

## Video games

After testing four video-game machines and 76 cartridges, we have our favorites. The list may surprise you.

An army of Imperial Walkers, bent on destruction, is marching toward your power generator on the Ice Planet Hoth. You must destroy them with your missile-firing Snowspeeder.

Or, you are trapped in a maze. Robots, spiders, and bats relentlessly track you down. You must shoot them with your trusty six-shooter before they get you.

The pervasive theme in home video games is aggression. It's kill or be killed. Someone or something—a space creature with an ugly disposition, or a large and toothy reptile that wants to include you on its menu, or a cold-eyed gunslinger who objects to the tilt of your 10-gallon hat—is out to get you. To survive, you must do unto others before they can do unto you.

Games of chase, capture, and military strategy are woven into the fabric of our culture. Consider ring-a-levio, cops and robbers, cowboys and Indians. Consider football, a game in which two armies of padded huskies do physical battle to attack and defend yards of territory. Consider even chess, that cerebral metaphor for war.

If video games haven't created aggression as a recreational theme, they have certainly added to the sound and fury with vivid graphic displays and sound effects programmed to greet the destruction of friend and foe alike. Those TV commercials of families squirming in competitive agony hardly exaggerate the

emotional reality of the best (or is it the worst?) of these games.

We'll leave to others the psychological and sociological meaning of the video-game craze. The economic meaning is clear enough. Some \$5-billion in quarters fed arcade video games last year. And home video games—the machines themselves and the cartridges bought separately—are a market that may reach \$1.7-billion this year. (CU's publication for young people, Penny Power, recently polled 10- to 12-year-old readers to find out how they spend their money. Half of those who knew how much they were spending reported dropping \$2 or more each week into the arcade games. Some 10 percent spend \$5 or more each week.)

The home video-game craze is a direct outgrowth of the video arcades, where youngsters have been joined by briefcase-toting executives, all feeding quarters to multicolored machines that flash and burp and bang. Addiction can set in rapidly. Millions of game junkies (or their parents) are buying home versions of the arcade games to hook up to their TV sets. The cost can be steep—upward of \$200 for the machine alone, plus some \$20 to \$30 for each game—but it should save many of those quarters.

Gone are the simple home video games that we reported on in 1977. Current machines have microprocessor "brains" that endow them with computerlike speed and sophistication. When we be-

gan our testing last summer, four machines held most of the market: The *Astrocade*, the *Atari VCS*, the *Mattel Intellivision*, and the *Odyssey 2*. We bought and tested all four. (The box on page 548 gives a rundown on a promising new machine, Coleco's *Colecovision*, which was introduced too late for us to test fully.)

To stave off monotony, the makers of the machines and independent manufacturers market a variety of game cartridges, and new game cartridges appear constantly. You change games by inserting a different game cartridge, much as you'd change musical selections in a cassette tape player. The *Atari*, the *Intellivision*, and the *Odyssey 2* come to life only after you insert a cartridge; the *Astrocade* has several built-in games as well.

Each machine comes with at least two hand controllers, each with a joystick, knob, or some other way to control the play. Controls on each machine's console let you select from various game formats and skill levels. The machine plugs into a wall outlet, so there are no batteries to worry about.

### Measuring the fun quotient

After checking that all the machines and cartridges were working properly, we distributed our samples to a test panel consisting of CU staffers and children. Most of the panelists frequent video-game arcades, so they knew the ropes.

For each machine, we selected eight typical game cartridges, including some adaptations of current arcade games. Each panelist spent two evenings with each machine and its eight games, and then filled out a questionnaire. After evaluating all four machines, panelists filled out a final questionnaire that asked which machine and which games they liked most and least.

Meanwhile, testers—electronics engineers and technicians—were trying out a host of other game cartridges in CU's laboratory to get an idea of what the games offered. As a backup, our testers also played the games that the panelists had evaluated.

A video game should give the player

precise, consistent control of the action, we think. Objects on the screen should move smoothly, without machinelike jerkiness. The graphics should suggest animated cartoon characters, not stick-figures. And the sounds should be appropriate to the action and amusing or exciting, rather than simplistic beeps and buzzes.

A typical game pits you against the machine itself. Some of the games, especially those based on sports, let you compete directly against another player. Most of the popular games have a feature that helps prevent boredom: The longer you play or the higher your score, the harder the game becomes. Another desirable feature is a choice of skill levels. At

the easiest level, there may be fewer hazards, or the game's action may be slower. As your skill improves, you can set the game to progress to more-difficult skill levels.

On the pages that follow, we discuss the four machines in alphabetical order. We also discuss, for each machine, the eight games that our panelists evaluated—and we give capsule summaries of other games, including some from independent manufacturers. The games, too, are in alphabetical order. In all instances, prices are as quoted by the manufacturer but they're generally discounted by 20 to 25 percent. Cartridge makers are noted where they are different from the maker of the console.

## Astrocade: Superior graphics and sounds

Formerly sold as the *Bally Professional Arcade*, the *Astrocade* (\$300) currently offers a selection of about 25 games—fewer than the *Atari* or the *Intellivision*. Several panelists noted that drawback. Nevertheless, the *Astrocade* was the panelists' clear favorite among the four machines.

The *Astrocade* provides detailed, colorful graphics and versatile sound effects. Its unique controllers are shaped like pistol grips: You fire with a trigger while using your other hand to move a stubby rotary control knob that doubles as a joystick. Panelists found the controls easy to operate.

You select game variations and skill levels either by pressing keypad buttons on the console or by manipulating the hand controller. That's a convenient setup; it lets you change programs from a chair, without having to get up to go to the console.

The *Astrocade* is the only machine whose instructions don't recommend shutting off the power before changing

game cartridges; that makes the awkward location of the power switch, on the rear panel, much less of an inconvenience. You can unplug the hand controllers for easy replacement. If you buy two additional controllers (\$40 a pair), you can accommodate four players in some of the games.

A handy compartment in the machine can hold up to 15 cartridges, though not their instruction booklets. Alternatively, you can store the hand controllers there.

The *Astrocade* has three games plus a simple calculator built into the console. In one of the games, somewhat as in the arcade game *Tron*, you maneuver a constantly moving dot across the screen; the dot leaves a trail that can't be crossed. Another built-in game is a doodle pad for up to four people; the hand controller lets you adjust the color and thickness of the "pen" stroke, which you then guide across the screen.

Here is a rundown on the eight *Astrocade* games the panelists tested:

**Amazing Maze/Tic-Tac-Toe** (\$25). You race through a maze against the computer or another player. The maze changes every time

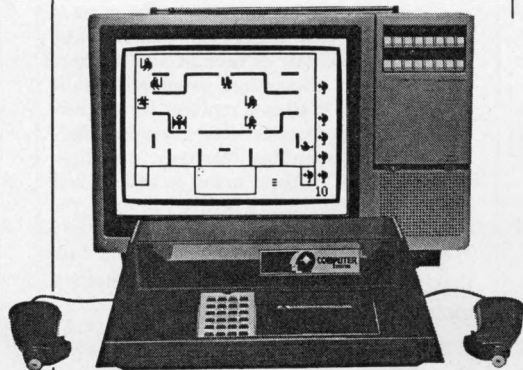
you play, and you can select from among three skill levels. Maze lovers may like the game. *Tic-Tac-Toe* is the familiar old game, but you play on the TV screen against the machine, rather than against another player.

**Bally Pin** (\$30). Our panelists thought it a pretty good simulation of a pinball machine. It includes electronic "flippers," scoring bonuses, and the like.

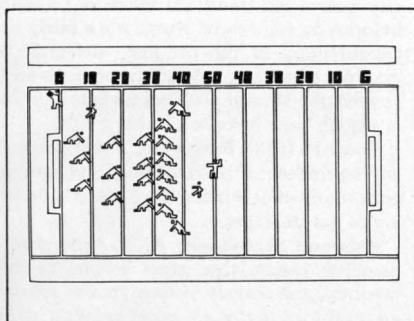
**Football** (\$30). The plays are quite realistic; the offense can run, pass, or kick, and the defense tries to tackle the ball-carrier or intercept a pass. Up to four players can compete on two teams. Sound effects include fanfares and cheers.

**Galactic Invasion** (\$30). Similar to the arcade games *Galaxian* and *Space Invaders*, this presents hordes of alien ships hovering in formation above your missile launcher. Intermittently, they peel off and dive at you singly or in groups, and you must either avoid them or destroy them. Our panelists found the game fun.

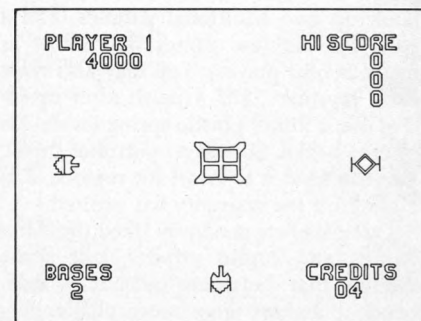
**Incredible Wizard** (\$35). This was the panelists' clear favorite of all the games they tested. An adaptation of the arcade game *Wizard of Wor*, it pits your arrow-shooting hunter against a variety of unfriendly creatures roaming a maze. As soon as you clear the maze, a new and more difficult one appears. A "radar" screen shows the locations of invisible enemies. Two players can team up against the



*Astrocade's* pistol-grip controllers were easy to use. In *Incredible Wizard*, an archer takes aim at a variety of unfriendly creatures, both visible and invisible, in a maze.



*Football*: The instructions say: "Complete a pass up the middle for a first down," attempt an end run or "razzle dazzle."



*Space Fortress*: "You're being attacked by alien ships from all directions. You destroy some—but they keep coming faster. . ."



creatures, but direct hits are scored individually. The two archers can even accidentally shoot each other.

**Space Fortress (\$30).** Your base is attacked randomly from all sides by alien ships. Occasionally, a kamikaze ship zips on-screen. The game includes unusually colorful explosion effects, as well as action that gets faster and faster.

**Tornado Baseball/Tennis/Handball/**

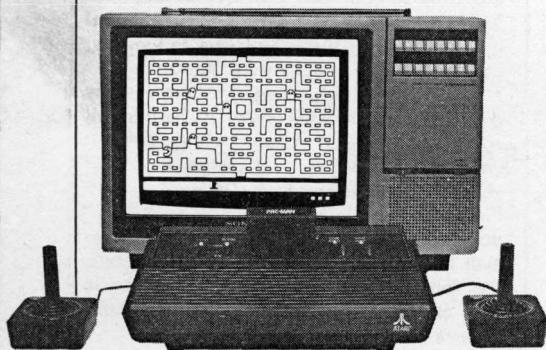
**Hockey (\$30).** The baseball version is reasonably good. You control the pitching and the batting, but you can't control the fielders individually. The other sports games are no better or worse than most competing versions. A couple of panelists loved this cartridge, a couple hated it, and most were lukewarm.

**280 ZZZap/Dodgem (\$25).** Our panelists found this car-race game unrealistic, uninspired, and difficult to control.

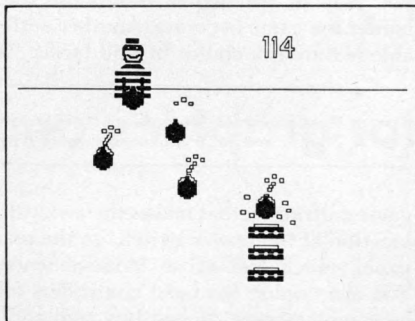
Our testers also checked out an additional cartridge that was not evaluated by our panelists:

**Bally Basic (included with *Astrocade machine*)** is an introduction to a stilted version of the computer language "Basic." But the keypad on the machine isn't well suited for the cartridge. Consider it only as a crude introduction to computer programming.

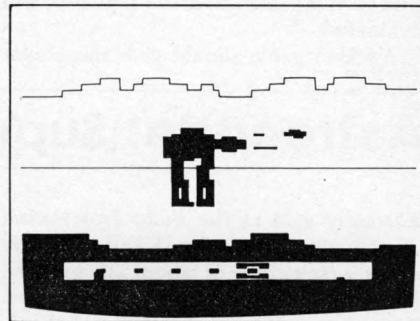
## Atari VCS: A wide selection of games



*Atari's joysticks were stiff, sloppy, and fragile. In Pac-Man, a little yellow blob tries to gobble all the "video wafers," "power pills," "ghosts," and "vitamins" in a maze.*



*Kaboom! An "unpredictable and relentless Mad Bomber" atop a wall is dropping bombs, which you must catch in a water bucket. If you miss one—kaboom!*



*Star Wars: The Empire Strikes Back: You must "destroy as many of the Imperial Walkers as you can" before they reach your power generator on the planet Hoth.*

The Atari was one of the first cartridge-programmable machines to hit the market. Since we last tested it, in 1977, there has been a dramatic increase in the number of available games. Atari currently offers more than 50, and independent manufacturers offer others. (Sears sells an essentially similar version of the current Atari machine, called the *Tele-Games Video Arcade*, at \$150 plus shipping.)

The latest Atari version, the VCS, differs from our older one in the placement of two switches that select game options. For some reason, the switches were moved from a convenient spot on the front panel to the rear of the console, where they are hard to see.

The Atari VCS (\$200) comes with two joysticks and two rotary "paddles" to plug into the console. You can buy and hook up two additional paddles (\$22 a pair) for the few games that allow as many as four players. You may also want extra joysticks (\$22 a pair); after extensive use, a flimsy plastic spring inside one of ours broke. Should a controller break, you can send it to Atari for repairs. (Enclose \$5 if the warranty has expired.)

Our panelists generally liked the Atari games and sound effects, but some thought that the games put out by independent makers were more challenging and exciting. The biggest criticism was the stiff, sloppy feel of the joystick, which made some games hard to control.

Here's a rundown on the eight games our panelists evaluated:

**Asteroids (\$38).** An arcade classic in a home version, *Asteroids* requires you to maneuver your space ship away from flying rocks while blasting them to pieces. The home game's display, however, is much less detailed than that of the arcade game.

**Chopper Command (Activision, \$32).** Your lone helicopter must protect a convoy of trucks from enemy choppers and jet fighters. The joystick makes your chopper climb or descend, speed up or reverse its direction. The enemy releases multiple-warhead bombs that can fly either upward or downward. CU's testers enjoyed the game, but the at-home panelists were not very impressed.

**Defender (\$38).** This home version of a popular arcade game pits your tiny space ship against a skyful of strange enemies, some of which try to kidnap "humanoids" from the city below and transform them into mutants before you can rescue them. It's a fairly successful copy of the original, although the graphics aren't as good and the controls aren't as versatile. Several panelists included *Defender* among their favorite games.

**Football (\$13).** Forget this one if you want any semblance of realism. Blinky images and poor sound effects made the game disappointing to our panelists.

**Kaboom! (Activision, \$23).** A number of panelists picked this game as one of their favorites, and nobody disliked it. The villain is an evil-looking mad bomber who drops lighted bombs from atop a wall. Your task is to catch the bombs in a bucket of water. Miss one, and you lose a bucket—and the mad bomber smiles malevolently. The bombs drop

faster and faster until you run out of buckets. Graphics and sound were outstanding.

**Pac-Man (\$38).** The graphics aren't quite as good as those in the arcade version, and the unresponsive joystick limits the player's control—but it's a lot closer to the arcade original than versions sold as hand-held or tabletop toys.

**Space Invaders (\$32).** Yet another version of a popular arcade game. In this one, you try to pick off alien space ships as they line up in formation and advance toward you. It's not as detailed as the arcade game, but it could please younger children.

**Star Wars: The Empire Strikes Back (Parker Bros., \$28).** A number of panelists included this game among their overall favorites. The Rebels (the good guys, played by you) must keep the Imperial Walkers (bad guys, provided by the machine) from reaching the power generator on the Ice Planet Hoth. The game is long, because your Rebel Snowspeeder must hit a vulnerable part of each of five Walkers 48 times. You always lose eventually, since each destroyed Walker is replaced by another. Some panelists described the game as "challenging," and requiring "strategy, coordination, and luck." Others found it tedious and monotonous. Moral: Try before you buy.

Games that fit the Atari machine but that weren't evaluated by our panelists include the following:

**Backgammon (\$27).** You can play against the machine, or you can use the screen as an electronic game board for play against an opponent. Graphics are good, and the game won't let you make an illegal move. The machine plays an amateurish "hitting" game,

but it's good to learn on. You can use the doubling cube, if you wish, and you can set up particular situations on the screen. You can also play an entertaining version of "acey-deucey" that uses the "backgammon board."

**Barnstorming (Activision, \$32).** You fly your biplane over windmills, around flocks of geese, and through red barns. The time needed to go through a certain number of barns determines your score. It's good for kids, but it may get dull for older players.

**Basketball (\$23).** This is O.K. as a one-on-one game, but it's too easy to make baskets. When a single player competes against the machine, the latter seems never to miss its shots.

**Boxing (Activision, \$23).** Pugilistic action, but with unimpressive graphics and sound. You see the boxers from above, head and shoulders only. Two players can box, or you can fight the machine.

**Breakout (\$23).** A game something like handball, it can be played by up to four people. The two-player **Super Breakout** version (\$32), is the one to get, unless you want a team doubles game. *Super's* colors, sounds, and play variations are so addictive that several staffers couldn't stay away from the machine. The idea is to bounce a ball against a colorful brick wall; each time the ball hits the wall, it knocks out a brick. In one variation, the wall advances toward you, making play more difficult.

**Canyon Bomber (\$23).** Two can play simultaneously at bombing land and sea targets. We suspect the game will bore players in fairly short order.

**Combat (included with Atari VCS machine).** Choose from many variations of tank battles and aircraft dogfights. Some are fun, some aren't. The better variations provide a good game for two competitive players. The "Tank-pong" version, in which shots ricochet off barriers, is especially entertaining.

**Demon Attack (Imagic, \$32).** This fast-paced cousin of the *Galaxian* arcade game features space aliens that zoom in and hover menacingly above your weapon. Occasionally they dive and drop bombs. The difficulty of play increases progressively, and the detail and color are striking.

**Fishing Derby (Activision, \$23).** You race against the machine or another player to see who can pull in 99 pounds of fish without losing them to the shark lurking near the surface. The graphics are cute, but our staffers

found that the fun is apt to wear off quickly.

**Freeway (Activision, \$23).** A takeoff on the arcade game *Frogger*, this game presents a busy freeway and a hapless chicken that wants to cross. Two players can compete to see who can guide the most chickens safely across within the time limit. You can select from among eight skill levels, with the traffic becoming progressively denser and faster. Fun at first, but you'll soon get the knack.

**Grand Prix (Activision, \$32).** This good dodge-'em racing game features randomly appearing phantom cars, oil slicks, and dangerous bridges.

**Home Run Baseball (\$13).** This oversimplified game lacks sufficient control and realism. Fielders can't even throw the ball to a base.

**Indy 500 (\$40).** The cartridge comes with two special controllers for steering. It's a fairly good car-racing game, especially for two players, with lots of variations.

**Ice Hockey (Activision, \$32).** Whether you play against the machine or another player, the action is good and fast. There are two players per team. Players can knock each other down, but there are no penalties.

**Laser Blast (Activision, \$23).** You fire down from your space craft at enemy guns on the ground. Restrictions on movement and firing made for frustration at times. We found the game challenging, but not too interesting.

**Missile Command (\$32).** As in the arcade game of the same name, your mission is to save your cities from a nuclear holocaust. You have only one base, not three as in the arcade game, and the joystick doesn't provide the quick, precise control of the original. But an aficionado of the arcade version might enjoy the game.

**Night Driver (\$27).** Fairly coarse images make this driving exercise for one player appear jumpy. The car accelerates too quickly for precise control.

**Skiing (Activision, \$23).** Realistic directional control helps make this a good game. You get a choice of slalom and downhill runs, with or without moguls to jump. The variations with random courses will keep you guessing.

**Space Jockey (Vidtec/US Games, \$25).** The principle is similar to that of *Defender* and *Chopper Command* (above), but we didn't think the execution was as successful. Enemy craft move from right to left past your space

ship, and you must outmaneuver and outshoot them. Wide variations in skill level are available.

**Starmaster (Activision, \$32).** It's a battle in three-dimensional space. Included are features such as a galactic chart, damage and energy-level indicators, and a complex scoring scheme. CU testers found it challenging and enjoyable.

**Star Voyager (Imagic, \$32).** It's not as challenging as the similar *Starmaster*, in our opinion, but it has a skill level appropriate for young children.

**Trick Shot (Imagic, \$25).** The cartridge gives a choice of three simplistic pool-table games: pool (with only three balls); "trick-shot" (a series of setup shots), and billiards. The last version is the most accurate representation of the real thing. Not very interesting, especially if you're not a pool player.

**Video Chess (\$27).** Graphics here are not good; some of the chess pieces are hard to tell apart. You play against the machine. You can choose either white or black pieces, and any of eight levels of difficulty. At the easiest level, the machine takes no more than 10 seconds per move; at the hardest level, the machine may take 10 hours, even in a relatively simple position. (You could turn off the TV set during that time, but not the machine.) When you make a certain series of moves, the machine will always respond in the same way to those moves. To make the machine play a different opening, you must set up the position manually, a tedious operation. Sometimes, when threatened with the loss of a piece or even with checkmate, the machine makes irrelevant moves. An advanced chess player soon found the machine all too easy to beat at its fifth level of difficulty—and far too slow at higher levels.

**Video Pinball (\$32).** This simulated pinball game has several variations, but we think it's not as good as the *Astrocade* version. A unique feature of this game is the ability to use the joystick to "bump" and "tilt" the on-screen machine.

**Yar's Revenge (\$32).** This space-creature adventure comes with its own jargon. Your "Yar" must blast through a shield to destroy the "Qotile" with its "Zorlon" cannon, while dodging missiles and "swirls." In one variation, you must accumulate energy units called "trons." Our staffers didn't find it as exciting as its TV commercials suggest.

## Mattel Intellivision: The best sports games

This machine (\$240) differs from the others primarily in the complexity of its hand controllers. All the game-playing controls except the reset switch are found there. (Sears sells an essentially similar version called the *Tele-Games Super Video Arcade*, \$260 plus shipping.)

The controllers are permanently attached. They have a flat, 12-button keypad (0 to 9, "clear," and "enter"); a pair of trigger buttons on each side accommodate left-handed and right-handed players. A disk that's slightly larger than a half-dollar tips in the direction your finger presses it, controlling the movement

of objects on the screen. Each game cartridge comes with a thin plastic overlay that you slide over the controller's keypad to customize the controls for that game.

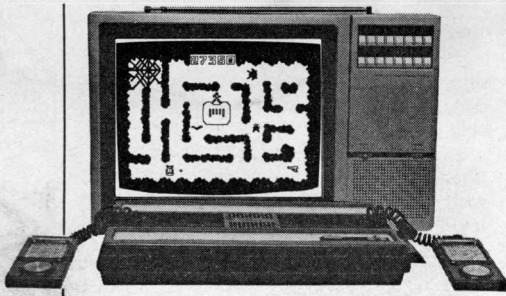
Some panelists thought the controls were ill-suited to certain games. And some panelists complained that the controls worked sluggishly and made their hands tired or uncomfortable. The side buttons, used for shooting at targets, were hard to depress and didn't have a positive feel. The overlays make cartridge-changing clumsy, too, and the coiled cords were a bit too short.

Some young children found the instructions hard to understand. Older players were mixed in their praise and criticism of the complexity of the machine's controls. But almost everyone liked the detailed graphics and versatile sound effects—especially in the sports games, which were judged the best tested.

The eight cartridges tested with the *Intellivision* are as follows:

**Armor Battle (\$30).** This reasonably good tank-warfare game is fought on a different battlefield each time. Buildings block your shots, and forests and lakes restrict movement; roads





*Intellivision's controls were judged to be awkward, sluggish. In **Night Stalker**, your man is trapped in a maze. Robots, spiders, and bats "relentlessly track him down."*

are available for fast travel. Each of the two players controls two tanks, and each tank can take up to three direct hits. You can also lay mines—but don't forget where you placed them.

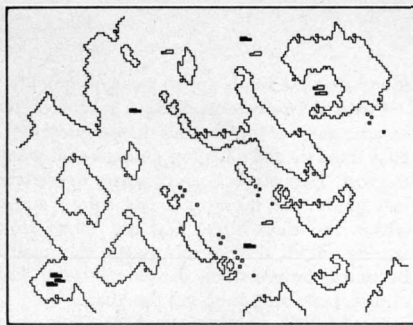
**Astrosplash (\$30).** The flying rocks of *Asteroids* are combined with the shooting-gallery effect of *Space Invaders* in this solo game. It can be played at any of four speeds, and with either single shots or machine-gun volleys. Large rocks can split into two smaller ones. If a rock or a UFO hits you, or if a cyclonelike "spinner" appears and lands before you can destroy it, you lose some firepower. The machine adds a bonus for every 1000 points scored, and you lose points for every rock you miss (an unusual scoring feature). Our panelists found the game fun.

**Auto Racing (\$30).** An inappropriate control design mars this otherwise clever grand prix race. The game can be fun after you master the controls enough to avoid crashing every few seconds. The screen shows a bird's-eye view of a small section of a large course. If two cars are racing, the game stops temporarily whenever one car is a few lengths in front of the other, adds points to the score of the player in the lead, and resumes the race with the cars abreast. Hazards include trees, houses, and ponds. You can choose from five cars with different cornering, acceleration, and braking characteristics.

**Major League Baseball (\$30).** An entertaining version of America's favorite sport, complete with action and sounds that our panelists found "very lifelike and funny." You select an outfielder with the keypad and move the player with the disk control. Stolen bases and force-outs are possible, but all hits are grounders—no fly outs. You can make the pitcher throw fastballs, change-ups, or curves, and the batter can bunt.

**NFL Football (\$30).** This complex game could confuse young children, but it can be exciting and realistic once you get the hang of it. To set up a pass play, for example, requires pressing five keys in the correct order to choose formation, receiver, passing zone, and the like. Nine formations are possible for each team, and all the trappings of the real game are there except for fumbles, kickoffs, and penalties. You can play at any of four speeds. The complexity makes this a game of strategy as well as of fast action.

**Night Stalker (\$39).** This is an enjoyable and challenging game if you can get the hang of the controls. Your figure, armed with a gun and six bullets, is trapped in a cavelike maze filled with spiders, bats, and shooting robots. As your score increases, the robots become more and more sophisticated—and deadly.



*Sea Battle:* Players "deploy fleets from their harbor, lay mines, maneuver into combat position, repair and regroup." Each player has 13 ships, to form up to four fleets.

You must look away from the screen to press one of four keys at critical times; trying to find the right key on the controller can disrupt your timing. After emptying the gun, the figure must run to pick up another one, which appears in the maze. Increasing difficulty made this a popular game with the panelists.

**Sea Battle (\$39).** Adults and older children may like this game of strategy on the high seas. Each of two players creates an armada of 13 ships in four fleets, with eight types of ships to choose from. When your ships are within range of the enemy's, you switch to a closeup view of the area and go into battle. You can lay mines (or sweep the enemy's), aim your guns, fire torpedos, dodge enemy fire, run aground on rocks, or steer your fleet into the harbor for repairs to battle-damaged ships. Different types of ships have different ranges, strengths, and vulnerabilities.

**Star Strike (\$39).** This heavily advertised game didn't live up to expectations, despite its impressive graphics. The idea is to fly your space craft through a canyon in an enemy space station and knock out five enemy bases while avoiding hostile flying saucers. Panelists found the controls sluggish and the instructions obscure.

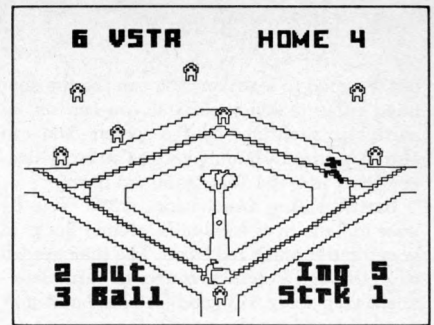
Other cartridges that fit the *Intellivision* machine include:

**The Electric Company Math Fun (\$15).** This game, for one or two players, has a gorilla stomping through the woods and encountering math problems that you must solve. It's intended for young children, but some of the levels pose problems that require pencil and paper to solve.

**Horse Racing (\$34).** This is a strategy game as much as it's a race. The game keeps track of the racing "history" of eight horses, calling the odds and taking bets from as many as six players. One or two players can be jockeys, or the machine can control all four horses in the race. Bets are either "win" or "exacta" (the latter involves picking the horses in first and second place), and the races are run at various distances and under various track conditions. If you're a jockey, you must time your coaxing and the use of your whip to get the most out of your horse. The sounds and graphics are interesting.

**Las Vegas Poker and Blackjack (included with *Mattel Intellivision* machine).** The rules are the same as in gambling casinos. One or two play against a shifty-eyed dealer, who smiles when you lose and frowns when you win. Poker games include five-card stud and draw and seven-card stud. You choose the stakes. A clever game, our staffers thought.

**NBA Basketball (\$30).** It's not as complex as



*Major League Baseball:* You can "hear the crowd roar as you call the plays—walks, hits, runs, a full variety of pitches." Two nine-man teams compete for nine innings.

**NFL Football**—but then, neither is real basketball as complex as real football. Each team consists of three players; the tilting disk controls the movement of the ball carrier. The other two players are machine-controlled and move realistically enough. The ball carrier can pass to a machine-controlled player, whom you can then control yourself. Fun, especially for sports fans.

**NHL Hockey (\$24).** Passing, shooting, tripping, and penalties are featured in this versatile game. Each team consists of four players; goalies are controlled by the machine, but they're quite lifelike. One problem could be figuring out who has the puck, since that's indicated by a change in color that might not show up well on some TV's.

**Space Battle (\$30).** You control several squadrons of space ships, which can engage several enemy squadrons in battle. Your goal: to protect your mother ship. Four speeds adapt the game to various skill levels. Two people can play as a team against the machine, but not against each other. In the fast-paced battles, a movable sight directs your laser against the saucerlike enemy ships. Fun if you like long games.

**Triple Action (\$24).** Three different games involving tanks, racing cars, and biplanes are combined in one cartridge. The tank game allows long-range "billiard" shots, but the graphics aren't as sophisticated as those in *Armor Battle* (above). The car race is a simple dodge-'em affair. The air game is a dogfight around a tower that you mustn't hit. The planes stall if you climb too steeply, a nice feature. Small children may enjoy these quick, simple games.

**U.S. Ski Team Skiing (\$30).** This was the best of the various skiing games we looked at. In this game's downhill run, you must jump moguls. Gates in the slalom are spaced so that turns must be very tight. You can vary the slope, and a button lets you slide through a turn with minimal loss of speed. The machine keeps track of as many as six players in three timed heats.

**Utopia (\$39).** A touch of megalomania sets this game apart from the rest. You are in charge of your own island state, with complete control of the treasury, agriculture, industry, housing, education, hospitals, and the military. If your decisions make your subjects happy, you gain points. If not, rebels may appear on the scene and try to create unrest. Even the weather affects your country's economy. You can play solo or with another player (there are two islands), and you can even foment rebellion in the other country. It's all very complex, and entertaining for those who like that sort of thing.

# Odyssey 2: A case of unfulfilled potential

The *Odyssey 2* (\$200) is unusual in that its console has a flat-panel keyboard laid out in a typewriter format. That makes it easy to enter letters and numbers for educational and word games. It also opens some interesting possibilities for personal computer programs. Unfortunately, the only computer language available, in a cartridge called *Computer Intro* (\$40), is "Assembler." The language is so stripped-down and cumbersome that it's useful only as an exercise in learning how small computers work.

The machine's wired-in joystick controllers worked reasonably well, our panelists judged. But that was about the only good thing the panelists could find in the *Odyssey 2*. The games, by and large, suffered from a coarse display, images that looked like stick-figures, and annoying restrictions in control. The sounds were mostly the uninspired beeps and boops of yesteryear's video games.

Several panelists wondered why a machine with such potential was handicapped with an array of such crude games. The problem is probably in what the game-playing market demands. The players are buying action games that benefit from quick responsiveness and highly detailed displays. The *Odyssey 2*'s design seems better suited to slow-moving strategy games.

The eight game cartridges that our panelists evaluated are as follows:

**Alien Invaders Plus** (\$23). This uninspired takeoff on *Space Invaders* has a couple of special features: There's a shield over your weapon that disintegrates when hit. And a diving "merciless monstrosity" may add some interest for small children.

**Alpine Skiing** (\$23). Graphics and sounds are cruder than those of other skiing games we tested, but steering was easier. You get a choice of downhill, slalom, or giant slalom; two players can compete simultaneously. The skier can turn at only one angle, so timing the turns carefully is the key to the game.

**Armored Encounter/Sub Chase** (\$23). The cartridge offers 12 minor variations on a tank game and three variations of air-sea warfare. The game, with its uninteresting graphics and sound, didn't hold the interest of our panelists for long.

**Football** (\$23). This primitive game has no first downs and gives very limited control over the stick-figure players.

**Freedom Fighters** (\$33). As in Atari's *Defender*, you must rescue people in space. Depending on which joystick you use, your space ship can move only vertically, or both vertically and horizontally. Two players can work the two controls as a team against the machine, if they want. The various scoring features may please some players.

**Invaders from Hyperspace** (\$23). One or two players take on enemy spacecraft amid a screenful of planets. You can land on a planet that matches your ship's color, but the ship is destroyed if it touches an alien planet. Unrealistic features—such as the ability to fire only to the left or right, not up and down—made this game unpopular with the panelists.

**K.C. Munchkin (now discontinued)**. This obvious takeoff on *Pac-Man* has Munchkins eating "munchies" and avoiding "munchers." There are only 12 munchies to eat—and no "vitamin pills," as in *Pac-Man*. But there's a choice of mazes; you can even make up your own. Our panelists liked *Pac-Man* better.

**Monkeyshines** (\$33). Humor was the element that made this game fairly popular with the panelists. One or two players play a game of tag with a cageful of monkeys. Your figure must jump from bar to bar, grab a monkey (which then turns red), throw it off, and avoid getting tagged until the monkey changes color again. The keyboard allows you to change the pattern of the bars. Variations include bars that move upward at intervals and bars that disappear. It should appeal to young children, once they get the hang of jumping.

Our testers also looked at the following *Odyssey 2* game cartridges:

**Baseball** (\$23). Fielders move as a trio, to the accompaniment of primitive beeps and boops. They can catch fly balls, but there's no tagging out, no stealing, and no bunting. Not much realism, either, in our judgment.

**Conquest of the World** (\$50). A magnetic

board map, included with the cartridge, can be used vertically or horizontally. The game is somewhat similar in concept to the board game *Risk*. From two to five people can play, and each tries to take over the world through negotiations, alliances, and battles on land and sea and in the air. The game involves planning, as well as reasonably fast action and quick reflexes in screen-fought battles. The complexity of *Conquest* should appeal to players who like games of strategy.

**The Great Wall Street Fortune Hunt** (\$45). This game of finance is remarkably complex. Featured are a stock ticker for 30 companies, a news wire that can affect stock prices, and an investment broker who buys and sells stocks. A game board and investment-record sheets are included. This one may interest older players who like strategy games.

**Math-A-Magic/Echo** (\$23). This educational math game for young children offers simple arithmetic problems at three levels of difficulty. *Echo* requires players to memorize an ever-growing series of numbers.

**Quest for the Rings** (\$50). A playing board and tokens come with the cartridge, as does an overlay for the keyboard. This Dungeons-and-Dragons-style game pits your character against four types of monster in a race against another player. The prize: 10 rings hidden in four hazardous labyrinths.

**Speedway/Spin-Out/Crypto-Logic** (included with *Odyssey 2* machine). *Speedway* is a bare-bones dodge-'em car race, with a choice of two speeds. *Spin-Out* is a simple two-car track race, with four variations. *Crypto-Logic* is an anagram game for two players. *Spin-Out* was the best of the three, we thought, but all are too simple to interest an adult for long.

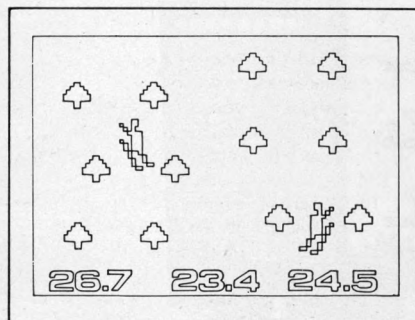
**Thunderball** (\$23). As many as four players can take turns at this so-so pinball game. Features include two speeds, moving bumpers, bonuses, and flippers that can be shifted slightly to either side. Graphics weren't as good as those in the *Astrocade's Bally Pin*.

**UFO** (\$33). Your ship is surrounded by hostile UFO's, but you can destroy them by touching them with your ship's ringlike shield or hitting them with laser fire. Control was difficult because the joystick moves your ship as you aim the laser. The "light-speed starship" that attacks can penetrate your shield, so it's hard to avoid. The game can be fun if you master the controls.

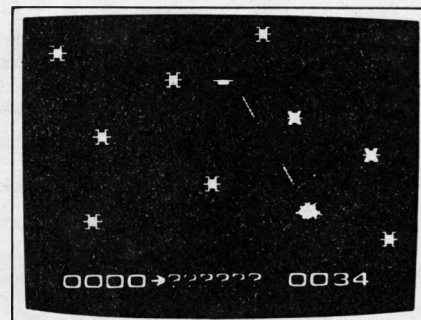
*Continued*



*Odyssey 2* had pretty good controls, but crude games. In *Quest for the Rings*, you carry a magic sword in a "supremely dangerous search" for "Rings of Power."



*Alpine Skiing*: It's an "authentic computerized simulation" of three skiing events—downhill racing, slalom, and giant slalom.



*UFO*: With your laser gun, you have to protect the earth from "a sinister invasion of mysterious unidentified flying objects."



# Recommendations

Overall, our panelists liked the *Astrocade* best of the four machines we tested. They preferred its hand controls over the others, and they liked the idea of the built-in games. They also thought the graphics and sounds were exciting. *Incredible Wizard* was the panelists' favorite of the eight cartridges tested for *Astrocade*, but *Bally Pin*, *Football*, *Galactic Invasion*, and *Space Fortress* were also popular.

The Atari VCS was a distant second choice of the panelists. Its strong point was the availability of an unusually wide selection of games from Atari and several independent manufacturers. However, the joystick controls were judged to be stiff and sloppy in their action—and they

appear to be rather fragile as well. CU's panel of at-home testers especially liked *Star Wars: The Empire Strikes Back*, *Kaboom!*, and *Defender*. Only the last of the three is made by Atari. Our staffers also liked *Demon Attack*, *Starmaster*, and *Super Breakout*.

The Mattel Intellivision boasts detailed graphics and amusing sounds, but the controls were criticized for their awkwardness and lack of precision. Small children especially were confused by the instructions. The panelists' top choices were *Night Stalker* and *Major League Baseball*. Our staffers also liked *Sea Battle* and *U.S. Ski Team Skiing*, as well as the *Utopia* game cartridge.

Nobody on the panel liked the *Odyssey 2* very much; all but one panelist voted it the worst of the four machines. The joystick controls were judged reasonably good, but the graphics and sounds were crude. Worst of all, the panelists found most of the *Odyssey 2* games boring. *Monkeyshines* was judged the best of a none-too-good lot. Our staffers also preferred *Quest for the Rings* and *UFO* among the other *Odyssey 2* games.

Before you choose one of the four machines tested by our panel, read the box below. The new generation of home video-game machines from Coleco and Atari may have made the older machines passé.

## Colecovision: A promising new machine

Just as we were finishing our panel testing of the four video-game machines, a new machine appeared in the stores, accompanied by an extensive advertising campaign. Coleco, known for hand-held electronic games and early video games, has produced a sophisticated home video machine, the *Colecovision* (\$200).

The machine is about the size of the four we tested. Its power and reset switches are conveniently placed near the front. The coiled cords of the hand controllers plug into the machine, and the controllers can be stored in a recess in the top. The controllers have a 12-key pad, which looks like a telephone touch-tone pad, and a stubby, mushroom-shaped joystick. Dividers between the keys help you avoid pressing the wrong key. There's a slot to accept a keypad

overlay, but none of the games we bought uses one. A button on each side of the controller triggers game functions.

A sliding door in the machine conceals a slot called an "expansion module interface," for which Coleco has promised a variety of add-on devices. The first of them is a module that accepts game cartridges made for the Atari VCS.

Coleco advises shutting off the power when changing cartridges. If you don't, an on-screen message reprimands you.

Coleco has been licensed to produce home adaptations of several currently popular arcade games. We looked at one, *Donkey Kong*, which is included with the machine, and at several others that sell for \$30 each.

*Donkey Kong* was so close to the arcade version that any differences we

found were judged insignificant. The story was the same with the other arcade-based cartridges we checked out: *Cosmic Avenger*, *Lady Bug*, and *Venture*. There were a few minor differences, but all the essential features of the original games were there. The detail in the images, the smoothness of motion, and the sounds were all superb, in our opinion.

Some players didn't like the way the controller is designed. You must press the trigger buttons with the same thumb and forefinger that hold the controller, unless you rest the controller on a table top; pressing the buttons can be awkward and fatiguing. The joystick was positive in its action, but some players thought that it moved a bit stiffly for very young children. A minor complaint is the 15-second wait for the opening title to disappear from the screen when you change games or press reset.

A disquieting note: Two of our four samples failed within a few hours of use. One wouldn't reset; the other stopped in the middle of play, as if someone had pressed the reset button and held it down. Be sure you can exchange the machine if a problem should occur.

Despite its problems, we think that the *Colecovision* has an edge over the four other video machines. However, Atari reportedly has a new machine scheduled for release by the time you read this. And our experience with the *Colecovision* suggests that Coleco is having the durability problems common to new products in their early stages of production. Prudent game-buyers will wait—if they can—to make direct comparisons of the new *Colecovision* and the new Atari before making a final decision.

*Colecovision* was the closest thing to the arcade games. In *Donkey Kong*, you "leap over tumbling barrels, dodge lethal fireballs," and climb girders to rescue a damsel in distress.

