

The Twice Monthly Publication
for the Coin Operated Entertainment Industry

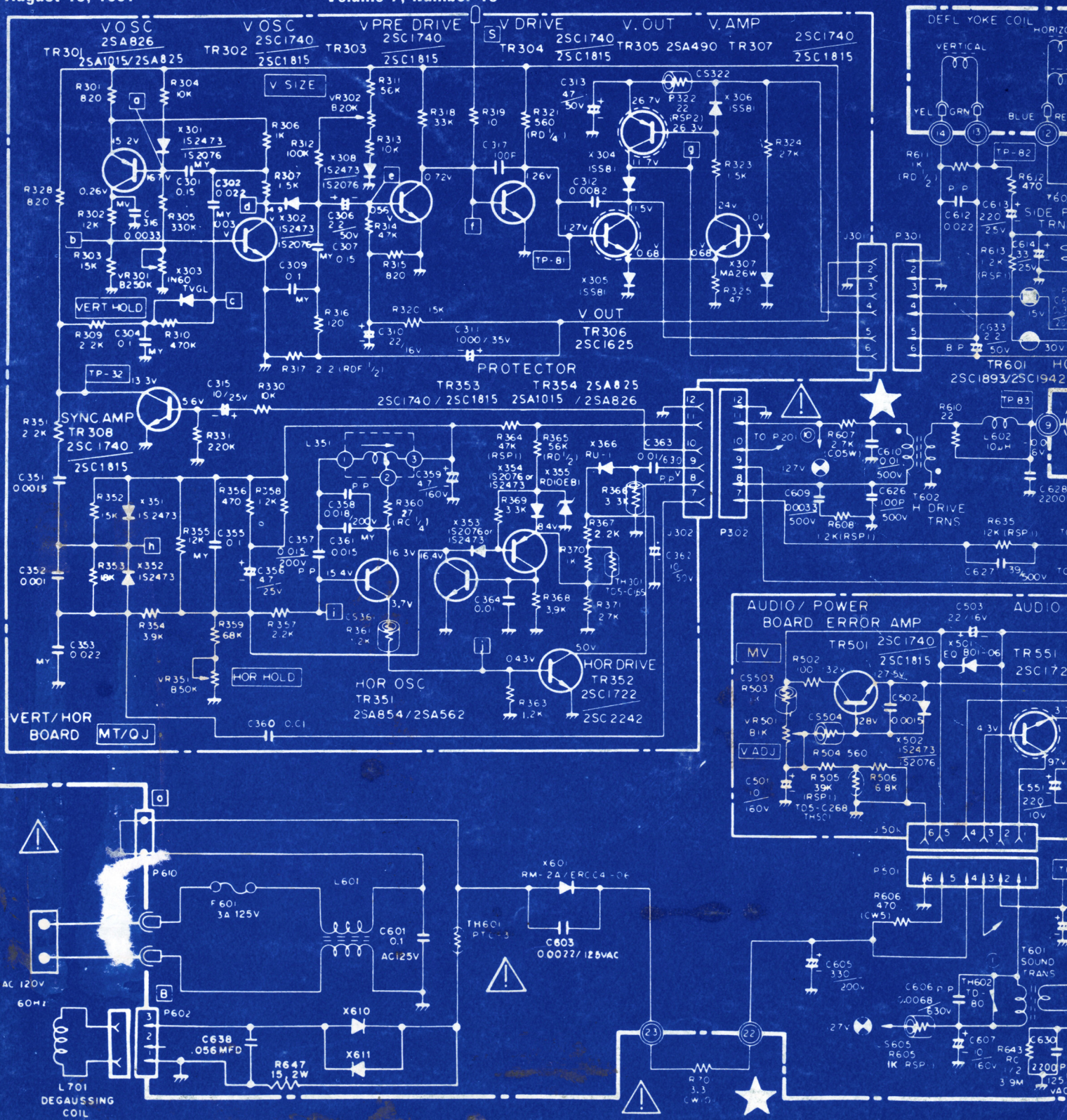
PLAY METER

August 15, 1981

Volume 7, Number 15

BLUEPRINT FOR GAMES
FUTURE: A LOOK AT R&D
AMERICAN-STYLE,
FROM THE WEST COAST

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In an age of imports, the coin-op industry still has its home-grown product. Mary Claire Blakeman examines the methods of several West Coast U.S. manufacturers in creating their own products in this highly competitive business of games.

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To gauge the earning power of current equipment more precisely, *Play Meter* has inaugurated this barometer of gross revenues as measured by our extensive survey of operators twice monthly. Editorial Director David Pierson explains this added service to the industry in this introductory article for the new surveying method.

Local Official Rejects Arcades 35

Coin-operated amusement games often get a bad rap in the local city hall. As a case study, *Play Meter* talked with a New Jersey township official about his adamant refusal to allow arcades to be licensed in his municipality. Worthy study for arcade operators across the country.

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Tony Bado of Virginia, new to these pages but a veteran operator by now, tells of how its not all riches and glory for the newcomer to the business of operating.

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UP FRONT

As you are about to see, this industry of ours has come to a crossroads. Where we go from here is anybody's guess. Ultimately, the decision will be left up to each and every one of you.

What follows is the account of a series of events that most likely will revolutionize the entire industry for better or worse.

December 1978...

"Going almost unnoticed was yet another innovation which may have some far-reaching effects on this industry in years to come...a new manufacturing concept—a universal game cabinet. When it comes time for an operator to buy a new game, all he does is buy the PC board, a new instruction panel, and new graphics. An interchangeable drawer assembly enables the operator to change the PC board and player controls at the same time. The name of the machine and the screen graphics can be changed just as easily.

"...What this innovation does is to take the operator out of the moving business and the manufacturers out of the cabinet business. Such an innovation can easily save the industry millions of dollars on the purchase of new equipment, freight costs, and warehousing."

(excerpted from Ralph Lally's editorial on the 1978 AMOA Show, December 1978 *Play Meter*, page 4 January 1981...

"Yet another aspect of the 1980 Japan show was the introduction of a 'revolutionary' engineering and marketing concept of the Data East Corporation. The concept is reprogrammable video games...All one has to do to change games is to slip in a new cassette device. In minutes, an old game is transformed into a new one. The cabinet and monitor can be used over and over...The idea may end up as just a flash in the pan—while on the other hand, it could in fact revolutionize the video game

business as we now know it."

(excerpted from Ralph Lally's report on the 1980 JAA Show, January *Play Meter*, page 39

June 12, 1981...

"Sega/Gremlin will introduce to you today its new video games called *Convert-a-Game* with built-in conversion capability...Sega/Gremlin's introduction of video game conversion will impact the industry at every level...Housed within a card cage are six PC boards...The card cage is situated in a newly designed cabinet which allows front entry. Quite simply, the PC boards to be replaced are slipped out, the new boards are inserted, and off you go with a brand-new game...It is important to remember that today's great 'winner' is next year's problem unless you can convert the game to something new that is also a 'top' money earner."

(excerpted from a speech delivered by David Rosen, chairman of Sega Enterprises at a recent national Gremlin/Sega distributors meeting.) [See related article in this issue.]

Convertible games—are they the beginning of the end or a new beginning? Since this is such a vital industry issue, we will be publishing the text of Mr. Rosen's speech in upcoming issue of *Play Meter*. We encourage our readers—manufacturers, distributors, and operators alike—to share their thoughts with us, and our intention is to publish as many different opinions as possible. What do you think? Drop us a line or give us a call. (Confidential communications are accepted.)



Ralph C. Lally II
Editor and Publisher

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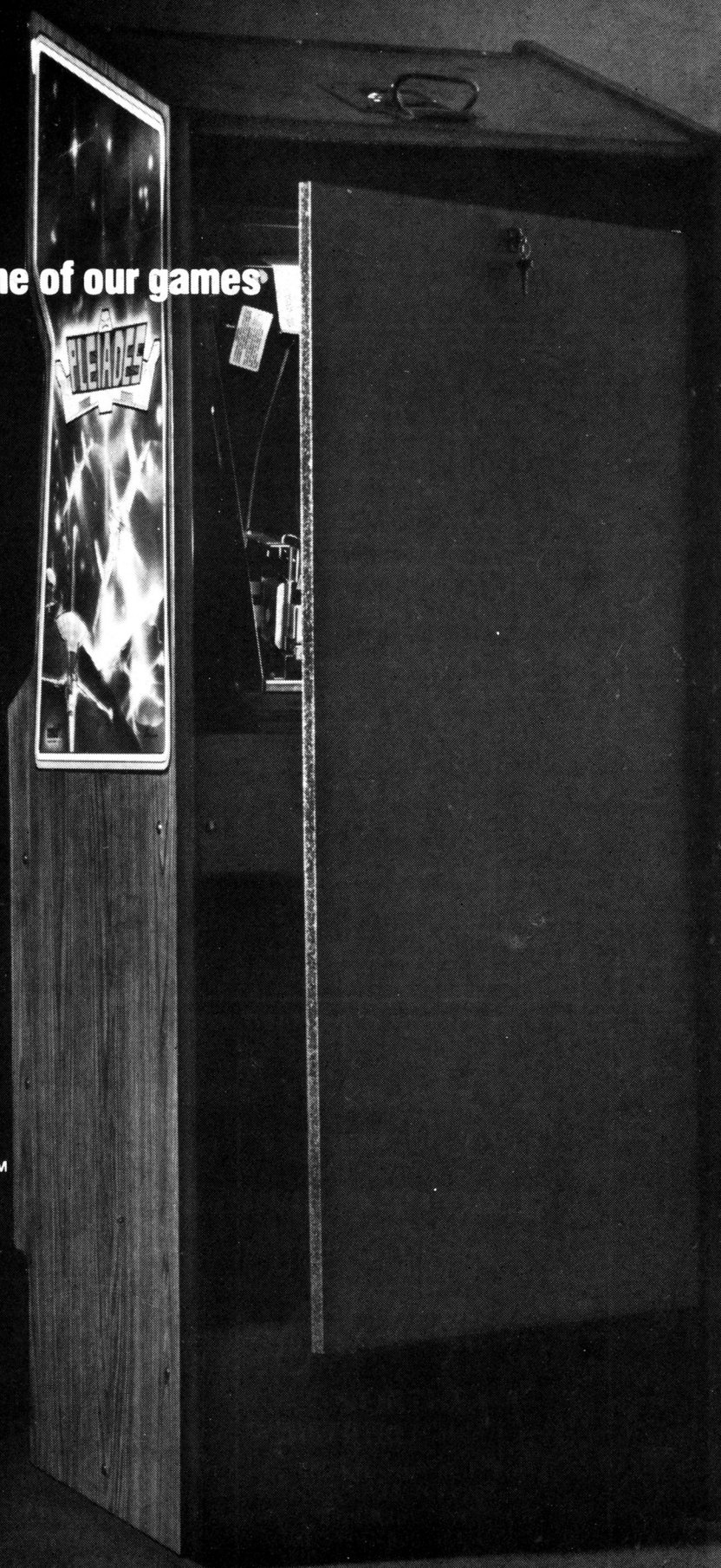
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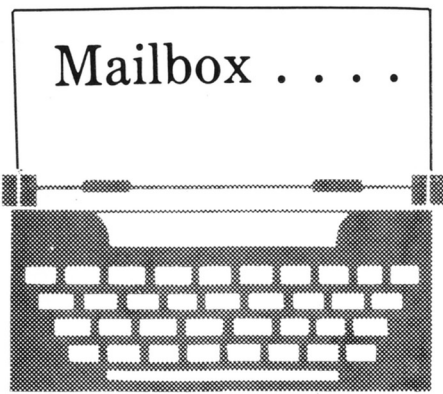
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Paraplegic play

We write to thank you for the interesting articles you have published concerning the assistance being given by persons within the amusement machine industry, to both quadriplegic and paraplegic persons.

Perhaps the disabled people themselves would be prepared to communicate with us, if so, we would welcome their ideas and opinions as well as those who have so expertly assisted from outside.

In time to come, we may be able to add our expertise to theirs with an International Tournament in mind; however at this point the objective is to ensure that we show our less fortunate friends that we care.

T.W. Davenport
Famark Industries
Victoria, Australia

[Ed. Note: See news article on Australian involvement in this worthy cause, inside this issue.]

Good image

With the proliferation of video games throughout almost every conceivable type of retail establishment, we propose the following suggestions in view of any possible sudden licensing and taxing increases from local governments...

We are in the entertainment industry and these are purely novelty type amusement devices; however, one must recognize there is a fine line between our coin-operated amusement type games and sloppy, roughneck-infested and poorly managed, seedy-type locations, that would justify public officials in condemning that type of location as a public nuisance. In that particular case, the entire video game industry is in jeopardy since the games can either be overly-licensed, overly-taxed, age restrictions imposed, limited in number of games per location, or made plainly illegal

except for specific types of establishments.

Therefore, we outline the following suggestions that could be used as a pattern in establishing our amusement game industry in not only a legally acceptable manner, but as one receiving unanimous approval from the parents, adjacent retail stores, law enforcement agencies, public officials, and of course, the media people—radio television and daily newspapers.

1. There *must* be strong management at all times in the arcade.

2. Be sure you have contacted the local law enforcement people who patrol the area so that you have their complete cooperation.

3. The location must be clean, immaculate in not only restrooms, but in the entire floor space including all the equipment looking sharp at all times.

4. The retail stores surrounding the business must be contacted

personally on a continuing basis for any objections or any areas that should be discussed so you have a continuing communications with them.

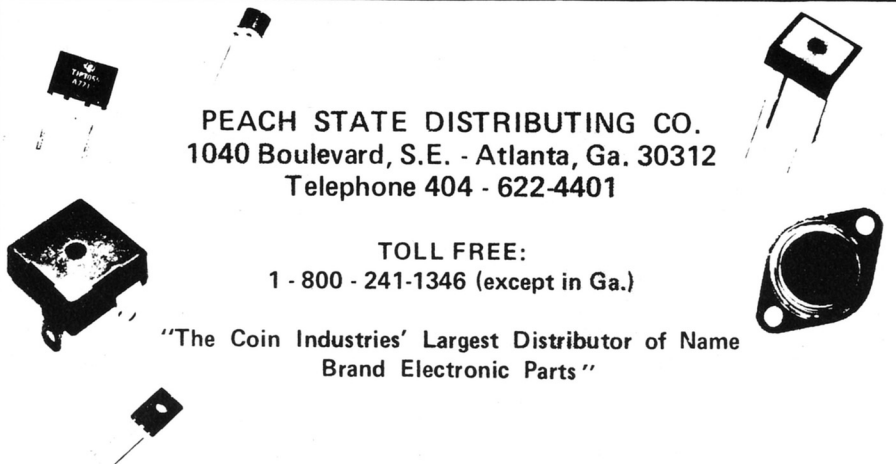
5. The parking lots must be clean at all times and loiterers in cars must be asked to leave.

6. Contact the local schools and youth groups so that you have their complete cooperation with regard to business hours so that they do not conflict with school hours in any way.

7. Be extremely careful there is not any passing of food, packs of cigarettes, or other possible illegal handling of merchandise in the location. If there is any sign of this happening, be sure those customers are evicted permanently.

8. Watch for the "bullies" who would destroy your business and give the location a very poor image.


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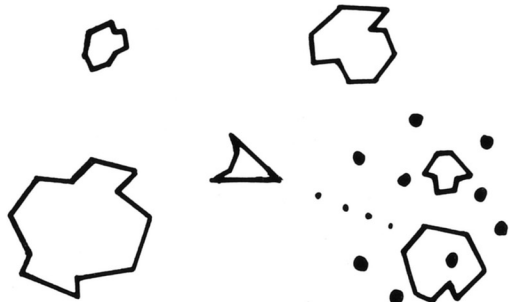
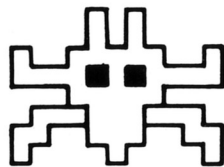
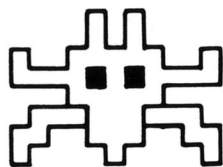
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A PLAYER'S VIEWS

This message is addressed to *Play Meter*, in the belief that the viewpoint of a coin-op machine "patron," or player might reveal his personal sentiments and contribute something of interest, especially during an interval when there seem to be conflicting views concerning the fine merits or potential faults of the machine itself.

The writer has been gainfully employed some 40 years, dividing his labors between corporation auditing, writing advertising copy, and free-lance writing in general. His somewhat extensive travels have taken him to or throughout most of the major cities in the eastern half of the U.S.A.

Being guided strictly by past experiences and searching for diversion, I am sincere in the belief that amusement machines—I mean variously—the pinball, video games, billiards, and the jukebox—are constantly offering the public vast and ever-improving sources of entertainment. Also it is even the more amazing when one considers that this type of diversion has expanded itself *beyond all geographic boundaries!*

As to my own personal experience I have, at one time or another, used virtually all of these fun-type amusements—viz, I've used the pinball; played at billiards (while in variously located YMCA branches); derived lavish enjoyment from listening to popular melodies pouring from the jukebox; and many other forms of coin-op games.

But, regardless of how brilliant, enlivening or colorful our special amusement may be, it seems that it must inevitably be plagued, or even obstructed by some perverse development in the guise of either legal technicality or some stupid restraint arising from irrational prejudice.

In this regard, I was disappointed to learn, from a recent issue of *Play Meter* that the distributors of these interesting and fun-giving machines are facing trouble spots in certain areas of the State of Ohio, and other geographic areas, as result of civic restraints and legal restrictions. [*Play Meter's* report on attempts to prohibit amusement games along with pseudo-gambling devices.]

According to my own sentiments (for whatever they may be worth) there can be no doubt whatever as to my attitude. Since these traditional fun-giving devices have found universal approval, so that they have been providing entertainment and relaxation for great masses of people—at all walks of life, of all creeds and nationalities—it is my fervent wish that they may continue to expand and flourish.

Somehow, I cannot escape the impression that the most serious indictment laid at the door of the coin-op machine would be label it (under certain stipulations) as a "gambling evil."

Why not look at the other side of the "gambling coin?" Where have all of our "noble crusaders" been during recent years? Look at the enormous monetary outlay involved in the (horse and dog) parimutuels. Baseball and football parlays, by way of example—also "point-shaving" "fight fixing" player bribing—these are, of course, the more evil phases of the broad sporting fraternity with its wide national range of activity. But there is hardly anything new about them.

**Harold Hartigan
Athens, Georgia**

Coin-op Game Development —American Style

By Mary Claire Blakeman



Lyle Rains (left), vice president/engineering for Atari's Coin-Op Games Division, discusses an attract mode sequence with one of Atari's game programmers. (photo courtesy Atari, Inc.)

In the world of semiconductors which revolutionized the game industry in the early 1970's, Japanese companies have become the clear leaders in the field. According to some estimates, Japan accounted for almost 69 percent of the \$13 billion world market, while Americans took 23 percent of it, and the Europeans picked up the remaining 8 percent.

Looking at this success, American businessmen respond with almost a litany of reasons to explain it: Japan's government supports businesses with tax benefits or sometimes capital grants. It also encourages research and development, and an organization like the Mitsui Intercompany Research Institute gets major companies together to produce ideas for new business opportunities. Worker productivity in Japan is higher. Tight money and high interest rates stifle investment in research and development in the U.S.

The reality of these conditions are not lost on the coin-operated amusement industry where many companies have turned to licensing games from Japan rather than developing their own.

"I guess the real fever for licensing started about five years ago with *Space Invaders*," says Tom Stroud, executive vice president of Cinematronics, a games manufacturing company based in El Cajon, California. "I think everyone realized you

could go out and license a game and that it could be a winner."

But while on the surface it appears that a large number of game companies are opting for licensing, good old American know-how is hardly dead. A number of manufacturers are adopting the strategy of using outside licenses as well as inside development to come up with products.

In looking at how game companies are able to continue their own research and development (R&D) at a time when many American businesses are bowing out of it, *Play Meter* talked with three California games manufacturers.

Each of these companies, Atari and Exidy, based in Sunnyvale, and Cinematronics in El Cajon, have common reasons as well as individual considerations for doing their own development. Tom Stroud of Cinematronics estimates that companies doing in-house R&D devote between 8 and 12 percent of their budget to it. Michael Fournell, director of corporate public relations at Atari, says his company puts 8 or 9 percent of its company-wide gross sales back into development.

Obviously these manufacturers think it's worth it.

"From an economic standpoint, there are so many pluses that outweigh the minuses that we can't afford not to do our own in-house development," says Leslie Hauser,

vice president of Exidy. "The substantial investment we make in research and development will be returned to us a zillion times over if the games are good."

Another common reason for in-house R&D is control, which most company spokesmen say is important in getting a game from the concept stage to the final product. "One of the biggest advantages is that you're not at the mercy of other companies to get products," says Stroud. "Then there's the problem with copies, of course. When you do everything in-house, there's less chance of a game getting out."

At Atari, Fournell agrees that the control factor is important, but it is something that came naturally out of the company's background. "Atari grew out of an engineering staff and so it never did do development outside of the company," he says. But there are other motivations behind Atari's investment in R&D. "If you want to be a leader in electronic entertainment you have to control your own destiny," Fournell adds. "We want to be, and are, leaders in that field, and that leadership comes

from doing your own thing in-house."

Pride and prestige are among the other intangibles mentioned by the companies who do their own R&D. "There's a certain amount of satisfaction in being the creator of the design," says Exidy's Hauser. And, with Exidy planning to enlarge, possibly double, its R&D staff, Hauser adds, "It's to our advantage to continue to be innovators rather than just implement other people's games."

Whatever the reasons, justifications or motivations for in-house R&D, all of the companies agreed that one essential ingredient must be present for the development formula to work: people. And all the companies reported that the "right people" are a special group who are not always easy to find.

"It seems that game designers are a special breed," says Ward Ellis, vice president of engineering at Cinematronics. "They are not too far removed from a first-hand acquaintance with the fantasy world. But in the video area, it is also virtually essential that a game designer be a

good programmer.

"I realized early on that game design is an art, not a science," he adds.

No formula for people

Because game design is such a unique art, the exact qualities of a designer are hard to nail down. "If we had a formula that would select creative people, we'd no doubt do very well," says Atari's Fournell jokingly. "But we look for people with a love for games, a love for the work that entails imagination and enthusiasm. We look for people who are willing to try something," he added.

The unique characteristics of the coin-op game industry also help define the kind of people who are valued on the R&D staffs. "In the game business, the time frame for developing products is shorter and changes more often than in other industries," Hauser of Exidy says. "It's stimulating to those people who like that kind of atmosphere, people who like to complete a project then move on. There is a limited number of people out there who like to do

California dreaming

While many game companies are opting to license games from Japan rather than develop their own, three California manufacturers, Atari, Exidy and Cinematronics, plan to continue the research and engineering work that is necessary to in-house development.

As Cinematronics' Engineering Vice President Ward Ellis sees it, "The future of a company like Cinematronics rests on its ability to develop games. Of necessity, it must be self-generating," Ellis explains that in relying on licensing, many smaller companies have to wait too long in line behind the bigger ones to get the winners.

In these three companies, most developers agree that game technology will continue to expand. "We've probably only exploited ten or fifteen percent of the available technology for games," says David Stroud, vice president of marketing at Cinematronics. "We will be seeing much more exciting games in the next ten to fifteen years."

Michael Fournell, director of corporate public relations at Atari, agrees that the technological developments in coin-op games will

keep increasing. "You only have to look back a few years at *Pong* and see that if you look at it today, it's not as exciting as *Asteroids* or *Missile Command*," he says. "Today, you don't have to be that stingy with your code when you write a program because there is more memory available in the games and also the cost of memory chips has come down."

But what kind of excitement is in store for the industry?

Fournell mentions clearer displays, voice synthesizers and voice circuits. Dave Stroud expects games to be more complex. "I think they'll be more complex and realistic," he says. "I think they'll be more like simulators."

Stroud's point about more realism in coin games is an important one and coincides with the vision of Arlen Grainger, engineering manager at Exidy. "It seems to be getting more and more like we're building a movie into each game," he says. "With a game, we want to take people through the same kinds of highs and lows, funny spots and lulls the same way a good movie director would."

"A video game is almost like a

large psychological programming device," Grainger explains. "We try to give the cues all at once—movement, sound and color—so they are all triggered at the same time."

Grainger says that in developing games now and in the future, "psychological imperatives" that are common to all leading games, play they will tell you certain obvious things," he says. "But it is the things that are sort of hidden from the players view that are important."

Simple mathematical principles of movement underlie much of the action in hot games. "The necessity of forcing a player to plot mental projectories within a limited time span is implicit in shooting games and driving games. Also, if something moves or blinks faster on the screen than something else, it will immediately draw your attention from what you're doing."

While these principles and the use of certain colors to attract players are incorporated into most coin-op games, a new area of player appeal is being explored: sound. Grainger says Exidy is working with psychological music to evoke

that.”

Spokesmen at both Cinematronics and Exidy pointed out that many of their engineers come from the ranks of the young. At Exidy, where the average age of the R&D staff is 28, Leslie Hauser says, “It’s sometimes good to attract people fresh out of school because they may have a fresh approach. It’s also interesting to note the number of companies doing their own research and development are in California. In developing a creative staff, it might be easier to attract people to California than say, Chicago.”

But at Cinematronics, though there are many young people in the company, Tom Stroud points out that they aren’t the only creative ones. “We have Ward Ellis, who is in his fifties, and he’s very good. He can beat me at the games—often.”

Ellis himself also observes that the West Coast has no monopoly on creativity. “As for game designers, the action in this business is still in Chicago,” he says. “And when a new game gets tested at Mother’s Pinball in Mt. Prospect, Illinois, all the good game designers show up.

There is a lot of vitality and exchange of ideas in those designer-to-designer sessions that I have not noticed on the West Coast.”

Wherever they come from, most companies work to keep the creative talents of the R&D staff. At Atari, there are perks like weight rooms, showers, and Jacuzzis so employees can exercise during the day. Exidy has a game room for employees and their families, a softball team, and spring kite flying days. “It’s important to have a creative atmosphere,” says Hauser.

Creativity often blossoms in a relaxed setting, so the three California companies have found a method that serves to spark new ideas and concepts: the off-site meeting. Off-site means that the R&D group takes off for a weekend or a few days to places like Monterey or Sonoma, California.

Atari and Exidy have already conducted these kinds of meetings and this year, for the first time, Cinematronics will also.

These meetings often take the form of brainstorming sessions where ideas are thrown out and tossed

around, or at other times, special speakers are invited to give talks on various aspects of the business. The idea, says Atari’s Fournell is to “get the engineers, marketing people and sales people off the premises and away from the phones.” And though the off-site meetings are relaxing, they are hardly just for fun.

“Those weekends are very constructive,” says Hauser. “You get back and it seems that you’re more drained mentally than if you’d stayed at the office.”

At Atari, Michael Fournell says, the off-site sessions are valuable whether they produce immediate results or not. “In these meetings, strange ideas may come up but nobody laughs at them or discourages them,” he says. “If one idea sounds outrageous or unfeasible because of technological limitations, we store the idea away and later we may pick it up and it might be successful.”

From back burner to success

Asteroids was one such idea that came from the back burner to become one of Atari’s biggest

in games technology

particular responses in players, and that new audio systems, simultaneous speech and multi-channel music generation will be a part of future games.

“Ed Anderson, a former professional musician whose specialty is psychological music is now writing music for us so that a player will feel different things with each round of play,” Grainger says.

“For example, in one round of play, we may want funny monsters to come out, so we may want funny sounds,” he says. “But then all of a sudden, the play action changes so the music changes too. We will have music that is written and orchestrated for a particular game and we will be seeing the results of this shortly.”

Another change is game design and one Grainger thinks will continue in the future is the shrinking of player control handles. “Games used to be more physical and you’d give people big wheels, gas pedals or control knobs,” he notes. “But now people want to push buttons more and more. They like finger-touch control of games.

“I guess it’s part of our evolution to

the stars,” Grainger jokes, “but I hope we don’t end up becoming little android people.”

Just as the technology and play action of games has grown more sophisticated, so have players. One reflection of this trend is the fact that manufacturers are not emphasizing instructions as much as they once did, and this trend too, will probably grow.

“We used to put a lot of instructions on games, but people didn’t read them,” Grainger says. “Players want to have to learn for themselves. *Defender* is a pretty sophisticated game that a person would never understand by reading about it.

“This opens up a whole new vista because people will learn it the longer they play a game. So they will play it more so they can learn it,” he said.

As for developments in Japan, Grainger sees more “cutesy” games like *Pac-Man* on the horizon. But personally, he says he has reservations about the trend (though, as the guy who thought up *Death Race* he may have personal prejudices). “In Japan, they have an

entirely different perspective on these things, but to me, I don’t see that ‘cutesy’ has proven itself yet,” he says.

“You can see evidence of this different perspective in their monster movies in which even the monsters are kind of cute. So when they do a space games there are elements of cutesy in it.”

But Grainger does credit the Japanese competition with spurring the U.S. companies to make changes. “I am pleased that the Japanese companies forced us to go color,” he says. “If they hadn’t come into the market with the U.S. companies wouldn’t have changed to color when we did.”

While appreciating the competition, Grainger does not think the Japanese threat to American companies is as great as it is sometimes perceived.

“I think that most of the popular things are now being generated ‘on the soil’ here, so to speak,” Grainger says. “What looked like a Japanese inundation of the market is not as great as we thought it was.

They can’t corner the market on ideas.”

—by Mary Claire Blakeman

'It might be as easy for someone in accounting to come up with an idea as it is for the company president, as long as the concept can be put into a game.'

—Manufacturing executive

successes. *Asteroids* was born from an idea that was thought would never make it as a game," Fournell says. "But then someone said, let's change this a little, change that a little and we ended up selling more than 70,000 units of *Asteroids* worldwide."

The off-site meetings and keeping ideas constantly brewing are common to the three California companies. All of them, however, have their own variations on the theme of game development.

A group of programmers, artists, hardware designers, and engineers get together at Cinematronics in weekly meetings to discuss game ideas. "We like to have one meeting a week where we review where we are and where we are going," explains engineering Vice President Ellis. "We encourage new ideas and concepts, and I have a blackboard that shows a two-year span of game development activity and we usually review that at the meetings."

Tom Stroud, who has watched Cinematronics progress through the

past few years, says the development process is loosening up at the company. "We used to do things in sort of a formal committee," he says. "But now, it's a little more unstructured, and everyone contributes."

Exidy also has special meetings of the designers, engineers, and marketing staff but it also holds game contests so all employees can offer ideas. "Everyone in the company contributes ideas," Leslie Hauser says. "It might be as easy for someone in accounting to come up with an idea as it is for the company president, as long as the concept can be put into a game. We're almost a family oriented kind of company and everyone shares and feels a part of the effort to ship a good product out the door."

In the Atari system, after the engineering, marketing, and sales staffs have met and come up with ideas, the concepts are assigned to a team of hardware and software engineers. These teams may draw up a game or do a simulation on a computer. When this part of the

process is about 70 percent complete, focus groups come in to critique the game.

"If it doesn't stand up to these experienced players then it's scrapped or changed," Fournell says. "Fortunately, that's only happened maybe once."

But Fournell emphasizes the importance of the player input into the technological process of game development. "If a player in the focus group says 'God, this is boring,' we're certainly not going to commit much money to that product."

This is because, in a world of microchips, digital circuits, and display terminals, it is still human beings who are the decisive factor whether it is in the arcade or the engineering department.

And whether they are in Japan or the United States, it is still people who make the difference when it comes to the special world of designing coin-op games. As Tom Stroud puts it, "Talented people make the difference. It's that complicated and that simple." ●



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Coin-op copyright net tightens on several legal fronts

Federal court and Customs Service actions were boiling in June as several American coin-op games manufacturers continued to wage fights against allegedly illegal copies of their products.

In what was possibly one of the most significant cases of the flurry of legal actions, a federal court in New York City has issued a landmark decision holding the audiovisual display of video games to be copyrightable.

In a suit filed in U.S. District Court, Stern Electronics charged Omni Video Games, Ferncrest Distributors, Frank Gagliano, and Kevin McIntyre with copyright infringement in connection with the defendants' sales of "Scramble," an alleged copy of Stern's popular video game, *Scramble*, licensed from Konami Industry of Osaka, Japan.

An evidentiary hearing in court was held with testimony of witness and demonstrations of Stern's *Scramble* and Omni's "Scramble." The District judge ruled that he found differences between the attract modes but virtual identity in the play modes and held that the copying of the play mode constitutes copyright infringement.

The court considered the game action "a movie in which the viewer participates in the action as the fearless pilot controlling the spaceship."

The court stated: "The heart of the audiovisual work is the play mode. That is the actual game. The customer pays a quarter to participate in the simulated space battle. The attract mode is merely advertising, designed to attract the bystander to the game and entice him to play it. Even if the attract mode were totally different in the two games, the copying of the play mode would still constitute a copyright infringement.

"This Court finds that Stern will probably succeed in showing that defendants copied its audiovisual work in the video game *Scramble*, and, consequently, that Stern is entitled to preliminary injunctive relief for copyright infringement."

The federal judge preliminarily

enjoined the defendants from selling "Scramble" and ordered the defendants to deliver all "Scramble" games to the court for impounding during the pendency of the lawsuit.

Stern Electronics then announced that it plans to seek injunctions, damages, and the impounding of video games directly from operators as well as the manufacturers.

U.S. Customs action

A shipment of "Munchie Man" video games imported by Marcel Company of Enfield, Connecticut, was subject of a redelivery order recently issued by the U.S. Customs Service in Boston, Massachusetts.

These games were alleged to be piratical copies of Midway's *Pac-Man* video game. Such orders subject the importer to penalties equal to the full value of the goods plus duties.

Midway continued to actively seek to prevent entry into the United States of all games, kits and game components which infringe its rights in *Galaxian*, *Pac-Man*, *Rally-X*, *Gorf*, and *Wizard of Wor* video games, the manufacturer announced.

In a suit filed by Midway against Artic International, Inc., the U.S. District Court in Chicago, in a 28-page opinion, held that Midway has stated a cause of action against Artic as a manufacturer and distributor of electronic circuit boards and speed-up kits for Midway's copyrighted video games.

Thus, even if Artic does not sell complete games, it may still be liable under the copyright laws for contributory infringement. The court denied Artic's motion that it was entitled to summary judgement as a matter of law. The court also rejected Artic's contention that, as a matter of law, copyrights cannot cover the video game itself.

Midway sought preliminary and permanent injunctions, as well as damages, and attorneys' fees in the suit.

Warning to pirates in Europe

In yet another arena—in the wake of Rock-Ola Manufacturing's

successful litigation recently before a West German court against a rip-off version of its first video game, *Star Castle*, and which was followed by series of favorable out-of-court settlements in Europe and Japan—Marketing Vice President Dr. David Rockola warned potential copiers to beware of future transgressions against his company and its proprietary games.

"It is very probable that some ill-advised individuals, who make a profession of copying legitimate manufacturers' games, will attempt to rip off our latest video, *Armor Attack*," he stated. "Accordingly, we have prepared ourselves for this eventuality and fortunately, Rock-Ola is today in an even better position to defend its video copyrights than was the case last January, at which time we were awarded the first injunction ever granted by a high European court to an American video game manufacturer in restraint of a European video game infringer," noted Dr. Rockola.

"For example, in several foreign countries, whenever it has seemed appropriate, we have taken all necessary steps to defend our *Armor Attack* copyright, well in advance of the introduction of the game itself.

"This includes not only publishing the usual copyright warnings and notices, and the issuances of the usual power-of-attorney, but as in the case of Italy and other countries wherever video game plagiarism is particularly acute, Rock-Ola has undertaken at considerable effort and expense to formally register its proprietary game directly with local foreign government patent authorities."

Dr. Rockola concluded: "Let the potential rip-off artists be aware that Rock-Ola now has at its disposal top professional legal talent in such cities as London, Frankfurt, Paris, Rome, and Tokyo, who are constantly monitoring the marketplace and who will at the slightest sign of wrongdoing, take swift and appropriate legal action against all *Armor Attack* copiers."

Video games lure competitors into the land of imagination

Twilite Zone, a national chain of plush family entertainment centers with locations from Massachusetts to Puerto Rico, recently held an out-of-this-world tournament to find the best overall coin-op games player in southeastern Connecticut. The tournament was held at the Twilite Zone in Groton, Connecticut.

"Groton is the home of the U.S. Coast Guard Academy, the largest U.S. Sub Base, and other industrial operations," said Ronald Phillips, general manger of Twilite Zone, "making the store a high traffic area ideal for a promotional tournament."

Phillips, explains that the promotion for the tournament began with the arcade holding a contest-to-name-the-contest. About a month before the planned dates of the tournament he advertised for "all earthlings and everyone else in town" to come up with a name for the contest to be held in June.

Not only did they come up with a clever name for the tournament—"Zone Challenge"—but a lot of interest was generated about the contest itself. The winner of the name-the-contest was awarded T-shirts and various other prizes.

The grand prize included a trip to Disney World, air fare for two on Eastern Airlines, motel accomodations, a rental car, and admission tickets to Disney World.

A local radio station, Q-105, provided free air time for advertising in exchange for being listed on all promotional material as a co-sponsor of the tournament. Q-105 also provided T-shirts and such items to be given the competitors once they reached the final

competition.

"Zone Challenge" was advertised on Q-105 approximately 12 to 15 times per day. Posters were placed in local store windows; billboards were painted; and signs were tacked up in the Twilite Zone promoting the event.

Registration was held from June 1 through June 12. On June 14 all registrants were required to attend a general rules review which stressed good sportsmanship. The competition began on June 15 and ran through June 27.

Two hundred fifty-six people registered for the tournament. The entry blank asked each person to fill out their preference in pinball or video and their first and second choice of games if they reached the finals. In the preliminary round of competition, pinball players were pitted against other pinball players and video game players against other video game players.

Sixteen cards were posted on the wall at Twilite Zone with 16 names per card. Each player was paired with another player on the card with the objective of becoming the last player to remain on the card. Round one began with eight pairs of players from each card. They played each other on an assortment of games with the first player to win 4 games out of seven, advancing and the loser being eliminated. At the end of round two, four players were left on each card, and so on until finally one player per card remained.

Phillips explained why the

preliminary matches were played on an assortment of games. "This allowed us to schedule and pre-choose the games on which matches would be played each day. If we would have let everyone pick the game of their choice for each game," he continued, "a high percentage of the players would have picked the same game. We wouldn't have had enough of *Berzerks* or *Pac-Mans* or *Defenders* to go around due to the high volume of preliminary matches."

The sixteen finalists were then placed on a "Card of Champions" to begin the final competition. All players reaching this point won a variety of prizes.

All preliminary competition matches were played on quarters out of the players' pockets. However, Phillips pointed out that there was no registration fee and matches were played during regular business hours. Once competition was started from the Card of Champions, the games were set on free play and the players then played on the game of their choice. Every team of players played three games on each player's choice. In the case of a seventh tie-breaking game being played, the game was chosen by the judges.

By the final day of competition, the field had been narrowed to eight players. These eight players played until only one emerged as the champion. Prizes and trophies were awarded to first, second, third, and fourth place winners.

—by Valerie Cognevich

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Williams touts its bumper crop

By Ray E. Tilley

"I believe we have the most exciting game in the industry."

Michael Stroll, president of Williams Electronics, was talking to the valued employees of his firm in the annual retreat for fun and games at Pheasant Run Resort, St. Charles, Illinois. He was referring to *Defender*—and he found occasion to make reference to the top-earning pingames *Black Knight* and *Firepower* during the night's festivities of June 13.

The machinery was in the back seat that night, however. The spotlight was on the key personnel of the Chicago manufacturer of games. But the coin-op devices were not lost among the claims of being "number one" in the manufacturing sector—Stroll specified that a successor to *Defender* was "virtually ready" to hit the production lines.

The event was reminiscent of the annual affair of Williams Electronics, one year ago, when the advent of

Defender was generally hinted. At this point in 1981, however, Stroll said, "we're building more, on a daily basis," and he added: "We've been number one for a long time."

The theme of this year's two day conference, "Responding to the Changing Climate of our Industry," began with Friday meetings devoted to discussions between the engineering, game design, and marketing departments. Saturday's conference reconvened with additional input from the manufacturing, quality control, Menasha Controls and financial departments of Williams.

On Saturday evening, employees attended a reception and dinner plus dancing to the Michael Lerich Band. Each year, highlighting the dinner, is the awards presentation to employees who have participated in an important way to Williams' success during the past year.

Stroll presented this year's awards to the following employees for major

contributions in four categories:

Bob Loose—operation and support; Steve Ritchie—game design; Ernie Pellegrino—manufacturing/production; and Paul Dussault—technical.

In addition to a plaque, these Williams employees each received an all-expense-paid trip to Las Vegas for themselves and their wives.

John Nemec, Williams vice president of finance, was singled out to receive an engraved watch to recognize his outstanding contributions towards the successful spin-off of Williams from Xcor.

Williams' Special Recognition Award, usually presented to one person, was presented to a team of seven people for the design and development of Williams' first video, *Defender*. They were Ken Fedesna, Tom Hart, Chuck Bleich, Paul Dussault, Sam Dicker, Wally Smolucha, and Jerry Hendrix—all receiving Tiffany key chains with the key to their brand new *Defender* cocktail tables.



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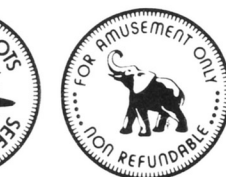
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Poll based on collection averages

Play Meter revamps survey to track industry trends

With this issue, *Play Meter* magazine has expanded and revamped its twice monthly equipment survey to actually reflect average weekly gross collections on current top games.

Play Meter, which inaugurated the concept of regular operator polling of current equipment two years ago (starting with the June 15, 1979 issue), made the change because, as David Pierson, editorial director of the magazine, put it, there's a much greater need today for even more precise, unbiased information which can be used as a guide in new equipment purchasing.

"High game prices, short-lives, and the high cost of money," said Pierson, "have all combined to make this business just about the most volatile there is. If the industry's operator base is to thrive and grow under these conditions," he continued, "it is necessary that *Play Meter*, as the organ for dissemination of industry information, provide operators with relevant data. And that data is average weekly

collections for each game and each game type.

"There is no question the industry has long been in need of an independent authority," said Pierson. "That's why this magazine produced the first annual operator survey many years ago to monitor all operator health signs. That's also why *Play Meter* initiated its equipment poll two years ago.

"Both operator polls," he continued, "were looked upon as truly revolutionary when they were first introduced. But industry people quickly adapted to them when they saw the data produced by the *Play Meter* polls was not only useful but also essential."

He said the new equipment poll by the magazine is based on a different concept from previous industry polls.

"With past surveys," he said, "if there was a general surge in collections or a downturn of activity with one equipment type, that change would not be reflected in the survey because the industry polls

were based on the relative merits of each game to the other games of that same type.

"For instance, when pinballs dropped off last year and videos shot through the ceiling, it could not actually be monitored by the existing survey methodology. But with this new polling procedure," Pierson continued, "the games are not actually ranked against one another but are ranked according to their average weekly gross collections. And that's what really counts, not how many games of each type there are out there, but what those games are actually earning.

"We think this new method will aid operators in tracking industry trends which may greatly influence their new equipment purchasing habits."

Pierson used as an example the widespread suspicion among many operators today that the video boom may soon bust. "Hopefully, with this new polling procedure by *Play Meter*," he said, "a lot of these vague fears will be allayed. We'll be able to monitor not only what the individual

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games are doing but we'll be able to monitor what pinballs and videos are doing as game types.

"By charting this information regularly, twice monthly, in fact, *Play Meter* subscribers will be able to track any industry trends. That way operators will be alerted to any dramatic shifts which, if they had known about, would have influenced their buying decisions.

"These games today just cost too much for operators to base such large buying decisions on guesstimates," said Pierson. "Today's operator needs more information, and we think the *Play Meter* survey will help fill that void.

Pierson also pointed out the survey would allow the operator to monitor if it is just a few games which are holding up the weekly collection average for a game type.

"In Japan, the video boom-bust appears to be attributable to the phenomenal earnings of a single game, *Space Invaders*. But because a lot of people misread that to include all video games, they overinvested and lost a lot. The *Play Meter* survey will allow operators to monitor how many games of each type are actually producing above average earnings."

Using this base, Pierson said, *Play Meter* will produce a ranking of only those games which are earning above the national average. "We won't be producing a Top Ten or Top Twenty anymore," he said. "The number of games included in any survey will be dictated solely by the number of games earnings above the national average.

"This new polling procedure should also cut through the myth that large production numbers of a particular piece make it a high earning game," he continued. "No matter how many of a particular game are produced," Pierson stated, "the production number of any model will not enhance or detract from the game's weekly earnings. The game will be rated as long as it receives a response rate of at least ten percent, and it will be ranked as long as it receives a response rate of at least 25 percent."

Poll open to input

The *Play Meter* staffer also added a request for still more *Play Meter* readers to join the growing ranks of those who respond to the survey. The operator base which the

survey is currently based on, Pierson noted, is currently topping 500.

"That makes this by far the most statistically valid regular survey this industry has ever had. There have been surveys which have been circulated throughout this industry and paraded around by individual factories which support their claims but which are based on samplings of anywhere from 15 to 50 people. There is just too much of a margin for error with surveys with that low a response rate," he said.

"That's probably why the *Play Meter* surveys are so widely referenced in this industry, when these same factories start planning their own companies' strategies, because the operator base is so great that there is no doubt the results are statistically valid.

"But to keep this going and growing," he concluded, "we encourage all those who are not presently taking part in a survey to fill in the entry form which also appears in each issue of the magazine.

"The survey doesn't cost the operator anything," he said, "and it only takes a few minutes of his time. The survey postage, by the way, is even paid by *Play Meter* both ways."

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Play Meter

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, including both arcade and street locations. 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. **Special note should be made that these earnings figures are gross revenues. When computing operator revenues, these amounts should be reduced by fifty percent to reflect the most widespread industry practice, that of granting fifty percent commissions to the location owners.**

TOP PINBALLS

Fourteen of the 23 pinballs (61%) with a response rate over ten percent have above average earnings.
Average weekly collections for pinballs as of June 19— \$89

- ★ 1. EIGHT-BALL DELUXE/Bally \$150
- 2. BLACK KNIGHT/Williams \$134
- 3. XENON/Bally \$126
- ★ 4. FLIGHT 2000/Stern \$120
- 5. JUNGLE LORD/Williams \$119
- 6. FLASH GORDON/Bally \$109
- 7. BLACKOUT/Williams \$97
- 8. ALIEN POKER/Williams \$94
- 9. FIREPOWER/Williams \$93

TOP VIDEOS

Fourteen of the 24 videos (58%) with a response rate over ten percent have above average earnings.
Average weekly collections for videos as of June 19— \$155

- 1. DEFENDER/Williams \$220
- 2. PAC-MAN/Midway \$207
- 3. SCRAMBLE/Stern \$206
- ★ 4. ARMOR ATTACK/Cinematronics \$196
- 5. GORF/Midway \$196
- 6. ASTEROIDS/Atari \$184
- ★ 7. CRAZY CLIMBER/Nichibutsu \$176
- 8. BERZERK/Stern \$175
- 9. ASTEROIDS DELUXE/Atari \$171
- 10. PHOENIX/Centuri \$169
- ★ 11. ASTRO BLASTER/Gremlin \$165

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

Provisionally Rated Pinballs and Videos

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

PINBALLS

- MARS/Gottlieb \$186
- FREEFALL/Stern \$150
- FIREBALL II/Bally \$121
- NINE BALL/Stern \$100
- TIME LINE/Gottlieb \$89

VIDEOS

- ROUTE 16/Centuri \$208
- CRAZY CLIMBER/Taito \$177
- PULSAR/Gremlin \$168

Location list repeal:

AMOA's role debated

The AMOA, through its *The Location* newsletter, has responded to criticism levelled at it by industry figures and *Play Meter* magazine. In its own defense, the national association said its policy for conducting board meetings that are closed to the association's general membership and the rest of the industry, and its handling of certain aspects of the compulsory jukebox copyright law has resulted in favorable decisions for jukebox operators.

In the June, 1981 issue of *The Location*, the AMOA claimed it was responsible for the favorable determination made by the Copyright Royalty Tribunal (CRT) June 5 when that federal agency decided to repeal its 1978 location list ruling which required all operators to file lists of their jukebox locations in order to remain in compliance with the compulsory jukebox law.

"It was the AMOA, representing jukebox operators," said the lead article in *The Location*, "who testified against the regulation before the CRT, (2) filed suit for declaratory judgement and permanent injunction, (3) appealed the decision to the U.S. District Court, (4) appealed the decision to the U.S. Court of Appeals, (5) filed a writ of certiorari with the U.S. Supreme Court, and (6) finally filed a second motion for reconsideration by the CRT which resulted in the ruling being overturned.

"AMOA's persistence," the newsletter article continued, "on behalf of its members and the industry has resulted in this favorable determination. Some operators and manufacturers did not support AMOA in these efforts and indicated they believed the battle was not worth the time and effort to fight it. One of the trade magazines editorialized in front page coverage that the location list battle was lost when the U.S. Supreme Court refused our writ of certiorari, and inferred that the time and money spent by the AMOA was wasted."

The offending magazine was

Play Meter which "editorialized" with a news story in its May 1, 1981 issue reporting that the AMOA's "JB List Battle is Lost."]

"All jukebox operators throughout the country can now be thankful

that AMOA did not share this gloomy outlook," the newsletter said.

David Pierson, editorial director of *Play Meter*, responded to the assertion by the AMOA in this

PLAY METER

.....NEWS UPDATE.....

Volume 7, Number 8

May 1, 1981

JB list battle is lost

The AMOA's jukebox location list battle was lost in February when the U.S. Supreme Court refused to hear the case. In denying the AMOA appeal, the Supreme Court let stand a lower federal court ruling which upheld the Copyright Royalty Tribunal's authority to require operators to file lists of their jukebox locations in order to be in compliance with the law.

The battle, which saw the creation of a special AMOA legal defense fund, cost over \$100,000. AMOA is continuing with the legal action fund, however, "challenges" another

But it has been the jukebox location list battle which many operators placed as the main fight. They argue that the location lists are confidential business information and that to give up these lists to a federal agency would jeopardize their businesses by leaving them open to future broadsides from so-called "blue sky" operators who sell direct to locations.

The AMOA challenge centered on its contention over what constitutes "access" to the jukebox. The CRT—which, according to the law, must distribute the royalties collected by

the challenge of constitutionality of this requirement.

Meanwhile, operators were filing applications for jukebox royalty licenses at a rate "right in line with last year," according to the U.S. Copyright Office. Walter Sampson, chief of licensing, said at the end of February certifications had been issued for a total of 89,595 machines, which at the current \$8 per-box rate had collected \$716,762 in royalties.

During 1980, 136,000 jukebox licenses were issued, Sampson pointed out.

In the mechanical "cas mat"



FACT SHEET



Amusement and Music Operators Association

BEFORE THE COPYRIGHT ROYALTY TRIBUNAL
United States of America
Washington, D. C.

IN THE MATTER OF
Proceeding Concerning
Regulations to Provide
Access to Phonorecord
(Jukebox) Players.

May 22, 1981

REPLY COMMENTS OF AMOA (AMUSEMENT AND MUSIC OPERATORS ASSOCIATION) TO COMMENTS OF ASCAP (AMERICAN SOCIETY OF COMPOSERS, AUTHORS AND PUBLISHERS) AND BMI (BROADCAST MUSIC, INC.)

1. By notice issued March 30, 1981 and published in the Federal Register April 6, 1981 (46 Fed. Reg. 20566) the Tribunal initiated this proceeding to delete from the jukebox access regulations (37 C.F.R. 303) the provisions which require jukebox operators to record with the Tribunal lists of their jukebox locations (37 C.F.R. 303.3). The Tribunal's

a different purpose, namely, to withdraw the confidentiality the Tribunal has accorded to the operators' location lists. The Tribunal announced the non-disclosure policy at a public hearing on November 9, 1978 and published it in the Federal Register on November 17, 1978 (43 Fed. Reg. 53795). Jukebox operators have the right to rely upon the Tribunal's published assurances of confidentiality as a condition to their recording of the location lists. Rescission of the policy, therefore, as BMI proposes, would violate the operators' constitutional rights to due process of law.

6. ASCAP explains its non-use of the location list information on the dual grounds (1) that not as many location lists have been filed as ASCAP would like to have, and (2) that ASCAP thought it best to refrain from requesting use of a location list while AMOA's lawsuit challenging the regulations was pending. Those grounds, we submit, are insufficient to justify ASCAP's non-use. In the first place, the location list information, the Tribunal has ascertained, was as accurate as ASCAP could have obtained.

Above, the May 1, 1981 issue of *Play Meter Update*, which reported that the AMOA's jukebox list battle was lost in the courts. Below, the AMOA "Fact Sheet," circulated by the AMOA to its members, outlines the case which the AMOA claims resulted in its winning a favorable location list determination by the Copyright Royalty Tribunal (CRT). CRT Chairman Thomas Brennan told *Play Meter*, after the location list regulation was struck down by the CRT, that the AMOA motion was "totally ignored," and the CRT acted on its own motion, completely independent of any action by the national association.

manner: "Play Meter stands by its earlier statement that the AMOA wasted untold thousands of industry dollars in a losing jukebox location list stand. The national association cannot take credit for the repeal of the location list requirement. That requirement was repealed because the CRT acted on its own motion, not because of any action on the part of the AMOA. All the AMOA court case established was that the CRT has the right under the law to make such a regulation."

Pierson's comments were borne out by CRT Chairman Thomas Brennan who told *Play Meter*, when contacted about the AMOA claim, "The location list regulation was reconsidered on the initiative of the CRT, not the AMOA. The reason the CRT reconsidered the regulation was because the regulation proved to be unessential. It was not providing any essential function."

Brennan told *Play Meter* AMOA filed its own motion for reconsidering the location list requirement, but that was "totally ignored" by the Tribunal. He said very little, if any, consideration was given to the AMOA motion because the CRT had decided on its own to reconsider the location list requirement.

"The Tribunal acted on its own initiative," he asserted.

This bears out with what Chairman Brennan told *Play Meter* two years ago. Under questioning by this trade magazine, Brennan conceded at the time that the CRT would reconsider its own location list ruling at a latter date if the performing rights societies did not make use of the lists (See *Play Meter*, July 15, 1979, "Trying to Understand the Copyright Royalty Tribunal's Reasoning").

Brennan added the CRT construed the AMOA's recent motion as a legal ploy that the national association hatched in order to renew its appeal of the regulation by going back to court again. "Their rationale," Brennan conjectured, "was apparently that, after the rejection of their case by the U.S. Supreme Court, they should go back to the federal agency, file a motion for reconsideration, and then if that motion was ignored, to try the appeal process again."

When asked if the threat of the AMOA renewing its case in the courts was the reason the CRT overturned its own regulation, Brennan said it was not. "The regulation simply was not essential," he repeated. He said the listing

requirement was on the CRT's agenda anyway, and any AMOA motion on the location list issue was "irrelevant."

POINT:
'The location list repeal is proof the association is doing its job.'

—AMOA

As a further indication that the CRT did not feel pressured into revoking its own requirement, Brennan said it made no difference to the agency if the AMOA wanted to press the issue through the courts a second time. "Quite frankly, I don't think a second court challenge by the AMOA would have been any more successful than their first one," he said.

COUNTERPOINT:
'The AMOA wielded no influence at all on the location list repeal.'

—CRT Chairman

"The point is," said Pierson of *Play Meter*, in response to the AMOA newsletter, "the AMOA is trying to claim credit for something it was not responsible for; so that, by taking credit for it, the AMOA can justify all the mistakes it has made—such as the fruitless—and expensive—court battle and the rate debacle the association had a hand in.

"Either the AMOA is really

unaware that its actions on the copyright front have been producing no effect whatsoever, or else the association is purposely misleading its members into thinking their cause is being adequately handled. Whatever the answer, it has to be said that the AMOA has not been honest with its members. It has not admitted that it has made some big mistakes, costly mistakes, concerning the copyright law simply because it has taken a lot of bad advice. And that's all because the association has not opened adequate avenues of dialogue among its members and the rest of the industry in search of better solutions."

Justify closed meetings

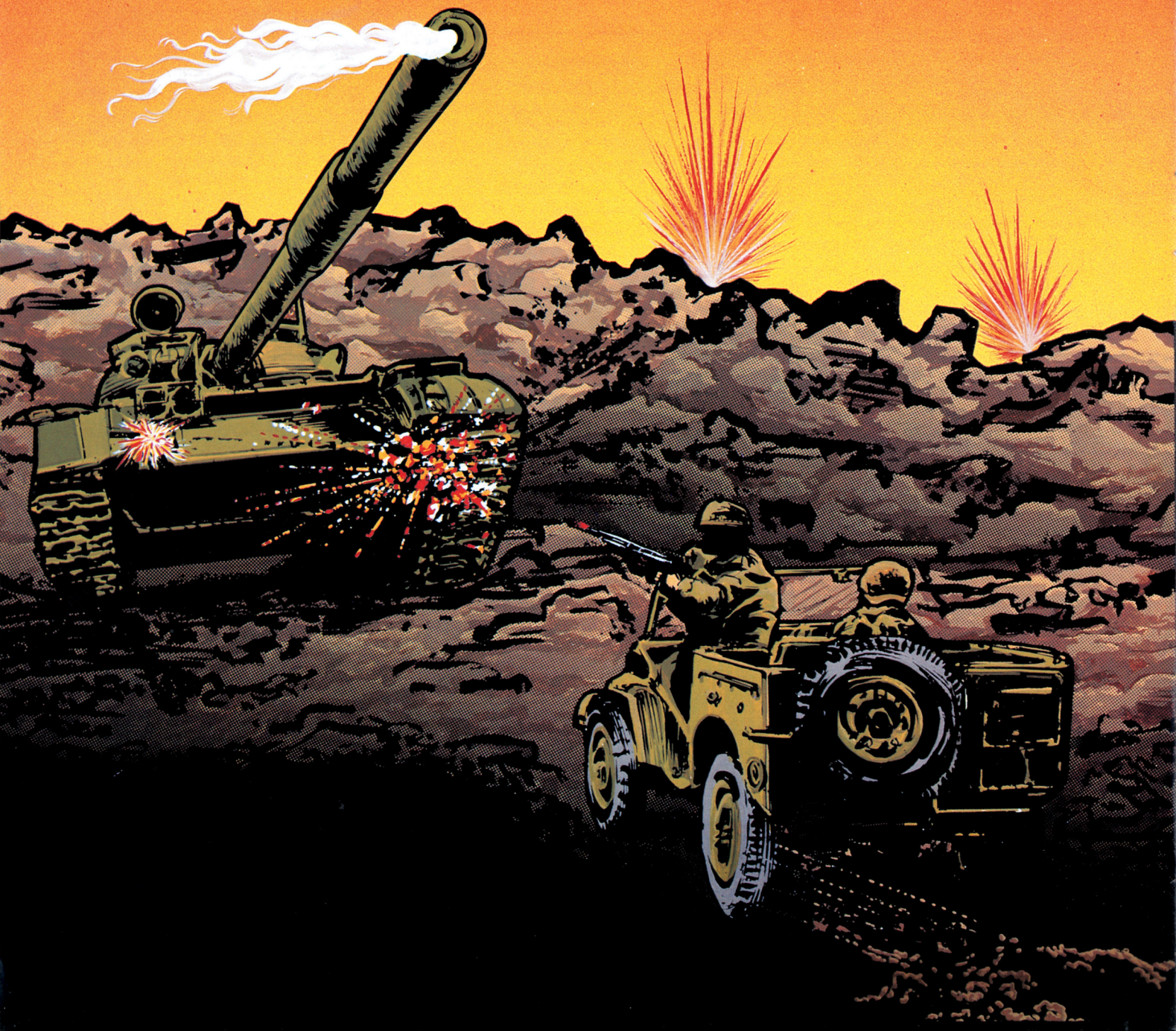
The AMOA newsletter also defended the association's policy of conducting closed door meetings: "AMOA has been criticized by certain trade magazine for stating 'no comment' to some of their questions. [*Play Meter*, June 15, 1981, "Las Vegas Exit Planned in Questioned Closed-Door Meeting"] What they neglected or perhaps chose to ignore is that legal counsel frequently requests that no public announcement be made until such time as certain actions have been implemented. It would be like an operator announcing in the paper that he was thinking about opening new locations, or a manufacturer announcing that he was thinking about a new machine. We know, of course, that isn't done because they don't want their competitors to know what they're doing until after it happens.

"AMOA has represented the interests of its members and the industry and will continue to meet this obligation. Sometimes it may appear that little or no progress is being made. However, in legislative matters there are certain procedures that the AMOA must follow and it takes time. The results can be rewarding, as illustrated by the decision on the location list regulation."

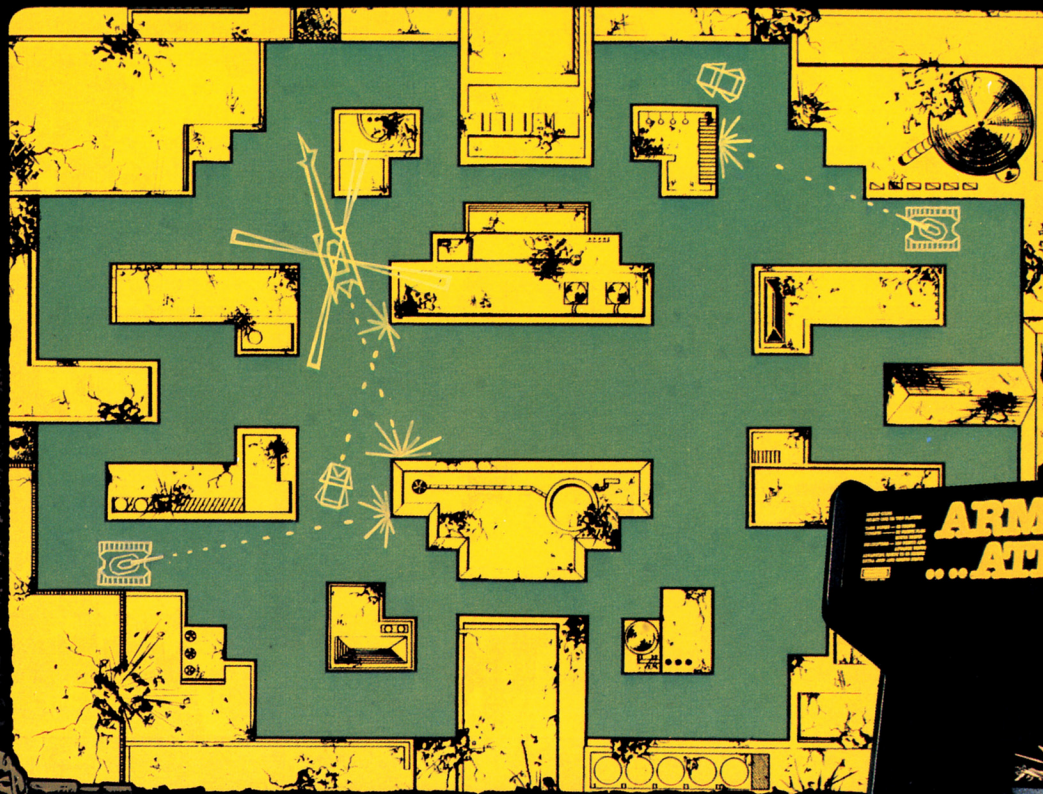
Pierson also responded to the newsletter's second contention:

"The national association's closed door policy remains indefensible. Defending the closed door board meetings on the premise that maybe something will be discussed which legal counsel does not think would be appropriate to divulge, does not ring true. On the issue which some AMOA officers offered 'no comment'—that is, to move the

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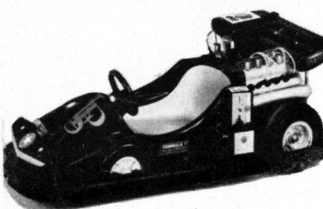
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AMOA Show out of Las Vegas and back to Chicago—other members of AMOA's own board of directors were quite willing to comment extensively, indicating obviously that AMOA's own board was not under the impression public disclosures on the matter would have an adverse effect on AMOA dealings. And, as a matter of fact, their disclosures did not adversely affect anything. For that reason, it appears the posture taken by the AMOA, that its board meeting is closed because maybe something might be discussed which legal counsel thinks would not be appropriate to divulge, appears to be a posture of rationalizing a policy after the fact.

"Also, it should be noted that *Play Meter*, when requesting to cover the board meeting, assured the AMOA that should certain delicate matters come under discussion which, if divulged, would adversely affect the industry, *Play Meter* would hold back on that information. As a responsible member of the trade press, *Play Meter* has always preserved confidentiality when it has received information under the conditions that it be 'off the record.'

"But perhaps the AMOA's insistence that it should be treated as a privately-held, profit-making organization strikes at the core of the problem," stated Pierson. "Board meetings of private corporations obviously do not come under such scrutiny by the trade press because the information discussed in those meetings is proprietary information.

"However, the AMOA is a public body, a non-profit organization whose membership is made up largely of members who are not allowed admittance to the board meeting," he said. "Unlike the decisions made by the privately-held organizations, the decisions made by the national association impact on others outside the meeting room who have an equal financial and intellectual interest in how and why its organization has come to certain conclusions.

"And in case of the AMOA," he continued, "press coverage is especially necessary in light of the series of bad decisions that AMOA has made recently which have cost and which will continue to cost this industry greatly.

"The AMOA cannot look upon itself as a business. It is an association which, like any governmental or pseudo-governmental body, must be open to the

press.

"Is the AMOA keeping its doors closed because it would have us believe that maybe by doing so it could, for instance, hatch a scheme whereby it could slip through Congress a change in the jukebox copyright law without ASCAP even knowing about it? If not, then who exactly is AMOA trying to hide from?"

'Full cooperation and support'

On page two in *The Location* entitled "Let's Get the Record Straight...and Get on With the Job," AMOA outlined what it saw as its achievements concerning the jukebox copyright law, and concluded with still another reference to its contention that it had had a major hand in the location list regulation repeal.

The AMOA newsletter article concluded in this way: "The industry's best chance of success in the efforts to secure improvements in the Copyright Law from Congress, to secure favorable decisions from federal agencies (emphasis added), and to correct agency abuses in the federal courts, depends in a large measure upon the cooperation and the will of everyone

in every segment of the industry to pull together in one united effort to advance the cause of the jukebox industry in Washington and elsewhere throughout the United States.

"Certainly we can expect best results only if we do coordinate and pursue our efforts with consistency toward common goals.

"To this end, we of the AMOA urge everyone at every level of the jukebox industry to give us their full cooperation and support, and we pledge the fullest cooperation and support from the AMOA in return."

Pierson responded, "Before the AMOA staff starts asking the industry to join behind it for a common goal, the AMOA staff should first ask its membership exactly what common goals it should be focusing on.

"The exorbitant per-jukebox assessment has quite possibly by itself established the present law as being a bad law and not in the best interests of this industry. Does the AMOA plan to haggle over the price some more with another costly court battle and try to whittle down a \$50-and-above assessment to maybe \$35? At this point, is that the direction the AMOA membership wants it to go?

Does the industry want this law in any form?

"There is a danger that if and when the AMOA leadership finally decides it has to go back to Congress to get the law amended, it may be inclined to fight for less than what its members want. After all, the AMOA agreed with the performing rights societies that jukebox operators should be paying additional copyright payments apart and above the copyright payments operators were already paying. Is the AMOA still willing to start off with such a critical concession?

"The AMOA must get in touch with the will of its members before embarking on what it deems are 'common goals.' The association staff cannot be allowed to dictate what directions a legislative or judicial push should go without consulting its members."

Pierson emphasized, "But, most importantly, the AMOA cannot look upon criticism directed at it as being something which is, by nature, anti-industry. Rather, the AMOA should do some soul-searching to see if the criticism levelled at it has merits and if indeed the association should become more open with its members." •

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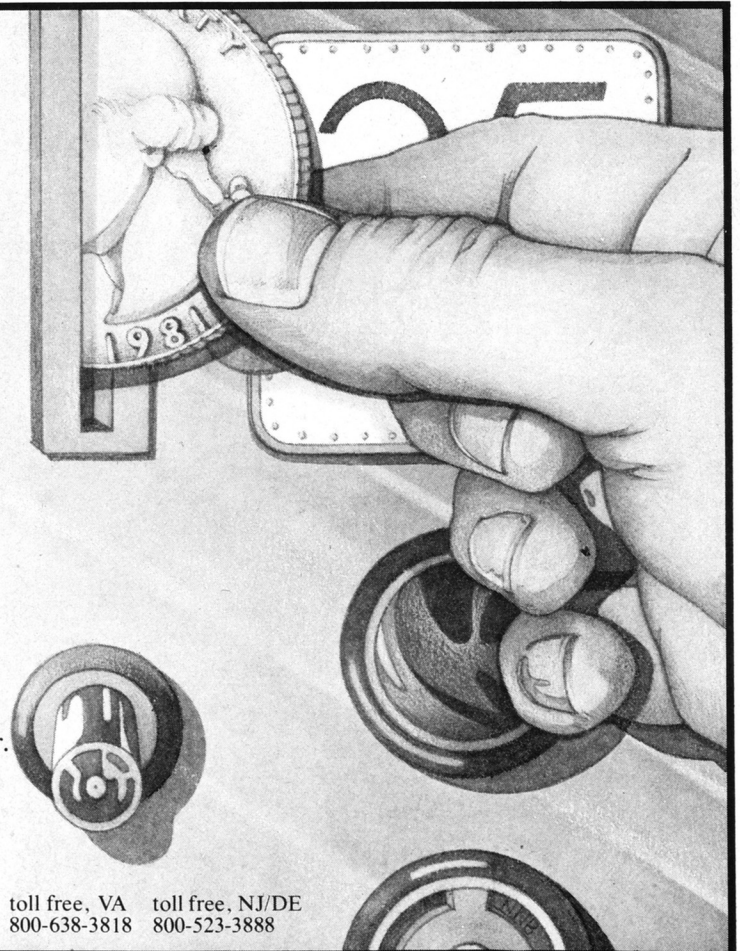
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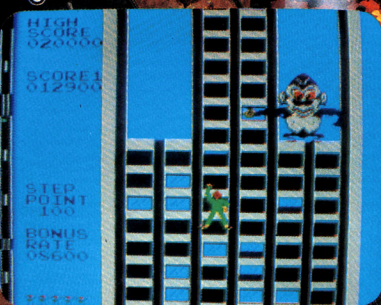
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Bally holds distrib seminars in Reno

The Holiday Inn, Reno, Nevada was the site of a gathering of distributor service managers from the Bally Pinball Division and the Midway Manufacturing Company distributor network.

The seminar which ran from May 18-20 drew participants from over the U.S. as well as Canada. "The content of the program encompassed various elements within service and was designed to more thoroughly define the state-of-the-industry role of the service manager and provide the necessary tools for effectively functioning in this capacity," said Bernie Powers, Bally marketing services manager.

A lineup of guest speakers who are considered experts in their respective fields joined members of the Bally and Midway staffs in conducting the various sessions.

The seminar opened with a multimedia presentation showing a full tour of the Bally and Midway factory facilities in Bensenville and Franklin Park, Illinois. John Reckas of Bally Pinball Division marketing research

then addressed the group on this subject and also conducted research survey for the factories over the 3-day period.

Midway's director of sales, Larry Berke, talked about the link between sales and service, elaborating on the various communicative processes necessary to solidify the structure.

Customer relations and how Bally and Midway handle this vital function was the subject of a presentation by Bally's Diane Guzzi and Midway's field manager Andy Ducay.

Jim Sneed of Kurz Kasch and Gordon Pickavance of Sencore apprised the group of the latest test equipment available, utilizing various demonstration units for illustration.

The Tuesday morning segment focused on the hiring of technical personnel, including evaluation, on-the-job classification, and intermediate type testing. This session was conducted by Bally's Ed Schmidt and Midway's Ken Dabek. Bernie Powers followed with a lecture on the team concept in managing shop personnel. This

portion of the program was climaxed with a presentation by Jim Roberts of James Industries, suppliers to Bally-Midway of monitors, transformers, lamp sockets, and various other components.

Present and future prospects were covered on Tuesday afternoon in the discussion "Where We Are Going Technologically," Powers and Arnie Aarstadt.

"Marketing Your Service Department" was the subject of Powers' discussion on Wednesday morning and the presentation focused on the elements for perfecting and making known the attributes of this vital function.

Midway's Brian Osowski conducted a session dealing with the factory's warranty policies and the structure of the parts department.

How to evaluate software packages for possible implementation into computerized systems was discussed by Bernie Powers in the opening session on Wednesday afternoon. He elaborated on the evaluation of mini and micro computer systems.



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Gas station mag plugs coin-op

An expansion of coin-op games locations into convenience stores and even gas stations is suggested by an item *U.S. Oil Week*, a petroleum industry publication, of May 18, 1981.

The article notes that video games, in particular, are catching on and cashing in where they were formerly not seen: locations including restaurants, hotel lobbies, grocery stores, and convenience stores. "People of all ages these days are dropping millions of coins into the electronic gizmos," states *U.S. Oil Week*.

Quoting the most recent annual *Play Meter* operators survey, the

articles goes on to say: "More than a half-million coin-operated video games are scattered around the country, taking in nearly \$3 billion in quarters a year," with average weekly collections of \$102 gross per video machine.

Video games, the publication notes, "are played by older, more conservative people, including housewives and businessmen," and the games fit nicely in convenience stores, "where space is at premium.

By implication, the games will fit well also in service stations—whether those are linked with food sales or not—which is a location possibility worth an operator's

checking out.

U.S. Oil Week observes: "Buying a video game for your C-store will cost \$2,500 to \$5,000, but it's not necessary and possibly not wise to buy one, the experts say. If you own the machine, you might have trouble getting it repaired, and you could be stuck with it when that particular game's popularity wears out.

"Most games are owned and maintained by professional game 'operators,' who split the income with the location owner. The usual split is 50/50. You can find local games operators under 'amusement devices' in the Yellow Pages," says *U.S. Oil Week*.

Bally to add 50 Aladdin's Castles

CHICAGO— Bally Manufacturing Corp. plans adding approximately 50 Aladdin's Castle units in the remainder of 1981, according to Bally officials' comments after the corporate first quarter revenue report was issued recently.

Aladdin's Castles and the Midway Manufacturing video games producing division of Bally were responsible for "substantial increases in revenues and earnings for the quarter, said Robert E. Mullane, chairman of the board and president of Bally.

Bally's corporate revenues and earnings set records for the first quarter ended March 31, 1981. Revenues for the quarter were a record \$209.7 million, compared to \$152.5 million for the 1980 first quarter. Net income for the three-month period was a record \$15.9

million, nearly double the \$8.0 million earned in the first quarter of 1980. Earnings per share were 60¢, or 94% above the 31¢ per share reported a year ago.

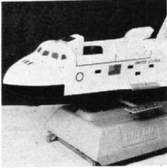
The first quarter 1981 results included a loss of \$1.6 million, or 6¢ per share, net of income tax credits and minority interests, from Bally's Park Place, Inc. subsidiary, which operates a hotel and casino in Atlantic City, New Jersey. Park Place's loss included in the comparable first quarter of 1980 was \$3.3 million, or 12¢ per share, also net of income tax credits and minority interests.

Mullane noted that "revenues and earnings from Bally's manufacturing, distributing, and equipment operating divisions were at record levels. Specifically, our Midway video game manufacturing division, and Aladdin's Castle, our 255-unit chain

of family amusement centers, both reported substantial increases in revenue and earnings. The results at Park Place in the quarter were negatively impacted by adverse winter seasonal factors and the high level of prime interest rates. We are pleased, however, with the improving operating results of Park Place, particularly in view of the increased competition resulting from the opening of three additional casinos in Atlantic City in 1980."

Commenting on the outlook for the second quarter and balance of 1981, Mullane concluded: "We fully expect continued strong gains from Bally's manufacturing, distributing, and equipment operating divisions. Demand for video games is continuing at an unprecedented rate, and we plan on opening approximately 50 additional Aladdin's Castle units in the remainder of 1981." ●

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—from 'Notes and Quotes' by Van Brook of Lexington

OMAA Show picks up on tobacco connection

The Tobacco Institute and three cigarette manufacturers were notable by their presence among the 14 new exhibitors in the Ohio Music and Amusement Association (OMAA) Exposition May 8 and 9 in Columbus.

OMAA officers commented that the Tobacco Institute's participation "was particularly interesting because, during the Show, it was revealed that OMAA members own more than 65% of the 34,000 vending machines licensed in the Buckeye State. Recognizing this trend, R.J. Reynolds has been an exhibitor since OMAA's inception. It was joined this year by Philip Morris and Brown & Williamson."

The OMAA study showed the growth in cigarette vending came as a move to protect coin-op amusement locations. The location managers generally would rather deal with only one operator, rather than one vendor and one games/music operator, said Executive Director Paul Corey, and "as a result, our people are more and more heavily into cigarette vending."

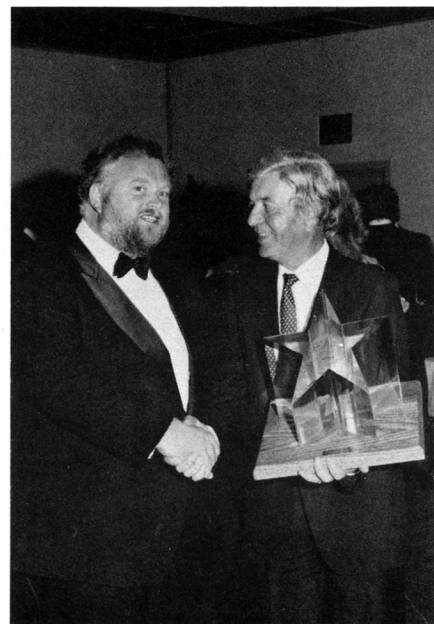
OMAA has asked the national association, AMOA, to study this area of other states' operators covering the cigarette vending line. If the Ohio situation of dual lines operating is true elsewhere, it would urge the AMOA to aid all its members in defense of selling tobacco products, said Corey.

For example, Ohio operators would fight a "disproportionate share of tax increases" on cigarettes, said Corey, and lobby for a discount for vendors who stamp their cigarette packs and save the state this work. [In the sales tax area, Minnesota operators, through lobbying in their state association, recently won a legislative fight to hold back sales tax collected on their receipts, while statewide sales taxes rose by one percent.

OMAA makes available "Tobacco Action Network" material from the Tobacco Institute, regarding "keeping the health aspect in the proper perspective," as well as materials from the Tobacco Tax Council of Richmond, Virginia.



Rock-Ola Manufacturing Corp., which made its debut in video games late last year, recently announced the introduction of its second video, *Armor Attack*. As was its first video, *Star Castle*, Rock-Ola's latest game has been licensed by Cinematronics, Inc. under an agreement which gives Rock-Ola exclusive export sales and marketing rights for Europe, Canada, Australia, and Japan, and non-exclusive rights for all other export markets. *Armor Attack* features the dramatic audio and visual effects of a fierce military encounter, for one or two players, with simultaneous play in the two-player mode. Rock-Ola offers *Armor Attack* in both the standard upright and 19" cocktail table versions.



Special awards presentations were part of the festivities at the gala seventh annual Atari distributors gathering in late March. The awards for highest sales of *Asteroids* in 1980 were presented to C.A. Robinson of Los Angeles for domestic sales and to Lowen Automaten for the international market. The happy coin-op crew above, left photo, are (left to right) Lee, Andrea, Sandy, and Al Bettelman; with Don Osborne, Atari vice president/sales, and C.A.'s Ira Bettelman, flanked by Tom Pettit of Atari. In photo at right, Shane Breaks, Atari's international markets director, congratulates Herbert Nack of Lowen for its sales record efforts. The distributor event at Pebble Beach, California embraced golf and tennis tournaments, a barbecue, and the formal dinner for awards. The group agreed the "Atari Classic" events were a success.

Tournament Games stages multi-play competition

The first Multi-Product World Championships, sponsored by Tournament Games and Atari, will take place Oct. 29—Nov. 1, 1981, at the Chicago Expocenter, offering competition in five different coin-operated sports.

"It's with a great deal of satisfaction that we see our dream of a Multi-Product World Championships becoming a reality on AMOA weekend, 1981," said Lee Peppard, president of Tournament Games, Inc. "We're moving forward after a year in which our promotional plans had to be put on hold because of the impact that the video boom had on the basic product lines."

Contenders for the world championship titles on the four Tournament Games products will vie for \$350,000 in cash and prizes, scheduled as follows: Tournament Soccer, \$150,000; Tournament Eight Ball, \$100,000; Tournament Mark Darts, \$75,000; and Tournament Hockey, \$25,000.

In addition, Tournament Games and Atari recently agreed to add a \$50,000 Atari World Championships to the schedule, making this "the biggest tournament in the history of the coin industry," said the promoters—a \$400,000 weekend.

"By concentrating our promotional efforts on two major, multi-product tournaments per year, we will be able to present events that merit the full attention and support of not only the players and the media, but also of the industry in total—as shown by the current working agreement with Atari," continued Peppard, defining the company's promotional direction for the future:

"We still firmly believe that promoting through tournaments is the key to successful marketing and expanded profits for the operator."

Promoters expect the multi-product tournament to introduce thousands of new players and locations, heretofore inactive, to the benefits of promotional involvement. "Considering the extent of today's video market, the addition of the Atari competition greatly enhances the multi-product concept," stated Cal Rogers, Tournament Games' executive vice president.

Past Tournament Soccer World Championships have had an average attendance of 4000 participants. With the addition of pool, darts, hockey, and video players, the attendance at this year's World Championships is expected to double or triple that amount, he said.

"The amount of detailed planning that goes into the preparation of an event this size is staggering," commented Kathy Brainard, tournament coordinator. "Over 10,000 players will be competing in forty-eight events for \$400,000 in cash and prizes—in a three-and-a-half-day time span. It's a real challenge, but the people on our tournament staff are the best—well-trained, experienced, and very capable."

Location tournament packages generating free entry into Tournament Eight Ball, Tournament Hockey, Tournament Mark Darts, and Atari events are available through Tournament Games. More information on the World Championships and on location tournament packages may be obtained by calling the tournament information line, toll free, 1-800-426-8897.

Vance relocates

Growing interest in game room operation has greatly spurred the business of token sales, which has led Van Brook of Lexington to expand its physical plant three times its former capacity, the Kentucky token manufacturer reported.

"The tremendous volume of business has caused us to triple out physical facilities," said Virgil Vance, president of Van Brook. He added that he would like to apologize to Van Brook customers who have had to wait a tied-up phone line at Lexington until a multi-line system could be installed.

All of Van Brook's customers have had marked increases in arcade revenue with the use of tokens, Vance said, and he added that this has had another uplifting effect on sales at Van Brook. The token makers have been working overtime to fill orders, he said.

"Lots of people are getting onto a good thing," Vance claimed.

Arcade washes out

From England comes this story relating a cause for an arcade's financial failure that is beyond any human control or caution: the weather.

A former Bridlington amusement arcade operator blames bad weather for the failure of his venture when he appeared before Scarborough Bankruptcy Court earlier this year. Michael Corrigan, of Scarborough, and his wife Sandra took over the arcade in 1978 as M. & S. Amusements. After a first year of "reasonable business," poor weather led to the business failing, he told the court.


Corrigan told of a joint deficit with his wife of £38,304 and a personal deficit of £29,594.

The fates smile too...

Two elderly sisters from West Virginia, broke for \$20, put three \$1 tokens in a progressive slot machine at an Atlantic City, New Jersey casino June 5 and won \$50,000, the record jackpot to date for the gambling resort.

UPI reported Julia Spatfore, 66, and Sara Cosco, 60, of Faimont, were stunned by the payoff which came at Resorts International Hotel Casino.

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Play Meter Calendar

August 14-16

Music Operators of Minnesota, summer meeting, Cragan's Pine Beach Lodge, Brainerd

September 11-13

North Carolina and South Carolina coin operators associations' combined annual convention, Carolina Inn, Columbia

September 25-26

West Virginia Music & Vending Association, annual meeting, Ramada Inn, South Charleston

October 6-8

JAA Convention, International Trade Center-Harumi Bldg., Tokyo

October 7-12

Japan Electronics Show, Osaka International Trade Fairgrounds, Osaka

October 12-18

Taiwan Electronics Show, World Trade Center, Taipei

October 14-20

Korea Electronics Show, Exhibition Center, Seoul

October 15-18

Enada Show, Rome, Italy

October 16-17

Amusement & Music Operators of Virginia, annual convention, Holiday Inn, Richmond

October 29-November 1

NAMA annual convention, McCormick Place, Chicago

October 29-31

AMOA Exposition, trade show and convention, Conrad Hilton, Chicago

November 25-27

Incomat Exhibition, Salzburg, Austria

December 9-12

Forainexpo, Paris, France

January 18-21, 1982

ATE, Birmingham, England, National Exhibition Centre

January 19

Music Operators of Minnesota, annual convention, Holiday Inn, Minneapolis

January 21-24

IMA, Frankfurt, Germany



Terence Cunningham recently 'landed' a position at Exidy, Inc. as the coin-op manufacturer's field service manager. A flying enthusiast, as shown above, Cunningham holds a world record for distance in ultra-light aircraft. He says he plans to drop in on Exidy customers via field service schools, and he will be responsible for the company's service manuals, "Zero Downtime", bulletins, and toll-free hot line. His career flight plan has included customer service experience with Atari, and he has over eight years in the electronics and computer field.

Brier goes to Atlas Music

Atlas Music Company of Chicago, Illinois announced the appointment of Mac Brier to the position of general sales manager.

Brier has filled the vacancy left by Paul Huebsch when he left Atlas to become the first executive director of the newly formed manufacturers association, ADMA (see related story).


Brier spent the past year as vice president and general manager at Loewen-America in Chicago. Prior to his position at Loewen America, he filled executive positions with Empire Distributing and National Coin, both in the Chicago area.

He explains that he is a 30-year-

plus veteran of the industry, having begun his career with 16 years spent as a local operator prior to his distributing experience. "The operating experience has helped me in the business," he said.

"When selling equipment to an operator, it's important to be able to think like they do," he continued. "An operator doesn't want to be pressured into a sale because when he is pressured into a sale, he will see the equipment in the shop all the time. You've got to steer him in the right direction. My belief is in helping the operator as much as possible, because even the lowly operator might become the big guy some day," Brier stated.

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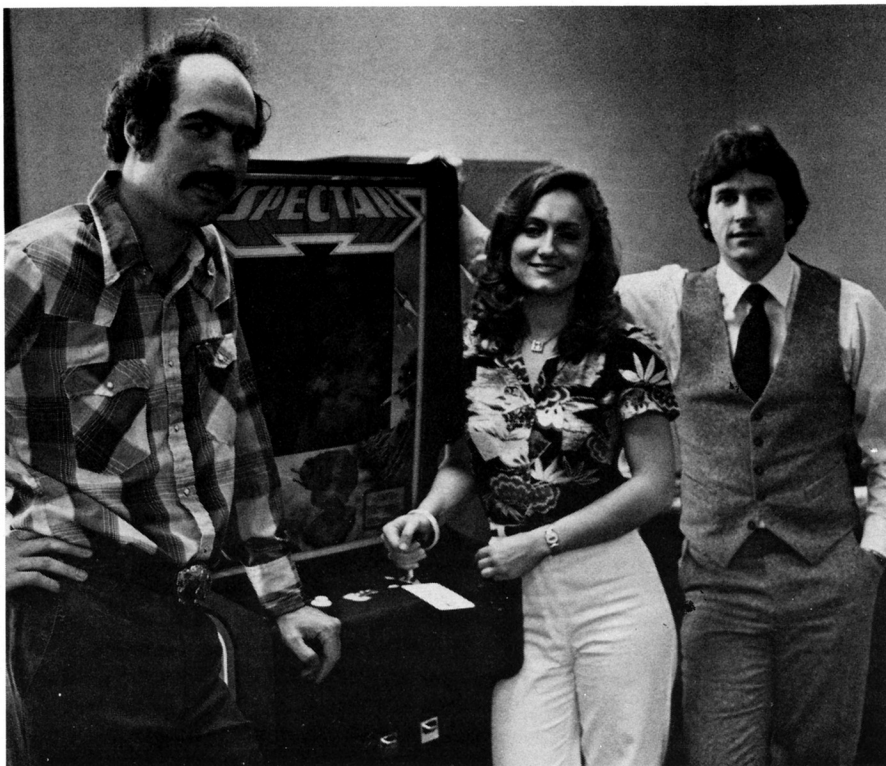
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On hand for Exidy, Inc. at the recent College Unions Show in San Francisco (left to right): Terry Cunningham, field service rep; Chris Minarik, and Mike Wright, both of Exidy National Sales, with Spectar on display. 'Businesses on college campuses have a common problem that a video game solves—a demand for high profits in a minimum space allowance,' Wright commented. The College Unions attendees showed enthusiasm for Exidy games' profit making power, he added.

Game development push predicted at Bally Mfg.

John A. Britz, himself recently promoted to chief executive officer in executive office changes at Bally Manufacturing Corp., announced two major appointments to the corporate staff.

James J. Barrett, former director of manufacturing for the pinball game and slot machine divisions of the corporation, was named corporate director of manufacturing with responsibility for all manufacturing operations.

Dr. Martin A. Keane, former assistant of technology, was named corporate director of technology, responsible for coordinating and supervising all engineering programs of the corporation.

Both executives will be based at Bally corporate headquarters at 2640 Belmont Avenue, Chicago, and will report to Britz.

Britz said, "Both Jim Barrett and Dr. Keane have made significant contributions in our successful efforts to achieve this number one position. I am confident that the addition of Dr. Keane and Jim

Barrett to our corporate staff will enable us to make even greater progress in developing games with even wider player appeal and in strengthening our production capability."

Barrett, before joining Bally, was an industrial engineer with the General Electric Corporation.

Dr. Keane has served as vice-president of the Midway Manufacturing Company, subsidiary of Bally, and for the past year was assistant director of technology for Bally.

Britz has been executive vice president/technology, at Bally since 1970 and a director since 1977 and will continue to serve in both positions. His appointment as chief operating officer is effective immediately.

Britz, 62, began his career with Lion Manufacturing Company, the predecessor company to Bally, in 1939 in slot machine development and production. He became general manager of Bally in 1963, with overall engineering and production responsibility.

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New at A.M.A. Dist.

Eddie Boasberg, an 18-year veteran of the coin machine industry, has returned after a two-year hiatus and is currently involved in sales at A.M.A. Distributors, New Orleans, Louisiana.

After being away from amusement machines and involved in consumer sales, Boasberg told *Play Meter*: "There's never been better equipment than there is available today. In two short years there have been tremendous changes in all games, especially from the inroads made by the smaller manufacturers. I am utterly delighted to be back."

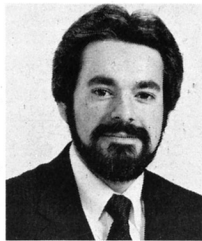
He will be involved in sales of equipment to operators and pool tables to the home market for A.M.A. Distributors, located at 1711 St. Charles Avenue, New Orleans 70130.

Boasberg's previous positions included experience with New Orleans Novelty Co. (beginning at age 15), Bally Manufacturing in Ireland, and Atari, Inc. in California.

He and one son, Shane Michael, live in New Orleans.



Boasberg



Reckas

Reckas is tapped

John Reckas has been appointed manager of market research for Bally Manufacturing's Pinball Division. Reckas' new duties will include a concentrated effort to research and develop profiles on the amusement game marketplace.

He has been with Bally for 8 years, most recently serving as assistant sales manager of the Gaming Equipment Division for 1 1/2 years.

In announcing the appointment, Tom Nieman, vice president of Bally Pinball Division, said: "We've been looking for someone to help the Pinball Division bring the needs and wants of the marketplace more sharply into focus. With John's varied background, working in Bally's computer department, the traffic department, and most recently the gaming division, he brings a new and valuable perspective to our marketing efforts."

PLAY METER, August 15, 1981



On the assembly line: Jack Mittel, Taito America president (on left), and World Wide's Vice President Harold Schwartz seal distributorship pact.

Taito joins hands with World Wide

Named the exclusive distributor for Taito in Illinois and Michigan, World Wide Distributors, Inc. on May 27th, enjoyed a welcome dinner and tour of Taito's modern facilities in suburban Chicago.

David Poole, vice president of engineering, introduced Taito's revolutionary new electronic system and service-priority cabinet that has been specifically designed for easy access and service as well as for maximum security.

"We are pleased to be appointed the exclusive distributor for Taito America," said Fred Skor, president of World Wide, adding, "I have great confidence that, together, we will make an unbeatable team."

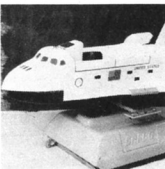
"We're happy to have World Wide aboard," responded Jack Mittel, president of Taito. "My personal association with the company goes

back 20 years and I'm positive they'll exceed my expectations to strengthen our industry position. Their great organization and back-up service will get full support from our factory at all levels."

Harold Schwartz, vice president of World Wide, has been a major figure in the industry for 45 years. "I consider Taito the forefather of the video game business as we know it, starting with the inception of *Space Invaders*," said Schwartz. "I look forward to their innovating and perpetuating the industry's most outstanding features."

Paul Moriarity, vice president of administration for Taito, is pleased that World Wide is a "service-minded organization, well-respected by customers. Their good reputation and strong rapport with operators will benefit Taito in the long run."

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Parliament turns down local game restrictions

Video games won a victory in the United Kingdom parliament on May 20 when an attempt to subject them to local authority control was defeated by 114 votes to 94.

George Foulkes, a socialist MP for South Ayrshire in Scotland, spoke of reports of young people becoming addicted to video games. Some resorted to theft, blackmail and vice to get money to satisfy their addiction, he said.

But Michael Brown, a conservative MP for Brigg and Scunthorpe and, at 29, the youngest member in the House of Commons, described Foulkes' Bill to control *Space Invaders* and other electronic games in public places through local authority licensing as a "petty anti-social measure" aimed at the innocent and harmless pleasure of many young people.

Seeking to introduce the bill under the UK parliament's obscure 10-minute rule, Foulkes told the House of young people who played truant from school, missed meals and gave up other normal activities to play video games.

"They become crazed with eyes glazed and oblivious to everything

around them as they play these machines," he said, urging MPs who had not seen it to go incognito to an arcade or cafe to see for themselves.

Young people were tempted to play machines again and again to try to beat the previous highest score, he said, and it was estimated that the profit from each machine was more than £200 a week.

"This is blood money extracted from the weakness of thousands of children around the country," Foulkes said.

His examples of young people addicted to the video games craze included a boy who stole between £60 and £100 from home to play the machines, and a 13-year-old boy who stole £106 collected for his grandmother's funeral.

Two boys allegedly blackmailed a classmate who had bought stolen property to get money for video games, and a Sheffield mother was quoted as saying her 14-year-old son underwent "Jekyll and Hyde changes" when he became hooked on the machine.

"In London a 17-year-old was so desperate for money to feed these

machines he turned to blackmail and theft, demanding £900 from a clergymen with whom he previously had sexual relations," said the MP.

Foulkes said the machines were not covered by any of the laws to control gambling. His bill would have enabled councils to refuse licenses if they believed there were already enough machines in the area, if the place was inappropriate or if they had received objections from local people.

Alternatively, councils could have granted a year's license which defined hours of use and imposed age restrictions.

Brown admitted, when he rose to oppose the bill, that he was an avid supporter of *Space Invaders*. He was not surprised, he said, that Foulkes wanted to extend his socialist beliefs in restriction and control of the "innocent pleasure of young people."

He added: "There are thousands of young people who could be doing worse things—trooping the streets and engaging in violence."

—by *Play Meter's International Desk*

Australian industry seeks ties with play efforts for the disabled

Australian operators in the Amusement Machine Operators Association are seeking contact with other persons who have experience in enabling video and pinball play by the handicapped.

T.W. Davenport, managing director of Famark Industries of Victoria, has been named project director in this area for the Australian association. Davenport said the association has "undertaken to promote and foster a relationship between the industry and these handicapped people (quadriplegic

and paraplegic), through which it is hoped to increase their quality of life."

He added, "It is intended that the scheme will be entirely funded by our industry, with no financial reward nor recompense being sought or offered."

In connection with the International Year of Disabled Persons, "it is our intention to complete a program in time to coincide with the 1981 Games for the Handicapped which will occur in Melbourne later

this year."

The Australian operators in this effort wish to have communication with those who have had experience in aiding the handicapped through games, particularly technical ideas for achieving this. Copies of promotional materials which have been used in such efforts would also be of assistance, said Davenport.

Interested parties may write: T.W. Davenport, 14 New Street, Frankston 3199, Victoria, Australia; phone: (03)783-6472.

Local official tells why he opposed coin-ops

One bad apple spoils the whole barrel: an ancient truism that is often borne out in this industry, as when local government passes burdensome restrictions on the coin-op trade. There are many examples, but for one, Medford, New Jersey, served to prove this case recently when the town council banned all amusement arcades. A page one news article in the Courier-Post of nearby Camden told the story: The city fathers of the rural Burlington County community had linked "pinball arcades, massage parlors and adult book stores, theatres, and live entertainment," and prohibited all these outlets in one fell swoop of an ordinance. Play Meter talked with Councilman Robert Meyer of Medford, who was quoted in the article as being most concerned with

detrimental effects to the community that residents believed were brought out by the operation of coin-op games. Meyer's statements—and the actions of the town council—should be instructive to operators elsewhere who are concerned with good image for this business and who should be on guard against potential legislation in their own areas that would curb legitimate and well-run coin-op arcades.

Q.: You are quoted in the press as saying, 'I have yet to meet the person who would endorse X-rated movies, skin shows, or arcades.' Have you met anyone who would link X-rated movies to, say, charities?

A.: No.

Q.: How did you come to link coin-operated games with, as it is reported, 'X-rated movies, skin shows,' and such things?

A.: No, it was just part of the ordinance. We weren't putting it in the same light as that type of activity. What we were doing was combining it in the same ordinance. We were in the process of putting that ordinance in, making it a matter of law in the township, when the pinball and electronic machines thing came up...But it was not meant as a reflection to mean that that type of activity was the same thing as pornographic movies.

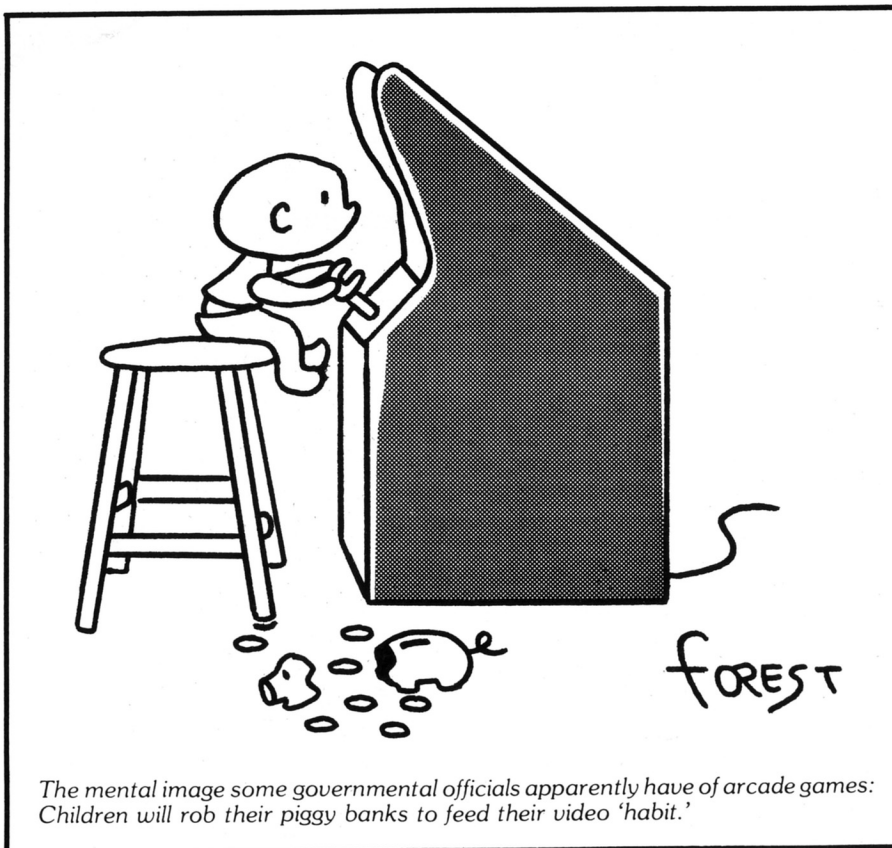
Q.: It is reported in the press that you had 200 people 'who told me to vote for this.' Have you never met anyone who advocates arcades?

A.: No. In my opinion there is a difference between the two things we're discussing. However, I could not and never will endorse an amusement arcade for our municipality. If people in other towns like them, that's fine. I'm not particularly fond of them.

Q.: What seems to be the problem with them?

A.: The children. Discipline. I think an arcade in itself becomes a police problem. It becomes unpoliced, attracting children who get into narcotics, into alcohol...We had one in Medford where this existed in the Lake Pine area. It went so far as children riding mopeds and trail bikes into and out of the building. It was a non-policed situation. There were constant complaints of the amount of alcohol residue—bottles, beer cans, and things found around the building becoming a hazard to the community. It became an eyesore. There were constant police calls on the building.

Q.: It would seem the city would consider revoking the business license of that specific place.



The mental image some governmental officials apparently have of arcade games: Children will rob their piggy banks to feed their video 'habit.'

A.: That ordinance has been amended recently to say that as a 'secondary use' there is no problem with pinball machines or these electronic machines. It was just that we were not interested in having an arcade which was exclusively used for that purpose. We're not trying to exclude them from the municipality, just saying that they be a secondary use instead of a primary use.

Q.: What does that accomplish?

A.: That we are dealing with percentages of building (space). If it became a nuisance, and I owned a restaurant and had pinball machines, etc., in the building,—if I had a situation where my restaurant was becoming a hangout for children and I was losing my restaurant business because of that occupancy—then I would more likely get rid of the disturbance by eliminating the machines. And that's what we're trying to accomplish.

Q.: How many secondary-use permits have been issued since the ordinance was passed?

A.: We issued a gentlemen a license for 12 machines, based on 25 percent (use) of the square feet of floor space...as a secondary use. [The operator had originally

projected plans to place 27 pingames in a building in a district zoned for 'small business.'—ed.]

Q.: Are those the only coin-operated games in the township?

A.: No, there are machines in other areas—the Shopping Bag food store...I dropped in, and there were 14 children playing three machines, and the boys were riding bikes in and out of the doorway. That's a management problem, I will agree, but it does attract a kind of unsightly situation. It's a drawing card, and I would probably take the machines out. You don't take children by the ear anymore. You'll go to court.

I made my decision based on my experience. I have six children, and my own children told me, 'Dad, if you put an arcade in town, you're going to have nothing but problems, because of control.'

Q.: We still fail to see the rationale between children with bicycles and the machines inside a building.

A.: Sir, I comply with ordinances that restrict my industry (construction) very strongly. And they include zoning ordinances, planning board, and everything else. Likewise, we would wish that the people in your

business would comply with our ordinances.

We are granting licenses. We have granted them in a way not to restrict the free enterprise system. You will find an awful lot of municipalities that have taken the same approach Medford has in the arcade situation.

Q.: And there is a case before the U.S. Supreme Court that would negate many of those municipal actions. [Play Meter, August 1: Mesquite, Texas vs. Aladdin's Castle.]

A.: If it negates that...We were faced with a law situation that was handed down by the Supreme Court of the State of New Jersey. And that is why we went to a primary and secondary use, to avoid the entrapment of that law case, and we did it as intelligently as possible.

Q.: How many establishments in Medford have secondary use coin-op permits?

A.: Maybe four.

Q.: Would you elaborate on the problems you've had?

A.: I had 200 of my constituents state very strongly, 'Bob whatever you do don't allow those goddamn arcades in Medford.' And I didn't.



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Trials of a New Operator

Some advice from experience,
to coin-op newcomers

By Tony Bado

I am certain many of you reading this article have experienced either recently or in years past some of the events which follow. Many new amusement machine operators perhaps began in business as a result of seeing or reading about all the quarters that the machines can churn-out. Just recently, this presumption of instant richness was reinforced by two national telecasts—namely, “NBC Magazine” and ABC’s “20/20.” There is a great temptation to enter the coin-op business on the premise that one does no work except collect all those quarters and change a game or two periodically.

All of us in the business find out very early that this is a false vision of utopia. It’s just not the way it is—especially when that new reliable pingame you purchased and placed twenty miles away has the ball trapped behind the sling-shot kicker during the very first day of play!

If any of you married fellows plan to enter this business as a street operator, I urge you to invest some time beforehand to make unhurried pleasantries to your family—you many not get another chance! Since my entrance into the coin machine business some three years past, I’ve been on a whirl-wind of sorts—or more like a dust devil, as decision making can be rather clouded at times.

Who knows whether that factory-acclaimed “hot new game” will give you an eventual return on investment? With few exceptions, once you buy it, it’s yours! And once a piece demonstrates itself as a nonearner; boy, is it yours! Or worse, if the game becomes a real hit; it becomes difficult to obtain at

any cost. Perhaps contrivances the likes of *Asteroids* make it all worth it, though—?

The contrast in daily activities can be such that on occasion I have difficulty recalling the events of just the day before. An unqualified statistic often quoted among operators is that “when you get up around a hundred machines, that’s about all one man can handle.” In being very near this figure with my operation I think the statement has a lot of merit. Once one gets above ten to fifteen locations, unless you have a partner, you are literally never done. On many occasions I’ve returned from a long day of service and collection only to go right back out again on a jammed coin slot.

The hectic scenario of events one endures each day—let alone each month—can be dramatic, traumatic, as well as humorous at times. Once, in troubleshooting a *Black Jack* pinball in dim light on location with a bunch of kids actively observing, I inadvertently inserted the twenty-pin driver board connector one pin down. Have you ever seen a pingame strobe like a super nova? Every bulb on the playfield and backbox winked-out! This was certainly a personal drama.

Or take the time I met for nearly four months with the board of a local recreation center in an attempt to sell the concept of amusement machines as part of their offering. After I cleared all roadblocks for their installation, the center, being a public facility, put the contract out on bid! This was not dramatic. It was hair-raising! But I got the contract.

Most operators I know have bulges in their pockets. If not from quarters, it’s from keys. Ever try to

pay for an airplane ticket with rolls of quarters? Not only do you get a strange glare; but the clerk will not accept them.

The owner of a nearby newsstand became all smiles.

These bulges can lead to disaster. Once, in unloading a *Firepower* flipper from the back of a pick-up truck with no help, I had an experience I wish not to repeat. With a little maneuvering, one can balance and spin a pingame on three legs and gently slide it down your thigh to the ground where the fourth leg can be fastened. Not so with a bulge in my pocket! The machine and I very quickly, but not quietly (I screamed as the machine made crunching sounds) crashed over on its side with me attached.

Ever see all the Williams processor boards from the outside of a locked backbox? And at ground level? To my amazement, the backglass did not break. Not so for my ego.

Some of these bulges can be reduced if the factories would standardize the coin door—or at least use the same barrel length locks. This would make master keying easier.

Perhaps the above incidents are humorous. And as I look back, I suppose they could fit that classification; but not at the time. Yet a funny thing once happened on the way to replace a broken playfield rubber. If you know that most of my storage boxes look alike, then you may be able to guess the ending. I keep a variety of parts in these boxes—from coin acceptors, to playfield posts, to quarters themselves.

One of these boxes is devoted to playfield rubber rings. At the risk of

‘Apart from being an amusement vendor, you are looked on as being an entrepreneur in the moving business with the expertise of a bank loan officer.’

digressing too much, I must say that I have four children who just love to color. They also keep their crayons in one of these boxes. Can you imagine dashing ten miles on a service call catering to the urgency of a serious onlooking location owner only to open up a box of crayons. You can fill in the details.

Who are you working for?

At times in this business one feels he is working for and not with the game manufacturers. It seems that with each technological surge which brings us a top machine that breaks all previous earnings, the factories raise the price a few hundred dollars. It's like they've got a computer that figures the parameters of the break even point on a 50/50 commission split in your best location. Then the factory will make a new game, or worse yet, put the hit game in question on home television in the form of a cassette cartridge.

I can only conjecture where all this may lead. Perhaps the only survivors down the road may be the huge arcade chains with their high volume traffic and free flow of quarters which can easily support the purchase of new frequent games as well as pay

the help and rent. Somehow the 50/50 split must be abandoned, or all the street operators are going to meet their demises.

The present video game phenomenon shows no signs of slowing at present. All of us are enjoying the excellent collections. Yet there exists a subtle issue that I see as the biggest danger to the operator; i.e., the home TV game cartridge of the most recent coin-op hits! Significant television inroads into prime arcade pieces essentially began with *Space Invaders*. Today for all practical purposes the coin-op street version has met an early death. Not wholly because of the introduction of the newer games, but greatly because one can play it on his home television set.

It's not because the home version is equally as good. We in this business know they are nowhere as good. The problem is much deeper than this. There exists subjective psychological factors which quantitatively shows up in the cash box. The fact that a person can play his own TV set qualifies the statement I've often heard recently, "Why should I spend a quarter when I can play this game at home?"

I'm not opposed to the manufac-

turers making a profit, or capitalizing on a hit machine; but not at my expense! I would urge them to give us at least a year before releasing a hit game on home television.

I believe it was Elliot Rosen (or was it Fred Skor?) who said that anyone thinking of entering the amusement business today needs a tremendous amount of money. One may not know what this means until you set up today's typical street location: two videos, one pinball, and a jukebox—about eight to ten thousand dollars if it's done right.

And oh...if you're going to be the sole owner/operator/collector/repairman/ and so forth, be ready (since you'll be highly visible) for those bimonthly location demands. Apart from being an amusement vendor, you are looked on as an entrepreneur in the moving business with the expertise of a bank loan officer.

Due to space limitations, it is time for my pen to exit. I hope the above passages have been coherent—as all here was written among numerous service calls and equipment moves. The life of a street operator is an ongoing saga. And, you know... "I've not had so much fun since I was a kid."

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New game mode unveiled

Sega distributes hear talk on future of industry

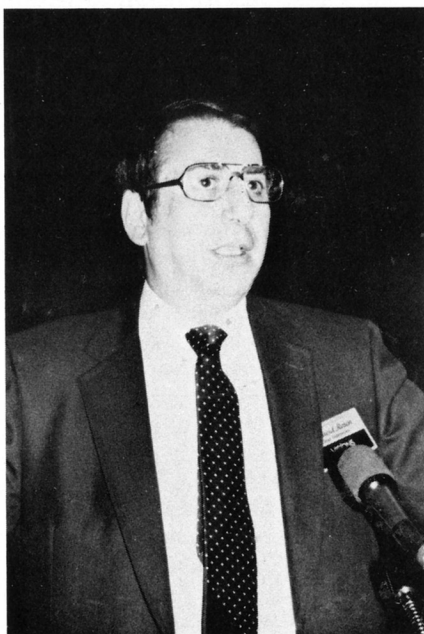
The "explosive" growth in the computer video game industry and its future opportunities were the subjects of a major address by David Rosen, chairman and chief executive officer of Sega Enterprises, Inc., before Gremlin/Sega's distributors in an annual meeting at La Costa, California.

Rosen contrasted the enormous cash box revenues generated by the U.S. coin-operated amusement industry with those of the motion picture and music industries. "In 1980, the U.S. coin-operated amusement industry registered revenues in excess of both the motion picture and music industries," he said. "It is clear that our industry has established itself as a major entertainment attraction in the United States."

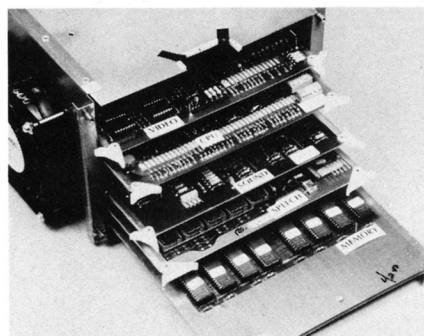
Within the coin-operated amusement game industry, Rosen pointed specifically to the dramatic 38 percent jump in average yearly gross realized by computer video games in 1980 (\$5300) versus 1979 (\$3300). He contrasted these figures with those of flipper games, which showed a 4 percent decrease (down to \$3280 in 1980 compared with \$3380 in 1979).

"Our industry's growth," Rosen told the video game distributors, "has been realized through the combined efforts of the major industry participants: manufacturers, distributors, and operators—supported by substantial consumer demand for sophisticated video game product.

"Computer video games have vast player appeal that cross age, occupation and income barriers," he said. "Unlike more passive forms of entertainment, such as movies, spectator sports and concerts—



Gremlin/Sega's Dave Rosen: 'An idea whose time has come.'



Sega/Gremlin G-80 hardware

computer video games give the individual a chance to actively participate and test one's skills. In a world that has become fascinated with computer technology, video games create fantasy environments

and provide exciting entertainment opportunities, all at very low cost.

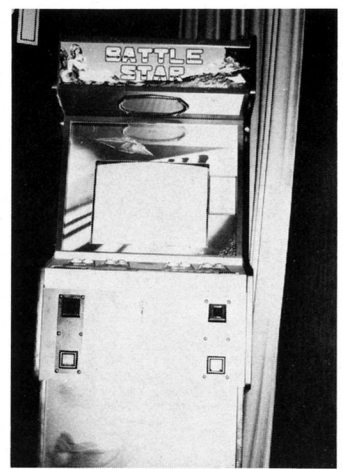
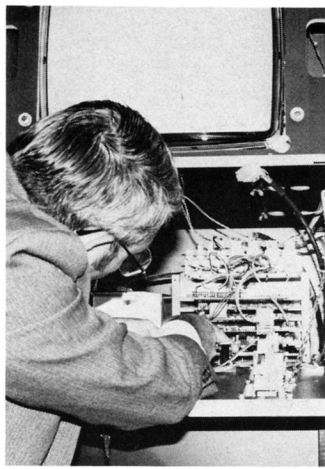
"By merging the worlds of computer sciences, communications and entertainment, the computer video game industry has devised an undisputed 'formula' for success," Rosen said. "Popularity of the games serves notice as to their fundamental entertainment value—and many in fact serve notice of our underlying need to escape daily pressures and doldrums with an entertainment alternative to television or the movies.

"The serious observer of the computer video game phenomenon may conclude that these advanced forms of electronic entertainment enjoy broad-based popularity in large part because the traditional alternatives of passive entertainment, such as television and motion pictures, fail to offer the combination of mental stimulation and personal involvement which are unique to computer video games," Rosen concluded.

Sega/Gremlin conversion

Sega Enterprises, Inc. introduced *Convert-a-Game*, a revolutionary new conversion system for coin-operated computer video games, at the June 15 meeting in La Costa. This development represents a technological and marketing milestone for the United States video game industry, according to Rosen.

The new Sega/Gremlin conversion system represents state-of-the-art technology, he said. "In comparison to the rather 'limited' capability of the cartridge/cassette system, our G-80 *Convert-a-Game* hardware is adaptable to accommodate the highly complex game



On stage, a Gremlin engineer demonstrates the conversion process. In the first photo, the screen graphics are removed and replaced. In the second photo, PC boards are interchanged. In the third photo, the control panel is exchanged. The fourth photos shows the end result—a Space Fury converted into a Battle Star. Time elapsed: 13 minutes.

concepts that we are currently developing and will be introducing in the future,” Rosen continued.

The *Convert-a-Game* system is modular in design and houses a card cage with approximately six PC boards—CPU, memory (which holds the game program), video board, video background board, sound, and speech. Simplicity is a major advantage: “Boards can be easily replaced resulting in the creation of a new game,” Rosen said. He emphasized that Sega/Gremlin conversions take no more than 10-15 minutes.

The Sega/Gremlin system, Rosen explained, can overcome various current problems confronting the coin-operated video game industry. Although the industry has enjoyed explosive market growth during the past few years, Rosen stressed that “we must not be lulled into believing that our industry’s past success will

be as easily realized in the future.”

He pointed to such current industry issues as “market maturity” (the limited available prime real estate for new arcades and street locations); the flood of new game introductions and the problems of trade-in values; the “scourge of our industry”—the game copiers and intermediary manufacturers and distributors; the “forward integration” or increasing self-sufficiency of large operators and operator associations; and the financial pressures and growing complacency among distributors.

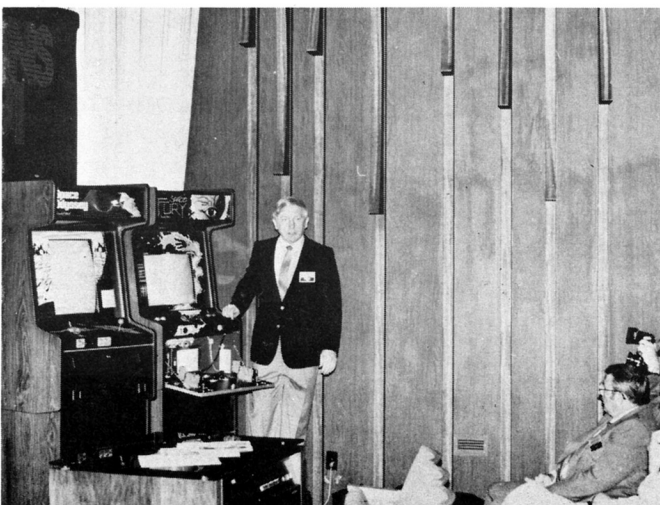
The interaction of all these factors, Rosen said, is directly related to the higher costs associated with introducing new video games and game maintenance and repair. “The economics and flexibility of our *Convert-a-Game* not only addresses the key industry issues confronting us, but offers virtually unlimited sales

potential to each and every Sega/Gremlin distributor,” Rosen said.

“*Convert-a-Game* will create a stronger bond between distributor and operator, and re-establish the distributors’ importance,” Rosen told the La Costa conference. He also indicated that since conversion requires less capital than the amount needed for purchasing complete games, a distributor has the potential to expand his customer base.

Rosen projected the sales of conversion kits, called *Convert-a-Paks* will be available with the introduction of Sega/Gremlin’s next *Convert-a-Game* models in the fall.

In closing, Rosen predicted to the distributors, “*Convert-a-Game* is a concept whose time has come. Sega/Gremlin is the first to develop and implement a truly sophisticated and flexible system to meet current and future market demands.”



Frank Fogelman unveils Gremlin/Sega’s new *Convert-a-Game* series.



Gremlin/Sega distributors size up *Space Odyssey*.



MUSIC PROGRAMMING

By Pat Matthews

Sibling acts and cute gimmicks

Did this happen back in the 30s and 40s? Or 50s even? Maybe I should ask my parents. The "this" I'm referring to is the sudden abundance of "comebacks" by singers or various musical acts who most people have left for dead in terms of their careers. The latest of these voices from the past to surprisingly re-surface is The Carpenters. Brother and sister Richard and Karen—and in a big way, I might add.

Touch Me While We're Dancing—The Carpenters—A & M/2344

It's been quite some time since these folks' melodies have graced the airwaves. Richard Carpenter hadn't been heard from (at least around these parts) since the mid-to late-Seventies, and the only time I can recall reading about sister Karen was when she got married last year. So, even though she no longer carries the name Carpenter as her last, the duo which took the world by storm by in the late '60s (covering The Beatles' "Ticket To Ride") is back! Same label, too. Produced by Richard, this first single in too many years is from a new album entitled *Made in America*. Karen has never sounded better than now on this breezy, well-produced love song which invites all those who listen to do what the title says. Nice string and horn arrangements. Old diehard fans should swallow this one up and

they could garner some of the current generation: *9 out of 10* on the Pop charts; should do even better on Easy Listeners—a #1 in this category.

Lady (You Bring Me Up)—Commodores—Motown/M 1514F

The reason for the subtitle should be obvious. They wanted to be sure of no confusion since Lionel Ritchie, Jr. of the group who wrote the song "Lady" for Kenny Rogers (he also wrote his current chart climber "I Don't Need You" which has hit so fast, and appeared between deadlines, I never had a chance to review it). The similarity ends with the title. The song is an up-tempo dance tune which is so infectious, it should dance its way to the tops of two charts: Pop and R & B; *10 out of 10* on both. And by the way, it sounds like the old *funky* Commodores.

Rock And Roll Dreams Come Through—Jim Steinman—Cleveland International/Epic/19-02111

Ok, Meatloaf fans! This will just have to do! For one reason or another, Meatloaf, the man whose physique resembles that of someone who has overdosed on that ground beef recipe for years, hasn't done any recording for a few years. He hit upon the music scene in the late Seventies with a smash album, *Bat Out Of Hell*, and left his fans in the

lurch in much the same way. The man who was a big part of that initial success as the principal songwriter has decided not to lay back and be a cult figure. Steinman has released an lp which may have been meant for Meatloaf to sing. His vocals may slightly lack in intensity when compared to Meatloaf's, but Steinman wrote the song and he does get the "feel" across in a big way. Tremendously grandiose background vocals make the production sound a lot like Queen at their best. Good song! *9 out of 10*, at least.

Urgent—Foreigner—Atlantic/3831

Cute gimmick. This one came in an envelope from the record company with one of those URGENTs stamped at an angle across the front. You know the ones where the edges of the letters look like fuzzy ink. Well, at any rate, we have another Foreigner single from a soon to be released lp called *Foreigner 4*. That's clever. So, I decided to see what was so urgent about this record other than its title. I put it on the turntable and found, unsurprisingly, that it sounded just like Foreigner. Fortunately for them, that's good. They've been able to gain a wide audience since their initial release in the mid-Seventies. That following is mostly male and mostly 16 to 24. Fortunately, again for the group, that age bracket buys

a lot of albums. The last album *Head Games* was a bit of a disappointment for the British rockers—but maybe with the addition of some nice sax work like on this first single from it, this one could fare well. But, then again, it's been a while since they've been heard from. Could go 8 out of 10, Pop.

Winelight—Grover Washington, Jr.—Elektra/E-47140-A

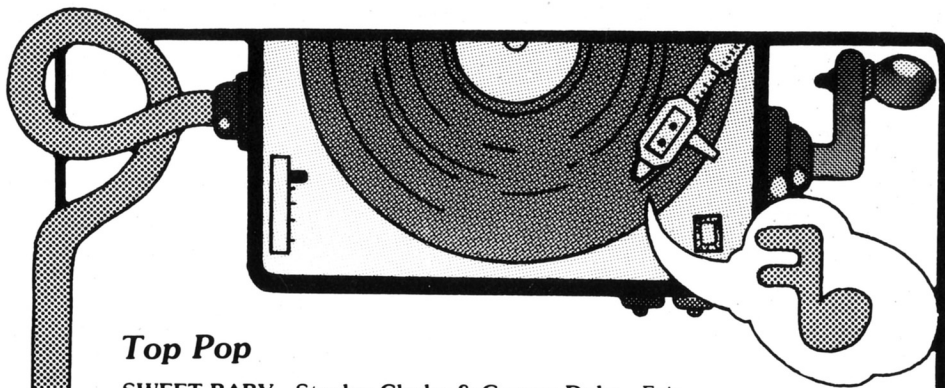
The sax player renown is finally getting the airplay and attention he has so long deserved. See what happens when someone with talent gets with a team that believes in him. Maybe that's what the major league baseball players were trying to get across. It was a little easier for Mr. Washington. He changed labels and had a hit right out of the box with a little help from Bill Withers on "Just The Two Of Us." This time around, it's strictly Grover, Mr. Magic, on his sax. Grover Washington, Jr. doesn't need any words when he's playing his horn. The album of the same name has already exploded and in the process has expanded his following tremendously. Good juke box record. Might go 8 out of 10 on Easy Listening (Adult Contemporary).

Don't Let Him Go—REO Speedwagon—Epic/19-02127

You just can't keep a good band down! It took so long for them to make it, it's only fair that they should have a string of hits. This one is the heaviest and least melodic of the two preceding hit singles from the platinum *Hi-Infidelity* album. It has a harmonica and a guitar that almost sounds like a fiddle. The song is carried through by a frantic bass drum which makes me think of the Sixties and a one-hit group called the Strangeloves. Remember "I Want Candy"? This one just doesn't have the wide appeal of the previous ones, so I'll just give it an 8 out of 10 and hope for the best.

What She Does To Me (The Diana Song)—The Producers—Portrait/12-02092

It's the first time around for these guys and what they have is a very commercial sounding record. The vocals are very clean and the arrangement makes the record sound like a hit. The chord changes and the chorus are the hooks. Overall, just a good pop song. And you have to listen half way through it to find out how this Diana character fits in with the song; 8 out of 10 with any kind of promotion.



Top Pop

SWEET BABY—Stanley Clarke & George Duke—Epic
 SUKIYAKI—A Taste of Honey—Capitol
 QUEEN OF HEARTS—Juice Newton—Capitol
 A WOMAN NEEDS LOVE (JUST LIKE YOU DO)—Ray Parker, Jr. & Raydio—Arista
 BETTE DAVIS EYES—Kim Carnes—EMI America***
 A LIFE OF ILLUSION—Joe Walsh—Asylum
 FOOL IN LOVE WITH YOU—Jim Photoglo-20th Century Fox
 STARS ON 45—Medley—Radio Records—Atlantic
 ALL THOSE YEARS AGO—Dark Horse—Warner Brothers***
 THE BOY FROM NEW YORK CITY—Manhattan Transfer—Atlantic***
 MODERN GIRL—Sheena Easton—EMI America ***
 THE WAITING—Tom Petty & The Heartbreakers—MCA/Backstreet
 JESSIE'S GIRL—Rick Springfield—RCA
 THE ONE THAT YOU LOVE—Air Supply—Arista ***
 YOU MAKE MY DREAMS COME TRUE—Daryl Hall & John Oates—RCA ***
 THEME FROM "GREATEST AMERICAN HERO"—Joey Scarbury—Elektra
 I DON'T NEED YOU—Kenny Rogers—Liberty
 IS IT YOU—Lee Ritenour—Elektra
 WINNING—Santana—Columbia
 GEMINI DREAMS—Moody Blues—Threshold—Polygram***
 SLOW HAND—Pointer Sisters—Planet
 TIME—The Alan Parsons Project—Arista***
 ELVIRA—The Oak Ridge Boys—MCA
 HEARTS—Marty Balin—EMI America***

Country & Western

WHISKEY CHASIN'—Joe Stampley—Epic***
 BUT YOU KNOW I LOVE YOU—Dolly Parton—RCA
 I DON'T NEED YOU—Kenny Rogers—Liberty
 I WAS COUNTRY WHEN COUNTRY WASN'T COOL—Barbara Mandrell—MCA
 THEY COULD PUT ME IN JAIL—Bellamy Brothers—Elektra
 THE MATADOR—Sylvia—RCA
 LOVING HER WAS EASIER—Tompall & The Glaser Brothers—Elektra
 A TEXAS STATE OF MIND—David Frizzell & Shelly West—Warner Brothers ***
 LOVIN' ARMS—Elvis Presley—RCA ***
 BLESSED ARE THE BELIEVERS—Anne Murray—Capitol
 FEELS SO RIGHT—Alabama—RCA

Rhythm & Blues

GIVE IT TO ME BABY—Rick James—Gordy
 FREAKY DANACIN'—Cameo—Chocolate City
 TWO HEARTS—Stephanie Mills—20th Century Fox
 PARADISE—Change—RFC/Atlantic
 HEARTBEAT—Tanna Gardner—West End
 RUNNING AWAY—Maze—Capitol
 VERY SPECIAL—Debra Law—Elektra
 LOVE ON A TWO WAY STREET—Stacy Lattisaw—Cotillion
 SWEET BABY—Stanley Clarke & George Duke—Epic
 WHAT CHA' GONNA DO FOR ME—Chaka Khan—Warner Brothers
 PUSH—One Way—MCA

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FRANK'S CRANKS



By Frank Seninsky

TECHNICAL VIEWS OF 'MARS'

Bouquets and brickbats for playfields and cabinets

This review will focus on Gottlieb's *Mars, god of war*. Before getting to this pinball game I'd like to "crank" about pinball cabinets and playfields.

As many operators have done and are still doing, I have been buying the flashier models by Williams, Bally, and Stern and almost completely forgetting about Gottlieb. This may have been unfair as well as unwise in the long run. A Gottlieb pinball will stand up and still have some player appeal, long after the playfields and cabinets of the other manufacturers have completely "disintegrated".

Recently I took a good look at some of my older pins. From Bally there is hardly any playfield paint left on models of *Six Million Dollar Man* and *Playboy*; the backs of the cabinets under the head base are split on each and every Bally game. We have reglued them and added metal brace plates but these will not hold for long. The playfields on *Stellar Wars* by Williams are also peeling and the same sections of the cabinet under the head are splitting. Even the playfield paint on *Firepower* by Williams is wearing off and this game is only a few months old. And you can forget about Stern's cabinets. Many of the heads have already broken off taking most of the back sections of the cabinet with them. The Stern's games are still sitting in the shop waiting for our "cabinet maker" to come in and spend a day on each one. (No, we don't have a cabinet maker.)

Anyway, I found the cabinets and playfields to be in good shape on Gottlieb's *Sinbad*, *Joker Poker*, *Pinball Pool*, *Solar Ride*, *Totem*, and even *Close Encounters*. I like the metal head brace panels used by Gottlieb. They have saved many cabinets from splitting. Gottlieb gets about a 9.0 out of 10 for their cabinet



strength and a 9.5 for their durable playfield paint.

MARS, GOD OF WAR/Gottlieb

Mars is Gottlieb's answer to Bally's *Xenon*, complete with "tube shot" and three dimensional backglass. A new playfield feature that will surely catch one's eye is the ramp leading up to the tube shot. This ramp can be raised so the ball will pass under it or can be lowered to act as a normal ramp leading to the tube. A coil controlled roller lifts up and lowers the thin metal ramp.

It is an interesting feature but I don't feel it is strong enough to withstand the punishment of a pinball and the constant flexing it must go through as it is lowered and raised.

The coin door on *Mars* has a rough, textured finish that will resist scratches and nicks or at least help to camouflage them. If you think about it, when approaching a pinball game what you really see is the

backglass first and then you'll notice the front of the cabinet and the coin door. The coin return assemblies have been strengthened from what they were in past pre-System 80 models, and are now up to grade.

Gottlieb has continued to use plastic insulators on the coin switch trip wires. This practice has proven satisfactory. On earlier models the insulation paper would get caught on the wire arms or wear out and a multitude of problems would occur. The same plastic insulators have been attached to the kicker switches and are doing their job there too.

There are five standard features that have been incorporated on *Mars* but should change on future games if possible: (1) *Flipper end-of-stroke blades*—Gottlieb games have a thin metal section on the flipper shoe that hits a metal backing blade on the end-of-stroke switch. In a very short time the metal flipper shoe cuts a slot into the metal blade and gets caught. These blades have to be replaced very often. By just changing the shoe surface, this wearing out problem could be easily solved.

(2) *Coil diodes*—Almost every coil on a Gottlieb game requires a diode to its terminals. These diodes always vibrate loose especially on flipper, pop bumper, and kicker coils. If any diode is not connected, strange problems occur such as a "game over" condition in the middle of a game. The diodes on Bally, Williams, and Stern coils never seem to fall off because they are soldered into the coil holes and are part of the coil base. Why can't Gottlieb put the diodes on this way?

(3) *Pop bumper scoring blades*—Gottlieb uses a system where the pop bumper fiberboard yoke slams into a normally open blade switch when the pop bumper coil is

energized. When this switch is closed, points are scored. It is obvious that this first blade will soon break off due to the huge force exerted on it with each "thump" of the pop bumper. Williams also has a normally open switch under the pop bumper but the longer blade rests on top of the yoke. When the yoke travels down, the switch closes under its own pressure. The Williams switches hardly ever break off. Bally and Stern games don't require switches under the pop bumpers for scoring; scoring is controlled through the MPU board.

(4) *Return springs around coil plungers*—Most of the return springs on the kicker and hole kicker plungers can easily "ride up" over the fiberboard or plastic link and get caught on the top. This can cause the plunger to remain partially inside the coil sleeve and not return to its normal position.

Springs with smaller diameter windings at the top could be used or the links could be made larger. In the field it is good practice to "notch" the link near the edge with a hacksaw blade, and carefully slip the spring into the notch. The spring edge remains in this notch as the plunger pulls in and releases and will not slip over the edge.

(5) *Flipper assembly*—Many Gottlieb pinball service calls involve a "flipper sticking." This can be caused by the end-of-stroke backing blade catching the flipper shoe as mentioned in #1 above or for a few other reasons: (a) The coil stop may have broken off the coil stop bracket. This can happen so often that the bracket should be redesigned. Even going back to the old method of using the threaded-on coil stops with nuts would be easier; (b) The plunger may not be perfectly lined up with the sleeve and coil so the plunger can get stuck inside the sleeve. This can usually be fixed by filing out the sleeve with a rat tail file which will allow the plunger a bit more clearance inside the sleeve. If this doesn't work, place a thin switch blade as a spacer either under the bottom coil stop bracket or the top coil bracket. This will slightly tilt the coil and hopefully it will now line up with the plunger.

The last resort should be to tighten the return spring but this only

reduces flipper strength and surely the flipper will get stuck again soon, if this is all you do. This in combination with the above may help. Gottlieb should redesign the whole flipper assembly because the present design has too many problem areas. If these five features were improved, service calls on Gottlieb pinballs would be greatly reduced.

"Pluses"

Some of the positive designs on *Mars* include (1) *Adjustable ball shooter assembly*: Gottlieb is about the only manufacturer to include slots to adjust the ball shooting plunger. Frequently the plunger tips on Bally, Stern, and Williams tear off because the plunger cannot be centered in the ball track and therefore rubs against the sides. It's so easy to center the Gottlieb plunger.

(2) *Beefed-up drop targets*—The drop targets have been made a little thicker just below the top section. On past games the drop targets frequently broke off, and it takes some of us a good twenty minutes to change a drop target if the target is located in the middle of a target bank. And that's on a good day.

(3) *Properly designed light circuits*—In general, both the control lights and illumination lights last much longer than those of the other manufacturers. There are no overloaded circuits to become heated up at the connectors.

(4) The playfield paint doesn't wear off and *Mars* even comes with a mylar plastic overlay which I'd still suggest using.

(5) One can reset bookkeeping functions to zero by pressing the replay button when the function is read out. This is better than having to open the lightbox each time to zero out a function.

(6) *Mars cannot be left in self-test*—If the self-test button isn't pressed within 60 seconds, *Mars* will automatically go into the attract mode.

The sound/speech board on *Mars* is not interchangeable with the sound boards used in previous System 80 games. There has also been a capacitor change in the voice board. C17 has been changed from a .0022 ufd to a .0033 ufd. This new capacitor offers a better tolerance

and will correct some of the initial sound problems. Production runs should have this new capacitor already.

Some of the earlier models of *Mars* came with #44 lamps in the lightbox. These will not last very long and should be replaced with #47 bulbs when they do burn out.

The A-19300 ball return coil has been changed and is now longer. This should eliminate earlier problems of the ball not being returned hard enough for it to reach the shooting track. This coil is very similar to the coils still used for the hole kickers. If a hole kicker coil is used as a replacement for the ball return coil, the result will be a very "sluggish" ball return attempt.

The lightbox door swings open on *Mars* as on past games but the design glass is not inside this swinging door. The design glass must be removed separately before the light and display panel can be lifted up and opened to reach the circuit boards. I did not like the way this was designed.

The display glass was very difficult to get out and also difficult to replace. It is held in by spring-type clips similar to the type use on screens on your home's storm windows. These clips were difficult to slip in place. If the glass is not secured properly, it could fall out when the head door is opened. Gottlieb has stated that these clips have been changed on production run games. Let's hope so.

There were no real significant changes from Gottlieb's last game to *Mars*. The graphics are attractive and the games plays well. For reliability I'll give *Mars* an 8.0; if Gottlieb can improve the five features mentioned above I'd be happy to give such a game a 9 or, who knows, maybe even a 10.

Gottlieb now has a State Circuit Kit available on request for all System 80 games. This kit has been designed for the European market but should solve some of the static problems now occurring in carpeted areas.

The reviewer is president of Alpha-Omega Amusements, Inc.— which operates a route including over 50 college game rooms, plus Wizard's World Arcade on the New Jersey Shore.

'An improvement is that you can reset bookkeeping functions to zero by pressing a button, not having to open the lightbox each time to zero out...'

Location contracts explored

"Justice and the Industry" was the theme of *Play Meter* for July, 1976. In an article complete with an example of a contract, Marshall Caras examined the location contract, its virtues and limitations. In another thought-provoking piece, writer/operator Gene Beley told of his one-man campaign to change unfair tax and license laws in his area; another textbook case for today's operator, it was entitled "Fighting City Hall" (with the moral: you can fight and win against the politicians).

This issue, Volume 2, Number 7 is available to our readers who send a check for \$4 to Back Issues, care of *Play Meter*.

Otherwise in the July, 1976 issue, humorist Dick Welu took a look at coin machine operating over the years in American history: "A Bicentennial Salute"—it sounded like the jingle of a pinball machine.

In news events, the moment was recorded for posterity when New York City Mayor Abraham Beame signed a bill into law, legalizing and

licensing pinball machines in the Big Apple.

Two books of interest to the operator were announced: "Quarterly Dividends—a Handbook of Arcade Operation" by J.W. Sedlak (who would later join the ranks of *Play Meter's* operator/writers) and "Tournaments" by Herb Gross concerning varied ways of staging a pinball tourney.

Coinman of the Month was Kansas operator Bud Gettle, who had built a chain of fun centers and offered advice from experience on starting an arcade operation.

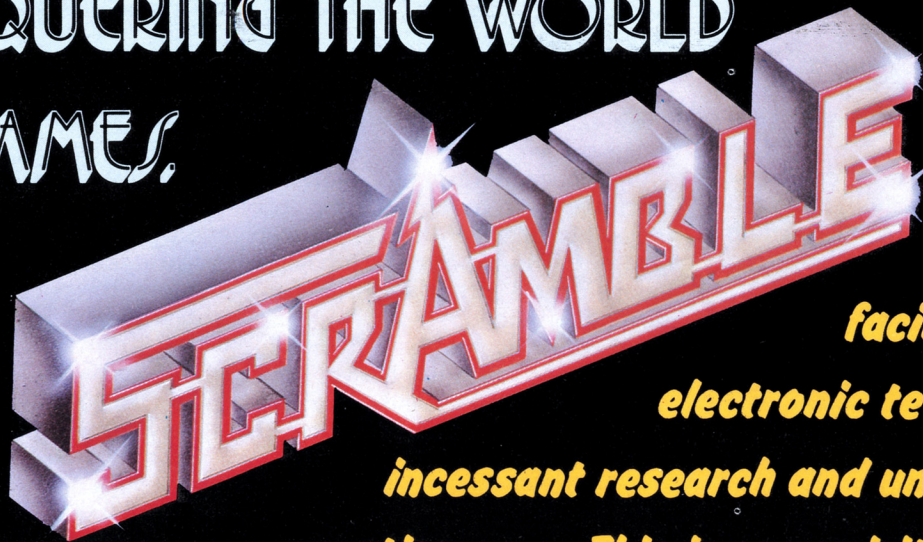
In an editorial column, *Play Meter* Publisher and Editor Ralph C. Lally II noted this magazine's stand behind the legal problems besetting the coin-op industry, commenting: "Among the various problems facing today's operator are some that seemingly must be lived with. Yet, while for a long while the industry lived with its 'image' problem, as of late great strides have been made in enhancing the image of the amuse-

ment machines industry. Indeed the industry has risen from the 'Dark Ages' and is presently rocketing through a 'Renaissance' of enlightened thinking as well as technological advancement."

Also in the news pages of *Play Meter*, we saw that Atari, Inc. had broken ground for its offices and warehouse in Sunnyvale, California...Irving Kaye Co. held its first Hurricane Soccer tournament in Ohio at the Holiday Inn, Strongsville....And in the New Products section, the games unveiled were: *Sound Stage* pinball from Chicago Coin; Midway's *Top Gun* shooting game cabinet; *Capt. Fantastic* from Bally with Elton John's visage on the backglass (a game that was later to be rated top game of the year in *Play Meter's* survey of operators); Atari's four-car version of *Indy 800* called *Indy 4*; and Atari's *Breakout* video.

On review by Roger Sharpe were Bally's *Old Chicago*, Williams' *Aztec*, and Chi Coin's *Cinema/Hollywood* pingames.

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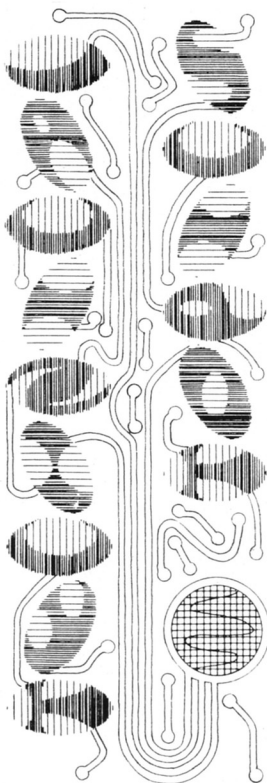
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*April and May, 1981, RePlay Magazine, The Player's Choice:
#1 flipper, Black Knight; #1 upright video, Defender.

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Lesson One

Logic Elements

The purpose of this first lesson is to introduce the AND, OR, and inverter gates. These three logic elements are the building blocks of all I.C. logic design.

AND Gates:

A simple circuit that is capable of demonstrating the AND function is shown in fig. 1-1. Since the two switches, A and B, are in series with the output X, both A and B must be closed if the battery voltage, E, is to be present at X. If either one or both of the switches are open, the output is zero volts.

At any one time, a switch can exist in only one of two possible states (open or closed); and, in the same manner the output must be either E or 0. Instead of using "yes-no" conditions, we shall say that a closed switch is in logic state 1, and an open switch is in logic state zero.

Likewise, if $X = E$, the output is in logic state 1; otherwise, it is in logic state zero. Summarizing all of the possible logic states of the switches and output, we obtain a Truth Table (table 1-1).

The first row of the truth table says that if $A = 0$ (open) and $B = 0$ (open) then $X = 0$ (zero volts). Obviously, the only time X can be 1 is when both $A = 1$ and $B = 1$ at the same time.

This circuit performs a logical AND function and is called an AND gate. It is represented by the symbol shown in fig. 1-2.

The AND gate, we have discussed, is a two-input device. By adding another switch in series with A and B, we can make a three-input AND gate as shown in fig. 1-3 along with its associated truth table. Notice that we now have a total of eight combinations of logic inputs. Since each input may have only two logic states and we are dealing with three inputs, the total number of combinations is given by $2^3 = 8$.

In general, each row of a truth table corresponds to a different combination of input logic states, and the total number of rows (N) will be equal to 2 to the n power,

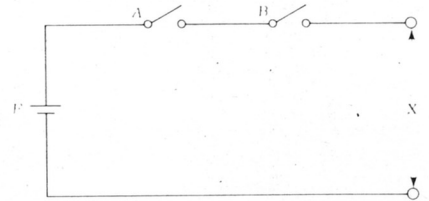


Fig. 1-1. A simple circuit demonstrating the AND function. Both switches must be closed simultaneously to obtain an output at "X".

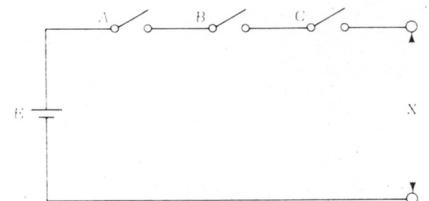
Truth Table

A	B	X
0	0	0
1	0	0
0	1	0
1	1	1

Table 1-1. The truth table for the circuit shown in fig. 1-1. Notice that the output is 1 only when A and B are both 1.



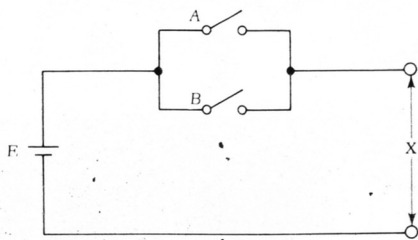
Fig. 1-2. The symbol for an AND gate. The input and output also correspond to truth table 1-1.



Truth Table

A	B	C	X
0	0	0	0
1	0	0	0
0	1	0	0
1	1	0	0
0	0	1	0
1	0	1	0
0	1	1	0
1	1	1	1

Fig. 1-3. The circuit and truth table for a three-input AND gate. Notice that the output is only 1 when all three inputs are 1 simultaneously.



Truth Table

A	B	X
0	0	0
1	0	1
0	1	1
1	1	1

Fig. 1-4. A simple circuit demonstrating the OR function and its associated truth table. Notice that the output "X" is 1 whenever either A or B is 1.



Fig. 1-5. The symbol and associated truth table for the OR gate. The function is identical to the circuit in fig. 1-4.

where N is the number of input variables. The formula is $N = 2$ to the n power.

OR Gates

In fig. 1-4 the switches have been placed in parallel, and the accompanying truth table is shown. In this circuit, the output, X, will be at a logic 1 if either A or B or both A and B are closed. Therefore, it is referred to as an OR gate. The symbol for a device that operates in this manner is shown in fig. 1-5, along with the truth table for the OR function.

Unlike the AND function, the output of an OR gate will be a logic 1 for every combination of inputs except one. Like the AND function, we may continue to add switches in parallel to make a three-input OR gate, four-input OR gate, etc.

Symbolic Notation:

The use of symbols to represent an AND or an OR gate allows the logic designer considerable freedom. Once he understands the way a particular gate functions, he can forget about what is inside the symbol and treat it as an individual component. For instance, the gates we shall work with are integrated circuit (I.C.) logic gates.

These gates are controlled by applying a voltage to the inputs. In a typical I.C., +5 volts will represent a logic level 1, and zero volts will be a logic level 0. The actual voltage level that corresponds to a particular logic level depends on the type of I.C.

As we shall see later, a typical integrated circuit may contain the equivalent of dozens of transistors, resistors, diodes, etc. Yet, in many cases it would be possible to use the I.C. without ever seeing a schematic of its internal configuration.

We can further simplify matters by the use of a few mathematical symbols. In the case of the AND gate, we can describe its operation in the following manner: $A \cdot B = X$. The symbol "." should not be confused with the algebraic symbol for multiplication. Here it represents the logical AND function. Similarly, for the OR gate we have: $A + B = X$. The symbol "+" does not indicate addition but rather the logical OR function.

By checking the truth tables, the student should be able to verify the following equations:

AND

- 1a) $0 \cdot 0 = 0$
- 2a) $0 \cdot 1 = 0$
- 3a) $1 \cdot 0 = 0$
- 4a) $1 \cdot 1 = 1$

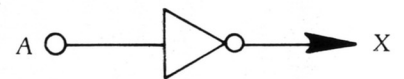
OR

- 1b) $1 + 1 = 1$
- 2b) $0 + 1 = 1$
- 3b) $1 + 0 = 1$
- 4b) $0 + 0 = 0$

The NOT Gate:

One of the simplest yet most useful of all logic functions is performed by the NOT gate. This device provides an output which is the complement, or opposite, of its input. When the input is at a high logic level (1), then the output is at a low logic level (0); and if the input is low, then the output must be high. The symbol for a NOT gate and its associated truth table is shown in fig. 1-6a.

The transistor inverter, fig. 1-6b, is capable of performing the NOT operation. In the absence of a Hi input to the base of Q, the output is nearly equal to the supply voltage, Vcc. The output with Lo input is dependent upon the I.C. family, but is close to zero.



Truth Table

A	X
0	1
1	0

Fig. 1-6a. The symbol and associated truth table for an inverter. The output, X, is always opposite of the input, A.

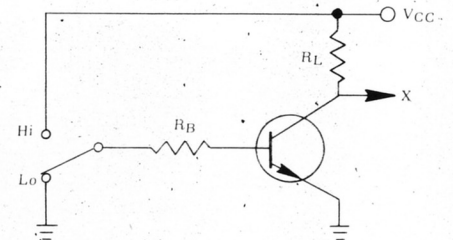
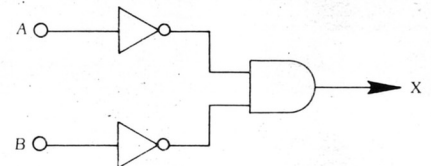


Fig. 1-6b. A transistor inverter circuit. The switch shown provides the "Hi" and "Lo" inputs to transistor "Q".



Truth Table

A	B	X
0	0	1
1	0	0
0	1	0
1	1	0

Fig. 1-7. The symbolic representation and truth table for an inverted input AND gate. The output is 1 only when both inputs are zero.



Truth Table

A	B	X
0	0	1
1	0	
0	1	
1	1	

Fig. 1-8. The symbol and truth table for a negated input OR gate. The inverted inputs are represented by circles. The truth table is left for the student to complete.

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The NOT operation may also be indicated by placing a vinculum (a bar) over the inverted function. This, $X = \overline{A}$ (with a vinculum), which is read, "X is not A" or "X is the complement of A."

The AND, OR and NOT gates represent *all* of the logic designer's basic tools. Even the most complex computer logic can be designed with these three basic operations. Consider the following example:

Fig. 1-7 shows a negated input

AND gate. In this compound operation each of the AND inputs must first be inverted. Remember that the output of a simple AND gate is high if, and only if, both A and B are high. Since the inputs to the AND gate in fig. 1-7 are A and B, we conclude that the output, X, will be high only if A and B are *not* high. Check the truth table for the remaining three cases and note that we can summarize this operation as, $X = \overline{A} \times \overline{B}$.

Another compound operation

is the negated input OR gate. Note that the symbol for this gate in fig. 1-8 has been drawn without the triangular NOT gate symbols. When inverters precede or follow other gates, it is accepted practice to replace the inverter symbol with small circles at the input to the gate or at its output.

The first line of the truth table has been included, and it is left to the reader to complete the table. Remember the actual inputs to the OR gate are not-A and not-B.

PROGRAMMED TEST/1

Instructions: The purpose of this test is to guide you step-by-step through actual circuit design problems. Also, many of these tests will provide you with additional design techniques. Most important, these tests will provide you with a gauge to establish your degree of understanding of the material covered in the lesson text. The test is programmed. Start at block 1 and then follow the numbered instruction associated with your answer.

1

The basic logic operations are:
a. NOT, NAND, NOR

GO TO BLOCK 20

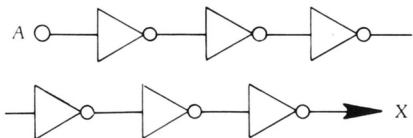
b. OR, NOT, AND

GO TO BLOCK 12

2 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 5.

3 YOU ARE CORRECT!



In the above drawing...

a. A will be the same as X

GO TO BLOCK 8

b. A will be the inverse of X

GO TO BLOCK 15

4



Truth Table

A	B	X
0	0	0
0	1	0
1	0	0
1	1	1

Did you get the same result? If not, do not go on but check.

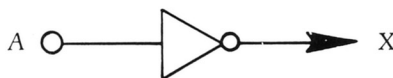
Draw the symbol for a two-input OR gate and complete the truth table.

Truth Table

A	B	X

GO TO BLOCK 7

5



Truth Table

A	X
0	1
1	0

Did you get the same result? If not, do not go on but check.



The output of the above drawing is the same as the output of an AND gate that has been

a. Complemented

GO TO BLOCK 3

b. Propagated

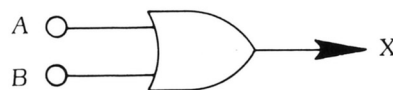
GO TO BLOCK 2

6

YOU ARE INCORRECT!

Refer to the text and return to BLOCK 17.

7



Truth Table

A	B	X
0	0	0
0	1	1
1	0	1
1	1	1

Did you get the same result? If not, do not go on but check.

Draw the symbol for a NOT gate and complete the truth.

Truth Table

A	X

GO TO BLOCK 5

8

YOU ARE INCORRECT!

Refer to the text and return to BLOCK 3.

9

YOU ARE CORRECT!

Draw the symbol for a two-input AND gate and complete the truth table.

Truth Table

A	B	X

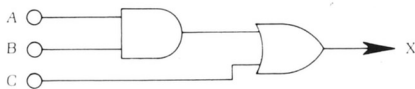
10 GO TO BLOCK 4
YOU ARE INCORRECT!

Refer to test and return to BLOCK 13

11 Truth Table

A	B	X
0	0	1
1	0	1
0	1	1
1	1	0

Did you get the same result? If not, do not go on but check.
Construct a truth table for the following circuit.



GO TO BLOCK 21

12 YOU ARE CORRECT!

Generally, a closed switch is indicated by

- a. Logic state 1 GO TO BLOCK 17
- b. Logic state zero GO TO BLOCK 18

13 YOU ARE CORRECT!

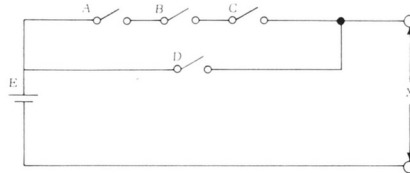
- $A \times B$ in logic notation means
 - a. Add B to A GO TO BLOCK 10
 - b. A or B GO TO BLOCK 9

14 Truth Table

A	B	C	D	X
0	0	0	0	0
0	0	0	1	1
0	0	1	0	0
0	0	1	1	1
0	1	0	0	0
0	1	0	1	1
0	1	1	0	0
0	1	1	1	1
1	0	0	0	0
1	0	0	1	1
1	0	1	0	0
1	0	1	1	1
1	1	0	0	0
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

Did you get the same result? If not do not go on but check.
In the previous block, circuit D would be considered
a. An OR gate GO TO BLOCK 19
b. An AND gate GO TO BLOCK 16

15 YOU ARE CORRECT!



Make a truth table for the above circuit.

16 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 14

17 YOU ARE CORRECT!

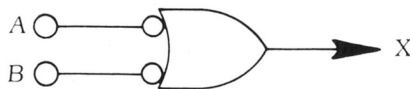
- $A \cdot B$ in logic notation means:
 - a. A and B GO TO BLOCK 13
 - b. A multiplied by B GO TO BLOCK 6

18 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 12.

19 YOU ARE CORRECT!

Complete the truth table for the following negated input OR gate.



Truth Table

A	B	X
0	0	1
1	0	
0	1	
1	1	

GO TO BLOCK 11

20 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 1.

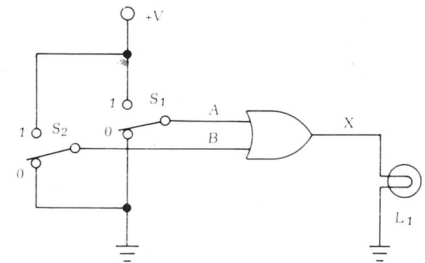
21 Truth Table

A	B	C	X
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

Did you get the same results? If not, do not go on but check.
You have completed the test for Lesson One. However, before going one should review any area in this lesson you do not fully understand.

BREADBOARD

1a: OR Gate



Truth Table

S ₁	S ₂	L ₁
A	B	X
0	0	0

- Wire up this circuit on the breadboard. Before applying power, set S₁ and S₂ to the logic zero position.
- Apply power, observing correct polarity.
- The lamp should *not* light. When operated in this state, both the A and B inputs are at logic zero. Likewise, the lamp indicates an output of logic zero. This corresponds to the first row of the truth table.
- Switch S₂ to the logic 1 position and complete the input

statement on row two of the truth table.

5. What is the logic condition of the output for two?

6. Return S₂ to the logic zero and switch S₁ to the logic 1 position. Enter the input statement on row three of the truth table.

7. What is the logic condition of the output for row three?

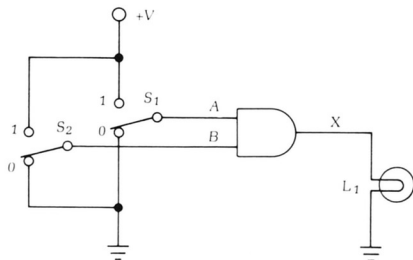
Refer to the breadboard project on the AND gate. Is the OR operation commutative? That is, does $A + B = B + A$?

8. Switch S₂ to logic 1 position and enter the input statement on row four of the truth table.

9. What is the condition of the output?

10. Compare the truth table with the truth table in fig. 1-5 of the textbook; they should be identical.

BREADBOARD 1 b: AND Gate



Truth Table

S ₁	S ₂	L ₁
A	B	X
0	0	

1. Wire up this circuit on the breadboard. Before applying power, set S₁ and S₂ to the logic zero position.

2. Apply power, observing correct polarity.

3. The lamp should *not* light. When operated in this state, both the A and B inputs are at a logic zero. Likewise, the lamp indicates an output of logic zero. This corresponds to the first row of the truth table.

4. Switch S₂ to the logic 1 position and complete the input

statement on row two of the truth table.

5. What is the logic condition of the output for row two?

6. Return S₂ to the logic zero and switch S₁ to the logic 1 position. Enter the input statement on row three of the truth table.

7. What is the logic condition of the output for row three?

Notice that the outputs for rows two and three are identical, AND $0.1 = 1.0 = 0$. Thus, the AND operation is commutative; that is, $A \cdot B = B \cdot A$.

8. Switch S₂ to the logic 1 position and enter the input statement on row four of the truth table.

9. What is the condition of the output?

10. Compare the truth table with table 1-1 of the textbook; they should be identical.

BREADBOARD 1 c: NOT Gate

1. Wire up this circuit on the breadboard. Before applying power, set S₁ to the logic zero position.

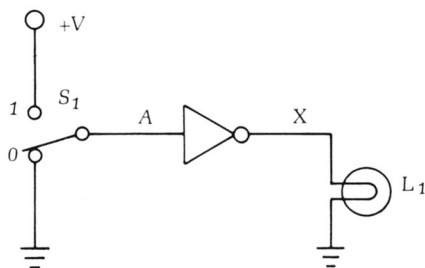
2. Apply power, observing correct polarity.

3. When operated in this state, the inverter input, A, is at logic zero. This corresponds to the first row of the truth table. Determine the inverter output and enter it in row one.

4. Switch S₁ to logic 1 and enter the input logic condition on row two.

5. What is the logic condition of the output?

6. Compare the truth table with the truth table in fig. 1-6a of the textbook; they should be identical.



BREADBOARD 1 d: Negated Input AND Gate

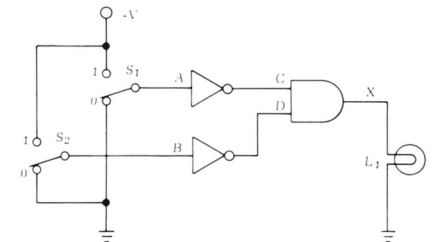


Fig. 1

Truth Table

A	B	C	D	X
0	0	1	1	

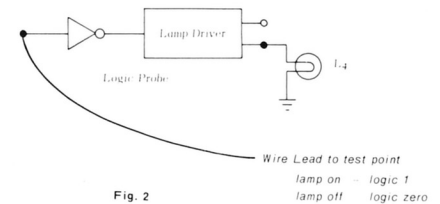


Fig. 2

1. Wire up the circuit on the breadboard using two inverters and one AND gate. Before applying power, set S₁ and S₂ to the logic zero position.

2. Apply power, observing correct polarity.

3. The lamp *should* light.

Although the A and B inputs are at logic zero, the inverters put logic 1 at the AND gate inputs, C and D.

4. Using a second lamp as a logic probe, (see fig. 2) test the logic level at points C and D, and enter them on the truth table.

5. Complete the first row of the truth table.

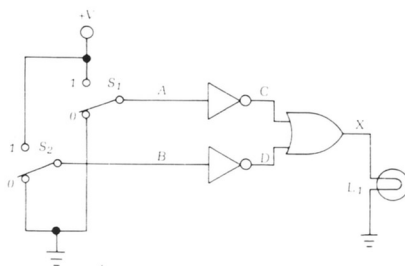
6. Switch S₂ to the logic 1 position and complete the input statement on row two of the truth table.

7. What is the output logic condition for row two?

8. Using the probe lamp, test C and D and enter their logic condition on the truth table in row two.

9. Return S₂ to the logic 1 position. Enter the input statement

- on row three of the truth table.
 10 What is the logic condition of the output?
 11 Using the probe, and test C and D and enter their logic condition on row three.
 12 Switch S₂ to the logic 1 position and enter the input statement on row four.
 13 What is the condition of the output?
 14. Use the probe to test C and D and enter their logic conditions on row four.
 15. Columns A, B, and X of the truth table represent the negated input AND gate.
 16. Compare Columns C, D and X with the AND truth table. Although the rows will be out of order, they should be similar.



Truth Table

S ₁	S ₂			L ₁
A	B	C	D	X
0	0	1	1	

and one OR gate. Before applying power, set S₁ and S₂ to the logic zero position.

- Apply power, observing correct polarity.
- The lamp *should* light. Although the A and B inputs are at logic zero, the inverters put logic 1 at the OR gate inputs, C and D.
- Using the logic probe (Breadboard Project — Negated Input AND Gate), test the logic levels of C and D; then, enter them on the truth table.

- Compare the first row of the truth table.
- Switch S₂ to the logic 1 position and complete the input statement on row two of the truth table.
- What is the output condition for row two?
- Using the probe, test C and D and enter their logic condition on the truth table in row two.
- Return S₂ to the logic zero position and switch S₁ to the logic 1 position. Enter the input statement of row three of the truth table.
- What is the logic condition of the output?
- Using the probe, test C and D and enter their logic conditions on row three.
- Switch S₂ to the logic 1 position and enter the input statement on row four.
- What is the logic condition of the output?
- Use the probe to test C and D and enter their logic conditions on row four.
- Columns A, B and X of the truth table represent the negated input OR gate.
- Compare Columns C, D and X with the OR truth table. Although the rows will not be in order, they should be similar.

BREADBOARD

1e:

Negated Input OR Gate

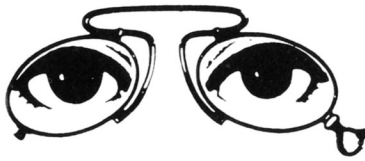
- Wire up the circuit on the breadboard using two inverters

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By Roger C. Sharpe

FIREBALL II ON REVIEW

Fame is the name of the game

The pinball evolution continues as manufacturers try to find the right mix of features to attract business. The past months have revealed that there are no clear-cut answers or directions to take that will insure an outstanding piece—and maybe that's for the best, since pinball has always been more of a trial-and-error type of phenomenon which has produced both those outstanding efforts and those that fade quickly from view.

What is refreshing is that some would have liked to fit the games into a neat description of what's necessary and found that you just can't do that with pinball machines. *Eight Ball Deluxe* proved the point and now there's a move back to the basics, thankfully, and a further exploration of those components that can produce a winning machine.

We have survived the almost single-minded direction of double-level games and, hopefully, now they realize that they're okay sometimes—but not all the time—and that there's room for almost any combination of things for that very special pinball market. The result is that each of the companies is trying to come up with unique efforts.

My only personal regret is that my recent trip to Chicago for the Consumer Electronics Show (about which I will file a *Play Meter* report) had me so tied up with *GQ Magazine* business that I didn't get a chance to go around and meet with everyone I had hoped. But I was able to touch base at a couple of places and see some of the things coming down the road. And it looks pretty promising for pinball, although some of the thinking has to change on all levels.

For the most part, the biggest problem is that pinball companies have to understand and accept the

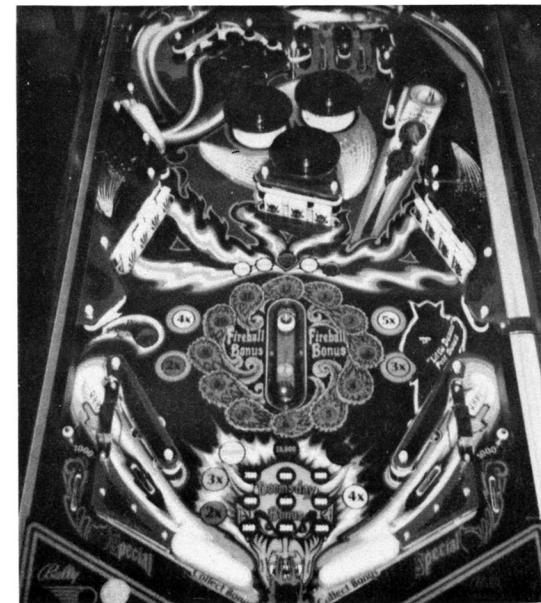
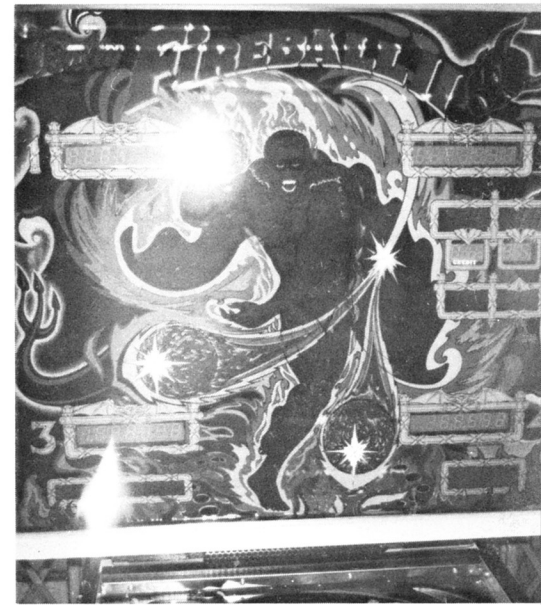
fact that their product isn't competing with video. Operators, too, have to realize this. The two markets, generally, are different, although there is considerable overlap. But the two types of equipment can, and will, stand on their own over the long haul no matter what anybody thinks.

What is revealing is the approach each of the companies seems to be taking regarding their present and upcoming pinball efforts. Williams has managed to keep on astonishing us with its innovative creations of the past few years, but in many ways it could well fall victim to its own successes by not being able to—or even allowed to—offer designs that aren't *Flash* or *Firepower* or even *Black Knight*. Interestingly, it has been able to follow up and refine particular features such as the lane change or magna-save and even multi-ball play, so that the succeeding games have benefited.

But again, it's difficult when an industry literally demands that, for argument's sake, every machine you build has to be double-level since *Black Knight* had such an impact on them. It's almost as if for Williams in particular, and everyone else in general, that once you've made a breakthrough you're stuck—damned if you do and damned if you don't.

It's a malady that the whole industry suffers, since everyone expects a winning creation to be done to death before the next creation is allowed to breathe and have a chance to show its own merits. Fortunately, Williams has managed to straddle the problem without losing stride.

With Gottlieb we find a company that is experimenting and refining its technology in the attempt to hit the



Bally's *Fireball II*

right mix, which was the case with their latest, *Mars*. It has taken a step-by-step approach of exploring new possibilities such as time as an element with *James Bond* and later with *Time Line* as well as the venture to a big game size machine and nothing else.

For the most part, however, if one were to look closer, the direction has been methodical from game to game, testing and trying different features and leading up to what undoubtedly will be the direction Gottlieb will eventually want to take for the future.

At Stern the impact of its video games can't be denied, since the company has experienced such remarkable success, and as a result pinball hasn't exhibited the same importance, which is understandable. Surprisingly, although it has been enjoying such positive results from its video line, the pinball efforts haven't suffered and the games produced have been exciting and innovative with their own special touches, such as the use of the on-field digital display and time play of *Lightning* and the use of some very effective multi-ball play and design on *Flight 2000* and *Free Fall*. This company just seems to keep coming

up with effective games on a steady basis.

Turning to Bally, one finds an interesting approach which has gotten results. Although from a design standpoint things continue to progress, the ultimate impact has been due to some very sound marketing that is really worthy of college textbook material.

The updated version probably isn't going to make anyone forget the original, but it does offer some balanced action and ample opportunities for multi-ball play.

First, Bally took a game that had immediate recognition and kept the name, but changed the format, banking on the reputation of something that had become a household word. The result was *Space Invaders*, the pinball machine and the *nom de plume* tie in, I'm sure, didn't hurt the acceptance and success of the machine. Then, after continuing along with a series of

models that garnered their own fair share of play, the company decided to go back to the book and came up with *Eight Ball Deluxe* on a game design that might have seemed dated and even foolheartly in today's market. But the results have proven differently. And, although the game is solid anyway, I'm sure that the inclusion of the company's most successful effort, in name alone, didn't hurt.

Now we find yet another link with the past, as *Fireball II* hopes to attract those who know the name from the home market version and those who have made the original one of the most sought-after collectible machines around. Coming up next, we'll see how the game fares on its own.

Bally's FIREBALL II

Coming back with another single level playfield, although this time with multi-ball play, the company continues to explore the variations of what a pinball machine can do, while also capitalizing on the strength of the name and even the return of that singular backglass character, slightly changed from before.

PLAYFIELD: The action begins with

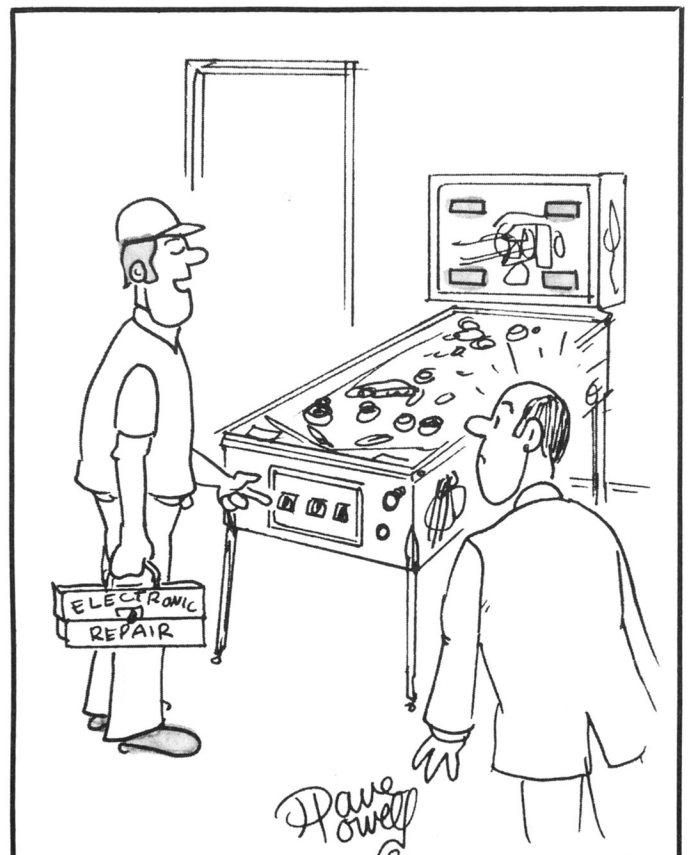
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Dave Coverly

"Well, here I am! Show me how to open up the top and I'll get right on it, sir..."

two top lanes (A & B) which lead down to three thumper bumpers. Over to the left is a single flipper and a slightly angled set-up of three targets as well as a curved arch leading to a top kick-out hole. At the right side is a kick-out hole before one gets to mid-field where there's a center bank of three drop targets as well as a four bank on the left and right side.

In the middle of the field, just below the board is a return of that old "Doodle Bug" bouncing-back-and-forth ball, while the bottom offers a variation of long slingshots and out-lane posts for getting the ball back to the flippers, somewhat similar to the configuration on *Viking*. And last, but not least, is a center "demon" post that can bounce back the ball and is controlled by an extra right side flipper button.

ANALYSIS: Well, the updated version probably isn't going to make people forget the original, but *Fireball II* does offer some balanced action and ample opportunities for multi-ball play. Completing the top three targets at the left activates the two kick-out holes for possible locking, although the majority of the game is drop-target oriented, with action very similar to that on

Gottlieb's *Torch*. Land in the kick-out holes when their orange lights are lit and the "fireball bonus" is totaled with that center Doodle Bug effect, as well as flashing lights.

The side banks build up the "doomsday" out-hole bonus as well as multiplier values, while the center bank can flash for an extra ball along with special possibilities and increased point totals. There are some nice reverses and fairly full access to the board, and the addition of a moveable and controllable post between the flippers should supply some fun and getting-used-to by players. Otherwise, much of the play is gun and run and a tough shot up the left for getting back to the top.

GRAPHICS: Sometimes it's difficult to improve on perfection, and something is off here. It might be the inclusion of black on the backglass and a feeling that's slightly more sinister; but even so, that character is still recognizable for most people and many won't stop to compare. The end effect is striking and a real eye-catcher, which is the important thing.

PLAY: The scoring can be high on *Fireball II* and for extra ball areas you should be okay with 600,000 points to start, followed by 1,200,000 and

2,000,000 points if you're going with three limits. On free play you may want to increase this by about 200,000 to 400,000 points for each. **PROS & CONS:** For the summer *Fireball II* may prove to be a good filler piece although it's kind of an in-between effort. It's not bad and it's not great. The build-up in action and continuity of precision play found on *Eight Ball Deluxe* is missing here and although there are some nice shots and cosmetic touches, there's nothing to shout about.

It's just an average game at a time when exceptional pinballs are needed to keep players attracted and drawn back for more.

RATING: ##

Although that's it this time around, future issues will find the next double-level from Williams, a look at some of the new things Bally is trying, the follow-up to *Mars* which the folks at Gottlieb feel is even better, and the next in line from Stern. The next few months should prove interesting as everyone gears up for the AMOA and this writer will try to keep you up on the developments as they come along. For now, as always, be well and prosper. ●



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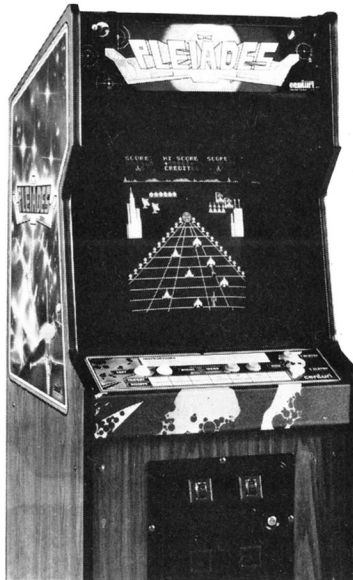
Mars/Gottlieb



Embryon/Bally



Wizard of Wor/Midway



Pleiades/Centuri



Laser Base/Amstar

Mars talks to pin players

Mars, god of war, Gottlieb's newest multiple-ball pingame, incorporates unusual graphic impact, new sound system, and a challenging new playfield layout.

"We think the combination of these three features has made Mars the top pingame in the country today. It's earnings are approaching those of some of the best video games currently on location" said Marshall Caras, vice president of marketing for the Northlake-bases Gottlieb.

Mars' infinity light-effect double backglass features a portrait of Mars himself, defying all players in the voice attract mode, "The power of Mars challenges you" and "Can you survive battle with Mars?" The game incorporates new speech/sound system which produces 16 complete phrases and a myriad of new sounds.

Mars' playfield features the Stargate moving ramp and tube which is tied into both bonus multiplier and "Hyperforce" multiple ball play. Another player oriented feature is the "Last Chance," which gives every player another chance when his last ball drains through either outlane with a captive ball.

Caras noted, "The testing period has quickly shown that Mars will be one of, if not the, top pingame of 1981."

Embryon captures eyes

Bally Pinball Division has released Embryon, a "supersized" flipper.

The game has 3 separate captured ball features, each one slightly different in play and value. On the left side three drop targets guard the ball and increase the value of the target behind the ball for points, extra-ball, and special. On the right side, a single drop target guards the ball and increases the target value for points as well as spotting a multiplier. The center captured ball feature has three balls and two targets. When a ball strikes either target, it qualifies the two outside targets on that side to award advance bonuses and qualifies the inner target for future closures to award an Embryon letter.

For another scoring feature, the

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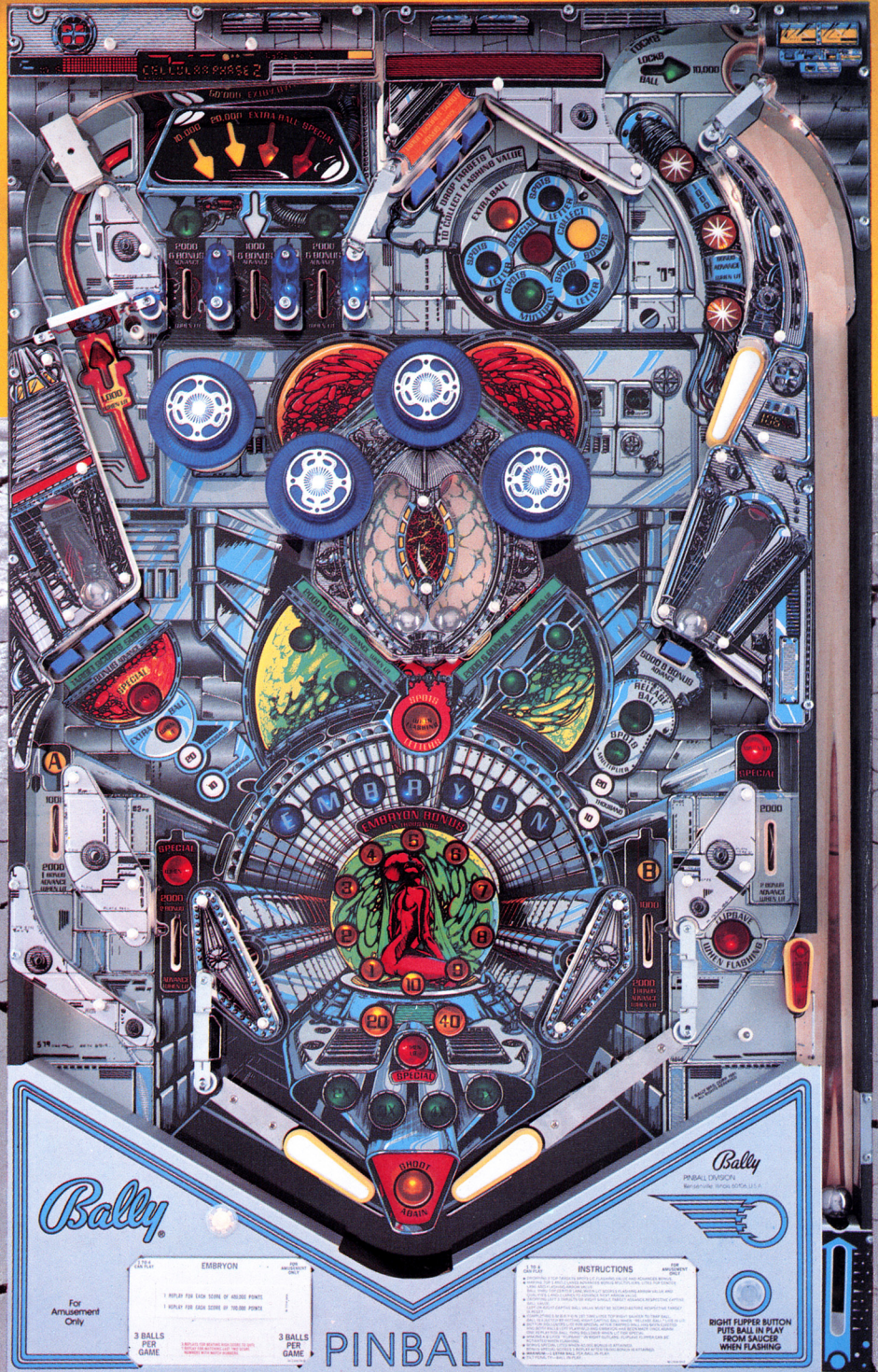
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Embryon's electronic voice commands supply important player instructions.

Awesome scoring opportunities result from Embryon's 3 separate Captive Ball Features. Two are covered by drop targets that, when uncovered, give points, extra ball and Special or spot multiplier. The third feature awards EMBRYON letters toward multi-ball play.

Embryon's upper flipper gives players power to complete 3 drop targets for flashing values and allows control to shoot into the upper scoring chamber.



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top drop targets provide a rotating circle of award lights. Depending upon the light flashing when the drop targets are all hit, a letter is awarded, a bonus multiplier is spotted, the bonus is collected, or an extra ball is awarded. There is also a special light that flashes in the sequence.

One innovative player option is the flippersaver. Located on the right side of the playfield, a player qualifies it by completing the A & B lanes.

Embryon is also a multi-ball game with a new twist. Spelling E-M-B-R-Y-O-N lights the top saucer for locking the ball. The player who locked it can release it through hitting the right captive ball stand-up target while the playfield releases light flashes. If he does not get it, the next player releases it by pushing the right flipper as it is indicated by a flashing light on the lower arch to begin his game. This ball then takes the place of a new ball coming up in the shooter lane.

Subterranean video

In Midway's new *Wizard Of Wor* magical themed video game, player "warriors" descend into many different dungeon mazes to destroy a variety of monster opponents and beat the Wizard.

Two players compete for score simultaneously and can be allies against the monsters. In a one-player mode, the computer acts as the second player. The game demands quick reflexes, skill and "hide and seek" strategy.

Wizard Of Wor features a varied pattern of dungeon mazes that become increasingly more difficult as the game progresses. The cast of enemy "Worlings" includes Burwors which are always visible, Garwors and Thorwors which move and fire more quickly and have the ability to be invisible. Worluk, the Wizard's messenger is sent into the fray when Worlings are defeated. The Worluk is a winged creature that flies about the dungeon maze in an erratic manner, seeking to destroy the Warriors or escape. If Worluk is hit by either Warrior, the next dungeon becomes double score.

The Wizard may choose to appear when Worluk is shot. He will "teleport" with amazing speed, appearing in one position on the screen and reappearing in a new position, furiously hurling lightning

bolts constantly to destroy the Warriors.

Each maze pattern has Escape Doors at either end. These are used for strategic exit and entry by Warriors to outwit the monster Worlings, Worluk and Wizard. The Radar Screen feature is used to determine general location of invisible monsters in the dungeon mazes.

Wizard Of Wor is available in three Midway models: standard arcade, Mini-Myte, and cocktail table model.

Daughters of the gods

Centuri, Inc. has entered into a licensing agreement with Tehkan International Corporation to manufacture *Pleiades*, multi-phased video space game.

According to Centuri President Ed Miller, under the terms of the agreement, Centuri has exclusive manufacturing rights to *Pleiades* in upright, cocktail table, and "elite" models for North and South America and Europe, excluding the United Kingdom and Germany.

"Like *Phoenix*, *Pleiades* continues the progressive screen concept which has become increasingly popular in the worldwide market," said Ivan Rothstein, vice president of sales.

"The name, *Pleiades*, also adds a mystical quality to the game," said Rothstein, "It comes from Greek mythology."

The first of *Pleiades*'s four phases begins with an alien attack on the earth city. The player's efforts to thwart the attack are hindered by barrier blocks constantly being constructed by the alien creatures.

Once the city is safe, the player's craft takes off into space to combat the flying space monsters. When the screen is cleared of the attackers, the player faces a dramatic space battleship and more attacking aliens. Mission accomplished, the player must then return to control base by docking the spacecraft.

Laser Base comes out

Amstar Electronics Corporation announced the release of its *Laser*

Base space-theme video game July 1.

The object of the game is to defend four of earth's space ships in the first sequence of the game. The attack is launched by meteorites and foreign objects in space as well as space craft dropping bombs.

The attacking force can be destroyed by a laser beam fired from any of the player's space ships. The direction of the laser beam is controlled by a trackball, while the position of the attacker determines which ship fires the laser.

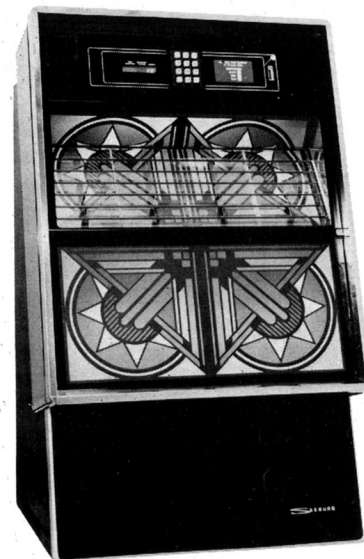
If the player successfully goes through several screens, which become more difficult after each skirmish, he will be launched deep into outer space with a single ship to defend.

During this screen, the numerous attackers travel at very high speeds. Depending on the skill of the player during this attack, a number of bonus ships are awarded for extended play.

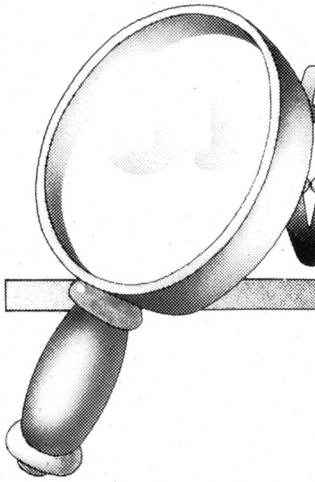
Bonus screens are added to the score after completion of each screen. The operator can select different settings to make the game's play more difficult.

Seeburg debut for Da Vinci

Stern Electronics, Inc. has announced production of its new 100-selection, solid state model *Da Vinci* phonograph. The new box was ready for delivery in late June, said Tom Campbell, director of marketing.

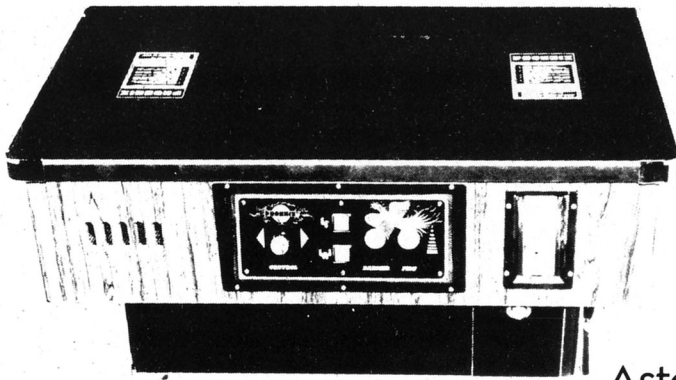


Da Vinci/Seeburg



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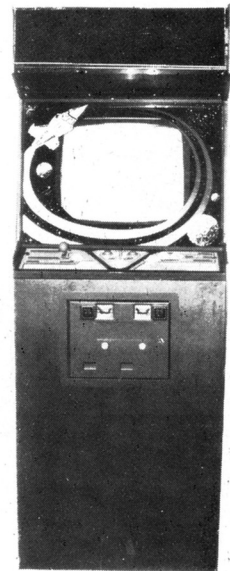
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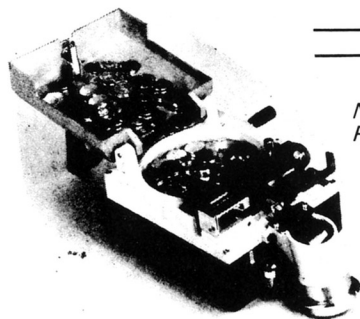
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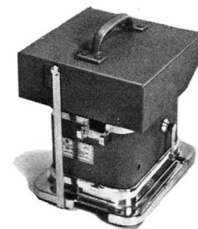
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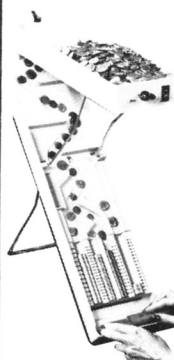
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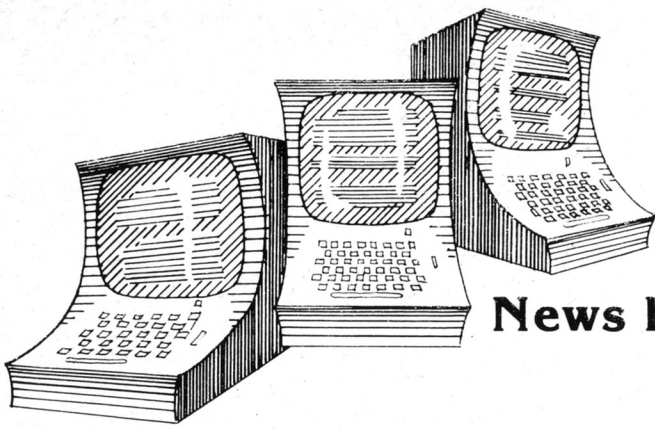
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News briefs....news briefs....news I

.....Joe Robbins has stepped down as president of Atari's Coin-op Division, according to unconfirmed reports. He will reportedly remain in a consulting capacity for the Sunnyvale, California firm. An official announcement on the company presidency was pending at this issue's press time.....

....."A real donnybrook that will last through the calendar year"--that's how Copyright Royalty Tribunal Chairman Tom Brennan described the distribution proceedings for the current year for ASCAP and BMI jukebox royalties. The two performing rights societies are each reportedly asking for 60 percent additional proceeds from jukebox fee collections from the current period.....

.....Cinematronics, Inc. moved in June into its new production facility in El Cajon, California. According to David Stroud, Cinematronics' vice president, the new 78,000-square-foot plant "should just about quadruple our production ability. We're looking forward to exciting times." The new address is 1841 Friendship Drive, El Cajon 92020; telephone: 714/562-7000; toll-free: 800/854-2666.....

.....Bans against youngsters playing pinball and other coin-op equipment--which face a U.S. Supreme Court test by this fall (*see report in Play Meter, August 1 issue*)--continue to crop up around the country. Children under 16 would be prohibited from playing pins or videos, which would have to be unplugged after 10 p.m. and before 9 a.m. for all players, under a Bound Brook, New Jersey City ordinance under consideration this summer. The measure would also restrict jukebox play after midnight, and none of the electronic amusements could be used on Sundays.....

.....Bally Manufacturing Corp. has announced that it has filed an application with the Securities and Exchange Commission and would withdraw its registration statement which previously proposed offering \$150 million principal amount of subordinated debentures due 2001, that were to be offered at a substantial discount from face value. Robert Mullane, chairman of the board and president of Bally, announced: "Due to the turbulence and unsettled conditions in the bond market, the company felt it would be prudent to withdraw its proposed debt offering at this time." Bally Manufacturing had intended to use proceeds from the sale of the debentures to reduce certain bank indebtedness and otherwise had no requirements for additional financing, said Mullane.

.....Gallaher, the makers of Winston cigarettes in Great Britain, were planning a new national pool competition to start in July and run in conjunction with the British Association of Pool Table Operators in pubs throughout the kingdom.....

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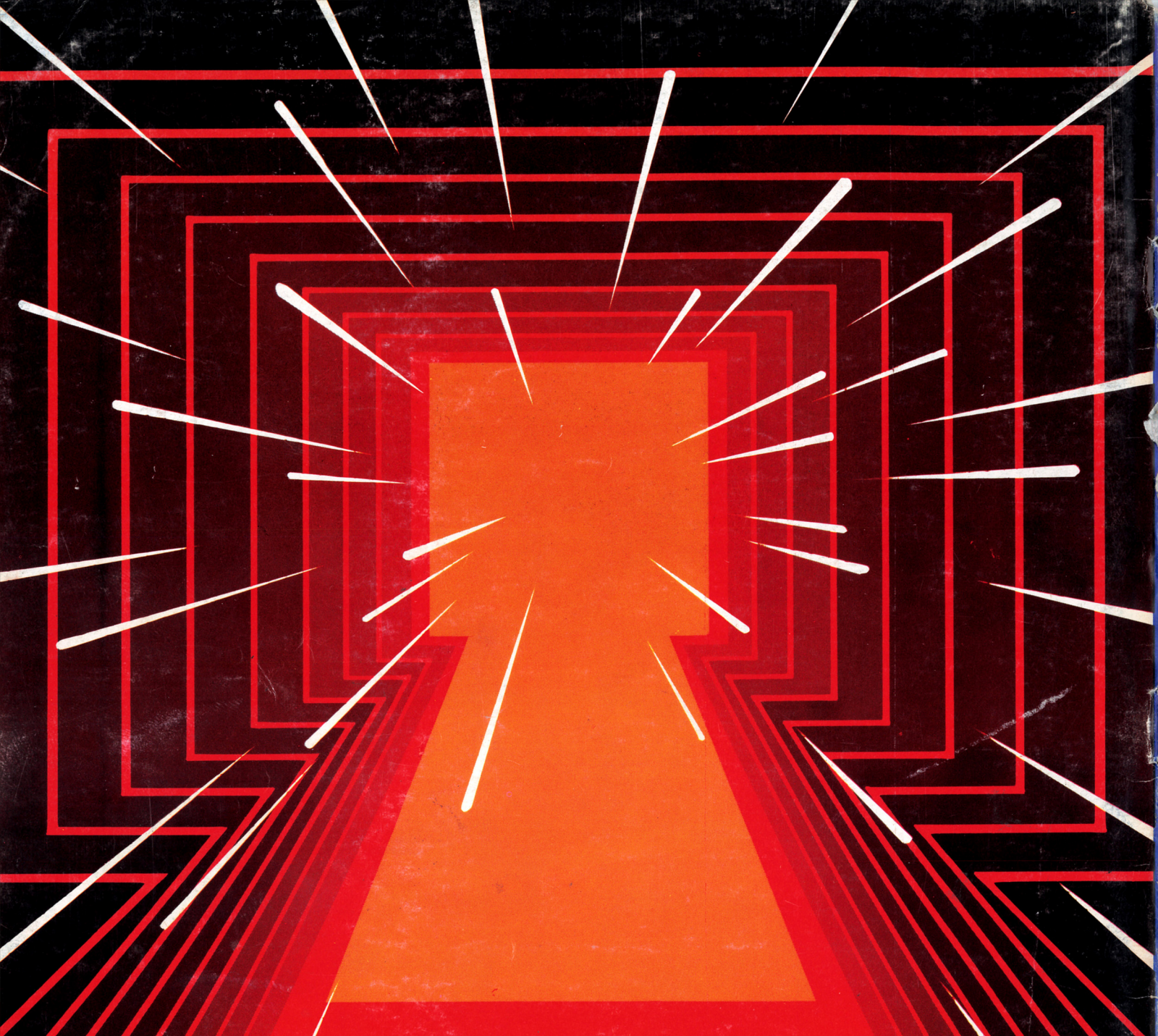
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