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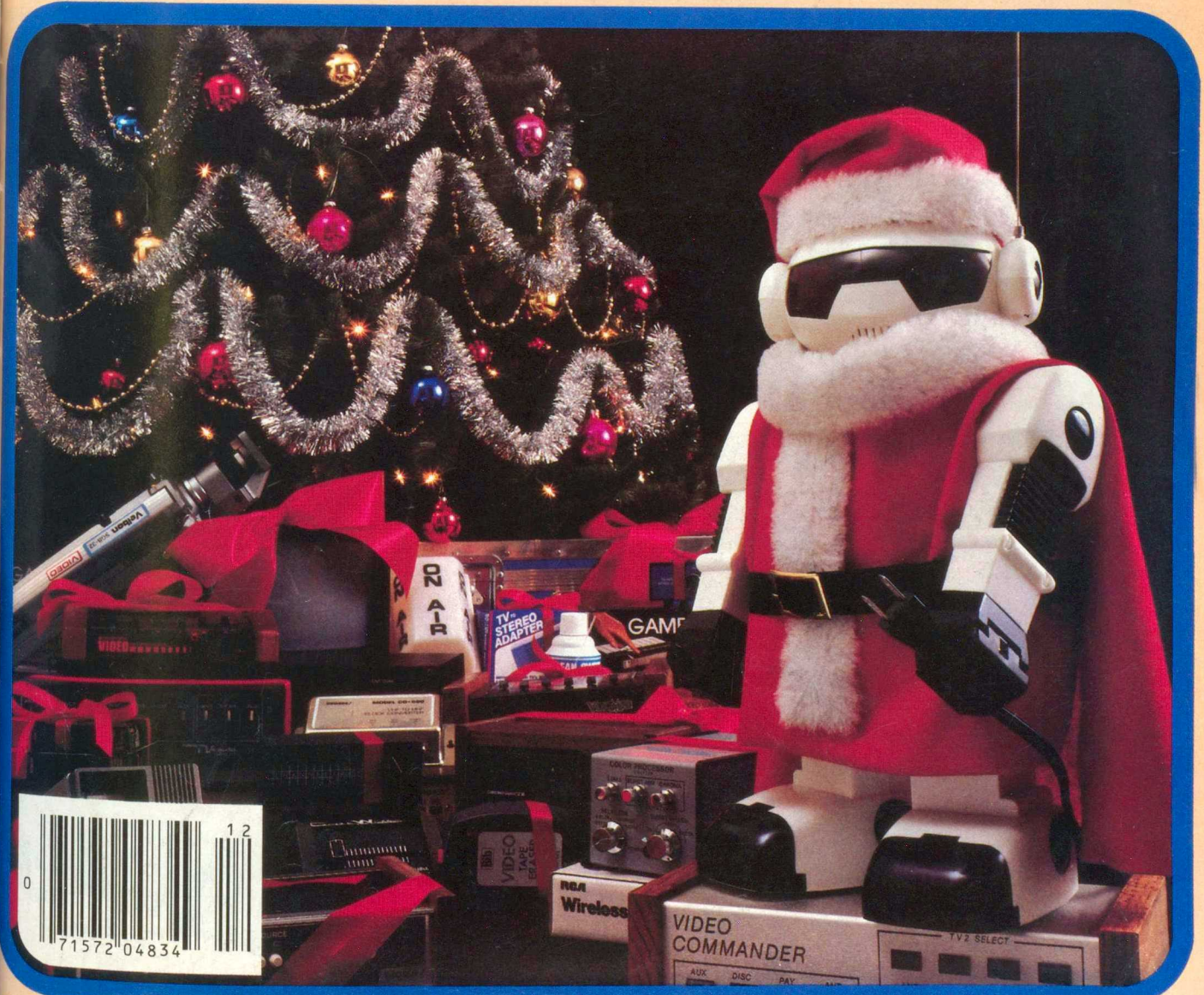

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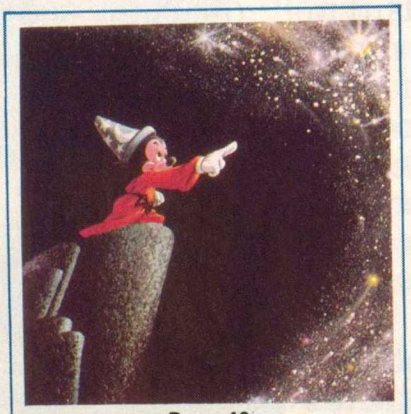

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ABOUT THE COVER
For budget-conscious hobbyists who can't decide what else they need—or what to give a favorite videophile—we've prepared a Holiday Gift-Giving Guide of accessories, add-ons, and enhancement devices in all shapes, sizes, colors and prices, presided over by our electronic Santa, who just can't wait to play all his new video toys. Photography by Les Morsillo.

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Arcade Alley

A Critical Look at Video Cartridge Games & Programs

by Bill Kunkel & Frank Laney, Jr.

'Quest for the Rings' and 'Asteroids': Holiday Classics

"What do you buy for the home arcader who has everything?" With the 1981 holiday season barreling toward us like a runaway freight train, more than one VIDEO reader is undoubtedly mulling over that problem with mounting desperation.

If the person to whom you'd like to tender a present happens to be a co-author of "Arcade Alley," you've got a big job ahead of you. On the other hand, any other game-lover should pose only a minimal problem. Just gladden the heart of that favorite gamer with one of the dynamite new cartridges video-game manufacturers are introducing this season for precisely that purpose.

Since many gamers will be making some pretty important buying decisions in the next month or so, we'll take time from stringing flashing Christmas lights across "Arcade Alley" to tell you all about two of the most fantastic cartridges ever offered to home arcaders. And the best part: they're so new that no electronic gamers on your gift list will have had a chance to buy them yet.

"You are about to become a legend in your own time," begins the instruction booklet for **Quest for the Rings** (Odyssey). It could just as easily have read "you are about to play an instant classic" because this marvelous new cartridge for the Odyssey² has "super hit" stamped all over it in gold letters. "Quest for the Rings" boldly ventures where no video game has gone before. For the first time, designers have blended aspects of the board game and the video game to produce a vigorous new hybrid unlike anything ever seen in home arcading.

This one-to-three player contest challenges gamers to find and capture the 10 magic rings which the malevolent Ringmaster has hidden deep beneath some of the 23 castles shown on the beautiful colored mapboard that comes with the game. This Sauron-like incarnation of evil has not left his valuable treasures unguarded either. All manner of fell creatures from barbaric orcs to fire-breathing dragons inhabit the deep labyrinths where the rings reside, and the monsters' only goal is to prevent adventurers from completing their quest. The idea behind the innovative hybrid format is to shift certain jobs that the Odyssey² system would otherwise have to handle onto the shoulders of the players. Adding human brainpower to the equation makes it possible to create a home-arcade game more complex than previously attempted.

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'Quest for the Rings', from Magnavox's Odyssey series boasts innovations that make it a unique home-arcade challenge.

pression on the surface of the tube than it can handle. This can cause the image of the bright light source to "burn" into the surface of the tube, leaving its mark long after the camera has been aimed somewhere else. If the light is bright enough the damage can become permanent. Newer camera-tube designs, such as the Hitachi Saticon tube, used by Hitachi and several other companies under license, eliminate much of the "lag" problem. And still other newer designs, such as the Hitachi MOS camera, which uses a metal-oxide semiconductor target instead of a vidicon tube, are virtually burn-resistant.

Arcade Alley

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To insure that every session of "Quest for the Rings" is completely unique, a gamer assumes the role of Ringmaster. Using an attractive set of printed wooden tokens, the Ringmaster decides which castles will harbor rings and/or monsters. The monsters and treasures are represented by small tokens which fit invisibly under the larger ones symbolizing the citadels. The reverse side of each castle marker shows which of the four different kinds of labyrinth is beneath it. Enter the good guys. Two arcaders have free choice of any of four different heroes, each with a special power. They may be selected in any combination, but arcaders must take care to pick ones that work well together because "Quest" is a game of teamwork. Players cooperate rather than compete against each other to complete the mission.

The character choices are: the warrior, who wields a magic blade; the wizard, who can cast spells; the chameleon, who can become invisible and undetectable to the monsters when he dons a mirror cloak; and the phantom, who can walk through walls at will. The heroes move around the mapboard, roving from place to place in search of the 10 mystic prizes. Whenever the pair land on a castle, the Ringmaster consults the tokens on that spot and keys in the appropriate information as indicated by a special overlay which fits on top of the Odyssey^2's diaphragm keyboard. (If there are only two players available, one doubles as the Ringmaster and lets the other choose which direction the team takes on the map.)

Even this lengthy description barely scratches the surface of "Quest for the Rings." If you only buy one Odyssey cartridge this year, this is definitely the one to get.

Asteroids (Atari) is the single most eagerly awaited cartridge in the history of video gaming. Even Atari was astounded when retailers began taking $5 deposits on the title as far back as last Christmas. The huge advance orders for "Asteroids" compelled the manufacturer to increase its ROM-cartridge production capability to handle the demand. Atari previewed the VCS version of its coin-operated champion at several trade shows early in 1981—to mixed reviews. Despite the addition of color, the home edition looked a bit ragged and play was far from perfect.

The main barrier was the quadrascan system used by the commercial-arcade machine. Coin-op "Asteroids" features space rocks moving onto the screen from all directions at varying speeds. The VCS cartridge, limited by the rasterscan system used by TV sets, had to settle for bisecting the field, with asteroids on the left side moving upward while meteorites on the right moved down the screen. The illusion did not impress many. Not wanting to disappoint its millions of fans, Atari sent the game back to the design department for more work. The company's creative staff rose to the occasion by developing a bank-switching technique that fools the VCS into reading twice as much game program as experts had previously thought possible.

The cleaned-up and refurbished VCS "Asteroids" is a major triumph. The graphics are crisp, the action is fluid, and the options include both shield and hyperspace. The asteroids move at either of two speeds. At the faster one, the game has all the frenetic excitement of its coin-op cousin. Playing with the difficulty switches set to the "A" position adds the complication of deadly UFOs which zip onto the screen when least expected to further increase the thrills. Asteroids streak all over the field as those clever folks at Atari make us forget we're playing a cartridge with far less programming than the big commercial-arcade devices. The space debris starts at the outer edges of the playfield and slowly edges toward the center, like the walls closing in on the heroine in an old horror movie. The illusion is truly masterful.

The verdict: "Asteroids" for the VCS system is fantastic. It boasts the most distinctive sound effects since "Space Invaders," sharp graphics, and arcading action that never quits. It's no accident that Atari has already announced that "Asteroids" will be the game used in this year's nationwide VCS tournament. Any Atari VCS owner who has ever fed a pocketful of change into an "Asteroids" or "Deluxe Asteroids" machine in the local electronic-game palace should consider the home version a high priority.

So make a friend happy this holiday season. And as long as you're buying, pick up another for yourself. After all, every gamer needs a treat, and this four-star introduction from Atari certainly fills the bill.


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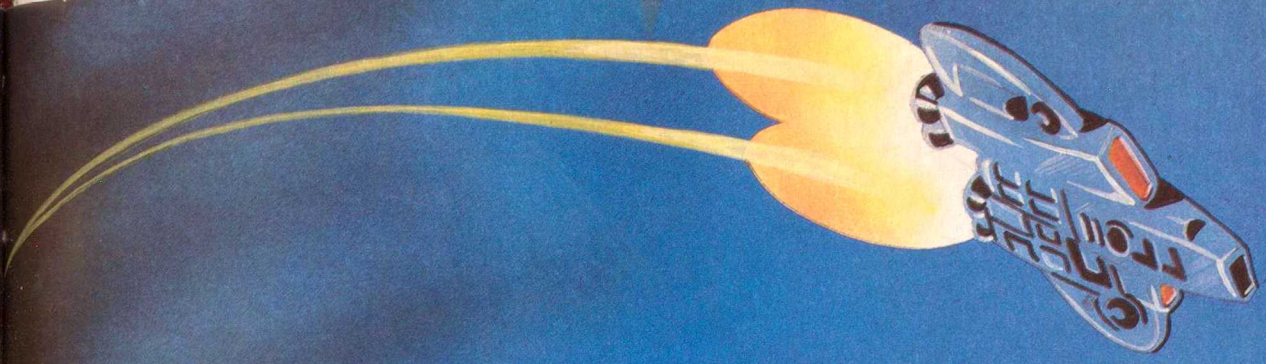


TEN YEARS OF VIDEO GAMES

After a decade, a look at where we've been and where we're going

by Bill Kunkel
and Frank Laney, Jr.

Eavesdrop on any of five million living-rooms and you'll likely hear some variation of the following dialogue:

"Wanna watch some television?"

"Nah, let's shoot aliens."

The speakers aren't a virulent new species of immigration official, just members of households with home video-game systems. Those beeps and boops, heard in thousands of bars, restaurants, bowling alleys, and candy stores, are now as familiar as the throb of air conditioners. Even operators of movie theaters and supermarkets are getting into the act by installing coin-operated video games in every spare nook and cranny. And the old-fashioned penny arcade has gone electronic. The once-dominant pinball machine now must share the limelight with the video game. Fans of Atari's "Asteroids" fed over 10 million quarters a day into its coin slots last year.

'Get a Horse'

It was not always thus. Whenever inventers have brought forth great discoveries, skeptics have invariably scoffed. They told pioneering motorists to "get a horse" and assured the Wright brothers that "it'll never fly." The creators of the early video games faced similar derision, and not a few serious obstacles. Ralph Baer, working for Magnavox, developed the first games for play on a TV set in late 1971. The mammoth electronics company secured a patent during the following year and prepared to take the world by storm.

It didn't happen, at least initially. The public got its first peek at the Odyssey video-game system on a TV special in 1971. What they saw was a space-age device, bargain-priced at only $75, that could play a whole range of fairly simple games. The response to Magnavox's new product fell far short of overnight acceptance. An examination of the system makes the reasons behind this lukewarm reception painfully obvious. Like the earliest computers, which used vacuum tubes instead of transistors, the Odyssey was a good idea that arrived ahead of its time. It took technological reality a few years to catch up to the dream.

The original Odyssey consisted of a large off-white console connected to a pair of controllers by elephantine cables. Since the Odyssey could not "draw" playfields on the screen—a process called video mapping—Magnavox designers resorted to brightly colored clear plastic overlays. Arcaders taped these sheets to the TV screen much in the manner of the old *Winky Dink* Saturday-morning children's show.

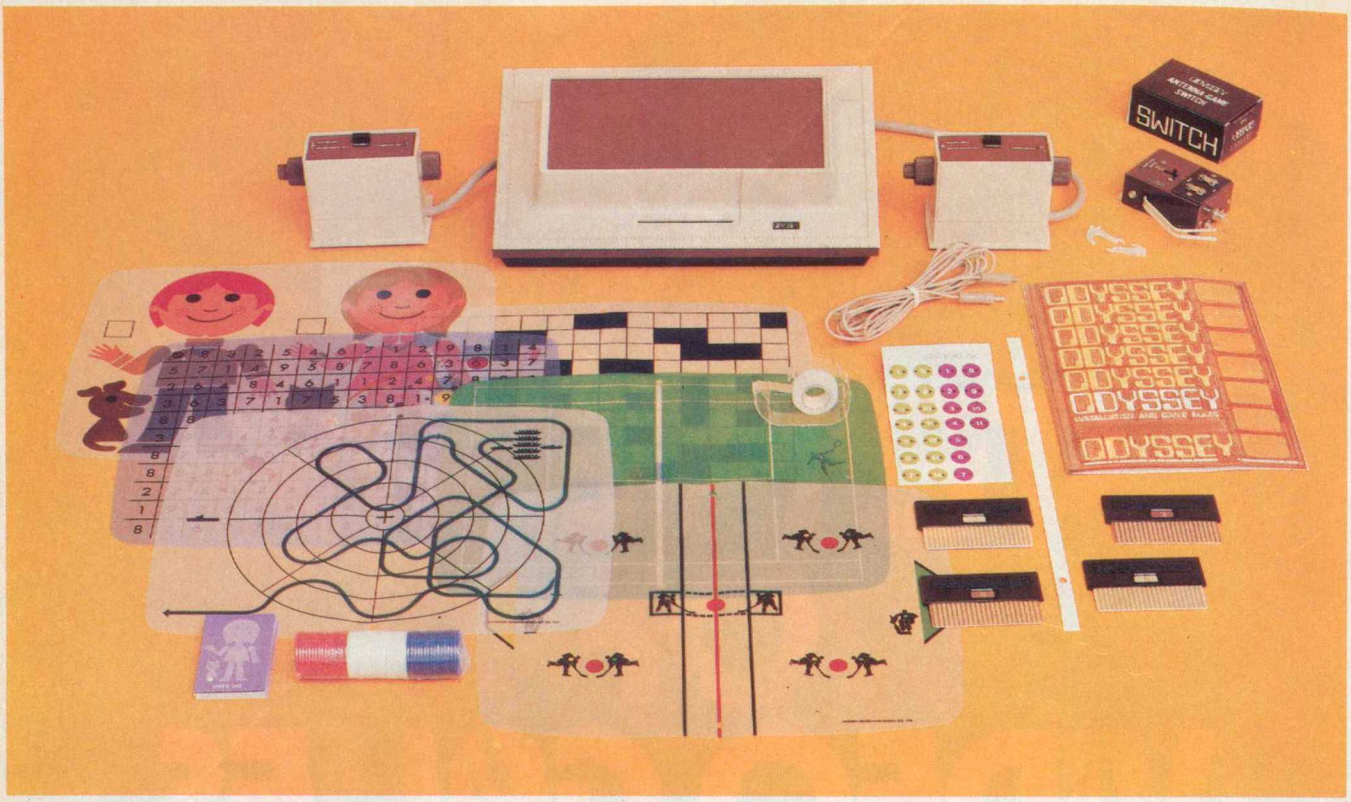
Bill Kunkel and Frank Laney, Jr. are VIDEO's "Arcade Alley" columnists.

The Odyssey device was not only the first video game, but also the first programmable one. Little metal boards carrying program information could be plugged into a slot in the console for play. The gargantuan controllers more closely resembled clock-radios than the joysticks and paddles now so familiar to contemporary gamers. Twisting the dial caused on-screen movement. An "English switch" on each controller caused the ball to do flip-flops and loop-de-loops when playing Odyssey's video tennis game.

Spotty availability and technological limitations doomed the Odyssey. Many observers were preparing to write off video games as just another stillborn craze.

Father Knows Best

Obituaries turned out to be premature. Enter the man whom many call "the father of the video game," Nolan Bushnel. He emerged from the obscurity of his California garage toting the prototype for "Pong." Bushnel quickly sensed the potential of his electronic ball-and-baddle brainchild, so he took it to the Bally Manufacturing Company. The then-leading maker of pinball machines was unimpressed. Bally executives gave the budding inventor the fast shuffle, clearly



Introduced in 1971, the Odyssey video-game system from Magnavox was a $75 device that could play several simple games. It consisted of a console, a pair of controllers, plastic TV-screen overlays, and metal program-information boards.

convinced that traditional flipper games could never be toppled off their throne. (The Chicago-based manufacturer has since learned the error of its ways, incidentally, and is today a leading maker of coin-operated video games.)

Bushnel remained convinced that "Pong" had a future. He organized a concern he dubbed Atari, after the word in the Japanese game of Go that corresponds to "checkmate" in chess. In 1974 Atari made a deal with Sears, Roebuck, and its "Pong" appeared in the mail-order company's catalog for the first time. The Sears tie-in put Atari over the top and helped establish the "dedicated-chip" video game as a certified fad. The dedicated chip is a tiny piece of silicon on which "logic circuits" are imprinted, allowing this electronic wonder to handle the essentials of play such as drawing the field and moving the paddles. These early devices were also called "hard-wired" games because they were not programmable and thus could only play the one, two, or three contests actually imprinted on the chip built into the game console.

In the next couple of years, following in the wake of Atari's obvious success, the first great wave of video-game mania crashed on the shore of popular culture. The capabilities of dedicated chips rose nearly as fast as retail prices nosedived. How hot was the market for such units in the mid-1970s? Here are a few of the companies that got heavily involved in hard-wired games: APF ("TV Gun Game"), Atari ("Pong," "Super-Pong," and others), Calfax ("Bag-A-Tel"), Coleco ("Telstar"), Entex ("Tele-Pong"), National Semiconductor ("Adversary"), Radio Shack ("TV Scoreboard"), and many more. Magnavox alone produced at least seven different hard-wired systems.

As might be expected, game-lovers soon began to weary of "Pong"'s brand of thrills. The companies countered with increasingly sophisticated hard-wired devices that could play several different ball-and-paddle diversions. Atari also tried to break the mold and widen the available spectrum of video fun by marketing "Indy 500" and "Video Pinball." Programmability edged back into the picture at this point. Fairchild's "Channel F," for example, offered a generous selection of entertainment cartridges almost from its inception. The manufacturer had already sold 300,000 systems and even designed an improved, second-generation unit before quitting the game field entirely.

Channel F might have caught on with flashier games and better marketing strategy, but RCA's Studio II video-game system had all the earmarks of a disaster right from the start. On-screen movement was agonizingly slow, and the pictures were black-and-white at a time when upscale hard-wired machines had already begun offering color graphics.

Arcade Rumbles

This was all treading water, as it turned out. In 1978 three major events took place that have shaped electronic gaming. Atari introduced its Video Computer System (VCS), Magnavox signaled its video-game comeback by marketing the Odyssey², and Japan's Taito produced its first coin-operated "Space Invaders" unit.

Programmability, a feature of both the Atari and Magnavox home arcades, transformed electronic gaming from a fad into a budding lifestyle. Consumers had grown sick and tired of trading up to successively more elaborate dedicated-chip systems and hiding the outmoded ones in the back of a closet. With the versatility provided by individual game cartridges, home arcaders could count on getting a steady supply of fresh programs to keep their machines continually new and interesting. The Atari VCS and Odyssey², which made dump-sale items out of most of the hard-wired video games, switched emphasis from hardware to software. A majority of buyers no longer cared much about the system's extra frills and features; the variety and quality of available games became the main attraction.

The much-discussed popularity of "Space Invaders" first in Japan and then in the U.S. had beneficial consequences for the emerging hobby. Not only did the high visibility of "Space Invaders" furnish the media with a handy peg on which to hang stories about the video-game phenomenon, but the favorable publicity surrounding "Space Invaders" and the other coin-operated marvels that have followed it virtually rehabilitated commercial arcades' seedy image overnight. Millions of people who had never set foot inside a game parlor suddenly turned into regular customers thanks to

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Video Games

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"Space Invaders." And when Atari premiered its "Space Invaders" cartridge for the VCS in 1980 it forged a synergy between home arcading and game palaces that is still growing stronger every day.

Folks who enjoy a particular machine at the family amusement center often want the same title for their home systems. The video-game manufacturers are of course only too pleased to cater to this desire. "Asteroids," "Breakout," "Dodge 'Em," and "Missile Command" are some of the video games that have struck gold in both arenas after starting life as coin-operated attractions. Atari "Basketball," on the other hand, is a design that originated as a VCS cartridge and is now finding acceptance, in refined form, in the fun parlors.

Mattel Electronics, which has several hugely successful lines of electronic stand-alone games, invaded the programmable market with Intellivision in 1980. Its Master Component, though intended as the cornerstone of a modular computer, is a superb video-game system all by itself. Although the often-promised keyboard is now two years late, most arcaders are too busy reveling in Intellivision's ingeniously detailed sports and military simulations to care.

The Mattel controllers combine a keypad with a direction disk and four action buttons to produce a device that is capable of infinitely more varied input than any paddle or joystick. This allows the Intellivision game library to include titles such as "Space Battle," which melds an arcade-style space shootout with a more broad-based, strategic-level contest. The system's graphics represent a tremendous plus. Intellivision generates visuals equal to the best produced by computers costing up to $5000. The gain in graphic resolution has a cost: movement on the screen isn't as fast as that on some competing units.

In the same year, 1980, Jim Levy and a quartet of designers launched a new era in video gaming by starting ActiVision, which specializes in making game cartridges for use with the Atari VCS and does not offer a complete system of its own. It is thus the world's first video-game company specializing in software. Which is not to say that there aren't a lot of outfits making games that can be played on a TV screen. There are, thanks to the rising interest in personal computers. Not only can microcomputer owners enjoy home versions of just about every arcade favorite, but the superior memory capacity of computers like the Apple II, Atari 400/800, Radio Shack TRS-80 Model III and Color Computer, and Commodore

surely through New England or visit a museum already exist. When the player indicates through sophisticated controls the action he wants to take, the computer summons up the appropriate full-color photograph. In the New England tour the player can even stop at a roadside restaurant, read the menu, and order a meal. (Then he has to imagine eating it, since the whole sequence of events is electronic.) Once this technique is perfected, there's no reason why it couldn't be used for a more exciting scenario. How about a trip to Dante's Inferno?

Another likely development is the "full-surround" coin-operated video game. Such machines would out-do current sit-down models by completely isolating the arcader. Sounds, pictures, even odors could be fed into the gaming enclosure to provide a vicarious but fully satisfying thrill. Eventually holography will be used to produce three-dimensional effects in arcade and home video games. Atari announced a tabletop device using holograms earlier this year, but the company subsequently returned its "Cosmos" system to the R&D department for more work. The hitch is that the 3D pictures serve only as window dressing and have no active part in the games. Atari's track record is so good that it's hard to bet against the company's researchers making a breakthrough in this area. When that happens, target-shooting games like "Missile Command" will literally take on astounding new dimensions.

And what of the programmable video-game systems that began it all a decade ago? Changes are afoot here too. Putting extra memory chips directly into the cartridges gives designers a larger canvas on which to work, which should result in a second-generation series of more full-bodied games. As the cost of memory chips continues to plummet, it will become commercially feasible to add progressively more powerful chips to the cartridges. Also leading to more complex games is a recently developed Atari process that fools the VCS console into reading 8K programs. Introduced in "Asteroids" last summer, it effectively allows VCS owners to play games twice as complicated as most of the ones on the market today.

Odyssey has also extended the horizons of home video gaming with "Quest for the Rings." This hybrid design has aspects of both video game and board game. Since the human players perform some functions the system itself would otherwise handle—moving the heroes around within the game's mythical country, for instance—it gives Odyssey the scope to create more intricate games. Ironically, "Quest," like the manufacturer's original Odyssey, uses overlays. This time, however, it's an opaque plate that fits over the system's diaphragm keyboard to aid players in programming the details of "Quest"'s dungeons.

Hardware isn't standing still either. Remote control is on its way from Atari, which may even have a remote-VCS model out in time for gift-giving this holiday season. Each of the wireless controllers has all the buttons and switches needed to select and play the games. This unit should come in handy in homes with big-screen TVs. Remote control not only eliminates the usual tangle of wires but also ends the need for leaving that comfortable chair across the room every time the arcader wants to choose a different game option or start a new round of play.

Ultimately, there'll be a new, more powerful video-game system with enough memory to match the microcomputers. The difference will be that such a device will be expressly tailored to the needs of gamers instead of being the typical general-purpose electronic brain.

The hobby of video gaming is developing at such a furious rate that the nature of future arcading is hard to forecast. One thing's for sure: gamers of 1991 won't love their electronic fun machines any more than gamers of 1981 adore "Pacman" or the gamers of 1971 doted on "Pong."

Happy 10th birthday, video games. Now, let's shoot aliens! V

Videology

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and doing it right now. Even more significant is the pricetag: in some cases the services are free or carry at worst a token charge of $1 per month. No costly adapters are needed. Southwestern Cable TV, a Time Inc. offshoot, is providing teletext news and information to 60,000 subscribers in San Diego, California (one of the most heavily wired cable communities in the U.S. with 40 percent penetration). As for stereo, many cable operators telecast films in two-channel sound, substituting synthesized stereo with films having a mono soundtrack. Cable stereo embraces not only video music services like Warner Amex's MTV, but also audio-only operations like Chicago's FM classical stereo station WFMT and the upcoming digital stereo Home Music Store. Most of these feed stereo audio into home hifi systems via local cable systems.

The future of broadcast television seems strong, but add-ons like stereo and teletext will go to the medium that gets there "firstest with the mostest." If cable television can provide the video-viewer with services the broadcast industry can only talk about, then the competitive edge of cable is growing sharper. And teletext and stereo are the kind of thing commercial broadcasters could cut themselves on.