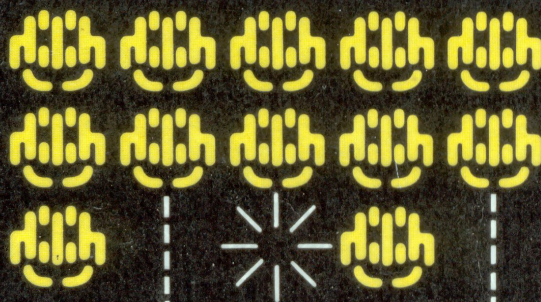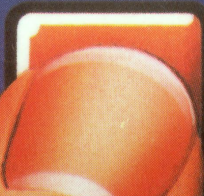How to choose the game you're looking for!

THE COMPLETE GUIDE TO ELECTRONIC GAMES

HOWARD J. BLUMENTHAL

SPHERE

Howard J. Blumenthal is a New York-based television producer who has designed over 300 television games, in addition to being a fully accredited electronic games buff. He is also the author of a book about personal computers and another about home video. He lives with his wife Sharon in New York.

The Complete Guide to Electronic Games

HOWARD J. BLUMENTHAL
with Sharon Blumenthal

Publisher's note
The names of many of the games in this book may be registered
trade-marks

For my parents, whose encouragement has been so very important to me.

Acknowledgements

Whenever a book such as this is written, there are dozens of people working behind the scenes to make it happen. In this case, most of that work was done by people in the toy industry. My most sincere thanks to the following people, and to the others who answered my questions and responded to my requests with interest and concern: Janice Bender, Ginny Juhnke, Margaret Keenan, Jim Mueller, Eileen Barme, Janet Willis, Kathy Lockton, Dick Badler, Dave DeMala, Dan Radeke, Michelle Meister, Frank Cimo, Les Ragle, Diane Drosnes and Shelley Rosenstock.

Thank you especially to Daniel Luzar of London's Games Centre, who knows more about electronic games than anyone I've ever met.

Enjoy the book.

Preface

This is a book for people who like to play games. I wrote it because I like to play games, and because I'm fascinated by electronic gadgets. I hope in reading the book you'll pick up some hints on buying a game, and that you'll become a bit more comfortable with the computer revolution.

There are hundreds of electronic games available on the retail market, with the actual number varying on almost a daily basis. I've reviewed nearly all of the best games, eliminating only the 'me too' games, those designed as copies of successful games. The market is still fairly new and still a bit volatile, so it is best to buy carefully.

When you set out to buy, stick to reputable stores. Avoid discontinued games, and concentrate on the most reputable manufacturers' products. Milton Bradley, Parker Brothers, Mattel, Texas Instruments and Altari, are among the most reliable makers of electronic games, though buying from these companies does not necessarily guarantee a flawless product. The use of chip circuitry is still relatively new, and you will occasionally come up with a lemon (generally due to faulty manufacture of the chip itself). Try the game in the store, and be sure to play it often during the retailer's grace period. It is best to exchange the merchandise if it does not function perfectly. Most games available in the UK are imports, offering further complication.

All major manufacturers offer warranties on their products, and each manufacturer has its own plan. With a few exceptions, the terms usually cover up to ninety days from purchase date for repair or replacement (at the manufacturer's option). Most require proof of purchase when a unit is returned – at your expense – to the manufacturer. You won't find a local repair shop willing to

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fix your electronic game; if it breaks, you'll be dealing directly with the manufacturer and most of these are located in the USA. If your game stops working after the warranty period, you'll have no choice but to send it back to the manufacturer or to forget about it completely. Read your warranty when you buy the game, and *never buy a game without a manufacturer's warranty*. Know what you are buying.

Nearly all the games on the market are powered by batteries, the number and size of which vary greatly among games, even within the product line of a single manufacturer. You will find that alkaline batteries (Duracells are among the best known in this category) are the best value, lasting several times longer than heavy-duty batteries. You'll find that many games can be powered by a mains adapter instead of batteries, but you must choose the adapters very carefully. The connecting plugs and jacks come in about a dozen formats, and the voltage can run anywhere from 3 to 9 volts. Be sure to refer to each individual game's instructions before you buy an adapter. The wrong adapter will destroy your game – and void your warranty. Beware of discounted adapters – unless you've double-checked for 220 volts (US adapters, at 120 volts, will cause serious problems).

I have tried to supply all the information you will need to buy an electronic game from a retailer. Included are over 200 of the top-selling games, with the results of my examination of them. Most of the entries describe in some detail how the games are played, while others simply highlight the unique points of a particular unit (this highlighting technique is used most often in the sports chapter, where many of the games are played in similar ways). Also listed are the power requirements and approximate retail prices of the games. You will find that these prices vary widely, primarily because of heavy discounting.

Note also that I've tried to indicate the original manufacturer with every game (or at least the principal

world-wide distributor), followed by the British distributors. These distributors may change, due to their own contracts. The manufacturer's IDs won't change.

The recommendations that end each entry in the book are based on my work with test groups of various age characteristics. When one group liked a game, nearly all the others concurred, and games with unoriginal formats were generally put aside. My measure of their reactions takes the form of stars: A 5-star (*****) game is the best in its category, with a clever game concept, captivating features, an effective design, and the ability to hold a player's attention for long periods of time on multiple occasions. Four-star (****) games are usually very good, but the enjoyment of play is somehow abridged by a single detracting feature: a too-small playing field, too-difficult a game to win, etc. A 3-star (***) game is basically a good investment. It appealed to most of the test groups but did not feature any clever concepts beyond the game itself. A 2-star (**) game lacks an essential of a good electronic game, and a 1-star (*) game lacks several. These offer an ordinary play concept without the necessary extras to make the games fun.

I hope you will find this book helpful in the selection of your own electronic games. With the advice that you play any game before spending £20–£30 or more to buy it, I ask that you read this book for the same reason I wrote it. For the fun of it.

H.B.
New York City, 1981

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Introduction

Five years ago there was no such thing as an electronic game. Ten years ago there were no calculators. And 15 years ago, household computers were considered a futuristic venture suitable only in a world filled with robots and electric cars. Today, several million people routinely record their favourite television shows for later viewing, and many of us travel abroad with a pocket-sized language translator instead of a phrasebook. This revolution occurred because of the great advances made in the electronics industry, most notably in the invention of microprocessor 'chip' circuitry.

A 'chip' is a tiny piece of silicon (roughly the size of a child's fingernail), with a photographic etching of a complex electronic circuit embedded in its surface. This chip is, in effect, a series of electrical circuits, which can be programmed with the intelligence needed to operate a clock, regulate a microwave oven, and perform addition, subtraction, multiplication, division, or any of the functions formerly associated with slide rules. Chips are used in highly sensitive hospital equipment, personal computers, railroad switching systems, telephone circuits, smoke alarms, digital speedometers, and video disc machines. Chips are used most often, however, in electronic games.

When you consider that half a billion dollars was spent on hand-held electronic games (not including video games) last year, you will begin to realise just how many electronic games have been produced. Over *300 million* electronic games have made their way into our homes in only four years (that's roughly one for every man, woman, and child in the USA). Unofficial toy industry sources verify these figures, noting that most of the money is being made by the

biggest manufacturers of these gadgets: Milton Bradley, Mattel, Parker Brothers, Kenner, Coleco, and a few others. All of these companies were previously engaged in a traditionally conservative business – the manufacture of toys and games. Today, these companies create machines that are in reality special-purpose computers, placing them at the forefront of the computer revolution.

The change first took hold in 1972, three years after Texas Instruments engineers developed the silicon chip. The four-function calculator was the first mass-market item to become popular, originally for prices as high as $100 for a rudimentary device that could add, subtract, multiply, and divide. Prices dropped quickly, and new designs were introduced with remarkable regularity. Casio was a leader in creating innovative calculators, pioneering the market-ing of small devices with clocks and stopwatches in 1977. Sharp, Hewlett-Packard, and Texas Instruments intro-duced calculators specially designed for business analysis, scientific applications, and schoolwork. Credit-card-sized calculators appeared in the late seventies, with pressure sensitive pads replacing buttons on the keyboard. Manufacturers enhanced their products by adding musical notes to each key, alarm clock circuits, and ultra-flat or ultra-miniature formats. Some enterprising game inventors even created books full of games that could be played on calculators, trying to ignite a fad that never quite took off.

Digital watches have been around for about as long as calculators, selling for no less than $200 in 1973. Today's digital timepieces are available in either light-emitting diode (LED – red glowing digits) or liquid crystal (LCD – black digits on silver background) models, some for as little as $20. Calculators that talk and voice-recognition machines will be available in the early 1980s.

The Craig corporation, along with Texas Instruments, and several others, has taken the calculator format a step into the future with language translators. These special-purpose, hand-held computers first appeared in early 1979, featuring removable memory modules containing lists of

words in French, Spanish, German, English, and other languages. These devices usually contain several thousand words, accessible via alphabetic keyboard. The Texas Instrument translator even has a speaking voice.

Personal computers have been popular consumer electronics items since the late 1970s. The newest hand-held computers are as small as calculators. Matsushta's Micro-Information System includes a full-function keyboard and a set of add-ons to rival the biggest computer systems designed for home or business use. And it all fits into a briefcase.

High-quality audio and video products proliferate. Sound systems now offer near-perfect reproduction due to the computerised 'digital' process of recording and playing back sound. Video discs and cassettes offer a vast array of movies and specialised television programmes, again because of the new developments. The video environment has been further advanced by low-cost information retrieval systems like PRESTEL and AT & T's VIEWTRON experiment which combines telephone and video technology. Home security, fire and emergency alarms, and public-opinion polling are already the subject of experimentation in the rapidly growing field of video and video-related services.

It is against this backdrop that electronic games have captured the world's imagination. Our suspicion of computers is being quickly and efficiently allayed. Children now routinely spend a large part of their playtime with computers. Some manufacturers are starting special electronic product lines for very young children, hoping to further capitalise upon a somewhat unexploited segment of the market.

The most sophisticated games available today are video games, available in cartridges that fit into large master computer units. These game systems, considered by some retailers to be the first step towards computers-in-every-home, have been selling alongside the electronic hand-helds for several years. Video

computer games are described in detail in Chapter Six.

Ever since our first calculators, we've learned to accept computers around the house. We travel with their words, are learning to compute taxes with their automated accounting programs, and now wear them on our wrists wherever we go. Electronic games are one of the most obvious effects of the revolution, no doubt leading the way for far more sophisticated special-purpose miniature computers in the next five years or so.

Chapter 1

Sports Games

The makers of electronic toys and games have long known the secret to success – in America, adaptations of football, basketball, and baseball are the consistent champs. And they're played by everyone – from armchair quarterbacks to small children. Because most games are made by or for the United States, games like American football and baseball proliferate. Most manufacturers have chosen not to release these games in Great Britain, so the number of sports games is limited, relative to the selection available to the American shopper.

Perhaps the most interesting characteristic of all the games in this chapter is that they have little, if any, relationship to the rules and the spirit of the actual sports they portray. For example, football, most often played with dashing red blips, is almost always a running game in its electronic rendition. Each game follows some of the mechanical rules of its sport, but it is the rare game that succeeds in really simulating the essence of a cleverly executed strategy play.

Still, many of the games in this chapter are a lot of fun to play. Chasing your way through a field of red blip defencemen is a real challenge, especially if you are agile enough to develop some skill in play. And the more you practise, the better you will play. I've tried to indicate those games that encourage the development of fast-fingered agility, and those whose action is purely the random flashing of a computer.

BASKETBALL *Mattel Electronics*®

Mattel's half-court basketball is one of the best-selling electronic games on the market in the USA, and with good reason. It's fast paced, requires short bursts of concentrated attention, and combines instantaneous reactions with simple, straightforward strategies.

Basketball is played on an invisible grid of twenty blips. Five computer-controlled blips race around the screen, always jumping between your shooter and the basket. During 24 simulated seconds, the blip you control can run around the screen by moving in any one of four directions, shooting as many baskets as you can within the allotted time. A missed basket's rebound may, of course, be caught by your opponent if you don't get to the ball before they do. All of this action is very, very fast – so fast, in fact, that you probably won't score many baskets during the first few games you play.

The computer always defends, and the player, whether on the home or the visitor scoreboard, is always the offence. A single player will first be home and then visitor; two players will pass the game between them after each turnaround.

Played with two speeds.

Manufacturer: Mattel, Hawthorne, California

Price: About £20

Power Requirements: One MN 1604 battery, or mains adapter

Rating: * * * * *

Recommendation: Children usually develop a fast, nearly unbeatable playing style. Adults will be devastated unless they practise and practise; (this is one of those elusive games that kids master more naturally than adults). Availabilities may be limited.

BASKETBALL 2 *Mattel Electronics*®

The most sophisticated game of basketball on the market depends heavily on the NBA rules. Mattel has maintained the basic play concept used in BASKETBALL, with a fast-moving offence blip attempting to get a clear line to the basket in a half-court game.

Before each play, a defensive plan is entered – either man-on-man, zone, or full-court press. Play is then initiated by touching one of the four directional buttons, and the business of setting up shots – at very fast speed – begins. Defence may commit fouls, which result in foul shots valued at either one or two points, depending upon the computer's random decision.

You may pass in BASKETBALL 2 by spotting your blinking pass receiver in a path unobstructed by defence-men and pressing the *shoot* button. If the pass is successful, the receiver becomes the ball-carrying solid blip, who then moves to set and shoot at the basket.

There is a three-second rule that prohibits an offenceman from loitering in the key.

All baskets are worth two points, but shots taken from beyond the blue line (a semicircle drawn outside the key) are worth three points, as in the NBA rules. Scores are shown on a small readout directly above the basket, with time remaining shown after each turnaround. The game is played in four quarters.

There are four skill levels in BASKETBALL 2.

Manufacturer: Mattel, Hawthorne, California

Price: About £30

Power Requirements: One MN 1604 battery, or mains adapter

Rating: *****

Recommendation: Even better than BASKETBALL – the new options make a good game even better. Availabilities may be limited.

HEAD-TO-HEAD® BASKETBALL *Coleco/CGL*

Designed for either one-player or two-player action, HEAD-TO-HEAD BASKETBALL is a game of passing. Like real basketball, this is not simply a matter of shooting baskets; instead, HEAD-TO-HEAD BASKETBALL players become involved in the strategy of setups. There are four court positions on screen, arranged in a semicircle around the key, with a fifth 'player' at the foul line. You can pass either clockwise or counterclockwise to the adjacent player, and you can do this relatively quickly. All passing is done to clear a path to the basket, a path unobstructed by the one defenceman who runs from player to player as a block. It's always best to pass the ball around the back-field and eventually to the player at the foul line before shooting, because the odds are best at the line. More adventurous players may take shots from all over the court, hoping the percentages will come their way. (They usually don't.)

The game really is just that simple – pass the ball around the court until you've got a clear shot, and then *shoot*. Every second counts. It's really a lot like the sport of basketball. (An abbreviated 24-second clock times each play.)

In the one-player game, the computer does a creditable job of defending. In the two-player HEAD-TO-HEAD version, the first player sets up shots, and the second player moves the defenceman in either a left- or a right-hand direction. There are two skill levels, the latter for fast action.

The readouts are clear, and the game is easily followed without eye strain.

Manufacturer/Distributor: Coleco, Hartford, Connecticut/CGL

Price: £20

Power Requirements: One MN 1604 battery

Rating: ****

Recommendation: For all ages, even for those whose fingers are not as lightning-fast as required by the Mattel game.

BASKETBALL DRIBBLE AWAY® *Bambino*®

Basketball in this game has a perplexing group of play features, some quite excellent, some exasperating. DRIBBLE AWAY is shaped like Bambino's football games, with an angled display screen, so that your thumbs do all the work. In this case, that work is the manoeuvring of a single offence player (we see a realistically drawn side-view) either up or down court, with any one of three different dribbles (high, medium, or low). One thumb handles player direction and the *shoot* button, while the other dribbles.

This is an odd adaptation of the game of basketball. There is no court *per se*, but instead a lengthwise display of competitive players who come into and out of play for no apparent reason. Our home player starts the game on the left side of the court. We press *start*, which starts one of the most arcane clocks ever created (it requires the counting of dashes to determine the number of seconds elapsed), and starts the player dribbling. He moves down court, and some players who appear in his way simply disappear as he runs towards the basket. Some players just stand there, and two beeps follow within a few seconds. Although the instructions do not say so, this is assumed to be either a running block of some sort or an interception. To begin the next play, press *start* again and these actions will be repeated – either the players will block by standing in the way of the offenceman, or they will leave the screen.

I should mention that the offence player shoots when you press *shoot*, and that if he's reasonably close to the basket, the ball usually swishes. If he's further down court and shoots, the ball may swish anyway. And sometimes one of the stolid fellows leaps into the air and catches the ball, only to stop the play (there is no such thing as continuous action

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here – every time something happens, the game stops and must be restarted).

There are three skill levels, each of which makes the court a little more crowded with defencemen.

Manufacturer: Bambino, Los Angeles, California

Price: Under £50

Power Requirements: Four MN 1500 or HP 7 batteries, or mains adapter

Rating: * $\frac{1}{2}$

Recommendation: Not as effective as other basketball games.

SOCCER KICK THE GOAL® *Bambino®*

For one or two players, this game of soccer is primarily a game of 'keep away'. Your offensive player races downfield while trying to avoid contact with defensive players. Players are indicated by fairly large representations of the offence, the defence, and the goalkeepers. Shots are taken from any position on the field, with the odds of successful goals increased with proximity to the goal.

Four directional 'arrow' buttons are used to control the offence player, and two different shoot buttons are used to score goals. The first, labelled *shoot*, is used for head-on attempts, and the second, *banana shoot*, allows for a bowling-like curve in goal shots. Two displays indicate game progress after each successful and unsuccessful goal attempt: the home and visitor scores, and the time remaining in the half. SOCCER is played in two '45-minute' halves, which last about nine actual minutes each. The game time allowed may be far more than necessary, and chances are you will tire before the half has elapsed.

In two-player action, the defensive player (human) can move his or her goalkeeper back and forth, while the computer continues to control all other defencemen.

Two skill levels affect game speed.

Manufacturer: Bambino, Los Angeles, California

Price: See note. Prices begin at £30

Power Requirements: Four 'AA' batteries, or mains adapter

Rating: ** $\frac{1}{2}$

Recommendation: Plays an adequate game with little variety; best for single-player action (the second player does very little).

NOTE: Bambino is no longer in business, although many of their games can still be found in stores. Be particularly careful in buying these games, as there is no way to get them fixed if they're faulty. You may well find them at knock down prices, and most are good games. It is, however, a risk.

HEAD-TO-HEAD® FOOTBALL   *Coleco/CGL*

Football in the HEAD-TO-HEAD series is a passing game, where the ball is kicked from one player to the player next to him (either counter-clockwise or clockwise, depending upon the control used). In this game there are five offence players – three are eligible to shoot goals, two play the backfield. The passing action is frequently blocked in the front line because of an additional defenceman playing the field as a goalie.

In the single-player version, both defender and goalie are computer-controlled. In two-player action, the human defence must control two blips on the gameboard at the same time. It makes for a fierce battle.

Manufacturer: Coleco, Hartford, Connecticut/CGL, London

Price: About £20

Power Requirements: One MN 1604 battery, no mains adapter

Rating: ****

Recommendation: More fun than BASKETBALL in the HEAD-TO-HEAD series because of the extra defender. Coleco says that an eight-year-old can handle the action, which may be a bit liberal, but possible with some parental supervision.

NOTE: This game is sold as SOCCER in the United States. Coleco sells a HEAD-TO-HEAD FOOTBALL there as well, based on the American sport.

SOCCER *Entex® Hales*

Soccer is large, easy-to-learn, and perfect as an introduction to the world of electronic games, especially for children. The game can be played by two people. In the single-player mode, you are an offensive player, trying to weave downfield to score, avoiding three defensive blips and a goalie. The offensive player manoeuvres his man with four directional arrow buttons, always avoiding contact with the defence, for contact is ruled an interception of the ball. A separate *kick* button is used when the offence is within scoring position. There is a score indicator at either side of the field. In the two-player version, each human shares control of his team with the computer.

The game plays at an even pace, but other soccer games are faster. Buttons occasionally do not respond – a crucial point where speed and agility are so very important to game play.

Manufacturer/Distributor: Entex, Compton, California/Hales

Price: £18.95

Power Requirements: Three MN 1500 or HP 7 batteries, or Entex mains adapter

Rating: ** ½

Recommendation: Game is not as gripping as others in this category, especially for adults.

SOCCER *Mattel Electronics®*

Half-court soccer, Mattel style, is a challenging game. This adaptation is played on a small playing field, with twenty field positions available for your offensive player. The opposition defends its goal with a five-man squad and a very active goalie. The idea here is to use your four directional buttons to move your man as quickly as possible, constantly weaving through the defensive zones, which are adeptly moved by the computer. Twelve of the

twenty field positions are shown on a diagram in the instructions – when you've manoeuvred your man into one of the positions, and you are not blocked by a defensive man – shoot! (if you shoot from any other position, you'll miss the goal). You'll probably find that your ball was either blocked by a defensive player who ran into position after your kick, or blocked by the incredibly fast goalie. Your odds are best if you shoot from a position close to the goal – but don't get too close, because the goalie will leave his post and steal the ball!

This game of soccer is played in two simulated '45-minute' halves, and is designed for two players to pass the game back and forth to imitate home and visitor possession. The simulated clock allows each player ten game minutes (actually 54 seconds) to score a goal, and renews his clock every time a goal is scored. The '45-minute' halves run just short of four minutes, so a full game of SOCCER should run about eight minutes in actual time.

For even faster play, try the game on level 2 (most novices have a tough time scoring in level 1). This game requires a good deal of practice and patience before much pleasure can be derived. But once you master it, you'll probably love it.

Manufacturer: Mattel, Hawthorne, California

Price: TBA

Power Requirements: One MN 1604 battery, no mains adapter

Rating: *** ½

Recommendation: This is a game for the patient and the fast-fingered. Limited availability.

(Mattel is slowly entering the UK market, and is releasing very small numbers of their sports games – and may opt to release only their more 'cerebral' backgammon and chess games, ignoring the UK sports market entirely. As of this writing, Mattel was still formulating plans.
Consult your retailer for more current information.)

Since Mattel's first soccer game was mainly an electronic goal-shooting device, serious devotees of the sport will be pleased to see a thorough revamping of play format in SOCCER 2. This is an entirely different game, and a far better one at that.

SOCCER 2 is played on a simulated nine-section field, with only one section visible at a time. Downfield motion is, therefore, the first team effort, as the offensive team (two blips, with the active one flashing) fends off the five-man opposition. There are interceptions, caused by inaccurate ball control.

The course of forward motion passes through the nine playing field segments, until you finally arrive in the goal section. (This section is indicated by the appearance of a small red dash just below the scoreboard.) The *shoot* button is used as it would be in most games – first set your ball-carrier in position, and then make the best of the opportunity. And remember to act quickly because the defence can, and will, steal the ball.

A second level of play is available to the proficient; it is activated by simultaneously pressing the *score* button and adjusting the speed switch. In the advanced game, low or high kicks can be used to pass the ball to your offensive teammate. That teammate, incidentally, may be moved around the field to your best advantage.

SOCCER 2 uses corner kicks (returning the ball to play after it crosses the defensive goal line after last being played by a defenceman), goal kicks (returning the ball to play after a goal is scored), and throw-in (returning the ball to play after it goes out of bounds) to make the action even closer to the real game of soccer.

While certain features of the sport are not reproduced in this hand-held game, most notably the inability of two sides to compete at the same time (the computer always defends, and either the home or the visiting team is offensive, depending on who is actually holding the game),

this is the best soccer available. Played with two speed levels.

Manufacturer: Mattel, Hawthorne, California

Price: TBA

Power Requirements: One MN 1604 battery, or mains adapter

Rating: **** $\frac{1}{2}$

Recommendation: Before you fall in love with any head-to-head version, try the action on this machine. It's simply a great game. Limited availability.

KEVIN KEEGAN'S ELECTRONIC ACTION SOCCER
Grandstand

For one or two players, this is a good, basic soccer game, again requiring the manoeuvring of a blip offenceman towards the goal.

The game is played on a field of forty blips (five across, eight up), with twelve team members, six per side, including goalies. In single-player mode, you are in control of one offensive man (the ball-carrier), who weaves through a constantly moving defence pattern towards the goal. The likelihood of interceptions is high, and one must be very fast-fingered on the four-directional buttons. SOCCER allows either head-on or 45-degree goals, so you have some flexibility in shooting for goals. The computer-controlled offensive team members will screen your run.

The only difference in two-player action seems to be the allowance of goalie control on defence (a function carried out by the computer in the single-player mode).

SOCCER is played for two 45-minute halves, which last only a few minutes each in real time. A total of nine goals, if they occur before the '90-minute' time period elapses, will also end the game. Two skill levels, both affecting speed, are available.

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Manufacturer: Grandstand

Price: About £23–£25

Power Requirements: Four MN 1500 or HP 7 Cells, or mains adapter

Rating: ***

Recommendation: A good workhorse action game, particularly for play by two active children.

LUCKY PUCK® ICE HOCKEY *Bambino®*

This hockey game is the same game as Bambino's SOCCER, with only minor design adjustments. The structure of this game, including the division of play into three simulated twenty-minute periods, and the fact that it begins with a face-off display routine, makes this version look and feel more like a hockey game than a soccer game.

Take your pick – either is fun to play.

Manufacturer: Bambino, Los Angeles, California

Price: Under £50

Power Requirements: Four MN 1500 or HP 7 batteries, or mains adapter

Rating: ***

Recommendation: Compare the HOCKEY to the SOCCER, but don't buy them both if you're hoping for different games.

See Bambino note on p. 15.

HOCKEY *Entex®*/Hales

A slightly different field has allowed Entex (and several other companies) to sell their soccer game in markets where hockey is a more popular sport. This is simple business – the crossover between markets occurs only in the biggest cities.

For details, see SOCCER (page 15).

KNOCK 'EM OUT® BOXING   *Bambino*®

Bambino's got the only electronic version of boxing on the market, and it's a pretty good adaptation. As with many of the Bambino games, this is played on a customised tabletop console, with a fairly complex display area. If you look closely, you'll see a series of seven small display panels each of which contains a boxer in one or more positions. As with electronic calculators, some or all of the segments in each display light up at appropriate moments, so you really do get the effect of a man being punched and falling backwards into his corner. Each player has six controls, three for changes in body position (*back, normal* and *ducking*), and three that control the punches thrown (*high, medium* and *low*). By keeping a close watch on your opponent, you can spring from a ducking position and catch him unaware – but he can catch you on the way up. Standard volleys of punches, with both boxers standing in their normal positions throwing medium blows, are generally dull and uneventful. If you want to play this game properly, it's best to keep changing your tactics throughout each round.

As in real boxing, final scores are tallied based on the quality of the competition as well as on a knockout. Each successful strike, depending upon your position in the ring, is worth a certain number of points. A knockout seems to be a matter of luck (the right punch at the right time). An inability to control the ferocity of the action can be a problem, because the match always moves along at the same speed and intensity. The addition of random movements by the computer is also bothersome; everyone who played felt that a secondary force was controlling the game to a greater degree than they were. Occasionally-unresponsive control buttons added to this problem.

Two skill levels ('Golden Glove' and 'Professional') affect speed. For one or two players.

Manufacturer: Bambino, Compton, California

Price: About £50

Power Requirements: Four MN 1400 batteries, or mains adapter

Rating: *** $\frac{1}{2}$

Recommendation: For either one or two players, this game is fun to play. Despite the frustrations caused by the computer's interference in the match, you will play this game often when you first buy it. Children, incidentally, are not so frustrated by the computer's intervention as adults.

See Bambino note on p. 15.

TENNIS *Entex*®/Hales

With all the excitement the original PONG! video game created, it's amazing that there is only one electronic ping-pong or, more accurately, tennis game in the hand-held arena. Entex has created a lifelike match here, and the result is a fine game.

Select 'singles' or 'doubles', a speed level, and one- or two-player mode (the 'doubles' game can only be played by human versus human, and it divides the court vertically rather than horizontally to start the game). Both ball and racquets are represented by red blips. Serve by pressing one of three 'ball return' buttons (left, right, centre), and the red 'ball' blip travels across the court towards your opponent. Depending upon the side of the court where the blip flies, the opponent uses either the left, the centre, or the right directional button to return your serve. The timing of precisely when you hit the button will determine whether the ball is long or short.

Scoring duplicates actual court rules, as each player progresses from Love ('*Lo*') to 15 on the first point, 30 on the second, 40 on the third. The readout will show '*Du*' if players tie on the third point, and '*Ad*' when one player scores an advantage towards the win. The match is won by the first side to win four or more games with a two-game advantage.

The game is normally played by one player against the computer, or by two opponents. The four-player match, where each player handles one side of the court, is not very effective.

Manufacturer/Distributor: Entex, Compton, California/Hales

Price: £21.95

Power Requirements: Three MN 1500 or HP 7 batteries

Rating: ** $\frac{1}{2}$

Recommendation: The button controls really limit your ability to simulate tennis's most-used actions, and so this becomes little more than a back-and-forth net game with tennis scoring.

TOMYTRONICS PALITOY® TENNIS

Display's the thing on this, the best electronic tennis game on the market. Here, you get a bird's eye view of the court, in a perspective that allows a full view not only of the court lines, but also of the players as they swing.

This is a game of position, and you may choose to play each ball from any of 6 positions, each controlled by its own button. When you press a button, you actually swing, so that both the run and the actual hit are both accomplished with a single button touch.

There are several variations on play, including a PRACTICE mode for new players, and two professional levels, affecting both speed of play and predictability of the computer player's strategies. You may play either against the computer or against another human player.

Manufacturer/Distributor: Tomy, Carson, California/Palitoy

Price: Not fixed

Power Requirements: Four MN 1400 batteries, no mains adapter

Rating: ****

Recommendation: A fine adaptation of the sport, for all ages.

HORSERACE ANALYSER *Mattel Electronics*®

The HORSERACE ANALYSER is not a toy, not a simulator of mythical horseraces, but a special-purpose miniature computer that enables the user to try to pick the winning horses in any race.

Your daily newspaper racing column provides a great deal of information which you will use in plotting your bets for any horserace. Specific formulas used by expert handicappers have been programmed into HORSERACE ANALYSER's design. The unit itself guides you through step-by-step entries, by flashing its directions on a large liquid-crystal display panel. Enter the *purse* of the race, the *distance* of the course, the horse's *post position*, the number of *days* since its last race, the number of *wins*, *places*, and *shows* in recent races, and the number of *lengths back* the horse finished in previous rounds. Using this and other related information, the HORSERACE ANALYSER plots a *speed rating* that you'll use in wagering. The idea here is that each horse in the race (or at least the horses that look good to you) is assigned a *speed rating*, which you compare across the field before you place your bets.

Mattel's limited testing of HORSERACE ANALYSER resulted in a better-than-50% success rate in picking horses who finished in the money. The rate seems more than consistent with our testing of the computer, and perhaps even a little low.

The manufacturer, as you might well imagine, makes absolutely no claims as to HORSERACE ANALYSER's ability to win races. But it is a marked improvement over hunches.

HORSERACE ANALYSER is a hand-held device designed to be placed in a vest-pocket between races. It comes with a leatherlike case, scratch pad, and pen.

Manufacturer: Mattel, Hawthorne, California

Price: Not fixed

Power Requirements: One MN 1604 battery

Rating: ***** (less if you're unlucky)

Recommendation: Only for those who are serious about the races. Others are apt to find the sheer number of inputs required for each horse to be a tedious affair. Limited availability.

At the time of writing, Mattel was determining how to work with the UK market on this extraordinary item. The problem: UK race charts are different from those used in America, so the computer program which runs this machine must be entirely revamped. Don't even try to use the US version – you'll never complete a calculation!

Consult your retailer to see how Mattel solves the problem – if at all!

CUE BALL ELECTRONIC POOL
Parker Brothers/Palitoy

It takes some time to understand just how this miniaturised billiard table makes the game of pool come alive on an electronic grid filled with red circles. The learning curve, however frustrating at first, seems to be time well spent for the select group that inevitably falls in love with this game. There are four variations of play: solo game or two-player competition (both simply requiring the sinking of the balls on the table); 'Poison Pool', which is akin to '8-Ball'; and 'Trick Shot', which allows placement of up to seven balls (including the cue) anywhere on the table.

The requisite skills are most easily learned in the first game, which is called up by pressing *select/score* until a game *#* is shown. *Cue up/shoot* sets the first rack of balls (six balls each rack – this is small table), and then take *aim*. Here's where it gets a little tricky, because you're dealing with rows and rows of unlit red circles. An 'arrow' is brought to lighted position by pressing *aim*. Press it again and the arrow will move clockwise one position. Press it once more and the arrow will move again – a total of eight times before the original position is reached. You aim in the direction that you wish the ball to go, and press a second button marked *angle* to perfect the shot (actually, 'perfect'

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is too strong a word – there are only two available angles, but they are helpful). Now press *cue up/shoot* once and the 'cue' will appear, mirroring the image of your aim. Press again, and the cue ball (the brightest one on the table) is released in your chosen direction. You can control the force of the shot by taking your finger off the *shoot* key early. (A musical tune plays and ends when *shoot* has reached its maximum force). The cue ball then reacts, breaks the rack, and knocks the balls all over the table. It really does look like pool, but the time it takes to set up shots can be a little frustrating until you develop some proficiency. Next, you choose an appealing ball anywhere on the table, take aim, fix your angle if you care to, and cue up. Time yourself as you shoot. You can even scratch (I did, a lot at the beginning, then less and less), and lose a point in doing so.

The one-player game uses three racks of six balls each, totalling eighteen balls. For the beginner, this is a very, very long game. For the practised novice, it's long, but not insufferable. For those who have developed the skill and know the rules and the mechanics well, it's about right.

The two-player game, which uses some of the lights on the board as player-indicator lamps, is played until one player sinks ten balls. You can reset this ten-ball total in increments of tens, for up to ninety balls.

'Poison Pool' is also a two-player game, whose object is to clear the entire table before sinking the blinking ball. One rack, one game.

'Trick Shots' are the most fun, even for beginners, who, when following the truly precise instructions, can do some mighty fancy shooting. By pressing the right buttons, you can place 1, 2, 3, 4, 5, or 6 balls in any positions you like around the table, and then cue up and have a grand old time. Among the most impressive setups is a 'Double Kiss', made by banking the cue ball three times with the highest possible accuracy.

After some time, you'll probably master certain kinds of standard shots, as you do in pool. But there will always be

the indeterminable element of power, of the speed of the ball, that will allow for fairly infinite variety of play.

Manufacturer/Distributor: Parker Brothers, Beverly, Massachusetts/Palitoy

Price: About £30–£35

Power Requirements: Six MN 1500 or HP 7 batteries, or mains adapter

Rating: ✱✱✱✱

Recommendation: Very awkward and frustrating for beginners, especially if you're learning the game from printed instructions (and not from someone who already plays). Once you get the hang of it, it's great! Those who master the game – and this one takes a good deal of patience and more time than most of the other games in this book – will be satisfied with its precise action and thoughtful play strategies.

Games of Logic, Strategy, and Memory

Where the games in the sports chapter involved physical agility, the games in this chapter require mental prowess. Which is not to say that you must be a Ph.D. – indeed, children play these games to the highest scores. All of the games require a lot of concentration, from the fantastically simple SIMON to the higher-priced computerised versions of bridge and chess.

The best-sellers in this chapter are SIMON, a memory game that can be played by almost anyone, and MERLIN, a multiple-game computer designed for play by all ages. Each is made by a game industry giant (Milton Bradley and Parker Brothers, respectively), and each has had extraordinarily consistent sales through several rocky years in a fast-changing marketplace. Each game has been copied by less imaginative manufacturers anxious to cash in on a successful trend. The industry calls these copies 'me too' games.

The more esoteric games in this chapter are also the most expensive games in the book. Fidelity, Tryom, and Applied Concepts sell electronic backgammon, bridge, chess, and checkers, frequently for a sophisticated audience. Applied Concepts, makers of the Boris chess series, now sells a robotic chess-playing computer. *Handroid* has an arm whose hand can physically move pieces around the board – and beat all comers! You can buy a very respectable chess game for about £50, as you will see in this chapter.

Throughout this section, be sure that you read the rules and know how to play before you buy. Some games look simple and are vexing; others look complex and are

childish, dull, and simplistic. Read carefully. I may save you some money.

SIMON® *Milton Bradley Electronics®*

Probably named for the child's game of *Simon Says*, the discuslike SIMON has been *the* electronic game sensation ever since its introduction in 1977. For the few who have never played, SIMON was the first to use the 'Press *red*, now press *red, blue*, now press *red, blue, green*, now press *red, blue, green, red* . . .' which I call 'progressive memory' in a game format.

SIMON looks like a flying saucer, with four brightly coloured plastic lenses on its topmost surface (the fourth colour is yellow). At the centre of the platter is a control area, which allows four skill levels and three game variations.

In Game No. 1, you continually repeat SIMON's pattern of colours and notes (each colour is accompanied by its own musical note) until a razz tells you that you goofed. In Game No. 2, it is your responsibility to increase the chain of colours by one colour on every turn. SIMON repeats each new sequence as you play. Game No. 3 is a small group version of the first game, with several players keeping a close watch on only their assigned colours.

SIMON is very easy to learn, very, very addictive, and guaranteed fun for everyone who encounters the game. It's also one of the most durable toys I've ever seen – it stands up to kids' pounding on each lens – and they do *pound* – with remarkable vigour.

Manufacturer: Milton Bradley, London

Price: About £30

Power Requirements: One MN 1604 battery and two MN 1300 batteries

Rating: *****

Recommendation: Hours of fun, even though you will probably play only Game No. 1 with any regularity.

POCKET SIMON® *Milton Bradley Electronics®*

SIMON's 13″ diameter can be a little cumbersome for travel, and so Milton Bradley has introduced a hand-held twin for portable play. The games, the colours, the skill levels, everything is the same as in the original.

Manufacturer: Milton Bradley, London

Price: £17

Power Requirements: One MN 1604 battery and two MN 1500 or HP 7 batteries

Rating: *****

Recommendation: Ages seven to adult, but even younger children are likely to enjoy this game once they get the hang of it. Again, the game is very durable, perfect for kids (and aggressive adults).

SUPER SIMON®

With the extraordinary success of SIMON, the first outstanding electronic game, it was inevitable that Milton Bradley Electronics would attempt a sequel. That sequel, SUPER SIMON, remains within the bounds of 4 colours and your memory/reaction time, with some interesting twists.

The gameboard is completely new; it's shaped like a rectangle, with each of the four coloured lenses represented on each side of a centre bar. The lenses are displayed piano-key style and fill most of the game's surface. All of the games can be played by one or more players, and many require the head-to-head action afforded by the double set of lenses.

Game No. 1 is called WHAT'S NEW, and it plays like SIMON's game No. 1. The computer generates a series of tones and your task is to repeat the series perfectly. The twist comes as follows: each time SUPER SIMON speaks, he generates a completely new set of tones, so this is not the

add-a-tone game that we've all come to know and love. There is intense concentration required, but the lack of repetition detracts from the original game's addictive qualities. With 4 skill levels and 3 speeds.

Game No. 2 is similar to No. 1, but it is mainly for two players. Once one player fails to repeat a sequence, he's out of the game. This game is most effective when played by groups of players. Three speeds; no skill levels. The third game, 'You're It', assigns one lens to each player. When that lens lights, the player must (you guessed it) repeat the sequence played by the computer. Fail, and the game is over for that player. Again, best with groups. With 3 speeds, no skill levels.

Game No. 4 is the most interesting of the pack. This is a game of timing, where you must press the lenses *at the same time* as the computer lights them. One by one, at highly erratic speeds (with 3 speeds and 4 skill levels, there's lots of variety), you must keep pace. The computer judges how well you've done, and scores are based on your speed and accuracy. Again, this is best played by two – as a head-to-head competition. The computer will identify the winner with a colour display.

Rapid response is the key to the fifth and final game on SUPER SIMON, and it is the most addictive of all. SUPER SIMON will light a lens, and you must press that lens before it is darkened. You'll need fast hands, the ability to keep a very high level of concentration, and a good deal of endurance to keep your level of competence at its best. 'Fast Hands' is the most fun when played as a head-to-head competition, with lots of laughter and screaming guaranteed.

Perhaps the only negative about SUPER SIMON is that its rather hefty price tag does not include the basic repeating SIMON game, which is available only with the separate units listed here.

Manufacturer: Milton Bradley Electronics, London

Price: Under £40

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Rating: *****

Recommendation: This is another good example of a well-designed, well-constructed game made by one of the best manufacturers in the business. Very professionally done.

TOUCH ME® *Atari*®

Despite its beginnings as a video game (in the BRAIN GAMES Atari VCS cartridge – see page 153), the pocket-sized TOUCH ME plays three games, each of which is identical to those which appear on SIMON. The key differences are in the scoring, where players can preset their goals to either 8, 16, 32, or 99 colours in a row. A counter logs the number of successful go-rounds as you play.

The game is played by pressing coloured buttons; the indicator lights sit beside the buttons themselves.

Manufacturer: Atari, Sunnyvale, California

Price: £5–£10

Power Requirements: One MN 1604 battery

Rating: ****

Recommendation: The design is not as technically beautiful as SIMON, but this is a wonderful game for the price.

COPYCAT® *Tiger*®

Shameless though it may seem, COPYCAT is another manufacturer's carbon copy of the super hit SIMON. COPYCAT plays the same games, for a considerably cheaper purchase price.

There are a few sacrifices – the coloured lenses don't light up (indicator lights above them do), the sounds are not as clean as in SIMON, and the physical design is not as technically beautiful and durable as SIMON's façade.

COPYCAT is about one third the size of SIMON, and can be held in your hand. Other than that, it's the 'same game'.

Manufacturer: Tiger, Mundelein, Illinois

Price: Under £20

Power Requirements: One MN 1604 battery

Rating: ****

Recommendation: By all means, try this game and compare it with SIMON in the stores. Tiger is a smaller company than Milton Bradley, and so you may not find COPYCAT everywhere. As with SIMON, it's a thoroughly intriguing game for all.

DITTO® *Tiger®*

This is getting a little silly, now, isn't it? It's not enough that Tiger has cloned a SIMON to make a hand-held version of the progressive memory game – now they're marketing a pocket-sized version of their COPYCAT. There are a few neat features here – like speed-up for extended sequences, but the game is the same as COPYCAT. And once again, the game is a good one, worthy of hours of fairly mindless diversion. Give it a once-over, then make your choice.

Manufacturer: Tiger, Mundelein, Illinois

Price: Under £15

Power Requirements: One MN 1604 battery only

Rating: ****

Recommendation: The field is now pretty confused, so try them all if you like. Chances are good that you'll be satisfied.

MILTON® *Milton Bradley Electronics®*

From the makers of the occasionally frustrating SIMON comes MILTON, a delightfully obnoxious matching game that talks. It talks a lot, as a matter of fact.

The game is played on a console roughly the size of SIMON – a 13-inch round disc about the size of a large frying pan. The top surface contains all play switches and buttons. One side of this surface contains seven red

buttons, and on the other side of the divider sit seven yellow buttons. Start the game, touch a red button, and listen to MILTON spout a half-phrase, '*Park Your . . .*' Touch a yellow button and you might hear the word *turkey*. Now we know the word *car* is identified with one of the yellow buttons, and that some other, unrelated verb-article combination is to be found under one of the red buttons. MILTON, never one to miss a quip, repeats the newly created phrase and then comments: '*Park your turkey – not in my driveway you don't!*' He then instructs the next player to press any red button. The next button might result in '*Crack the . . .*' which will match up with *egg* on the yellow buttons. You choose a button, only to find the word *house*, to which MILTON makes another crack designed to make you feel like a fool. The game goes on until each of the seven matches has been made.

MILTON is designed as a party game, for there are only 18 phrases in his memory, and these phrases do wear thin after you've heard them 12 or 13 times. For the first few weeks at least, MILTON is an absolute panic. (And he's fun to play, too.)

There are three variations on the basic game, for one or two or more players. MILTON, incidentally, keeps his own score (but not without commenting about how well everyone has done).

Manufacturer: Milton Bradley, London

Price: £55

Power Requirements: Plug into electrical outlet (no batteries)

Rating: ***

Recommendation: Plan to play very often for the first month you own the game, and to tire of the game a few weeks later, at which time you will take it out of the bedroom drawer only for parties and at the request of your children. Ages seven to adult seems reasonable, but the younger kids will have more patience and will concentrate on the game itself more readily than the adults.

Kids loved it, and adults walked away wondering what all of the excitement was about. That's the story of our MANIAC tests, a strangely beguiling tabletop game for two, three, or four players. The way to play MANIAC isn't at all clear from looking at this mysterious black box, nor is it apparent through the random play with its assorted controls. You really *must* read the instructions to find out how to play. MANIAC is a game of reaction and memory, but the game itself is not nearly as inspired as the competition it causes, especially with the younger set.

MANIAC plays a sequence of four different games. You cannot shift from game to game if you favour one or another. You must play through the entire sequence of four 'challenges', each one played three times in each cycle. The first challenge is called MUSICAL MANIAC, and the idea here is to be the first to respond when a random melody *ends*. If you press your MANIAC panel within one-quarter second after the tune ends, you score two points. If you respond within one-half second, you score one point. After one-half second has elapsed, you score no points at all. Considering the fact that the player who wins MANIAC is the one who first amasses twenty-five points, it is best to respond with the greatest possible precision. MUSICAL MANIAC is played a total of three times, and at the end of each rally, each player's accumulated score is played on the top-of-game readout.

SOUNDS ABOUND is challenge number two, wherein MANIAC plays a rapid series of notes and tones to be counted by each player. At tune's end, the MANIAC panel must be tapped as many times as there were notes in the song. Score two points for the correct count, one point if you've erred with one note too few or many, and zero points if you were off by more than a single count. Play SOUNDS ABOUND three times, and then on to the third challenge.

LOOK TWICE is played on the pair of seven-segment digits previously used for scoring. A random grouping of segments are lit, to be memorised and later matched by all players. We first see the random pattern, then three more patterns, which may or may not duplicate the first pattern shown. Players must identify the match (or lack of a match). Scoring is based on the speed of your correct response. Play three times, and MANIAC follows with the fourth challenge.

YOUR TIME'S UP is a game of time estimation. One long tone is sounded, followed by silence, and then by a second shorter tone. Players must press their MANIAC panels for precisely the number of seconds elapsed during the *silence*. Points are scored if you duplicate the seconds of silence within one-half second.

Challenge No. 4 is played three times, and it is followed by game No. 1, then No. 2, and so forth. The competition is over when one player scores 25 points. MANIAC increases its game difficulty automatically with player proficiency.

Manufacturer: Ideal, Berkshire, UK

Price: £35

Power Requirements: Four MN 1400 batteries

Rating: ***

Recommendation: If you're a kid, or very patient, add a star.

GRANDSTAND SOLITAIRE *Grandstand*

This is the old game of jumping pegs, played on an electronic grid. Learning how to manoeuvre your pegs on this fairly confused machine is annoying, but anyone will get the knack with some practice.

Briefly, there is a grid marked A, B, C, D, E, F across and 1, 2, 3, 4, 5 down. At each intersection is a 'peg' separated by a glowing red blip. You select the peg by its co-ordinates (press button E, and button 4 for position E4). Next, go to the second bank of buttons to choose direction – these

buttons are arranged in a circle, rather like the points of a compass. Once the direction is entered, your chosen peg will jump another, and the game goes on until you've exhausted all possible moves.

The physical layout of the controls, and their somewhat abstracted relationship with the pegs makes this game occasionally annoying – because you find yourself concentrating on the entry process as much as on game play.

Distributed by: Grandstand

Price: Under £20

Power Requirements: TBA

Rating: **

Recommendation: Don't buy the electronic version before you've played the physical version – played with marbles, wooden or plastic pegs, available at all toy stores.

GENIUS *Milton Bradley Electronics*

As a kid, you probably played with an inexpensive little game that required you to slide 15 numbered titles into a specific order. Although basically nameless, the '15 puzzle' has mystified gameplayers and puzzle fanatics for centuries.

Milton Bradley has recreated the concept, this time using 8 squares to be shoved about in a 9-square grid, and this time, with electronics.

The object of GENIUS is to slide those 8 electronic pieces of plastic until each of their lights (each tile has an LED, glowing red, in its centre) is lit. There are no numbers for reference, and all tiles are the same colour, so the game's quite a challenge.

The manufacturer suggests that once you've assembled the puzzle, and caused all of the lights to glow, you reverse the process and cause all of the lights to go dark. It's harder than it sounds.

This is another of those games that kids, unencumbered

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by life's little frustrations, can really concentrate on, and therefore, beat their parents with great regularity.

Manufacturer: Milton Bradley, London

Price: About £20

Power Requirements: Two HP 7 or MN 1500 batteries, no mains adapter

Rating: *** $\frac{1}{2}$

Recommendation: Highly frustrating if you don't consider Rubik's Cube or Instant Insanity-type puzzles fun. Otherwise, it's another in a long line of unrelenting frustration toys – for the fun of it.

LOGIC 5 *Milton Bradley Electronics*®

Every February, the Toy Manufacturers of America stage a mammoth exhibition in their New York City head-quarters to introduce the year's Christmas line. Toy retailers and chain store buyers stroll from showroom to showroom, ordering merchandise to fill their shelves come 'the season'. Milton Bradley, as you might expect, puts on a particularly impressive show, but never has its showroom been so magical as it was in 1977, for that was the year that Bradley introduced its very first hand-held electronic game, LOGIC 5. Months before the desktop unit was available, a dozen of these miraculous new machines were placed in the demonstration arena, each one available for play. In the centre of the demonstration stood one enormous LOGIC 5, looking more like a game show's bonus board than a retail toy. Back in those days (three years is a long time in this toy industry), few of us had ever seen the likes of anything as remarkable as LOGIC 5. You would type in a random selection of three, four, or five digits, and the computer would tell you *instantly* whether your digits matched the ones it had selected at random from its own memory. Some deductive reasoning (see this volume's entry on SUPERSONIC MASTERMIND, page 42, for games which require deduction), and your correct answer

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would cause all of the lights to flash, indicating a correct answer. In 1977, LOGIC 5 was magic.

A short time later, LOGIC 5 was showing signs of becoming obsolete, if only for a single design inadequacy. The game play is in itself every bit as intriguing as MASTERMIND and SCRABBLE SENSOR (all are virtually the same game, with letters instead of numbers used in the hidden combinations in SENSOR). The controls and displays are clear, well designed, and always dependable. But there is no way to'give up'. If you become weary of play (these games can make anyone weary after enough hours of play), there is no way to find out the correct answer. In fact, the only way to recognise a correct answer is to type it in yourself. This can become frustrating, particularly in matches involving four or five digits in the chain.

For those who are confident that they will never need a machine's assistance in playing a game, however, LOGIC 5 may be a dream.

Manufacturer: Milton Bradley, London

Price: £20

Power Requirements: One MN 1604 battery

Rating: *** ½

Recommendation: Effective as a children's game (for bright children) as it is an adult game; the design is durable, the buttons are large, and the overall approach is typically Milton Bradley – fun for all ages.

SCRABBLE® SENSOR® ELECTRONIC WORD GAME *Selchow & Righter®*/Spear Games

SENSOR is not, contrary to first impressions, an electronic version of the Scrabble crossword game. Instead, SENSOR is an exercise in deduction similar in play to COMP IV or MASTERMIND, where letters instead of colours or numbers are grouped in elusive combinations.

The game has a futuristic design with a 26-letter

pressure-sensitive keyboard and four control buttons (*enter, clear, space, auto*), and a single double switch in the base. Two rows of lights provide all feedback, in an upright display panel. The game is most easily explained in the solitaire (*auto*) mode: start the game in single mode, then press *auto*. SENSOR first selects a four-letter word at random from a limited vocabulary (all related to space travel) and is then ready to receive the first guess. We touch the letters 'MOON', and SENSOR tells us that one letter in the word 'MOON' is also in the mystery word, and that one letter is in the correct position. We 'test' the 'O' in the second position, and build a new word, 'NOVA'. SENSOR lights no letters and no positions correct. On the tally sheet (provided in pad form), we deduce that because there is no 'N' or 'O' in the computer's word, the only letter in the word 'MOON' that is correct is the 'M' which is also in the first position. The process continues until the word 'MARS' causes all four letter indicators and all four position indicators to flash on and off, rewarding a correct answer.

Two other versions of SENSOR can be played as well. In Single Word Mode for Two Players, one player programs a word of two to seven letters, and the other actually plays the game by forming test words with strategic letters. The Double Word Mode allows two players to each enter their own words.

SENSOR is effectively a scoreboard for jotto players, with one flaw in the *auto* mode. Newer players, who have not yet developed a strong ability to deduce the correct combinations, cannot 'give up' and see the elusive word. There is no letter display – only indicators which count correct answers.

Manufacturer/Distributor: Selchow & Righter, Bay Shore, New York/Spear

Price: TBA

Power Requirements: One MN 1604 battery, or mains adapter

Rating: ***

Recommendation: Despite S & R's '7 to adult' suggested play range, those under 10 are likely to need a lot of help from parents.

NOTE: At time of publication, release plans for this game were still being formulated by the manufacturer and distributor.

COMPUTER PERFECTION® *Lakeside*®

Frequently vexing, occasionally frustrating, and consistently challenging, Lakeside's COMPUTER PERFECTION is one of the most popular electronic games. It is played on a circular field, enclosed by a plastic globe, which give it a futuristic appearance. If you have the patience, you'll find yourself occupied for hours at a time.

There are four games: two solitaires and two games for two players, all quite similar. There are ten buttons and ten lights. When you press one of the buttons, one or more of the lights turns on or off.

In the first game, each button will cause a light to glow. You'll notice that each light is numbered (0–9). You must first find the button that causes No. 1 to glow, then find the button that causes No. 2 to glow, and so forth, through No. 0. There are three skill levels – the first essentially allows all possible flexibility within reasonable time limits, the second allows only 30 button presses to work out the logic of which-button-causes-which-light-to-turn-on, and the third allows only twelve chances to score the sequence (this is nearly impossible unless you're psychic). In all cases, you must light the lamps in numerical order.

Game No. 2 is essentially the same game as No. 1 – with a penalty. Each time you mistakenly press a button which you've already used to light a lamp in sequence, the game's progress zips back to the point in the game when you last used that button. You must then retrace your steps, avoiding further error. It is a fine jeopardy game.

The third game is the most fun of all, because it pits two players against one another in a most challenging battle of wits and patience. One player tries to turn all lights on, by

pressing an appropriate combination of buttons through the course of the game. The other player tries the opposite – to turn all the lights off. Since the buttons seem to have their own logic, this can be a baffling task at the start of the game, and will certainly be a brain race by the end, as each button's capabilities become known to both players. The fourth game is a simplified version of the third – a race to light a specific number of lamps before your opponent.

Advanced skill levels are available in every game.

Manufacturer/Distributor: Lakeside, Minneapolis, Minnesota/ Action Toys and Games

Price: About £30

Power Requirements: One MN 1604 battery

Rating: *****

Recommendation: If you have the patience, this game is a joy.

SUPERSONIC ELECTRONIC
MASTERMIND® *Invicta Plastics*

This is the only legitimate electronic version of MASTERMIND, the superior table game of logic and deduction. In this revision, Invicta has replaced its red, blue, yellow, white, green, and black plastic pegs with electronic digits (0–9), and the black or white clue pegs with an electronic checkmark or 'X' mark. The game is the same as it has always been, and with the same rules and the quality of the entire MASTERMIND line.

For those who have not yet played MASTERMIND, it is an easily understood game of logic, the object of which is to deduce the correct combination of digits. Let's say that the hidden combination is 9–4–6, and you start your series of guesses with 9–6–2. The game would tell you that you have guessed one digit in the correct position (the checkmark), and one digit in the wrong position (the 'X' mark). You guess again, hoping that it is the '9' causing the checkmark, and type in 9–3–2. The response: one

checkmark and no 'X' marks, telling you that you have one correctly placed digit – it could be the '2', the '9', or even the '3'. You place another guess, 9–7–8, and MASTERMIND responds with that same one checkmark, no 'X' marks. You follow a hunch, keep the '9' in place, and mentally dismiss the numbers 2, 3, 7, and 8 (there is a certain amount of faulty logic in this assumption, but you're playing against time, and so you must take risks and play hunches). Try again with 9–6–1, and you get one checkmark (it's looking more and more like that 9 was a good assumption), and one 'X'. Replace one of the numbers, and switch the final two, and 9–0–6. You get two checkmarks, and no 'X' marks. It looks like the 6 is in the right place. Try a different number in the middle and see what happens. Type in: 9–5–6, and those two checkmarks reappear, with no 'X' marks. Try another number in the middle: 9–4–6, and sure enough, a winning tone sounds and all of the numbers start to flash.

SUPERSONIC MASTERMIND allows combinations up to six digits, and includes a clock to time each match, and a counter to track the number of tries used to find the answer. If you give up, there's an appropriately labelled *fail* button, a necessity if frustration takes its fiendish course. Other features include manual-code entry, so that opponents may enter codes in the computer's stead, and according to Invicta, over a million combinations of digits are available for play.

There is an earlier version of SUPERSONIC MASTERMIND, called simply ELECTRONIC MASTERMIND, which is also available. Aside from the absence of sound effects and the time, the original version offers combinations of up to five digits. Other than that, the games are virtually identical.

MASTERMIND comes packaged in a vest-pocket folder, which includes a pen and scoresheet (you will almost certainly need these implements if you play the five- or six-digit versions).

Manufacturer: Invicta Plastics

Price: £15 (the original ELECTRONIC MASTERMIND sells for £10)

Power Requirements: Two MN 1500 or HP 7 batteries, or mains adapter

Rating: *****

Recommendation: This is a game for adults and perhaps those children who are not easily frustrated (perhaps 12 to adult). It is effective in every way, always challenging, always an addiction to those who care to beat the machine.

STOP THIEF!® *Parker Brothers/Palitoy*®

With this game of electronic cops and robbers, Parker Brothers has successfully blended the infinite possibilities of hand-held electronics with a formula board game, opening a new world of potential formats for the game industry. STOP THIEF looks a bit like CLUE, one of Parker's classic board games, but the games are quite different in their play.

STOP THIEF is a game for two, three, or four 'detectives', each of whom gathers clues and chases an invisible electronic burglar through the streets of a small city. The movements of this bad guy are cooked-up in the brain of the 'electronic crime scanner', an oversized calculator whose digital readout displays information about the thief's movements throughout the gameboard. Numbered gameboard positions facilitate the search.

At the start of each game, a crime is committed and a reward is set. The crime scanner immediately displays the building in which the robbery occurred, allowing players to locate the thief in one of four or five 'red spots' within the chosen building. As each detective races towards the burglarised building via dice rolls, the scanner provides additional information. We hear a door open directly after the crime occurs – so we know that the red spot where the crime was committed must have been adjacent to a door. We then hear footsteps running down a street (between the

buildings there are streets, subways, and newsstands), and attempt to locate a red spot that is adjacent to a door which leads to the street. All detectives hear the same clues, but the readout, showing the *number* of the particular building where the door sound or the window sound was heard, is seen only by the detective 'at bat'.

The thief keeps moving, leaving a steady trail of clues for the intrepid detectives throughout the game. Sooner or later, one detective has a hunch that he or she is standing next to the invisible thief, and when he does, the 'Arrest mode' is used on the crime scanner. The process is simple – just type in the number of the spot where the thief is believed to be hiding. The scanner will react with one of three sounds – a successful arrest, a false arrest (wrong guess), or an escape.

Several thieves must be caught in order to win the game – a feat accomplished by accumulating $2500 in reward money.

'Tip cards', which allow you to buy information from an informer (the crime scanner), will generally allow you to ask the scanner about the actual position of the thief – then the trick is to race towards the thief before he changes course once again.

Manufacturer/Distributor: Parker Brothers, Beverly, Massachusetts/Palitoy

Price: About £30

Power Requirements: One MN 1604 battery

Rating: *****

Recommendation: For all ages, solid family entertainment.

ELECTRONIC DETECTIVE® *Ideal*

Using a series of seemingly unrelated clues, the sleuth (that's you) must link bits of information in an attempt to find the murderer. The plot's been around for years, but this particular version will really stretch your logical wiles.

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It's really a fine lesson in how a computer system works – you must process an array of simple facts in a highly logical manner. Which is not to say that this game isn't fun. It is, but you'll really have to pay attention as you interrogate each of up to twenty suspects. A sample match illustrates the fine points of the search.

Before play begins, you must enter the number of detectives involved in the case (one to four players), and the skill level desired (controlling the number of questions permitted in the interrogation of each witness). For purposes of explanation, let's play with only a single player in the 'Gumshoe' mode (the least challenging, allowing the most 'private questions' in each round of questioning). Each game actually starts with electronic gunshots and a short funeral dirge, followed by a display of the victim's identification number, and the location at which the corpse was found. The very first thing to do is to cross off the location and the number of the murdered victim from your 'Case Fact Sheet' (a cross-referenced tabulator sheet – provided); the thief never returns to the scene of the crime. The game now becomes a race to figure out who committed the murder, using a complicated cross-referencing of where the weapon was found (any self-respecting murderer would *never* remain in the location of his or her weapon – a fact to be used in concert with others later in the game), the murderer's sex, his/her location (uptown, downtown, or midtown *and* east or west side), the weapon used, the 'fingerprints' of the perpetrator (this is the weakest metaphor – what Ideal is really saying is that someone will tell you whether the evil party has an odd or an even numbered card).

All of the facts are found by questioning suspects, whose numbered cards (No. 1 to No. 20, with the murdered party pulled from the pack) are used one by one in the questioning. The computer has told us that No. 12 was killed, so let's arbitrarily start the query with No. 13 (you can start with any suspect). Piper Perez, a Latin singer, is pictured on card No. 13 (the picture and personality profile

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mean nothing, but the cartoons are funny), and so we enter her number into the computer, by pressing *suspect*, then No. 13, then *enter*. She's not talking much – she'll only say that she was with No. 2 and No. 18, but she won't say where. We ask a 'Private Question' (there are five private questions on each suspect's card), asking 'What area did the murderer go to?' and we find out that the murderer went *uptown*. We ask if she knows anything about 'fingerprints' (knowing that there is a custom rule here that only a member of the same sex who is at the location of the murder weapon can tell us anything), and find out that she knows nothing. Following her lead to No. 2, we find out that Al Farook (No. 2) was on the west side, uptown, which tells us that No. 13 and No. 18 were also in the same location – but we still don't know whether they're all holing up at the Factory, the Docks, the Theatre, the Card Party, or the Embassy (but they can't be at the Art Show, because that's where the body was found). In private questioning, Al says that a male did not do it (so a *female* did – check that off on the fact sheet), that the murderer went uptown, and that the murderer was not on the east side (so he was on the *west side*). This merely verifies previous information, so we dismiss him, and we question No. 18, that famous lady newscaster, Doris Dill. Doris tells us that No. 7 was also with them, and that the murderer went to the west side (check it off). She's not much more help (in other words, she had questions on her card whose answers we already know), and so she's dismissed. Rip Rapp, No. 7, tells us that he was at the Factory, and so we know that the whole group was at the Factory. He also says that one of the two guns was hidden in the Theatre.

Using this information, and similar data provided by other suspects, we determine that the murderer was female, on the west side, uptown, with an odd number, and that the weapon used was a .38. The possible suspects become No. 11, No. 13, No. 15, No. 17, and No. 19, and we start eliminating: No. 19 was in midtown so she's not the murderess . . . and so forth. Depending upon luck and the

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right grouping of questions, there can be an 'Accusation' after about five to ten minutes of play. But you'd better be right – in the one-player game, it's all over if your accusation turns out to be a false arrest. (In the two-player game, the mistaken detective is out of the game, and the opposing gumshoe has one more turn to finish the game.)

DETECTIVE sits on a tabletop, fully equipped with keyboard, calculator-like display, and twenty-card file.

Manufacturer: Ideal, Berkshire, UK

Price: About £40

Power Requirements: Six MN 1500 or HP 7 batteries

Rating: *****

Recommendation: Ideal recommends this game for ages ten to adult, and we agree. The game looks deceptively childish, which is a shame, because this game is actually a very advanced, challenging MASTERMIND variation. This is a *super* game.

ELECTRONIC 3-D ESCAPE®
1000 MAZES *Entex/Hales*

Packaged in a handsome desktop unit, this rather futuristic-looking device contains the programs for literally 1000 different mazes. Using a silver-and-black liquid-crystal display, you, the player, actually manoeuvre from within the maze itself. That's right. You are trapped in a maze, and see only walls and alleys to the front of you. Using four directional arrows, you can make your way through a 64-square maze (or a 72, 80, 88, or 96-square maze depending on the number of maze which you choose – each one has its own identification code), always operating in three-dimensional space.

The manufacturer recommends that you actually plot your course using graph paper if your memory needs the assistance – without the help, this can be agonising!

Entex has created a very intriguing, always frustrating, highly exasperating game here, but one that may become

the pride of your collection. They've carried it off beautifully!

Manufacturer/Distributor: Entex, Compton, Ca./A. A. Hales

Price: £29.95

Power Requirements: 4 MN 1500 or HP 7 batteries, or mains adapter

Rating: ★★★★ ½

Recommendation: Try it before you buy it – it may just be too frustrating for some people. Most will adore it.

COMPUTER BATTLESHIP *Milton Bradley Electronics®*

The game of battleship, taught to me by my father using only a sheet of graph paper (which we tore in half and shared) and two pencils, was one of the first games to 'go electronic'. The game's the same as the original, but now it makes noises and practically explodes when a battleship, cruiser or other maritime vessel is destroyed by the opposition.

BATTLESHIP is played by two warring factions, each of whom owns a portion of the sea, represented by a 10 × 10 inch plastic grid. On your grid are placed plastic ships, each of which occupies certain linear positions on the grid (in other words, one ship might occupy spaces A–1, A–2 and A–3 on the grid, while another might hold spaces F–6, G–6, H–6, I–6 and J–6). These positions are entered into COMPUTER BATTLESHIP's computer memory at the start of the game by each player (each player has an input keyboard). The entry procedure is a ritual that takes a good few minutes, and must be done with perfect accuracy. Now the game is ready to start.

One player names a sea position, perhaps 'D–2', enters first a 'D' and then a '2' into a small keyboard on his or her side of the barrier, and presses a button marked *fire*. If the small monitor explodes in the colour red, an enemy ship has been hit. If an insignificant bleep is heard, play

continues with the opposition identifying a new sea position.

The game continues until one of the navies has been devastated.

Impressive though BATTLESHIP's hardware may be, the old pencil-and-paper formula is just as good and easier to play. Each ship position must be entered manually in the electronic game (it is easier and faster to blacken squares on graph paper), and no features improve play because there's a computer on hand. Only the noises and the ability to blow up opponents' ships with a greater degree of realism make COMPUTER BATTLESHIP a more fascinating game than the original.

Manufacturer: Milton Bradley, London

Price: Under £40

Power Requirements: One MN 1604 battery, no mains adapter

Rating: **

Recommendation: If you are unfamiliar with the original, COMPUTER BATTLESHIP is a solid game of deduction. The electronic effects are impressive, but it is unlikely that they will impress veteran battleship aficionados.

THE GENERALS® *Ideal*

Contrary to the impression I formed in my mind by looking at the packaging and marketing materials on THE GENERALS, this is not a fully electronic war game. Instead, it is a tabletop strategy game with manual operation and some electronic hi-jinx in the scoring of the game. It's worth a look . . .

Throughout the world, there are dozens of variations on the game that we call chess. THE GENERALS is a Filipino variation, wherein each play piece is assigned a numerical fighting power (instead of move capabilities, as in chess). When two pieces from opposing sides come back to back in a confrontation (human players never see the opposing fronts of the pieces, so they never know the value of the

soldier who beat their own) of key importance, a third party serves as 'arbitrator' identifying the winning and losing pieces. It is this function that has been taken by the electronic brain that is the heart of THE GENERALS. When two play pieces meet in battle, both are removed from the board and placed on a special set of platforms, designed to react to various pegs beneath the base of each individual play piece. (Upon close inspection, you'll notice that the pegs beneath the Private differ from the Sergeant's peg configuration, for example). There are 15 different play piece designations in a full army of 21 per side.

The object of THE GENERALS is to capture a *flag*, a task accomplished by confronting the unidentified flag piece face to face with any piece in your army. Like the King in chess, the Flag cautiously moves around the board, and like the King, he is protected by all other pieces in the army. Unlike chess, however, the Flag may win the game for its own side by reaching the opponent's back row on the playing field.

There is no way to play against a computer here, since the computer's only function is to arbitrate. It is player versus player, in the tried and true tradition of tabletop gamesmanship.

Manufacturer: Ideal, Berkshire, UK

Price: About £30

Power Requirements: One MN 1604 battery (*Note*: There is no on-off switch here, because the computer is activated only when playpieces are pressed on to the peg-detection panel. As with all electronic games, the battery should be removed if the game is to lie dormant for a time.)

Rating: ****

Recommendation: The above rating is based on the quality of play, which is very good. You will find, however, that this game really is much more akin to STRATEGO (a non-electronic Milton Bradley game) than it is to other games in this book. The fact that there are electronics involved – likely to become a trend – does not necessarily mean that a game will be based on an all-electronic format. For ages eight to adult, a very good game.

DALLAS *Mattel Electronics®*

Just as this book was going to press, Mattel introduced an electronic board game based on the popular television series, DALLAS. It's a game fraught with gimmicks, but if you love the show, you'll probably love the game too.

The centrepiece of this game is 'J.R. – the Corrupt-Computer', which looks a lot like an inexpensive numerical calculator. Using the standard gear of a board game (paper money, play tokens, playing cards, a gameboard with a grid, populated by 'ranch', 'cattleman's club', and so forth), human players must outwit the J.R. computer. If this is accomplished (and it's hard, because the computer *cheats*), you, as one of the members of the TV show family, will gain control of the Ewing empire.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: TBA

Power Requirements: TBA

Rating: (game has not been played by author)

Recommendation: Based on a sample match I saw at a convention where this was introduced, this one's for DALLAS fans only.

DUNGEONS & DRAGONS® COMPUTER LABYRINTH GAME *Mattel® Electronics*

Although the market is bound to be filled with imitations, Mattel's DUNGEONS AND DRAGONS is the official electronic adaptation of the popular role-playing fantasy game. Mattel has reworked the concept as a board game involving a maze, but the object remains the same – to find and capture a treasure, while avoiding obstacles from dragons to warriors.

This is really a very straightforward approach, as players move tokens from square to square on a checkboard-size grid. Players are given information about their own

locations in relation to, for example, the dragon, via electronic sound effects (triggered by a touch-sensitive gameboard surface). Players move their metallic warrior pieces through a maze created by the computer, and as one player nears the treasure, we hear the dragon awakening, and perhaps taking a quick nibble out of the offensive warrior, causing him to hobble (at reduced speed) back to his home base.

A second skill level introduces the concept of hidden doors and other game complexities.

DUNGEONS AND DRAGONS can be played by one player against the computer, or by two players, as a race of sorts.

Manufacturer: Mattel Electronics, Hawthorne, California

Power Requirements: One MN 1604 battery or mains adapter

Price: TBA

Rating: *** $\frac{1}{2}$

Recommendation: The original game is much more engaging, but this is a highly playable electronic board game.

BRAIN BAFFLER® *Mattel Electronics*®

Eight word and number games can be played on the BRAIN BAFFLER keyboard console, a device geared mainly for two-player competition. As is apparent from a glance at the BRAIN BAFFLER keyboard, this is a multi-game unit whose emphasis is on word games, many of which are thoroughly intriguing. A total of eight games can be played using the 44-button keyboard and the 8-character LED readout, and you will probably need a thorough reading of the instructions before you start (this is not one of those games where you noodle with the buttons until you figure out how it works).

Game 1, ANAGRAMS, begins as a player loads the game by pressing the *A/1* button on the keyboard. The first player then types a word (up to eight letters), presses

enter, and sees *GO appear on the display, on the right-hand side. Player two now presses the *go* button (if the *GO appeared on the left side, player one would go) and sees a scrambled word which he decodes letter-by-letter while a clock ticks off seconds. If he's right, a fanfare sounds, and the complete word is shown on the display. If he's wrong, a series of sounds will tell him so, and the *GO will reappear on the display, inviting him to press *go* once again and see a new scramble of the same word. He may, at any point, decide to *give-up* by pressing the corresponding button, or he may rescramble the word by pressing *refresh*, or he may request the first letter of the word (along with subsequent letters) by pressing the *buy* key. The game is scored by the number of seconds you needed to decode the word, and you'll find that the use of the *refresh*, *buy* and *give-up* keys will affect your score as well. ANAGRAMS is, as I said, a two-player competition, and BRAIN BAFFLER keeps track of scores for both players. You can see the scores by pressing *score* at key times in the game. Low score wins.

BUILD-A-WORD, activated by pressing *game* and *B/2*, is a random electronic version of 'ghost'. A letter appears on the extreme right of the display, and it changes to another letter, then another, until one of the two players taps their *Player/Bonus* key. At that point, the letter becomes permanent, and a second letter starts randomly changing. The idea of the game is to build your own word, stopping the letter sequence in the most vexing possible circumstances (first an R, then an H . . . this is bound to draw a challenge unless your opponent is thinking of the word RHYTHM or RHYME). Specific keys are involved in the challenge sequence, which are detailed in the instruction booklet.

FLASH WORD shows a series of eight letters on the display, and changes one of the letters in the combination as play progresses. One of two players stops the action by touching *Player/Bonus*, and each continues to press that button one time for each letter in the longest possible word

he sees in the random combination. Note that the letters themselves are not pressed here – only the *Player/Bonus* button. BRAIN BAFFLER's computer is not capable of judging the game, and so the players themselves, along with a dictionary, control the game. BRAIN BAFFLER only displays the letters. THIRD-DEGREE FLASH WORD, game *D/4*, follows the same rules, changing only the number of letters which change during the display sequence.

COPY THAT is a number game (which might have been more fun if played with letters), where a series of numbers is to be parroted on the keyboard after they're shown. The gimmick here is that players can control the number of digits (only 1–4 are used) on each turn. In this case, the game does judge right and wrong answers.

GO HANG! is hangman, played with words up to seven letters. The instructions promise 'a delight for one or two players', but no single-player mode is available. The game is played by two players as follows: the first player enters a word, presses *enter*, and hands the game to the second player, who sees an appropriate number of blanks shown on the screen, alongside the number 8. Player 2 now has 8 chances to be incorrect in his quasi-logical guesses entered via keyboard. In this version, the computer will not subtract the same incorrect letter more than one time (an improvement over TI's SPELLING B). As in all games on BRAIN BAFFLER, the game is scored as a two-player competition.

The two final games on BRAIN BAFFLER are CONCUSSION I and CONCUSSION II, which are numerical variations on MASTERMIND. CON-CUSSION I is the only one-player game on BRAIN BAFFLER, wherein the computer chooses the hidden combinations. The second CONCUSSION game allows player input of 4-digit combinations.

Many of the games on BRAIN BAFFLER are familiar, while others merely offer different (not necessarily better) versions of already available games. The most important

thing to remember about this unit is its versatility – there are at least 6 totally different games available on the single unit. And each one is a strong basis for mature two-player competition.

Manufacturer: Mattel, Hawthorne, California

Price: TBA

Power Requirements: One MN 1604 battery, or mains adapter

Rating: ****

Recommendation: So long as you realise that all of these buttons don't indicate a full-blown computer with word-recognition capability, you'll be very pleased with the group of games offered by BRAIN BAFFLER. The game tested best with older children with a bent towards word games. Adults found the number of different buttons required for play a bit tiresome, but enjoyed the games anyway.

Mattel has not yet announced plans for a UK release on BRAIN BAFFLER.

SCRABBLE® LEXOR® COMPUTER WORD GAME   *Selchow & Righter®/Spear Games*

Unlike SENSOR, Selchow & Righter's first electronic word game, LEXOR, really does duplicate the action of a SCRABBLE game, in somewhat modified form. It is played with a 26-letter keyboard on a rather futuristic console, and, like SCRABBLE, it begins with a rack of seven letters.

The object of LEXOR's first game (there are three games) is to work a single rack of letters (shown electronically) trying to form as many words as possible within a time limit. There is a bonus for words of 5 letters and over. Each letter used carries its own score (H=4, Z=10, P=3, etc.) in this and every LEXOR game. This particular game, called FLASH MODE, is designed for two players, with one entering and the other challenging unacceptable words. LEXOR does not feature a dictionary of any kind – it merely displays random letters and keeps score.

In the SOLO MODE, LEXOR chooses seven letters (no blanks), and the player must use as many as possible in forming a new word. A second rack appears, with all new letters, and the player reacts in a similar manner. There are fourteen racks in all.

The third mode is not a game at all. Instead, it is a scorekeeper, to be used in all of your future SCRABBLE matches. All you need do is to type the word, with appropriate double- and triple-letter and word scores, and the computer will tally your point scores. It will time each turn as well.

Manufacturer/Distributor: Selchow & Righter, Bay Shore, New York/Spear Games

Price: TBA

Power Requirements: Four MN 1400 batteries, or mains adapter

Rating: ****

Recommendation: A must for all SCRABBLE players.

NOTE: Spear/S & R has not yet made definite plans for release date in the UK. Consult your local retailer for up-to-date information.

ELECTRONIC POKER   *Entex®/Hales*

Entex ELECTRONIC POKER is a particularly good rendition of the betting man's favourite, five-card draw. The game itself is large (5 × 8 inches), and carries a split display, designed to show dealer cards on the left and player cards on the right. When the *DL* (deal) button is pressed, the display shows five cards in each area; the player cards are exposed, and the dealer cards are not. Cards are designated by the familiar seven-segment display, with one diagonal line added to show queens and unexposed cards. Suits appear directly above or below each digit. (The symbols are a little confusing at first, but everyone learns to accept them.) Take a good look at your hand – a queen and a five of clubs, and a two and a seven of spades, and a five of

hearts, for a total of one pair of fives. Discard the queen, the seven and the two by pressing the buttons for those card positions (each *position* in your hand is numbered, regardless of the card which occupies it – so you discard your first card by pressing 1, your third card by pressing 3, your fifth card by pressing 5). Each of these discards flashes to allow a double-check, which you verify by pressing *GO*. Your new cards come up immediately, at random – jack of clubs, six of spades, queen of hearts, which still leaves only a pair of fives. The dealer's hand – at this point showing only the backs of cards – blinks the cards it has replaced.

It is now time to place the first bet – so press *BT* for bet, and enter your wager, anywhere from 1 to 9999 points. Let's bet 10 on our pair and press GO. The dealer sees that bet, raises it 1, and exposes only two cards – a jack of spades and a six of diamonds. You bet again, raising to a total of 20, which the dealer sees and raises again by 1 chip. He shows another card – the ten of hearts. Final bet now – let's go to 30. Dealer sees the bet, then shows his hand with a *pair* of sixes and a *pair* of tens. He takes the pot, we press *T* for the accumulated total of your winnings – down 30 points.

Keep at it – it takes practice to become a card shark.

Manufacturer/Distributor: Entex, Compton, California/Hales

Price: £22.95

Power Requirements: Four MN 1500 or HP 7 batteries, or mains adapter

Rating: **** $\frac{1}{2}$

Recommendation: A wonderfully addictive game for adults who enjoy a nice blend of skill and chance. Once in the hands of a true fanatic, you may lose this person's attention for weeks!

COMPUTER GIN® *Mattel Electronics*®

GIN is a very different game as electronic hand-helds go, primarily because of the card display. The entire deck is etched into the liquid crystal display, with active cards 'lit' during the game. Notice that there is no 'bet' function on

the Mattel version – this is a card game, not a betting game.

As in cards, we start with a deal. Eleven cards appear, one of which is flashing. You may either take the flashing card, or draw a new one. In any case, you must then discard, a process done by holding the *select* button, causing each card in your hand to flash, one at a time. When the proper card flashes, press *discard* and the card will drop out of sight.

The dealer, your opponent throughout, will either accept the up card by saying 'thanks', or draw his own card – 'no thanks'.

The game continues until one player has gin, or when the dealer knocks. In the second circumstance, the player may then meld on to the dealer's hand.

Manufacturer: Mattel, Hawthorne, California

Price: TBA

Power Requirements: One MN 1604 battery

Rating: ****

Recommendation: A fine electronic card game. I only wish we could see the dealer's hand.

NOTE: Mattel has not officially announced release date. Consult your toy store for more information.

JACKPOT GIN RUMMY & BLACKJACK *Entex®*/Hales

This is a full-feature game of gin rummy, including scoring, in a format first used for this company's POKER game. The card display looks rather like a calculator, with the usual numerical patterns for 1–9, '0' for the ten, 'J' for jack, an '0' with diagonal slash for the queen, 'K' for the king, and an 'A' for the ace. Backs of cards look like queens, with an additional line through the centre. These patterns are a bit unorthodox, but not very troublesome after the first few plays. Suits are indicated by small pips either above or below the value of each card.

GIN RUMMY is a ten-card game, and so it starts with a random deal of ten cards, plus one 'up' card. First order of business is to arrange your hand – you'll find that card positions are numbered 1–10, and that you can switch any two cards in your hand by first pressing the position and then the *CH* button (change). Remember that you want either groups of the same value (three 10s, four 4s, three jacks, etc.) or runs of cards in the same suit (7–8–9 of hearts, 2–3–4–5 of clubs, J–Q–K of diamonds, etc.) or any combination of the two. You may also decide to Knock (to end the hand when your unmatched cards total less than ten points). Let's play out a hand.

Take a good look at the up card at the extreme right side of the display. If you want it, press the number of the card you wish to replace, and then *CH*. If you don't want it, press *DR* (for draw), look at the new card, and either use it to replace another card in your hand, or let it go. The game continues this way until either you or the dealer declares *GIN!* (or knocks).

Scoring is based on the total value of the losing hand minus the total value of the winning hand. When either dealer or player knocks, the opponent may meld (*MD* button) cards against the hand used for knocking, to decrease losses, and possibly to undercut the knocked hand by showing a hand of sufficiently low point value. This is explained thoroughly in the game's instructions.

The dealer's hand will be displayed, incidentally, when you press *CH* after either a knock or a gin.

All gin games are played to a total of 100 points.

JACKPOT is not just a game of gin. There is a fairly basic blackjack game here as well. Unlike gin, this is very much the betting game, where the highest possible scores are the only goal.

To play BLACKJACK, slide the *BJ/OFF/GIN* switch to *BJ*. You'll hear the cards shuffle, and see two cards, face-down, dealt to player and dealer. Place a bet by pressing 1 to 999 on the keyboard, and confirm by pressing *BT*. Now press *GO* to see both of your cards, and the dealer top card.

Press *HT* to hit, and *ST* to stand. Dealer stands at 17 or over. You may double down if your cards are of identical value, and you may split pairs if one comes your way.

Each deal is played to 21 points. The cards are shuffled after thirty-eight cards have been played. There is no insurance in this blackjack game.

Manufacturer/Distributor: Entex, Compton, California/Hales

Price: £27.95

Power Requirements: Four MN 1400 or HP 7 batteries, or mains adapter

Rating: ✳✳✳✳

Recommendation: A good gin game, plus an adequate blackjack. Fun for adults, especially devout cardplayers.

BACKGAMMON CHALLENGER® *Fidelity*

The game of backgammon, which involves the movement of checkers along a path of twenty-four points to a home base area, is a perfect game for play by computer. The reason why is as simple as computers themselves: the program tracks the number of black checkers and the number of white checkers on each of the twenty-four points (plus 25 – the area used for bearing off, and 0, which is normally called the centre bar). All the computer need do is to identify the checker being moved, and either add or subtract the number of blips on the die used to affect the move.

Backgammon aficionados will love BACKGAMMON CHALLENGER primarily because of its innate flexibility as to modes of play. The game itself offers both computing/calculator area and full-scale gameboard, all on one durable lap-sized unit. Feel free to handle the dice yourself, or to let the CHALLENGER's randomising programs throw the dice for you. Each move is indicated by number (from position 13 to position 10), and multiple moves caused by doubles are made clear as well. All of the generally accepted strategies have been programmed into CHALLENGER, including the play of a running game, hit

and run, blocking and bearing off games. His strategy varies game to game, assuring a partner of infinite imagination.

Speciality modes.on this particular device include *PV*, for Position Verification, which tells you how many of whose checkers are currently located on each point, and *PB*, the problem mode, which can be used to set up mid-game situations for strategic practice. CHALLENGER keeps a close watch on every move, and will react abruptly if you enter an illegal move during the game.

For the gamblers among us, BACKGAMMON CHALLENGER offers a built-in doubling feature as well.

In general, BACKGAMMON CHALLENGER provides an intelligent opponent for totally manual play. The *fact that this game is computerised* does not indicate automated action – you must move each and every checker by hand, for yourself and for the computer. This has its positive effects, however, in that it forces beginners to pay particular attention to the board positions of every checker. The physicality of CHALLENGER, as opposed to the video versions of backgammon reviewed in a later chapter, allows more direct interaction with the game.

The only problem here is an unfortunately designed storage package, which almost guarantees the loss of custom-made checkers in all but the neatest households.

Manufacturer: Fidelity, Miami, Florida

Price: £89.95

Power Requirements: No batteries, uses a mains adapter which is included in the package.

Rating: ****

Recommendation: Perfect for players of all ages; only the concept of reading the digital computer readout may prove confusing for the youngest players. *Note*: The computer programming in this game may occasionally display an impossible play situation. Be sure you buy the most updated version of all Fidelity products – *they're getting better all the time.*

OMAR is named for master backgammon player/actor Omar Sharif. It is a calculator-like device which is programmed to play backgammon, in much the same way as BACKGAMMON CHALLENGER (see preceding entry). OMAR is unique in that it is a hand-held computer, available in one of five different product formats. There are effectively two different OMARs – each identical except for the display (OMAR I and OMAR IV have LEDs – bright glowing red alphanumerics on a dark background, while OMAR II, III, and V have LCDs, or liquid-crystal displays, whose images are black on a silver-grey background). Tryom created the OMAR series as a packaging plan for retailers – all of the games are effectively identical. For the record, OMAR I, with its LED readout, is packaged with a nine-inch, magnetic portable backgammon set. OMAR II, with LCD display, is packaged 'with a Deluxe Corduroy' portable backgammon set. OMAR III again offers the liquid-crystal display (which most people, incidentally, prefer, because the dice faces are more clearly displayed), this time with a fifteen-inch backgammon set. OMARs IV and V are provided without any backgammon set at all. OMAR IV has LEDs, and V has LCDs. And there you have it.

But what of the game, you ask? It's easily played using a twenty-button keypad just below the display console. Most buttons are used to simply input your moves (a numerical code for each point on the board is used for entry, with twelve possible entries, and an arrow to indicate upper board – where the arrow points up, and lower board, where the arrow points down). Two dice flash on the right side of the display at random; to stop the dice, one presses the button imprinted with a die. To enter a move, or to see OMAR's moves, press *EN*, also known as the *enter* button. A *VR* button is used to verify all board positions, again using the numerical codes and arrows for all information.

As with any electronic counting game, one must watch each and every move very carefully, for the computer cannot see what you are doing. A single piece in the wrong place, especially in a game like backgammon, could destroy the play of the entire game. OMAR, like the Fidelity Products, has not been perfect in this regard. It too is being improved with time.

Manufacturer/Distributor: Tryom, Cleveland, Ohio/Studio Ann Carlton

Prices:
OMAR I – About £33
OMAR II – About £60
OMAR III – About £65
OMAR IV – About £25
OMAR V – About £57

Power Requirements: This varies per unit. All five games can be operated by mains adapter, included in all but OMAR V. The first four units use four MN 1500 or HP 7 batteries, but OMAR V uses an MN 1604 instead.

Rating: ***

Recommendation: Overall, OMAR is a reasonably durable backgammon set. The use of upper board and lower board is a bit confusing, especially since the official game is played with an inner board and an outer board. But the controls and the display all function quite effectively, and it does play a good game of backgammon.

You will find design flaws in both the Tryom and the Fidelity lines. Again, these games are being upgraded periodically, so be sure to buy the most recent model.

GAMMONMASTER II® *Studio Ann Carlton/Tryom*

Essentially an early version of OMAR fitted into a larger plastic backgammon board, GAMMONMASTER II offers the same sort of play sequences as OMAR.

GAMMONMASTER II physically resembles the Fidelity Electronics game called BACKGAMMON CHALLENGER, with two important design improvements in the physical game itself. First, large-sized electronic dice readouts make the game a bit more clear,

and second, storage space is offered for checkers when not in use.

Tryom and Fidelity have created somewhat different versions of the same classic game. Each version has its advantages, but our tests seemed to favour the Fidelity game by a small margin.

Manufacturer/Distributor: Tryom, Cleveland, Ohio/Studio Ann Carlton

Price: £90 (with doubling program)

Power Requirements: Plugs into AC

Rating: ***

Recommendation: Try both units in the store and see which one you prefer. This is a matter of opinion. (Gammonmaster II, incidentally, was the first backgammon game in release.)

CHECKER CHALLENGER® *Fidelity*

The game of checkers was never a game that was played very seriously around my house. Since checkers involves only three simple rules (move one diagonal space on each turn; try to reach the opposing side of the board to 'king' your player; you must 'jump' over your opponent's checker if the opportunity presents itself), it was always a game for children, and nothing more.

The game of checkers, and its electronic counterpart, CHECKER CHALLENGER, is hardly a children's game. It is a serious strategic competition, played on one of two levels against a very smart computer. All dark squares on the checkerboard are numbered for identification, and the computer not only recalls the position of each checker on the board, but recalls which of the checkers have achieved 'king' status as well. A calculator-like keyboard allows human players to communicate with the computer, using board identification numbers as the common language (from 22 to 18, or in the case of a jump, from 26 to 19. A double jump is displayed as from 26 to 19 – flashing – and 19 to 10). The computer follows every move with absolute

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accuracy, and even flashes an 'I Win' light when it reigns victorious. A humble 'I Lose' light flashes when the human player wins the game.

The layout of the game includes a plastic checkerboard with numerical imprints, and a specially programmed keyboard and display, also in the checkerboard unit. All computer inputs are touched-in manually (which is a good idea because it forces humans to play with computerlike accuracy).

Manufacturer: Fidelity, Miami, Florida

Price: £65

Power Requirements: Plugs into AC

Rating: ***

Recommendation: If you like checkers, this is an excellent game. If you are not a checker player, it is unlikely that this game will change your gaming habits.
Note: The game includes a strategy booklet entitled 'Checkers Secrets of the Experts'.
Second Note: CHECKER CHALLENGER/4, has been discontinued.

CHESS CHALLENGER® 7   *Fidelity*

The layout here provides a durable plastic chessboard and a calculator-like device on a single unit designed for single-player activity. The chessboard is numbered and lettered, and the computer uses a letter/number code to identify each move (AZ to AS, E4 to F6). All of the computer's moves are displayed in this format, and all of your moves are entered using this code as well.

CHESS CHALLENGER 7 can be played on one of seven levels, each linked to response time. The level of play can be changed at any time during the game. A problem mode allows you to preset board positions and either play them yourself or study the computer's strategies as it selects the best possible moves on the board. An override feature allows you to play several moves before the computer

makes its move. You may also add or subtract pieces during the game in a 'teach' mode. Pawn promotion, *en passant* captures and book opening are also standard. The computer varies its strategies, of course, in every game. With position verification, which tells you which piece is in which square on the board.

Manufacturer: Fidelity, Miami, Florida

Price: £89.95

Power Requirements: AC only

Rating: ***

Recommendation: The computer program plays a good game of chess, with a good group of features. The physical design does not allow for storage of pieces, which is an annoyance, though a minor one at that.

VOICE CHESS CHALLENGER® *Fidelity*

A vastly improved version of CHESS CHALLENGER 10 (no longer available – it was a more powerful chess player than the CHESS CHALLENGER 7 now on the market), VOICE CHESS CHALLENGER comes packaged in an attaché case. It is played in much the same way as CHALLENGER 7, with a greater number of features available via more powerful memory. And, of course, there's a computerised voice, helpful in identifying which piece moved to which square, check and checkmate, and even the locations of every piece on the board.

VOICE CHESS CHALLENGER can be played at one of ten levels, which can be changed at any point in the game. Response time at the beginner level is five seconds; at the expert level, response time is eleven minutes. An 'infinite' amount of response time can be entered as well, allowing the computer all the time it needs to search its memory for the best possible moves.

The game allows you (or the computer) to select any one of forty standard book openings for the game, and to continue in book pattern for as long as you like. Castling

and *en passant* are in the program, but only to be used when clearly advantageous to overall strategy. Pawn promotion always results in the return of a queen, though you may program other responses via the problem mode. You may also move twice in a turn, setting better strategies as you go – the computer will help you to select your move in this or any other instance.

An extensive educational approach has been used in the writing of this computer program, so you'll find that recommended moves, proper use of book openings, and end game solutions are all part of the system. In the 'infinite response time' mode, where the computer may take days to decide on its next move, you may interrogate as to its current thinking with the press of a button.

You can buy VOICE CHESS CHALLENGER with any of four languages – English, German, French, or Spanish.

Manufacturer: Fidelity, Miami, Florida

Price: £149

Power Requirements: AC only

Rating: ****

Recommendation: The SENSORY VOICE version (below) is much better, but this is a very good chess system.

SENSORY VOICE CHESS CHALLENGER® *Fidelity*

Fidelity's top-of-the-line chess game is essentially a full-featured version of the relatively new SENSORY CHESS CHALLENGER game, with even stronger programming. Aside from a solid walnut housing, magnetised chess pieces and optional printer attachment, you'll find significant advances in the software which guides all computer movements. A built-in clock ticks off the time remaining for each player's move.

The sensory chessboard eliminates all data entry; the

computer 'moves' its pieces by first flashing an occupied square's indicator light, and then a light in an empty square. You respond by pressing on each square in your move, activating the sensors just below the surface of the board.

Nine levels of play, plus an infinite level which allows unlimited response time for either player, make this game the most advanced ever created by Fidelity's labs. Fifty vocabulary words are spoken to guide the action. The voice is especially helpful in the position verification mode.

There is an enlarged group of book openings available, along with sixty-four complete games originated by the masters (Spassky, Fischer, Morphy, Capablanca). The game is designed for you to compete against either side in these games, and even score points if you select the move originally played by a master. It's a welcome addition to the package of features.

Manufacturer: Fidelity, Miami, Florida

Price: £250

Power Requirements: AC only, but you can buy a special battery pack for portable use.

Rating: **** $\frac{1}{2}$

Recommendation: This is the best Fidelity game on the market, substantially more powerful than either the SENSORY CHESS CHALLENGER or VOICE CHESS CHALLENGER alone. It compares with only one other game – the GRAND MASTER SYSTEM III by Tryom.

CHESS TRAVELLER® *Acetronic*

A portable computer, several inches smaller than this book, is a full feature miniature chessboard. Acetronic claims that CHESS TRAVELLER plays chess at a level competitive with Fidelity's CHESS CHALLENGER 7 game, with a far more functional design. There are seven levels of play difficulty, each determining the amount of time allotted to the computer for calculating possible

moves, and a problem-solving mode. Play levels can be changed during the course of the game.

All pieces, whether in play or captured, fit into the pegboard base of the game. A chessboard, with lettered/numbered squares, occupies most of the pegboard. Every move is keyed into the computer by identifying the square you presently occupy, and the square into which you are moving (e.g., D6 to D8). This data is displayed directly above the board. The computer communicates its moves on the display as well.

Features include a tutorial mode (where the computer plays against itself), prohibition of illegal moves, *en passant*, pawn promotion, mate in two moves, and position verification. Computer random action makes every game unique – there are thousands of possible moves.

Distributor: Ace

Price: Under £50

Power Requirements: Six MN 1500 or HP 7 batteries, or mains adapter

Rating: ****

Recommendation: An excellent portable chess, more than competitive for all but the best players.

CHESS SYSTEM III   *Studio Ann Carlton*

There are virtually no games currently available on the retail market that can compare with SYSTEM III. The software design is superb, and the hardware system is simply beautiful. It is everything that an expensive special-purpose computer should be – and it fits into an attaché case!

CHESS SYSTEM III is a component affair, with a self-contained master device at its heart. This central console is the actual computing device, and various accessories can be plugged directly into special jacks, located on the sides of the console itself. Each game begins with a determination of time allowed to respond, to be set at any point between

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zero seconds (instantaneous response) and 100 hours. You then select your colour (which you may, incidentally, change at any time during the game) and enter your opening move. You'll find several helpful design features will make the game seem very futuristic – the display shows a sketch of the piece in play, uses international symbols for capture, check, checkmate, draw, and stalemate, and shows suggested moves when requested to do so. CHESS SYSTEM III will allow you to back up through ten moves, so that you may study, or even change your strategies during the game, playing from either side.

Position verification, automatic execution of *en passant*, and castling, and various physical design niceties make the game even more appealing, especially if you play chess frequently.

The central console can be made more versatile with the addition of several accessories. A liquid-crystal chessboard which receives and displays all moves instantly can be hooked into the left side of the console. A printer assembly fits on to the right side. It displays lists of moves or if desired, illustrations of the entire board at any point in the game; these charts are great when used for analysis. A power pack allows two-and-a-half to five hours of play without access to a wall outlet. The memory module is required to recall the ten most recent moves, and to store your current game for up to one full year.

This is an awfully powerful chess system, among the best available. In serious competition, however, you'll find that chess programs written for the new personal computers, whose memories are even more substantial, will be able to beat this game. Most other games will not.

Distributor: Studio Ann Carlton

Prices: Master Unit – £170, LCD Chessboard – £120, Printer – £110, Memory – £30, Power Pack – £35, Master Unit, Chessboard, Printer, in a leatherette attaché case – £475

Power Requirements: AC, or rechargeable power pack

Rating: *****

Recommendation: Treat this like any investment – spend some time working with this system at a store or hobby club before you buy, and ask your retailer about other, comparable units that may have appeared on the market in recent months. It is wise to shop around – especially in the largest cities – you may be able to find some handsome discounts. But you will not be dissatisfied with Chess System III.

COMPUTER CHESS *Mattel Electronics®*

With its introduction of Chess, Mattel Electronics has firmly established itself as far more than a maker of toys and children's games. This is a pocket-sized chess computer, with four skill levels, competitive with many of the better chess computing systems available.

The emphasis here is not the highly-competitive focus often associated with electronic chess games. Instead, Mattel has chosen to create a well-designed and quite challenging machine for the everyday player. The software is designed to allow human players to enquire as to next moves, to take back up to three moves, to generally sharpen playing ability. A human player can also switch sides with the computer in mid-game, which should be particularly encouraging to those of us who are beaten quite solidly by electronic opponents every time.

The design of the game is simply terrific – it's about the size of a pack of cigarettes, but there's a full-scale liquid crystal gameboard which fills nearly half the surface area of the unit. Mattel's typically straightforward push-button controls makes this chess game very easy to learn – assuming, of course, you know how to play chess. (And if you don't, this is a great machine to teach you. It's endorsed by some of the best teachers in the United States.)

There are four different skill levels, and the game can be played simply as a chessboard, between two human players. The liquid-crystal board is probably the best portable chessboard ever created.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: TBA

Power Requirements: Four HP 7 or MN 1500 batteries, or mains adapter

Rating: *****

Recommendation: Don't expect this machine to be the champion – there are lots of computers that can beat it. Use this as the ultimate portable, with the best design available for those who are not yet chess masters.

BRIDGE CHALLENGER® *Fidelity*

A handsome special-purpose computer which can be carried anywhere, BRIDGE CHALLENGER is one of the most complex electronic games yet devised. It is complex in regard to circuitry and computer memory, but remarkably easy to play. When you open the case, you will find a console packed with input keyboard and display lights, and two decks of specially marked playing cards. It isn't as hard as it looks, just follow the instructions, step-by-step, and you'll be playing computerised bridge in no time at all.

The first step is the choice of dealer. Press *DL*, and you'll see the North, East, South, and West indicators light, one at a time. Stop the light at the appropriate indicator to choose the dealer for this hand.

Next, tell the computer which positions will be occupied by human players. The computer will play one, two, three, or all four hands if you like. Vulnerability and choice of conventions are the third and fourth presets – you may add to the Stayman, Gerber, and Blackwood conventions with 5-card Majors, a Weak 1 No-Trump Opener, a strong 2-Club Opener, Jacoby transfers over 1 No-Trump opening, Baron Replay to No-Trump opening, or Strength of 2 No-Trump Response.

After setting these standards of play, the word 'cards' will appear on the readout. It is time now to deal four hands, and to pass each of them over a scanner, which reads the markings of each card in precisely the way a

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modern cash register reads price codes from grocery items. Each card must then be placed in a specific position on one of four mats – this is a long, tedious ritual, but it's the only way yet invented to tell the computer about the cards in each hand.

Bidding is the focus of BRIDGE CHALLENGER, and the game is programmed to react to the essentials set forth in American Standard, ACOL, and various European systems. The machine is good at the bidding game and becoming even better as it evolves (see recommendation), allowing doubles and redoubles via special key entry. A 38-page booklet, entitled *The Bridge Challenger Bidding System*, outlines Fidelity's commitment to high-level play, as it thoroughly details evaluation of hands, opening bids, appropriate replies, intervention bids, overcalls, reopening bids, and penalty doubles, as well as second replies and slam bids. While there are subtle imperfections, this bidding system is a good one, more than adequate for all but the finest players.

The contract is finally won by one side or another, and play begins. But first – the dummy hand must be rescanned by the BRIDGE CHALLENGER, if the dummy is human. This is again tedious, but an apparent necessity in the play of the match.

Scoring follows the rules of Rubber Bridge. The number of tricks won is first displayed, followed by the contract, and the number of tricks made over book. The instructions further explain how match scores are accumulated over an entire game.

You may decide to replay any hand, even going so far as to change the human/computer status of the hands (the computer will not cheat – it will forget the cards it has already seen, automatically). There is a Bridge review function as well, which will run through all bids or all tricks, depending upon the phase of the game.

BRIDGE CHALLENGER comes with two decks of specially marked cards, and three mats with thirteen numbered card positions, used by the computer to identify

cards to be played for each trick. Plan to use an entire bridge table to play the game.

Manufacturer: Fidelity, Miami, Florida

Price: £279

Power Requirements: Mains adapter, or optional battery pack

Rating: ****

Recommendation: The card entry procedure is tedious, but once past that, this is an attractive item.

Chapter 3

Games Action

Depending upon your imagination – and the size of your wallet – this next group of games may lead you through the perils of an African safari, the rigours of a space battle, or the mucky terrain of a tank skirmish. All of the games in this chapter are full of action, requiring fast reflexes and sharp strategies.

You will find some sports games here, some war games, and some games that simply refuse to fit into any other part of this book. Particularly popular is Entex's SPACE INVADERS, based on the popular video game of the same name.

There are two types of action games in this chapter: games whose electronic controls simulate action on a display screen, and games that actually involve physical action. A visit to any toy store will show that there are many more of the second variety – from radio-controlled gliders to tanks that can be programmed to do the cha-cha. I've limited the second group because I believe that this is a book for game players, as opposed to people who are fascinated by items that might be labelled 'toys' or 'sporting goods'.

EARTH INVADERS   *CGL*

Picture yourself in a strange and mysterious region, where your only hope of survival is to dig holes around your position and hope that the ever-aggressive force of invaders will fall in. That's the basis of EARTH INVADERS, one of the most enjoyable and most competitive electronic games ever created.

You are a soldier of sorts, represented by a glowing design that looks a bit like an ant, whose task is to bury as many invaders (which look like little spiders) as possible within the 13-minute time limit. You first dig a hole (press DIG), and then wait for an invader to fall in. Then – instantly – you must press BURY, lest the invader climb back out of the hole to step on you. (You have five seconds to do this – just enough time, unless you are busy digging a hole elsewhere on the board.)

This is a game of territories, where you attempt to control as large an area as you can by digging holes around your area. The rub is that you must be right next to the hole that an invader trips into in order to bury him.

The game itself is played on a grid of 45 boxes, arranged as a 9×5 matrix. Eight central boxes are 'no man's land', where neither you nor the aliens can go and where no holes can be dug (these can be used to protect your man from the invaders, if you construct your line of holes to connect these embankments).

The actual digging and burying processes are easy enough – just press DIG or BURY, along with an arrow (up, down, right, or left) to indicate which square is to be acted on. The same set of arrowed buttons is used to move your little man – whether in the arrangement of new strategies, or simply to run away from an invader's crush.

Two skill levels, the first with you moving faster than the invaders ('AM', for amateur), the second with the invaders moving faster than you ('PRO', for professional), really enhance play. Invaders always appear first as a group of three (to get you started), then five, then seven, then three again. Invaders must be buried one by one – for a highest possible score of 10,000 points (or 13 minutes of play, whichever comes first).

The soldier, incidentally, is red. Everything else on the board is blue. You get three soldiers per match – in case you get stepped on.

Distributed by: CGL

Price: £25

Power Requirements: Four MN 1400 batteries or mains adapter

Rating: *****

Recommendation: One of the most challenging, and most entertaining games in the electronic idiom. A must for any game player, good for children (8 and up), great for adults. Do not confuse with Space Invaders – this is a very different game. And it's terrific!

UFO MASTER-BLASTER STATION® *Bambino*®

Designed to look like an implement of space travel, this space station plays a game similar to the SPACE INVADERS battle, with an entourage of enemy UFOs attacking a missile base. The playing field is long and narrow, and the invaders are sufficiently large to play under any circumstances. Each match begins as a UFO floats down towards the base from the top of the screen, shifting between one of three invisible columns as it comes near. Using a three-way joystick to manoeuvre your launch between these invisible columns, you must *fire* when the UFO is within range. The earlier you hit the UFO, the more points you score. And if the UFO manages to steer clear of all of your shots (it doesn't try very hard to do this, even at the most difficult skill levels, but it does occur), your missile base is destroyed, and the game is over.

The speed with which the UFOs approach is determined by a three-way switch at the base of the game.

Manufacturer: Bambino, Los Angeles, California

Price: Under £35

Power Requirements: Four MN 1500 or HP 7 batteries, or mains adapter

Rating: ***

Recommendation: A boredom factor may set in for adults early on; children will love this, though.

ELECTRONIC SPACE INVADER® *Entex®/Hales*

Based on the extraordinarily popular video arcade game of almost the same name, SPACE INVADER is an outer space target battle of a most enticing variety. The game itself is very simple – you move your missile base back and forth to dodge the bombs being dropped from the bank of invaders located directly above your base. At the sametime, you shoot up at the invaders, hoping to pick them off one by one. (A more complete explanation of the video SPACE INVADERS game ap*ears in the final chapter.)

This is a good target game, but it lacks many of the intricacies offered on the video version of the game. The major differences involve the way that the ships move , in the video version, the most significant movements are quite subtle, where this LED version allows only the broadesd strokec. This hand-held game, and the other SPACE INVADERS adaptations, are fun to play, but the video versions (see page 145) are simply better games. With two play speeds.

Manufacturer/Distributor: Entex, Compton, California/Hales

Price: £21.95

Power Requirements: Six MN 1500 or HP 7 batteries, or mains adapter

Rating: *** (a noble effort)

Recommendation: This is fun to play, but, again, the video versions are stronger.

SUPER GALAXY INVADER® *Bandai Electronics®A.A. Hales*

This is another small-scale version of SPACE IN-VADERS, played on a larger field than the Epoch game provides. SUPER GALAXY INVADER again pits a cluster of alien attack ships against a missile base which is armed with 10 missiles. Since the cluster of invaders is

smaller and the playing field larger, there is room for some interesting movements. When combined with a progressive speed-up feature, these movements make for an addictive game indeed.

Easy to play with only two manipulation buttons (a missile base *left/right* button and a *fire* button), SUPER GALAXY INVADER's physical controls are unfortunately a bit sluggish. If you pay attention, you can win this game, and when you do, you can further increase your score by facing new clusters of invaders. The game becomes progressively more difficult with each new set of invaders as the result of a speed-up factor and a certain amount of fatigue. It's fun to play, fun to win, and an interesting challenge, even though it lacks many of the fine points that make the video game so very intriguing.

Manufacturer/Distributor: Bandai, Secaucus, New Jersey/A.A. Hales

Price: About £30

Power Requirements: Six MN 1500 or HP 7 batteries

Rating: *** $\frac{1}{2}$

Recommendation: For all ages.

MISSILE INVADER   *Bandai Electronics®/A. A. Hales*

This is a pocket-sized version of Bandai's SUPER GALAXY INVADER. Because of the smaller size it loses some positive features of its big brother in the translation. There is only one alien ship jiggling back and forth across a playfield, but it seems to be shooting off its bombs almost all the time. Most of the human player's time is spent merely dodging bombs and occasionally scoring lucky hits on the UFO, which gently floats at the top of the playing field at odd intervals.

The best possible score here is 245, based on an enormously successful raid using your fifty missiles to hit the ideal combination of the UFO (five points) and the

Invader (one point). Unlikely you will score even half that without an awful lot of practice.

> **Manufacturer/Distributor:** Bandai, Secaucus, New Jersey/ A. A. Hales
>
> **Price:** About £35
>
> **Power Requirements:** One MN 1604 battery
>
> **Rating:** *
>
> **Recommendation:** Buy the bigger version; it is more fun to play.

SPACE LASER FIGHT® *Bambino*®

Unlike so many of the space games on the market, SPACE LASER FIGHT is a one-on-one duel between two robots armed with laser beams. It's a little like fencing from a distance, and a lot like the Bambino boxing game, which is available in the same housing, with many of the same controls.

Each robot has two strategies at his command: the ability to stoop, stand straight, or leap into the air, and the ability to shoot lasers from one of three positions. The former grouping is used for dodging oncoming beams, while the latter is used to attack.

The match begins with each robot in position, ready to shoot. You'll quickly find that your controls can only be used in certain combinations – from the 'jump' position, for example, you can shoot only high or medium lasers. Fast fingers will allow the best players to change positions quickly, so that offensive and defensive actions are used in concert with one another.

Each player robot is equipped with thirty laser beams at the start of the bout, and the game ends when *both* robots have exhausted their ammunition.

A random obstacle, rather like a shield, appears throughout the game in either high, medium, or low positions.

Scoring is based on the number of hits to the head, mid-

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section, and legs placed successfully. For one player versus the computer, or two players.

Manufacturer: Bambino, Los Angeles, California

Price: Under £50

Power Requirements: Four MN 1400 batteries, or mains adapter

Rating: ***

Recommendation: Fun to play, but a little too similar to the BOXING game. Buy one or the other, but not both.

See Bambino Note.

INVADERS FROM SPACE *Grandstand*

This adaptation of SPACE INVADERS offers many of the points that make these intergalactic games so appealing, and a small playing field which simplifies the game enormously. At the top of the rectangular playing field flies first one, then four glowing blue 'invaders' which move as a group from left, to right, to left, to right. The screen then adds another row of four invaders from the top, then a third, and a fourth, and so on. At the bottom of the screen is your missile base, which is bombed by the invaders up above. You can move your missile base from left to right with a small joystick, and you can return fire by pressing a *fire* button. You'll find that as the game progresses, the invaders will march down the screen towards your base, and that the invaders closest to the base are worth the most points when you hit them.

Scoring and game progress are adjusted to the number of hits successfully placed by each side. The computer always controls the invaders, and you always control the base. The computer also randomly flies a UFO above it all which you can try to hit for bonus points; it is a direct adaptation of the video original.

Manufacturer: Grandstand

Price: About £25

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Power Requirements: Four MN 1500 or HP 7 batteries, or mains adapter

Rating: ***$\frac{1}{2}$

Recommendation: A slight design flaw occasionally ends games prematurely, but aside from that, this is an exciting version of the video game. It's great for kids. The game is lots of fun, especially as a hand-eye co-ordination exercise.

ELECTRONIC BLASTER *CGL*

Another SPACE INVADERS variation, this one is rather neatly designed as a robot-type plastic case, with large, easy-to-use controls and one of the clearest, brightest, and best displays I've seen in an electronic game. Three columns of alien ships bomb your base station, which is moved out of the way of each bomb with a small joystick. Shoot back at the invader force by pressing the large red *fire* button, and score the best possible point values by spotting the enemy ship early – the higher the target when you hit it, the more points you will score.

Your missile base will reappear two times after it is either hit by a bomb or displaced by an alien ship which manages to float down to base level.

For one player, with three skill variations all based on speed of play.

Distributor: CGL

Price: About £20

Power Requirements: four MN 1500 or HP 7 batteries

Rating: ***$\frac{1}{2}$

Recommendation: Still a simple version of SPACE INVADERS, but easier to play than most of the available variations. It has been improved on, by the units that follow.

GALAXY INVADER 1000 *CGL*

Another Space Invaders game, this time with a two-colour display, and a built-in challenge for the better players.

There are a limited number of missiles allotted to your base station – so nearly every shot you take *must* be a good one if you are to win this game. A total of 250 missiles will score 750 points, the trigger for an additional 50 missiles, and an open shot at the top score of 999 points.

As with most Invaders games, you'll score maximum points when each alien ship first appears on the screen.

With three skill levels.

Distributed by: CGL

Price: £20

Power Requirements: Four MN 1500 or HP 7, or mains adapter

Rating: ****

Recommendation: Good for all players, with special attention paid to the real Invader fanatics.

JET FIGHTERS   *CGL*

This is a good SPACE INVADERS game, played sideways, with jets instead of alien ships. The orange jets race towards your blue base, fire at it, and attempt to wipe you out before you've destroyed their forces. The usual alien saucer, which hovers beyond the space alien force, is replaced by a destroyer here.

With three skill levels.

Distributed by: CGL

Price: £24

Power: Four MN 1500 or HP 7, or mains adapter

Rating: ***

Recommendation: Buy either this or a SPACE INVADERS; don't buy both because they're the same game.

SUPER SPACE JACK   *Grandstand*

It's clear that SPACE JACK is an alien invader game just by its design. Here we have SPACE INVADERS with

some nice twists, packaged for easy handling and play under most light conditions.

Preset the number of missiles and the number of UFOs prior to play, and you're off. There are three skill levels, each involving the frequency of attack.

This is a fairly conventional set-up, with two specialities: first, you can shoot out the missiles (the bombs from invading ships), and second, you must move your base ship after each time you fire.

Distributed by: Grandstand

Price: About £25

Power Requirements: Four MN 1500 or HP 7 batteries

Rating: ***½

Recommendations: One of the better INVADER units around, does everything that it should and a bit more.

COSMIC COMBAT *Tomytronic®*

Despite an ingenious and truly different line of electronic games, Tomytronic has issued a relatively ordinary version of SPACE INVADERS. With four invaders across, the playfield is smallish. Choose either one, two, three, four, or five missiles and the game starts instantly (the rendering of your choice really does start the game).

There are two speeds, the first so very predictable that it's barely even fun. The second speed is what most would consider 'normal', thus leaving players without a truly high-skill level.

Controls are conventional, with a 3-position 'move' switch, and a shoot button.

Scoring is explained in the instructions; the top score is 999. Even the best will have a tough time with that, because the game ends whenever an alien reaches the ground level base – and with a small playfield, that's a frequent occurrence.

Manufacturer: Tomytronic, Compton, California

Price: As yet unfixed

Power Requirements: Four MN 1400 batteries, no mains adapter

Rating: ***

Recommendation: Compare options and prices between all SPACE INVADERS games before you buy.

ONE-ON-ONE GALAXIAN 2® *Entex®/Hales*

This is the finest, most sophisticated version of SPACE INVADERS ever published in hand-held electronic form. With few defections (mainly in visual design), this is everything an electronic game should be, and more.

You should by now understand the basis of SPACE INVADERS, where a troupe of aliens descend upon a series of home bases. The aliens (the computer) shoot at the bases, and the bases (that's you) shoot at the aliens. As the aliens get closer to the bases, they become more dangerous (a collision could end the game), and more valuable in terms of point-values as well.

The invaders have a course of 8-sections across, and 12-down, making this the most detailed SPACE INVADERS course on the market. The invaders begin the game in convoy fashion, randomly dropping their missiles on the bases below. Then, without warning, one breaks from the pack, and starts a raid. Shoot at the alien, and you'll score bonus points on the hit. (Or, just protect yourself by shooting out his bullets before they strike.) This action continues as you wipe out convoy after convoy of aliens, or until you run out of ships (you start the game with three ships, but you're awarded an additional ship, in reserve, for every 2000 points you score). The ships, incidentally, are precisely the same as the home bases found in conventional SPACE INVADERS games. Every time you shoot out a convoy, or fleet, it is noted on a small scoreboard. You can play forever – there are symbols for *hundreds* of fleets.

Assorted buttons and controls include a 'demo mode',

which allows you to demonstrate the action of the game, and to double-check that all LEDs are operative before you start a game (a good feature – it should be on all games). You can play with sound effects, or, if its incessant, beeping drives everyone else in the room crazy, you can play without sound effects. Controllers are standard – different arrows showing direction, the fire button, and so forth.

There are two ways to play GALAXIAN, each at two skill levels. The first way is described above, where the computer controls the invading force, and you defend. You may also opt to play against a fellow human, allowing your opponent to control the invading force, to have him (or her) release aliens from the convoy and start firing wildly at your home ships. One note of importance: your opponent can control, and fire, from one ship at a time, so the opponent's role is a difficult one indeed.

There is only one bad feature of this game – a field of green stars which confuses the playfield regularly, interfering with the red base ships and the green invading force and the orange bullets. The greens don't 'simulate travelling through space' as it says in the instructions, they disrupt an otherwise superb playing device's presentation. Still, you can't have everything – but we can hope for it.

Manufacturer/Distributor: Entex, Compton, California/Hales

Price: £32.95

Power Requirements: Four MN 1400 batteries, or mains adapter

Rating: *****

Recommendation: If you're looking for any kind of action game, you must consider this device. It is simply one of the best ever invented.

GUNFIGHTER *Bandai Electronics®/A. A. Hales*

Based on the arcade game, this is a shoot-'em-up game. It begins with a cowboy on each side of the display, with an occasional covered wagon riding through the cactus patch

at centre screen. Cowboys can, of course, shoot at one another, using an up or down button to evade shots, or to position for an attack. Once a cowboy is shot, a funeral march plays and the game is over.

Manufacturer/Distributor: Bandai, Secaucus, New Jersey/A. A. Hales

Price: About £20–£30

Power Requirements: One MN 1604 battery

Rating: ***

Recommendation: Give it a try – for ages eight and upwards.

ZAP!® *Coleco/CGL*

On the theory of 'simple is best', especially for the younger children, Coleco designed one of the simplest electronic games of all. This is a game of reaction – when you see a light coming your way, tap the button in front of you. A green ball of light starts at what amounts to centre court, and without warning, it shoots towards either one of the two players. Once the light starts coming your way, tap your *Zap!* button (don't press it, tap it, because it reacts when you *lift* your finger, not when you press down). If you act fast, the ball will start moving towards your opponent, who will react by tapping his *Zap!* button and send it back to you.

You'll notice that there are three numbered lights in each player's field. This can be, and usually is, used as a strategic element. The longer you wait to return the ball, the faster it will travel towards your opponent. But there is a danger – if you wait until the ball reaches your No. 2 or No. 3 area, it is coming very close to your goal; you must react judiciously before you yourself are zapped.

Kids *always* beat their parents. Try it.

Manufacturer/Distributor: Coleco, Hartford, Connecticut/ CGL

Price: About £10

Power Requirements: One MN 1604 battery

Rating: *****

Recommendation: Great game for kids, who'll probably love it and then get bored and forget about it (you know how kids are . . .). Try it with one player, with one hand on each control – it's quite a feat of co-ordination.

Note: Coleco is dropping this item from the line, but it is good enough to try and track one down. It's really a lot of fun.

BLAST IT *Entex®/Hales*

A simple hand-held version of the video classic BREAKOUT, this game is played with three button controls instead of the usual dial or joystick controller.

The game lacks the vitality of the original, but it is a challenge to wipe clean the 7 × 3 inch grid of bricks on the board – harder still because of the button controllers.

Three balls per game; two skill levels.

Manufacturer/Distributor: Entex, Compton, C. A./Hales

Price: £23

Power Requirements: Six MN 1500 or HP 7 batteries

Rating: **$\frac{1}{2}$

Recommendation: Somewhat expensive for this fairly simple game.

WILDFIRE® *Parker Brothers®/PaliToy*

While it is true that the large-scale game of pinball has yet to be duplicated in hand-held electronic form, Parker Brother's WILDFIRE is a noble effort. Both silver ball and flippers (WILDFIRE has two players) have been adapted for electronic play as custom-shaped red blips, as have the various bonus gates, kickers, and bumpers. There are a good many pinball-like scoring gimmicks and gadgets on this table but, alas, only the mechanics – and a small dose of its spirit – are reproduced even in this, the best of the electronic pinball hand-helds.

The game itself is about the size of a paperback bestseller and about as thick. There are two flipper buttons (also used to set the ball's speed and the number of players in the match), and a ball release, whose touch can be timed to roughly control the ball's initial power. It all begins as you shoot off a red blip, which bounces about from bumper to bumper, scoring points as it makes contact with each point. There's a 'kicker', which pinball fans know as a ball-drain, which has been fixed to bounce (kick) the ball back into play. This is turned on and off by making contact with a target. There's also a bonus area called the Cave, which is entered only with expert flipper capability (or a lot of luck). A Tilt kills the ball if you are playing too fiercely (read that as two flips per second – too fast for what the machine considers to be 'normal play'). Score is kept in thousands on an indicator for one to four players simultaneously (on one readout – the scores are sequenced). The indicator keeps track of the player at bat, and counts the number of balls played.

Manufacturer/Distributor: Parker Brothers, Beverly, Massachusetts/ PaliToy

Price: About £30

Power Requirements: Six MN 1500 or HP 7 batteries, or mains adapter

Rating: ***$\frac{1}{2}$

Recommendation: Ages seven to adult is reasonable, with probable boredom factors with the older set. There just isn't enough magic here for the long haul.

RAISE THE DEVIL® PINBALL   *Entex®/Hales*

As electronic pinball games go, this is better than most. It all starts with the *shoot* button, which causes a red ball of light to travel up the ball path. The ball then travels through the playing field, which is in fact a matrix of lights which glow when the 'ball' occupies one particular spot on the board. The ball moves from bumper to bumper,

making all sorts of noises as it scores points. One can really 'Raise the Devil' and score lots of points by hitting the bumper at his nose.

The flipper action is clean, accurate, and requires a little practice for those who tend to drain their balls too easily.

Each game is played with three balls, whose total score is tallied on a digital scoreboard. Four skill levels affect speed.

Manufacturer/Distributor: Entex, Compton, California/Hales

Price: £21.95

Power Requirements: Three MN 1500 or HP 7 batteries, or mains adapter

Rating: ***

Recommendations: As good as any of the pinballs on the market. It's simple, unpretentious, and delivers all its promises.

ATOMIC ARCADE® PINBALL *PaliToy/Tomy*

This is the largest, most realistic pinball toy on the market, but is only partly electronic in its operation. The game itself is akin to old-fashioned flipper pinball, with mechanical scoring and mechanical operation. The ball itself is a real metal ball, not an electronic blip. The flippers are plastic pieces, controlled by spring action, operated by large toy-style push-buttons. When you start the pinball on its path, it strokes electronic bumpers and rolls over switches that generate all sorts of championship noises and sound effects, causing a totally-mechanical scoring device to tally each ten and hundred and thousand.

ATOMIC ARCADE is a semi-electronic game, with a style of play that is very much a toy version of the large, old-style, pre-electronic pinball games. It has been a consistent favourite with all sorts of game players and, compared with other units, provides a most realistic pinball-like feeling.

Manufacturer/Distributor: Tomy, Carson, California/PaliToy

Price: TBA

Power Requirements: Five MN 1300 batteries (heavy power use)

Rating: ****

Recommendation: A good pinball game, though only semi-electronic in design. Very good for younger children.

GAME AND WATCH BALL   *CGL*

The first of the new small-format liquid crystal games were released by CGL during the summer of 1980. Measuring roughly the size of a credit card, and featuring wonderful animated displays, the GAME AND WATCH games all feature cartoon characters hard at work in some oddball occupation.

Each game has a built-in quartz clock as well.

BALL is a juggling game. It stars the only electronic juggler I've ever seen. You play Game 'A' by controlling the juggler's hands – moving them either right or left in order to keep two balls in the air at all times. When a ball is dropped, the word 'Crush' appears, and the game is over. The number of successful juggles appears throughout.

Game 'B' is faster, and it requires the juggling of three balls.

Distributor: CGL

Price: About £20

Power Requirements: Two LR 43s or SR 43s (they're special batteries that can be bought at a camera store or jewellery store. They last six months.)

Rating: ****

Recommendation: Lots of silly fun, for hours – and small enough to carry in your pocket.

GAME AND WATCH VERMIN *CGL*

A game of clubbing cartoon rodents must be the most arcane game ever created for the electronic medium. In the first game, the rodents (called moles) try to wiggle their way through cracks in the floor, while you control the action of the exterminator's hammers with a left and a right button. The second game is faster, with an additional crack in the sidewalk. Each mole is worth one point.

The game ends when three moles have made their way through the floor's openings.

With quartz clock.

Distributor: CGL

Price: About £20

Power Requirements: Two LR 43s or SR 43s (buy at camera or jewellery store)

Rating: ****

Recommendation: Certainly the most deranged game available – and somehow lots of fun because it's so strange.

GAME AND WATCH FIRE *CGL*

The folks who are designing these GAME AND WATCH games have a very peculiar outlook. This one allows you to control a stretcher, located outside a burning building. Five people jump at once, and you've got to move that stretcher left or right, trying to save as many lives as possible. Each time you miss, the jumper crashes and reappears as an angel. Three angels and the game is over.

A second version of the game lets nine people jump at once.

With quartz clock.

Distributor: CGL

Price: About £20

Power Requirements: Two LR 43s or SR 43s

Rating: ****

Recommendation: Another strange one. I love it.

SPLIT SECOND® *Parker Brothers®/PaliToy*

If MERLIN is for those whose greatest strength is in their perceptive skills, SPLIT SECOND is for those who favour fast fingers and quick reflexes. But anyone can play, as you'll see.

All of the movements on the SPLIT SECOND program of eight games are controlled by four directional arrow buttons, and two accessory buttons, one normally used to select games and the other to start games. In some games, *select* and *start* are used within the games as well.

The SPLIT SECOND screen features the outline of a 3 × 5 inch grid, which is composed of a series of fifteen different boxes. Within each box is the image of a large glowing dot. The lines which make up the boxes and the dot are not usually seen in any one particular configuration; instead, these red elements are lighted to create everything from star fighters to racecourse obstacles (you'll need some imagination). The way in which the display area is used is most clear in the first three games, each of which is a maze.

In game No. 1, a random series of line segments creates a maze-like path to a three-sided box. The ball starts at the top of the readout, and the box (the goal) is on the bottom. Using the arrow buttons, one must manoeuvre through the stationary maze elements and get the ball into the box. It's very easy. Easy enough to accomplish in 3 or 4 seconds. Easy enough to be accomplished with even the toughest mazes (a maze can't be very tough on SPLIT SECOND – there aren't enough available lines), even at breakneck speed, in a succession of different mazes. The idea here is to move the ball as fast as you possibly can, because the game is timing your actions to the *tenth of a second*, and the more quickly you complete ten mazes, the better your score will be. All scores, for all games on SPLIT SECOND are

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expressed in the simplest possible terms: by the number of seconds and tenths of seconds used to complete the challenge.

Game No. 2 is played in precisely the same way, but a maze appears for only an instant before it vanishes, leaving memory as your only guide. Game No. 3 eliminates even the flash, leaving your instincts to guide the way. Even the last of these isn't very hard because the mazes themselves are simply constructed.

The fourth and fifth games are space attacks, with an imaginary fighter ship (a dash on top, a dot in the middle, and a dash on the bottom – it looks a little like the STAR WARS X-wing fighter). The arrow controls are now used to guide the enemy fighter into the central target area, and either the *start* or the *select* button is used to fire. In game No. 4, all action is guided by your arrow controls; in the more difficult game No. 5, the enemy ships try to escape your control while you play.

AUTO CROSS, the sixth game, is an imaginary car race through an obstacle course. You must manipulate the dash (your car) through two circles or around one circle in a series of fifteen obstacles.

In the seventh game, STOMP, your ball is positioned at the centre of the screen. Indicators appear to the right, left, or above or below the circle for an instant – and you must react with the appropriate arrow button before the indicator disappears. The goal, as always, is to react quickly. The game is scored only on the number of seconds required to successfully STOMP twenty indicators – up to 99.9 seconds (the maximum in all of SPLIT SECOND's games).

The eighth and final game on SPLIT SECOND is SPEEDBALL, and many thought it to be the most challenging game of all. A ball appears on the screen alongside four elements of dashes which form a line. The challenge is to trap the ball in a four-sided box by changing the direction of the moving line and its elements as fast as possible. The ball is elusive, to say the least, and few

beginners can entrap the red blip until it virtually slows to a stop (games Nos. 4–8 all slow down if goals are not met quickly – a great automatic feature).

All games automatically stop after the maximum 99.9 seconds has elapsed. While playing the same game over and over, the computer will show your best score if you press the *up* arrow between games. For one player, but you can hand the game to a friend and ask him to beat your score. Some games automatically alter speed based on your skill level.

Manufacturer/Distributor: Parker Brothers, Beverly, Massachusetts/PaliToy

Price: About £30

Power Requirements: Six MN 1500 or HP 7 batteries or mains adapter

Rating: **** $\frac{1}{2}$

Recommendation: Some games are better than others, with the first group of mazes the clear favourite. With these mazes and the rest of the assortment, Parker Brothers is likely to please most game players.

SLIMLINE SPEEDWAY *Tomytronic®*

This is a really snappy liquid crystal car racing game, packaged in a convenient plastic wallet, not much larger than a calculator. There are five different games on this particular speedway, played using various combinations of a 'left-right-forward-reverse' set of 4 buttons, an accelerator-button (each press increases the acceleration by one increment – up to 4), and a brake (which subtracts one acceleration increment with each touch). All games are played on a silver-and-blue field, measuring just $1\frac{1}{2}$ by $2\frac{1}{2}$ inches.

Games one and two are similar to one another. Each is a lap race, where a computer-controlled car weaves in and out of lanes, creating sudden obstacles. In game No. 1, you use only the accelerator and brake; in game two, you also

control the car itself. This control becomes somewhat frustrating because of the layout of the course (it's a tall, thin rectangular doughnut). When heading forward at the start of the race, the 'right' button turns the car to the right (helpful for either changing lanes or turning). When heading forward on the opposite side of the track, forward isn't up, it's down, so you again use the 'right' button (because you're making a *right* turn), although the graphic shows your car moving to the left. Coordinating your turns with the track's awkward shape is frequently harder than the game itself. Once mastered (even the best still confuse the button/turn) you'll become addicted to the racing action. After a few hours of play, you should be able to master the only skill level on both races, scoring the top 990–999, and causing the first place position to flash at the top of the display.

The other 3 games are not as intriguing. The fifth game is an advanced version of game No. 2 with the computer-controlled car moving in opposition to your own car – and you must avoid a head-on collision. Game No. 4 requires you to chase the computer's car all over a blank playfield, and most of those tested were not particularly enthusiastic about this one. The third game is more like the others on the market, with your car pushing ever upwards on a segment of the racecourse, avoiding lots of other cars in the process.

Generally speaking, games No. 1, No. 2, and No. 5 are among the best racing games on the market, once you've mastered the oddity of turning your car.

Manufacturer/Distributor: Tomytronic, Compton, California/ PaliToy

Price: TBA

Power Requirements: Two G 13 batteries (oftentimes used in watches and calculators – they're about the size of an aspirin)

Rating: ★★★★

Recommendation: If you're coordinated, this is a great little game. If you've got a tough time with left and right, particularly

in speed situations, this will be the most frustrating device ever created by man.

GRAND PRIX *CGL*

With its silver liquid-crystal display and clearly defined graphics, GRAND PRIX is one of the better auto-racing games yet devised. Some of the physical play features are marginal, but the race itself is lots of fun.

There are two different racing styles to choose from: a lap race, wherein you are timed while you cover a specified number of laps, and a timed race, where you cover as much distance as you can within a given time period.

As with many coin-operated games, you must switch between three lanes, avoiding oncoming vehicles while moving as quickly as possible. (A note on this – steering is done by pushing a small stick either to the right or to the left – beware of its tendency to snap back to the middle position automatically, thereby causing unwanted lane changes. You must *hold* the shift in place throughout the race.)

Acceleration is accomplished by shifting from low to medium to high gears. Beware of 'playing it safe' and moving slowly in low gear. Such manoeuvres usually result in an over-heated engine in only seconds.

The gear indicator which should read 'low, medium, high' is a little confusing – as the designer has opted for a graphic pattern (small pattern if low gear, big, if high) for no apparent reason.

Aside from these minor flaws, the races are good solitary entertainment – but only in a reasonably lit room (the liquid crystals do not 'glow' as their LED cousins do).

Distributed by: CGL

Price: About £25–£30

Rating: ***½

Power Requirements: Three MN 1500 or HP 7 batteries

Recommendation: After the first few hundred races, this game may wear thin. Add a star if you're a race fan.

CHAMPION RACER   *Bandai Electronics®/A. A. Hales*

Most people tested had a tough time warming up to this racing hand-held game, mainly because beginners show an enormous (and unintentional) propensity towards crashing. Once you understand the instructions (a task best accomplished in a learn-by-doing mode; the instructions are not very clear), this racecourse can be a real challenge.

The race begins as your car attempts to enter what amounts to a three-lane highway (raceway) from a right-hand ramp. By using the *up/down* switch, you can speed up or slow down, and weave between lanes, hoping to avoid a very crowded racecourse. There are three lanes (as in the other racing games), and within each lane is a grade which moves the game faster and faster as you near the end of each lap. It isn't terribly clear when each lap ends, so you do your best to speed along, avoid oncoming competitors, and re-enter the speedway whenever you're hit (using the entrance ramp) until the time alloted is over. There are 100 seconds to play, with penalties deducted for each crash.

Manufacturer/Distributor: Bandai, Secaucus, New Jersey/A. A. Hales

Price: £15

Power Requirements: One MN 1604 battery

Rating: ** ½

Recommendation: The finesses available on other units are not available here, but the game does play nicely for less demanding speed demons.

REDLINE®   *Kenner Electronics®/PaliToy*

Your motor starts to churn as you grasp the steering wheel – keep your eyes on the Christmas tree* as a string of yellow

* A Christmas tree is a ready-set-go signal used in professional drag racing. It is an upright row of coloured lights which has become a sport standard.

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lights ends in a bright green light. That's the way this drag race game begins, as you clutch the steering wheel (and nothing more). The physical game includes the basic steering wheel assembly, the Christmas tree, a gearshift, a gas pedal button, and a speedometer read-out.

You start in first gear, and quickly shift into second (and squeal your tyres, just like in drag racing), third, and fourth, always pushing hard on the gas to better your elapsed time rating and average miles per hour. The game here, aside from pressing hard on the gas, is to accelerate and maintain a speed to just below your 'red line' (the red line is the mark on a dragster's speedometer beyond which the engine blows) for the best average speed and best time. Level one sets the red line at 10,000 units (the unit of measure is not explained) – so you try to ride at about 9000, avoiding a sudden end to your game by accidentally topping the red line. The other skill levels set the red line at 9000, 8000, and 7000.

The sound effects, incidentally, are terrific.

Manufacturer/Distributor: Kenner, Cincinnati, Ohio/PaliToy

Price: About £40

Power Requirements: Two MN 1500 or HP 7 batteries

Rating: *** ½

Recommendation: This is hardly your standard box-type electronic race game. The disembodied steering wheel feels a little strange at first, but once you get the feel of the gas and gear buttons, you'll probably love it.

ELECTRONIC 2-MAN SKEET® *Ideal*

Inside the enormous box is a full-scale shooting gallery, known as 2-MAN SKEET. The sport of skeet, or skeet shooting, as it is generally known, usually involves one or more sharpshooters, armed with 12-gauge shotguns, who

aim the guns at specially made clay plates called 'pigeons'. These pigeons are propelled into the air by a machine designed specifically for that purpose. Ideal's version of the sport is a scaled-down indoor version of this Olympic competition.

ELECTRONIC 2-MAN SKEET can be played by either one or two players, each equipped with plastic shotguns. The clay pigeons have been replaced with a ball of light, which is projected on any wall by the master console. Each time you hit a moving target, the computer replaces the image with a full-colour explosion of light. With the sound effects (loud and plentiful), the concept of a shooting gallery is executed beautifully in your living-room. Seven successful hits end the game, but there is no timer, and no shot-by-shot counter to tell you how well you did. Instead, you may set the mode knob to *Novice, Marksman,* or *Expert*, allowing one and one-half minutes, one minute, and a half-minute to shoot all seven targets. In the *dual* mode (the *only* two-player game here – which makes the name of the game a bit off-centre), there is no time limit, so both players just shoot until all seven hits are made.

SKEET plays three games, each involving the projection of a circle of light on a wall (any white or coloured wall is okay, but the lightest colours are best. Also, avoid patterned walls at all costs, because you'll have an impossible time following the ball of white light). Game No. 1 SKEET moves the light circle back and forth on the wall for a few seconds, and then replaces it with another, and another until all of the shots are made. RUNNING TARGET, the second game, keeps a ball of light on the wall at nearly all times (you'll play in this mode most often – at least we did). DISAPPEARING TARGET dims the target from view periodically, without any apparent logic. This was the least favourite in the bunch, but all were fun to play.

Manufacturer: Ideal, Berkshire, UK

Price: Under £50

Power Requirements: No batteries, it comes with an AC adapter

Rating: ** $\frac{1}{2}$

Recommendation: There are lots of target games of every possible variety on the market. This is neither the most versatile nor the most exciting. The electronics are a good game element, and the sport is nicely reproduced, but this was not a top choice in any age group.

FLASH® *Ideal*

Electronic beanbags? Sure, why not? There are six standard kid-sized beanbags, which are thrown at a circle of eight pie-piece plastic targets. At the centre of the 'pie' is a scoreboard, used in various ways in the different games. FLASH plays five different target games in all, each played without trouble by an eight-year-old. First is PINBALL (the name has nothing to do with the game), where six beanbags are thrown at the individually coloured panels. The object is to light at least six indicator lamps (each panel has its own indicator light), and possibly even seven or eight lights (sometimes a beanbag can hit two panels at the same time; rarely, but sometimes). PINBALL isn't the most imaginative game here, so read on.

ALL OR NOTHING starts out with four of the eight panels 'on' and four panels 'off'. Hit a panel whose indicator light is off and it turns on, hit an on panel and it turns off. Try to turn them all on or all off, using your beanbags. No count of shots or scoring when you eventually manage to win – just a loud siren.

The MEMORY game first flashes a point score for each panel on the central scoring readout, including a zero value. Your points accumulate with each hit, but they're wiped out when you hit the zero panel. The values for each panel change with every game.

MOVING TARGETS lights panels one by one in a counter-clockwise action, and you must hit each single lit panel before it goes dark. TIME TRIALS is similar, but the action is random from panel to panel, and the time

periods and adjusted scores vary per amount of time lit.

FLASH can be played by one, two, three, four, or five players. And incidentally, you can either stand FLASH on a table, or you can hang it on a wall (as you would a dartboard). Either way, this game is designed to stand up to a lot of punishment.

Manufacturer: Ideal, Berkshire, UK

Price: Under £50

Power Requirements: Four MN 1300 batteries

Rating: ***$\frac{1}{2}$

Recommendation: This is basically a child's toy, but it really is lots of fun for the whole family. The beanbags make FLASH unique. You'll probably spend a number of pleasant evenings in the basement or family room with FLASH.

SAFARI® *Bambino*®

When I was first introduced to SAFARI at the Toy Fair Convention, I decided that I wanted to have it for my very own. For some reason (which I have not been able to discern), SAFARI is consistently one of the favourite games played by test groups and even visiting friends. It's one of the few games that I keep out on the coffee table, and it commands the attention of nearly anyone who picks it up, and keeps that attention for about 15 minutes at a time.

SAFARI, silly as it sounds, is a game of caging animals in the jungle. Moose, cobra, apes, tigers, hippos, giraffes, elephants – they're all here, pictured in most simple forms on a 21-square playing field. Each animal lights at random, and your job as zoo-keeper is to manoeuvre your cage, using the four directional arrows made famous in the sports games, around their lit squares before those squares dim. You see a giraffe, for example, in the centre of the top playing field line, and you run your cage up to that square, ready to press the *catch* button once you've got him surrounded. The race becomes a matter of getting to that giraffe before her light goes out, which in turn causes one or

more of the other animal lights to go on. It's crazy, but it's lots of fun.

Three skill levels control the speed with which the animal lights flash on and off. A bonus scoring chart is included in the instructions, rewarding strings of successful cagings accomplished 'in a row' – without missed cagings in between.

Manufacturer: Bambino, Los Angeles, California

Price: Under £50

Power Requirements: Four MN batteries, or mains adapter

Rating: ★★★★

Recommendation: Try before you buy. We all loved it. For all ages.

Chapter 4

Learning Aids

Most of the computers in this chapter are not games. Rather, they are special-purpose, hand-held devices that teach. Many, but not all, of the devices have been created as a result of long and careful study of the educational process, and will therefore be an enormous help to children who are learning verbal skills or the fundamentals of mathematics. Texas Instruments is the clear leader in this category, having been most fastidious in the pre-market testing of all such devices.

Children will find plenty of games to play in these learning aids – games that are fun to play, games that teach important concepts while they entertain. It is here that educators place their greatest hopes for the future – in a computerised classroom situation, where intelligent machines work in tandem with teachers, perfecting the learning process just a little bit more every day. Age ranges are listed with every game in the chapter.

Just as there is nothing more detrimental to a child's development than a bad teacher, you will find that there is no advantage in purchasing an inferior or frustrating learning device. Read these reviews carefully, parents – it would be best to discuss them with your child's teacher.

SPELLING B®   *Texas Instruments*

This tidy little package, including keyboard and workbook in a convenient plastic folder, is intended to make spelling a more colourful experience for elementary school youngsters. The unit has 264 words stored in the computer's memory, which have been chosen with the help

of educators as words particularly important in the learning of spelling.

Select one of three levels, press the *on* button, and we're ready to play the first game, called SPELLING B. A number appears on the display, and the instructions tell us to find a coloured picture in the workbook identified by that number (there are 264 pictures, grouped for both difficulty and concept). The number is 78, so we turn to number 78, and there is a drawing of a broom. Let's type in 'b-r-o-o-m'. The computer displays 'right', and shows us the next number (they usually run in order, so the next would be 79). If we enter the incorrect spelling, SPELLING B shows a 'wrong'. If we do so twice, SPELLING B will first display 'wrong', and then the correct spelling of the word. STARTS WITH is a simpler version of SPELLING B, requiring only the first letter of each numerically identified picture. In both these games, players may request 'free letters' by pressing the *Clue* button. And in both cases, the game will provide a final score after 5 words are played.

MISSING LETTER is a partial game of 'hangman', where several letters of a word are shown and the player must fill in the rest correctly. MYSTERY WORD is virtually the same game, only it begins as does 'hangman' with a full set of blanks in place of letters. In both cases, the level selected for play determines the length of the words, and in both cases, the *Clue* button may be used to make play easier. MISSING LETTERS is scored on a number correct out of five words; MYSTERY WORD flashes 'You Win' if you crack the word in nine guesses or less, and 'I Win' if your nine letter guesses are insufficient to spell the word. (The letter guesses, as in hangman, are counted only if they're wrong – if the correct letters only are entered there will not be a single point deducted from the score).

The final game on SPELLING B allows the entry of any word (3 to 7 letters) for a game of anagrams. It can be played by one or two players. The first player, for example, might enter the word 'spell' into the memory, which the computer would recall as, perhaps, 'lelps'. The second

player would then retype the entire word, for which he gets either a 'right' or 'wrong' display. Two wrongs results in the word being displayed. Up to five words may be stored in the computer's memory for each game. Scores are shown as number correct, both in asterisks and in digits (why both? – most children who can spell 'd-o-g' can recognise the digits 1–5).

The game automatically turns itself off if left idle for more than a few minutes.

Manufacturer: Texas Instruments, Dallas, Texas

Price: £30

Power: One MN 1604 battery, or mains adapter

Rating: ***

Recommendation: The picture identifications in the first two games are effective teaching tools, but they are, of course, limited to 264 words. The 'hangman' games require considerably more sophistication, and the anagram game requires more sophistication still. It would seem that TI has created a learning series for three highly distinct age/skill groups here. The jump from level to level can be a frustrating affair for children who are unready to do so, and so the use of SPELLING B should be carefully monitored in order to assure the most advantageous uses of the game. Additionally, the 'personality' of SPELLING B is virtually humourless, and so a poor speller may be further frustrated by the constant appearance of the word 'wrong'.

For good spellers and children who enjoy playing progressively more difficult word games, SPELLING B can be fun to play.

SPEAK & SPELL® *Texas Instruments*

This brightly coloured fun-filled device is one of the finest electronic innovations yet created. It is a talking keyboard, with an initial vocabulary of over 200 words, designed to teach elementary school children the fundamentals of spelling. And it does the job beautifully.

A fast tour through the keyboard is necessary before the exercises are detailed. There are 40 keys, 26 of which are the letters of the alphabet. Turn the game on (that's another

button), and press a letter, perhaps the 'W'. SPEAK &
SPELL responds in a male voice – 'Double-yooo'. Each
letter in the alphabet is pronounced on the touch. And as
for the dozen-or-so other buttons, you'll find start switches
for 4 other games, a *Replay* key (used to play an entire
exercise for a second time, using the same word list), a
Repeat key (asking SPEAK & SPELL to reiterate its most
recent word), a *Clue* key (asking for 'free letters' in a
'hangman' game), an *Erase* key to correct letter-input
errors, an *Apostrophe* (used to teach contractions and
possessives), an *Enter* and a *Go* key for internal game
operations, and perhaps most important of all, a *Module
Select* key (identified as * on the keyboard). This module
key allows the entry of a full catalogue of new spelling lists,
for all age groups, to be explained later in this review.

The basic SPELL game is started by pressing *On* and *Go*.
The toy requests, 'Spell EARTH', and shows a starting
space on its calculator-style display. E-A-R-T-H is typed,
SPEAK & SPELL pronounces every letter, and then the
player presses *Enter*. SPEAK & SPELL provides im-
mediate feedback, by saying simply 'That is correct – now
spell ANSWER.' This goes on for a total of ten words, each
one selected from an educator-approved list of problem
words and words which represent important concepts. The
emphasis here is not in the game playing, but in
lighthearted spelling exercises. It is clearly fun to learn with
SPEAK & SPELL. Every child I tested was extremely
positive when working with the 'toy', and nearly every child
was already familiar with the unit when I as much as
mentioned its name. Most were able to teach me how it
works.

A favourite game for the elementary school student on
SPEAK & SPELL is MYSTERY WORD, which we all
know as 'hangman'. This is the most comprehensive game
on the unit, since it forces deductive thinking as it
pronounces every letter in the hidden word. A series of
dashes indicate the number of letters in the mystery word,
and a game allows seven letter guesses, though these letters

are never counted on the display. The mystery words themselves, although they are obviously on the spelling lists in the computer's memory, are never pronounced upon discovery. The game simply ends with an 'I Win' or 'You Win' voiced by the unit.

SECRET CODE is mainly a letter-recognition game, whose most popular uses are in the game category. All of the letters in the alphabet are permanently linked to other, secret, letters. An 'A', for example, is always an 'F', and 'M' is always 'T' – the reverse is also true in all cases. This simplistic version of cryptograms can be lots of fun, particularly in the games provided in the activity book.

An additional "???" mode randomly displays (and pronounces) letters. Again, the uses of this function are mainly in activity book games, which are generally designed to reinforce specific vocabulary and word-building skills while having fun.

SPEAK & SPELL's internally stored program can be used on any of four levels of play in the learning games. At least a half-dozen additional modules can be purchased to allow specialised concentration in a particular spelling area. BASIC BUILDERS, for grades 2 and 3, emphasises confusing concepts in spelling. VOWEL POWER, for grades 2 through 4, concentrates upon the use of vowels and vowel word structure. SUPER STUMPERS and MIGHTY VERBS are designed for grades 4, 5 and 6. The former deals with irregular spellings, silent letters, double consonants, and related difficulties. The latter encourages a lighthearted learning experience involving verb endings which change due to tense changes, and other problems in verb endings. Grades 7 and 8 are encouraged to improve their most-misspelled list with a SUPER STUMPERS designed for that age group. HOMONYM HEROES, for the same grade level, uses games to teach and to reinforce the spellings and the definitions of homonyms. Each module is scarcely half the size of a credit card, and roughly a half-inch thick; the large packages in which they're sold also include activity and instruction books.

Manufacturer: Texas Instruments, Dallas, Texas

Price: About £45–£50

Power Requirements: Four MN 1400 *Alkaline* batteries (use the Alkaline here without question – any battery that shows signs of weakening will affect the clarity of speech. AC adapter available.

Rating: ****$\frac{1}{2}$

Recommendation: This is an extremely effective, palatable, teaching-reinforcement device for children. Even the youngest children just learning their ABCs will adore the talking box and the array of buttons. Older children, despite the graded modules, seem to lose interest in the game in favour of other activities. The game did not test well with secondary school children whose main objections seemed to be that the games were juvenile.

Note: Texas Instruments, an American firm, has customised the vocabulary for sales in Britain.

SPEAK & READ® *Texas Instruments*

The human voice is a highly significant force in the process of learning how to read. SPEAK & READ merges concepts of letter recognition, word recognition, and pronunciation, with active, fast-paced drills designed to develop skills related to construction as well as word meaning.

WORD ZAP is a word-recognition exercise, where a word is first spoken, and then shown as one of three words flashed across the screen. The idea is very nearly a game – hit the *Word Zap* key (this is a pressure-sensitive keypad, so you're really just touching a spot on a solid plastic sheet, marked with an asterisk and labelled *Word Zapper*). This moves quickly, so the student must have his or her finger on the asterisk, ready for an instantaneous reaction when the spoken word appears on the screen.

HEAR IT is a similar recognition drill which utilises a 250-word vocabulary list in the basic memory of SPEAK & SPELL. Additional 150-word modules, with other vocabulary words, are available beyond the basic list. The student types in a word from the prescribed word list, and the machine recites the word. It's a vocabulary expansion exercise, and an excellent example of TI's ability to

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introduce 'computer-associated instruction' into the lives of young children. READ IT operates in a similar fashion.

As with SPELLING B, this newer unit uses a book full of pictures to link everyday objects with words and phrases. PICTURE READ uses this book of pictures to develop skills in a lighthearted way.

WORD MAKER teaches the use of syllables through phonic elements, as in 'cat/hat/sat'.

LETTER STUMPER uses the progressive memory concept, where a letter is played, repeated, and played again with a new letter. It teaches the matching of letter sounds and letter symbols.

All SPEAK & . . . learning aids are packaged with the very clumsy handling by young children in mind. A carrying case, earphone, and built-in carrying handle are included.

Manufacturer: Texas Instruments, Dallas, Texas

Price: About £80 (additional modules are available)

Power Requirements: Four MN 1400 batteries, or mains adapter

Rating: ****

Recommendation: Consistent with the entire TI line of learning aids, SPEAK & READ is a fine special-purpose computer which uses the computer voice to its best advantage.

LETTER LOGIC   *Texas Instruments*

Designed for a slightly older crowd than the other TI electronic devices, LETTER LOGIC plays word games – some are designed to educate, and others are designed purely for fun. There are four games here: MYSTERY WORD, WORD CHALLENGE, LETTER GUESSER, and CRAZY LETTERS. Each game is played on a full-alphabet keyboard and calculator-like letter/number readout. Three levels of difficulty are offered on all computer-generated games.

Hangman is the theme for MYSTERY WORD, wherein the computer creates a word of up to seven letters to be

guessed letter-by-letter with up to 8 wrong guesses in a single game. A *clue* button, used in exchange for 2 wrong letters, exposes one letter per touch. LETTER LOGIC keeps score on each MYSTERY WORD match, based on level of play, number of incorrect guesses, time used, and the number of clues used. A bright adult will score superior totals every time, as will a bright teenager, which makes this game best for the student-aged group. There's a second-player mode, complete with scoring capability, here as well. The game of WORD CHALLENGE is similar to MYSTERY WORD, with a human opponent providing the word in the computer's stead.

CRAZY LETTERS starts with a single letter exposed, and acknowledged, followed by the first paired with a new letter, then those two paired with a third and so on. The first level uses letters A, B and C, the second also uses D, and the third uses A, B, C, D, and E. The adults who will inevitably play this game will probably wish for a CRAZY LETTERS using most of or all of the letters in the alphabet. That would be truly different – this is more of the same, perhaps a small-fry, letter-recognition game on the simplest possible level. It could be so much more.

LETTER GUESSER appears in number form in other TI games – it merely shows 'A – Z' asking for any letter between them. If we pick 'J', the letter choice might be narrowed to 'A – J', and we continue narrowing down to 'A – E' and 'C – E' and we finally come up with the answer – 'D'. It's fun a few times for adults, for longer in the hands of children.

After three minutes of non-use, LETTER LOGIC turns itself off.

Manufacturer: Texas Instruments, Dallas, Texas

Price: About £30

Power Requirements: One MN 1604 battery, or mains adapter

Rating: ****

Recommendation: This is a good learning device for the student who is just learning to read and spell with a more advanced vocabulary. Unfortunately, the diversity of the games is somewhat limited.

LITTLE PROFESSOR® *Texas Instruments*

Children's calculators and related learning devices were an obvious outgrowth of the remarkable pocket calculator revolution – LITTLE PROFESSOR is a survivor of that period. This owl-like device serves as an electronic 'flash card' system, where simple numerical problems are posed on a calculator-like readout.

Parents and interested children can select one of four difficulty levels in addition, subtraction, multiplication and division. Once the level and the operation is set, ten simple problems are shown, one by one, on the display. A child has three chances to 'touch in' the correct answer, and if he is successful, he scores one point. (If he is not successful, LITTLE PROFESSOR displays the answer himself.) At the end of the drill, LITTLE PROFESSOR displays the number of correct answers.

Texas Instruments tried hard to make this game 'fun' for all children, providing a bright-yellow cartoon-like game-board, and a 24-page pamphlet chock full of games to be played with numbers, but LITTLE PROFESSOR is not nearly as engaging as the newer items in the line. In 1976, when LITTLE PROFESSOR was introduced, he was hot stuff. Five years later, with far more flexible technology now the rule, there are frankly better learning devices available (most of them, in fact, from Texas Instruments).

Manufacturer: Texas Instruments, Dallas, Texas

Price: About £13

Rating: **½

Power Requirements: One MN 1604 battery

Recommendation: For primary school children with a bent towards maths games.

Roughly a year after LITTLE PROFESSOR was introduced, DATAMAN started counting rings around his mathematical precursor. DATAMAN, looking like a science-fiction robot, is a thoroughly enjoyable numerical tool for learning and diversion. His story – including encounters with the evil AntiMath and his nemesis, Commander NumberFun – begins the instruction pamphlet. He plays no fewer than six games – actually some are not really games, just electronic versions of classroom exercises, but don't tell the kids – and each one serves a specific educational purpose.

DATAMAN looks like a calculator with a few crazy keys, which upon close inspection, you'll discover are used to set the '+', '−', '×' and '÷' apart from the digits and the game-selection switches. Texas Instruments did not settle for a simple list of games numbered 1, 2, 3, 4, and so forth – instead, each game has its own name, and its own key on the keyboard. This adds to the experience.

Let's play a game that you may recognise – DATAMAN calls it ELECTRO-FLASH. The game begins as we press *On*, then *Electro-Flash*, and then one of the operational keys – for example, the multiplication key. Since this is a game of 'times tables', multiplier is then chosen (× 5, × 6, × 7, etc.) – in this case we choose × 7. Press *Go* and the first example appears – '0 × 7 =', and you enter '7' – which is wrong. DATAMAN responds with an 'EEE', and gives you another try. Let's give the right answer – '0'. His readout goes a little crazy (he calls it a light show), as a reward for the correct answer. Here's the next question – '1 × 7 =', to which we answer '7'. The times table goes through '9 × 7', and it is followed by the total correct, along with a count of the number of seconds you needed to get through the table. This is ideal for a classroom contest, where he who makes his way through the multiplication tables with the most speed and accuracy wins some sort of a prize (no homework for a week). And don't forget that

ELECTRO-FLASH can be used for problems in addition, subtraction, and division as well as in multiplication.

NUMBER GUESSER is a silly little guessing game on the surface, with a far more serious intent riding just below the visible surface. The idea of the game is to guess a number which lies between two other numbers – a clever way to introduce the concept of 'greater than/less than'. One example explains the whole game: the computer puts up 9 (   ) 100, and I type in '50'. DATAMAN responds by displaying 9 (   ) 50, and I type '25'. He shows: 25 (   ) 50, and I type '38', to which he responds 25 (   ) 38. I type 32. A good guess, for his display goes into that crazy light show again – I was correct!

WIPE OUT is a speed game for two, three, or virtually any number of players. It is a 'Hot Potato' game, where the idea is to answer an addition problem as quickly as possible and pass the machine to the next player, lest it start its light show while in your position and cause you to lose the game. The idea, obviously, is to encourage fast, accurate thinking in a game that seems to be all fun and very little work at all.

The game of Nim, an ancient favourite reinforcing the skills involved in subtraction theory, is the basis for a game called FORCE OUT. DATAMAN selects a number between 30 and 70 to start play. Players take turns subtracting any single digit from 1 to 9 from the master number and its subsequent remainders. The player who subtracts the final example (generally 1 — 1) and scores the zero loses the game. Let's try one: DATAMAN shows 37. I subtract 8, leaving 29. You subtract 7, leaving 22. I subtract 1, leaving 21. You subtract 2, leaving 19. I subtract 8, leaving 11. You subtract 8, leaving 3. I subtract 2, leaving a remainder of 1. You must take a move, and DATAMAN will not allow you to subtract 0, and so you subtract 1, and end up with the zero. I win.

FORCE OUT has a variation, of course, which DATAMAN calls FIRST OUT. In this game, the object is just the reverse of before – the object of the game is to be the

player who makes the final subtraction. Either game can be played with 2, 3 or even 4 players effectively.

Two other exercises, a bit less orientated towards fun than the rest, are also offered on DATAMAN. MISSING NUMBER, which allows younger children to concentrate on specific problems in arithmetic by shifting the 'open' digit from one position to another within an example (e.g., '2 × ——— 6'; '——— + 17 = 30'; or '25/ 5 =———'), is basically a timed drill. ANSWER CHECKER allows children to enter their own examples, which DATAMAN will check, and, if necessary, correct. A MEMORY BANK option allows parents to enter up to ten problems for later play by children (this is also the basis for some child-to-child competitions). In both MISSING NUMBER and ANSWER CHECKER, DATAMAN keeps score and tells children how many answers were correct out of the ten shown. The latter game also shows the time used, in seconds.

Step-by-step instructions, along with an imaginative playbook designed to broaden the game-based uses of DATAMAN's capabilities, are extremely well packaged.

Manufacturer: Texas Instruments, Dallas, Texas

Price: About £20

Power Requirements: One MN 1604 battery

Rating: *****

Recommendation: For younger elementary school children just learning maths, DATAMAN is a very effective aid to the teaching process, particularly when used with teacher's supervision.

SPEAK & MATH® *Texas Instruments*

Modelled after the highly successful SPEAK & SPELL, this is a device that teaches numerical recognition and arithmetic processes, and has some fun along the way. To make this 'learning aid' even more accessible, Texas

Instruments has added a computerised voice, and has designed several exercises based on this remarkable element. All problems are solved by touching buttons on the pressure-sensitive keyboard now typical of all SPEAK & . . . devices made by TI.

In SOLVE IT, one of six different exercises, SPEAK & MATH simply talks and shows a numerical equation – 'One plus three equals . . .' requiring students to press the appropriate buttons to answer. WORD PROBLEMS, activated by another selection button, requires students to listen to the problem, without the assistance of the numerical display. In both games you may preset the operation to be used (addition, subtraction, multiplication, division). MIX IT jumps from operation to operation. In both cases, the problems are run, and the computer counts the number correct at the end of the set.

GREATER/LESS is very simple – numbers are shown, and users must press either a > button for 'greater than', or < for 'less than'. It's a basic, essential exercise. WRITE IT is equally straightforward, encouraging recognition of the sound of a number's name, and the way the number looks in print.

NUMBER STUMPER is a MASTERMIND game, played with either two, three, or four digits in the hidden code. The voice is helpful in guiding players, especially young players, through a challenging game.

The *Enter* button is used in most exercises to avoid errors; a *Clear* button is provided for the same reason.

With three skill levels, and a thirty-two-page activity book.

Manufacturer: Texas Instruments, Dallas, Texas

Price: £40–£50

Power Requirements: Four MN 1400 batteries, or mains adapter

Rating: *****

Recommendation: This is the only speaking TI learning aid that does not accept new memory modules, but there are 100,000 random problems already loaded, so that is no problem. This is a

highly workable device, that does everything it sets out to do. **Be** sure to buy carefully – the SPEAK & MATH comes in the *grey* case.

2XL® *Mego Electronics*®

'The robot with a personality' is one of the most diversified electronic toys/games on the market today. 2XL is magnificent in design and in execution – he teaches without becoming a heavy-handed educational tool, he plays the quizmaster but never becomes ponderous or boring, and he takes the whole concept of toys-that-teach two or three steps in a very positive direction.

2XL is really a simple fellow, whose robotic persona requires virtually no instructions, and, thankfully, no batteries at all. An AC adapter plugs into one of 2XL's arms, and a standard 8-track audiotape plugs into his belly. Once these two tasks are accomplished, 2XL needs only to be flipped on, and he's ready to go. He might start with a ridiculous riddle – 'Do you know why it gets so hot in a baseball park after the game? . . . It's because all the *fans* leave.' A silly little laugh follows, and then it's down to business – perhaps a question about the sci-fi series STAR TREK, with three possible answers. Multiple choice – just answer by pressing 'A', 'B', or 'C' on 2XL's mid-section, and after a second or two, the robot will tell you whether you were right or wrong, and why the answer had to be the letter, say 'A'. He might follow with a question about baseball, or the metric system, or even a puzzle that would require you to look at a workbook page (included with each cartridge). 2XL uses his buttons to allow three different questions – each of varying difficulty – and the choice between them within a single subject heading. And if you don't really understand the question, just press *question* (the far left button), and 2XL will give you more information.

This robot's winning personality, and his apparent versatility, originates in the clever use of different tracks on

an 8-track cartridge. 2XL jumps from track to track to increase question difficulty, to provide more information about a question, even to play thinking music. The four buttons that sit in 2XL's mid-section are actually switches that cut from track to track, in a manner identical to the operation of an 8-track player you might have in your family car.

The secret behind 2XL's success is the cartridges, for this is essentially a radio quiz show with lots of customising. Each cartridge is totally different (with different jokes, but never without that irrepressible 2XL personality); the current catalogue includes: SPORTS, GAMES AND PUZZLES, 'GUINNESS BOOK OF WORLD RECORDS', ASTRONOMY, METRIC SYSTEM, BELIEVE THIS OR NOT, INTERVIEWS WITH GREAT PEOPLE FROM HISTORY, ANIMAL WORLD, NOSTALGIA, STORYLAND: 2XL & THE TIME MACHINE (where kids use the buttons to control the actual story), US PRESIDENTS, and a pre-schooler's BASICS OF ABC's. In some cases, more than one cartridge is available on a single topic (e.g. SPORTS); one GENERAL INFORMATION cartridge is provided with the toy.

2XL also plays standard 8-track cartridges.

Manufacturer: Mego, New York, New York

Price: £40–£50

Power Requirements: No batteries, mains adapter provided

Rating: *****

Recommendation: Mainly a children's toy (ages eight and up), but substantial enough for the whole family to enjoy for hours. Audiotapes may be hard to find in some regions.

LI'L GENIUS® *Coleco/CGL*

This is your basic 'answer checker' with only a green light (correct) and a red light (wrong), designed with the face of a bookish cartoon character. You create the problems, enter

them into the keyboard, press '=' then your answer, then 'PLS' then 'CHK' then '?!' for every problem. A number of recent introductions vastly improve the teaching of maths through electronics. This was one of the first.

Manufacturer/Distributor: Coleco, Hartford, Connecticut/ CGL

Price: About £5

Power Requirements: One MN 1604 battery

Rating: *

Recommendation: Try the other maths devices, or a calculator.

Multiple Game Systems and Special-Purpose Devices

There are a good many games in this book that fit several categories, and several multi-game units that must logically be considered as a system rather than as a game. These two types of games, along with 'unclassified' devices such as horoscope and bio-rhythm computers, fill this chapter.

MERLIN®   *Parker Brothers®/PaliToy*

Parker Brothers' MERLIN was among the very first nationally popular electronic games, primarily because of the company's extraordinary success with their game line (MONOPOLY, SORRY, CLUE, etc.). MERLIN is a wizard of sorts, capable of playing six different games, most of which can be played by almost anybody for long periods, with a minimum of instruction. Physically, the game looks like a futuristic touch-tone phone, with a few extra buttons.

From the very first game, TIC-TAC-TOE, MERLIN proves to be a strong competitor, possessing a sharp, accurate mind. TIC-TAC-TOE can only be played as a one-player game, and is started by simply touching the *New Game* button on the lower area of the game, and the No. 1 button in the play area. As the instructions promise, this action causes MERLIN to flash his No. 10 button, for reasons never explained. The choice of who moves first is yours – either touch one of the nine buttons used in TIC-TAC-TOE, or touch *Comp Turn* ('Computer Turn') on the lower panel. MERLIN's squares are shown with flashing

red lights. The game follows along the usual rules until one party wins (or, as is often the case, the game ends in a draw). If you want to play again, just touch *Same Game*, decide who places the first mark, and you're off and running.

When you tire of TIC-TAC-TOE, press *New Game* (actually, the word 'press' is inappropriate, since the pressure-sensitive buttons are so very, well, sensitive). After *New Game*, touch No. 2 for MUSIC MACHINE, and MERLIN becomes a hand-held organ. Buttons No. 2–No. 9 play the scale, button No. 0 is a rest, and buttons No. 1 and No. 10 offer notes outside the scale. You can play any tune whose notes fall within a single scale (21 tunes are included in the instructions, but you'll quickly learn to make up your own), and by touching *Comp Turn*, you can sit back and listen while MERLIN replays your composition. Once again, you can remain in the MUSIC MACHINE mode and start a new song by pressing *Same Game*.

ECHO is game No. 3 (touch *New Game*, then No. 3) which is a fast-paced memory game. You tell MERLIN how many notes (one–nine) you want to hear and see on the playing field, and MERLIN will breeze through a nonsense song. One-, two- and three-note songs are easy, but try to follow eight or nine notes on the tiny playing field, as that little red dot jumps from button to button. ECHO, depending upon the difficulty you set yourself, can be one challenging game.

MERLIN's fourth game is based on the card game of BLACKJACK, and so it is called BLACKJACK 13. The object of the game has been revised for MERLIN's ten-button keypad – simply acquire the higher hand, of thirteen points or less. MERLIN starts the game by showing one 'card' in his hand with a steady light in one of the boxes (let's say MERLIN holds box No. 3 to start the game). At the same time, he shows one number for you, indicated by a flashing light in, say, No. 5. He has three points, and you have five. Touch *Hit Me* (bottom panel), and MERLIN randomly lights No. 1, so your new total is six points, going

for a high of thirteen. The only logical move is to touch *Hit Me* again, which results in a 4, for a new total of ten on your side. MERLIN still stands with three points. You need a 1, 2, or 3 to remain in the game – and you notice that you already hold the No. 1, and that MERLIN has the No. 3, leaving only the No. 2 available. With 6, 7, 8 and 9 still available, the odds are good that the next hit will put you over. And so you stand, by touching *Comp Turn*. MERLIN randomly selects a number for himself (this is a dubious action for any worthy opponent, but for some reason, you learn to trust computers in this regard) and the number is a 9. MERLIN's total is now twelve, to your ten. He just won the game. To play again (always against MERLIN, never with a partner, unless you want to split the action), touch *Same Game*.

The fifth game is the most challenging game on MERLIN and it resembles a competitive game called COMPUTER PERFECTION (page 41). It's called MAGIC SQUARE, and its object is to form an outside square (all lights in the central square of the playfield except the centre light) of flashing red lights. You quickly learn that touching each button has an odd, if somewhat unpredictable effect on the other buttons. The game begins and buttons 1–5 and 7–9 (see diagram) are flashing. The natural start would be to press the dark button, number 6, and see what happens. Sure enough, it lights, but No. 3 and No. 9 now go dark. Try pressing number 4, and the whole left side goes out leaving only the centre line of 2–5–6 and the right side's No. 6 flashing. Try touching number 8, and numbers 7 and 9 relight . . . and so on, until you light the outer square.

Experienced players of MAGIC SQUARE sense a very real logic to this insanity, but those who are not of the fold generally find that MAGIC SQUARE is among the most frustrating games ever devised. I am, as you might have guessed, of the latter group, although I can crack the game if I take pencil and paper and really devote myself to the purest form of concentration.

MINDBENDER is the last of the MERLIN games. The formula here is MASTERMIND-like combinations of up to nine digits, and the ability to not only guess the combination but to keep score on the very same playing field. It is a reasonably good version of the popular game, and, as always, it will be played most efficiently if you work with pencil and paper beside you.

For all of the wonder surrounding MERLIN, I can't help wondering myself why there are ten different buttons on the playing field and only six are used for game selection. MERLIN has captured my imagination, and I would have liked to see 4 additional games on the system, even for an increase in price.

Manufacturer/Distributor: Parker Brothers, Beverly, Massachusetts/PaliToy

Price: About £22

Power Requirements: Six MN 1500 or HP 7 batteries, or a mains adapter

Rating: ****

Recommendation: Parker's range for age is seven to adult, and the emphasis here would be slightly in favour of the kids. TIC-TAC-TOE, MUSIC MACHINE and ECHO were favourites with children, while adults seemed to tire of the more sophisticated games after a (long) time. Despite the magic that MERLIN contained in 1978, the game system is nothing spectacular measured in today's market. Still, all of the games are fun to play, even if the world of coloured lights and fancier sounds has caused it to lose a star.

ADAM SUPER ELEVEN *Grandstand*

The ADAM SUPER ELEVEN is a four-game desktop system which requires memory, speed, agility, and concentration. It is a game of colours, easily played (and adored) by children. All games are played using the four coloured corner buttons (red, yellow, blue, green), and two of the games utilise the grid of red blips at the centre of the game. Each coloured button begins a game – red starts

HOT CORNERS, green starts BREAKOUT, blue starts MUSIC MAKER, and yellow starts MATCH ME.

BREAKOUT is the most unique game on ADAM. Two to four players compete in a speed/memory fete, working a blip through a maze. With four players, the game becomes particularly intriguing, as each must recall the precise combination of turns used by competitors before guessing the latest directions in the ruse.

HOT CORNERS is an action game of great appeal to children. Each player 'guards' a corner of the playfield, and reacts to blips headed towards the owned corner, in much the same way as an electronic baseball batter reacts to a 'pitch'. It is fast, simple, and a favourite in all my game-test sessions with children.

MATCH ME is nothing extraordinary – it is one of the many progressive memory games on the market, similar to Atari's TOUCH ME, Milton Bradley's SIMON, and a few others.

MUSIC MAKERS, to be used with an accompanying songbook of 30 selections, uses the four colour-coded buttons to play simple electronic notes and tunes. It requires some patience, since half-notes require young Beethovens to press two buttons at once.

ADAM SUPER ELEVEN promises eleven ways to play four games. In most cases, the variations are simply recommendations to allow three or four players to share functions normally played by one or two players.

Distributor: Grandstand

Price: £25

Power Requirements: Six MN 1400 batteries, or mains adapter

Rating: Adults: *
Children: ****

Recommendation: There is little magic here for adults, but kids love this game.

MASTER CHALLENGER® *Coleco*

Coleco's question-and-answer computer is really much more of an electronic quiz book than it is a true electronic game, as you will see as you read the description. When you open the package, you'll find two distinct units. The first is a typical electronic keyboard console, with buttons for 10 digits (0–9), four more for answering A, B, C, or D (all questions are multiple choice), an *answer* button, and a *clear* button, a *yes* light, a *no* light, and a small speaker. The second is a large-sized wallet, equipped with a quiz book (1001 questions) and a built-in receptacle with that particular quiz book's circuits. When you snap the keyboard console into the quiz book's receptacle, you're ready to start answering questions. Here's where MASTER CHALLENGER becomes less a game and more a book of questions.

First, choose a question by number, and key in the digits. Let's try number 208 – so we type 2, 0 and 8. The machine does not react, does not even tell us whether it's working or not. Shrug of shoulders, then continue. Press an answer: 'GEPETTO is ———'s father. A. Snow White's, B. Hansel's, C. Goldilock's [*sic*], D. Pinocchio's – so we press D, and then *answer,* and the *yes* light blinks. If we had answered B, the *no* light would have blinked. It merely confirms the right answer, and lets you fish until you've come upon it.

For the next question, we must again key in each digit, 2–0–9 (it would be helpful if MASTER CHALLENGER could just let the player answer, rather than requiring a new keying in of each and every question number in sequence), and again he blinks *yes* when the correct button is pressed.

Scoring in MASTER CHALLENGER is manual, and you'll find score sheets at the back of the question book. It merely checks answers, an art long ago mastered by those who thumb through quiz books to the answer section. Sure there's a benefit in having instant response to each

question, but the expense seems rather dear to have a machine that only does this and nothing more.

Coleco is constantly introducing new quiz books and accompanying electronic wallets for MASTER CHALLENGER. At last count there were twenty different cartridge wallets, each equipped with 1001 questions. Here, as of press time, are the twenty current entries available in the USA – Coleco is slowly releasing many of these in the UK.

No. 1: 1001 QUESTIONS – general information; comes with the electronic keyboard unit, No. 2: THE WORLD OF SPORTS, No. 3: MOVIES AND TV, No. 4: PEOPLE AND PLACES – famous personalities and places in modern history, No. 5: TRIVIA, No. 6: MUSIC AND BOOKS – the literary works of the past and the present, No. 7: MATH MANIA – mathematical problems, puzzles, and games, No. 8: THE BOOK OF LISTS – questions from the best-seller, No. 9: GREATEST SPORTS LEGENDS – based on the TV series, No. 10: SUPER HEROES, No. 11: DISASTER – WHEN NATURE STRIKES BACK – by the editors of the *Encyclopaedia Britannica*, No. 12: THE OCEAN – MANKIND'S LAST FRONTIER – also from *E.B.*, No. 13: ENERGY – THE FUEL OF LIFE – also from *E.B.*, No. 14: HOW THINGS WORK – FROM AEROSOLS TO ZIPPERS – from *E.B.*, No. 15: NATIONAL BASKETBALL ASSOCIATION – questions about teams and team players, No. 16: NATIONAL FOOTBALL LEAGUE PLAYERS' ASSOCIATION, No. 17: MAJOR LEAGUE BASEBALL, No. 18: GUINNESS BOOK OF WORLD RECORDS – from the book, No. 19: THE PEOPLE'S ALMANAC No. 1 AND No. 2 – from the books, No. 20: SHERLOCK HOLMES AND OTHER FAMOUS MYSTERIES.

Manufacturer: Coleco, Hartford, Connecticut

Price: About £15 for Master Unit and Cartridge/Quiz Book No. 1: £5 for each additional quiz book

Power Requirements: One MN 1604 battery, or mains adapter

Rating: **

Recommendation: There's really nothing extraordinary here that could not be provided by quiz books in paperback, available at less than half the price. For ages six to adult – but the age range really depends on the subject matter (most of the questions are good and tough, like a well-written quiz book should be).

MICROVISION® *Milton Bradley Electronics*®

Milton Bradley has combined the portability of hand-held games with the versatility of video games in a well-designed series of games which come under the heading of MICROVISION. The game itself comes in two parts – a master component, which houses most of the electronics and a small liquid-crystal display, and a series of individual cartridges which include specific controls and the necessary electronics for each individual game.

In order to buy MICROVISION games, one must first buy the master component, which includes one cartridge called BLOCK BUSTER. The MICROVISION component is constructed with the liquid-crystal display, the pressure-sensitive keypad, and a dial-type controller. The BLOCK BUSTER cartridge plugs into an open space directly on top of the display screen and the pressure-pad, creating various designations on the display, and specific functions for each button on the control pad. Different cartridges, as we will see, use different numbers of buttons, and different formats on the display screen. Some games use the dial, and others do not.

Each of the games is played by either watching or controlling elements on the display screen, which is in fact 16 × 16 small squares arranged in a silver grid. Combinations of squares on the grid are used to create everything from numbers to submarines, from bowling balls to laser beams. It takes a little imagination, along with the proper light (these games are best played in direct light –

even diffuse room light may be a little dim), and very good close-up vision to play MICROVISION. Given all of these requisites, along with a fast hand and a quick mind, you'll find that these games are among the finest hand-held on the market today.

A word about the ratings of each game: The physical MICROVISION set is nothing more than a piece of hardware, just as a television set is nothing more than hardware so far as video games are concerned. Each of the games available to MICROVISION users is reviewed separately, including the BLOCK BUSTER game, which is always bought with the basic unit. Additionally, MB plans to issue a BASEBALL and SEA DUEL cartridge to bring their total to eight game cartridges.

Manufacturer: Milton Bradley, London

Price: (For basic unit and BLOCK BUSTER) £45

Power Requirements: One MN 1640 battery (with an open compartment for a second battery – a very good idea), no mains adapter available.

Rating: See individual games

Recommendation: See individual games

MICROVISION BLOCK BUSTER® *Milton Bradley Electronics*®

Those who are familiar with the arcade and video game of BREAKOUT will recognise this ball-and-paddle competition. (See pages 143–44). For the unfamiliar, the game is magnificently simple: control the paddle to hit the ball into a three-ply row of bricks. As each brick is hit, it disappears, and the idea here is to make all bricks (48 in all) vanish, partially because of paddle action and partially because of the ball's own momentum. It's precisely the sort of game that is learned in less than a minute, and requires hours of patience and practice to master. Nearly everybody who played the game, no matter what the age, would not

leave this game alone. It is truly one of the most addictive action games ever invented. If your eyes can stand the occasional strain, you can literally play for hours and hours. Every time you 'clear the board' – make all of the bricks disappear – a whole new set of 48 appears in its place. The folks at Bradley claim that their sons and daughters have held some informal competitions and scored as high as 725 points, which is very, very good. The highest scores reached in our test groups were in the mid- to high-100s, but we're still practising.

BLOCK BUSTER can be played with one, three, five, seven or nine balls per game, and it normally sets itself to seven balls for the average players. Paddle size, normally three squares long, can be adjusted to only 2 squares, and ball speed can be either fast or slow. The easiest combination of these factors was more than challenging for all but the most skilled BLOCK BUSTER players, leaving us all plenty of room for improvement.

BLOCK BUSTER is controlled by the small knob at the bottom of the master unit.

Manufacturer: Milton Bradley, Springfield, Massachusetts

Price: (Available *only* with main MICROVISION console)

Power Requirements: None (see MICROVISION master unit)

Rating: ***** (Maybe even more – it's one of the best games I've ever played.)

Recommendation: Buy it.

MICROVISION PINBALL® *Milton Bradley Electronics*®

Once you've mastered BLOCK BUSTER, give PINBALL a try. The layout is different, but the play's pretty much the same. Once again, choose your paddle size, ball speed, and number of balls you wish to play (all such characteristics are identical to those used in BLOCK BUSTER), and press *go* twice to start the game. The playfield is simple,

uncluttered, showing only four darkened blips, each to be called a 'bumper'. Using a paddle, the idea here is to knock the ball into paths that will cause collisions with the stationary bumpers as frequently as possible. Each hit in the early part of the game is worth one point, and then after you've hit the same bumper five times, you'll score two points for each hit. If you manage to get all four bumpers into this 'bonus' two-point mode *while playing the same ball*, every bumper hit jumps in value to three points.

Your total score flashes on the screen each time you lose a ball.

Frankly, this game isn't very much like any pinball machine I've ever played, but this is a very addictive game. It's one that you will play for hours and hours – just trying to beat your last score. Scores here, incidentally, tallied in the high 100s for better players, and under 50 for the beginners. With hours of practice, the sky's the limit (actually 999 is the limit, after which the game starts counting again from 1).

Manufacturer: Milton Bradley, London

Price: Under £15

Power Requirements: None (see MICROVISION master unit)

Rating: ****½

Recommendation: BLOCK BUSTER, the other speed-reaction game for MICROVISION is more engaging. You will, however, find those who have learned to prefer this game to the other. Again, an eye strain, but most say it's worth it.

MICROVISION BOWLING® *Milton Bradley Electronics*®

Using a thoroughly different play format for MICROVISION BOWLING (in fact, a format that's quite similar to the other electronic bowling games in this book), Milton Bradley has created another fast-reaction game of target shooting. MICROVISION BOWLING is the fastest

bowling game you'll ever play – and, unfortunately, one of the least intriguing.

We begin by telling MICROVISION how many players will bowl (the score can be kept for one or for two), and how fast (2 speeds) the action is to be. Press the now-familiar *go* button, and get ready. A ball shoots down the side of the alley, and then across the length of the foul line. The ball moves back and forth along the line until you press *bowl*, and if you do so at the precise moment, you'll score a strike. With a little practice, you'll score a strike every time on the 'slow' speed, and a bit too often on the 'fast'. It's all a game of pressing the *bowl* button when your ball is in line with the 'pins', and this is a skill too easily mastered to make the game interesting. Nearly every frame contains a mark, even at the 'fast' speed, even for those who are normally 'not very good at electronic games'. There are no curves, no hooks, no strategy elements at all.

Manufacturer: Milton Bradley, London

Price: About £15

Power Requirements: None (see MICROVISION master unit)

Rating: **

Recommendation: Try it before you buy it; perhaps you'll find the magic that was lacking in our testing sessions. (*Note:* Younger children, whose timing coordination is still being perfected, are the only ones who consistently score varied totals in each frame.)

MICROVISION SHOOTING STAR *Milton Bradley Electronics*®

This is a little bit like the earliest arcade video games, where a gun at the bottom of the screen could be pointed in several directions in order to shoot the airbound enemies flying above. SHOOTING STAR offers four such enemies, who may be played in individual games (their lengths vary,

making this a skill variety element), or together in the 'C' mode (for 'changeable' targets). A series of ten to ninety targets may be displayed per game, preset by the player. And three different gun positions – straight up, diagonal left and diagonal right – are available for the battle. A choice of two speeds completes the preset cycle.

This is a simple game – just move the gun to shoot the target (you only need one button – the gun movement is immediately followed by the shot). But it's hard to play perfectly. The playing field is small, and the targets, especially the smaller targets, can come into view very quickly. You can start with the 4-square targets (nothing more than a single-line of 4 lit squares), and practise until you're playing the 1-square targets at the fastest possible speed. You won't want to put this down once you've begun, because you'll see how quickly you progress from an awful player to a really competent marksman. And besides, it's fun.

Manufacturer: Milton Bradley, London

Price: £15

Power Requirements: None (see MICROVISION master unit)

Rating: ***$\frac{1}{2}$

Recommendation: For all ages. Incidentally (as if you didn't know), this has nothing to do with STAR TREK whatsoever.

MICROVISION® CONNECT FOUR   *Milton Bradley Electronics®*

This MICROVISION game is based on a Milton Bradley 'box game' of the same name, and if you play it for a while, you'll realise that you're playing a most intriguing variation on the most basic of games, tic-tac-toe. The action of the original game, wherein two players filled circles within a grid by dropping discs into chutes, is duplicated nicely in this version of CONNECT FOUR, and, as the title implies, these discs are strategically

dropped in an effort to string four of your own discs in a row.

You can play either against another partner or against a supremely competitive computer. Let's play against the computer and you'll see how it works. We set the game to the one-player mode, and the skill level to the No. 1 slot (the second slot allows the computer a greater opportunity to win), press *go*, and see a solid disc appear in the upper left corner of the screen. By twisting the dial at the bottom of the MICROVISION unit, the solid disc moves across the seven columns on the board. (Each column has six rows, making the board a 7 × 6 matrix of 42 circles). When the *drop* button is pressed, the disc falls to the bottom row within the column selected. It is now the computer's turn (initiated by pressing the *comp* button), and he/she/it drops a two-colour disc in a strategic position, always remembering that the object of the game is to string four in a row of your own disc, either up and down, left to right, or on a diagonal. It's my turn, and I can either block the computer's line-up, or continue building my own line. This continues until either player or computer connects four, and thereby ends the game.

The computer is a most capable opponent, and so the game is captivating for very long periods, especially for adults. I found that playing with the computer for as long as I did allowed me to develop a very real edge in playing the game, and I found it more fun to play against the computer than to play against human competition. Others found this to be the case as well.

Perhaps the only criticism that might be levelled here is the fact that the playing field's painted lines (which are part of the cartridge insert and rest several millimetres above the actual display panel in the master component) cast serious shadows on the field, and make it rather difficult to discern one's playing pieces from one's opponents'.

Manufacturer: Milton Bradley, London
Price: £15

Power Requirements: None (see MICROVISION master unit)

Rating: ****$\frac{1}{2}$

Recommendation: For all ages, each of which will find their own level in a very good game.

Chapter 6

Video Games

All of the games in this section are 'video games', which means they require both a television and a customised computer terminal. Any television screen will do, but the games are easiest to play if the set is colour, and if it is 12″ (measured diagonally) or larger. The computer terminals are manufactured by the game-makers themselves, so you'll find that a Mattel game cartridge can only be used with Mattel equipment, Atari cartridges with Atari consoles and so forth. These consoles cost over £100 each. All of the individual games described here can be bought for about £20 (some slightly higher), but in every case, the cartridge is a small black plastic box, which holds computerised data about the game, to be decoded only by the manufacturer's master component. Many of these games are essentially home versions of the video arcade games, with lots of new designs for play on your home screen.

The field of marketers has thinned in the past few years. Before you buy any master computer unit, consult your retailer and ask about the availability of software (the cartridges are known as software in the game industry). Before you buy, find out how many games he regularly stocks, how often the manufacturer releases new game cartridges, and the likelihood of serious catalogue deletions. Only Atari and Mattel have had consistently dependable distribution of new products. You'll find asking questions will assure you that what you may want later will still be available.

Video/computer games fall into four distinct categories, each involving entirely different computer hard-

ware. The first, and most primitive, is the single-game console – the format originally used to introduce PONG and its variations in the middle seventies. Most manufacturers are phasing out this format, and despite low prices, this is not a very wise investment since repair is difficult. The second category was introduced (and later discontinued) by Fairchild in 1977 – the 'cartridge programmable'. Atari's VIDEO COMPUTER SYSTEM, Mattel's INTELLIVISION, Philips' VIDEOPAC G700 and Acetronic's MPU 1000 are all cartridge systems, all typified by an easy-to-operate master console and games that can be bought in book-like packages. Each of these is described in detail in this chapter. All of these systems vary in terms of capability, but all are special-purpse computers designed to do just one thing: play games. The third category broadens the game system to something much more impressive: a full-scale home computer. Atari's 400 and 800 PERSONAL COMPUTERS are designed to accept their own game cartridges, as is the Mattel INTELLIVISION keyboard component. The Philips system is also a home computer that mainly plays games. Some of the other personal computer systems, Tandy's TRS–80 and Apple, for example, can also play games from preprogrammed cartridges or cassettes, but the overall focus of these computers is outside the realm of games. The fourth category applies only to those who program their own household computers. Virtually all of the world's games can be adapted for play by computer, as long as you have the skills needed to program. There are several excellent books which offer detailed instruction for programmers.* Consult your local bookstore for books about computer programming, or, more specifically, about programming games. Certain hobbyist magazines may be even more helpful.

As you read this chapter, please remember that the

* *Microcomputing: Everything You Ever Wanted to Know* by Rose Deakin, *Sphere* 1982.

games described can generally be used only in one distinct master system. Read carefully before you buy, and again, you'll find the greatest availability of game cartridges for the Atari, Mattel, Acetronic and Magnavox systems in the 'game-only' category. Grandstand also sells a cartridge game system, but the limited number of available cartridges makes it a poor investment at any price. Atari has a separate group of game cartridges for their personal computer system, but Mattel's INTELLIVISION cartridges can be used in either system. Other computer systems for the home, including the *Apple II* and the *Commodore PET*, have also been designed to accept game play. For further information about these two computers, see your local home computer retailer.

Very Important: Remember that the British television system, PAL, is not compatible with the American and Japanese (NTSC) system. The initials are unimportant – the need for PAL, and *only* PAL videogames in Britain is very important, because all others will not work.

Atari requires special PAL cartridges, while Mattel and Philips sell PAL game computers, allowing any cartridges to be used. Acetronic is PAL only.

Consult your retailer for more information.

VIDEO COMPUTER SYSTEM® *Atari*®

Introduced in 1977 by a company with a wide variety of coin-operated arcade games in its library, the Atari 'VCS' console currently accepts approximately 40 cartridges carrying about 500 different games with more games to come.

The physical console itself is designed to sit near your black-and-white or colour television set. One cable is attached to antenna contacts (explained in the instruction) and a second cable is used for power (AC only). The console consists of six switches: one on/off, a player difficulty switch for each of the players, a colour/black-and-white switch (all Atari games play just as well in colour

as they do in black-and-white – this is NOT true of all competitive systems), a switch to select one of the 100 games that may be available on any single cartridge, and a rest switch. The cartridge slot is well designed and easy to use.

Three controls are available in the VCS – a 'joystick controller', which is an eight-way stick shift used in the majority of the games, a 'paddle controller', which is effectively a small steering wheel, and a 'keyboard controller', with 12 buttons, similar to a push-button dialler on your telephone. The keyboard is relatively new, and Atari has not yet developed many games which require its use. The other two have been around from the start. Each game cartridge (described in the following pages) requires one particular set of controllers.

Manufacturer: Atari, Sunnyvale, California
Atari games are distributed in the United Kingdom under both the Atari and the Ingersoll names.

Price: About £100

Power Requirements: AC only

Rating: See individual game cartridges

Recommendation: Cartridges are generally available throughout the country, and with Atari's aggressive stance in the business of coin-operated games, you can expect to see their already healthy library become more exciting as time goes on. The PERSONAL COMPUTER, however, may start taking the spotlight away from the VCS. Consult your retailer as to the expected release schedule of new games for the VCS.

COMBAT® _Atari®_

Some of Atari's earliest arcade war games have been combined for a possible 27 games, and variations, in a single cartridge. TANK is among the best with its block-like implements of attack which are moved around various mazes with your joystick. Players shoot at each other's tank by pressing the red button on the joystick controller, with a choice of 'guided missiles' or 'straight missiles', on either

'easy maze' generated at random, 'complex maze', or 'open field' (no maze at all – just two tanks on a blank screen). The mazes are to be manoeuvred through, as well as being blockades used for protection from enemy fire.

The TANK-PONG variations allow missiles to bounce off maze elements or outside borders. 'Billiard hits' are only scored as successful shots when banked off a side or maze piece. These elements, and those listed above, are also used in conjunction with 'invisible' games, where both tanks are invisible except when shooting or when hit.

Price: (Packed with original unit, so it's 'free'.)

Rating: ***

Recommendation: If you like war games, this is as good as any.

AIR-SEA BATTLE® *Atari®*

Twenty-seven shooting games, with all sorts of wartime instruments of destruction are the basis of the games in AIR-SEA BATTLE. Games are only slightly different from one variation to another and are grouped in six categories: ANTI-AIRCRAFT (airborne targets), TORPEDO GAME (with ships), SHOOTING GALLERY (rabbits, ducks and clowns), POLARIS GAME (similar to the TORPEDO GAME, with slightly different underwater attack capability), BOMBER GAME (like POLARIS GAME only with airborne attack power), and POLARIS VERSUS BOMBER GAME (one player is the ship, the other is the jet fighter). In every case, a small gun angle is controlled in an effort to hit as many targets as possible. With assorted mines, scoring variation and the usual bag of tricks.

Price: £15–£20

Rating: **

Recommendation: Again, we've learned to expect more control and more interesting variations. An oldie.

INDY 500® *Atari®*

Atari's first attempt at a video racing game is still its best. This is full-course racing, laps and all, with quick-reflex car control provided by a specially designed (and specially purchased) Driving Controller. There are fourteen variations, most worth learning to play (you'll develop your own favourites – all of the games are pretty good).

Games No. 1 and No. 2 are Grand Prix lap games, which means that you just do your best to speed around the curves and cross that lap counter as often as you possibly can. The first game is for two players – the first to complete twenty-five laps is the winner. The second game is a time trial, for one player only (sixty seconds). Games No. 3 and No. 4 are the same as No. 1 and No. 2 respectively, but include a series of wicked turns called 'Devil's Elbow'.

The Atari arcade hit CRASH N' SCORE is the basis for Games No. 5–8. These games' drivers try to crash into a small white blip that chases about the screen as often as possible. The number of hits and the amount of time required is the basis for scoring.

TAG is the children's game, played with electronic race cars. It is not the strongest game on this cartridge, but it is fun on occasion. Two different playing field obstacle courses make the TAG games, numbered 9 and 10, more interesting.

Games 11 to 14 are the most fun of all because they're played on a very slick, icy surface. Car control is crucial, and skidding creates an enormous advantage for players who can really control their racers (and an enormous disadvantage for players who can't). A 'Sprint' track and a 'Rally' track, along with two-player games and time-trials.

Price: About £35

Rating: ****

Recommendation: This is one of the more satisfying video games available, adapted directly from a series of top-notch arcade games also made by Atari.

Note: The high price includes an additional set of steering controls.

SLOT RACERS® *Atari®*

If you're expecting model car racing from SLOT RACERS, you've got the wrong game entirely. For reasons unexplained, this is a game of missile-bombing on the racetrack, with a series of different maze-like racetrack configurations to make play more interesting. Using your joystick, you snake your car around tough corners, stalking your competitor's car. When he's in range, it's bombs away – you'll score a single point for every successful hit. Twenty-five points wins the game. You might say that this is a TANK game, played with race cars. An odd combination.

Price: About £17

Rating: **

Recommendation: Try TANK – there's more action (and a lot more games on the cartridge).

VIDEO OLYMPICS® *Atari®*

For those who still love a good game of PONG (or any of its fifty variations), it's all here in VIDEO OLYMPICS. PLAY PONG (like ping-pong – hit the ball with your paddle, and your opponent returns your shot), SUPER PONG (two paddles per side), SOCCER (PONG, with open goals on the extreme sides of the screen), FOOZPONG (PONG with two rows of three paddles on each side), HOCKEY (SOCCER with slightly different goals), QUADROPONG (SOCCER with goals on four sides of the field), HANDBALL (PONG with rebounds), VOLLEYBALL (HANDBALL with a centre net), or

BASKETBALL (HANDBALL redesigned with baskets).

For one, two, three, or four players, 'Whammy' to change angles or hits, 'Catch', so the ball sticks to the paddle until it's released, or 'Jump' for spiking the ball. You can vary ball speeds as well. Not all features are available on all games. Play with paddle controllers.

Price: About £17

Rating: *½

Recommendation: Games on screen have become more sophisticated than even the best of these offerings. The basic concepts here are only the groundwork for far more intriguing play.

BREAKOUT® *Atari*®

The reigning king of the video game for several years, BREAKOUT is an extremely challenging, occasionally frustrating, always satisfying match between man and machine. The game itself is a derivative of **PONG**, the very first video game which simulated table tennis. In order to play, you must simply hit the ball whenever it comes your way. In order to play well, however, you must aim your shots, always trying to angle the ball so it strikes a new area on the screen. Each time you hit the ball, you actually bounce it into a brick wall, and each time the ball strikes a brick, that brick disappears from the screen. There are six rows of bricks on the screen, each of a different colour, and as you work your way deeper into the game, you'll find that each row is worth more points for a maximum score of 864 points. This is achieved by clearing every brick from the screen, and then, as the brick field is reshown, by clearing them all a second time.

Notice from the illustration that the bricks do not sit on the upper edge of the screen, but just below it. If you are able to angle your shot through a path of cleared areas, and bank it off the top of the screen, the ball will ricochet in the upper regions, clearing bricks from the top down. This pattern may end at any second if the ball bounces into a

clear path as the ball comes shooting back to the paddle, ready for another return. If you do not return the ball, a new ball comes on screen. A total of five balls are played in each game.

There are twelve game variations: four with the basic game, four with a clock timing your game, and four with specialised ball movement. In this group, the ball's path clears a series of bricks in line with the ball path, as opposed to a single brick as before. Each of these variations allows either the regular game, a 'steerable' ball (after you hit the ball with the paddle, you have limited control of its path), 'catch' where instead of merely returning the ball to play, you can hold it on your paddle, move your paddle, and release the ball elsewhere on the screen, or an invisible feature, wherein all bricks disappear between contact with the ball.

Played with one or two players, and two levels of difficulty based on paddle size.

Price: About £17

Rating: ****$\frac{1}{2}$

Recommendation: The arcade version is reproduced nicely here; see the Atari 400/800 for a more advanced version of the game.

SURROUND® *Atari*®

Again adapted from an arcade game original, SUR-ROUND is a competition of sudden death, designed expressly for the video medium. Each player (one or two – better with two) starts out with a small coloured block. By pushing the joystick to the right, the block moves right, leaving a visible trail where it has been. Joystick down, and the line leads down, joystick left, and the line continues left, always leaving a trail where it has been. Both players create lines simultaneously, always trying to draw their lines around territories occupied by their opponent. Each round ends as one player builds his line in a space already

occupied by either himself or his opponent. The game moves quickly, so both players must react with accuracy, always mindful of both long-range and short-range strategy.

Game features include 'speed-up', where the line construction becomes increasingly fast, leaving little time to think and plan as you go, diagonal line construction, the ability to erase your line paths, and the option to run off one side of the screen and return on the opposite side. A 'Video Graffiti' feature eliminates all speed, allowing players to draw their own designs using all drawing options, at their leisure.

Price: About £17

Rating: ****

Recommendation: The ability to react very quickly will make for the best game. Human versus computer games are not very interesting, since the computer does not react with a shriek or snide comment when a crash occurs. The game is best between equally matched players – more the case here than elsewhere.

SPACE INVADERS® *Atari*®

This is the official, bona fide home version of the world's most popular video arcade game. The competition can be fierce when the Space Invaders, a dastardly flock of horrible aliens, attack your missile base. If you look at the illustrations, you'll notice six rows of six aliens, each in centre screen, with three laser shields just below the aliens, and a single laser cannon resting at the bottom of the screen. The most valued member of the alien fleet, Command Alien Ship, flies above the aliens.

All of the aliens shoot laser bombs by dropping small cylinders down towards your missile base, while you shoot your laser back up at the evil 36, trying to pick them off one by one. Use your joystick to move your laser base and dodge enemy fire – a task made easier by hiding beneath the laser shields. The shields are valuable – they provide shelter

from the storm of bombs. But they must be used with caution, for they can be accidentally destroyed by your own fire.

Each row of invaders increases scoring values – worth 5, 10, 15, 20, 25 and 30 points. The command ship is worth either 100 or 200 points, depending upon the game variation.

There are four variations available. MOVING SHIELDS adds an element of chance – the laser shields, once safe and secure, become chancy and even a little false in their value as protection areas. ZIGZAGGING LASER BOMBS change the normally straight and predictable downward course of the alien bombs, making the dodge difficult, and sometimes nearly impossible. FAST LASER BOMBS is self-explanatory (and a particular challenge when combined with the zigzag feature). INVISIBLE INVADERS causes the alien force to disappear between your successful hits.

There are sixteen basic games on this cartridge, created by varying combinations of moving shields, zigzagging bombs, fast bombs, and invisible invaders. Fully 112 variations are created with basic game, two players alternating turns, two players shooting at the same time, alternately, and various two-player partnerships.

All missile-base movement is accomplished via the joystick, and all offensive shots are recorded by pressing the red button. This is a deceptively basic description of the game's action – you'll constantly be moving that missile base, because the alien lasers are constant, and bombardment comes from all sides. Your own attack mechanism will seem all but worthless against the rain of lasers from above at first, but a little practice and you'll be knocking off those aliens like an old pro – but keep an eye out for sudden attacks from behind. Those aliens are devious – and worse when fast bombs or zigzag motion is involved.

All in all, a highly competitive reaction game, and one of the best available.

Price: About £25–£30

Rating: *****

Recommendation: Lots of agility required here, heavy hand-eye coordination, and a real respect for the game. It's a good one.

ADVENTURE® *Atari*®

Loosely based on the fantasy game of *Dungeons and Dragons*, ADVENTURE is a true fantasy video game. There's a fairly complicated fable involved here, a fable in which you will become the fairy tale hero if you are successful in avoiding Yorgle, Grundle and the awful Rhindle, the three dragons who are trying to foil your well-meaning attempts to find the Enchanted Chalice. Fortunately, in your travels through the mazes and courtyards and deep dark dungeons, you'll find a sword with which you may foil even the most dreadful dragon.

It all begins just outside the castle, as you start to look for the key – a search that may take you all over the kingdom. There are three castles, each of which is opened with a coloured key (the golden castle with a golden key, the black castle with a black key, and the white castle with a white key), which are found by floating from room to room and maze to maze throughout the kingdom. You will find that this experience is most unlike the video games normally sold with this or any other system – when you leave a room, you literally float off the screen in one direction and enter another – and you're able to return to the original area simply by retracing your own path.

The search for the chalice can be a frustrating one, especially when you're caught in one of the mazes. But keep at it, for there is a grateful king waiting for its return.

Three skill levels are brought to play in the three games offered – the first is simplest, the second involves more catacombs, more obstacles, and even a Black Bat, who may be friend or foe depending upon your situation at the time, and the third simply makes the game harder to play by

randomly placing dragons in most inopportune locations. You'd best start with the first game and work your way up, especially if you're new at this.

Incidentally, the reason you must watch out for the dragons is related to their devilishly good appetites. If they see you, they'll chase you and try to eat you. And once you're in the jaws of a dragon, you have no alternative but to be reincarnated – easily done by pressing the *game reset* switch. The *difficulty* switches, also on the main console, can be adjusted to allow the dragons to hesitate for a moment before nipping, if you so desire. (It's a little easier that way – you've got a chance to escape.)

Price: About £23

Rating: ****

Recommendation: This is a wonderful idea, carried off nicely by Atari. Patience is a virtue, especially in this kingdom – in your first dozen or two plays, you'll probably never even see the Golden Chalice. Stick with it – the game's fun once you've figured out what the instructions are trying to say.

CANYON BOMBER® *Atari*®

This wartime diversion is rather like a game of BREAKOUT in reverse. Two planes (one controlled by Player No. 1 and the other controlled by either Player No. 2 or by the computer) cruise overhead, as layers of coloured bricks sit in the canyon below. Press the red button on your Paddle Controller, and it's bombs away, with the bombs charging through several levels of bricks at a pass. In some game variations, the bricks will remain strangely suspended, ignoring the laws of gravity, and in others, the bricks will cave in, creating new patterns for each overhead bombing raid.

Also on this cartridge is a one- and two-player war game called SEA BOMBER. Using unlimited bombs, your helicopter shoots down towards the naval ships below. The variation here is that you must choose the ships you wish to

bomb before letting loose, which is an interesting gimmick but hardly the basis of a game.

Price: About £17

Rating: **** for CANYON BOMBER games
* for SEA BOMBER games

Recommendation: Worth a try, especially if you enjoy playing BREAKOUT. If you're like the videogamers who tested this cartridge, you will probably ignore the SEA BOMBER games. We did.

SKY DIVER® (play with joystick controller)   *Atari*®

Parachute jumping, computer-style, is the basis of SKY DIVER. There are five games on the cartridge. No matter – they're all fun to play.

Each jump begins as your aeroplane floats across the top of the screen. Push the red button on your controller and your man jumps. Pull the joystick towards you and the parachute opens. Now manoeuvre the dive so that the chutist lands on the target area. And keep an eye on the wind sock – it tells you vital information about wind speed and direction.

Games No. 1 and No. 2 are simple jumps, with the stationary target pad in a new location each jump. In games No. 3 (big target) and No. 4 (small target) the wind factor is eliminated, and the target pads are moving constantly. In game No. 5, a single landing pad is shared by two competing chutists – it's a game of 'chicken'.

Scoring, at zero – eleven points for successful landing, is based on when you open the parachute. For one or two players. Use joysticks.

Price: About £17

Rating: ***½

Recommendation: Primarily reaction and timing – and a fun game for the development of expertise.

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HUMAN CANNONBALL® *Atari*®

On the left side of the screen is a small cannon, whose angle is controlled with your joystick. The angle of your cannon can directly affect the fate of a winsome fellow, who is about to be propelled into the air and (with a bit of luck), into a small water tank on the right side of your screen. Two joystick positions affect his speed, and four others can move the tank itself – so you are truly the master of this man's fate.

The eight games and variations are based on your control (or the computer's control) of the cannon's base position, the speed of the 'projectile', the cannon angle, the moveable water tank, and even a moving window, through which the lad must jump on his way to the tank in four of the eight games. Each of the games can be played by either one or two players. Scoring is based on the number of successes (and the number of flops). The difficulty switch sets the width of the water tank in all cases.

Wonderful sound effects make this blithe stunt a thoroughly comical diversion.

Price: About £17

Rating: ****

Recommendation: Play it, you'll love it. Fun for all.

CASINO® *Atari*®

There are three betting games played with electronically displayed cards in this casino, played with your paddle controllers. The first of these is BLACKJACK, a game frequently adapted for electronic/computerised play. With symbols difficult to discern, small white cards are shown on the screen beside the key words: *hit, stay, bet, double, insurance*, and *split*. Words, in abbreviated form, are shown by the computer when appropriate. You may select between *hit* and *stay*, for example, by merely twisting

the paddle in one direction to get the word *hit* to change to *stay*, and in the other for opposite action. It's very simple, really. Betting is done in precisely the same way – twist the controller in one direction to increase the bet, and in the other to decrease the bet. This is a full-feature game, as you can see from the key words involved. Two sets of house rules are available by switching the *difficulty* toggle on the master console.

STUD POKER is a less successful game on CASINO, particularly because the pips used to indicate suits are so poorly designed. Unless you have a perfectly sharp TV picture, and you are sitting only a few feet from the screen, you probably won't be able to tell a club from a spade. This is a very challenging game as well, because the rules of STUD POKER (as opposed to DRAW POKER) do not permit replacement of undesirable cards. Bets are laid on the table after the second, third, fourth and fifth cards are dealt. This is a betting game, usually for high rollers.

POKER SOLITAIRE allows a single player to strategise through five poker hands at one time. A card is shown at the top of the screen, and it is up to the player to decide which hand would most benefit by the card. The paddle is then used to place the card, as a new card appears on top of the screen. It's easy for the first few cards, but even the best-planned game can be destroyed by the run of your luck.

Most games can be played by one player against the computer, or by two players. You can even play with three or four hands, if you buy a second paddle controller set.

Price: About £23

Rating: **

Recommendation: The BLACKJACK is very good, but the display does not compare at all with the more costly INTELLIVISION version of the same game (page 190). STUD POKER was rarely a favourite, since most folks are accustomed to the relatively lightweight DRAW POKER instead (there is no DRAW POKER on this cartridge). POKER SOLITAIRE is more easily played on your bridge table with a deck of cards – the

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position indicator, which shows where you might drop the current card, is difficult to operate.

Note: Atari also makes a less expensive cartridge that only plays BLACKJACK. It sells for about £20 and it is slightly more limited in the betting game (no INSURANCE, etc.).

BACKGAMMON® *Atari*®

This is a simple version of the popular table game, with some liberties taken in gameboard design for the TV screen. All of the elements appear on the screen, complete with a controllable cursor which lights up the current points in play, and miniaturised checker blips which track around the board as they do in the table version. But there are some problems.

The board itself is physically crammed into the space available on the screen, causing a real bother whenever points must be counted. The checkers are too small, constructed so that they sit sometimes side-by-side and sometimes in groups on each point. The cursor moves both in a clockwise and in a counterclockwise direction, so that the confusion begun by the fact that the board sits sideways on the screen is compounded by a confusion (especially for beginners) as to the direction of play.

On the other hand, Atari provides a very clear instruction book with the game, detailing all features (they're all here, just a little small), from doubling to doublets. You really can learn how to play a good game of backgammon using this game – but experienced players will find nothing but frustration in this awkward design.

Atari's BACKGAMMON also plays a one- and two-player version of ACEY-DEUCEY, a backgammon variation invented in the Mediterranean that has achieved some popularity here through the years.

Price: About £34

Rating: *

Recommendation: Play it before you buy it.

VIDEO CHESS® *Atari®*

If you already own the Atari VCS, you might be interested in owning a computerised chess game for a comparatively modest price. VIDEO CHESS is more than an adequate competitor for most of us, allowing for 8 levels of play, ranging in response time from 10 seconds to 10 hours. All control is accomplished by moving a cursor (a small square of light) around the screen, taking control of one piece, and moving it to another square. The computer recognises all illegal moves, and has provisions for castling and *en passant*.

You will find that VIDEO CHESS, aside from being a good opponent, is a good teacher as well. Level 8 is the mode best suited to the educational process.

You might say that VIDEO CHESS is comparable to many of the less-expensive (under £100), dedicated computers made by Tryom, Fidelity and a few others.

Price: About £35

Rating: ***

Recommendation: This is an interesting expansion on a system once bound to the realm of air battles and electronic tennis. It's wonderful value for the price.

BRAIN GAMES® *Atari®*

This multiple-game collection was one of the first to really exploit the capabilities of the keyboard controller. There are six different games in all, each one requiring some degree of basic mental abilities. TOUCH ME is a game like SIMON, with either 6 or 9 possible tones to recall in a progressive fashion. COUNT ME is a similar game, with series of digits replacing the single ones used in TOUCH ME. PICTURE ME requires players to memorise a series of simple drawings in order, while the computer makes obnoxious noises in the background. FIND ME shows

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groups of objects on the screen, all of which match another – except one. The object here is to locate the oddball. ADD ME shows a list of numbers to be added before time runs out. PLAY ME allows anyone to use the VIDEO COMPUTER SYSTEM as an electronic organ (three songs are provided in numerical form: 'Twinkle, Twinkle Little Star', 'Three Blind Mice', and 'Row Row Row Your Boat').

Most games have variable difficulty, nearly all can be played by either one or two players.

Price: About £17

Rating: ****

Recommendation: Fun for kids.

FLAG CAPTURE® *Atari*®

A flag is hidden in a 7 × 9 matrix of 63 squares, and your job is to find it. Your joystick allows movement anywhere on the board, and by pressing the red button, you can encounter either a Direction Clue (the flag is that-a-way), a Number Clue (the flag is 'X' squares away), a Bomb (back to start), or the Flag itself. The game always involves finding the Flag as quickly as possible. This can be challenging, particularly in games where the flag itself moves.

Ten games and game variations are built on varying combinations of a moving flag, timed games, and the ability (or inability) of the flag to leave the right side of the field and reappear on the left.

Price: About £17

Rating: **

Recommendation: Best for kids, an interesting diversion.

HUNT AND SCORE®
(Also known as CONCENTRATION)   *Atari*®

HUNT AND SCORE is the matching game of
CONCENTRATION gone computer video. You can play
on either sixteen or thirty squares. Using your keyboard
controller, simply type in the numbers of the two boxes you
wish to match – if you're correct and they do match, you
score either one point ('A' difficulty) or two points ('B'
difficulty). The objects to be matched are all block
drawings, from llamas to rangers to television sets to deers.
With a 'wild card' (matches anything) option. For one or
two players.

> **Price:** About £17
>
> **Rating:** **
>
> **Recommendation:** The game of CONCENTRATION is better
> on a TV with a rebus puzzle behind those matching squares, but
> this is as much fun as the card game. As a matter of fact, you
> could save some money and just buy a deck of cards – and have
> more matches to boot.

CODEBREAKER®   *Atari*®

MASTERMIND via computer – that's what
CODEBREAKER is all about. There are two versions, a
three-digit mystery code and a four-digit mystery code,
operating with a field of 6 and 9 possible digits respectively.
In the variations, you have a choice of players (1 or 2), and
the ability to enter your own hidden combination.

The more interesting game here is NIM, which is the old
game of being the last to remove a pick from a large pile. In
the Atari version, there are one to four stacks of objects.
You take turns with the computer or with a partner
removing any number of objects from any of the one, two,
three, or four stacks. You must remove at least one object
on every turn, and all objects that you remove must be from

the same stack. You either play to avoid taking the last object, or to strive to remove the very last one – it's your choice.

For one or two players. Keyboard controllers required.

Price: About £17

Rating: ****

Recommendation: A more-than-adequate version of MASTERMIND (I wish there were longer codes available), combined with the terrific game of NIM – a very solid cartridge indeed.

BASIC MATH®
(Also known as FUN WITH NUMBERS®) *Atari*®

Designed to be a video flashcard system for elementary school youngsters, BASIC MATH offers a battery of ten problems each in addition, subtraction, multiplication, and division. The first four 'games' literally begin with a number of your choice and addition or subtraction drills based on your selected number. The second grouping of four games offers random alounts of problems in each arithmetic process.

Use joystick controllers to file through digits quickly.

Price: About £17

Rating: *$\frac{1}{2}$

Recommendation: A very basic set of flashcards, hardly an electronic wonder.

SUPERMAN® *Atari*®

Use your joystick controllers to actually manipulate the man of steel! The game itself is simple in object, and mord than a bit confusing to play. The object of the game is to collect a group of bad guys (Lex Luthor among them(, lock them behind bars, rebuild the fallen Metropolis Bridge, change back into your Clark Kent get-up, and return to the

Daily Planet in the best possible time. You need the phone booth to change from Superman to Mr Kent, and so you must control your motions as you fly from block to block in Metropolis. Each block, as you will see, contains an element that may be useful in play.

The game is far more complicated and convoluted than that which I have described here. Suffice it to say that the Superman game was released shortly after the movie was released, and that this is not one of Atari's more persevering games.

Price: About £23

Rating: *

Recommendation: Stick to the comic books.

MINIATURE GOLF® *Atari*®

Easily the most abstract putting course ever created, this strangely angular green, with its moving obstacles, square golf balls, and square holes makes a most entertaining game of golf. The joystick is used to control the head of your club – both the direction and the power of the swing. By setting proper angles, you must hit the ball towards the hole in as few shots as possible. (This is a 9-hole course, each 'hole' sets up different obstacles and displays a different 'par'.)

For one or two players, with a handicap (more power to your swing) for those who so desire.

Price: About £17

Rating: ***½

Recommendation: Played with pool-like precision, this is a fun game. It's a bit slow for a video game, just as golf is relatively slow as sports go, but more fun to play than many video games.

BOWLING® *Atari*®

For one or two bowlers, each armed with joystick, this computerised alley provides a fair to good adaptation of the indoor sport. On screen is a full alley, with bowler on the left, and ten pins on the right. The joystick can be used, depending on game variation, to move the bowler's foul line position, ball curve, and literally steer the ball motion.

All scoring frames are shown directly above the alley somewhat compressed characters. All frames are shown all times.

Price: About £17

Rating: ***

Recommendation: Not much real feel of the sport here, just a man releasing a ball. The action is a little awkward and the skill factor is marginal, but despite all flaws, it's fun to play, over and over again.

HANGMAN® *Atari*®

This is the word game, played with very large letters. Use your joystick to quickly cycle through the whole alphabet – from A to Z or Z to A. Press the red button to enter your chosen letter. Eleven incorrect letter selections are allowed until the 'hanging'.

There are nine games, the first four of which are for solo play with the second four for two players. All of these are based on elementary high school vocabulary lists or a per game basis. The ninth game is for two players as well, with one player entering a word of 1–6 letters for his or her opponent.

Each correctly guessed word is worth one point, and five points wins the game.

Price: About £17

Rating: *

Recommendation: For children only.

FOOTBALL® *Atari*®

Compared with the American FOOTBALL that appears on Mattel's INTELLIVISION, this game is hardly worth describing. Each team has 3 players which move towards goals on a nondescript striped gridiron (the matter of yardage never enters into this game). Both defence and offence preprogram their plays (a choice of five for each team, described in detail on the back pages of the instruction booklet).

Once the plays have been entered, the action begins. You may use your joystick to change the path of certain players on your team during the play, or you may sit back and watch the computer execute your plays. Either way, this game of football is surprisingly flat, especially for a company like Atari, whose coin-operated arcade football game is a very big hit.

Price: About £17

Rating: *

Recommendation: Stick to the other cartridges.

BASKETBALL® *Atari*®

One-on-one basketball, Atari-style, is played with two stick figures who dribble as they run, and who shoot when a red button is pressed on your joystick controller. You merely try to work your way as near as possible to the basket, and then shoot when playing offence. Or try to stand between offence and basket if you're defence.

All play occurs on a flattened 3-D court, but the players move in a 2-D space, which is most confusing and even inadequate for serious play.

Two difficulty levels and one- or two-player action.

Price: About £17

Rating: ***

Recommendation: Try the basketball that Atari makes for its 400/800 computers – more sophisticated, and more realistic.

HOME RUN® *Atari*®

There are precisely three elements in the play of Atari's VCS baseball game. The pitcher can throw any of 4 different pitches, and control each of them while in the air. The batter has only one swing, accomplished by shoving the joystick in *any* direction at all. Running is computer-controlled, though a runner may be stopped at a base (to avoid a possible put-out) by pressing the red button on the controller. The pitcher becomes the outfield after the ball is hit, controlling a trio of outfielders (who stand in a line, even in the most advanced of the games) to pick up the ball and thereby field it.

The ragtag manner in which this game plays, especially when compared with the Mattel INTELLIVISION game, makes for a relatively inadequate game.

Price: About £17

Rating: *½

Recommendation: Again, not especially effective.

VIDEO CHECKERS® *Atari*®

Neither the Atari checkers nor the Activision Checkers game (made for the Atari VCS unit, and described on page 173) are designed as efficiently as the Checker game designed for Mattel's INTELLIVISION system (see page 190). Atari's CHECKERS, like the Activision equivalent, seems to overload the power of its hardware, because the screen actually goes blank while the computer is 'thinking'.

As it is explained in the instructions, the complexity of the computer's consideration of all possible moves and responses occupies its entire mind, leaving little remaining for the video display, which draws from the same bank of computer power. If you play board games with any degree of concentration, and tend to develop strategies even while your opponent is thinking out his or her moves, this game is guaranteed to destroy your concentration.

Atari has built some good program features into the overall cartridge, including a flashing 'jump' signal (you *must* jump in a game of checkers if the opportunity presents itself), and a system of on-screen numbering of squares which matches the examples in textbooks about checkers. There are 9 games of standard checkers here, varying in the amount of time that the computer is allowed to consider its moves (the least is 1½ seconds, the most is 15 minutes – imagine playing checkers with a blank screen for 15 minutes!!!!!). There are 9 additional games, where the object is to lose the game by either giving away all checkers or forcing oneself into an immovable position. The board can also be used for human vs human play.

Generally speaking, Mattel has done a far better job with CHECKERS. Mattel's board allows for much more efficient (and more attractive) movement of pieces (it actually animates the jumps), and its computer will even suggest possible moves based on its vast store of strategic information.

Manufacturer: Atari, Sunnyvale, California

Price: £35

Power Requirements: (none)

Rating: * (and just barely, at that)

Recommendation: Don't buy this cartridge unless you own everything else Atari makes.

OTHELLO *Atari*

It's good to see this excellent table game adapted for video, particularly with a built-in computer opponent. For the uninitiated, OTHELLO (also known as REVERSI) is a rather old game involving the surrounding of your opponent's checkers in an effort to capture as many squares as possible on a 64-square gameboard.

This is very simply learned (Atari's instructions are particularly good, so even a new player can learn to play in minutes), with a good many tutorial variations.

Beyond three skill levels (against a novice, intermediate or expert computer program), and the use of the video game board for traditional two-player games, a set-up mode can be used (without the use and help of the computer, unfortunately) to explore your own game strategies either during or after games.

Although the official rules of OTHELLO dictate that the black player moves first, the game has been programmed to allow either player to start the game.

The computer keeps a running score, consisting of the number of boxes owned by each of the 2 players throughout the entire match. Use joysticks to play.

Manufacturer: Atari, Sunnyvale, California

Price: £35

Power Requirements: (none)

Rating: ****

Recommendation: As a strict man vs computer activity, this is a good Othello game. It would have been better if that same computer could have been used to teach strategy as well.

3-D TIC-TAC-TOE (Noughts and Crosses) *Atari*

Playing games on three-dimensional gameboards is almost always confusing, and confusion is a very real factor in the beginner's game of 3-D TIC-TAC-TOE. There are two key

design elements to contend with: a 16-square grid (as opposed to the conventional 9-square tic-tac board), and a layout of 4 such boards (thus allowing a tic-tac-toe to be created on, for example, the far right corners of each board). Here, the boards are shown in a somewhat exploded view, confounding in that players must occasionally count squares to be sure that the marker is being placed in the spot they desire. A cursor, controlled by a single joystick, allows one to place his 'x' or 'o' markers anywhere on the board.

Once you get past the physical logic of the gameboards, this is a challenging game, a very snappy diversion. It takes a minute to learn – it's just a bit more complicated in strategies than tic-tac-toe's 9-square, two-dimensional game. As with most strategy board games, the computer's skill is based on the amount of time it is allotted to examine its moves, your reactions, its reactions to your reactions, and so forth. There are 8 different skill levels, allowing the computer to look ahead for only one-half second, or as long as 20 minutes between moves. There is also a set-up mode, where you may explore the many strategies of the game (some of these strategies are included in the instructions, and they're very helpful).

Manufacturer: Atari, Sunnyvale, California

Price: £17

Power Requirements: (none)

Rating: ∗∗∗∗

Recommendation: One of the better strategy board games available for the Atari system. Give it a try.

DODGE 'EM® *Atari*

When you flip on DODGE 'EM, you'll see four concentric racecourses, each one filled with its own dotted line. The idea of the game is to collect as many of these dots as possible (by driving over them), switching lanes whenever

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necessary, while all the time avoiding an oncoming car (controlled by the computer). Considering the fact that you're heading counter-clockwise, and the computer's car is heading clockwise, the odds for a crack-up are remarkably good, so you must be very, very fast in both the steering and the acceleration departments.

There are three variations. Game No. 1 is straight player vs computer action. Game No. 2 has one player 'up' against the computer at a time, but will score a match. Game No. 3 allows one player to control the point-scoring car while the opponent controls the 'crash' car (formerly controlled by the computer).

Manufacturer: Atari, Sunnyvale, California

Price: £17

Power Requirements: (none)

Rating: ****

Recommendation: Keep your eyes open for more sophisticated games based on similar concepts. This game is good, but something better should be coming along soon.

NIGHT DRIVER® *Atari*

In the dark of night, you see only the guardrails. The road swerves left, straightens for an instant, swerves gently left, then sharp to the right. You accelerate, feeling that you've caught the pace, and suddenly, out of nowhere, the road takes a mean curve, an endless curve, to the left, then right, then left, then . . . you've moved just a little too quickly, and you've crashed into the rail. That's the premise of NIGHT DRIVER, a consistent arcade favourite now available in a home version.

You actually see the road, its guardrails, and the occasional tree, looking at your TV screen as if you were looking through a windshield in the black of night. The ambience is wonderful. And so's the game, and all of its variations. There are 8 NIGHT DRIVER games, 4 with timed courses (90 seconds), 4 which can be played with no

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time limit at all. Each group of 4 includes one novice course, one pro course, one expert course – each plays identically each time you choose to play – plus a RANDOM course, which plays with a different course every time.

Atari's PADDLE controllers are used to play NIGHT DRIVER.

Manufacturer: Atari, Sunnyvale, California

Price: £17

Rating: *****

Recommendation: This is the best auto racing game yet available for video.

CIRCUS ATARI® *Atari*

This game is so simple, it takes only a few seconds to learn. There is a see-saw, and there are two clowns. One must move the see-saw, so that one clown (on his way down) will hit the appropriate end of the see-saw, and send the other clown on his way up. Each time this is successfully accomplished, you score a point.

Now, there is a reason why these clowns keep jumping up into the air. Each time they jump, they try to hit (and break) a balloon. The higher the jump, the more valuable the balloon.

One quickly senses that the best way to keep those clowns up high is to have the descending clown hit the see-saw as close to its end as possible (thus creating the most powerful catapulting action available).

There are lots of bonus situations as you break the balloons (the action is rather like BREAKOUT – see page 143), notably an extra clown, or turn, when you've burst all the balloons on any one of the three rows. Atari offers 8 variations here, with one-player or two-player competition, and two different manners of clowns catapulting (you must see a deomonstration – words will not explain the difference properly).

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Manufacturer: Atari, Sunnyvale, California

Price: £17

Power Requirements: (none)

Rating: ****$\frac{1}{2}$

Recommendation: Try BREAKOUT, which is more sophisticated, and buy this one afterwards – but reverse the process if young children are the prime users of your video game system.

MISSILE COMMAND® *Atari*

Another in Atari's continuing line of coin-operated games for the home VCS unit, MISSILE COMMAND is one of the better video games to date. The layout is reminiscent of SPACE INVADERS, with airborne attackers tossing explosives towards earthbound bases. We don't actually see the invading force here, however, instead we see the 'interplanetary ballistic missiles' leaving their trails in space. The object here is to spot your 'cruise missile' (controlled by joystick) in the anticipated path of an oncoming missile, in hopes of setting off an explosion in space that will destroy the missile in its path. Once you've become adept in manoeuvring the cruise missile, the process is easy. It only becomes challenging as multiples of IBMs attack at once (the multiple attacks are commonplace – they're called 'waves'). It is here that the race begins, as you rush to position the cruise missile (actually a cursor – it doesn't look much like a missile or any other such conveyance), fire, and move to the next position. In the simpler skill levels this manoeuvring isn't very hard, but one or two missiles are bound to get through (and possibly destroy a city, or worse yet, your missile base) with even the best of players at the helm. The game continues until all 6 cities are destroyed.

Atari has built enough variations into this game to allow 16 different games for one player, and another 16 games for 2 players, plus a children's version for either solo or competitive play.

These variations include a 'slow/fast target control' which determines just how quickly you can move your cruise missile around the screen (this has a direct impact on how many IBMs can be destroyed within a given time frame – slow control makes the game *much more difficult*), 'enemy cruise missiles' which can be smart enough to evade your anti-ballistic missiles (there are two kinds – smart, which can evade, and dumb, which cannot), and the actual speed of movement of each attack wave.

MISSILE COMMAND is one of the most engaging, hypertense, and active video games yet devised. It is in a class with the greats, including SPACE INVADERS and BREAKOUT.

Manufacturer: Atari, Sunnyvale, California

Price: £35

Power Requirements: (none)

Rating: *****

Recommendation: For all ages, one of the best action videogames on the market.

PELE'S CHAMPIONSHIP SOCCER® *Atari*

This soccer game, endorsed by soccer great Pele, doesn't look much like regulation soccer on the screen. The players are coloured dashes, and the screen shows a field that is wider than it is long. Although there are many, many features, the game does not play very much like the real thing.

There are a mind-boggling 54 variations to CHAMPIONSHIP SOCCER, including 3 different combinations of penalties, 3 different goal sizes and fully 9 different ways to affect skill levels. The game can be played either against the computer (games No. 28 to No. 54) or against another player (games No. 1 to No. 27).

The game's action is controlled by a joystick, which in turns controls a forward and two backs *as a group*

formation. There is little here that simulates the real action of a soccer field, as an in-store demonstration will show.

> **Manufacturer:** Atari, Sunnyvale, California
>
> **Price:** TBA
>
> **Power Requirements:** (none)
>
> **Rating:** *
>
> **Recommendation:** Not one of the better games.

GOLF *Atari*

Atari's golf course features nine holes, and concentrates almost entirely on simply getting the ball into the hole. There is no choice of clubs, only a timing control that controls the power of each swing. You start each game at the tee, and see the entire fairway until you reach the green. You play the green on a close-up view, with the club action similar to a putter. Joystick controlled.

> **Manufacturer:** Atari, Sunnyvale, California
>
> **Price:** TBA
>
> **Power Requirements:** (none)
>
> **Rating:** **$\frac{1}{2}$
>
> **Recommendation:** A relatively lack-lustre, mechanical version of golf. Compared with the Mattel GOLF (page 198), it is not a very realistic rendition.

MAZE CRAZE®:   A GAME OF COPS N' ROBBERS
Atari

It was inevitable that Atari would come up with a joystick-controlled maze game, because their graphics system is so very well suited to that sort of thing. When you first encounter MAZE CRAZE, it appears to be simply a random structuring of a fairly complicated maze, with features that allow portions of the maze to be invisible, thus

forcing you to find your way through by both trial-and-error and pure memory.

The game is not simply a race through a maze, which probably would have been better than what this game has turned out to be. Using some very abstract cops and robbers, we have a chase game that is most unimpressive during most matches. The fun of this cartridge is speeding your way through a different maze every time; one almost wishes that there were a timer that measures the split seconds of each run. Instead, you 'man' is a cop, whose mission it is to chase, avoid, or capture other maze inhabitants, at the same time working the maze itself. The result is confusing and a bit tedious, because the point of a maze is not so much a hide-and-seek course as it is a race-course filled with strange and wonderful obstacles.

It appears that Atari has missed the point here. The fun of this game is completely irrelevant to the world of criminal chase scenes; I wish I could do these mazes in ever-faster cycles. That would be rather addictive.

As for the particular mechanics of the game, there are good invisible and semi-invisible arrangements along with a 'peek-a-boo' feature to jog the memory or help one out of a nearly impossible jam.

The game as designed is not much fun for a single player; one cannot really compete against the computer and feel as though there's a serious game being played. It is better for two human players, mainly because of the laughter and screams bound to occur when you get caught up in the race . . . to nab those criminals before they get away.

Manufacturer: Atari, Sunnyvale, California

Price: About £20

Power Requirements: (none)

Rating: **½

Recommendation: Take a look at Acetronic's maze cartridge and compare. It really seems as though Atari has missed the point of a maze cartridge here.

ABOUT ACTIVISION

In the era of SPACE INVADERS, several renegade Atari designers left that company to form their own game company. With plans to create software for all computer-related systems, Activision quite naturally started with familiar turf, and issued several games for the Atari VCS. Initially, Atari objected and threatened to sue, but the infusion of the new Activision cartridges turned out to create even more interest in Atari's highly successful game system.

The initial crop of Activision games, specifically those reviewed in this book, can be used only in the Atari VIDEO COMPUTER SYSTEM. It seems likely that Activision will also make games for other systems, but none was available as of this writing.

All of Activision's Atari games can be played with standard Atari hardware – including joysticks and paddle controllers. No supplementary hardware is required.

Activision is distributed in the UK by CGL/Computer Games Limited.

FISHING DERBY® *Activision®*

The basics of this game couldn't be more simple. Use your joystick to drop a fishing line, and try to drop the hook and bait as close as possible to the mouth of one of the swimming fish. When you've got him hooked, press the red button on the joystick. It's as calm and relaxing as a quiet morning at the pier – but watch out for the shark! Very near the top of the water, a very fast computer-operated shark is on the prowl . . . ready to nibble a fish right off your line. Use the joystick to manoeuvre the line around the shark, and your best sense of timing to pull those fish up when the shark is on the far side of the screen.

There are two games, both lots of fun and surprisingly addictive. You can play against the computer fisherman

(who can be set at either of two levels of proficiency), or against a second human player. Scoring is based on the depth of the fish (or, more accurately the weight of the fish, which determines how deep he swims).

Pay particular attention to the tips of designer David Crane, published in the instruction book.

Distributor: CGL for Activision, Sunnyvale, California

Price: £16.95

Power Requirements: (none)

Rating: ****

Recommendation: A unique game for all ages, particularly for children. (Note that the actual relationship between hook and fish's mouth may seem a little arbitrary, and so frustrating at times.)

SKIING *Activision*®

This is one of the finest one-player video games I've encountered. There are two games here, each with its own variations, each requiring you, the skier, to constantly better your own time down the slopes. It's best to start on the 20-gate novice run (game No. 1), to get the feel of the game. Quite simply, your skier will move most quickly if his skis are pointed forward (*down* the slope), so the idea is to move him from gate to gate (avoiding assorted obstacles, like trees, in the more advanced courses), while keeping him moving straight ahead as much as possible. The easiest slalom course seems impossible for the first few tries (you'll keep banging into the gate flags, or missing the gates entirely), but then, quite suddenly, the strategy of keeping those skis *straight*, and making your moves *gradually* comes clear.

Due to limitations of computer memory and reasonable pricing, the runs for games Nos. 1, 2, 3 and 4 (and No. 6–No. 9 in the downhill runs) are identical every time. Runs No. 5 (slalom) and No. 10 (downhill) offer a new game every time.

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Downhill racing and slalom are essentially the same here. Besides the obvious value of additional courses, downhill replaces the slalom gates with moguls, which must be jumped over to avoid a spill. The differences between styles is almost inconsequential; it is more significant to have two novice courses, two intermediates, two experts, and two Olympic runs.

Bob Whitehead, who designed the game, offers some very good pointers in the instructions, particularly with regard to the use of the joystick for gradual manoeuvres.

Distributor: CGL for Activision, Sunnyvale, California

Price: £16.95

Power Requirements: (none)

Rating: ****½

Recommendation: Great for the highly competitive, fun for everyone. A welcome relief from the battle games that proliferate in the field of video games.

LASER BLAST® *Activision®*

This is reminiscent of some of the older space target games (in the age prior to SPACE INVADERS and ASTEROIDS), where your airborne ship shoots at enemy ground stations while avoiding their own fire. Several gimmicks make this a very special game indeed. First, unlike those oldies, the ground is constantly moving right to left, causing the ground stations to move as well. Second, your active ship (there are four ships to play in all) is very much affected by force fields, which determine just how close you can fly to the ground and how vulnerable you are to radar tracking. And third, when your ship is shot down, you can actually destroy an earth station by landing on it.

The wonderful thing about LASER BLAST is that it demands total concentration, but operates in a simple enough fashion for beginners. It's a good game because it requires only seconds to learn, and a fantastic amount of

play to master. With 4 skill levels, determining the number of earth stations on screen.

Distributor: CGL for ACTIVISION, Sunnyvale, California

Price: £16.95

Power Requirements: (none)

Rating: ****

Recommendation: One of the better space games, though not quite a SPACE INVADERS. Pay close attention to LASER BLASTER designer David Crane's tips for better play. And keep at it, because a photo of your 100,000 score, sent to ACTIVISION, will allow admission into the Activision Federation of Laser Blasters. (The photo is your proof.)

CHECKERS *Activision®*

Activision's CHECKERS suffers from most of the same problems as Atari's CHECKERS. Briefly, the screen goes blank while the computer thinks about its next move (see the Atari VIDEO CHECKERS entry, on page 160, for an explanation).

Sadly, this is a stripped-down version of the highly-inadequate Atari game (although this game did come out first in the USA).

Distributor: CGL for Activision, Sunnyvale, California

Price: £16.95

Power Requirements: (none)

Rating: (less than a star)

Recommendation: Only if you must buy this. As video games go, it is not one of the better ones around.

TENNIS *Activision®*

The very first video games made in America were electronic table tennis games, where small white dashes could be controlled to volley a small white dot, thereby simulating a ping-pong match. There was a limited amount of skill

involved, mainly, there was a hefty need for patience, as volleys went on forever.

Activision's TENNIS suffers from many of the problems of the early games, and some new problems of its own. We see the court from behind one player's position, looking at a perspective view of both players' courts. Players are stick figures with racquets, but one doesn't control the racquets, one merely moves the player in the way of the ball (like those early tennis games), and the computer actually does the swinging. The players don't move very quickly, and coverage of the entire court is even more difficult here than it is on the real court. Players are similarly limited in the amount of power they can apply, and even the directions in which the ball can be hit. The computer does most of the work; the players merely race into position. If they make it to the position in time to return the ball, no point is scored. If they do not return, a point is scored.

With some embellishments, that's about it.

Manufacturer/Distributor: Activision, Sunnyvale, California/ CGL

Power Requirements: (none)

Price: £16.95

Rating: *

Recommendation: Wait for Atari to issue a Tennis game, and then compare. This is hardly Activision's best effort.

BOXING *Activision*®

This is a terrific game. It doesn't have too much to do with the sport of boxing, but it's the closest anybody's come so far, and it is terrific fun. Designer Bob Whitehead has taken a bird's eye view of two boxers in the ring, each with arms slightly extended, ready to punch.

A round is 2 minutes long. When you're playing against the computer, you are the white boxer (the computer is the black fighter). You use a joystick to move your man around

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the ring, coming in for a fast jab (press red button on joystick to punch), then dancing away before the computer's boxer rebounds. The key is to dance, and hit, and dance, and hit, always trying for the high-valued close power punches when prudent to do so. It is possible to knock-out your opponent, though I have never seen it happen. The actual fighting is lots of fun, moderate violence if you will. The computer's boxer will even conform to your skill and agility. When he gets behind, he gets better, and when you're behind, you'll get a fair chance to catch up.

Designer Whitehead is full of tips that really work, and each is discussed in detail in the game's instructions. The only possible complaint is monotony – by the end of a two-minute match, you do get a little weary of pressing the red button over and over again, particularly if you're a consistent champ. (There are two skill levels – you can go for the harder one if you're getting cocky.)

Manufacturer/Distributor: Activision, Sunnyvale, California/ CGL

Price: £16.95

Power Requirements: (none)

Rating: ****½

Recommendation: An exciting, action-packed video game, quite suitable for any age group or skill level.

DRAGSTER® *Activision*®

There is a very limited group of drag race fans to whom the DRAGSTER cartridge will appeal. It is frustrating to learn, and, in the author's opinion, requires hardware somewhat more delicate than an Atari joystick for accurate and fair play.

The cartridge displays two dragsters – racing cars – each on its own track. Directly after the countdown (10 . . . 9 . . . 8 . . . and so forth), one must tap the joystick once to start in first gear, and, practically simultaneously, tap the red

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button to accelerate. Too light, or too short a tap will cause almost no acceleration; a slightly heavier tap will blow the engine and end the race. If you're a good player, 7 or 8 seconds later, you've worked your way up through fourth gear, tapping the accelerator just perfectly on gears two and three and avoiding a near-inevitable blow, the game is over. For most beginning players, the game is all but impossible to play. In the first 35 tries, I blew my engine 25 times before I even shifted into first gear, and 10 times before I shifted successfully into second. On try 36, I did manage to shift into third gear, but I was so shy about blowing the engine that I was barely moving at all.

This game requires a very special sort of patience, an ability to react instantly with sub-standard equipment, and, frankly, it is not for everyone. There are those who will master it instantly and make my 35 tries seem awfully feeble, but most players will probably return the game to the store out of sheer frustration.

If you do master the game, and send a photo of your score on the screen as proof of an 'under 6-seconds' run, Activision will enroll you in their World Class Dragster Club. I have seen the score as low as 6 seconds, but I defy most readers to do much better than double or triple that score, if they complete the race at all.

Manufacturer/Distributor: Activision, Sunnyvale California/ CGL

Power Requirements: (none)

Price: £16.95

Rating: $*\frac{1}{2}$

Recommendation: Play it in the store before you buy – you may be one of the few to whom this game comes easily. All others, beware.

BRIDGE *Activision®*

Activision has taken a rather bold step by introducing the only bridge game available for the video game world.

Although this is hardly a tournament-quality program, Activision **BRIDGE** does play a reasonably good game, and is certainly a worthy opponent for the average Sunday afternoon bridge amateur.

The designer, Larry Kaplan, has taken only a few liberties with the card game's rather steadfast rules to recreate the game for video. You always play south, and you can see your partner's hand if you like (a switch can be thrown to make it visible). You may start the game by bidding (or you may simply select a contract and start playing tricks – it doesn't make much difference because of the game's design, but the options do exist), but you will see only your partner's bids. You will not see the East and West bids at all, so your communication with your partner is focused as it might be in a classroom situation and you will be forced to bid without any information at all about your opponent's hands. The bidding is designed to follow most conventional responses, and there is a small guide to your partner's bidding responses included with the cartridge, but this is hardly a perfect tool for the learning of bridge bidding. It's more like bridge bidding for the fun of it.

Next, you play. The computer displays the number of tricks remaining to make bid, and keeps a running tally, so all you must do is keep your eyes on the cards and make the best possible decisions. The computer will help you, by flashing its suggestion. You may honour the suggestion and play the card, or you may select another card. Once a card is played, however, you cannot take it up again. Play continues until all cards are played. At the game's end, your opponent's hands are displayed.

If you want to replay the same hand, you may switch into that mode. Otherwise, you may start a new game by pressing game reset on the Atari VCS.

Manufacturer: Activision, Sunnyvale, California

Power Requirements: (none)

Price: £16.95

Rating: ****

Recommendation: A superb device for improving your basic bridge techniques, in both the bidding and the play. As 'one more cartridge for the system', this is an intriguing, and rather unique, selection. Please don't expect tournament play of this small computer program – it is designed for the fun of it.

INTELLIVISION® THE MASTER COMPONENT
Mattel Electronics®

Shortly after their successful foray into the world of hand-held electronics, Mattel started work on a highly versatile home computer system known as INTELLIVISION (short for Intelligent Television). The actual computer system comes in two parts, both of which will be described in these pages. The heart of INTELLIVISION is a special-purpose computer known as a 'Master Component', whose sole function is to play games. This component fits directly into the top of a second 'Keyboard Component', which looks and acts very much like a full-scale personal computer system. (A separate entry details the possible uses of the 'Keyboard Component'.)

Efficiently designed for tabletop use, the Master Component is a brilliant, yet simple, computer that a child can operate in minutes. Two hand-held controllers are attached directly to the component, and it is these units that are used to play every single game on INTELLIVISION. Each hand-held unit contains a 12-key pressure-sensitive pad, which includes digits 0–9. and an *enter* and *clear* key. At the bottom of each hand-held device is a 'control disc' which combines the functions of Atari's paddle joystick controllers. The control disc requires a little bit of practice to master perfectly, while the keypad is easier than a touch-tone phone. Incidentally, there are 2 more switches on the control unit, located on the side of the unit itself (there are actually 2 sets of these switches, so that either right- or left-handed players may operate at maximum efficiency).

There is a small port, designed for cartridge entry, located on the right-hand side of the 'Master Component'. All games are played using these cartridges.

Only two other buttons appear on the console: a *reset*, and an *on/off*. Most of the game control is where it should be – in your hands.

Mattel takes this concept a step further than any of its competitors by adding overlay to the keyboard for each and every game. In the baseball game, for example, a plastic sheet imprinted with an exact replica of the on-screen diamond asks you only to press the base or the player involved rather than memorising a list of digits associated with each fielder on the team. In each game, the overlay creates a totally new meaning for the keyboard – and you never use the keyboard 'naked' – each and every game offers a keyboard overlay, just to help you along.

The retail distribution of INTELLIVISION has been very good, primarily because Mattel has such a strong history in toy and game retailing. Chances are good that cartridges will be available in a neighbourhood shopping mall, and equally good that you'll see new cartridges every few months. Mattel promises to introduce well over a dozen new game cartridges every year, hoping to surpass the Atari library in a relatively short time.

Manufacturer: Mattel, Hawthorne, California

Price: About £200

Power Requirements: AC adapter included with unit

Rating: ****

Recommendation: The price of this unit is considerably higher than the other top-selling unit, Atari's VIDEO COMPUTER SYSTEM. The games on Mattel's component are considerably more complicated than those on Atari's system. Additionally, you may look at the 'Master Component' as a first step to the overall computer system, which is precisely the way that Mattel hopes you will look at all of this. The system, of course, is of secondary importance; most significant in your purchase of any computer system is the software, better known as 'The Games'.

INTELLIVISION® ARMOR BATTLE® *Mattel Electronics®*

A tank game par excellence, ARMOR BATTLE is a tactical war game designed for two players. Each player begins the game with 2 tanks, so there are 4 tanks on the screen to start. These tanks are invariably buried in the forest, or behind buildings, or in the water. Your tank must first be eased out of the obstacle before it can be used as an offensive weapon. And when Mattel says that these fellows move like tanks, they're not kidding. The vehicles move more slowly and more clumsily than any conveyance yet invented for the video screen. Changing course, accomplished by using the control disc as a compass of sorts, is a slow, tedious process. But all of the clumsiness is part of the fun, because both players are laden with these turtle-like battle pieces.

The game is played with one tank at a time, and you may change the active tank by touching a button on your keypad. The object of the game is to successfully bomb each of your opponent's tanks three times (each time you blow a tank to kingdom come, a small puff of smoke marks the site). As you might expect, shooting over the long courses, or through the woods, is not as accurate as shooting from only inches away from the tank. Just as speed games like football force all players to think and act at extremely fast speeds, ARMOR BATTLE forces players to conquer very *slow* speeds. There's no such thing as sneaking up from behind here – every move is out in the open, and most of the moves are so laborious that they are apparent to all concerned. The game then becomes a question of how well you shoot, and how fortunate or unfortunate the recoils from your own shots make your positions.

You can lay invisible mines, unbeknownst to your opponent, which explode within 5 seconds of their placement. This is a rarely used tool, but one that may

prove important in particularly close matches. Only one mine is needed to knock out a tank.

A list of strategies, mostly involving a force play where your opponent has no alternative but to get caught in an obstacle, is included in the instructions. It is most helpful.

There are 240 different maps in the cartridge memory, so each mission will be a unique experience. All maps include a green grassy area, a water obstacle, a forest, buildings and a road (the road is the fastest way to travel, but sometimes they're hard to get to). You may set as many maps as you care to before play begins.

Price: Under £20

Rating: ****

Recommendation: Remember that this is a two-player game and that it cannot be played against the computer. You'll have lots of fun with this one – a fine blend of strategy and action.

INTELLIVISION® MAJOR LEAGUE BASEBALL®
Mattel Electronics®

There is no electronic adaptation of baseball available that surpasses the authenticity of Mattel's MAJOR LEAGUE BASEBALL. In fact, there are few electronic versions of *any* sport that play so very well on video. The game is simply terrific.

A plastic overlay of the whole ballfield fits directly over your hand-held keypad. Nine ball players, each ready and in position, are drawn directly above nine of the buttons. Press any player and the ball will be thrown *to* the position you've activated. A few tosses 'around the bases' will demonstrate just how realistic the action feels. (When you actually play this game, you'll probably be fascinated by your ability to *throw* the ball. I know that I was.) After a practice run, return the ball to the pitcher by pressing his position. It is time to start the game.

The pitcher chooses his strategy by pressing one of eight regions on the direction disc. This too is most logical – the

faster pitches are towards the top, and the slower ones are the bottom-most part of the disc. Curves are aligned to a right-handed batter – left is 'inside', and the right is 'outside'. The person who pitches uses his/her controller to initiate the action. The batter merely presses either *bat* or *bunt* on the opposing controller.

The offence must watch the pitcher very carefully, select, consider timing, and press *bat* (or *bunt*) at the precise instant when the ball crosses the strike zone. As you perfect your timing, you'll be able to place the ball in right, left, or centre field.

Once you hit the ball, press the disc to start running. And remember that your runner is racing against the fielding team, who run after the ball and throw to the proper base (all via control of a *human* opponent). You can even get caught in a rundown between two bases (hence the ability to run backwards). Stolen bases, and double plays are part of the game as well. (Only two standard baseball rules have been eliminated in order to clarify the play – there are no fly-outs, and no bases gained when a batter is hit by a pitch.)

With three play speeds, for two players.

Price: Under £20

Rating: *****

Recommendation: Play it once and you'll want it for your very own.

INTELLIVISION® NFL FOOTBALL® *Mattel Electronics®*

So far as video versions of America's favourite sport are concerned, Mattels got the winner hands down. The reason why is simple: attention to detail, serious player control, the ability to plan your offensive and defensive plays and revise your plans instantly. All of this, combined with a high-clarity playing field (which scrolls across the screen, showing 20 yards at a time), and realistic play

results make INTELLIVISION NFL FOOTBALL a solid adaptation.

The game begins, as all INTELLIVISION games do, with the insertion of a plastic overlay into the hand-held controllers. In this instance, the first 9 buttons are labelled 1–9, with the 7 key also used to identify running plays, the 8 key for kicks, and the 9 for pass options. Player movement is the result of moving the floating disc: if you press the top of the disc, the player you control will run towards the top of the screen, and if you press the bottom, the player will run towards the bottom, and in a similar fashion for side-to-side motion. You'll find that each team controls one of five players, with the computer taking charge of the remaining four men on each side.

The actual play starts with a choice of speed – either 'NFL Speed', which is very fast, 'Semi-Pro', which is fast, 'College', which is medium speed, or 'High School', which is slow. Once you select the speed, you'll hear a cheer, a fanfare, and assorted jubilant sounds, and you'll see the teams run out on to the field. Both teams huddle, and the formations are selected. It is here that NFL FOOTBALL becomes a game of strategy. A playbook details the player formations available, and any of these can be reproduced on screen by typing in a whole series of digits. (The ritual is long and tedious if you're unsure of what you're doing – just be sure to follow the directions precisely, and you shouldn't have much trouble). Three digits are required for a run play, 5 are needed for a pass play, and 2 are needed to program defence for any play. The passing plays are most complicated, with two eligible receivers, the time of the hike (initiated by one of the side buttons on the controller) and the movement of the receiver. The action is realistic, as the quarterback fades and takes on a mind of his own as he passes to the eligible receiver. And, of course, you control switches from the QB to the receiver at the proper moment.

Running and kicking plays are somewhat less complicated, but equally intriguing. You'll find that the blend of strategies in this football game is very, very similar to

those involved in the pro sport. (There aren't many sports adaptations that can make that claim). Manual control of one player on each team makes the game even more realistic.

Scoring is clear and easily understood. The game is played over 4 quarters of fifteen simulated minutes each. You'll find that the scoreboard will respond to the action of the game, stopping when a player runs out of bounds, when a pass is incomplete, after touchdowns, and so forth.

A most enjoyable sporting event, requiring two players for every game (the computer cannot play against a single human).

Price: Under £20

Rating: *****

Recommendation: You'll need some time to become comfortable with the numerical entries, but that's the only difficulty here. Remember, this is *American* football.

INTELLIVISION® NASL SOCCER *Mattel*

Designed with the blessing of the North American Soccer League, Mattel's SOCCER is a close kin to their American Football (NFL) cartridge (see page 182). Again we are playing a full-field game, but we see only one-third at a time, in the visual field that might be covered by a television camera. The action is realistic here, player control is very good, and you really can play a good game of soccer (American rules, of course) using this cartridge. This is the kind of game that is particularly difficult to explain in less than a dozen pages, so a visit to your local retailer for a demonstration is certainly due if you are interested.

For the record, and for your reference, there are a healthy number of features that affect play. You can run the game at any of 4 speeds (and you will absolutely want to start at the slowest speed if you are to keep control of the ball in early games). Each team has three men plus a goalie, but the computer makes it seem as though its 10 vs 10 and

you have control over the man who has the ball, who can kick, pass, dribble and manoeuvre around other players as a result of the careful manipulation of your hand-held controller. The direction disc is most important – it will allow you to run in any of 16 different directions during the play.

Perhaps the most interesting feature is the way in which the computer simulates the 10-man team. Generally, you will see 3 active men (plus goalie). When the TV camera effect pans in one direction, and loses a man off to one edge, a replacement man appears at a predictable interval over on the other edge of the screen. At first, this seems a little contrived, but it does work in the context of this simulation, and it really makes play more realistic. Play it in a store, and you'll see just how well this game is designed.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: Under £20

Power Requirements: (none)

Rating: ****½

Recommendation: This is one of INTELLIVISION's best sports games.

INTELLIVISION® NBA BASKETBALL® *Mattel Electronics*®

NBA BASKETBALL is one of the more confusing games on INTELLIVISION, primarily because the plastic overlay card (for the hand-held controller) contains so much information about the offensive games. As with FOOTBALL, there are four playing speeds. I suggest that you start with the slowest of these speeds, because you'll need all the help you can get in learning how to play this game.

The overlay contains nine pass keys, each of which represents a ninth of the offensive half-court (think of the

court as a noughts and crosses board, and look at the nine buttons in the same way, and you'll be able to follow the pattern). Press the area of the court that you want the ball to go *to*, and one of the computer-controlled players will race over to the area, hopefully in time to receive the ball. (The ball will, however, be intercepted if the opposition gets there first).

Players are moved via the floating disc, in precisely the manner designed for the FOOTBALL game.

Aside from dribbling and running to passed balls, the game of BASKETBALL obviously involves shooting as well. One button in the keypad is a *jump shot*, and another is a *set shot*. In the first case, the shooter leaves the ground, and so he's a little harder to block than in the second case, where the shooter is stationary, and more likely to score a basket. Your shooter is always manually controlled, one of three players on the offensive team, the other two are run by the computer. The defence also has three players, one of whom is human-controlled. The controllable defenceman is used to block, rebound, intercept passes and steal the ball; all functions can also be done, with a little less accuracy, by his computerised counterparts.

The best games on this court are played with lots of running, and lots of passing, with a healthy amount of fast strategy. The size of the hand-held controller makes this collection of feats difficult indeed, made even more so by the fact that small, abstract players sometimes obscure one another during crucial moments of the game.

Price: Under £20

Rating: ****

Recommendation: Try this one in the store before you buy. It isn't as perfect as some of the other INTELLIVISION cartridges, particularly for novices.

INTELLIVISION® ELECTRIC COMPANY® MATHS FUN   *Mattel Electronics®*

Children's maths games have never been more entertaining than with the INTELLIVISION cartridge designed by the folks at The Electric Company. Each player is a gorilla, racing through the jungle. As he runs, he encounters all sorts of animals. Each animal brings a mathematical problem (preset at one of fourteen levels). A correct answer will result in your gorilla prancing once again along his jungle path, until he meets up with another animal and another problem. A wrong answer will force your gorilla into the river, where hippos and crocodiles provide progressively easier problems. A gorilla can only leave the river if he answers a question correctly.

You may pre-select the number of problems you wish to conquer in each match, and that number can vary with each of the two gorillas who play the game.

Total scores are based on the number of problems correct (100 points for each correct answer) and the number of seconds required (children are encouraged to convert minutes to seconds in this sneaky bit of educational fun).

Gorillas, incidentally, do a victory dance when they've completed the series of problems. Buy one for your gorilla today.

Price: Under £20

Rating: ****

Recommendation: A children's game for sure, but adults will find that the most challenging problems will be toughies even for them without the help of a memo pad. Younger children should be encouraged to use a pad and pencil as well.

INTELLIVISION®ELECTRIC COMPANY® WORD FUN® *Mattel Electronics®*

WORD FUN is a children's cartridge with educational undertones, designed in conjunction with the Children's Television Workshop (responsible for SESAME STREET and this game's association, THE ELECTRIC COMPANY). There are three games here, and most are fun for all ages. The first, CROSSWORDS, is very much like SCRABBLE, with a grid-style board and each player selecting letters from a tray of seven to form words that will intersect with existing words on the board. Unlike SCRABBLE, there are no per-letter points; instead, the computer simply counts the number of letters used and tallies the score on a point-per-letter basis. The second game, WORD HUNT, is for younger children, but it's really great fun for almost anyone. It is played in a sort of letter jungle, where monkeys are used to pull letters off trees to form words. The game becomes a race, where each player controls his own monkey, trying to form words of at least 3 letters in length. WORD ROCKETS is very much a video game, requiring not only thinking skills but also a fast, agile touch. Two players try to complete the same word at the same time. Each player starts each move by loading a vowel into a sort of launch pad, ready to shoot it off should it fit into one of the words floating above (example: I have a 'U' in my launch pad and a 'C – T' appears. 'CUT' is indeed a word, so I shoot, hoping to have my 'U' make contact with the C – T before it passes out of range. Had the letters above been 'T – P', my 'U' would have been useless, but my opponent's 'A' would form the word 'TAP'.)

All three games are good family entertainment.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: TBA

Power Requirements: (none)

Rating: *****

Recommendation: Particularly good if there are grade-school children, several of them, in a single household. This is one of the great educational baby-sitters of our time.

INTELLIVISION® APBA BACKGAMMON® *Mattel Electronics*®

The American Backgammon Players Association has lent its good name to Mattel's fine version of the strategy classic, and with good reason. Extraordinarily clear and well devised, the game can be played as either a conservative, straightforward bout, or as an aggressive, highly developed war of nerves. Only doubling is missing.

You'll find that the gameboard is particularly clear, and that the action of the cursor (a small indicator used to mark the checker currently in play) is quick and painless. The fact that you are playing backgammon on a TV screen – frequently a tedious venture in other formats – becomes a plus with this INTELLIVISION game.

The plastic overlay, which is placed on top of the control keyboard prior to play, is crisply efficient. Moves are accomplished by pressing die faces (⚀ through ⚅) rather than digits. A *move two* switch is most convenient when doubles are rolled. The cursor is moved via floating control disc. All in all, a delightful way to play backgammon. And a superb way to learn the game, especially in light of the buzzer which identifies illegal moves.

The instruction book details the rules of APBA backgammon as well as the particular scheme of the Intellivision version.

Price: Under £20

Rating: ****

Recommendation: Computer backgammon experts may object to this game's comparatively straightforward rendition, but all others are likely to be fond of this version. Note that there is no doubling option here.

INTELLIVISION® CHECKERS *Mattel Electronics*®

INTELLIVISION truly adds new possibilities to a game that's nearly forgotten amongst the younger players. An extremely popular game in my grandfather's day (he taught me, and judging from the way I play today, he never used very strong battle plans against me). The computer is a tough opponent – it sees nearly every move and every possibility, and so it is difficult to win even in the best of circumstances. There are two skill levels, but almost no one was able to play a serious game on the second skill level as the computer took sheer advantage of its clearly superior mental capabilities. A kind soul it is, however, because the very same wizardry that wins the games for the computer is available to the human player – a special 'Computer Suggests Move' button can be pressed before you make your own move. Use it if you see fit – it's usually a great help in planning and executing your every manoeuvre).

A touch of animation, where a captured checker will simply fly off the board and on to an offsides rack, makes this game a bit more appealing. Checkers has never been so much fun.

Price: Under £20

Rating: ****

Recommendation: Better than a checkerboard because you can play with the computer. You can also play against a friend. *FOR COLOUR TV VIEWING ONLY.*

INTELLIVISION® LAS VEGAS POKER & BLACKJACK *Mattel Electronics*®

Las Vegas-style gambling isn't a complete experience without a cold-hearted dealer, and it is Mattel's beady-eyed dealer who controls this electronic card table. The dealer communicates in short phrases, seen in print within the bounds of a comic-book balloon. His first question in all games is 'Wallet?' which invites you to set your own betting

limit ('How much you wish to lose'). You respond by looking down at your keypad, with plastic overlay already inserted, and typing in a number between 1 and 9999. Now select a game on his 'Ready?' command – choose either FIVE-CARD STUD, SEVEN-CARD STUD, FIVE-CARD DRAW (all three are poker games, for those who are uninitiated), BLACKJACK, DEALER'S CHOICE (any of the games may come up), or SAME GAME.

Let's start with BLACKJACK. Bets are laid, cards are dealt in fairly ordinary fashion (the dealer is a little on the flashy side – racing his little eyes back and forth as he tosses your cards into position). The play of the game is simple, allowing only commands for *hit, stand,* and *double down.* There is no insurance against possible dealer blackjacks on this table. Dealer stands at 17.

FIVE-CARD STUD features an active dealer, who can *bet, raise* and *call* just like the other one or two players in the game. He also bluffs, and that electronic poker face tells nothing at all. Bets are laid (and hands can be dropped) after each card is dealt from card No. 2 to card No. 5. The first card is dealt face down – if you care to see your card (and allow your opponent to see your card as well), press any position on the disc below the keyboard. You never see the dealer card until the end of the game, when the dealer himself announces the winner of the pot. This is of course a gambling game, made more fun by a rancorous dealer.

You may transfer your wallet from one game to another in this casino. Let's try a game of SEVEN-CARD STUD. House rules are identical to the FIVE-CARD version, but the first, second, and seventh cards are left unexposed. The first round of bets occurs after the third card is dealt. The game is won, of course, by the player with the best five cards out of seven.

Transfer over to FIVE-CARD DRAW by pressing the appropriate button on your control console. The game's the same as STUD, with one important difference – after the first bet, you can discard zero, one, two, or three cards by identifying their positions in your hand and pressing the

enter button. (Incidentally, if you make an error in this or any other game, there is a *clear* button, but you must use it *before* you press *enter*.)

Theoretically, you can play this game until you've gone broke (in which case you can simply reset the game and start again). It's fun for a good few hours, especially if you're on a winning streak. But good as it is, the real thing is far more exciting.

Price: Under £20

Rating: ***½

Recommendation: Great with parties or friends – everyone loves the dealer. But when all is said and done, this snappy little system does nothing more than count up your money totals and deal cards, and you don't need a computer to do that.

INTELLIVISION® LAS VEGAS ROULETTE *Mattel Electronics®*

Here's the only electronic betting table for the game of roulette on the market. Most of the computer power has been put in the game's ability to recognise any roulette's 100-odd individual bets, involving a full betting table layout and individual chips which can be moved in a near-animated fashion.

The problem is the wheel. There is something very trustworthy about a mechanical wheel, and a real silver ball that bounces about until it settles into a number pocket. Despite all kinds of sound effects and even a slowing effect that simulates the ball settling-in, the computerised roulette wheel just doesn't have the spirit of the real thing.

As a betting pastime (all 'pretend', of course), this game is pretty good. As a full-scale casino simulation, it is not all it should be.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: About £20

Power Requirements: (none)

Rating: **

Recommendation: Buy a plastic roulette toy wheel – it is far more realistic and far less costly.

INTELLIVISION® HORSE RACING   *Mattel Electronics®*

Mattel has been very consistent in designing their INTELLIVISION games to maintain high user involvement and continued interest, and HORSE RACING is a fine example of their strong product line. Here we have a program that allows you not only to bet on races, but also to jockey one horse in each race.

Let's deal with the wager aspect first.

Each time you turn on the unit, you will begin a series of 10 races, each with 4 horses. The computer logs the performance of each horse in each race, and offers handicapping information to betters prior to each start. (The betting system is thoroughly American, and a sketchy rendition at best, but the concept is there, and you can have some fun, even if most bets are only minimally related to real handicapping.)

Once everyone has established their bets (in US dollars), each of two players takes control of a horse. There are four horses in each race; two horses are controlled by the computer. You have but two controls as you jockey: a COAX, to speed your horse at some point during the first half of the race, and a WHIP, to be used for that extra burst of steam just before the finish line.

Mattel recommends that you keep a tally of each race's finishing order to improve your betting odds. If you get that serious about simulated horse racing, you'll probably surpass this game in a short time. If you're just in for the fun of it and don't expect anything near a real horse race, this may be for you.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: About £20

Power Requirements: (none)

Rating: * * *

Recommendation: Mainly fun for adults, a little complicated for most video game set-ups, without the kind of action we usually demand of INTELLIVISION.

INTELLIVISION® TENNIS   *Mattel Electronics*®

Mattel's game designers have taken great pains to recreate the sport of tennis for video, and the result is relatively stupendous. Sure, you're still looking at stiff video figures. Sure, the action of the ball is far more limited than the real thing. With all of the limitations of video, and of inexpensive computer hardware and software, the designers have done a terrific job.

As spectators, we are seated at centre net, roughly 45 degrees up. We see the entire court, plus a grandstand full of spectators in the distance (they cheer when appropriate). The game is always singles, and each of two players (you must have two humans – the computer doesn't know how to play) controls his own stick figure, racquet in hand.

To start the game, select the speed of the game (there are 4 in all). The left player has the first serve. First, he presses the SWING button to toss the ball up in the air, then presses either hard or soft swing and the direction in which the ball is to go (inner, centre, or outer court – diagonally across from the serving position). The right player uses the direction disc to move his player into position to return the ball, again using the SWING buttons. A hard swing will produce a ground stroke; a soft swing will produce a lob. A volley will ensue, after a little practice of course. And the game continues, following nearly all of tennis's rules. The computer is programmed to recognise a FAULT if you swing at and miss the ball on the serve, or if you serve to an out-of-bounds position. If you tap the net with the ball at any point in the game, that's called a LET, and the computer will allow you to take the turn over, as per the rules of tennis.

Even the most critical of tennis players will find a very real spirit of the game here, with nearly all game elements reproduced to affect the play of the game with appropriate balance. The game's instructions clearly outline each of these features in great detail (the booklet is 30 pages long – there are a lot of features). Only one feature is missing, and you can move your player to cover – there is no backhand provision on INTELLIVISION TENNIS.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: About £20

Power Requirements: (none)

Rating: *****

Recommendation: This is one of the best INTELLIVISION games, in a category with their BASEBALL and FOOTBALL classics.

INTELLIVISION® US SKI TEAM SKIING   *Mattel Electronics®*

Once again, Mattel has effectively translated a large-scale action sport into a neat, compact video game, and, once again, the results are marvellous. Two to six players can try for the best times in a match, electing either a downhill or slalom course with up to 15 different skill levels. One player may also play, alone, trying to better his score on each run.

To play SKIING, you select one of four game speeds (the fastest is nearly impossible unless you are a real INTELLI-VISION wiz-kid, and can handle the controls with instantaneous reactions), and tell the computer how many skiers will compete. The skill levels are numbered 1–15, with each increment representing a steeper grade of slope. Choose downhill or slalom, and you're on your way.

When you ski, you actually control a little man on skis by pointing his skis towards the right, towards the left, or straight ahead. This control is accomplished by pressing the floating direction disc on the hand-held controller. When you release the disc, the skier will move forward,

increasing his speed based on the degree of slope. To slow him down, make a turn, and even point him a bit uphill (you can control the skier all through 360° if necessary – it really isn't necessary except in very odd situations).

Skiing here, as in the real world, is not so much a game of speed as it is of accuracy. You must first learn to control that skier, to get him through the slalom gates without hitting, to have him jump the moguls (patches of snow which appear only in the downhill) without wiping-out. Once you've mastered this group of manoeuvres, and learned to make your turns gracefully, you can leave the beginner courses and start on the more difficult slopes.

Each skier has 3 chances for a best time; the computer tallies the results of each heat and posts only the best times for each player at game end.

The instructions list a few hints for better scoring; the best advice is simply to practise, to try and make all of your moves as gentle as you possibly can, and to master the easier slopes before you attempt anything too hard at the beginning. If this sounds like advice to skiers who sport on real snow, it is no accident. Mattel has done a fine job in reproducing the sport for video.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: About £20

Power Requirements: (none)

Rating: *****

Recommendation: A fascinating action game, very different from the usual baseball-football-basketball that has become so very popular.

INTELLIVISION® SPACE BATTLE® *Mattel Electronics*®

Your television screen becomes a radar screen as you sail across the universe in SPACE BATTLE. It is a game of both strategy and manipulation, so you must think quickly and react instantly to really win the game. At the centre of

your screen sits the 'Mother Ship', which must be saved at all costs, and blocked from the alien attack squadrons. Using a limited number of defence squadrons, which you control, and their laser-powered weapons, which you also control, you play a defensive game in order to guard your mother ship. Most of the game is played under battle circumstances, and it is very easy to get caught up in the fantasy.

Be sure to read the instructions carefully, because there are a few dozen individual playing points that you must know in order to compete effectively against the computer. The game can be played by one or two players, but only on a colour television set (it is a good idea to play all INTELLIVISION games on a colour set – or to double-check for a 'FOR COLOUR TV VIEWING ONLY' on individual INTELLIVISION cartridges).

Manufacturer: Mattel Electronics, Hawthorne, California

Price: About £20

Power Requirements: (none)

Rating: ***½

Recommendation: It is likely that Mattel will issue a SPACE INVADERS variation at some point in the future. Unless you must have a space game right now, you might wait.

INTELLIVISION® AUTO RACING *Mattel* Electronics®

There are five different courses in the memory of this racing cartridge, each filled with hairpin turns and sudden angles. You do not see the entire course (except on a map in the instruction booklet); you see only the stretch of road where you are driving your selected race car (there are five to choose from, each varying .in acceleration, top speed, cornering, even choice of colour). Steering is accomplished with the careful, practised use of the direction disc. As with SKIING (see page 195), all steering must be very graceful, very gradual, and as accurate as possible. The likelihood of a crash is extremely good, particularly for the first-time

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racers. Fortunately, a crash will not require you to begin the entire race again (they are quite long); instead, your car will be restarted at one of several checkpoints on your course. The instruction booklet's maps show where these checkpoints are located on each course.

The game is good in both a single-player version (against time), and a double-player match, with two cars. It is not an idle lap-style affair, it really is a country-style road race, which may take beginners as long as 30 minutes to complete (courses No. 3 and No. 4 may take even longer!). Every time you play, your score will reflect an increased ability. This is a good, positive experience – even beginners can see progress in their first few races, and the best drivers can always try to better their scores.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: About £20

Power Requirements: (none)

Rating: *****

Recommendation: Good for all but younger children, very good for heavy game users.

INTELLIVISION® PGA GOLF   *Mattel Electronics*®

This cartridge holds a full 9-hole golf course, complete with living maps of each individual hole, to be played remarkably like the sport itself. As a golfer, you spend most of your energy selecting the correct club (included: driver, No. 3 wood, No. 5 wood, No. 3 iron, No. 5 iron, No. 7 iron, No. 9 iron, wedge, and putter), identifying the proper direction in which the ball is to go (there is a choice of 16 directions, controlled by the direction disc), and selecting the power of the swing. There are realistically created obstacles which play like their real-world counterparts (trees, water, etc.), and a realistic par for each hole on the course.

Mattel supplies a very extensive instruction book, so that

golfers and non-golfers may play and enjoy this game (there is a thorough explanation, for example, of what each club is used for and how it is likely to affect your score). For colour TV viewing only.

Manufacturer: Mattel Electronics, Hawthorne, California

Price: About £20

Power Requirements: (none)

Rating: * * * * *

Recommendation: Another strong sports simulation, for golfers and non-golfers alike.

VIDEOPAC G 7000 *Philips*

In 1978, when Philips introduced 'the Ultimate Computer Game System', VIDEOPAC was a remarkable machine. Here was the first effective combination of home computer and game system, complete with typewriter-style keyboard and well over a dozen different game cartridges, each offering new possibilities in electronic game play. VIDEOPAC was a most impressive achievement, made by the company who had originated the very idea of cartridge video games systems back in 1972.

This latest version plays several superb games, but the overall graphic appearance of the games are broad, bold, and rarely detailed. This makes each game appear to be more simplistic and not nearly as well-tooled as the INTELLIVISION or Atari equivalents. Most of the sports simulations suffer from over-simplification, with the possible exception of the COMPUTER GOLF cartridge (9 holes, each one offering a new challenge), and a skiing game.

The war games, frequently entwined with LASER WAR, COSMIC CONFLICT science-fiction plot lines, are the best offerings on VIDEOPAC, and STONE SLING, a target game, is the best in the category. There's a wonderful action pinball game, with all sorts of thumper

bumpers, bonus situations, and very quick ball action and even a fruit machine simulation.

The brain games and educational cartridges include several maths and logic entries, some expressly for children, and SAMURAI (a computer version of OTHELLO, which can be played against the computer).

A COMPUTER INTRO cartridge allows users to dip into the world of basic programming, but the limitations of this system's hardware do not allow any expansion beyond the initial lessons on the cartridge itself.

The Philips unit is roughly the size of an electric typewriter. The keyboard is a single pressure-sensitive plastic sheet. Two hand-held controllers, roughly comparable to Atari's joysticks, are permanently attached to the back of the unit.

Manufacturer: Philips

Price: About £100 (cartridges cost about £15 each)

Power Requirements: AC operation only

Rating: ***

Recommendation: Philips has not been as aggressive as other companies in the introduction of new cartridges, hence their catalogue includes roughly two dozen different cartridges and no more. The games are generally quite good, but the system's inability to expand, combined with this limited library, make it appear pale against some of the more ambitious products on the market.

MPU 1000 *Acetronic*

Although less elaborate than the more expensive systems, Acetronic's video game unit plays hundreds of different games, on numerous cartridges. The master unit is much the same as the others, consisting of cartridge slot (remember, Acetronic cartridges can only be used in this machine, and, conversely, Atari, Mattel, and Philips cartridges cannot be used here), an on/off, game select, and game start switches. The two controllers, each a hand-held

unit, carry both a fluid-headed joystick (which does not snap back into neutral when you let it go – it's not like the traditional joystick, and it takes some getting used to), and a small keypad. Many cartridges are packed with keypad overlays, so that the button used to place Blackjack bets in one game may be used to select active players in Soccer.

Of the dozen-plus cartridges available, SUPER MAZE is probably the most captivating and certainly the greatest challenge (and far more fun than any other electronic maze generator available). The gimmick here is to find hidden maze walks through trial-and-error (and memory), cat-and-mouse chase variations, and the ultimate, a maze whose path changes right before your eyes – and very, very quickly.

The PINBALL is also quite good – flipping too fast causes a tilt, and using flippers in a horizontal (or 'closed') position to trap the ball is called 'cheating' by the computer, which will deduct points from your score whenever you execute the said manoeuvre.

The OTHELLO here is a good challenge, with SOCCER, HORSE RACE, and BLACKJACK and INVADERS also very playable. The explosions on AIR-SEA ATTACK are good, but the rest of this battle is ordinary, even with numerous variations.

Distributed by: Acetronic

Price: About £100, including *Olympics* cartridge. (Most cartridges are about £15 each.)

Power Requirements: AC only

Recommendation: Although it lacks the snappy graphics of Mattel's INTELLIVISION, and the dozens of cartridges available for Atari's VCS, this is a fine small-scale video game system, with a lot of highly entertaining games.

PERSONAL COMPUTER GAMES

Personal computers, many of which appear in offices, family rooms, and libraries, serve a great many practical functions. They are most popular, however, when used to

play games. All of the best-known personal computers require customised game programs – so that you cannot use a Radio Shack game on an Apple computer, for example.

Radio Shack, Apple, Pet and Atari all manufacture programs for their own computers. The games that follow should give an idea of the detail allowed on a personal computer, in this case the Atari 400 or 800 computer. Consult your retailer for information on other Atari games, as well as games to be played on the other home computers.

Marketing of these games is just beginning in the UK. You will also find games available for the Apple and Tandy/Radio Shack Computers, but few as good as those described on these pages, for use only on the Atari system.

BASKETBALL *Atari*®

Considerably more versatile than Atari's VCS original, this full-court game of BASKETBALL is one of the best available. We see the court from the point of view of a fan, whose seat is located in the stands just above the centre line. The game can be played as one-on-one (with either the computer or a second human as the opponent), two-on-one (with three human players), or two-on-two (with four human players or two human players against two computer players). All games are played with the joystick controller, which allows players to be moved towards the top of the screen, the bottom of the screen, either side, or to any corner. The control is a two-dimensional process, while the field is a three-dimensional view; you will need to adjust to the 'dimension warp' before you really master the game.

Shooting is done by controlling the player's actions on the screen, and watching the movements so that you time the release perfectly. Again, this is tough at first, but a skill factor after you've practised for a while. Blocking is done by telling your guard to jump at the right moment. Practice makes perfect here as well.

Price: TBA

Rating: ****$\frac{1}{2}$

Recommendation: A great action game, lacking some of the finesse included in the Mattel INTELLIVISION version.

SUPER BREAKOUT® *Atari*®

A vastly improved version of an already wonderful game, SUPER BREAKOUT is designed for play by one to eight participants, using paddle controllers. There are four different BREAKOUT variations here, all of which are adaptations of the coin-operated masterpiece created by Atari.

The first game is the basic BREAKOUT game, where a ball is used to eliminate bricks from a wall in a PONG-like action (this is described more fully in the VCS BREAKOUT review, see page 143). The second game is called PROGRESSIVE BREAKOUT, because the wall, or more accurately, a series of walls, progressively draws nearer to your paddle throughout the game. DOUBLE BREAKOUT is played with two paddles and two balls, by one player, and is considered by many to be the most difficult BREAKOUT of all. CAVITY is like the first game, with two holes cut in the brick wall. Inside each hole is an additional ball, which may be played at the same time as your original ball-in-play. The balls are released once the bricks surrounding the cavity have created an opening in their chamber.

A scoring and rating chart, far too complicated to explain here, is included in the instructions. You may freeze action on the screen by pressing appropriate computer keys as well.

Price: TBA

Rating: *****

Recommendation: One of the best video games ever devised.

COMPUTER CHESS *Atari*®

Comparing one computer chess game to another can be a risky and inaccurate venture at best, and so I shall concentrate on features instead of conjecture as to computer programming.

There are eight skill levels in this video chess, timed at 15, 30, 45, 150, 180 seconds, and 10 minutes, 9 hours, and 10 hours.

The game is always human versus computer, on a large, clearly drawn chessboard. Pieces are moved by an occasionally inaccurate joystick controller.

A 'check' situation is shown most graphically, as the king's animated motion leaves little question as to circumstances.

Using the 'S' on your computer keyboard, you may construct particular play situations for educational purposes.

Castling and *en passant* are standard features, as is pawn promotion.

Price: TBA

Rating: **

Recommendation: A solid game of chess, but it would have been nice to see an on-screen clock to show time elapsed or time remaining in each move. Perhaps we'll see this in a subsequent release.

STAR RAIDERS® *Atari*®

Atari calls their STAR RAIDERS cartridge a 'computer adventure' instead of a 'game', and with good reason. This is the first mass market software cartridge to ·truly demonstrate the massive capabilities of a personal computer. It is very nearly a literal flight through space, a multi-level fantasy which simulates the action of commanding a starship.

The guise under which all of this battling occurs is a

mission with a singular purpose: 'Destroy all Zylon starships on sight; show no mercy.'

The flight begins as you check your position on the Galactic Chart, spot a target zone, make the jump into hyperspace, travel at incredible speeds, and settle into an area full of Zylon ships. Using both computer keyboard and joystick controllers, you observe the oncoming regions with a front view, check on the status of the entire zone with a Long-Range Sector Scan, and, when an enemy ship comes into view, fire!

The business of selecting and tracking targets is accomplished using a data readout located just below your window on space. Longitudinal and latitudinal coordinates are provided regularly throughout the game, alongside the range of the selected target. A Computer Attack Control allows for precise marksmanship in every case.

There is more control in STAR RAIDERS than in any other computer game I've encountered. This control, combined with rich sound effects, fabulous video displays, and a vivid imagination, makes STAR RAIDERS a wonderfully entertaining simulation, an adventure far more engaging than even the best of the video games.

I should point out that this game is comparatively complicated, and may not be for everyone. The instructions, specifically those involved with the movement of your ship through the universe, make this far more than a target game. The manoeuvres can be a little tricky, so you should plan to spend about thirty minutes studying the instruction book before you start to play. (It's worth the time and trouble – take this from one who regularly tries to figure out the game and reads the instructions only as a last resort.)

Price: TBA

Rating: *****

Recommendation: If this is the sort of game that Atari will produce in the future, a whole new generation of computer games will certainly emerge. Not only is it fun – it's fascinating.

Inside Information About the Newest Games!

Just before press time, all of the toy manufacturers provided information about their soon-to-be-released upcoming games. Some of these games may never reach the United Kingdom, but most will be available in your local stores before Christmas of 1982. Be sure to consult your retailer for further information and release dates.

FROM ENTEX/A. A. HALES:

ELECTRONIC 3-D GRAND PRIX: The most sophisticated auto race device so far. You are the driver, changing lanes, steering, passing other cars displayed on a liquid-crystal display. Push your car to the limit, and play for either laps or for time. Every race is randomly designed by the computer, so each one is different. (About £30.)

ELECTRONIC COLOUR SELECT-A-GAME MACHINE: A cartridge game system that plays basketball, baseball, pinball, American football, and Space Invaders on the same electronic, non-video screen. Each game is on a cartridge, which is inserted into the master unit, which also houses standardised controls. The unit comes with Space Invaders, all others are to be purchased separately (basic unit £34.95; cartridges £8.95).

TABLE-TOP GAME MACHINE: A larger, more sophisticated version of the unit described above. (£59.95.)

FROM GABRIEL:

COMPUTER OTHELLO: A very smart program, designed in a handsome console with a bright, clear quartz display. This is one of the better electronic games, and you'll pay not only for design, but for a worthy opponent as well. Plan to spend about £100; final pricing not available at press time.

FROM MATTEL ELECTRONICS (available on a limited basis in UK):

BOWLING: A hand-held bowling alley, reasonably priced, which not only allows the standard action, but numerous ball-control features not usually available in a bowling alley.

COMPUTER BACKGAMMON: A companion to computer chess (see page 72), also pocket-sized with a clear liquid crystal display and very simple operation. Including 6 skill levels, and electronic doubling cube. Mattel claims that it rivals some of the units made by Fidelity and Tryom. Worth a look.

FROM TRYOM:

ARISTOTLE: A very expensive (over £1000) electronic backgammon for the very serious player. The game is totally electronic, and absolutely beautiful. You won't find this in many stores, but you may see its coin-operated sister in a classy nightspot.

FROM MILTON BRADLEY (no information about definite release):

DARK TOWER: Already available in the United States, this is a dungeons-and-dragons theme game, combining a clever board game with a central plastic tower, which is electronic. The game is a crusade, and you are one of the

warriors (it plays best with several players) who are affected by the electronic projections shown on the tower. It's great fun. (MB has not made definite plans for UK release.)

LIGHTFIGHT: Five fast-action games for two players, each involving spots of light which must be trapped, pushed, manoeuvred, captured, or otherwise anticipated. It's very fast, lots of fun, and so far, available only in America.

PLUS ONE: This has been around for a year in the States. It's a little like SIMON, in that you must remember patterns of colours (it even uses the same colours as SIMON). This is a board game, however, involving a pyramid-shaped memory device that you hold in your hand and move to play.

FROM PALITOY:

Kenner's LONG BEACH GRAND PRIX: Shaped like a formula steering wheel, this is an expansion on the REDLINE theme. You must race on the track (visible within the steering wheel), on one to nine laps, as quickly as possible without spinning out or crashing.

Parker Brothers' REFLEX: Another terrific action game, actually five games, from the makers of SPLIT SECOND. This is a circular game involving lights, and is a little bit like LIGHTFIGHT by Milton Bradley. You trap the light, play 'tetherball' with the light, look for patterns created by the light, and so forth. It's a five-star (*****) game, and it was the very first time I played it. No plans for UK release at press time, but it was available in the US for Christmas of 1981.

FROM FIDELITY ELECTRONICS:

MINI-SENSORY CHESS·CHALLENGER: A portable unit, not unlike the CHESS TRAVELLER sold by Studio

Anne Carlton. The main benefit here is the fact that the computer knows where you moved, so no entry routine is required. There are unlimited skill levels, and you may change skill levels at any time during the game. All of the standard Fidelity features are here (see pages 65–9), in a very convenient travel package.

CHAMPION SENSORY CHESS CHALLENGER: The ultimate chess computer made by Fidelity. It speaks in four languages, senses every move, has a built-in clock, offers a take-back feature that allows you to reverse up to 15 moves to perfect your strategies. This is one of the few machines that will really allow the computer to balance itself as a competitor, regardless of level (the clock can actually be adjusted to allow only a precise number of seconds for the computer to move). Two human players can also play on the board – and the computer will announce the moves, reject illegal moves, and even print out the entire play of the game, with the use of an additional (optional) printer.

DECORATOR CHALLENGER: Similar to SENSORY VOICE CHESS CHALLENGER (see page 68), with a slightly different exterior design.

REVERSI SENSORY CHALLENGER: A computer Othello game on a full-sized regulation board. Moves are sensed by the computer (the gameboard is pressure-sensitive), and tally lights indicate the results of the most recent moves (a very convenient feature, particularly if you're playing in a noisy room). Many of the better chess features have been integrated, including a take-back that allows you to reverse the action and replay certain moves, position verification, a problem mode, and a teaching mode.

DAME SENSORY CHALLENGER: Dame (pronounced DAH-MAH) is the ancestor of draughts, and it is played on a 10 × 10 grid (as opposed to the familiar 8 × 8). The additional squares alter playing strategies, and Fidelity has treated this game to its usual features.

New video games are a bit harder to predict. There has been a stream of Atari coin-operated games which have been translated in home video games, and we'll soon see both ASTEROIDS and WARLORDS on cartridge. Mattel's INTELLIVISION will soon add USCF CHESS, ADVENTURE (a dungeons and dragons variation), PBA BOWLING, and a SUBMARINE BATTLE to their 20-odd cartridges already available. All other manufacturers are also readying new cartridges, but no specifics are yet available.

List of Game Sources

The electronic game industry is still relatively new, with its distribution patterns still being established in the UK. The distributors in the British market sell wares made primarily in the USA or in the Orient. Some manufacturers are still researching their entry into the UK market on a full-scale basis (Mattel, one of the largest US game makers, has announced plans on a limited basis, offering only a specific group of games); others have limited relationships with their distributors.

If you are looking for a specific game, you will find the most up-to-date information in one of the larger game stores. Contacting individual manufacturers will usually produce dependable results, but you could wait months for a trans-Oceanic reply only to find out that there is no distributor in the UK at all. Britain's game distributors may be helpful, but only on the games they themselves handle. Few distributors are set up to handle individual consumer requests, most will refer you to the toy stores.

There are two very fine game stores in London, both of whom operate mail-order businesses. My personal recommendation is GAMES CENTRE, at 22 Oxford Street, London W1A 2LS, telephone 01-636 8728, or at 126 Charing Cross Road, London WC2, telephone 01-240 5691. For electronic game browsing, the Charing Cross Road store is better, because the electronics are segregated in their own play area. Try also JUST GAMES in London's West End.

As for manufacturers, you'll find that most are headquartered in the USA. An abbreviated list follows:

Atari, Inc.
Consumer Division,
1265 Borregas Avenue,
Sunnyvale, California 94086.

Bandai America, Inc.,
54 Metro Way,
Secaucus, New Jersey 07904.

Coleco Industries, Inc.,
945 Asylum Avenue,
Hartford, Connecticut 06108.

Entex Industries, Inc.,
303 West Artesia Blvd,
Compton, California 90220.

Fidelity Electronics, Ltd,
8800 NW 36 Street,
Miami, Florida 33178.

Mattel Electronics,
5150 Rosencrans Avenue,
Hawthorne, California 90250.

Parker Brothers,
50 Dunham Road,
Beverly, Massachusetts 01915.

Selchow & Righter Company,
2215 Union Blvd,
Bay Shore, New York.

Texas Instruments,
Consumer Electronic Products,
PO Box 225012,
Mail Station 84,
Dallas, Texas 75265.

Tiger Electronic Toys,
909 East Orchard Street,
Mundelein, Illinois 60060.

The principal UK distributors, along with some US
manufacturers with UK offices, are as follows:

Acetronic,
Wembley, UK.

Adam Imports/Grandstand Leisure Products,
Unit 2A Ripon Road Industrial Estate,
Harrogate, North Yorkshire HG1 2AU.

Action Games & Toys Ltd,
Quebec Road,
Henley-on-Thames,
Oxon.

CGL/Computer Games Limited,
214–220 Maybank Road,
South Woodford, London E18 1EX.

A. A. Hales Ltd,
PO Box 33,
Harrowbrook Road,
Hinckley, Leicester LE10 3DN.

Ideal Toy Co., Ltd,
Fishponds Road,
Wokingham, Berkshire RG11 2QR.

Invicta Plastics Ltd,
Oadby,
Leicester LE2 4LB.

Milton Bradley Ltd,
CP House,
97–107 Uxbridge Road,
Ealing, London W5 5TZ.

The PaliToy Company,
Owen Street,
Coalville, Leicester LE6 2DE.

Studio Anne Carlton, Ltd,
112–114 Flinton Street,
Hessle Road,
Hull, E. Yorkshire HU3 4BN.

Waddington's House of Games, Ltd,
Castle Gate,
Oulton, Leeds LS26 8HG.

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BY PETER MARSH

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