

PLAY METER

DECEMBER 1, 1982



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PLAY METER

Twice a Month Publication for the Coin Operated Entertainment Industry

 BPA Member Business Publications Audit

CONTENTS/

Volume 8, Number 23/December 1, 1982

FEATURES

Big Time for 'Burger Time'? **35**

Data East personnel are excited over the prospects of their new interchangeable game, 'Burger Time.' But Mary Claire Blakeman goes beyond the potential hit game and examines the company's philosophy about its interchangeable products.

Declining Collections **40**

Valerie Cognevich talks to a small sampling of operators to find out how their collections compare to last year's take. Finding: Operators collect less or if they take in as much money as they did in 1982, their escalating costs offset any profit.

S-T-R-E-T-C-H **44**

Dr. Jerome Schulster talks to Mary Claire Blakeman about videos exercising mental abilities—memory, learning, and recognition. He also discusses why some parents fear videos.

DEPARTMENTS

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Cover Credit: Atari and Marriott's Great America developed the Atari Video Adventure in Santa Clara, California. However, its games offer more than aesthetic appeal. According to Dr. Jerome Schulster's remarks on page 44, games stretch our mental abilities.

Bowling & Ice Cream Designs



321



2654



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Publisher and Editor:
 Ralph C. Lally II

Editorial Director:
 David Pierson

Managing Editor:
 Laura R. Braddock

Associate Editor:
 Mike Shaw

Administrative Assistant:
 Valerie Cognevich

Art Director:
 Katey Schwark

Circulation Manager:
 Renee' C. Pierson

Typographer:
 Jo Ann Anthony

Graphics:
 Jeanne Woods

Technical Writers:
 Randy Fromm
 Frank Seninsky

Correspondents:
 Roger C. Sharpe
 Mary Claire Blakeman
 Charles C. Ross
 Mike Bucki
 Paul Thiele
 Bill Kurtz
 Dick Welu
 Tony Bado
 Michael Mendelsohn
 Bill Brohaugh

Classified Advertising:
 Valerie Cognevich

Advertising Manager:
 David Pierson

Illustrator:
 Bob Giuffria

European Representative:
 Esmay Leslie

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Guest Editorial

Operators can join a variety of organizations

By Allen J. Fagel
AVMDA General Counsel

If you are not a member of the AMOA, I urge you to join. If you are fortunate enough to be in a state that has a state association, you should be a member. Contact all the other operators in your area and form your own local organization. The whole idea is to get involved with others just like yourself who are faced with the very same problems you are faced with.

Ralph C. Lally II
Up Front
November 1, 1982

While I certainly join with you in urging operators to join AMOA and their local associations (Up Front, November 1, 1982), I believe you owe your readers an obligation to point out that there are other organizations, particularly the Amusement and Vending Machine Distributors Association, that, if they be eligible, both merits as well as requires their joining.

AVMDA is a relatively new organization, but it has actively assisted both distributors—as well as operators (when specifically sponsored by a member distributor)—in fighting the insidious legislation of which we are all so aware.

It was AVMDA which set up a legislative assistance service whereby attorneys for member distributors—or attorneys for operators, when requested by a member distributor—could obtain necessary and pertinent case law, legal research, and related materials to represent realistically and rationally the operators (those who are really on the “firing line”) in arguing against the passage of restrictive local legislation.

It was, in fact, a member distributor of AVMDA,

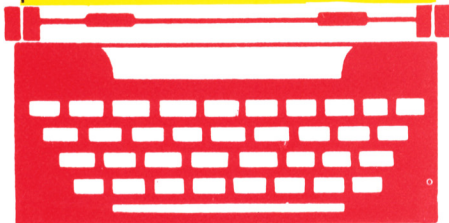
through materials and programs developed by AVMDA, that provided the legal and financial assistance to an operator which, we believe, was the kind of assistance that made the difference in a recent court ruling that took place in Cook County, Illinois (Chicago). For the first time in this area, it declared a local ordinance (which contained all of the classical restrictions on arcades) unconstitutional.

Additionally, as recently as two weeks ago, AVMDA furnished materials to an attorney representing an operator in Muncie, Indiana (who contacted the association through a member distributor). Those materials—along with the efforts of a number of operators, location owners, and distributors—caused the municipality to refrain from taking any action relating to coin-operated amusement devices.

I am certain you will agree this success is the cooperation of all associations, not just the efforts of one association. If all segments of our industry work together, we will prevail against the restrictive and prohibitive legislation being proposed in many municipalities throughout the country.

AVMDA is a relatively new organization, but it has actively assisted both distributors, as well as operators (when specifically sponsored by a member distributor) in fighting the insidious legislation of which we are all so aware.

Letters to the editor . . .



3. Digital Innovators, Inc.
4. Innovative Management Consultants
5. Micro Computer Sales
6. Validata

Linda P. Stein
Office Manager
Brick Road Inc.
San Diego, California

Gainesville, FL 32607
904/375-8580

CIO Systems/Software
12535 Seal Beach Blvd.
Seal Beach, CA 90740
213/493-2478

Digital Innovators, Inc.
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Piscataway, New Jersey 08854
201/968-0200

[Ed. Note: Here are the companies included in the August 15 story.]

CAME Software Systems, Inc.
5200 Newberry Rd., Suite D-6

Innovative Management
Consultants

Distributors' future

We have been an arcade operator for a long period. We have been reading with great interest "Distributors discuss market, industry's future" and "Dramatic changes face operators." (See *Play Meter*, September 1, pp. 41, 44.) We have begun to distribute used videos, parts, and PC boards.

The distributing market has slowed down in Japan. The reasons why the business has slowed down?

1. Diversity of market;
2. Manufacturer, distributor, operator, respectively diminish its features;
3. A theory that all good things eventually end; and
4. Recession

But we hope the future of distributors is not the same. Diversity of market will proceed more. "Industry shakeout"—it will cut across all industry lines: operators, distributors, and manufacturers.

"What kind of changes should we expect?" The Number One change will be a shakeout. And the Number Two will probably be growth. Why probably? Game copiers have hurt the industry more in Japan than USA.

Kingo Kurabayashi
Sinsei Industry Co. Ltd.
Tokyo, Japan

Software solutions

I am inquiring about your article titled "Software Systems For The Operator" in the August 15 issue of *Play Meter*. I would like to know the addresses and/or phone numbers of the following companies outlined in your article:

1. CAME Software Systems, Inc.
2. CIO Systems/Software

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| Basketball | \$ 125 |
| Battlezone | \$ 425 |
| Battlezone Cabaret | \$ 400 |
| Missile Command | \$ 645 |
| Missile Command Cabaret | \$ 645 |
| Super Breakout | \$ 195 |

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| | |
|----------|--------|
| Route 16 | \$ 550 |
|----------|--------|

CINEMATRONICS

| | |
|--------------|--------|
| Armor Attack | \$ 350 |
| Solar Quest | \$ 850 |
| Star Castle | \$ 395 |
| Star Hawk | \$ 250 |

EXIDY

| | |
|-----------------|--------|
| Spectar | \$ 495 |
| Spectar Cabaret | \$ 445 |
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| Venture | \$ 595 |

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| | |
|---------------|--------|
| Astro Fighter | \$ 550 |
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| | |
|-----------------------|--------|
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| Wizard of War | \$ 895 |

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| | |
|------------|--------|
| Radarscope | \$ 695 |
|------------|--------|

TAITO

| | |
|-----------------------|--------|
| Colony 7 | \$ 495 |
| Crazy Climber | \$ 550 |
| Crazy Climber Cabaret | \$ 495 |

TAITO

| | |
|-----------------------|--------|
| Crazy Climber C/Table | \$ 495 |
| Lock N' Chase | \$ 895 |
| Qix | \$ 795 |
| Qix Cabaret | \$ 745 |
| Qix C/Table | \$ 695 |

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| | |
|-----------------|--------|
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|-----------------|--------|

SIT DOWN GAMES

| | |
|--------------------------|--------|
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| GREMLIN Space Tactics | \$ 950 |
| TAITO Star V | \$1250 |

NEW CLOSE OUTS

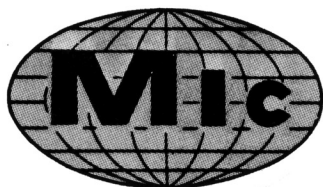
| | |
|---------------------|--------|
| ATARI Space Duel | \$1295 |
| Space Duel C/Table | \$1195 |
| SEGA Zektor | \$1595 |
| GOTTLIED Reactor | \$1095 |
| TAITO Kram | \$1395 |
| Wild Western | \$1695 |

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| | |
|---------------------------|--------|
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| Haunted House | \$1095 |
| Mars | \$ 650 |
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| | |
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Jews, "Pac-Man"

I can't tell you how much all of us at the Jews for Jesus headquarters enjoyed the article you did on our *Pac-Man* controversy. We'll be sure to keep you posted if anything else comes of it. (See *Play Meter*, October 1, p. 176.)

Sue Perlman
Information Officer
Jews for Jesus
San Francisco, California

Teen alcohol abuse

The U.S. Department of Health and Human Service announced the initiation of a major drive against alcohol abuse by teenagers. This issue has reached a high priority for the country, according to Richard S. Schweiker, department secretary.

This opens an excellent opportunity for those in the coin-op amusement industry to boost the public image and contribute in a positive way to the teenagers who make up a large percentage of our player market.

You must act now in order to gain the maximum benefit from this effort. Operators should write to Secretary Schweiker and to the Alcohol Drug Problems Association offering to help and to be a part of their campaign. Our industry organizations must also join together at all levels to contribute for this worthy cause. This may be the chance to change a lot of negative publicity to positive as it relates to our industry.

Reporting on the issue to the Alcohol and Drug Problems Association in an Associated Press release, Schweiker said, "The grim fact is that 8,000 teens and young adults die in drinking related accidents every year. Another 40,000 suffer injuries...The killing must be stopped."

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EATON Electrical/Electronic
Control

He continued to explain the extent of the teen drinking problem with astonishing statistics. "Over 75 percent of America's youth drink by age 16. Twenty-five percent of high school seniors drink once a week or more often. From 1974 to 1978, the number of teenagers who abuse alcohol jumped from 3 percent to 38 percent among boys and 5 percent to 26 percent among girls."

The campaign is scheduled to start this fall, and it is clear that a tremendous effort will be needed. The Department of Health and Human Services is now committed to using its resources and putting a new, stronger emphasis on the issue of teen alcohol abuse. With the added backing and support of our industry, its campaign can be even more effective.

Operators can put anti-drinking posters in all teen-oriented game centers around the country, and distribute other materials for their drive in their locations. Distributors and manufacturers can also help by offering the support and influence of the game industry for this campaign.

A large percentage of game players today are most likely the same teenagers who have problems with alcohol abuse. The statistics show this. It is essential that the industry support this program and help our players with our efforts. If you agree with me, write a letter today to Secretary Schweiker, U.S. Department of Health and Human Services, 200 Independence Avenue, S.W., Washington D.C., 20201, and offer to help in the campaign.

**Carol J. Kantor
Business Builders
Cupertino, California**

8— San Mateo THE TIMES Mc

**Drive planned
on teen-ager
alcohol abuse**

WASHINGTON (AP) — The Reagan administration will launch a drive this fall against alcohol abuse by teen-agers, Health and Human Services Secretary Richard S. Schweiker said today.

"The grim fact is that 8,000 teens and young adults die in drinking-related accidents every year. Another 40,000 suffer injuries," Schweiker said.

"The killing must be stopped," he declared in a speech to 300 people at the Alcohol and Drug Problem As...

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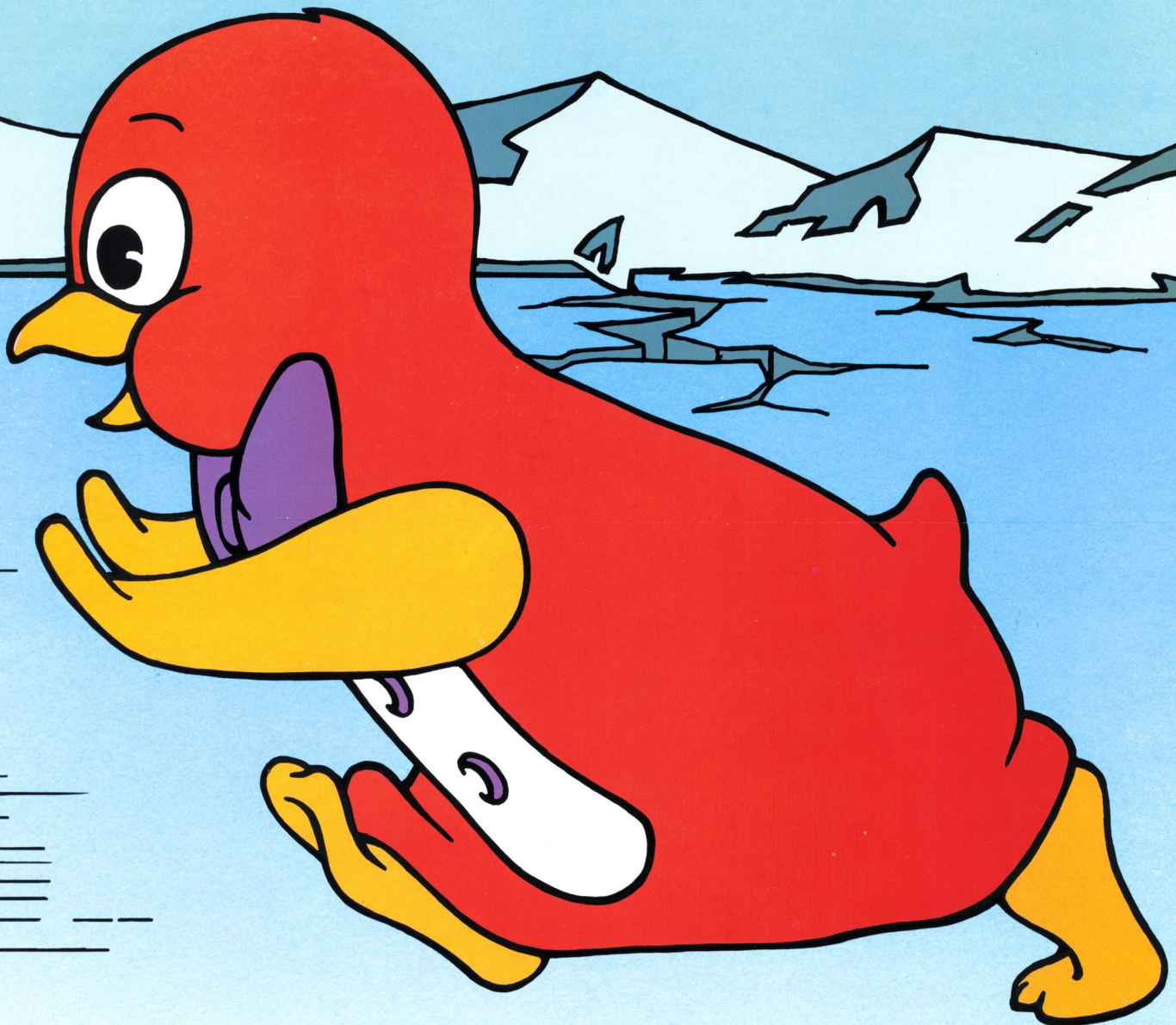
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PlayMeter

Equipment Poll

The following are rankings of the top videos and top pinballs making above average weekly gross collections nationwide. The dollar amounts appearing are the average weekly grosses as reported to Play Meter magazine through its regular national operator survey. These averages are for games that are currently being marketed in the U.S. (no older than six months). Games with less than adequate responses (less than fifty percent) but with above average collections are so noted. Games not appearing on the poll either (1) did not generate over a ten percent response rate to provide an adequate representative sampling or (2) did not register weekly gross collections above the national average. We encourage operators to join our ever-growing number of readers participating in the survey.

TOP VIDEOS Arcade Locations

Thirteen of 23 videos (57%) with a response rate over ten percent have above average earnings.

| | Dec. 1 | Nov. 15 |
|--|--------|---------|
| National video average | \$173 | \$187 |
| ★ 1. <i>Jungle King</i> /Taito | \$250 | \$270 |
| ★ 2. <i>Donkey Kong Jr</i> /Nintendo | \$235 | \$245 |
| 3. <i>Tron</i> /Midway | \$201 | \$225 |
| 4. <i>Ms. Pac-Man</i> /Midway | \$197 | \$226 |
| ★ 5. <i>Tutankham</i> /Stern | \$191 | \$200 |
| 6. <i>Galaga</i> /Midway | \$184 | \$195 |
| 7. <i>Turbo/Sega</i> | \$180 | — |
| 8. <i>Robotron</i> /Williams | \$176 | \$202 |
| 9. <i>Dig Dug</i> /Atari | \$176 | \$192 |

★ Conditionally Rated— Weekly average based on less than 50% response rate

TOP VIDEOS Street Locations

Twelve of 22 videos (55%) with a response rate over ten percent have above average earnings.

| | Dec. 1 | Nov. 15 |
|--|--------|---------|
| National video average | \$163 | \$174 |
| ★ 1. <i>Tutankham</i> /Stern | \$261 | \$200 |
| ★ 2. <i>Donkey Kong Jr</i> /Nintendo | \$222 | \$241 |
| ★ 3. <i>Galaga</i> /Midway | \$208 | \$210 |
| ★ 4. <i>Tron</i> /Midway | \$184 | \$206 |
| ★ 5. <i>Turbo/Sega</i> | \$182 | — |
| 6. <i>Ms. Pac-Man</i> /Midway | \$177 | \$201 |
| ★ 7. <i>Kangaroo</i> /Atari | \$166 | — |
| ★ 8. <i>Dig Dug</i> /Atari | \$163 | \$194 |

TOP PINBALLS Arcade & Street Locations

| | Dec. 1 | Nov. 15 |
|---|--------|---------|
| National pinball average | \$ 96 | \$ 95 |
| 1. <i>Caveman</i> /Gottlieb | \$114 | \$106 |
| ★ 2. <i>Orbitor</i> /Stern | \$110 | — |
| ★ 3. <i>Devil's Dare</i> /Gottlieb | \$110 | \$110 |
| 4. <i>Mr. & Mrs. Pac-Man</i> /Bally | \$109 | \$116 |
| ★ 5. <i>Rocky</i> /Gottlieb | \$100 | \$115 |
| 6. <i>Haunted House</i> /Gottlieb | \$ 98 | — |

Provisionally Rated Videos

(Above average earning games, with a response rate between 10—25%)

Arcade Locations

| Provisional Ratings | Dec. 1 | Nov. 15 |
|------------------------------------|--------|---------|
| <i>Slither</i> /GDI | \$223 | \$280 |
| <i>Moon Patrol</i> /Williams | \$208 | \$260 |
| <i>Eyes</i> /Rock-Ola | \$196 | — |
| <i>Gravitar</i> /Atari | \$192 | \$211 |

Street Locations

| Provisional Ratings | Dec. 1 | Nov. 15 |
|------------------------------------|--------|---------|
| <i>Moon Patrol</i> /Williams | \$245 | \$220 |
| <i>Jungle King</i> /Taito | \$221 | \$263 |
| <i>Gravitar</i> /Atari | \$200 | — |
| <i>Frenzy</i> /Stern | \$170 | — |

PINBALLS

Arcade & Street Locations

| Provisional Ratings | Dec. 1 | Nov. 15 |
|-------------------------------|--------|---------|
| <i>Spirit</i> /Gottlieb | \$105 | \$150 |

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WHIRLY BUCKET™ is packed with special features. A moving target adds a new twist by doubling the value of the holes when hit. The electronic age comes alive with this complete audio system (a standard feature) with the option to customize the sounds to fit your location. The special remote control option on the ticket dispenser allows a bartender to offer "happy hour" specials. And, the handsome wood grain finish adds distinction to any location.

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|--------|-----------|---------|
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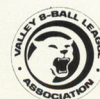
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COPYRIGHTS UPHELD FOR OBJECT CODE • IT'S A NEW GAME IN CA • STUDENTS GO BACK TO VIDEOS • SUPREME COURT TURNS BACK JUKE OPS • DYNAMO DROPS VIDEO DIVISION • NEW JERSEY CONSIDERS TAX ON VIDEOS • LAWYERS DEBATE SETTLEMENT • CENTURI LOOKS TO OUTSIDE HELP • ENGLAND'S ALCA FALLS • AGMA GROWS WITH INDUSTRY CONCERNS • ALL-STARS ON PARADE

COPYRIGHTS UPHELD FOR OBJECT CODE

In a decision that extends the coverage of video games by U.S. copyright laws, the U.S. court of appeals in Philadelphia ruled August 2 in favor of Williams Electronics, upholding a lower court opinion against *Defender* infringer, Artic International. The decision is significant for its recognition of the copyrightability of an object code computer program.

Previous to the appellate ruling, the U.S. district court for New Jersey found that Artic had infringed on Williams' copyrights for the computer program and the audio/visual works of *Defender*. In its appeal, Artic did not deny copying the video game, but the New Jersey firm did challenge the scope and validity of the copyright laws to include protection of object code.

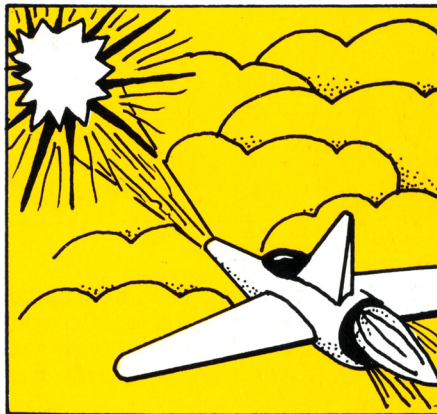
"Defendant (Artic) argues that there can be no copyright protection for the ROMs (read only memories) because they are utilitarian objects or machine parts," wrote Circuit Court Judge Sloviter, one of the three judges who presided over the appeal. "Defendant's argument in this regard is misdirected. The issue in this case is not whether plaintiff, if it sought, could protect the ROM itself under the copyright laws. Rather, before us is only the plaintiff's effort to protect its artistic expression in original works which have met the statutory fixation requirement through their embodiment in the ROM devices."

The court then recognized the ROMs could be protected when they contain the "artistic expression" of the game and dismissed the contention that the ROMs in question were noth-

ing more than mechanical devices.

In Chicago, Richard Kinney of Kinney & Niblack, who argued the case for Artic, said he had asked the U.S. Supreme Court to review the case.

"The fundamental constitutional question," Kinney said, "is whether a ROM is protectable under the current copyright law." Kinney reaffirmed his contention that the ROM is only "a piece of hardware" and that, as a part of a machine, the ROM is utilitarian and not copyrightable.



He said that Artic is also appealing a similar ruling in a decision in favor of Midway Manufacturing. That appeal will be heard early in 1983 in the U.S. court of appeals in Chicago.

"Perhaps we're beating a dead horse," Kinney admitted. "If a judge rules that black is white; then it is. But, then again, we could win in Chicago and we would have a different law in Philadelphia than in Chicago."

At Williams, Ron Crouse, vice president and director of marketing, heralded the decision.

"We are delighted to have received this favorable ruling by the U.S. Court of Appeals. This decision will give the

industry another powerful tool in protecting the rights of manufacturers, such as Williams, who are making significant investments in original game development."

IT'S A NEW GAME IN CALIFORNIA

When Los Angeles operators avoided a proposed \$250 annual per machine tax this summer, they did so, in part, by forcing the City Council to develop a proposal for consideration by the electorate (*Play Meter*, September 1, p. 16).

Would that tax come under consideration again today, those who fought so deliberately to defeat it would not be able to use the same methods.

Despite California's famous Proposition 13, the state Supreme Court has ruled municipalities can pass a tax to benefit their general revenue funds without the approval of the voters.

Previous to the court's ruling August 5, and as part of the declaration of the state's 1978 Proposition 13 law, no taxes were passed without the approval of two-thirds of the voters in the municipality where the tax was proposed.

But then came the city and San Francisco county. Bay city fathers proposed a general fund issue that did not get two-thirds approval from the city's voters. No matter, groaned the city, the council would implement the tax anyway and challenge that interpretation of Section 4 of Proposition 13.

Hence was born *City and County of San Francisco vs. Farrell*, a "manufactured" case wherein the city sued

its own comptroller for refusing to collect the tax and thereby got the issue into court.

The essence of the state Supreme Court ruling is that Section 4, Proposition 13 does not prohibit a municipality from issuing a tax designed to benefit its general revenue fund. Only a tax earmarked for a special use must be approved by two-thirds of the voters.

The measure was endorsed by the Supreme Court 5-2.

Already, the law's altered interpretation has affected some operators in California. Hercules, a small residential community along the edge of San Francisco Bay, adopted a business license tax that went into effect October 1. That tax imposes a \$50 per quarter levy on all coin-operated amusements, as well as a \$10 per quarter levy on vending machines. Billiard and pool tables are taxed \$5 per quarter.

The tax affects other businesses as well and is expected to net the little community up to \$200,000 annually when a 400-acre industrial site is completed.

STUDENTS GO BACK TO VIDEOS

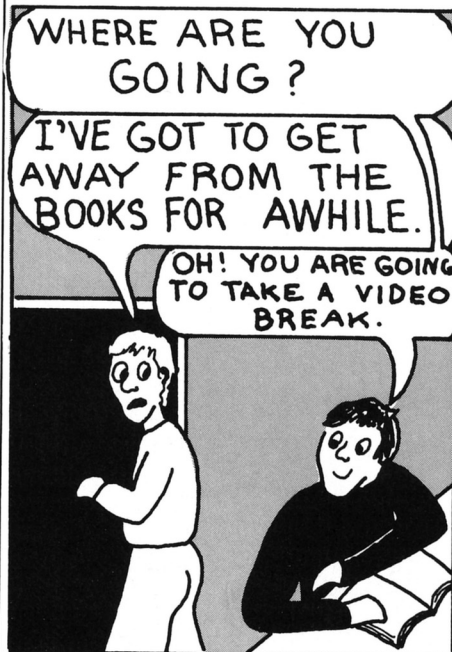
Some school officials in California find they can live with video games in the schools after all.

On September 14, Stockton Unified School district trustees voted to put back into use the videos it had

unplugged in April after parents complained about the games on campus.

Apparently, the school trustees decided the revenues produced by Pac-Man and friends were significant enough to review and then reverse their initial decision.

"As a means to assist the middle and secondary schools in providing additional revenue, it is recommended that the board approve the coin-operated video games on the campuses..." said Gerald Hunter, district director of instruction.



District officials said the games pulled in between \$20 and \$60 a week for the schools, and the money was used to cover student activity programs.

Before reaching its conclusion, the board reviewed a district survey that confirmed the videos were not taking as large an electronic bite out of the academic pursuits of students as many people thought.

"The opinions of those individuals responding to the surveys indicate the installation of the coin-operated video games has not had a significant impact on the schools," read a final report compiled by the district's Research and Evaluation Department.

The survey also found the games had not increased problems of supervision nor had they negatively affected student attendance or behavior.

A coordinator of child welfare and attendance, Sidney Wadley, even remarked the games kept students

aged 14 and under from contact with marijuana. He said a student caught with a lot of marijuana told him it was difficult to sell the drug because students were spending their money on video games.

SUPREME COURT TURNS BACK JUKE OPS

Opposition to the current license fees imposed by the U.S. Copyright Office on jukebox operators has run into what appears to be an insurmountable hurdle.

In a ruling October 12, the U.S. Supreme Court denied an Amusement and Music Operators Association request to reconsider an April 16 U.S. Court of Appeals ruling.

In denying the AMOA request, the Supreme Court effectively upheld the 7th Circuit appellate court ruling that allowed the Copyright Royalty Tribunal to raise jukebox fees for 1982 and 1983 to \$25. The fee had been \$8 per year since 1978.

On January 5, 1981, the Tribunal produced that fee schedule for 1982-83, as well as a \$50 rate for the years 1984 through 1986. An inflation adjustment will be added to that \$50 rate for the years 1987-90. (See *Play Meter*, June 1, p. 16.)

Until the Supreme Court ruled not to hear the appeal, AMOA had been instructing its members to pay the increased fees but to do so "in protest." Their payments to the Copyright Office contained a letter saying they would expect a refund, with interest, if the Supreme Court ruled the fees excessive.

At AMOA headquarters in Chicago, association Director Leo Droste indicated his displeasure with the decision.

"AMOA is very disappointed that the U.S. Supreme Court denied our petition for a writ of *certiorari*," he said in a prepared statement. "We consider a 525 percent increase in the jukebox royalty fee to be entirely unwarranted. AMOA will now concentrate efforts on its legislative program."

Droste said the association's law firm is drafting the legislative program to deal with the issue, and the program will be announced at the AMOA Exposition November 18-20.

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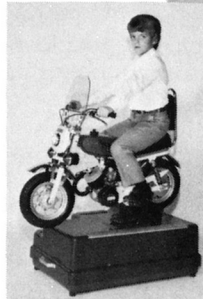
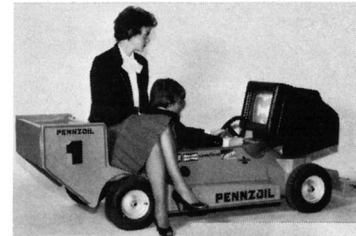
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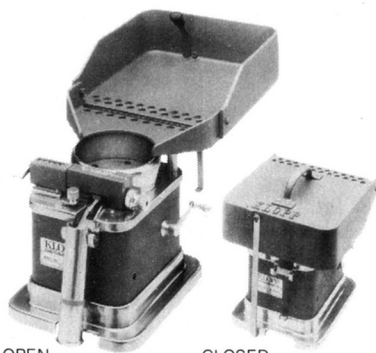
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DYNAMO DROPS VIDEO DIVISION

In what was characterized as a mutually beneficial arrangement, Dynamo Corporation of Grand Prairie, Texas, has terminated its video game efforts, canceling its contract with Tom Struhs and eliminating its video games division.

Struhs will now do business as Tago Electronics, following a brief but busy stint with Dynamo Games.

Struhs arrived at Dynamo in April to help develop the Dynamo Games Division.

"He's (Struhs) an old friend of mine who helped raise the capital under a separate corporation to get our games business going," said Dynamo's Bill Rickett.

As Dynamo Games' chief, Struhs worked to develop industry acceptance to games like *L'il Hustler* and *Boxing Bugs*. Those videos were a big part of the Dynamo 1982 earnings report, Rickett said.

"Videos were a good percentage of our business this year," Rickett said. "They showed very good earnings and were very profitable, but we felt it better for Tom to do the production and marketing on his own rather than as a part of Dynamo."

Dynamo will concentrate on its dominant products, pool tables, its soccer table market, and, at least temporarily, stand aside from the video marketplace, Rickett said.

"In order to be successful in the future video market, it will take a very sophisticated research and development program. We feel it better for us at Dynamo to concentrate our efforts on our dominant products."

Rickett added that Dynamo will release a new product line, neither pool nor video related, at the Amusement Operators Exposition in 1983.

The Dynamo video production facilities will go to Tago along with the video game business.

Though the name may be unfamiliar, Tago is not a new firm. Struhs formed the company in March 1981, but when he contracted with Dynamo to produce and market the videos he was working on, the name Tago slipped into the background.

A spokesman for Tago, which will be located just one block away from Dynamo in Grand Prairie, said the company is concentrating on two

games licensed from an unnamed "major" manufacturer. The games, *Anteater* and *Calypso*, will be notable for their low cost to distributors, considerably less than \$2,000 per game, the spokesman indicated.

Additionally, the company said, it will soon release a conversion system for use in all existing raster scan games that will be available at a retail price of less than \$750. •

NEW JERSEY CONSIDERS TAX ON VIDEOS

A New Jersey Assembly panel approved a bill that would extend the state's 5 percent sales tax to coin-op amusements, a move designed to raise \$11 million to establish a state-wide job training program.

The bill's sponsor is Assemblyman Thomas Paterniti of Middlesex.

Under the legislation, the sales tax would be applied to all videos, jukeboxes, pinballs, and other coin-op amusements. Originally, the proposal was to include cable television, but that provision was deleted. The tax would be imposed on gross receipts.

Paterniti called on conversations with his constituents to back his contention that the general public favors a tax on amusements, but he showed no evidence that the coin-op industry could withstand such a tax.

At Betson Enterprises in New Jersey, distributor Jerry Gordon said the state association is fighting back with a battery of lobbyists, lawyers, and association members making contact with various assembly members. He said the issue is the same piece of legislation that was defeated eight years ago through industry efforts.

"Operators already pay sales tax when they purchase equipment," Gordon pointed out. "To hit them again with a sales or gross receipts tax on collections is unfair."

Though there are no state fees as yet in place on New Jersey amusement machines, Gordon said municipalities there have a variety of fees ranging from \$5 to \$1,000 per game. If the state were to make any general licensing requirements on amusements, Gordon noted, he hoped it

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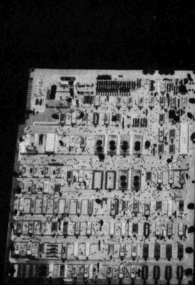
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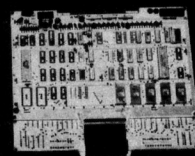
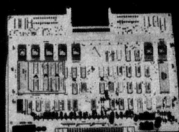
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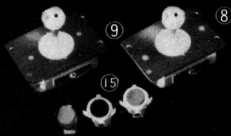


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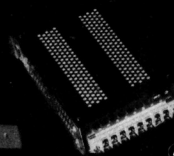
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NEWS

would be to establish a uniform fee for all games in the state. Monies collected from that fee could then be redistributed to the municipalities, he proposed.

Assemblyman Michael Matthews of Atlantic said he expected the measure to be sent to a finance committee for a review before it is considered by the Assembly members.

Matthews also asked the state's Division of Taxation to estimate the cost of collecting the tax. He said that could be a difficult task, considering the number of video games in taverns, restaurants, airports, and shops. ●

LAWYERS DEBATE SETTLEMENT

Attorneys for All American Vending Corporation of Orlando, Florida,

responded to a *Play Meter* article of September 15, challenging the contention that a circuit court upheld several location contracts on behalf of a Florida vending firm.

"I have been representing All American Vending in all of the litigation with Paramount Vending," attorney Theodore Schwartz wrote. "This litigation has been settled by an agreement and stipulation between the parties and not by the Circuit Court in Broward County."

Schwartz told *Play Meter* the issue was settled between the parties specifically to avoid litigation. Therefore, he insisted the court did not uphold location contracts in Florida. They were simply reinstated by agreement between the companies.

But Paramount attorney Ira Marcus disagreed. He said the court upheld the contracts when it issued a preliminary injunction against All American.

"Our contracts were found not in restraint of trade," Marcus pointed out. "The preliminary injunction found we had binding contracts. The order says that."

Marcus pointed out that the court

refused to grant the injunction for locations where no written agreement was in evidence.

Marcus did agree with Schwartz, however, that, contrary to what the *Play Meter* story reported, the court did not award the damages nor impose the settlement on the parties. After All American filed an appeal with the state court of appeals addressing the dismissal by the circuit court of its countersuits, the parties met to form a settlement, part of which resulted in damages of \$25,000 being paid by All American to Paramount, Marcus reaffirmed. ●

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released its third quarter earnings statistics, figures that show the company's revenues are suffering serious setbacks in 1982.

Revenues for the quarter ending July 31 were slightly more than \$2 million, down from almost \$15 million for the same period in 1981. Figures for the first nine months of fiscal 1982 show a decline to \$13.5 million from \$37.5 million in 1981.

Milton Koffman, chairman of the board for Centuri, told *Play Meter* the firm suffered from lack of a recent hit game.

At the same time the report was showing stockholders a net loss of almost \$2 million for the quarter, Koffman boasted of a new acquisition outside the video game industry that he hopes will "provide an additional, consistent revenue and earnings base



for Centuri."

At a time when companies outside the coin-op amusement industry are commonly buying into it to bolster earnings, it is noteworthy that Centuri will look to Outdoor Sports Headquarters Inc., an Ohio-based firm involved in the wholesale distribution of outdoor sporting goods, to help it out of its current sag. That company's 1981 revenues were almost twice those reported by Centuri for its fiscal 1981. •

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ENGLAND'S ALCA FALLS

Alca Electronics, a major English coin-op firm whose manufacturing and operating activities produced more than \$12 million in revenues in 1981, has ended operations by voluntary liquidation showing current debts of more than \$5 million, according to British sources.

The company blamed a dramatic downturn in the demand for video games in 1981 for its problems.

Statutory meetings of creditors of Alca and its two operating divisions, Alca Operations and Alca Leisure, were held in Manchester, England, September 8 under the chairmanship of Robert Atkins in the absence of Alca's Michael Green. He resigned from the post of principal director of the firm September 1.

Alca opened its doors in 1966, manufacturing electro-mechanical amusement machines for sale in the United Kingdom and abroad. The

company began producing pool tables in the mid-1970s and later sacrificed efforts to manufacture videos.

When the video decline in England reduced the company's income from sales and operations, the firm tried to broaden its range of products by introducing a race game called *Derby Day*.

A liquidation report indicated the firm was bowing out of the industry in response to pressures from creditors during July and August. But, the liquidator indicated there were no prospects for payments to unsecured creditors. •

AGMA GROWS WITH INDUSTRY CONCERNS

The Amusement Game Manufacturers Association met September 10 to find ways to pursue copyright infringers, and AGMA officials say plans for a new line of attack will be released soon.

An AGMA spokesman characterized the largest turnout ever for an AGMA event: "Manufacturers are becoming more involved in generic industry issues, and their participation in AGMA is evidence of this new direction."

To help manufacturers better coordinate their attack on game infringers, AGMA brought outside speakers to the meeting. Two FBI agents told manufacturers of cooperative efforts already underway between AGMA and the FBI in copyright protection of video games, efforts which reflect manufacturers' leanings toward becoming more active in their pursuit of criminal sanctions against infringers.

Manufacturers were also addressed by representatives of the U.S. Customs Service and the Motion Picture Industries Film Security Office, each tackling the copyright issue.

AGMA gained members during the meeting. Pizza Time Theater and Ravenswood Electronics became members, while Jack Mittel of Taito America and Don Rockola of Rock-Ola Manufacturing were added to the Board of Directors.

An open house for the new AGMA

office in Alexandria, Virginia, was also held. In addition to directors and members, many of Washington's politicians and some private businessmen showed up September 9 to enjoy cocktails with industry officials and be entertained by industry products. •

ALL-STARS ON PARADE

Have you heard that California won the all-star game?

What all-star game? Did you miss something? Did Reggie Jackson hit a late inning home run to give the Americans a rare victory over the Nationals in this summer's national pastime classic? Did Ted Turner already organize striking football players into his what-else-have-we-got-to-do all-star league?

None of the above. If you missed this all-star game, perhaps your lack of awareness is excusable. Because the all-star game that California won did

not receive much publicity, although maybe it should have.

In the era of electronic entertainment, a growing need for high level competition is being evidenced by video game players throughout the nation, and lately, Twin Galaxies—those folks who keep records of the nation's highest video game scores—staged the nation's first all-star video game competition.

And the Californians won in traditional competitive style. They overcame the odds against them with a late rally to beat the video all-stars of North Carolina.

North Carolina lost in the last hour, by a score of 10-8, after entering the contest a slight favorite, leading most of the weekend-long competition August 27-30.

Twin Galaxies International Scoreboard's Walter Day developed his national service (ranking scores, players, and states as to their accomplishments on the videos) in November 1981 and still runs the operation from his arcade in Ottumwa, Iowa.

It's the biggest thing that's happened in Ottumwa since Walter O'Reilly came home from the Korean War, and it's the best thing that's happened to serious game players. Some might call them video athletes yet.



Some participants at the AGMA board meeting at the new Alexandria office were, from left at table, Joe Robbins, president; Duane Blough, vice president; H.R. "Pete" Kauffman, board member; Karen Witte, Atari; and Jack Mittel, board member. Along wall, Nolan Bushnell, Pizza Time Theater; Hank Vandendop, Amstar; Arnold Kaminkow, Centuri; and Joe Keenan, Pizza Time Theater.

THE CALENDAR

November 18—20

AMOA Exposition, Hyatt Regency Downtown, Chicago

November 18—20

IAAPA annual convention (Parks Show), Bartle Hall, Kansas City

November 26-28

Video Expo '82, sponsored by the National Association of Merchants, Orange County Fairgrounds, Orange County, California

December 2—4

SADA 82, Spanish Amusement Trade Show, Convention Hall of Torremolinos, Malaga

1983

January 10—13

ATE 39th Amusement Trades Exhibition, Olympia, London, England

January 20—23

International Amusement and Vending Machine Trade Fair (IMA), Frankfurt, Germany

February 4—6

Music Operators of Minnesota, Annual State Team 8 Ball Pool Tournament, Kahler Hotel, Rochester

February 18—20

Music Operators of Minnesota, Annual State Convention, Holiday Inn Downtown, Minneapolis

February 21—23

Pacific Amusement Operators' Show, Fairmont Hotel, San Francisco, California

March 16—17

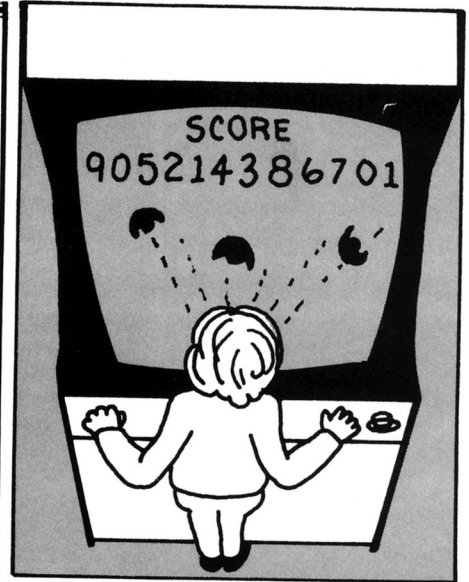
Nihon Amusement-Machine Operator's Association, second amusement expo, Shinjuku N.S. Building, near Keio Plaza Hotel, Shinjuku, Tokyo.

March 25—27

Amusement Operators Expo '83, O'Hare Exhibition Center, Chicago

June 16—18

OMAA's 1983 Exposition of Music and Games, Hyatt Regency, Columbus



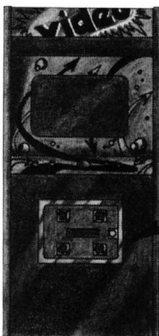
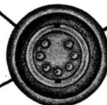
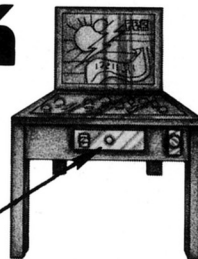
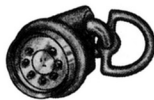
In Twin Galaxies' first all-star playoff, each state's contestants met in a local arcade that functioned as host. In Lakewood, California, Phil's Family Amusement Center had more than 100 contestants performing on 18 different games, while the Light Years Amusement Company in Wrightsville Beach, North Carolina, had a similar turnout.

Competition was as fierce as an all-star contest should be. It seemed to bring out the best in the competitors as California's best broke eight world records, and North Carolina's all-stars broke three.

Day and his associates have opened the door for continuing high level competition, and further development of top video athletes might evolve into a professional league of sorts. We'll know when they get there. Ed Garvey will step forward to lead a strike for a percentage of their sponsoring arcades' gross.

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Rosen, distributors weigh replacement market strategies

The luxurious La Costa Hotel outside San Diego, California, was the scene for the annual Sega distributors' meeting September 23-26. Organized to give Sega handlers a sneak preview of the company's new line of equipment for the fall and winter months, the meeting has, nevertheless, become something of a forum of late for Sega distributors on the state of the industry as seen through the eyes of one of the industry's largest game makers.

About 200 people, representing 49 domestic distributors and nine foreign distributorships, were on hand for the meeting this year.

Last year the Sega meeting drew more than its share of controversy when Sega's chairman and chief executive officer, David Rosen, announced the factory's decision to start manufacturing interchangeable games for operators. The reaction from Sega distributors to that announcement was icy since, distributors argued, it would destroy the base of the industry.

This year's speech from Rosen was not as grating to distributors, but it was topical, nevertheless.

In a speech titled "Our Industry at a Crossroad in 1982," Rosen noted, "The boom market of the past several years is, for the present, behind us. Not lost, or never again to repeat, but rather just behind us for the present time."

He then outlined what he saw as "the crucial market and industry conditions which have brought us to the crossroad our industry faces today."

Difficult market

Describing the video game market today as a replacement market, not an expansion market, he said it is "a much more difficult environment in which to survive and prosper."

Rosen said, "During the recent expansion phase when tens of thousands of new locations were opening, operators were scrambling for new equipment. There was never enough,

and almost any new equipment would suffice as long as the operator also had a fair share of the hottest games. In this environment virtually every manufacturer, distributor, and operator prospered. How could they help but not?"

He observed there came a shock after the boom period. Oversaturation of video games, he noted, resulted in a slowdown in average income per machine.

"It was not a case of player interest declining," he said. "It was not a case of people playing video games less, but there were simply a lot more machines with which to share essentially the same player base."

He said the real shock to the operator base of the industry came when there were fewer and fewer locations left to expand to.

"And so today's replacement market is quite a different story from that of the recent expansion market," Rosen stated. "Operators are no longer scrambling for new equipment, not even the hottest of the hot new games. Quite the contrary, in this shock stage of the replacement market, and I believe we are only referring to a transition period we are now going through, the operator looks to maintain revenues and simultaneously limit new equipment purchases. Even though the operator generally knows these two objectives can never be had in concert, there is still a strong tendency for an unduly conservative attitude which often takes precedence over more rational thinking."

Marketplace mood

He summed up the point by stating, "I believe the contradiction of maintaining revenues and limiting new equipment purchases fairly expresses the mood of the marketplace at this time and during this period of transition from an expansion market to a replacement market. Needless to say, this attitude represents a dangerous direction for the industry."

He then turned his attention to what he called "secondary conversions."

"In a replacement market," he said, "the operator must weigh every new equipment purchase in the light of incremental earnings—and in so doing—cheap conversions offered by second and third tier manufacturers and distributors can mistakenly appear very attractive.

"What is overlooked or ignored by the operator in his search for cheap new games," Rosen countered, "is the shoddy appearance of these secondary conversions. And because these conversions are generally synonymous with inferior games, the combination of shoddy appearance and inferior game play always results in lower location revenues.

"We have only to look to Europe to see the unfortunate impact of secondary conversions which have come about of economic necessity to the operator," he said.

One of the problems with the secondary conversion market in Europe, he said, was that the conversions over there "were not marketed to the operator in an orderly and well-conceived fashion, and this is one of the key reasons why the European coin-op amusement industry is today in such a state of disarray."

Caution to distribs

He then sounded a warning to his distributor audience, "If we don't learn from past misjudgments, and if we don't grasp the market opportunities before us, it is clear to me that business as usual will in the not too distant future serve to bring to an end the U.S. distribution system as we know it today and which has served the industry so well these many years."

He also said that illegal game copies and dumping new games at discount prices cannot continue if game sellers are to have an orderly market.

"What I believe is the most important problem facing us today is the



The Sega handlers tried their hands at the new video game offerings.



Distributors were treated to a tour of the Sega plant.



Sega boasted nearly 100 percent distributor attendance at the special preview meeting.

lack of conviction on the part of the operator as to the fundamental health of his operation and thereby a lack of new equipment purchases on the part of the operator."

Rosen told the audience, "based on what is happening throughout the industry. Sega's business relationship with you, our distributors, is in the process of change. And this change or crossroad will be just as true for the typical distributor/operator relationship."

He said the distributor's role has changed in that his business is focused almost entirely on video games. In the past, the distributor's business was centered on flipper games and music.

As a result, Rosen said, "Gone are the days when operators had to rely heavily on distributors for parts and services of hundreds, if not thousands of complex mechanical flipper and music equipment components. Computer video games have few moving parts; and PCB service, although extremely important and not to be minimized, does not allow the continuity of contact, as in the past.

Trade-in market

Also, trade-ins must follow the simple laws of supply and demand and are, therefore, "not economically attractive to a distributor."

Because of the hit syndrome that demands only the very best games, he observed, there is virtually no trade-in value for used games anymore. And with the shorter product life of games, the distributor's role as a financial intermediary has been drastically modified as well, he said.

What remains unchanged, he said, is that the distributor still remains a factory representative who inventories finished product and an equipment consultant who aids operators in the proper equipment selection for their needs.

The industry as a whole, he pointed out, "is today a major segment of the overall entertainment industry, and as such, we have a major market share to protect and nurture.."

Toward this goal, he revealed that Sega has now expanded its role "to that of a consumer entertainment marketing company. I believe the basic principles of consumer marketing hold the key to our industry's future prosperity."

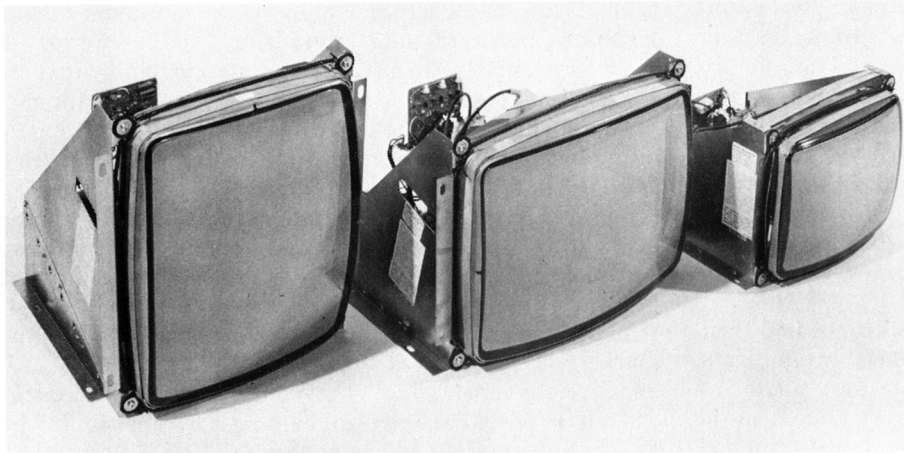
He stressed that this means "the manufacturer and distributor must place an increasing emphasis on advertising and promotion as the means to

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an end. That end, or ultimate objective, is obviously to sell as much new equipment as possible."

Consumer awareness

He said that "consumer momentum" is the major asset working in favor of the coin-op video game industry today. Citing the technology explosion, the increase in the number of new locations, the unprecedented media coverage of the industry, the growing popularity of personal home computers, and the tremendous popularity of home video games—he said "consumer awareness and acceptance of arcade video games is unquestionably at an all-time high. Therefore, he said, "It is crucial that we, the manufacturer and the distributor, profile specific new models, and stimulate player interest and location demand for fresh new games which have hit potential.

"If new hit games do not find their way to the marketplace in significant numbers, it will only be a matter of time before the player and location owner ultimately become disillusioned with the industry's entertainment offerings. This in turn will set in motion a decline in player interest and a loss of consumer momentum, and the industry will unquestionably wind down to something smaller than it is today."

"He stressed the need for television and radio advertising to profile new hit games that will stimulate player interest and location demand, increase video game collections, and build the industry's image.

He cited a second objective of product advertising and promotion as drawing attention to legal hit games and exposing illegal game copies, secondary conversions, and the general bastardizing of equipment on location which he said is detrimental to the industry.

That way, he claimed, "location owners will be openly exposed to the comparative appearance and superior game play of these new hit games in contrast to the secondary conversions and bastardized equipment which may be at their locations."

By doing this, he said, the industry would be able to solidify its market share within the overall entertainment industry.

Distributor advertising

To accomplish this task, Rosen said, the distributor must be expected to share the burden of advertising and

promotion of the equipment lines it represents.

Also, the distributor must educate the operator with regard to the selling points of the manufacturer's new equipment, and educate and renew the operator's confidence in the long-term viability of his operations by instilling in him "a buying mentality," which is the key to sustaining an operator's revenue base, Rosen said.

In his new role, Rosen said, the distributor would be the field marketing arm of the manufacturer, supplying feedback and hard data monitoring the effectiveness of an advertising and promotional campaign.

He also turned the distributors' attention to "the second major crossroad" facing the industry, the economic needs of the operator in today's replacement market. And he zeroed in on his contention. "I cannot help but believe it is now obvious to all that the economics of a replacement market dictate some form of cost-effective conversion," he said.

To illustrate what Sega had in mind as far as marketing to the consumer base, Rosen revealed the results of a 30-second *Zaxxon* television commercial that Sega aired in four major markets (Los Angeles, Chicago, New York, and Philadelphia).

"We have been very pleased with the reception and effectiveness of the *Zaxxon* TV commercials as measured by consumer awareness. In each of the markets that *Zaxxon* was aired, a media research company conducted random before and after awareness surveys... Total consumer awareness of *Zaxxon* increased anywhere from 79 percent in the Chicago market up to an astounding 214 percent in the New York/North New Jersey market," he said.

Dramatic statistics

"These are impressive statistics and dramatically point out the tremendous impact of television advertising," he concluded.

Rosen offered that the commercial could be tagged to include locations where the new hit game could be played, and this is where the distributor could assist greatly in the marketing, sales, and promotion of the factory's product.

Following the lengthy Rosen address, Sega's vice chairman, Frank Fogleman, introduced the new product for the company. Receiving the most distributor attention at the meeting was the cartoon video game

Pengo that features a player changeable field that continually disintegrates. "It's destined to be a classic," beamed Fogleman.

Another Sega product unveiled at the special distributor meeting was *SubRoc-3D*, a three-dimensional air-sea shooting game that is reminiscent of an extremely successful *Sea Wolf* video game that hit big prior to the video game boom.

The three-dimensional effect of the game is achieved by alternative flashing images that flash at a speed of 30 per second. The special shutter assembly that creates the special effect was produced by Matsushita Electronics of Japan, whose parent company is Panasonic.

This game, Fogleman said, will be available in both an upright and cockpit configuration.

The third video game product unveiled at the show featured another *Convert-A-Game* from Sega. This one is called *Tac/Scan*, an outer space shooting game.

Distributor interest in product was good, and there was even a small group of distributors who took a tour of the highly-sophisticated Sega facilities.

Change to Sega

Noteworthy was a decided de-emphasis on the name *Gremlin* and renewed emphasis on *Sega*. Sega President Duane Blough told *Play Meter* the reason for the subtle change is to coincide the product name with the company's consumer product promotions.

He said it is more favorable corporately for the company to be recognized by one name rather than two such as *Sega/Gremlin* or *Gremlin/Sega*. The subtle name change was even reflected in the accompanying literature and placards that littered the meeting. The name *Sega* was in prominence and beneath it a smattering of dots which, if left to the imagination, might convey that the other name that many in the industry have identified with the San Diego factory for some time, *Gremlin*, had been vaporized by one of the *Tac/Scan* fighter jets.

After an intensive meeting, the distributors dispersed over the La Costa grounds to leave their fair share of divots and shoe marks on the resort community's golf course and tennis courts before leaving for home to promote the new *Sega* product to operators. ●

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HEADLINERS

As expected, **Malaysia** has pulled the plug on video games.

Following in the footsteps of other governments—the Philippines, Indonesia, and Singapore—rulers of Malaysia have banned the games because of their alleged negative influence on youth.

"We are aware of the undesirable influence these centers have on our young people," Suppiah Dhanabalan, a minister of culture said.

The ban was enacted October 4.

.....

The town of Berwick, Pennsylvania, is pleased with the results of its recently enacted license fee for videos. According to the town's secretary, 36 businesses with video games have complied with the ordinance, and a total of 102 machines now bear licenses. The town reports a \$5,335 bonanza from the collections. Each business operating games must pay an initial \$50 fee and then surrender \$35 annually for each video.

"We had no idea there were that many machines in the borough," the secretary remarked.

.....

Wyoming's largest city, Casper, has approved an ordinance to keep children under 17 from playing video games during school hours. The City Council unanimously passed the ordinance August 6. Despite problems communities encounter in maintaining age restrictions on playing the games, Mayor Jerry Combs said the ordinance will stand up to any legal challenge. Combs also said that police will sweep through the city's arcades to make sure the ordinance is enforced.

.....

The **Pennsylvania Amusement and Music Machine Association** is offering a membership service that will help clarify the coin-op side on issues.

A member of PAMMA need only to send timely articles about any community problem related to amusements to the PAMMA office along with his thoughts on an appropriate response. PAMMA officials will then return a properly worded and legally correct response.

.....

Robert Zufall has become vice president of administration for **Atari's** coin-op video game division. He moves up from a director's position and will handle employment, compensation, management development and training, and employee relations within that division.

.....

Universal U.S.A. Inc., the Santa Clara, California, video game manufacturer, has recently made a series of promotions. Yoshihide Okuno was transferred from Tokyo into the vice president's chair at Universal. Joining Okuno on the trip from Tokyo is William Hara who joined Universal as director of customer service regarding all technical matters, including quality control.

The firm also named two regional sales managers, Clare Teerlink in the West and Joe Morici in the Midwest and South.

.....

Coin Machine Distributors Inc. of Elmsford, New York, is opening a new office in Baton Rouge, Louisiana. The new southern arm of the company will be open for business in January under the direction of Harry Williamson.

.....

London Distributing Corp., of Milwaukee, Wisconsin, has been added to the Rock-Ola Manufacturing list of distributors. London will offer Rock-Ola's videos.

In welcoming the near 50-year-old distributorship to its network, Rock-Ola praised the firm for its aggressive sales

attitude and excellent service department.

.....

The tremendous variety of arcade tokens in use nationwide and the fact that they are used in place of money has made them attractive to numismatists. Many token collections have reportedly reached sizeable proportions. Even an association has been formed to promote amusement token collections, the **Maryland Amusement Token Collections Association**.

In order to publicize its existence, the MATCA has coined its own token, featuring a Pac-Man logo on one side and a Pac-Man ghost on the other. Free samples of the token are available to anyone in exchange for a token from any arcade, along with the arcade's name and address.

The Maryland club's address is: P.O. Box J; Baltimore, Maryland 21228.

.....

Obsessions with *Space Invaders* have been traced by three Duke University psychiatrists to hangups about getting married. Writing for the *Journal of the American Medical Association*, the psychiatrists characterized problems in three young men preparing to get married.

One man took his fiancé to watch him play the game, a second delayed his honeymoon for a few more battles with the *Invaders*, and a third spent his entire three weeks leading up to marriage engrossed in the game.

"We believe that each man's obsession with *Space Invaders* was a means of handling his anger over the recent commitment to marriage," the doctors wrote. "The disintegration of invading aliens who were trying to overrun the home base took on symbolic significance."

The doctors said that after their patients made their marital commitments, they were less threatened and their obsessions ceased.

Will 'Burger Time' mean the big time for interchangeable games?

By Mary Claire Blakeman

Maybe they're not so revolutionary after all.

At least that's the impression one gets from the plush-carpeted, earthtoned offices of Data East, the company that launched the first interchangeable game systems onto the American coin-op scene.

Sure, when interchangeable games first hit the market, they were heralded as an idea that would turn the coin-op video game business upside down.

But now, Bob Lloyd, a former member of the New York Nets pro basketball team who is the executive vice president of Data East in Santa Clara, California, says the "revolutionary" label is misleading. "We don't call it a revolution. We don't want to change the industry—I don't know any revolutionaries who live longer than a year. They don't last long."

In fact, the company is going so far as to follow the well-established, sure-

fire formula for success that applies to video games as well as baseball players: Get a hit.

That could be a new, cute game called *Burger Time* that showed good enough numbers in early field testing that it may be the game to break down industry resistance to the interchangeable concept. The game did so well in testing that Bally/Midway is getting in on the action too. In a unique marketing arrangement, Bally/Midway received the dedicated rights to the game from Data East. That means Bally/Midway will offer the game in the usual cabinet just like any other coin-op, but Data East retains its rights to sell the game and will make it available in the interchangeable format.

Hopping hot dogs

Burger Time involves the trials and tribulations of a white-hatted chef who gets chased around a maze-ladder grid

by high-stepping hot dogs. "*Burger Time* is not just good, it's real good," Lloyd says. "The fact that Bally/Midway would be a part of this is indicative that it's a strong, strong game."

Lloyd explained that while both companies will sell the game, they will not be competing with each other but will instead coordinate efforts to market *Burger Time*. "We won't compete with Bally/Midway," he says. "We're working to have the sales effort dovetail. We obviously can't sell the numbers that a Bally/Midway can."

In describing this reasoning behind the joint arrangement between the companies, Lloyd also touched on the basic marketing approach and philosophy of Data East, which is a wholly-owned subsidiary of Tokyo-based Data East Corp. "Our goal is not to be an Atari or Bally/Midway," Lloyd says. "Data East wants to develop games and license games,



Mark McCleskey, vice president of sales, and Bob Lloyd, executive vice president, don't want Data East to get caught up in the "have to have a hit syndrome."



Technician Jim Noland and Customer Service Representative Dave Mariant work to have a 24-hour turnaround on monitors.



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using the strengths of our Japanese parent company. We will always be in the interchangeable game business. We don't want to get caught up in the 'have to have a hit' syndrome."

Lloyd says the company plans to accomplish its goals through slow growth without taking on the kind of production overhead in the U.S. that sometimes cripples growing companies. "We're unique here in that we don't have that huge overhead. I think it's because the Japanese tend to look more to the long term. It's not 'small is beautiful'; it's 'profitable is beautiful.'"

Mark McCleskey, Data East's vice president of sales and a seven-year veteran of the industry, concurred with Lloyd's description of the company's growth policy. "When the president of Data East, Mr. Fukuda, was here, he said that we may grow up to producing large numbers of games, but we'll do it step by step," McCleskey says.

"We expect to do 30 or 50 percent more the second time we have a hit, not 500 percent then up it again the next time. The biggest risk when you come out with a hit game is that you have the profits to gear up to that level every time, and if you don't have a hit, the overhead gobbles you up."

Some industry observers maintain that interchangeables need a hit if they are ever to crack the market. But while the Data East personnel are clearly excited about the potential of *Burger Time*, they still call it the "icing on the cake." Interchangeables, they insist, can be very profitable whether they are superstars or not.

More profit

"Forgetting about hits, we can show figures that it's more profitable to go with interchangeables," Lloyd says. "An interchangeable game can produce 40 percent less, and in 14 months it will show more dollar profit. That's because you're not investing \$3,000 every time; you're investing \$500 or \$600. You can't just look at the coin drop to determine profit."

When operators buy the basic interchangeable cabinet from Data East, they purchase a system with three PC boards that are activated by a micro-cassette tape and key module that works with the tape to unlock the PC boards when the machine is turned on. In a matter of minutes by switching the tape and key module of one game for the tape and key module of another game, a Data East *Astro Fighter* can quickly become *Lock 'n Chase*.

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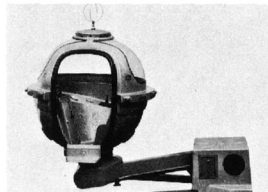
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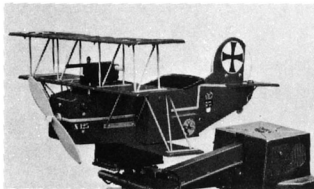
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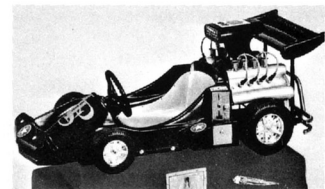


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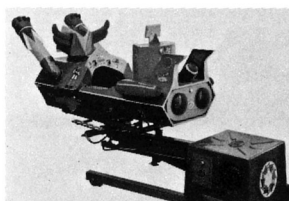
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That ability, Lloyd says, allows operators to freshen their stock of games and capture the middle ground of player interest between the top hits and the dogs. The company's copyrighted Deco Cassette system includes the micro-cassette tape and key module for each game, as well as a top flash panel and instructions. It sells for \$500 to \$600 to the operator.

"With the way the market is changing, you can pick about three of the top games. After that, it's a shooting match," Lloyd says. "For an operator to spend \$3,000 on a shot in the dark, well, that's difficult. We don't see interchangeable systems replacing every game, but we do say to the operator: 'Buy the top three games. Then after that you have to freshen up and change the other games, and you can do that with interchangeables.'"

"An operator can put in three hits, then put in two games that are good games," Lloyd adds. "Then two months later, with our system, those good games can be changed to keep up interest. More and more people are saying they're going to stick with the top games, but how interesting is that to the players?"

Sales vice president McCleskey adds, "Our philosophy is that an operator can make more money with our system—consistent, viable, staying-in-business volume—than gambling on hit after hit. What's happened is that the players are really running our industry. Location owners are saying to operators that they've got to have *Ms. Pac-Man* or *Donkey Kong*, and they're not allowing operators to run their



Lloyd's right-hand man is liaison officer Tad Yokoyama.

businesses and make sales from distributors' inventories. Therefore, there are manufacturers out there now who are literally shipping record lows. But our sales are good. We can sell even in these economic times because the games are interchangeable."

Strong parent company

Lloyd reports that the company's sales in 1982 are already running 20 to 25 percent ahead of 1981. A big reason behind the company's success, he says, is the strength of its parent company in Japan. Data East has 55 full-time game developers working in a team system to constantly develop new games.

"In Japanese game parlors, when you walk in, the first five or six in a row are Data East games," Lloyd says. "The company is a hit game developer

in Japan. It's just that Data East didn't happen to hit on the game, like *Pac-Man*, that crossed over well into the U.S. market. Data East has 15 percent of the market in Japan—when people hear that, they suddenly think they're sitting with a Sega or a Williams."

And an important link between Santa Clara and Tokyo is the liaison officer for Data East, Tadashi Yokoyama. Lloyd praised Yokoyama's input into the company and says, "He's my right-hand man. It's important to have someone who can communicate with the home office. I won't go to Japan without him."

While the company enjoys success in Japan, the interchangeable game concept met with resistance in this country, which Lloyd attributes to operators and others looking at the short-term gain instead of the larger profit picture. But there are signs that that attitude is changing. When the company sent out informative post cards a year ago, it received 200 responses. This past August, it got back 1,000 cards from people in the industry asking the basic question of the year: "How can I make money?"

"I think in the beginning the company tried to force interchangeable on the market," Lloyd says. "But now, the market is coming to us. What's happening in the market is bringing interchangeable games about." Lloyd adds that it has been interesting to watch this process of the development of a somewhat unknown product since much of his own business background involved name products such as Bjorn Borg's FILA sportswear line. "This business

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moves quickly," Lloyd says, "and you have a real chance to make decisions and move."

Growing up

The industry has been going at such a rate that McCleskey says, "We're fixing to move the interchangeable game business from its infancy to its maturity."

Part of that move involves meeting the established industry competition closer to its own turf. When interchangeables first came out, some distributors complained that the original price on the games hovered too high above the \$3,000 range. "Initially, Data East thought the concept was enough to make money, and it would not be difficult to convince operators of that," Lloyd says. "But we realize it should be competitive. So now, our cost to the distributor is right on with everyone else even though our machine is more expensive to us since we have three PC boards in each game."

Still, some in the industry question the performance and appearance of the interchangeables. "I think the cabinet and monitors of some interchangeables tend to get raunchy," said one West Coast salesperson. "If they look at the quality of Data East's equipment, they would recognize that we are not a part of that group of manufacturers," McCleskey says.

"Our monitors have been especially chosen for long life, and at our service center in Santa Clara, we normally have 24-hour turnaround," Customer Service Manager Lynn Watson says. "We have hardware-enhanced circuits which automatically provide missile firing, explosions, and other actions that would normally require software built right into the electronics. We also have full capacity memory for a 64K system."

Along with all the other unique features of interchangeables, Watson says that the company also provides a taped diagnostic program. "You can put in a diagnostic tape in place of a game kit, and because it's tape loaded, certain things will happen in the game. That makes it very easy to troubleshoot over the phone."

The cassette system has also caused some misunderstandings among operators, Lloyd says. "When you say cassette, people think that every time the game is moving that the cassette is whirring. But it only runs when the board is being programmed; after that it lies dormant," he explains. "It only runs about 20 hours in a year, and we

guarantee the cassette for 400 hours."

Home video market

This talk of tape systems also brings up comparisons between the interchangeables and home video game sets. Data East, too, has recognized the growing influence of the home games and may even spring even more surprises on the industry in the future.

"Home games are getting more powerful, and Data East believes that there has to be a breakthrough in hardware to greatly separate the coin-op game from the home game," Lloyd

says. "Data East is working on something in hardware that will again push coin-op games way ahead of what can be done at home. It will be coming in the near future to make that gap between arcade games and home games bigger again.

"We don't want the home market," Lloyd adds, "we're coin-op people."●

The majority of operators we interviewed were very hopeful about the interchangeable game concept. Read their opinions on page 40 of this issue.

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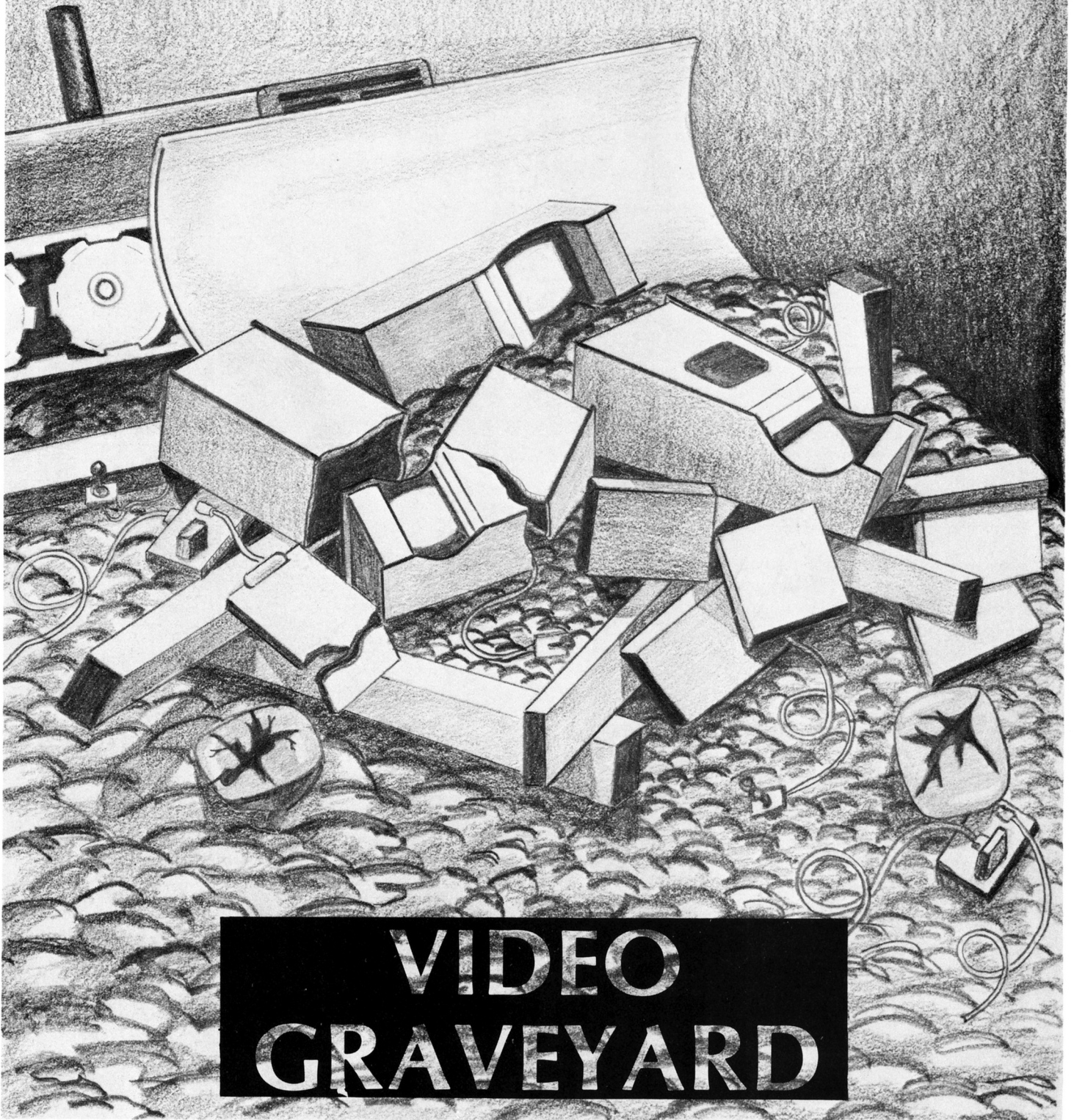
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Hey, is the video craze over?

By Valerie Cognevich



**VIDEO
GRAVEYARD**

Hey, is the video craze over or what?" quips Al Shuler of Magic Galaxy Inc. This seems to be the belief of a sampling of operators polled as they see smaller increases or no increases in their collections.

Operators blame a weak economy, overproduction of equipment, fewer acceptable trade-ins, competition, and adverse legislation.

The majority of operators reported that their collections were not significantly down from last year. But it was quickly pointed out that in the past several years, each year has shown a substantial increase.

The *Play Meter* 1982 Annual Subscriber Poll gave specifics on game revenue. In order for operators to break even in 1982, each machine had to average \$116 per week for 10.5 months. Yet operators reported average gross collections only hit \$109 per week, and games were commercially viable for only eight months.

Richard Cary of Capital Music Co. in Montana says, "Our collections have doubled this year! But," he elaborates, "my investment has more than tripled!"

Bill Beckham of Red Baron Family Amusement Centers in Toledo, Ohio, agrees that his collections are about even compared to last year. "What I don't like about it though," he says, "is that every other year we have been considerably up. Being even this year is about the same as being down. We were getting used to our increases over the years."

Used to more

It seems to be about the same everywhere. Collections remain about the same as last year's revenues. However, this does not satisfy operators used to increases from the previous years.

The economy was unanimously voted as the Number One problem for smaller increases in collections. "It is really taking its toll on our businesses and the industry as a whole," Shuler observes.

Shuler explains that in his area, Louisville, Kentucky, one major industry, International Harvester, is pulling out completely. General Electric is also cutting back in workers.

In other areas where the auto industry is prevalent, unemployment in mainly the blue collar workers has affected the amusement game businesses.

Industry problems

How did collections stop increasing as quickly as they used to?

Many of the industry's problems have come to rest squarely in the laps of the operators. Since operators make up the largest group of people in the industry, the problems they face are very significant to the industry as a whole.

It is inevitable that mention of the saturation of equipment would come up. Every operator polled had a very strong opinion about how many games are being introduced into the marketplace.

Beckham elaborates: "It doesn't bother me how many games they come out with, because if they come out with 10 super games, I'll buy them. Unfortunately, not too many games coming out are very good so I just don't buy them.

"Instead of buying 20 mediocre games, I'll buy 20 of one game if it looks like it will be a hit. I believe in banking games, and I just am not purchasing the mediocre games anymore."

"Our collections have doubled this year. But my investment has more than tripled."

Richard Cary
Capital Music Co.

Beckham mentions his concern about how the manufacturers can gear up for so many games. His theory is that no matter how many games come out, if a game is going to be a hit, then it will still be a hit.

Cary laments that he is really getting tired of getting stuck with so many dogs.

This feeling is shared among operators everywhere. Their buying habits have changed dramatically. The ones who used to want to be the first on the block to have the newest equipment now seem to be sitting back to see how the game will do. Many have a good relationship with other operators and will confer with them on the potential of the games.

Cautious buyers

The operators who at one time said, "Send me one of everything new" are now being more selective. They are realizing that they have got to see some

return on their money to stay in business.

"I just hang on to some of my older filler pieces, and let them take the place of some of the mediocre pieces coming out," Beckham says. "I've got plenty of filler pieces, like most operators, and whether the filler piece is a year old or a month old doesn't make that much difference except the money that I have invested into it. A filler piece is a filler piece, and the fewer I get stuck with the better."

Jeff Ferri with Ironhouse Amusements in Maryland says that he is buying the new games in higher quantity to get the price break and then selling them to other operators in the area.

He notes that he is selling his newer equipment much faster instead of doing nothing and hoping that it will be a hit. "We just can't afford to keep the marginal equipment for any length of time," he says. "And to be competitive we have to have most of the latest equipment."

Some operators who have dealt with only one or two distributors are now shopping around more for the best price. They may be shopping around at the distributors in their area or sometimes even buying out of town.

Mad about trade-ins

Ferri sees red when he hears or reads about distributors who feel that operators are being completely unreasonable when expecting distributors to take equipment on trade.

"These distributors," Ferri complains, "think that we have a lot of nerve asking for trade-ins on equipment. I have heard distributors say that we have made our money back over and over on the games that we want to trade in.

"Maybe a few years or even last year," he continues. "But now very few of the games ever make me back my investment. I bought a game recently (at my distributor's recommendation) for \$2,800 that never made over \$40 per week (before splits). My distributor only offered me \$600 for a trade-in after two months."

The operators are getting hurt more and more on the games they are buying. Many distributors have solved their problem of too much warehousing of games by just not taking trades.

Cary says he gets down to the nitty gritty when he disposes of his used equipment. He really disposes of it—at the dump. "It's not worth it to me to

sell some of these games for only a few hundred dollars. If I sell a game for \$200 and then make four service calls for that game, the profits are wiped out. No matter how old the game, no one wants to pay for a service call on something they just bought.

"So I take the games off of my inventory," he continues, "write down the serial numbers, and haul them to the dump. I take a picture as the bulldozer plows them under to show to the IRS when writing the games off.

"The first year I decided to take the old stuff (that I was still paying taxes on) off my inventory and dumping them, was the first year ever that I got tax money back."

Many operators have felt that the manufacturers are insensitive to their needs. One particularly sore spot they mention is home video games.

Manufacturers come out with the home version at the same time many operators are waiting to see the return on their investment from the arcade piece.

When the home systems first came out, the *Asteroids* and *Space Invaders*' cartridges were presented for the system.

Those games were long out of production, and people who had played the games in an arcade or a location were eager to play them at home. However, the operators had long before seen their investment return, and many did not feel that it was a threat to them.

But people who purchase the new games on a cartridge may not be likely to play them elsewhere. With some cartridges being introduced so soon after the arcade piece, many have not even played the game before they buy it for the home.

Competition

Competition is fierce. The industry has been so overrated by the media that everyone and his brother wants a piece of the action.

The real trouble is that not everyone knows where to start, and many cause problems for others in the business.

When the real video fad hit, many new people thought they could just buy a few games, and place them anywhere and make a million.

Cary points out that many of the locations these new operators placed games into had been overlooked by the established operators for various reasons. They may not have been the terrific locations the new guy thought they would be.

"We as operators have hurt ourselves by putting games into locations that should not have games," Shuler observes.

Some new operators also undermined some of the established operators by offering a bigger percentage of the gross receipts to the locations. Many operators offer 60/40 splits, and many still are on a 50/50 split. But then came along brand new operators offering even a bigger percentage.

Any operator has to realize that even the 50/50 split is borderline in operating expenses. So by offering a bigger percentage, many of these new operators sealed their own fate, and they will not be in business long.

Forces sales

Even this has put some of the old operators in a surprising situation. "The new people who got into the business and aren't making it put their routes up for sale almost forcing us to buy them," Cary says. "We end up buying six-to-eight month old equipment that probably wasn't taken care of.

"It's kind of a waste of time buying these routes, but if we don't, someone will buy them that maybe has more money. They will expand the route, and then we'll have a larger route to absorb. It's buy it now or buy it later, and it's just more feasible to buy it now."

Beckham, whose company operates only arcades, says that the competition among game rooms is also a problem.

"In my area," he says, "no one arcade has killed us, but there have been so many of them opening. In one area, there were five game rooms in a one and a half mile radius. Needless to say, they will not all be open by the end of the year."

Legislation also creates problems.

Shuler says that his Magic Galaxy was the first decent arcade to open in one of the towns around Louisville. But there was a law passed in the area banning anyone under eighteen from even playing a video game because of a shoddy arcade that once operated there.

Try harder

"The law is not enforced," he says. "But we feel that we will always be under the gun from officials, and we have to bend over backwards to keep our nose clean.

"Keeping in touch with the local police and trying to solve problems is

an absolute must with any arcade," Shuler emphasizes. "The parking area, though it was a local hangout for the kids to drink even before we opened our arcade there, is better now than before we opened. You can't turn your head and say it's not your problem because it is your problem if you want your arcade welcome in your town."

Shuler related a story about a boy who showed up in his arcade with a \$20 bill. "It just didn't look right. So I asked him about it and did not get a satisfactory answer. I found out who he was and called his mom. It turned out to be that his friend had stolen the money from his grandma.

"Well," he continued, "that mom was very appreciative, and she realized that I didn't want her son or anyone's son in my arcade with stolen money. Believe me, word gets around, too.

"I get more satisfaction," Shuler says, "out of a parent telling me that I have a respectable, nice place than just about anything. That means that I am doing the job I should be doing."

Almost every area has had to face some sort of legislation whether on a local or state level. The state associations have been doing a credible job in finding out what legislation is under consideration and advising the operators.

Legislation has a domino effect. Mayors get together and talk about what they have done in their towns, and before you know it, something that happened out of your area can directly affect you.

Join an association

"When it comes down to it, we operators are all competitors, but we either grow together or go down together," Shuler says. "By joining an association, you can get to know your competitors and find out that they aren't such bad guys after all."

Even distributors realize that things that affect operators indirectly affect them too and are actively supporting their state operator associations.

Despite the negative aspects of the operating business now, operators look to the future and possible solutions. What about convertible games? Are more locations going to be tied into large corporations?

Almost every operator polled was very supportive of the convertible game concept.

"The concept is great, but the excuses I've heard from manufacturers about why it is not feasible do not make sense," Beckham says.

"I admit," he continues, "that many of the convertible games I have are filler pieces, but when I first put it in a location, it does very well for me better even than some of the marginal games that I have spent \$2,800 on.

"Then somewhere down the line when the game isn't doing so well, I can spend several hundred dollars and have a new filler piece instead of warehousing that \$2,800 filler.

Marginal games

"My point is," he says, "is that I would rather have only \$700 invested in a marginal game than four times that amount. They don't have to come out with a *Pac-Man* for me to buy them, because if there is a choice between that \$700 convertible game and a game that will only do well for two months that costs \$2,500, it's obvious what I'm going to buy."

Beckham elaborates: "If a major manufacturer would come out with a good convertible game like *Donkey Kong* that everyone has to buy, when it comes time to buy a new game, they would be faced with the question about whether to buy the new Nintendo convertible game or a mediocre game for much more money."

Once you get the cabinet and hardware in the operators' hands, the company will be selling its kits against someone else's \$2,500 games, he says.

Ferri is in full agreement about convertible games. "I would just love to see someone come out with a really exceptional convertible game. It could help the operators tremendously."

Operators agreed that video games are positively here to stay. One operator pointed out that there had been street operators who crossed over into arcade operations, and we may see an interspersing of arcade operators crossing over into street locations.

There is also speculation that more and more places will be linked with food operations or the Putt-Putt Golf concept. With these ideas, there should be a much bigger investment needed to get into the industry bringing in more corporations and large investors.

Clear the smoke

Small operators who find out that this industry is not the gravy train it's been overexaggerated into being will leave the industry. One operator said that he was just waiting for the smoke to clear to see who is left and then pick up from there.

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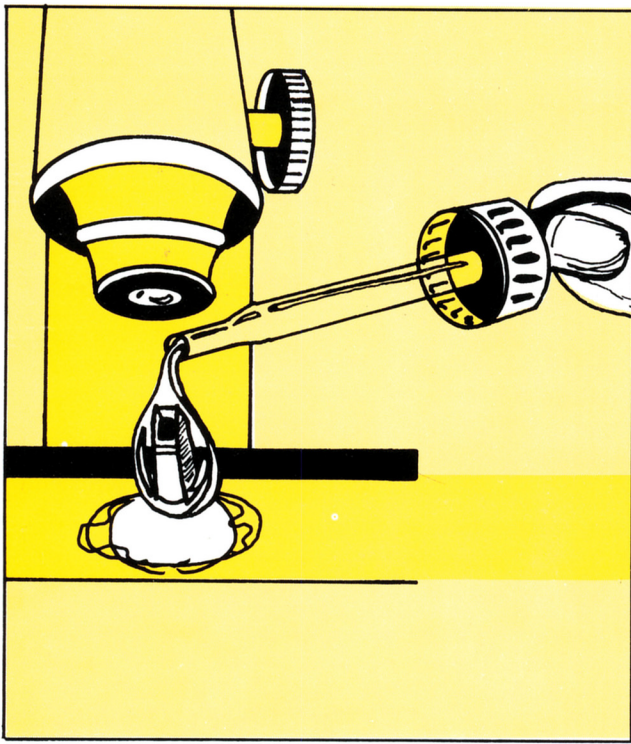
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Studies In Video:

S-T-R-E-T-C-H Games exercise mental abilities

By Mary Claire Blakeman

Editor's Note:

[This is the third article in a series of stories dealing with Studies in Video.]

Dr. Jerome R. Schulster, an associate professor of psychology at the University of Connecticut at Stamford, has observed the video game phenomenon from his perspective as a researcher into human learning, thinking, and memory.

He earned his Ph.D. in experimental psychology from the University of Delaware in 1975. He contributes to academic journals and writes articles on video games for Connecticut newspapers and for *Electronic Education* magazine.

Schulster believes the key to the attraction of video games may not be their theme or the level of excitement, but rather the exhilaration of intense concentration they require. Sometimes, that kind of concentration scares parents who may view the games as stealing their children. Schulster, who sometimes played chess blindfolded as a child, also says that pattern games like *Pac-Man* can work similarly to his early chess games by stretching cognitive skills and memory.

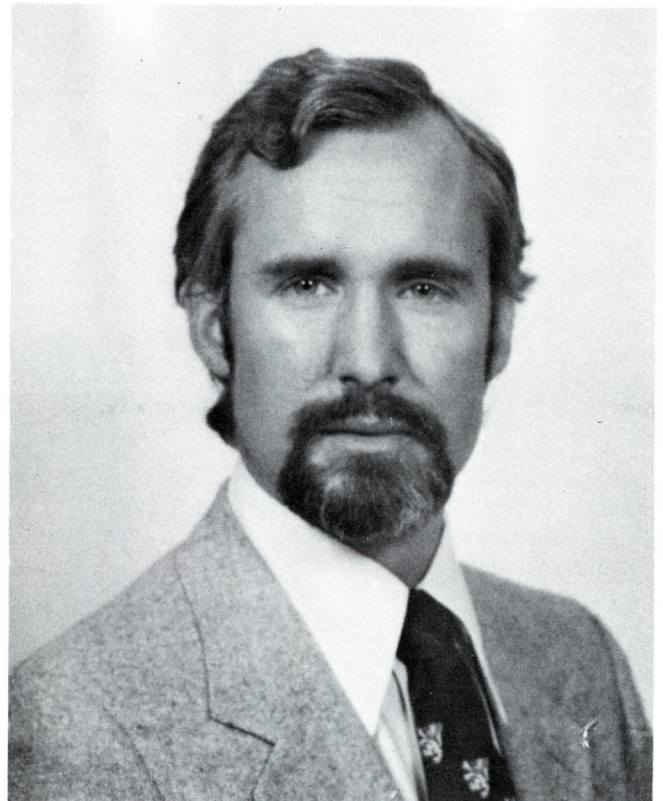
PLAY METER: You have not done formal research into video games. What kind of investigations have you done?

SEHULSTER: A video game can be used as a research device for cognitive processes in the sense that a video game yields a score, and if you can show an increase in score, then you can assume that there's some learning going on.

The other issues that I think warrant study are the sociological issues surrounding arcades. What age groups tend to play games, what age groups tend to go to arcades, what age groups exhibit anti-social behavior at arcades—the kinds of questions that town councils tend to ask.

PLAY METER: Do you play the games?

SEHULSTER: Yes. Actually it was my sister who, shall



Dr. Jerome R. Schulster

we say, "turned me on" to some of the games. She plays quite frequently and always seems to be a game ahead of me.

PLAY METER: Did she start with *Pac-Man*?

SEHULSTER: She started with *Pac-Man*, although she quickly went to *Omega Race*, *Donkey Kong*, *Dig-Dug*, and many of the newer games. It was my mother and father

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who actually showed me *Pac-Man* at a place where we dined one night. I had played *Space Invaders* at an airport, but it was *Pac-Man* that piqued my curiosity. Now I play very rarely but enough to keep up with what the games offer.

Most of the games don't interest me too much because most of them involve motor coordination, and a game that involves motor coordination is not really intriguing enough for me.

For me, that's skill that I don't really wish to develop.

However, *Pac-Man*, of course, has endeared itself to a number of people because it involves patterns and strategies. Of course, I would suggest that all of the games involve strategies of some sort; although the ratio between reaction time, motor coordination, and cognitive strategies varies from game to game. A person's interest in a game depends on what side of that ratio he or she favors. I'm more interested in solving the problem.

PLAY METER: If the industry is moving beyond teenagers, could that approach of looking at strategy instead of just motor skills attract a broader range of people?

SEHULSTER: Definitely. In an article I wrote, I point to that direction and suggest that a game that is going to engage more of the mental activities of the person will reach a broader base.

PLAY METER: As far as memory is concerned, studies show that sometimes people remember things by where they saw them; others will remember things if someone told them about them, and so on. Have you noticed any of that in video games?

SEHULSTER: One of the things I'm noticing, especially with a game like *Pac-Man* that requires continual action on a single dimension, is that a lot of people remember the hand movements. If you take them away from the game and give them a diagram of the board, there's a number of people who can't draw the actual pattern that they do.

But as soon as you put the stick in their hand and get the game actually running in front of them, they will execute all the movements flawlessly which suggests to me that a lot of what's being learned is more than just some kind of a visual map. Although, there will be some players who tend to be visually oriented who will use more of their visual skills and be able to describe it to you.

PLAY METER: It sounds like the way some people spell using their fingers to "type" out the letters in the air. Is that what you mean with the joystick movements?

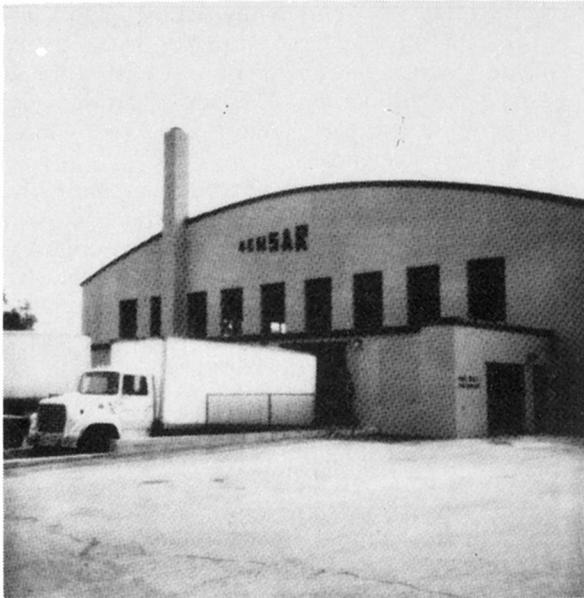
SEHULSTER: Yes. It may be the case that that is just a stage, that at a more advanced stage of the game, the person can talk about it without the game actually being there. That's certainly a level that friends of mine have reached. We were able to sit around and talk about the games as if they were running through in our minds.

I don't know that a 14-year-old can do that, although my guess is that a lot of them can. It seems to me that any experience, be it an arcade game, or chess, or even Rubik's cube, any experience that forces you to manipulate images and concepts in mind is going to be a positive experience.

For instance, when I was a child, one of the things a friend and I tried to do was to play chess blindfolded. One of us would be blindfolded, and the other one would move and call out the position of the move that had been made. You'd have to remember every position on the board, every position of the men. That got to be quite interesting—as you can imagine.

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But that's an exercise; it seem to me that that exercises one's cognitive skills, and I think that the patterns in *Pac-Man*—learning them, discussing them, testing them, trying them out—I think that also stretches a number of cognitive skills.

PLAY METER: Have you made any other observations in your published articles or in general about some of these skills?

SEHULSTER: Well, in my articles I talk about how games that involve large strategies probably exercise the memory quite a bit. They certainly exercise the timing and hand-eye coordination. They also exercise concentration in the sense that the slightest distraction can oftentimes blow the whole game.

And in the context of a noisy arcade, the ability to concentrate on what you're doing is really quite an ability. It's not like doing it in a quiet room. So the actual act of playing the game requires a number of cognitive skills. It requires that they be applied in very rigorous fashion, more so than almost any other experience that the child has, certainly more so than television.

As a matter of fact, a number of my friends who are attracted to video games would much rather play games than watch anything on television. Even though the act of sitting in front of the screen and being indoors, even though those things are the same, it's the act of concentration that they find exhilarating.

PLAY METER: Do they say that it matters if it's a video game at home or in the arcades?

SEHULSTER: The arcade games, for sure, are much more sophisticated. I myself would not purchase a home video game simply because I don't play that frequently. For the amount of money that one would invest, I certainly would come out better going to the arcades.

The arcade games are much more vibrant. The images are more vibrant; the sounds are clearer. Also, there's a large social aspect that I think happens at the arcades. The arcade becomes like a social event that kids can do together. When I was young, we used to go to the Saturday matinees together, and that included popcorn, walking to the theater, and joking around on the way home.

The arcades have that kind of an aura about them. They are a place away from home where kids can gather. They're a place away from home that kids can talk about going to and can joke around coming from. I think that's another big difference that the home games will miss, although there's certainly the social aspect—like playing Monopoly at someone's home.

PLAY METER: Filtering out stimuli and other distractions to concentrate, is that a skill that we are needing more and more now? Do you think that could be part of the attraction of videos—particularly for young people?

SEHULSTER: If I were to say "yes," you would find a parent who would turn around and say, "Yes, but the arcades bombard kids with so much information that that's part of the problem."

But I would say, in general, yes. I would say that it's exciting to concentrate. Kids enjoy being intense and, in general, what makes the games very attractive is that they require an intensity of responding.

PLAY METER: An intensity that television doesn't require?

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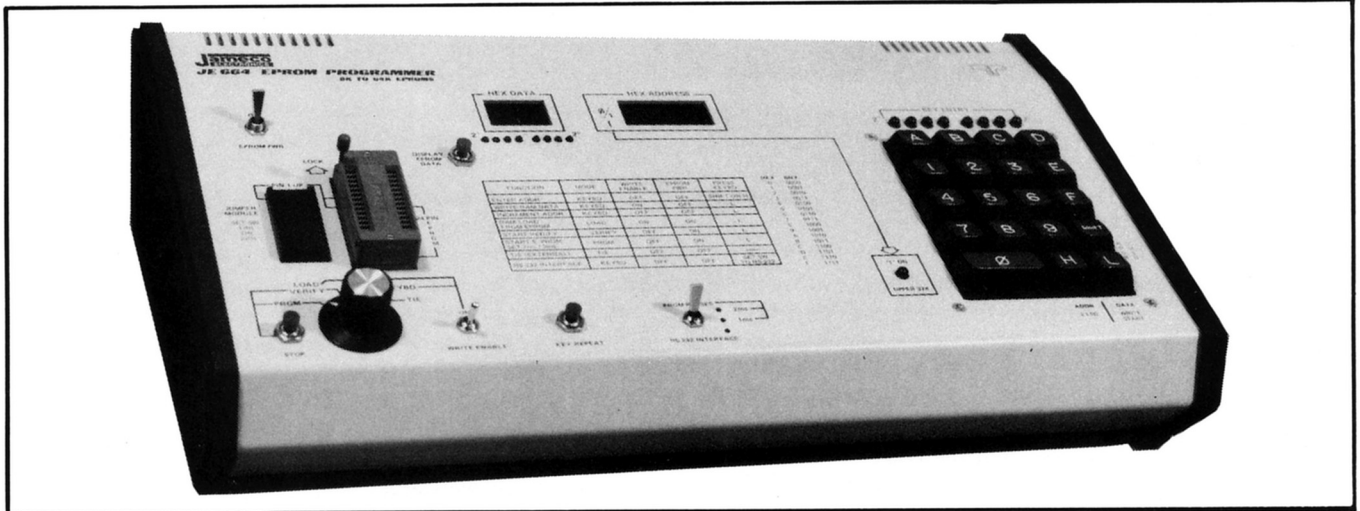
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SEHULSTER: That television doesn't usually require. Also I think that parents somehow mistrust intensity in children, intense concentration. I think they are afraid that something will happen to the child. I know that part of the criticism of the games is that they are perceived as being addictive, "stealing the child's mind."

When you start to talk about "stealing the child's mind," the picture that I envision is a picture of a person standing there hooked to a machine such that he can't get away. But I don't notice children struggling to get away. I notice children concentrating on what they are doing.

Now, I will say this, a lot of children can't concentrate on what they're doing. They haven't learned the skills yet, and consequently they tend to lose a lot of money. And in situations where I don't feel like concentrating because I'm tired, or because I'm distracted, or because something else is on my mind, I don't play the games. I know I won't do well so I just say, "Well, I'm not going to do it."

Let's take reading for a second. One of the things children miss nowadays is the intensity of reading that comes with concentrating on a book, on a story. Part of that is because I don't think our society allows them to get into anything with that kind of depth. Also, another thing is that they don't see their parents getting into anything in depth.

PLAY METER: Is this because video games force you to concentrate? If you don't concentrate, you get zapped?

SEHULSTER: Yes, the games force you to concentrate. You can play the game without concentrating in which case you're just doing an idle exercise. But then again, you can do that with a book, and skim read it and miss half of the depths of it.

PLAY METER: Since there are some kids who can't concentrate, do you see any diagnostic uses for the games?

SEHULSTER: The games have been used in that manner. They've been used both in diagnostics and in training. They've been used in training brain damaged children. They've also been used in diagnosing, let's just say "hangover" problems in pilots.

Someone has decided that the alcoholism rate of airline pilots is enough to raise the question of "On the morning after or two days after, are they really sharp? Are they really sharp enough to fly a plane and carry the lives of 150 people?" And the games lend themselves to that kind of a thing.

Again, you can use that score as an indicator of certain skills—reaction time skills, concentration skills—although the game itself doesn't tell you which skill is lacking. The games just give you the score, and you pretty much have to infer what's missing or what's there.

PLAY METER: Another researcher brought up the point that television teaches role models, and in a lot of cases, the arcades or the home video games are taking the place of that television watching. Have you noticed anything about what the games are telling us or teaching us?

SEHULSTER: Now that's an interesting question. In the first place, as far as the games taking something away, in the sense of making it less likely that the child will spend most of his time watching television, I think that's definitely true. That means that, potentially, if TV is that much of an influence, it means that the child will be similar in some ways to what children were like before television came in, on the one hand.

On the other hand, though, I think that one of the big

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things that games do is let the child glimpse the technological world firsthand. I've read an article about the insides of *Ms. Pac-Man*—the number of circuits, the number of memories, the number of different programs, and all that stuff that goes into it. It seems to me that if a child gets intrigued with how that game works, he has asked a question that could potentially be, for the rest of his life, a career.

One of the attractions of the games is that they allow the child to make an impact on the machines. The only impact you can have on television is to turn it on, turn it off, turn the volume up or down, or change the channel.

But the games allow the child to impact upon the machine, and I think that's a valuable statement about relationship with the environment. It makes the child a lot less passive. Of course, again, parents will say, "Yes, he's active with regard to the game, but he's passively hooked into playing games."

PLAY METER: Maybe there's not a transfer of the active interaction?

SEHULSTER: Maybe, but I would argue that that's the case with just about anything. At what point do you stop criticizing the activity? Parents are always going to find something wrong if they basically disagree with the concept of going to an arcade and playing a game.

They'll basically find something wrong, even if it's just that children shouldn't walk from the side of the street to get there. So I think the activity is important. It really defines the role of human beings to the machine. The human being is playing against the machine, and to me that's much better than being at the mercy of the machine at home, like the television at the mercy of what Hollywood offers us.

I personally don't think that we should take seriously the charges that the games make children more aggressive or that the games suck children into a sort of fantasy world.

PLAY METER: Why do you think that?

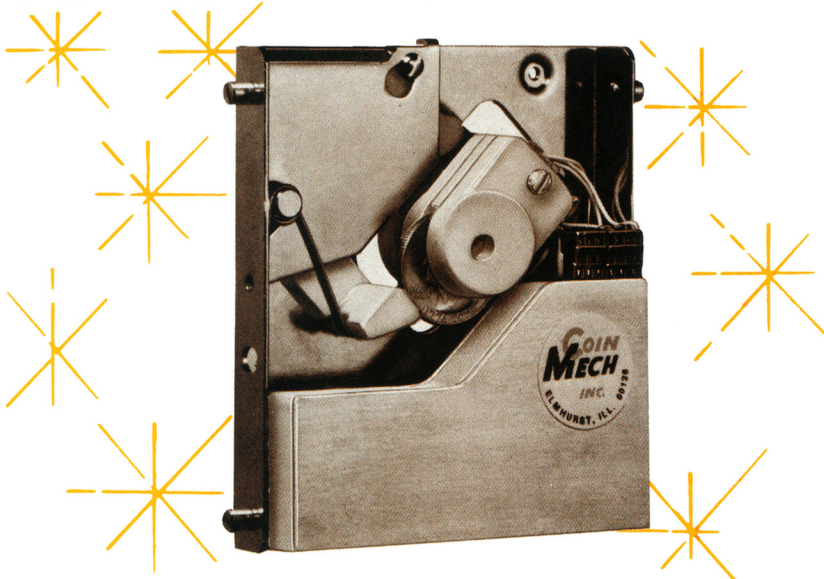
SEHULSTER: I think that's an exaggerated charge. I don't think there's more fantasy involved with playing the video games than with the child playing sandlot baseball and fantasizing that he's Babe Ruth or Reggie Jackson. There's fantasy involved with everything that children do. There's fantasy involved with a lot of what adults do—walking down the street as if you're a movie star, standing up in front of a microphone at an Elks' convention as if you're the president of the United States. Adults do all that too, and there's no reason to suppose that children don't.

But people have suggested that the games involve a lot of aggressive fantasies or a lot of aggressive drives, that the games stimulate those drives. I don't think, for example, that *Pac-Man* relates to our oral needs as some people have said, or that women like *Pac-Man* because of the idea of engulfing or eating—I think that's largely nonsense. I think that *Pac-Man* is popular with women because it requires one general movement with a stick, and that it's a simple game in terms of motor coordination.

I think kids are pretty much able to realize that it's just a machine test of reaction time. It's not anymore than like shooting the water pistol at the boardwalk so you can raise the ball and win a Cupie doll—any more than that is seen as shooting.

PLAY METER: So the outer space battle theme is not necessarily a violent theme? It could be like you said,

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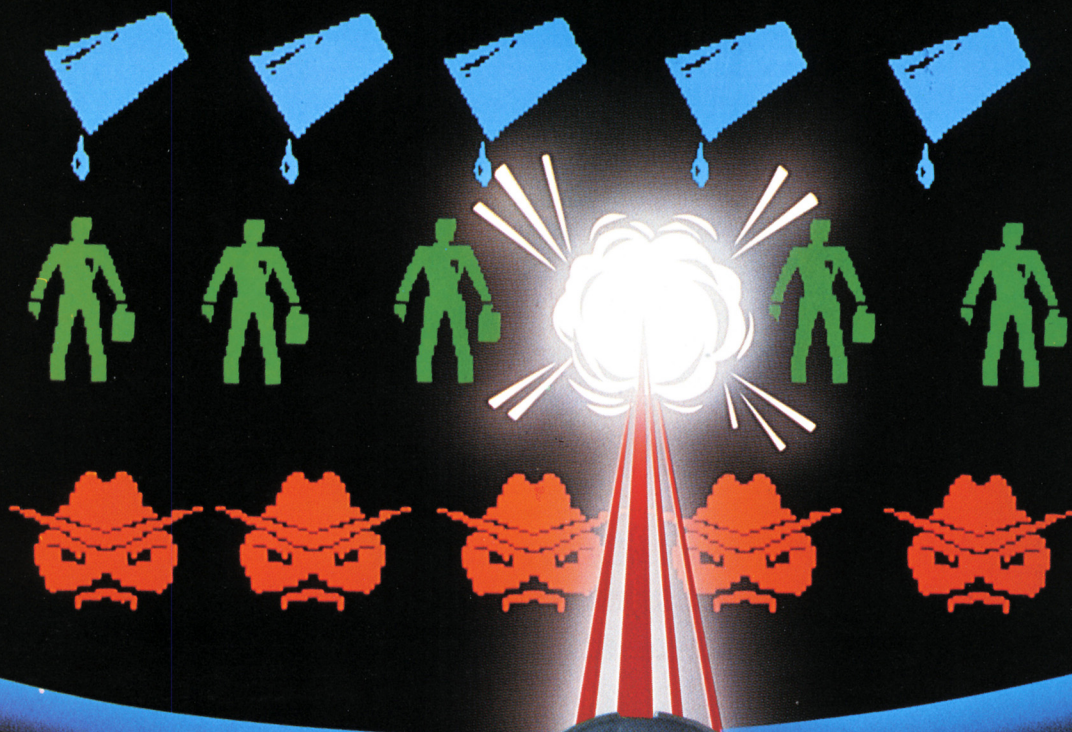
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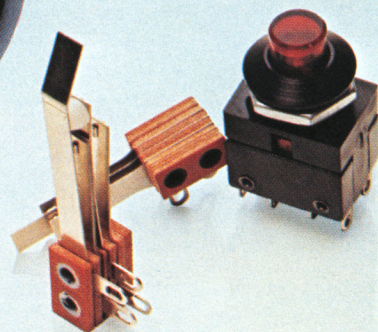
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shooting the water pistol?

SEHULSTER: Yes, in part. Also, you have to understand that most of the motion pictures that are popular, look at Indiana Jones' solution to dealing with the Germans. Look at "Star Wars." Look at its solution to dealing with the empire. We see this all over the place. Look at Charles Bronson's solution to crime in the city.

It seems to me that the game is more of an abstract motor challenge. And it's the same challenge whether you're painting up the tracks of pussy cats in the maze, whether you're gobbling dots, whether you're being chased by an android creature. But the content of the game, I think, is not as relevant as the actual action. The challenge is on the level of action and strategies more than the action content.

PLAY METER: With a game like Pac-Man, it's almost a benevolent kind of content so that you get both action and strategy. There is a move toward more kinds of "cute" games since Pac-Man.

SEHULSTER: I think one study that the arcade manufacturers could do would be to look at the complexity of the responses required, the number of hands that are involved, and the number of different buttons that are involved. Then equate that complexity or compare that complexity with an approximation of the people who tend to play those games.

What you'll find is that most of the shooting games involve at least two buttons, if not three or four or five, and the simpler games like *Pac-Man* and *Frogger* involve just one basic motion. So it seems to me that the simplicity of the response may be the critical variable rather than the content of the game.

Pac-Man was, in that sense, in terms of response, a relatively simple game. What I admire about *Pac-Man* is that it's higher on the cognitive skills and lower on the motor coordination, reaction-time skills. I think that's what made it popular with a lot of people who get into thinking about games. I think *Pac-Man* was attractive because it sort of hit everybody on all different levels.

PLAY METER: You said that for women, there was only the one motor skill involved in Pac-Man. Will women adapt to the more complex games, or is there a real difference?

SEHULSTER: I suspect that it's going to be a matter of interest in the games. That's going to determine whether a person invests the time and money to learn how to play it.

PLAY METER: So there's nothing intrinsically different in the way women operate that would keep them with the simpler games?

SEHULSTER: There's another thing too and that's social pressure. I think there's less social pressure for a woman to master a game like *Asteroids*. Each man sort of feels that part of his ego is on the line. So the men will spread out to as many games as they can in order to find one that they're particularly good at.

The women, on the other hand, I don't think it's as much of an issue for them. It's almost like memorizing baseball trivia is not a big issue for females. And so men will tend to find a sport that they follow, and they'll tend to find trivia that they remember that they can drop in conversation and it's a big deal for them.

So my guess is that one of the reasons females have

not spread out to the other games is, in part, because of the complexity. The complexity means that the game is more difficult to master; it's going to take a longer time. My guess is that they're just not interested that much. They can do it, I'm sure.

In other words, in terms of differences, sexual differences, I'm sure they can master the games if they wanted to. But it's not as big an issue for them partly because I think the men kind of got in there and made it something to compete on.

PLAY METER: So it's more the competition level that affects play?

SEHULSTER: It could be. Women compete in different dimensions. Their popularity or their success, as defined today, is in a different dimension, and I think that the games just haven't hit that dimension yet.

PLAY METER: Could you describe that dimension of women's competition?

SEHULSTER: For instance, women have appearance as one of their dimensions to compete on. Women traditionally have some global thing called "popularity"...It used to be a long time ago being intelligent was not a dimension on which they competed, although that's changed in the last 20 or 30 years. In terms of athletics, now that we're having women's athletics, perhaps that's becoming something to compete on.

It seems to me that when a new game or a new thing comes in...most females would say, "Well, I'm just not interested in that." I don't think that's a statement of brains. I think that's a statement of "None of my friends are interested in that, and if I were interested in that, I'd be pretty much isolated so what's the point? Why spend the time?"

PLAY METER: Looking at families does it matter if all or some of the members play videos?

SEHULSTER: In the arcade that I used to go to, it's mostly couples. That seemed to me to be the critical factor, whether the couple played. And I should add that if the couple played, then video games is not an issue between them—just as if the family goes to the arcade, then video games are not an issue for them either.

When it becomes an issue is when one member does it and enjoys it, and the other member does not enjoy it and tries to prohibit it or reduce the frequency of trips. I think the parents who have the most trouble with their kids going to the arcades are the ones who think that the activity is silly; the activity is non-productive.

But when you think about it, what childhood activity is productive? It's all play, and it's all play that is later molded into something useful. It seems to me that if a child can get interested in computers through the arcade, interested in computer graphics, or interested in how that silly thing works, you may have the potential for a budding genius.

PLAY METER: It seems as though some of the resistance from parents is partly because of this technological explosion. The parents have not been in on it, and the kids go to the arcades and get interested in computers. Is that part of the reason why town councils get so upset about the arcade games?

SEHULSTER: I think that's part of it. I think the other

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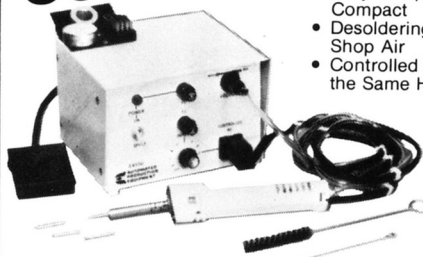
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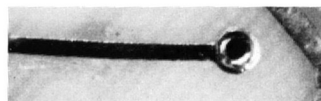


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part of it is that parents in general are suspicious of anything that's extremely attractive to children. Just as parents were suspicious of Elvis Presley, forgetting that they themselves were excited about Frank Sinatra to distraction.

Parents are suspicious of anything that threatens to take their child away from them and rightly so. I'm not suggesting that they shouldn't be. But in the case of the games, I think that their suspicion is a little bit of an overreaction.

If kids are involved with games, it's probably because games are probably one of the most enjoyable activities they've been involved with for a while. If kids play games constantly in the evening at home, what were they doing before that? If the answer is watching television, then I would say, well which is really more useful—watching television or playing a video game?

My suspicion is that parents really fear the lack of control. They're very concerned about some kind of machine that I suspect deep down they mistrust—some kind of machine controlling the mind of their children. Remember that most parents were raised with the specter of Orwell's *1984*. They've read the book; their kids have not. They've feared the coming of this.

They see this as "here we are not. Here's a machine that seems to have a tentacle around my child, and it's taking my child away from me." What I suggest is that people start to look at what are the kids' alternatives? What was he doing before the game came into town? Was that activity any more useful?

People will say, "If children are playing games, then they don't have time to read." That's true. But were they reading before they were playing the games? If the answer to that is no, then it seems to me that argument doesn't hold any water.

PLAY METER: In many places there really isn't much for young people to do. A lot of operators have "mom and pop" arcades, and they become surrogate parents.

SEHULSTER: Exactly, and there's no question that if the arcade were handled properly, it could be quite a positive social place for children to go to. Usually the places that are planned in a rational sense, sort of like a planned community, just don't seem to be popular.

Kids go for the zeitgeist (The general trend of an era.). Kids go for what they perceive to be the "in" thing to do. If the "in" thing to do also involves a lot of surrogate parenting on the part of the owner or a lot of control on the part of the authorities, a kind of benevolent control, it seems to me it could be a very positive social institution.

I know of a number of arcade owners who are very, very good with kids. I would suggest that the kids tend to talk to them more than they would talk to their own parents or any other adult.

PLAY METER: Why do parents fear arcades?

SEHULSTER: Parents get nervous when a lot of kids get together. There's the potential for trouble. Some of the early, early articles that came out about the games pointed to drug deals, drinking and smoking, profane language, and all sorts of social ills. It seems to me, though, that it's unfair to point a finger at the arcades in specific.

The high school parking lot, church parking lot, the back lots of shopping centers—all of those areas, you'll find the same behaviors. It seems to me that an arcade that's supervised or an arcade that flatly doesn't permit

these behaviors could actually be better controlled.

If the town police knew that drug deals were being done in an arcade, or potentially being done in an arcade, it seems then the drug dealer would be absolutely insane to go there.

Not only that, but the more parents you have that go to the arcades and play the games with their children, that also will limit that kind of behavior.

PLAY METER: But there are kids who seem to get "addicted," or they seem to have trouble. Do you think that is indicative of some sort of other problem?

SEHULSTER: My general rule is that one should always focus on the person, the individual, and not on the game itself. If you can show that 85 percent of the population has no problem playing a game or not playing a game, or seems to be in control of deciding to play a game or leaving it, it seems to me that to focus on the game is to really miss the important part of the game player's system.

Certainly the person who is playing the game is who we should concentrate on, and there will be persons who will abuse things.

What we're talking about is an intriguing problem. The video game is an intriguing problem, and the person doesn't seem to be able to get that problem out of his mind. So consequently he wants to play and play and play and play so as to solve it. That's one possible explanation.

So there you're talking about an ability to switch gears. Does this person have trouble switching gears? The game becomes something that, like, almost has to be done right then and there. I think anybody who's ever done a serious piece of work, he gets involved with it.

There's another issue, too. I think this is one of the negative sides of the arcades—I think kids today are bombarded with noise. The noise level is a very critical factor in a kid's life. If you go into various households around the country, you will find each household has a preferred noise level.

And the arcades are noisy. Some of those games are almost ear-splitting. We're hooked into a lot of stimulation. Nowadays, it's possible to have a loud car stereo, it's possible to have Muzak on in the office, it's possible to go around with a Walkman, and go into an arcade and be bombarded by noise. I think it's possible for a child to seek that level of noise stimulation.

In that sense, the arcade will be something that the adult might go for. It's one of the reasons they've increased the level on all of the sports telecasts. You get more of the crowd, you get more of the clattering shoulder pads, and you get more of the grunts and groans.

It's all increasing the level of stimulation. It makes it more attractive. It makes it a little bit more exciting than it would be without that. I mean have you ever seen a TV show without canned laughter or applause?

PLAY METER: One arcade owner put headphones on his games so that the individual player could adjust the sound on that machine.

SEHULSTER: That's interesting. And that would certainly be a step toward a person controlling his environment a little bit more. So when you talk about what looks like "addictive" behavior on the part of the child, a person "hooked" into the games, he also might be hooked into the level of ambient stimulation.

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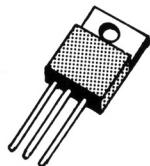
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OUR 'CADES

By
Bill
Kurtz

Who plays, pays?

Arcades aren't just child's play anymore.

Sure, a lot of the players are teenagers (mostly boys), but lately, businessmen, housewives, and senior citizens have joined the ranks of arcade addicts.

Knowing your players is now even more important than it used to be, especially with the variety of games available.

"An arcade owner must have a feel for his customers, because today's equipment is more complicated and players are more selective," said Steve Bodenstein, president of the Game Exchange.

Probably the most important factor in determining who plays in your arcade is your geographical location. Teens will not always be your biggest group.

"If your arcade is near a government building, between about 10 and 2 you'll have the professional people in coats and ties," Bodenstein said. "In a shopping area, the makeup of the neighborhood will be a factor."

Children at malls

Although it's difficult to generalize, mall arcades are more likely to have children playing the games than amusement park locations, for

instance, which get more of a family crowd, according to one New Jersey operator.

"There aren't as many older people in a mall, and the parents who take their children there are more interested in going shopping than playing the games," he said. "The older people are more likely to stay with the younger ones in an amusement park, though."

Even the type of players in each arcade may change during the day. During lunchtime, a mall arcade may get the older mall employees, while shoppers in their late teens and early 20s may dominate from about 1 to 3 p.m.

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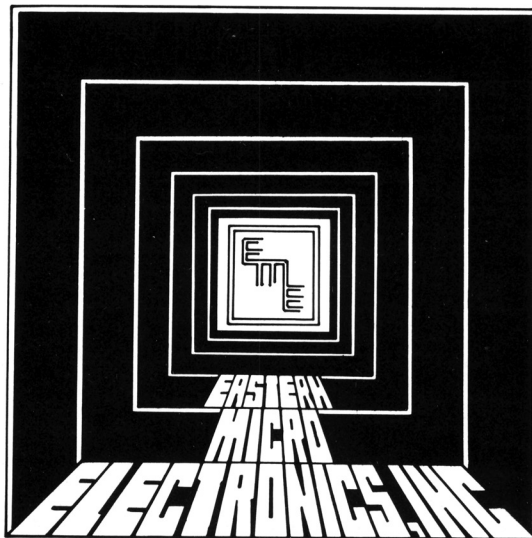
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Late afternoon may bring in the after-school crowd, while the evening hours will find just about everyone in an arcade.

Learning just which players are the biggest segment of your business is mainly a matter of spending time in your arcade and watching who comes in. Bodenstein said pinpointing who your players are can help the small operator compete with the national chains.

"I feel the small operator with... six or seven locations can do a better job than the national chains because he can pay individual attention to the needs of his location," he said. "The big chains can tell you what game is doing well, but they can't tell you *why* it's doing super."

Briefcase bunch

Some arcades "specialize" in appealing to a particular clientele. Stuart Fitzgerald operates arcades in Washington, D.C., with "an ambiance pleasing to the briefcase crowd," according to *Washingtonian Maga-*

zine.

Fitzgerald said that about 95 percent of his players are between 18 and 45 years old.

"We're catering to the adult crowd. If we run the kids out, OK," he said.

*...pinpointing who
your players are
can help the
small operator
compete with the
national chains.*

"When you get more kids in your arcade, they run the adults out."

To encourage a "briefcase crowd," Fitzgerald sometimes runs Lawyers' Day or F.B.I. Day, when members of these professions show their creden-

tials to receive free tokens.

If you're interested in just checking the demographics of your players (male or female, age group, etc.), you can do that, too. Fitzgerald suggested running a contest giveaway in your arcade so you can have a record of your customers when they register.

Check hourly

Another method is to look at your business on an hourly basis. Bodenstein said if you operate on tokens, you can check the meter reading on your changer every hour.

If your arcade is filled with the suit and tie crowd from 11 a.m. to 1 p.m., you can compare the changer's meter readings from those two hours with the day's total readings and estimate what percentage of your business is from that group.

No matter how you go about doing it, it's important to know your players to help you buy the right equipment. In next issue's column, figuring out what types of videos are best for your players will be considered. •



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PUZZLE ANSWERS

By Bill Brohaugh

Media quiz (Solution to puzzle in Nov. 15 issue of *Play Meter*, page 74)

A while back, I prepared a coin-op media quiz. Because of all the media attention being paid to video games and coin-op games in general, gathering material for a second quiz took only about a quarter of the time it took me to gather information for the first.

Here's the coin-op media quiz.

1. a) The comic strip *Funky Winkerbean* often featured a video game that was planning to take over the earth. Which one?
b) The video was foiled. By what?
2. A science program sponsored by *Omni* magazine discussed how the voice system of a particular pingame was created. Which game?
3. a) Name the musical artist that recorded a song as a tribute to *Space Invaders*.
b) Name the musical group that recorded another song called "Space Invaders" (The song isn't about the video, though some sound effects from the game are used.).
4. a) An episode of the generally mindless show "Strike Force" showed a teenager tripping out on drugs (And yes, I don't like to see such negative portrayals on TV either.) at what arcade?
b) Why was what happened at the arcade and its associated business totally unrealistic?
5. Which magazine used a parody of *Space Invaders* on its cover?
6. B.J. Hunnicutt spent an evening playing pinball at the camp bar during one episode. Which game?
7. William Saroyan, a great writer who recently died, wrote a play in 1939 that featured a character who plays a marble game throughout the performance. What is the play?
8. The comic strip *Goosemeyer* showed President Reagan involved in a video game. Which one?
9. a) In an episode of the TV show "Phoenix," the title character is depicted playing a video game. Which one?
b) What made the game he played unrealistic?
10. An episode of "Private Benjamin" was set in a restaurant called The Pizza Place. Which pingame was set up there?
11. Somewhat related to question No. 10, what made the arcade scene in *American Graffiti* unrealistic?
12. a) What pingame adorned the set of Arnold's, the restaurant in "Happy Days"?
b) Why was the set designer silly for putting it there?
13. The comic strip *Ziggy* showed a character from a video game leaping from the machine and chasing Ziggy around. Which video game?
14. a) Which TV show parodied *Pac-Man* by superimposing the Pac-Man over the heads of people in pictures? (For example, they showed a cab driver with

- a) Pac-Man for a head, and called him "Hack-Man."
b) They then showed what was supposedly a frontal view of Pac-Man. What was the frontal view?
15. a) A man trying to buy into Archie Bunker's Place in the TV show of the same name wanted to replace the pingame with a video. Which video?
b) What was unrealistic about that episode?

ANSWERS

1. a) Taito/Midway's *Space Invaders*
b) Pac-Men
2. Bally's *Xenon*
3. a) Uncle Vic
b) The Pretenders
4. a) Malibu Grand Prix
b) Many cars were allowed on the track at one time, as if it were the Indy 500.
5. *Mad* magazine. What else?
6. Gottlieb's *Spot-a-Card*
7. *The Time of Your Life*
8. Midway's *Pac-Man*
9. a) Centuri's *Phoenix*
b) High score was a ridiculously low 6,800 points. When the main character beat high score, he was awarded *five free games*.
10. Gottlieb's *El Dorado*
11. *American Graffiti* takes place in 1962, but the machines in the arcade were manufactured much later. For instance, an *El Dorado*, which was made in 1975, is in the scene.
12. a) Bally's *Nip It*
b) *Happy Days* is set in the '50s, and *Nip It* was made in 1973.
13. *Pac-Man*
14. a) *Saturday Night Live*
b) A "happy face"
15. a) Nintendo's *Donkey Kong*
b) The character started playing the game the minute it was carted into the bar on a dolly, without even plugging the thing in.

Scoring

Give yourself 3 points for each *a* question answered correctly, and 2 points for each *b* question answered correctly. Total possible points: 59.

35-59: You know a lot about this stuff. If you ever get out of the coin-op business, consider writing TV scripts.

9-35: You, too, know a lot about this stuff. You should give a shot at a TV script, too.

8: You answered everything with "Pac-Man."

0-7: You took the quiz for fun, which it was intended for.

Four-terminal regulators

By Randy Fromm

Integrated circuit voltage regulators provide a quick and easy solution to the problem of manufacturing the highly regulated power supplies that are essential to the computer systems in video games.

In one small package, the voltage regulator contains 17 transistors, two zener diodes, 21 resistors, and even a small (30 picofarad) capacitor. At about a buck and a half to two dollars each, they're a low-cost answer to a "high class" regulated supply.

Midway introduces device

The three-terminal voltage regulators have been standard issue in video games for many years. They've been used in just about every game from Midway since the introduction of the

then revolutionary new video, *Gunfight*. But when Midway introduced us to *Galaxian* (and the Namco engineered, Z-80 based video game system that is essentially the same as that used for *Pac-Man* and *Ms. Pac-Man* as well), it also introduced us to another type of voltage regulator integrated circuit, the 78GU1C.

Like the three-terminal regulators, the 78GU1C provides a constant output voltage regardless of fluctuations in voltage at the input. But the three-terminals' regulator is generally used as the sole regulating component in the low current power supplies such as the -5 and +12 volt power supplies found in many games.

The 78GU1C, on the other hand, has four leads and is used in conjunction

with a transistor to regulate the high current, five-volt power supply for the entire computer system itself.

The addition of the fourth lead allows this regulator's output voltage to be controlled to any voltage between five and 30 volts. The voltage at the "control" input (pin 4) determines the output voltage of the regulator itself. This control voltage is derived by using combinations of resistors or resistors and zener diodes to create a circuit known as a voltage divider.

In the schematic diagram of the basic positive regulator, the voltage divider resistors are R1 and R2. By changing the values of these two resistors, the design engineer can change the output voltage of the device.

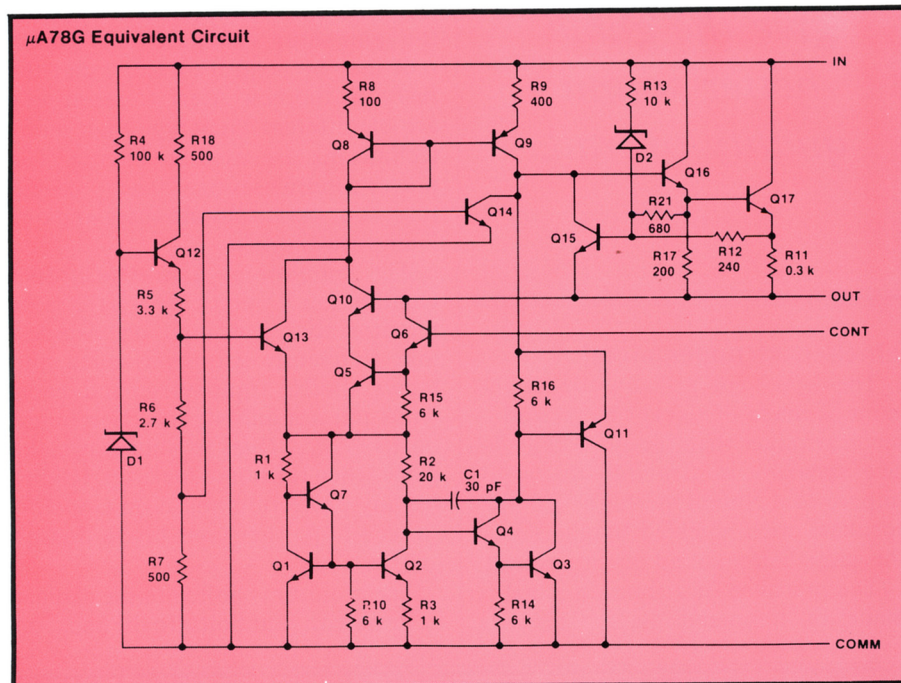
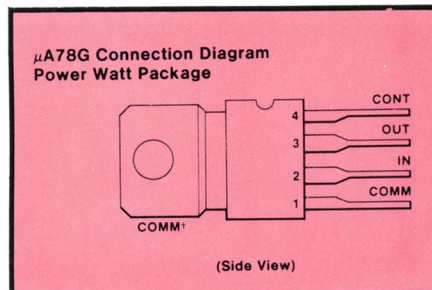
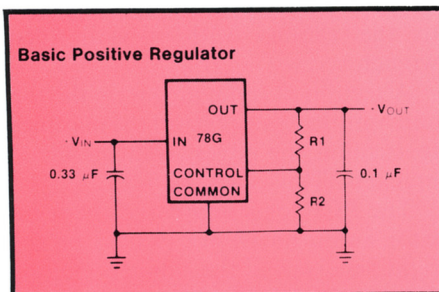
Regulated output

In the Namco system (and others as well), the 78GU1C is used to drive the base of a series-pass regulator transistor, which in turn regulates the larger amounts of current required of the +5 volt power supply by the computer system. By keeping the base voltage of the transistor at a constant level (in this case at somewhere around 5.6 volts), a regulated output of exactly five volts can be obtained at the emitter regardless of changes in voltage of the unregulated input at the collector.

The 78G series of integrated circuit voltage regulators is not commonly available at electronic retail or "hobbyist" stores. Be prepared by ordering a replacement part ahead of time to keep in stock. Most reputable dealers of video game replacement parts will stock this item.

The remainder of the part number that follows the "78G" indicates the type of package for the device (U1 is the designation for the "power Watt" type of package.) and the temperature rating (C is the designation for the "commercial rating."). Operation is restricted to temperatures between 0°C and 150°C.).

For further information about voltage regulators, see *Play Meter*, April 15, p. 135.



FRANK'S CRANKS

By
Frank
Seninsky

Gravitar: it may be 'a very reliable game'

Atari's latest release, *Gravitar*, is what I would call a combination of *Lunar Lander* and *Space Duel*.

It seems like I just reviewed Atari's *Kangaroo* only a few weeks ago, and here is still another Atari game. We all feel that too much equipment is flooding the market, and the bubble will burst shortly—if it has not already.

The *Gravitar* cabinet is very similar to the type used on *Kangaroo*, *Centipede*, *Dig Dug*, etc. The front section, below the control panel, is painted black. This color and type of paint has stood up extremely well to the frequent kicking video games receive. The cabinet's sides are painted a glossy white and are covered with brightly colored decals. These side decals adhere to Atari games very well. Even on games a few years old, the sides can be cleaned and the decals look attractive. Atari has this aspect down well.

Gravitar utilizes the Coin Controls Inc. two-door system (over/under) with a separate cashbox area located under the coin door. As promised, Coin Controls has put a key hook on the inside of the coin door. We all appreciate this very much.

Atari has cut two key notches into the sides of the utility panel which is mounted to the top back of the coin box frame. These notches can be used to hold the back door keys and/or coin box door keys, but I would recommend using the hook instead. The reason is that the keys can fall out of the notches if the game is tilted back far enough or gets a severe jostle. Searching for keys in the bottom of a

cabinet and not finding them wastes valuable time.

Speaker grills have been rivoted to the cabinet over the two speakers, one mounted over the coin door and the other under the marquee or attraction glass overhang. These grills are much stronger than those used on most games but can be bent from the edges.

*Shielded high
fidelity speakers
with magnets
give the game
better sound
quality overall.*

Thicker, stronger metal

The heat vent grill on top of the game is made of thicker metal and is much stronger than the speaker grills. The speakers in *Gravitar* are newly improved. Shielded high fidelity speakers with shielded magnets give the game better sound quality overall.

The marquee or attraction panel is made of tempered glass. This has

worked better than plastic, evident by the infrequency that Atari marquees have to be replaced. The marquee can withstand a mild punch (I don't recommend hitting it.) and is held in place with two sturdy metal guide brackets (top and bottom). The guide rails are not easily bent with your fingertips, so chances are that the marquee will stay in place. Atari has secured the guides to the cabinet with special Allen wrench screws.

A section of foam tape is on the top and bottom front edges of the marquee to cushion the edges from the metal brackets. This is a good idea.

The PCB logic board and the regulator audio board are located on the right side wall of the cabinet, looking from the back door. The power supply is located on the cabinet floor. This is the same setup as in past Atari games.

It may be helpful to know that the fuses on the new Atari power supply are of different amperage than many technicians are used to having. The power supply uses one 20-amp slo-blo fuse, four 4-amp slo-blo fuses, and one 7-amp slo-blo fuse.

The monitor is a Wells-Gardner Quadrascan XY color. This is the same monitor that was used on *Tempest* that frequently gets overloaded and blows diodes, transistors, and caps. Atari put a monitor protection board on its *Space Duel* to shut down the game when the board locks up. I didn't see any protection board on *Gravitar*, so let's hope that your board doesn't lockup.

The monitor is bolted to the cabinet in front with four bolts. In the back, on

the right side, the monitor chasis is held in place with a metal L-bracket. The whole wooden shelf holding up the monitor has been eliminated. The L-bracket should be enough to keep the monitor in place.

Tempered glass

The monitor display glass is also tempered and held in place at the bottom edge by a retaining clip and the control panel edge. Once the control panel is open, the retaining clip must be slid to the right and removed through the wooden cutout. Then the monitor glass can be easily removed.

The control panel is designed slightly different from the panels we've seen in the past. The top of the panel curves upward and covers the bottom inch of the monitor cover. Two latches secure the panel from the top section to the cabinet frame in a horizontal position. The panel is held in place and cannot be easily pried off.

The top edge, however, can be bent slightly outward, and this is the weakest section where damage may occur. When unlatched, the panel pulls forward on a hinge and opens so that the wiring and switches are almost horizontal. In this position, they are easy to work on. The overlay decal is wrapped over the top edge of the panel so it can't easily be peeled off. This overlay looks like it will last. It's supposed to be burn resistant. The *Centipede* decal overlays held up except that many of them cracked and peeled around the ball control area circle.

Atari has also placed foam tape on the display shield glass to act as a cushion between the control panel edge and the display shield and also to prevent liquid from getting between these two sections and down into the cabinet. There are five buttons: left and right rotate, thrust, fire, and tractor/shield, with cross-hair leaf switches and two led switch buttons (first and second player start).

These buttons and switches are relatively trouble free. It's wise to always check the ground strap attached to the panel latch tabs to make sure it is attached tightly. This will decrease the chances of players receiving shocks while playing the game.

The Operator Information Display and the Self Test features on *Gravitar* should be of interest to many operators. Atari recommends waiting at least 10 seconds after a game has

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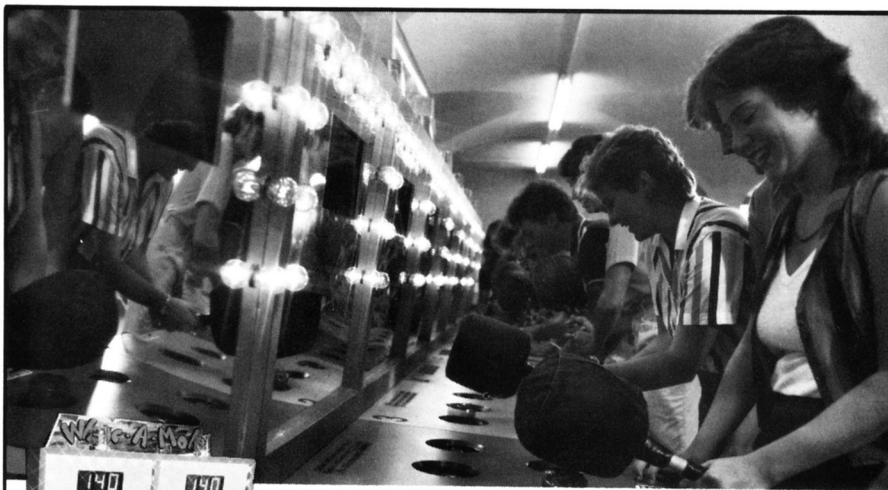
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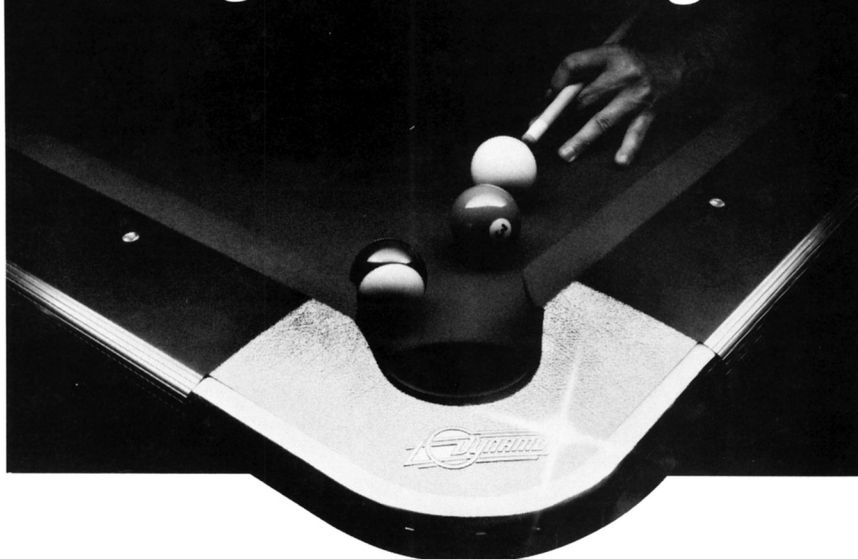
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been played before entering the self test mode. If the test switch is put on just after a game, or in the middle of a game, it is possible to erase the top three scores in the high score table or to ruin the game statistics. Garbage numbers may result.

Available information

The information displayed on the Information Display includes the number of credits per coin (left and right), number of credits for each push of the utility coin switch, game difficulty, ships per game, number of games played, and average game time.

Part of the self-test mode checks every switch (even takes into account the control buttons for both first and second player, although the same buttons are used for both players, alternately), two RAM's, 10 ROM's, and three intergrated circuits that include one EAROM and two custom I/O chips.

There are five possible modes of operation on *Gravitar*:

1. **Demonstration**—This mode allows operators to enter all the different planets to view the terrains and obstacles without being attacked or hit. This must be every player's ultimate dream. It gives the operator a chance to make believe he is a great player. Seriously, it is a troubleshooting aid.

2. **Attract Mode**—One of four possible screens or pictures is repeated every 30 seconds.

3. **High Score Mode**—This mode starts if a player gets into one of the eight high score level brackets. The player has one full minute to enter his or her initials. The other two modes are, of course, play and self test.

Pretty good

Atari games usually get a pretty good rating and *Gravitar* will be no exception. The cabinet is well-designed, won't come apart when kicked, and its surface paint and graphics will hold up. I feel the speaker grills could be stronger, and the top edge of the control panel can be bent. The game hasn't been out in the field long enough to notice any recurring problems. There are no joysticks to wear out and break. The power supply has proven very reliable on past games. If the monitor doesn't overload, as do some *Tempest* monitors, *Gravitar* will be a very reliable game. I'll give it a 8.9 out of 10.

Cherry pickers

Harvest a cherry crop before a band of red marauders destroy Mr. Do in Universal's game of that name, *Mr. Do*.

Armed with a highspeed shovel and a potent powerball, the player must carve a path to each group of cherries for harvesting. Once they are all harvested, he earns a new field of play. He may also earn a new field of play by destroying all of the Red Marauders.

If the first six marauders aren't destroyed right away, two or three more appear from their home in center screen to pursue him. Once all the marauders have left their home, a bonus target is uncovered.

Points are earned by harvesting the cherries and/or killing the marauders. They can be destroyed in two ways: By Mr. Do turning and firing his powerball, which will destroy only one at a time; or by Mr. Do pushing a nearby apple on top of them and crushing them.

Since timing and strategy are required to crush the oncoming marauders, twice as many points are earned for each death caused by a falling apple. Once the powerball is launched, the player must evade the relentless marauders until he becomes energized with a new powerball.

Bonus points are earned by harvesting a single group of cherries without interruption or by crushing two or more marauders with a single apple. Bonus points are also earned by consuming the center screen target, the value of which increases with each successive field of play. EXTRA targets circulate the screen periodically, and an extra life can be earned if all five of these targets are destroyed.

Lives are adjustable from three to six. There are four difficulty settings, and it's available in an upright and cocktail table.



Spotting fun

Bob's Space Racers Inc. of Daytona Beach, maker of *Whac-A-Mole*, announces the addition of a new game, *Hot Spot*.

Hot Spot is a fast-moving game requiring quick reflexes and coordination. Players face a board of six flashing hot spots. Points accumulate as players tap the fiery spots as they light at random. It takes skill and persistence because the lights only flash for an instant, and you never know which one will flash next.



Battle Satan

Using a black-light illuminated joystick with an integrated trigger and a regenerating shield for protection, the player battles swooping gargoyles and menacing devils to build a bridge across a river of fire to battle Satan in his lair in Bally/Midway's *Satan's Hollow*.

Combatting ever changing patterns of attack by the enemies, the player gains increased fire power at the completion of each battle with the devil.

Bally/Midway's computer hardware system is the key to *Satan's Hollow's* video graphics display. During the course of game play, the scene changes from daylight to darkness intensifying the player's challenge and hazards. *Satan's Hollow* is also equipped with a complete self-diagnostic package providing the operator with valuable information on player input, bookkeeping, machine set-up, channel testing, and ROM and RAM operation.

Satan's Hollow Super Shooter Competition Kit is a new merchandising aid offered from Bally/Midway. The *Super Shooter Kit* contains everything needed to launch the game, from window banners to competition prizes. Designed with the location in mind, the *Super Shooter Kit* is highlighted in a full color brochure enclosed with each *Satan's Hollow* upright video game.



Twack, whiz, swish!

Sega unleashes the *Tac/Scan* fleet to challenge players with new dimensions in space game flight and visual frontiers, company officials claim.

The new video space game adventure combines action, more than 1,300 space sound variations, and unique three-point perspective views to provide players with a successive challenge of skill and timing.

Tac/Scan is available in the standard upright, one/two player model, and is an exclusive Sega Color X-Y Convert-a-Game that can update any upright *Space Fury*, *Eliminator*, or *Zektor* game at less than half the price of a new game.

A new feature of *Tac/Scan* is the Add-a-Ship option. When a player ship is destroyed either by enemy fire-power or craft collision with the adversaries, an open formation position marks the area of the missing fighter. The player can replenish the open position with another fighter by calling up a reserve ship or by docking with additional *Tac/Scan* fighters as they randomly appear on the screen. The number of additional reserve ships is limited, so the player must concentrate on docking with other fighters in order to replenish his forces.

The player (Fleet Commander) pilots his *Tac/Scan* squadron of seven space fighters through three phases of deep space travel. *Tac/Scan* enters a distant galaxy ruled by an evil empire and is intercepted by one of its space armadas. The *Tac/Scan* fleet is attacked by rocket-launching Annihilators and laser-firing Stingers.

The Fleet Commander's mission: To destroy the enemy and escape the galaxy. He destroys the evil armada by firing missile salvos. He attempts to escape the galaxy by entering a Space Tunnel that places the *Tac/Scan* squadron in another part of the galaxy...only to meet another armada.

Seven-time test

Unleashed by ATW Inc., that fearless adventurer of old embarks on this, his latest series of voyages, in which he faces the dangers of the unknown.

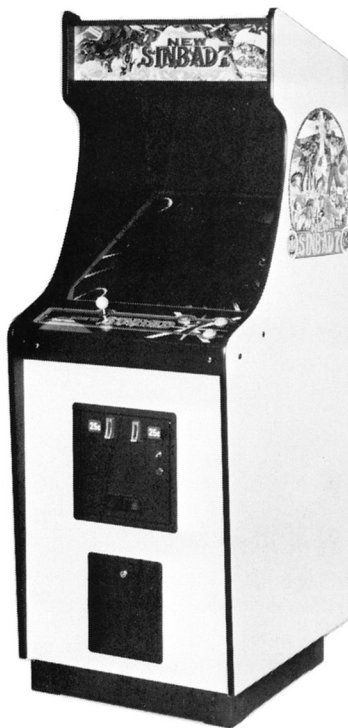
Destroying the forces of the evil sorcerers, he flees through pathways of danger with the 'Key of Destiny,' avoiding the hidden dangers of the elements and enchantment. Reaching the golden gate, his hopes of freedom are dashed, as he tumbles through time and space into the nest of 'Virons.'

Fighting against time, he overcomes them only to be plucked back into the present to try again in ATW's *New Sinbad 7*.

As he pits his skill against even more powerful challenges and hazards, he flees again with what he hopes is the real 'key of destiny.' Will it lead to success? He is tested seven times over his skill.

New Sinbad 7 is a new game, leading the player ever onward through seven rounds of increasing difficulty. Many will try, but few will succeed in gaining the ultimate bonus awarded for successful completion of all seven rounds.

Designed and built in ATW's new modern factory, *New Sinbad 7* is available in standard upright, mini-upright, and table models.



Water sports

Centuri Inc. has entered into a licensing agreement with Japan-based Tehkan Ltd. to manufacture *Swimmer*, a four-phase aquatic adventure.

Under the terms of the agreement, Centuri has the exclusive rights to *Swimmer* in both upright and cocktail table models for the United States and Central and South America.

"Our decision to enter into this agreement was based on the ever increasing demands of today's player for different game concepts," said Centuri President Arnold Kaminkow. "*Swimmer* not only meets these demands, it exceeds them."

With the aid of an 8-way joystick and a left or right-handed "dive button," the player begins an aquatic adventure.

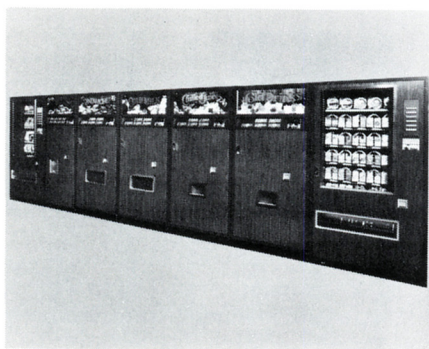
"The goal of the game," Kaminkow said, "is to reach Treasure Island. In order to get there, you have to avoid a host of predators, while simultaneously gathering bonus points."

During the game, the player also attempts to reach a floating "golden ring" that gives him momentary "superpowers." *Swimmer* also features an end-of-game bonus that allows every player a chance of extended play.

"*Swimmer's* graphics and sound effects are without peer," Kaminkow said. "It represents a significant breakthrough in programming and provides an outstanding alternative to current video games."

Aids to the Trade

Vending selection



Federal Machine Corporation's new *Eagle Line* brings total vending to any business establishment with its complete line of sandwich, hot beverage, canned drink, cold milk, and chilled juice vendors, as well as merchandise marts to handle cigarettes, candy, gum, and snacks.

Sandwich Machine—Handles five selections of sandwiches.

Hot Beverage—Handles coffee six different ways: black, black with sugar, cream and sugar, or extra cream and sugar. It also features light creamy whipped hot chocolate, as well as soup.

Canned Drink—Five selections for different flavor drinks. Holds 10 ounce or 12 ounce cans.

Cold Milk—Five selections. Holds half pint cartons—40 cartons per selection.

Chilled Juice—Five selections. Holds 6 ounce or 8 ounce cans.

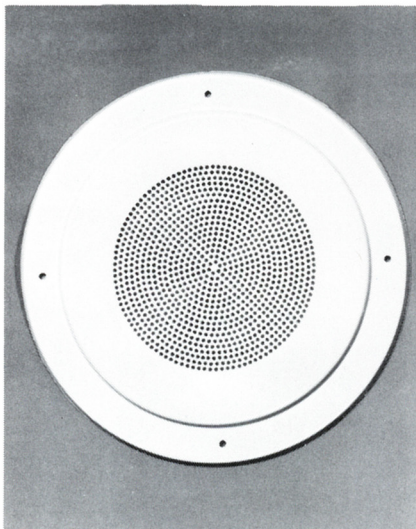
30-H Merchandise Mart—Thirty selections for cigarettes, chips, candy, gum, and snacks. Can be set for four prices.

25-H Merchandise Mart—Twenty-five selections for candy bars, snacks, chips, or small cakes. Can be set for four prices.

Federal Machine Corporation offers a complete line of cigarette, candy, coffee/hot chocolate/soup, popcorn, canned drink machines, and

merchandise marts designed for maximum profit for any location owner. More about Federal Machine Corporation Automatic Merchandising Machines can be obtained by writing to Federal Machine Corporation, Box 1779, Des Moines, Iowa 50306.

'Baffled' about sound?



Quam-Nichols Company has augmented its line of steel *ceiling baffles* with an 8 inch round baffle with hidden loudspeaker mounting studs. Like all Quam products, the new baffles are available for shipping the same day the order is received.

The *Model BR8WCS* is made of 22 gauge steel. It has a two-step contour, and the corrosion-resistant metal is finished with white baked epoxy. It has four mounting holes and four hidden loudspeaker mounting studs. Complete mounting hardware is included.

The new ceiling baffle fits all 8 inch loudspeakers and round backboxes. In addition, it is available in factory pre-assembled Quam loudspeaker/transformer/baffle combinations.

End-user price of the *Model BR8WCS* is as low as \$4.95 each in quantities of 96. Other quantity pricing and information on the complete line of Quam sound products is available from Quam-Nichols Company Inc., 234 East Marquette Road, Chicago, IL 60637. Telephone: 1-312/488-5800.

Business Builders distributes "Envirographics"

Business Builders, the game center promotion agency out of Cupertino, California, is now an authorized distributor for the *Envirographics* posters, signs, and promotion aids.

"We are excited about representing these new graphic products developed by Willis Industries," reported Frank Nickerson, national sales manager for Wico Corporation. "The response to initial marketing efforts shows high demand for the product. Because *Envirographics* works together with the other promotion products represented by Business Builders, we feel this is a good addition to our distribution."

Envirographics is a kit of wall graphics, signs, and support material that will add to the decor of an amusement center. There are 10 large space theme posters, a Coming Events Board, a Special Video Scoreboard where high scorers can be posted and changed with a grease pencil, Open and Closed Signs, Rules of the House, and more.

There is even a Complete High Scorer contest package with "Joystick Awards" decals and special signs to post over the games. There are a total of 19 signs all mounted on foam board



Carol Kantor, Business Builders' president, shows a few of the signs in the new Envirographics product she now represents.

for easy display and quantities of six additional decals for the contest and out-of-order display. All of these graphics were designed by Willis Industries, the company that specializes in game graphics.

Carol Kantor, president of Business Builders, said, "I have watched the development of this product by Willis and am glad that Wico has given me the opportunity to distribute it in my line of promotion products. The signs and posters give an added level of excitement to the game center environment that is good for promotion."

The *Envirographics* kit and individual signs and posters will be included in the new Business Builders Catalog for the AMOA.

For further information, contact Carol Kantor at Business Builders, 10381 S. De Anza Blvd., Suite 209, Cupertino, CA 95014. Telephone: 408/446-4400.

Marathon 10: rechargeable power pack

Responding to the consumer demand for a highly rechargeable, lightweight

power source capable of delivering up to eight hours of portable VCR (video cassette recorder) operating time, Enerlite Products Corporation introduces the *Enerlite Marathon 10*, a 3.5 pound nickel cadmium power pack.

Enerlite is the developer, manufacturer, and distributor of quality products employing unvented nicad cells, including the Search Light, a high intensity, professional-quality rechargeable flashlight.

The *Enerlite Marathon 10* is the first auxiliary nicad power pack designed specifically for the consumer market. According to the manufacturer's specifications, it can match or outperform any of the 12 volt, 4 amp pro-industrial power packs that typically sell in the \$500 range. The *Marathon 10* has a suggested list price of \$169.95.



The *Enerlite Marathon 10* weighs 3.5 pounds and is capable of delivering approximately 1,000-1,500 charge/discharge cycles and a four to eight hour VCR range, depending on equipment used and battery condition. Other equipment on today's market with comparable applications weigh from 6-15 pounds, are rechargeable for a maximum of 150 cycles, and don't offer flame retardant construction. Additionally, in contrast to the current lead acid battery packs, the *Enerlite Marathon 10* will not be damaged if overcharged or left discharged, company officials claim.

The *Enerlite Marathon 10* employs unvented nicad cells with excellent electrical characteristics. By using the special nicad cells, the *Enerlite Marathon 10* designers eliminated electrolyte loss.

They also provide materials for a newly developed separator that provides high ion mobility with stability. The result of these combined technologies is high energy density (low weight) and long-term reliability.

The *Enerlite Marathon 10* power pack is produced in compliance with a strict Quality Assurance Program that includes 100 percent in-progress and final inspections. Among the technologies employed that enable the *Enerlite Marathon 10* to provide high energy, long life, and reliability is a fully automated, robotic-like, resistance spot welding process that assure maximum contact between battery cells.

The housing or plastic casing, is designed in such a way that all cells are mechanically locked in place, thereby eliminating cell movement. The casting consists of a flame retardant, high impact, special purpose [Acyro-Nitrite Butadiene Styrene] plastic with a built-in loop accepting a belt or shoulder strap.

For more information regarding the *Enerlite Marathon 10*, contact Enerlite Products Corporation, 550 Stephenson Highway, Troy, Michigan 48084. Telephone: 313/589-0058, 800/225-1657.

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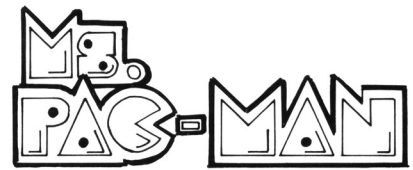
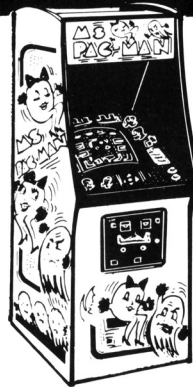
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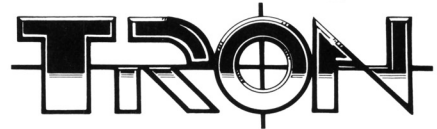
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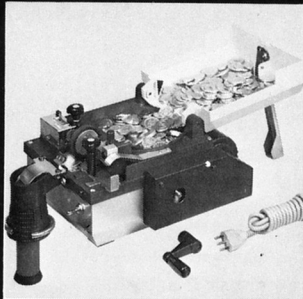
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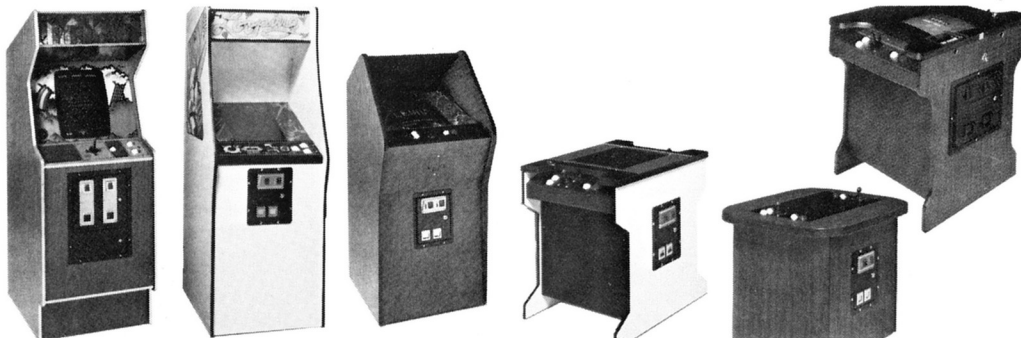
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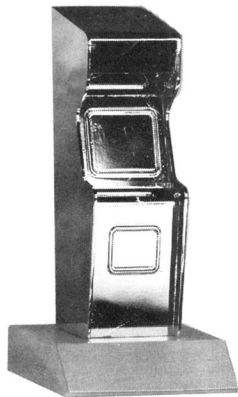
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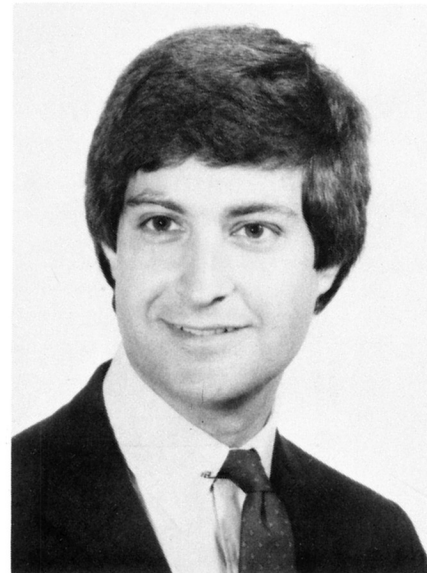
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SNAPSHOTS



Atari Inc. and Marriott's Great America have joined to develop a video entertainment center in Santa Clara, California. The Atari Video Adventure is a game room that will

ultimately include a video center demonstrating the evolution and application of video technology and a retail center featuring video games and computer products for home use.

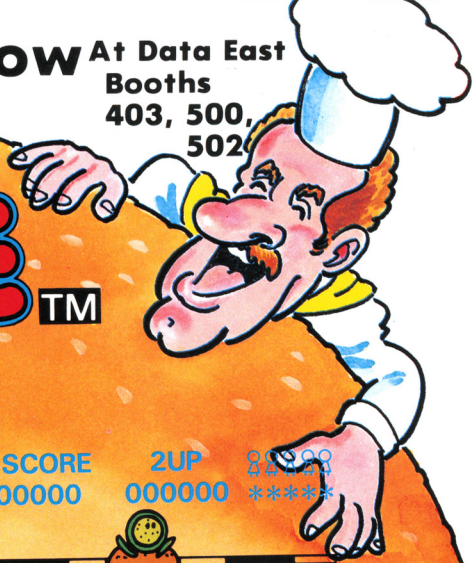


In a move to improve communications between home offices and distributors, **Bally/Midway Manufacturing** and **Bally Pinball Division** jointly appointed **John Margold** as Eastern regional sales rep. Margold will assist the firm's marketing team in creating direct contact with distributors, providing them with the latest information on products and promotions. Margold comes to Bally/Midway from Rowe International's distributorship in Dedham, Massachusetts, just as Bally distributing exec Chuck Arnold did earlier this year.



It would be hard to say Barstow, California's **Palace Arcade** did not have the support of its community when it opened this summer. A grand opening ceremony featured a ribbon cutting, with the town's leading citizens participating. Left to right, Lavawn Keller (wife of the mayor), Dick Goldsmith (Palace Arcade owner), Bill Green (city council), Dwight Parks (former director of the Barstow Chamber of Commerce), Betty Goldsmith (owner), Barney Keller (mayor), Corynne Averill (Miss Barstow), Iva Hartman (president of Chamber of Commerce), and Shirlee Hora (city council).

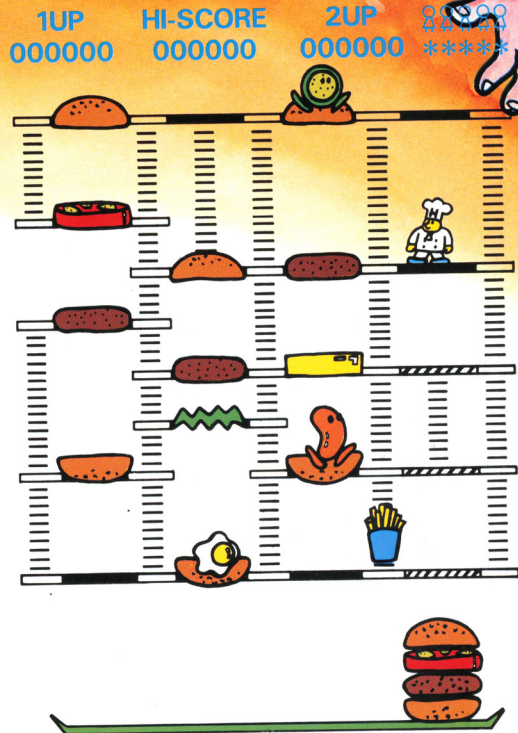
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How to play

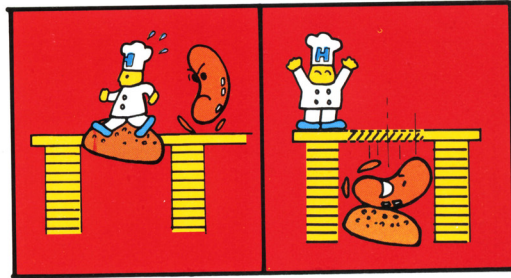
Here's how to make yourself a hamburger and have a challenging and fun time as you go.

- ★ Use the lever to jog your merry Chef, Peter Pepper™, over the ingredients — buns — hamburger patties — tomato slices — cheese — and drop them onto the plates below.
- ★ Avoid the animated characters — Mr. Hotdog™, Mr. Egg™, Mr. Pickle™ — they're out to catch your Chef and bring him down.
- ★ Red button — press to toss pepper in the animated nasties' faces. (replenish pepper supply and get bonus points by picking up ice cream, cup of coffee or french fries when they show on screen).
- ★ The animated characters are nasty but they're also tasty so why not mix them in your burger — drop a bun on them — or — drop the bun they're standing on. This is a great way to eliminate them from the screen and earn bonus points.



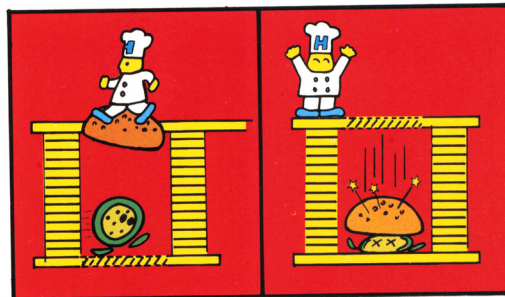
BONUS

Drop an ingredient while one of the nasties is on it and both fall TWO levels.



BONUS

Add a tasty nasty to your burger by dropping an ingredient on top of it.



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