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Volume 3/No. 11

June, 1977



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ON THE MARKET



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Features

Buying Used Equipment	18
Used equipment may be the answer to rising new equipment costs, according to J.W. Sedlak. In this article, he discusses the used games market and how to get into it as a knowledgeable buyer.	
Electronic Pins to Market	20
Will all our pinballs soon be solid-state? Chicago writer Susan Brenna talked to the major manufacturers and recorded their reactions for this <i>Play Meter</i> special.	
Who's Out There?	46
The ultimate game buyer is the player, the penultimate the operator. Keep these two happy, Editor Ralph Lally tells manufacturers, and you can hardly go wrong.	
The Amazing Sea Wolf	50
The story behind the success of this most successful game as analyzed by the fabulous Wizard of Dubuque. Dick Welu picks his own brain for the answers.	

Departments

From the Editor	4
Mailbox	6
Coinman of the Month	8
Operating	14
Manufacturing	23
Distributing	24
Music Programming	26
Critic's Corner	37
On the Move	48
New Products	56
Technical Topics	59
Classified	62

FROM THE EDITOR

In sizing up today's market, one can't help but consider the effect of the novelty game market. While pinball continues to soar, and phonographs and table games are at least remaining stable novelty games, especially video games, seem to be slipping. The once well known names of Chicago Coin, Fun Games, Nutting, PMC, Digital, Electromotion and hoards of other not so well known names are no longer with us and stand as living . . . or . . . dead testimony to the pitfalls of the novelty game business.

The few manufacturers who have survived did so on account of their abilities to produce a minimum of dud games. Even the biggest and best producers of video games will admit to their share of losers. But attention to player and operator demands has enabled those manufacturers to produce far more winners than losers. And herein lies the ultimate success or failure of any game manufacturer.

What can be done about the duds? Certainly every effort should be made to make sure a dud is caught before it goes into production. Proper field testing is one answer to the problem. But what new games manufacturer has the capital necessary to forestall production on a potentially good game for site testing. Then too, it seems, there is the real chance that the game will be seen on location by the competition who might perhaps copy it and even beat the originator to the market.

Engineering costs are another consideration. A manufacturer sinks a pile of money into an R&D effort and comes with a dud. Somebody's going to have to eat those engineering costs: should it be the manufacturer, distributor or the operator? I say nobody should have to foot the bill for a dud.

Perhaps part of the answer here lies in the consumer market. Diversifying into the consumer market, engineering costs can be spread over two product lines. If a coin-op game turns out to be a dud, the logic could then be put into a consumer game—one that may offer a choice of several different games. It may not be the most popular game of the ones that could be selected, but at least the manufacturer will have gotten some additional mileage out of his engineering dollar.

Of course, the best thing is to somehow avoid producing a dud altogether. I doubt this can be done, but perhaps a step towards its accomplishment could

be found in some new system of licensing. Instead of each and every video game manufacturer having his own private R&D department, why not have several privately and separately held engineering firms that would conduct market research, dream up new games, build and test prototypes and offer them for sale on a bid basis to the various manufacturers. It could be spelled out in terms of the final agreement as to just who can produce what [exclusively or otherwise] and ceilings or limits of production would be imposed to protect the resale value of the games.

In this way, all manufacturers would have to do is select and bid on a game that they are impressed with, pay a fair amount of royalty or license fee to the engineering firm, and start in production with zero engineering costs and zero time lost in testing. The engineering firms would have to operate in almost total secrecy and independence. Facts concerning earnings of prototype games and all pertinent information concerning the games testing should be endorsed by yet another independent agency such as a reputable national accounting firm, consumer testing laboratory or the like.

This may not be the answer. But it just seems to me that there are an awful lot of mediocre games that are produced. And we do see a lot of copying going on. This all indicates to me a severe lack of engineering talent within the existing framework of the business.

What I am getting at is that perhaps we should move toward a system of specialization where one agency would design, one would manufacture, and one would handle the distribution.

We have devoted this issue to zeroing in on the market. Elsewhere I have discussed the ways the manufacturer can make a better market for himself today—by considering the operator and the player. Coinman Joe Robbins discusses today's market from a distributor's point of view. J.W. Sedlak writes about buying used equipment on today's market. And Dick Welu "explains" [in his own way] the phenomenal success of Sea Wolf.

All this and more. Enjoy.

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Ralph C. Lally II,
Publisher & Editor

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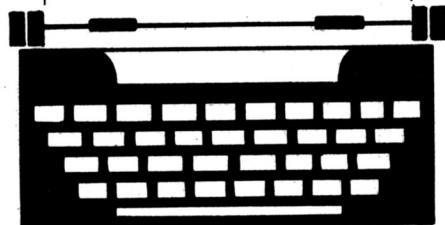
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MODIFICATIONS

As shop foreman for a fairly large operation in Southern California—our route extends from San Luis Obispo to the Mexican border—I'm always on the lookout for new ways to improve the games we operate. Most of our changes are made to improve a game's reliability, but after having such great success with your Trak 10 and Tank modifications, I began looking for other modifications we could try.

The April *Play Meter* carried an ad for a Challenger Customizing Kit that will add three new tracks to the two tracks already programmed.

With a recently opened mind toward game modification, I ordered the piggy-back board and a new front plexiglass with the name "Gran Prix" stencilled on it. The kit arrived a few days later, and after some hair-pulling over unclear instructions, we soon had a working "Gran Prix" game with repainted black and white sides and a sharp new appearance.

The game is now on location and doing very well.

Because our local distributors are busy with the business of selling new games, I depend on *Play Meter* to keep me informed about new products such as these. I especially look forward to "Technical Topics" in both *Play Meter* and *Update*.

Mike Watts
Games Unlimited
Santa Monica, Cal.

PINBALL PROBLEM

We really find your magazine of great value to us and feel that it pays for itself. We also hope you can aid us in a problem we have.

In all our efforts, we have yet to come up with a way to keep our pinballs clean. J & L leaves a film that attracts carbon; car wax is nearly impossible to remove totally. We even tried Shaklee Basic H, but it doesn't clean bands very well at all. Any advice would be a big help to us.

Thanks again for a fabulous publication.

Toni Harker
Godfather's Emporium
Columbus, Indiana

[Bernie Powers, service manager for Bally Mfg. Corp., says that his company recommends Wildcat 125. The product is available from Wildcat Chemical Co., 1333 Seminary Drive, Fort Worth, Texas 76115.—Ed.]

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SERVICE COMPANIES

Addressing subject matter in your April "Mailbox": Mr. Crankshaw of Electronic Amusement Service emphasized that service organizations such as his (and ours) fulfill a need within the industry and we need to be recognized for what we are.

I would like to point out that in the advertisement for the **Play Meter/DRA Price Guide**, not even **Play Meter** recognized service companies; there were only three categories mentioned: Manufacturer, Distributor, and Operator. Neither Electronic Amusement Service nor Steed's nor many other service companies fits into any of those categories.

Nathan E. Bush
Steed's
Garland, Texas

[Play Meter recognizes that service companies do fulfill a need in the industry. Please feel free to take advantage of the special Play Meter/DRA subscription offer. — Ed.]

TWO IDEAS

I would really like to see more articles on promotional ideas for arcades, especially in regard to pinball and skill games (skee-ball, roll-downs, etc.). We operate a large arcade in a very competitive Lake Erie resort and need more articles in that area.

Keep up the good work. I especially enjoy your technical topics column. Perhaps you could have a miscellaneous "service hints" column where readers could send in.

D.P. Woodward
Games Superintendent
Pera & Pera
Geneva-on-the-Lake, Ohio

[I am passing your article idea along to our arcades specialist, J.W. Sedlak. The "service hints" column idea is also a good one. We look forward to hearing from our technically oriented readers and will publish "hints" of interest along with Robin Minnear's regular Technical Topics column. This month we have a letter from Nathan Bush of Steeds.]



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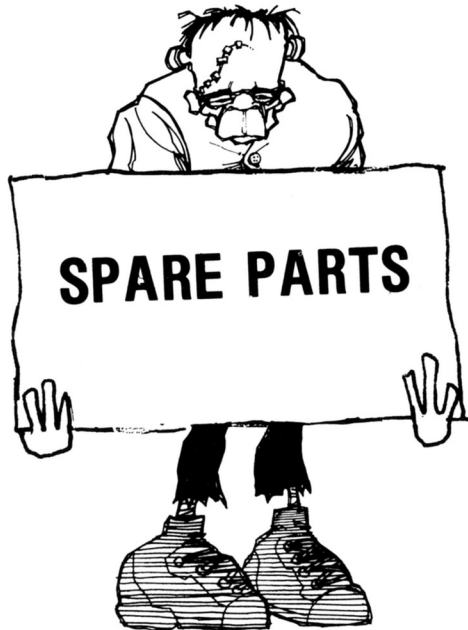
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COINMAN OF THE MONTH



JOE ROBBINS

This month's Coinman, Joe Robbins of Empire Distributing, Inc., Chicago, is well known throughout the industry.

Joe began his involvement in the coin machine world shortly after World War II. When he got out of the service in 1946, he told Play Meter, he went to work with the Seeburg organization in New England as a sales representative. "The organization was distributor for other manufacturers as well as Seeburg products," he said.

Joe was on the road, working for the famous Bert Lane and competing against such notables, he said, as Dan Brown, Marv Gold and Dave Bond.

In 1948 Robbins went to the S.L. London Music Company in Milwaukee, also as sales representative. He remained there until 1955 when he came to Empire as Sales Manager. He became a partner in the company in 1961.

Joe and his wife have three boys, the oldest in business in Houston, the middle one in medical school and the youngest just beginning high school.

Robbins is active civically, particularly involved in charitable work for the Jewish United Fund, Israel Bonds. He is also—few people know this, he told us—"the oldest active hockey referee in the State of Illinois."

Joe also gets exercise on the golf course. He fishes and now and then does a bit of duck hunting.

Our interview focuses on marketing throughout the industry, but we wanted first to get Joe's opinions on the state of the industry in general.

PLAY METER: It is generally believed that the industry is in a boom period. Do your experiences bear this out?

ROBBINS: I don't think we're in a boom period. I think we've come out of a boom period. We've passed the peak and we're in a plateau area. Certainly the video games have peaked and they're in a plateau. Many manufacturers have left the business or are in trouble; you've only very few left that you could call "meaningful" video or arcade manufacturers. You do, of course, have to separate the parts of the games industry: one part is flippers, the other arcades, novelty and such. These are two distinct divisions. You've absolutely plateaued in the arcade end—novelty, video, etc.—so that you've got a lot of little manufacturers who are no longer with us, and you have a lot of others that are still with us but are in distinct trouble.

PLAY METER: Why do you think that is?

ROBBINS: Well, it's just something that happens when you come out of a boom period and you start to slide into a plateau area. Sales begin to level off and the operator becomes selective in his buying. When you're in a boom period, he buys almost anything. When video games were booming in 1974-75, he'd buy almost any game you threw at him. But now, it had better be a good game, a real good one, or he passes. He just won't buy the average or the mediocre game. Also, everything the operator today buys is "on trial." He picks it up and if it does well, he pays for it; if it doesn't do well, he returns it. So the *distributor* has to be very careful about what *he* buys. He can't sell or lease equipment that is not good. So you just have to judge the equipment, and you'd better be right most of the time.

PLAY METER: How do you judge the equipment?

ROBBINS: Well, when we get a piece of equipment in, we'll view it—all of our people—and we'll take an initial consensus of opinion. We usually take several pieces and we'll put one on the floor and we'll put some out for test. We combine our initial reactions with the reactions of the people who see it and play it on the floor and with, most important, the results of the tests—two or three weeks anyway—in the field. We put that information into a hopper, and then we know pretty much what we got, though we can still be wrong.

PLAY METER: You don't operate yourselves, do you? How do you work these tests?

ROBBINS: We farm the equipment out to operators. We watch then what it takes in, how the service is, and we watch the income. If it starts to slide rapidly, then you've got problems.

PLAY METER: Do you show the data collected to prospective customers?

ROBBINS: No, they don't ask to see it; they'll ask just, "How's it doing?" And we've found that it always pays to be honest. If we've had it out for a period of time, and we can say that it's testing beautifully, they'll buy it. But if it's not testing beautifully, then there's no sense in being dishonest with the factory or the customer; we'll tell both of them the truth.

PLAY METER: Do you think two or three weeks is long enough to get a good test on a piece of equipment?

ROBBINS: Ordinarily but not necessarily. Normally you can get a pretty good feeling, but you can get fooled. So you've got to be careful: it could be a two or three week wonder. And on some pieces we will insist on a longer test. But then with some pieces you just know. You take a Sea Wolf or a LeMans, for example. You put it out and it takes in money, but you know more from the enthusiasm, the feeling of the players—you watch them and you know that you can go with that piece. So really judging a piece takes a tremendous amount of experience and knowledge. You're talking about something intrinsic, intangible, that you can't really quantify. And you can be in this business a hundred years, and let me tell you something, you can still make mistakes. You can get carried away. I've seen that, at conventions particularly, distributors and operators getting carried away by

a game, "the best of show," and really it was just a game.

PLAY METER: How did you feel about the blocking games that came out of this past AMOA??

ROBBINS: They were fairly good games. I never thought that they were as good as the reaction of the show indicated, and that's the way it has worked out. They turned out to be good but not extraordinary.

PLAY METER: What about all the copying that goes on? How do you feel about that?

ROBBINS: I think that's quieted down quite a bit. You cannot exist as a real entity in this business and go by primarily copying the other guys. Sooner or later it catches up with you. You must have your own innovations, and if you do not, you will not stay around very long. The guys that are left today, Midway, Atari, Gremlin and the few others—I don't think you're going to see them copying each other.

PLAY METER: Why not?

ROBBINS: Because, I think, these people that are left, the big ones especially, the successful ones, they want to keep the respect they have gained. They have pride in the business, in their company, and they have found that they do not have to copy to be successful, that it is not in their interests to copy from the next guy, because he'll copy from you. If you'll just behave like a gentleman, you'll be treated like one, normally. And that's the best way to run the business. It would have to be a gentleman's agreement really, unwritten, because patents are something very difficult to prove up in court. And nobody likes to go to court anyway.

PLAY METER: How do you think the operators have fared in this plateau period that you mentioned earlier?

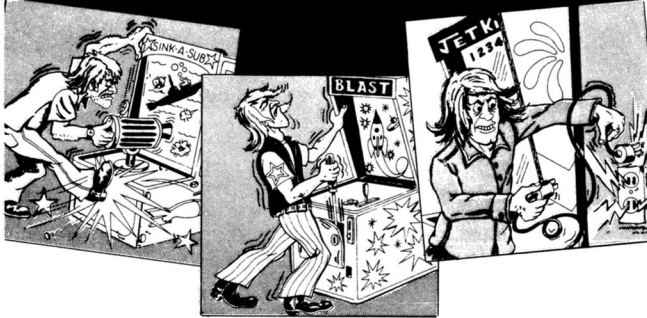
ROBBINS: Not very well. I think that the operator is not making the margin of profit he's entitled to; he is having difficulties.

PLAY METER: What are some of the most serious of these difficulties?

ROBBINS: Well, in the urban areas, his biggest difficulty is the loan demands from the locations. They are sapping his cash, draining it, making it more difficult for him to buy equipment and sustain the income from the route that he needs by fusing in new equipment all the time. The operator in the city is not so concerned with the 50-50 as with the horrible drain on his money from the loans. He has a location, a good location—he's been in there for ten years and everything's fine. He walks in one day and the guy says, "Hey, I need five grand." He says, "Five grand? I can't..." The guy says, "Well, so and so...I can get it." What the hell do you do—it's a good spot; you can't lose it. Sure the other guy's an imbecile, but he'll give it to them. It's horrible.

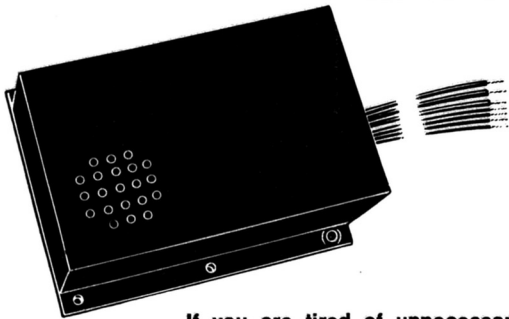
The operator's expenses are going sky high all over the place. The equipment is going sky high all over the place. One of the things he needs is the new small dollar coin. He may not know it, but this is where organizations like AMOA and NAMA come into play; and they're working on it. He's at a quarter play on arcades and novelties now. If they get that small dollar, in certain instances, he'll be

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able to go to three for a dollar in the near future. And that's going to increase his income—it's got to.

In order for the operator to pay the rising prices for equipment, he must make more money. He must somehow get away from the loans in the urban areas and in all areas he must somehow get away from the 50-50 operation.

PLAY METER: How would you do that, move away from 50-50, if you were an operator?

ROBBINS: I'm studying it. In one of our newsletters, I asked for responses and I've gotten many; now I'm correlating all the information, examining it, studying it. And I hope to come back with some type of practical solution to attacking the 50-50 problem. I don't know what that might be at this point. But I do know that the 50-50 operation has got the operator strangled.

PLAY METER: Are there any ways an operator can predict what kind of year he's going to have, or does he pretty much have to fly by the seat of his pants?

ROBBINS: Sometimes he can, especially if there is something economically predictable in his area, an industry perhaps. A lot of operators are in areas where there might be one or two industries that are really significant. He can get an economic picture of those industries, and if those industries are healthy and growing, his year is probably going to be a good one. On the other hand, if he's in an area where that industry might have a bad couple of months, or if it's on a downward trend, he could have a bad year. Also, you can look sometimes at where the industry is going equipment-wise. If something dramatic has just come out, it may zoom income for some operators like when the video games came out. You could see almost right away that the next year was going to be super unbelievable, and it was. Right now, if you asked me to forecast on the next six months, I would expect them to be in the normal range. I see nothing that's going to be super sensational, but I see no reason economically why there should be much of a downtrend either.

PLAY METER: What about the Chicago market in particular? What actually started the ball rolling to get pins legalized in Chicago?

ROBBINS: You're going back now to 1958. There has been a constant effort since then on the part of one or more distributors to get pins legalized. It's always been the distributors who kept the ball alive, but in the final enactment, it was the power of the manufacturers—that they are located in the community and employ local people—and the sudden kind of zooming popularity of pinball that served. Pinball was suddenly palatable to the public. The publicity that was all over the country, that started with Wizard and the picture *Tommy*, fed back to Chicago. And even the members of the council realized, "Well, if everyone likes pinball, what's the matter with it? Here's the center of the industry and we ban the flipper." So all these things helped. The atmosphere changed and pinball was legalized.

PLAY METER: What do you think about all these new investors coming into the business, Warner, Columbia, etc.? Is that a good sign?

ROBBINS: Oh, I think that's great, just super. It's probably one of the most significant developments in the history of this business. Nothing but good can come of it. They have lent such a degree of respectability to this business that it's warming to anybody who's been in it as long as I have. To have been through all the things that we have gone through and then see companies like that want to get in—it's fantastic. And the effect will go all the way down through the industry. It will make people want to distribute, it will make people want to operate, it will make people want to take games in. It's just great from the lowest level to the top.

PLAY METER: What do you think made these companies want to enter into the business?

ROBBINS: Well, for one thing it is a good industry—it still has tremendous growth possibilities. And it's a cash flow industry—it thrives off cash.

PLAY METER: Speaking of cash, could we come back to the dollar coin for a moment? Do you see that as a real possibility?

ROBBINS: It depends largely on the efforts of the associations. You know, it has always been astonishing to me that the enrollment in the AMOA is so small. Did you know it's only about a thousand operators? Why every operator in the United States would not pay a small amount of money for dues to join AMOA when it's the only organization—and I say this without completely agreeing with AMOA in everything they do—it's the only organization the operator has going for him legislatively. And anything the association does will benefit the operator directly, witness this copyright legislation. The association's efforts have saved operators countless thousands of dollars, every one of them. But most of them don't belong.

PLAY METER: You mentioned that this dollar coin might change future pricing, on video games in particular; but let's talk a bit about pricing today. Do you recommend 25 cent play for flipper games?

ROBBINS: All the games we order now from the factory, all of them, come in here on 25 cent play, three balls. We ship them all that way. If the operator wants them another way, he must come get them. We will not ship them any other way but 25 cents, three ball play. That's for his benefit, and ours.

PLAY METER: What about phonographs?

ROBBINS: All of our phonographs go out on quarter play.

The jukebox is a problem of course. The income of the jukebox is relatively stable, and we have not had anything innovative from the standpoint of point of sale, anything that can put more money into the cashbox, for quite some time.

PLAY METER: Do you foresee anything like that?

ROBBINS: It's got to come.

PLAY METER: What do you think it's going to be?

ROBBINS: I'm not really sure, but the video disc is one possibility. The video disc, properly put into a jukebox, could revolutionize the business, and make the jukebox operation once again a good thing.

PLAY METER: How would that work exactly?

ROBBINS: Well, you would have the choice when

[continued on page 60]



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New York Show a Success

Well, the Irving, Ben and Sophie show was in full swing over the May 12th to 15th weekend, as the Music and Amusement Association threw their gala convention in Swan Lake, New York. The Stevensville Country Club is more conducive to a relaxed and carefree manner than to business, and so it was that much ado over sun and fun was emphasized.

A time to get way away from everything, this convention offers a little bit for everyone, much as it did last year. But besides the tennis, golf and softball, there were some other things to take note of, namely the games and machines on display.

Probably the biggest surprise at the show was the unveiling of the first totally Stern game. Called *Disco*, this two-player has some definite possibilities for the future. Also causing some stir was *Mars Trek* from Sonic, which wasn't scheduled to be anywhere for a while; but there it was and getting a lot of play.

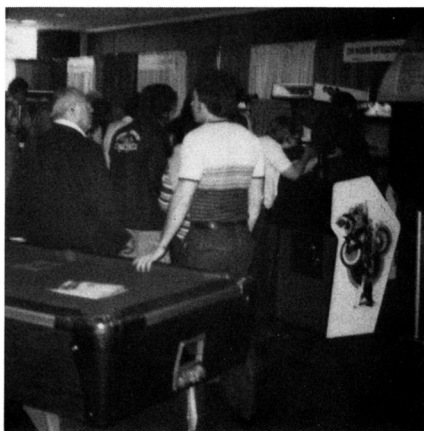
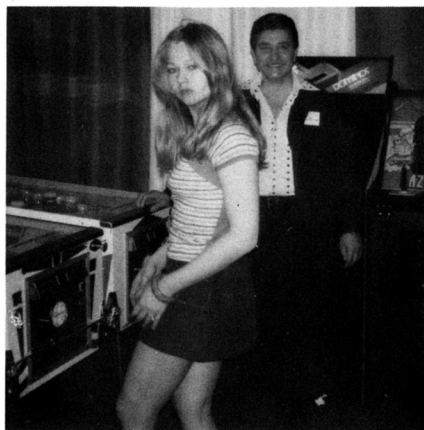
A nice touch was the inclusion this time around of Gottlieb machines, so aptly displayed by Tony and Sal of Mondial. Lenny was showing his thing at the Albert Simon booth, and this thing should cause some excitement for the pool table industry. Briefly stated, with the help of an electronic eye, a cue ball can be discerned from the rest of the rack. Impressive is the only word for this innovation.

Another game which caught the eye of most who walked the arena was *Nok-Out* by Gamex Amusement Inc. The game featured boxers hitting themselves out via the old television screen format.

Also in attendance was Lou Wolberg and Bally's newest additions, *Evel Knievel* (the game, not the man) included. For Al and Donna Kress, space was taken up with the new triple gun games by Atari as well as the pinball *The Atarians*, and a whole slew of equipment.

Add Millie McCarthy, Pinball Pattie from Special When Lit, and a whole host of others and you get a show that combined the best of both worlds, business and pleasure. For 1977, the M.A.A. once again produced a Swan Song well worth remembering.

— Roger Sharpe



The New York Show, Hanging out. Once again the show room floor was crowded, as the machines got even more play than the golf course. Second from top: Tony Yula of Mondial checks out some of the play in his booth. Bottom: Harold Kaufman, up from the city, relaxes.

Casino Gambling!?

While casino gambling took another step toward becoming reality in Atlantic City, New Jersey, the concept has once again run into opposition in the Louisiana legislature.

The New Jersey Assembly has approved a rule book for the establishment of casino gambling in Atlantic City. The book now goes to the State Senate and from there to the desk of Governor Byrne for his signature. The Senate is expected to raise no difficulties for the package, and the Governor has indicated that he will sign the bill.

The regulations package, which covers everything from operating hours and credit arrangements to liquor availability and tipping, was adopted by a vote of 48 to 20.

During more than nine hours of debate, over 30 different attempts were made to amend the control bill. Among these were attempts to increase and reduce the hours of operation from the planned 18 hours a day during the week and 20 hours during weekends. Neither effort succeeded.

Meanwhile, a bill to legalize gambling in Louisiana ran into tough questioning from House committee members in Baton Rouge. The bill, proposed by Louis Charbonnet of New Orleans, has also drawn fire from the Louisiana District Attorneys Association.

Charbonnet has tried to get various versions of a gambling bill through the House in recent sessions. The present bill would permit any parish with a population of more than 350,000 to hold a referendum on legalizing gambling if 10,000 of its citizens petition for such.

New Suzo Catalogue Coming Out Soon

L.J. Suverein of Suzo Trading Co., Rotterdam, Netherlands, has announced that applications for the firm's most recent catalogue have so far exceeded expectations as to exhaust supplies.

"Our new catalogue for 1977 will be ready in about six weeks, however," he said, "and we shall send that immediately to all applicants who ordered but did not receive the earlier one.

"We have not forgotten those people," he added. "As soon as the new catalogue is ready, we will be shipping them out."

Renegade Operator at Large

A traffic accident involving a vendor's pickup truck in Marin County, California unravelled some mysteries regarding stolen amusement machines. However, the Federal fugitive involved is still at large and is apt to use the same method of operations in other areas, warned A.W. Gillotte, Investigations Division, Novato, California Police Department.

Suspect George Joseph Nolan, 39, had been operating Marin Vending in Novato for two years under the assumed name of James Corliss Mallor. Police discovered he had been using a stolen pickup truck, as well as stolen games and vending equipment on his route in that Northern California community. Most of the stolen equipment was from the Los Angeles area, although some came from as far away as Salt Lake City, Utah, and Kansas City, Missouri.

Recovered equipment from the Los Angeles area included a Wurlitzer 1050 juke box belonging to Jones Music, a cigarette machine from Royal Vending; and a Kee Tank cocktail table belonging to Gene Beley. Roy Jones recalled how the theft of his juke box occurred more than a year previously.

"Someone came into the location one day and apparently put some new records on it, then fiddled with the machine, like something was wrong. The man told the location owner the machine would require some welding and it would be necessary to take it into the shop within the next few days. Two of them returned a couple of days later and loaded the juke box into their truck. I never knew anything about it until the location owner called me

about two weeks later and wanted to know when we were going to return the juke box!"

Beley said his Kee Tank game was stolen from a Ramada Inn cocktail lounge on a Sunday morning. "The cocktail lounge was closed with the entrance barred by a security gate. The manager reported she saw it in the lounge at 10:30 a.m. but noted it missing by 11 a.m. She had called me to see if I had picked it up. The thieves had taken it out a side door."

Also of interest to operators is the fact the suspect had apparently changed the circuit boards and TV set on the Kee Tank game. Novato P.D. traced Beley down through his name written on the inside and reporting the theft to Atari-Kee Games.

Police began unravelling Nolan's method of operations in January when he was involved in a traffic accident with the stolen pickup on the shores of San Francisco Bay in Tiburon. The driver of the pickup, which struck a parked vehicle, reportedly fled the area. "This started the ball rolling," said Officer Gillotte, "and we also had another person come forward and state that most of the machines Nolan operated were stolen from Southern California and out of state."

Nolan is described as being 6 foot, 220 pounds; he was born June 13, 1937. The Novato P.D. has a warrant for possession of stolen property waiting for him and the F.B.I. also lists him as a Federal fugitive from the San Diego area.

Anyone having any information on the whereabouts of Nolan should immediately contact Officer Gillotte, Novato Police Dept., 415/897-4361.

Pin Tourney in Third Year

The Third Annual New York State Pinball Championship has been declared the most successful to date. Millie McCarthy, president of the New York State Coin Machine Association, declared herself "thoroughly pleased with the manner in which the tournament was handled, dating back to its preparations in November 1976."

This year's finals were held in the luxurious Parlor "A" of the Northway Inn, Syracuse, N.Y. and the winner was a Syracuse man, Gerald Kieffer. Kieffer battled his way through the loser's bracket to win the trophy in his first entry in the three year old tournament.

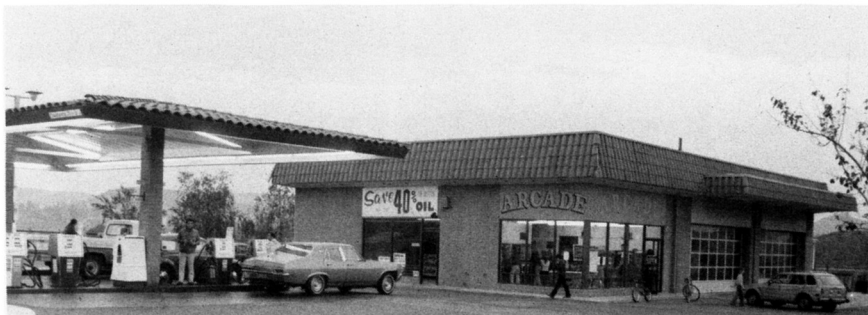
Winner's bracket victor and runner-up was Les Marley, and third place finisher was Stan Zubrowski, also from Syracuse.

Participants in the tournament were winners in local qualifying tournaments held in locations throughout the state.

The 1977 tournament was called the "Vacation Bonanza." As first place winner, Kieffer received an all expense paid trip to the Country Music Awards weekend in Nashville, Tennessee. Second place finisher Marley received a weekend in Atlantic City, New Jersey, and third-place finisher Zubrowski was awarded a VIP day at the Gran Prix races in Watkins Glen, New York.

Distributors from as far away as Canada were present at the tournament, highlights of which were televised by CBS affiliate WTVH of Syracuse.

Chairman of this year's tournament was Bill Kern of Putt-A-Round, Poughkeepsie, New York. Assisting Kern in the administration of the tournament were USPTSA President Jim Ferguson, Ron Bruno of Bruno Novelty, Roland Smith of See-North and Mark and Cindy Davis.



Play Meter writer and former operator Gene Beley ran across this gas station cum arcade in Agoura, California. "Gary and Joanne Wetzels operate the arcade," he wrote us. "They were just moving in when I visited. I was struck by the unusual location and wondered if others might benefit from the revolutionary changes going on in the gas station business."

Electronic Amusement Report has expanded with "Vending Update," a bi-monthly technical report covering service updates and modifications for vending machines.

Vending Update is written with the vending operator in mind, and is designed to supply him with the same type of valuable technical data, service tips, and conversions that E.A.R. now supplies to electronic game operator. The Electronic Amusement Report is distributed out of Quincy, Mass.

Board Meeting



At the recent AMOA Board of Directors Meeting. Top: Former Vice Presidents Nels Cheney and Ray Barker with wives Muriel and Doris. Middle: Antoine and George Mouton of Lafayette, La. visit with Mr. and Mrs. Bob Nims. Nims is AMOA treasurer for this year. Bottom: Left to right: Lane Ray, Mr. and Mrs. Gabe Orland, Mr. and Mrs. Richard Silla and Pat Storino enjoy refreshments at the reception.

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S.E.A.T. Announces Course

Director Frank Sola, School of Electronic Amusement Technology, (S.E.A.T.), Quincy, Mass., announced this week a new home studies course in digital circuitry.

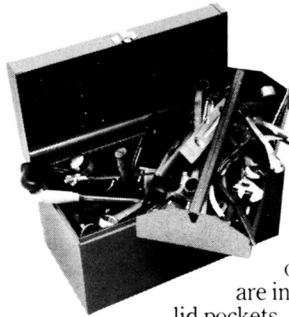
Following the format set forth in the S.E.A.T. classroom courses, the home course offers both theoretical and practical applications of digital electronics.

"Our practical approach to electronic game repair has been so well

received" states Sola, "that we've now made it available for those who wish to learn at their own speed in their leisure hours."

The school's co-founder Stephen Perry adds, "This digital course is as thorough as any I've seen, yet presents itself in a very easy to follow way. It's ideal for the operator or technician who desires to learn about digital electronics."

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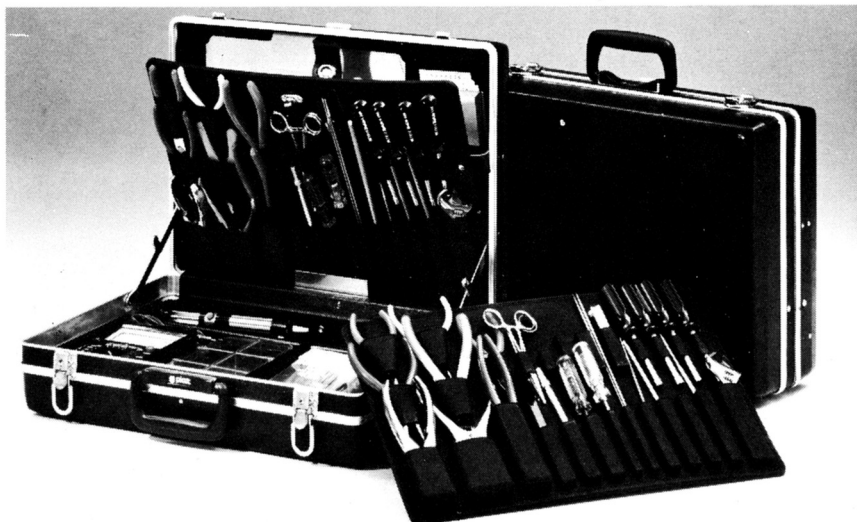
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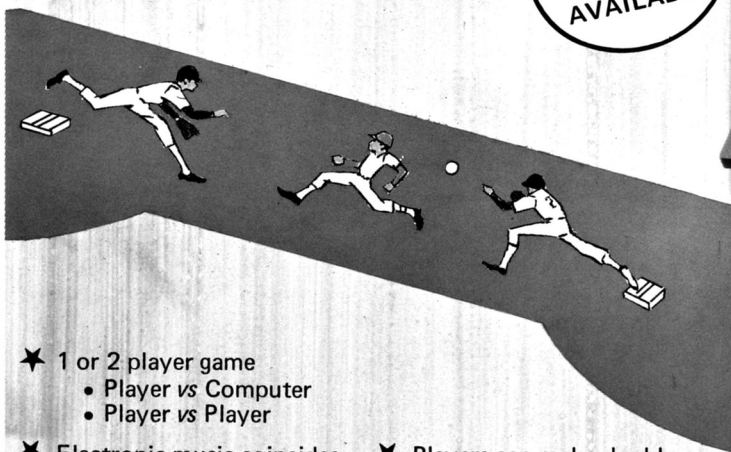


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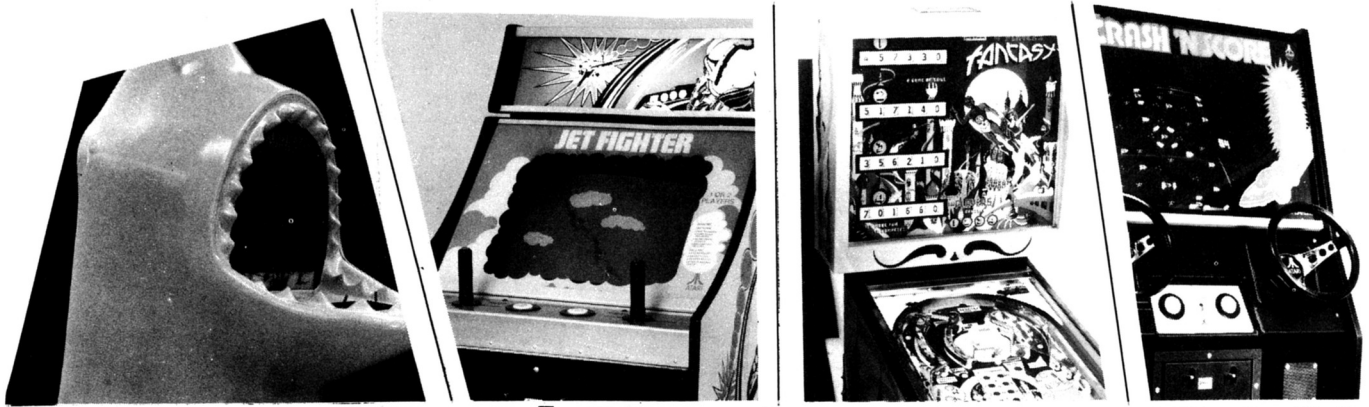
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Buying Used Equipment by J.W. Sedlak

\$1,500.00 for a pinball!!! "Never happen" is the response you would have gotten from most operators five years ago. Yet, today you can spend that much and more for the new machines. Despite statements from machine manufacturers that switching to digital was the only way to hold down prices, the cost of buying new equipment has been continuously rising. More than one video manufacturer offers a game costing in excess of \$4,000.

So what do you do when you need another piece of equipment for that new spot on the route or for your arcade? The alternative now being taken by many operators is to purchase used machines. But, if you choose to follow this alternative, you must be more careful than ever. Because of the high price of new equipment, many operators are holding on to their used machines longer than ever. So the quality of the used games has been declining.

What I will address in this article is some of the things you should look for when purchasing that used machine. Later in the article, we will talk generally about where to get that machine.

First, let's discuss some items which will apply to just about any kind of equipment. (Later, I'll get to some specifics on particular types of games.)

One of the first things you'll want to check is the condition of the cabinet. Check it well. The cabinet can tell you a great deal about the history of the particular piece that you are looking at. Don't forget to look underneath to see if there is any damage from dropping or kicking. Check the paint job and the condition of any control devices (steering wheels, shifts, plungers, etc.). If your inspection turns up any evidence of excessive abuse, be prepared to spend extra time checking out the insides and the machine functions. Excessive dam-

age may forecast operating problems in the future.

Now that you've checked the outside, it's time to run a thorough check of all the functions that the machine should perform. Read the instructions and determine exactly what the machine is supposed to do. Then play the game and assure yourself that each function does indeed work. Don't take anything for granted. Don't assume that because you get a free ball at 30,000, you will get a free ball as expected at 75,000. Take your time and run through every item. This will help you in two ways: first, it will give you confidence that the machine is a good one, and, second, it will help you in your troubleshooting when you get the game to your location and a function does not work. If that function worked in the sales room, then you can be fairly certain that the problem is probably a minor one caused by the moving of the machine.

I recommend that you never buy a game that does not have an up-to-date schematic. Most games are relatively easy to fix *if* you have a schematic to work from. Without one, you may needlessly tie up your ace mechanic for hours trying to figure the game out to solve a simple problem.

In conjunction with looking at the schematic, check the insides of the game. In addition to checking for excessively worn components or missing parts, you should look at the wiring and note any unusual splices or wiring runs. If you find anything out of the ordinary, check the schematic and determine if the schematic has been changed to reflect the wiring changes. *Again*, you could lose a great deal of time if your mechanic has to wade through a maze of wiring harnesses every time the machine has a problem.

One frequent problem area often overlooked by buyers is the coin mechanism. All operators know the coin mech problems are the most frequent—and the most aggravating—of the problems that occur in the field. Check the coin mech for any signs of excessive bending or repair work. Even if the game is open so you can get a free play, drop a couple of quarters in the slot to make sure they go through easily and are counted properly.

Many areas of the country have specific types of weather conditions which affect the games. Ocean salt water can cause excessive deterioration of metal parts and the hot dry climates of the mid-west can cause wood warpage and other problems. When looking at a machine try to find out where it comes from and then pay particular attention to any problem areas which are peculiar to the area.

In addition to these general considerations, there are some particular areas you will want to check out on certain types of machines. I've listed below some of the major areas to check on the most common machine types.

PINBALL. One of the critical parts of the machine is the playfield. Check it over and look for any cracks or ridges that may interfere with the roll of the ball. In addition, check the playfield for any warpage or peeling. Another area to check is the point at which the legs are attached to the body. Make sure all legs can be fastened securely and that the wood in the corner is not broken. Make sure the top glass, back glass, and the door are all held securely in place.

VIDEO GAMES. The first thing to check is the manufacturer's name. The industry has had so many companies that have produced one or two machines and then gone out

of business, that it is imperative that you make sure the manufacturer is still around and that parts are available. Many of the earlier TV games had severe problems with static discharge. You can start many of them by rubbing your shoes on the carpet and touching the game with a coin or key. Check out any TV game for static discharge problems before you buy—there's no sense installing a game to give your customers free play.

These items should give you an idea of what to look for in evaluating the used machine you want to buy. It is not an exhaustive list. I would recommend that you take along your top mechanic when you buy any used equipment. He is the guy who will have to keep the machine running and his primary interest will be not to get stuck with a dog that will spend more time in the shop than on the route. So let him look over the machine and *listen to him*—he's your expert. He can use the outline for examining the machine that I've presented here and add to it intelligently for those things that are recurring problems in your area.

Another advantage of bringing along your mechanic comes if your investigation of the machine turns up a problem. Your mechanic can quickly determine how serious the problem is. If he finds the problems are minor, you can buy a good piece you might have otherwise turned down.

All of the discussion so far has been on the physical examination of the machine on the sales floor. The rest of this article will deal with three other questions you must answer when looking for used equipment:

- 1) What machines to buy.
- 2) Where to buy them.
- 3) What price to pay.

The first thing you should do is decide on which, of the many used machines on the market, you want for your route. If you have been in the business for many years, then you probably have a general knowledge of machine performance and can make this decision yourself. If, on the other hand, you are relatively new to the industry, one of the greatest sources of knowledge on the worthiness of the used machine is the older members of your local Coin Machine Association. By getting an opinion from several fellow members, you can get a good cross section and gain enough information to make an intelligent decision.

You will often see ads or hear of a

distributor who has a number of older games in their original factory containers. My advice is to stay away from these deals. If the machine didn't sell the first time around, it won't do any better for you.

Another important source of which machines deserve your attention is back issues of the trade journals. A number of magazines, as part of their annual issue, will highlight the best money-making machines of the year. If you collect several of these issues, you will have a good start towards selecting the right machine to buy. *Play Meter* has an "Ask The Experts" column which in the last few months has given a synopsis of what some people consider to be the best machines ever.

Using all of the methods just described, you should be able to make the task of selecting the right game a lot less difficult than you originally thought.

Once you've decided which machines to buy, the next problem is to figure out where to buy them. Obviously, you want to get the best machines for the lowest price.

First of all, check with your local distributors to find out what they have in stock and what prices they are asking. Next, check the trade journals for advertisements of far away distributors or other coin machine operators. Very often these ads will list the equipment available. Even if your piece of equipment is not listed, the larger outfits should be called to see if they have what you like. One caution about prices quoted to you from any out-of-town machine seller: most prices will be without shipping charges. By the time you add the shipping charges from a distributor 3,000 miles away, you may find the apparent bargain actually costs you more—particularly on some of the larger and heavier arcade pieces.

In reviewing all of the sources of machines, you should give top priority to a local distributor. By dealing locally, you will be able to see and play the game before you buy, you will also have the seller around if any warranty work needs to be performed on the equipment. If you must deal with an outfit many hundreds of miles away, check around among your colleagues to see if anyone else has dealt with the firm and what their experiences have been. Many of the far-away firms are totally respectable and stand behind their machines. They will readily fix any problems or take back a poor machine that slipped through their

own quality control inspections. By talking to fellow coinmen at association meetings or by telephone, you can find out about these sellers and make an intelligent decision on where to buy those money-making machines.

The most difficult part of purchasing those used machines is trying to decide what price to pay. For your assistance, several companies (e.g. Distributor's Research Associates) publish price guides on used equipment. The operative word in the description of what they publish is "guide." No list is absolute. These companies simply try to give you an idea of the worth of a particular game. The actual worth of the game will be a result of many factors including the condition of the particular piece that's for sale, the availability of used equipment in general, and your own position on how much you need that particular piece.

Using the price guides, however, you should be confident in settling on a price that is not far from the norm. You should expect to pay a little more for a single piece purchase than if you were ordering several pieces at the same time. One thing to remember is that most prices (like car prices) are open to negotiation. The amount of negotiation you can do will depend on your own abilities and any problems you were able to uncover during your physical inspection. Obviously, if the machine has definite, although minor, problems, you would not expect to pay as much as if the machine was in perfect condition.

By applying the techniques addressed throughout this article, you should have a sound start towards selecting, finding, and purchasing the used machine for your route. Just remember that although a machine is 10 years old, if it has not been used in or around your location, it will be a new machine to your customers. You will get the same initial surge on that \$600 piece of used equipment as you would have gotten on a \$1500 machine. Granted, it may not last for as long a period of time, but you can always add another \$600 machine and still be ahead of the game. Besides, in dealing with used equipment you have the advantage of being able to determine what type of performer the machine is and stay clear of the real dogs.

Until new machine prices start getting within the reach of the average operators, it may be a smart move if you put your available cash into quality used machines.

This (solid-state) Pin Went to Market

by Susan Brenna

Say good-bye to your favorite banging, rattling, old pinball game. Pin games are gliding into the sophisticated age of electronics, according to most producers.

They will not look like most of today's solid state TV screen video games, nor will the ball bouncing off the thumper bumper go "bloop" instead of the familiar ring.

But many of the external features such as sound and scoreboard will be slightly different. And on the inside, it's a whole new game.

"We feel very strongly that in order to be a viable force in this business in a few years, we'll have to be producing all solid state," insisted Michael Stroll, vice president of corporate technology at Seeburg Corp., owner of Williams Electronics.

Stroll's ideas are echoed by spokesmen from Bally, Atari, and Stern Electronics. The only remaining question, says Stroll, is how soon everyone can respond and shift production over to solid state.

By all reports, electronic games now in the field are being accepted enthusiastically. According to Ross Scheer of Bally, in places where the game Night Rider is available to players in both electronic and electro-mechanical formats, the electronic game shows 40 percent higher play.

Bill DeSelm of Williams says the electronic Aztec is doing almost double the business of the electro-mechanical model.

Atari, the California manufacturer, who is a leader in the electronic coin-op amusement field, went into full production on its first pin game, The Atarians, in April.

"In almost all the places where the games are now, it is reported to be one of the top earning pieces," Carol Kantor reported of The Atarians in May. Kantor, Atari's marketing research manager, says the company's electronic expertise was used in developing its first solid

state pinball game.

What magical charm is attracting the droves of pinball fans to the electronic games? The novelty of the games is certainly one factor. According to Scheer, players are fascinated by the new sounds and chimes, read-outs, accurate scoring, and brighter appearance of the games.

As Norm Clark, Bally's chief designer pointed out, most of the electronic games now on the market have exciting playfields, which guarantee heavy play. But steady strong returns on solid state machines indicate that player preference is more than just a fad.

There is disagreement over whether electronic games play faster. Steve Cordac, a Williams designer, says there is no detectable difference in speed between the old and new style pin games. But Kantor says that players prefer the type of fast action they get in an electronic game. And there is potential, Kantor says, for much



All electronic run: *Evel Knievel.*

more action with the new technology.

Already, solid state is adding new features to pin games. The Atari's playfield is six inches wider than the standard field, and the company is testing other innovative features.

"You can do more with the games in sounds and visual features," said Scheer. Bally lures those players who just can't resist a challenge by flashing the current high score on a machine while it is inactive. The electronic memory feature makes that possible.

Scoring is also higher on the new models because switches register simultaneously, giving the player full point value. Also, if the machine is accidentally unplugged during play, the game will continue without loss of credits.

Stroll says that Aztec is not being tested for the purpose of measuring player reaction. "From the player's aspect, the playfield on the two types of games is virtually the same." Seeburg instead is out to

prove the concept and reliability of the games. Stroll wants to know: "Have we solved the technical problems? Does reliability go up? How difficult are the machines to repair? Can the repairman get into the machine? Does he have access to all the parts?"

So far, the answers are all positive. Although there are mechanical parts in every game, all the logic is solid state. This removes 50 to 60 percent of the switch closures, solenoids, and relays, or about half the devices that can cause problems, says Stroll.

Bally has led the field in marketing the electronic pin games, beginning with a limited solid state edition of Freedom, and a partial electronic run on Night Rider. Their newest machine, Evel Knievel, is available only in solid state, as is the fast-selling home version of Fireball.

During a recent visit to the Bally plant, Clark proudly demonstrated the self-diagnostic and recording system set off by a self-test switch. A series of flashing lights and chimes indicates that all parts are in working order. Clark also took a read-out on the highest score, total plays, and total replays.

Despite the high reliability of the machines, all companies going into solid state production are carefully training repairmen in the new technology.

Atari has an in-house service department that gives service seminars to distributors. They send out monthly service bulletins, and offer a toll free phone number where they can be contacted in case of emergency repairs.

So what are the indications for the future? It looks as though connoisseurs of the old rattlers will have to be appeased by the promised exciting features soon to appear on the slick new machines.

But not everyone is jumping on the band wagon. Alvin Gottlieb, who predicts we will see a Gottlieb electronic machine by the end of the year, says, "We're leaving our options open."

Gottlieb thinks there will eventually be solid state components in all machines, but is unsure whether the new models should have functions identical to the electro-mechanical machines.

The company is not rushing to put out a solid state model. "We're going about it in our own inimitable, rather methodical way," Gottlieb said.

Still Williams is working toward full solid state production, and a spokesman for Stern speculates that the market will be entirely solid state within two to three years.



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Gremlin Industries, Inc.
8401 Aero Drive, San Diego, CA 92123
(714) 277-8700



Sega Enterprises Announces Third Quarter Earnings

Sega Enterprises, Inc., Redondo Beach, Cal., recently reported a net loss for the third quarter ended March 31, 1977 of \$615,000, or 32 cents per share, versus net earnings of \$640,000, or 34 cents per share, for the comparable period in fiscal 1976. The results include a foreign exchange translation gain of \$57,000 or 3 cents per share, in the 1977 quarter and a translation gain of \$73,000, or 4 cents per share, in the restated fiscal 1976 quarter. Revenues were \$7,747,000 compared with \$5,752,000 in last year's third quarter, with the increase reflecting the inclusion of the Muntz Manufacturing and Kingdom of Oz businesses acquired during the fourth quarter of fiscal 1976.

For the nine months, net earnings were \$74,000, or 4 cents per share, in fiscal 1977 versus \$1,382,000, or 73 cents per share, in fiscal 1976. Net earnings included a foreign exchange translation gain of \$281,000, or 15 cents per share, in the first nine months of fiscal 1977, and a translation loss of \$248,000, or 13 cents per share, in the restated 1976 period. Revenues for the nine months were \$22,186,000, versus \$17,821,000 for the same period last year.

Sega said that the third quarter loss reflected disappointing sales of its U.S. amusement game product line during the key spring selling season. The company said it has consequently lowered selling prices and reduced the carrying amount of game machines in inventory.

Japanese operations were profitable for both the quarter and nine months, but by comparison with last year's results operating income was lower in Japan due to lower gross profit margins and increased selling, general and administrative expenses.

The company said that during the quarter it consolidated the manufacturing of Sega-Vision, its large screen television system, with its Redondo Beach facility, and opened a pilot retail outlet under the name Sega-Vision Studios. It added that the opening of new amusement centers under the Sega Center name is continuing on schedule.

Sega, which manufactures and distributes coin-operated amusement centers, is a 95-percent-owned subsidiary of Gulf & Western Industries, Inc.

MANUFACTURING



Medeco Plans Plant Addition

Medeco Security Locks, Inc. is expanding its manufacturing facilities by more than 55 percent with construction of a \$1,200,000 extension to its modern plant in Salem, Virginia, according to announcement by the firm's president Roy N. Oliver. Work has begun on the 125 by 250 ft. addition, which is scheduled for completion and occupancy in September this year.

The addition will provide 31,250 square feet of new production space, supplementing 56,000 square feet in the present building used for the complete manufacture of Medeco high security locks and cylinders.

The new Medeco extension, designed to conform to the present structure, will be of brick and steel construction, fireproof and fully

air-conditioned. The expanded structure will occupy approximately 10 acres of the firm's attractively landscaped 32-acre site. Medeco is expanding the parking area from its current 190-car capacity to spaces for 400 cars.

Included in its enlarged manufacturing area for die casting, plating, and precision machining will be expanded lunchroom and rest room facilities. The lunchroom with seating for 125 persons will provide food service from vending machines.

Medeco produces 800,000 high security locks annually in the present plant and has 160 employees. New personnel will be hired as production demands when the plant extension is completed.

Seeburg Industries Reports Quarterly Dividend

Seeburg Industries, Inc., Oak Brook, Ill., has reported earnings of \$240,000, or 9 cents per share, on revenues of \$31,009,000, for the three months ended March 31. For the comparable 1976 quarter, when earnings included \$4,000 from dis-

continued operations, net income was \$516,000, or 22 cents per share, on restated revenues of \$28,070,000.

The management of Seeburg stated that improvement is anticipated in the second quarter and balance of the current year.

QUOTABLE:

"The plain fact is that not enough testing and inspection is carried out on new machines before they leave the manufacturers' premises and we, the operators, have to spend

many hours of checking and then putting right the faults we can put the machines out.

— Jack Farmer
in *Coin Slot*,
May 21, 1977

DISTRIBUTING



So. Dak. 8-Ball Ends 11th Year

Half of the winners in this year's South Dakato State 8-Ball Tournament came to the tournament in Pierre from Rapid City. Taking the Men's A Division title was Dick Spitzer from the TNT Lounge in Rapid City. Spitzer took home \$750 for his effort.

First in the Women's Division was 13-year-old Timi Bloomberg who qualified at Radak Billiards of Rapid City. Timi, who beat her mother Jeanne (also from Radak) in the finals, picked up \$300 for the win. Her mother's consolation prize was \$150. Timi also defeated South Dakato Gov. Richard Kneip in a challenge match.

Other winners were Martin Smith of the Moose Lodge in Fort Pierre and Ronald Bauden of the Cayote Lodge in Harrold. Smith copped the B Division and took home \$450; Bauden won the C Division with first prize money of \$300.

The tournament was directed by Mac Hasvold of Sioux Falls.

This year 357 shooters competed in the A, B and C Division finals while 87 women played in the Women's Division. The two-day tournament was held on April 23 and 24. Action began at 9:00 a.m. and the shooters played continuously until 9:00 p.m. each day.

The award ceremony was emceed by Dave Miller of KCCR radio of Pierre. Trophies and cash awards were presented by Gov. Kneip, an avid pool fan.

An honored guest at this year's tournament was Len Schneller, sales manager of U.S. Billiards. Schneller directed the first South Dakota State 8-Ball ten years ago.

U.S. Billiards manufactures the 35 cent red and white Pro-3 Leader table that has been the "official tournament table since the meet's inception.

Blockade Plays the Radio

The smash hit game Blockade from Gremlin Industries is so popular in Puerto Rico that it is played over the radio.

Radio Station WANA, an innovative station in the west coast Puerto Rican city of Aguadilla, has recorded the novel sounds of Blockade from the game room next door and uses the sounds to introduce the local newscast. In turn the publicity causes the game to be played all day long.

International marketing expert

Bob Haim of Belam took a double-take when he heard the unusual sounds emanating from a car radio during a recent trip to Aguadilla. Upon further investigation he discovered that it was indeed the Blockade's sounds.

Gremlin Vice-President Malcolm Bains cried a hearty, "Fantastic!" when he heard the news. So, if you should be in Puerto Rico and happen to hear the strange familiar sounds of games coming from the radio, don't be surprised.

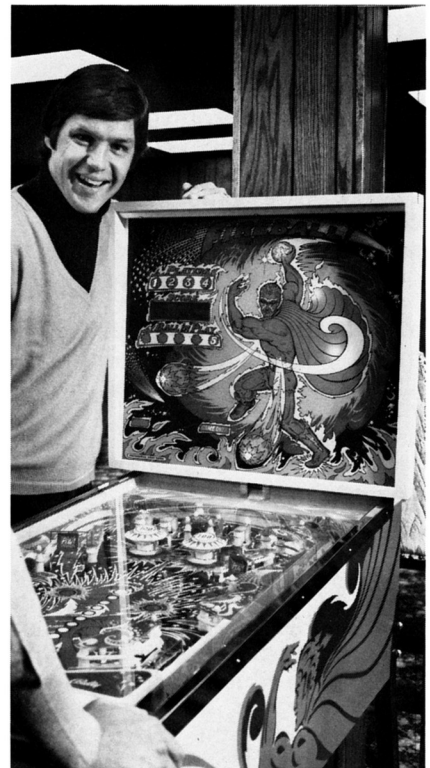
Seaver Visits Irving Kaye

The Irving Kaye Company was honored recently by a visit to their new factory showroom by Tom Seaver, star pitcher for the New York Mets. The purpose of his impromptu visit was to pick out an Irving Kaye pool table for his home.

Irving Kaye is the New York and New England distributor for Bally consumer products and when Seaver saw the professional home Fireball pin table, he chose one of those as well!

After playing the Fireball, Tom said, "This is out of sight! It's the most fun I have ever had with a game." He then readily agreed to let the Irving Kaye Company utilize his picture as an aid in the marketing of Bally's Fireball.

According to Howard Kaye, "The Irving Kaye Company is very proud to have a man of Mr. Seaver's caliber allow us to use his photograph playing the Fireball in our marketing effort. Tom certainly projects the wholesome image the industry is striving for."



New York Mets fireballer Tom Seaver checks out Bally's new home Fireball. Tom is buying the game from the Irving Kaye Co.

Audio-Visual Program Now Available from Rock-Ola

A new audio-visual training program now available through Rock-Ola distributors can be used to instruct any number of phonograph servicemen, according to Rock-Ola executive vice-president, Edward G. Doris.

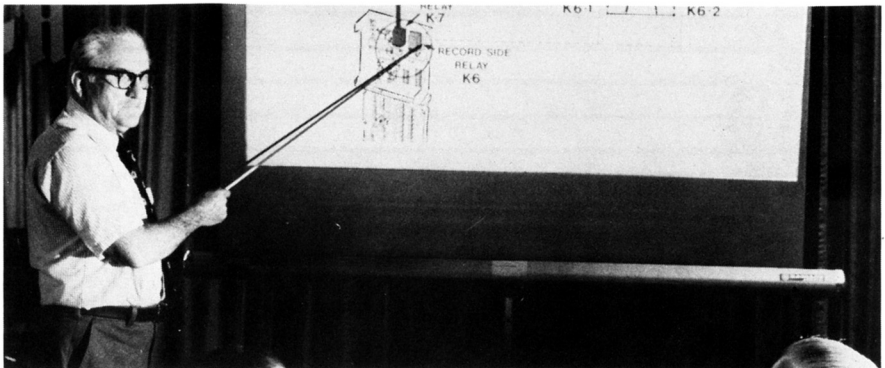
"The simplicity and thoroughness of the program gives it great flexibility," Doris said. It can be used to instruct one or any number of servicemen, and it can be used with or without the assistance of an instructor. The instructor has the option of personally presenting the audio portion, or using the tape recorded material. The program can be stopped at any point, and if necessary, returned to an earlier portion of the program.

Rock-Ola's new program uses full color slides and a tape recorded explanation to instruct the serviceman. As each step in the operation of a Rock-Ola is shown, the trainee is told exactly what is happening mechanically and/or electrically. Once the serviceman learns the sequence and what each step accomplishes, it becomes a simple matter to maintain and service a Rock-Ola phonograph, according to Doris.

When viewing the program alone, a serviceman can stop the program at any point and return to an earlier slide. When the service manager uses the program to instruct a group, he may prefer to shut off the audio portion and explain the slides personally. In this way he can tailor the material to the learning level of the students.

Any serviceman who knows the basic fundamentals of vending machine operation can learn how to maintain or service Rock-Ola phonographs from this 30 minute program. For future reference, each serviceman who takes the training is provided with a manual that covers the program material completely.

Arrangements for one or more servicemen to take advantage of the program can be made through any Rock-Ola distributor.



Rock-Ola's new training program makes use of a slide demonstration.

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MUSIC PROGRAMMING



Bringing Back "Good Old Melody"

While attentively listening to the singles I am going to review this month, I had a great revelation. Melody is back! As noted in last month's column, things are looking up. For a while, we almost lost that good old melody.

Music theory informs us that a melody is a series of musical notes which are placed in agreeable succession. Stated more simply, you can hum, whistle, and remember a particular melody after a couple of listenings.

However, a whole year (at least) went by when we were simply grooving on beat, or a series of notes that sounded wonderful. But we weren't able to remember them, in any concrete series, so we didn't really have a melody. But we do now!

In the past, jazz has always been a good example of finding a melody, and following it. But during the last twenty years, or so, jazz went into hiding. The jazz fan got shafted by many of the people in jazz, unfortunately, including the musicians. For a time, the jazz people had the attitude that jazz was too pure for the masses. And thus: many fans were turned off. It wasn't cool to tap your feet, or get into the music by humming or whatever. This wasn't chic. Not so anymore.

And until recently, pop music was dominated by the monotonous sounds of those never-ending rock and roll triplets: one-two-three. As the lyric to a well known tune goes, "Everything's Been Changed, Rearranged." The melody is back!

Heading in the Right Direction—Renee Geyer/Polydor-PD-14390

Here is a fine example of a melody that you can remember and hum over and over. It is a beautiful example of an intricate but melodious tune blending perfectly with the words.

This single is atypical of good pop music, and should prove to be a hit for Renee. Her voice is nothing special, but her control, and phrasing are perfect. This tune seems to have been constructed in the tradition of the great pop hits of the late forties, even though it has a modern feel about it. It is a fine, fine tune, done by a fine singer, and deserves your attention.

White Rock—Rick Wakeman/A&M Records-1937S (Stereo)

For a time, I had always disregarded Rick Wakeman as a phenomena of the early 1970's. Much like Lee Michaels, he would be here today, gone tomorrow. Just another fancy keyboardist. But it is just not so with Rick Wakeman.

I really am not very certain as to how this single might do in jukeboxes. It has all the ingredients of a hit. And it has that melody I have been writing about. The melody is harder to follow here, than on the previous single. But it is there. And it is good.

This record captivated me immediately. Rick Wakeman is not just another hype from the record companies. He is a fine musician. All I can say about this tune is you should listen to it, and decide for yourself whether or not you might get play from it in your machines. But you *should* listen.

Give a Little Bit—Supertramp/A&M Records-1938S (Stereo)

As a rule, the best test of a good melody is its ability to stand up to both time, and interpretation from other artists. For example, could Tony Bennett, or Sinatra, or even Streisand sing this song? Listen to the tune, "Something" by the Beatles. The song is so melodious that just about every singer that can carry a tune in a bucket could sing it.

Well, "Give a Little Bit" by Supertramp is definitely not that type of tune. But for what it is, it is good. Many people will go around humming it. The lyrics are "throw-away" total nonsense, but this single has that infectious melody. It is a rock tune, but without the obnoxious one-two-three triplets.

I think that for those of you who have jukeboxes on campus, this is the perfect addition as it is certain to get airplay on the local FM stations.

As usual, the sound quality of this record (as with *all* A&M records) is perfect. Crisp and clean. And a plus: this single is long, 4 minutes 7 seconds. A good one!

As Natalie Cole so aptly puts it, "Hey Mr. Melody, come along with me." And if someone wrote a song about melody, and someone sings a song entirely about melody, we must be almost there, don't you think.

**BY MICHAEL
B. KLEIN**

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Pop

SLOW DANCIN' DON'T TURN ME ON Addrissi Bros./Buddah 566
ARIEL Dean Friedman/Lifesong 45022
DO YOU WANNA MAKE LOVE Peter McCann/20th Century 2335
EASY Commodores/Motown 1418
WATCH CLOSELY NOW Kris Kristofferson/Columbia 10525
EVERYBODY BE DANCIN' Starbuck/Private Stock 144
THIS IS THE WAY THAT I FEEL Marie Osmond/Polydor 14385
IT'S SAD TO BELONG England Dan & John Ford Coley/Big Tree 16088
THE PRETENDER Jackson Browne/Asylum 45399
PEOPLE IN LOVE 10cc/Mercury 73917
RUNAWAY Bonnie Raitt/Warner Bros. 8382
BURNIN' SKY Bad Company/Swan Song 70112

AMARILLO Neil Sedaka/Elektra 45406
JUST A SONG BEFORE I GO Crosby, Stills & Nash/Atlantic 3401
A REAL MOTHER FOR YA Johnny "Guitar" Watson/DJM 1024

Soul

BABY DON'T CHANGE YOUR MIND Gladys Knight & the Pips/Buddah 569
KISS IN '77 James Brown/Polydor 14388
THIS I SWEAR Tyrone Davis/Columbia 10528
BEST OF MY LOVE Emotions/Columbia 10544
NO DO-U-WANNA DANCE Graham Central Station/Warner Bros. 8378

Country

THAT WAS YESTERDAY Donna Fargo/Warner Bros. 8375
COME SEE ABOUT ME Cal Smith/MCA 40714
IF YOU WANT ME Billie Jo Spears/United Artists 985
I CAN'T LOVE YOU ENOUGH Loretta Lynn & Conway Twitty/MCA 40728
I'M A MEMORY Willie Nelson/RCA 10969
OLD KING KONG George Jones/Epic 50385
MAKING BELIEVE Emmylou Harris/Warner Bros. 8388
TEN YEARS OF THIS Gary Stewart/RCA 10957

courtesy of **STERLING TITLE STRIP CO., INC.**
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Top Twenty Soul

1	1	GOT TO GIVE IT UP	MARVIN GAYE/Tamla T 54280F (Motown)
2	3	SIR DUKE	STEVIE WONDER/Tamla T 54281F (Motown)
3	2	I'M YOUR BOOGIE MAN	KC & THE SUNSHINE BAND/T.K. 1022
4	4	AIN'T GONNA BUMP(WITH NO BIG FAT WOMAN)	JOE TEX/Epic 8 50313
5	6	THE PRIDE	ISLEY BROTHERS/T-Neck ZS8 2262 (CBS)
6	13	WHODUNIT	TAVARES/Capitol P 4398
7	5	TRYING TO LOVE TWO	WILLIAM BELL/Mercury 73839
8	15	HOLLYWOOD	RUFUS FEATURING CHAKA KHAN/ABC 12269
9	20	I DON'T LOVE YOU ANYMORE	TEDDY PENDERGRASS/Phila. Int'l. AS8 3622 (CBS)
10	17	HIGH SCHOOL DANCE	SYLVERS/Capitol P 4405
11	12	UPTOWN FESTIVAL	SHALAMAR/Soul Train SB 10885 (RCA)
12	8	YOUR LOVE	MARILYN McCOO & BILLY DAVIS, JR./ABC 12262
13	9	SHOW YOU THE WAY TO GO	JACKSONS/Epic 8 50350
14	7	DISCO INFERNO	TRAMMPS/Atlantic 3389
15	18	IT FEELS SO GOOD (TO BE LOVED SO BAD)	MANHATTANS/Columbia 3 10495
16	19	GOOD THING MAN	FRANK LUCAS/ICA 001
17	10	I WANNA GET NEXT TO YOU	ROSE ROYCE/MCA 40662
18	11	I'VE GOT LOVE ON MY MIND	NATALIE COLE/Capitol P 4360
19	14	YOU'RE THROWING A GOOD LOVE AWAY	SPINNERS/Atlantic 3382
20	16	I WANNA DO IT TO YOU	JERRY BUTLER/Motown M 1414F

Top Twenty Country

1	1	LUCKENBACH, TEXAS	WAYLON JENNINGS/RCA PB 10924
2	2	SOME BROKEN HEARTS NEVER MEND	DON WILLIAMS/ABC Dot DO 17683
3	3	I'LL DO IT ALL OVER AGAIN	CRYSTAL GAYLE/United Artists XW948 Y
4	4	IF WE'RE NOT BACK IN LOVE BY MONDAY	MERLE HAGGARD/MCA 40700
5	7	I CAN'T HELP MYSELF	EDDIE RABBITT/Elektra 45390
6	6	THE RAINS CAME/ SUGAR COATED LOVE	FREDDY FENDER/ABC Dot DO 17686
7	11	MARRIED BUT NOT TO EACH OTHER	BARBARA MANDRELL/ABC Dot DO 17688
8	13	YOUR MAN LOVES YOU HONEY	TOM T. HALL/Mercury 73899
9	5	PLAY GUITAR PLAY	CONWAY TWITTY/MCA 40682
10	10	BLUEST HEARTACHE OF THE YEAR	KENNY DALE/Capitol 4389
11	14	I'M GETTING GOOD AT MISSING YOU (SOLITAIRE)	REX ALLEN, JR./Warner Bros. WBS 8375
12	25	THAT WAS YESTERDAY	DONNA FARGO/Warner Bros. WBS 8375
13	16	LIGHT OF A CLEAR BLUE MORNING	DOLLY PARTON/RCA PB 10935
14	17	IT'S A COWBOY LOVIN' NIGHT	TANYA TUCKER/MCA 40708
15	20	BURNING MEMORIES	MEL TILLIS/MCA 40710
16	19	ME AND MILLIE	RONNIE SESSIONS/MCA 40705
17	21	THANK GOD SHE'S MINE	FREDDIE HART/Capitol 4409
18	9	LET'S GET TOGETHER (ONE LAST TIME)	TAMMY WYNETTE/Epic 8 50349
19	26	I WAS THERE	STATLER BROTHERS/Mercury 73906
20	8	SHE'S PULLING ME BACK AGAIN	MICKY GILLEY/Playboy 6100

JUKEBOX

TITLE, ARTIST, Label, Number, (Distributing Label)

MAY 28	MAY 21		WKS. ON CHART
1	2	SIR DUKE STEVIE WONDER Tamla T 54281F (Motown)	9
2	1	WHEN I NEED YOU LEO SAYER/Warner Bros. WBS 8332	14
3	4	I'M YOUR BOOGIE MAN KC & THE SUNSHINE BAND/T.K. 1022	13
4	7	GOT TO GIVE IT UP MARVIN GAYE/Tamla T 54280F (Motown)	8
5	8	DREAMS FLEETWOOD MAC/Warner Bros. WBS 8371	7
6	5	HOTEL CALIFORNIA EAGLES/Asylum 45386	13
7	14	GONNA FLY NOW (THEME FROM "ROCKY") BILL CONTI/United Artists XW940 Y	6
8	11	LUCILLE KENNY ROGERS/United Artists XW929 Y	11
9	10	COULDN'T GET IT RIGHT CLIMAX BLUES BAND/Sire 736 (ABC)	13
10	16	LONELY BOY ANDREW GOLD/Asylum 45384	11
11	13	AIN'T GONNA BUMP (WITH NO BIG FAT WOMAN) JOE TEX/Epic 8 50313	11
12	9	DON'T GIVE UP ON US DAVID SOUL/Private Stock 129	18
13	3	SOUTHERN NIGHTS GLEN CAMPBELL/Capitol P 4376	14
14	17	FEELS LIKE THE FIRST TIME FOREIGNER/Atlantic 3394	10
15	18	UNDERCOVER ANGEL ALAN O'DAY/Pacific 001 (Atlantic)	6
16	6	RICH GIRL DARYL HALL & JOHN OATES/RCA PB 10860	18
17	12	LIDO SHUFFLE BOZ SCAGGS/Columbia 3 10491	12
18	15	CALLING DR. LOVE KISS/Casablanca 880	12
19	19	I'VE GOT LOVE ON MY MIND NATALIE COLE/Capitol P 4360	17
20	22	WHODUNIT TAVARES/Capitol P 4398	11
21	23	ANGEL IN YOUR ARMS HOT/Big Tree BT 16085 (Atlantic)	13
22	24	HELLO STRANGER YVONNE ELLIMAN/RSO RS 871 (Polydor)	10
23	27	HEARD IT IN A LOVE SONG MARSHALL TUCKER BAND/Capricorn CPS 0270 (WB)	12
24	21	RIGHT TIME OF THE NIGHT JENNIFER WARNES/Arista 0223	14
25	20	I WANNA GET NEXT TO YOU ROSE ROYCE/MCA 40662	12
26	33	HIGH SCHOOL DANCE SYLVERS/Capitol P 4405	7
27	34	JET AIRLINER STEVE MILLER BAND/Capitol P 4424	5
28	32	SLOW DANCIN' (DON'T TURN ME ON) ADDRISI BROTHERS/Buddah BDA 566	8
29	25	YOUR LOVE MARILYN McCOO & BILLY DAVIS, JR./ABC 12262	11
30	39	LIFE IN THE FAST LANE EAGLES/Asylum 45403	3
31	46	LOOKS LIKE WE MADE IT BARRY MANILOW/Arista 0244	4
32	40	MARGARITAVILLE JIMMY BUFFETT/ABC 12254	7
33	26	SO IN TO YOU ATLANTA RHYTHM SECTION/Polydor PD 14373	17



34	28	TRYING TO LOVE TWO W
35	38	SHOW YOU THE WAY TO
36	41	MAINSTREET BOB SEGER,
37	47	I JUST WANT TO BE YOU
38	44	HOLLYWOOD RUFUS FEA
39	29	DANCING QUEEN ABBA,
40	30	THE THINGS WE DO FOR
41	35	CAN'T STOP DANCIN' CA
42	49	BACK TOGETHER AGAIN
43	48	GONNA FLY NOW (THE
44	53	DO YOU WANNA MAKE
45	51	LUCKENBACH, TEXAS WA
46	31	CHERRY BABY STARZ/Cal
47	50	LOVE'S GROWN DEEP KE
48	60	ARIEL DEAN FRIEDMAN/I
49	52	SPIRIT IN THE NIGHT MA
50	37	DON'T LEAVE ME THIS W
51	69	DA DOO RON RON SHAI
52	65	IT'S SAD TO BELONG ENC
53	62	WHATCHA GONNA DO?
54	42	CINDERELLA FIREFALL/At
55	76	KNOWING ME, KNOWIN
56	77	MY HEART BELONGS TO
57	59	THIS IS THE WAY THAT I
58	66	(YOUR LOVE HAS LIFTED
CHARTMAKER OF THE WEEK		
59	—	I'M IN YOU PETER FRAMPTON A&M 1941
60	68	EVERYBODY BE DANCIN'
61	63	FLY AT NIGHT (IN THE M
62	73	PEACE OF MIND BOSTON
63	67	GOING IN WITH MY EYE
64	75	YOU'RE MY WORLD HELE
65	36	LOVE THEME FROM "A S BARBR



TOP 100

WILLIAM BELL/Mercury 73839	16	66	71	ON THE BORDER AL STEWART/Janus 267	5
D GO JACKSONS/Epic 8 50530	9	67	57	I THINK WE'RE ALONE NOW RUBINOOS/Beserkely B 5741 (Playboy)	8
/Capitol P 4422	6	68	54	BLINDED BY THE LIGHT MANFRED MANN'S EARTH BAND/ Warner Bros. WBS 8252	29
R EVERYTHING ANDY GIBB/ RSO RS 872 (Polydor)	5	69	72	THE PRIDE ISLEY BROTHERS/T-Neck ZS8 2262 (CBS)	9
TURING CHAKA KHAN/ABC 12269	5	70	61	MAYBE I'M AMAZED WINGS/Capitol SPRO 8571	16
/Atlantic 3372	24	71	81	WATCH CLOSELY NOW KRIS KRISTOFFERSON/Columbia 3 10525	2
R LOVE 10CC/Mercury 73875	20	72	74	I'M GOING DOWN ROSE ROYCE/MCA 40721	4
APTAIN & TENNILLE/A&M 1912	10	73	45	SAY YOU'LL STAY UNTIL TOMORROW TOM JONES/ Epic 8 50308	21
DARYL HALL & JOHN OATES/ RCA PB 10970	4	74	83	GOOD THING MAN FRANK LUCAS/ICA 001	3
ME FROM "ROCKY") MAYNARD FERGUSON/Columbia 3 10468	5	75	43	DANCIN' MAN Q/Epic/Sweet City 8 50335	11
LOVE PETER McCANN/ 20th Century 2335	5	76	58	NIGHT MOVES BOB SEGER & THE SILVER BULLET BAND/ Capitol P 4360	26
AYLON JENNINGS/RCA PB 10924	4	77	86	GIVE A LITTLE BIT SUPERTRAMP/A&M 1938	2
capitol P 4399	11	78	82	THIS GIRL (HAS TURNED INTO A WOMAN) MARY MacGREGOR/Ariola America P 7662 (Capitol)	3
ENNY NOLAN/20th Century 2331	9	79	84	YOU AND ME ALICE COOPER/Warner Bros. WBS 8349	5
Lifesong 45002	8	80	91	SLOW DOWN JOHN MILES/London 5N 682	3
ANFRED MANN'S EARTH BAND/ Warner Bros. WBS 8355	6	81	92	RIDIN' THE STORM OUT REO SPEEDWAGON/Epic 8 50367	4
AY THELMA HOUSTON/ Tamla T 54278F (Motown)	23	82	85	I DON'T LOVE YOU ANYMORE TEDDY PENDERGRASS/ Phila. Intl. ZS8 3622 (CBS)	5
UN CASSIDY/Warner/Curb 8365 (WB)	3	83	93	THE PRETENDER JACKSON BROWNE/Asylum 45399	3
GLAND DAN & JOHN FORD COLEY/ Big Tree BT 16088 (Atlantic)	4	84	56	TORN BETWEEN TWO LOVERS MARY MacGREGOR/ Ariola America P 7638 (Capitol)	27
PABLO CRUISE/A&M 1920	4	85	88	UPTOWN FESTIVAL SHALAMAR/Soul Train SB 10885 (RCA)	4
atlantic 3392	10	86	90	SOLSBURY HILL PETER GABRIEL/Atco 7079	4
G YOU ABBA/Atlantic 3387	3	87	—	EASY COMMODORES/Motown M 1418F	1
ME BARBRA STREISAND/ Columbia 3 10555	2	88	—	BARRACUDA HEART/Portrait 6 70004	1
FEEL MARIE OSMOND/Polydor PD 14385	7	89	89	YOU + ME = LOVE UNDISPUTED TRUTH/Whitfield 8231 (WB)	11
ME) HIGHER & HIGHER RITA COOLIDGE/A&M 1922	4	90	95	IT FEELS SO GOOD (TO BE LOVED SO BAD) MANHATTANS/ Columbia 3 10495	3
		91	96	YOU'RE MOVIN' OUT TODAY BETTE MIDLER/Atlantic 3379	2
		92	97	ALL YOU GET FROM LOVE IS A LOVE SONG CARPENTERS/ A&M 1940	2
		93	94	MY WHEELS WON'T TURN BACHMAN-TURNER OVERDRIVE/ Mercury 73903	5
		94	55	MY SWEET LADY JOHN DENVER/RCA PB 10911	9
		95	98	I GOTTA KEEP DANCIN' CARRIE LUCAS/Soul Train SB 10891 (RCA)	2
		96	—	SO HIGH (ROCK ME BABY AND ROLL ME AWAY) DAVE MASON/Columbia 3 10509	1
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		99	—	RUNAWAY BONNIE RAITT/Warner Bros. WBS 8382	1
		100	70	CARRY ON WAYWARD SON KANSAS/Kirshner ZS8 4367 (CBS)	23



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 ORNING WE LAND) CHILLIWACK/
 Mushroom M 7024 7
 N/Epic 8 50381 4
 S OPEN DAVID SOUL/
 Private Stock 45150 5
 EN REDDY/Capitol P 4418 3
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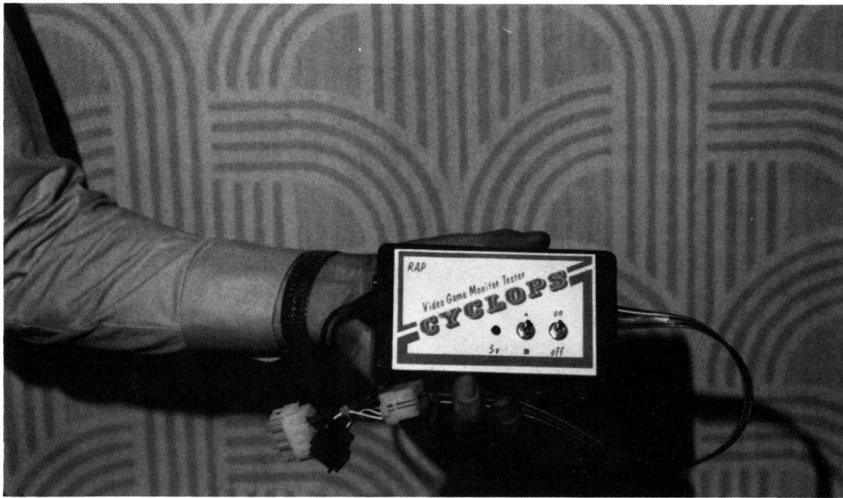


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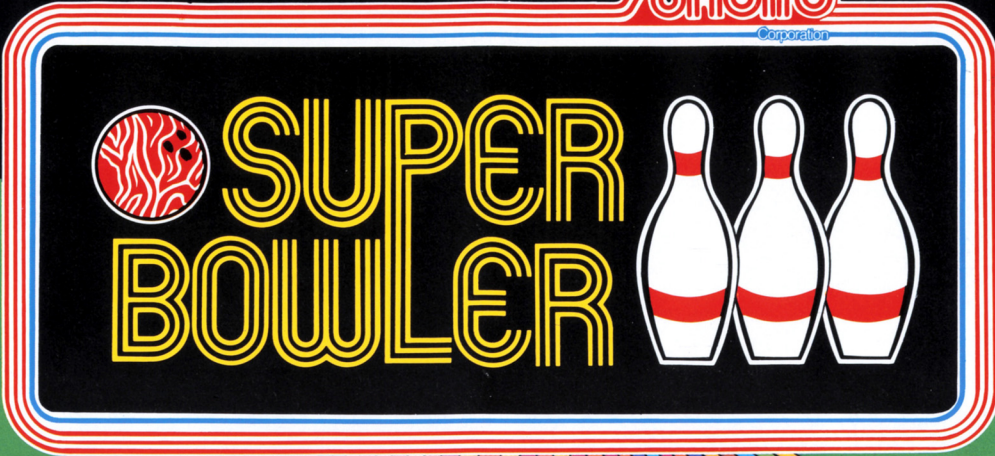
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the pins to disappear as it strikes them.

atically assumes starting position if headpin remains to be picked up by the second ball. If headpin is knocked down and pins left in the top position, player moves up to a third position. If the headpin is knocked down and pins are left in the bottom position, the player moves down to a fourth position.

Strike display lights up and crowd cheers whenever a strike is thrown.

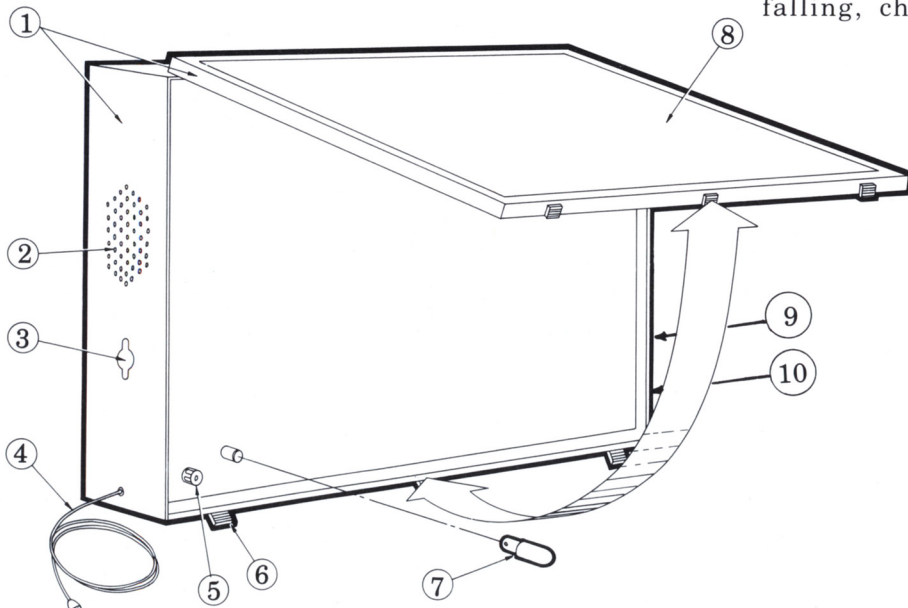


Instantaneous scoring system for up to four players duplicates actual scoring, indicates which player is up and which frame is being played.

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Selectable beer frame display automatically lights up at the beginning of the fifth or third and seventh frame.

Adjustable volume control for sound of ball being released and traveling down alley, gutter ball, pins being hit, pins falling, cheers and whistles of crowd for strikes.



Specifications –

Super Bowler measures 32" x 62" x 5½". Operation is on 100/115 volt AC or 230 volt AC 50/60 HZ. Test switch on front of lamp board simplifies on-location circuit checks and bad lamp replacement. Comes complete with operating and maintenance manual, coin box and remote control. One year warranty.

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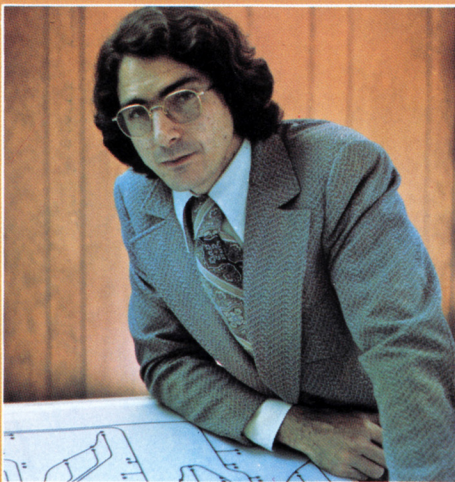


For more information, contact Bob Nallick, Sunbird Corporation, 7557 Washington Avenue South, Minneapolis, Minnesota 55435. Or call collect (612) 944-1437. But remember, we warned you. Once you've tried it, you're hooked.

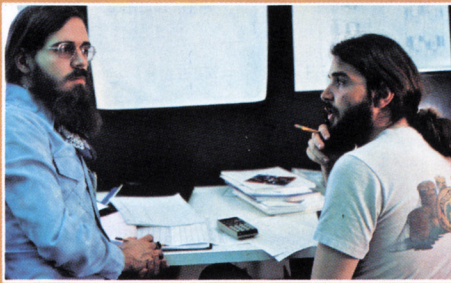
Sunbird

Who is Sunbird? And what are they doing in Minneapolis, Minnesota?

Sunbird is a new company which was formed to develop, manufacture and market popular, state-of-the-art games for the coin-operated entertainment industry. Bob Nallick, the company's founder and president, brings to Sunbird his extensive background in the custom design of electronic audio-visual displays. He has brought together a design and engineering team who enable Sunbird to introduce new approaches and concepts in the use of re-programmable microprocessor systems. Representative of the caliber of talent within this team is William Arkush,



Bill Arkush, Chief Design Consultant, with new circuit layout.



Robert Meagher and David August go over a new program.

who has been named the Chief Design Consultant for Sunbird Corporation.

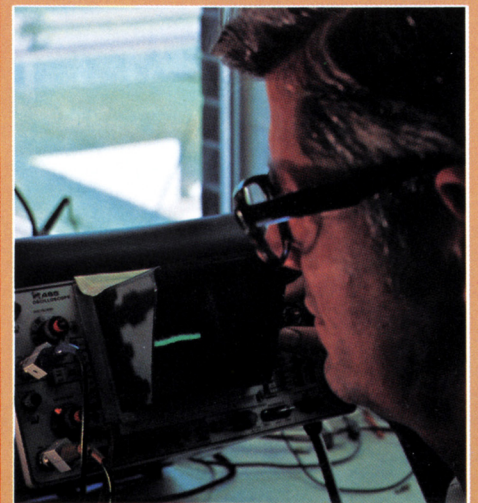
While the bulk of the technology that created the silicon-chip revolution remains based in California, the technology and talent developed to utilize that breakthrough is located right here in the upper midwest. For everything from software systems to aluminum extrusions, Minneapolis is where it's at. And Sunbird's unique mix of video game expertise and computer know-how makes it particularly well-qualified to capitalize on the resources of this area.

A Survival technique designed for doing business in today's marketplace.

Not too long ago, all you needed to start a business was a little extra space in your garage and a good idea. And

in some respects, that's still a good place to get your start. But today's entertainment market quickly demands much more of a company. It demands the ability to turn ideas into products, quickly and efficiently. And, because even the best idea has a limited life-time, it demands the ability to generate new ideas and products.

Sunbird is both staffed and financed to meet the rigorous demands of today's marketplace. Solid, long-term financing allows us to both develop and produce products which will be made available to you at the time of introduction. And through normal channels of distribution.



Carl Drew running a circuit test.

Before anything else, every Sunbird game has to prove itself as a successful "business machine."

The entertainment business is just that, a business. And that often-overlooked fact has played an important part in the development of our product philosophy. Our new Super Bowler game, for example, has a test circuit and plug-in printed circuit boards which minimize downtime and encourage preventive maintenance during routine



Carl Drew, Chief Engineer, checks a circuit diagram with Bill Arkush.

coin collection. This easy service approach, combined with the rigid quality control standards and post-production testing at our factory, assures you of a highly reliable product. And a faster return on your investment.

Should one of our products require more than routine maintenance, it's equally nice to know that all Sunbird products are covered by a full, one-year warranty.

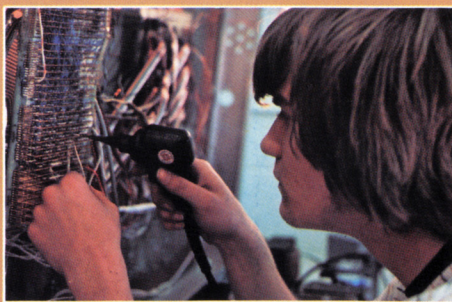


Bob Nallick, President of Sunbird.

On the other hand, all work and no play takes the fun out of a potentially exciting market.

Obviously, a game has to do more than just run well. It has to draw an audience, and hold their attention. So in the process of building successful business machines, we pay a lot of attention to player appeal. What constitutes player appeal? We think that Super Bowler serves as an excellent example.

First, Super Bowler is based on a well-known and very popular concept. So it is, in that respect, pre-sold. Beyond that, however, the game offers each player the opportunity to participate on a variety of



Mark Bialon, Engineering Technician, wiring an engineering prototype for a new game.

skill levels. Bowling can be just as challenging and rewarding for the person with an 89 average as it is for the person with a 246 average.

When the first ball of the game is released, one of twenty-three combinations of pins fall. This variety of possible outcomes, frame after frame and game after game, makes Super Bowler a game with extremely wide appeal.

For more information, contact Bob Nallick, Sunbird Corporation, 7557 Washington Avenue South, Minneapolis, Minnesota 55435. Or call collect (612) 944-1437.

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-
-
- | | |
|--|--|
| 1. Advance Distributing Co.6,40
St. Louis, Missouri | 16. Nevada Gaming Schools.....49
Las Vegas, Nevada |
| 2. Atari, Inc.2
Sunnyvale, California | 17. O.B.A. Inc.42
Dallas, Texas |
| 3. bally Manufacturing Corp.5
Chicago, Illinois | 18. Poland Manufacturing Co.....52
Forrest City, Arkansas |
| 4. Belam Export Corporation43
New York, New York | 19. Platt Luggage Co.16
Chicago, Illinois |
| 5. Bonanza Enterprises, Ltd.16,51
Yokohama, Japan | 20. Playmatic SA63
Barcelona, Spain |
| 6. Dynamo Corporation47
Grand Prairie, Texas | 21. RAP Enterprises30
Los Gatos, California |
| 7. Ebonite Corporation59
Miami Lakes, Florida | 22. Ramtek Corporation43
Sunnyvale, California |
| 8. The Great Amusement Emporium42
Denver, Colorado | 23. Rock-Ola Mfg. Corp.64
Chicagao, Illinois |
| 9. Gremlin Industries Inc.22
San Diego, California | 24. Rowe International21
Whippany, New Jersey |
| 10. Imperial Billiards7
East Rutherford, New Jersey | 25. Standard Metal Typer42
Chicago, Illinois |
| 11. International Billiards13
Houston, Texas | 26. Sunbird Corporation.....31-34
Minneapolis, Minnesota |
| 12. J & J Distributors, Inc.49
Indianapolis, Indiana | 27. Suzo Trading Co.....7
Rotterdam, The Netherlands |
| 13. Kurz-Kasch Electronics61
Dayton, Ohio | 28. U.B.I., Inc.13
Union, New Jersey |
| 14. Henry W.T. Mali Co.26
New York, New York | 29. U.S. Billiards25
Amityville, New York |
| 15. Midway Manufacturing17
Franklin Park, Illinois | 30. Wico Corporation10
Niles, Illinois |



The Pins of Summer

by Roger C. Sharpe

Well, as the old movie title goes, "Some Like It Hot," and if the games of recent vintage are any indication, this summer is going to be very "hot" for pinball machines. A trip to the New Jersey shore just a few days ago revealed that many operations were gearing up for what should be a very successful season. The only ones who may suffer will be those locations in the inner city that will probably find themselves abandoned when the weekend arrives. But if the location is worth its weight, it should find crowds enough during the week-days to more than compensate.

The big thing is to get in on the action with a strong line-up of games that are in good working condition. Some of the newest models should draw in a great deal of traffic if they're placed in a peak spot in any arcade or operation. Elsewhere in this issue, I've also included a "Pins on Parade" which lists all the games reviewed in the past year of this column's existence. It's a sure fire way for you to check how far off I've been in my judgments—or how close I may have been to the truth.

So go by your gut instincts in selecting machinery, and if my few words and pictures can somehow help—great. Just keep your games in shape and let the player play them the way they were meant to be played.

Anyway, this month's line-up is a long one, so let's get to the matters at hand, some games that should make some heat waves in their own right. And as the saying goes: summer there, summer here, summer everywhere. Don't get burned by the heat and enjoy.

Gottlieb's BIG HIT

Why not start with the game of summer, baseball. And here it's executed by the master of the baseball pinball machine, Gottlieb. Every year there seems to be a new edition and update on the basic theme, and this season is no exception with this "striking" one-player.

Utilizing a center shooter which is activated by the right flipper button, *Big Hit* offers a lot of action if the

shooter isn't worn out by constant flipper play. But let's get into features before we point out any deficiencies in the game.

The top of the playfield offers ten drop targets that are spaced in a group of five and five. Two top side lanes offer points and specials when the targets are dropped down. Just below is a first set of flippers that supply a great deal of usefulness in getting the targets and the specials when they're lit.



Two side lanes at mid-field offer a "double" on the left and a "triple" on the right. Again, the baseball motif is a strong one, since runs as well as points are scored during the play of the game. Large numbers identify the three rollovers at mid-field which place a man on the prescribed base when hit. Two vari-targets at either side offer points and also a slowing of the action which is fairly fast paced and physical with this machine.

Two thumper bumpers just to the front of the vari-targets offer some

strong downward action on the field and compliment the kickers which offer only subtle action similar to that started on Gottlieb games beginning with Volley. The Gottlieb bottom with two flippers finishes off the layout, but not the action.

The game plays well, if the player can get into using a bit more force than is usually asked for from other games. The shots are long for the most part, which is probably why this game begs to be played differently. The big thing is to be able to work the top and bottom flippers in tandem when the ball reaches the top drop targets. Straight shots are pure drains, since the only "obstructions" are those three center rollover buttons. But strategy is the key, since the drop targets hold the key to scoring runs as well as points.

Probably the most frustrating part of *Big Hit* is the center shooter that I mentioned earlier. All too often the power isn't sufficient to propel the ball up to the level of the drop targets, or even the upper side lane. I just don't know about this feature, since it asks for a dual function from an assembly that gets enough work as is. The flipper is an integral part of the game and can be pressed continually. Why not have an extra side button just for the shooter? Or even a center shooter button on the face of the cabinet? Somehow, I think this might work out better for the game as a whole, since if the shooter isn't powerful enough, players aren't going to play this game as much as is warranted by the play action that is offered.

As a pinball machine, *Big Hit* is a good standard game that should appeal to one-player locations and other places that have room for a "baseball game." The graphics are solid and rather plain, and I don't know why a team or baseball personality wasn't used to liven up the art work and basic appeal of the game. But you can't take away from the strength of this pin, which is the potential action it provides for a pinball player. It's a good change of pace from the games of summer that will be filling the arcades, and it should be a hit in anybody's league.

Rating: ## ½

CORNER



Gottlieb's *TEAM ONE*

Sports continue to be featured on this add-a-ball effort from Gottlieb that taps soccer for its inspiration. A solid performer in a local New York City arcade, *Team One* may seem familiar to those of you who remember back to Abracadabra. For whatever success that game had, this lay-out and design is far better suited for an add-a-ball machine, and the response bears this out, since the game is constantly being played by the regulars of the arcade.

Four top lanes, numbered 1-2-3-4, start off the action in a blend of symmetry and strong skill lines. Five drop targets at the top left and right are the real keys to the action, as Gottlieb continues to build upon a good thing—an ability to integrate drop targets in an exceptional manner that sets them apart from everyone else in the field. A top center stationary target finishes off the upper action.

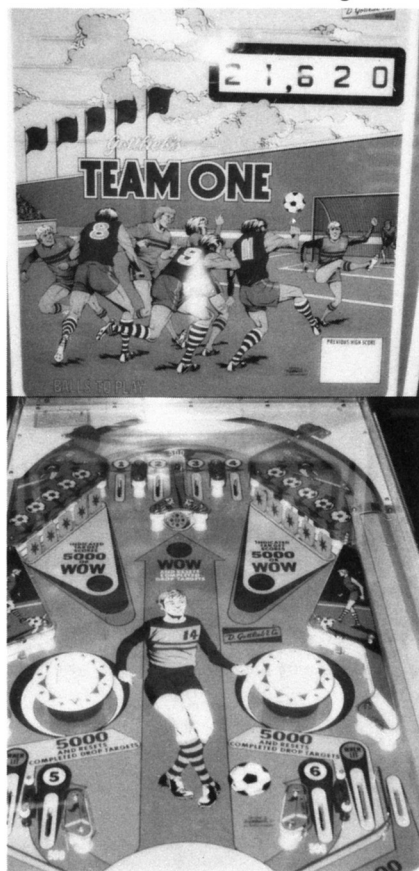
Further down at the sides, one sees the return of the strong sling-shot kickers that can rebound a ball quicker than a nudge can be put to the machine. Two side thumper bumpers lower down on the field offer some quick action near the flippers, with a bottom that also found its way onto *Spirit of '76* and some other recent Gottlieb efforts. Also tied into this four-laned bottom is a 5 and 6 lane that ties in with the top four lanes.

The targets, rather than being random, have been thoughtfully planned so that when the soccer ball is lit above a particular target, that target is worth 5000 points rather than 500. The way this is controlled is through the thumper bumpers and the number of times the ball comes in contact with them. Getting all the targets down, whether you're scoring 5000 a pop or 500, is the way to light up the center WOW target, which when hit will give an added ball and also reset the targets. Speaking about resetting the targets, once a line (either left or right) has been gotten, the bottom side lanes will light up and score 5000 points as well as resetting the particular bank of drop targets. This can be a godsend or frustrating as hell depending upon how you stand with the opposite bank of targets.

Tied into this is the 1 through 6 numbered lanes, which also feature a top left and right target area for

the 5 and 6 depending upon how skillful one is in manipulating the ball into the lower lanes. Anyway, once all the numbers are out, the side WOWs come brilliantly to life, and this is where aim is everything since those targets that have the lit soccer ball above them, when hit, will pop up an added ball. Also—and this is a nice thought—the 5 and 6 rear lit top targets don't have to have the target hit if the soccer light is on above them. Five WOWs are allowed for any one ball on this game which offers a lot in the way of pure pinball action.

A word of warning may be in order however for those of you who insist on having three-ball games.



This machine just doesn't make the grade on anything but a five-ball format. Even if the features are doubled up as is the case with most three-ball modifications, this machine has too much going for it, and it will bring in the quick quarter with its wide open playfield.

Graphically, the same thing can be said for this game as was said for *Big Hit*, but you cannot knock the action which is always right on goal.

Rating: ####

Gottlieb's *JUNGLE QUEEN*

[two-player *JUNGLE PRINCESS*]

The way Gottlieb has been churning out games makes it difficult for even me to keep up with them, but my obsessive playing streak motivates me onward, and luckily so, since I happened upon these games some time ago when they were on test. By the time you're reading this, both *Jungle Queen* and (probably) *Jungle Princess* will be available at your local distributor. If they aren't, wait for them, because I think these are going to be super summer pins for Gottlieb and every location that has one.

A big thing for both these machines is that for the first time Gottlieb has added 100,000 lights to a multi-player backglass. Thank God for small favors. Now when I walk away with 112,000 points, it doesn't stare back at me as only 12,000. For no other reason, this game should garner some player enthusiasm in the months to come.

As a four-player, *Jungle Queen* offers some new wrinkles and some good solid action. The top three lanes A-B-C may seem familiar from the recent *Bronco* four-player, as may the top triangular thumper bumper configuration and the top left and right kick-out holes. But then the playfield changes significantly.

Two rows of the ever-present drop targets, five to a side, are at the middle of the playfield, similar to Gottlieb's *Far Out* from some years past. Also modified are the side lanes that offer 500 or 5000 points depending upon how many targets are down—a completed row lights up the corresponding side lane. One other word about those drop targets that warm the cockles of my heart is that there are little monkey graphics portrayed on the front. I have a soft spot in my soul for monkeys. But that's another story best saved for another time.

The bottom flipper line-up offers a subtle twist to the normal Gottlieb bottom, which on this game has been altered slightly. It's double flippers back, but his time in a new way with two small flippers just above the two larger size flippers. The action is obviously set with the skillful in mind when it comes to "saving" the ball or in working the left and right side in tandem. But the angles from the flippers (large and small) are pure for the targets or the top side kick-out holes.



The idea for the game is to get the A-B-C lights out—you can get the A and C out at the bottom lanes—and to also get down all the drop targets; this lights up the whole jungle with double bonuses, specials and same player shoots again.

After playing this game a number of times, I can say that the best thing is to go for the drop targets (one at a time to insure bonus build-up) and then to go toward the top kick-out holes (which hopefully have been set at the right angle for the ball's flight downward toward the flippers).

Graphically, the game picks up the style of Target Alpha and Solar City, with this time a scantily clad jungle queen looking out over her domain which seems threatened by the menacing volcano that is erupting in the background. The use of reds, yellows and blues makes this scene a striking adventure for any arcade. The game should draw in enough "animals" ready to conquer this kingdom of action—and that is no monkey business.

Rating: ####

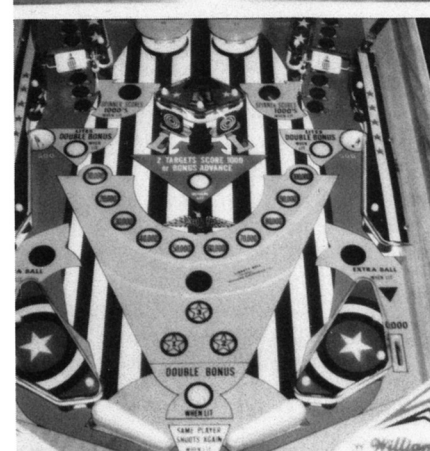
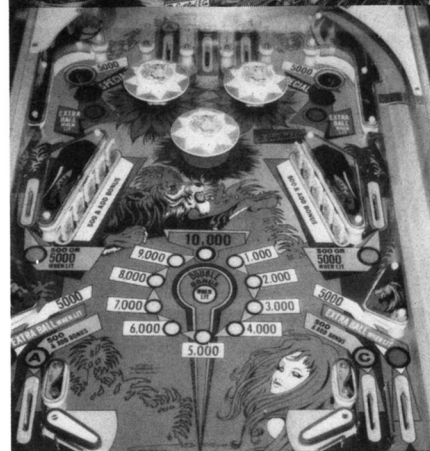
Williams' LIBERTY BELL

Better late than never for this two-player from Williams, which has finally surfaced after the long runs of Space Mission and Space Odyssey threw everything out of sync at the factory. But who can complain about prosperity? Anyway if at first glance this game looks familiar, think back on Grand Prix, modify the bottom and change a few of the bonus treatments, and—presto!—instant *Liberty Bell*.

There's six digit scoring once again so you know the action is meant for high scoring, and the top kick-out hole, which offers five different scoring values, has a 30,000 top limit.

This time around the four drop targets, two at the top left and right, and the two at mid-center, spell out the word B-E-L-L and herein lies the secret for big bonus build-ups as well as any special possibilities. The double spinners, rather than working on an alternating system as was the case with Grand Prix advance the out-hole bonus no matter which one you're going through. The two side kick-out holes at mid-field offer double bonus possibilities during the course of play, rather than just rining off the bonus as was the case with Grand Prix.

The big difference with this



two-player is the bottom which has instead two kickers that go all the way down to the flippers, harkening back to the days of the mid-sixties when most games had this configuration. The side out-lanes offer extra balls when lit and that is the game.

All a player has to do is hit down the drop targets, go through the spinners enough to build the bonus up to its 100,000 point limit, land in the side kick-out hole for the double bonus, and....I'm out of breath, but you get the general idea.

The action is swift and the bottom kickers allow some good set-ups off the flipper if you can slow down the pace of the ball. Once again, the primary targets are probably going to be the spinners, with most of the external nudging being called upon when the ball is in the thumper bumper area.

Graphically, red, white and blue have become staples of the pinball machine banner, and the throwback to the bicentennial isn't as jarring as it could have been. Plus, Miss Liberty, or maybe it's just plain Bell(e), is amply appealing to draw in some action on a game which should be a star-spangled hit in places that haven't gotten their fill of Grand Prix.

Rating: ###

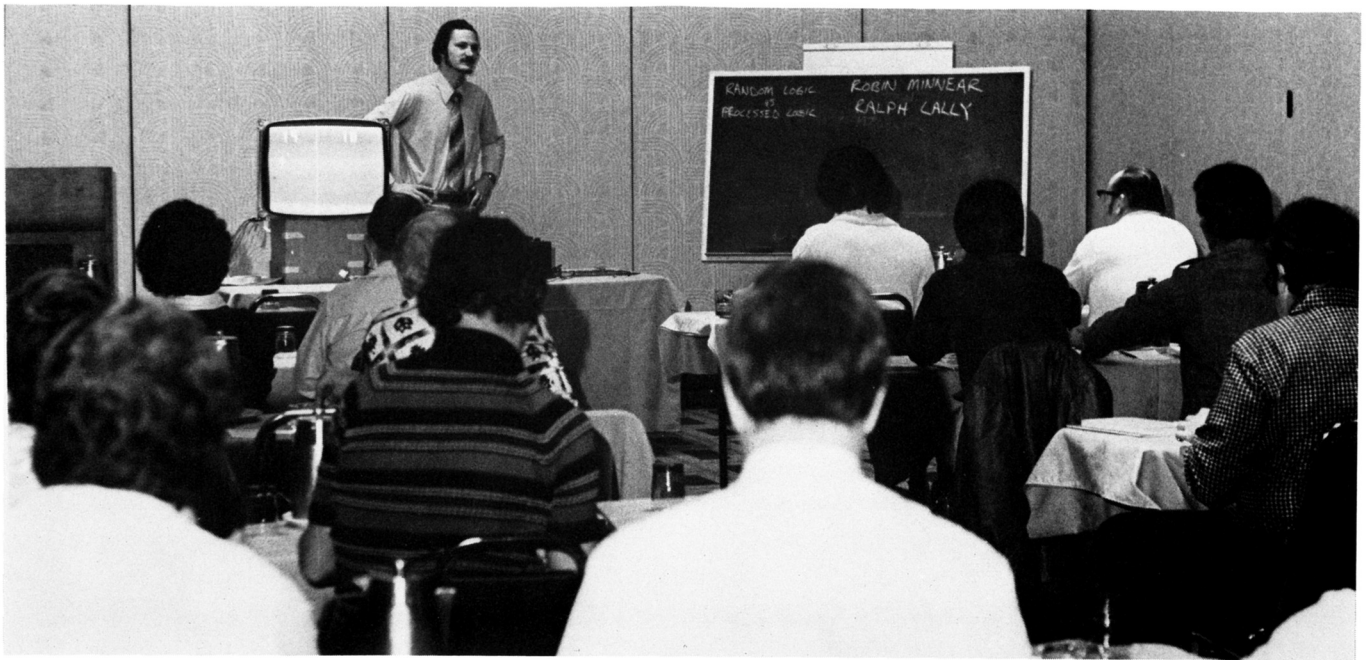
Sonic's SUPER STRAIGHT

Last but not least in this month's pin parade is this four-player which is as complicated and feature-filled as it looks. Following close on the heels of Prospector, this game offers a departure from the play action Sonic has had in the past.

The top three lanes feature the on again/off again bonus lane set-up that Williams has used so successfully in the past, plus a new wrinkle—a top center bonus roll-over. There's a triangular thumper bumper alignment for good rebounding angles into the major focus of the game—the "card" targets.

Five targets at the left offer the Ten of Clubs, Jack of Hearts, Queen of Clubs, Jack of Clubs and Ten of Diamonds. And since this is a high card game, the two targets at the top right are the King of Diamonds and the King of Clubs.

At the mid-far right of the field there's an interesting departure for a kicker lane which can either mean an extra ball when lit or just an increase in bonus. But this feature



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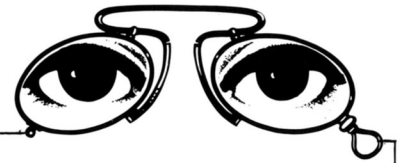
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takes a well aimed shot from the flipper or a good rebound from the thumper bumpers since the ball can just as easily rebound up to the top of the game without landing in the kicker lane.

Moving further down the playfield, one finds a kick-out hole at the mid-left side that either collects bonus points or registers the bonus; but this isn't a primary target to hit during the play of the game. The middle spinner and target area is though, with two drop targets bordering the spinner and offering the Ace of Hearts and the Ace of Clubs. Make the two aces and the bottom double bonus lanes light up as well as other specials when the targets are hit.

If that weren't enough to confound even the staunchest flipperer, there's also a gate at the right side that returns the ball back to the plunger, which is opened when the two King targets have been hit. The bottom is a Gottlieb bottom, with kickers that offer some good power and nudging possibilities. The only problem, which occurs on most Sonic games, is that the flipper stroke isn't what American players are used to. It is very difficult to get a center shot off, since the power zone isn't as full as it could be. If Sonic were to remedy this, I think their games would have even more success than they already have.

Graphically, *Super Straight* does not joke(r) around with its big cartoon-like art work and use of colors, specifically blues, reds and yellows. For anyone playing with a full deck *Super Straight* should hold the upper hand when summer calls the bluff on most games; and that's in the cards for you to bank on.

Rating: ###

Well, that's it for the pins of summer, except for the first results of *The Atarians* poll which has supplied some interesting reactions.

First off though, some modifications have been made on the game since its initial debut. Two side posts at the bottom of the playfield near the 4 & 5 and 7 & 8 lane have been added for a little more life to any ball that finds itself rushing down in that direction. Also changed is the center target (9) which has a cut edge, rather than the straight angular shape it once had. This allows for less straight a rebound off any flipper shots.

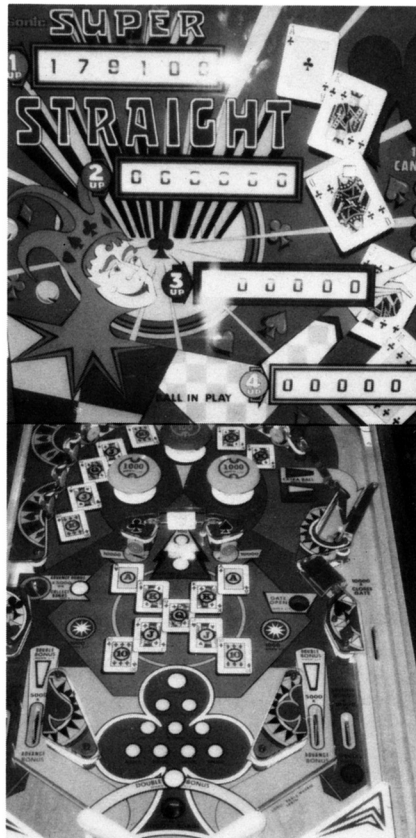
With or without the additions and

changes, the following numbers have been totalled—with the final figures coming up next month.

Rating: ### 26
 ### 18
 # 21
 # 19

The numbers are from players, distributors and operators who had a fairly good familiarity with the game. I told them basically how the ratings worked and they took it from there.

So far the findings show a pretty even mix, although for the most



part, those ratings on the low side came from the players. But this is just the beginning; the figures may change once more people have had the chance to review the game on their own. So keep the votes coming in and until next time, be well and prosper.

Pins on Parade

When it started I didn't think it would survive, but now it's been a year and "Critic's Corner" lives on. Much of the early criticism against my doing it has subsided and suddenly all of the excitement from last summer is just a memory.

In looking back over the past issues, the thing that is evident is that the "Corner" has evolved into something much more than it was initially. The reviews are longer for each game and I've tried to integrate some of the secrets of play for each machine. And the recent addition of pictures, no matter how crude they may be, has, I think, served a useful purpose. Obviously, the column has grown, and for that I'm thankful.

Most important to the issue is the feedback that I get is all positive. I have tried through this past year to be as unbiased as I possibly can be. My love is pinball—all pinball machines, good and bad—but when I see a game that I think is good, my first reaction is to shout about it. Still the reviews are my own opinions for the most part—although in the past I have asked others for their reactions and input; and that option is still open and always will be.

With it all, "Critic's Corner" lives on; hopefully it's accomplished something. I'd like to think so. I'd like to think that if nothing else it's gotten every one of you to stop and think a little bit more about the games that are coming out today; I'd like to think that your views and sensibilities toward pinball machines have grown to the point where you can judge what a good or great game is for your clientele. It's not an easy task, but hopefully each and every game isn't just taken at face value any more; and that's what it's all about.

Since I was surprised that it's been a year, I thought many of you would feel the same way, so what I want to do is list all the games I've rated. I'm sure that some games may, or may not have, lived up to the reviews I gave them. But look, see where I was wrong and where I was right. Drop me a line and let me know how I have fared these past months, because in the long run, I'm only as good as you let me be. Let me know which games I was right about and for the games I was wrong on, let me know why.

Anyway, thanks to those of you who have followed the column every month. Thanks for the letters and support, and lastly, thanks for the chance to look at pinball machines in a way that no one has ever looked at them before.

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- RATING: ####
 Bally's *Capt. Fantastic*
 Chicago Coin's *Sound Stage*
 Gottlieb's *Target Alpha/*
Solar City
Jacks Open
Bronco/Mustang
Team One
Jungle Queen/
Jungle Princess
 Sonic's *Prospector*
 RATING: ### 1/2
 Gottlieb's *Surf Champ/Surfer*
 Playmatic's *New World/*
Conquest 200
 Williams' *Grand Prix*
 RATING: ### 1/4
 Bally's *Alladin's Castle*
 Gottlieb's *Royal Flush/*
Card Whiz
 Playmatic's *Speakeasy*
 Sonic's *Super Straight*
 Stern's *Stampede/Rawhide*
 Williams' *Liberty Bell*
 RATING: ## 3/4
 Zaccaria's *Moon Flight*
 RATING: ## 1/2
 Bally's *Old Chicago*
 Chicago Coin's *Cinema/*
Hollywood
 Gottlieb's *Big Hit*
Ship Ahoy/Buccaneer
 Playmatic's *Fiesta/Fandango*
 Recel's *Criterion 75*
 Sonic's *Faces*
 Williams' *Blue Chip*
 RATING: ## 1/4
 Recel's *Underwater*
 RATING: ##
 Allied Leisure's *Boogie/*
Dyn O' Mite
 AMI s.p.a. *Hot Race*
 Recel's *Lady Luck/Fortune*
 Sega's *Rodeo*
Temptation
 Zaccaria's *Universe*
Wood Queen


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Announcing UPDATE

COIN INDUSTRY **PLAY METER** UPDATE

Volume 3/ No. 9

May 20, 1977

Dynamo World Soccer Tour Underway

The Dynamo World Soccer Tournament Tour is currently on its "Southern Swing." The tour kicked off with a tournament at the exciting Casino Beach and Resort Hotel in Pensacola, Florida on February 18, 19 and 20. The most recent stop on the swing was at Houston, Texas for a \$5,000 event held at the Ramda Inn-Hobby Airport.

Winners in the May 6-8 event were Ronnie Lewis and Mario Garcia of Austin, Texas in Open Doubles; Mark Crowell of Salinas, Kansas in Singles; Tom and Terry Jonas of Balch Springs, Texas in Mixed Doubles; Sandy Robinson and Nelva Miles of Waco in Women's Doubles; Larry Aden and Dalby Bryan of Houston in Novice Doubles; and David Ruben and George Garbet of Houston in Consolation Doubles. Lewis and Garcia received \$700 for their Open Doubles win. Other prize money awarded included \$200 for the Mixed Doubles Winners, \$300 for the Singles winner, \$100 for the Novice Doubles winner and \$75 for the winners in Women's and Consolation Doubles.

The tour came to Houston after the February stop at Pensacola Beach and March and April stops at Birmingham, Alabama and Atlanta, Georgia. The tour's next event is a \$7,500 tournament scheduled for this weekend, May 20-22, at the El Tropicano Hotel in San Antonio.

In that event \$900 will go to the winners of the Open Doubles and \$300 to the winners of the Mixed Doubles. The Singles winner takes home \$450, and the winners of the Women's, Novice and Consolation Doubles take home \$100.

Among the tour's leading players so far are Mark Crowell and Ronnie Lewis. Crowell teamed with Marty

Chase to take second in the Open Doubles in Florida and win the Open Doubles in Birmingham. Crowell also took the singles and teamed with Diane Queyzen to cop the Mixed Doubles crown in the Alabama meet. In addition to his Houston win (with Garcia), Lewis teamed with David Ferguson to win the Open Doubles and with Susan Muhlbach to win the Mixed Doubles at the tour opener in Pensacola Beach.

Following the San Antonio tournament, the Dynamo tour has stops scheduled for Irving, Texas (outside Dallas), a \$10,000 tournament, June 17-19; Oklahoma City, Oklahoma (\$5,000), July 8-10; and Kansas City, Missouri (\$7,500), July 28-31.

The "Southern Swing" will close with a tournament in Fenton, Missouri (Outside St. Louis) at which \$15,000 worth of cash and prizes will be offered. Among the prizes will be three Honda Civic automobiles. The St. Louis tournament is scheduled for the Ramada Inn at 800 South Hiway Drive in Fenton on August 26-28.

Dynamo officials have declared themselves pleased with the success of the tournaments held so far.

"The tournament momentum is growing," said John Gilliland, tournament director for the Texas-based company, "and Dynamo is preparing an announcement regarding the second leg of its World Tour."

It is presently hinted that that "leg" will bring tournaments to the Midwest and Northern states. Gilliland has also announced plans for the establishment of the World Table Soccer Association, a professional players group. Yearly membership dues are \$15. Included with membership are a card, T-shirt

and one year's subscription to *FoosNoos*.

Boon Richards, Dynamo sales service director, reported to us that sales were brisk in promotional items. "We have, in addition to our present shirts, hats, buckles and patches, introduced special tournament shirts, gloves, hand spray and visors," Richards said.

All tournament play on Dynamo's World Soccer Tour is on the new Dynamo CB model table.

Seeburg Charges BSR Violated Patent Rights

Seeburg Corporation of Delaware, a subsidiary of Seeburg Industries, Inc., announced today that it has filed suit in the United States District Court in Chicago B.S.R. (U.S.A.) Ltd., a manufacturer of phonographs and phonograph parts, claiming the latter company has infringed upon Seeburg patents.

In its complaint Seeburg contends that the B.S.R.'s Accutrac Model 4000 turntable is an infringement on the Seeburg sound-track selection patent and seeks treble damages, legal costs and an injunction halting sales of such turntable by Accutrac.

Also named a defendant in the suit is Playback, Inc., a Chicago-based chain of retail phonograph and audio equipment stores.

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WHO'S OUT THERE?

by Ralph C. Lally II

[The following is excerpted from a speech presented by *Play Meter* Editor and Publisher Ralph Lally at a recent seminar, "Strategies for Marketing TV Games and Coin-Operated Video Games Products." The seminar took place May 24 at the Harvard Club in New York City. It was sponsored by the industrial advisory firm of Frost & Sullivan of New York.

The emphasis of the seminar was on market strategies, but in the section of his speech reprinted here, Mr. Lally presented himself as a representative of the operator and player of the games. "What can the manufacturer in particular do for the operator and player to create a better market for himself?" he asked. Part of his answer follows. He invites your additions.]

According to *Play Meter's* records, only one video game appeared at the MOA exhibit in 1973, an obscure and complicated game called computer space. But in 1974 there were 12 manufacturers displaying games at the show and by 1975 there were more than twice that number.

In all, according to our unofficial records, some 45 manufacturers have been active in the video business here in the United States. Of those, few survive. Some, e.g. Williams, dropped out of the video business of their own accord; but most failed. We would list fourteen companies as major manufacturers; five remain in the business as what we would call minor manufacturers. The fourteen are Allied Leisure, Amutech, Atari, Cinematronics, Electra, Exidy, Gremlin, Meadows Games, Midway, Mirco, P.S.E., Ramtek, Sega, and U.S. Billiards. The five would be A-1 Amusement Products, Bailey International, Century Industries, United Games and Venture Line. Of the major companies, at least three or four are in big trouble at present. That leaves ten only who are both alive and well right now.

Where did they all go wrong? It is difficult to point a finger to one particular reason. There are probably as many reasons as there have been companies to bite the dust. But we might get at some of the reasons if we start out at the beginning. Where else?

There is a sort of on-going joke among engineers and designers that goes something like this: " 'In the beginning, God created heaven and earth.' . . . On the eighth day, He created Nolan Bushnell."

Mr. Bushnell is indeed the father of the *coin-operated* video game. I

emphasize the coin-operated part simply because, as most of us know, video games were being played in the old IBM computer rooms back in the late fifties. Mr. Bushnell simply came up with the idea of attaching a coin slot to one. It sounds simple but, as I'm sure most of you know, it wasn't.

In the beginning, nobody starts out to make a bad game. Yet a lot of games start off bad. And before you can begin to successfully market a new video game, you first of all have to make sure you have a game worth marketing. So first a few thoughts about engineering and design.

Build your games with only two people in mind—the operator and the player—and you'll never go wrong.

More on the player later. First let's just try to concentrate on making the operator happy.

The most vital part of any game is the credit system. An astonishing percentage of all service calls result from faulty credit systems. The thing is taking money and not giving any games or it simply refuses money altogether. Either case means loss of money for the operator. More down time has been caused by cheap inferior coin acceptors and poorly designed coin entry chutes than anything else I know of.

No operator likes to trail 50 miles to unjam a coin mech. He would gladly pay a few bucks more to have a spare coin acceptor on his game just to double the chances of avoiding such an unfortunate incident.

Make sure the coin acceptor mechanisms you install are the best that money can buy. A game is at a severe disadvantage if it's designed to have only one coin mech. Design

in two. And make certain that you allow for two separate and independent coin entry holes and chutes!

You should see some of the coin chutes I've seen. Sheer atrocities some of them are. Still there's no sense in getting fancy and trying to engineer some L.A. Freeway kind of chute, it will only result in an additional trouble area.

What is needed is a fool-proof, fail-safe coin acceptor mechanism that is connected to the coin entry slot by the shortest simplest, reliable coin chute one can imagine. Maybe the answer is some sort of optic scanner that can determine the size weight and validity of a coin without having to put it through a miniaturized obstacle course.

Think of it, gentlemen, games are being made today employing some of the most sophisticated circuitry and electronics—space age—and yet they're all equipped with 1940's coin acceptors. That doesn't make sense to me and it shouldn't make sense to you.

You must also make sure, of course, that the rest of your game is as reliable as humanly possible. When designing a game to suit the operator you must keep in mind the serviceman. You have to sell him too. Many operators consult their service people for opinions before a new game is purchased. If its too complicated electronically, or it takes a contortionist to get to the power supply or other vital parts, they won't buy it. To keep that operator smiling, make everything within the game easily accessible to both the service people and the collectors.

Whatever you do, make sure every single game comes packed with schematic diagrams and a service manual. This is the only business I know that charges an arm and a leg for a piece of equipment and when the piece finally breaks down it takes a dental surgeon to get a schematic from a manufacturer.

Thank goodness some manufacturers have finally gotten around to providing all the pertinent technical information to properly service their games. If you're going to sell a guy a piece of equipment, it's only fair that you enable him to fix it when it's down. It sounds like plain old every day common sense but you would be surprised how many factories today still do not give out schematics for their games.

If you have a good system that is both reliable and accessible it is no good if you don't have a good game inside; you're again beat before you start. The other most important customer is the player. No matter

how happy you make the operator, if you fail to make the player happy, you've failed.

First off, a machine has to be eye or ear catching. It must in some way attract the player. It must stand out from the rest in some manner. The new microprocessor systems allow for a message to be flashed up on the monitor to attract attention. And the backglass or the graphics surrounding the monitor should be as close to Hollywood as you can get, the flashier the better. That goes for the cabinet finish and player controls as well. The more buttons, steering wheels, joy sticks, pedals, etc. the better. These things stimulate player involvement which is an essential ingredient in lasting play appeal. And lasting play appeal is what the business is all about.

The successful games of today all have an attract mode built into the system whereby the game sort of plays itself when not being played. Many games employ the use of curious electronic sounds to accompany the action on the screen. If you get that first quarter, in a sense, what you're trying to do is addict the player to your game. You want to create an insatiable desire within him to play your game over and over. The ultimate success or failure of any machine is the number of times it gets played. If the play meter inside a new game doesn't click off some big numbers each week that machine is in trouble. So the idea is to pull as many plays from each player as possible. And how does one go about doing that?

Well, competition is the main ingredient of a stimulating game. Whether it be in the form of head to head competition, every man for himself, man against machine, or man against high score, the competitive challenge must be there.

Of course the most exciting form of competition is man against man or team against team. It is therefore a very wise game designer who designs games that more than one can play. It is a plain and simple fact that multi-player games have at least double the earning potential of single player games.

Another important ingredient is skill. A game must demand a certain degree of skill of the player. It can be in the form of hand-eye coordination, manipulation of player controls, reaction time, split second decision making, or combination. If a game doesn't challenge a player's skill, you might as well have invented a coin tossing machine.

In addition to the competitive challenge and skill requirements, all successful games seem to have the

ability to make every game seem to play different from the game before, though the basic object of the game does remain the same. The object of the game, the player controls, and method of scoring should be uncomplicated and clearly spelled out on the game. Yet the actual play of the game should be challenging and ever changing. It's a delicate mixture, but if you strike the right formula, you'll have a sure fire winner on your hands. A couple of good examples are Atari's Tank and Gremlin's Blockade.

Last and certainly not least, there is "player incentive." The classic psychological motivational tool "reward" works in games, too. A good game should reward excellent play. The reward can be in the form of a free game, extended play, or high score. Some factories are now programming the games to emit a reaction—siren, chimes, or lights flashing, whenever a player wins a free game, goes into an extended play, or hits the highest score of the day or week. It's sound psychology and good business to reward excellent play and attract it to the attention of others. Most of all, it stimulates repeat play.

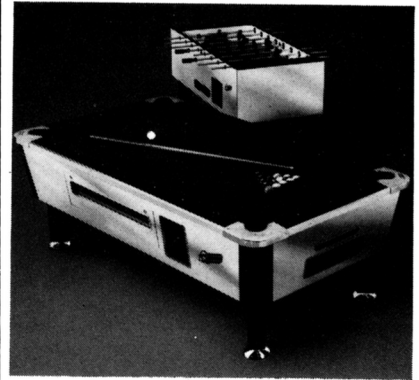
Once you have designed a new game with the necessary elements that will enable it to attract repeat play, you should field test it before releasing it on the open market. A small number of prototype games must be assembled at whatever the cost and set out on location for a minimum period of 4 weeks, preferably 8 weeks or more.

Besides finding out how much the game will earn, one is likely to learn some other interesting facts. The game may, for instance, attract younger players in which case you would want to include a built-in foot stool in your production models.

Or, you may discover a particular feature of the game makes cleaning it difficult, or lends itself to becoming an ash tray or drink rest which will surely lead to appearance and cleaning problems. Or, you'll learn of a technical problem which can be corrected before production. There's just a wealth of information that can be gained from proper field testing. Do it and you'll be glad you did. Don't do it and you'll live to regret it.

After a thorough field test, you should be convinced of your games performance. The next step is to get it on the market as fast as possible.

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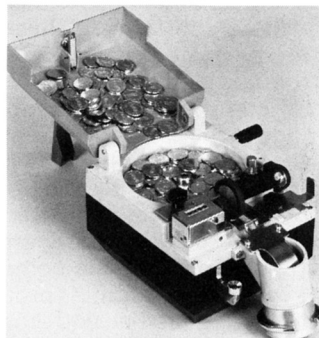
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ON THE MOVE...

Barton Resigns

Rowe International's D.J. Barton has resigned from his position of president of the company. The resignation became effective May 18. Barton's successor is former design and engineering vice president Merrill Krakauer.

Krakauer has most recently been serving as vice president and general manager of the Whippany facilities of Triangle Industries. Triangle is also parent company to Rowe.

Barton has long been associated with Rowe, working with distributorships in Florida before being tapped to head Rowe sales from the Whippany office. He served as president of the firm for about two and one half years.

Barton cited health and a desire to move back to the South as two reasons for stepping down. He will remain with the Rowe organization in an advisory capacity.

For complete details on this story, see this month's edition of *Play Meter UPDATE*.

Waldman Joins TS

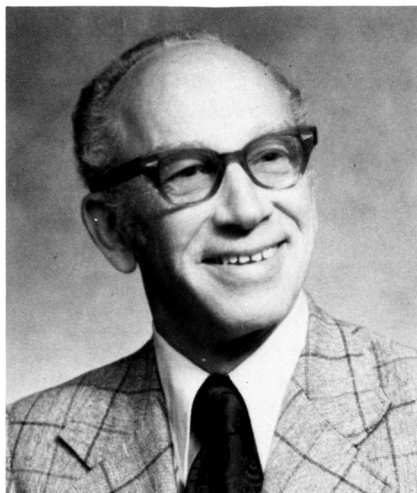
Lee Peppard of Tournament Soccer, has announced the addition to the staff of United Financial Corporation of Charles Waldman.

Waldman will be involved in the financial end of Tournament Soccer's domestic and foreign distribution, the Tournament Soccer arcade system, Grouchos, and the Tournament Soccer tavern, Bogeys.

"We feel we've found, in Charles, another factor to compliment our aggressive marketing strategies, the man who can help define, and then describe, the financial implications of each of our enterprises," Lee said.

Before assuming his current position, Waldman worked for three years with Rowe International in Whippany, N.J. Waldman's transcontinental move will be followed quickly by a trip to Minneapolis where he will oversee the revenues generated at Tournament Soccer's \$50,000.00 Super Singles event.

Waldman's arrival coincides with the May 1st opening of Tournament Soccer's expanded and remodeled offices in Seattle.



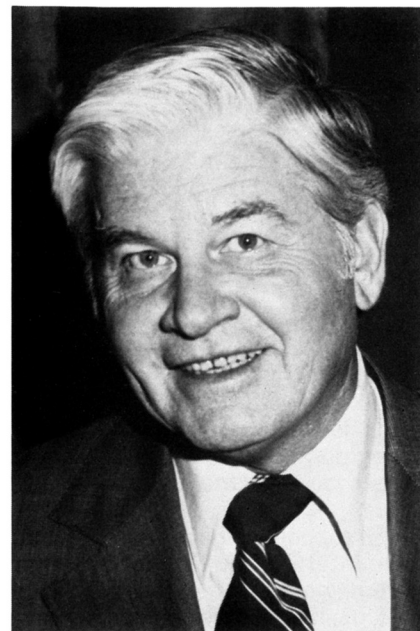
Mirco Promotes Vernon Leas

Mirco, Inc., Phoenix, Az., has announced the appointment of Vernon E. Leas as vice president, director of domestic operations. In this new position Leas will oversee all of the company's U.S. operations including the domestic games business, the systems business and the distribution business.

A veteran of more than 30 years in the electronics field, Leas has an interesting and unique combination of both large and small company experience having been at various times, the vice president and general manager of the Sperry Univac Information Services Division, and the owner and founder of a small electronics company, Diverse Ventures.

Leas is also a veteran of many years in the games business having been the owner and operator of a company engaged in the coin-operated amusement industry. Prior to his promotion, he was president of the Mirco Games Division.

Mirco, Inc. has three operating divisions and one wholly-owned offshore subsidiary. These are the Mirco Systems Division, which produces automatic test equipment and computer programs for a wide range of industrial customers; the Mirco Games Division, which manufactures leisure-time products for home and commercial use; and the Mirco Electronic Distributors Division which supplies a complete line of quality electronic products to military, industrial and commercial users. Mirco Games GmbH, the subsidiary which is located in Neu Isenburg West Germany, manufactures and markets leisure-time products.



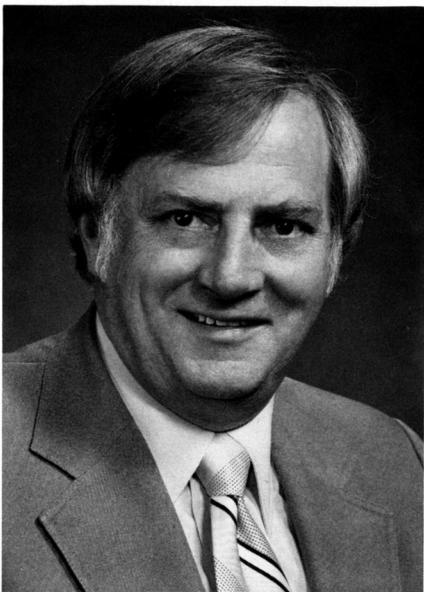
Eckel to Head Rowe-Dedham

Rowe International, Inc. has announced the appointment of Russell Eckel as General Manager of the Rowe-Dedham distributorship. Eckel is responsible for the operation of all distributor services to operators throughout most of New England and upper New York state. He reports to H.L. Williamson, vice president and general manager-distributor operations.

Eckel has been national director of Rowe's Customusic Division since 1972 and prior to that was associated with the Dedham organization from 1954. His knowledge of the area and of all Rowe products will be of benefit to all customers throughout the territory.

In making the announcement, then Rowe President D.J. Barton pointed out that Russ's proven sales, administrative and service experiences have well-fitted him for carrying on and improving the successful practices that are traditional with the Rowe-Dedham distributorship. He stated, "We are very pleased that the Rowe organization develops management people of Eckel's caliber who are ready and capable of maintaining leadership in the industry through service to our customers."

Eckel responded that he welcomes this challenge and that he is grateful for the depth and talent within the distributorship. He has great confidence, he said, in the sales organization headed by people like Dan Brown and Arthur Frates.



Joins Rowe Int'l.

Rowe International, Inc., recently announced the appointment of Charles D. "Chuck" Arnold as Field Sales Manager. Reporting to J.P. Newlander, vice president-marketing, Arnold is responsible for field implementation of all major Rowe products sales programs.

A veteran of 30 years in sales, sales management and marketing, Arnold is familiar with most Rowe customers through his previous positions with several game manufacturers.

In making the appointment, then Rowe President D.J. Barton pointed out, "The purpose of the new Field Sales Manager position is to expand our field services to our distributors and their customers. The job complements our entire marketing effort, which now includes general sales management, market development, national accounts programs, customer services, industrial design and marketing services."

Myers to Consult

Although John Myers has completed his full time engagement with Gremlin Industries of San Diego, he intends to remain actively involved in the coin industry, he told *Play Meter*.

"My Gremlin experience has been most interesting and rewarding," Myers said, but "I am now fully committed to John Myers Marketing Consulting." Myers served as Director of Marketing for Gremlin.

Myers has been active in marketing and sales since 1959, serving both large and small companies in the United States and Canada, Mexico, Europe and Japan.

Myers said that he welcomed the opportunity to discuss marketing problems with coin industry businesses. "At John Myers Marketing, we view ourselves as an integral part of your organization—the in-house capability you would have were there a continuing need," he said. "We support you and your interests. We make recommendations supported by evaluations and can make the decision and carry out the program if appropriate."

John Myers Marketing is located in Solana Beach, Cal. Tel. 714/282-3100.

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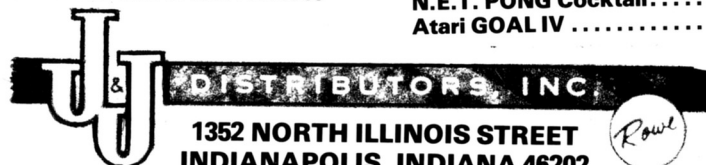
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SEA WOLF

by dick welu



Sea Wolf comes chugging down the assembly line at the Midway plant.

Everybody loves the Sea Wolf. Or at least that was the premise upon which this study was undertaken. Everybody does seem to love the Sea Wolf, foremost among its many admirers, of course, the legions of operators who have assiduously measured the success of this rather mundane appearing machine by the volume of quarter dollar pieces amassed in the interior repository. Or as Maria put it so succinctly, ". . . the ol' DO, RE, Mi." ¹

Did I say "mundane appearing"? Let me clarify that seeming slight. Actually, though I have tried to remain completely objective in my evaluation of the Sea Wolf, I used the term "mundane" only in-so-far as the machine is neither exceptional in design or intent. Submarine games have long been a staple item of commerce in the game business so forcing customers to stoop ingloriously in the manner of the Hunchback of Notre Dame with their posteriors ungracefully exposed to a passing pinch or kick can hardly be considered a great selling point.

Ergo,² since there appears to be no outstanding feature of the aforementioned game, Sea Wolf, notwithstanding the unpredictable tastes of the masses, the sum total

of the external parts of the Sea Wolf³ must combine in such a way as to compose the "almost perfect game." And whereas the industry is perpetually scrambling to find Nirvana with its creations, a thorough, item by item, disassembly of the SW may provide invaluable insight to both the manufacturer, distributor, and operator in the selection of games.

Paradoxically, the most technical and sophisticated apparatus of the SW, the micro-processor unit, can be overlooked. The truth be known, the customer has little knowledge and less concern for what makes a machine operate. An eager hamster pedaling furiously on a treadmill could provide the game's motivation and still satisfy the player. It is not "how" but "what" that holds his interest, or as Professor Corey has so aptly stated, "You can lead a horse to water, but you can't write without lead in your pencil."⁴

What then has made the SW a classic? Let us consider:

The Shape. The basic shape of the SW is a rectangular box, a shape held in common with containers of shoes, oranges, and saltine crackers. Perhaps it is this similarity with the common packages of life that creates a trusting approach within the prospective customer.

The rectangular box poses no threat (unless it is a coffin); rather it is an old friend. Obviously the Midway people counted on this easy response. Besides a round machine would have been difficult to keep from rolling about an arcade room, and a square machine, which has a bad connotation, would have had to measure 7 ft. x 7 ft., wasting yards of space. No, the selection of the rectangular box bordered on near genius.

The Periscope. What's a submarine game without a periscope, right? Believe it or don't, an industry rumor⁵ has it that Midway, attempting to be innovative, tossed around the idea of manufacturing a sub game sans periscope.

Fortunately wiser heads prevailed. But then, in a *coup*⁶ of sorts, a Midway engineer inserted ball bearings at the pivot points of the periscope turning surface—an expensive addition but a crucial contribution to the game's success. For we live in a ball-bearing oriented society today. Where thousands of new products have gone to metal bushings and fibre-glass bearings, the inclusion of ball-bearings in a machine tells the customer one thing—it's got class. When a kid grabs a hold of the SW periscope handles and hears those ball bearings swiveling around he knows he's grabbed *class*.

Also the placement of the torpedo firing button on the periscope handle should be mentioned. It is located on the inside of the handle grip, directly under the right hand thumb—a wise choice for position. A small particular, I realize, but if Midway had placed that button—it could have been the same sized button—on the outer end of the handle, the player would have been required to shoot with his little pinkie, an irritating possibility. Attention to detail paid off. Though some left-handers have grouched about discrimination, they've never been right.

The Step. Little credit has gone to the sliding step at the base of the SW which is a shame because that step has carried its load in contributing to the game's popularity.

What is the first thing you notice upon entering a crowded room? Besides the girls with the nice bazooms? The tall people, right? They stand out like cranes in a pigeon flock. So too the SW in a game room. Due to the step at the bottom (for players 4'3" or under), the SW looms above 90 percent of the other games available. Dumb luck? Hard to believe; my hat is off to the designer of that humble 6" step.

The Color and Artwork. First of all, let me say that aquamarine blue was not very imaginative for a machine with a water motif. I mean, everybody does their sub games in aquamarine blue. Since Midway decided to include a periscope, why didn't they innovate with color. Tomato red would have been different. Anyway, blue worked. Somehow, inexplicably, it worked. I think, on close examination, it was the sea anemone that saved it. It's the only distinctly outstanding sea artifact: right there on the front below the cash door is a big flowery sea anemone. Or maybe it's a cabbage? Who knows for sure? Regardless, I somehow feel this attention given by Midway's artists to plant and animal life sucked in the botany and biology crowd. A shrewd move. Forget all those dandy submarines pictured. Every sub game's had them.

The Name. The name was crucial. Again, industry rumors have it that "Sea Wolf" was not the first choice. "Charlie the Tuna" was. One of Midway's vice-presidents, who shall go nameless, had been impressed by Bally's use of established entertainment stars to promote "Wizard" and "Capt. Fantastic." He pushed, therefore, for a tie-up with a "water-oriented" star. "Lloyd Bridges" seemed like a poor name for a machine. "Flipper" had passed on to that great fishy heaven in the sky some years back. "Moby Dick" was unavailable, unless you were willing to contribute a leg. So it came down to "Charlie the Tuna," who was very commercial. Fortunately for Midway, just when plans were about set, somebody reminded this unnamed vice-president that "Charlie the Tuna" was never chosen because he had no class. The idea was hastily scuttled and "Sea Wolf" surfaced. I understand it was suggested by a night maintenance man who read a lot of Jack London during his coffee breaks.

The Sound. Let's face it. Midway blew the sound reproduction on the SW. Oh, the tonal quality of the torpedo hissing, the sonar ping, the explosion of a hit is fine, but, really who do they think they're kidding with that P.T. boat sound? I have a suspicion that the sound engineers just threw in the resistor here and said, "Let's punt." 7 The sound of the P.T. boat is definitely that of a laugh, not a motor. The fact that people will play a game which purports to be realistic but whose primary target is a laughing boat that sounds like Phyllis Diller—well, perhaps the

comment of one customer getting further change for a dollar typifies the players' anger at such slipshod workmanship: "I'm going to sink that laughing little bastard if it takes every cent I've got."

The Targets. There are three target ships on the SW: freighters, warships, and P.T. boats. Much has been made of the P.T. boat because of its elusiveness. But the freighters and warships should receive their due. First of all, what if they'd been labeled shrimp boats and tramp steamers. The game would have taken on a whole different perspective! Secondly, the slower speeds of these two targets act like a baseball change-up⁸ to the player; and, finally, neither the freighter nor warship laugh at the customer which allows him to walk away with some dignity and no doubt has helped to cover up the sound engineers' deficiency in the case of the P.T. boat.

So that is the anatomy of the Sea Wolf; and I believe its conclusion is crystal clear: when looking for a sure-fire winner of a game it should resemble an upright coffin, contain ball-bearings, not have the firing button under the little finger, use a pull-out⁶ step, paint a cabbage on the front, not use the name "Charlie the Tuna," screw up the sound so that one target laughs, and utilize a change-up.

Don't blame me if that sounds ridiculous; Midway did it and it's a hell of a game!

1 Maria, heroine of *The Sound of Music*, 1966, not hitherto known for contributing to the game industry, an oversight of most scholars.
2 From the Latin, *ergo, ergas, ergat*, intransitive verb meaning to get the picture.

3 I'm getting tired of repeating the name. Henceforth to be referred to as "SW."

4 *Notable Quotes That Don't Mean a Damn Thing.* Houghton, Mifflin, 1958, p. 167.

5 *Rumors, Rumors, What the Heck Can You Believe?* Ali, Muhammed, Viking Press, 1973, p. 42.

6 *coup*—not like chicken coop; according to my Funk & Wagnalls it's from a French word that originally meant a cuff on the ear. Sounds good.

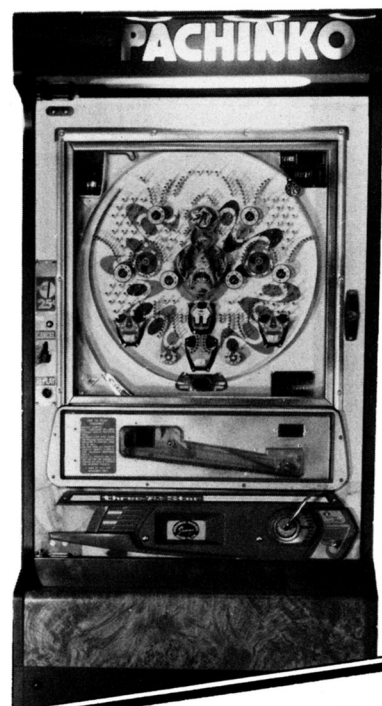
7 Quotation made famous by Vince Lombardi while coaching Green Bay Packers in 1964, Dallas game, 3rd and long.

8 change-up—to wit: a ball delivered at an off-speed to mess up the batter's timing; *Wit and Wisdom of Sandy Koufax.* Koufax, Sandy. Playboy Press, 1973, pp. 22-24.

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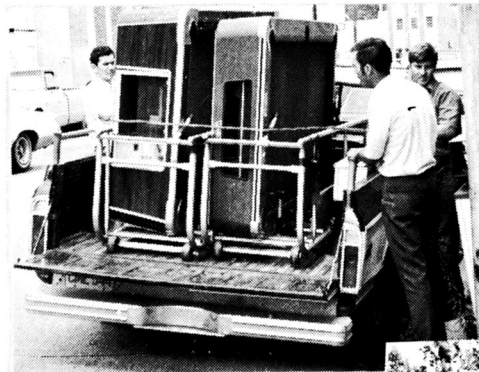
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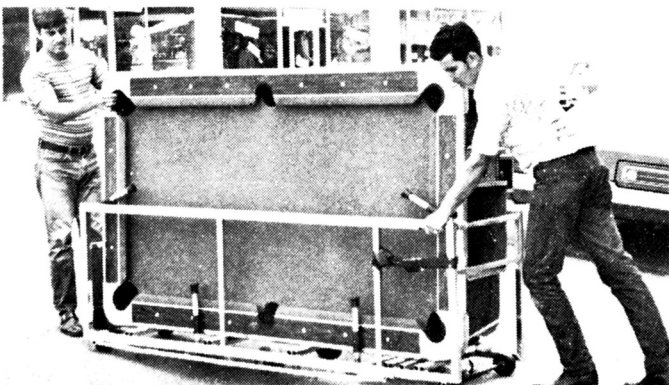
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Shooting The Bird

Midway's newest video game features that elusive desert bird, Road Runner and his assorted group of "what-nots".

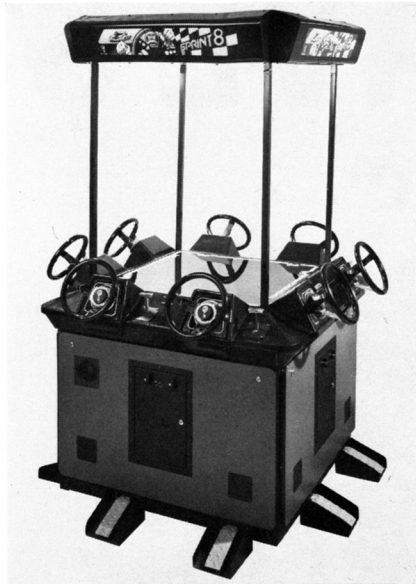
Road Runner is a gun game with electronic sounds to fit the characters and electronic music to coincide with the situation.

The game displays via a shot explosion on the video tube where the gun was aimed. In addition, the targets go to pieces when hit and score from 100 to 500 according to the object hit. There are multiple targets on the playfield at the same time.

Other features for Road Runner are that at the end of each game the player's score, the previous score, and the daily high score are displayed.

Also included is an adjustable timer, five languages, microprocessor logic boards, double 25 cent chutes, 23 in. solid state monitor and a full size rifle.

Cabinet dimensions are 28½ in. (72cm) wide, 38½ in. (98cm) deep and 67 in. (170cm) high.



Up to Eight Can Play New Atari Game

Atari, Inc. has announced an eight player driving game, Sprint 8. In the tradition of Indy 800 with the added challenge and action of Sprint 2, Sprint 8 is a spectacular arcade game with many new features to increase overall appeal and assure reliability.

Up to eight players select one of five tracks for the competition using the track change button. Each player, with a different color car, races at top speeds, skidding around corners, shifting, and crashing into barriers. For fewer than eight players, white computer controlled cars compete and give the added challenge of traffic on the track. A durable 2-speed shift, gas pedal and steering wheel provide fast acceleration and precise control of the cars.

"Indy 800 was introduced in 1975 and is still considered to have extraordinary earnings. The return on investment for Indy 800 set new industry records," says Marshall Caras, director of marketing. "The market demands for a new high attraction eight player driving game are met with Sprint 8."

Sprint 8 will attract even more players with the five tracks flashing in rotation while not in play. Once a coin has been inserted, there is a 10 second count down for the competitors to choose a track and for other players to join in. Each player scores 5 points per lap. The score is displayed in front of each player's position in the same color as his car. The leader's score flashes to add to the excitement and challenge.

Atari has combined the best play features from their top driving games in Sprint 8. Additionally, the built-in self-test program for troubleshooting any potential problems assures maximum income potential. Sprint 8 is engineered for the highest reliability with fewer parts and rugged construction for durability.



Quik Sort Sorts Quik

"Quik Sort" coin sorting trays, from ABC Coin Sorting Mfg. Co., form a fast, compact shaker-sorter system that can separate up to \$50 in mixed coins in 20 seconds. The color-coded device allows operators to separate mixed coins in a quick and simple operation.

An improved set of coin tubes are

available with the system to stack and count pennies through quarters. Each tube has a "Visual Vue" slot to allow detection of slugs, bent and undersized coins by the user. Up to 12 rolls of coins can be counted and packaged per minute using these tubes.

ABC Coin Sorting is located in Plano, Texas.

Video Bowler

Sunbird Corp., a Minneapolis company specializing in electronic games, recently announced the release of their new video game, Super Bowler.

Super Bowler accommodates up to four players, providing them with authentic bowling action and scoring. The ball actually travels across the screen, causing the pins to disappear as it strikes them. A built-in audio system highlights the action on the screen with the sound of the ball being released and traveling down the alley, a gutter ball, pins being hit, pins falling, and the cheers and whistles of the crowd whenever a strike is thrown.

Super Bowler has adjustable volume control, a selectable beer frame display, and a Pro/Amateur switch which allows the players to select their own skill level.

The Sunbird game operates on 100/115 volt AC or 230 volt AC 50/60 HZ. A test switch on the front of the lamp board simplifies on-location circuit checks and lamp replacement. And the unit comes complete with operating and maintenance manual, coin box, remote control, and a one year warranty.

Home Pinball

Wico has announced entry into the growing home entertainment field with the introduction of a new electronic home pinball game, Big Top.

"The game has the scoring, lighting, action and skill shot features found on the commercial games," said Games Division Manager Frank Happ, "but it will cost substantially less. Happ said the game will retail for about \$450 and carries a 90-day limited warranty backed by nation-wide service.

Wico's Big Top features solid-state electronics with digital display score board. Other features of the home flipper include electric ball return, dual chime sounds, automatic ball count, spinning target, three bulls-eye targets, two action kickers and two electrically operated individual flippers.

Cabinet construction is of 1/2 in. and 3/4 in. wood composite with steel legs with levelers. The game's overall dimensions are 63 in. high, 43 1/2 in. long and 20 1/2 in. wide. Shipping weight is 143 pounds.

The game will be manufactured in Wico's 85,000 sq. ft. game division plant in San Marcos, Cal.



Supplement Out

Wico Corp., Niles, Ill., has announced publication of "All New from Wico," a catalog supplement consisting of 16 pages of new items for the amusement and vending industry. Items shown in the supplement are not listed in Wico's 1977 catalog.

Highlight items include a new security item for flipper and cigarette machines, specialty tools for video games, and plastic signs for food machines.



New Flipper Suspenseful

"Bally's Hang Glider is as tricky as the sport for which the game is named," commented Paul Calamari, Bally sales manager, announcing volume delivery this week of the new four-player flipper pinball.

"The trickiness of Hang Glider," Calamari explained, "is based on the interlocking functions of a centrally located kickout hole, a bank of 5 drop targets and the build-up out-hole bonus."

For example, a ball shot into the kickout hole, when adjacent special light is lit, scores special. The light lights when all 5 drop targets are downed for the second time and subsequent times in each ball played. Skilled manipulation of the ball can score several specials with each ball shot.

Outhole specials may also be scored by the ball's crossing left or right out lane rollovers with adjacent special light lit, the lights alternating, left and right, after the bonus score is at the 15,000 top mark. "Here again," Calamari said, "the drop targets and kickout hole are involved."

Although bonus advances 1,000 for ball contact with any of a variety of bonus-advance skill objectives, a major factor of bonus building is the kickout hole, which advances bonus 1,000 for each 'kite' lit under the hole. One 'kite' is lit for each drop target knocked down.

"What happens the first time all 5 drop targets are dropped?" asked Calamari. "Again we have 'Tinkers to Evers to Chance'—targets to kickout hole to extra ball. The first drop of all targets lights the extra ball light under the kickout hole. Then ball in hole lights 'same player shoots again,' qualifying the out ball to return to shooter tip as an extra ball.

"So, throughout the playfield, while numerous scoring objectives are included, the interlocking influence of kickout hole, drop target, and bonus are constantly apparent.

"The only thing not tricky about 'Hang Glider' is collections," Calamari concluded. "Location tests already indicate that 'Hang Glider' will set some new profit records."

TECHNICAL TOPICS

by Robin Minnear

Negative Logic

When first learning about Logic or when first starting to repair logic boards, most people eat dirt when they come across a negative logic situation.

You may come across a weird looking symbol on your schematic or go way off track when applying *Positive Logic* functions to a *Negative Logic* situation. The truth is that the same logic gate will perform a different logic function in a Negative Logic situation.

The reason Negative Logic and Positive Logic are used together is that by their combination, the amount of chips needed to perform a task are usually reduced.

The best way to understand positive/negative logic is to apply them to a couple of common logic gates.

Figure 1 is the truth table and symbol for the Nand gate (7400). According to the truth table, if inputs A and B are high at the same time, the output Y goes from HI to LO. This is the positive logic situation.

It is important to realize that this is the basic "And" function. A and B are high to make the output change. All of this is assuming that the Nand gate is looking for HIs coming in. What if the Nand gate is looking for LOs to come to inputs A and B?

Figure 2 is the symbol for the Nand gate when it is hooked up in a *negative logic* situation. Notice that the zirks are on the inputs instead of the output. It is the same device, same truth table but he is going to do his thing, or function when lows appear on the inputs.

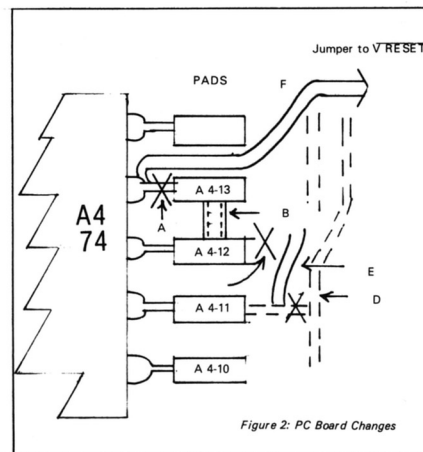
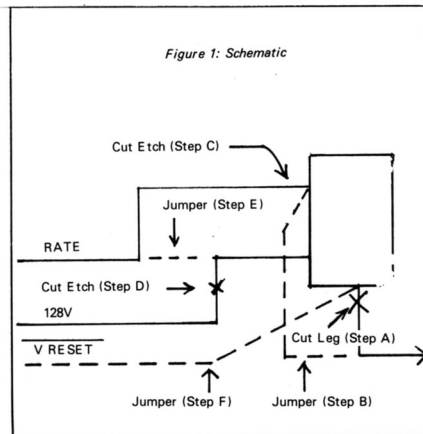
Looking at the truth table in *Figure 2*, if A is low or B is LO, or A and B are low at the same time, the output Y is high. Now we are dealing with a situation where if either A or B are low the output will change. Now we are dealing with the basic OR function.

Figure 3 is the positive logic symbol and truth table for the Nor gate (7402). According to the truth table if A or B is high, the output Y is low. Again, this is the positive logic situation where the Nor gate is looking for HIs on his inputs to do his thing.

Figure 4 is the negative logic symbol for the Nor gate. This time

we'll be concerned with the inputs going LO. According to the truth table in *Figure 3*, if A and B are low at the same time, output Y is HI. No other combinations will produce a HI on the output.

To summarize this mess, "In a negative logic situation, Nand gates act like Nor gates and Nor gates act like Nand gates." Most logic schematics show the negative logic symbols for negative logic situations. Be aware that there are some schematics that only use positive logic symbols.



Conversions: A Letter

Concerning the Trak 10 conversions discussed in the January article and the April "Mailbox": Mr. Randall of Oceanside Amusements solved the disable "Crash" problem one way. Here is another, somewhat simpler method. Add a diode (1N914) between F9-8 and C7-5 so that "Attract" will disable the crash op-amp. (Cathode to F9-8).

This method was devised by our Service Department in the development of the "Grand Prix"—Challenger Customizing Kit for Grand Traks or Trak 10's, sold by O.B.A. Inc., in Dallas.

Another modification (which is incorporated in the Kit) which may be of interest is improved steering for Grand Trak and Trak 10's. This modification improves the sensitivity and "feel" of steering action. Changes at and near I.C. chip A4 are made, and a jumper wire added from A4-13 to a point connected to V RESET which originates at H1-8. (Electrical changes are shown schematically in *Figure 1*. The mechanics of the corresponding PC board changes are shown in *Figure 2*.) The changes can be executed by performing the following sequence of operations:

Step 1. To change "P" from A4-13 to A4-12, perform two operations: Sever, between the chip and the PC board and as near the board as is practical, I.C. chip lead A4-13, then bend the severed lead up and away from chip & board. Jumper between PC board PADS A4-12 and A4-13.

Step 2. To change "Rate" from A4-12 to A4-11, perform three operations: On the back (non-chip side) of the board, cut the etch at A4-12. On the back of the board, cut the etch near A4-11. Add a jumper from A4-11 to the etch which led to A4-12.

Step 3. To connect the now isolated A4-13 to "V RESET" which originates at H1-8, first, check for continuity between H1-8 and B1-11, then perform the final operation: Connect a jumper wire to the uplifted lead A4-13 and to B1-11 (H1-8 or V RESET).

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Nand Gate (7400)



Positive

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

fig 1

If A and B are HI, Y is LO.

Nor Gate (7402)



Positive

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

fig 3

If A or B are HI, Y is LO.

Nand Gate



Negative

If A or B are LO, Y is HI.

fig 2

Nor Gate



Negative

If A and B are LO, Y is HI.

fig 4

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you put in your money (according to how much money you put in) of getting just music or getting video as well. You can see that this opens up a whole new vista of possibilities for coin-operated music.

PLAY METER: What sort of video would you get, do you think?

ROBBINS: It's really too early to discuss that because you've got so many possibilities. It involves the record companies as well. As you know RCA is working on this thing, North American Phillips, others. Which system is going to be the best, we don't know, but whichever it is, I can't see that it cannot be incorporated somehow into a jukebox. Still, there may be technical problems, industry problems; there may be artist problems, something that will make it impractical, even impossible. But I know that there must be something like that because an industry can't stand absolutely still and retain its position.

PLAY METER: Where would you say the phonograph market is now?

ROBBINS: It is on a plateau. It's not going down and it's not going up—it's on a plateau.

PLAY METER: Is that in accordance with your sales figures over the past few years? Do you find phonograph sales have been pretty stable?

ROBBINS: Yes.

PLAY METER: How long do you guys recommend that an operator hold onto a phonograph before he trades it in?

ROBBINS: That's a great question. One of the problems with the jukebox industry is that the phonographs are so damn good, they'll last forever. When I got into this business in 1946, the average operator turned over his phonographs every five years, 20 per cent per year. By 1952 or 1953, it evolved so that the average operator (by our calculations) turned his phonographs over every six and a half years, that is 15 per cent a year. What do you think it is today? I'll tell you one thing: it's not more than six and a half. In fact the replacement rate is closer to five per cent, or one every *twenty* years. At least, that's my opinion. Maybe I'm wrong, but that's my opinion.

PLAY METER: If and when an operator finally does get around to trading in his box, how do you fix a trade-in value on it?

ROBBINS: The Bally Group prints its own trade-in guide. And we all follow that, more or less. It's not a bible, of course, it's a guide. Normally a jukebox will lose value completely after ten years. It will take the biggest bump, of course, the first year, probably 20-25 per cent. After that it would not depreciate over 10 per cent a year.

PLAY METER: What do you see in the future for the flipper market?

ROBBINS: Here you are going through a very, very important historical phase in the industry. The flipper manufacturer is phasing from electro-mechanical to electronic. There is no question that electronic is where it is going; the only question is, "How long will it take?" As you probably know, Evel Knievel, which is the next Bally game, will be an all electronic run. The success of Freedom and now Night Rider is so phenomenal in the electronic

state that there can be no doubt any more that it's going that way. The question is: how long will it take the others to do it?

PLAY METER: Do you see that change as a price salvation? Will it put a lid on flipper prices?

ROBBINS: I'm not sure about that.

PLAY METER: Do you see prices levelling off any time in the near future?

ROBBINS: Well, they'd better level off. But after all, there's always the law of supply and demand and there's always the point of diminishing returns. And when the price of equipment gets too high in relation to his income, the operator stops buying, and the prices have to stop going up.

PLAY METER: What about leasing equipment? Is that a viable alternative?

ROBBINS: Our leasing business has been very good; it continues to grow, although not as fast as we would like it to—because of the prices of equipment. Games are very, very expensive to buy but also to lease. Still, more and more operators have found that you do not have to be completely a buyer or completely a leasor. There is room for both, especially for some leasing, in almost every operation. I have rarely found an operation where some leasing is not advisable or applicable.

PLAY METER: Not every distributor has a lease program. How does yours work?

ROBBINS: You have to have a tremendous financial foundation to be able to lease—it takes a lot of money. But, one of the great ways an operator can use leasing is if he's not sure about buying a piece of equipment. We have all kinds of options. An operator can take a piece on lease, and, while he's obligated for 26 weeks only, at any time he can buy it. And if he buys it in the first thirty days—say he's got it out three or four weeks and decides, "Hey, this is a good game"—all of his leasing charges apply to the purchase: it doesn't cost him a dime to lease it. He gets a first hand look at the machine. And if it turns out only fair to middlin', so he's got it on lease for six months; then he can return it. Pretty hard to lose with that kind of deal. It's an option and a lot of guys should take advantage of it.

PLAY METER: How about the used games market? How is that holding up?

ROBBINS: You have to differentiate again. The pinball market up until now has been very predictable, very stable, very fine and that has been a great help to the operator—he knows that he can get a good return on his used equipment. There seems to be an insatiable demand for used pins out there.

The arcade and novelty market on the other hand is probably the most dangerous resale market in the whole industry, because it is completely unpredictable. In some cases, on the super games, you can predict it: you are going to get a good return. But there are so many games that have come out that have depreciated, 50 per cent, 60 per cent, 70 per cent in a year, even 75 per cent in the first six months, one hundred per cent in a year. It's unbelievable! Any used arcade game, video whatever, can be terribly dangerous.

PLAY METER: Do you find that you lose much money on these things?

ROBBINS: Yes, we do. Everybody got carried away during the video boom and they started selling and leasing like mad. And for every game that was a great success, with longevity, there were five that were just mediocre. And there never seemed to develop the secondary market that there is with other equipment. There's always been a good used market for pins here, and overseas too. But that first guy that would buy the new video game far, far outnumbered the guy who wouldn't buy the new one but might buy the used one.

PLAY METER: As distributor, you're caught in the middle between factory and operator, it seems. How do you view your role?

ROBBINS: The distributor has to be not only the supplier to the operator and an intelligent supplier, he must be a guide to the operators in his area. There is nobody else they can look to to guide them as to the right things to do, the way to operate, the right equipment to buy, and so forth. But they've got to have a guide and the distributor has a moral responsibility to act in this role, and if he doesn't do it, he is going to hurt the operators in his area, and he's going to hurt his own chances of success.

PLAY METER: How do you see your role in relationship to the manufacturers?

ROBBINS: You do have a responsibility to the manufacturers to do the best possible sales job you can for him, within the framework of intelligent marketing.

PLAY METER: Do you find much co-operation between manufacturer and distributor?

ROBBINS: In most cases, yes. You'll find that most

manufacturers today have incoming WATS lines. They have people assigned for service to the distributor—and directly to the operator too—and they're much more aware of the need for that service. The successful manufacturers today are in most cases very cooperative and very responsive. but there are manufacturers that are out of business or in trouble now because they have constantly refused to accept troubles from the field and do something about them, so that the operators finally decided—it seems in concert—that they were not going to buy any more of that equipment because the maker wouldn't stand behind it.

PLAY METER: Does today's distributor face any one problem that stands out from all the others?

ROBBINS: Certainly *one* of the most dangerous aspects today from the distributor standpoint, and from the manufacturer standpoint as well—and I think the operator is aware of it—is the tremendous change in credit policy. Years ago it was easy credit from the distributor to the operator. And the operator was pretty loose himself, giving money out etc. Today our terms with the manufacturer are ultra, ultra constrictive. It's thirty days or less. Therefore we cannot give long term credit to the operator. And he must pay us. This also means that the operator can't give easy credit or easy loans to his locations—he can't do it. It's got to be tightened up all the way down the line, because it's going to get still tighter. And the squeeze is going to be on that distributor or that operator who is not a good businessman, who doesn't put his house in order so that he can stay with the trend.

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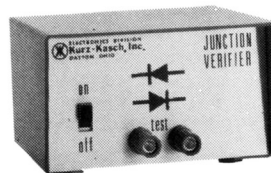
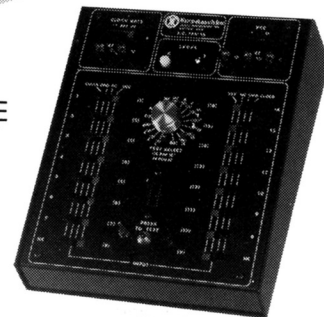
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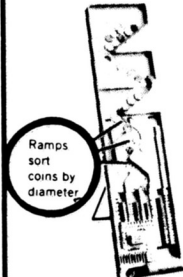
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