

The World's Leading Amusement Machine Trade Publication

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# PLAY METER

Volume 7, Number 5

March 15, 1981



## Cocktail Table Issue

ATE/London Show Coverage  
Electronics Course Introduced  
Amusement Operators Expo Preview



# Midway Wins U.S. International Trade Commission 'Recommended Determination'

On January 9, 1981, an administrative law judge of the U.S. International Trade Commission issued a 'Recommended Determination' favorable to MIDWAY on its complaint which was based on MIDWAY'S exclusive rights in the GALAXIAN™ game in the U.S.A. The complaint sought to obtain an order to exclude certain imported video games and game kits entry into the United States and also sought cease and desist orders against a number of individual companies infringing on these rights.

The ITC initiated its investigation on June 20, 1980 (No. 337-TA-87) and after extensive evidentiary hearings were held in Washington, D.C., with actual games in evidence and depositions were taken of numerous witnesses who had been subpoenaed in various cities throughout the country, the judge found basically that:

1. The word GALAXIAN™ as well as the GALAXIAN™ logo are valid trade marks of MIDWAY.
2. The GALAXIAN™ video game is copyrightable subject matter.
3. MIDWAY owns the United States copyrights in the GALAXIAN™ video game.
4. All of the accused games infringed MIDWAY'S copyrights in the GALAXIAN™ game.
5. Those games which had the GALAXIAN™ or similar name or logo also infringed MIDWAY'S trade mark rights.
6. All the respondents against whom evidence of actual importation or sale existed and who had not entered into an approved settlement agreement violated Section 337 of the U.S. Tariff Act of 1939.

MIDWAY intends to continue its policy of actively enforcing its exclusive rights in GALAXIAN™ and its other popular games introduced since GALAXIAN™. These games include PAC-MAN™, RALLY-X™, SPACE ENCOUNTERS™, and SPACE ZAP™ as well as its newest game, GORF™.



**MIDWAY MFG. CO.**  
A BALLY COMPANY  
*Franklin Park, Illinois 60131*



# PLAY METER

Vol. 7, No.5  
March 15, 1981

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# PLAY METER

## **Hotel Guide to New Orleans** ..... 8

For the Amusement Operators Expo attendee, here is a listing of some comparative lodging rates and services and sights and tastes offered in "The City that Care Forgot."

## **The 1981 AOE Seminars** ..... 22

From soup to nuts, the bill of fare is wide and handsome in the March 12-14 sessions. Here are details of the seminar offerings in the Amusement Operators Expo in New Orleans.

## **Cocktail Tables: Packaging the Games with Locations in Mind** ..... 33

A lesson is at hand for the coin-op industry: good things come in many different sizes. The cocktail table game size can be a wedge in the door of unconquered locations—many of which have shunned the larger models in the past and which are reassessing coin-op revenue attractions right now. Here are two **PLAY METER** reports. Read well!

## **Video and Pinball Cocktails: Two Perspectives** ..... 38

Manufacturers are making a renewed rally behind cocktail tables, reports Tony Licata. And pinball critic Roger Sharpe speculates on the future of pinball in the knee-high mode.

## **Horizontal Statement Analysis** ..... 66

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## **Cover Credit:**

Special thanks to Nichibutsu U.S.A. Co., Ltd. for the cover photograph of a cocktail table cafe, which first appeared in Nichibutsu Japan's corporate brochure this year.



# From the Editor

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Without a doubt, the incomparable success of Play Meter over the past six years can be attributed to our continuing commitment to the needs of today's operators. Play Meter, in fact, revolutionized this industry's trade press. We brought to this industry a new form of trade journalism that was open, honest, and direct. For the first time, amusement operators had a publication they could truly call their own. Dedicated exclusively to the coin-op amusement field, Play Meter represented a dramatic departure from the traditional trade press.

Instead of filling our pages with meaningless record charts, vending machine news, and hyped up stories about big manufacturers and distributors in exchange for advertising dollars, we decided to focus our editorial attention on the most important person of all—the operator. Our reasoning was pure and simple. An educated operator is a profitable operator. If the operator makes money, everybody else up the line is going to make money. Our goal has, therefore, been to provide the operator with the information he needs to stay on top of today's ever-changing climate.

In keeping with our goal of enlightening operators by disseminating information, we have gone one step further and instituted a revolutionary trade show for this industry. Dedicated exclusively to today's operator, the Amusement Operators Expo was conceived first and foremost to fulfill the needs of American amusement operators. Just as Play Meter is an operator's magazine, so too is the Amusement Operators Expo an operator's convention.

By popular demand, this year's AOE will again take place here in New Orleans on March 12-14. It will again be held on a Thursday, Friday, and Saturday, leaving Sunday open for sightseeing here in New Orleans or for traveling back home. Among the improvements slated for this year's show are an expanded seminar program that will not conflict with the exhibit hours, lower registration fees for seminar sessions with free entry into the exhibit area, a move to a more elaborate facility—the lush Hyatt Regency Hotel, and the introduction of two free industry-wide seminars.

In all, thirty-three different seminar sessions are

scheduled which range from business management to technical repair and everything in between. This year's faculty will include nationally recognized experts in finances, legal affairs, management, taxes, marketing, and service. A special free "early bird" session will be held the evening before AOE officially opens. Heading up this special session will be Gary Stern of Stern Electronics, Charles Paul, V.P. and general counsel of Atari, and noted industry attorney Rufus King. This very important general session will focus in on the various legal problems facing the industry and suggested ways in which they should be handled.

This year's seminar format will allow for ample time to view the exhibit area without having to fight your way through to the latest equipment, products, and services that interest you the most. The exhibit floor will not be crowded with manufacturer/exhibit personnel, children, and family members, or hoards of overseas buyers. The AOE is intended for the serious minded operators of America. It is not a social gathering for manufacturers and distributors. It exists solely for the purpose of gathering operators together from all over the United States in a sincere effort to promote profitability at the operator level.

As you already know, from those who attended last year, the AOE provided the forum for ops to openly discuss mutual problems and exchange possible solutions. This interaction between ops, many attendees pointed out, was the most rewarding aspect of the entire seminar program. There is probably no better evidence of this than the fact that 98 percent of those who attended last year have said they will return this year.

That's not hype. That's the straight word from ops. Like yourself.

Need we say more?



Ralph C. Lally II  
Editor and Publisher



## EDITORIAL:

# The copyright spiderweb

Now then, what was it the spider said to the fly in that fable?

Something about "Welcome to my parlor"?

Jukebox operators are feeling a whole lot like that fly right now, ever since they were led by the copyright spiders into the webbed parlor of governmental bureaucracy.

You're supposed to expect unbiased and even-handed treatment at the hands of governmental agencies. But jukebox operators are slowly starting to realize that's not necessarily the case. For it seems the non-profit special interests groups (in the jukebox operators' case, the performing rights societies) have too much influence over the machinations of these bodies.

Take for instance a tribute this past fall by the Nashville Songwriters Association International (NSAI). NSAI presented its seventh annual President's Award to Barbara Ringer, the former U.S. Register of Copyrights in Washington, D.C., for being the individual "who has personally contributed the most to further the aims and welfare of the songwriters this year."

Ed Cramer, president of BMI, one of the major performing rights societies, was on hand for the presentation. He called Ringer "a true friend of the songwriter and a staunch defender of copyright. She is universally recognized as the principal architect of the new copyright law which has substantially extended recognition of the rights of copyright holders."

Ringer, in accepting the tribute, stated, "There is no group of creators today that means more to American culture than you (songwriters) do."

Perhaps Ringer can be forgiven for her effusiveness since, after all, the award she was receiving was coming from a songwriters association. Obviously, there's something amiss with any such sweeping statement that would seem to elevate the cultural contributions of creators of songs (that oftentimes don't last much longer than a sixty-second commercial) above the cultural contributions of novelists, poets, playwrights, artists, sculptors, and other creators.

But the award does point out the patronizing familiarity of special interests groups, such as BMI, and governmental bureaucrats, who in their assigned tasks are not supposed to be representing any one side on any one issue.

It's been obvious to everyone closely concerned with the compulsory jukebox copyright law, for instance, that the members of the Copyright Royalty Tribunal, another government agency, are hardly unbiased. Play Meter has documented several instances where CRT members have allowed their prejudices to show through. Much of it is now part of public record, from the testimony at the various CRT proceedings. It's something that, for the most part, both sides have chosen to ignore. But past associations and close kinships between CRT members and the performing rights societies cannot be ignored. Instead, they cast a cloud of doubt over the fairness these bureaucrats can show in any issue that closely affects a side they are friendly with.

The payoff for that friendship came December 10, when the CRT decided to raise the per-jukebox fee from

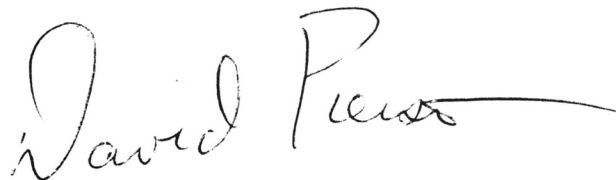
\$8 per jukebox to \$25 per jukebox in 1982—an increase of more than 300 percent. Then they will double that fee to \$50 in 1984. And three years later, they'll raise it again, according to an inflation index.

The jukebox operators' national association, the AMOA, has appealed the ruling, of course, saying the rate is too high. But ASCAP, one of the performing rights societies, though it has already said it was pleased with the rate adjustments made by the CRT, is also appealing the CRT decision, saying it is too low.

Why are they doing that? Look at it this way: What would you think if you were the judge at such an appeal, and one side came in saying the rate is too high, and the other side came in saying the rate is too low? The reaction will be that apparently the rate is just right.

Now operators can continue their fight, haggling over the price of music, or else they can start a grassroots political movement to get a new law, something which has been needed from the beginning. From the mood of the electorate this past November, the timing is good for such political action. Special interests groups, like the performing rights societies, have lost a lot of the liberal support which has given them a free hand. The mood is to lessen government's interplay with private industry, not to expand it.

But operators are going to have to get politically active to take advantage of that sentiment. Otherwise, they had better get used to getting all tangled up in that bureaucratic web that is the spider's parlor.



**David Pierson**  
Editorial Director



*Patsy Bruce of NSAI and Ed Cramer of BMI offer tribute to governmental employee, Barbara Ringer, right. Can bureaucrats fraternize with special interests groups and still remain objective?*



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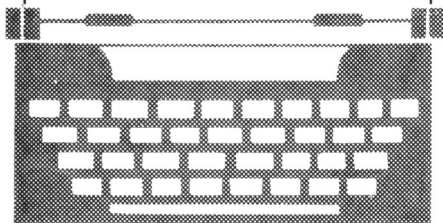
viding the proper Token is selected, Coin Mechs can be set to eliminate slugging completely.

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## Mailbox . . . .



### Not Las Vegas

Exidy joins the many other manufacturers who are concerned about the 1982 site selection of the AMOA Show and concur that Las Vegas would not be a desirable choice. The idea of alternating the location between the major game manufacturing cities (i.e., Chicago, San Diego, Sunnyvale) is an excellent one, and we would support it strongly. If that is not plausible, we hope that every effort would be made to keep the show in Chicago, the unspoken "home" of the AMOA.

**H.R. "Pete" Kauffman**  
President  
Exidy, Inc.

### Chicago is 'home'

Undoubtedly, Chicago is the home of the AMOA, and although it adds additional expense to Centuri as a southern manufacturer, I believe Chicago should remain the location.

The current convention site of this show is absolutely inadequate, and I sincerely hope that (the AMOA) will take action to correct this long-term problem even if it means changing the show date to the spring season, which is equally suitable to our industry.

**Edward D. Miller**  
President  
Centuri, Inc.

[Editor's Note: These two letters were both addressed to the attention of Norman Pink, the new president of the AMOA. In both cases, photocopies of the letters were made and sent to over 20 other parties, including the trade press, for

widespread publication. *PLAY METER* has excerpted the relevant material.]

### Liberal tilts

A recent visit to several arcades in shopping malls and other locations has prompted me to write this letter.

I played several machines, tilted most of them (more than once) and walked out.

One thing you can't do with a video game is shake it. This is a definite advantage for the pinball machine, but operators are not taking advantage of it. Instead, the tilts get set so the least little push will tilt the machine.

As an operator, I set my tilts very liberal (the pendulum is above the ring. A player won't tilt any of the machines unless he really gets abusive with the machine or lifts it off the ground.

I think Williams had the right idea

when they added the "No. of tilts" feature into their games.

With video as strong as it is, pinball needs to utilize all of its advantages.

Let's loosen up those tilts!

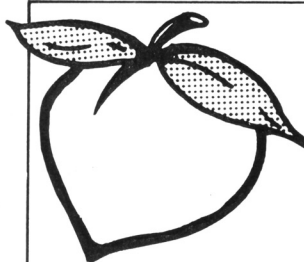
F.L.

Matawan, N.J.

### Late, but worth wait

[Editor's Note: We have had numerous telephone calls and letters from subscribers asking why the January 15 issue was so late. Regrettably, the issue, which went to press on time, was beset by numerous problems, including a press breakdown and a faulty printing that would have had all the pages out of sequence. This forced a necessary delay while the magazine was reprinted.

We were embarrassed by the delay and hopefully have gained assurances and have taken precautions to insure this doesn't happen again.]



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AOE activities will be centered in the Hyatt Regency adjoining the Superdome, which is prominent in this sky view of the city.

# Guide to a New Orleans visit

Possibly the most perfect setting this side of Paris for a gathering of persons in an amusements industry, New Orleans lays fair claim to her title: "The City Care Forgot."

During the Amusement Operators Expo in New Orleans, Louisiana, March 12-14, visitors will have little problem of what to do with their time left after show hours—except the hard choice between the feast items of fine cuisine, varied sights of the surroundings, down-home jazz, and much more.

One port of call only should not be missed by the first-time visitor: the French Quarter, or Vieux Carre, as it is still called. Though it may seem more influenced by the Spanish than the French, because the old quarter was ravaged by fire and rebuilt during a time when the Spanish governed the city—it is the centerpiece of today's multi-cultural New Orleans. Within its more than 40 square blocks are the elegant and the tawdry, saints and sinners (or fair representations of both). The Quarter is seen to best advantage by a walking tour, or by relaxing in a horse-drawn carriage tour that is available day or night.

Within the old quarter and near Canal Street is the Visitor's Information Center, 334 Royal Street, in the Old Bank of Louisiana, built in 1826 and once the city's financial hub. There one can load up on maps, reference guides, and current data on the Crescent City. There is a complimentary cup of coffee (a brew which is another singular treat of New Orleans), and outside tables invite watching people stroll Royal Street, which is noted for its shops dealing in antique items of numerous origins.

## Lodging

To get to that point—and to the Amusement Operators Expo, from which we were taking a breather with our walking tour—you will, of course, want to have made room accommodations. Of lodging, there is also a great variety in the city and its outlying area.

Following is a guide to some of the many hotels available, both in the central district and on routes convenient to it and to New Orleans International Airport. From the outlying locations, a cab fare of

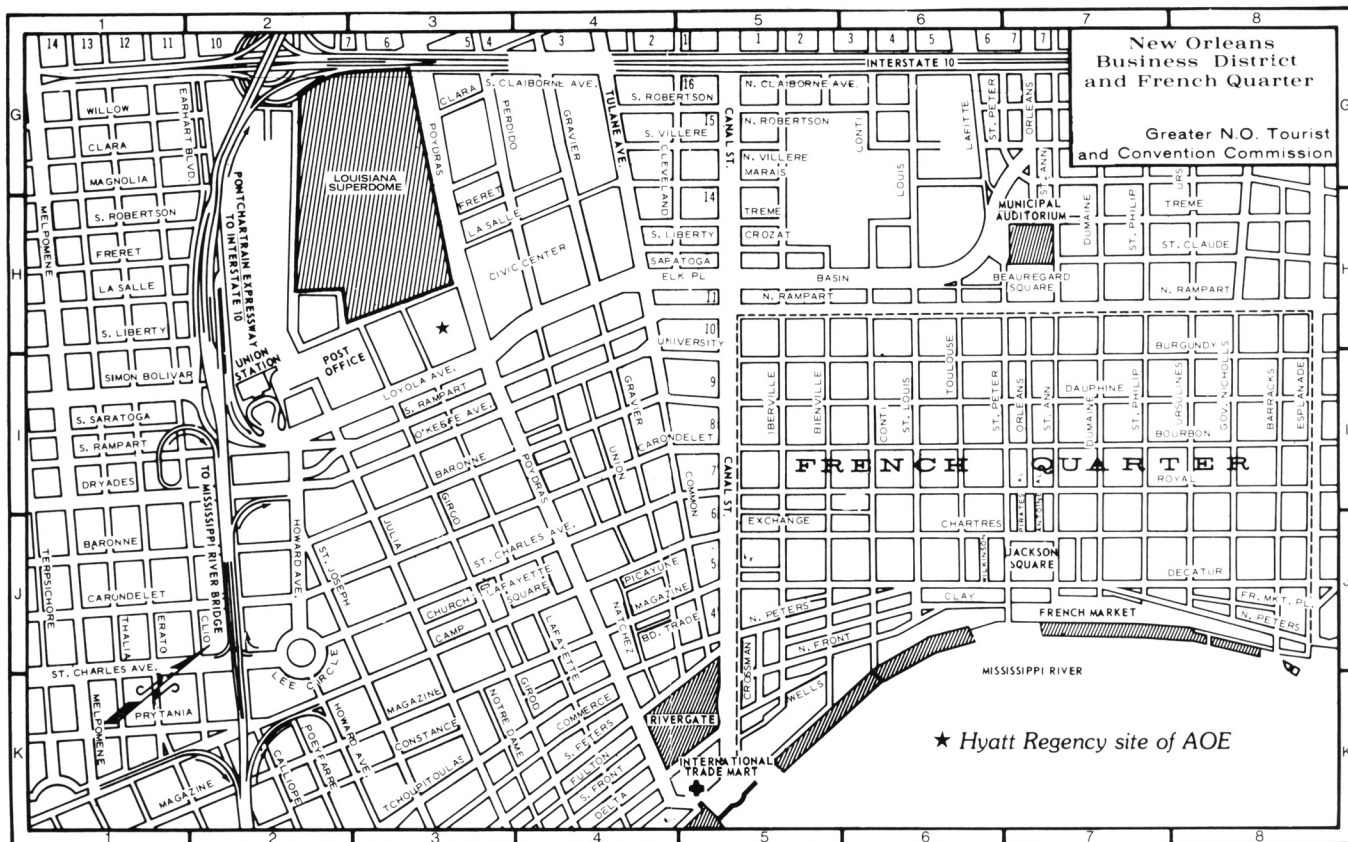
about \$10 will take the visitor into the business district and the Hyatt Regency location of the show—about 30 minutes car travel.

Based on information from the local Tourist and Convention Commission, room prices are rated here in terms of an average price double: *moderate* (\$25 to \$45), *deluxe* (\$45 to \$65), and *luxury* (\$65 and over). Prices are subject to change, and the visitor will want to phone the hotel in advance. Commercial rates are noted when offered, as are family plan arrangements. For the discount of a commercial or businessman's rate: apply on making reservation for a "corporate number" that will be accepted at the desk on checking in.

First, the luxury pads:

Fairmont Hotel, University Place, a few blocks from the show site, commercial rates; phone 800/527-4727, or locally, 529-7111. Top night club entertainment in three settings.

Le Pavillon Hotel, Baronne and Poydras streets, near AOE show site, commercial rates; old world elegance; phone 800/535-9095, or locally, 581-3111.



New Orleans Marriott Hotel, 555 Canal Street, edge of the Quarter; family plan and commercial rates; 41st floor restaurant overlooks the city; phone 504/581-1000.

The Ponchartrain Hotel, 2031 St. Charles Avenue, honored for local-flavor cuisine in the Garden District; phone 800/323-7500; locally, 524-0581.

The Royal Orleans Hotel, Royal and St. Louis Streets, family plan; acclaimed beef and wines in The Rib Room; French Quarter ambiance; phone 800/223-5757; locally, 529-5333.

Royal Sonesta Hotel, 300 Bourbon Street, four dining accommodations feature the Greenhouse Cafe, a setting of tropical plants overlooking the hotel patio; phone 504/586-0300. Package and special commercial rates.

In the old quarter, you can hear the jazz sound of "the saints marching in." You may also choose

one of these French Quarter hotels: Saint Ann, 717 Conti Street, deluxe rates; Creole Patio dining; phone 504/581-1881.

St. Louis Hotel, 730 Bienville Street, deluxe rates; LePetit Restaurant; phone 504/581-7300.

St. Peter Guest House, 1005 St. Peter Street, moderate rates, near north edge of French Quarter (Rampart Street); phone 800/535-7815, locally, 324-9323.

A pair of Garden District dwellings:

St. Charles Hotel, deluxe rates, 2203 St. Charles Avenue; Gallagher's Steak House; phone 504/529-4261.

St. Charles Inn, 3636 St. Charles Avenue, deluxe rates; phone 504/899-8888.

At the 1200-room Hyatt Regency, site of the show, the rate category is luxury and the costs for accommodations via reservation with the rooms blocked for the AOE range from \$56

to \$80. Call toll-free: 800/228-9000, or locally, 504/561-1234 both for reservations and cancellations. Top of the Dome Restaurant revolves aloft, overlooking the Superdome and downtown terrain. Languages spoken include Spanish, French, German, Italian, Portuguese, and Chinese, and sign language will be recognized.

Hotels in the deluxe rate range include:

Bourbon Orleans, 717 Orleans in the Quarter at Bourbon Street; phone 800/228-2828, or locally, 504/523-5251.

Holiday Inn/Royal Street, 124 Royal Street; phone 800/238-5400 or locally, 529-7211.

The De La Poste Motor Hotel, 316 Chartes Street in the old quarter; family plan and commercial rates; phone 504/581-1200.

Downtown Howard Johnsons, 330 Loyola Avenue, nearest to the Hyatt location and the AOE show;

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family plan; phone 800/535-7830; locally, 581-1600.

Fountain Bay Club Hotel, 4040 Tulane Avenue (a main approach and near downtown), family plan; phone 800/327-3384; locally, 486-6111.

International Hotel, 300 Canal Street near the Rivergate Exhibition Center, wine and food in the New Orleans and Continental traditions, family plan and commercial rates available; phone 800/535-7783; locally, 581-1300.

Monteleone Hotel, 214 Royal Street; family plan and commercial rates available; phone 800/535-9595; locally, 523-3341.

New Orleans Airport Hilton Inn, 901 Airline Highway, family plan; phone 800/452-8702; locally, 721-3471.

Travelodge/Downtown, 1630 Canal Street, easy distance to the show site; family plan and commercial rates; phone 800/255-3050.

The Warwick Hotel, 1315 Gravier Street, family plan and commercial rates, close to the Hyatt Regency site; phone 800/535-9141; locally, 586-0100.

Room accommodations at moderate rates include these inns:

Best Western Gateway Hotel, 2261 N. Causeway Blvd. (a location

approximately halfway between New Orleans Airport and downtown), commercial rates, courtesy transportation on a schedule to airport and downtown; phone 800/528-1234; locally, 833-8211.

Sheraton Inn/N.O. International Airport Hotel, 2150 Veterans Blvd., in near proximity to the airport; family plan and commercial; phone 800/325-3535; locally, 467-3111.

Ramada Inn Airport Hotel, 1021 Airline Highway; family plan and commercial; south of the air field on main approach to the city, phone 800/228-2828; locally, 721-6211.

Provincial Motor Hotel, 1024 Chartes Street, near the French Market; family plan; phone 504/581-4995.

Quality Inn Midtown, 3900 Tulane Avenue; has handicapped facilities; phone 504/486-5541.

Scottish Inns: 4861 Chef Menteur Highway, for those coming from the east by car, and 5733 Airline Highway in the airport direction; family plan; phone 800/251-1962; locally, 283-1531 or 733-1550.

Travel Lodge East Motel, 5035 Chef Menteur Highway; family plan and commercial; phone 504/949-4421.

Travel Lodge/Airport, 2240 Veterans Blvd.; phone 800/255-3050; locally, 469-7341.

Also listing moderate rates:

Nine-O-Five Royal Hotel, 905 Royal Street, 14 rooms; phone 504/523-4068.

Old Town Villa Guest House, 616 Ursuline Street, also French Quarter; family plan, 24 rooms; phone 504/522-1793.

Olivier House Hotel, 828 Toulouse Street, easy distance of show site; family plan, 40 rooms; phone 504/525-8456.

Ambassador Hotel, 3800 Tulane Avenue, 125 rooms; phone 504/488-2661.

Brent House Hotel, 1512 Jefferson Highway (approach from west to downtown), phone 504/835-5411.

Landmark Motor Hotel, 2601 Severn Avenue, in Metairie, lakeside section west of Causeway; commercial rates; phone 800/535-8840; locally, 888-9500.

Rodeway Inn Downtown, 1725 Tulane Avenue, phone 504/529-5411.

Vieux Carre Motor Lodge Hotel, 920 N. Rampart Street; family plan and commercial rate, 12 blocks from show site; phone 504/524-0461.

Also, six or more trailer sites and campgrounds including KOAs are convenient to the city.

For more information, contact the lodging sites or call the Greater New Orleans Tourist and Convention Commission offices at 504/566-5031.

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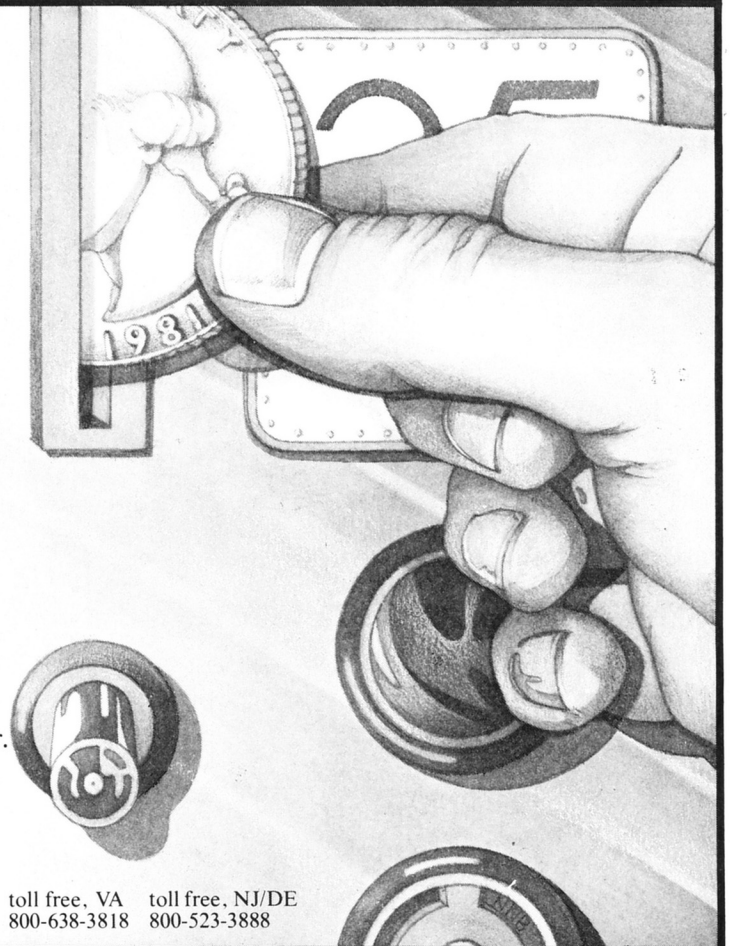
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- Millie McCarthy and a panel of industry leaders will "Tell It Like It Is" in the Amusement Industry and how to proceed in a time of uncertain economics.
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CASTLE





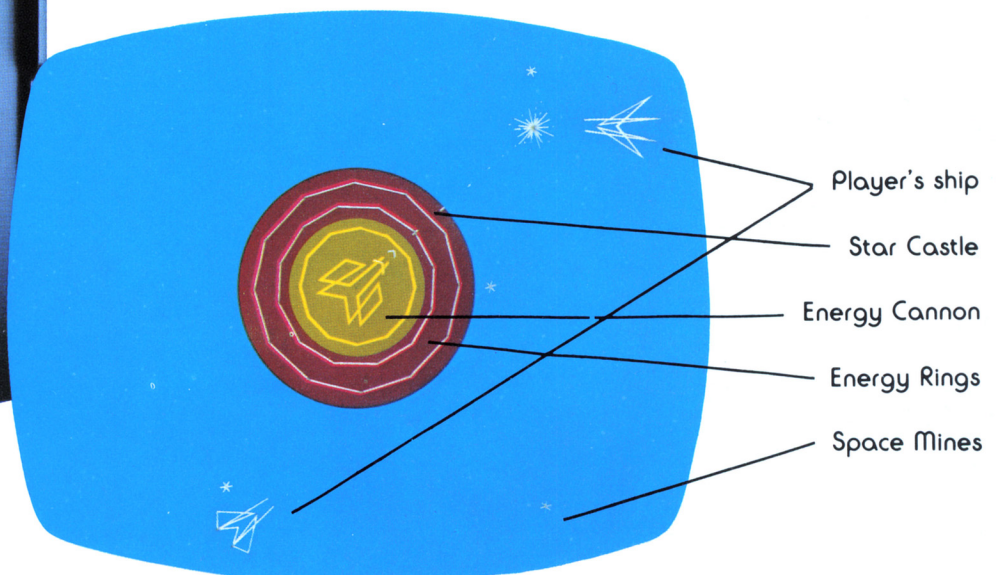
# STAR CASTLE

## FEATURES

- Unprecedented realism with the patented Vectorbeam™ monitors
- Automatic progressive levels of difficulty give players increasing challenge as their score increases
- New cabinet design for fast, efficient maintenance
- Full 90 day warranty on major components

## HOW TO PLAY

- Score points by shooting the Energy Rings and Star Castle
- Avoid the Space Mines that home in on you
- Shooting holes in the Energy Rings gives you shots at the Star Castle
- Shooting the Star Castle gives bonus points and an extra ship
- Watch out! The Energy Cannon is always aimed at you



### Dimensions

Boxed: 75" H 33" D 29" W

Unboxed: 70" H 30" D 26½" W

Weight (Boxed): 280 lbs.

**CINEMATRONICS** INC.

1466 Pioneer Way



**COSMIC SERIES**

**UNIVERSAL**

# SPACE PANIC



**Shoot down the assaulting  
space monsters into  
the black hole !!**

EXPANDS THE WORLD OF PLAY  
**UNIVERSAL**

San Francisco/London/Taiwan  
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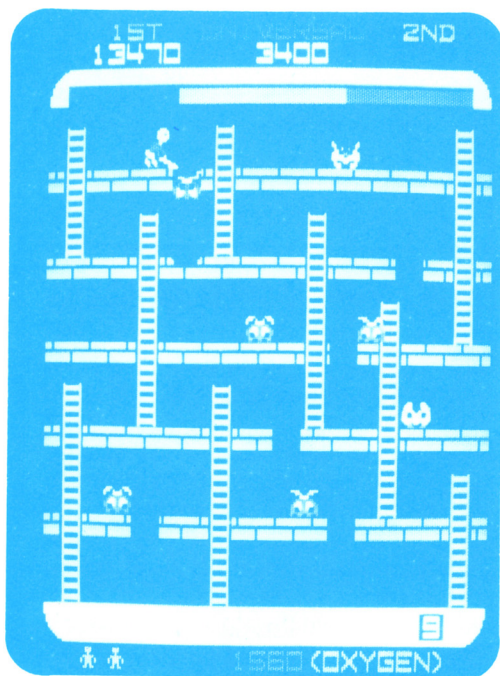


**COSMIC  
SERIES**

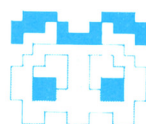
# UNIVERSAL SPACE PANIC

## HOW TO PLAY

- ★ Dig holes by operating the man. When a space monster has fallen into a hole, fill it up before the space monster creeps out of it, and you are awarded points.
- ★ The man can escape by jumping down through the hole he has dug to the next lower floor.
- ★ When oxygen is rarefied, a warning buzzer sounds and the man's movement slows down. When oxygen is reduced to zero, he dies.
- ★ If oxygen has not been reduced to zero even when all the space monsters on the screen have been destroyed, you are awarded corresponding bonus points.
- ★ The highest scorer can register his name on the screen.



## SCORE



**MONSTER** ..... 100~800 PTS



**BOSS** ..... 300~1,200 PTS



**DON** ..... 800~2,000 PTS

## SPECIFICATIONS

[Table type] >

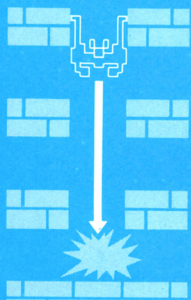
550 m/m (D) AC 100V/115V/230V  
842 m/m (W) 50/60Hz  
650~850 m/m (H) 140W  
▽ 95-1859

[Upright type]

800 m/m (D) AC 100V/115V/230V  
640 m/m (W) 50/60Hz  
1750 m/m (H) 180W  
▽ 95-1653

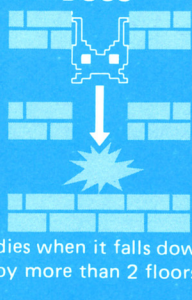
## HOW TO SCORE POINTS

### DON



dies when it falls down by more than 3 floors.

### BOSS

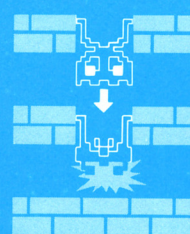


dies when it falls down by more than 2 floors.

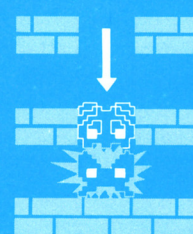
### MONSTER



dies when it falls down by more than 1 floor.



**[Die together]**  
When more than 2 monsters have fallen into the upright holes.



**[Falls down onto the other's head]**  
when it falls down onto the head of a monster, etc. they are both destroyed.

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## Coinman of the Month

# Sol Tabb

---

*Sol Tabb, a 40-year veteran in the business, is pioneering a new wave in the coin-op amusement industry—the operation of video cocktail tables. Operating over most of the Florida area, Sol has found the video cocktail table to be an excellent way to open up new and high-traffic locations to games.*

*He's found location owners who were down on the idea of games often like the idea of a game that can double as a table. He also found that because of the peculiar configuration of the cocktail table, he is able to put more cocktail tables into a location profitably than he could with uprights. The result: higher collections per location, something which makes both the operator and the location owner happy.*

*A subject that always comes up with regard to multiple-machine locations is the "cannibalism" effect, a much dreaded over-supply of machines to a location where the machines end up competing against one another for the same amount of quarters. The operator has to make sure he isn't just putting more machines into the location to collect the same amount of quarters. But Sol Tabb points out that the average location will accommodate anywhere from four to six table machines without cannibalizing. This is a much higher ratio than uprights, which average out at slightly over two machines per location. Sol continues to point out that with such a high number of cocktail tables in a location*

*he has seen a higher collection per location than he could have hoped for with uprights.*

*Sol started in the business in 1940 in Brooklyn, New York with Hy Jaffee to form Hysol Music, a route they bought from an industry friend, Babe Kaufman. In 1957 Sol left the Brooklyn area for Florida where he joined up with Morris Marder to form Martab Vending, a company which was based in Miami. Together, Sol and Morris assembled what was to become one of the largest companies in Florida at that time. After selling out his interest in that company, he started Sol Tabb, Inc. He began building up around the state—intensifying his efforts in Miami, West Palm Beach, Ocala, Orlando, Sarasota, Fort Meyers, Gainesville, and elsewhere. The result is that Sol Tabb, Inc. has blossomed into four separate divisions—Beyer & Brown, based in South Daytona; Fuller Amusement in Ocala; Palm City Music in North Fort Meyers; and State Amusement in North Miami.*

*Sol works out of a separate office in North Miami. He also has warehouses in Sarasota, Gainesville, and Orlando. He operates both uprights and cocktails, music and pool also; but today he is becoming best known for his pioneering ways with the cocktail table, a form of coin-op entertainment that many operators appear to have underestimated.*

---

**PLAY METER:** You've had a lot of experience operating cocktail tables. Have you found that they open up new types of locations for the operator?

**TABB:** There's no question about it. Cocktail tables open up so many different types of locations now that it's hard to count them all. It seems that every day there's somebody who calls up who wants a game in a type of location that's never had a game before. When I started in this business, we had only three types of locations to work with. There was the bar and grill, the luncheonette, and the sundry store. Today the number of location

types is closer to thirty or forty. That is how much this business has grown.

**PLAY METER:** And you're saying a lot of this is directly attributable to cocktail tables?

**TABB:** Yes, to give you an idea, Pizza Hut, which never wanted a game before, is delighted with the business we've done in 39 of its locations. And it's all because of the cocktail tables. I know a lot of fast food chains are thinking seriously about creating small sections for games so people can play while they wait for their pizza



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or hamburgers.

**PLAY METER:** What is it the location owners like about the cocktail tables?

**TABB:** First of all, they're not giving up any space. They see where space which before was only going to serve up food is now becoming revenue producing. In fact, I'd say that in about 50 percent of the locations I operate in, the revenue from the tables is close to paying for the rent and utilities. So that's a big plus. It's generating that kind of revenue without even taking up additional space. They like it when they see they're not giving up any space and are making additional money from their existing setup.

Second, the cocktail tables don't crowd up the area. People don't have to stand around the game to see what's happening. They can sit and watch. So the place doesn't look congested. And then, of course, the cocktail tables can be used to eat on. So the location owners are happy with the cocktail configurations. They see where space that wasn't giving them any revenue before is now generating substantial income for them.

**PLAY METER:** So you see cocktail tables as not going to replace regular uprights but rather going into locations that wouldn't accept uprights before. Is that right?

**TABB:** Exactly. A lot of locations where we're putting these cocktails in wouldn't go with uprights because the decor of the uprights is a little on the gaudy side. A lot of location owners are hesitant about anything that looks gaudy. Rightly or wrongly, they feel it cheapens their places. Something with flashy signs and flashing lights doesn't appeal to them since it would have to be backed up against a conservative wall. So in comes the cocktail table. It fits in with the location owner's decor, and he's

earning that additional revenue. And everyone is happy.

**PLAY METER:** You have just given a good example of why an operator must listen to a location owner's objections to having games instead of trying to overtalk him.

**TABB:** The operator has to prove what he's saying is right, but he has to remember one thing—the location owner is right until you can show him otherwise. Never fight the location owner. Just try to show him that the point you're trying to make can be proven—in this case, that games can increase their stores' earnings without degrading the business. You don't go to a location owner and go in with the attitude that, "Hey, you're wrong!" You've got to go in there with the idea of "Let's wait and see." That's all you need today with these games. Two or three collections, and then the location owner is running after you.

**PLAY METER:** Could you give us an idea of what kinds of locations you've had experience in opening up with cocktail tables?

**TABB:** Well, I've mentioned the Pizza Huts. That's number one. Then there's every large chain of hotels, from the Holiday Inns and Hilton Hotels to the Howard Johnsons and Ramada Inns and so on. Every big chain in our area has one form or another of cocktail tables in them, whether we've put the games in the lobbies or the game rooms or the bars or the restaurants or the reception rooms or wherever. It's just becoming something of a necessity for the hotels and motels. And these cocktails are also going into a lot of supermarkets and mini-markets and food chains—places that have never had games in them until now. Then there are







colleges, firehouses, police stations, airports. We even have them in doctors and dentists offices where they get a lot of kids in there with nothing to keep them occupied while they're waiting.

**PLAY METER:** Do you feel that fast food restaurants like McDonald's and Burger King will eventually come around?

**TABB:** Let me give you this example. There was an empty store next to a Burger King where we put in an arcade. The manager of that Burger King fought us tooth and nail all the way. He didn't want us to come in. He told the landlord that if he allowed us to put our arcade there he was going to break his lease.

Well, after we were there about seven or eight weeks, he called me up and came in and apologized. He said since our arcade opened up his business had gone up 25 percent. So you can see where the Burger Kings and McDonald's are going to have to go for the games. It's just a matter of time.

But I'm not worrying about that right now. We've got enough to keep us going as it is. Thank God, our games are so good today that we can actually defy people *not* to play them. You know how many people have gotten hooked on *Space Invaders* and *Asteroids* after playing it a couple of times? You're not going to be able to stop that. So I honestly feel that every food chain, every place where people congregate is going to open up to our games. You've seen what's happened with all the convenience stores! The field just keeps expanding so much it doesn't surprise me anymore. When you see these games being accepted in firehouses, police stations, at private clubs, and racquetball clubs, and in the lobbies of the best hotels, you can't even begin to

guess where the next step is going to be.

**PLAY METER:** You went to Tokyo for the Japan Show this past year. That's where cocktail tables have really boomed. What was your reaction to the cocktail table market over there?

**TABB:** Actually, they've over-saturated it. A lot of those arcades you hear about where they had just cocktail tables in there are turning back to Pachinko, believe it or not. The reason is, quite simply, you can overdo *anything*.

**PLAY METER:** What lesson is there to be learned from this?

**TABB:** It's a lesson that the manufacturer has got to learn. The manufacturers must have much closer communication with operators and shouldn't try to force games down the operators' throats, like they did when they came out with the electronic pingames and were turning out what seemed like seven pingames a month. I think if a manufacturer is smart and he's got a winner, he should stay with it. He can do just as well coming out with one game per year as he can coming out with six or seven mediocre games. The fact is today no mediocre games should be made. We can't afford them at \$2200 a crack. How many losers can you afford?

If a manufacturer can't turn out a game that rates at least an "8", then he shouldn't turn it out. They should only be making good games now. I'd like to see manufacturers start calling in operators to ask them what they'd like to see in the cocktail tables.

**PLAY METER:** From your experience, do you have some ideas as far as the design of cocktail tables which

[continued on page 40]



# 1981 AOE Seminar Program

*By Ray E. Tilley*

Building on its success in the first-ever offering of 1980, the Amusement Operators Expo '81 has been stocked with many improvements suggested by the enthusiastic attendees of the first show, said Ralph C. Lally II, publisher and editor of *PLAY METER*, the AOE sponsor.

First, the AOE returns to New Orleans and displays at the Hyatt Regency Hotel's opulent facilities near the Louisiana Superdome complex. For three days, March 12-14, AOE will be the scene of coin-op business information sharing, new product introductions, and sales of equipment. A whopping 98 percent of 1980 attendees indicated they will return for AOE '81, and many exhibitors and operators will be on hand for the first time in the industry's growing springtime show.

"The seminar program has been expanded with a wider range of educational sessions, covering business management, technical repair, and everything in between," said Lally. Seminars will run from 9:00 to 10:30, mornings, with the exhibit hall open from 10:30 a.m.—4:30 p.m. each day and afternoon seminars scheduled for 4:40—6:30 p.m. daily.

## **Industry Personalities**

The kickoff program will be a special, free "Early Bird" general session on Wednesday, March 11, before the show's official opening, to begin at 6 p.m. and run to 7:30 p.m.

"Challenges and Responses: It's Time for Industry Action" is the theme of the Early Bird meeting which features noted industry lawyer Rufus King, Stern Electronics President Gary Stern, and Charles S. Paul, vice president and general counsel of Atari, Inc., as leaders of the informal discussion of industry problems going into the new decade. A get-acquainted cocktail session will precede this meeting at 5 p.m. While the seminar is free of charge, registrants are asked to indicate on

their registration forms whether attendance was planned.

Another free session comes on Thursday, March 12, at 6 p.m., called "The Quick Fix," with Millie McCarthy, president of the New York State Coin Machine Association, and a panel of industry personalities in a frank discussion of coping with negative images of the coin-op trade. Attendees should also note their desire to attend this session on their registration forms.

Fees for other educational seminars/workshops listed below are \$15 each for advance registration (before February 13) and \$25 for later registration. Attendance in as many as six sessions can be scheduled.

Following is a summary of the course material in the AOE Seminars.

*Thursday Sessions: 9-10:30 a.m.*

□Seminar 101:

### **Arcade Design and Construction: A Practical Approach**

The first of a two-part session, 201 being on Thursday afternoon, 4:30, this is designed to acquaint the owner/operator with the details of effective design and construction of an arcade.

Seminar leader Steven J. Bodenstein, vice president/development for Six Flags Amusement Centers, Inc., will discuss building permits, ordinances, and inspections; desirable location features, layout, marketing, and construction materials; plans and architects. An attendee must register for both parts of the program.

□Seminar 102:

### **Field Service: Keeping Simple Problems Simple**

For the operator who does not require a full-time technician, here is a seminar to equip him with the details of a basic maintenance

program that he can handle alone—from troubleshooting techniques to the kind of equipment he needs in a tool box. Seminar leader is Doc Lofaso, independent game technician of Resada, California, who will discuss the planning necessary in a sound field service program during this in-depth session.

□Seminar 103:

### **Advertising for the Coin-Op Business**

Carol Kantor, president of Business Builders marketing agency, will delve into effective ad campaigns, selection of media, whether to use an ad agency, and other key points to be considered in making advertising decisions.

□Seminar 104:

### **Signature Analysis:**

**The Future of Troubleshooting**  
In the first of a four-part program, Jim Sneed will cover the means of isolating digital logic faults at the component level. Sneed, director of research and development for Kurz-Kasch, Inc., will discuss the signature analysis technique, which is not only considered most useful in serving microprocessor based products but is also applicable to all digital systems.

The tracking of signals and the conversion of lengthy bit streams into four-digit hexadecimal "signatures" will be highlighted during this technical series. An individual must register for all four parts of this program, continuing in sessions 204, 304, and 404.

□Seminar 105:

### **Location Cost Analysis**

Tying course material together with sessions on depreciation (305) and business profitability (604), Charles C. Ross has expanded his popular seminars of 1980's AOE and will show how to use depreciation tools in analysis of the location. A method will be offered in place of "seat of the pants" thinking, said Ross, for "showing how to divide



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## AOE seminar speakers: Rufus King, Gary Stern, Fred Skor, Art Seglin

costs to each location and determining whether a location should be kept or whether you should pull out."

An information-crammed session is promised by the former instructor of finance and accounting at Southwest Texas State University (and now full-time operator and management consultant); however, time limits will rule out individual analysis of operators' situations during the seminar hours. (See also sessions 305 and 604.)

Thursday Sessions: 4:30-6 p.m.

□Seminar 201:

### Arcade Design and Construction:

#### A Practical Approach/Part 2

Steven Bodenstein of Six Flags Amusements presents the second meeting in a two-part session on the details that go into the effective design and construction of an arcade. Registration is required for 101 also.

□Seminar 202:

### New Equipment Purchasing for the 1980s

Fred Skor, president of World Wide Distributors, examines the various factors that lead to a wise purchasing decision in the face of rising costs. Selectivity, reliability, and supplier analysis will be studied.

□Seminar 203:

### Shopping Centers and Arcade Leasing

Jon Daugherty of LeMans Development Co. will moderate a panel of national arcade company executives and shopping center developers in discussing the shopping center, one of the prime factors in the growth of the amusement machine industry. Factors in finding and selecting locations within a shopping center, negotiating the lease, and analyzing the costs will be covered.

□Seminar 204:

### Signature Analysis:

**The Future of Troubleshooting Part 2:** Jim Sneed continues the four-part series designed for the technician. Registration is required also for sessions 104, 304, and 404 for each individual attending.

□Seminar 205:

### The Pinball Tournament: A Practical Approach

Douglas E. Gear, president of

the American Pinball Association, says: "There is no magical formula in producing the successful pinball tournament." He will present an in-depth discussion of the steps in setting up the tournament—what are prime locations, vendors that should be contacted, and legal aspects within a state. Attendees will gain knowledge of the legal background of tournaments that will arm them in gaining local governments' support and approval, said Gear. And the seminar will deal with increased location revenue through forming pinball leagues.

Friday Sessions: 9-10:30 a.m.

□Seminar 301:

### Equipment Marketing in Arcades

Basic guidelines of value in terms of in-house marketing will be discussed by Steven Bodenstein, vice president/development with Six Flags Amusement Centers. Location, visibility, price, and incentives will be covered, to give the attendee an understanding of these in relation to developing a successful arcade.

□Seminar 302:

### Training Personnel: An Investment that Pays Immediate Dividends

Art Seglin, instructor in Hudson County Area Vocational Technical School, will detail the development of an effective training program, including discussions on whether in-house or external program is better for the individual operation, what is available for training personnel, and how to keep technicians up-to-date on technical changes and innovations.

□Seminar 303:

### Internal Cash Controls and the Absentee Owner

How can you deal with cash losses when you, as owner, cannot be on the premises all the time? Jon Daugherty will lead discussion on the various systems available within the industry which are designed to alleviate losses. Also, the use of poly-graph, coin-count metering systems, and collection procedures will be explored.

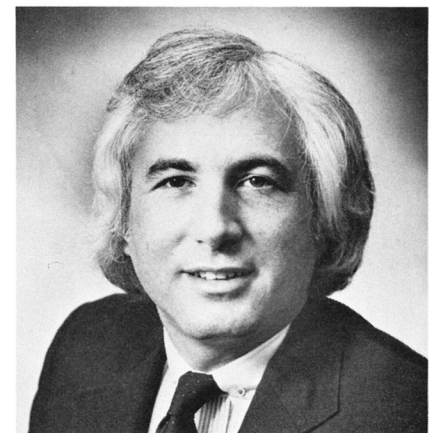
□Seminar 304:

### Signature Analysis: The Future of Troubleshooting

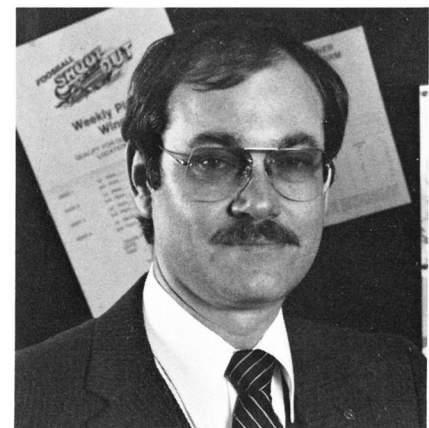
Third in a four-part series which



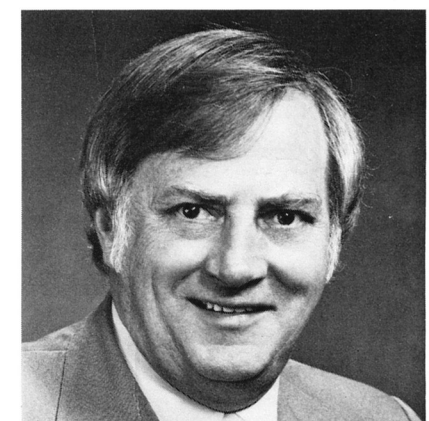
Millie McCarthy



Gary Stern



Ray Hibarger



Chuck Arnold



# Carol Kantor, Jim Sneed, Charles Ross, Douglas Grear, Steven Bodenstein

begins Thursday morning (session 104); in-depth material for the technician.

□Seminar 305:

## Depreciation Facts and Fallacies

This workshop by Charles C. Ross will examine depreciation and its impact on coin-op business profitability. Some misconceptions of which depreciation methods are best for an operator will be covered at length. The attendee will be given an understanding of the proper use of depreciation and how it should be seen from the accounting standpoint. Materials will be handed out; a notepad and pens will be needed.

Friday Sessions: 4:30-6 p.m.

□Seminar 401:

## Creative Marketing and General Promotion in the Coin-Op Business

Carol J. Kantor will give an overview of creative techniques to meet the marketing objectives of the amusement games industry. Toward each owner/operator developing a specific marketing and promotion plan to meet the needs of his location, Kantor will present guides to setting up and promoting special events, getting publicity, and evaluating the results. With these methods, the attendee will be armed with "how to" in stimulating growth and expansion of new locations and revenue.

□Seminar 402:

## Keep the Ball Rolling and the Aliens Moving

Art Seglin will instruct attendees in troubleshooting techniques through the use of a limited amount of test equipment. Emphasizing "up time," the differences between in-shop and on-location servicing will be discussed in terms of making better maintenance decisions.

□Seminar 403:

## The Profitable Distributorship

Chuck Arnold, general manager of the Northeast Region for Rowe International, in this seminar for distributors only will examine gross profits as they are related to games, music and vending. Arnold will also discuss the "hidden profit centers" of the distributorship.

A favorable profit margin and "the bottom line" will be clearly detailed.

□Seminar 404:

## Signature Analysis: Final part

The technique that is to the computer era as the Simpson 260 VOM was to the electro-mechanical era is detailed by Jim Sneed. See sessions 104, 204, and 304.

□Seminar 405:

## Making the Street Arcade Profitable for the Operator

Rich Babich, president of Automated Amusements/Denver, looks into the difficulties many operators have had in establishing a profitable street arcade. Discussion will be given to potential locations, equipment needs, promotion, and the overall stability of any given operation: the "known" factors in developing a profitable arcade.

Saturday Sessions: 9-10:30 a.m.

□Seminar 501:

## Business Forms and Record Keeping

A panel of successful operators will explain how they have organized their routes to boost their record-keeping abilities. Moderator will be Michael A. Babich, CPA, of Denver. Efficient use of forms will be demonstrated along with the use and evaluation of the information that is gathered.

□Seminar 502:

## Electronics—How Times Have Changed

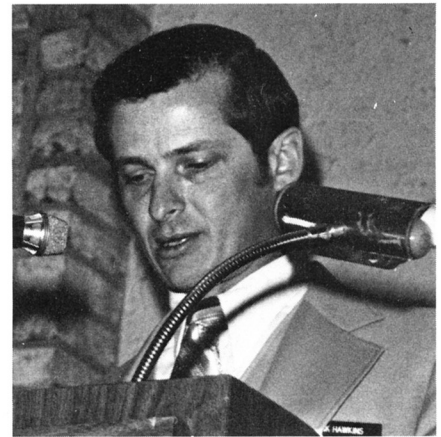
Do you seem lost in the ins and outs of solid state? Jay Hannah, service manager for Automated Amusements/Denver, hosts a seminar for the owner/operator, rather than the technician, in "basic common sense" amid the technology jumble of today. Material covered will include hiring technicians, reliable suppliers, how to save money on board repair, and "what to avoid"—for example, so-called discount items.

Hannah advised, "Take a look at equipment before you buy. Cheap isn't worth a damn." Continuing education of personnel will also be stressed by Hannah, who was formerly with Funway Freeways. An overview of the terms and uses of electronics will also be presented in order to acquaint the operator with what his technician is talking about.

□Seminar 503:

## Starting and Managing the Arcade

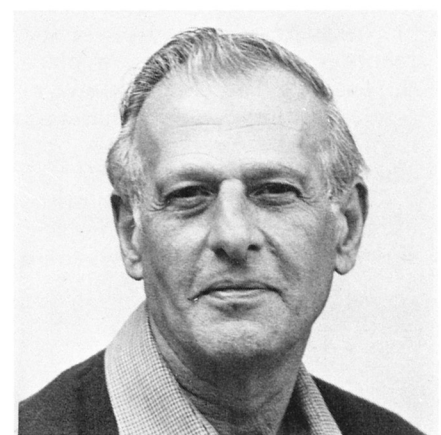
The arcade operation has different aspects from other new



Dick Hawkins



Carol Kantor



Arthur Seglin



Fred Skor



## AOE speakers: Jon Daugherty, Chuck Arnold, Jim Hanna, Millie McCarthy, Dick Hawkins, Ray Hibarger

ventures that are also managed on sound business practices. Steve Isaacson, general manager of S.L. London Music Co., will examine topics such as determining locations, construction, licensing, purchasing, management, and game mix and traffic flow.

□Seminar 504:

### How You Can Benefit from a Pool League

A pool league has been recognized as a viable means of producing revenue and enhancing public relations. Richard Hawkins, president of D&R Star, will discuss the specific benefits to the operator

and the location, as well as the best means to take advantage of the pool league promotion.

□Seminar 505:

### Negotiating Commissions with Locations

In terms of inflationary costs, operators will be instructed by Stephen Goot in how to explain their situation to locations in a plain and logical manner. The president of Total Vending Services, Inc. will also discuss establishing weekly minimums and assessing service charges.

Saturday Sessions: 4:30-6 p.m.

□Seminar 601:

### The Hit Syndrome

How many hits does an operator buy, past the point of their economic justification to him? How many sales does a distributor lose on good game pieces that are less than runaway hit attractions? Ray Hibarger of Hanson Distributing will take on the topic of "the hit syndrome" and define it from both the impact on route operations and distributor sales, based partly on a survey he has taken of individuals in his market area. He will offer an outline for coping with "the hit syndrome" and discuss "Is it good or bad?" Factors that lead to the hit

## Amusement Operators Expo/'80: Setting the Stage

Registrants for the 1981 Amusement Operators Expo will be coming to an event that racked up noted successes in its debut last year, both in the seminar program and on the exhibit floor.

In the seminars for 1980's AOE, according to the Conference Management team who organized the program, the average number of seminars attended by each registrant was 2.7, or nearly six hours spent "in class" by each participant.

Dave Karcher of Conference Management noted the favorable responses of 98 percent of the seminar

attendees, who answered a poll by saying they would recommend the AOE seminars to their industry associates.

Stephen Goot, an Atlanta operator who hosted a seminar last year and will return for the March 12-14 program, commented: "We've always needed a seminar series like this. I could never talk like this with operators in my area—but we don't have that problem here," Goot said.

Chuch Arnold of Rowe International, likewise a seminar speaker in both AOE editions, said: "We distributors have always needed this

opportunity to get together and exchange ideas in this type of forum."

Action on the exhibit floor was dazzling in the 1980 AOE. Two of the top-earning pingames of the year, Bally's *Space Invaders* and Williams' *Firepower*, were introduced for the first time to operators at the New Orleans show. The coin slot on *Space Invaders* was notable: it was set to ship with 50-cent play pricing. And, of course, the design was a Bally landmark.

Williams' game of the year as voted later in 1980 by operators in Play Meter's Subscriber Survey, *Firepower* was prominent on the show floor with its lane-change feature activated by the player's right flipper.

In videos, operators were able to preview two at the AOE which turned out to be successes—Cinematronics' *Rip Off* and Data East's *Astro Fighter*, which would be marketed in uprights by Gremlin and by Data East as a sit-down model.

So, attendees were twice armed by the springtime show: with the newest equipment on view, and with the seminar program and its main aim of "helping the operators become better businessmen," said Play Meter Publisher Ralph C. Lally II, sponsor of the AOE. And the show's timing coincided with the release of new games for the spring buying season.

The plan for this year's event is basically, "more and better," said Lally. ●



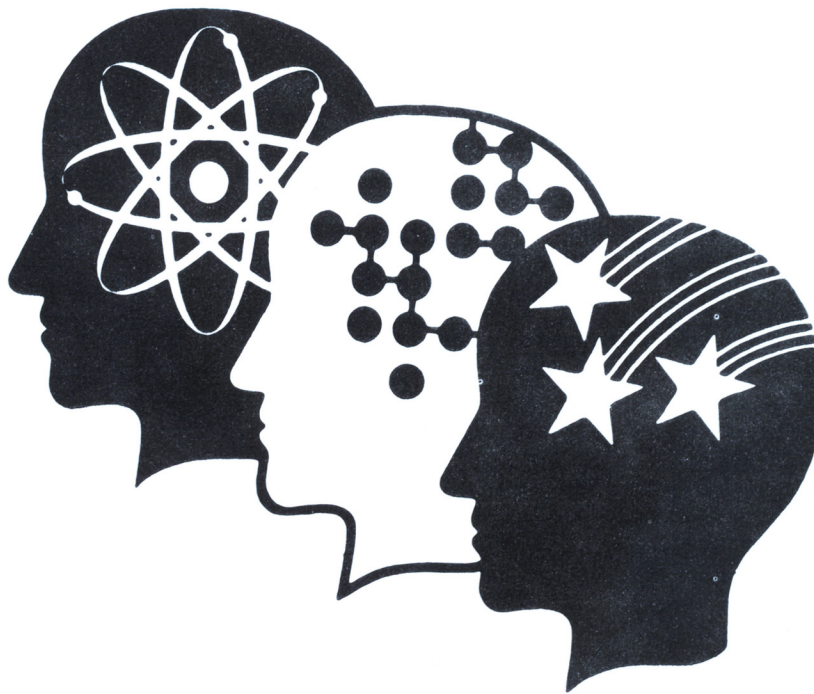
A popular seminar topic of the 1980 AOE was *Internal Cash Controls*, wherein featured speakers (above, left to right) were Steve Isaacson, Ed Shroter, and Jon Daugherty. Isaacson and Daugherty return for sessions this year.



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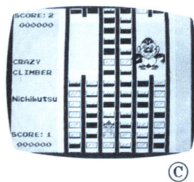
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# AOE speakers: Steve Isaacson, Eric Ivary, Randy Fromm, Charles C. Paul, Doc Lofaso, Stephen Goot

syndrome will be examined.

□Seminar 602:

## Practical Solid State Amusement Repair

Randy Fromm of San Diego Arcade School will stress the efficient use of the digital multimeter, rather than a lot of expensive equipment, to diagnose problems in all types of coin-op amusement games. Workshop highlights will include testing diodes and transistors, troubleshooting power supplies, testing integrated circuits, and troubleshooting audio circuits. Fromm, a Play Meter technical editor, said the technician leaving this seminar should have gained insight into the workings of solid state that will make his job easier.

□Seminar 603:

## Token Operations:

### An Alternative for Profit

As an item for promotion, cash control, and security, the token's use in operating will be examined by Eric Ivary, Sega Centers' director of operations. Details will be shared on "how a private money system can work to generate increased

revenues."

□Seminar 604:

## Return on Investment and Business Profitability

"The age-old question of when to rotate a piece of equipment" will be discussed in depth, as well as when to sell equipment. Charles Ross, a successful operator and management consultant, has developed a system he will explain for how to make these vital decisions for greater profit in an amusement games operation. Attendees may want to bring copies of their income statement and balance sheet for comparison against the seminar information.

The course material has been developed to tie into Ross's seminar sessions 105 and 305.

□Seminar 605:

## Computer-Assisted Management Systems for the Mid-size Operator

A computer management system will be discussed that will allow tracking of when equipment needs to be moved, where it has been, when it has been collected, and what is its

location—for little or no more additional expense than an operator's current bookkeeping costs.

Moderator Rich Babich will lead discussion of entry forms, hardware needed, and software and output information during this session. The seminar will be geared for the 200-1,000 piece operation.

□Seminar 606:

## Arcades—An Equipment Strategy for the 80s

Does 2+2=5? Opposing points of view will be presented by Steve Isaacson and Jon Daugherty, as to an overall strategy for the arcade of the 1980s. Questions dealing with equipment location, high play pricing versus diminishing returns, and methods of disposing of used equipment will be discussed at length.

All sessions will be held in the Hyatt Regency New Orleans located at 500 Poydras Plaza, New Orleans. Registrants for seminars will automatically receive Exhibit Hall admission badges with their tickets.



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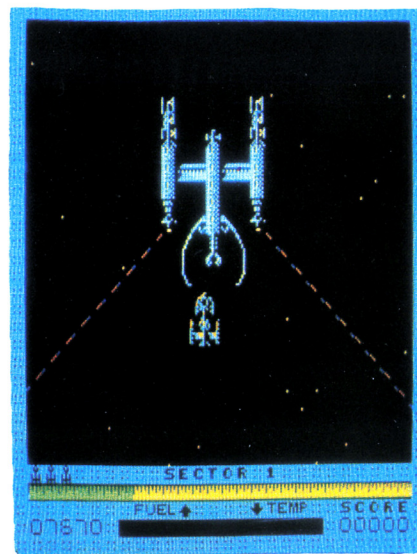
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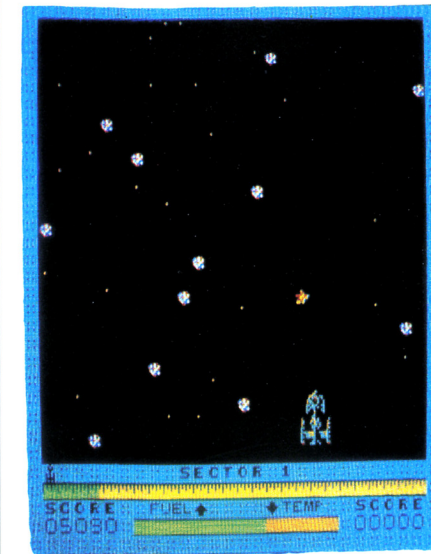
points by completing specific tasks. But the bonuses are secret, adding even more excitement to the game.

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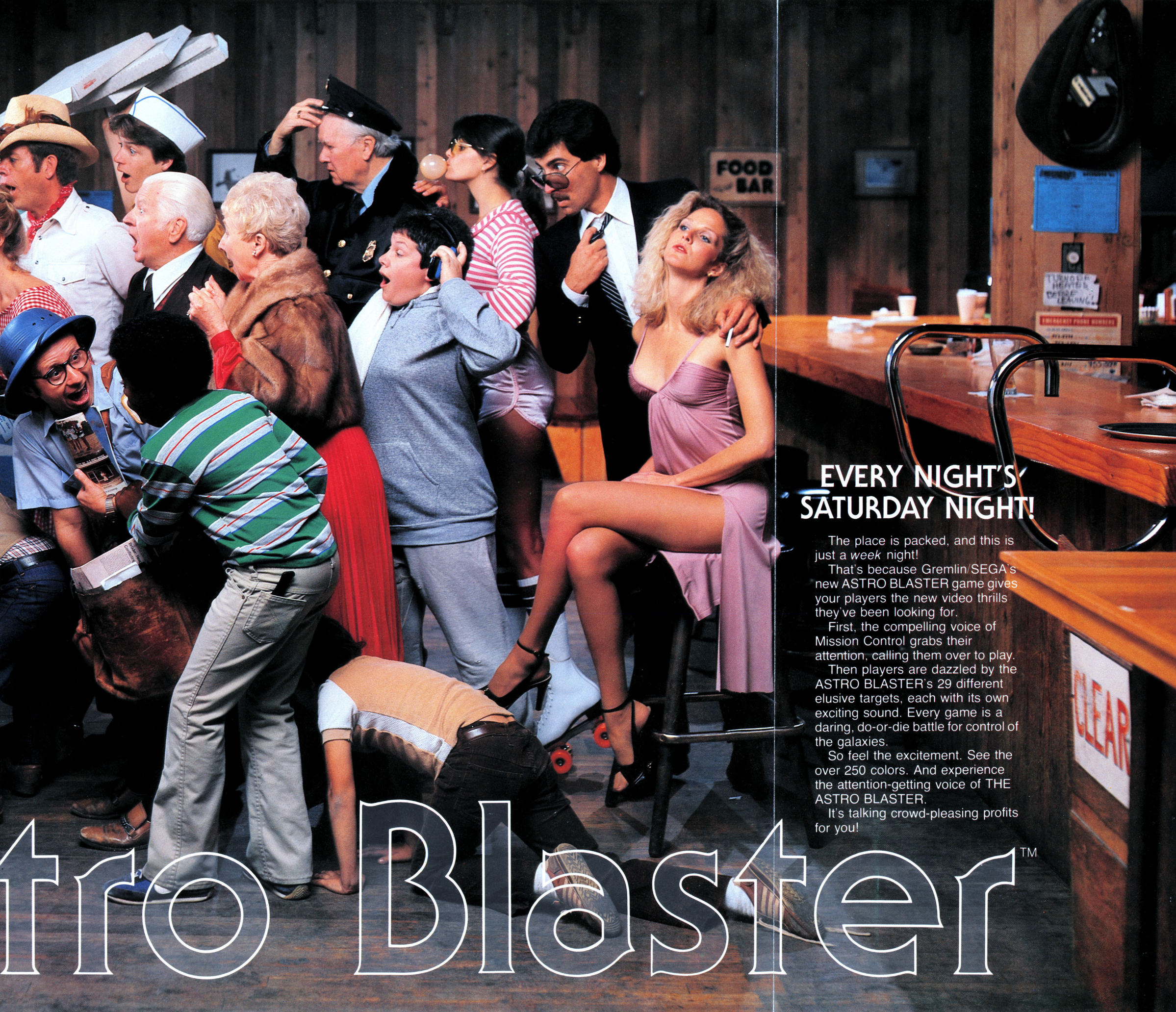
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## COCKTAIL TABLES:

# Packaging games with locations in mind

By David Pierson

Consider the established wisdom of the Coca-Cola Bottling Company.

Coca-Cola packages its soft drink in small bottles and big bottles, big tin cans and mini-tin cans. And you can buy those bottles and cans in handy cartons. You can also get Coke in plastic liter bottles or glass liter bottles. You can get it on-tap or with crushed ice from a vending machine. In fact, you can get Coca-Cola almost anywhere and in almost any form because Coca-Cola has packaged its product so well that it's not out-of-place at a beachside hot dog stand, the fanciest restaurant in town, and any place in between.

There's a lesson the coin-op amusement industry should pick up there, a lesson operators should be aware of: Packaging is very important. It could well be that if operators looked more closely at the various packages of coin-op equipment, they might be able to place their games in even more locations—and better locations, besides.

Consider now the cocktail table. For many operators the cocktail table was tried and passed over some years ago as unworkable. It wasn't reliable. The games weren't appealing. The companies that manufactured the equipment were not always the most reputable. It was a bad scene all around.

But things have changed. They changed for the video game market, didn't they? After the bottom fell out of the *Pong* market, a lot of people wrote off video games forever. Those people either changed their minds again or are now in some other line of work. The fact is the video market has changed. And, in the same respect, the cocktail table has changed, too.

What does it mean to the operator? What does it all have to do with the Coca-Cola Bottling Company? Simply this: The cocktail

table is another form of packaging coin-op amusement equipment. The cocktail table is designed to open the door to locations that previously turned thumbs-down on the idea of games. And herein lies the basis for a new strategy for progressive operators.

### Review those location rejections

Go back over that list of location rejections—not the list of locations that have machines from other operators in them. Study again that list of potential locations that still don't have games.

Now re-think your argument with these locations. Were they really opposed to the idea of making additional revenue through coin-op games? Or did they have objections such as that the games would take up too much space or they would create an arcade or “hangout” atmosphere that is contrary to their stated desires?

Chances are when you go over this rejection list you'll find a lot of potential locations out there that you wrote off as being not interested in games that actually are very much interested in having games. They just weren't interested in what you had to offer them in the way of games. They probably didn't know, for instance, that you had other types of games to offer them besides the upright pinballs and upright videos.

It's also a good chance that location owners who were impressed by the earning potential of such a game as *Galaxian* were not overly impressed with the actual appearance of these games in the upright configuration. The uprights don't exactly blend in harmoniously with all types of locations. In some spots a more subdued or understated appearance is more successful.

It's worked that way with a lot of phonograph stops where location



*Locally-owned, sleek-styled fast food restaurant owners and managers might just like the idea of having games in their high-traffic locations if an operator pointed out to them that their non-revenue-producing tables could be instantly transformed into tables that double as revenue-producing games.*



*It can be a pleasant surprise for patrons in fancy hotel lobbies and cocktail lounges when they look down at their table and notice that it's a game as well. And the collections from that game table can be a pleasant surprise for location owners who thought the idea of games would clash with their way of doing business.*



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**You saw it in  
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owners, who objected to a jukebox that looked like a jukebox, agreed to having a jukebox that looked like a piece of fine furniture. It's all in the packaging.

The cocktail table has this going for it. It can break into new types of locations that wouldn't have gone for upright games. The cocktail configuration fits in very well with the decor of a lot of establishments which otherwise would have objected to the notion of games.

Now, if you look down that list of locations that still don't have games, you'll see some high traffic places like hotel chains and fancy restaurants which, if approached about cocktail tables, might be more receptive to the idea of placing games.

These are premier cocktail table locations. The cocktail table configuration has answered the need for these locations with a piece of equipment that is more suited for their decor. Fortunately, the understated tone of the cocktail table makes these games perfectly acceptable for such high-traffic locations.

But the cocktail table is not really that pervasive in the industry, and this seems to be because operators still have a low regard for the game type. Supposedly cocktail tables don't make as much money as uprights, so they've taken a back seat to uprights. But such thinking overlooks a lot of built-in advantages the cocktail tables have over the uprights.

Let's return for a moment to the Coca-Cola analogy. Just because Coca-Cola realizes a better profit on its 6-ounce bottle than it does on its 12-ounce drink, doesn't mean the 12-ounce package is inferior. Perhaps the 12-ounce represents a larger volume of sales, a larger turnover, than the 6-ounce bottle. In that case, the smaller return per sale is offset by an increased number of sales.

The same thing may very well be true with cocktail tables. Indications are that cocktail tables, while perhaps grossing less per machine per week than uprights, may indeed make more money per location. Sol Tabb, a Miami operator and one of the pioneers in cocktail tables, told PLAY METER in his Coinman interview this month that cocktail tables make each location stop more profitable for him:

"A standup piece will do about 10 percent better than a cocktail table, but you've got to look at the overall picture, that you're able to put four or five cocktail tables in a location

where you couldn't put in four or five standups. So you're making the location pay off better for you."

He further commented that the cannibalism effect of the additional machines was slight with four or five cocktail tables in a location.

In light of increased fuel costs, operators might just find that locations with five or six machines are more profitable for them than a whole lot of locations with only one or two machines in them.

It's something to consider, of course, and it's one of the strong suits of the cocktail table that never seems to get mentioned. They do facilitate placement of more machines per locations simply because they take up less floor space and can go in place of dining tables.

### The challenge of cocktails

So there are advantages to the "other" game package—the cocktail table. And it should be a challenge to operators and to the industry as a whole to make the general public aware that coin-op games do take other forms. Coin-op games must be presented to locations as coming in a variety of different packages. If games are presented as being primarily in the upright configuration, with cocktail tables being something of an ugly sister, then it's understandable why national fast food chains, for instance, have issued corporate edicts against the games. They have been left with a dinosaur impression about the games industry—that the games cannot adapt to their various needs.

The reason for all this negativity from fast food restaurants appears to stem from a pre-conceived notion that games really come in only one configuration—the upright. McDonald's might not be so happy to sell Coca-Cola if it were only available in bottles and couldn't be dispensed on tap.

The same principle holds true for coin-op games. The fast food restaurants have seen the upright games and they are not overly excited about the space requirements and—let's face it—their juvenile appearance, which is not in keeping with the corporate image of a family eating place.

This is why coin-op games with a more subdued appearance might be more in keeping with such corporate images.

Operators could chip away at this corporate stone wall against games if they were able to show how games can adapt to the different needs of



# The cocktail table eases placement of more machines per location...and can go in place of dining tables.

different types of locations. One way to do that would be to approach the countless fast food restaurants which have modelled themselves after the McDonald's-Burger King-Wendy's-Kentucky Fried Chicken formula for success. These locally-owned fast food stores are not hampered by corporate mandates against games.

Now, while these location owners may share similar negative feelings about coin-op games in their stores, they might be more inclined to give the games a try if the operator were able to show them that the games don't have to be as obtrusive in appearance as an upright model—which is probably their only notion of what coin-op games are.

If they saw that games were also available in a design that looked like a table, they might be more inclined to give the games a try. And this would go a long way toward breaking the resistance by the corporate slow-movers. There are several reasons for that:

1. It would invite franchise holders of stores in the national

chains to see for themselves that coin-op games don't necessarily take up more space, that they can actually make better and more profitable use of existing space in the store. And this feedback would make its way back to the corporate level.

2. It would change a lot of preconceived notions people outside the industry have about coin-op games. For one thing, they would see that children aren't the only ones who play the games, thus the games would not create the much-dreaded "arcade environment." And word of this would make its way back to the corporate level.

3. It would advertise for the industry that coin-op games come in more than just one package and maybe this other package is more suited for fast food chains. And this message would make its way back to the corporate level.

4. And fast food restaurant franchisees would see that they would need the games to stay competitive with these other fast food stops which do offer games to

their customers. And this will surely make its way back to the corporate level.

## Local strategy

The strategy, therefore, is to attack the fast food chains at the ground level. Make the individual managers aware that the corporate edict against games is placing them at a disadvantage. Anyway, the franchise holders would be much more effective pitchmen for coin-op games to their home offices than anyone in this industry could possibly be. So why shouldn't operators start working on creating that ground swell of feeling among fast food chain managers?

Would it work? Indications are that it would. Fast food restaurants have been showing signs recently of weakening in their opposition to games simply because the games the industry has to offer are that good.

And the little innocuous cocktail table may just be what the industry has been looking for to break through the national fast food stone wall. ●



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Can McDonald's stay 'closed' for long?

# Hardee's and Bonanza— opening to coin-op games

The negativity of the national fast food chains towards coin-op games is well-known. But simply because of the games' enormous earning potential, the fast food restaurants have been showing some signs of crossing the coin-op line—most notable are Hardee's and Bonanza. But even such chains as McDonald's have been taking second looks at what coin-op can do for them.

Last year, for instance, PLAY METER reported on the development of an Urban Amusement Park, together with a sixty-piece arcade, in Brooklyn, New York (May, 1980, page 59). It is located next door to a thriving McDonald's outlet, and there are good indications that McDonald's has been closely monitoring the situation to see if coin-op games could improve its profit picture.

Also, there have been unconfirmed reports of a recent secret test at four

McDonald's locations where upright games were being tried out on the premises. Unconfirmed reports mention \$300 a week grosses per game (\$150 location's share). But McDonald's has been mum about the matter, refusing to confirm or deny the reports.

Sol Tabb, a Miami operator and one of the pioneers in cocktail table operations, reports in the Coinman interview this month that after his opening an arcade next to a Burger King, the hamburger store's business went up 25 percent.

Vince Rickard, senior institutional development manager for Hardee's, told PLAY METER that Hardee's has been testing out coin-op games at some of its turnpike locations with great success.

"We've been pleased with the results," reported Rickard, who said the machines had been tested on 14 locations since April, 1980. He

pointed out that the Hardee's stores with the games are locations with limited highway access in New York, New Jersey, Kentucky, and Florida. They are not what could be considered as street locations.

"It's a new concept for toll road stores," he told PLAY METER. "It's a convenience to travellers and truckers. It takes away the tension of those long drives."

He mentioned that Hardee's had looked into the area of gift shops on premises but found that to be a losing proposition. "There's no doubt about the per-square-foot return on investment being better with games than it is with gift shops."

He went on to say that Hardee's is constantly expanding to new locations and seemed to suggest that there's a good possibility they will consider operators' games at their street locations. "Wherever we can," he said, "we'll take the games."

Although Hardee's is presently thinking in terms of uprights, it might be better advised for operators to stress the advantages of the cocktail tables because a store such as Hardee's opens such a direct comparison for other national chains to study.

Then there's the case of Bonanza, the national steakhouse restaurant chain. Bonanza marketing executive John Bill told PLAY METER that the matter of coin-op games is left up to each individual franchisee. He estimated, though, that up to 90 percent of Bonanza's locations do not presently have games in them, though there is no corporate edict against the games. Could it be that operators have assumed the worst about Bonanza without really checking?

It would seem wise for operators to stress here also the built-in advantages of the cocktail table since it would invite a direct comparison for national chains and enlarge their conception of the games market.

So the word seems to be getting out. Coin-op games are not necessarily bad for the fast food business, and in fact may be better for their profits picture.

—By Ray Tilley



Franchised fast food restaurants are taking a second look at the high earning potential of games. Hardee's and Bonanza are reportedly very receptive to the idea of games in some of their locations. And, though McDonald's is remaining mum on the matter, there are reports they too have been testing the games at some locations.



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# Cocktails emerge for U.S. operators

By TONY LICATA

Just as video games are awakening the interest of players who never indulged in amusement machines before, cocktail tables are opening up new locations for players unfamiliar with arcades and game rooms. This is not to say the cocktail tables don't go well in traditional locations; they do, but canny manufacturers are using them to serve the broader purpose of expanding the market for video games in general. "It's wide open to the energies of the operator," according to Frank Ballouz, Atari marketing director.

He noted that cocktail table games are not new to the United States. They have been around since 1975, but were a very small segment of the market. He said early "blue suede" operators didn't do the tables' acceptance any good when they placed them in dubious locations and provided users with poor service.

Now the games have gained resurgence in Japan, he added. The typical game room has uprights all around the perimeter while the center of the room is filled with cocktail tables.

Jack Mittel, president of Taito America, echoed these positive sentiments. "Right now cocktail tables have taken over in Japan," he said. "In the long run they could prove as popular over here, although they won't entirely replace uprights."

Ben Rochetti, Stern Electronics director of sales, said he considers cocktail tables "another tool to open new locations."

He said he has encountered no resistance from any part of the country to the table games. They have been very popular in Chicago for quite a while. Rochetti observed that Bill Herman's well-known Mother's Pinball arcade just outside Chicago has 14 cocktails on play at present.

Taito's Jack Mittel noted two other positive points about cocktail tables. First, two people can sit and play at the same time. This is much

more appealing for adult couples on dates. It doesn't force the woman partner to hang over the man's shoulder while he is playing. Second, the tables occupy less space than uprights, which means one will fit in a space too small for an upright. Or, several cocktail tables will go into the space required for only one or two uprights.

Williams Electronics' Director of Engineering Ken Fedesna said the cocktail tables also dress-up a location and consequently appeal to older, more sophisticated players.

Ballouz also viewed the cocktail tables as fitting more appropriately into "finer lounges."

## Home video rub-off

The advertising and popularity of home video games has accounted for some of the older players now getting interested in video games, Rochetti said. He reckoned that the cocktail tables would prove more attractive to these players than standard arcade games.

Some of the possible new locations suggested by the manufacturers' representatives included fast food outlets, pizza parlors, cocktail lounges, college unions, and, as Ballouz said, "anyplace someone has to wait." \*

Stern marketed its first video game, *Astro Invader*, as a cocktail table game as well as an upright. The firm also planned to introduce a cocktail table model of its second offering, *Berzerk*, in mid-February, according to Rochetti.

Fedesna said that Williams will be producing a cocktail table version of its current *Defender* shortly, also.

Taito will be redesigning its uprights, cabinets, and cocktail tables for western standards of player size, in a newly-planned addition to its Elk Grove Village, Illinois plant, according to President Jack Mittel.

\* See separate article, this issue on the opening location possibilities for sitdown games in fast-food stops.

# Are

By ROGER C. SHARPE

There is an interesting phenomenon that's still going on in the coin machine industry after starting up only a couple of years ago. Manufacturers have been toying around with different sized machines in order to accommodate new locations or even in an attempt to be different so as to attract attention of existing players. We've seen this not only with the "squat" body pinball but also the big game size, and with video we now have an assortment of "minis" and other stand-up models that sport their own particular name, wherein the game is smaller and less bulky. But with all this change, so too has the sit-down cocktail table machine earned its rightful place in the scheme of things.

Surprisingly, what has happened with cocktail table games is that they have managed to create their own market since their introduction. Bars, restaurants, movie theaters, and many other places that might not have thought about putting in conventional games of any type, turned to these models because they were functional as well as profitable without intruding upon the overall ambiance of any location. Admittedly, to the forefront came video games, but pinball also followed suit,

## 'Shoot Again' exhibit

A special traveling exhibit called "Shoot Again, or the Marvelous Adventure of the Flipper," organized by the International Art Office of Paris, launched in December of 1980. Visitors walking over an enormous flipper game, measuring about 80 square meters, followed the course of an imaginary pinball.

The exhibit divides into four sections: (1) "Mr. Gottlieb, 1927-19...?" —a retrospective on the changes in the pingame over the past 50 years; (2) "The Soul of the Machine" —evolution and techniques of the game; (3) "Same Player: Shoot Again" —the player's motivations represented; and "Extra Ball," or the flipper and the arts: cinema, painting, and literature.



# cocktail pinballs viable?

causing new manufacturers to enter the business and also show that pinball could take many forms.

One of the basic problems, however, with pinball was that you soon found extenders being offered, making these sit-down models stand-up machines and when sales became diluted, the pins found themselves caught in a soft market for flippers with video being king. Unfortunately, no one really remained willing to tap the ever diminishing market, and the sit-down pins gave way to their video counterparts.

In taking a closer look at the reasons behind the premature demise of the pinball cocktail table, one must recognize that much of the blame must be placed on video becoming just too strong and that the idea of a swivel table or some such invention (tried by a couple of pinball manufacturers) made the idea of getting up and moving a major problem. With video it was two players facing each other, with the screen shifting to face the appropriate player and not causing someone to get up and move in order to have access to the plunger and flippers. It was an important consideration that was largely ignored or at least passed over by those trying to sell sit-downs.

What may have proved more

successful, in hindsight, would have been some major alterations in the thinking regarding pinball design to fit the format. One avenue that might have been well worth exploring would have been two-player games with players sitting across from each other and playing against or even with each other to accomplish specific goals on the playfield. To combat the lack of space on the field, maybe it would have made more sense to retool and take everything down in size: smaller flippers, smaller targets, and every feature brought down to a degree that it became manageable to fit things in and not take away any of the fun of playing pinball.

Who knows, maybe at this moment someone is thinking about bringing back pinball in cocktail table size. It might just realize better success given the greater amounts of locations that are now utilizing sit-downs and, for pinball, have a chance to make new fans and maybe even introduce people to a type of flipper game which might just pique their interest to try the conventional models out there.

All in all, the initial understanding to such a venture is that for the most part one is not dealing with the ordinary hard-core pinball player, so things can be changed and not

compared to the full sized models by the very nature of the use and purpose of a sit-down game. For the most part people are waiting somewhere, or want to take a break from their surroundings, and the game (whether it be video or pinball) can help supply the necessary diversion, especially if space is cramped and full size models can't be fit in, or an owner of the establishment wants to keep his games discreet. In accepting this notion, one can throw away the old rules regarding pinball and come up with something different that might just fill this need.

Anyway, the point to be made in this PLAY METER issue highlighting cocktail table machines is that pinball, too, can be a viable addition to this share of the market. This is really the case when you consider that the sit-downs, without the fanfare that followed them when they first broke upon the scene, are in fact enjoying a comeback of sorts if one is to look at some of the places they're turning up—the waiting area of a restaurant in Evanston, Illinois, a country and western bar in New York City, the airport bar in Las Vegas, and many other places.

So maybe the time is indeed right for a rebirth of pinball in this "new" form. I suppose only time will tell. •

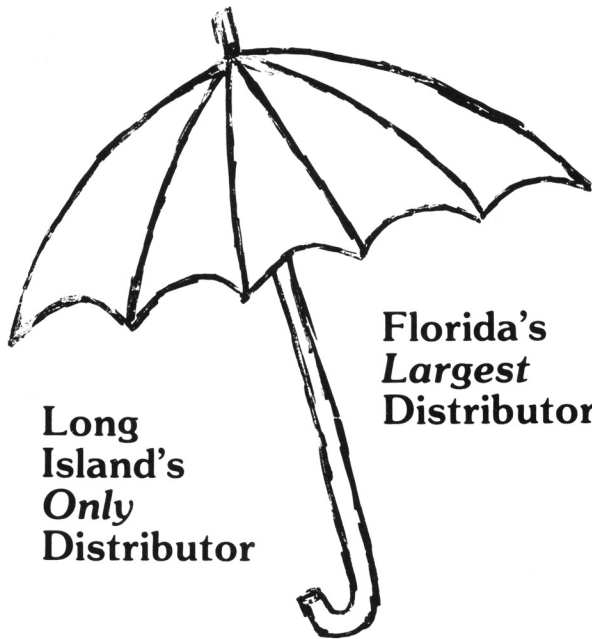
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[continued from page 21]

would make the games easier to place in locations?

**TABB:** Yes, I do. First of all, I think the table should be kept very conservative looking. It should not be too flashy. And instead of just one or two height adjustments, there should be about four, five, or six adjustments available. Second, I think the table should be a table where you can actually eat at it. A lot of tables you can't even fit your legs under.

Something else is we need a chair suitable for the cocktail table. While I was in Japan, I saw that they were using some really attractive comfortable chairs with the cocktail tables, but we don't have chairs like that here. They weren't big chairs at all. Instead, they were more or less wraparound chairs, and once you got into those chairs, you didn't want to get out of them. And they were ideal for playing the games.

**PLAY METER:** A moment ago we were talking about the cocktail table arcades in Japan. Would such an arcade setup work in the United States?

**TABB:** This may surprise you, but we're starting to do that right now. We're setting up our first one in Fort Meyers, Florida. I had the place renovated so I can put thirty cocktail tables in there and maybe only about eight standup pieces. This is a place where we couldn't have gone in with just the other games. It was the cocktail tables which opened up this arcade possibility.

**PLAY METER:** From what you've been saying, it would appear that the cocktail table business is a pull business rather than a push business. Is that your impression?

**TABB:** That's right. The locations are calling us up. They want us to put games in their locations now. A guy called up the other day, for instance, who never had any games in his location. He said he wanted me to put in a couple of cocktail tables, but he didn't know where he could put them. Well, I had to tell him that we are experts at determining where the games should go. There are times when we've spent up to a thousand dollars running wires under carpet to accommodate new types of locations. But it's always paid off.

**PLAY METER:** How do you determine the number of cocktail tables to put into a location?

**TABB:** It depends on the location's average. If a guy wants as many cocktails as he can get in there, I'll start him out with maybe five or ten—depending on the space and the traffic. I'll stipulate that if I make an average of, say, \$70 apiece on the games, I'll put in some more. If the machines don't make the average, I'll start taking them out until they do. That way we let the location suit itself.

When someone asks me how many games I'll put in a location, I always tell them we'll put in as many games as the averages will allow. We tell them what we expect the average to be; so the location owner knows up front what it is and won't fight us. Of course, the averages also depend on the type of game he's got in there. If I have a *Space Invaders* in there, for instance, I would be willing to accept a lower average than I would for an *Asteroids*.

**PLAY METER:** The average location for uprights has a little over two pieces of equipment in it. What would be the average number of cocktail tables you can expect in a location?

**TABB:** Of course, that depends on the location, but it averages out at between four and six games per location.

**PLAY METER:** So it looks like there's a potential for a





It sure is shapely,  
but it's not The End.



This receiver dropped a TD pass,  
but it's not the End.



This is as far as you can go,  
but it's not The End.



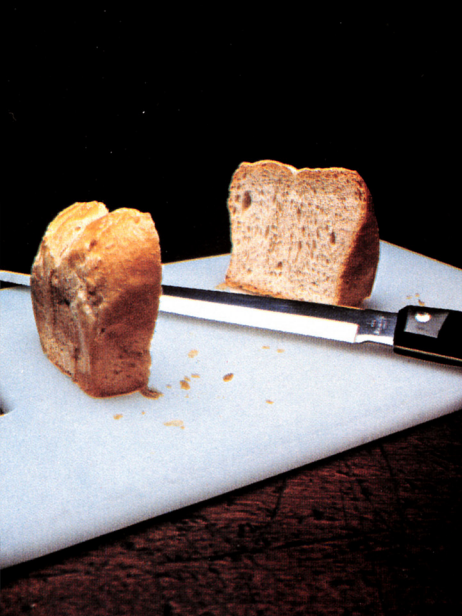
The words say she left you,  
but it's not The End.



This is a little corny,  
but it's not The End.



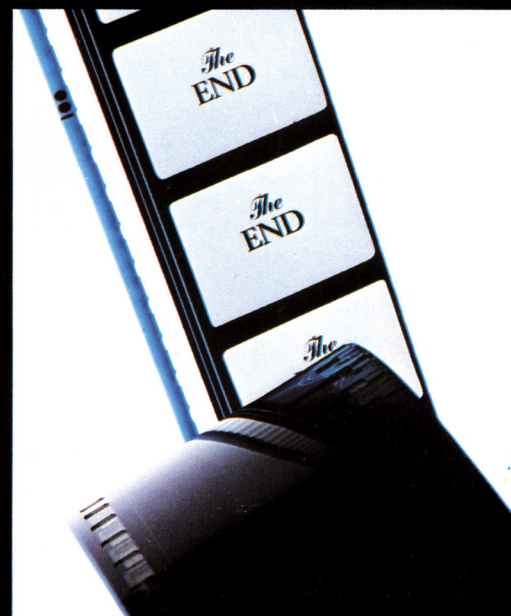
Ooops, wrong button!  
But it's not The End.



Nobody likes the heels,  
but it's not The End.



The race is over,  
but it's not The End.



You may think this is the end,  
but it's not The End... (Turn this end over)



# THIS IS THE END!



Here it is: the latest video game from Stern—and what a game it is! You could say "The End" is the last word in fantasy or fun. But, in the final analysis, "The End" is nothing more than the beginning. The beginning of big profits for you.

#### HOW TO PLAY "THE END:"

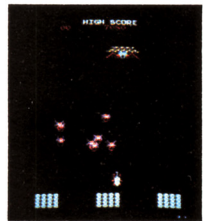
- Insert 25¢ per player.
- Select 1 or 2 player button.

#### "THE END" OBJECTIVE:

- To destroy SPACE BANDITS attempting to steal BRICKS from your DEFENSE BASES.
- SPACE BANDITS arrange stolen BRICKS to spell out END.
- SPACE BANDITS are destroyed by pressing firing mechanism on your DEFENSE BASE
- The DEFENSE BASE moves left and right to meet attacking SPACE BANDITS head-on.
- Shooting SPACE BANDITS or MOTHER SHIP in "CHANCE TIME" subtracts BRICKS.
- Additional DEFENSE BASE awarded at 10,000 pts.
- Game is over when all DEFENSE BASES are destroyed or E-N-D is completed by SPACE BANDITS.

#### THE POINTS OF "THE END:"

- Each SPACE BANDIT destroyed scores 40, 60, or 100 points
- Destroying MOTHER SHIP SCORES 10 to 100 points per brick on each brick remaining at DEFENSE BASES.
- Destroying SPACE BANDITS carrying stolen BRICKS scores double.
- Every player's final score displayed for comparison against highest score to date.
- 5 highest scores to date register on screen.



Game begins. Space Bandits converge on Defense Bases, while Mother Ship hovers above.



Space Bandit successfully destroys Defense Base.



All Defense Bases nearly destroyed. The End is imminent.



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higher ratio of games to location with cocktails. Is that right?

**TABB:** Absolutely, there's no question about it. And the collections on the cocktails are comparable. A standup piece will do about 10 percent better than a cocktail table, but you've got to look at the overall picture, that you're able to put in four or five cocktail tables in a location where you couldn't put in four or five standups. So you're making the location pay off better for you.

Fortunately, our games are so good today that we can actually defy people to sit down and *not* play them. Sure, you're going to have people sit down at the tables who are not going to play them, but people get addicted to these games, and so the tables will be good, solid earners.

**PLAY METER:** In the early days of the cocktail tables, there were problems with people spilling drinks on the tables and...

**TABB:** It doesn't bother the machines anymore. These tables are well-covered; so drinks don't get into the tables now.

**PLAY METER:** What I wanted to get to was a suspicion by a lot of operators that a cocktail table is more cheaply made than an upright. Is that your experience?

**TABB:** Today's tables are well-built. In fact, I don't think there can be a better cocktail table built for reliability than the Taito cocktail table. Cocktail tables in general are just as reliable, if not more reliable, simply because players don't kick them around as much.

**PLAY METER:** Let's turn for a second to the matter of the cocktail pinball game. Why didn't that catch on?

**TABB:** Well, the cocktail pin showed promise when it first came out, but none of the games were really good. We tried to move them, but they were just average pieces. And then when *Space Invaders* and *Asteroids* hit, it just buried these games, just like it did the upright pinballs.

**PLAY METER:** Do you see a chance for pinball to succeed in the cocktail configuration?

**TABB:** At this moment, no. The video game is just too strong right now. There are just so many good video winners that I see pinball taking the back seat for another year or two. The pingame will come back, I'm sure, but it'll have to come back in another form or fashion to get into these new locations. It'll have to match up to the decor of the locations.

**PLAY METER:** How would you sum up the prospects for the operator in the cocktail table market?

**TABB:** How would I sum it up? Well, for the first time in a long time the operator can really grow in this business. The potential of these games is that great. It has a potential for greatness as long as we don't make a racket out of it. We must be honest and right with our people and our locations. We must be able to show the locations that our games can make for them the kind of money they want them to make. Each location is completely different, and the operator has to keep this in mind. There is more money to be made out of a location today, and this is where the cocktail tables can help.

When I started in the business in 1940, it took me about thirty locations to realize the kind of money I now see in one location. And cocktail tables are very much a reason for that. □



# “TOMORROW and TOMORROW and TOMORROW

creeps in this petty pace  
from day to day.”

William Shakespeare never operated coin-op games, but he seems to have summed up pretty well the frustrations of today's operators. It's exasperating to be put off day after day by distributors who don't seem to have any of the top games—only an interminable waiting list for each one.

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# Ruling determines Midway rights valid over 26 who 'pirated' games

Midway Manufacturing Co. has won a major battle in protecting rights to video game products with an administrative law judge's ruling in January that the producer's trademarks are valid for *Galaxian* and that it is a copyrightable game. The ramifications from this ruling could set a legal precedent for future copyright problems.

Midway announced that on January 9, 1981, an administrative law judge of the U.S. International Trade Commission issued a "recommended determination" favorable to Midway on its complaint which was based on Midway's exclusive rights to the *Galaxian* game in the United States. The complaint sought to obtain an order to exclude the entry of certain imported video games and game kits into the United States and also sought cease and desist orders against a number of individual companies infringing on these rights.

The ITC began its extensive investigation on June 20, 1980. After evidentiary hearings were held in Washington, D.C. with actual games in evidence and depositions were taken of numerous witnesses who



Andy Ducay, left, and Larry Berke of Midway at the London trade show, with *Gorf*, new game which may have more protection from copying under ITC ruling.

had been subpoenaed in various cities throughout the country, the judge found basically that:

1) The word, *Galaxian*, as well as the *Galaxian* logo are valid trademarks of Midway.

2) The *Galaxian* video game is copyrightable subject matter.

3) Midway owns the U.S. copyrights in the *Galaxian* video game.

4) All of the accused games infringed Midway's copyrights in the *Galaxian* game.

5) Those games which had the *Galaxian* or similar name or logo also infringed Midway's trademark rights.

6) All the respondents against whom evidence of actual importation or sale existed and who had not entered into an approved settlement agreement violated Section 337 of the U.S. Tariff Act of 1939.

Midway's representatives stressed that they intend to continue a policy of actively enforcing Midway's exclusive rights in *Galaxian* and its other popular games introduced since *Galaxian*. These games include *Pac-Man*, *Rally-X*, *Space Encounters*, and *Space Zap* as well as its newest game, *Gorf*.

Infringing companies in the *Galaxian* case were not divulged by Midway. However, it was reported to PLAY METER that 26 respondents were called to appear before the I.T.C. in this matter.

## Singing about coin-op togetherness

NASHVILLE—Cooperation was a key to the Amusement & Music Operators of Tennessee's setting up its first convention, which got off on a good note at Opry Land Hotel, December 12-13.

Milton Hobbs, a North Carolina operator with association experience, was contacted by AMOT last October to organize the coin-op convention in the Volunteer State. "I was pleased at the results on short notice," Hobbs told PLAY METER. "Generally, it takes a year to set one up. Everything went very good, cooperation was outstanding, and we had no hassle at all."

The AMOT executive director counted 125 persons in attendance, representing 40 to 45 amusement/music operations. The convention activities began with a Saturday pool tournament and a banquet that night. The group held a general meeting and a board meeting, and a special attraction was a Friday night visit to the Grand Ole Opry.

Seminars were held by Paul Morrison, Tennessee operator, on "How to Increase Profits on Games"; and by AMOA President Norman Pink, "The Benefits of Cooperation," regarding associations' work.

In the drawings held for coin-op equipment, Bill Stone of Stone Amusement/Tullahoma, Tennessee won a Bally pingame donated to AMOT by Bally Manufacturing and Sanders Distributing companies. Stone donated the pingame back to AMOT for auction, at which it raised \$1750 for the association coffers. Tennessee operator Bill Spencer bought the game.

Other donations to the coin-op cause were made by Poland Manufacturing, giving a pool table mover, and Dynamo and Rowe International of Nashville, which presented a Dynamo pool table.

Leo Droste, AMOA executive vice president, attended and gave a brief talk at the Saturday luncheon.

Nathan Wall, outgoing AMOT president, of T&W Amusement Co./Nashville, was awarded a plaque.

Elected officers for 1981 were: president, John Estridge of Southern Games/Lewisburg; vice president, Bill Stone, Stone Amusement; treasurer, Charles Stutz, Coin Machine Service Co./Chattanooga; secretary, Bill Spencer of Burruss, Tennessee; and Milton Hobbs was confirmed as executive director of AMOT. The association gained five new members during the convention, said Hobbs.

Other gains of the AMOT gathering included \$4,000 in revenue from the program book.

The 1981 convention, July 24-26 will have coin-op exhibits scheduled. It will be held at the Hyatt Regency in Nashville. Inquiries may be made to Executive Director Hobbs direct: P.O. Box 2002, Hickory, North Carolina 28601; telephone 704/879-8747.



# AMOA's new round of royalty bout

CHICAGO—Attorneys for the AMOA have appealed to a federal court to maintain royalty fees on jukeboxes at \$8 per box, while counsel for the performing rights society ASCAP has asked a court to increase the scale set in December by the Copyright Royalty Tribunal.

Legal action in January was in the formative stage, but another arena had been entered for the continuing fight over operator payments for the use of copyrighted music. Nicholas Allen, AMOA counsel, said rapid action was expected through the Seventh Circuit Court of Appeals in Chicago, or the Second Circuit, New York City, where the ASCAP appeal was filed. BMI filed motions to intervene in both cases.

The AMOA asked the court to "review, vacate, modify, or correct the final ruling by the CRT." The position of maintaining the \$8 phonograph fee also opposes the sliding scale and cost-of-living adjustments as passed down in December. Attorneys continued to "review the exact wording" of the CRT edict, an AMOA spokesman said.

AMOA asked for the transfer of the New York federal appeal to the Seventh Circuit court in Chicago, based on the AMOA's filing an appeal there first.

"These copyright matters aren't going away," commented AMOA Executive Vice President Leo Droste.

## CRT action on fees

The AMOA's stand on the jukebox licensing fee issue took its most severe setback December 10 when the Copyright Royalty Tribunal resolved to fix fees to jukebox operators at the \$50 level, phased in over a seven-year period, after which the fee will be given an "inflationary adjustment"—doubtlessly upward—to be based on the change in the consumer price index over that period.

The CRT decision was officially published in the Federal Register on December 31.

Meanwhile, jukebox operators were faced with the legal requirement to register machines in operation on January 1.

The AMOA, in arguing the fees issue before the CRT in 1980, stood for no increase in the present \$8 per box fee. The association, through its

attorneys, won its position only insofar as the \$8 fee will remain in effect for 1981. On January 1, 1982, however, the fee set by the CRT will rise to \$25 per jukebox; as of 1984, the \$50 fee level will go into effect and last until 1987, at which time a rate will be determined to go into effect with the inflation adjustment included.

ASCAP's General Counsel Bernard Korman has commented, "The operators and establishment owners can well afford these modest rates."

AMOA's position before the CRT in month's-long hearings was that a decline in jukebox activity over the past few years should convince the arbitrating panel to freeze the fee at \$8 per machine.

A public vote by the CRT disclosed a shift from a scale of \$30 in 1982, \$60 in 1984 to the lower scale approved by commissioners Berg, Brennan, and Coulter.

Commissioner Mary Lou Berg explained, in a conversation with PLAY METER, her motion to reduce fees from the \$30/\$60 level. "My concern was and remains for the small jukebox operator. I tried to approach that problem with a graduated scale."

Her original proposal, which found no support among the other commissioners, was for a three-tiered scale: one fee set for operators of less than 60 jukeboxes, a mid-range fee for the operators with more than 60 but less than a given number, and the highest fee per box for the largest set of operators.

"There was no initial support for this, but I continue to believe that it is

the most fair and equitable approach," said Berg. Without support for this scheme, she motioned for the \$25/\$50 fee phase-in which passed.

Of the decision as it was handed down, she said, "I'm sure there will be an appeal. All our work this year is precedential in nature. In any case, you can't please all parties." She noted that a CRT decision on distribution of cable television royalties is already under appeal.

Berg conceded that the fees set were in the form of a compromise within the commission.

The fees were not, however, a compromise between the differing amounts of \$30 per box, sought by the BMI, and \$70 sought by ASCAP, she stated; the fact that \$50 falls directly between those sums was "coincidental," she said.

The added cash for performing artists was argued by ASCAP on the basis of "marketplace analysis," or what jukebox operators and the performing rights organizations would theoretically negotiate face-to-face, if there were no Copyright Tribunal involved.

Last year, the major rights organizations approximately divided the \$1 million collections in equal parts, with five percent going to SESAC for its members. That sum was based on 1978 collections.

The licensing agency for the jukebox is the Licensing Division of the U.S. Copyright Office, Library of Congress. That division's chief, Walter D. Sampson, Jr., appealed to jukebox operators to comply with the requirements to register.

—by Ray E. Tilley

## Exidy tapped for tots charity

Exidy was given a special award for its contribution to the Northern California Van Council "Vannin' for Tots" charity event. Robert Bland, president of the San Jose Chapter Vancheros and Exidy employee, presented a hand-made plaque to Pete Kauffman, Exidy chief, who donated the use of a Targ video game for the club's Christmas charity program.

About 1500 members of the Northern California organization participated in the "Vannin' for Tots" event and collected over 4000 toys for the underprivileged children. The

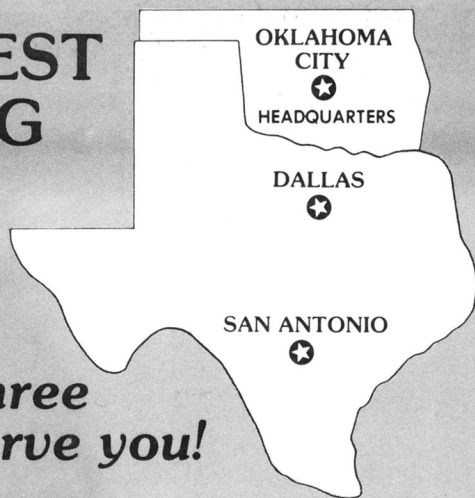
U.S. Marine Corp Reserve participated with the Vans Clubs to distribute the toys in time for Christmas.

Exidy's Targ game was made available for play during the charity event as profits from the game's play helped with the fundraising efforts of the organization.

"The members of our club and the children who attended the three-day program enjoyed playing Targ," reported Robert Bland. "We appreciate Exidy's generosity with our charity program."



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## Newlander tapped

James P. Newlander has been appointed a regional sales manager of D. Gottlieb & Co., covering the eastern area of the United States, announced Thomas L. Herrick, Gottlieb vice president.

"Jim Newlander's exceptionally broad experience in the field of coin-operated equipment is well-known to many Gottlieb distributors," said Herrick in commenting on the appointment. "Early in his career, he was on the executive staff of NAMA and he subsequently spent 16 years with Rowe International, culminating his career at that company as vice president of marketing. Most recently, he was national sales manager/vending of LaCrosse Cooler Company.

"I have personally seen Jim in action at distributor sales meetings," continued Herrick, "and his commitment to independent distribution and special talents come across in a most convincing manner."

Newlander in January began a series of trips throughout the eastern U.S. region, contacting Gottlieb distributors and becoming re-acquainted with many of them, he said.

## Exidy sales staff joined by Mike Wright

Pete Kaufman, Exidy president, announced that Mike Wright has been appointed to the firm's games sales staff.

"Wright comes to Exidy with strong experience in the operation area of the industry," said Kaufman. "He has worked with large operating companies such as Araven, Canteen, and Bally over the past nine years, and he brings a needed expertise to our marketing team. His insights from the operator's point of view will be of great value to Exidy's goals of providing the best products for the industry."

Most recently, Wright was regional general manager at Araven Services in Santa Clara, California. He commented of his move to Exidy, "This is an excellent opportunity for me to work from the manufacturer's side of the industry. I feel confident that my operating experience will help strengthen Exidy's position in the marketplace as well as being of value in my dealing with the distributors."

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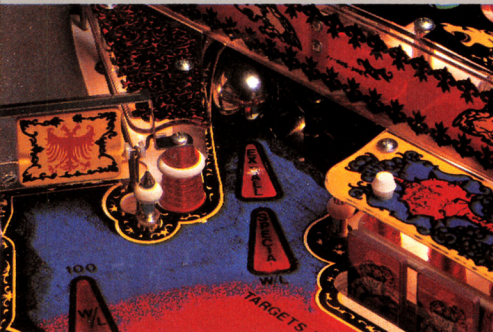




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## NEW Bonus Ball!



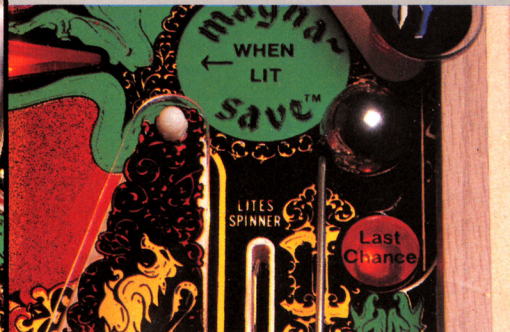
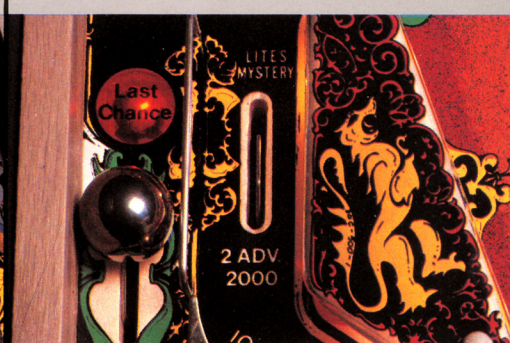
The winner of any game with more than 1 player achieves Bonus Ball! After regulation play has ended, the winner has from 30 to 99 seconds (operator adjustable) to play unlimited multi-ball! The score earned is added to the regulation play score. Bonus Ball play gives the only opportunity to light Special! When all 4 banks of targets are dropped, Special lights for Re-play, another Bonus Ball or 100,000 points!

## NEW Timed Features!



In addition to Bonus Ball and Timed Drop Targets, the left and right inside lanes activate timers! When the ball shoots through the left inside lane, the Mystery Timer is activated, giving the player 3 seconds to propel the ball up the center ramp for 20,000 to 99,000 Mystery Points! When the ball shoots through the right inside lane, the player has 3 seconds to shoot through the lit Spinner for 2500 points per spin!

## NEW Last Chance!



If you lock up 1 or 2 balls in the upper level while your last ball is in play, you'll light Last Chance in both outside lanes! Drain through either lane and any locked balls are kicked out into play!

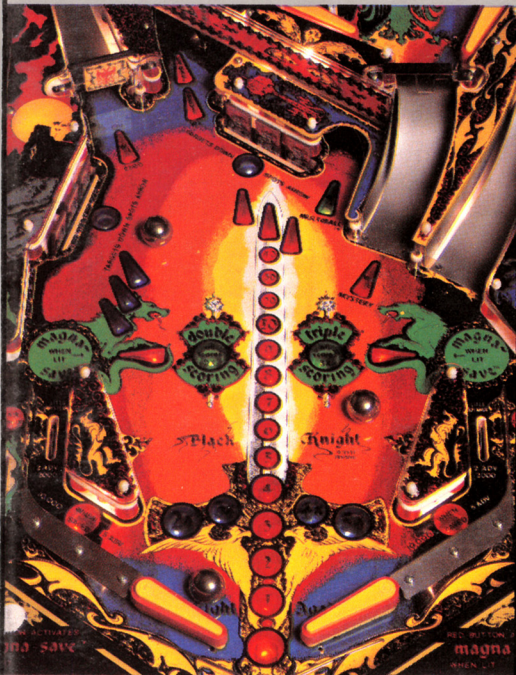
\*Patent Pending



# Williams

## introduces *Black Knight* (and that's just the beginning)!

**NEW** Multi-Ball Scoring!



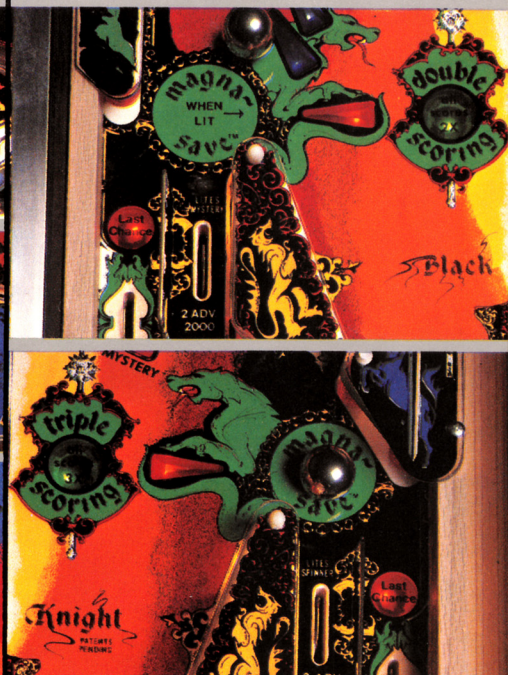
All scoring is doubled during 2-ball play . . . tripled during 3-ball play! Multi-ball can be activated 3 ways, making the exclusive score display animation on the back glass come alive!

**NEW** Timed Drop Targets!



Knock down any drop target and the player has a limited time to knock down the other targets in the same bank or the dropped targets will pop back up! Dropping both banks of targets on either level 3 times lights Extra Ball the first time! Light Extra Ball a second and third time by knocking down all 12 targets! Collecting Extra Ball alternates on both levels.

**NEW** Magna-Save<sup>™</sup>!



Earn this player-controlled ball-saving feature by dropping any bank of targets! Activating the magnets with the special buttons on either side of the cabinet will capture the ball, preventing it from draining through the outside lanes, and shoot it back into play, scoring 10,000 points and 5 bonus advances!



***THIS IS IT!***  
*With Black Knight,  
Multi-Level is just the beginning!  
And there's no end  
in sight for unbeatable  
profits!*



Height: 69½"; Depth: 52"  
Width (cabinet): 22½"  
Width (backbox): 30¼"  
Weight: 260 lbs.  
Instruction manual in game.

For the service back-up  
that keeps you out-front,  
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In Illinois, call toll-free at 800/972-7898.

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Lock 1

Lock 2

Lock 3

SPOTS ARROW

TARGETS DOWN

SPOTS ARROW

TARGETS DOWN

100

2500

TARGETS DOWN SPOTS ARROW

SPOTS ARROW

MULTIBALL™

40

30

20

10

0

8

7

6

5

4

3

2

1

MYSTERY

Magna-Save™  
WHEN LIT →

double  
scoring  
CORES

triple  
scoring  
ALL SCORING  
3X

Magna-Save™  
← WHEN LIT

LITES  
MYSTERY

2 ADV.  
2000

10000

WHEN  
SAVED

5 ADV.

Black Knight  
PATENTS PENDING

LITES  
SPINNER

2 ADV.  
2000

10000

WHEN  
SAVED

5 ADV.

Last  
Chance

5000  
2 ADV.





## NEW Resident Software!

With this revolutionary new software program, Williams breaks away from tradition . . . and starts its own! Players will thrill to all kinds of spectacular special effects from the black-out attract mode to lights flickering, sweeping, dancing on the play field and back glass! And the sounds! The Black Knight comes alive, challenging, laughing, taunting and teasing. Play is met with crowd noises, the sound of galloping horses, 16 different phrases of speech, ringing bells! And with open-ended scoring, the player will always have something to go for, game after game after game!

RED BUTTON ACTIVATES  
**magna-save™**  
WHEN LIT

RED BUTTON ACTIVATES  
**magna-save™**  
WHEN LIT



## Skor tops World Wide

Nate Feinstein announced the appointment of Fred Skor as president and chief operating officer of World Wide Distributors, effective January 1.

Feinstein will continue with World Wide as vice chairman of the board of directors, as well as assuming other responsibilities.

"Skor, a veteran of 31 years in the coin machine industry, is well qualified to continue and enhance the universal leadership of World Wide in the industry," said Feinstein. "He looks forward with confidence and optimism to the era of the 80s, following World Wide's banner year in 1980."

## Bohrer is sales mgr.

Green Duck Corporation of Hernando, Mississippi, has promoted Phyllis Bohrer to general sales manager as of January 5, 1981. In her new position, Bohrer will be responsible for all company sales in all distribution channels.

Bohrer has been with Green Duck for five years as a sales consultant.

Green Duck is one of the oldest and major manufacturers of coins, tokens, litho buttons, badges, emblematic jewelry, and other promotional items.

## Sugita promoted

Paul J. Jacobs, president of Universal U.S.A., Inc., has announced the promotion of Masahiko (Mac) Sugita to a newly-created position of general manager/administration.

Sugita first joined Universal in October of 1979. Working in the former Hollywood office, he began as a sales and service representative and coordinated all shipping and receiving functions of the company. Later he was promoted to import/export manager and accompanied Universal in its move to its current offices in Santa Clara. On August 1, 1980, the board of directors appointed him assistant secretary of the corporation.

In his new position, Sugita will be responsible for the administrative coordination of all operations within Universal U.S.A. In addition, he will coordinate transactions between Universal U.S.A. and its parent company in Tokyo, Universal Co., Ltd.



Once again, Laniel Automatic Machines, Montreal distributors, held its annual Christmas party and rewarded its employees. Shown here, lower photo, the Laniel crew pose with the 1981 Pontiac Firebird which was given away by a "token operated" drawing. Two employees shared the car win—Pierre Belanger of the parts department and Viateur Chabot, electronics. Above, left is Jean-Pierre Lefebure, parts manager, awarded with a microwave oven for his 20 years' service with Laniel; on his right is Jean Coutu, vice president of Laniel. The above, right photo shows Guy Baron, computer manager, with a tape-radio set that's his reward on completing 10 years' service; Pierre Laniel, president of the distributorship, beams with pride at his employees—who were rather happy themselves.

## For a need, a pin marathon

Six Pottstown, Pennsylvania teenagers staged a 132-hour pinball marathon to raise funds to help pay the hospital and funeral expenses of a crippled youth who died on Christmas Day.

Scott Giarrocco, who manages the arcade where the 5½-day marathon was held, said pledges and donations amounted to several hundred dollars for the family of Leo Wampole, 18, who died December 25, 1980 of pneumonia complicated

by cerebral palsy.

He said none of the six youths knew Wampole but they decided to use their holiday vacations to raise money for his family after several church groups publicized the family's financial status.

As part of the marathon, the six youths averaged 12 games an hour on *Asteroids*. The high score was logged by Bruce Walters, a Penn State student, who broke the 2 million point mark.



# Minnesota operators arm for legislative bout

By RAY E. TILLEY

What do you do on the way to lobby your legislators? If you take the route of the Music Operators of Minnesota, you hold an auction.

Do the methods of politics seem strange at this point? There is method here, a plan of action. According to Ray Hibarger, a director of MOM, an anticipated legislative fight to reduce or eliminate sales taxes on amusement games revenue this year will be very costly to the state association. To raise part of those legal costs, MOM sponsored an auction November 29-30, putting obsolete equipment on the block and selling 220 pieces at a \$17,000 profit to MOM. Its gain in the war chest came after expenses were covered and 40 percent commissions were paid to companies donating old jukeboxes, EM and solid state pins, older arcade pieces, and other coin-operated equipment.

The auction was open to the general public at a warehouse near Hibarger's Hanson Distributing facilities in Minneapolis. MOM called for equipment to be "as attractive as possible and in demonstrating working order"—which likely contributed to the "very successful program," in Hibarger's words. "This is a good start on the legislative costs," he said.

## Seminar on lobbying

Another step in arming for a fight against an unfair tax was taken in the Music Operators of Minnesota's January 16-18 meeting and show in the downtown Minneapolis Holiday Inn. An informative seminar, "How Will We Cope?" was scheduled with MOM's legal counsel Robert Latz and his associate Roland Amonson speaking on how to organize grassroots lobbying.

Latz, who participated in a "grassroots politics" seminar during the 1980 AMOA Show in Chicago, spoke to the Minneapolis meeting on how to wield the most effectiveness with local legislators. [See "From Operating to Politicking" in PLAY METER, January, 1980.]

"There are tricks to the trade in

getting a message across to the legislator," Hibarger summed up. "From the grassroots approach, we are hoping to have a better ear given us on Capital Hill."

As with any group, among the state association's membership there has been "apathy until the last minute" towards dealing with unfavorable legislation, said the member of the MOM board of directors. "All of this is aimed at getting an effective legislative program going in this state."

Minnesota operators' present target for lobbying is the state lawmakers' plan to eliminate a one percent exemption of sales tax on amusement and vending revenues. They argue that a proposed hike in the sales tax would leave operators with an inflated expense and "give them no way of passing the tax on to the ultimate consumer."

Such an argument sounds convincing, but a lawmaker requires extraordinary persuasion: for example, a showing of the number of persons—*voters*—who are influenced by an operator. It is easy to let the legislator go "unconvinced" until a crisis threatens one's business.

Potential crises to coin machines operators could likely be found in every state during the legislative season. (As one astute political observer once said, "No man's wife or property are safe while the legislature is in session.") One example lies in Ohio, where in mid-December, an "emergency tax law" hit suddenly. Among other things, the revenue bill added a penny sales tax per dollar of purchase; suspended the one percent vendors discount; applied sales tax to industrial packaging items such as toothpaste and cleaners; and subjected cigarettes, already taxed at 15 cents a pack, to the sales tax at five percent.

Ohio Music and Amusement Association urged its members to voice their concerns to Gov. James Rhodes and the General Assembly within the early months of 1981, else "rest assured that these so-called temporary measures may well become permanent on July 1." ...

## Calibre concepts forms

Frank Sola of Ft. Lauderdale, Florida, announced the formation of Caliber Concepts, Inc., a marketing corporation. "The main objective of Caliber Concepts," said Sola, "is to provide the coin machine industry and electronics industry with creativity in hardware design and software which will promote the highest levels of play appeal and reliability in the final manufactured product."

Sola added that his company aims at promotion and protection of the independent designer and his role in the industry.

"There is always an abundance of good technology and creative ideas available throughout the world," he continued. "It is the prime mission of Caliber Concepts to create an international 'think tank' accessible to all manufacturers." The firm's address is 2257 N.W. 59th Terrace, Ft. Lauderdale, Florida, 33313

## Bally special

Bally Pinball Division offered a New Year's special from January 12 through March 30. Any operator who sends in a special business reply card will be eligible for a drawing each week for a Bally Pinball jacket. The cards are found on top of every new Bally game. Operators should indicate small, medium, or large size jacket on the card.

The manufacturer said operators' responses on the cards are "useful and necessary to Bally in order that we may provide operators with the best possible product."

## Park Place record set

An Edison, New Jersey woman broke Atlantic City's progressive slot machine record on New Year's Day, winning \$11,831.70 at Bally's Park Place Casino/Hotel.

Rita Buchowiecki started playing a progressive machine with 20 Susan B. Anthony dollars and hit the jackpot after parlaying the \$20 into \$50, said Park Place officials. She broke the old Atlantic City record of \$10,240, set December 15 by a New York woman, also at Park Place, a casino spokesman said.

The progressive machines pay a minimum jackpot of \$10,000 when three dollar coins result in three sevens showing. They offer the largest slot machine winnings and had been used in the resort for less than a month.



# Five Years Ago in Play Meter...

February, 1976

In these pages five years ago, editorial eyes were on the ATE London show, which was suffused with "optimism about the future of the coin-operated amusements industry in Great Britain and Europe," said Alan Willis, a representative of the ATE.

All of the British gaming machine manufacturers, as well as many American producers, were on hand at the 1976 London show. On view for the first time in England on the Ruffler and Deith stand was Mirco Games' *Spirit of '76*, the first pinball game to use microprocessors. Also present for the first time was a game which Atari had "kept hidden in its suite" during the previous October's Chicago AMOA show—the *Tank 8*, an eight-player version of the popular two-player game. Sega's *Bullet Mark* also made its debut in London, and UBI Inc.'s new *Bunny Pool*, a narrower and shorter than normal table, was on display. Other

major pool table and phonograph manufacturers were represented.

In PLAY METER's international section for the February, 1976 world markets issue, it was reported that major coin machine exporters in the United States foresaw a banner year for coin-op sales abroad in 1976. Video games, especially *Pong*, were just beginning to warm up in some markets, said Bob Haim, president of New York's R.H. Belam Co.

In France, the phonograph maker Jupiter had been taken over by the French operating company Socodimex and was producing jukeboxes as well as Atari products for Europe.

British operator Peter Groom, of Mam Inn Play, was interviewed as Coinman of the Month for February, 1976. Among his comments was one that his 10,000-jukebox operation would have to raise the price of five pence (10 cents) for a single play. "We have to start getting more because we have to pay performing

rights fees," said Groom. "On average we are paying something like 15 to 20 pounds (per machine) per annum for the privilege of supplying music to a place....That is currently being examined by the performing rights society....We are threatened with a 400 percent increase in charge." [Ed. note: The British jukebox license fee was increased from £37.50 to £50 last year, with upcoming annual increases likely, and operators were being advised by the British Amusement Catering Trades Association to go to one play for 20 pence.]

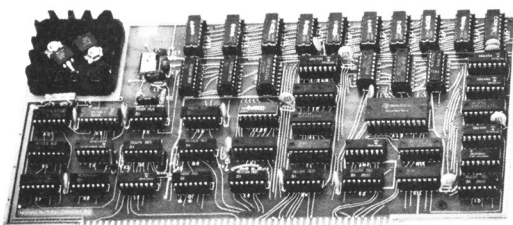
New products in these pages five years ago included: Chicago Coin's *Demolition Derby* video driving game; an alternative to standard hockey tables, called *Pull!* from Satco Systems of Grand Rapids, Michigan; and Zytronic's *Electronic Handwriting Analysis* machine, set to operate on 50 cents. ‡

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# LONDON

## The trade came in from the cold

By RALPH C. LALLY II

LONDON—The 37th annual Amusement Trades Exposition (ATE), sponsored by the British Amusement Trades Catering Association (BACTA), was staged a couple of weeks early this year. The premier international coin event of the year found itself unable to return to the gloomy surroundings of the fire-ravaged Alexandra Palace, the former home of the event (See PLAY METER, September, 1980, page 46).

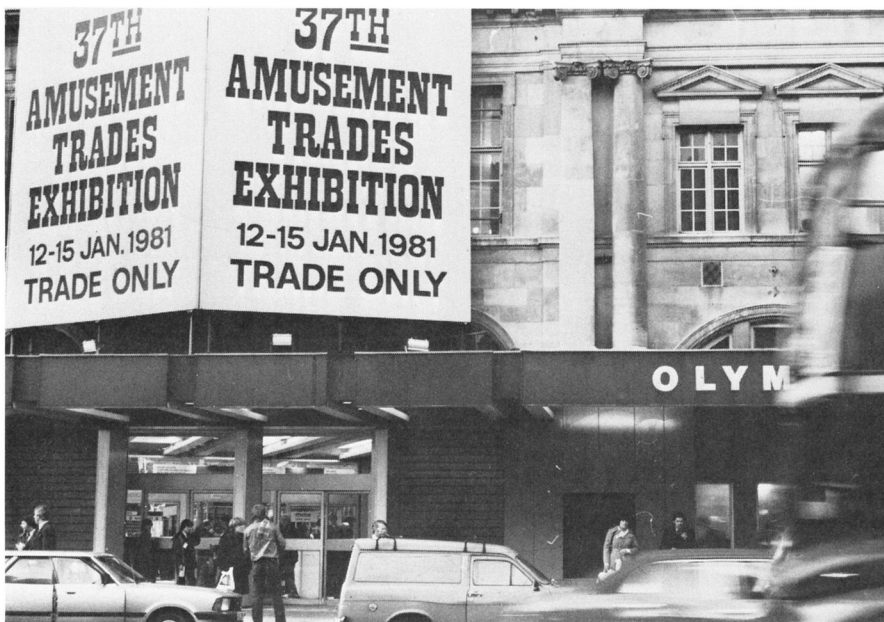
ATE organizers were hard pressed to relocate the show. And, after a considerable amount of effort to locate a site that was large enough, they managed to book London's Olympia exhibition facility for the event of January 12-15.

As a result, the talk of the show was the show itself. Visitors to this year's ATE couldn't help but applaud the outstanding facilities Olympia had to offer. One could actually walk the exhibit floor without an overcoat, and it didn't take an hour to get there. Also, it was no longer necessary to fight through crowds to get to the bar for a drink or wait in slow-moving lines to grab a bite to eat.

The exhibits were not scattered throughout a maze of alley ways and rooms. All the exhibits were neatly arranged on two levels under one large dome.

And, best of all, there was a tremendous reduction in the number of children at the show. This was no doubt due to the \$25 admission fee that was enforced this year. The high admission fee discouraged the general public from attending the show and, as a result, the games were more accessible to the serious buyers.

To further this effect, the show organizers held a special "trade



Entrance to Olympia: A new beginning, a welcome end.



The show goes on, with easier floor access than at Ally Pally.



only" preview showing the day before the show officially opened. The "trade only" preview was free to all BACTA members, and everyone else had to pay \$50 to get in for that one day. Needless to say, that sizeable admission fee discouraged a lot of lookers from filling up the aisles and occupying the games.

ATE visitors were not the only ones who found themselves digging deeper this year, though. Olympia, a far more expensive facility than Alexandra Palace, forced ATE to make a hefty increase in the cost of booth space.

Nevertheless, the show was a sellout. There was a total of 170 exhibitors occupying some 93,000 square feet. But with all that, there were still some 20 or so companies that couldn't book space. The only American company that succeeded in having its own stand at the ATE was the Willoughby, Ohio change machine manufacturer, Ardac, Inc.

Virtually every major U.S. manufacturer was represented in one or more of the British distributor stands that dominated the entire show. At the ATE show, the major exhibitors included the British manufacturing concerns, as well as the large British distributors.

Since split lines exist in the United Kingdom, as they do almost everywhere else, it was not uncommon to see the same game in more than one stand. In fact, some games were seen in a lot of stands, particularly those with some rather familiar sounding names—yes, the rip offs were in full force at the ATE again this year.

### Copies galore

The most sensational aspect of the year's ATE show was the incredible number of game copies on display. Just about every hit game from the past AMOA show had been ripped off by a number of foreign manufacturers. There were copies of Williams' *Defender*, Namco/Midway's *Pac Man* and *Rally X*, Cinematronics' *Rip Off*, Cinematronics/Rock-Ola's *Star Castle*, and many more.

I personally counted eleven different copies of Midway's *Pac Man* with such names as *Bite Monster*, *Mazeman*, *Munchy Man*, *Crock Man*, *Take Man*, *Puck Puck*, and *Pic Man*.

Williams Electronics officials were so outraged at the blatant piracy that was going on that they successfully took legal action against one of the pirate firms and actually got a copy of *Defender* removed from the floor



Lightning legal action paid off for the Williams team. Left to right: Bud Solk; Joseph Quadri, Williams' European representative; and Michael Stroll, president.



At World Wide Distributing's cocktail party in the London Hilton: Fred Skor, World Wide's president; Lila Zinter of Exidy Inc.; Harry Calleia, Vanguard Amusement of Sydney, Australia; Michael Ashcroft, chairman of Hawley Leisure (parent company of Ruffler & Deith; Mrs. Ashcroft; and Nate Feinstein of World Wide/Chicago. The industry's elite gather for refreshment.



Visiting American distributors at the show stand: (left to right) Donna Kress, Al Rodstein (Banner Specialty/Philadelphia), Jerry Marcus (Empire/Chicago), Mrs. Marcus, and Al Kress (Coin Machine Distributors/Peekskill, New York).

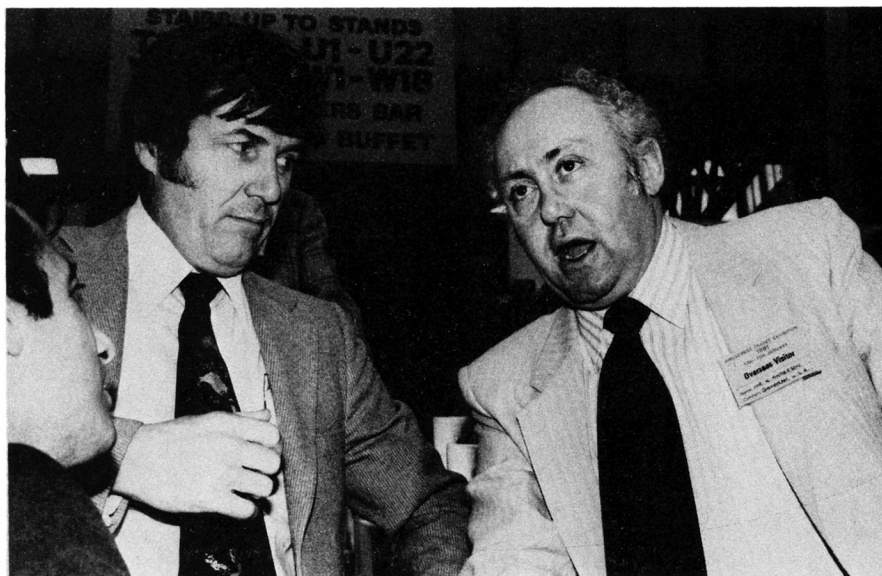




John Nicastro, general manager, G.D.I.; Al Rodstein of Banner Specialty Co.; and Bob Breither and Ward Ellis of G.D.I. Gaming equipment abounded as always, and G.D.I. was there with its bionic bandits.



Proud handlers of the hit Pac Man were Stan Jarocki, left, of Midway Manufacturing Co., and Jerry Marcus of Empire Distributing/Chicago.



Game Plan's Ken Anderson (right) strikes up a deal on the busy ATE show floor.

(See related story). By the end of the exposition, there were a number of pirated games that had been unplugged. This series of events may well mark the beginning of an all-out legal battle against game copies all over the world.

Despite the hoards of copies, all of the hit games from the past AMOA show were well received by the British market. Big sellers at this year's show included Williams' *Defender*, Atari's *Battlezone*, Midway's *Pac Man*, Cinematronics/Rock-Ola's *Star Castle*, Stern's *Berzerk*, and Exidy's *Spectar*.

What came as a surprise to many visitors to this year's show was the number of new games that were there. In years gone by, it was rare to come across a game at the ATE that had not been shown at the AMOA show—or a copy of a game at the AMOA. But this year was truly an exception.

Among the new games released were Midway's *Gorf*; Atari's *War Lord* and *Red Baron*; Gremlin's *Astro Blaster* and *Pulsar*; Centuri's *Phoenix*; Gottlieb's second video effort, *New York, New York*; Game Plan's *Intruder*; and a new Japanese game called *Scramble* that was manufactured by Konami Industries. Most of these new games will be appearing in New Orleans March 12-14 at the Amusement Operators Expo exhibit hall.

### Birmingham in '82

At the close of this year's show, it was announced that the show organizers were unable to book the Olympia for the '82 show. The show will therefore be held at the National Exhibition Center in Birmingham.

This news disturbed a number of overseas visitors who are accustomed to the London night life. Next year, visitors who elect to stay in London will have to commute to Birmingham on the rail service. We understand that trip takes about 1½ hours one way.

For those opting to stay in Birmingham, they should book early. Accommodations are likely to be scarce. The Albany Hotel in Birmingham is said to have the best accommodations. Dates for next year's show will be January 18-21.

The following year the ATE will again return to the Olympia in London, which after this year's successful trade show was happy news for those who found the newly adopted home of the ATE much more hospitable than the gloomy Victorian edifice of past ATE shows.

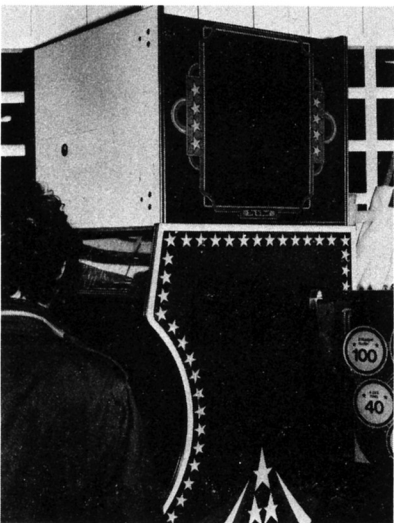




Gremlin President Frank Fogleman and Hazel Grove Music's Stan McKenna beam at the reception Astro Blaster got.



Rowe/Dedham's Chuck Arnold and Atari's Fred McCord watch two ATE visitors 'have a go' at Atari's new video, War Lords.



Scramble—the Japanese game that was getting the most attention. Here we go again?

## LEGAL ACTION TAKEN:

# 'Copies' are booted from ATE show

Sooner or later somebody was bound to get sick and tired of this nasty business of ripping off video games. Williams Electronics became the first manufacturer to successfully oust from a trade show an alleged game copycat. This occurred during the recent ATE show in London, January 12-15 and involved the hit game *Defender*.

Williams' legal representatives in London sought an injunction against Jeutel, a French video manufacturing concern. Jeutel had on display and was offering for sale games titled *Defender's*, *Speak and Rescue*, *Astro Invader*, *Moune Creste*, *Pucman*, and, you guessed it, *Rip Off*, among others. It was no coincidence that these games played exactly like their original counterparts, i.e., Williams' *Defender*, Taito's *Speak and Rescue*, Gremlin's *Moon Cresta*, Midway's *Space Invaders* and *Puc Man*, and Cinematronics' *Rip Off*.

Williams President Michael Stroll discovered the Jeutel game *Defender's* at the ATE show the morning of the opening day. Stroll told PLAY METER that after having played the game a few times it was extremely obvious to him that it was either a direct copy or what was inside the machine was actually Williams Electronics boards that had been modified slightly to cover up the Williams logo and copyright graphics that appear on the screen in the attract mode.

That afternoon Stroll met with his attorney in London. By midnight they had written their arguments for an affidavit for presentation in court the following morning. After several hours in court, the judge ruled in favor of Williams and handed down the injunction. Before the close of the show the second day, Williams' attorney had served notice to Jeutel representatives that the court had

ordered their *Defender's* game removed from the floor of the show.

When the show opened on the third day, there was no Jeutel *Defender's* game to be seen.

At presstime, Williams officials had been advised by their legal counsel not to operate or inspect the seized game until a further court order gives them the right to do so. Stroll told PLAY METER they are attempting to have a court order that would allow an independent technical third party to inspect the machine and verify what's inside and, hopefully, find them in violation of copyright protections. The French company, Jeutel, on the other hand, is attempting to block that action.

At the IMA show in Frankfurt, West Germany, January 23-25, the Jeutel firm did not have one of its *Defender's* games on display. Jeutel officials explained the absence of the game as due to legal and technical problems.

Also in Frankfurt, it was learned that David Rockola of Rock-Ola Manufacturing Corp. had been successful in getting a judgement that ousted a number of *Star Castle* imitations. Rock-Ola has been legally licensed to manufacture the Cinematronics video game which was one of the most copied games at the ATE and IMA shows.

Major U.S. manufacturers were scheduled to meet in Chicago and discuss the formation of a manufacturers association that would fight the copying problem around the world. PLAY METER will have a full report on that meeting in its upcoming Update Edition.

But, for a beginning, the lightning court action taken by Williams in London may go a long way toward protecting the proprietary rights of game originators and their legal licensees.

—by Ralph C. Lally II



For a different look at income

# Horizontal Statement Analysis

By Charles C. Ross

*Editor's Note: The author will be a speaker in Amusement Operator's Expo seminar sessions for the second year.*

You just got your 1980 year end statements from your accountant. You look at 1979 sales and net income as compared to 1980's sales and net income and you don't even react. You don't know if the \$15,000 increase in sales and \$6,800 increase in net income is good or bad. The reason you do not know if it is a good or bad increase is because you have not related the figures on a common basis.

If you have ever felt that you were not sure if the increases or decreases were good or not, you are in need of some Horizontal Statement Analysis. Horizontal analysis is easy to perform and can be an excellent indicator of how well your firm is waging its war against inflation. (By waging a war against inflation, I am not implying you are trying to cure the national problem but that you are making sure you are at least keeping up with inflation's relentless pace.)

In Exhibit I, selected income statement items are shown which have been used for the horizontal analysis study. It should be noted that the percentage increase or decrease is determined by dividing the dollar increase or decrease by the earliest year, in this case the 1979 year, *not* the most recent year. Only certain items have been selected here but all Income Statement Items can be analyzed.

Once you have obtained the percentage increases and decreases you can begin your study of the numbers. Sales increased 21 percent last year, but is that bad or good? If you are shooting for a 10 percent growth rate you may give a sigh of relief. But before you pack the fishing gear thinking all is well, don't forget about our friend inflation. In 1980

EXHIBIT I				
GAMES GALORE INC.				
HORIZONTAL ANALYSIS				
SELECTED INCOME STATEMENT ITEMS				
ITEM	1980	1979	INCREASE	% INCREASE *
Sales	\$250,000	\$205,500	\$44,500	21.65%
Wages	75,000	57,540	17,460	30.65%
Auto	10,000	8,000	2,000	25.00%
Advertising	3,000	4,110	(1,100)	-27.00%
Net Income	46,800	42,000	6,800	11.50%

\*  $\frac{\text{Increase}}{\text{Base Year}} = \% \quad \text{Example: Sales} \quad \frac{\$44,500}{\$205,500} = 21.65\%$

EXHIBIT II									
GAMES GALORE INC.									
SALES BY MONTH									
1979 and 1980									
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.
1979	12,000	11,500	13,000	14,000	15,000	16,000	14,000	12,500	9,500
1980	13,400	12,280	13,000	14,200	16,000	18,000	15,000	14,000	9,000
% Change*	11.7%	6.8%	-0-	1.4%	6.7%	12.5%	7.14%	12%	5.2%

\*The percentage change is determined by taking the difference in 1980 and 1979 figures and dividing by the 1979 figure. For example, May:

$$\frac{16,000 - 15,000}{15,000} = .066 = 6.7\%$$



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## When The Going Gets Tough

At all times a momentary respite from warfare can be achieved by hitting the protective barrier button. But caution should prevail. Your safety is only insured for a matter of seconds.

## A Wolf In Sheeps Clothing

Beautiful, but deceiving, eggs materialize on the screen. Right before your eyes they hatch into the deadly Phoenix<sup>®</sup> war birds. It's the ultimate test of survival as the fiendish fowl pellets you with its awesome power.

## The Encounter

Protected by a convoy of war birds, the lone alien taunts you to tear down the barriers that protect his ship. Succeed and you destroy the interloper. Fail, and your fate is in the hands of the vulturous attackers.

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- Progressive Frame Game Play For Increased Player Appeal
- Precision Angle Monitor Placement For Extra High Visibility & Ease Of Play
- Beautiful Bird Graphics
- High Durability Cabinet Structure Made Of Low Pressure Laminate
- Highly Reliable Low Temperature Switcher Type Power Supply
- Automatic High Score Registration
- Operator Adjustable Number of Missile Bases, Volume Control & Play Pricing

UPRIGHT	C/M	INCHES	MAXI	C/M	INCHES
Height	180.3	71	Height	139.7	55
Width	64.5	25-3/8	Width	52.7	20-3/4
Depth	76.2	30	Depth	59.7	23-1/2
Shipping Weight	KGS. 616	LBS. 310	Shipping Weight	KGS. 418	LBS. 190



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inflation was about 13 percent, depending on who you listen to and believe. So your effective net increase in sales was:

Increase	21.6%
-Inflation	13.0%
Net Increase	8.6%

You didn't make your 10 percent increase in real dollar terms.

Look at the wages expense increase of 30.3 percent. Subtracting out the inflation rate of 13 percent shows a net increase of 17.3 percent. Now you must ask *why?* Why did sales only increase 8.6 percent while inflation adjustments and wages shot up a whopping 17.3 percent with inflation adjustments? There could be a number of answers for the payroll increase—for example, the owner's son got a big pay raise or you finally hired a full-time repairman, gearing up for the future growth of the company. The answer could even be that some supervisor, or even the owner, got a little spend happy when passing out raises. He not only compensated his employees for inflation but gave them a healthy raise over and above inflation's bite.

It is up to every owner and

operator to analyze his own increases and decreases and determine if they are acceptable or not. Remember, you expect your standard of living to improve and so do your employees.

Alas, the study of net income or profit, the all-important bottom line. An 11.5 percent raw increase in net income doesn't look bad until you rip out the 13 percent for inflation, and then there is a net decrease in real net income of 1.5 percent. Translated into dollars this is a \$630 decrease (-1.5% X \$42,000 of base year net income). Not a large loss but the whole idea is to get net income and your purchasing power to increase, not decrease. As I have already said, you do expect your standard of living to improve. There is of course no cause for panic, but there is cause for concern. Something is happening between the top of the income statement and the bottom of the income statement, or between Sales and Net Income. Detailed analysis of all expense items is needed to see why net income is not keeping pace with inflation.

Horizontal analysis can also be performed on a monthly basis. In Exhibit II are listed the monthly sales figures for "Games Galore, Inc." The

best increase over the same period last year for Games Galore occurred in June and the worst occurred in September. It should be noted that none of the increases are sufficient to offset inflation by even using a conservative inflation measure! Advocates of studying Net Income would respond, "How did our net compare to the net income in the same month last year?" If you are going to compare net income on a monthly basis, be sure you have compared expenses for the same period. The shorter the time period, the more likely net income will be inaccurate because of the manner in which expenses may not occur again at the same time this year as they did last year. There are also some expenses which may not occur at all this year but did occur last year.

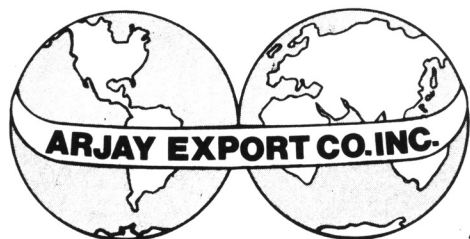
Horizontal analysis is an extremely useful tool and should be performed at least once a year. It can be performed over any comparable time periods in different years. If you do perform your horizontal analysis and discover you are not keeping pace with inflation, it is time to seek ways to boost revenues and cut cost, otherwise you will have less to spend even though it looks like you have more. ●

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# MUSIC PROGRAMMING



By Pat Matthews

## The Cold gathers steam



Cold fever is spreading! It's contagious, but it won't block up your nasal passages. On the contrary, it'll clear your head and make you feel good all over. The resident physicians of this musical phenomenon, which started in New Orleans and is beginning to branch out regionally, are pictured here in all their regalia.

Vance DeGeneres, bass and vocals, joined the group in early 1980 after initially taking on the duties of the original group's (Totally Cold) soundman—strictly as a hobby because “there certainly wasn't much money changing hands.” Vance's influence on the new band has been as quick as it was profound.

Besides DeGeneres, the additions of songstress extraordinaire Barbara “Babs” Menendez and drummer Chris Luckette to the already powerfully rhythmic guitar work of group originals Bert Smith and Kevin Radecker (the latter being the second half of a very talented songwriting team which includes Vance) have made the difference.

Barbara supplies all the visuals any group could possibly need with her very animated, yet somehow appropriate gyrations and one of the finer vocal ranges to be found on today's music scene. Chris Luckette, formerly of the defunct Normals (who played New York City in late '79), provides the group with

its infectious beat and the much needed experience which is so valuable.

From raw beginnings, The Cold has built a reputation of attracting crowds which sometime encircle the block outside the club waiting to get inside. There's only one place to go from here and that's back to being an opening act—for major artists on nationwide tours. You know, life is like a circle, and The Cold is making the turn on their way to the top.

Send all inquiries to The Cold, P.O. Box 51838, New Orleans, LA 70151, and in the meantime read about their debut record and see how to get your copies.

**You**—The Cold—Top Pop/KRS-611

Here's that effervescent quintet from New Orleans in their debut single. Featuring the gutsy, smooth, sometimes dramatic vocals of lead singer Barbara Menendez and the refreshing playing of the band (including “Babs” on keyboard) makes for one of the brightest sounds to emerge from the South since Antoine “Fats” himself rolled his fat fingers across the ivories. The song is done in quick 4/4 fashion and showcases the arranging and bass playing talents of Vance DeGeneres, as well as an irrepressible backbeat laid down by drummer Chris Luckette. Positive feelings are expressed everywhere this one's heard, and if you would like to get a



copy for your customers to get into Cold "fever", call All South Records Distributors in New Orleans, 504/568-0971.

**Woman**—John Lennon—Geffen/GEF49644

One of the more personal compositions from the *Double Fantasy* lp, this one shows John at his songwriting best. Symphonic in a sense, the arrangement is lush, the double-tracked background vocals effective, and the lyrics, needless to say, touching. There's even a chord change near the end. Easy is the feel for a song which fades while John sings "I love you forever." Stop and think, he may have been singing to the world as well as to Yoko; *10 out of 10*.

**Crying**—Don McLean—Millenium H-11799

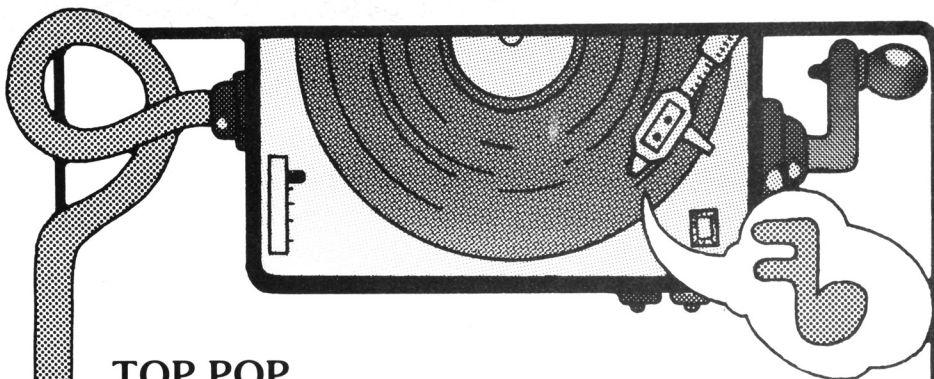
Where has he been? One of the more talented singer-songwriters of the early 70s just seemed to disappear. And now he's reappeared as quickly as he went away. For his comeback attempt, McLean has chosen the Roy Orbison classic ballad. The results are on the vinyl and success is virtually in the bag. Don's voice hasn't lost anything from the layoff. If anything, he's matured in a lot of ways. A near replica of the original, its powerful vocals make this a sure-shot winner and the eight year hiatus of Don McLean a lot easier to take; *10 out of 10*, and that's saying a lot!

**Games People Play**—The Alan Parsons Project—Arista/AS0573

From the intricate synthesizer opening and throughout, this one has the very recognizable sound of producer-writer extraordinaire Alan Parsons. Using basically the same singers and musicians from the previous lp, *Eve*, which spawned a hit single of relative magnitude ("Damned If I Do"), Mr. Parsons seems to have struck upon the right combination of personnel for hit records. With more hit potential than previous efforts by the group, I rate thee *9 out of 10* for sure.

**Perfect Fool**—Debby Boone—Warner-Curb/WBS 49652

Ms. Boone has taken another Diane Pfeifer composition (the first one, "Free To Be Lonely Again" went to No. 14 on the Country charts with no trouble) and added her own sultry alto vocalizings which should insure success for this one, too. The song has "Hit" written all over it. It's bouncy and infectious. You might even say that "Perfect Fool" is a "perfect" tune. I give it *10 out of 10* Country, no sweat.



## TOP POP

THE TIDE IS HIGH—BLONDIE—Chrysalis\*\*\*  
LOVE ON THE ROCKS—NEIL DIAMOND—Capitol\*\*\*  
(JUST LIKE) STARTING OVER—JOHN LENNON—Geffen\*\*\*  
PASSION—ROD STEWART—Warner Brothers  
TELL IT LIKE IT IS—HEART—Epic\*\*\*  
HEY NINETEEN—STEELY DAN—MCA\*\*\*  
SAME OLD LANG SYNE—DAN FOGELBERG—Full Moon/Epic\*\*\*  
I MADE IT THROUGH THE RAIN—BARRY MANILOW—Arista\*\*\*  
CELEBRATION—KOOL & THE GANG—Delite\*\*\*  
GIVING IT UP FOR YOUR LOVE—DELBERT McCLINTON—Capitol  
EVERY WOMAN IN THE WORLD—AIR SUPPLY—Arista\*\*\*  
I LOVE A RAINY NIGHT—EDDIE RABBITT—Elektra\*\*\*  
MISS SUN—BOZ SCAGGS—Columbia\*\*\*  
GUILTY—BARBRA STREISAND/BARRY GIBB—Columbia\*\*\*  
KEEP ON LOVING YOU—REO SPEEDWAGON—Epic\*\*\*  
FLASH'S THEME—QUEEN—Elektra  
I AIN'T GONNA STAND FOR IT—STEVIE WONDER—Tamlam\*\*\*  
TIME IS TIME—ANDY GIBB—RSO  
TOGETHER—TIERRA—Boardwalk\*\*\*  
HEARTBREAK HOTEL—THE JACKSONS—Epic\*\*\*  
A LITTLE IN LOVE—CLIFF RICHARD—EMI/America\*\*\*  
THE WINNER TAKES IT ALL—ABBA—Atlantic  
SEVEN BRIDGES ROAD—EAGLES—Asylum\*\*\*  
9 TO 5—DOLLY PARTON—RCA  
COLD LOVE—DONNA SUMMER—Geffen\*\*\*  
IT'S MY TURN—DIANA ROSS—Motown\*\*\*  
SMOKEY MOUNTAIN RAIN—RONNIE MILSAP—RCA

## COUNTRY & WESTERN

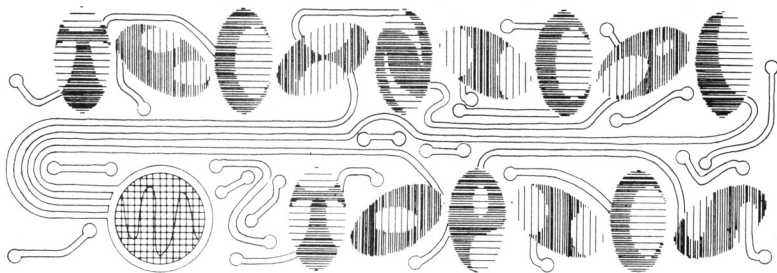
BEAUTIFUL YOU—OAKRIDGE BOYS—MCA  
ANGEL FLYING TOO CLOSE—WILLIE NELSON—Columbia  
9 TO 5—DOLLY PARTON—RCA  
I LOVE A RAINY NIGHT—EDDIE RABBITT—Elektra\*\*\*  
DON'T FORGET YOURSELF—STATLER BROTHERS—Mercury  
THINK I'LL JUST STAY HERE—MERLE HAGGARD—MCA  
I FEEL LIKE LOVING YOU AGAIN—T.G. SHEPPARD—WB/Curb  
I'LL BE THERE—GAIL DAVIES—Warner Brothers  
THAT'S ALL THAT MATTERS—MICKEY GILLEY—Epic  
ACAPULCO—JOHNNY DUNCAN—Columbia  
DOWN TO MY LAST BROKEN HEART—JANIE FRICKE—Columbia  
IF YOU GO, I'LL FOLLOW YOU—PORTER WAGONER & DOLLY PARTON—RCA

## RHYTHM & BLUES

CELEBRATION—KOOL & THE GANG—Delite\*\*\*  
REMOTE CONTROL—REDDINGS—Bid  
UNITED TOGETHER—ARETHA FRANKLIN—Arista  
TOO TIGHT—CON FUNKSHUN—Mercury  
HEARTBREAK HOTEL—THE JACKSONS—Epic\*\*\*  
YOU—EARTH, WIND & FIRE—ARC\*\*\*  
KEEP IT HOT—CAMEO—Chocolate City  
I'LL NEVER FIND ANOTHER (ANOTHER LIKE YOU)—THE MANHATTANS—Columbia\*\*\*  
LOOK UP—PATRICE RUSHEN—Elektra  
SHINE ON—LTD—A & M  
TOGETHER—TIERRA—Boardwalk\*\*\*  
COULD I BE DREAMING—POINTER SISTERS—Planet\*\*\*

\*\*\*denotes record reviewed previously by PLAY METER





By Randy Fromm

## COCKTAIL TABLE GAMES: Flipped-out videos

Anyone who has kept an eye on the industry has witnessed a dramatic rebirth of the cocktail table as a viable form of operational equipment for today's coin-op route. Smaller tables and more powerful games have made the table models acceptable in locations where none were welcomed previously. The difference between the upright and table version of any game will vary, naturally, from game to game, and from manufacturer to manufacturer. There are, however, a few standard systems that are used to make the table game flip the picture.

In order to understand the way the picture is flipped for the player seated on the opposite side of the table, let's look at three different ways that table games work.

### SYSTEM #1—YOKE SWITCHING

The earliest and most basic form of table game "flip" system was used on Exidy's *TV Pinball*. In this system, a relay was used to reverse the phase of the vertical and horizontal yoke connections [see figure 1]. Since the yoke is used to deflect the electron beam and draw a picture on the face of the picture tube, reversing the yoke will reverse the picture.

Reversing the connections to the vertical yoke will flip the picture upside down. Unfortunately, the picture will also be reversed (mirror image) unless the horizontal yoke winding is reversed simultaneously.

While this system is easy to understand and is fairly reliable, there are a couple of drawbacks to the system. First of all, a modified monitor must be used so that the yoke relay can be

connected. Midway's *Space Invaders* table had a specially constructed monitor with a built-in yoke relay. A transistor on the game board is used to drive the yoke relay. When the picture is supposed to flip, the transistor is turned on by the computer which in turn energizes the relay, flipping the picture.

A second drawback is that the yoke relay must switch while the monitor is in operation. This means that the yoke is disconnected and re-connected while power is flowing through the circuit. Although this has not proven to be a big problem, the switching can cause premature failure of the vertical and horizontal output transistors. Problems with the "flipping" circuit of the game can usually be traced to bad relay contacts (no vertical or horizontal

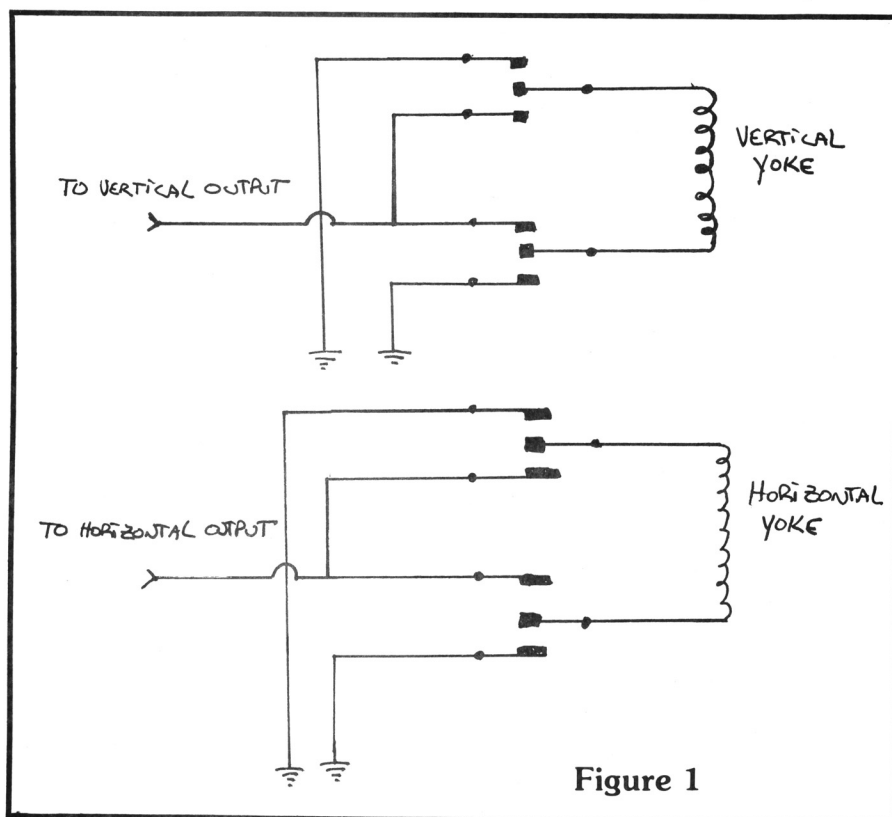


Figure 1

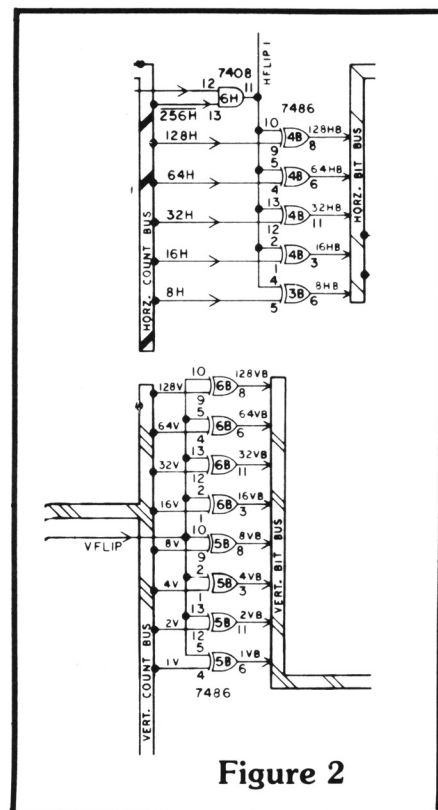


Figure 2







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Warning! Take the offensive quickly and destroy jet squadrons or your range of maneuverability will be limited!

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1 or 2 player upright:

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deflection, resulting in a single horizontal or vertical line), or a bad relay driver transistor (doesn't flip or stays flipped).

### SYSTEM #2— SYNC CHAIN INVERT

Most of today's video games use a system that allows the picture to be flipped without the use of a yoke relay. By selectively inverting some of the SYNC signals, the image from the computer can be reversed before it reaches the monitor. The inversion is accomplished by the use of "exclusive or" gates [see figure 2]. As long as the "FLIP" signal is at a logic 0 or low, the SYNC signals pass through the 7486 unchanged. When the "FLIP" input changes to a logic 1 or hi state, all of the SYNC signals that are applied to the exclusive-or gates are inverted at the output. By inverting the SYNC signals, the computer will draw the picture upside down for the second player.

Note that there are separate circuits for vertical and horizontal "flip." I have received a few comments from the field, regarding games that flip by themselves. This has generally been traced to static discharge that somehow resets the flip circuit. No amount of grounding has seemed to help the problem, but

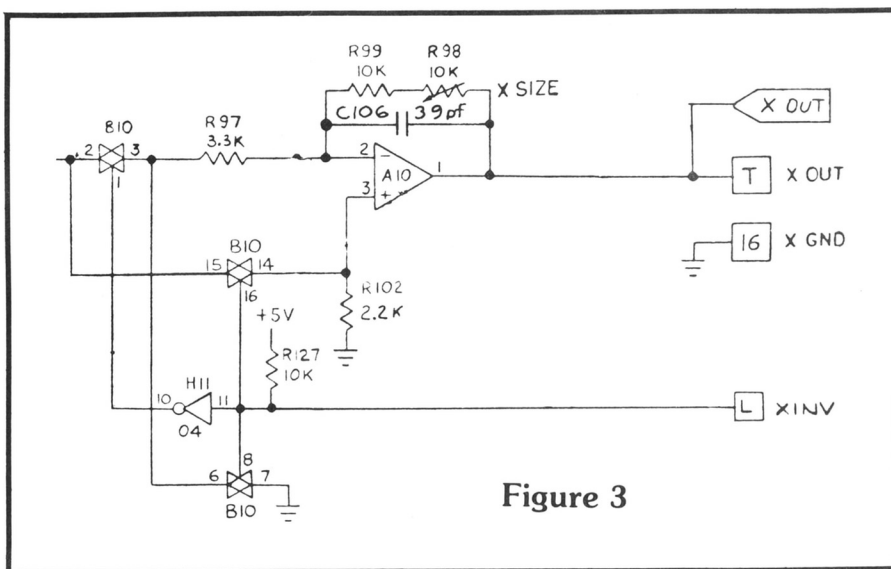


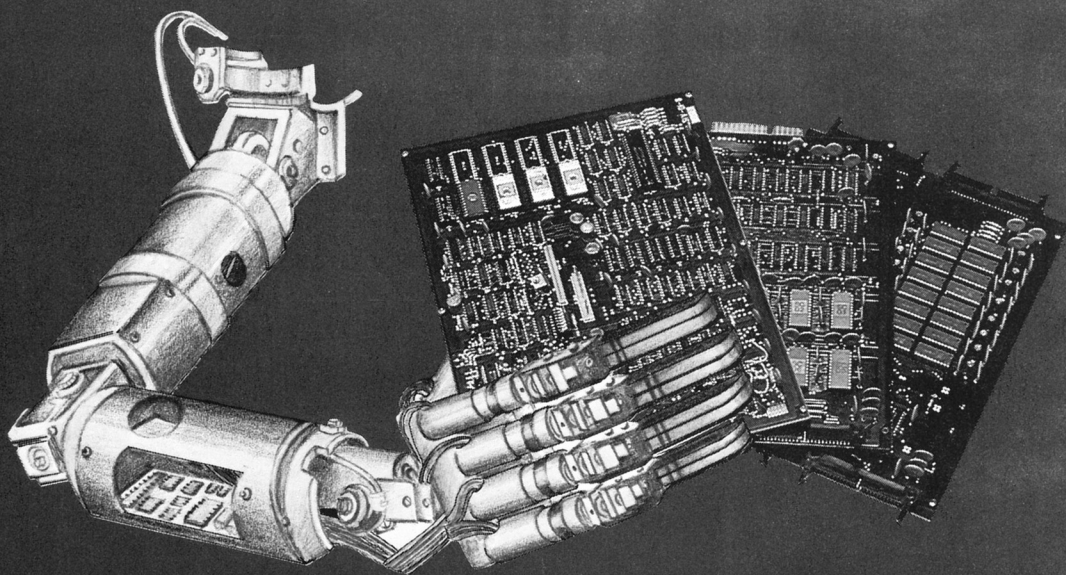
Figure 3

there is a sure-fire way to eliminate the static which causes the problem in the first place: Dissolve a small amount of Downey fabric softener in water and put the solution in a spray bottle. A 10:1 ratio of water to fabric softener is about right. Set the spray bottle to "stream" and give the area around the game a good squirting. The same anti-static ingredient that keeps the static from your clothing will reduce the static charge in the carpeting as well. (As an added bonus, the place will smell nice too!)

### SYSTEM #3— ATARI/QUADRASCAN

To invert the picture on the Asteroids cocktail table game, the analog signals to the X and Y sections of the Quadrascan monitor are inverted as they leave the logic board of the game [see figure 3]. The XINV (X invert) signal controls the analog switch (B10). By switching the X input to one side or the other of A10, the output of A10 can be made to invert back and forth. The circuit for the Y section is identical. ●

## So, why play around when technology is in hand?



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*Kurz Kasch, Play Meter joint effort:*

# Industry education series offered via these pages

Starting with this issue, *Play Meter* magazine—together with Kurz Kasch, a digital test equipment company based in Dayton, Ohio—will present a complete serialization of the Kurz Kasch correspondence course for electronic technology.

This course, marketed to the coin-operated amusement industry by Kurz Kasch from 1973 through June 1980, was designed to help operators and their technicians understand the basics of electronics. What makes this course singularly important to this industry is that it does not address itself to such extraneous subjects as television and car radio repairs. The material addresses itself only to the end goal of understanding logic circuitry, the basis of all coin-op machines today.

The course starts at the very basics, with diodes and transistors, and then progresses to gates such as the OR and NOR gates, then goes on to integrated logic.

“Once a person has learned the information in the first two courses,” Jim Sneed of Kurz Kasch told *PLAY METER*, “he has learned everything he needs to know. An IC with six inverters in it is called small-scale integration. By the use of many inverters and gates—such as AND gates, NAND gates, OR gates, NOR gates, and so on—any large scale integration device can be developed, including microprocessors.

“There are six basic gates,” he continued, “buffers, inverters, AND, NAND, OR, NOR. Knowing those six gates, you can build any piece of digital equipment. These are the building blocks. The idea of these courses was to teach those basic building blocks so a person, with a little imagination, can move on to a more complex logic environment.”

Though looking complex at first glance, the material is written in an easy-to-understand manner, an attribute which no doubt con-

tributed to the course’s high completion rate. The course, Sneed told *PLAY METER*, had a completion rate of better than 95 percent. “That’s one of the things that amazed the Ohio Department of Education about this course,” he said, “the high percentage of completion by persons taking it. The completion ratio of other comparable electronics courses is usually around 10-15 percent.”

Sneed said the high percentage rate not only showed the easy-to-understand manner in which the

material was presented but also the eagerness of industry persons to work with a course which exactly suited their needs. “The people in the industry who took this course were motivated,” Sneed added. “They recognized that although they had some talent in the electro-mechanical era, they needed to develop a talent with solid state technology in order to survive.”

Because of the absence of such educational material for people in the coin machine business, the industry welcomed the Kurz Kasch course



*Jim Sneed presents the Kurz Kasch correspondence course set to Play Meter’s Editor and Publisher Ralph C. Lally II: Designed for the games industry tech.*



right from the outset. The course was approved by the AMOA, becoming the only such program the AMOA has ever approved (other than the 10-day Don Miller schools which are now co-sponsored by individual state associations).

The course was prepared by faculty members of the University of Dayton and accredited by the Ohio Department of Education.

Sneed explained that the reason Kurz Kasch initiated the correspondence course in the first place was because it could not sell its digital test equipment to an industry that didn't understand the technology involved.

"Our goal was twofold," said Sneed. "From a selfish motive, we wanted to sell our test equipment. But we realized if we sold test equipment, we had the responsibility to teach the person how to use it. So that brought about our second goal—our responsibility in helping upgrade the industry's understanding of solid state technology."

Ralph C. Lally II, editor and publisher of Play Meter, stated as his reasons for reprinting the entire Kurz Kasch course: "We have always felt there was a lack of information available to this industry

concerning solid state technology. Operators every day are coming into this business with little or no understanding of the technology and with no idea of where to get that information. Because of Play Meter's peculiar position in the industry, as being the industry's source for information dissemination, we feel that this is a service Play Meter should provide for its readers.

"Hopefully, operators will also see the need for this type of information and preserve these serializations of the Kurz Kasch text to help upgrade their personnel's understanding of solid state technology. We hope it will go a long way toward offering the operator a means of educating new employees."

Lally and Sneed agreed that, after the course has been completely published, reprints of the entire course would be made available to anyone interested at a nominal fee, with the proceeds to go to the various state associations, courtesy of Kurz Kasch and Play Meter magazine.

#### Course material

The complete course consists of four different course studies:

—Course I, consisting of 14

lessons on digital circuits.

—Course II, consisting of 10 lessons on IC logic.

—Course III, consisting of 13 lessons on power supplies.

—Course IV, consisting of 15 lessons on MOS/FET-J/FET circuits.

The first two courses are recommended as basic to understanding logic. Courses III and IV are for further study and are not essential to a workable understanding of the technology. The course will continue in subsequent issues, along with the programmed tests for those lessons in each issue of Play Meter and Play Meter Update.

Breadboard projects will appear from time to time with various lessons. Sneed suggested that operators and technicians interested in completing the breadboard projects could find the suitable hardware being offered by AP Products of Euclid, Ohio. AP Products, which markets through electronics hobby distributors and radio and television parts supply houses, offers an inexpensive breadboard. Components for the individual exercises can be gotten from Radio Shack outlets or from the operator's own inventory. •

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## LESSON 1:

# Digital Circuit Design Course

A series to be continued in PLAY METER for technical education.

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

### Transistor Action

The purpose of this first lesson is to develop an understanding of the terms *alpha* and *beta*. The lesson describes what they mean, from where they are derived, and how they are used.

### Symbols:

The transistor is a three lead device capable of operating either as an amplifier or as a switch. The leads are labeled: *base*, *emitter*, and *collector*. (Refer to figure 1-1A.) The arrow in the emitter lead indicates the direction of current flow through the device.

As shown in figure 1-1A, transistors are of two types, *PNP* and *NPN*. The differences between the two types are the direction of current flow and, therefore, the battery connections.

The semiconductor diode is a two lead device principally used as a rectifier. The leads are labeled (refer to figure 1-1B) *anode* and *cathode*. The direction of current flow through the device is indicated by the arrow in the anode lead.

### Transistor and diode biasing:

In order for the transistor to operate, it must be connected into the circuit so that the current will flow in the direction indicated by the arrow in the emitter. Semiconductors operate according to the current flow conversion—that is, from a positive potential to a negative potential (refer to figure 1-3). It is also possible to operate both NPN and PNP transistors simultaneously with the same power supply, as shown in figure 1-2.

Since the diode is a rectifier, it can be connected into the circuit in one of two ways: *forward biased* (conducting) or *reverse biased* (non-conducting) as shown in figure 1-4.

In the forward biased state the diode offers a very low resistance to current flow and will, therefore, conduct a high current though it. When reverse biased, the diode offers a very high resistance and, therefore conducts virtually no current.

### DC Analysis:

All current through the transistor is either flowing into or out of the emitter. Whether the

current flows into or from the emitter depends upon the type of transistor, PNP or NPN. (Refer to figure 1-3.) Notice that current flows in the emitter for PNP and out of the emitter for NPN. The currents are defined as *base current* [ $I_B$ ], *collector current* [ $I_C$ ], and *emitter current* [ $I_E$ ]. Figure 1-5 illustrates these currents for a PNP transistor.

*Complete the diagram in figure 1-5 by indicating the direction of current flow with arrowheads and connecting the battery for a NPN transistor.*

Because all the current through the transistor can be measured in the emitter lead, it can be stated that the sum of the currents through the transistor equals the emitter current. Stated more simply:

$$I_E = I_C + I_B$$

[Formula 1]

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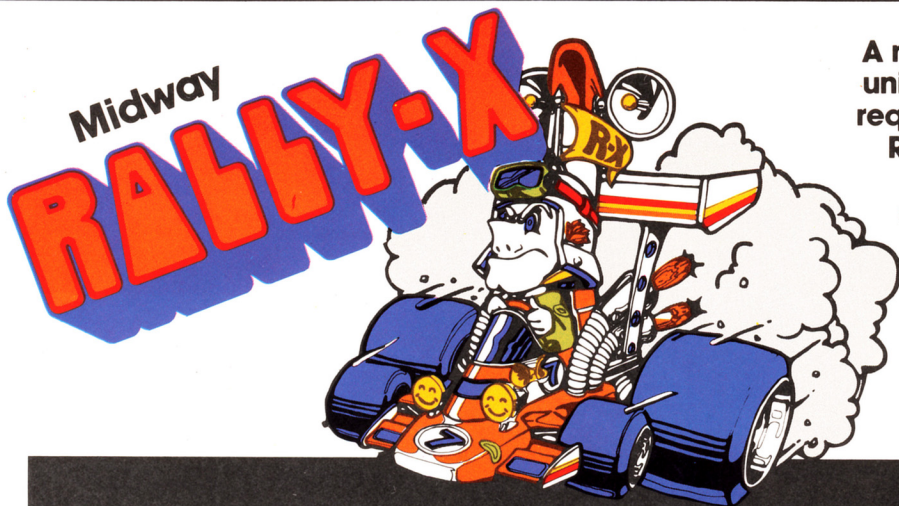


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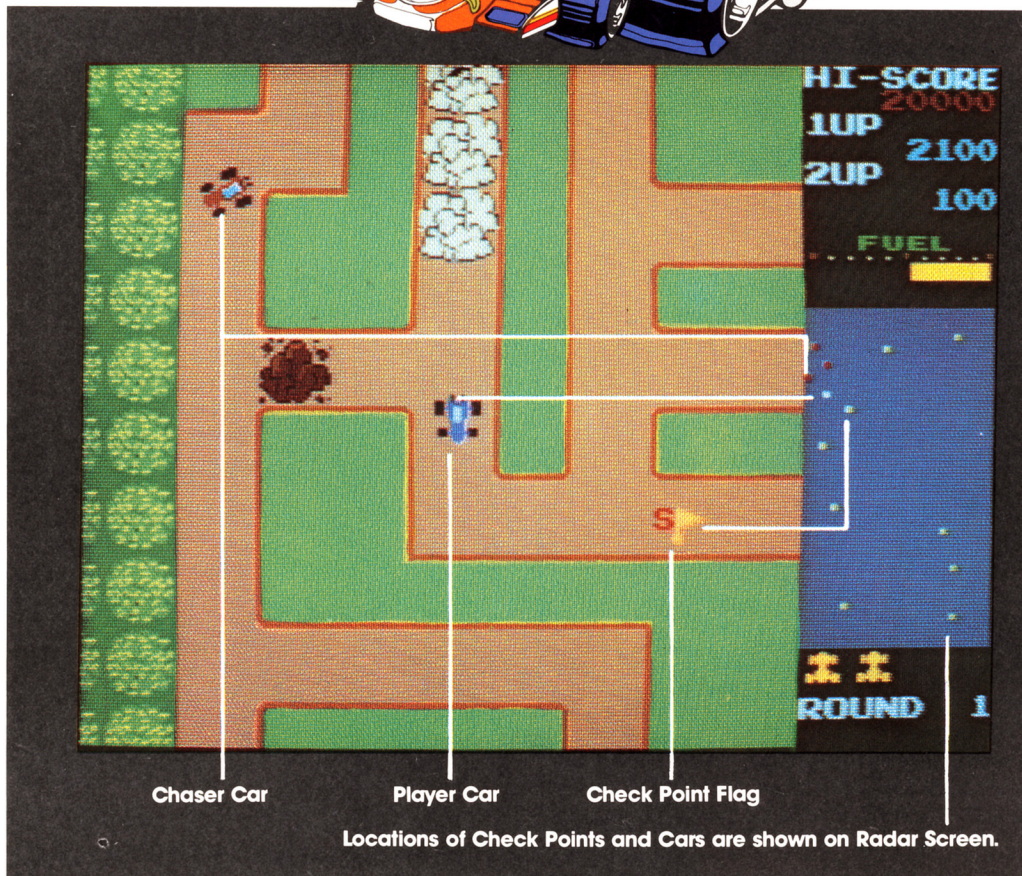
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Midway



A maze, chase and race game all in one! A uniquely different kind of driving game that requires skillful strategy and quick reactions. RALLY-X is an exciting 1 or 2 player game with a full color video playfield, a radar screen that reveals positions of cars and check points plus fuel gauge indicator.



With the four-way joy stick, the player drives his Blue car and tries to clear the 10 'Check Point' Flags that appear randomly in the maze of city streets. The player checks the Radar Screen and plans his strategy to use as little fuel as possible.

Increasing point values are scored for 'Check Point' Flags. After the 'Special' Flag, all points double. Each player starts out with a full tank of fuel; remaining fuel adds to the final score.

Red 'chaser' cars try to wreck the Blue 'player' car. The player can out-manuever the Red cars by throwing out a Smoke Screen that causes them to spin and stall. There are 3 to 8 Red cars, depending on the phase of the game. RALLY-X features a 'Challenging Stage' at phases 3, 7, 11, 15...etc. The object then is to clear all 10 flags in a given time limit. The 8 Red cars only start chasing when the fuel is low.

Players start with 3 cars per game. Additional BONUS car is awarded at 20,000 points. (Adjustable)

Chaser Car

Player Car

Check Point Flag

Locations of Check Points and Cars are shown on Radar Screen.



Drive car from Check Point to Check Point clearing each Flag.



**Don't get wrecked!**  
Watch for Chaser Cars.  
Don't crash into rocks.



Use Smoke Screen button to stall Chaser Cars.

Keep an eye on the Fuel Gauge.



Game ends when 3 cars are wrecked or player runs out of fuel.

#### SCORING



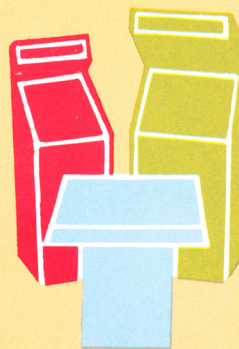
#### Check Points

1st: 100 points  
2nd: 200 points  
10th: 1000 points



All points double after clearing SPECIAL Check Point.

RALLY-X is available in 3 Midway models: New Mini-Myte, Cocktail Table and Standard Arcade.



HEIGHT	WIDTH	DEPTH
58½"	19½"	24"
149 cm	49.5 cm	61 cm
29"	32"	22"
74 cm	81.25 cm	56 cm
68"	24½"	27½"
172.7 cm	62.25 cm	70 cm



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# FIGURES

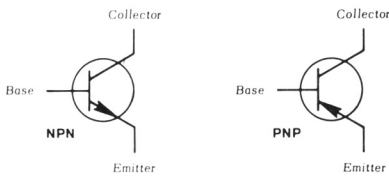


Fig. 1-1A. The standard symbols of a NPN and a PNP transistor. The angular placement of the collector and emitter leads indicate both are rectifying junctions.



Fig. 1-1B. The standard symbol for a semiconductor diode. The arrow indicates the direction of current flow (the standard of this text) while the labels are consistent with the electron flow convention.

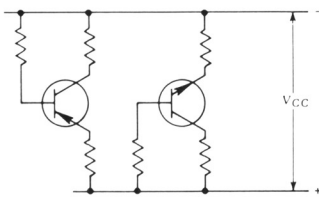


Fig. 1-2. A circuit containing both a NPN and PNP transistor. Current flow thru each device is sometimes considered of opposite polarity. However, when viewed in the context of the diagram above, note that the current flow is of the same polarity.

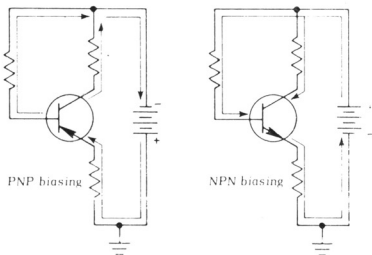


Fig. 1-3. Note that the batteries are reversed for each type and the direction of current flow is consistent with that of the arrowheads.

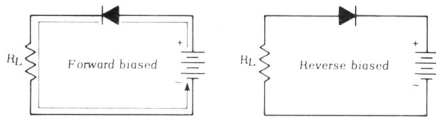


Fig. 1-4. A forward and reverse biased diode. Although no current flow is indicated for the reverse biased diode, in reality a small leakage current is flowing. This will be covered in detail in the next lesson.

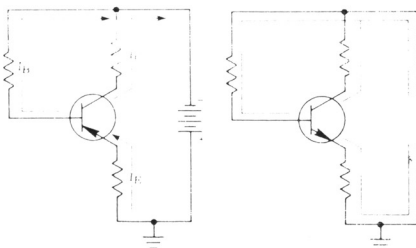


Fig. 1-5. The terms associated with and the directions of current flow for a PNP are given to the left. The student should complete the diagram to the right.

transistor, it is imperative to be able to state how much of the emitter current is collector current or base current. To do this a figure of merit is established and is termed *alpha* ( $\alpha$ ).

$\alpha$  is the ratio of emitter to collector current.

OR:

$$\frac{I_C}{I_E} = \alpha$$

[Formula 2]

Two important variations of the above are used to find  $I_C$  and  $I_B$ . To find  $I_C$ , solve the following for  $I_C$ :

$$I_C = \alpha I_E$$

[Formula 2A]

To find  $I_B$  in terms of  $\alpha$ , we refer to formula 1 above and substitute from formula 2A:

$$\text{from (1)} \quad I_B = I_E - I_C$$

substituting (2A) for  $I_C$

$$I_B = I_E - \alpha I_E$$

$$\text{factoring } I_E \quad I_B = (1 - \alpha) I_E$$

A second figure of merit can be established. This one, termed *beta* (Greek symbol  $\beta$ , below), expresses the ratio of base to collector current.

$\beta$  is the ratio of base to collector current.

or:

$$(4) \quad \beta = \frac{I_C}{I_B}$$

To express beta in terms of alpha, substitute from [2A] for  $I_C$ , and from [3] for  $I_B$  in the above.

$$\beta = \frac{\alpha I_E}{(1 - \alpha) I_E}$$

cancelling  $I_E$ :

$$(5) \quad \beta = \frac{\alpha}{(1 - \alpha)}$$

To express alpha in terms of beta:

$$\beta = \frac{\alpha}{1 - \alpha}$$

$$\beta (1 - \alpha) = \alpha$$

$$(\beta - \beta \alpha) = \alpha$$

$$\beta = \alpha + \beta \alpha$$

$$\beta = (1 + \beta) \alpha$$

$$\frac{\beta}{1 + \beta} = \alpha$$

Since the terms alpha and beta describe the ratio between currents, they are insensitive to the type of transistor used; that is, NPN or PNP. For example, the current through a PNP transistor can be considered negative, but alpha and beta are not. Therefore, when calculating or operating with these terms, the designer need not be concerned with the type of transistor used.

Example:

Determine for the circuit in figure 1-5  $I_C$ , alpha and beta, if  $I_B$  equals 0.01 ma and  $I_E$  equals 1.0 ma. To find  $I_C$  use formula 1.

$$I_E = I_C + I_B$$

$$I_E - I_B = I_C$$

$$1.0\text{ma} - 0.01\text{ma} = 0.99\text{ma}$$

$$I_C = 0.99\text{ma}$$

To find  $\alpha$  use formula (2)

$$\frac{I_C}{I_E} = \alpha \quad \alpha = \frac{0.99}{1.00} = .99$$

To find  $\beta$  use formula (4)

or formula (5)

using formula (4)

$$\beta = \frac{I_C}{I_B} \quad \beta = \frac{.99}{.01} = 99$$

using formula (5)

$$\beta = \frac{\alpha}{1 - \alpha} \quad \beta = \frac{.99}{.01} = 99$$

End of lesson one.



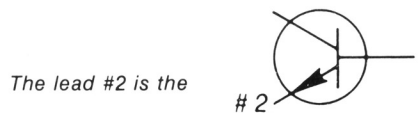
# PROGRAMMED TEST

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



- The transistor shown by this figure is an
- NPN GO TO BLOCK 10
  - PNP GO TO BLOCK 20

2 YOU ARE CORRECT!



- Emitter GO TO BLOCK 9
- Base GO TO BLOCK 11

3 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 15.

4 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 9.

5 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 22.

6 YOU ARE CORRECT!

All of the current in the transistor sum in the \_\_\_\_\_.

- Emitter GO TO BLOCK 13
- Collector GO TO BLOCK 24

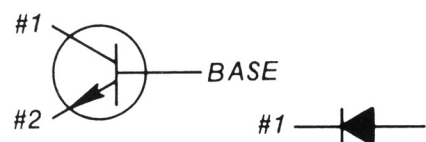
7 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 13.

8 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 10.

9 YOU ARE CORRECT!

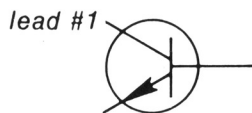


And, of course, the remaining lead is the BASE.

The lead #1 is the \_\_\_\_\_.

- Anode GO TO BLOCK 4
- Cathode GO TO BLOCK 15

10 YOU ARE CORRECT!



The lead #1 is the \_\_\_\_\_.

- Collector GO TO BLOCK 2
- Emitter GO TO BLOCK 8
- Base GO TO BLOCK 21

11 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 2.

12 YOU ARE CORRECT!



The diode in the figure is \_\_\_\_\_ biased.

- Forward GO TO BLOCK 6
- Reverse GO TO BLOCK 25

13 YOU ARE CORRECT!

The formula for alpha ( $\alpha$ ) is

- $\alpha = \frac{I_C}{I_E}$  GO TO BLOCK 23
- $\alpha = \frac{I_E}{I_C}$  GO TO BLOCK 7

14 YOU ARE CORRECT!

The formula for beta ( $\beta$ ) is

- $\beta = \frac{I_B}{I_C}$  GO TO BLOCK 26
- $\beta = \frac{I_C}{I_B}$  GO TO BLOCK 27

15 YOU ARE CORRECT!

And, of course, the remaining lead is the ANODE.



The direction of current through semiconductors is indicated by the arrowhead here.

- False GO TO BLOCK 3
- True GO TO BLOCK 22

16

The answer is  $I_B = 0.02 \text{ ma}$ . If you do not have this result, check your formula. It should be:

$$I_B = \frac{I_C}{\beta} = \frac{1.0 \text{ ma}}{50}$$

Or, check your arithmetic. Do not go on until you obtain the correct answer. Then GO TO BLOCK 17

17

You have completed the test for the first lesson. Make sure you understand the formulas in this lesson. They are important. Give yourself some extra exercise with all of the numbered formulas in the lesson text.

19

YOU ARE INCORRECT!

Return to BLOCK 23 and check your arithmetic.

20 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 1.

21 ARE INCORRECT!

Refer to the text and return to BLOCK 10.

22 YOU ARE CORRECT!

Semiconductors operate in accordance with the \_\_\_\_\_ flow conversion.

- Electron GO TO BLOCK 5
- Current GO TO BLOCK 12

23 YOU ARE CORRECT!

If  $I_E = 1.0 \text{ ma}$  and  $I_C = 0.99 \text{ ma}$ , what is a (alpha)?

- 0.99 GO TO BLOCK 14
- 9.90 GO TO BLOCK 19

24 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 6.

25 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 12

26 YOU ARE INCORRECT!

Refer to the text and return to BLOCK 14.

27 YOU ARE CORRECT!

If  $I_C = 1.0 \text{ ma}$  and  $\beta = 50$ , what is  $I_B$ ?

- $I_B = \text{_____ ma}$ .

GO TO BLOCK 16





# Current complaints

Technical bouquets and brickbats for some new equipment.

By Frank Seninsky

After last month's column I felt I would spend more time talking with the game designers and let you out there know the efforts being made to improve game design. Why are there still problems? Part of the reason, I can now assuredly say, is that these problems have not been brought to their attention. So if you see a game design deficiency, drop me a line in care of PLAY METER—and I'll see that it gets to the right people in the industry. Better yet, if you have a solution that is used on a future game, you'll get credit.

[Ed.—Readers with technical solutions for game design deficiencies may send material to PLAY METER to be judged for publication, plus a small reward, and credit under our "Great Ideas" program. The material will be passed on to the manufacturers through the "house crank," Frank.]

Three pinball games and one video have been selected for technical review this issue—*Black Knight*, *Flash Gordon*, *Time Line*, and *Space Firebird*. It is still my intention to be a "crank"—an irritable, complaining person by definition—when I see the same problems passed on from one game to the next.

For upcoming months, articles are in the works to compare the major types of bill changers, to look at what free-game percentage means to the operator, and to help revive pinball revenues.

‡ ‡ ‡

## **BLACK KNIGHT/Williams**

Williams has completely rewritten the control program of this multi-level, multi-ball machine. This provides greater versatility for game options and memory on this model and on future games. Some of the new game features include the auditing of the number of bonus balls played, number of "mysteries" accomplished, the number of times multi-ball is played, and how many times "last chance" is accomplished on last ball. (Check "Critic's Corner," February PLAY METER, for further, in-depth play analysis).

Operators will applaud the improvements made to the self-test system. The switch scan readout now shows each closed switch, repeating them instead of just listing them one at a time. This gives the

service person the complete picture of all closed switches. The new seven-segment display (now with commas) will display a number from one to nine, allowing for instant recognition of a faulty "chip." This versatility of the new system will allow for much more of this type of troubleshooting ability. Another feature is that "Game Over" can now be reached from self-test instead of having to shut down the machine. Another new bookkeeping feature reads out the number of times that each replay level has been attained.

One of the advantages of changing the system is now only one switch is needed to relay information from the drop targets to the control system. The troublesome "horseshoe blades" on the drop targets have been eliminated completely. Switches are now located in the bottom of the drop target bracket. This new design will eliminate the problem of Williams' drop targets not scoring or not resetting most of the time. However, these new switches are in unprotected, vulnerable positions—so be careful when working inside the game. I hope Williams will provide some type of protective covering for these switches on future games.

The *Black Knight* that we tested had flipper problems. By this I mean that, one by one, all of the flipper coils burned up. All of these problems were caused by the flipper end-of-stroke blades which didn't open. I have heard that on later models of *Black Knight*, Williams has redesigned these blades, making them out of stainless steel with riveted contacts instead of using the old welded-type contacts. The length of the blades should also be increased a bit so there is less (or no) chance of the flipper shoe arm slipping past the top of the blade.

The double sets of flipper switches were another source of problems. These blades were found to bend over each other, causing the flippers to be continuously energized during game operation (which makes for a definite service call). These blades must be made more flexible with better return action.

Insulation tubing that goes on the flipper shoes is now heat-shrunk onto the arm. This is an improvement over the slip-on (slip-off) tubing used on previous models. It is critically important that the flipper shoe is completely insulated from the end-of-stroke switch. Check the



tubing once a week, or fuses will blow "mysteriously." If arcing occurs, there will be a large current surge which will wear down the slow-blow fuse in the coil current.

While we're discussing flippers: there are now two flipper circuits instead of one. By using two isolated circuits, more current is now available. The result is stronger flippers and the strength should last for a longer period of time rather than dissipating itself in just a few short weeks.

A new fuse has been added into the backbox light circuit, which is now split into two circuits reducing the load and making it easier to troubleshoot.

Wing nuts are now located on top and underneath the pendulum bob, thus locking the bob in position. This decreases the chances of the pendulum coming loose and falling off—either making the machine *untitlable* or placing the game in *continuous* tilt. This improvement was first introduced on Williams' *Alien Poker* but deserves mention here.

The operator should tape or protect the wire bundles which run from under the back portion of the playfield up into the lightbox. This is where the serviceperson should look for cuts in the insulated wires. The vibration from game operation and the excessive rubbing caused when the playfield is raised and lowered during service causes many problems which are often very costly to the operator.

Lastly, I have had problems with two bridge rectifiers. The crimped connections are often loose, which causes arcing and heat build-up. Eventually, the current flow will be restricted and problems will arise. It is very difficult to solder the wires to the bridge directly, but this seems the most likely solution. Operators should make sure these connections are real tight.

A bigger heat sink has been designed into the power supply board. This should reduce the "Game Over" problems that are often called in to us but never are "observed" by our servicemen.

### **FLASH GORDON/Bally**

My congratulations to Bally for taking the time to attach each switch capacitor to the switches using strong, flexible wire. This should keep the capacitors from vibrating loose and taking away the sensitivity and quickness intended for pop bumpers and target action. I realize

this took extra time. (It is only really necessary to use the capacitors for pop bumpers and bull's-eye targets; the old capacitors never seem to fall off any other type of switches.)

Most of the cabinet and mechanical improvements that I would like to see implemented on Bally games have been gone over in "Cranks" last time, for *Xenon*. Bally has stated that it is fully aware of the fact that the flipper coil stop bracket screws are prone to shear off, and we can look forward to seeing a new, stronger type in the near future.

The new "Squawk-a-talk" T.I. system gives more flexibility for programming sounds. The voice and sounds are now on one circuit board instead of two, but the game contains two speakers—one for voice and one for computerized sound. Each speaker is independently adjustable.

The same strobe system that was so successful in *Space Invaders* has been utilized to put the "flash" in *Flash Gordon*. The strobe system is easy to remove, and operators should make sure it is operating properly as it is a large attraction for this game.

Most of the mechanical parts have been strengthened in past models but the hole kicker assembly looks to be flimsy. This assembly will get plenty of use as it must kick the ball from the lower level to the upper level of the playfield and also alternates to send the ball into the lower level. I would hope that this assembly will be strengthened when it next appears.

The game parts under the playfield are easy to get at and the game tested had no major service problems.

Lastly, I would like to pose a question concerning the plastic overlay provided with all Bally games. Why doesn't the manufacturer put this overlay on at the factory. It would make life easier for us operators, as I've not heard of any who do not favor using it.

### **SPACE FIREBIRD/Gremlin**

The *Space Firebird* cabinet was satisfactory. The cashbox cannot easily be reached from the back, thus making it difficult to rob. The outside speaker cover is very sturdy. The cashbox is strong and is positioned in a sturdy casing. When used with a cashbox lock, the cashbox is hard to remove; this is good news for the operator, as it could take a matter of seconds for a thief, using no tools as aids, to make

off with a cashbox of numerous games.

Gremlin claims that the insertion of a coin will reset the restart system. This clears up problems caused by power line disturbances. Most of us have already told our location owners to just turn off and then turn on the game and most of the power line disturbances will clear up. However, *Space Firebird* does not have an on/off switch, so perhaps the insertion of a coin feature is a good idea. Anyway the location owner will have to move the machine and yank on the plug to turn it off at night.

One noteworthy improvement is that the machine will not operate if the coin counter meter is disconnected. It can be "jumped" if the meter malfunctions and the serviceperson doesn't have one handy, but this would be too much trouble for the average person to tamper with.

The monitor on the *Space Firebird* is mounted on an angle and is very difficult to remove for service. It must have been just as hard for Gremlin's factory to put it in as it was for me to remove it. (I required an assistant's help.)

The main logic board, the video board, and the sound board all have test points to simplify troubleshooting. The location of these boards was satisfactory.

### **TIME LINE/Gottlieb**

The lightbox on *Time Line* has been redesigned to fit snugly on the cabinet base. An extra bracket has been fitted into the top of the cabinet base and the bottom of the lightbox. The two slide over each other and lock into place; this will keep the lightbox secured.

The panel of the lightbox swings open by pivoting at a certain point approximately two-thirds across the width of the lightbox. Inside, one can see that an auxiliary lamp driver board has been added, handling up to thirty additional lamps.

The coin switch actuating blades now have a plastic insulation riveted on. This plastic is an improvement over the cardboard insulator used on past games. If the coin lockout arm wire ever comes into contact with the coin switch, the coin lockout will ground out the "Return 7" switch matrix. All-zeros would appear in the displays, and a serviceman would start a search for the problem.

Gottlieb has not improved the flipper shoe and end-of-stroke switch assemblies. The metal backing on the end-of-stroke blade readily



DON'T GET BUCKED



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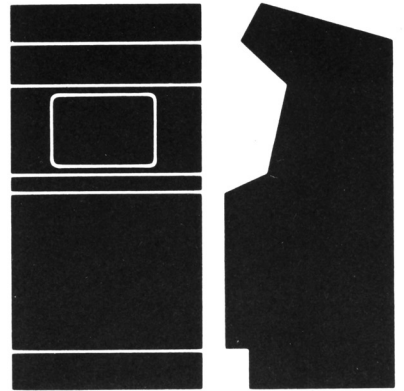


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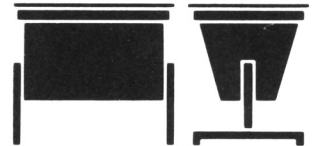
**"I'll Get That Bugger"**  
You'll be screaming once you get into this exciting episode of battle. Hide behind barriers—keep moving—and fire—that's the key to staying in the game. Important Note:  
**—DON'T GET BUGGED—**

**DIMENSIONS**



**UPRIGHT**

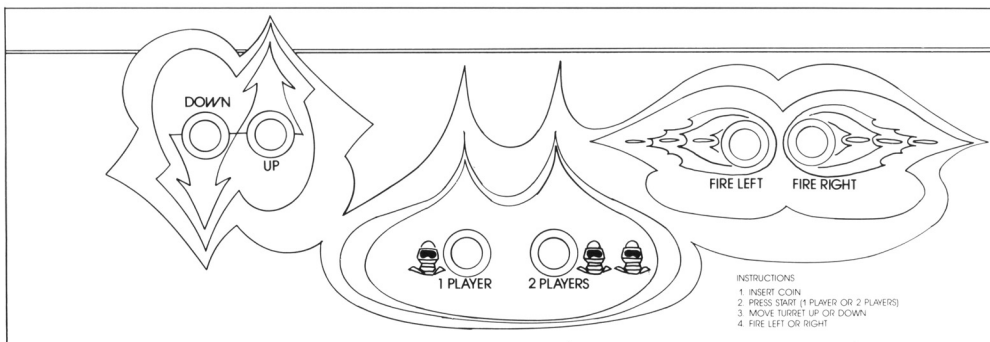
25½"W x 67"H x 28"D



**COCKTAIL**

22"W x 34"L x 24½" H

**#1 IN ANY LOCATION**





develops a cut out section caused by metal smashing against metal. This causes the flipper to jam in the up position and necessitates changing the blade. Gottlieb suggests applying grease prior to putting the game in the field, or filing the shoe arm to remove any burrs. I have found that either replacing the switch completely or just removing the metal backing is a fair solution.

The diodes hanging from the pop bumper coils and the flipper coils have a bad habit of vibrating off. Symptoms are that the game will go "Game Over" in the middle of a game if one of the diodes is disconnected. Try to solder them on with as little lead as possible.

Another chronic problem is that the pop bumper scoring blades break off due to the heavy pounding they take from the pop bumper yoke

assembly. Sometimes a pop bumper can be worth up to 1,000 points and the operator will never even know that it is not scoring. These blades must be checked each week to insure that a scoring feature is not taken away from the player.

The metal cups which extend from the pop bumper switches have returned. In the past, plastic cups were used—but as we all found out, the plastic wore out and the actuator finger would get stuck. When metal cups were used years ago, I can't recall one ever wearing out.

The drop targets have remained the same as in past models. In Gottlieb games where the drop targets are close to a flipper—*Sinbad*, *Joker Poker*, etc.—the drop targets would break constantly. It would be a good idea to "beek them up" a bit.

All in all, the features on *Time Line* were found to be satisfactory. If Gottlieb could just clear up some of these small problems, there is little doubt that the games could play for weeks without service problems.

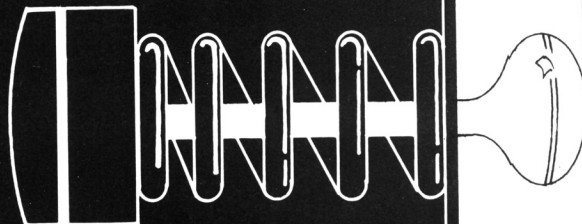
‡ ‡ ‡

My thanks to Bruce Minus, manager of technical services at Gottlieb; Steve Ritchie of Williams; Arnie Aarstad and Pete Gustavson of Bally; and Art Warner, divisional manager of Betson Enterprises (who gave this column its name); and Roger Sharpe, all for their cooperation. •

*Editor's Note: Contributor Frank Seninsky operates Wizards World Arcade and Alpha-Omega Amusements, Inc., game room specialists, in Edison, New Jersey.*

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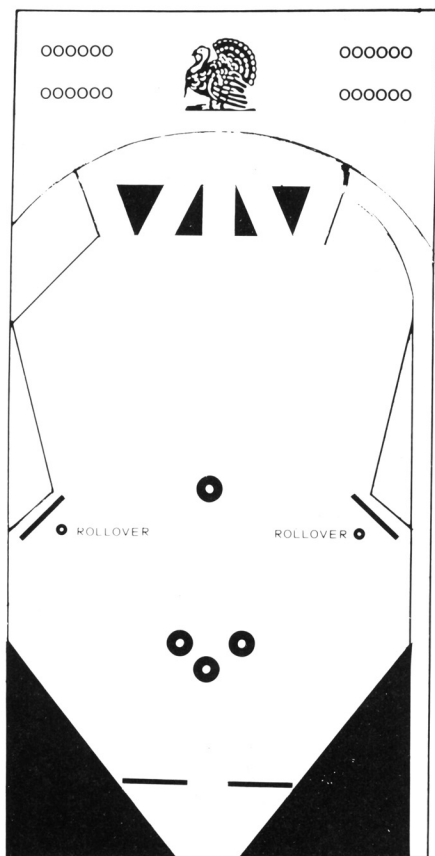
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- Save Time
- Evaluate Profitability
- Keep Accurate Records on:
  - CASH FLOW
  - PROFIT AND LOSS
  - INDIVIDUAL MACHINE PERFORMANCE



# THE IDEA BANK

## Pinball: Designs on Keeping Players Involved *Intensely*

Game play ideas from a player's point of view



Playfield: Curved flippers at mid-field are suggested by the author. The 'turkey' on backglass symbolizes attract features which, he says, do not matter to the serious player.

(Editor's Note: Suggestions from games players come to *PLAY METER* from time to time, and when these are well-thought-out and presented, they are offered to the industry in these pages. In the following article by a free-lance writer and pinball player, we found such meritorious comments on some directions pinball could take in the future.)

The city fathers of Athens, Georgia changed my lifestyle last year. They voted to legalize pinball for the first time since I was a child.

That ordinance may not sound earth shaking, but for me a few games of *Firepower* or *Space Invaders* have replaced the quick beer as an after-work tension reliever. I may be the only regular at the neighborhood bar who never buys anything to drink.

Thus, while video games are old hat here, pinball is something new. There are usually more pinballs than videos in a bar. My outlook, then, is not the same as most games players'. After a year of reading *PLAY METER*, I've developed some highly subjective ideas about the psychology and design of pinballs.

What the videos have over pinball is a sense of immediacy. When you play a video, your whole concentration is on the screen. Everything beyond disappears for a few minutes, and it's you against the inscrutable, implacable machine. That kind of intensity doesn't happen with a pinball machine, and I think that is one reason for the

ascendency of videos. I think the same sense of urgency and combat could be added to pinballs through some design changes.

Take a look at the pinball machines in the New Products section of *PLAY METER*. There's the backglass sitting above the playing area, separate—and as far as the game goes, irrelevant. On games where the backglass is wider than the playing area, the separation is more obvious. I don't think it is an accident that one of the most effective backglasses is that of Bally's *Space Invaders*, which is the same width as the playing area and blends into it smoothly.

The eye-catching function of the backglass art may attract the first-time player, but after I've played a game once I don't notice (or care) if it's the *Incredible Hulk* or *Bo Derek* up there. The backglass just becomes a place where the score shows up.

### Integrated play area

Less space is needed inside the backglass for electronic equipment than for the old electro-mechanical apparatus. Why not put the space to work by building a one-piece game with the backglass integrated into the playing area? Instead of having the backglass sitting at an angle to the rest of the game, the machine could be built with the traditional playing area curving up into the backglass. (Figure A.)

Moving from top to bottom, this is how I see such a machine: The ball enters automatically about halfway



Figure A: Proposed silhouette



**By D.J. Pass**

up the backglass. By having the ball return to the top of the machine and enter automatically, without pause, a sense of immediacy would be added. No more going off for a beer between balls. This would cut down the amount of time used to play each game and thus would increase the earning potential of each machine. The control given the player by the plunger could be supplied by some kind of steering device about the entry lanes.

These lanes themselves would be slanted, so as to shunt the ball off to different areas of the field of play, into the thumpers and flippers that would send it down to the player. The traditional playing area could be more steeply slanted to make the ball move faster.

Another intensity killer in pinball are the side exit lanes. They are like the O and OO in roulette, the deadly random element you can't control. (Unless you're a terrific player or a heavy gunner, and I can't believe operators want people hitting their machines.) Just as you're getting into the game, you against the ball, your opponent sneaks out a side door without putting up a proper fight. It's like stepping out into a dusty street to shoot it out with Matt Dillon and having a fatal heart attack before you can go for your gun.

I can see the purpose as an equalizer to keep the time of each game shorter, but it destroys the player's concentration on the game. The side lane factor could be made up in different ways.

What I have described here is a

game anyone can play, tie up for a long period of time, and probably beat regularly.

All right, let's give the machine a few weapons.

#### **Fighting flippers**

We've already slanted the playing area to make the ball move faster. Below the entry lanes are curved flippers activated by rollovers which catch the ball and throw it back at the player when they catch the ball squarely, or throw it back into the field if they hit off-center. Motion, not accuracy, is the key.

On most existing machines, the various thumpers throw the ball, but they generally don't throw it back at the player. The skilled player could use this feature to his own advantage, using these flippers and his own in tandem to knock out targets. As a bonus feature, the flippers could be deactivated. Or as a time penalty, more could be activated.

Putting thumper bumpers lower on the playing area is another way to strengthen the machine. I found this disconcerting at first when I played Game Plan's *Sharpshooter*, but it does eliminate a "safe" area of the playing field and thus demands the kind of concentration the game needs.

At the bottom, the not very original move of putting the flippers farther apart would give the machine a little edge. It is too easy on some machines now to catch and juggle the ball, again something that slows the pace of the game.

There are problems to the unified body idea, of course. Pinball machines are slipped in pieces with the backglass detached. To make the kind of machine I've postulated would require either shipping the machine in one piece at higher cost, or shipping it in more pieces requiring more assembly by the distributor.

Retooling for a different shape of cabinet isn't as much problem as it might seem. The basic material is wood, and changing the shape of the pieces that have to be cut is not that much of a technical problem. One manufacturing executive told me in essence that it is the market that determines whether retooling is practical. If a company thinks a design will sell, then retooling is not an obstacle. Some companies have found the wide body machines worth staying with, some have not.

We've seen a rash of innovations within the standard pinball framework—notably the time pressure features—as the industry tries to keep its share of the amusement games market. I've tried to describe a machine which will keep the player intensely involved—one that beats him, not with chance but with pure machine cussedness and intelligence. I think such a machine will help pinball increase its share of the amusement games market.

And when a player walks away, he won't feel like kicking the machine. He'll walk away wiping his forehead and muttering, "Damn tough machine!"



# Employee Theft and Fidelity Insurance

By Joseph Arkin

Losses sustained by employers in this country at the hands of dishonest employees amount to as much as \$5 million a day, more than four times the total amount stolen by the nation's burglars, pickpockets, armed robbers, and car thieves—and more than the total monetary loss caused by all fires in the United States.

Before you say, "It can't happen to me—my employees are 100 percent trustworthy," consider the fact that more than \$2 billion stolen annually is from employers with the same thought.

You can take a two-pronged approach to the problem. First of all, you can take steps to prevent employee dishonesty; and secondly, you can accept the fact that despite any measures, theft can occur, necessitating the carrying of insurance to cover employee theft.

It is important to understand the "why" and the "how" of employee theft in order to know how to prevent it. Basically there are five important reasons for employee dishonesty. They are (1) ease of stealing from employers who are not vigilant; (2) easy credit in today's society luring employees to live beyond their means; (3) bad examples set by an employer engaging in questionable business practices; (4) observation of stealing by fellow employees who are "getting away" with theft; and (5) the knowledge that being caught usually means loss of job with reluctance on part of the employer to prosecute or press charges.

There are many methods suggested for preventing employee theft, most of which are equally applicable to the operator.

The tips herein outlined are recommended by security officers.

One of the surest means of controlling employee theft can be taken at the very beginning—the employee's hiring. Applicants for employment should be asked to complete a comprehensive employment application form (standard forms are available at most commercial stationery stores for pennies per copy) delving into past employment record, criminal record, and personal data. Important? Yes, for in a study of 4,000 confessed employee thieves, 68 percent were "repeaters" and in 98 percent of the cases present employers knew nothing of their past records.

A must is a requirement for the applicant to also fill a questionnaire

for the issuance of a fidelity bond. How much checking the company does is immaterial—the very thought of a bonding company in perpetual, relentless pursuit is a deterrent in itself.

Another important step is the running of unannounced spot checks. In the office a check should be made to see if customer's accounts are being properly credited with collections. This can be a check on your own, or through the services of your accountant. It will be useful in uncovering the pocketing and "borrowing" of collections.

Office duties in connection with billing, posting and depositing of funds should be separated. Employee collusion is possible, but not letting one person in charge of all finances is a step in limiting losses.

Inventory control is another important step. An adequate system using some of the more recent electronic devices, or a sophisticated check-and-balance system may be costly—but the end result may be the prevention of theft which can literally bankrupt your firm.

Banks have a standard rule that every employee must take a vacation. This is so because the absence of an employee leads to the discovery of embezzlement. This would have special applications to check on your collectors.

Unfortunately, even carefully designed plans to stop employee pilferage are not 100 percent effective. Even if measures outlined do trip up a dishonest person, the discovery will not be immediate, but after there has already been a pattern of losses, perhaps a very large overall loss.

## Insuring

Thus, we come to insurance as a means of reducing the overall loss of employee theft. Insurance companies today offer package crime insurance to cover potential losses to an operator's business. Some of the coverage is for outside theft and will not be discussed here. What is needed is a policy tailored or geared to the individual needs of your particular business.

Available today are *fidelity and dishonesty* policies offering protection against dishonesty losses sustained from loss of cash and securities, office supplies and equipment, merchandise, other fixtures, tools or equipment.

A *depositors' forgery* policy protects against loss from forged or altered checks drawn (or allegedly



# THE PINBALL PATRON

**Sneak Peek  
Into  
Pinball Freak**

(See inside)









# WE'RE WIRED INTO THE PINBALL PLAYER.

**What makes pinball players tick? How do you get a pinball player totally involved in the action? Is there pinball in China? Or after death?**

In December of 1976, Stern Electronics commissioned themselves to unravel these perplexing mysteries.

Their hope was to gain a thorough understanding of the pinball player so they could gain control of the pinball industry.

## **The Plot Unfolds.**

Recently, the success of their expedition has been revealed and documented. (This helps explain Stern's spectacular corporate rise.)

Through a scientific process called "Clone Midgetrolysis," Gary Stern, Larry Siegel and Stephen Kaufman were reproduced and reduced a million-fold in size. This enabled the Stern team of experts to gain entrance into virgin territory—the mind of a pinball player—through the auditory canal.

For three long days they traipsed through brain circuitry via chemo-electrical impulses. Like no one before, they came to know the innermost thoughts and feelings of the subject. Including his perceptions of the perfect "10" machine.

Recent Stern games have all been formulated from the results of this research.

## **What lies ahead for this seemingly mad company?**

It's been learned that Stern plans to send further mini exploratory expeditions into the heads of Bally, Gottlieb and Williams executives.

Someone should let these people know they better get earplugs soon.

**STERN**



**“You ain’t seen nothing yet!”**

**STERN**



drawn) on your checking account. A clause can be added for checks stolen from others and accepted by your firm in good faith.

A policy to protect *money and securities* is obtainable for mysterious disappearance and outright theft.

Your employees can be covered on a "blanket" or "per employee" bond with a specific amount shown for each risk involved.

A problem area is the person performing services who is not an employee, but an independent contractor, according to the terms of the insurance policy. A typical fidelity bond might read as follows: "An employee is any natural person while in the regular service of the insured in the ordinary course of the insured's business during the period, and when the insured compensates by salary, wages or commissions and has the right to govern and direct in the performance of such services, but does not mean any broker, factor, commission merchant, consignee, contractor, or other agent or representative of the same general character."

A person who would be excluded from coverage when this type of provision is present can be added to the policy by endorsement.

Some fidelity bonds have a "sleeper" clause which tends to negate the coverage. Not telling the insurance company that you have knowledge of prior theft (not disclosed to the insurance company in the application for the fidelity bond), or that you have knowledge of a dishonest act committed while in your employ, *relieves the company of responsibility* for making good on that employee's subsequent acts of dishonesty.

The bonding company's responsibility for covering employees terminates with respect to each employee after a given number of days after termination of employment. When buying a policy it is important to know the "out date" and possibly ask for an extension so that an audit of accounts or inventory can be made, or hope that any dishonesty of a former employee will be uncovered shortly in the ordinary course of doing business.

As in any form of insurance coverage there are conflicts with other policies carried. Money disappears mysteriously from an unlocked safe during ordinary business hours. Does the bonding company or the company insuring for theft make good the loss?

### Crime "package"

To avoid a squabble of this nature, the simple expedient is to purchase a fidelity bond with the same company carrying your comprehensive fire and theft policies. Or, purchase a crime package insurance so that one company assumes all the risks.

Despite what you may have read or heard, your bank does not bear all of the responsibility or loss for forged checks. Your acts of negligence or omission may shift the liability for forgeries to you and legally relieve the bank from having to make good. If you buy a depositor's forgery policy (these are available at very reasonable cost) it becomes an added protection and coverage for employees as an auxiliary to the fidelity bond.

The costs of the aforementioned policies vary with industry, the extent of coverage, the state in which you are located and your previous record of losses.

However, costs can be cut by accepting a deductible clause (similar to the deductible clauses for automobiles). Remember, though, that you can't forgive small losses without telling the company. You must either discharge the employee or continue employment with the bonding company's permission.

Despite the staggering amount stolen each year, there is strong competition for this type of policy, and your broker should be urged to hunt for the best possible coverage at the lowest possible cost.

Filing and settling losses is not too difficult, but there are rules which must be followed. For one thing, prompt reporting is required. Report a loss immediately upon discovery.

If the loss is one of a series (or you suspect that the loss you discovered is part of an overall scheme of defrauding your firm) report the one loss uncovered and advise the

company that you are going to conduct an examination to discover the full extent of the loss.

Check for policy clauses which give you only a specific time in which to make claims. Ask for an extension if you cannot file a proof of loss within the required time. This request should be in writing, ask for Certified Mail receipt or Registry receipt.

The team best suited to help you in the filing of a claim is your accountant, your legal advisor and your insurance broker.

### Use caution

Where dishonesty is suspected, care should be taken in handling the disclosure to others. A false statement can give rise to a lawsuit for slander or libel. Having an employee arrested and then not being able to make the charge stick can be costly when and if you find yourself at the receiving end of a suit for false arrest.

Because the legal and accounting fees can be considerable in checking and filing a loss claim, some companies offer a reimbursement clause in the fidelity bond contract.

While you may think that your office assistant is beyond reproach, or while you think the head stock clerk to be incorruptible, the fact does remain that a decay in our moral standards has brought about a crisis in employee dishonesty.

The typical employee does not start a job with the intent to steal. An employer who tempts him with opportunity at every turn is at least partly at fault. Famed lawyer Clarence Darrow went even further in placing the blame. "When an employee is caught stealing," he said, "the fault lies not with the employee, but rather with the employer, who, having placed temptation in the employee's path, did not make the proper check to prevent theft."

It is perhaps the unconscious recognition of his own share of the guilt that prevents an employer from prosecuting the dishonest worker.

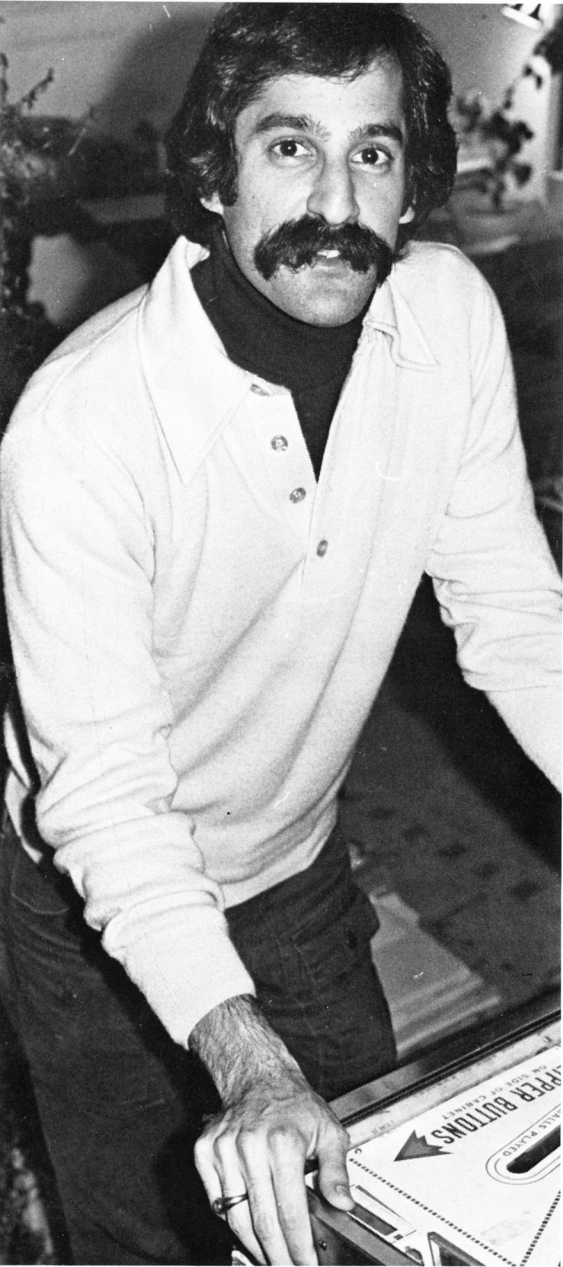
Whether to prosecute the thief, however, is a question that need seldom arise if employers will take the precautions necessary to prevent crime.

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***Operators know their business  
because we know ours.—PLAY METER***



# Pinball critic responds



*Our house critic defends the 'purity' of pinball in this rebuttal to the article, 'Keeping Players Involved Intensely,' elsewhere in the present issue. Sharpe looks at the possibilities and improbabilities—while also inviting other creative ideas to boost the game.*

By Roger C. Sharpe

Although magazine lead times are such that it's often impossible to have true continuity from issue to issue regarding many matters, PLAY METER's own Ray Tilley afforded this writer the advance opportunity to read a manuscript of a story which runs this month, in order to make a possible dialogue of sorts between what its writer has to say and my response. I am grateful for the chance of this "instantaneous" rebuttal and only hope that it can spark others to also air their views concerning the following subject matter. Anyway, here goes.

I always find it remarkably educational to hear the views of those who are new to pinball and how they would alter or modify the product to suit what they feel are very real needs. Such was the case with the piece under "The Idea Bank" by D.J. Pass and the conversation I had with him before he set pen to paper, or at least paper to typewriter. As a resident of Athens, Georgia, D.J. has only been able to sample the joys of pinball for a year and yet he has some very firm beliefs as to the games themselves and their comparison to video, or as he states, "some highly subjective ideas about the psychology and design of pinballs."

Now, lest anyone (and D.J. in particular) think that this is going to be a "knock" piece, be assured that I would only like to respond as one who has studied the history and growth of the industry and would like to think has some intuitive feeling and sensitivity regarding the machines from many different levels. In keeping with this frame of mind, I found it interesting that the statement could occur that "videos have more immediacy than pinballs," that one's whole concentration is focused on the screen, and that this intensity doesn't happen with pinball.

Taken on its own merits, if one is to really *play* pinball, the involvement can be no less total—and the immediacy of action that can sometimes be random and based on the ball hitting a rubber or bumper, where control is lost for that magic moment—what can be more compelling? Even though I've succumbed to some video games in

recent times, the attraction and satisfaction of playing pinball still remains unique, and it is this quality of uncertainty matched by the inclusion of skill that makes it all worthwhile.

Somehow there is still that lingering dissatisfaction with the fact that you can't interact with a video machine, that the medium itself is rather passive and safe because you're only working buttons, or joysticks, knobs, steering wheels, or even track balls. But with pinball, just imagine, you can move the entire machine and alter the course of the ball and maybe even the outcome of the game itself. Now there's what I call involvement. And anyone worth their weight in extra balls and specials knows that you can't accomplish either unless you're concentrating on the board and the action—total immersion, nothing less will do.

But then D.J. moves on and directs his attention, or lack of it, to the "irrelevant" backglass that stands "above the playing area, separate." He does make a point that the heads of the game are more effective when they're the same width as the playfield, but many manufacturers are doing that anyway and the differential isn't that great to cause one any real perceptual problems.

However, isn't the backglass the attraction of the game, the thing the player sees first before he ever stands up to the game? Isn't its function to attract the eye and even to beckon the hesitant player to a machine he may not have encountered before? And, as to its real use, haven't we learned from Atari's lesson that the scoring is better at eye level and not at the point of the playfield where it would distract the player? In addition, isn't it a way for the observer to see how well a player is doing on a machine in terms of score, rather than its being in sight of only the player? Intangible qualities, I would agree, and nothing one would want to bank on in the cashbox, but something that has proven itself effective since the introduction of the backglass in the Thirties.

Another point about the backglass that's noted is that less space is



# to writer/player's game ideas

needed since there's an appreciable lack of hardware compared to the old EM pins, but one need only look at those boards in the head to realize that *here* is truly where the game is and the *body* of the machine is where space has been gained, if anywhere.

## Backglass action

D.J. would like to try to circumvent the shipping and storage problems inherent in transporting a game long distances and offers an idea as to how one might design a one-piece machine where the backglass contains some of the action. However, in doing this he also includes the idea of a ball automatically entering at some point on the field, taking away that first player contact of person and plunger, adding that this takes time needlessly. Well, for someone who has played with an automatic shooter in Skokie, Illinois some years back at a bowling alley near Old Orchard Shopping Center that banned the plunger, calling it something that wasn't tied into skill—I have got to say that one of the most unsatisfying and disassociating feelings I have ever felt playing pinball occurred there. The game did it all, not taking into account that maybe I, the player, would like to control the velocity of the ball being sent up from the plunger, that maybe I might just like moving that metal plunger back and slamming it into the body of the game, propelling the ball upward and over to the field.

Talk about being left out at the starting gate, you were frustrated as a player because of this—almost the same feeling one can get from those old center field shooter games that Gottlieb always used to come out with when they did a football or baseball motif and controlled the shooter from the right flipper button.

Other points that D.J. makes about playfield slant should be proof that he hasn't gone into some locations where the back legs are jacked up to the sky and the front are down lower than low. It's like Spain was when I was there researching "Pinball!" You couldn't even take a breath, let alone try to aim on the game; everything happened at light speed. And with some of today's

games, that could mean instant death not only for the player's ball, but also, ultimately, the game. As for his idea of flippers shooting down from the top of the field, the thought isn't too bad except when you stop to think that most players are trying their darndest to keep the ball at the top of the field and probably wouldn't want it getting down any quicker than it has to. On some of the two-player models over the years such as Gottlieb's *Challenger* back in the mid-Sixties and even Komputer Dynamics' *Invasion Strategy*, that made it through one (at that time) MOA convention or even last year's *War* by Viza, the design change wasn't too bad because it had two players playing against each other. But with conventional, standard pinball one has to be careful of the available space and also the geometry of certain angles and proximity of things hitting into things without too great an impact—something acutely felt by those who were caught up designing cocktail table pinballs and found it difficult to put targets just in front of flippers which could shear them off. D.J.'s idea might mean a very open game to accommodate his downward hitting flippers.

I do appreciate the mention of *Sharpshooter* with its lower-down-on-the-field thumper bumpers, but would also be the first to point out that this can't be done on every game and that there has to be a rhyme or reason for placing certain features in specific places. In my case it was to make the right side more alive, make it more difficult for a player to cradle the ball on the right flipper to sit back and peel off the targets and lastly, to help knock out targets just from the ball rebounding off the thumpers and over to the target bank. On some games, however, the bottom thumpers just aren't that successful because they don't interact enough with the other parts of the playfield, such as the right side bottom on *Future Spa* or less so, on a game such as *Old Chicago*.

## Game shape

One comment I can't let by is that made by D.J., whereby he mentions that in changing the shape of the game, the only problem is the wood and cutting it. If he only knew that

the reason the industry found itself with "two-by-fours," the size introduced from Atari, was that was the shape and size of the wood they could get for something different and that economically it was more practical and profitable to just go along with the pieces as is, rather than try to cut them down. And everyone else followed suit for the same reason until *Big Game* entered the scene.

But more important than any of these feelings expressed by D.J. is the fact that there is purity to pinball that must be remembered no matter when someone is throwing out ideas to "save" the games from obsolescence. The machines provide a very real function to those who are caught up in their charms, not the least of which is that sense of control that's always on the edge of uncertainty when a ball can drain out the sides or down the middle. In truth, some games, by their design, are less forgiving than others and might even drain more than would be liked, and there are subtle changes possibly not caught in the engineering room or even out on test, or the game might have played too long without this compensation, but for the most part every manufacturer knows exactly what the hell he's doing when a game hits the streets. He may not be totally happy with the results and impact of a particular model, but he has to live with his product, hopefully refine it and offer something more in keeping with the audience, also always keeping in mind that slender thread of trying to produce something that's not so easy that it's not challenging and not so difficult as to be impossible. And that holds true on the same game for all caliber of players from the beginner all the way to the tournament winners.

That's a helluva tall order for every machine, especially when you consider the number of models that hit the streets. But each one takes ideas and, who knows, maybe D.J. will trigger someone into thinking about a way to alter and modify games.

After all, who would have given a second look at multiple level play ten years ago (outside of the little rails on Gottlieb's *Roller Coaster* and some other efforts in the '30s)? ■



## Outlook for Business/'81

*Observations on  
the Reagan Administration  
and Taxes*

The new administration wants to increase productivity and the capital base. Accelerated depreciation is being billed as the star of this show in Washington. The 10-5-3 depreciation system has perfect credentials for this part. This system would permit businesses to depreciate structures over a ten-year period, equipment over five years, and up to \$100,000 worth of cars and light trucks over three years. It, or some modified accelerated depreciation system, will become law. You can bet on it.

Increased investment credits and special credits for troubled industries—like the automobile and steel industries—have a strong likelihood of becoming law along with the fast depreciation package. Why? It would reduce the cost of capital, thus encouraging a building of the capital base.

The Social Security tax is rising like a hot air balloon. On January 1 the Social Security earnings limit rose to \$29,700 at a 6.65 percent rate, up from \$25,900 and 6.13 percent. If adjusted for inflation only, the new limit would be \$27,800. *The system is not funded*, so that the payroll taxes are not stored up or invested but are paid out as current benefits. In effect, benefits—earned in earlier years—are made out of taxes paid currently by the working generation. Given the current inflationary spiral, it makes no sense to add an estimated \$6.5 billion to 1981 employer costs. At least the balloon can come down when it runs out of hot air. A tax credit to eliminate all or a portion of this 1981 payroll tax increase is a good bet.

Remember the dividend relief rebate in 1977 and 1978? There was some hope for eliminating or reducing the double tax to owners of corporate stock. Don't count on the idea being revived. Tax relief to corporations will come in the form of

reduced tax rates. How much? The reduction will probably be phased in at the rate of 10 percent a year.

### **Other tax changes in the wind**

Following is a list of likely tax changes to be made by the Reagan administration:

*The Windfall Profits Tax.* It will probably be repealed or modified. Small royalty owners and small independent producers should be taken off the hook in any event.

*Capital Gains Tax.* This will probably be lowered when the individual rates are lowered. Look for some mechanism for indexing capital gains, to eliminate or cushion the inflation factor, after the Reagan tax program is in place.

*The Marriage Penalty.* The Reagan team has an opportunity to do as much for marriage as Cupid. How? Reduce the marginal tax rates of married couples when both were wage earners. The administration will help Cupid. I predict joint returns will be continued but two-earner couples will pay about the same tax as singles with equivalent earnings. Then wait for a "foul" cry from marrieds with only one earner.

*Estate and Gift Taxes.* The administration will probably recommend raising the estate tax exclusion for farmers and small businessmen. Adoption will depend on how tight the budget/tax cut/inflation triangle looks. Don't believe any talk you hear about the Reagan pledge to eliminate federal estate and gift taxes.

*Inventory.* Some kind of activity is very likely. What? Probably (1) a simplification of LIFO (last-in, first-out); (2) elimination of full absorption requirements for small manufacturers; and (3) permission for certain small businesses to use the cash method of accounting.

### **The tax cut**

We will get a tax cut. It should be at or near the 10 percent per year for

**By Irving Blackman**



three years as promised. The political campaign rhetoric was of an "across-the-board tax cut." I doubt it. Do you consider yourself a middle or upper income person? Do you save or invest your excess cash? If so, you will most likely will be one of the chosen people to receive heavy benefits from the tax cut.

President Reagan's advisors claim the tax cut will spur production and increase economic growth. Result: more income, so the extra revenues will more than offset taxes lost to lower rates; deficits would shrink rather than rise.

Personally, I like the tax cut idea but would rather rely on reduced government expenditures to make up any tax collection shortfall. Tax cuts without a realistic target date to balance the budget are a fool's paradise.

A few other concepts will probably be kept in the dark. Tax reform seems to have been shelved. "Tax reform" usually means closing loopholes so those who have been benefitting from the loopholes will have to pay more tax. So far, the Reagan camp has not embraced this concept. So relax, fellows. Most of our best tricks will keep right on working.

There will be one exception to the go-slow on tax reform. That is tax shelters. Congress will keep up the pressure to destroy all those naughty tax shelter schemes—born or unborn.

### Conclusion

Ronald Reagan has pledged to cut taxes without "depriving people of needed programs." I'm on his side. Let's all wish him luck. ●

*Irving L. Blackman is a practicing tax partner of Blackman, Kallick & Company, Ltd., Certified Public Accountants, offices in Chicago and Coral Gables. Blackman, also an attorney is a nationally known author, tax lecturer, and seminar leader.*

*Blackman will analyze the new Reagan tax program as soon as it becomes law.*

### SOME COROLLARIES TO VARIOUS LAWS

Most failure will reside in the most inaccessible places. (—Sneed)

You don't learn anything new the second time you "crow-bar" a power supply. (—anonymous)

## U.S. plans new act for slots in bases on the Continent

BONN — Slot machines will be reintroduced on American military bases abroad but will be adjusted to keep GIs from losing all their pay, according to military sources.

Army and Air Force spokesmen confirmed an item in *The Stars and Stripes* reporting the military has approved a plan to install slots in GI clubs across Europe.

The newspaper quoted Col. Charles Walker, chief of the Air Force clubs division, as saying the machines should be regarded as "amusement machines" rather than moneymakers for clubs, as they had been in past years.

Walter said the electronic slots will have devices to prevent abuses and will be fixed to pay back 93 percent of money put in.

The Army and Air Force took slots out of GI clubs nine years ago after allegations of abuses and over-playing by GIs with families in need. ‡



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# PlayMeter

## Equipment Poll

### Top Videos

THIS MONTH	LAST MONTH	THIS MONTH	LAST MONTH
1 ASTEROIDS/Atari .....	1	6 STAR CASTLE/Cinematronics .....	5
2 GALAXIAN/Midway .....	2	7 SPACE INVADERS/Midway .....	4
3 MISSILE COMMAND/Atari .....	3	8 MOON CRESTA/Gremlin & Amstar .....	8
4 BATTLEZONE/Atari .....	6	9 ASTRO FIGHTER/Gremlin & Data East ..	7
5 PAC MAN/Midway .....	—	10 BERZERK/Stern .....	—

### Top Pingames

THIS MONTH	LAST MONTH	THIS MONTH	LAST MONTH
1 FIREPOWER/Williams .....	1	11 GALAXY/Stern .....	15
2 BLACKOUT/Williams .....	2	12 [tie] SCORPION/Williams .....	8
3 FLIGHT 2000/Stern .....	6	[tie] SKATEBALL/Bally .....	20
4 SPACE INVADERS/Bally .....	3	14 BIG GAME/Stern .....	14
5 BLACK KNIGHT/Williams .....	—	15 SILVERBALL MANIA/Bally .....	7
6 GORGAR/Williams .....	4	16 LASERBALL/Williams .....	12
7 ALIEN POKER/Williams .....	10	17 TIME LINE/Gottlieb .....	11
8 XENON/Bally .....	—	18 NINE BALL/Stern .....	—
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The PLAY METER subscriber survey of pinball and video games will be a regular feature in subsequent PLAY METER publications. If you would like to join readers currently participating in the survey, simply fill out and return the coupon below.

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By Roger C. Sharpe

## Springing into Action

Well, here we are with another year drifting by faster than we can imagine as spring waits in the wings to once again usher in the before-you-know-it warm weather. In the meantime, the industry is managing to survive many of its own slings and arrows as pinball continues to find it can co-exist with video and vice versa.

What may be more interesting are some of the observations made by this writer at a recent Consumer Electronics Show in Las Vegas where I eyed the next generation of at home entertainment goodies, not the least of which were an abundant variety of hand-held electronic games, slightly larger models and, of course, home computer systems led by the likes of Atari and Mattel.

You would have to be there in person to realize where the future is heading, but one glance at the array of games from Mattel and its dedication to detail is remarkable considering the price of its Intellivision System—and the equally impressive display by Atari with all of its cartridges for home games including the new *Asteroids*, is nothing less than sensational for the home market. But even more was on view, such as Atari's new games featuring holography, and one wonders if next time around the AMOA might have a new treat to witness regarding these commercial efforts. But this isn't pinball, is it?

The point of interest is that more competition is just around the corner for the amusement dollar and that pinball isn't going to fall victim to the pressures as will the commercial style video games, especially when the player at home can often enjoy the same video game or variations far better than those found at the

local arcade, and, over the long haul, for far less money.

It should be obvious that change will come in the arcade and that the games which might be feeling the sting will be video machines that will have to compete with those home models and even the hand-helds that are getting far more sophisticated than ever before. The next couple of years and the growing acceptance of video into the home will undoubtedly tell the story.

On another front, news to report from New York regarding, once again, amusement machines. And, while in the past it has only been pinball that's come under the attack, video has also joined company for a proposed legislative move that could have incredible ramifications around the country if it comes to pass—and might even mean the end to some of your businesses out there, depending upon how you're doing financially. January 12th found the following story in the New York Post under the title of "Koch sees tax as anti-smut weapon" and it read in part:

"Mayor Koch wants to slap a stiff tax on coin-operated Times Square smut shows. He is asking the state Legislature for permission to tax the 25-cent peep show machines at the rate of \$125 to \$250 per year.

"It's the first time anyone has sought to use taxation as a means to crack down on Times Square smut. Previous efforts have failed, in part, because sex shows, porn shops, and peep shows are protected by First Amendment rights guaranteeing freedom of expression."

And lest you feel that this doesn't have anything to do with our fun games in the industry, you're

mistaken since once again they fall victim to guilt by association and the sheer fact that they're coin-operated, as shown by the following excerpt that continues in the newspaper article:

"And just so he can't be accused of stifling First Amendment rights, the mayor also wants to legalize pizza parlor pinball machines and tax them, too. Pinball and video game taxes would also add another \$1 million a year to the municipal coffers, the lobbyist said. That money would go to the Consumer Affairs Dept., which needs cash to enforce laws regulating and prohibiting amusement machines in places like pizza parlors.

"Earlier efforts to legalize and tax the pizza parlor pinball games failed because the jukebox industry felt an extra tax would put some firms out of business."

And so, fun seekers, unless we have some strong opposition from somewhere and somebody, the games are doomed to be classified with porno machines and be taxed accordingly, which might be a bit stiff if we're talking about another \$250 per machine. Just think of the bars and grills and small spots with a game or two, who are going to have to bow out of business. But even more so, think of the future taint on the image of the industry. Will someone do anything to stop this? What about the AMOA and some of the others that claim to stand up for the rights of the industry? Isn't this just cause to act and send lobbyists to Albany and the state legislature to stop this thing before it gets out of hand?

Let's hope so, or pretty soon it may be happening in your state, or your neighborhood.

### Roger's Ratings At-A-Glance

Bally's FRONTIER.....##¾    Gottlieb's FORCE II .....##½



With this still fresh in my mind it's kind of difficult to concentrate on the newest games that are happening out in the marketplace, but I know everything will pass by and be forgotten, so what the hell. Cynical? Yes. Only because I've been around long enough and through enough to realize the nature of this business and how people operate, but it doesn't change things nor does it make it any easier to accept things as they occur.

As for the games at hand, there are a couple of surprises in terms of the two machines we take a look at this month. One because it's a throwback to another day and age, but somehow works for this time frame, even though it's probably being ignored by many. And the other machine is an attempt for something contemporary that still falls a bit short of the mark. Anyway, see what you think of these games which might just be popping up around your neck of the woods.

### Bally's FRONTIER

It's hard to get attention when you're a machine that's been fitted between *Xenon* and *Flash Gordon*, but, interestingly, this machine made some points at the past AMOA show and isn't too bad a game compared to all the razzmatazz that's out there.

**PLAYFIELD:** The action starts with three lanes at the top (A-B-C) and leads down to a fairly enclosed three thumper bumper area that does offer a slight opening to a right side kick-out hole, although this isn't the major access point for this upward bound kicker. Over at the left side of the field are three in-line drop targets and a further set back stationary target, while on the right side to keep the symmetry is a spinner lane for access back to the top. Move down toward center field and there's a big red rectangular target (shades of *Evel*) with a stationary target on the left side, another just to the right of the spinner. The bottom is a conventional wire form and lane set up with the addition of red posts at the top of the outlanes for some hoped for action other than just draining (a lesson perhaps from *Dolly Parton*).

**ANALYSIS:** Admittedly, *Frontier* isn't the most imaginative design and it does conjure up images and similar shots of *Nitro Groundshaker*, *Mystic*, and a few others, but somehow it all seems to work a bit better than on those former machines, although this isn't to

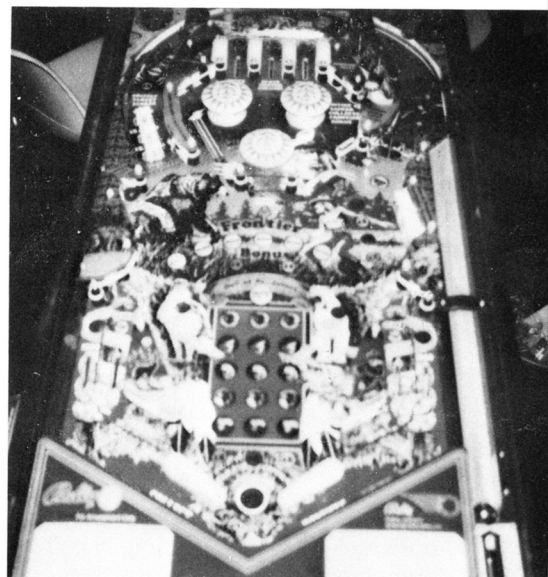
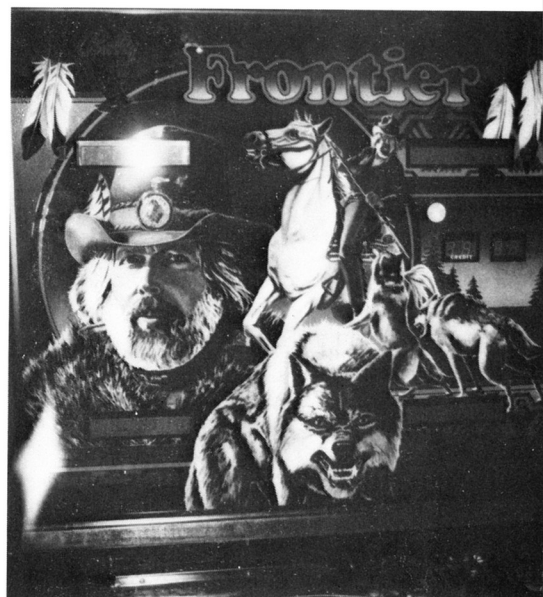
suggest that we need another variation of the same theme after four months. But the game as it stands offers some interesting build-ups, not the least of which is the out-hole bonus build-up that, cloaked as the "Den of Predators," has fifteen targets worth 3,000 points each. The whole idea is to fill out this card and then fill it again, building up the various columns by hitting the targets around the field and going down the appropriate lanes at the top. The in-lines meanwhile hold out that top right kick-out hole and an open gate mechanism for multiple values up to 4X of what could be 60,000 points or 240,000 points. But the game is one where one ball's action adds to the next and only some values are held over. On the right is the out-hole bonus multiplier value up to 4X as well and points are ample on the game, although it's not a high millions scorer, which is nice in this day and age of inflated scores on some games.

The shots for the most part are fairly basic left to right and right to left although there are some nice reverses, and drains aren't too bad a greater percentage of the time. The only problem is that it's just a pinball machine and doesn't have the dynamics in design or even lighting treatment to corner the attention of many people who may be far more interested in some of the flashier numbers out. It's too bad, since this does offer some challenge and is a good standard effort.

**GRAPHICS:** Well, *Frontier* isn't space or glitz, but rather a nice Grizzly Adams, call-of-the-wild motif that's even carried through in the sound effects, complete with birds chirping and other rustic inspired touches. The style is neatly and realistically rendered and the colors are nice and bright for a decent package in total.

**PLAY:** Since *Frontier* is a throwback to another age, the scoring is such that you'll probably have to toy around with the limits to get just the right percentaging for your own needs. However, for extra ball play you should be fairly safe with a 360,000 start followed by 720,000 and 1,300,000 point limits. On free play you might want to bump up each limit by about 200,000 to 300,000 points for each level.

**PROS & CONS:** As I mentioned previously, the machine is a good basic game without frills that offers, in some respects, a respite from the wars of multi-level and multi-ball play. Admittedly it's not the most



Bally's FRONTIER

inspired playfield layout, but for the most part everything is tied-in and, although the game can be maxed out, the extra (seventh) digit should hold players' interest as they try to top the existing high score to date. The shots are relatively straightforward and the build-ups around the board are pretty well thought out from one ball to the next.

**RATING:** ## $\frac{3}{4}$

### Gottlieb's FORCE II

In an attempt to stay current with the present crop of machines, the folks from Northlake bring in their



first multi-ball game that offers a bit of glitz as well.

**PLAYFIELD:** The field begins with three lanes (red, white, and blue) at the right and also features a spinner at the left of this set up. Move down to a three thumper bumper area that also has a right top bulls-eye target that lights for activating the lock for multi-ball play. Over at the left is double roll-over lane leading down to a flipper which is for hitting a top four-drop-target bank of white drop targets. Move further down on the field and at the center is a kick-out hole which can lock up a ball when it's lit. At the left is a five-drop-target bank of red targets as well as a bulls-eye target. For balance there's another bank of five blue targets at the right which also features another flipper. The bottom has a bulls-eye at the left as well as a long running wire lane to the flipper, while the right side has a kick-back kicker that also functions to lock up a ball when lit as well as an out lane. And that's the game.

**ANALYSIS:** *Force II* is an interesting game with some very long shots and also open space in the middle of the field giving it a feel similar to *Panthera*, especially with the inclusion of memory drop targets which might mean one target in a bank left standing for the next ball in play. In fact, the drop targets are the prime shots and also add up bonus multiplier which can get up to 6X on any given ball. And the offset angles of the flippers along with some of the kicking rubbers supplies enough lateral motion once the ball gets past the top thumper bumper area. Get out the lanes at top and hit the right bulls-eyes around the board and the two spots on the field for locking up the ball are lit and ready for two-ball maximum multi-ball play.

As I mentioned there are some decent long shots and some steep angles for hitting specific spots, with the feeling being that maybe a conventional size board might have allowed a bit more immediacy when playing the game and also a chance to close up the field slightly, making it a "tighter" game to play since the open middle does tend to be a problem for the majority of average players who are center-shot oriented until they master playing pinball.

And, once again, the lack of a seventh digit or even a million light detracts from the scoring potential of the machine and also that repeat play of someone going up and trying to top that phantom high score to date. Invariably one is left facing a

999,990 or something close to this for high score to date even though someone may have gotten a million or two. The problem is that if a machine is going to have scoring built in that will mean an occasional one or two million or even more, it should have some place to show that achievement so the player has that satisfaction and the machine itself stays a challenge.

**GRAPHICS:** Aliens in space still seem to be a safe motif to use and Gottlieb offers up some strange looking ones on *Force II* which uses dark colors splashed with some lighter shades to draw the eye and a playfield that picks up the theme of flying ships and explosions. The problem I see here, however, is a continuity of stylistic treatment for the company so that looks, although different, serve up a familiar feeling, especially when one thinks of their last effort, *Time Line* which was much more animated and alive. What is an interesting touch is the use of a flashing light start up to each ball that brightens up the dark colors and makes the game seem that it's always on when it's in play, a similar touch to one that Stern has used so successfully.

**PLAY:** Without the million light or a seventh digit, you'll probably only want to go with two limits on *Force II* with extra ball areas not too bad off at 400,000 and 750,000 points. For free play you might want to try raising these by about 200,000 to 250,000 points each depending upon the caliber of your players.

**PROS & CONS:** As I've said with the last few Gottlieb games, the major problem for repeat play over the long haul, even given any design shortcomings, is the lack of the million light or seventh digit. It's a shame because too many people that I've encountered have liked particular games and yet don't get the satisfaction of going after that high score to date that's truly reflective of the scoring on the machine. With *Force II* the problem is no different and it's too bad, because there are some nice shots to get into on the machine and they may never be realized by those who want to have their scores up there if they should break through to the millions.

Other than that, the power that seemed to be lacking in recent times at the flippers, especially on the tips, has been rectified this time around with sufficient strength to reach all access points on the field.

**RATING:** ## $\frac{1}{2}$



Gottlieb's *FORCE II*

And so for this month that's it in the way of games and other news happenings. There are some interesting rumblings going on about pinball at this time and probably even more so when you read this. Hopefully, some will be shared next time around when we pay close attention to *Flash Gordon*, which is proving its strength on location in test at this juncture, and some other news about new levels in playfield design, the fact that Gottlieb seems to be in the pink for the near future, plus a whole lot more. As always; my best, and be well and prosper. ●





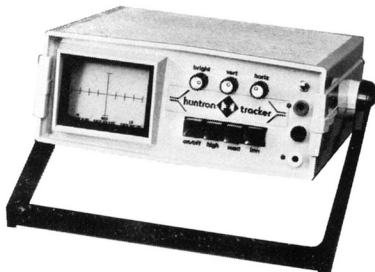
## Digital Troubleshooter

Huntron Industries announced the introduction of *Compar-A-Trace* Model HTR 1005B-1S, an instrument for troubleshooting solid state components and circuits.

The unit features timed dual-channel switching or single channel operation for comparison testing of analog or digital devices—in or out of circuit. Visual displays indicate the condition of devices or circuits under comparison as they are tested *without circuit power applied*. A graticule faceplate supplies a reference standard for visual comparison of firing voltages for diodes, discrete components, or ICs.

The model is simple to operate and effective in cutting service and repair times and costs, according to Huntron Instruments.

An illustrated brochure is available from Huntron which describes the instrument and applications. Write: Huntron, 15123 Highway 99 North, Lynnwood, Washington 98036.



## Zero Hour launch

Universal U.S.A. has shipped out its latest space hit, *Zero Hour*.

*Zero Hour* is a colorful display of a space craft launched from earth, passing through multi-colored asteroids to attack the enemy who are protected by energy fields.

By controlling the eight-position joy stick and rapid fire button, the player destroys the onslaught of asteroids while waiting for the brief moment when the enemy's energy field appears. If the enemy craft is hit, it splits into three attacking ships.

If the player is successful in destroying the enemy, he must re-dock his craft to obtain bonus points.

*Zero Hour* is a fast paced, color monitor upright game available now at Universal U.S.A. distributors.

## Allens hit Gotham City

"New York, New York," the internationally awaited Gottlieb talking video game is now out on test," said an announcement from Tom Herrick, D. Gottlieb & Co. sales vice president.

The video licensed from Sigma Enterprises has been talked about in amusement game circles for weeks—despite the hard facts about the game being a "closely guarded secret," Herrick commented.

Gottlieb's first talking video game takes the player high above the city skyscrapers and the Statue of Liberty where the alien attack begins. Each player, armed with three missile bases, defends the city and builds high scores for skill shooting.

The leader-ship, which must be hit several times to be destroyed, is centered in the swirling formation of its escorts, each dropping "laser bombs" on the city while alternately teasing, taunting, and complimenting the players for their shooting abilities. Each squadron destroyed brings on a special UFO, with a mystery value.





# Big changer

Standard Change-Makers, Inc., of Indianapolis, has begun marketing its new hopper-load \$1 bill changer that holds up to 10,000 quarters (\$2,500) in change—more than any other changer on the market today, according to the manufacturer.

This new super-capacity changer is specifically designed for amusement centers or coin laundries and vending locations where volume is large or the owners desire to fill the changers less frequently. While normally designed to vend quarters only, it can also be set up to vend a like number of tokens of similar size.

Designated *Series 8001*, the new changer features hopper-loading and has just one large hopper. It includes all the features of Standard Change-Makers' *Series 8503* changer: a dispensing system which has no belts and motors, but moves coins through the machine by means of vibration; an attractive cabinet with simple, straight-line design that blends with any decor; front-and top-loading doors that maintain security but offer easier access to all the internal, modular components; bill stacker and lighted cap kit; optional auditing system; coin chutes fitted to assure positive delivery to the payout cup; and a power box with advanced bus-oriented, computer-type structure that assures longer life and dependable operation, said Standard Change-Makers.

"The *Series 8001* changer is a highly efficient machine that provides a dependable source of change, makes filing and servicing easier, and eliminates problems like jamming, overpays, underpays, and jackpotting," said product literature.

For more information, call or write Standard Change-Makers, Inc., 422 E. New York Street, Indianapolis 46202; telephone 317/639-3423.



## Fiery feathered flock of fiends

Gremlin Industries is now shipping upright, table, and mini models of the popular *Space Firebird* video game.

The one- or two-player game calls on players to defend their ship against the Emperor, Eagle, and Gull firebirds. The birds fly in twisting, turning, looping formations, attacking from all directions. Players score 20 to 100 points as they eliminate the birds.

Each bird is armed with a different resistance level to the player's missiles. The Emperor is downed by four hits, the Eagle with two, and the soaring Gull with one hit. The Eagle firebirds release a bomb that drops straight from the sky, aimed directly at the player's ship. Hitting the bomb before it explodes, can add 50 to 200 points to the player's score, depending on the accuracy of the hit—but, once hit, the bomb scatters deadly shrapnel that can destroy the player's ship.

*Space Firebird* is equipped with "warp mode," that provides the player's ship with a protective shield deflecting enemy fire. It also launches the ship into space, destroying the firebirds by simply ramming into them.

"*Space Firebird* was extremely well received at the AMOA Show in November," said Bob Harmon, Gremlin's director of marketing. "Distributors and operators were impressed with the game's visual appeal, the vivid colors, and the complex motion of the birds."

Gremlin has acquired exclusive proprietary rights to the *Space Firebird* game for the United States and Canada from Nintendo Co., Ltd. of Japan.





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- The Exhibit Hall will feature the leading suppliers to the industry. Exhibitors already planning to participate include:

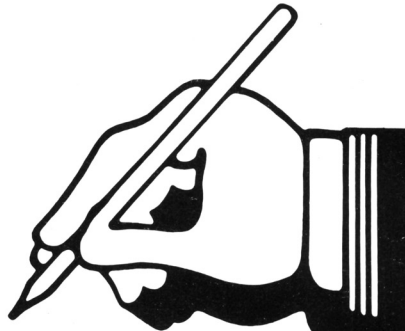
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## This Is 'The End'

Stern Electronics, Inc. has announced production of its latest video game, *The End*, a new, solid-state one or two player game to be launched on the market in early February. A cocktail table model was shipped to Stern distributors worldwide in late January, with production of an upright model to follow, said the Chicago manufacturer.

*The End*, proven popular in selected test markets, features explosive non-stop play action. In the Stern tradition, the artwork is of bold design colorfully dramatizing the game theme of cosmic warfare.

For 25 cents per play, *The End* challenges the player to defend against an on-screen invasion of aliens, programmed to attack and dismantle the player's defense base. Object of the game is for the player to shoot down attacking aliens before they transport defense base units to the top of the screen and spell out E-N-D.

*The End* features rousing game starter and warfare sound effects. Among scoring features are: Player may score double by destroying aliens that are transporting defense base units; player may counterattack and dismantle units from the E-N-D formation by destroying aliens during the third invasion.

Ten highest scores to date are registered on screen, and every player's final score is displayed for comparison against highest score to date.



## Video chase

*Rally-X* is "a maze, chase, and race game all in one," says Stan Jarocki, Midway's vice president/marketing. "It is a unique and different kind of driving game that requires skillful strategy and quick reactions." *Rally-X* is a one- or two-player game with a full color video playfield, a radar screen that reveals positions of cars and check points, along with a fuel gauge indicator.

With the four-way joy stick, the player drives his car and tries to clear the 10 "Check Point" flags that appear randomly in the maze of city streets. The player checks the Radar Screen and plans his strategy to use as little fuel as possible.

Increasing point values are scored for Check Point flags. After the "Special" flag, all points double. Each player starts out with a full tank of fuel; remaining fuel adds to the final score.

The chaser cars try to wreck the player car. The player can out-manuever the chaser cars by throwing out a Smoke Screen that causes them to spin and stall. There are 3 to 8 chaser cars, depending on the phase of the game.

## Space Invaders In wood-grained mini

In response to popular demand, Taito America has introduced the new *Space Invaders* trimline, the world's original video game kit in a compact cabinet.

"This new mini model, (54" high, 20" wide, and 24" deep), is taking operators where they've never been before—to new profit heights and new locations where space is at a premium," said the manufacturer. "Requiring less than 3½ square feet and offering the same exciting features as the original, full-size *Space Invaders* game, Taito's trimline means maximum earnings from minimal space and investment."

Jack Mittel, president of Taito America, said:

"It was inevitable that the hottest game ever created would ultimately be available in a compact size. The trimline cabinet adds an extra profit dimension by making it ideal for locations where floor space is particularly limited such as convenience stores, hotels and resorts, restaurants and retail stores."

The streamlined, contemporary, wood-grain design makes it a sophisticated, attractive, go-anywhere, played-everywhere video.





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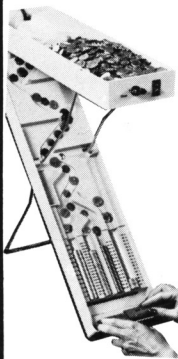
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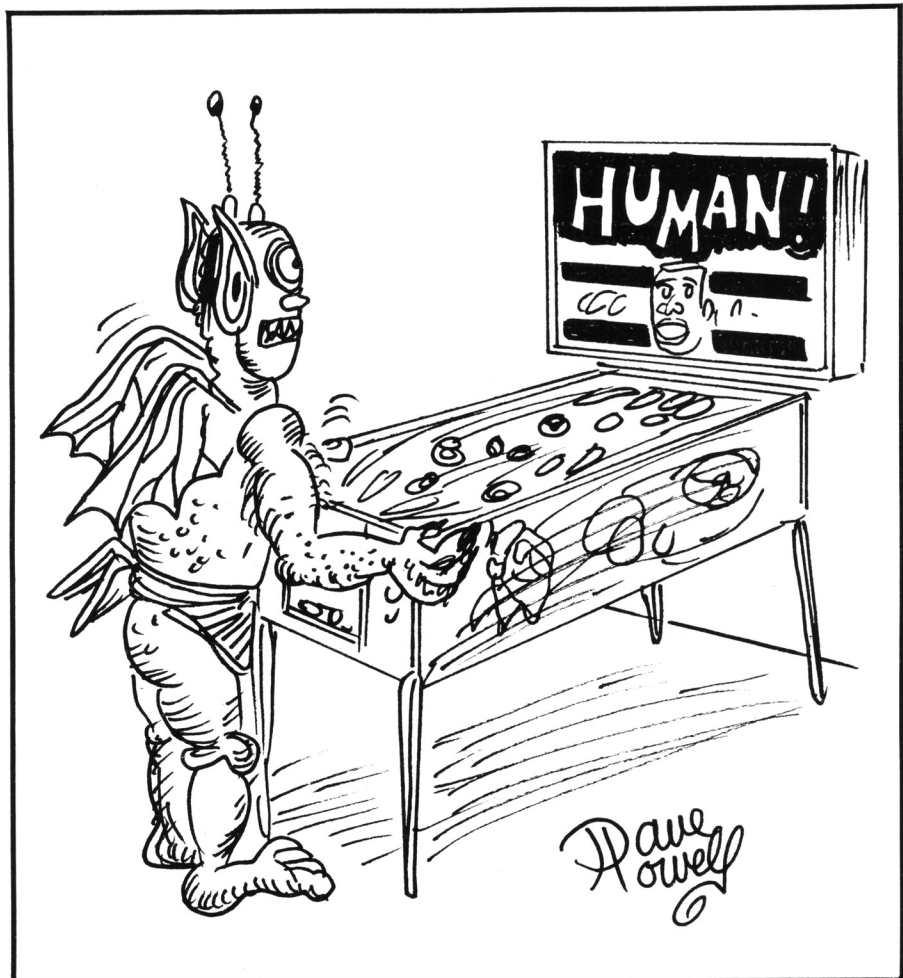
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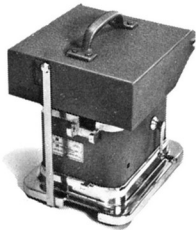
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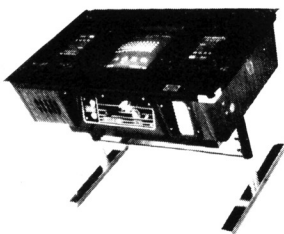
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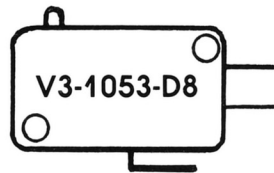


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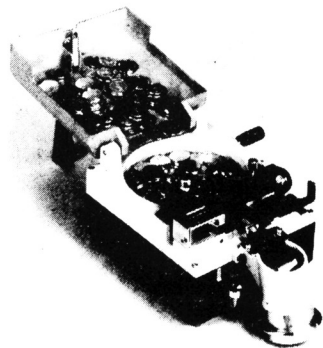
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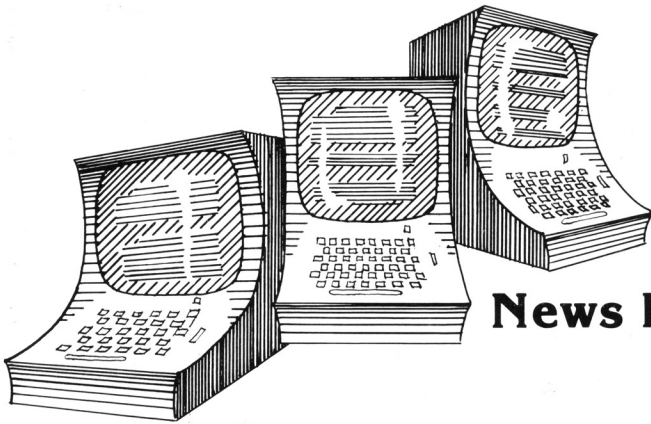
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## News briefs...news briefs...news b

.....Ohio Music & Amusement Association prepared for an appeals court challenge of a lower court ruling that was in favor of video poker games. OMAA maintained in lengthy legal briefs in late January that the lower court erred and that, in fact, "electronic draw poker machines are schemes of chance and fall within the Ohio statute as gambling devices" and should be seized, as they had been in 1980 by agents of the Ohio Department of Liquor Control. The owner of the machines in that instance, taken from the Fraternal Order of Eagles in Cleveland, Mills-Jennings of Ohio, sought successfully to have the games returned and claimed that chance is not the main factor in their play, but rather skill. OMAA, on the other hand, asked the appeals court to consider its ruling as a precedent that may set the trend for other states concerning the "gray area" equipment. If gray area games are declared lawful in Ohio, OMAA argues, it could create problems outside of Ohio's borders. As a part of the OMAA "friend of the court" filing in support of the state attorney general, the association brought industry authority and attorney Rufus King to give legal background on the games to the appeals court.....

.....Florida Amusement Vending Association's convention and trade show was geared up for March 26-29 at the Sheraton Twin Towers in Orlando. A golf tournament will tee off the event, March 26 at 11 a.m. with pro golfer Gene Smith at the Cypress Creek Golf Course in Orlando, limited to 40 participants. Closing date to register for that competition is February 25; contact FAVA at 904/575-8137.....

.....Stern Electronics, Inc. reported being close to its largest production run ever on any amusement game it has manufactured, at this issue's press time. It was for a video game, interestingly enough--Berzerk, three months into its production at the Chicago manufacturer.....

.....Gremlin Industries officials expect its next game, Astro Blaster, to be a hit. "It's the ultimate space game with voice," said a spokesman for Gremlin. In this case, the voice aids the player throughout the game, giving hints as to how play can be improved, offering warnings, etc. The game was previewed at the ATE Show in London; see coverage in this issue.





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