35711   WPS

GAMES

The Impossible Christmas

Not all these gifts will be under the tree
Christmas morning, because some of
them simply can't exist
in reality. Can you find
the impossible ornament
and 16 other visual
paradoxes?

Answers, page 76

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Difficulty Rating   Smooth Sailing ★   Uphill Climb ★★   Proceed at Your Own Risk ★★★   Mixed Bag ★☆

Cover Illustration Andrea Baruffi   **Puzzle** Mike Shenk and Don Wright

# For personal computers that have been very, very good this year…

Fun and games from IBM.

Just in time for the holidays, IBM presents a batch of entertaining software programs for every IBM personal computer (and every IBM personal computer person) on your gift list.

If it's pure fun and games you're after, or educational programs cleverly disguised as fun and games, you've come to the right ad. (If, on the other hand, your only interest is a spreadsheet or database manager, just remember what they say about all work and no play.)

Except for IBM PC*jr* ColorPaint, all the programs here cost less than $50.* And all are available through IBM Product Centers and authorized IBM Personal Computer dealers. For the location of the store nearest you, just call 1-800-447-4700. In Alaska or Hawaii, 1-800-447-0890.

Arcade Games
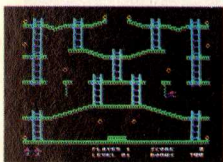
Jumpman™
You have to defuse hundreds of bombs to save the Jupiter Command Center, but be careful. The bad guys are shooting live ones. Requires color display or TV, joystick optional.

Mine Shaft
You have a little problem. Floodwaters have short-circuited your robot miners, and now they're running berserk. PC*jr* only. Requires color display or TV, joystick optional.

SHAMUS™
Find and eliminate the evil Shadow. 128 rooms and all manner of ill-mannered creatures stand between you and your goal. Requires color display or TV, joystick optional.

Crossfire
The streets are crawling with giant spiders. Your city is counting on you. Good luck. PC*jr* only. Requires color display or TV, joystick optional.
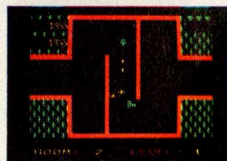
ScubaVenture
Dive for sunken treasure and live to tell about it. Maybe. PC*jr* only. Requires color display or TV, joystick optional.

Adventure Games

King's Quest
Save the Kingdom of Daventry from certain doom. An adventure game with advanced graphics, plus music and sound effects. PC*jr* only. Requires color display or TV.

Zyll
Explore the castle of a wicked sorcerer as a warrior, a wizard or a thief. A text adventure game for 1 or 2 players.

Education Programs

Gertrude's Secrets™
Progressively challenging games that stress logical thinking. Ages 4 to 10. Requires color display or TV.

Gertrude's Puzzles™
A series of exercises to sharpen a child's powers of deductive reasoning. Ages 8 to 13. Requires color display or TV.

Rocky's Boots™
39 interrelated games that teach the basics of computer logic and circuitry. Ages 9 to adult. Requires color display or TV.

Turtle Power
A music and drawing program that introduces the fundamentals of programming with Logo turtle graphics. Preschool and up. Requires color display or TV.

Monster Math
Solve math problems and slay dragons. Or else. Requires color display or TV.

Adventures in Math
Roam through a castle and find hidden treasure. Your math skill opens the doors. Requires color display or TV.

Bumble Games™
Six colorful programs that teach children to plot number pairs, a basic math skill. Ages 4 to 10. Requires color display or TV.

Juggles' Butterfly™
Reading and math for the uninitiated. Ages 3 to 6. Requires color display or TV.

Bumble Plot™

Geometry made fun. Yes, fun. Ages 8 to 13. Requires color display or TV.

Serious Fun

PC Pool Challenges

If you don't have room for a pool table, this is the next-best thing. 1 to 4 players. Requires color display or TV.
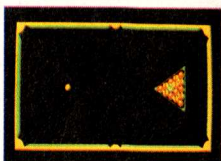
Touchdown Football

Realistic football action. Call your own plays against an opponent or the computer as the crowd cheers you on. PCjr only. Requires either color display or TV, and joystick.

Trivia 101: The Introductory Course

5,000 trivial questions in more than 200 trivial categories. Up to 14 players (or teams) compete against each other and the clock. Requires color display or TV.

TV and Cinema 101: Trivia from Talkies to Trekkies

"What was the name of Pancho's horse on The Cisco Kid?" and 4,999 other infuriating questions. Requires color display or TV.

Casino Games

Try your luck at blackjack, poker or the slot machines with $500 in "computer" chips. 1 to 4 players. Requires color display or TV.

Strategy Games

Computer versions of four popular board games: Checkers, Elusion, Battleship and Reversi. 1 or 2 players. Requires color display or TV.

Graphics Programs

IBM PCjr ColorPaint

A program that helps you draw just about anything you can think (including the Christmas tree pictured below) in living, sparkling color. Very sophisticated, but very easy to use. PCjr only. Requires color display and mouse.

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Create colorful moving pictures on your computer. No knowledge of programming necessary. Requires color display or TV.

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Personal Computer Software

This is NOT a simulated picture. It's a real, live picture created with PCjr ColorPaint (see "Graphics Programs" above).

COMPUTER CAPERS

EDITED BY R. WAYNE SCHMITTBERGER AND BURT HOCHBERG

All work and no play make for a dull computer owner. But those of you who sit pinned in front of a monitor screen balancing checkbooks or learning conversational Basque should take heart: The new computer games will quickly remove that glazed look from your eyes.

The best of the games released in the past year display not only an amazing technical ingenuity on the part of their designers and programmers, but also an uncanny ability to engage both the minds and fingers of players sitting entranced before a computer for hour after hour.

The visual and aural wonders unleashed by this techno-magic range from graphics that realistically depict a gymnast tumbling to the mat after a double axel vault over a horse to the blood-curdling scream of a man falling down a bottomless pit to a wide variety of musical effects rivaling those of a professional synthesizer.

And for complex challenges, the home computer is a wonderful companion. A wargame that simulates the German invasion of the Soviet Union in World War II requires the strategic savvy of a five-star general, and lifelike games based on the stock market and on Presidential elections make it seem that the economic and political future of the nation are riding on every decision. Even "simple" games of motor coordination, the classic video-game mainstays, have taken on new dimensions: On top of running fast and/or shooting straight it may also be necessary to outwit fiendishly intelligent robots or gingerly puzzle a path through a field of precariously balanced boulders. If the designer's thrills aren't satisfying enough, some games allow players a programming option, whether it's building a race course or creating mazes simple enough for a child or hard enough for a master architect.

Computer games have indeed come of age. With roughly 10 million computers already installed in American homes (the number is increasing rapidly), software manufacturers are eager to meet the voracious demand for new products. Video games, meanwhile, have taken a back seat. Most, including many old friends, have gone the way of the dinosaur and the Davy Crockett hat.

Yet the hardiest members of the species have survived (often in reformatted versions for home computers), and a few fine new games were introduced in the last year (for example, Space Shuttle for the Atari 2600, Ballblazer for the Atari 5200, and Rocky for ColecoVision/Adam). And lovers of the good old shoot-'em-up can find some action for their game machines by sticking with the classics of this genre, many of which are still available in stores.

In the pages that follow, we offer reviews of our favorite new computer and video games as well as an update on hardware. Most of the games fit neatly into categories—adventure, arcade action, simulations, and so on—and that's how we've arranged them. Listed at the end of each review are vital statistics about the game: manufacturer, author (if credited by the manufacturer), systems the game is playable on (check with retail outlets or the manufacturer for current availability of versions not listed here), approximate price, and format (D for disk, C for cartridge, and T for tape cassette). The following abbreviations are used for the hardware:

AP: Apple II/II+/IIe
AT: Atari 400/800/1200XL/600XL/800XL
COL: ColecoVision/Adam
C64: Commodore 64
IBM: PC/PCjr
MAC: Macintosh
2600: Atari 2600 Video Computer System
5200: Atari 5200 Super System

Since no retail outlet can carry all games in all formats, the manufacturers' full names and addresses are also listed (page 60). If you can't find the games you want in local stores, check with the manufacturer.

Games that have been previously covered in this magazine include an issue reference at the end of the review. We've also included at the end of each category a list of "Don't Miss" older games, most of which were reviewed by GAMES in two special sections last year ("Computers at Play," December 1983, and "Fine Tunings," October 1983).

And if you're not a computer owner, the following pages will give you a good idea of what you can look forward to if you take the plunge. —B.H.

ADVENTURE
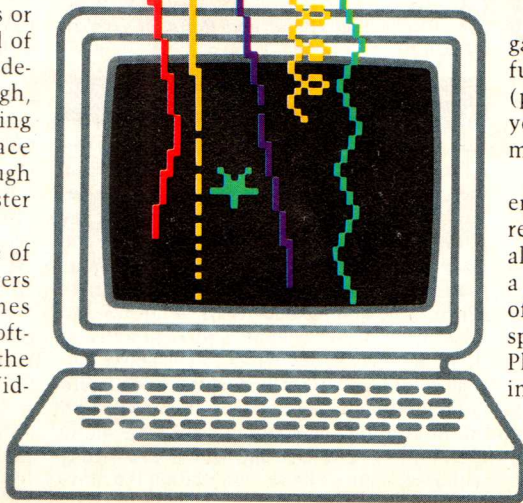
INFIDEL

The Arab workers have poisoned your kumiss and abandoned you in the desert because you asked them to work on a high holy day. The "navigation box" hasn't arrived from the States yet. And it isn't even noon. What a way to start the day. Yet that's how it does start in Infidel, the first in the new "Adventure" series of games from Infocom.

You play an ambitious, unscrupulous archaeologist. The very fact that you're here in the desert searching for a lost pyramid is the result of having cheated your fine upstanding partner. Now you're alone. Using a map and the navigation box (when it finally arrives), you must find, in the endless, shifting desert dunes, the location of the pyramid. Once you find it and go inside, there are hieroglyphics to decipher, hidden traps to avoid, and treasures to collect—provided you explore slowly and carefully.

Infidel is purposely simpler to solve than most of Infocom's fine line of witty, all-text games, since it was written as an introduction to the genre for novice adventurers. But it's still a challenge. Sharp thinking is required to solve the puzzles it poses, and the thrill of successfully deducing the meaning of the jewel clusters or correctly reading the hieroglyphics without the aid of a Rosetta Stone is no less exhilarating than the rewards of more taxing adventures. (Aug. 84)   —Randi Hacker
Infocom; AP, AT, C64, IBM, MAC (D); $45.

XYPHUS
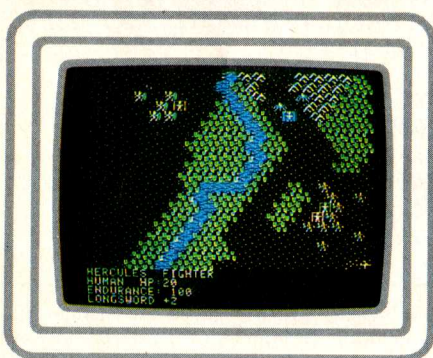
Fantasy role-playing adventures—the computer game equivalents to the likes of Dungeons & Dragons—are a delightful source of challenge, but they have one drawback: They require weeks or months to play. The designers of Xyphus must have sensed some players' frustration at slow progress, and have created the first adventure-game equivalent of *One Minute Manager*.

Xyphus is divided into six separate modules, which must be played in order. Each is a complete adventure, solvable in about one to 12 hours, depending on the skill of the player. The modules get progressively harder, and the final one should satisfy even the

most jaded expert player.

As many as four characters may be separately controlled on the screen at the same time—a feature unique to this game. Make sure your party includes at least one of each of the three races (Elf, Dwarf, and Human), as powers special to each race are needed at different times. Characters can cast three types of magic spells (attack, hindrance, and healing). As characters gain levels of experience (good players should be able to develop level-four characters, while a really lucky Indiana Jones type adventurer might make the fifth level), they earn more powerful spells.

Since multiple monsters of different types may appear together, the game has some elements of classical strategic planning, as the player organizes his forces in a battle front to best fight the approaching enemy.

New players will find this very original game an excellent introduction to the genre, while experienced players will appreciate the game's brevity as well as its detail.
—Roe R. Adams, III
Penguin, by Dave Albert and Robert Waller; AP, C64 (D); $35.

THE COVETED MIRROR

This game offers not only a first-rate puzzle, but also interesting graphics that include a detail of animation in most scenes. At the start, you've been imprisoned by the evil King Voar, whose hold over the kingdom can be broken only by finding a piece of a magical mirror. You can escape from your cell and explore the castle or even wander into town, but from time to time you'll be recaptured by the guards. The geography of the game has all the classic elements, from confusing Twisty Passages to secret passageways that are useful shortcuts. Most of the objects you find must be traded for other objects (try talking to the townspeople, who may offer hints). There are also unusual touches like fishing and jousting contests that test your reflexes. This is an excellent game for all levels of adventurers. (May 84)   —R. W. S.
Penguin, by Eagle Berns and Holly Thomason; AP (D); $35.

SORCERER

You meet a lot of intriguing characters in this all-text sequel to Enchanter (Feb. 84), including a mysterious Adventurer whose identity will surprise you. Once again you're the young wizard you were in Enchanter, but this time you're more respected and have more spells. Your mentor, Belboz, has been carried off by a demon named Jeearr, who has also taken over Belboz's mind and is now living there rent free. Your job is to evict him. But first you've got to get out of the Enchanters' Guild without using the door. If you don't get out by bedtime, your dreams will take you to the House of Eternal Pain, where your agony will be so profound you won't be able to move

or think—or escape. Try to avoid this.

Your explorations will take you through the Underground Empire first visited in the Zork trilogy (Dec. 83) and later encountered indirectly in Enchanter. If you find the admission fee, you can spend a little R&R time in the best amusement park ever. Don't miss the arcade area, where the prizes for beaning bunnies with metal balls are even better than kewpie dolls. You'll meet gnomes, learn that crime does in fact pay, and discover that bat guano is not just something to avoid stepping in. Magic scrolls are littered all over the place, and the spells they contain will make your mouth water. Making a map of the game's landscape is necessary, as is finding a friend to play with who understands mirror mazes and reverse mirror mazes—and don't underestimate the usefulness of the Infotater, the information wheel that comes with the game.

The story line is brilliantly conceived. As in other Infocom games, the program understands full English sentences and is a witty smart aleck. For example, should you find a flag and type in the command WEAR FLAG, the computer's response might be "Who do you think you are, Abby Hoffman?"
—Randi Hacker
Infocom; AP, AT, C64, IBM, MAC (D); $45.

KING'S QUEST

In this animated adventure, you use a joystick or the keyboard to move your character through each scene and make him walk, climb, swim, etc., while other characters and animals are also moving. Instead of entering directions on the keyboard (NORTH, SOUTH, etc.), moving your character to the edge of the screen automatically brings him to the adjacent area. And to further reduce the amount of typing you have to do, single keystrokes can be used for certain commands. The graphics are the sunniest and most charmingly detailed we've seen, and make the game a real pleasure to play. The object is to collect three magical objects and bring them to the king. Solving the puzzles you encounter along the way isn't easy, but once you see how they're all related (we won't spoil it for you), you'll find them uniquely logical.   —B. H.
IBM, by Sierra On-Line; IBM (D); $60.

PLANETFALL

The end justifies the means in Planetfall—even murder, after a fashion—and those who take their scruples into the game with them should abandon all hope of winning.

As usual, Infocom has given adventurers an all-text game containing an intricate, absorbing, and humorous series of puzzles. You are low ensign on a starship, which is about to blow up (cause unknown). Fortunately, the gods look out for shlemiels, and you alone escape in an emergency vehicle to fulfill your destiny, which is on an ostensibly uninhabited planet. With your emergency survival kit, you must explore abandoned settlements, locate crucial rooms and tools, and save the planet from the many disasters that threaten

to destroy it. And you must work quickly, since there's a virus in the air that could kill you if you take too long.

The game is full of such futuristic stuff as teleportation booths, computerized life support systems, and lasers. You even latch on to a robot companion who is loyal and true and tells the same stories over and over—just like real people do. Use him mercilessly.

There is logic and order to the story line. Every time you come up against what seems to be an insoluble problem, a little creative thinking will get you out. This makes Planetfall a totally satisfying game. You can, by the way, finish it without completing all the steps leading up to the ending, but in that case the ending will be different.　　—Randi Hacker
Infocom; AP, AT, C64, IBM, MAC (D); $45.

DON'T MISS

Role-playing
Wizardry (Sir-Tech) AP, IBM
Ultima I, II, III (Sierra-on-Line; Origin Systems) AP, AT, C64, IBM (not all games available for each system)
Graphic
Scott Adams Graphic Adventure Series (Adventures Int'l) AP, AT
Time Zone (Sierra-on-Line) AP
Transylvania (Penguin) AP, AT, C64, MAC
All-Text
Zork I, II, III (Infocom) all systems
Suspended (Infocom) all systems
Deadline (Infocom) all systems

SIMULATIONS

RAILS WEST

Fiendishly complex, and detailed to the point of obscurity, Rails West will nonetheless be loved by railroad enthusiasts, frustrated robber barons, and anyone who thinks computer games are too simple and flashy. The object is to amass a fortune in the railroad business of the 19th-century Western United States. Acting as individuals, or as directors of railroads in which they own a controlling interest, players buy and sell stocks and bonds, take out loans, build new rail lines, and even merge one company into another. The game is all text, except for a map that shows the status of railroad lines across the country. Players can also chart their progress on paper maps and balance sheets that come with the game. As Max Beerbohm said, "For those who like this sort of thing, it is the sort of thing they like."　　—Jack Lechner
*SSI, by Martin C. Campion; AP, AT, C64 (D); $40.*

PRESIDENT ELECT

Curious to see whether Ted Kennedy might defeat George Bush for president? Whether Reagan would have beaten Carter in 1976? This mostly text game allows you to simulate any presidential election from 1960 to 1984, using the historical conditions or variant situations you determine.

Each week from Labor Day to Election Day, the computer gives you poll results and spending breakdowns for each candidate. As a candidate's campaign manager, you must choose how much to spend on advertising and where to spend it; how many appearances the candidate should make and where; whether to debate, and how to answer each question. The computer will play some, all, or none of the parts—and it can be a shrewd strategist. Diehard political buffs can choose to finish the game with a real-time simulation of election night, lasting four hours; we prefer skipping ahead to the final tally.　　—Jack Lechner
SSI, by Nelson G. Hernandez; AP, C64 (D) $40.

SPACE SHUTTLE

PHOTOGRAPH BY KIMBERLY BUTLER
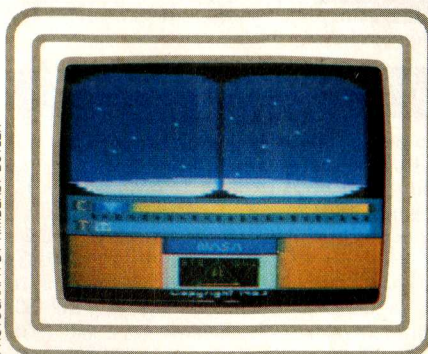
Some day in the not too distant future, seats on the NASA space shuttle will be available through your local travel agent. And on that inevitable day when the pilot slumps forward in her seat and the flight attendants ask if anyone knows how to fly a shuttle, a passenger will stifle a yawn and saunter casually into the cockpit. With a practiced hand, the passenger will dock the shuttle with an orbiting satellite, then return it safely to Earth. Upon receiving the Congressional Medal of Honor, the passenger will tell the nation that "It's nothing once you've mastered the Activision simulation."　　—Jack Lechner
Activision, by Steve Kitchen; AP (D); C64 (D, C); AT, 2600, 5200 (C); $35.

FLIGHT SIMULATOR II

Playing this game is the closest you can come to flying a plane without having to eat airline food. It's all here, in laborious detail: the endless rows of dials and gauges, the radar, and your choice of cloud positions, seasons, and wind speeds. You even have machine guns and bombs, if you're playing the "World War I Ace" variation. Graphics are excellent, with three-dimensional terrain of most of the U.S. to fly over. It takes a while to learn to fly

without crashing—but aren't you lucky to be able to make mistakes that pilots can't afford?　　—Jack Lechner
Sublogic, by Bruce Artwick; AP, AT, C64 (D); $50.

RUN FOR THE MONEY

This solid introduction to basic economic principles is also a lot of fun. You're a Bizling who's stranded on the planet Simian until you can cover your spaceship with protective paint. To get the money to buy the paint at auction, you can sell "synannas"—synthetic bananas—to the Simians who swing overhead. Synannas are made from "rufs," which you can buy from Ruffians at the Rufhouses. And there's another Bizling in the same predicament—either the computer or a human opponent—who competes with you for paint, rufs, and synanna customers. The game demonstrates the law of supply and demand, the effectiveness of timely advertising, and the role of competition. If you want to win, go for the paint every chance you get.　　—Jack Lechner
Scarborough, by Tom Snyder; AP, AT, C64, IBM, MAC (D); $50.

GATO

GATO is a first-rate submarine simulation, placing you in command of a World War II American sub trying to sink enemy ships in the South Pacific. The attractive graphics (not as clear on the PCjr) display your instrument panel and periscope view, a radar screen, charts of your patrol area and quadrant, and—if you don't dive quickly after a destroyer spots you—a damage report.

The controls are simple to understand and maneuver; it's the requisite strategy and skill that make GATO a real challenge. Your opponents can be tricky, even to the extent of sending false orders to trap you deep in their waters. Take the advice of Admiral Halsey: "Hit hard, hit fast, hit often."—Jack Lechner
Spectrum HoloByte, by Paul Arlton and Ed Dawson; IBM (D); $40.

STAR LEAGUE BASEBALL
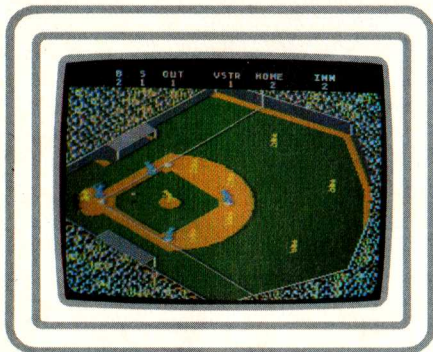
Right from the start, you know it's going to be a great day for a ball game: The sky is California blue and the organist plays Beach Boys type music. The game itself is laid back, simulating baseball's simplicity. Unlike many other such baseball games, you don't have to press a lot of buttons to activate the fielders—the computer does it for you. But what makes this game truly different is the view. Your vantage point is the same as Bob Uecker's in the Miller Lite commercial—the right-field upper deck—and it gives a 3D effect to those line-drive base hits. Before the game, players select the types of hitters and pitchers they want (curve-ball specialist or power hurler). The fast-baller can mow 'em down early, but by the seventh-inning stretch he'll have as much zip as day-old Perrier. Pickoffs, steals, and bunts add realism to the game. The only flaw is that the right fielder, unrealistically, can throw out batters running to first. You can play against an opponent or against the computer, but you have as much chance to beat the latter as a minor league club would have against the 1927 Yankees.   —C. S.
Gamestar, by Dan Ugrin and Scott Orr; AT, C64 (D, T); $32.
Activision; AP (D); $32.

ROCKY and CHAMPIONSHIP BOXING

Both these games offer heavyweight thrills without bruising anything more than the loser's ego. Coleco's Rocky pits Rocky Balboa against Clubber Lang (a.k.a. Mr. T) in a 15-round bout. Coleco's Super Action Controller is especially well suited for the game. Its hand buttons let your boxer throw leather to the face and body, duck, and cover up. The built-in joystick moves the fighters from side to side and across the ring. Though the computer scores the fight, giving cumulative totals at the end of each round, most fights end in a knockout caused by an accumulation of blows. It's important to watch the fatigue and daze gauges, so you'll know when to cover up and when to attack. To score big, jab and then weave by moving quickly from side to side. And don't forget to work the body.

With its world of options, Championship Boxing is far more complex than Rocky. There are three main choices: Let the computer do all the fighting; or act as manager, giving strategy advice to your fighter from the corner before and during the fight; or, in the arcade mode, get in on the action, controlling the movements of one of the fighters against either the computer or another player. You use the keyboard to throw jabs, uppercuts, duck, etc., so you'd better learn to hit the 10 different keys needed without looking or *you'll* get hit. The fighters come in two varieties: real boxers, like Marciano, Ali, and Thomas Hearns, whose characteristics are built into the program; or a fighter created by you, building from a list of variables, including weight, reach, aggressiveness, ability to take a punch, etc. Thus you can pit a superman of your own making against another hybrid, or Joe Lewis against Jack Dempsey, though such matchups probably won't KO any barroom arguments.   —C. S.
Rocky, Coleco; COL (C); $34.
Championship Boxing, Sierra, by Dave and Barry Murray; IBM (D); $35.

BALLBLAZER

Lucasfilm has come up with a winner that's as visually original as the company's movies. In this futuristic game, each of two players rides a high-speed bumper-car inside the boundaries of an immense checkerboard. The object is to capture a glowing ball of light that sticks to an air cushion in front of the car, and to score points by pushing or shooting the ball through goalposts that move back and forth across the end line. A horizontally split screen allows you to see the point of view of both players simultaneously. Since both cars always turn to face the ball automatically, the perspective can change with dizzying suddenness. This takes some getting used to.

The best strategy is simple: Get to the ball first and plow ahead to the goal. Failing that, you can dislodge the ball from the opponent's car when it's in close range by pressing the fire button. A canny player can shield the ball with his car, so a good defensive strategy is to drive up alongside your opponent (the car without the ball moves faster), and when your car automatically turns to face the ball, blast it loose. If we're lucky enough to live to the 21st century, maybe we'll get to play a full-size version of Ballblazer.   —C. S.
*Atari/Lucasfilm; 5200 (C); $35.*

RALLY SPEEDWAY

This might be the only racing event in which a car crash gets a laugh. Whenever a car explodes, the driver hurries out in flames, rolls over a few times, then waves to show he's all right. You'd better laugh, because you'll probably be doing plenty of crashing against the scenery as you and your opponent try to bump each other off a narrow track full of

hairpin turns while racing at speeds of up to 200 m.p.h. And if that isn't tough enough, options permit you to simulate wet or icy conditions. Recklessness is penalized with time loss, but so is caution—you receive a penalty if the other car zooms ahead off the screen. If this kind of pressure makes you want to pull up for a pit stop, you might want to race only against the clock. And if you're not satisfied with the track itself, create a new one from scratch, fitting together elements like a jigsaw puzzle.   —C. S.
Adventures Int'l., by John Anderson; AT (C); $50.
Commodore; C64 (D); $35.

HES GAMES and SUMMER GAMES
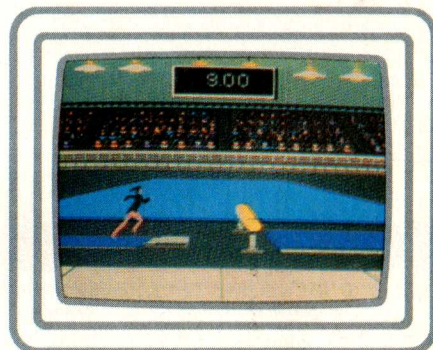
Top: HES Games (Weightlifting)
Bottom: Summer Games (Gymnastics)

Don't wait until 1988 to reexperience the Olympic spirit. The 14 different events in these two packages are so exciting that not even the Russians would boycott them. HES gives you the 400-meter hurdles, springboard diving, 100-meter dash, weightlifting, long jump, and archery. Summer Games fills the gaps with the pole vault, 4 by 400-meter relay race, 100-meter dash, gymnastics, high-board diving, skeet shooting, and, in the pool, the freestyle relay and the 100-meter freestyle. Although some of the events are of the jiggle variety (the faster you jiggle the joystick, the faster the figure on the screen moves), most require great coordination. In weightlifting,

for instance, to make the vaguely Slavic hunks perform the clean and jerk successfully requires eight perfectly timed movements of the joystick. This kind of precision is needed also in events like gymnastics and diving, where a flick of the stick separates a bellyflop from a perfect 10.

The graphics and sound for both programs are astounding. From the fluid movements of the pole vaulter to the female gymnast who struggles to retain her balance to the "thuck" of an arrow hitting the target, they are totally lifelike. Particularly impressive are the opening ceremonies of the Summer Games, complete with a flock of doves. Both games offer nice details: With HES, you get to choose the colors of your shirt and socks, while Summer Games allows you to represent any one of 18 nations, and even plays parts of their national anthems. Summer Games also gives you a running tally of medals and total score and lets you compare your efforts against the world records. All in all, these programs deserve gold medals. —C. S.

HES Games, HES, by Mike Crick; AP, C64 (D); $35.
Summer Games, Epyx; AP, AT, C64 (D); $40.

ONE-ON-ONE

It's the basketball junkie's dream: a one-on-one confrontation between NBA superstars Larry Bird and Julius "Dr. J" Erving. Even better, you control their moves—by joystick or keyboard—making them shoot jumpers, spin and drive to the hoop, leap for rebounds, and soar for dunks. The electronic players not only look like the Bird and the Doctor, they also play like them. So knowing that Bird is a deadly outside shooter if left unguarded, and that the quicker Erving has a less accurate jump shot but a better move to the basket, will affect your game plan.

Play solo (against the computer) or against an opponent at levels ranging from "Playground"—no blood, no fouls—to pro, with a 24-second clock, 3-point plays, foul shots, and a referee with a quick whistle. Especially good moves are rewarded with an instant replay. Even if you can't slap the backboard in real life, here you'll be able to skywalk, particularly if you're the Doctor. But our favorite moments are the occasional monster slam dunks that shatter the backboard. —C. S.

Electronic Arts, by Eric Hammond; AP, AT, C64, IBM (D); $40.

DON'T MISS

Soccer (Atari) 5200
Real Sports Volleyball (Atari) 2600
Pole Position (Atari) AT, 2600, 5200

WORDPLAY & TRIVIA

WORD CHALLENGE

Word Challenge is basically a computerized version of Parker Brothers' Boggle; in fact, the "standard game" is exactly like playing Boggle against Lex, the program's player, right down to the time limit and scoring rules—and Lex is a worthy opponent indeed.

Lex can be set at 26 levels, from A, where he'll find all the words in the grid (as long as they're in his built-in 90,000-word dictionary), to Z, where he'll find absolutely nothing (a nice way to humble Lex after he's trounced you at a higher level). You can also change the grid size (3 × 3, 4 × 4, or 5 × 5), set the timer anywhere from one second to more than 16 minutes, choose any of five scoring methods, and vary the winning score. If you wish, the computer will list all the formable words during the scoring period, even those that you and Lex missed, and you can even type letters of your choice into the grid so you can analyze actual Boggle games. Word Challenge's only limitation—that only one player at a time can compete against Lex—can be overcome by having a group of players, one doing all the typing, join forces against Lex at one of his higher levels. —M. S.

Hayden; AP, C64, IBM (D); $40.

PATHWORDS

At first glance, Pathwords may seem to be another Boggle clone, since the object is to form the longest possible words by moving from letter to adjacent letter in an array—but that's where the similarity ends. Players (from one to four, best with two) take turns finding words. Each player starts with one of the three letters at one point of the diamond-shaped grid, and when it's that player's turn again, his next word must begin with the letter his previous word ended on. To keep things unpredictable, all the letters a player uses to make a word (except the last letter) are changed before the next player's turn. And to keep things lively, a timer penalizes players who think too long.

Hard-to-use letters score bonus points, but since the basic score for a word is the square of the number of letters it contains, going for length is the best strategy. Unlike Boggle, you can "stand" on a letter to repeat it, or reuse it as often as you like. We found the 169-point SENSELESSNESS by using only four letters. —M. S.

CBS, by Eon Software; AP, C64, IBM (D); $35.

COMPUZZLER

What—solving crosswords without pencil and paper? The idea may be jarring, but in some ways Compuzzler actually improves the old game. The program disk contains 70 puzzles, ranging from 15 × 15 to 21 × 21 squares in size. The screen shows the puzzle grid with a blinking cursor arrow in one of the squares, and clues underneath for the two words that cross at the arrow. Answers are typed in, and new clues appear as the arrow moves.

While a computer is not as handy—or as portable—as the printed form for solving, it has a number of advantages: It can automatically check your answers, removing incorrect letters, without your having to peek at the solution; and the increased size of the puzzle makes group solving easy, turning a solitaire pastime into a social activity. Perhaps best of all, Compuzzler provides an exciting competitive format for 2–4 players, each starting from different corners of the same puzzle grid and building outward to capture territory. We aren't ready yet to renounce pencil-and-paper crosswords, but Compuzzler is a welcome alternative. —W. S.

Uptown, by WordWare; AP, C64 (D); $40.

TRIVIA FEVER

It was inevitable that trivia would enter the computer age. Trivia Fever isn't just an attempt to cash in on the craze, though; it's a cleverly conceived, attractively packaged game. Each player (up to eight individuals or teams) chooses five of the seven categories (science, history, geography, sports, entertainment, famous people, and nature) in which to compete. Players then agree on how many points will be needed to complete a category. On each turn, the computer randomly chooses a category and the player chooses the level of difficulty—a not-too-hard one-point question, a tricky two-pointer, or a deviously difficult three-pointer. The player's answer, given verbally, is compared with the correct answer displayed a moment later by the computer. When a player has enough points to finish a category, he must answer a "category completion question" before continuing. And when all his categories are completed, he's given a final question, which, if answered correctly, earns him the trivia title.

Trivia Fever can also be played without a computer; it comes with scoresheets and a book containing the same 3,000 or so questions that are on the disk. (Buyers without computers can send back their disks for $5 rebates.) And the manufacturer promises six more volumes within the year. —M. S.

Professional Software, by Robert Crowell; AP, C64, MAC, IBM (D); $40.

STRATEGY

ARCHON II: ADEPT

This game is a worthy sequel to Archon, the first game to blend arcade action and chesslike strategic maneuvering. Each of two players (one of which can be the computer) controls an army that initially consists of four "Adepts," magical pieces that can teleport around the board and cast spells. Additional pieces of a dozen different types can be conjured up by the Adepts, who must expend varying amounts of magical energy to do so. And the spells—to immobilize an enemy piece or heal a wounded piece, for example—also vary in energy costs.

When a piece lands on a square occupied by an opposing piece, the scene shifts to a separate screen, where an arcade-style battle ensues. There the two pieces—controlled by joystick and fire button—attack one another by such means as firing missiles, breathing flames, or emitting deadly sounds. Each hit scored on a piece reduces its energy level, and the battle continues until one piece loses all its energy, after which the survivor occupies the contested board square. The pieces have weirder powers than those in Archon—Wraiths, for example, are invisible during much of a battle, and the Adepts' missiles can be directed after they are launched.

A player wins by wiping out the enemy army, by occupying all six "power points" (squares that reward the player occupying them with extra magical energy each turn), or by winning an "Apocalypse." The latter is a final and often lengthy battle that either player can call for at any time, but at a cost in energy that is very high early in the game.
—R. W. S.
Electronic Arts, by Freefall Associates; AT, C64 (D); $40.

FORTRESS

The object of this game is to control the most territory, measured in squares of the 6 × 6 board grid. Each of two players (one or both of whom can be computer-controlled) in turn either builds a fort on any empty square or strengthens one of his existing forts. A fort exerts one point of influence over its own square and one point over each square with which it shares a border; a strengthened fort

exerts two or three points of influence per square. Each square is controlled by whoever has the most influence over it. A fort is eliminated if the opponent gains control of its square.

Five computer-controlled opponents come on the disk, each with a different strength and style of play. Whenever you beat one of them, you can have the computer update the strategy tables it uses to choose its moves, thus creating a new type of player. An interesting mode of play is to pit your computer-trained opponent against someone else's (or another of your own). A match of several games is best, since two given opponents won't always perform the same way against one another. (June 84)
—R. W. S.
SSI, by Patty Denbrook and Jim Templeman; AP, AT, C64 (D); $35.

EL-IXIR

PHOTOGRAPH BY KIMBERLY BUTLER
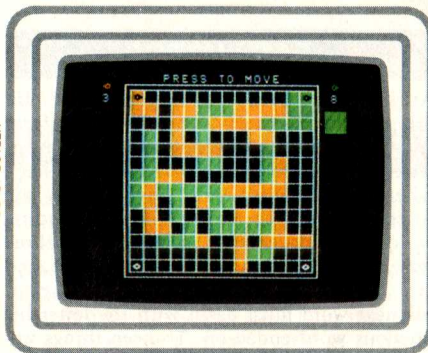
In this easy-to-learn two-player game, players use contrasting colors to fill in from one to four squares of a 14 × 14 grid each turn, attempting to occupy or surround the most territory at game's end. Each turn, the computer offers the player four randomly chosen empty squares. After the player picks one (if he hesitates, the computer does it for him), the square is filled in with his color. The player is now given a choice of four directions in which to try to extend his square into a line segment. The computer then will fill in a line of from zero to three additional squares (this number is also determined randomly) in the chosen direction.

Ownership of squares can change during the game. If a player surrounds a group of squares of the opponent's color, all the squares in the group change to his color (but can later be similarly recaptured). The only squares that can't be "stolen" are those connected to at least one of the four corners ("elixirs"). As the players battle to connect the largest possible areas to the corners, they often have to judge whether to take a move that guarantees a connection now, or wait and hope to connect a larger area later.

If one player is lucky enough to get control of all four corners, he wins automatically; even control of three corners is often too big an advantage to overcome. For players who

prefer games with less luck, we suggest a rule prohibiting a player from taking more than two corners, which gives players equal chances throughout the game. —R. W. S.
Isoft; AP, IBM (D); $30.

SEVEN CITIES OF GOLD

This is a brilliant simulation of the age of Spanish exploration and conquest of the New World. It's 1492, and you outfit an expedition with ships, men, food, and trade goods. Then you head West. (The game uses mostly animated graphics, and you control your character's movements by joystick.) When you hit land—you'll find both islands and continents—you may put ashore as many men as you wish, plus as much food and goods as they can carry. As you move your expedition through jungles and mountains, often following rivers, you'll encounter natives living in everything from tribal villages to major Inca cities. You can attack them mercilessly, and usually win, after which you can take their food and gold; but this approach will make neighboring tribes more likely to ambush you as you explore farther. A much better long-range strategy is to befriend the natives and give them goods in exchange for food and gold. But this is a little tricky: As you move through a village or city looking for the chief with whom you must deal, you have to be careful not to accidentally bump into a native, which kills him automatically and enrages the others. (Hint: You'll need a *lot* of trade goods to make a deal, so at the start of the game, buy an extra ship and fill it with all the goods you can.) Friendly natives will also give you hints about where to look for gold mines and other points of interest, and they may even be converted to your faith and allow you to build a mission in their city, a useful future base.

When you return to Spain, you're given a rating based on how much of the New World you've mapped and your other achievements. Then the king grants you a new commission, and you can return to the Americas with a larger fleet. When you've mapped the known world and learned the best ways to deal with the different native tribes, computer-generated random continents will offer endless scope for new adventures. —R. W. S.
Electronic Arts, AP, AT, C64 (D); $40.

SARGON III

This chess program plays well enough to beat about three-fourths of the members of the U.S. Chess Federation, a group much stronger than the general population. Unless you're an unheralded master, Sargon will beat you too, and thereby help you learn to play better. You can adjust its level to your own strength if you want an equal opponent, give it material odds if you think you're good enough, or play speed chess against it. You can also switch sides, take back moves, set up problems, even watch it "think." With all the features anyone could want, an excellent manual, and its optimum combination of strength and playing speed, Sargon III is the chess program of choice. —B. H.
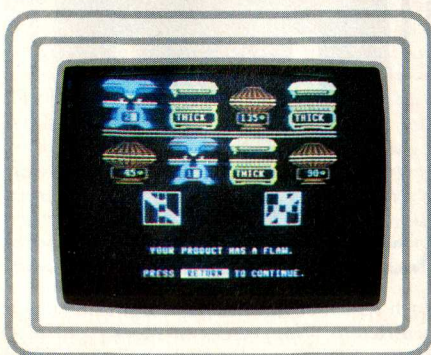*Hayden, by Dan and Kathe Spracklen; AP, C64, IBM, MAC (D); $50.*

NOT FOR KIDS ONLY

THE FACTORY

PHOTOGRAPH BY KIMBERLY BUTLER

Writers and publishers of educational software should visit The Factory—it's one of the simplest games around, and one of the best.

You must design an assembly line consisting of one to eight machines of three different types: a hole-punch, which makes one, two, or three square or round holes; a painter, which paints stripes in any of three widths; and a rotator, which turns the product through multiples of 45 degrees. You are shown the prototype of a product—a square flat board made up of holes and stripes—which you must duplicate using a specified number of machines. If you design your assembly line properly, the raw material (an unmarked board) will emerge as a finished product that matches the prototype.

Products vary from easy, requiring one or two machines, to hard, requiring all eight. You can create prototypes for a friend to duplicate, or let the computer choose the prototypes. The game develops both spatial visualization and sequential reasoning in a captivating way. The graphics are superb; it's fun just to watch the machines do their simple tasks. This game is highly recommended for all age groups. —Jack Goldberg
Sunburst, by Marge Kosel and Mike Fish; AP (D); $20.
HesWare, by Sunburst; C64 (D); $20.

UP FOR GRABS

This word game, for one to four players, cleverly combines word construction with manual dexterity. The object is to grab letters that appear briefly and randomly on the faces of a spinning cube and use them to spell words on your diminutive Scrabble-like grid. The scoring loosely resembles that of Scrabble.

It is the competition for letters that adds excitement. Game players who may be put off by the slow play of purely mental word games should find that the addition of motor coordination skills and time limits reduces the significance of word-building abilities: It isn't so easy to spell ZEPHYR and get the Z and Y on double-letter squares when you're competing with other players for the same letters.

Up for Grabs is legitimately educational, however, even if it isn't Scrabble. It develops the skills of word recognition, spelling, and strategic thinking, and it should interest the whole family. —Jack Goldberg
Spinnaker; AT, C64 (C); $40.

THE POND

PHOTOGRAPH BY KIMBERLY BUTLER
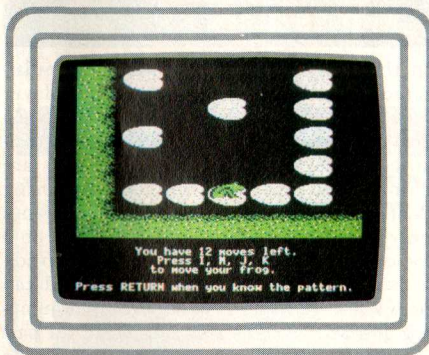
The object is to get a frog to shore by making him hop across a pond from one lily pad to another. Your view of the pond is limited to only a few lily pads. The pads, however, are arranged in a patterned maze so that a repeated sequence of hops will take the frog to shore. In the simplest ponds, a two-move sequence—for instance, three pads down, one pad to the right, repeated as often as necessary—will suffice. The most complex ponds require a repeating pattern of four moves and include extra pads that are not part of the pattern, making visualization more difficult.

The puzzle is to discover the pattern by trial and error in the fewest possible tries. You start with 35 points, and one point is deducted each time you move the frog along the pads to see more of the pattern (you can view the whole pond at once if you're willing to take a 15-point penalty). When you think you know the pattern, enter it into the computer and watch the frog follow your instructions until, as so often happens in the most advanced ponds, he plops into the water.

The graphics are good and the play interesting. The Pond is a worthwhile exercise in pattern recognition and inductive reasoning. Although it can be recommended primarily for the 9–14 age group, adults may enjoy it too at the higher levels. —Jack Goldberg
Sunburst; by Mike Fish and Eric Grubbs; AP, AT, C64, IBM (D); $40.

THE INCREDIBLE LABORATORY

In this delightful and well-designed game, young alchemists can create their own ghouls from such enticing materials as "alien oil," "goose grease," and "black ice," and in the process learn how to analyze logically. Each of the fiendish chemicals in this computerized chamber of horrors represents one of several gruesome varieties of a monster's body. Black ice might generate a head of snakes, for example, or goose grease might produce arms like bat wings or the bandaged legs of a mummy. But the six chemicals must all be chosen before it is known what effect any of them has. Only by studying the monster that has been created, then changing the formula and studying the new monster, is it possible to figure out what each chemical does.

Solving this intellectual challenge requires logical reasoning, clear thinking, and careful note-taking. Adults, too, will find it stimulating at the higher levels. But to understand the fundamentals it is essential to play the novice level first, in which each chemical always determines the same variation of the same specific body part. At higher levels, chemicals may be combined in various ways and may randomly represent different variations or different body parts. For each of the six levels there's a challenge: This time, after the player has selected his ingredients he gets three monsters instead of one, two of which are impostors. Will the real Thing please stand up? —Jack Goldberg
*Sunburst, by Marge Kosel and Jay Carlson; AP, AT, C64 (D); $55.*

BOULDER DASH

Diamonds are forever in this superb puzzle/action game. In each of 16 caves, played sequentially, you must pick up a certain number of jewels in a certain amount of time. To do so, you must learn how to use boulders to help you while not letting them fall on your head. You can push them out of your way, use them to kill or block deadly fireflies, drop them on butterflies (which then turn into jewels), or pile them up to limit the growth of amoebas (which turn into jewels when they can't grow any more). Each cave is a different challenge requiring a unique solution. At each of the five skill levels, the caves are laid out differently, more jewels are required, and the time is reduced. (July 84)   —B. H.
Micro Fun, by First Star; AT, COL, C64 (D); $35.

BRISTLES
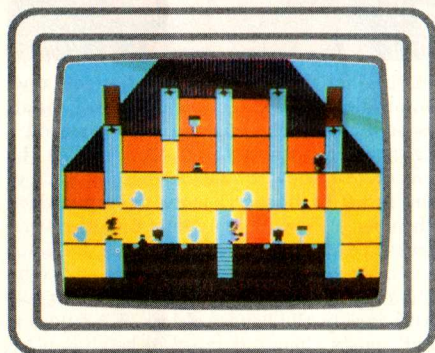
The object is to paint all the rooms of a building that includes elevators, various flying objects, and an obnoxious little girl who puts hand-prints on your freshly painted walls, forcing you to paint them again. On the more difficult levels, invisible paint is used, so you must remember which rooms you've already painted; and at the highest levels you're painting in the dark. There's so much going on, and the action is so fast, that it's easy to get confused; but everything occurs strictly according to patterns that can be memorized. It may take a while to get the hang of this game, but it's a real charmer.   —B. H.
First Star, by Fernando Herrera; AT, C64 (D,C,T); $30.

GUMBALL

Gumballs of different colors are moving through a network of interlocking tubes, and the player's job is to catch each of them in a bin of the same color by sliding the bins right or left under the dropout chutes. In the tubes are gates that you can open and close to direct a ball to any chute. But since all the gates work together, and since several balls are in the tubes at the same time, you have to try while directing one ball not to misdirect others. If you catch a gumball in the wrong color bin, or if you catch a defective (white) one, the supervisor comes out and empties that bin. The day's quota is posted on the screen and must be reached before the 5 o'clock whistle blows. If you're falling behind, you can speed up the rate of gumball production, but if you set it too fast, you're sure to get all bollixed up. (Feb. 84)   —B. H.
Broderbund, by Robert Cook; AP, AT, C64 (D); $30.

DRELBS

There are two basic scenarios in this visually and aurally beautiful game. In the first, your object, as the last remaining Drelb, is to turn a field of lines into as many squares as possible by pushing against the lines to rotate them on their axes. To prevent this, a deadly Trollaboar chases you or tries to get in your way. If you succeed, you go to the second scenario, a field of imprisoned Drelbs that you must try to free (by touching them) while being shot at. If you fail, you go back to the first screen and try again. Each time you succeed, you advance to a higher level of difficulty (the enemies are more aggressive and there are more of them) as the scenarios alternate. (Jan. 84)   —B. H.
Synapse, by Kelly Jones; AP, AT, C64 (D); $35.

MONTEZUMA'S REVENGE

In this simple-looking but fiendish multi-screen climbing/jumping game, the player moves through dozens of rooms in a fortress (fewer in the 2600 version) collecting treasures, tools, and keys. Since the keys are color-coded and work only on matching doors, and the tools (torch, sword, etc.) work only in certain rooms, you're forced to do a lot of backtracking to rooms you've already visited—if you remember the route and can deal with the hazards again. Accurate jumping and fast reflexes are required to get past the moving obstacles and to solve each room's tactical puzzle.   —B. H.
Parker; AP, AT, C64, IBM (D); 2600, 5200, COL (C); $30.

POGO JOE

Though this is a color-changing hopping game, it's much less like Q*bert than it appears. Pogo Joe contains 64 different patterns of cylinders (Q*bert has just one pyramid), offering many different challenges—multiple color changes, double hops, cylinders that are invisible until you land on them, others that disappear when you land on them (so you can't go back)—and a variety of options, such as your choice of starting screen and playing speed. Also hopping around the cylinders are creatures; some can be caught for extra points, others must be avoided, and still others undo Pogo Joe's work. Each pattern includes flashing cylinders that temporarily eliminate all creatures (use them wisely), and most include

"black holes" that transport Joe rapidly from one area to another (very difficult to master). Don't expect to conquer this game quickly, but look forward to many hours of pleasurable trying.   —B. H.
*Screenplay, by William F. Denman, Jr.; C64 (D,T); $25.*

JACK ATTACK
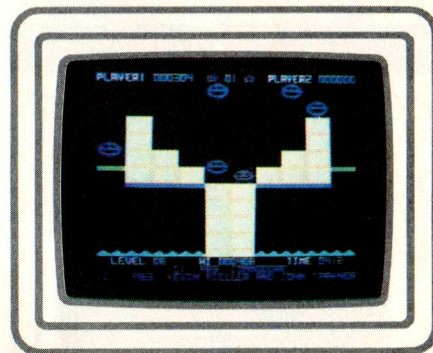
Each screen of this maddening puzzle game is a different arrangement of blocks and platforms. You control a little balloon named Jack, who can hop the distance of one block right or left or three blocks up. His job is to squash all the other hopping balloons by landing on them, which is exactly what they are trying to do to Jack. To compensate for their greater numbers, Jack can rearrange the blocks by pushing or pulling them, which allows him to squash balloons between or under blocks. Completing a level by squashing all the balloons is hard enough, especially on the higher levels, but for bonus points you can try to get Jack to hop onto all the platforms before they disappear. This requires moving blocks around quickly and cleverly while also trying not to get squashed. Patience and practice will be well rewarded.   —B. H.
Commodore, by Kevin Kieller and John Traynor; C64 (C); $30.

OIL'S WELL

Pac-Maniacs who have despaired of ever finding another activity to equal the most addictive game of all time, take heart. As in Pac-Man, the object here is to eat dots—in this case, oil pellets—but your eating mechanism is a drill bit, connected by a pipeline to the wellhead at the top of the screen. Both pipeline and drill bit are vulnerable to monsters that move horizontally through the maze of tunnels at different speeds. So the problem is to find efficient routes to the most deeply buried pellets and retract the pipeline before it's destroyed. Each screen must be cleared before the timer runs out. When you've done all eight screens, they're repeated at a higher speed. (April 84)   —B. H.
Sierra, by Thomas Mitchell; AP, IBM (D); AT, C64 (C,D); COL (C); $30.

IMPOSSIBLE MISSION
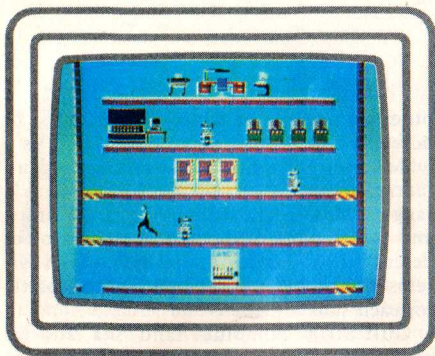
The mission, which certainly does seem impossible, is to collect the nine parts of a security password and use it to confront Elvin, who is trying to take over the world. Parts of the password are obtained by collecting enough puzzle pieces—there are 36 in all—to put four of them together correctly. You carry with you a "pocket computer," which tells you whether you have the pieces you need to solve a puzzle. The play consists mainly of running and somersaulting through the 32 rooms the pieces are hidden in and avoiding the deadly robot guards. Some of the robots can be outwitted by figuring out the patterns in which they move and shoot death-rays; others must be immobilized by using the special passwords found in some rooms. The rooms themselves are puzzles, and to get to all parts of them requires precise timing, accurate somersaulting, and clever use of the local elevators. The game has enough color and action to keep anyone busy, and the underlying puzzle element adds considerable depth and interest. The sound effects, especially the despairing cry of your character when he falls through the floor, are marvelous.   —B. H.
Epyx; C64 (D,T); $32.

SPARE CHANGE

The characters in this zany game are you and two Zerks, who are all trying to collect tokens from the token dispensers. If the Zerks deposit five in their piggybank, they win. You need to deposit 18 in your token bins to advance to the next level, but depositing 10 lets you enter the "Zerk Show Booth," where the Zerks must perform a little show and thus lose all the tokens they've collected. The Zerks have other problems, too: They keep bumping into each other; they fly into blind rages when you steal one of their tokens; and when you play the jukebox, make popcorn, or ring the telephone, they get distracted and stop working. You can modify the Zerks' behavior to make the play easier or harder.   —B. H.
Broderbund, by Dan and Mike Zeller; AT, C64 (D); $35.

SLAMBALL

This new pinball game, with its many bumpers and targets, colorful layout, and true-to-life sound effects, re-creates the excitement of the real thing. The board is so large that you can see only about one-fourth of it at a time while the screen scrolls to keep up with the ball. In various places are 37 targets arranged in sets. Knocking out an entire set releases a floating bumper that, if run over in time, doubles the point value of everything you hit later. Hitting all the targets takes you to the next level, where the increased board angle makes the ball harder to keep in play. For each ball you have a limited number of "pulses," which influence the direction of the ball (like bumping the table in real pinball). Adding to your control—and increasing the skill factor—are four sets of flippers. As in real pinball, flipper technique and knowing when and which way to "pulse" separate the hotshots from the duffers.   —B. H.
Synapse, by Stephen C. Biggs; C64 (D); $35.

RAID ON BUNGELING BAY

Your helicraft lifts off from the carrier armed with unlimited missiles and nine bombs. The mission—to search the nine islands in the bay and destroy all six factories that are manufacturing the ultimate War Machine. Destroying a factory takes many bombs; if you have to leave the job unfinished to get more bombs from the carrier, or if you're distracted by anti-aircraft fire or the truly vicious enemy planes, the factory will be rebuilt. You can slow production by sinking supply boats, and gain time for bombing runs by knocking out enemy guns, but while you're doing that, the factories are completing their work and enemy planes are attacking your carrier. The continuously scrolling screen lets you view only a small part of the bay, but a separate map is provided to help you keep your bearings. This game sets a new standard of excellence for nonstop flying action.   —B. H.
Broderbund, by Will Wright; C64 (D); $30.

SPACE TAXI

Although the object of most space games is to destroy an enemy by maneuvering a spacecraft well and shooting accurately, the object of Space Taxi is simply to maneuver. But there's nothing simple about it. Each of the 24 different screens is a series of numbered landing pads that are separated by various types of obstructions and are often located in almost inaccessible places. When a little man appears on one of them, you must land your taxi on the pad and take him to the pad he specifies. If you succeed you get $5, plus a tip if the man liked your driving. Earn $300 and you get an extra cab. When you've landed on every pad in a screen you go to the next screen, where the difficulties increase. To play this game successfully, you need a surgeon's touch with the joystick to negotiate the extremely delicate maneuvers and land in tiny spaces without totaling your taxi.   —B. H.
Muse, by John Kutcher; C64 (D); $30.

WIZARD

No other game puts the Commodore 64 through its paces like this one does. In fact, because Wizard employs every bit of hardware in the computer, it is used by some dealers as a test: If a unit has a flaw, Wizard will show it up. The game is outstanding not only for its variety of color, sound, and movement, but also as an exciting and challenging climbing maze. Your character, a wizard, must run, climb, and jump his way through a series of 40 caverns (screens), in each of which he has to find a key and bring it to a keyhole. The faster this is accomplished, the higher the bonus score for that screen. But for really high scores (and an extra wizard at each 10,000 points), you must pick up the treasures strewn about the caverns. On higher levels this will be almost impossible without using spells, which are earned by picking up keys, and in some cases the keys aren't visible until the treasures have been picked up. If you manage somehow to learn the secrets of all 40 caverns, you can use a construction feature to create your own. (Oct. 84)   —B. H.
Prog. Periph., by Sean Moore and Steven Luedders; C64 (D); $40.

DON'T MISS

Pinball Construction Set (Electronic Arts) AP, AT, C64

Lode Runner (Broderbund) AP, AT, C64, IBM, MAC

Crossfire (Sierra On-Line) AP, AT, C64, IBM

Centipede (Atari) AP, AT, COL, C64, IBM, 2600, 5200 (best)

Ladybug (Coleco) COL

Demon Attack (Imagic) IBM (PC*jr* only, best), 2600

Ms. Pac-Man (Atari) AP, AT, COL, C64, IBM, 2600, 5200

Shamus II (Synapse) AT, C64

Donkey Kong (Coleco) COL

Donkey Kong Jr. (Coleco) COL

Frogger (Parker Brothers, Sierra On-Line) AP, AT, C64, IBM, MAC, 2600, 5200

Zaxxon (Coleco, Synapse) AP, COL, C64

Qix (Atari) AT, 5200 (best)

Miner 2049er (Microlab, Tigervision) AP, AT, COL, C64, 2600

River Raid (Activision) AT, C64, IBM, 2600, 5200

Choplifter (Broderbund) AP, AT, C64

Defender (Atari) AP, AT, C64

Venture (Coleco) COL

Q*bert (Parker Brothers) AT, C64, COL (best), 2600, 5200

Castle Wolfenstein (Muse) AP, AT, C64

Pitfall (Activision) AT, COL, C64, 2600, 5200

Missile Command (Atari) AT, C64, 2600, 5200

High Rise (Microlab) AP, AT, C64, IBM

FIGHTER COMMAND

Perhaps more than any other computer wargame, Fighter Command creates the "feel" of commanding under fire. The British player must make important strategic and operational decisions as German Luftwaffe raids make their way to targets in England. After an initial Orders Phase, in which the German player organizes his raids for the day and the British player makes some initial adjustments in his air defenses, the game enters the critical Execution Phase, during which a clock ticks off the hours as the Luftwaffe attacks its targets.

Like Hermann Goering, the German player (which, in the solitaire version, is controlled by the computer) can only sit back and wait for his planes to return from their missions. On the other hand, the British player, filling the role of Air Chief-Marshall Dowding, must watch the map closely while awaiting the reports of incoming raids. As raids are detected by British radar, their location, altitude, and estimated size are displayed on the map. As the minutes pass, the British player must decide what units to commit to intercept missions. Commit too many units and there may be none available for later and possibly larger raids. Send too few or send them too late and the Germans not only bomb their targets but escape unscathed.

But don't think that the German player is bored while all of this is going on. This writer found it extremely entertaining to set up the German raids, then sit back in an easy chair and watch the British player sweat through the attacks. Is Raid F a fighter-sweep/decoy? Is Raid G really headed for London as it appears, or will it veer off toward Bristol?

Fighter Command is a programming masterpiece that pushes forward the creative edge of computer wargaming.
—Russell Sipe
SSI, by Charles Merrow, Jr. and Jack Avery; AP, C64 (D); $40.

FIFTH ESKADRA

This strategic-level modern naval wargame deals with the possibility of war in the Mediterranean today. Each player fulfills the role of Mediterranean Theater Commander for either the NATO or Soviet navy, and commands task forces containing the major surface ships and submarine forces assigned to the area. The game is realistic but easy to play, and should appeal to both experienced and novice computer wargamers.

The game emphasizes the concept of command control. The player sends orders to his various task force commanders who execute those orders . . . usually! A commander with high initiative and low reliability ratings will be much more likely to take independent actions that may even be contrary to his orders. In the game, this combination is typical of the Americans, while the Soviet commanders tend to rate higher in reliability but lower in initiative. Thus the Soviet player will have

better control of his forces, but will suffer from lack of timely actions on the part of the task force commanders. The NATO commander, on the other hand, faces the possibility that a local CO may take the initiative in a particular situation and thereby compromise NATO's overall strategic plan (a case of winning the battle but losing the war).

Most computer wargames display a high-resolution map of the "battlefield." This game uses, instead, a fold-out map with counters. The computer displays, in a numeric form, the locations of units on the screen as each turn progresses. Some gamers may view this as a step backward in computer gaming, but it is not: It frees much more of the computer's power for actual game-play, and the absence of a scrolling screen can make the play easier to follow.

One of the game's few weaknesses is the documentation. The various vessels and weapon systems represented are not described in the rulebook. A roster describing the various ship types would have been helpful, especially for the novice.
—Russell Sipe
Sim. Canada, by W.J. Nichols, AP (D); $60.

GULF STRIKE
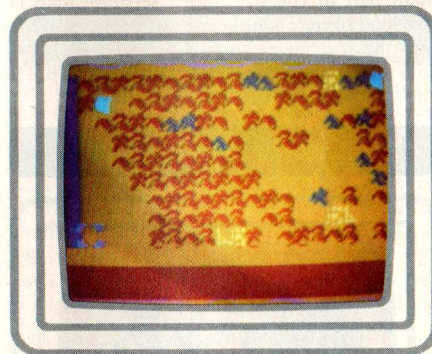
Can you picture Iran and the U.S. fighting as allies in a Middle East war? As odd as that might sound, it is not impossible according to Mark Herman, who designed the original board-game version of Gulf Strike, by Victory Games. As the current Iran–Iraq war drags on, the possibility of national collapse on either or both sides increases, with intervention by the superpowers perhaps to follow.

Gulf Strike simulates a war between Soviet/Iraqi forces and the U.S. Rapid Deployment Force (allied with Iranian and certain Arab forces). The game makes good use of sound and scrolling graphics (you see a 19 × 8 section of squares from the game's 56 × 65 map at any one time) as it portrays battles fought from the Euphrates River to the eastern border of Iran, and from the Caspian Sea to the Persian Gulf. The terrain symbols are "busy," but players will get used to them.

Sound is used not only to simulate battles, but also for audio cues during order entry. The game can be played solo (with the com-

puter controlling the Russian/Iraqi units) or between two human opponents. There is a wide variety of units: armor-mechanized infantry, engineers, marines, regular infantry, rangers, surface and submarine naval units, and aircraft. The rulebook does a good job of describing the various air and sea weapon systems and includes a detailed order of battle for each side.

Gulf Strike combines land, sea, and air combat in an interesting "what-if" game that we all hope will never happen in real life.
—Russell Sipe
Avalon Hill, by Winchell Chung; AT (D); $30.

WAR IN RUSSIA

Without a doubt, War in Russia is the most significant computer wargame release this year. Not for the novice, the game covers the Eastern Theater of WWII in the kind of detail usually found in the macro scale board games. It's all here: tactical combat, combat group formation and reinforcement, air strikes, supply depots, railroad construction, building factories, artillery buildups, entrenchment, Lend Lease, the creation of Soviet Guard units, partisans, weather, and so on.

Each division in the game is rated for strength, experience, and fatigue. You, as the overall commander of the Axis or Soviet forces, must accomplish your goals in the face of problems such as fatigue and lack of experience. Keep the same division at the spearhead of the attack too long and it will finally stop, too tired to move on and very vulnerable to a counterattack. Fresh but green troops can be troublesome as well.

The game is played in weekly turns. The campaign game (Barbarossa) begins on June 22, 1941, and can go to January 1945. Shorter scenarios cover Case Blue (the battle for Stalingrad); and Zitadelle (the battle for Kursk).

The game uses a 31 × 32 scrolling hi-res map that covers the entire Eastern European Theater. The Apple version also contains a hi-res strategic map that gives you the big picture (not found in the Atari version). Perhaps more helpful than the Apple map is the plastic-coated strategic map included with both versions. With the use of this map you can coordinate your grand strategy with your various operations across the front—and, thanks to the game's outstanding design, you'll feel as if you're really there.
—Russell Sipe
SSI, by Gary Grigsby; AP, AT (D); $80.

DON'T MISS

Eastern Front (Atari) AT
Guadalcanal Campaign (SSI) AP
Combat Leader (SSI) AT, C64
Legionnaire (Avalon Hill) AP, AT, C64
Computer Ambush (SSI) AP, AT
Germany 1985 (SSI) AP, C64
Operation Whirlwind (Broderbund)
  AT, C64

As home video systems continued their two-year decline, home computers had a mixed year, with as many unexpected failures as notable successes. While Apple's IIe sold better than ever (even better than the new and portable IIc) and Apple's Macintosh became the darling of the media, Coleco's Adam and IBM's PC*jr*, or "Peanut," got off to troubled starts. But changes made in the Peanut by IBM in August—replacement of the original "Chiclet-type" keyboard with a full-stroke one, and the availability of a board that adds more memory—have made that machine's future look brighter. And while Commodore's low-priced 64 continues to be by far the most popular home computer in the country, Commodore's former president Jack Tramiel purchased financially troubled Atari, whose line of computers and game systems have an uncertain future as the company reconsiders its direction.

Intellivision has all but disappeared from stores since Mattel sold it to a small company, making ColecoVision and the Atari 2600 and 5200 the last surviving game systems. Even these seem to be offered at ever lower prices, and the 5200, of which there are large inventories, is reportedly no longer being made. Production of new games for these systems slowed to a trickle over the past year. Atari bravely showed a new game system (the 7800) at the Summer Consumer Electronics Show—but most observers doubt that it will ever get off the ground.

Other casualties of the past year were the Commodore VIC-20 and Texas Instruments' TI-99/4A. Except for the Commodore 64, computers selling for under $500 no longer seem to attract buyers, who appear more and more willing to venture into the $500-$1,500 range. And even many Commodore 64 buyers are adding disk drives, which cost more than the computer itself but make it much more useful.

The following brief look at the most important surviving home computers and video systems focuses on their game-playing capabilities. Not coincidentally, these are the same computers that offer the best and largest amount of software for other applications.

HOME COMPUTERS

The following computers all come with a full-stroke keyboard, the amount of memory specified, and any other items specified. Most do not come with a monitor, which costs $75 and up (monochrome) and $300 and up (color). All these computers can be hooked up to a TV set instead (though we don't recommend it, because the resolution will be poorer); this may require the additional purchase of an RF modulator (around $30).

Apple The greatest number of software titles—including the biggest adventure game library, by far—are still available for the highly expandable IIe system, which is compatible with the earlier Apple II and II+ computers (provided they have enough memory—typically 48K for game programs—to accommodate the software). Much Apple IIe software will also run on the Apple IIc, the new portable (but not readily expandable) 128K computer. Some games are being rewritten for the IIc, though, to take advantage of its greater resolution. The Macintosh is mainly a business machine, but is revolutionary for its ease of use, speed, and beautiful (though so far only black and white) graphics.
Apple IIe around $900 (includes 64K and disk drive)
Apple IIc around $1,300 (includes 128K and disk drive)
Macintosh around $2,495 (includes 128K, monitor, disk drive, and "mouse" controller)

IBM Because sales of the "Peanut" lagged early this year, little software has been written that takes advantage of the PC*jr*'s graphic capabilities. But most IBM PC games, of which there is a surprisingly good variety considering it is primarily a business machine, will run on the Peanut without any trouble. The PC*jr*'s new full-stroke keyboard should help gain acceptance for the machine, although business users are still likely to balk at the absence of a second disk drive (except somewhat expensive ones from companies other than IBM) and the PC*jr*'s incompatibility with IBM networks.
IBM PCjr around $1,000 (includes 128K and disk drive)
IBM PC around $2,000 (includes 256K and disk drive), plus around $250 for color graphics card needed to play most games. In the future, many business users are likely to prefer the new and faster IBM PC AT (Advanced Technology), starting around $4,000.

Commodore 64 A very large game library has grown up around this machine in the past year, spurred by its success in the market. For the money, it's hard to beat this machine's memory and choice of good software. On the negative side, its disk drive loads very slowly compared to those of Apple or IBM computers, and quality-control problems have caused Commodore to replace a high percentage of defective machines.
Commodore 64 around $200 (includes 64K and RF modulator), plus $250 for disk drive

Atari 800XL This is probably the last survivor in the line of mostly well-designed computers that has included the Atari 400, 800, 1200XL, and 600XL. The 400 and 800 are compatible; but a Translator disk (around $5) is needed to run most 400/800 programs on the XL computers. Atari machines still have the best library of arcade-type action games, though a small choice of adventure titles. Few new games are being produced for Atari, as software companies wait to find out what kind of computers Atari will be making next year, and indeed whether Atari even survives.
Atari 800XL around $200 (includes 64K and RF modulator), plus $350 for disk drive

Adam A delayed introduction, flawed documentation, and quality-control problems got this machine off to a poor start. However, it does come with a letter-quality printer (none of the other computers listed here do), a digital data pack (a high-speed tape that is closer in speed to disk drives than to ordinary cassettes), and built-in word processing software. Coleco has promised to introduce disk drives very soon. Adam plays all ColecoVision games, which fit right into its cartridge slot.
Adam around $700 (includes 80K, printer, and word processing software). Currently, however, Coleco is offering a $500 rebate toward college tuitions for qualifying student purchasers.

Other Computers The Radio Shack Color Computer, or "Coco," is a good and inexpensive ($120 for 16K) learning computer. It has relatively limited game software, however; and to buy one with 64K and a disk drive is costly (nearly $800). The most talked-about computer next year could be one developed by Amiga, which may be marketed by Commodore in 1985. While offering many of the Macintosh's advanced features, the Amiga computer will use color, and may be priced as low as $1,000.

VIDEO GAMES

ColecoVision This system boasts excellent graphics, some nice optional hand controllers (driving wheel for racing games, Super-action for sports), and an expansion module that allows playing of Atari 2600 games. Now under $100 in many stores.

Atari 2600 Although this system has more games available than any other, only a few titles are good enough to be compared with games for the Atari 5200 and ColecoVision. Under $50 in many stores.

Atari 5200 No longer being manufactured, this system is nonetheless a good buy (around $100) because of the high quality of its relatively small game library. An expansion module allows playing of Atari 2600 games.

Intellivision If you can get one for under $50, and can find some games for it, you still might consider this apparently defunct system. Its greatest strength is the good number of excellent sports and strategy games that have been produced for it.

LIST OF COMPANIES

The following companies make software or hardware discussed in this section.

Activision, 2350 Bayshore Frontage Rd., Mountain View, CA 94043

Adventures International, Box 3435, Longwood, FL 32750

Apple Computer, 20525 Mariani Ave., Cupertino, CA 95014

Atari/Atarisoft, 1399 Moffett Park Dr., Sunnyvale, CA 94086

Avalon Hill, 4517 Harford Rd., Baltimore, MD 21214

Broderbund, 17 Paul Dr., San Rafael, CA 94903

CBS Software, One Fawcett Place, Greenwich, CT 06836

Coleco Industries, 999 Quaker Lane South, W. Hartford, CT 06110

Commodore Business Machines, 1200 Wilson Dr., West Chester, PA 19380

Electronic Arts, 2755 Campus Dr., San Mateo, CA 94403

Epyx, 1043 Kiel Court, Sunnyvale, CA 94089

First Star Software, 18 East 41st St., New York, NY 10017

Gamestar, 1302 State St., Santa Barbara, CA 93101

Hayden Software, 50 Essex St., Rochelle Park, NJ 07662

Human Engineered Software (HESware), 150 N. Hill Dr., Brisbane, CA 94005

IBM, 1000 NW 51st St., Boca Raton, FL 33432

Imagic, 981 University Ave., Los Gatos, CA 95030

Infocom, 55 Wheeler St., Cambridge, MA 02138

Isoft, Box 10762, Stanford, CA 94305

The Learning Company, 545 Middlefield Rd., Suite 170, Menlo Park, CA 94025

Lightning Software, P.O. Box 11725, Palo Alto, CA 94306

Microlab/Microfun, 230 Skokie Valley Rd., Highland Park, IL 60035

Muse, 347 N. Charles St., Baltimore, MD 21201

Origin Systems, 1545 Osgood St., Suite 7, North Andover, MA 01845

Parker Brothers, 50 Dunham Rd , Beverly, MA 01915

Penguin Software, 830 Fourth Ave., Geneva, IL 60134

Professional Software, 51 Freemont St., Needham, MA 02194

Progressive Peripherals & Software, 2186 S. Holly, Suite 2, Denver, CO 80222

Scarborough Systems, 25 N. Broadway, Tarrytown, NY 10591

Screenplay, Box 3558, Chapel Hill, NC 27514

Sierra On-Line, P.O. Box 485, Coarsegold, CA 93614

Simulations Canada, P.O. Box 452, Bridgewater, Nova Scotia, Canada B4V 2X6

Sir-Tech, 6 Main St., Ogdensburg, NY 13669

Spectrum Holobyte, 2006 Broadway, Suite 301, Boulder, CO 80302

Spinnaker, One Kendall Square, Cambridge, MA 02139

Strategic Simulations Inc. (SSI), 465 Fairchild Dr., Suite 108, Mountain View, CA 94043

Sublogic, 713 Edgewood Dr., Champaign, IL 61820

Sunburst Communications, Room AB, 39 Washington Ave., Pleasantville, NY 10570

Synapse, 5327 Jacuzzi St., Richmond, CA 94804

Tigervision, 909 Orchard, Mundelein, IL 60060

Uptown Software, 268 Summer St., Boston, MA 02210