

PLAY METER

SEPTEMBER 15, 1982



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The game that puts space games in perspective.

Zaxxon technology and creativity present a 3-dimensional-like playfield which sets Zaxxon apart—and makes Zaxxon the first of a new generation of video games.

An authentic fighter control stick brings fantastic new realism to Zaxxon game play. Up, down, bank right, bank left—the player uses the control stick to maneuver his space ship just like a real fighter pilot.

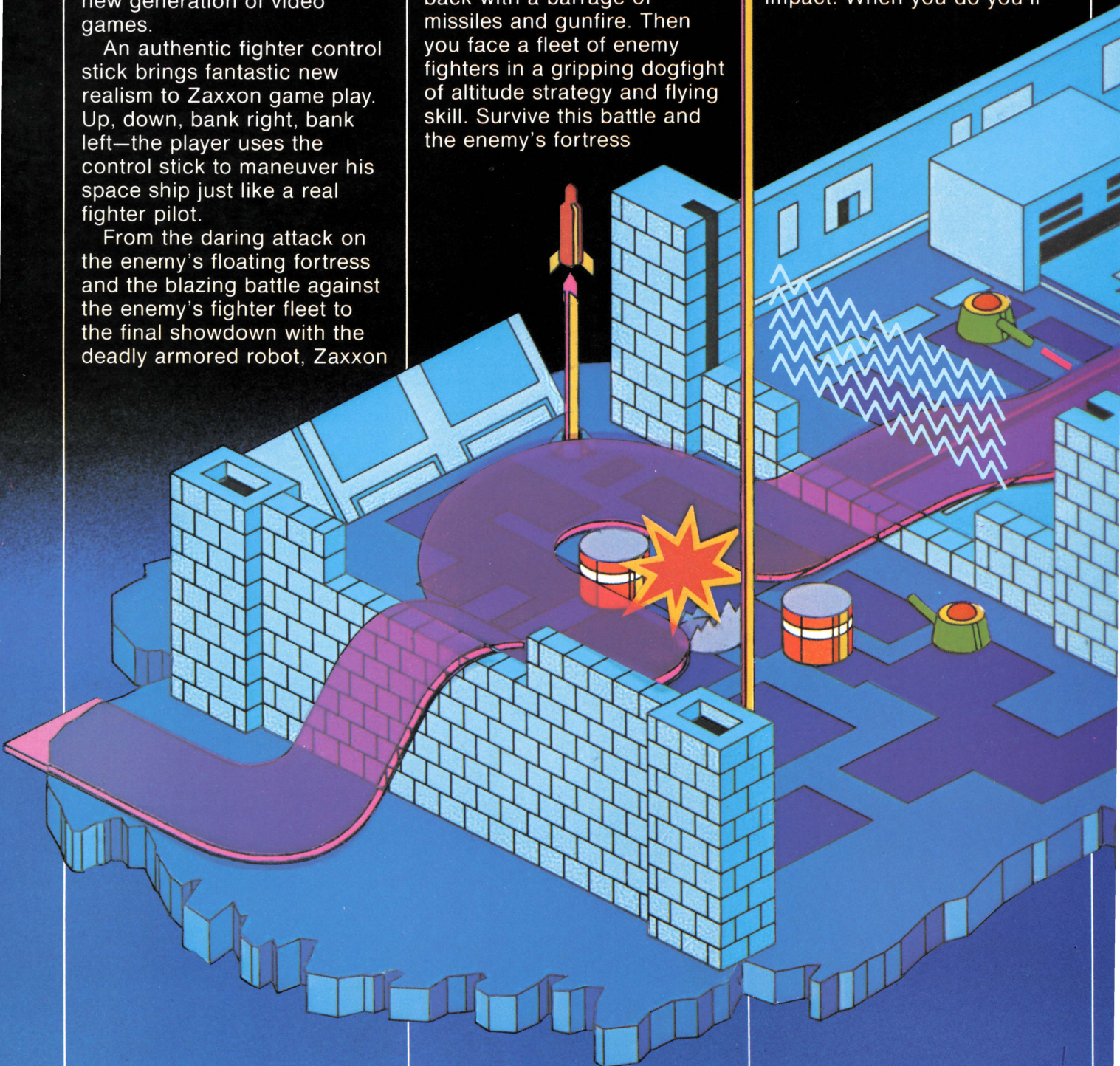
From the daring attack on the enemy's floating fortress and the blazing battle against the enemy's fighter fleet to the final showdown with the deadly armored robot, Zaxxon

challenges the skill and imagination of every player at every level of skill.

Imagine yourself the pilot, the pilot's control stick in your grasp. You attack the enemy fortress—climbing, diving, strafing to score points and extra fuel. The enemy fights back with a barrage of missiles and gunfire. Then you face a fleet of enemy fighters in a gripping dogfight of altitude strategy and flying skill. Survive this battle and the enemy's fortress

defended with laser barriers, then you've earned the ultimate challenge: a blazing confrontation with the powerful robot, armed with a lethal homing missile.

Zaxxon is the one game that you must see to believe. You have to play it to feel its impact. When you do you'll





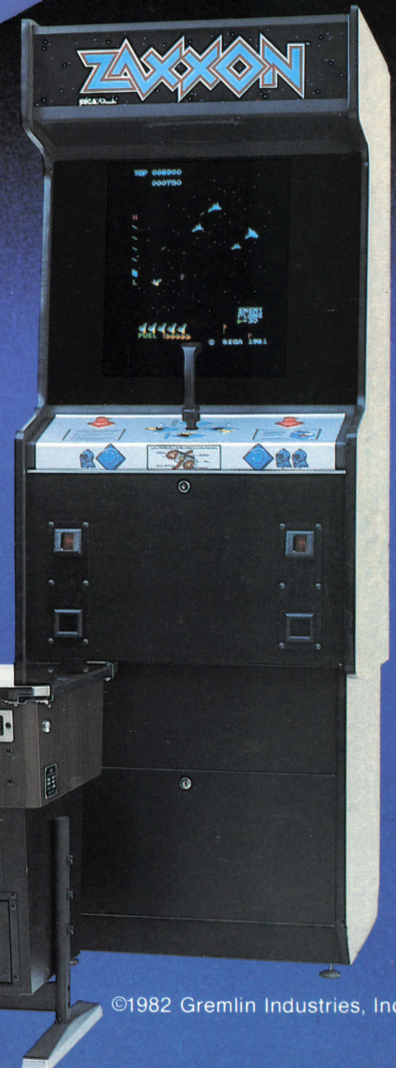
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know what we mean when we say Zaxxon gives space games a fantastic new perspective.

For more information on the pace-setting Zaxxon and its new dimension for cash collections, call your nearest Sega/Gremlin distributor.

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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.

	Sept. 15	Sept. 1
National video average	\$205	\$204
1. <i>Tron</i> /Midway	\$279	\$276
2. <i>Ms. Pac-Man</i> /Midway	\$244	\$249
3. <i>Robotron</i> /Williams	\$243	\$224
★ 4. <i>Kangaroo</i> /Atari	\$229	\$233
5. <i>Turbo</i> /Gremlin	\$226	\$245
6. <i>Dig Dug</i> /Atari	\$221	\$224
7. <i>Zaxxon</i> /Gremlin	\$219	\$249
8. <i>Galaga</i> /Midway	\$217	\$223
9. <i>Pac-Man</i> /Midway	\$216	\$216
10. <i>Stargate</i> /Williams	\$214	\$211
11. <i>Donkey Kong</i> /Nintendo	\$207	\$212

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

TOP VIDEOS Street Locations

Nine of 22 videos (41%) with a response rate over ten percent have above average earnings.

	Sept. 15	Sept. 1
National video average	\$179	\$170
★ 1. <i>Tron</i> /Midway	\$245	\$250
2. <i>Galaga</i> /Midway	\$225	\$210
3. <i>Ms. Pac-Man</i> /Midway	\$216	\$206
4. <i>Robotron</i> /Williams	\$215	\$182
5. <i>Stargate</i> /Williams	\$197	\$182
6. <i>Donkey Kong</i> /Nintendo	\$190	\$176
★ 7. <i>Turbo</i> /Gremlin	\$188	\$183
8. <i>Dig Dug</i> /Atari	\$184	\$179

TOP PINBALLS

Arcade & Street Locations

Four of 8 pinballs (50%) with a response rate over ten percent have above average earnings.

	Sept. 15	Sept. 1
National pinball average	\$115	\$117
1. <i>Caveman</i> /Gottlieb	\$146	\$146
2. <i>Mr. & Mrs. Pac-Man</i> /Bally	\$130	\$141
★ 3. <i>Orbitor 1</i> /Stern	\$122	\$146
4. <i>Hyperball</i> /Williams	\$119	—

Provisionally Rated Videos

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

VIDEOS

Arcade Locations

Provisional Ratings	Sept. 15	Sept. 1
<i>Tutankham</i> /Stern	\$275	—
<i>Looping</i> /Venture Line	\$220	—

VIDEOS

Street Locations

Provisional Ratings	Sept. 15	Sept. 1
<i>Tutankham</i> /Stern	\$325	—

Operator/readers who would like to join the ever-growing numbers of readers participating currently in the survey, write: *Play Meter, Equipment Poll*, P.O. Box 24170, New Orleans 70184.



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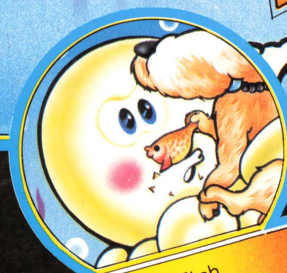
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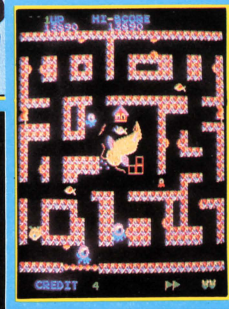
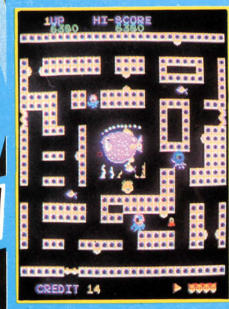
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PLAY METER

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Home video games may be healthy for American families, but they may not be the best medicine for the coin-op industry. Mary Claire Blakeman talks to Dr. Edna Mitchell, head of the department of education at Mills College in Oakland, Calif.

Getting Respect 35

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Careful Buying 40

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Cover Credit: Gremlin Industries Inc., Sega's arcade video game manufacturing subsidiary, used employee models for cover photo. Bob Harmon, sales manager, is father; Kay Knighten, executive secretary, is mother; Lorrie Burns, accounting clerk, is girl; and Paul DeMichele, son of Vera DeMichele, quality engineer, is boy. Designer: Jerry Olson. Photographer: Gordon Menzie.



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Whether these games are good or bad, they still split the available income so that your per game average is dropping.



Gullong

GUEST EDITORIAL

The coin-op industry tomorrow

By C. Barton Gullong

As you know, our industry is in trouble. So many games have been produced, and so many non-professionals are purchasing one or two games to go into the business that the saturation point is near or has reached all over the country.

In the small strip shopping center, where your game stood alone in the deli, now there is a knock-off next door in the pet store, two games on the other side in the jean store, and another two down the way in the barber shop. Whether these games are good or bad, they still split the available income so that your per game average is dropping.

On the other hand, the smaller manufacturers are going out of business or on the verge of bankruptcy. Soon only the majors will be left, and they, more than ever, will decide what you pay for games.

Your location owner doesn't care to hear your problems. If you won't put the hottest new game in a marginal location, there are three or four part-time "operators" with money to burn who are more than willing to make the foolish investment.

Now you must seek out the unique location that bears high traffic and is impervious to competition. The old bread and butter, non-glamorous pool tables and other small investment,

long-term return items are suddenly looking good again. The operator of tomorrow, the survivor, will not just be the man with the cash reserves to wait until the business opportunity entrepreneurs lose interest. He will be the creative, but cynical *businessman* who can swallow his pride and say good-bye to the unprofitable location that he has carried for years; will operate fewer games, in only the highest traffic areas; and can operate efficiently in a compact geographical radius.

It is now apparent that the next few months will see some takeovers of major distributors by major manufacturers. The major distributors hold the paper of most of their operators. When "Black Tuesday" comes for the operators who have bought too much, too high, at too heavy an interest rate, who but the distributors will be taking over their routes, and who will own those distributors? It seems that the circle is completing itself. What will you be doing for the next few months?

C. Barton Gullong
All-Weather Amusements
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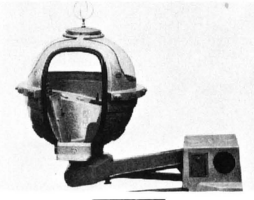
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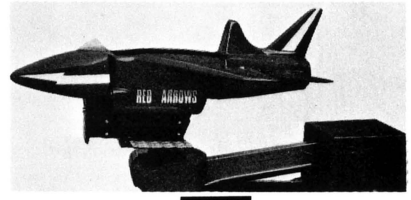
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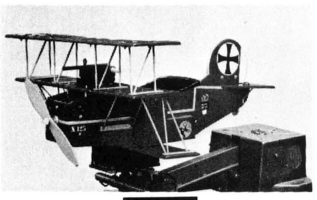
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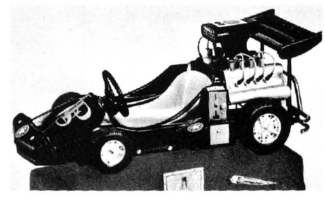


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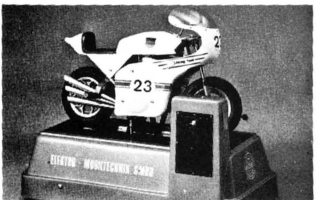
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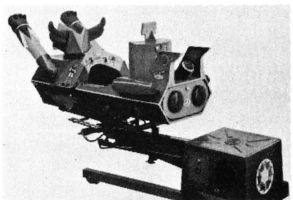
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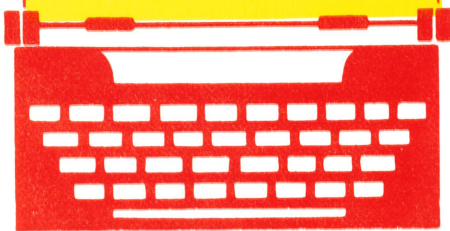
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Letters to the editor . . .



Token war

I am writing this to cause a shock wave in this industry and to dispel a major industry myth, if *Play Meter* dares print my letter.

I have been an arcade operator for 13 years. We also run a route of approximately 300 games. For 12 years we operated our arcade(s) very happily and extremely successfully on quarter-a-play and dreaded the day when tokens invaded our area. Needless to say, 10 months ago, Bally Corp. opened up a Games-R-Fun establishment in our area and promptly went 10 tokens for a dollar. After a short period of time, they reduced it to eight, then six. They maintained at six for approximately eight months.

Much to my consternation, we also gave in and went tokens in the one arcade that was most critically affected by Games-R-Fun. We matched them, six for a dollar out of self-defense and preservation. This cost us a \$500 change machine conversion and approximately \$3,000 for tokens.

During the 10 and eight period of time (approximately six to eight weeks) we lost a certain portion of business to Bally, but once we went six for a dollar, we gained back all of our business. However, and here's the trick, we were generating exactly the same volume as we were the previous year at the same time, but since the value of that coin going into the machine was now at 18¾ cents instead of 25 cents, we ended up losing approximately \$2,000 per week.

I was in the process of compiling all the information on the money we lost over the nine months in order to send it to Bally. Would it matter? With the amount that I lost in one location, and Bally owning???? establishments, even Bally had to look at the loss of revenue.

I was on the verge of contacting them, when lo-and-behold, Bally dropped to four for a dollar. They evidently saw the black and red of the whole situation.

Our whole establishment celebrated. Bally was our basic competition. Needless

to say, within 15 minutes after finding out, we also dropped to four for a dollar. Another major arcade in town dropped within two days.

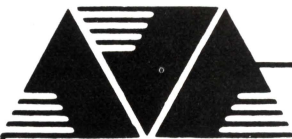
I have black and white documentation as to the amount of revenue loss I suffered in that nine month period of time—\$97,500! It is phenomenal. The reason—the practice, by operators, of changing the value of the dollar by issuing multiples of tokens other than four for a dollar.

Manufacturers are making record profits, distributors are smiling at their bank account balances, while the confused operator is running around in circles trying to figure out what he or she is doing wrong when everyone else is supposedly making

record money. Please, please, please, do not shaft *yourself*. We are the only industry that can be talked into thinking that we make money on a loaf of bread by giving a third of it away.

Those of you whom have been in the game room setup for less than a year do not yet know of what I speak. Those of you whom have operated for one to two years are getting the cold cruel realization between the eyes (and in the bank account balance), and those of you whom have operated longer than that are either gone or in a quandary as to what step to take next.

Those of you engaging in these asinine token wars are stabbing yourselves. If you



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think that you are making money with your six, eight, or whatever for a dollar, wait for 12 months and try to figure out where in the world you are going to raise \$45,000 to \$90,000 for replacing obsolete equipment.

My most successful arcades today are run on quarters or four for a dollar. I cherish the day when the token fad is obsolete.

Cheryl L. McCown
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[Ed. Note: The problem isn't tokens but rather the misuse of tokens. Operators

should be aware that in token wars, the only casualties are the operators.]

Open letter

Mr. Manufacturer:

Our industry has grown to tremendous proportion during the last number of years, and there are many arcade operators and route people, each, with thousands of machines.

Our cash control systems, I assume, are adequate—with one small flaw.

An operator with 40 arcades, running thousands of miles away from his home office, must rely on his manager or atten-

dant to fill out his collection sheets and/or meter readings. These meter readings are quite difficult for us at home office to continually verify. Therefore, my solution is: Why not have a small strip print-out of the meter reading, as taken by the attendant or manager? In this manner, I believe we will be coming very close to a foolproof collection system.

I am sure it is a simple matter to install this item at the manufacturing level.

May I hear your comments?

J. Lerner
Arcade Amusements Inc.
St. Laurent, Quebec

[Ed. Note: There are two systems available that we know about. International Totalizing Systems Inc. and the Nighthawk system by Vidcom. For more information, ITS is located at 1244 Chesnut St., Newton Upper Falls, Mass. 02164. Telephone: (617) 332-4400. To learn more about Nighthawk, write Vidcom at 2170 The Alameda, San Jose, Cal. 95126. Call (408) 248-1400.]

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"Video Invaders"

We note on page 45 of your May 1, 1982 issue that you mention a mid-April publication of a book titled "Video Invaders" which refers to flak raised over coin operated machines, as well as court actions which have taken place in America.

Our Association is keen to purchase this publication, as in Australia we suffer problems with Council objections and regulations to the industry, and we feel a book such as this will be an asset to us for referral purposes.

We would be pleased if you could advise us where we can obtain a copy of "Video Invaders" and also the price of the book.

We are pleased to inform you that Australian operators are keen readers of *Play Meter*, and your magazine is very popular in this country.

T. Hobday (Mrs.)
 Secretary
 National Amusement Machine
 Operators Association Limited
 Australia

[Ed. Note: "Video Invaders" by Steve Bloom costs \$11.95 in the cloth-bound version and \$5.95 in paperback. For information, contact Arco Publishing Inc., 215 Park Avenue South, New York, N.Y. 10003.]

Something on your mind you want to vent? Got a gripe? Full of praise? Have a question? If you have comments on the coin operated entertainment industry, write to *Play Meter*. Our "Letters to the Editor" columns are dedicated to you, the operator/reader.

NEWS

BY
MIKE
SHAW

FBI EXPLODES PIRACY SCHEME • FEDERAL EXCISE TAX BEATEN • COURT UPHOLDS LOCATION CONTRACTS • 'TRON' CONTROVERSY AIRED • DISTRIBS WON'T BUY BACK USED VIDEOS • MOM BATTLES ON • U.S. OPEN SET FOR L.A. • CONNECTICUT MOVES TOWARD LICENSE FEE • PORT CHESTER CRUMBLES CHEESE'S PLAN • ON BALLY ADVANCE • CLAMORING AGAINST THE CLAMOR • STATE ASSOCIATIONS DIVIDING • SHORT SUBJECTS

FBI EXPLODES PIRACY SCHEME

Behind the clout of the federal government's tough new stance on dealing with copyright criminals, the Federal Bureau of Investigation has seized an estimated \$200,000 worth of pirated video games.

The games allegedly infringe on the copyrights of *Pac-Man* (Midway Manufacturing), *Donkey Kong* (Nintendo of America), and *Frogger* (Sega/Gremlin Enterprises).

A May 24, 1982, amendment signed into federal law by President Reagan bolstered the Criminal Copyright Infringement Provisions of Federal Law by toughening penalties for convicted infringers. The new law provides sanctions of up to \$250,000 in fines, and even more dramatically, up to five years imprisonment.

Sources at the FBI in New York told *Play Meter* that federal agency sees the increased severity in the penalty as a mandate from the federal government for the FBI to crack down on this type of crime. Sources indicated that the industry's reported earnings for 1981—estimated anywhere from \$5.5 billion to \$8.5 billion—and its historically reputed connections with organized crime have led to the directive.

In the first action given impetus by the new law, the FBI and its "strike force" climaxed a year-long investigation of U.S. Amusements and its affiliated company, Bagatelle Amusements, with searches under three warrants at the company's warehouses in New York and New Jersey. There, 60 allegedly illegal games were seized along with the books and records of the firm.

U.S. Amusements has been named in several suits brought against it this year by major manufacturers of video games.

Most recently on May 27, the company was enjoined from selling copies of Cinematronics's *Naughty Boy*. (See *Play Meter*, July 1, p. 18).

FBI sources said no arrests had been made, but the company's records are now with the federal grand jury and employees of U.S. Amusements, including its boss Mryon Sugarman, are being subpoenaed.

The investigation followed the firm as it altered its manner of conducting the allegedly illegal part of its business over the year. Initially, U.S. Amusements' salesmen were openly offering the copies to even the most casually interested potential buyers, FBI sources said. But, as manufacturers with copyrights to protect demonstrated their eagerness to enforce their rights, the *modus operandi* at U.S. Amusements changed.

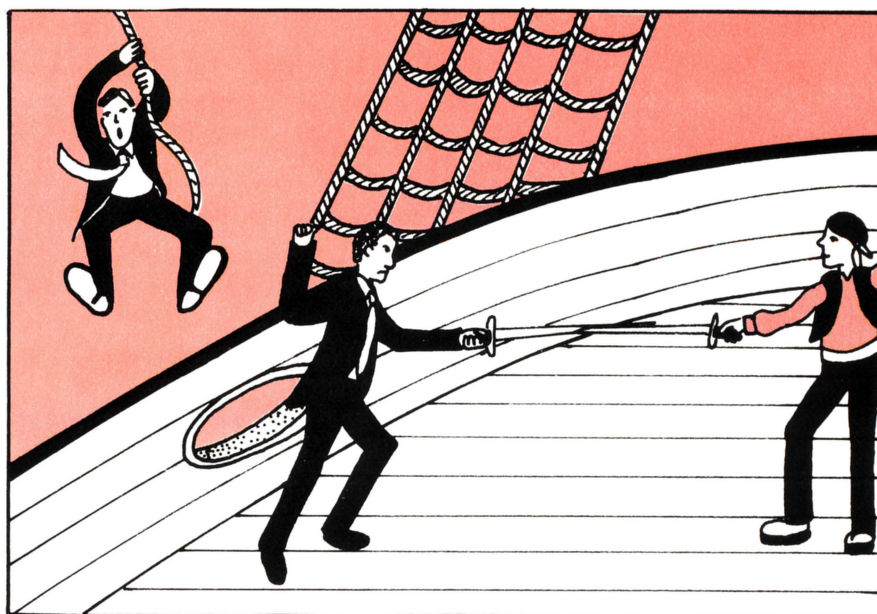
Toward the end of the investigation, sources said, U.S. Amusements had moved its illegitimate games to the Bagatelle

location in Hillsdale, and buyers for those games were carefully screened before they were sent to the Hillsdale store.

In addition to criminal sanctions for violating copyright laws, Sugarman and his associates could face federal fraud charges, interstate transfer charges, and penalties applicable to individuals found operating as part of a ring of organized crime.

FBI sources said pirating videos is being attributed to underworld figures and organized crime, and that U.S. Amusements is just the first company to be cited in the investigation that continues into several other alleged violators.

FBI sources said the agency is taking the lead in cracking down on video game copyright criminals, and during the *Play Meter* interview, informally offered to consult with industry associations that might be interested in how the FBI is tackling the piracy problem. •



FEDERAL EXCISE TAX BEATEN

A section of the nation's new tax law designed to eliminate some \$98 billion of federal debt over the next three years featured a 10 percent excise tax on coin-operated amusements.

But the Amusement Games Manufacturers Association and its new director, Glenn Braswell, are claiming they extricated the amusement tax from that legislation.

The 10 percent excise tax was in the first draft of the tax bill, but the measure was no longer a part of the bill when it left the Senate side of Congress on its way to the House of Representatives. The amusement tax question was not revived by the House, and at this writing, while final editions of the legislation are being formulated in conference sessions, there was still no indication the amusement industry would be called upon to shoulder the burden of the federal deficit.

Braswell said AGMA was able to convince the Joint Committee on Taxation to abandon the coin-op amusement tax by capitalizing on the fact that the committee had no economic data indicating the real revenue effects of the proposal.

The enlighten Republican committee members, Braswell showed how video games made the difference for many location owners between profit and loss. Without video games, many locations would suffer annual income losses, and the federal government would subsequently lose tax revenue it would have received from that business. Hence, the imposition of an excise tax would lead to an elimination of federal income taxes and be, in effect, counterproductive, he said.

In dealing with committee Democrats, AGMA stressed the social benefits of videos, pointing out video game entertainment is a low cost source of pleasure for the masses. To press for a tax that would diminish the games would be to deprive many low income people from the only form of entertainment they can afford.

Braswell and AGMA have been busy lately attending national conventions of civic leaders. Early in July, AGMA set up a booth of games in Baltimore at the 1982 National Association of Counties Convention, a gathering of the nation's elected county officials, the largest gathering of elected officials in the United States. In late July, AGMA set up shop once again, this time in Chicago at the National Convention of State Legislators.

At both conventions, Braswell and AGMA staffers talked with politicians and their families about the positive side of videos. They offered free play to delegates, their spouses, and their children and demonstrated the fun of playing.

"We have more friends than we expect," said Braswell after a month of conversation with political folk from across the nation.

"The responses to the games came in three categories," Braswell explained. "Delegates who were first-time players remarked they found the games to be great fun. Many had been in a position of making decisions on the games without knowing anything about them. They remarked they were surprised there was so much objection to the games.

"In the second category were delegates' spouses who said they would tell their husbands to stop voting against the games.

"The third type of player was the delegate who, seeing the games are so popular, wanted to know the location of our booth at the next convention so he could arrange a site next to us."

Braswell said the direction AGMA will continue to take in behalf of the coin-op industry is to stress the positive side of video game entertainment, defining the social revolution in the entertainment field that has accompanied the popularity of the games.

COURT UPHOLDS LOCATION CONTRACTS

The Broward County Circuit Court in Fort Lauderdale, Fla., has settled an argument

over the validity of location contracts.

In a late July decision, the court upheld the validity of location contracts between Paramount Vending of Fort Lauderdale and several of its clients. The clients had ignored the company's contracts and ousted its cigarette and game machines in favor of those of an Orlando firm, All-American Vending.

Initially in July 1981, the court had issued a preliminary injunction against All-American to withdraw its machines from at least one of the six locations that Paramount claimed had dishonored its contracts in order to patronize All-American.

After the injunction was levelled against All-American, that firm countersued Paramount for restraint of trade violations. (See *Play Meter*, Dec. 1, 1981, p. 85) Those countersuits were dismissed by the court, and all rulings rendered were in favor of Paramount and the solidarity of its original contracts, according to Paramount attorney Ira Marcus.

In addition to reinforcing its contracts, Paramount was awarded \$25,000 in damages by the court, Marcus reported.

Only one of the locations, a Veterans of Foreign Wars' post, was not sued because, Marcus said, the account was too small to involve.

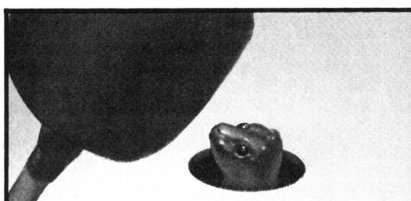
Locations had shown preference for the Orlando firm when it convinced them they could take in more money by purchasing machines direct from All-American and operating them themselves.

"They told them they could make more money by owning the machines," Marcus confirmed, "but they found out different. In the case of the Nobi Japanese restaurant (the subject location of the July 1981 injunction), its \$25 per month commission was better than what it was making after paying an \$88 per month note on the cigarette machine it had bought from All-American."

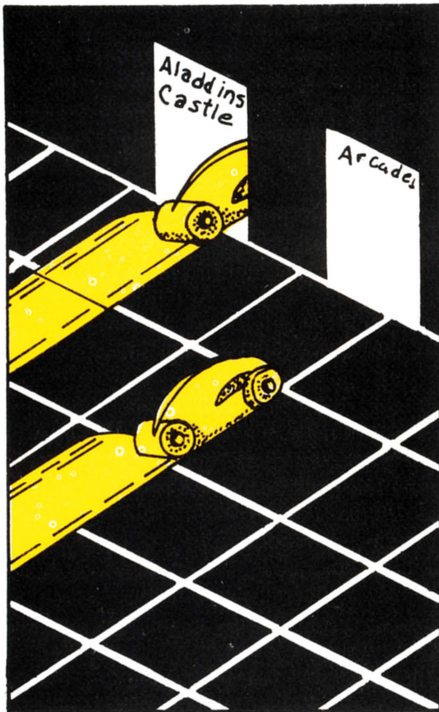
'TRON' CONTROVERSY AIRED

The Utah Amusement Music Association is encouraging its members not to buy *Tron* games and to buy Bally and Midway products "only when necessary."

The action comes in the wake of the national *Tron* tournament, conducted by



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Aladdin's Castle in support of the Disney feature film and its parent company's

(Bally/Midway Manufacturing) video game. Controversy occurs over the early distribution of the game and the way the tournament was conducted.

In a letter to Bally's Chuck Farmer, Utah association President Craig Johnson told Bally/Midway of his membership's objection to the exclusion of all operators except Aladdin's Castles from participation in the tournament and early distribution of the games.

Johnson said he does not object to Bally being in the operation segment of the industry, but he strenuously objects to the "unfair" method of competition arising from the distribution of the games to Aladdin's Castle locations "eight to 12 weeks before they were available to operators.

"I don't mind competing with Aladdin's Castle for my business. I feel I can do some things locally that make me competitive. But Bally is supposed to serve the industry fairly, and they have hurt the industry by keeping us from benefiting from the Disney ads for *Tron*. The peak life of a game is limited by its public exposure, and we missed out on eight to 12 weeks of promotion."

Johnson said he had not bought any

Tron games despite pressure from some of his clients for the game. Other operators contacted in the state said they had also not purchased *Tron* games.

Aladdin's Castle's Bernard Powers said the company kept its *Trons* to itself because of the time schedule involved in connection with a contract with Disney to get the tournament underway before the movie promotion kicked off.

"We operated the tournament in advance of the publicity for the movie and risked \$2 million. We don't believe we could get operators, on a national scale, to risk that much of an investment on an unknown and unproved game."

"Some are buying *Trons*," Johnson said of the state's 75 operators, "but we are asking them not to buy anymore than they have to."

Ohio Amusement and Music Association President William Levine also objected to Bally/Midway about the unavailability of *Tron* in his state. Bally's associate general counsel Cary Gaan responded for the firm.

"We are obviously concerned that Bally's Aladdin's Castle/Walt Disney promotion of *Tron* through the *Tron* tournament has had the unintended affect of

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causing you to question the supplier-customer loyalty we have attempted to develop over the years," Gaan wrote. "Please accept our apology for any concern raised in your mind with respect to *Tron* deliveries."

Players were not 100 percent satisfied with the tournament either.

A first round (location) winner in Mississippi said he practiced several weeks in preparation for the tournament only to get to district action and a changed *Tron* game.

"I prepared to go to the district championship after winning the store championship...playing three to four hours a day, seven days a week for five weeks. I had to drive 300 miles to the district competition and found out...they had changed the entire game."

"The game has nine levels of difficulty," Aladdin's Powers explained. He said store level competition was set at level No. 1, district competition at level No. 5, and the final three rounds in New York were set at levels No. 7, No. 8, and No. 9 respectively.

He explained the elimination of earlier levels in the game simply brought the action to a more difficult level more quickly passing slower and simpler game play.

"Anyone capable of winning would have been familiar with those levels of play," Powers said.

DISTRIBS WON'T BUY BACK USED VIDEOS

The deluge of new equipment coming from manufacturers during the 1980s video boom has created an equipment glut that has altered the way distributors and operators do business. Less than a year ago, it was common practice for an operator to use his old games as trade-ins—now it is a rare procedure.

"Rural markets used to absorb the trade-ins, but not now," said John Gatens, president of Southwest Vending, one of the nation's major distributorships. "With all the publicity surrounding the video games now, everyone everywhere wants the most popular games."

With the disappearance of the markets for used games and the demand for the new games more pressing than ever, the situation is one with no easy answer.

The situation developed, according to



Gatens, early in the video boom period. New locations were springing up everywhere. Grocery stores like the Safeway chain (the country's second biggest retailer next to Sears), convenience stores, restaurants—businesses that had never considered taking the games—were anxious to get a split of the profits from these popular pieces that required no initial costs to the store owner and no maintenance once installed.

"At the beginning, locations would take anything," Gatens said. "It didn't matter what the game was; they just wanted equipment. But now they have become more sophisticated. They want equipment replaced with the top games, the proven earners."

And so the equipment glut problem builds. Unlike gasoline, you can't expend video games. Only their appeal is perishable. So the unwanted games sit, somewhere, bulky and occupying expensive warehouse space.

"Right now we are trying to sell the used games to foreign markets, particularly Mexico," said Gatens, whose Texas firm sees Mexico as a logical geographic direction to unload used videos.

But apparently the attitude of the Mexican government is not positive.

"Like many poor and undeveloped nations, the government looks upon these games as counterproductive," he offered.

So games sent into Mexico are hit with tough importing fees, with the result that many games get into Mexico illegally. Subsequently, they are subject to being picked up at any government official's whim. That common practice provides another reason for the government to frown on videos and their entertainment value.

Operators besieged by the current equipment glut will not get a great deal of

sympathy from distributors.

"Why should an operator expect a distributor to take the games back after they have paid for themselves many times over?" Gatens said. "We don't have a market for the games, and the operator has already made a fortune on them. To take a trade-in on that basis is like buying one game in order to sell another."

MOM BATTLES ON

Michigan operators may have won the battle, but the war is far from over.

After defeating a proposed 4 percent gross receipts tax on amusements in May, the Music Operators of Michigan under the direction of Walt Maner is still geared up to stave off any further attempts to burden the coin-op industry. Attempts could come up during this fall's legislative sessions in the state, including a possible revitalization of that 4 percent take measure.

Michigan's sagging economy, brought about by a severe depression in the automotive industry and a general decline in construction related industries, will be looked at hard by legislators who need to find ways to deal with a \$50 to \$100 million budget deficit and a drastic unemployment picture.

One proposal to be considered by the state's congressional body is a "job development bank," a bureaucratic body that would be funded by another version of the 4 percent amusement device tax.

"Because the tendency is toward less government," Maner commented, "I don't think that issue will get much support."

Maner said that a "ripple" effect from the declining auto industry has been devastating to the state. Industries that supply the big automotive companies have failed and left employees jobless.

In its initial effort to tax operators, the state used *Play Meter's* Equipment Poll to determine income from locations.

"They used it incorrectly," said Maner, who explained the state used the top game averages to estimate earnings of all games. A New York distributor recently told the Rochester *Democrat and Chronicle* that operators can lose money on up to 70 percent of the games they buy.

To defeat the 4 percent tax, Maner said, MOM brought several operators to the



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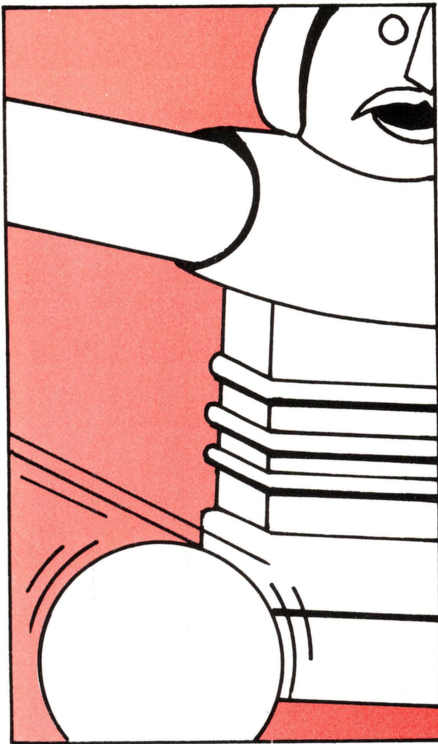
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state capital in Lansing where they spent three weeks prior to a vote circulating through the offices of state senators and representatives. Their repeated visits created the impression there were even more operators around than the number indicated.

The operators also were assisted in their plight by other industries that would have been adversely affected by the tax. Representatives of motion picture companies, racetracks, cable TV companies, and other entertainment industries worked with operators to help defeat the proposed tax measure. •

U.S. OPEN SET FOR L.A.



The stage is set for the first Coin Sports International championship foosball tournament Labor Day weekend in Los Angeles.

Co-sponsored by Dynamo, manufacturers of the table used exclusively for Coin Sports tournament play, the U.S. Open, as it has been titled, will award \$10,000 to winners in three categories, open, novice, and rookie.

The prize money was placed in escrow in a Los Angeles bank early in August so there would be no doubt payments would be awarded to the winners, said Johnny Lott, one of the Coin Sports' principals

helping stage the tournament.

The Coin Sports schedule of tournaments is meant to fill the void left by Lee Peppard and his Tournament Soccer schedule of championship tournaments that fell apart last year when Peppard failed to come up with prize money for a games competition in Chicago.

The first of Coin Sports' scheduled "big money" tournaments, being held at the Sheraton Plaza Hotel in Los Angeles, features Lott and partner Doug Fury defending their national doubles title.

Additionally, the tournament has taken on a charitable aspect in its connection with a new charity designed to help young runaways. A portion of the proceeds, in combination with some contributions Coin Sports is seeking, will go to the new Youth Rescue Fund, a national organization headed by some of the entertainment industry's top young celebrities. The organization carries the motto, "Kids Helping Kids."

A follow-up tournament, the World Championships, is scheduled for the Radisson Hotel in Chicago in November. Prize money and details for that tournament are to be announced at the U.S. Open tournament. •

CONNECTICUT MOVES TOWARD LICENSE FEE

More than 1,000 bar owners showed up at a public hearing in Connecticut to help defeat a 7.5 percent gross receipts state tax proposal.

James Kenney, a distributor serving parts of Rhode Island and Connecticut, is thankful that those states have not, to date, imposed burdensome fees or taxes on the coin-op industry. But, he added, Connecticut is ready to pass some licensing legislation.

Early this year, Connecticut decided it wanted some revenue from the games that had proliferated; so it set up a committee to study the issue, Kenney said.

"The legislature wanted to know how we felt they should handle our industry. When over 1,500 people showed at the public hearing to object to a gross receipts tax, the committee decided to table the issue for further study."

The result of the committee's study, apparently, is a licensing fee of \$50 per game—a stipulation industry execs do not oppose.

"I am in favor of some regulation at the

state level," Kenney said.

Kenney is voicing an opinion echoed by politically cognizant industry people in several states who hope that state regulation will provide some uniformity throughout the state and eliminate much of the arbitrary, and often irrational, restrictions imposed by local community ruling bodies. •

PORT CHESTER CRUMBLES CHEESE'S PLAN

An effort by a Pizza Time Theatre franchiser to get the Port Chester, Westchester County, New York Board of Trustees to ease their limits of two coin-op games per establishment and allow a 40-game operation to open there has failed.

Having attended some Board meetings with a companion dressed as Chuck E. Cheese, the main character in the Pizza Time lineup of animated performers, franchiser Roger Groh continues to try to get the Board to reverse its decision claiming his operation is "not a video game parlor."

"Perhaps we can show them the light," Groh said. "We are not a video game parlor. The board does not realize that. The reaction across the country is unless you have been there, you're going to hate us because you think we're a video game parlor. Once you have been there, you'll love us."

Groh angered local operators who had worked with the town Board to develop an ordinance that would keep some games in operation in the city. (See *Play Meter*, Aug. 15, p. 31-32.) Groh's attempts to circumvent that ordinance without consulting the operators has rallied operators support for the town, the ordinance, and the effort to keep Pizza Time from opening.

In addition to the Port Chester location, Groh wants to open three other Pizza Time Theatres in Westchester County. •

ON BALLY ADVANCE

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Magical Spot	850
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Distributing to Bally Midwest, we thought it would be appropriate when Bally sought to attach its corporate name to its Pacific Coast branch, to name it Bally Pacific.

But, alas, we are not in the distributor naming business. The correct new name for Bally's San Francisco distributorship is Bally Advance, not Bally Pacific as we stated on page 33 of our Aug. 15 issue. Our apologies to Bally Advance President Chet McMurdie and his staff.

CLAMORING AGAINST THE CLAMOR

City attorneys for the Smokey Mountain tourist town of Gatlinburg, Tenn., are attacking the sounds of video games by trying to enforce an anti-noise ordinance against arcades that line the city's neon-lit main boulevard.

But operators are noisily objecting.

"The city trolleys are illegal under this ordinance," said Bill Jenkins, an attorney representing arcade owners. "They ding. The street musicians and wood carvers are illegal."

The operators have said the sounds are necessary for the players to play the games, but city attorney Ron Sharp claimed the noise is blared onto the parkway to attract business.



"They are intruding on the peace and quiet of people walking on the sidewalk," Sharp said.

The clatter is worse this year, Sharpe continued, because more arcades have opened on the street.

"I notice a lot of the machines don't just make clicks and buzzes. They have sirens that go off, and a number of cars driving downtown have been confused and alarmed because the drivers thought an ambulance was coming at them," Sharp contended.

Jenkins countered that the ordinance was too vague to be constitutionally sound.

"Nobody knows when they are violating it. You've got a cop who has super hearing and another cop who is near deaf. Which one should decide if the arcades are too noisy?" he asked.

STATE ASSOCIATIONS DIVIDING

With the mounting intent of local politicians to get a piece of video game profits, some state associations are trying to get more input into operator problems by diversifying into regional associations.

Certain state associations have decided they can be best used in regard to local ordinance problems as a coordinating body, providing assistance to regional leaders who will be more closely attuned to the situations that arise in their respective state areas.

In light of this new approach, the Ohio Music and Amusement Association has set up seven districts and is holding organizational meetings.

Ohio already reports some successes due to the regional attention. For example, leaders in the Miami Valley region were able to stop an ordinance that would have struck down the industry in Dayton. They got the city's legislators to review existing ordinances from other cities that regulate the industry without destroying it.

The Pennsylvania Amusement and Music Machine Association originated as an association of six regions. At its inception, PAMMA elected 12 directors, two from its six regional branches, as well as a state leader, President Louis Georges of Pittsburgh.

PAMMA will fight unfair restrictions in a state that has been a leader in irrationality when it comes to dealing with the industry. PAMMA will attack ordinances like the one in Bellvue which sets a \$500 tax on games and requires each operator to pay a \$175 license fee.

Some Corollaries To Various Laws

Servicing is difficult because people look for failures where they aren't. (Miller)

The less a field engineer knows of the design of a system the better he will sleep before he has to service it. (Bismark)

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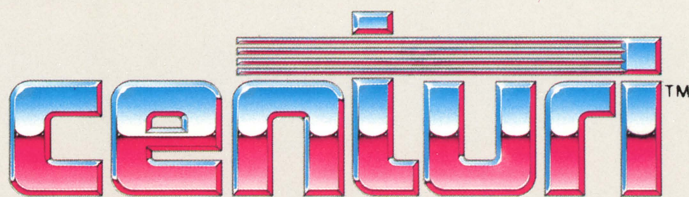
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Great tax bedfellows

By Irving L. Blackman

Often one tax gimmick (a legal way to save taxes) begets another.

Even more often, good tax saving ideas make strange but profitable bedfellows. The bedfellows in this tax story are indeed strange—big business and any qualified deferred compensation plan (usually the profit sharing or pension plan of a closely held business).

This story has three chapters. Chapter One: In 1981 big business developed a new corporate financing device—the zero coupon bond. Such bonds do not pay interest. Instead Big Co. issues bonds, say for \$100 million payable in eight years, for \$35 million. The discount is \$65 million. So, Big Co. starts out with \$35 million and doesn't pay dollar-one in interest until the \$100 million is due in eight years.

Wait, there is more. Big Co. saves roughly an extra \$4 million a year in taxes (assuming a 50 percent tax bracket) by deducting the \$65 million discount at the rate of \$8.1 million (\$65 million divided by 8) over the eight-year period. This deduction is called "amortization."

I know it sounds complicated. But the simple fact is that Big Co. makes out like gang-busters. It passes some of those tax savings on to your qualified plan—the investor.

Chapter Two: Your qualified plan (either pension or profit sharing) is a tax-free entity. As such it pays no tax. Your main interest is rate of return (assuming the investment is prudent).

Chapter Three: Now let's put it all together. Zero coupon bonds are targeted for sale primarily to tax-exempt entities—like qualified plans (including a Keogh plan or an IRA). From the investor's viewpoint, extremely large earnings can be realized. Because there are no interest payments to be reinvested, there is no problem of idle cash. In addition, the total return is locked in for the term of the bond.

For example, if your qualified plan bought \$350,000 of the bonds in the above example, your plan would have \$1 million in eight years. Nice! Of course, smaller amounts would be purchased for a Keogh plan or an IRA.

These bonds are offered with varying maturities. Target yours to mature when you want to start drawing down funds. The tax possibilities are so outstanding that the IRS is considering closing the door on any corporation issuing new zero coupon bonds. But even a change in the rules will not effect the tax advantages to you when you buy existing bond issues. Check with your broker.

THE CALENDAR

September 18

1982 Music Operators of Michigan Convention, Grand Rapids

September 24—25

West Virginia Music & Vending Association convention, Ramada Inn, South Charleston, West Virginia

September 30—October 2

Japan Amusement Machine Show, Exhibition Hall of the International Trade Center, Harumi, Tokyo

October 7—10

NAMA convention and exhibit, The Rivergate, New Orleans

October 9

Washington Amusement & Music Operators Association, Davenport Hotel, Spokane

October 14—17

ENADA (exhibition of coin-op amusement machines), Congress Building (EUR), Rome, Italy

October 15—16

Amusement and Music Operators of Virginia, annual convention and trade show, John Marshall Hotel, Richmond

November 18—20

AMOA Exposition, Hyatt Regency Downtown, Chicago

November 18—20

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

1983

January 10—13

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

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, Hyatt Regency O'Hare, Chicago

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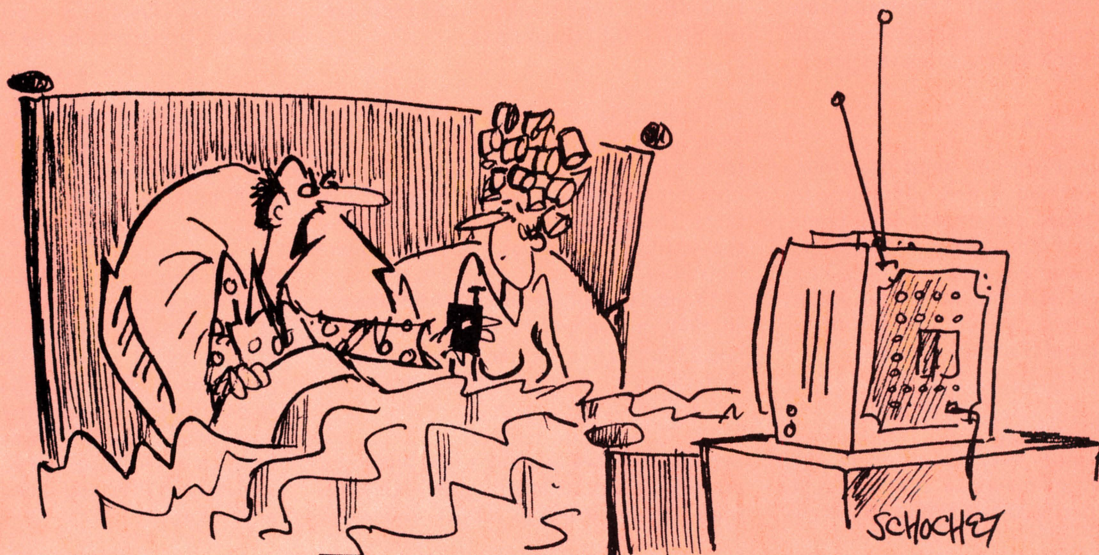
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"And another thing, it's causing interference! All the space ships are running off course."

Short Subjects

Kansas City officials have decided that video games aren't so distasteful after all. They have solicited bids for installation of the games at the city's International Airport. The proposal was conjured up after airport officials polled 20 airports nationwide to sample video game policies and profits. From that poll, officials determined video games might earn the airport \$45,000 a year.

Of the airports polled, **Minneapolis-St. Paul International** earned the top take from videos, about \$202,000 annually or 2.5 cents for each passenger arriving or departing. The **Greater Cincinnati Airport** took in the least, about \$24,900 a year or .9 cents a passenger.

* * * * *

Pizza Time Theatre Inc. has announced another expansion move. Now numbering nearly 150 owned or franchised stores in 32 states, the firm of family entertainment centers has formed a Canadian subsidiary, **Chuck E. Cheese's Pizza Time Theatre Limited**. With headquarters in Toronto, the new branch will be under the leadership of **C. T. Finlay**.

The home office of Pizza Time Theatre is in Sunnyvale, Calif.

* * * * *

Game Exchange, a distributor with offices in Denver, Atlanta, and Columbus, Ohio, is not to be confused with **American Game Exchange** whose principals have been both arrested and bankrupted earlier this year in California.

* * * * *

Status Game Corp. of West Hartford, Conn., has formed a new subsidiary to produce software for arcade and home video games. Fifteen programmers and technicians have begun developing new game concepts in hopes of turning out a new piece every six weeks. The subsidiary is called **Concept Technologies Inc.**

* * * * *

Who is next?

Now educators want a piece of the action. Some members of the Ringgold School District Board of Education, New

Eagle, Penn., decided they should tax video games at a rate of \$100 per machine.

When operators attended a school board meeting to complain, Board Director **Dr. George Buell** condescended to lower his request to \$50 per machine. The board turned down the issue in a 6 to 3 vote. It found, after some investigation including visits to game rooms, the games were not profitable enough to support more taxes.

* * * * *

In 1980, the town of Kent, N.Y., had no objections to allowing **Jay Jay's Arcade** to open. In fact, the Town Supervisor **Anthony Cazzari** "thought it would be interfering with enterprise" not to allow Jay Jay's to open. But now, Cazzari has noticed "there are quite a few communities that have these laws (banning game rooms), and they've been upheld in the courts."

So, if these laws are upheld elsewhere, it only follows that Kent should have one too. Although "the town never had any trouble with Jay Jay's, another arcade operator might not be as responsible as (**John**) **Finney**. It would be easier to ban arcades that attempt to regulate them."

A dissenting voice on the imposed ban came from **Councilman Greg Quinn**. "Whenever you have a bunch of kids congregating, you can have problems," Quinn said. "But I don't think you can outlaw all the places kids congregate."

* * * * *

In Dania, Fla., police have resurrected a 1946 ordinance to keep anyone under 17 from playing coin-op amusements. **Atari** operates a **Malibu Grand Prix** game room there, and Atari's **Ed Watson** is hot about the sudden enforcement of the dormant legislation.

"When we got our license from the city in 1979, no one said anything about that law," Watson commented. "It is our feeling that Dania's law is unconstitutional."

* * * * *

Sega Enterprises has put a new telephone line into service to help its video game customers with technical service and parts.

Toll-free numbers for California callers are 800/722-8576 for service and 800/722-8575 for parts. Callers from outside the state can reach Sega's service department at 800/854-1938 and get parts assistance by dialing 800/854-1900.

* * * * *

"If we don't get into this, we'll be losing money," said **James Fiedler**, president of **MCA Video Games Inc.**, a newly formed subsidiary of **MCA**, the biggest and richest force in the entertainment industry, operating **Universal Studios** and record and book companies. The firm will market home video games.

* * * * *

Milton Bradley, which controls a quarter of the world's game board business, has decided to enter the video game market. The firm has announced an agreement in principle to buy **General Consumer Electronics Corp.** of Santa Monica, Calif., innovators of the *Vectrex* arcade system.

Bradley's current best selling game is *Game of Life*.

* * * * *

Demographic warning signals have been issued to those who count on kids for quarters. The number of Americans between 15 and 24, which grew almost 50 percent to 35.5 million in the 1960s, leveled off in the '70s and is expected to decrease almost 16 percent in the '80s.

* * * * *

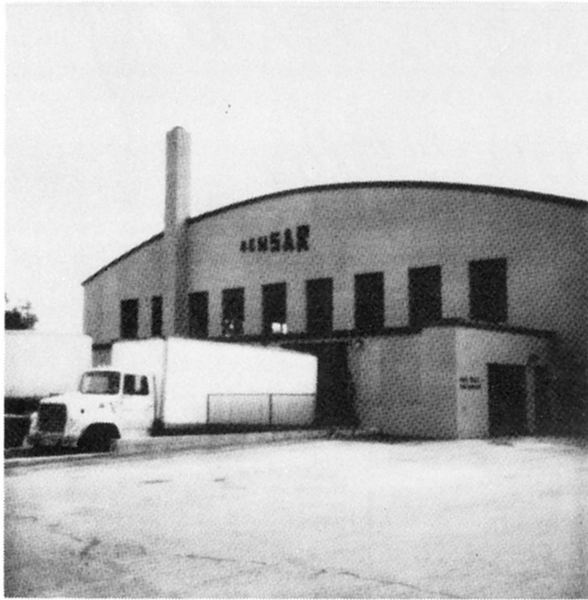
A spokesman for the **Record Industry Association of America** has estimated video games are costing his industry about \$400 million a year.

* * * * *

Bally Corp. has doubled its annual common stock cash dividend to 20 cents per share. "While the company's philosophy of reinvesting its earnings for future growth and capital development has not changed," said Bally President **Robert Mullane**, "the continued excellent prospects for the balance of 1982 and the years ahead make such a cash dividend increase appropriate at this time."

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Home videos cut arcade play — but coin-ops more exciting, researcher finds

By Mary Claire Blakeman

Home video games promote healthy interplay in American families—but they may not be such good medicine for the coin-op industry, according to preliminary results in an academic study by Dr. Edna Mitchell, head of the department of education at Mills College in Oakland, Calif.

“For children in my study, in nearly all cases, the amount of play in the coin-operated machines has declined dramatically (after they got home games),” Mitchell said. “Now that may shoot up again when new games come out in the arcades. Overall, they are spending less time in the arcades when they get one at home, but the coin-op games are much more interesting and the children realize that.”

Coin-operated games were unquestionably more appealing to young players in the study, although at home they can practice a game many times and closely watch the improvements in their scores. Some in the study reported feeling letdown by the home versions after playing the games in arcades.

“As one of them said, getting the home *Pac-Man* was like a rerun of an old movie,” Mitchell said. “The coin-op games are more complex, more graphically exciting, the screens are bigger. They require a lot more skill, and the youngsters love the complexity of the skill of pushing buttons and having all the different things that are on the coin-op machines. Plus there is an exciting environment, with their peers and other people around.”

Home video logs

Mitchell also pointed out that her research with 20 families in the San Francisco Bay area included time logs only for home video play, not arcade play. “Kids were telling me that they’d played as much as three hours a day (at home), but very few records had kids playing that much,” she said.

Initial data show that only half the



Dr. Edna Mitchell, a social scientist who is head of the department of education at Mills College in Oakland, Calif., has done ethnographic research on toys in the U.S., Mexico, Scandinavia, and Asia for the past 10 years. In a current project supported by Atari's Educational Research Foundation, she is researching the impact of home video games on family interactions in American homes.

families played more than one hour per day while the other half of the families played less than that amount. The playing time for all families combined averaged less than an hour-and-a-half per day.

“The concerns that people have had that kids are glued to these games are

unfounded, I think, because the timing I have is not just for an individual child, it’s for all members of the family,” Mitchell explained.

“It doesn’t mean the kids are being kept from playing outside, from doing music, from reading,” she added. “It’s not substituting, in most cases, for other activities. The activity it is substituting for is watching television, and that should be of concern to the television people.”

Funded by Atari’s Educational Research Foundation, the study began during Christmas 1981 and should be completed by this December. Mitchell, a social scientist who uses ethnographic techniques, underscored the independent nature of the project and said the foundation gave her *carte blanche* to pursue her own questions.

Family backgrounds

Families participating in the research come from varied social and ethnic backgrounds including white, black, Puerto Rican, Filipino, and Japanese-American. Middle-class families made up the bulk of those surveyed, approximately 25 percent were low-income, and about 15 percent came from the ranks of professionals. Single mothers accounted for 30 percent of the total, and all families had at least one child. Children in the group were split roughly 50-50 between boys and girls, and approximately half the children of both sexes were more than 13 years old.

As an incentive to participate in the research, families will receive three home game cartridges, though Mitchell has given only one cartridge to each family so far. “I’m holding off giving them the rest because that tends to skew the amount of playing time when they have a new game,” she said. “But the kids keep calling me and bugging me about when they’re going to get their new game.”

The most popular home video cartridges reflected the top arcade pieces with *Pac-*

Man far in front as the choice of families surveyed. Among the other favorites were *Asteroids*, *Super Breakout*, *Space Invaders*, *Missile Command*, *Adventure*, and *Kaboom*. "When we began, most of them wanted *Pac-Man*, and now they're telling me they want *Defender* and *Yars Revenge*," Mitchell said. "I don't think they were aware that *Donkey Kong* is now available, so I'll probably have to pick up some of those. They all hate *Combat*, though."

Young players did show interest in the sport games, but Mitchell heard criticism about those cartridges because they did not simulate live play. "They say that they're not real sports—you have a football team and it's not a team, it's only two players," she said. "It shouldn't be called 'football,' that's what they think. It should be called something else. They don't exactly object to the game itself, but they object to the fact that it has not enough connection with what they know about the rules of football and the strategies that are involved in a live football or basketball game."

Coin machine excitement

While parents in the study tended to have clear-cut feelings about arcades, the children were more ambivalent about them. They like the excitement of the coin-operated machines, but, "what they don't like is seeing they have drained their pockets in those machines. They don't especially like waiting to take a turn at the machine. Some of them recognize that the environment in the arcade may not be entirely healthy. One 16-year-old was concerned about people selling drugs around the arcades, although he said that where he goes, the management keeps those people out on the street," Mitchell said.

She sees the amount of money young people put into arcades as the crux of parental objections to coin-op play and cites the case of one boy from a low-income family who once dropped \$15 into a machine. "He felt terrible after that," Mitchell said. "Most children do not want anyone to know that they made such fools of themselves. So they may give themselves a limit, say \$5, and they justify it by saying a movie and popcorn costs \$5."

"I don't see prohibition of the games as a solution," she added.

Families, in some cases, were also concerned about violence portrayed in video games, and a few asked Mitchell for "non warlike games. I don't think the kids think of it in terms of real warfare," Mitchell said. "They think of it in terms of targets, goals, or action. They love games that are non-violent not because they are non-violent, but because the graphics are so interesting...games like *Frogger*, *Donkey Kong*, or *Centipede* where there's a real diversity in the graphics."

In most families participating in the study, parents felt a sense of pride about their children's skill on the games and were often surprised at how adept the young players were, Mitchell reported.

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As it moves toward creating more family entertainment centers, the industry may want to take cues from the study regarding family interactions around video games. "In many of the families, the family interaction they describe is one of almost a revolution," Mitchell reported.

Competitive family

"One father of three teenage girls said that never before in their family life had they been able to do anything competitive together. When the girls were little, he used to take them out and try to play ball with them, but they never really had the skills that made it fun for him. It was more of a duty for him...With the video games in the house, the family has these running competitions together."

Video games do tend to bring out the rowdier sides of people as players shout encouragement or taunts to each other, and this lively atmosphere develops around home games as well. In Mitchell's study, one single mother participated in outdoor sports and other activities with her three children, but she found the home video games brought a new dimension to family life.

"After they got the game in the house, she said it introduced a quality...a kind of a raucous quality that her children had not experienced before," Mitchell said. "There were people shouting—this was a very quiet little household—but here these people were shouting and laughing and yelling, and it was an air of competition that was particularly interesting to her from the standpoint of her two little girls.

"That kind of assertiveness...aggressiveness, she realized, was healthy. When they played in the arcades, they didn't interact in that way. But when they had a crowd of people around, she found it very exciting and stimulating."

Besides group involvement, the games increased interactions among siblings in

some families. As one mother pointed out, the videos provided an activity in which age and sex play a less important role than they do in other games. "A younger brother and an older brother may play a video game together whereas they can't play football together," Mitchell said.

Play sooner or later

Some parents in the study got involved with the games even if they showed an initial disinterest. One father said he was too busy to play, but then he had a foot operation. While he recuperated, his wife often heard him playing with the video cartridges late at night.

While one family got friends together for a 12-hour game marathon one weekend, almost all of those in the survey went through periods when no one played the games. "In most of the families, there have been weeks that have gone by since they got the set that they haven't touched it," Mitchell said.

The experience of one family illustrates the importance of women's attitudes about game play. The father bought a home video game set, but due to a malfunction, it had to be disconnected. So the unit was put away in a closet for several months. "I think part of that reflects an underlying family interaction," Mitchell said. "The mother was not consulted before the set was purchased, and she has no interest in it whatsoever."

Mitchell said she was disappointed to discover that many mothers did not play the games much. Women reported that they had too much work to do; they preferred other forms of recreation—or they simply could not keep up with their children's play on the videos.

There were exceptions. One well-organized professional woman managed to get in 15 to 30 minutes of play each day before work and got scores high enough to beat her husband and daughters.

Resent play

Another mother was determined to become a master of *Pac-Man* so she played from 10 p.m. to midnight on some evenings. "(Her) boys were saying 'Mother used to want to talk to us. Now, we don't even have a family time anymore because she's always in front of the video game saying, 'Go away, go away, I'm in the middle of a game.'" Mitchell reported. "She spent a lot of time on it, and the boys really resented it. She's come down from that some now."

Teenage girls too, have to deal with male egos when it comes to video game play. One mother told Mitchell that while her daughters are highly skilled, they back off on their play when their boyfriends visit. "They have the idea that you don't beat a boy," Mitchell said.

Women may develop more confidence about video games as increasing numbers of families play them at home or in arcades. In her study, Mitchell found that families are developing a sense of control about the games.

"The families are using the games in moderation; they are not becoming addicts," she said. "They are developing a sense of power—if not over technology itself, then they are keeping their risk-taking options open to try new things. In families who won't try computer games, it's not really because they don't have time, it's because of some sense of insecurity."

One of the options many young players may pursue naturally involves computers. "All of these children, without exception, are interested in computers," Mitchell said.

Given the current picture of technology, Mitchell compares video games to the popular Kinetoscopes at the turn of the century which gave rise to motion pictures and eventually the Betamax. "Video games as we know them may not be on the scene in two decades," she said. "They will probably evolve, but they are not a passing fad."



"...getting the home *Pac-Man* was like a rerun of an old movie."



"The concerns that people have had that kids are glued to these games are unfounded..."



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Weight: 250 lbs. (112.5 kg)

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Cabinet: Heavy 14 ga. steel (1/4" steel plate available at extra cost)

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Customer Information Display: Multiple flashing messages

Separate Status Indicators: Lighted "Insert Bill" or "Out of Service"

Servicing: Diagnostic display and replaceable plug-in PC boards

Locking Mechanism: Recessed 3-point T-handle lock

Mounting: Holes provided for wall mounting on 16" horizontal centers (base stand optional)

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- Unauthorized intrusion triggers battery operated alarm and opens alarm relay

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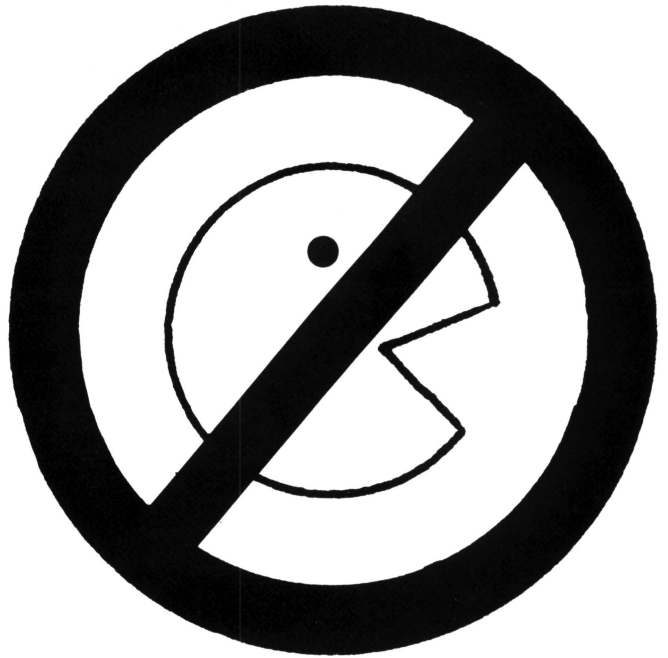
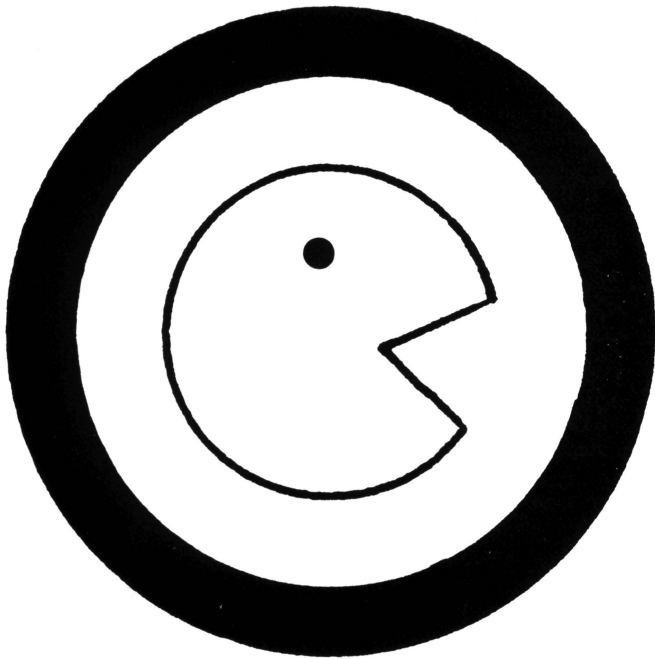
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A new trend in municipal governments:

Operators get respect

By Mike Shaw

The evidence is now arriving in overwhelming support of the contention that when operators and their business associates make their aims known to town councils, boards of aldermen, city planning commissions, and licensing departments, some of these regulating committees listen, then rule intelligently and fairly on video games in their communities.

Although there is still much to be done to eliminate what has been a popular view held by America's municipal and state authorities—that video game operators are making obscene profits by unscrupulously assaulting the psyches of American youths—it is undeniable that a new trend has developed. A new awareness is coming to council members from Pacific Grove to Yorktown Heights.

They are beginning to realize that

imposing undue hardships on video game operators is as unfair as imposing undue hardships on oil company stockholders or automobile workers. And they are realizing it because operators, in small but effective groups, are becoming organized.

Throughout the country, new associations are springing up to give operators clout and credibility in dealing with town councils. Some of the associations are more formal than others and their titles, like the North Jersey Operators Association and the South Florida Operators Association, reflect the fact that these new groups are attacking more than one problematic instance. But other groups of operators are effective just by getting together and preparing to attend a single council meeting. Showing up *en masse* at a town council meeting has recently saved businessmen in several towns from having

to operate under unfair restrictions.

Although the principal of objecting to unfair restriction seems simple, it is still interesting that such a loosely knit, individualistic type of industry should be following the same plan effectively in so many instances.

The Victories

Just a few weeks ago, newspaper clippings coming to *Play Meter* were predominantly broadcasting sad tales of video game bans and excessive licensing fees and gross receipts taxes dumped on game operators and their locations. That kind of legislation is far from over, and some of America's largest cities are just beginning to deal severely with video games (Los Angeles, Houston, New York, to name an impressive few). But, at least, numerically, the trend has changed to more thoughtful

considerations by councils and courts in dealing with video game businesses.

Take **San Mateo County, Cal.**, for example. There, on June 23, the County Planning Commission rejected an ordinance that would have made permanent an earlier "urgency" measure that prohibited games from locating within 300 feet of a school building.

"It's getting ridiculous," lamented Commission Chairman Lore Radisch. "Where is all of this going to stop? We're interfering with the schools' and parents' authority. It's up to them to maintain discipline."

The San Mateo county board considered the ordinance "an unacceptable intrusion into the social arena" and an "invasion of private enterprise."

In **Artesia, Cal.**, Councilman Robert Jamison had been vocal in his opposition to video games. But he changed his opinion when a well organized group of location owners turned up at a City Council meeting to address an ordinance prohibiting play of video games by children under 18 in stores where take-out liquor was sold.

"They need all the nickles, dimes, and quarters they can get to survive," he said.

"We can't govern people's children. They are their children, not ours," Mayor Gretchen Whitney said. "If a child goes to a liquor store for a quart of milk for his mother and puts a quarter in a machine...so

what?"

Operators organizing in **Bergen County, N.J.**, got 30 municipalities there to call a city attorneys' meeting to discuss what to do about operator court challenges to New Jersey municipal ordinances. That committee wound up considering an operator composed ordinance as a model. One of the communities, Cliffside Park, had been operating under a complete moratorium on games, but now it will consider the operators' ordinance as a logical step to deal with the situation.

Upper Moreland, Pa., commissioners decided to make adjustments to an ordinance restricting games as a result of complaints by operators.

"We want to make sure it's fair and even-handed," township Manager Brian Mook said.

One change made by the commission was to increase from one to three the number of video or pinball machines allowed in a given building without special permission.

In **Maple Heights, Ohio**, near Cleveland, the City Council amended a \$100 per game fee to \$25 when "strenuous objections" were aired by a group of operators headed by Edward Cochran who educated the Council on costs of operating the machines.

The city fathers of **Slaton, Texas**, had

agreed to lambast locations with a \$100 a year fee, and stick both operators and locations with a 2 percent gross receipts tax when game owners stepped forward to show their irritation.

The objections caused City Administrator Alex Webb to back down from his stance on the regulations and say: "Our form of government allows for input from the citizens. The time to consider changes... is when it (the ordinance) is placed before the commission for discussion. First and foremost, the commission wants to be fair."

Early in June, the **Pacific Groves, Cal.**, City Council had placed a moratorium of up to six months on video games. But two weeks later, after hearing the objections of a store owner who had eight games and who "has presented no problem for the community," the Council reversed itself and rejected two compromise versions of the measure.

Operators and location owners showed up at a June 7 **Town of Gates, N.Y.**, meeting and helped the town board decide on an ordinance that would have required licensing of videos and limited the number of games at any single establishment. But, most importantly, the law sought to identify which types of businesses could have games.

Operators Larry Fallone and Joseph Centani got a reasonable approach rolling

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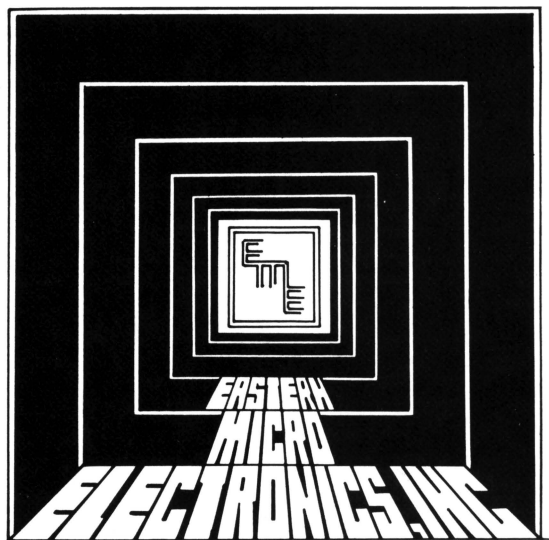
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by informing the Town Board they did not have to limit the number of machines. "The demand for the machines does that," they offered.

A delicatessen operator complained about discrimination against his business.

"You're allowing Perkins to put in four machines, but you're telling me I can't," he said, referring to an ordinance exempt business. "I'd like to have three machines—I have three now—and believe me, it's helping my business."

And the children who came to play the games caused no problems, he continued. He said there had been no increase in vandalism in his store since he had installed the games.

The Town of Gates Board unanimously voted to table the ordinance at the conclusion of the public hearing.

When the swallows return to **Capistrano, Cal.**, this year, they'll be able to touch down near the comforting sounds of video games. City officials found that an existing ordinance against machines in the commercial tourist district surrounding the San Juan Capistrano Mission was unnecessary when restaurant owners argued the games would be consistent with the tourist zone.

The Westchester Operators' Guild showed up at a **Greenburgh, N.Y.**, Town Board meeting June 23 and kept a measure

that would limit the number of games in any location to two from passing.

Al Kress of Coin Machines Distributors told the Board of the jobs provided for the area.

"In Elmsford alone," he said, "two companies which distribute and operate games employ 135 people."

In **Manorhaven, N.Y.**, the Village Board decided to alter its view of the electronic amusements it had previously decided to prohibit. In announcing the village had changed its law to "conform with recent court decisions regarding electronic video games and other amusement devices," Mayor James Mattei said of the new law: "The main purpose of the law is to permit the legitimate operation of businesses."

The town of **Antioch, Cal.**, anguished over the possibility of an arcade within its limits, and then awarded Dick Silvera the city's first arcade when he told the Planning Commission: "Antioch needs the business. We need the taxes. And I think the young people of this town want some place to go."

Vincent Gorman told the **Yorktown Heights, N.Y.**, Board he wanted to run an arcade as a family amusement center and as an attraction for the serious video game enthusiast—not as a hangout for idle teenagers. The Board complied with an arcade

permit for a 60-game center in spite of a law approved last October that had kept arcades out of the New York town.

And when Jerry Tate assured the City Planning Commission in **Anderson, Cal.**, his arcade would be "run in an upstanding manner," fears voiced about noise and the safety of the young people of the neighborhood was assuaged.

In **Mount Kisco, N.Y.**, some residents seemed to have an early upper hand in an effort to get the games banned altogether. But as all sides of the issue were voiced, the town's legislators became aware of operators' rights to conduct their businesses. In a recent meeting, village attorney Charles Martabano halted video objectors by warning them that federal courts had recognized arcade owners' rights to operate their businesses and a local government could find it legally impossible to close a business through legislation.

Again, operators' problems with town legislators are not over. But, many of the irrational fears of the unknown that accompanied the early days of the video boom have passed allowing sensible people to see more clearly that the video game industry is much like any other business. It takes a good business person a great deal of hard work to make a reasonable profit. ●



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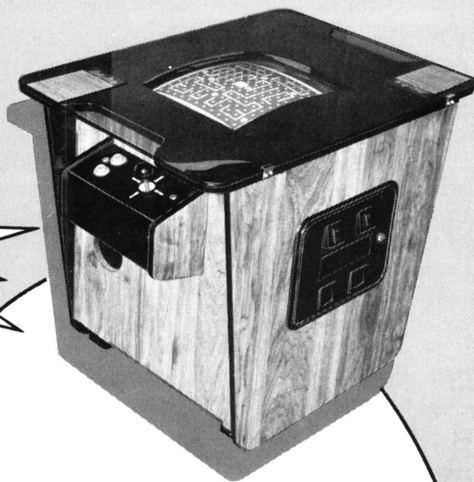
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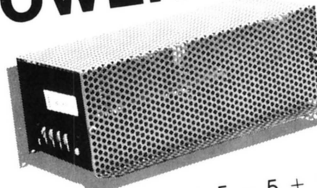
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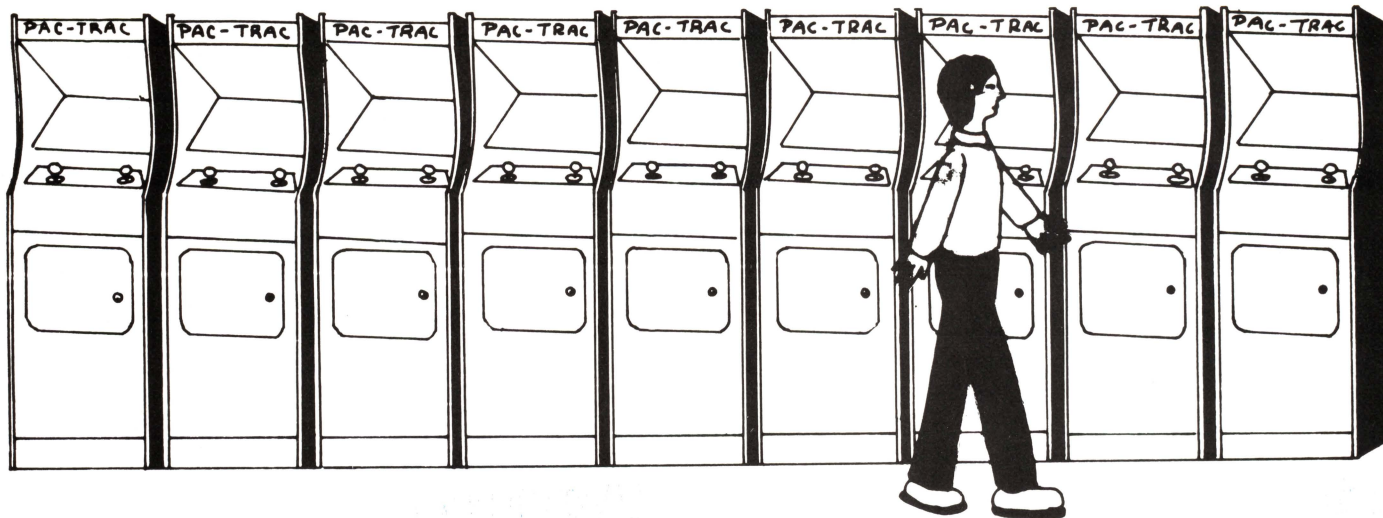


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Buyer beware... Buyer be **AWARE!**

By Roger C. Sharpe

It really became apparent this afternoon when I received a call from an operator located in the South who had a question about a machine and whether or not he should consider buying it for his business which is very seasonal during the summer, but no less up-to-date with equipment presently hitting the street.

What happened was that the conversation became less about the merits of the specific game and more in terms of his clientele and the nature of what he was really after. Did he have a large space where he needed a filler? Was he trying to replace something else that was no longer holding its own? Or was he dealing with a smaller space where every piece had to count and hold its own over his busy period. Was his motivation to maximize his purchase price in hopes of eventual earnings that would keep him ahead of the game?

Best for location

This last scenario was the key for his situation and was compounded by the fact that he could get this particular machine at a bargain price. He was obviously hesitant, unsure of whether he would be doing the best for his location and did what everyone should do in a similar circumstance—he sought out opinions from a variety of sources.

It was admittedly gratifying to be considered for advice, but beyond this, my feeling was that here was an individual who besides being careful with his money, was willing to do the extra step to make his ultimate purchase decision something more than a hit or miss effort.

All too often, both operators and distributors are caught in a position where they can't win for losing. They may get captured in the initial hype of a given game and find that it's really only a two-week wonder, while some other model comes across as a big surprise and hits everyone flat-footed. It's an age-old problem that remains no matter what the hot games are, video or otherwise.

And, when there's a glut of equipment, as is the case now, the problem becomes that much more important. After all, it's easy to ride the crest and then fall victim to expectations that are never met. The sour taste that remains does no one any good and unfortunately may have an adverse effect at some future time when it's not really warranted.

Space or maze?

As a result, I suppose one of the points that needs to be made is that operators, as never before, truly must have a firm hold on what their locations can hold. Is the next new piece a replacement, or does it round out the array of machines already operating? Is it the need for another space-game motif, maze variety action machine, or some other category game that needs to be filled, or is there another valid reason for plunking down the money for a new addition? These are just a few of the questions that must be asked if an operator wants to do the best for himself and his players.

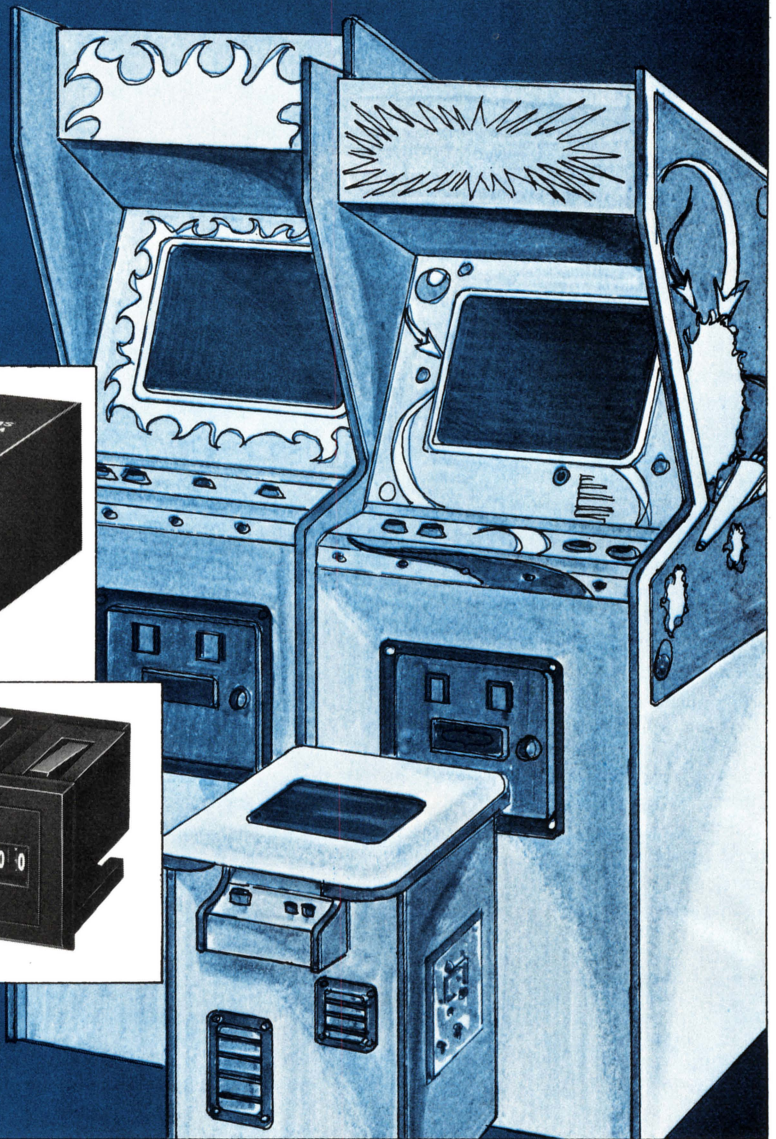
I mention this especially in the light of a phenomenon which bears repeating because of the effect it can have on overall earnings. One of the problems is that so many uneducated individuals are entering

onto the scene looking for quick bucks because of all the publicity surrounding the success of video games and the coin-op industry. They really don't have any idea of the business but have some local spot they would like to tap and enough money to get the ball rolling (so to speak). And what we find from these folks, as well as others, is a less than satisfactory situation for the players. I'll explain.

I've had a chance to do some traveling lately, and what I've found at an alarming rate at new spots, as well as some older established places, is the multiple loading up of models. In the past it wasn't unusual to find an operator who doubled or even tripled up on a given game if it was really hot. Sometimes he'd even get five or six of the same model just to satisfy the demand. And it made good business if the place had enough of a variety of other equipment to balance off things.

But I have to wonder whether the increasing instance of that is in everyone's best interest. I saw a sign while driving in New Jersey, advising passersby that this particular location had 14, count 'em, 14 *Ms. Pac-Man's*. There comes a point of diminishing returns even for the most novel and popular attractions whereby the operator is taking away from his overall total for that given model. If he's making \$300 per week for one, no one can ensure that he will *average* that same level for extra models. Maybe the falloff is only to \$250 for the multiples, but with one less model, replaced by something else, could he, in fact, be making more on the new game and thus increase the earnings of his total location? These are the types of evaluations that must be made.

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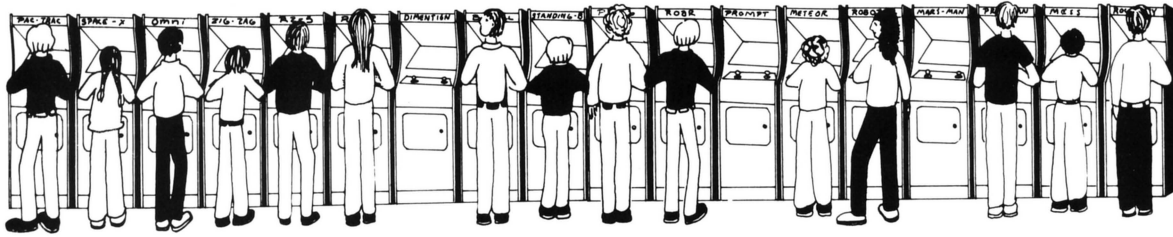
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It is becoming widespread to see 30 games in one place, but *alas*, only find five or six different models. Is it the best for the players or will they go elsewhere to try the new challenges they hear about? Everyone has to gauge the impact. Admittedly, in Japan there were, for years, pachinko parlors where that was the only game in town, and if you wanted to play it, fine, if not, too bad. These gave way to *Space Invaders* when that great hit made waves and captured the public's fancy. But I have to believe that American players in particular are far too fickle to be lulled into a false sense that, to borrow from an old Peggy Lee song, "is that all there is?"

This isn't to suggest that doubling, tripling, or even more isn't the best way to go. It might well be, but the operator has to really know his audience and keep a close watch to make sure that he has all that he should in terms of equipment, variety of themes, and play action.

I suppose that what I'm really driving at

is the need for a greater sensitivity and awareness regarding what the manufacturers are producing and why they continue to strive for innovative design and programming features.

The question is whether an old business practice no longer applies or is it not being given a chance to prove itself. There used to be a belief that sometimes it was good for players at any location, for the most part, to wait to play a favorite or new game. While they were waiting, they would undoubtedly play other machines while keeping an eye on the one that they wanted to play. Now there's admittedly a limit to this. But I wonder if, by ganging up the same model, an operator isn't, incrementally, taking away from the earnings of his other equipment and not gaining all that much in return.

The other problem I think is inherent to this is that when players are given a limited number of models to choose from, aren't they more apt to become far more adept at playing a given machine? Will they wind up

playing on the game longer and hence will the earnings be less?

Balancing highs, lows

I've got to believe that the truly successful locations are finding that balance between saturation and not having enough, but the important thing is that everyone can benefit if the realization is made that there's a lot of competition out there for the players' money including movies, other forms of entertainment, the location down the road and, last but not least, the arrival of video games in the home. Together the effect can be substantial; that only means that things aren't going to get any easier.

So operators, those that want to achieve, are going to have to become more involved, and really know the ins and outs of the business and what, ultimately, the customers want or don't want. It's not such a difficult task and in comparison to the rewards, the price is a small one to pay. See if you don't agree. ●



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'Tron': anything but a 'Mickey Mouse' effort

By Roger C. Sharpe

The experience of summer '82 is long past by the time of this reading, but its memory is destined to live on. The almost complete promotionalization of video was taken to, what some might consider, its next logical step when it invaded movie theaters in July. And rather than making the trip alone, there was the addition of a *Tron* tournament.

Throughout the years, it has always seemed to be in the right place at the right time, and Bally was there again when it took the chance to team up with the movie "Tron."

Regardless of how the movie will be analyzed—as a success or failure for Disney Studios—the recognition generated guarantees a response that only furthers the pervasiveness of video.

Less than a decade ago, it was pinball and the summer movie "Tommy" that gave rise to *Wizard*, interestingly enough, from those same folks at Bally. This time, however, there was a little extra thrown in to get the show on the road—a *Tron* tournament that kicked off nationwide on May 24.

It's surprising that it took so long to correlate a movie and a video game. After all, pinball has had songs, the movie "Tommy" adapted from the mid-'60s record album of the same name, and a little gem better left as a trivia question regarding Brooke Shields' film career. Now there's "Tron," and God only knows what else lurks in the wings.

What is undoubtedly true, given all the ballyhoo (no pun intended) is that for those within the industry who weren't a part of the happening, the reaction may well be, "so what?" However, no matter what side you're on or who you're with, the repercussions are going to be felt—if they haven't been already.

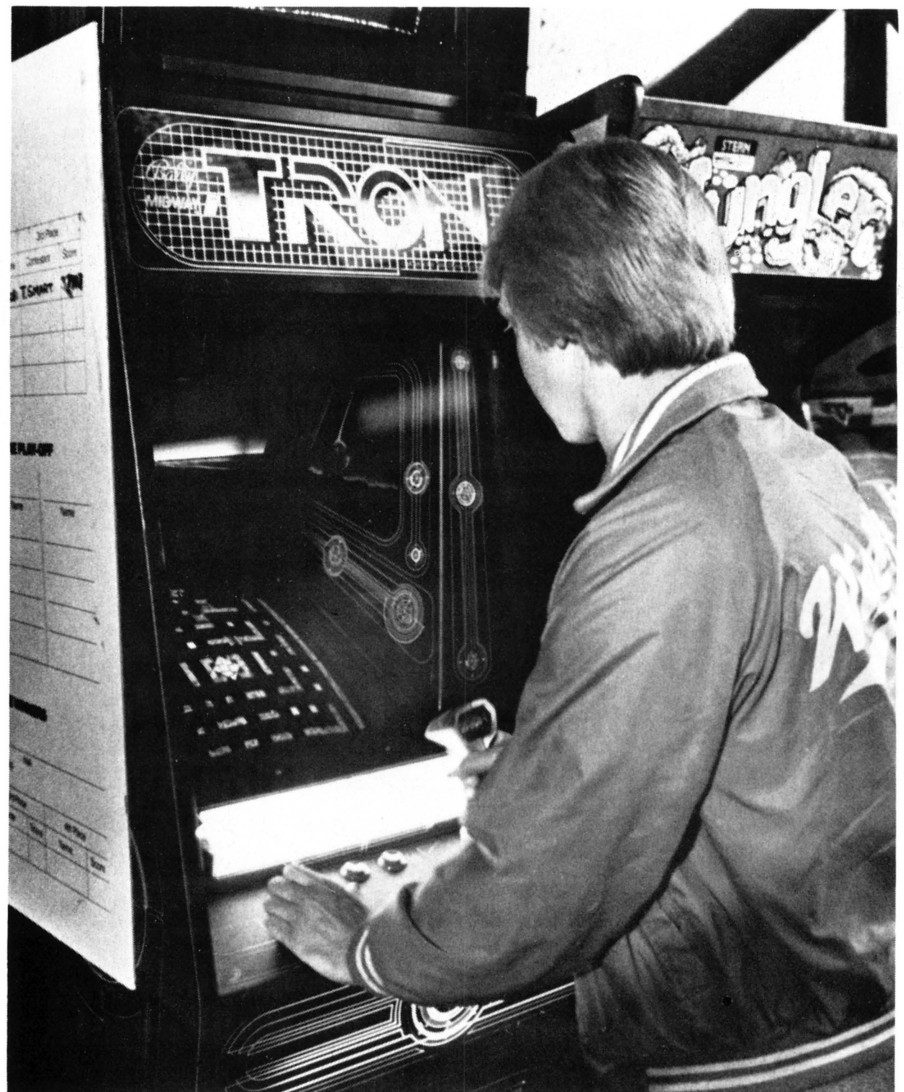
Crossover effect

No matter who gets involved with the staging of any activity, the crossover benefit has to be an effect shared by all. To think otherwise is to believe that any of the enormous publicity, good or bad, directed at the games or the industry is apart from the norm and not an issue.

Let's take a look at this endeavor and how its impact can be generated on all levels. Admittedly, first and foremost, are the principals who have everything to gain and lose. Just look at the beating Disney stock took when the movie first opened and the Wall Streeters called in for screen-

ings, suddenly became film critics, and panned the effort before it was even able to get off the ground. The reaction by Disney executives, and with good reason, was anything but calm because of the chain reaction their opinions set off.

Now, without knowing what the inter-



In addition to adept participants, the Tron tournament drew celebrities such as Hank Aaron, Doug McKeon, and David Warner.

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vening months have brought regarding the film's success or failure, the fact remains that the premise of the work is video-related, which should only bring yet another form of recognition to the games being produced either for home or street operation. It's just an additional medium to convey the message of video, not only in terms of graphics, but as the trust of this fantasy adventure.

Add in the tournament held by Bally at its many locations around the country, the resulting publicity, and attention garnered on all levels. If you weren't a direct part of it, the easy reaction is to say that your business hasn't benefited by it. But you'd be selling it short. No matter how big or small an effort, if nothing else, the tournament gets the games into the public eye. In essence it becomes a part of a much larger puzzle, constantly being formed and reshaped to fit the times.

In this case, you have the staging of an event that was only positive. Winners got what they were supposed to, and all levels of competition were as fairly held as possible. That's always important, but so too is the fact that if you're a part of the busi-

No matter how big or small an effort, if nothing else, the tournament gets the games into the public eye.

ness, as a generic and general category of entertainment, you've also been a part of the residual effect.

Flow as a whole

If you don't believe this, just think about other industries and how the chain reaction can work positively or even negatively. Even something as common as the stock market tends to flow as a whole, rather than the individual parts it really is when conditions blanket buyers and sellers in their daily investments.

Sure, there are some issues that buck the trend, but that's always the case and especially in this business any one company is only as good as its last effort. There's the constant test to prove the skeptics wrong. It's a domino theory in practice and application. So with "Tron," it's got to help and, as the saying goes, it can't hurt. With this in mind, the final returns not yet in at the time of this writing, the state is set to capitalize on what was involved.

Now to some tournament details. The *Tron* tournament field of 1,600 was reduced down to 400, 48, and then to 16 regional finalists. The finalists were flown to New York City for a two-day competition July 6 and 7. The first two rounds were staged in the Grand Hyatt Hotel before moving on to the Felt Forum in Madison

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Fight for prizes

Each of the 16 finalists, ranging in age from 13 to 33, faced off for total scores over three games to determine the ultimate winners who would receive a year's worth of tokens for playing games at Bally's facilities nationwide, valued at \$260; a \$4,000 Commodore Computer, and a *Tron* machine from Bally/Midway, valued at \$2,500.

But that wasn't all. A celebrity tournament was also held. And there was really a potpourri of individuals who tried their hand.

The lineup included the legendary Willie Mays; Hammerin' Hank Aaron; Melinda Fee from the soap opera, "Days of Our Lives;" Doug McKeon, who was the child star in the movie "On Golden Pond"; the New York correspondent for TV's "Entertainment Tonight," Robin Leach; and film stars David Warner and Cindy Morgan, who both just happen to appear in "Tron." There were also some men

For this time around, hats should go off to Bally for what it has accomplished.

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behind the scenes of the movie: Harrison Ellenshaw who did the special effects, Producer Don Kushner, and Richard Taylor who also worked on the special effects.

Maybe not so surprisingly, Kushner, Ellenshaw, and McKeon finished in that order with \$2,000, \$1,500, and \$1,000 being the monies generated for their selected charities.

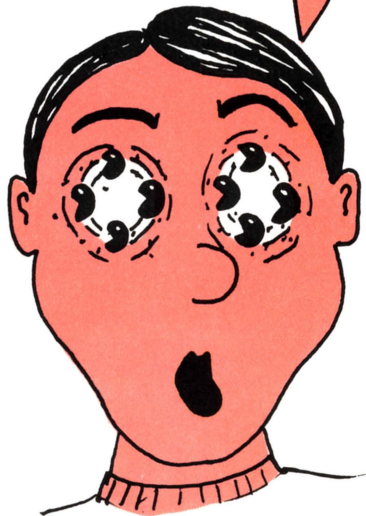
As for the big winners, with some staggering scores when you consider the machines were set at their most difficult levels, they were: in third place with a score of 1,158,085 points, Sterling Ouchi, an adept 18-year-old from Torrance, Calif.; in second place, after putting on a last round run for the lead, Scott Katkin, a 19-year old player from East Greenwich, R.I., who scored 2,721,770 points; and finally, the competitor who blew them all away with some incredible play for first place and a phenomenal total of 3,958,901 points, 29-year-old Richard Ross from Jacksonville, Fla., who parlayed his efficient way of playing and memory use for patterns to walk off with the honors.

All in all, it was a memorable display that garnered a fair amount of onlookers and assorted press coverage for the type of activity that can only blossom in the future. For this time around, hats should go off to Bally for what it has accomplished.

PR Problems/PR Solutions

What to Say When...

No More Playing
Pac-Man For Me



Q. Can children become addicted to playing video games?

A. No. Technically, the term addiction means physical dependency upon a habit-forming drug. In a looser sense, it means being devoted to something habitually or obsessively. There is no evidence that video games create an obsessive dependency.

That is not to say the games are not fascinating, amusing, and entertaining.

Young people who master the games derive great satisfaction in developing their skills, and they will likely want to play again and again just as they might enjoy a sport or a hobby.

But even the most devoted video game fan tires of playing, just as a player tires of shooting baskets on a playground. If video games were addictive, people never would stop playing home video games, would they?

Q. But aren't video games conducive to gambling?

A. No. There is absolutely no evidence that amusement games lead to gambling. Most game centers expressly forbid gambling on games by players, and in all but two states of the union, gambling is illegal.

Similar charges were made against amusement pinball games and billiard games, yet they never were substantiated.

Video games are fundamentally different from games that lend themselves to gambling, such as card games or flipping a coin. Video games require a trust in self and personal ability, so that people who tend to gamble would not be attracted to the game.

Under law, gambling must have three elements: a stake or bet by the player, a dependence on chance, and a pay-off. Video games have none of these. The coin inserted by the player is payment for the amusement he receives, not a stake. Skill, not chance, determines the game's outcome. Video games do not pay-out for winning, unless one considers the extension of play a reward, which most courts do not.

According to one of the nation's leading authorities on compulsive gambling, Robert L. Custer, chief of treatment services at the Veterans Administration, video games lack the essential element for any gambling habit—a monetary pay-off. He said in a telephone interview that video game players and gamblers both receive an "ego pay-off" from successfully battling

machines, but this is where the comparison ends.

Gamblers Anonymous as an organization does not oppose video games, nor has it treated anyone for problems created by the games. According to a spokesman, the majority of compulsive gamblers do not limit themselves to playing one particular game.

People who confuse video games with gambling often believe chance determines the game's outcome. Not true. In fact, good video game players discover patterns to the games' play, and several books have been published to teach players winning skills.



Q. With the aggressive theme of many of the games—such as those that present warlike situations—can children be learning violent behavior?

A. According to two psychologists who were interviewed by phone in February 1982, Daniel Anderson at the University of Massachusetts, Amherst and James McConnell at the University of Michigan, the possibility of learning violent behavior is pretty weak. Anderson, who has studied the effect of TV violence, pointed out that the games present a fantasy situation unlike the realistic social situations presented on television.

Television can promote modeling behavior because it presents sympathetic characters who exhibit violent behavior. In his book, "TV Violence and the Adolescent Boy" (Saxon House, 1978), British psychologist William A. Belson pointed out

that violence in TV cartoons has no effect because they present fantasy situations. McConnell said video games are in the same category.

Q. Isn't it a waste of time for children to play video games?

A. Playing video games is a form of entertainment like any other, such as watching

TV, going to a movie or a dance, listening to records, even reading a book. Parents can help guide a child in spending his leisure time in ways he finds enjoyable and rewarding.

Several psychologists compare parents' worries to the same concerns parents had in the 1950s about their children reading comic books, and in the 1960s, about watching television. At worst, they feel playing the games is a harmless form of entertainment, and at best, they feel children gain some real benefits from spending their time on the games. (As Anderson said, "It's not a safe assumption that children would spend their time doing something more constructive.")

The Southland Corp., which owns neighborhood Seven-Eleven stores, commissioned an independent study (not yet published) to find out how the public feels about video games. They found that 93 percent of the people believe video games are a legitimate form of entertainment. Another 75 percent said they would spend part of their entertainment budget on playing these games; and 68 percent do not object to their children playing video games. Likewise, an April 1982 *People Magazine* poll found that 58 percent of its readers don't believe video games are harmful.

Q. But do children learn anything from playing the games?

A. Because little research has been done in this area, there is no hard evidence that children learn from playing the games. But several psychologists stated they believe there are some direct and indirect benefits to children:

- Almost everyone agrees that the games offer competition in a skill not dependent on physical endowments, size, or age. As James D. Laird, psychology professor at Clark University, noted, Americans value skill and thrive on competition. "It's a great equalizer, that these games are electronic," he said (Associated Press, 1982).

- Most of the machines require one of two skills: 1) quick reflexes, which develop hand-and-eye coordination; and 2) strategy, or thinking ahead to deal with upcoming situations. Maze games like *Pac-Man* require 90 percent strategy and 10 percent reflex actions. Attack games require from 50 to 90 percent hand-eye coordination.

Psychologists believe both skills may be useful for children to develop because they can be transferred to other tasks. McConnell said the games are "an excellent learning element." The motor skills developed playing the games may help youths become better drivers because they learn to observe and react to their environment, "and watch three cars down the road." Anderson pointed out that the strategy games force children to think ahead, and learning to plan is one task of childhood.

Emanuel Dunchin, University of Illinois professor of psychology, interviewed by phone in February 1982, said his research on amusement games with teenagers aged 17 to 19 found the machines are excellent in developing competence in complex situations, as well as introducing youth to computers. He feels the games teach skills transferable to other tasks.

MIT sociologist Sherry Turkle also observed the benefits of learning reflex skills:

What I see is an experience that great athletes have, where they can allow their bodies to think for them. The games are giving that experience to large numbers of people. With good players, their fingers are doing the thinking (*Smithsonian*, September 1981).

Because the games help increase reflex responses and improve attention span and concentration, Dr. William J. Lynch of the Brain Injury Rehabilitation Unit, Veteran Administration Medical Center in Palo Alto, Calif., is using video games to rehabilitate the handicapped.

At the Johns Hopkins University School of Medicine, the effects of anticonvulsant drugs on epileptic children are tested by observing their attention span and eye-hand coordination while playing video games (*Time*, January 18, 1982).

Many of the benefits of playing the games are summarized in Tom Hirshfeld's book, "How to Master the Video Games":

Furthermore, video games improve players' reflexes and mental powers far more than many other activities, for instance, watching today's television shows. The games offer a

chance to participate, to enjoy oneself non-passively, and to release tension and aggression. In a society moving toward complete computerization, the games teach self-reliance and computer confidence.

The fact that the games are turning children on to computers has been noted by Midway Manufacturing Co., which has received numerous letters from youths who say they want to go into computer design or engineering as a result of their curiosity about the games.

Smithsonian Magazine writer Paul Trachtman, who interviewed Atari programmers for an extensive article on video games (September 1982), reported:

Everyone here seems to feel that computers are going to play a much friendlier role in our lives than most people ever expected. "People aren't going to be able to be scared of computers very much longer," one young games programmer assures me.

And psychologist Dan Anderson noticed at the University of Massachusetts at Amherst, "kids are expressing an openness to learning about computers. They're taking up the university's computer time by writing their own games. A lot of people are attributing this to the popularity of video games."

All of this attention on video games is not being lost on education. A math pro-

fessor at Swarthmore College has adapted Atari home computers to teach high school and college students trigonometry.

And in his dissertation for Stanford University's department of psychology, Thomas W. Malone studied computer games to see how the fun aspects of the games could be used in designing educational computer programs. As reported in the December 1981 issue of *Byte Magazine*, Malone found three elements of the games that can be used to make education more fun: they are challenging; they present a fantasy situation; and they stimulate and satisfy curiosity. Adapting the games for educational purposes, he feels, "can help in creating instructional computer programs that fascinate as well as educate their users."

Q. Is it possible, then, that fear of computers, or any new technology, may be behind some parents' objections to the games?

A. Parents' concerns do have a historical basis, a fear of the unknown that surfaces every time a new medium is introduced into society. The concerns they're voicing about computer games are similar to complaints about television that surfaced when consumers started buying them in quantity.

Because of this fear, psychologist Dan Anderson of the University of Massachusetts feels parents fail to see the rapidly evolving potential of the games: how they will come to be played more at home, how the content will change to provide more challenging games that may be played for hours, and how children can be introduced to computers through games.

Victor Walling, a business consultant at SRI International, a research firm in Menlo Park, Calif., compared kids conquering computers through the games to their parents learning to drive cars. "Kids learn that you can walk up to a computer and make it respond, unlike the previous generation," he said (*Smithsonian*, September 1981).

In a cover story on computers (Nov. 16, 1981), *Newsweek* reporter William Marbach wrote: "It is fascinating to watch how children and adults learn to cope with computers. Almost intuitively children seem to understand that Zen-like simplicity is the key. Few adults manage to attain the same state of grace."

Isaac Asimov, scientist and writer,

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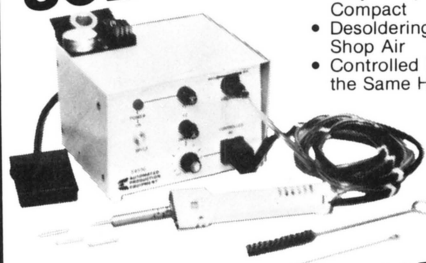
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explained this attraction: "Kids like the computer because it plays back. You can play with it, but it is completely under your control; it's a pal, a friend, but it doesn't get mad; it doesn't say 'I won't play'; and it doesn't break the rules. What kid wouldn't want that?" (*Smithsonian*, September 1981.)

Dr. Lisa Raub, who just completed a dissertation on computer anxiety at the University of Pennsylvania, is even more adamant about the benefits of the games. "There is no question that video games reduce [computer] anxiety and increase technological acceptance," she said (*The Philadelphia Inquirer*, January 24, 1982).

Q. Do the games promote anti-social behavior since it is a solitary activity and children tend to get so involved that they forget the world around them?

A. There is no basis for the argument that games prevent children from socializing. Dan Anderson compared this aspect to

watching television: it depends on where you play and who you're with while playing. He has heard children discussing the fine points of the game, just as they would after seeing a football or baseball game or watching a stimulating, popular TV program.

In interviews with the press, many children interviewed in game centers mention "seeing their friends" as one of the reasons for being there. Like any popular form of entertainment, children want to share the experience with their friends and family.

Q. Are children wasting their lunch money playing video games?

A. One champion video player, Greg Davies of Fresno, Calif., told the Associated Press: "You might spend a little too much money on the games or play them too much, but no matter what hobby you have, you're going to spend money. And this way, at least parents know where their kids are."

In addition, the 1981 Rand Corporation Youth Poll found that teenagers spend

very little on video games compared with other weekly expenditures. Of their weekly average spending of \$16, boys 13 to 15 spent 75 cents on games, which was 4.7 percent of their total expenses. Boys aged 16 to 19 spent about the same on video games, 5.3 percent of their weekly earnings.

What do teenagers spend more money on? Food and snacks, movies and entertainment, clothing, hobbies, records, magazines, and books. Among young teenagers, video games ranked last. For older boys, they ranked sixth out of 11 categories, yet still averaged only about \$1.80 a week.

Money spent on video games is comparable to other forms of amusement. On an hourly comparison, a first-run movie will cost about the same amount, a baseball game will cost twice as much, and a professional football game or rock concert may cost three times as much. •

This information was reprinted from "A Community Relations Manual for the Coin-operated Amusement Games Industry" by The Amusement and Music Operators Association, Amusement Games Manufacturers Association, and Amusement and Vending Machine Distributors Association.

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SNAPSHOTS



Chet McMurtie of **Bally Advance** in San Francisco and **Don Osborne**, vice president of sales and marketing for the Coin-Operated Division of **Atari Inc.**, display commendations they received from the city of San Jose for their participation in San Jose's Youth Month. Atari presented a check for \$2,000 to the City Council during the ceremony, matching the amount of money raised for youth programs through the use of Atari coin video games.



Escondido police clerk **Pat Flynn** stands guard over a recently confiscated *Double Up* video card game. This **Omega Products** game and others like it have been seized recently throughout California. Authorities say the games violate state gambling codes. (See News, *Play Meter*, Sept. 1)



World Wide Distributors' Grand Rapids branch manager **Ron Howard** (standing) chats with factory reps at the recent opening of the firm's second Michigan headquarters. More than 100 operators, factory reps, and guests attended the open house and browsed through the 5,000 square foot facility to see the new showroom, parts and service departments, and some interesting pieces of equipment displayed by some of the firms for whom World Wide distributes. With Howard in the picture are **Stern/Seeburg's Bob Lentz**, **GDI's Bob Breither**, **Pacific Novelty's Bill Cravens**, and **Marcia Young** of **Taito America**.

Collateral: insurance against disaster

By Bryan E. Milling

A small business usually has to pledge collateral to secure a bank loan. That makes many business owners reluctant to use bank credit consideration. Instead of pledging the firm's assets, they elect to operate without borrowed funds.

Unfortunately, that decision can restrict the growth and reduce the earning potential in a business. Indeed, few businesses prosper without the aid of bank financing.

No business owner should hesitate to pledge collateral to secure a loan that benefits his operation. Consequently, we will review the rationale that makes collateral a normal requirement for bank credit consideration.

First, recognize that collateral seldom stands as the major factor in a banker's decision to extend credit. Collateral does not transform questionable credit into a good loan. Thus, a banker's request for

collateral does not imply any doubt about a borrower's basic credit worthiness.

Of course, a collateral pledge does provide a banker with an additional measure of protection against any potential default by a borrower. But in normal circumstances, he doesn't want to liquidate collateral to pay any loan. In fact, collateral ranks third as a potential source of funds to retire a banker's credit consideration.

The primary source of funds remains the borrower's normal operations. Those funds may come from projected seasonal or cyclical fluctuations in the firm's cash flow. Or they may proceed from anticipated earnings. In neither circumstances does the banker or the borrower want to look beyond the primary source of funds for repayment.

Unexpected problems

Of course, an unforeseen disruption in normal operations might eliminate the

borrower's primary repayment source. A bad economy might reduce a firm's projected cash flow. A borrower may incur a loss rather than make a profit.

To protect against the loss of the primary source for repayment, a banker looks for a secondary source of funds sufficient to retire a prospective loan. He employs that source only when circumstance makes the primary source inadequate.

The strength held in a borrower's financial structure usually stands as the secondary source of repayment. That strength gives the business the ability to absorb a financial setback without losing the ability to honor its debt obligations.

Different lenders use different criteria to measure the financial strength in a business. However, most bankers focus on the borrower's net worth—i.e. the stockholder or owner's equity. The banker then tempers that measure with a look at

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the firm's debt to equity ratio. The higher that ratio—total debt divided by total equity—the less comfortable a banker feels with a borrower's financial strength as a secondary source of repayment.

As a general rule of thumb, a debt to equity ratio that exceeds two to one may disqualify your business from credit consideration. A business in that financial circumstance uses more than \$2 in debt for every \$1 in equity. From a banker's perspective, that circumstance raises serious questions about a borrower's ability to survive any disruption in the firm's anticipated earnings and cash flow.

Although a borrower has adequate financial strength, a banker still seeks collateral as the third source of funds for repaying a loan. That provides the final measure of security against a financial disaster. However, liquidating collateral to repay a loan becomes necessary only when the first two sources vanish.

Indeed, as indicated above, a collateral pledge doesn't justify credit consideration. It merely adds support for a banker's positive view of a borrower's credit worthiness. Collateral makes a good loan better.

Collateral aids decision

Collateral also makes another contribution to a banker's credit decision. That is, collateral often influences the size of the loan approved by a lender. That occurs when a bank limits the credit consideration to some proportion of the value of the

Collateral	Advance Rate	Probable Loan Limit*
Accounts Receivable	60-80%	\$6,000-\$8,000
Inventory	20-50%	\$2,000-\$5,000
Machinery & Equipment	70-90%	\$7,000-\$9,000

*Per each \$10,000 in collateral value.

assets pledged as collateral.

Numerous considerations affect the size of the loan a banker will advance against any collateral—i.e. "advance rate." However, a credit worthy borrower can expect the general relationships to hold true. (See chart)

Thus, a business with \$10,000 in accounts receivable has borrowing power that typically ranges from \$6,000 to \$8,000. A financially strong borrower qualifies for a loan approaching the upper end of that range. A business with potential cash flow problems will be near (or below) the lower end of the guideline.

Finally, collateral adds one more significant factor to a lending relationship. As it protects the lender, collateral also provides a financial safety shield for the principle who personally guarantees repayment of the business loan.

After all, a bank does not make a loan to a small business without requiring the owner's personal guaranty for the obligation. Should circumstances make the business unable to honor its credit obligation, the guaranty allows the bank to seek recovery directly from the owner.

Bank won't lose

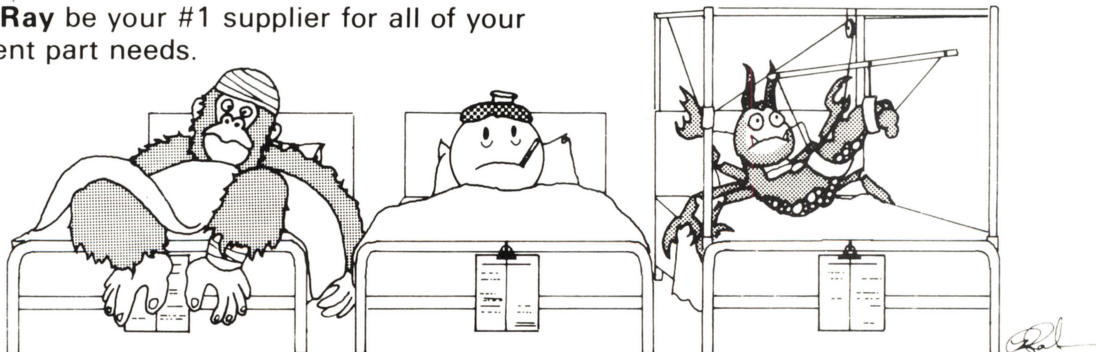
When collateral stands behind a business loan, that loan seldom becomes necessary. Even should the business fail, the bank will not suffer a loss. Liquidating the collateral will provide the funds necessary to retire the bank's credit consideration.

Certainly, any business failure is an unfortunate circumstance. However, that circumstance need not become a financial disaster for an individual personally liable for the firm's debt. Pledging the firm's collateral provides some valuable insurance against that disaster.

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OUR 'CADES By Bill Kurtz

Retailing: a new market for arcades?

With more arcades becoming established in shopping malls and shopping centers, operators are now being thought of as retailers—"selling" a few minutes of entertainment on a coin-op game the way other merchants sell clothing or furniture.

Some operators have even taken the retail concept a step further. They're really selling merchandise in their arcades—video game T-shirts, hats, stickers, etc.

In fact, at least 2,500 arcades are selling these items manufactured by The Wiz Kids (The Videoshirt Company), according to Wiz Kids President Benjamin Fein.

One benefit to an arcade selling T-shirts is uniqueness. It's still uncommon to buy something in an arcade.

"There are an increasing number of arcades selling shirts, just as there is more competition among arcades," Fein said. "T-shirts give your arcade something extra that the arcade down the road may not have."

The T-shirts, hats, frisbees, and patches that Fein and his 15 employees produce are also good advertising, because Fein can imprint your arcade's name on the back of

any video shirt.

One of the Wiz Kids' customers ordering personalized shirts is Malibu Grand Prix, which operates a chain of arcades.

"Our sales are very minor right now. We do sell in all of our arcades, but it's not a big number," said Bruce Cherubin, director of games for Malibu Grand Prix. "But when we do sell the shirts, we do make money."

Along with video game T-shirts, Cherubin said the arcades sell Malibu Grand Prix T-shirts, Pac-Man hats, and a paperback Pac-Man book.

Cherubin added that the chain will push retail sales more heavily in the near future when it begins selling the Atari home video game units.

"We're going to broaden our offerings. We have the space to do it," he said. "Retail sales will definitely be a bigger item."

Fein admitted that the major drawback to an arcade selling the T-shirts is the amount of energy needed to do it properly.

"Operators are not retailers in clothing or merchandise," he said. "We have to show them how to do it; we have to help

them with things like point of purchase displays."

Some arcades evidently need the help. Ed Hinckley, manager of the Play Palace arcade in South Euclid, Ohio, said the game room's T-shirt sales since January "haven't been too good."

Hinckley said he's sold about three shirts per month, and may run a special on them to close out the stock or give them away as prizes.

Play Palace, however, has no retail display—only three sample shirts fastened to the wall about eight feet above floor level.

Fein said the Wiz Kids sold one million shirts last year. Only a small percentage was sold in arcades.

"About 90 percent of our gross sales are to retail outlets, but we're trying to gear our business toward arcades," he said. "Arcades are going to have to diversify more and more to survive in the future."

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CRITIC'S CORNER

By
Roger C.
Sharpe

Making a 'Ballyhoo' about 'Tron'

There have been times when I've been concerned about the release of games and whether the Column could always sustain what was being produced. This was especially true when the subject matter was strictly pinball, and the models weren't there in the numbers that they used to be.

Then we opened up to all types of equipment, specifically video, and there seems to be an ever-present overabundance that, even with the increased number of issues, still causes me to have to pick and choose as best I can to cover the field as completely and timely as possible.

In fact, I'm always evaluating ways to bring you the most I can.

What you may begin seeing in upcoming CC's are mini-reviews of some games, so that they're not lost forever because of timing or deadlines, and the conventional write-ups you're used to.

However, here we are getting deeper into fall and the realization that another year is rapidly passing by. There have been some interesting developments such as *Hyperball* that tried to bridge pinball/video and the old arcade game motif in a contemporary package that offered great expectation for expanding the basic product categories.

Zaxxon came with a flourish and not only pointed the way for a new plateau in screen graphics and dimensionality, but Sega also broke through another barrier by aggressively broadening what the coin-op industry can become in the future when it goes straight to the people by advertising the machine on television. Even now, the full effect of advertising is probably not recognized.

There was the popularity of *Donkey Kong*, and *Ms. Pac-Man* took up where the original left off.

Caveman brought the world the first true pinball/video hybrid and left its mark.

Orbitor 1 gave even more dimensionality to an already three-dimensional entertainment form and proved that there was still life for pinball and room for imagination. The movie "Tron" brought Disney studios more attention than any other effort in recent years and inspired the coin-op rendition by Bally along with a tournament to try and maximize the wave of publicity generated by the anticipation of the wonders on the silver screen.

The literary world discovered that books and even magazines devoted to video games could mean big bucks and firmed up to tap all the dollars going into the games. Words upon words were printed on how to beat or master almost every model as well as create additional reading for the games consumer.

And, last, the big push began with the home market and a new generation of hand-held models as well as computer game

cartridge variations of already successful coin-op games or independent creations hoping to capture their own at-home fan appeal.

And the year isn't even over yet. We've yet to really see the impact of the coming holiday media blitz for the home computer system and the variety of game cartridges available. But it will prove to be an enlightening experience after all is said and done.

Will it help or hurt the arcade games? Who knows. Will it bring back to life games that may have already peaked because of the increased awareness of their existence? Who knows. The answers will come slowly at first and then more rapidly depending upon how the advancements in the industry take shape.

All attention has to be focused on what's coming for AMOA. It should prove interesting and maybe even surprising to see the majors jockey for the top spot and the players' loyalty.

But now let's look at the games on view this time around that offer some variations within themselves as well as compared to previous efforts.

Bally's *Tron*

Although much of the ballyhoo is past us now, the impact of this machine should last well into the future given the incredible amount of coverage surrounding the movie, its storyline, and its special effects. If nothing else, there's a recognizability factor that will always remain, an extended personality beyond the game that is more the legacy of the Disney event rather than anything else.

PLAY: The controls once again take a more simplified form. That appears to be the trend with all manufacturers, and here it's a joystick (more about this later) and a turning knob for direction of firing with a machine that's really four games in one.

Borrowing action from the movie, there's an energy cone with different colored bricks fronting it, and players must navigate the person on screen to fire and knock out the bricks while also trying to pass behind and up for the next challenge.

Another problem is a tank maze with anywhere from one to six enemy tanks having to be battled in order to move on.

The third test is shooting and maneuvering against a growing team of spiders while trying to gain access to a center chamber before a timer runs down. The last test is a speed cycle race with a grid and action similar to the old *Blockade* days. Here it can be the player against one to three enemies.

The player has a few seconds to decide which of the four colored maze-like areas to point his joystick toward, or the machine will automatically do the choosing. And when one

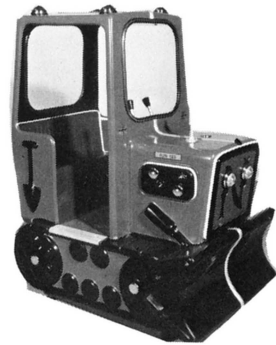
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game is accomplished, the player moves on to complete the other games before earning the chance to advance to the next stage of difficulty—there are nine levels in all.

ANALYSIS: Even without the strength of the movie tie-in, the blend of challenges offers some good balance of action, pacing, and strategy for each of the four tests.

However, the movie does provide support and *Tron* won't let fans down with action that's fairly faithful to the screen effort, and a test of hand and eye coordination that forces a player to adjust once an individual stage is completed.

It's a nice approach to play that should find some players mastering some of the action easily, while still finding one or two that pose problems and demand adjustments. Rather than a single pattern, the result is almost a way of offering something for everyone in a rather straightforward way that's simple to understand and not intimidating.

GRAPHICS: The total package deserves kudos since *Tron* is an eye-grabber. From the blue, internally illuminated joystick, to the artwork on the cabinet, the effect sets the machine apart on first glance. As for the screen, which is deeply set with some nice exterior touches, the colors are brilliant and bright on all the games and should appeal to almost every player's visual sensibilities.

PROS & CONS: Given the constraints, or what some might consider the luxury of having to utilize the action of the movie, *Tron* really doesn't suffer in the translation and any following for the picture should only help the machine. Although it's going to have to stand on its own.

But even this it does well with some basic game action that resurrects a couple of themes long past while embellishing each 'game' in a thoughtful manner. There's a nice give-and-take within this that should aid the novice player and provide more than enough challenge for the expert.

RATING: If you were looking at the screen action without the impact of the tie-in, the feeling wouldn't be as strong regarding the potential appeal and drawing power of *Tron*. But then maybe Bally would have produced a far different game, so the two have to be taken hand-in-hand in the total scheme of things.

For this very important reason and the extra dimension it opens for coin-op video, *Tron* gets a well-deserved #### for bringing it all together, and maybe more importantly, adding that bit of differentiation and uniqueness that all games seek.

Atari's *Kangaroo*

Once again this giant from California brings an effort not totally grown in-house, but under license from Sun Electronics. Although a competitive machine in today's market, the feeling that emerges is the announcement at Chicago's summer CES convention about Lucas (of "Star Wars" fame) entering into agreement with Atari to produce equipment. Could the coming months find something really dramatic approaching reality? Time will tell; but in the meantime, let's take a closer look at this game of maternal rescue.

PLAY: There's a six-position joystick control and 'punch' buttons, with the former moving the main character, Mother Kangaroo, in her quest to reach her baby. She hops and jumps along horizontal paths very similar to those found in *Donkey Kong*.

The influence here is obvious to the play as the *Kangaroo* must avoid obstacles such as cantankerous monkeys and apples hurled to stop her from reaching the top of the maze. There are extra fruits along the way for increased point values, and once the baby is successfully rescued, more advanced levels of play change the basic layout of the screen graphics. In the first round, there are ladders between each platform that rests in the middle of two trees.

The second level features a series of jagged spaced logs that must be navigated. Level three goes one step further with

greater distance and nuances to the monkey villains, and the fourth round has short and long ladders with the action and speed of movement getting progressively faster and harder as play continues.

ANALYSIS: *Kangaroo* is cute, colorful, and obviously trying to appeal to a wide cross section of those who found *Donkey Kong* fun to play. It may even be an attempt to further involve and interest the female market of players with the basic content of the game and graphics.

For the most part, it is non-violent with punches being the real injury to the basically inoffensive monkeys. The results are straightforward enough and might even capture some visibility in the glut of equipment hitting the streets.

Once again, the controls are relatively simple that should add to those who are becoming more accustomed to this approach. There's enough personality to the on-screen activity to possibly bring in the curious. Is the challenge level there to sustain player traffic is the question since many players may be more willing to move on to something a bit different.

GRAPHICS: I am a simian freak pure and simple; I have always had a thing for monkeys, apes, etc., so *Kangaroo* stands out in this respect.

But there's some good color on both the cabinet and the screen, and the result is bright and cheerful. So this departure is pleasant from the norm of machines of recent vintage. And there are some good sound effects and other enhanced graphic elements during play to add to the package.

PROS & CONS: I don't know about *Kangaroo* because it comes so close on the heels of *Donkey Kong* that has already had a resounding success. Is the well tapped dry for this particular kind of game play? My feeling is that those locations that have multiple, multiples of *Donkey Kong* would probably be less apt to add this effort to their lineup. But those who fell short on the other might want to get this one to fill a slot.

After all, the play is OK as well as the overall effect. But the disappointment is that it's not the next step in the evolutionary line of things. It's just a rehash of what's been done. Ideally, that type of thinking is the exception rather than the rule as the industry continues to expand its scope.

RATING: Taken on its own, *Kangaroo* isn't that bad of a game, but the existence of a predecessor along similar lines has got to hurt the overall effort and impact of the game in the marketplace. So the result is that I'm ambivalent about *Kangaroo*. That might be the worst thing to say about the game. It just doesn't stand out on its own on its own merit and that's a shame. We'll go with a ## here and leave the decision to you the operator and whether you've had enough of the same old thing.

Stern's Tutankham

When I first saw this game at the Konami booth at the spring AOE in Chicago, I liked it and thought it would be a strong game whenever it hit the streets. There is some good graphics, interesting action, and a storyline. Now it comes from Stern as the next in its constantly flowing line of products.

PLAY: There's a double joystick for those who have mastered walking and chewing gum at the same time. The left moves the on-screen little character around and through a maze looking for treasures and keys needed to open the various rooms, while the right side control is for firing at an array of little villains out to end the adventurer's quest.

In addition, a 'flash' button can be used to destroy all visible enemies at once. Four levels of play offer progressively more difficult challenges for players in an adventure that takes place within the netherworld of an ancient pyramid and the search for the hidden tomb.

A smaller map screen above the main graphic (similar to *Defender*) is here and provides players with a basic grid of where to go and what will be encountered as the scroll rolls

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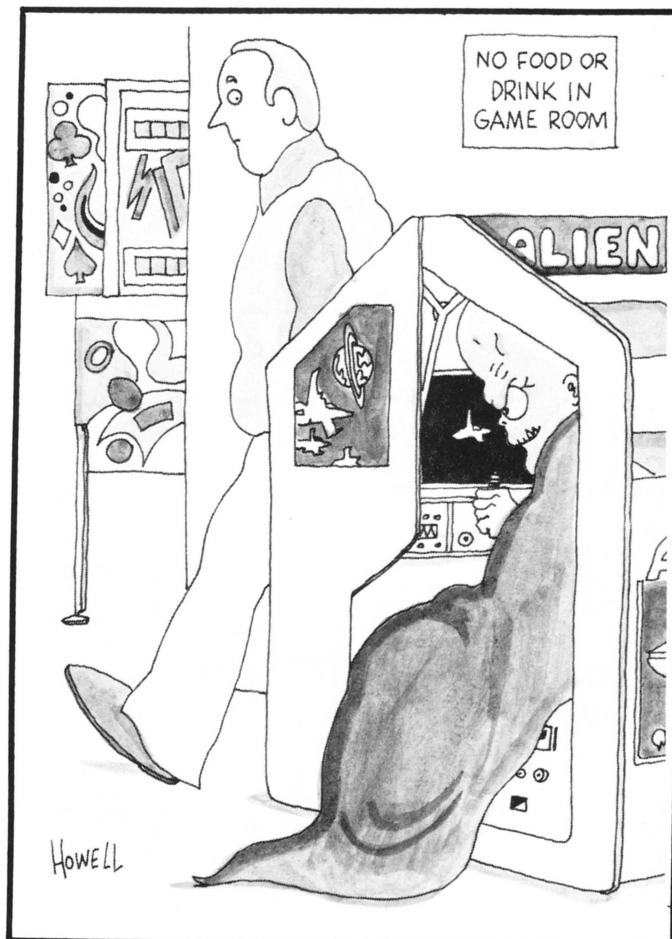
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along with the direction of the action and movement of the intrepid explorer. Points are scored for wiping out the always present enemies such as asps, bats, and vultures, and for picking up keys and treasures scattered along the way throughout the maze.

ANALYSIS: *Tutankham* offers some nice action that's not so easy to master as might be considered on the surface—the limitation of the firing joystick to a position that's only back or forth adds to the strategy. Also, positioning for the player throughout the play and the maze itself with some hidden doors that can transport the main character to another part of the screen, is another nice touch.

The embellishments within the setting are a definite advantage in the creation of a total environment with very specific goals and a set storyline that should tend to involve players to a great degree as the quest continues from one stage to the next.

There's a need for quick reflexes and also establishing a play strategy that goes beyond mastering a particular timed pattern of on-screen occurrences.

GRAPHICS: When I first saw *Tut*, I liked the effect that was accomplished and felt that it would carry the game to the players looking for something different. That initial feeling hasn't changed, because the machine is colorful and absorbing even for those only watching someone else play.

There are also good, supportive sound effects and other visual nuances that make the total package a strong one no matter what the eventual appeal will prove to be.

PROS & CONS: The issue with *Tutankham* is whether, at this stage in product development, the perceived strength of another maze game, even with its emphasis on details and continuity, is enough to bring players back time and again for something that is really a dressed up version of many other video machine efforts that have tried to capitalize on the *Pac-Man* craze.

I think it can provide some inherent difference that should find a niche for itself, but the staying power may be something less than if the game had been released six months earlier.

However, even with all these factors, the machine is a nice integrated effort that, in this day and age especially, should find a second life as a home computer game cartridge that should do more than well in this market if and when it ever hits.

For the meantime, *Tut* finds itself in the unenviable position of competing less with the current crop of games hitting the street and more so against the old line favorites that still enjoy a fairly stable following from new as well as old players.

RATING: As mentioned earlier, *Tut* is a very appealing game on many different levels, but the question is whether it can establish its own identity in what has become a glutted marketplace. Given the right placement on location, within a mixture of games that would warrant its inclusion, this Stern entity deserves some extra notice and earns here a strong ###½ for putting it all together with a game that should draw in the female player as well as the avid male videophile.

With this issue's offerings out of the way, the fall season should be firmly entrenched and ready to reap whatever dividend may have been lacking for those seasonal spots that were hurt by the summer and the spreading out of the population on vacations, etc. Now the real sweepstakes will begin, and the process of weeding out the bad from the good and the imitations from the innovations should prove to be the primary goal of one and all.

We'll be in a holding period for the next couple of months before the AMOA-slanted creations begin to hit the streets and tantalize the players with visions for the rest of the year and the beginning of next. It's a basic cycle that has been followed for at least the eight years I've been around, and there's no reason to assume it will be different this time.

Although, what might prove interesting is the effect of the expected media blitz for home systems and games and what the relationship of this will be on the coin-op explosion.

When this becomes more defined, I'll be covering it on these pages, while keeping track of events as they happen. Until next time, however, be well and prosper. ●

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FOR PROMOTION

By
Carol
Kantor

Public Relations + promotions = profit

Promotion is done to increase business. Public Relations is done to improve public image. *Do both consistently* and the long-range profit picture will be maximized. The game center will be viewed as a place for fun and entertainment and will have high traffic and play activity.

There are promotion and public relations programs. That is, events, policies, special offers, etc. that are specifically designed to meet the promotion and P.R. objectives simultaneously. Here are a few examples to consider:

Donation of collections for a cause

Select a local cause that is getting a lot of media attention. For example, in San Francisco a "Save the Cable Car" event has high public interest. Hold a four-hour special fund raiser at the game center during prime time to maximize attention. All collections go to the cause.

Send notices and invitations two to three weeks in advance to all local organizations, civic groups, schools, etc. Send out press releases on the event. Invite the "cause" coordinators to sell T-shirts, buttons, etc. during your event. The extra people you draw for the fund raiser will introduce new potential customers to your location. The publicity will also be good, and results should be effective to build traffic and image.

This is just one example of how game collections donated to a popular cause can be used for promotion and P.R. Anytime a good P.R. fund-raising event can attract people and publicity, it should be considered. If every game center did two collection/donation type promotions a year, the image problem might be significantly reduced.

Play rewards for good grades/good deeds

An effective and popular program for promotion and P.R. is to give "Free Plays for A's" in a game center that attracts students. The free play incentives for your players to "earn" can be expanded to other areas as well. A "Clean the Park" campaign offering free plays for bags of park litter can be good. Any use of free play offers for player achievements or good deeds will add the P.R. element to the promotion in order to create a more positive image for the location.

Score for charity

A special contest can be designed to raise funds for a charity and to attract new players to the location as well. Approach local organizations to participate in a contest where the points scored represent donations to a popular charity.

This is similar to a walk-a-thon concept. Participants get money pledges for points

scored. This type of contest has many variations and is equally good for expert and novice players because even a lower score represents a donation to the charity. Encourage attendance by sponsors as well as players. While waiting for their turn on the official contest games, participants will enjoy the other games in the location.

Public service or support giveaways

Give out some item for public service: safety reflecting stickers for bicycles, Halloween bags with safety tips, or bumper strips promoting a local event. Items for safety, education, or another worthy cause can be given out at a game center to draw players and demonstrate a P.R. attitude.

The "giveaway" should be advertised well to the community. It can be done as a "with purchase" offer or just as a "come by" to pick it up offer to attract new customers to the location. Anyway it is done, the item should be useful for a service or support application and continue to advertise the game center name.

Whether it is a donation, a free play offer, a giveaway, or a contest—promotions should be planned with a public relations slant—or public relations programs should be planned with a promotion slant to add to the effectiveness. And both should be done often to keep the traffic and image high.

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FRANK'S CRANKS

By
Frank
Seninsky

Jumping to Atari's 'Kangaroo'

Atari has come through again with another well-made game. Its latest release, *Kangaroo*, is laid out very similar to its last game, *Dig Dug*.

It's too early to project on the long-run reliability of this game, but in the last couple of weeks since *Kangaroo* has been in my area of the country, it has done well and required little maintenance.

Cabinet

The cabinet is black in the front and has white sides. The black on the front is also easy to paint with only flat black spray paint. The side graphics are extremely colorful and will not peel off easily. They are similar to the type of decals Atari used on *Centipede* that has held up for more than a year now. The decals and the white glossy paint are easy to keep clean. It's very important to keep game cabinets clean and attractive.

The marquee is made of tempered glass and is held in place by two metal guide rail brackets. Each bracket is mounted to the cabinet with three Allen head screws. It's not the best method for securing the marquee, but under the circumstances, it's better than using Phillips screws and plastic guide rails as other manufacturers do. The metal guides are strong enough so they can't easily be bent up or down with just your fingers. However, the screws can be taken out with the proper Allen wrench or just a simple pair of pliers. If these screws were recessed into the metal guides, I feel that the marquee would be more secure.

Control Panel

Atari has used a durable overlay on the control panel. On the game I tested, there were no air bubbles under the overlay. It has been wrapped under the panel edges so the material can't easily be peeled off.

Atari has used the "beef-up" Wico eight-position joystick, which has proven to be the best after many tests. *Kangaroo* uses only six of the eight positions: up, down, left, right, and two super leap positions where two of the leaf switches must be closed at the same time. The control panel

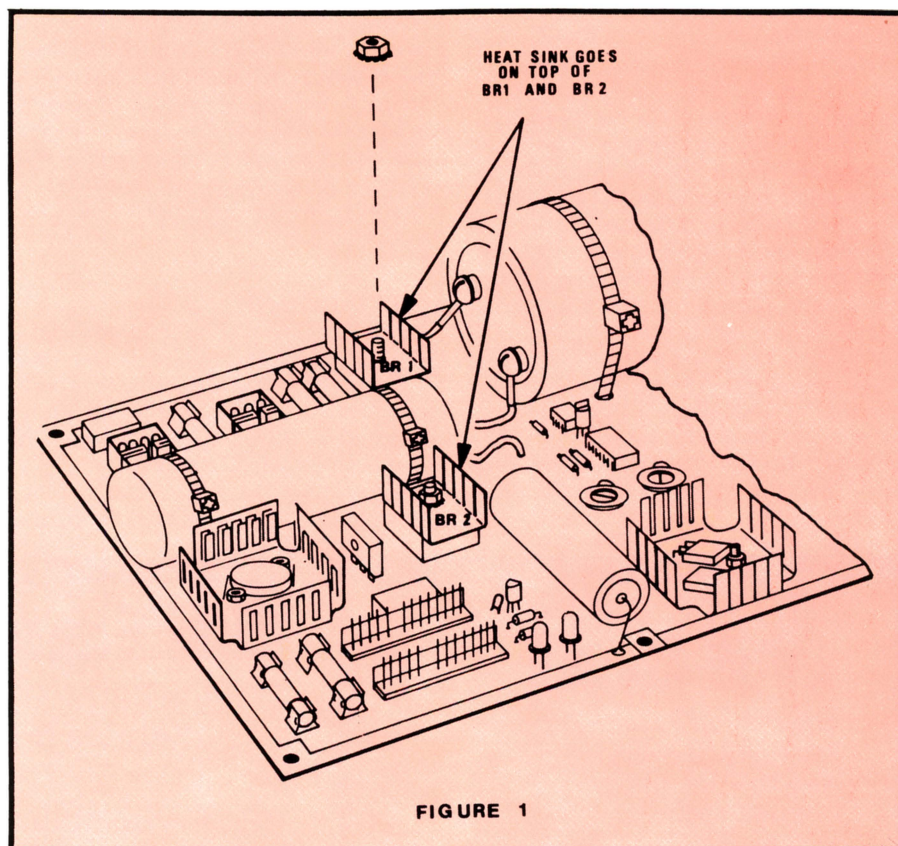
has two "punch" buttons depending on if you are right or left-handed.

This is a much better system than pulling trigger switches on joystick controls. Cross-hair leaf switches have been used on the punch buttons and the joystick switches. These switches are self-cleaning and are the most reliable. They rarely crack and must be replaced only when a deep notch is developed in the contact area. These switches should be checked at least monthly.

LED push-button switches are used for the first and second player start buttons. High plastic caps are used instead of the lower plastic or metal types to secure these switches to the control panel. These caps cannot be easily twisted off by a player because they have two prongs that fit into

the control panel. It is also better to use the high caps so that the red, plastic LED cover buttons on the switch can't be pulled off with your fingers. These caps surely reduce the number of button related service calls.

The control panel is locked in place by two latches. The latches are screwed to the cabinet wall in the vertical direction. This makes it harder to loosen the latches by pulling on the joystick. This has been readily noticed in our *Robotron* games where the latches are placed in a horizontal direction. The players pull hard on both *Robotron* joysticks, and in a short time, the cabinet latches loosen or pull out. Part of the reason is also attributed to *Robotron* having two joysticks so the player can exert almost twice as much force on the latches.



Coin Doors

Atari has again used the over-under (separate coin door and cashbox door) system made by Coin Controls. This dual door system has been used on the last few models and has worked well. There are rarely coin jam problems because the angle of the coin entry chutes is steep, and the coin return buttons don't stick. I like this door system and hope that more manufacturers will utilize it. A standard door system would be a blessing, especially when it could be taken off an old, worn-out game and used to repair a new game.

The coin meter, volume control pot, test switch, and coin switch are all mounted on a small bracket that is mounted to the coin box entry top (a few inches behind the slots under the micro switches). These controls are easy to reach from the coin door.

Monitor

Kangaroo has an Electrohome 19-inch color rasterscan monitor. The monitor can be removed from the front of the game by removing the monitor cover, monitor bezel, four bolts, and one screw. It sounds difficult but it really isn't. It is usually easier to remove a monitor from the front rather than from the back of a game.

It's always a good idea to discharge the high voltage section before grabbing the monitor. I can just imagine someone holding a monitor and accidentally touching the high voltage and getting a good jolt. Of course he or she could let go of the monitor and drop it!

To discharge any monitor, attach one end of a jumper cable to the metal shaft of an insulated screw driver. Attach the other end to a grounded section of the monitor chassis (while still hooked up in the game with the power off). Then slide the screwdriver tip underneath the high voltage anode suction cup on the picture tube. You should hear a cracking sound. The high voltage will then be discharged.

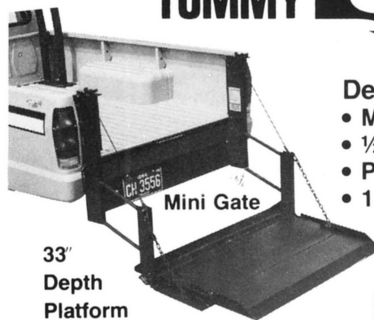
Logic Boards

There are two boards mounted "piggy-back" on the right wall of the cabinet (looking inside from the back door). These are called the CPU boards, and they are connected by a 50 pin ribbon connector. I hate ribbon connectors.

A new switch (service switch) is located on the outer board that enables you to enter credits without stepping up the coin meter. This switch will also start the self-test if it is pressed while the game is powering up. This makes it a bit easier for the serviceman.

The regulator/audio board is mounted on the right cabinet wall just under the CPU boards. This board is the same as those in Atari's last few games. The power supply is located on the bottom of the cabinet. This supply has a new transformer (#A035888-01) but can still be used in other

TOMMY GATE

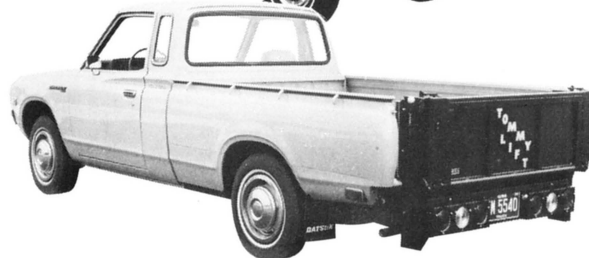


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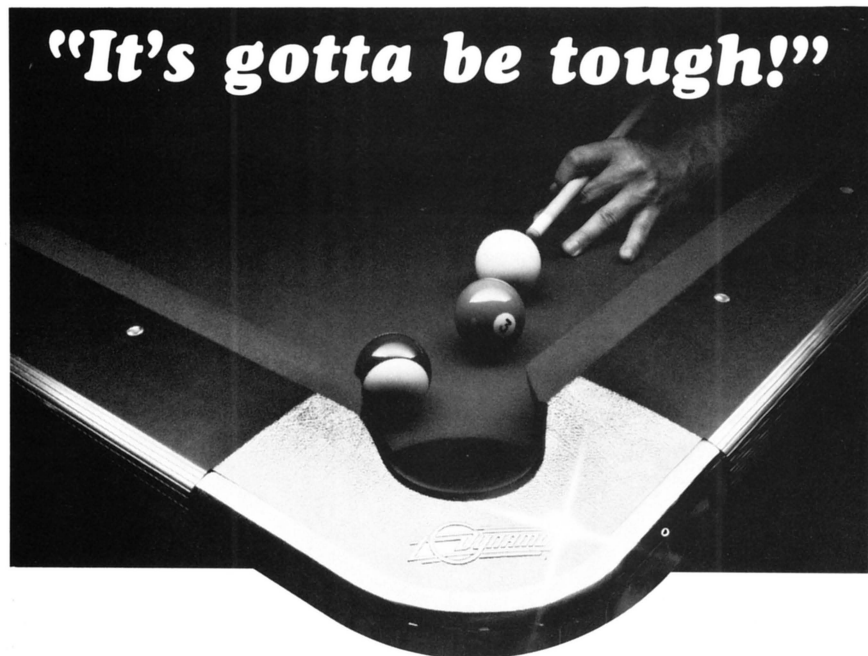
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Atari games. The older transformer (#A035888-02) can be substituted if necessary.

The self-test features on *Kangaroo* can be separated into four groups: 1) test for all RAMS and ROMS; 2) test for seven colors on the monitor: blue, green, light blue, red, yellow, violet, and white; 3) test for all switches; and 4) test for all sounds, 1-9 and A-J. It is pointed out in the manual that there is no test for the coin door lockout coils. If you keep blowing fuses and know the boards, power supply, and monitor are good, check out the coil wiring, coin door harness, and TR3 or TR4 on the CPU.

Atari has supplied an "Operation, Maintenance and Service Manual" with

the game. It contains 20 sheets of schematics that cover every aspect of the game. So far it is the most complete set of drawings supplied with a game. That will either be good news for you or just confuse you more.

Kangaroo is a well-made game. Atari has its cabinet, control panel, and coin door designs down pretty well. The marquee mounting could be improved, however. I would like to see slam switches included on all games. (*Kangaroo* doesn't have one.) I give *Kangaroo* a 9.0 out of 10. If things start to fall apart in the next few months, I'll let you know. But I feel *Kangaroo* is a reliable game.

Service Tips

Ms. Pac-Man and Galaga

If you have a wavy picture and can't find any blown fuses, there is a chance that the problem is due to a poor ground. Midway recommends that you remove the yellow ground strap from the transformer mount and screw it to the metal case of the line filter assembly. This may clear up the picture.

Taito Power Supply

If you have been having problems with a Taito power supply, (*Qix, Alpine Ski, Wild Western, Kram, Electric Yo Yo*) it may be that BR1 and BR2 are running too hot and burning up. Taito suggests that heat sinks be added onto these two bridges. You will need the heat sinks (30-00001-001), two 6/32 inch long screws and corresponding nuts, and some heat sink compound. Figure 1 shows where these heat sinks are placed.

Mr. & Mrs. Pac-Man Pinball

There are a few areas where the harness wiring insulation is cut and shorts a circuit to the ground (if you're lucky) or into another circuit. I've found this most often occurs under the playfield on the right edge. There is a wire bundle that can easily be cut by the playfield support rails. Other areas to search are where any wire bundle touches a light socket or bracket edge. Vibration will cause any of these wires touching metal to have their insulation cut.

After you've gone through all the wire bundles, you may still find that every few days (or everyday) the 5 amp solenoid fuse blows. This circuit is definitely overloaded. Try putting a 7, 8, or 10 amp fuse and see if the fuse blowing problem is corrected.

There is a switch (saucer hole) under the playfield at the top edge of the board that can easily have its terminals shorted together. This occurs when the playfield is pushed back into place after it has been in a vertical position for servicing. As the playfield is pushed back, these switch terminals can hit up against the cabinet frame and short together. The symptom would be a closed switch, and the ball would not come up to start a game. The machine thinks the ball is in the top saucer hole and is waiting for it to be kicked out. •

Some Corollaries To Various Laws

Auditors are the people who go in after the war is lost and bayonet the wounded. (Rubin)

When an engineer designs a simple workable system, it is because he didn't know how to design a complex workable system. (Epperson)

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PUZZLE ANSWERS

By Bill Brohaugh

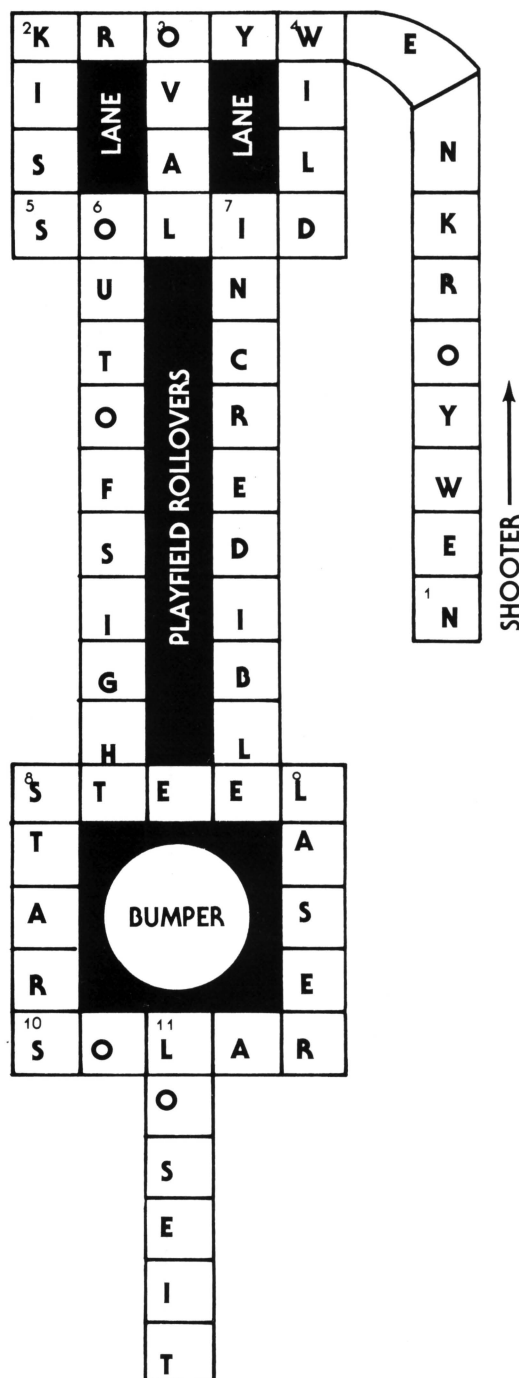
Crossword pinball

(Solution to puzzle in Sept. 1 issue of *Play Meter*, page 12)

Win a special by completing this puzzle with your "crossword pinball." Start at the right in square #1, and "shoot" the first words onto the playfield. Put the first letter in square #1, and continue the word up to the first lane (Yes, the word will be backward by the time you get there, but that doesn't matter).

CLUES

- (shooter): The big apples of Gottlieb's video eye (4 words).
- (down): This popular Bally pingame featuring a rock group was sealed with a _____.
- (down): A 1933 pingame was called _____ Ten; this is also the shape of a racetrack.
- (down): Stern's Roman-themed _____ Fyre.
- (across): The state pinball machines are in today.
- (down): Gottlieb's "invisible" electromechanical pingame of 1975 (3 words).
- (down): Gottlieb's *Hulk* machine was _____.
- (across): The silver ball is actually made of _____.
- (down): Stern's stellar 1978 pingame.
- (down): Williams's _____ ball gets its name from a beam of light.
- (across): Gottlieb's _____ Ride and Williams's _____ Fire (1 word).
- (down): What happens when the ball is in this part of the playfield. You _____ (2 words).



POWER SUPPLY DESIGN COURSE PSD-1

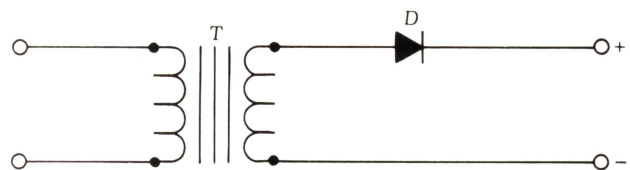
Lesson Two: Power Supply Elements

Editor's Note: The material below is a serialization of the Kurz Kasch correspondence course for electronics, designed specifically for the coin-operated amusement industry. This course is copyrighted and owned by Kurz Kasch of Dayton, Ohio, and its reprinting is being sponsored jointly by Kurz Kasch and Play Meter magazine. This material is authorized for publication exclusively in Play Meter magazine.

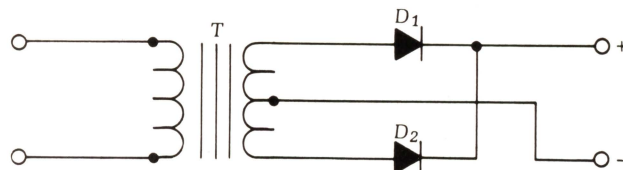
Lesson Two – Power Supply Elements: This lesson introduces the student to the general idea of a power supply. Included are a study of and definitions of the terms associated with a sign wave. Semiconducted diodes are also covered in their application as rectifying elements.

RECTIFIERS AND FILTERS:

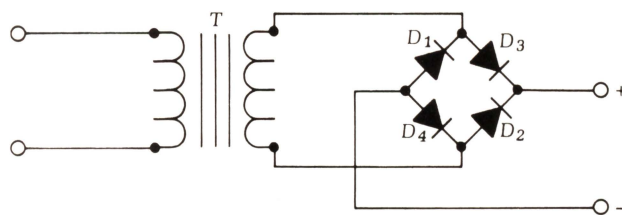
In the previous lesson the performance of a power supply as a whole was studied. In this section a detailed analysis will be made of those segments which directly relate to AC to DC conversion. Since almost all electronic equipment derives its primary power from the commercial 115VAC power line, this section will be of particular interest to the power supply designer. AC to DC conversion will be studied in two steps; first rectifiers, then filters.



The Half-Wave Rectifier



The Full-Wave Center Tapped Rectifier



The Full-Wave Bridge Rectifier

Fig. 2-1: There are three basic rectifier configurations; and, they are of two basic types – half-wave and full-wave.

RECTIFIERS:

There are three popular rectifier circuit configurations. They are **half-wave**, **full-wave center tapped** and **full-wave bridge**. All are shown schematically in fig. 2-1. Notice that in each case the rectifier circuit contains a transformer (T) and at least one diode (D). Although, in the case of the half-wave rectifier, a transformer is not always necessary. So that a uniform presentation of each configuration and a direct comparison can be made, the half-wave rectifier, in this course, will contain a transformer. The advantages and disadvantages of each configuration will become obvious as each is studied in detail.

The purpose of the transformer is to step-up or step-down the primary voltage with only a small amount of heat loss by the device. The purpose of the diode(s) is, of course, to permit current to flow in only one direction. However, before

discussing each rectifier type in detail, it would be best to first review the sine wave and its associated formula. Also, the silicon diode and its characteristics will be reviewed.

THE SINE WAVE :

In AC the values of voltage and current are constantly undergoing a complete amplitude change. Also, current flow will alternately reverse direction with each voltage alternation; both at a periodic rate. Thus, a **peak value**, $E_{(pk)}$, of AC will not do the same work as a DC voltage of the same value. Also, for one cycle of an AC current, an **average value** will be zero because the positive peak value is equal to the negative peak value. The term average value, however, is used by the industry to refer to 0.636 of the peak value for one alternation. The average value is used primarily for circuits involving rectification of the sine wave. Hence, the average value, $E_{(av)}$, is :

$$E_{(av)} = 0.636 \times E_{(pk)} \quad (1)$$

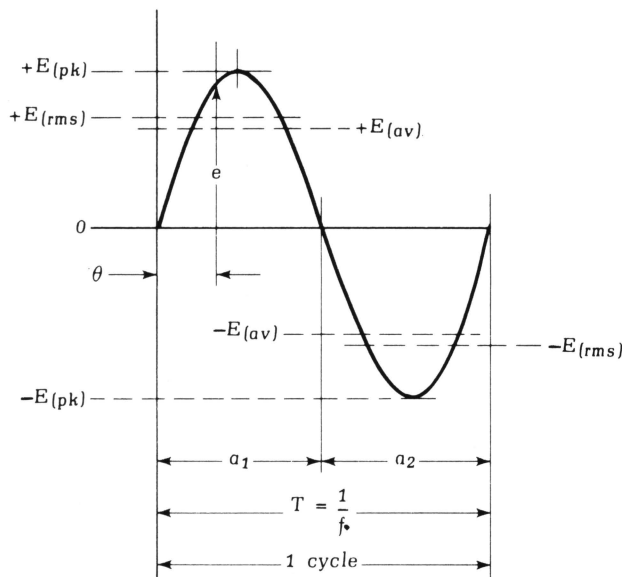


Fig. 2-2: The terms associated with a sine wave are of prime importance when designing power supply circuits. This diagram graphically shows the meaning of each term and their relationships to each other.

A second value worthy of note is the **effective value**, $E_{(rms)}$ (rms - root-means-squared - is descriptive of the method used to calculate the effective value). The rms value of the peak value is :

$$E_{(rms)} = 0.707 \times E_{(pk)} \quad (2)$$

Referring to fig. 2-2, one can observe a sine wave and the above-mentioned relationships. Notice that the sine wave consists of a positive going and a negative going alternation; both making up a cycle. The number of cycles occurring in one second determines the **frequency** (f) of the waveform. The number of waveform cycles occurring in one second is expressed in Hertz (Hz). For example, 60 sine waves per second is expressed as 60 Hz.

The **instantaneous voltage**, e , can be expressed as:

$$e = E_{(pk)} \times \sin \theta \quad (3)$$

For purposes of clarity all AC voltages will be expressed by the term E while all DC voltages will be expressed by the term V .

THE IDEAL DIODE :

To achieve an understanding of semiconductor diode characteristics, it is best to first discuss an ideal diode. This imaginary rectifier, (which exists only in our minds), has ideal characteristics...in other words it is perfect. As shown in fig. 2-3, when forward biased it is capable of passing an infinite amount of current (I_F) and regardless of the forward current it would drop zero volts (V_F). The zero voltage drop indicates that the resistance of the device, when forward biased, is zero ohms. Therefore, the power dissipated by the diode, regardless of the current through it, is zero watts. Using the power formula for proof:

$$P = I^2 \times R$$

(if $R = 0$ then $P = 0$)

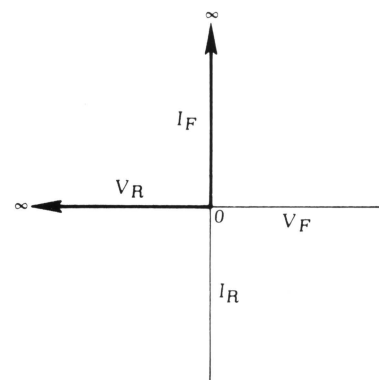


Fig. 2-3. The operational characteristics of an ideal diode. Note that $V_F = 0$, I_F extends to infinity, $I_R = 0$ and V_R extends to infinity.

When this ideal diode is reverse biased it would be capable of not breaking down regardless of the reverse voltage (V_R) across it. Also, there would be no leakage current (I_R). The lack of I_R indicates that the resistance of this imaginary diode is infinite. Using Ohms Law for proof:

$$R = E/I$$

(If $I = 0$ then R is without limit or ∞ .)

Based on the above, it can be stated that an ideal diode would switch from a zero ohm state to an infinite resistance state when the source voltage is reversed.

THE PRACTICAL DIODE :

If the diode described in the preceding paragraphs existed, the circuit designer would be able to pick, at random, any diode and install it into his circuit. His choice of diodes would require no thought since they would all have infinite

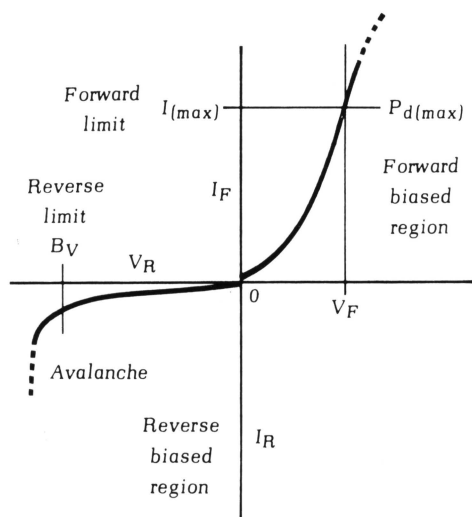


Fig. 2-4. The operational characteristics of a practical diode. Compare V_F , I_F , I_R and V_R with those of fig. 2-3. Also, note the limits $P_{d(max)}$ and B_V .

capability and would, therefore, be the same. In reality no semiconductor diode is perfect. These imperfections are the topics of the following paragraphs.

Fig. 2-4 shows the typical behavior of a real diode when forward and reverse biased. It should be noted that with the real diode there are definite operating limits, both in the forward and reverse biased states. Also, the forward and reverse resistances of the real device are far from those of the ideal diode; note I_R and V_F .

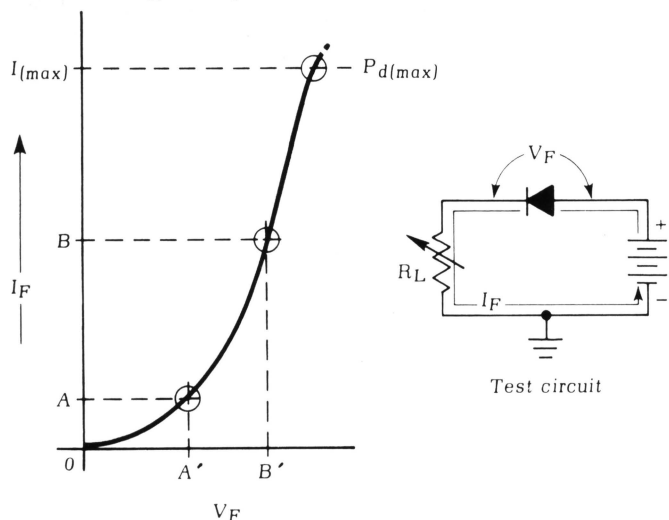


Fig. 2-5. The forward biased characteristics of a typical diode. V_F increases as I_F increases to the operational limit $P_{d(max)}$.

We will now focus our attention to the forward biased behavior of the diode curve and fig. 2-5. The test circuit shown in fig. 2-5 illustrates the meaning of V_F and I_F , while the load resistance is varied to change the current I_F . As R_L is varied from a maximum resistance to a lower value, the current drawn through the diode increases, say, from point A to point B. V_F also changes from point A' to point B'. Notice that the **current (I_F) through the diode determines the voltage (V_F) dropped across the diode.**

The current through the diode can be increased by decreasing R_L until the product of the current through the diode and the voltage across the diode equal the maximum power ($P_{d(max)}$) that the device is capable of dissipating.

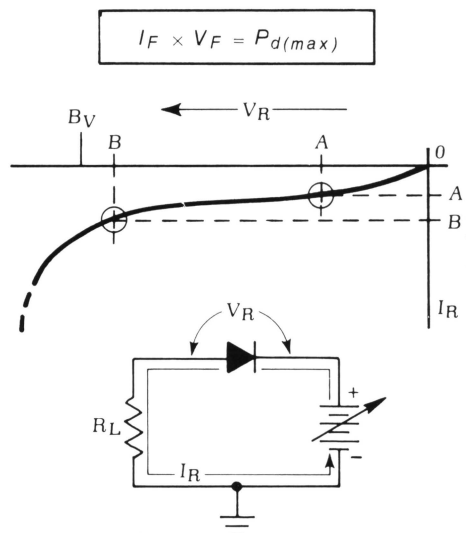


Fig. 2-6. The reverse biased characteristics of a diode. I_R increases as V_R increased to the limit B_V .

Once the dissipation by the diode exceeds the manufacturer's stated limit, the diode will then operate on the principle of **thermal runaway**. Diodes operated beyond the stated $P_{d(max)}$ will, under normal circumstances, be destroyed.

When the real diode is reverse biased, as in the circuit of fig. 2-6, a small current will flow. This current is typically in the order of microamperes. As the battery voltage in the test circuit is adjusted, for example, from point A to point B, the reverse current (I_R) increased from point A' to point B'. It should be observed that in the reverse biased state **the reverse voltage (V_R) determines the current through the diode (I_R)**, as opposed to I_F controlling V_F in forward biased state. The battery voltage can be increased to the limit B_V (breakdown voltage). B_V is stated by the manufacturer and when exceeded the diode will enter the **avalanche region**. Once a diode is operated in the avalanche region it will be destroyed.

Since almost all electronic equipment derives its primary power from the commercial 115 VAC power line, this section will be of particular interest to the power supply designer.

Jukebox audio, live video

Ever wished that you could see what you heard when you put a coin into a jukebox? Well, that has now become a reality with the introduction of the *Startime Video Muzzikboxx/Communicator*.

Nicknamed the *Video Jukebox*, this device has propelled the old-fashioned jukebox into the middle of the 1980s video revolution with the inclusion of conceptual and live performances on a television screen that is built into the unit.

Video Music International Inc. has successfully developed and begun an extensive international marketing campaign to distribute and promote the *Video Jukebox*. Units are already being marketed throughout the United Kingdom.

Startime, VMI's trademark name for this new state of the art coin-operated entertainment/communications concept, combines jukebox audio with live video. It can also be programmed to feature advertising, short films, informational messages, top sporting events, educational formats, or any other type of communications message, when it is not in the play mode.

The *Startime Video Muzzikboxx* can be located in any public place where people meet, relax, or seek entertainment. It can be positioned in record stores, restaurants, shopping malls, video arcades, amusement parks, bowling alleys, theater lobbies, hotels, motels, laundromats, car washes, disco establishments, airports, bus and train terminals, etc.

The non-coin operated version—the *Startime Video Communicator* can be utilized for educational, informational, or instructional purposes. It can be placed in hospitals, doctors' offices, museums, schools, banks, and many other locations.

Multiple auxiliary screens of any size from cafe tabletop to wide-screen projection can be hooked up to the master equipment of the unit. Cabinets are available in a variety of styles, ranging from classical to futuristic, from rustic to art deco.

Entertainment programming features an exciting array of Top-40 stars performing their recent hits, as well as high-lighting the best of yesteryear's famous artists and their "golden oldies." The entertainment format contains a variety of 40 to 48 selections encompassing the musical spectrum ranging from pop, rock, soul, rhythm and blues, country, and Vegas-type dance extravaganzas, etc. Or the format can be tailor-made to meet the needs of the location, or cater to specific audiences such as children or sports fans, etc.

Group W Productions, a Westinghouse company, under special contract with VMI, distributes new programming to each location once a month for a monthly fee to the purchaser of a *Startime* unit.



Cosmic catastrophe

Sega/Gremlin puts space game enthusiasts to a rugged new test with its latest video game, *Zektor*.

A kaleidoscope of challenge and color, *Zektor* provides players with all the action, speed, and sound effects of a movie space adventure, company officials said.

"With *Zektor* we have provided players with a game that challenges all of their coordination skills and playing abilities," said Duane Blough, president of Gremlin Industries Inc. "The action, sound, and colorful screen graphics capture the realistic thrill of space-age excitement."

Zektor challenges the player to recapture eight cosmic cities that have been seized by the evil cadre of alien Robots. In order to liberate each city, the player must defeat three attack waves of Enemy Fighters and Roboprobes that fire lethal zig-zag-shaped Zizzers at the Player Ship. Three types of Moboids can bounce, spin, or explode the player ship.

The talking male and female robots themselves can be neutralized between rounds by firing through slotted tunnels in protective, revolving barriers. The ultimate object of the game is to liberate all eight cosmic cities from alien robot occupation.

The eight different space cities are depicted in video graphics along with the menacing male and female robot faces. Each robot verbally challenges the player to retake its respective city. The cosmic cities are named Ascella, Baitos, Centaurus, Denebala, Eridonus, Faltar, Graffas...and the last city is the secret domain of a mystery robot from the past.

Zektor also offers new space sounds such as the low rumble of player ship engines, the whizz of speeding rockets, the "zzzt" of Zizzers, the bouncing and skidding of Moboids, the sinusoidal wave sound of revolving barriers, and the supernova starburst of robot neutralization.

It takes eight challenging rounds to liberate the eight cosmic cities from alien robot occupation. Each round comprises three sub-rounds or defense rings: 1) enemy fighters and Roboprobes have no shields, 2) they have one shield, and 3) they have three shields. Each round is more aggressive than its previous round. Extended play can be gained by defeating the eighth robot.



Target practice

Bally Pinball Division announces the release of *Spectrum*, a new four-player pinball that allows players to break color codes.

"*Spectrum* will provide an entirely new type of challenge to players as they match their skills against a computer," said Tom Nieman, vice president of marketing for the division. "The test response to the game has been very enthusiastic."

Spectrum's computer will select one from a possible 256 color combination "color codes" at the start of each game. The object of the game is to break the code by knocking down the red, blue, green, or yellow targets. Clues are given throughout the game by the saucer feature. Hitting a target spots a corresponding color as a guess. The code is broken when four flashing lights appear in a column rewarded by a star and 100,000 points.

Another feature of *Spectrum* is the way the balls are put into play...automatically when credited or by pushing the right flipper button. Balls continue to feed automatically to the flippers.



Interchangeable action

Radar Zone is the latest game in the line of Tuni Electro Service interchangeable games under license by Century Electronics of England.

Radar Zone joins *Dazzler*, *8 Ball*, and others to form an exciting interchangeable game system.

Radar Zone, like all Tuni games, is covered by the exclusive Tuni 12-month limited warranty!

Radar Zone is a joystick controlled game in which the player directs a small character called a "painter" around a series of boxes that form one of more than 19 different geometric shapes, each one representing one level of this simple, yet complex game.

The object of the game is for the painter to completely "outline" each box within the geometric configuration to earn the points contained in the box. As the painter completes the outline, the box fills in with color, and the player is awarded the respective points.

The painter must completely outline the entire geometric shape to advance to the next level. The painter is pursued by "chasers" that can be slowed by using a "gap" button on the control panel that leaves a space behind the painter in the path of the chaser. The gap will fill in after just a few seconds.

In the more advanced levels, the chasers also have the ability to "shoot" at the painter, making the game that much more competitive.

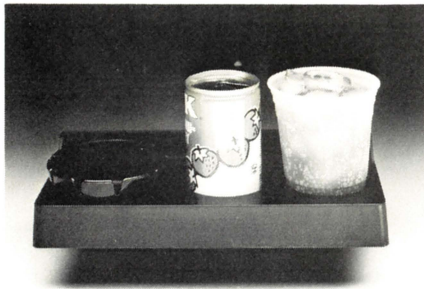
Radar Zone has a number of additional features. After a player has lost his last painter and the game has ended, he has 10 seconds to insert another coin to continue the game from the level he had achieved in the previous game. Also, the player who has become skilled at the game, has the option of skipping the first three elementary levels and beginning the game on level four.

Initial results from Tuni distributors have been very exciting. John Potenza of Full Spectrum Marketing & Sales in the San Francisco Bay area said, "*Radar Zone* is bringing in above-average income in all locations tested to date, including one arcade location where it has been the number one game for three weeks running against the toughest competition!"

Alden Rosbrook, Tuni director of marketing, stated, "We are extremely excited about *Radar Zone*. It is one of the few games designed that is simple enough for the first-time player to enjoy, yet highly competitive for even the best video game player!"

Aids to the Trade

Spilled drinks mop up profits



The video game industry is enjoying a popularity that has virtually no end in sight. But there's a force on the horizon that is eating up industry profits faster than a Pac-Man swallows energy dots: spilled drinks.

Each year, spilled beverages mop up an enormous industry expense, due to replacing fried circuit boards damaged by the liquid nemesis. Enter Pajent Inc., a Fort Worth firm with a patented device that keeps drinks and cigarettes from damaging the expensive video games.

It's called, *That's Entertainment*. The product is the brainchild of vending company President John Barber who developed *That's Entertainment* out of necessity, when two of his video game machines were damaged by spilled liquids.

The video games' average cost ranges from \$2,300 to \$2,800. So to protect his investment, the Fort Worth businessman had a wooden tray built that could be bolted to the side of the machine and serve as an ashtray and drink holder.

With the help of Pajent, he refined his original design so that it could be molded from high-impact plastic and attached to the video games with double-stick adhesive.

The plastic version of *That's Entertainment* turned out lighter, more durable and required no assembly. And since the product no longer needed to be bolted to the machine, it couldn't mar its surface and lower its ultimate resale value.

Sales have been brisk. The first week the plastic tray was on the market, it generated some 2,000 orders without the benefit of any promotion or advertising.

The black plastic trays wholesale for

\$5.95 each and are available through mail-order from the Pajent Corp., 3912 Broadway, Fort Worth, Texas 76117. Quantity discounts are available, and phone orders may be placed by calling 817/831-0688.

Shoe pockets, flyers



Flyers and Shoe Pockets are among the most popular promotion items for game

centers offered by Business Builders.

Imprinted with the game center logo or token design, the flyers and shoe pockets make excellent prizes, self-liquidators, (given with purchase) or promotional giveaways. They continue to advertise the game center, create positive public relations, and their cost is relatively low. In quantities of 500, flyers are 76 cents each and shoe pockets 62 cents plus a one-time screen charge. This is less than a third of the cost of many T-shirts.

Shoe pockets are soft vinyl cases with a snap closing that attach onto most popular tie shoes. They are handy for carrying keys, change, and tokens on shoes. They come in many bright colors and have a 1 inch by 1½ inch imprint area.

Frisbee-style flyers are also a popular promotion item. A large round imprint area in the center makes it good for imprinting a token design. The flyers can also be used for a special contest, "Throw the Flyer into the Basket To Win Tokens," using a basketball-type hoop on a display.

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

Display tube catalog

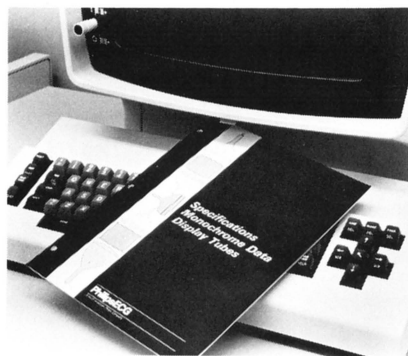
The Distributor & Special Markets Division of Philips ECG Inc. has a new catalog on Sylvania brand data display tubes for replacement applications.

The 20-page catalog contains an organized data summary on a representative listing of the Sylvania brand monochrome line. In addition, outline drawings, implosion protection system drawings, basing diagrams, and cut-off design charts are highlighted on almost 100 Sylvania tube types.

Philips ECG Inc. is a major supplier of data display tubes to the OEM markets. Tubes listed in the catalog are direct replacements of those types it supplies to the OEM market where critical viewing requirements of these unique applications

require exact replacements.

Copies of the new Sylvania brand data display *Tube Catalog* (ET-1456) are available from Philips ECG Inc., Product Marketing Department, 50 Johnston St., Seneca Falls, NY 13148.



Affordable solenoids

E-M Devices, a key supplier of solenoids, is now offering the line of *Shindengen solenoids*. Shindengen is one of the leading solenoid manufacturers in Japan.

The product includes a wide variety of standard solenoids such as rotary, push/pull, and tubular types. The rotary solenoids are available with torque output from .12 kg-cm to 113 kg-cm and rotation in 25°, 35°, 45°, 67.5°, and 95°. The push/pull types offer short linear strokes with high force capability from 3mm stroke with 450 grams starting force up to 6mm stroke with 45 kg starting force. The tubular line is for longer linear strokes from 12mm stroke with 50 grams starting force to 18mm stroke with 1.75 kg starting force.

The solenoids can be modified with Shindengen's technical/manufacturing capabilities to design, develop, and



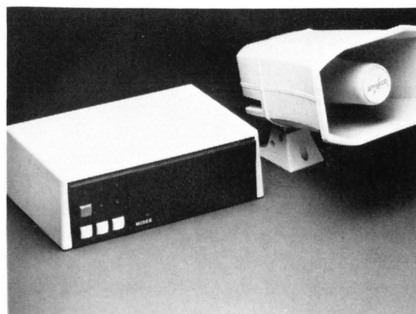
produce custom designs to meet specific performance, quality, and price requirements. Some of the options are: special armature plates, lengthened, flatted, and tapped shafts.

Delivery is immediate on stock models for your prototype applications. Delivery of production quantities is 8-12 weeks ARO. Prices range from \$5 to \$45 in 100-piece quantities depending upon type, options, and size. For additional information, contact: Richard Driscoll, E-M Devices, P.O. Box 158, Troy, Ohio 45373, 513/335-4871.

Microwave motion alarm

The *Midex Burglar Alarm System* has been added to the security product line of Mountain West Alarm in Phoenix. Midex is specially designed for homes, small retail stores, and offices.

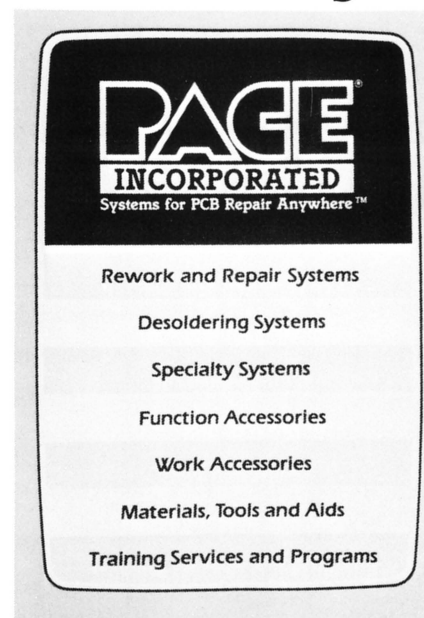
The system provides sensitive but harmless microwave motion detection and a computerized control system. The *Midex Burglar Alarm System* protects more than 5,000 square feet with a maximum range of 50 feet. It detects attempted entry through doors, windows, walls, floors, and ceilings. There's almost no installation required—for a basic unit, just plug it in the wall. Just two additional wires are needed for optional blast horn speaker.



Other features include a low false alarm rate due to solid-state signal processing, a four-hour standby power supply, entry and exit delays to eliminate outdoor keyswitches, and pushbutton control on the unit for secure arming and disarming.

In small quantities, the *Midex* system lists at \$199.95, while the extra outdoor blast horn is \$39.95. *Midex* is distributed by Mountain West Alarm, a worldwide distributor of security systems. For complete information and prices, write Mountain West Alarm, 4215 North 16th St., Phoenix, AZ 85016 or phone toll-free 800/528-6169 (Arizona call 263-8831 collect).

Pace issues new catalog



Rework and Repair Systems

Desoldering Systems

Specialty Systems

Function Accessories

Work Accessories

Materials, Tools and Aids

Training Services and Programs

Pace Inc., the world's leading manufacturer of equipment for rework and repair of electronic circuit boards, has released a new catalog.

The catalog of new equipment includes descriptions of Pace rework and repair systems, desoldering systems, function accessories, work accessories, materials, tools, and aids.

The new catalog also includes information on Pace's motion picture/video training courses—"Basic Soldering" (now available in 11 languages) and "Rework and Repair for Electronics."

Pace also provides a unique Repair Support Program including documented solutions to your operation's specific repair problems, customized repair instructions, and instructor training courses.

Copies of the new Pace catalog are available at no cost from Pace representatives worldwide or by contacting: Marc Siegel, Pace Inc., 9893 Brewers Court, Laurel, MD 20707. Telephone: 301/490-9860.

Counting coins, notes

A British-made machine can accurately count presorted paper, money, and coins and instantly display the currency's value.



Game power

The *Signatron Power Supply Unit* is produced domestically, and it has fewer components than competitive models. Therefore fewer components fail, the company claims.

"This is *not* an infamous failure-prone, switching regulator that's loaded with exotic parts from far-off lands. You could lose the whole unit for the want of a simple part," Signatron officials said.

The *Signatron Power Supply Unit* has a rugged and linear electronic design with better transient suppression capabilities and an overload protection system that is superior to anything on a switching regulator. It won't blow out costly boards, the company claims.

"Here's a power supply that won't fail you! Simple design, fewer parts, and rugged construction guarantee a power source that virtually eliminates "downtime," officials said.

The *Signatron Power Supply Unit's* output is rated at 3 amps on +5vDC and 1 amp on -5 and +12vDC. Built to specifications, Signatron will design power supply units with any three voltages.

The compact (3.5 inch by 3.5 inch by nine inch) *Signatron Power Supply Unit* is housed in an attractive, well-ventilated gold and black anodized case. It mounts anywhere—any level or plane without the need for modification. A screwdriver is only needed to connect the harness and AC line cord.

A complete power module contains the *Signatron Power Supply Unit*, EM filter, fuse, 8 inch grounded AC line cord, and harness. All you do is plug it in. In any configuration, *Signatron's Power Supply Unit* has three output voltages, Ex: +5/-5/+12vDC.

Call 213/768-7144 in Los Angeles for an immediate response. Specify for OEM. The *Signatron Power Supply Unit* is

fully guaranteed against defects for one year from date of purchase when properly installed to specifications.

Dimension: 9.0 inches long, 3.5 inches wide, 3.5 inches high with full-length mounting flangs.

Linear power output: +5 vDC at 3 amps, -5vDC at 1 amp, =12vDC at 1 amp.

Other configurations: On special orders of 50 units or more, the power supply can be delivered with any three voltages necessary for special applications. The same applies to output amperages.

Larger dot matrix

The Component Products Division of Industrial Electronic Engineers Inc., manufacturer of a wide variety of electronic displays and innovator in the switch marketplace, has added a single 1.16 inch character, red LED utilizing the popular 5 by 7 dot matrix format.

The new *LR1257R* incorporates a dot size 50 percent larger than the widely acclaimed *LR1057R*, making readability easier at extreme viewing distances and is identical in form, fit, and function. In appearance, this display has a gray face and white body with dots appearing to be translucent when not lit. Each display is side stackable, enabling engineers to design such applications as walking signs to any desired length required and is compatible with ASCII and EBCDIC formats further simplifying multiplexed designs.

Availability is stock to six weeks, pricing is less than \$4 for OEM quantities.

For further information regarding specifications, pricing, and availability, contact Lou Hronek, Product Marketing Manager, Component Products Division, IEE, 7740 Lemona Ave., Van Nuys, CA 91405, 213/787-0311, ext. 392.

Up to 150 loose or wrapped notes of the same denomination can be counted in a single weighing. The value is shown on a liquid crystal display in less than half a second.

The accuracy of the load cell and calibration ensures that irregularities (such as torn, taped, and incomplete notes) are detected. The machine displays the word "help" rather than give an incorrect reading.

When used for counting coins, the *Tellermate* can handle up to 4.4 pounds per single weighing.

A switch to different currencies can be made in seconds with interchangeable memory modules. The machine is said to be reliable and easy to maintain because it has no moving parts.

The results of each weighing can be added to display totals by denomination, and the value of all money that has passed through the machine during a shift can be indicated. An optional printer provides a permanent record of transactions.

Measuring 10.4 inches by 7.3 inches, the counter can be used at any desk.

Inquiries from prospective U.S. customers, distributors, and agents may be sent to British Information Services, 845 Third Ave., New York, NY 10022, Telephone: 212/752-8400.

The Perkam Ltd. (Contact: Edgar Bliss, director), is located at 7 Rosehart Mews, London W11 3LA England. Telephone: 01-221 3877. Telex: 28742.

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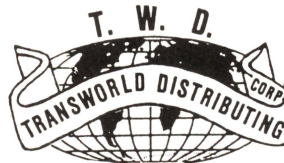
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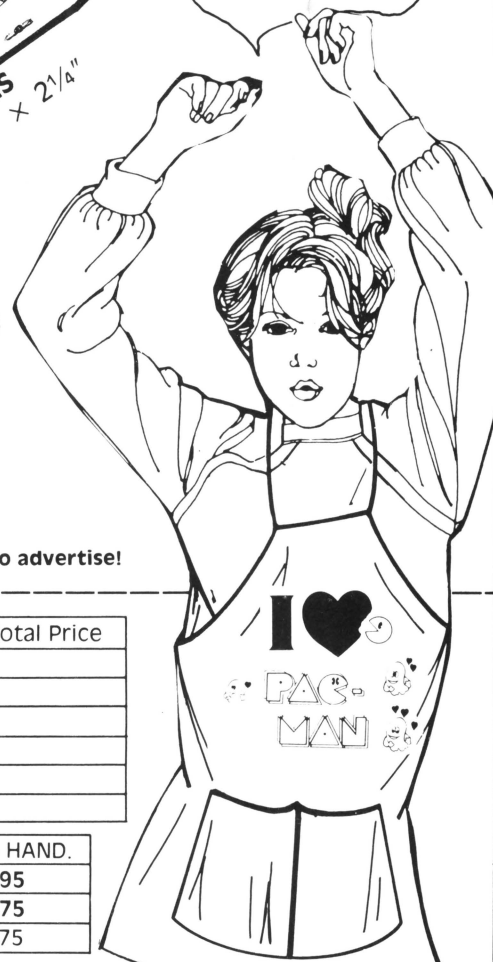
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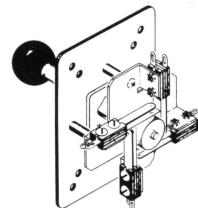
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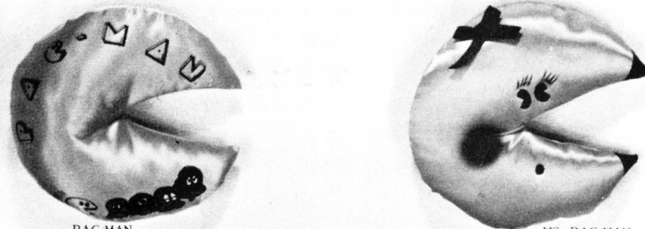
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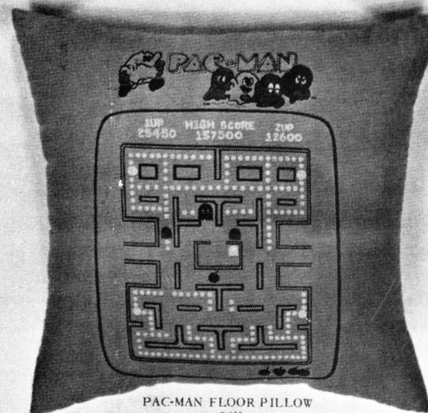
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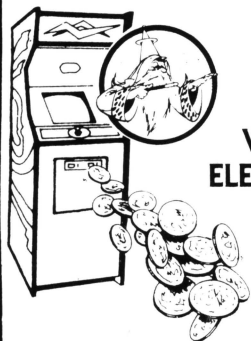
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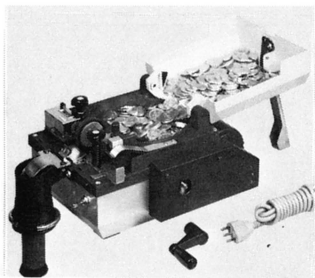
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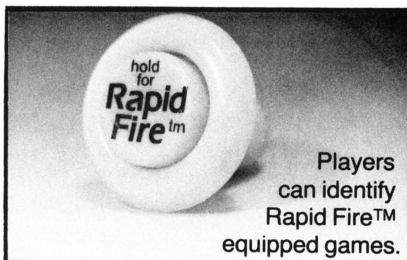
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THE LAST WORD

'Pac-Man' vs. Freedom of the Press

By David Pierson



If the video game industry expects the general public to gain a certain perspective about the games' role in society, that the games do indeed serve a purpose, then it follows the industry must also strive to keep itself in perspective.

But lately there's a clear indication that some manufacturers within the industry are losing that sense of perspective, as is evidenced by the maddening rush by one major game manufacturer to litigate against anything that moves, in the name of copyright infringement.

Now, we're not talking about illegal copy games here. We're talking about copyright fanaticism which, if allowed to run its course, would extend the copyright law to the point where it challenges not only our collective sensibilities but our individual liberties as well.

In a recent court action, Midway Manufacturing enjoined Simon and Schuster from continuing to publish its "How to Win at *Pac-Man*" book on the grounds it infringed Midway's copyright. Prior to the court challenge, a Midway spokesman said the court case would probably be an interesting test to see which right is greater—copyrights or the public's right to a free press.

Now Midway's headstrong insistence to protect its "rights" in this area raises serious questions about our rights. And our rights aren't proprietary, like Midway's, but rather inalienable! Proprietary rights may be enlarged upon or diminished by an act of Congress, but inalienable rights are hardly negotiable. And no governing body, whether it be King George of England or the Copyright Congress of 1976, can assign away any portion of those rights without encountering the wrath of the people.

Now Midway says the 1976 Copyright Congress has assigned away a part of our inalienable rights to it, that our freedom to unbiased information is lesser than its newly expanded proprietary rights. Perhaps the company has been carried away by its own gamesmanship and really believes that, like the finger game, Paper covers Rock. Perhaps encouraged by its series of copyright victories in other areas, Midway has come to think the rights of a cartoon character like *Pac-Man* are indeed greater than the rights of living, breathing human beings.

If that's the case, then truly Midway has lost its perspective.

Does Midway really believe that, as a copyright holder, it is entitled to royalties and/or final approval

on derivative works such as "How to Beat *Pac-Man*" books?

If so, then consider that *Mad* magazine recently featured a *Pac-Man* with teeth on its cover. No doubt *Mad* sold a lot of copies of its magazine because of the image of *Pac-Man* on the cover. I, for one, now publicly confess I wouldn't have bought that particular issue of *Mad* magazine had it not been for the image of *Pac-Man* on the cover. I had to see what those guys at *Mad* had to say about *Pac-Man*.

Does Midway have actionable cause to demand royalty payments from *Mad* magazine for the use of that character? Or, better yet, does Midway think it has the right to stop the distribution of that magazine as well, because it depicts the *Pac-Man* in a less than "acceptable" manner?

Where does one draw the line between copyright and free press? Or are we to wait for Midway to define that for us?

Following Midway's cue, doesn't every major motion picture and television studio in the country have equally due cause to sue *Mad* magazine for running cartoon satires of their motion pictures and, thus profiting from other people's proprietary rights?

Might we also assume that, according to Midway's own logic, movie and literary reviewers will now have to seek approval of the copyright holders before they can publicize their criticisms and tell us which books and movies are worth the price. When we reach that point, will any criticism still be worthwhile?

If Midway Manufacturing insists on pursuing its case to its logical conclusion, it may find out exactly how easily Scissors cuts Paper. It may also find that it would have been better for the company to have reconsidered some of these latest copyright sorties. By overstating its proprietary rights, it may call into question at a later date some of the copyright claims it has already hammered out in the courts. How many of those cases are suspect as well?

It's all a matter of perspective.

Is someone's copyrights of greater importance than our national security?

If not, then doesn't it seem slightly incongruous that the United States government couldn't stop the publication of a magazine article that explained exactly how to build an atom bomb; yet the Midway Manufacturing Company, invoking what it sees as its copyrights, was able to enjoin a book publisher from explaining exactly how to beat *Pac-Man*?

Where is our perspective?

Where are our rights?

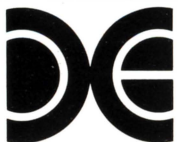
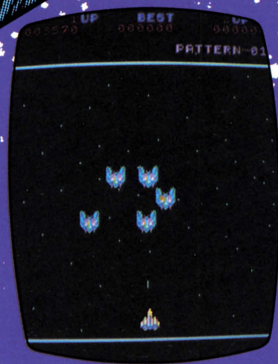
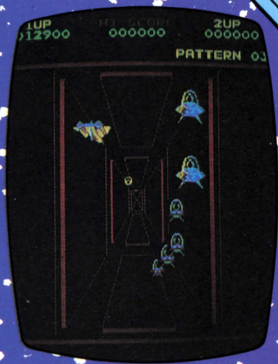
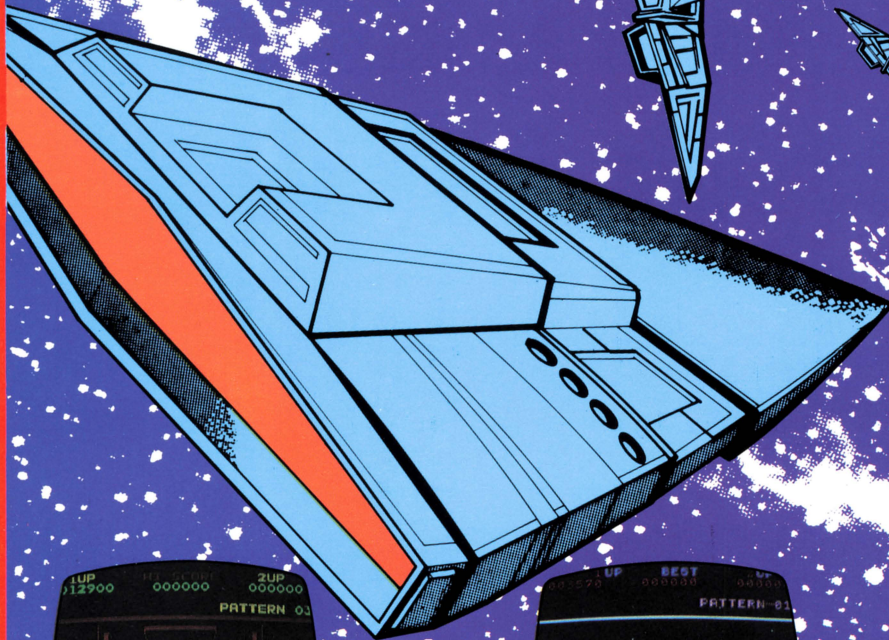
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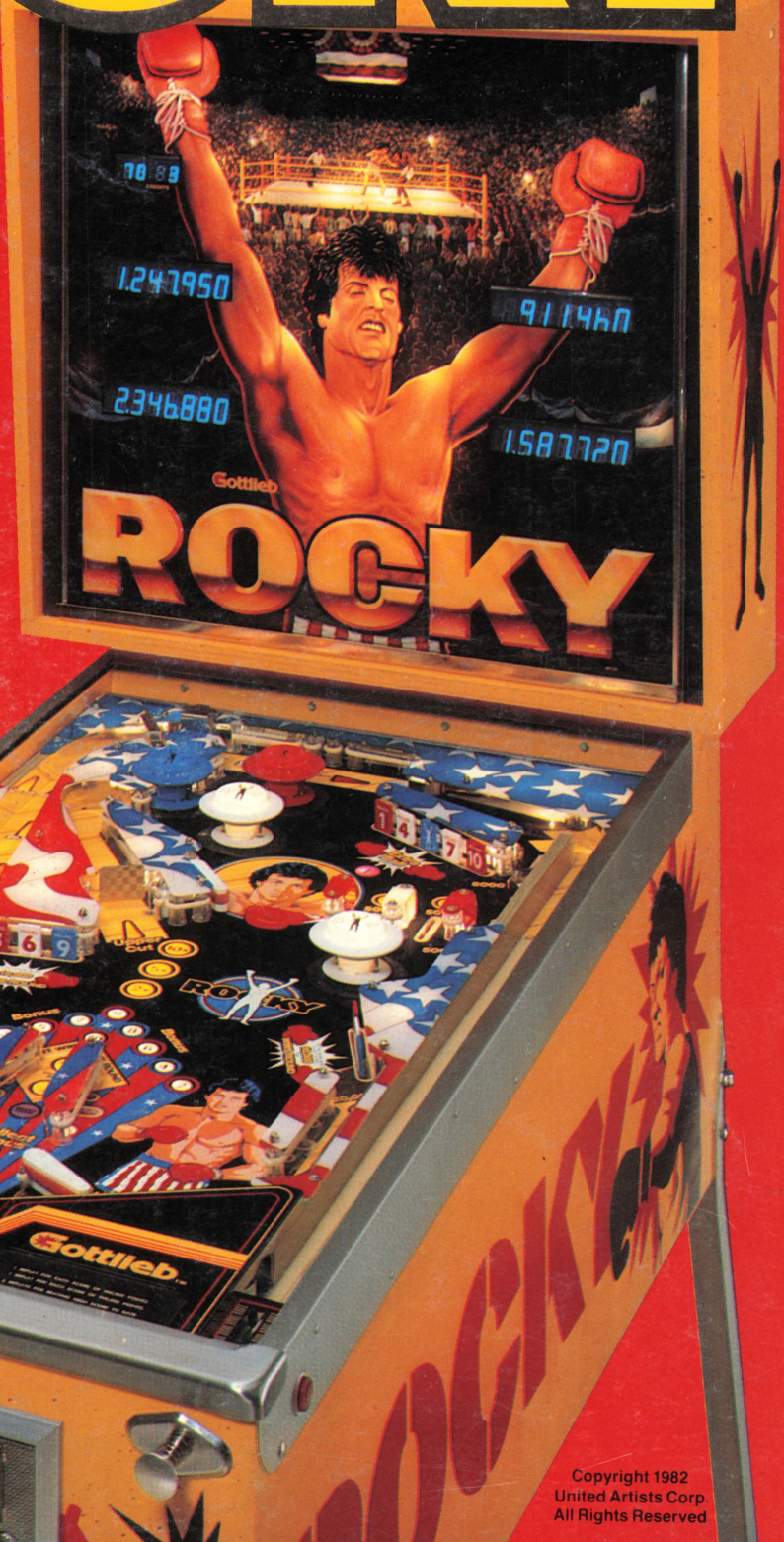
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