cut acceleration and survey the scene. If the cars ahead can be cleanly passed, then resume top speed. If not, it makes it easier to screech to a halt when that's called for.

The best strategy, of course, is practice—not only for sharpening skills but to increase familiarity with the track, which is a driver's single most important edge.

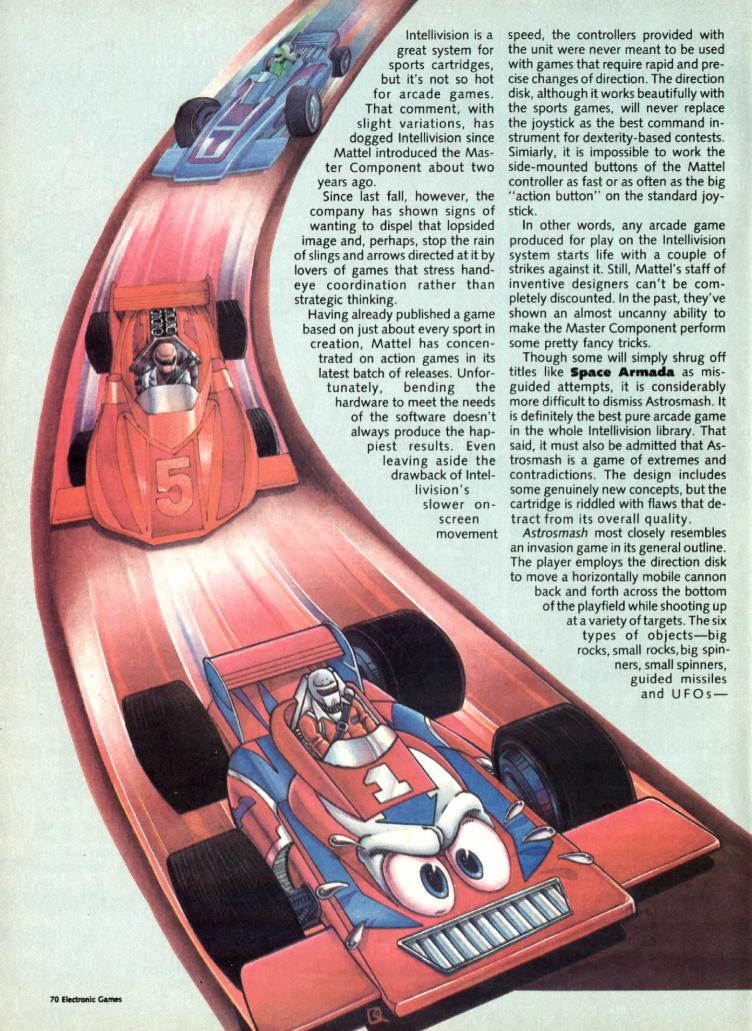
Again, not only is the action portion

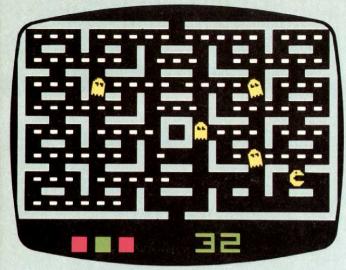
of Grand Prix spectacular, with cars whizzing along at incredible speeds, but the game is a visual triumph as well. The racers themselves are the best looking automobiles this side of the top coin-op videogames. The large, rear wheels spin faster and faster as the car gains speed and the veering skitter produced by contact with an oil slick is first rate. Grand Prix is delightful to look at and a blast to play, and should bring VCS race fans running.

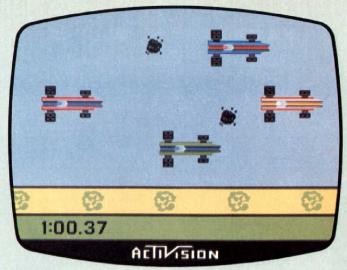
Astrosmash/Mattel/

Intellivision

Most gamers feel the







PAC-MAN

GRAND PRIX

are falling toward the ground at variable rates of speed. The action begins at a snail's pace and gradually speeds up as the score increases. There are six basic levels of difficulty, and the background color shifts to let the arcader know when he's stepped up in class

Dodging the targets you can't destroy won't work in Astrosmash. Points are subtracted every time a big or small rock lands, and the player automatically loses one of the allotted guns if a spinner slips past. The guided missiles, should they reach the bottom of the screen, will often home in on the cannon and wipe it out. The only defense against this is the hyperspace button, which immediately moves the gun to a randomly selected point along the bottom of the screen. The UFOs, which only appear at the fourth skill level (20,000 points) can fire back at the cannon.

For the first time, a game offers players the option of firing one burst at a time or selecting an auto-shoot alternative. The latter enables the gunner to get off three shots every second. Some players report that they actually do better firing single shots, but most people will want to let the cannon blast away on automatic, if only to rescue their finger from all that button-pressing.

The color changes are the game's single most annoying factor. The original black is all right, but the gram shifts to an eyeball-searing blue at 1,000 points that makes it somewhat unpleasant to continue. The rest of the colors aren't quite as bad, but the designer should have chosen the hues more carefully.

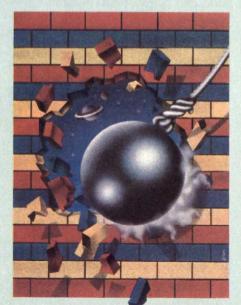
hands.

Despite its flaws, Astrosmash must be regarded as a milestone for the Intellivision. It may never replace Galaxian or Missile Command, but it does



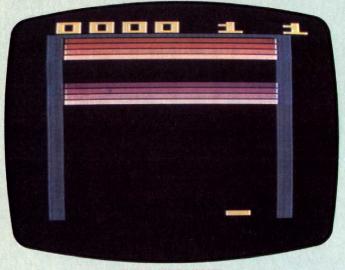
Sound is another weakness. Trying for a memorable audio signature, the designers of Astrosmash have ended up with a noise like a 25-cent cap pistol. It doesn't make pleasant listening when playing a game that can easily last for a couple of hours in skilled

finally provide owenrs of this system with a decent arcade-style contest to challenge their reflexes.

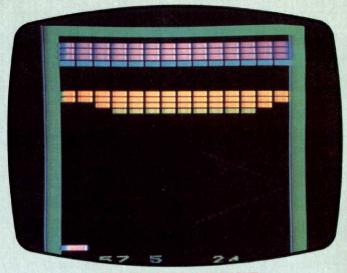


Pac-Man/Atari/Atari VCS

All right, folks, first the bad news about the most eagerly-awaited videogame of all time. Atari's VCS version of Pac-Man neither looks nor sounds anything like the coin-op original. The graphics are clunky unsophisticated-there are no changing bonus items such as cherries, limes, keys, but simply an orange square with a blue dot inside—and the sounds, except for an in inappropriate metallic "boing" whenever the gobbler consumes a pill, are virtually nonexistent Joystick response on all game variations, but especially game 1, is horrible. Getting the gobbler to drop down through an opening is an ordeal. The







COMPUTER SUPER-BREAKOUT

goblins blink constantly, making them difficult to see, and their eyes do not look in the direction they're "seeing" or traveling but simply rotate through four positions.

Now, what about the good news? Well, there's finally a gobble game available for the Atari VCs. Beyond that, like the coin-op version, the maze is single-line and the "pills" look like hyphens. The "bonus thingie" has a stationary value of 100 points.

This Pac-Man is no pushover, however, and even top-flight gamers will have their hands full racking up many

it's disappointingly difficult to find anything positive to say about this game. Considering the anticipation

game. Considering the anticipation and considerable time the Atari designers had to work on it, it's astonishing to see a home version of a classic arcade contest so totally devoid of what gave the original its charm. There is none of the whimsey of the Namco/ Midway version, nor any of the delightful graphic elements. Even the famous Pac-Man theme is missing. The game looks suspiciously like a project where the creators were so afraid of not measuring up to their source of inspiration that they simply avoided any conflict. The only area where the games go head to head is in the gobbler himself, and here Atari's version makes the transition quite satisfactorily.

As in the coin-op classic, players maneuver the hungry Pac-Man around a labyrinth stocked with pills and patrolled by ravenous goblins. Unthousand points. Patterns can be developed, to a certain extent, but the whole play mechanic depends on the game variation chosen. On those games where the gobbler moves very fast, joystick control is improved, though still far from slick.

In the final analysis, those Atarians who are desperate for a gobble game will find that this version fits the bill. Those arcaders who demand that home versions match their coin-op cousins will be seriously disappointed.

Super-Breakout/Atar/VCS

Tell me, gamers, how often does the VCS version of a popular coin-op or computer classic not only measure up to, but surpass the game on which it is based. Not too often, perhaps, but with the VCS version of **Super**

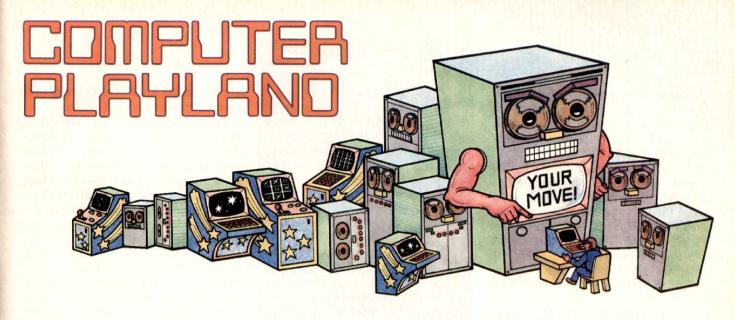
Breakout we have a cartridge that shines far brighter than either of its predesessors.

As in the coin-op and 400/800 versions, the cartridge features classic Breakout, Double (with two, vertically-stacked paddles), Cavity and Progressive. In Cavity, two bonus balls are trapped in a hollowed out pair of spaces in the standard brickyard wall, waiting to be freed. Progressive blends the classic Breakout with elements of Space Invaders, as the rows of bricks-followed by an equal area of empty space-descend toward the bottom of the playfield, disappearing off screen just before reaching the paddle.

The real difference, however, between this and earlier versions of the Super Breakout package is strictly in the sounds. Instead of muted, exploding punch that signalled the bursting of a brick in prior versions, the VCS version features a wide array of accompanying sounds. In some games, bricks disappear with the tinkling of fine crystal, in other variations, the bricks break up to a series of musical notes-and a breakout here creates a really wild arpeggio. There's a metallic twang, and an ominous, synthetic fuzz that rumbles ominously with each brick that's destroyed.

It's these totally enchanting sounds that turn a well-respected, but slightly dated program into a wildly contemporary hit. Super Breakout for the VCS shows skill, imagination and loving care in its design. Even owners of Breakout should seriously consider picking up this videogame wunderkind. In fact, why not try a game or two. If this one doesn't get you, you can't be got.

72 Electronic Games



Android Avengers Attack from All Sides

K-razy Shoot-out/K-Byte Atari 400 & 800/ROM cartridge.

These maze games just keep on comin', don't they? What with maze-chases such as Pac-Man, maze-strategy games such as Wizard of Wor and maze-shoot-out games modeled on **Berserk**, they're more plentiful than ripoffs of **Space Invaders**.

Fortunately, innovative design by the team of Keith Dreyer, Torre Meeder and Chuck Miller raise K-razy Shoot-Out far above the maze genre's general standard. The player's space commander must reach the control sector of the alien base, shoot all the droids and safely

toward home. The arcader must clear all seven sectors of the base of droids in order to triumph.

Each of the sectors is a simple "floor plan" maze shown in overhead perspective. Players guide their onscreen representatives with the joystick. Pushing the action button while pointing the stick fires the laser in the desired direction. Otherwise, the space commander moves toward the compass point indicated by the stick. You'll repeatedly find yourself grateful for Atari's high quality controllers as your fighter darts into and out of danger.

The enemy droids materialize at the edges of each sector. A bar running across the top of the screen furnishes a

marker shortens toward the left, its color changes first from the original green to yellow and then from yellow to red. If the bar disappears before a sector is entirely cleared, the program penalizes the player. The arcader must complete a whole sector at the same level—and there's no credit for points! The penalty for leaving a sector before killing all the droids is even worse; up to two sectors must be repeated without scoring credit.

The squad assaulting the base consists of three space commanders, available one at a time. A commander dies when hit by a droid's laser fire or if it touches a robot or wall. A cute animation sequence follows in which the mortally wounded hero staggers forward and keels over on his back, dead, to the strains of the funeral march. Accumulating 10,000 points earns an extra space commander, though the reserve force may contain no more than four at any one time.

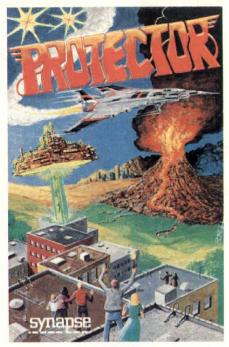
Scoring is to say the least, complicated. The final rating is based on total elapsed time (shown in the lower right-hand corner of the screen), the amount of ammunition expended and the total points gained by killing droids. Classifications run from "Goon" up to "Marksman", with each divided into five sub-ranks ascending from five to one. The creators of K-razy Shoot-Out are either a trio of supergamers, or they're being overly optimistic in naming the classifications. It will take a lot of skill-and quicksilver reflexes-to rise to even the "Novice" level.



Unlike other maze-shoot-outs, this one places a premium on causing the targets to destroy themselves. There is a bonus of 10 points for each droid that runs into a barrier or another robot, and causing one foe to shoot another counts for 50 points. Bonuses are also awarded if the player leaves a sector while the bar is yellow (300 points) or green (1,000 points). An ordinary kill earns 100 points per droid in sectors 1-3 and 200 points in sectors 4-7. The program prints a complete scoring recap after the completion of each sector.

Constant motion is the key. Except in the first sector, where the droids are unarmed, the robots will make short work of any stationary target. Don't wait to see if the previous shot struck home before lining up the next one. That wastes precious seconds, and you've got a little less than two minutes to finish a sector.

It is also important to resist the temptation of unobstructed sight-lines



PROTECTOR

offered by the edges of the sector. Remember, the droids are materializing there, and if one pops into existence right on top of the space commander, that's it.

K-razy Shoot-Out is the first of a projected series of ROM cartridges from K-Byte. If follow-up titles maintain the same high standards as this initial release, it's great news for Atari computer owners. K-razy Shoot-Out is, quite simply, the best game of its type available for any system. (Arnie Katz)

Captivity/Beyond Software Atari 400 & 800/24 K tape

This first release from the newly created entertainment software subsidiary of PDI is an auspicious beginning. It is perhaps the most involving maze game yet designed, providing players with both the standard overhead and a three-dimensional "worm's eye" view of the action.

After randomly generating one of an almost infinite number of maze configurations, the program permits par-



ticipants to study the labyrinth for a few seconds. The computer then produces the three-dimensional graphic and dares the arcader to find the correct pathway.

It's a race against time to see how rapidly one can negotiate the twists and turns. By pushing the action button, the gamer can get another few seconds to study the overhead diagram, but this option costs both time and points every time it is used.

For those poor souls without a sense of direction, Captivity can be an allday exercise, albeit a rather pleasant one. But for arcaders who know where they're at, this program proves to be a surprisingly successful entry in the software sweepstakes.

The game is so well-done that computerists will perhaps even forgive Beyond for only making it available on cassette. At least the supplier includes an audio track of lovely guitar music to the tape loads. (Bill Kunkel)

Protector/Synapse Software Atari 800/32 K disk and tape

This epic science fiction program, designed by 400-800 wizard Mike Potter, formerly of Crystalware, is actually a reworking of a Crystal original. In the earlier version, the game was genuinely exciting, but clearly lacked the finishing touches that Potter has lovingly lavished on this update for his new employer, Synapse.

The scenario is as follows: Gamers pilot the Protector, last of three Earth flying craft with sufficient firepower to take on the aliens that have all but conquered our poor planet. The tableau consists of two cities; one free, the other controlled by the aliens, separated by an ominous, and highly active, volcano. The Protector must pick up the earthlings, who crowd the streets and tops of buildings in the alien-patrolled metropolis, ferry them over the volcano and drop them off at the safe city.

In the process of accomplishing this feat, the adventurers face several degigantic mothership. This vessel is busy, meanwhile, picking up humans from the fallen metropolis with its tractor beam and dropping them into the volcano.

Once all the human beings are either dead or on safe ground, a vault door to the heavily armed pneumatic tubeways opens — and the volcano erupts, spewing lava in the direction of the previously-rescued humans in the safe city. When the Protector enters the tube-chamber, it must take out the gun batteries on both walls, then retrieve those previously saved folks and drop them down the tubeway hatches. Only then will the harried humans be shielded from the invaders. The graphics here will





away the breath of any arcader who enjoys realistically-presented visuals. Games #1 through #3 feature a simple scenario, while the rest involve a much more detailed, high-res tableau. Smoke gushes from a factory's chimney, meteors sizzle to earth and the haunting strains of Beethoven runs throughout the entire operation at a low, nearly-subliminal volume. For those gamers who enjoy spectacular graphics and a good combat adventure, this horizontally-scrolling shootout combines elements from Defender, Scramble and Super-Cobra with innovations of Potter's own to create a piece of game software you will not want to be without.

In terms of strategy, keep in mind that there are several places where you can keep your rescued folks other than the lava-threatened city. Once the door to the tube chamber opens, it will not close again. At this point, move your rescued into the mountains where they will be safe from lava and meteorites. (Curiously, Potter has provided a roofed "safe house" for protection from the meteors. However, the meteors don't fall on other parts of the safe city, so it may serve a more interesting purpose.

When taking out gun batteries assaulting your ship from two sides, simply wait until they fire, then lower your ship into position and obliterate them. The batteries always fire in sequence, so there's breathing time once a blast is launched. Overall, nitpickers may find one or two elements slightly bothersome, but the overall package is so visually stunning, the game play so addictive and the action so irresistable, *Protector* has become an instant must-have game program for all Atari computer owners. Very highly recommended. (Bill Kunkel)

County Fair/Datamost/Apple IV48K disk

County Fair, designed by Don Illowsky with a generous amount of inspiration from Exidy's Carnival coin-op, creates a shooting gallery idea in electronic form.

The arcader uses a joystick to move the on-screen target pistol back and forth near the bottom of the playfield.

The rows of bullets located directly below the pistol represent the sharpshooter's supply of ammunition. Run out of bullets before you've knocked down all the targets and the game is over. There are several ways in which the stock of ammo can be increased or reduced. Periodically, a row of bullets — the actual number of slugs varies greatly - will appear somewhere near the top of the playfield for a few seconds. Some are preceded by plus signs, while others are fronted by minuses. If a shot from the gun strikes such a row, the corresponding number of bullets is added or subtracted from the gamer's supply.

The duck targets not only must be shot from the field, but they also pose a direct threat to the ammunition dump at the bottom of the screen. The quackers, like all the other targets, drop one row lower on the playfield each time they exit off the right viewing edge. If they get close enough, they take wing and gobble up a random number of

your remaining stock of bullets.

The bunnies are also worth watching very closely. Like all rabbits, these hares multiply constantly.

The line of trees in the box located at the center top of the playfield are hardest to hit. Not only are they the only targets that cross the field from right to left, but there are only two narrow slots in the box through which to aim shots. The best advice is to line the gun up with one of these open channels as early in the game as possible. That way, should a shot miss one of the regular targets, there's a chance it will continue through the slot and hit a tree.

Any shooter who clears the whole screen, including the trees, enters a bonus round. You have the opportunity to use all your surplus bullets to repeatedly hit a wild duck that flaps back and forth across the now-empty screen.

In either case, the screen resets with a complete field of targets and a new load of bullets. Play resumes, but this time at a slightly faster speed.

County Fair is sure to hit the bullseye for arcaders who enjoy target-shooting programs. (Arnie Katz)

Ricochet /Automated Simulations/ Atari 800 & Apple II/Atari 32K, Apple 48K

Every once in a while, a game comes along that is so fresh, so offbeat and entertaining, it becomes almost a compulsion among players who've overdosed temporarily on maze chases and blowing up aliens.



COUNTY FAIR

Play begins with the selection of one of the five game variants, with #1 the easiest, and so on. Gamers then decide whether they'll play against one another or the computer, then set the skill ratings for each participant.

Once the playfield is constructed, it will resemble a square grid, marked by rows of dots. At the left and right of the screen are each player's launchers, pieces and bumpers. During his turn, a player may choose one of two options: launch or reposition pieces. Choosing the latter allows the gamer to reorient the long, see-saw like pieces into different locations on the grid. Opting to launch allows the combatant to fire his launches in pinball fashion from either the top or bottom of his side of the screen. Once fired, the ball travels in a

direct line along the grid dots — enabling the skilled player to plot the course before the move is actually made.

SOMPLITE BALANI

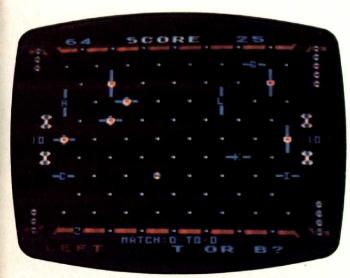
The object of the game is to strike as many pieces as possible. Striking a piece scores a point, but has far greater implications as it now alters the angle of that piece. Each time a piece is changed, the entire tactical approach to the game is similarly altered.

Bonus points are scored for hitting the opposing player's bumper(s) or for lodging a launch in the opposing player's launcher — which also incapacitates that launcher for a pair of turns.

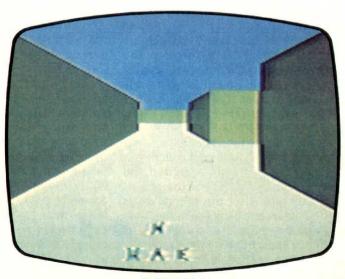
The audio and graphic effects are simple but wholly satisfying, with each of the five variations played against differently colored, but quite striking, backdrop colors. The pieces tinkle like delicate chimes when a ball deflects off them and when a buzzer or launching slot is hit, the computer reacts with a harsh buzzing.

Beyond graphics, however, Ricochet — which can be played using either the computer keyboard or joysticks as controllers — is a delightful contest that involves elements of action, strategy and tactical thinking in a marvelous ensemble.

A truly offbeat triumph. Well worth checking out, and highly recommended for fans of strategy contests. (Bill Kunkel)



RICOCHET



CAPTIVITY



STAND ALONE SCENE

Pac-Man/Coleco/\$60-\$70

Now you can bring your favorite arcade game home in miniature form! Coleco has successfully translated **Midway's Pac-Man** into a tabletop unit that should please the most fanatic gamer. This diminutive device is a near replica of its big brother in appearance, and the play action is close enough to the real thing to give the arcader a run for his point total.

Turn the unit on by choosing skill level one or two. The left joystick chooses between three versions of the game: One-Player Pac-Man, Head-to-Head Pac-Man, and Eat & Run.

One-Player Pac-Man starts with the Pac-Man song. Race through the maze, eating yellow dots and avoiding the four red monsters that patrol the area and pursue the gobbler. Four power capsules (large red dots) provide the strength for Pac-Man to turn the tables on the monsters at least for a short period of time. After eating a capsule, the gobbler is energized and can devour monsters for extra points. But look out! After the energy wears off, the monsters blink a warning, then resume the chase.

When the gobbler eats a monster, the baddie reappears in its starting position and after a short delay, begins

By Joyce Worley

to chase the Pac-Man again. When the gobbler is eaten, a new one and another round starts. The player gets three "lives" per game, plus a bonus gobbler at 10,000 points. After the final score flashes, the unit shows the best score during the play session in progress. To start a new round, just move the joystick to the game you want to play.

Dots score 10 points, and power capsules score 50. Monsters eaten during a single energized period are valued at 100 for the first, 200 for the second, 400 for the third, and 800 for the fourth. When an arcader clears a maze, a special "refill maze" song plays.

song plays.
Good strategy suggests that you race through the maze, avoiding the monsters and eating dots, devouring the power capsules until the time's right. When the monsters converge on the gobbler, eat a power capsule and gobble up

as many of the four

meanies as you can

stomach before they begin to blink. When the energized tone gives way to the regular sounds, your power has dissipated. Then concentrate again on clearing the maze of dots while avoiding the monsters. When the baddies all head in your direction again, stop the Pac-Man near a power capsule and wait for them to approach. Then eat the capsule and do it all again. Using this technique will greatly increase the score. To extend the gobbler's lifespan even further, watch the way the monsters move through the maze



a few times, and memorize the patterns they follow. Then plan the Pac-Man's movements to avoid them.

In Head-to-Head Pac-Man, two gobblers move simultaneously. When one chomper eats a power capsule, both are energized. If the gobblers catch one, the round continues until the second Pac-Man is devoured. The game ends when both players use up all three of their "lives".

Eat & Run strips Pac-Man to its essentials. The maze is empty of dots and contains only the four power capsules and four monsters. The gobbler must grab at least one capsule and return safely to its base in order to score points. The more he gets, the higher the score when he reaches base. But the gate will not open automatically! It randomly opens and closes, and the gobbler must time his run for the base to avoid the monsters and catch the door open.

There are differences between Coleco's *Pac-Man* and the Midway arcade machine. Obviously, the maze is much smaller, with single walls rather than double. There are 63 dots, instead of the 240 found in the coin-op, and the four power capsules are lo-

cated in different posi-

arcader will

tions. The practiced

miss the

scor-



ing opportunities represented by the prizes that appear on each level of the arcade version.

Movement is not as fast in the tabletop version. There is a slight hesitation, especially when Pac-Man changes direction, and the player must consider this pause when judging his ability to stay ahead of the monsters.

The Coleco graphics are very pretty, yet they do lack some of the niceties of

the larger game. The monsters don't change colors when the gobbler is energized, and you can't tell which direction they plan to go by watching their eyes.

ences when measured against the extreme attractiveness and playability of this game. Coleco's Pac-Man is an outstanding translation of the arcade thriller. It's beautiful to look at, a symphony of great arcade sounds, and, most important of all - fun to play.

Reversi Sensory Challenger/ Fidelity Electronics/About \$150

Reversi players seeking competition will meet their match, when they take on the **Reversi Sensory Challenger.** This space-age computer program from Fidelity has players flipping their markers, if not their wigs, trying to defeat the Challenger in a modern version of the popular strategy game, Othello.



lenger at its top skill level would require a champion.

The game consists of 64 squares, and 64 magnetic discs, black on one side and white on the other. Each player must place his marker to trap the opponent's pieces between two of his own, then flips the trapped pieces to his color. The objective is to have the greatest number of pieces on the board at the end of the game.

The Reversi Sensory Challenger provides competition at 18 levels of difficulty. Choose either the Novice or Expert categories, with nine levels in each classification. When the game is turned on or reset, Novice Level One is selected. To change from Novice to Expert, press the Expert square

before play begins. Levels may be changed at any time, even during a game, by pressing the LV key.

The player sets up the game with two white pieces and two black. The computer assumes the human opponent is playing black and making the first move, though sides can be changed by pressing the ST key. Press a marker onto the board and the pressure sensitive switches beneath the sensory playing surface register the move. That square's LED lights continuously, and the squares of the pieces flip

then flash.

80 Electronic Games

When all

Play continues in rotation. This is a very volatile game, with markers getting flipped and reflipped many times. The game ends when all 64 squares are filled, it is not possible for either player to make a move that creates a trap, or all pieces on the board are the same color.

The Reversi Sensory Challenger provides great flexibility for players through its special features. The tone button turns the audio on or off, in case you prefer silent play. Position Verification checks correct placing of

black and white

board

pieces on the

should you lose track. If a player makes a move, then changes his mind, the Clear key takes that move out of the computer.

The Display Move key prompts the computer to suggest the human player's best available move. A Reverse key takes back unwanted moves. It is actually possible to reverse an entire game, move by move, using this key. If the computer is winning, a player can roll back moves to where he lost his lead and begin again from that point. The Start/ Stop key changes sides with the computer or stops the computer's search process during its turn. Using the Problem mode, the arcader can set up any configuration of pieces and play that position.

When two humans want to play against each other, the computer acts as referee in the Monitor mode, keeping track of the game and signalling illegal moves. If anyone tries an illegal move, a tone sounds and no squares light. To correct, simply make a legal move and play resumes.

Reversi Sensory Challenger can play in two modes, random or non-random. The game automatically chooses the non-random mode when it is switched on and the computer always plays the move it considers best in any given situation. If random move is desired, press the RV key after selecting the playing level. The computer then chooses several possible good moves in response to a given situation, and picks one at random.

This is a beautiful unit, measuring about 10½ in. by 11½ in. and is 2½ inches deep. It operates either on 4 C-size batteries or by AC current through the use of the transformer that comes with the game. The field is pool-table green, with clear lettering and numbering as required, and the playing pieces are magnetic. The

LEDs shine brilliantly red, and the entire appearance of the unit is extremely attractive. It will look handsome sitting on anyone's game table.

Fidelity Electronics entered the Reversi Sensory Challenger in the International Tournament of Othello Programs in Lyon, France, where it

easily won all of its games, without a

the flashing pieces are turned, press the continuously lit LED and all lights go out. An audio tone signifies the move is complete. The computer then moves by lighting the LED of the square it chooses.

single loss or tie. It has also defeated all human champions to date, in its Expert mode, which makes it the strongest Reversi program offered on the commercial market.

Split Second/Parker Brothers/\$42

Split Second is the sleeper handheld game of the month. This miniature marvel has five exciting games to surprise and delight everyone.

The handsome hand-held looks something like a Princess telephone. It fits nicely in one hand, leaving the other free to operate the select, start, and four directional buttons.

Game #1 is **Mad Maze.** The arcader maneuvers a ball through a series of ten different mazes, using the directional arrow buttons.

Game #2 shows the maze for just a fraction of a second. The player must use memory to negotiate the labyrinth. In Game #3, only the ball and the goal are visible without even a peek at the obstacles.

Space Attack for beginners is game #4. At the center of the screen is a red dot representing a force field controlled by the player. An enemy spaceship appears at one end of the screen, and can be drawn to the force field by using the arrow buttons. As soon as the ship is centered over the force field, fire lasers by pressing either the Select or Start button.

Game #5 is **Space Attack** for pro's. In this version, the enemy ship is not so tractable, and tries to evade control by constantly moving in different directions.

The next game is **Auto Cross.** The player moves his car (a red bar) through a series of 16 obstacle courses in the shortest time. The obstacles are either a single dot, or two dots.

Game #7 is **Stomp.** The player must hit 20 targets. This is a real test of reflexes. A target appears and the player must instantly press the corresponding Arrow before the target disappears. Sounds indicate whether the arcader has scored a bullseye.

The final game is **Speedball.** Try to capture five moving balls in the shortest time. As soon as the game begins, a moving circle appears, along with a four-part line with its front part flashing. The flashing segment is moved by the directional Arrow button, so as to surround the ball with the line. As soon as a ball is captured, the next appears.

This is a delightful device. It's the perfect time-passer to take on a trip.

Coming NEXT in electronic GAMES

Exclusive Tron Preview

On July 9, Walt Disney Products will premiere the first big-budget videogame-oriented movie. You won't have to wait until then, because the July EG will feature five photo-packed pages about this landmark event in the history of electronic arcading. Ever better, there's the first report on the new videogames, handheld devices and coin-op machine inspired by the *Tron* movie!

The History of Arcades

Noted authority Roger C. Sharpe looks back to the remote ancestors of today's family amusement centers. You find out how it all began, and how the arcades survived wars, the depression and government persecution on the way to their current peak of popularity.

The Players Guide to Summer Sports Videogames

Arcaders do not live by baseball alone. There are many excellent — and some not so excellent — videogame cartridges devoted to other warm-weather sports, from soccer to auto racing. EG's editors tell which are really worth playing, and which are more likely to gather dust in a closet.

Home Arcading Goes King-size

Playing your favorite home videogame on a four-, five- or six-foot diagonal screen sounds great... but is it? Do the games lose something when blown up to super-size? Will it damage your big-screen TV? Get no-nonsense answers to these questions and learn all about the latest generation of king-size television systems when **Electronic Games** probes this sometimes controversial topic in July.

There'll be plenty of other articles and features of interest to arcade addicts, plus regular columns:

- *Switch On!
- *Q&A
- *Inside Gaming
- *Arcade Spotlight
- *Computer Playland
- *Programmable Parade
- *Stand-Alone Scene
- *Readers Replay
- **★EG Hotline**
- *Strategy Session
- *Insert Coin Here
- **★Passport to Adventure**
- *New Products
- *Test Lab

And introducing two brand new columns:

Games Library — EG looks at books for arcaders
Editors Choice — Your monthly buyer's guide to electronic
gaming software.

So watch for the next issue of **Electronic Games**

On Sale June 10, 1982



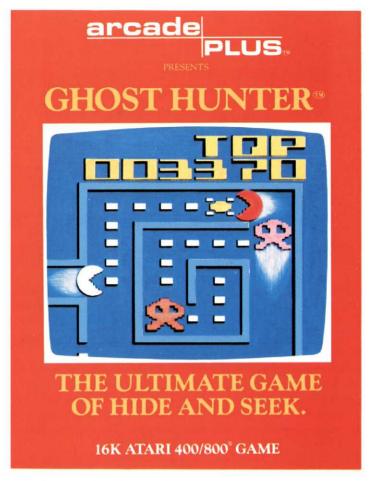
nteraction between the readers and editors of **Electronic Games** helps make this a better magazine. The more we here at **EG** know about who you are and what you want to read, the better we can satisfy your needs and desires. That's why we run a Reader Poll in every single issue of this

magazine. Rest assured that, even though we protect the anonymity of every respondent to our survey, the editor personally reads each and every ballot received. And of course, this is also your ballot for casting your vote for the most popular videogames, computer game programs and coin-op

arcade machines.

Please return this poll sheet—or a photocopy if you prefer to keep your **Electronic Games** in perfect condition—to: Electronic Games, 235 Park Avenue South, New York, N.Y. 10003.

Sex: Male Female Age: Under 14 15-17 18-19 20-21	How many hours per week do you spend playing various types of electronic games:
25-29 30-34 35-44 45+	Less than 2 hours 2-5 hours 6-10 hours
Household Income: Under \$5000 \$5000-9999	More than 10 hours How much do you spend per week on electronic games: Under \$2 \$2-5 \$6-10 Over \$10
\$10,000-14,999 \$15,000-19,999 \$20,000-24,999	Please rate the following subjects from 1 (not very interesting to me) to 10 (of great interest to me): Fantasy & Science Fiction
\$25,000+	Coin-op games Videogames
Marital Status: Single Married	Computer games
Number of Children in Household: Ages: Under 2 6-11 12-17	My favorite videogame cartridges are: 1
Please rate the following features from 1 (awful) to 10 (great): Switch On!Q&ATest LabE.G. Hotline Computer PlaylandProgrammable Parade	My favorite microcomputer game programs: 1
Insert Coin HereStrategy Session Arcade AmericaPassport to Adventure Inside GamingStand-Alone Scene	My favorite coin-op games are: 1
Players Guide 82 Electronic Games	3.



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