products
that
think®

A collection of the most advanced micro-electronic consumer products.

2

Dear Customer:

This catalog will someday become a collector's item. It represents the start of a new revolution in micro-electronic technology.

Our company has been a pioneer in this industry, and our products in this issue represent the finest selection we have ever offered in the history of our company.

You'll read about a few of the new trends in electronics, namely in computers, telephones, and in television conveniences, and many of our products are being offered to you before they will be available to the general public.

We are presenting some products a few months before we actually receive them, but we felt that they were so important, we wanted you to know about them before our national introductions. Other products developed exclusively for us and offered only to JS&A customers are being shown in this catalog for the first time.

The printed circuit board shown to the left is a good example of how far technology has advanced in just a few short years. This device would have cost over a million dollars to duplicate ten years ago. Today, it represents a fraction of the selling price of the Bally pinball machine where it is used. This same technology is now found in a variety of consumer products.

The Home Library Computer is a good example of this advanced technology. I have used one for the past few months and have seen my family enjoy its many programs. I have seen my children's math proficiency increase. We use the built-in electronic calculator to balance our checkbook, and our whole family gets together to play the many games. It's also the hit of the neighborhood. Now I don't have to find out where my children are during the week; they're usually at home with the neighbors' children playing our Bally computer.

Look at the JS&A Jogging Computer on page four. I have personally owned just about every adult toy designed to encourage exercise—items such as bicycles, treadmills and slant boards. But the new Jogging Computer has finally given me a way of exercising while accurately measuring my progress, without using a large piece of exercise equipment. I now feel much better and am enjoying the benefits of jogging in the privacy of my home during any weather. I'll be in great shape come summer.

Take a look at the Sensor 440 digital watch. We now have a lady's version which, together with our men's model, makes a great combination gift. The Sensor 440 is probably the finest digital watch you can buy today. It was introduced as being years ahead of other watches in technology and style, and today it remains the finest—proven by thousands of Sensor owners. It's the nation's largest selling digital watch for over $100 and the only digital with a 5-year warranty.

We offer a 30 day trial period on every electronic product you purchase, so you have the advantage of personally using it in your home or office under your everyday conditions. And if, for any reason, you wish to return an item, we will still consider you one of our good customers, and we will refund your full purchase price including the postage and handling charges indicated with each item. There is no sales tax for residents outside Illinois—also a big savings.

We also pride ourselves on our low prices and the value we provide our customers. By selling directly to you through the mail, we save on showroom costs and extensive overhead and can pass these savings on to you.

We work hard to make a fair profit, as would any company, but we also invest a great deal of that profit into the most elaborate systems to provide the finest customer service. Our large computer and our new Kodak computerized micro-filming system give us immediate access to information while our customers are on the phone. This personal service often amazes people when we can recall a piece of correspondence and all the details of an order in just a few seconds. We also care a great deal about our employees and their families, and this concern is often felt by our customers. We do care.
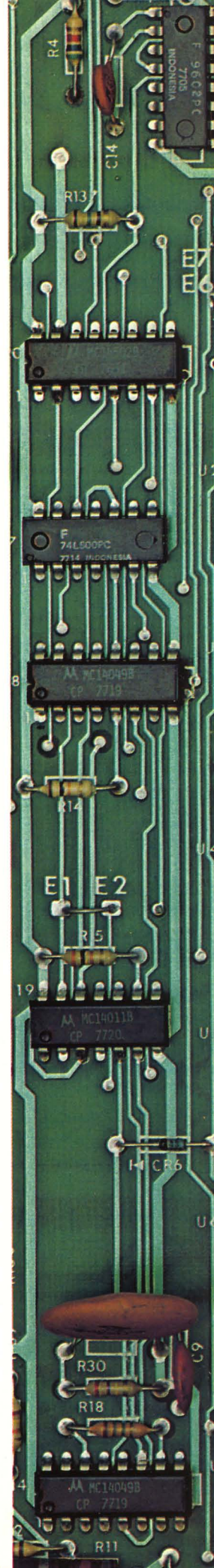
JS&A has the distinction of introducing more space-age products than any other company in the United States. Our pioneering efforts have built our company during the past decade into a substantial organization—always dedicated to our customers and their satisfaction.

Again, we appreciate your interest in space-age technology and urge you to join the micro-electronic revolution.

Sincerely,
JS&A National Sales Group

W. Mitchell

William Mitchell

the Home Computer Revolution

If you read this easy-to-understand article, you'll know more about home computers than most Americans will learn in the next two years.

You've heard that computers will overwhelm America. And if you are like most Americans, you probably don't believe it.

Ironically, computers indeed will overwhelm this country but for reasons quite different than you realize. The sooner you understand what is happening, the sooner you'll be able to join the revolution and take advantage of the many benefits.

The questions everyone asks is "What will a home computer do for me? How can I justify purchasing one?"

The answer is quite simple. You purchase one when the total number of things you can use it for justifies buying a system. That's it—pure and simple.

LIKE WHAT THINGS

Like the arcade games. If you've always enjoyed playing the video games at your local arcade and discovered that these same games cost only $20 each on a home computer, then it's easy to see the savings. Sea Wolf is a game that sells for $1500 to arcades. The Sea Wolf cartridge in our Bally Computer costs only $20.

Another example is a 10-digit calculator with ten memories. If you need a calculator and the Bally computer can do the same thing, you've got something else to justify its purchase.

Now add Bally's Math Bingo game which adjusts to each player's math proficiency as the game is played. A child can compete with a parent and learn the math tables at the same time. A stimulating learning system like this is available at a cost of thousands of dollars. On the Bally computer, it costs only $20.

The more features you can use, the more the system starts to make sense for you. But the key is price. At what price does it make sense to make the plunge?

WHAT PLUNGE?

Buying your first piece. Chances are, no matter what you buy, it's the start of a relationship with your home computer. After you get one, amazing things happen. You discover all sorts of neat things you can do with it which make it work even better.

There are printers that print out paper copies, text processing programs that turn your computer into a typewriter, storage systems that store your programs, and a host of other add-ons (called peripherals) that expand the fun and use of your system. But the key when you decide to expand your computer is the system you start with.

HOW SHOULD I START?

As slowly and as inexpensively as possible. Just look at the trouble businesses have when they get their first computer. They purchase an expensive computer and add peripherals only to find that they've outgrown their system and have to replace everything. So the key is to get a system that can grow beyond your wildest desires.

YOUR WILDEST DESIRES

But to know your wildest desires, you've got to learn a little about how to measure the power of a computer. If a computer can be graded or judged or weighed, it would have to be by its memory power—the amount of space it has to store or process data. And if you learn just two things about computers, you'll sound knowledgeable in any crowd.

TWO THINGS YOU SHOULD KNOW

First, you measure memory power in thousands of bytes. (A thousand bytes is called 1K bytes.) The second thing you should know is that there are two kinds of memory—ROM and RAM.

The ROM (read only memory) is the memory that contains the fixed programs or instructions which reside in the computer and do not change. They tell the computer what to do with what you put in it.

RAM (random access memory) is the memory that handles the data, does the work, and coordinates the activities in your computer. It's constantly manipulating data. You can feed the RAM memory with data from cartridges, cassettes, the direct entry of a keyboard, or from a typewriter terminal.

The bigger the RAM, the more capacity you have and the more work you can do. The bigger the ROM, the more intelligent your computer is, and thus the fewer outside instructions you have to feed it. With plenty of RAM and ROM, you've got greater value. But here's an interesting fact. The hardware, the RAM and ROM, and all the circuitry represent only 10% of a computer's selling price. The big surprise is in the cost of software.

SOFTWARE COSTS PLENTY

Software includes the instructions given a computer and represents 50% of the cost of a typical home computer. Software also includes the cartridges or programs you load into the computer and the instructions designed for the ROM by the engineers who designed the system. This represents thousands of man hours—even man years—of labor.

Software isn't like hardware. Software costs the manufacturer one lump sum no matter how many units he sells. So if he doubles sales, his cost for software is half his estimate per unit while his hardware costs remain fairly constant. This means that the more computers a manufacturer sells, the easier it is for him to offer better value to the consumer—easier, in fact, than in almost any other manufacturing business.

But you can't totally judge a computer by how much RAM and ROM you have. Anybody can throw a cheap computer together with plenty of power if they spend little time and thought on the software. The more extensive your software, however, the smarter your basic computer. (There are such things as dumb computers.)

HOW TO FEED YOUR COMPUTER

Computers are like people. Feed them intelligent instructions and they process data intelligently. Feed them the wrong instructions and you won't believe how stupid they act.

So to make sure computers do their tasks with a high level of intelligence, manufacturers have produced programs, cartridges, and cassettes that you can feed into your computer to make them even smarter. Arcade game instructions, accounting procedures, teaching programs are but a few examples.

These instructions are put on either ROM or magnetic media (usually tape or disks) and then "loaded" into your computer's RAM.

The only data left to feed it are those specific instructions unique to your situation. You do this through some handy little tools you can buy with many home computers.

HANDY LITTLE TOOLS

Like an alpha-numeric (typewriter-style) keyboard, a calculator keypad, or even a joystick or pistol grip accessory. All these tools enter those specific instructions you wish to give your computer and are your personal link with your system.

To view your answers, you have a few choices. You can use 1) your own black and white or color TV screen, 2) a specially designed TV called a "CRT" which only works with your computer or 3) a printer which makes a printed copy of your results.

THAT'S ALL THERE IS TO IT

If you understand what we've said, you've got most of what you need to know about the home computer revolution. Now the question is, "When do I join?"

And like we said in the beginning, "You purchase one when the total number of things you can use it for justifies buying a system." You might justify buying a system because of the educational value for your entire family, its entertainment uses, or just out of curiosity. Whatever your decision, we hope you will consider the system we are offering.

JS&A understands the computer market and the systems that will provide the most value to the consumer. We want you to join the computer revolution, and we hope you will consider our company when you do.

Top view of the complete Home Library Computer with alpha-numeric keyboard. This system, a powerful home or business computer, will be introduced in August of this year.

The basic unit of JS&A's new Home Library Computer system can be used as an electronic scrolling calculator, a teaching machine or a home video arcade game.

the JS&A Computer

Here's our choice for the very best home, personal or business computer.

It's only natural. Every home computer company will claim that their home computer is better than the next company's.

We're a little different. We feel that each computer has its own personality and price and that there is no such thing as "the best computer." But we do feel that there is a big difference in value—how much computer you can get for your dollar.

So when JS&A surveyed the market, we were rather impressed with the video game system that Bally Manufacturing was designing for their arcade games. Their software package contained all the essentials needed for a powerful home computer.

There was high resolution, excellent color graphics, comprehensive internal sound generation, a well thought-out operating system, and more software features than any other home computer.

With Bally's large volume sales of their video game, the cost of their software per unit would be quite low. By combining their unit, after a few modifications, with a JS&A system, we could produce the most powerful and useful personal business computer on the market—years ahead of all the other companies. And that's exactly what we did.

The Bally software represents only 5% of the total cost of our system, and the cost per byte is the lowest by far of all other systems. The system consists of two main modules. The first module, the basic unit, is actually a home computer with a calculator-type keypad, 4K of RAM, and an extensive software package of 8K of ROM. It costs only $220.

The add-on module contains an alphanumeric keyboard and 16K of RAM plus 16K of ROM for a total of 20K RAM and 24K ROM—the most powerful home computer system ever produced. The hardware chart in this article shows the comparison when both modules are combined to form the system.

THE BASIC SYSTEM

The basic unit can be attached to your TV screen. It provides you with a ten-digit electronic calculator with ten memories. You can scroll your computations (just like the credits

on a movie screen), you can balance your checkbook, or you can do any home financial calculations. You can also access its color graphics system and have the unit draw beautiful random patterns on your color TV screen.

By adding two pistol grip accessories, you can access the three Bally arcade games already built into the unit. They include: 1) Gunfight, in which two cowboys shoot it out around cactus and covered wagons, 2) Checkmate, a one to four player game in which you build walls around your opponent to win, and 3) Scribbling, a program that lets one to four people draw different designs in full color on the TV screen. By adding two more pistol grips, four peole can play all the arcade games.

With the basic home library computer system, you can then select from a library of games and educational programs that range from math tables through adult-type courses—all of which can be stored in the unit's library located on top of the system. (See the separate descriptions of each cartridge available.)

Just add a Bally programming cartridge, and your unit is now ready to program. The cartridge and a plastic keyboard overlay convert your calculator so you can enter programming instructions and letters in a form of BASIC—a very simple and easy-to-understand programming language.

The basic unit by itself will acquaint you with the home computer revolution at a very reasonable price. It will permit you to expand its use through ROM cartridges for entertainment and educational programs.

If you decide not to expand to a larger system, you are left with a very useful system without much investment. If you decide to expand, you have a multitude of new options at very reasonable prices.

THE ADD-ON MODULE

The add-on module with full computer typewriter-style keyboard connects and fits nicely under the basic unit. The entire system is then comparable to the other systems shown in the hardware comparison chart and looks similar to the unit shown above. Now you can use it for

accounting, payroll, inventory control, plus many complex operations only large mini-computers can tackle.

THE JS&A ACCESSORIES

Also, with this system, you will be able to buy from JS&A or many computer manufacturers such things as printers, mass storage systems, and your own continuous printed forms. Many of these products or peripherals will simply plug into the JS&A unit since it uses standard computer connections or "bus structures."

If you buy it for your home, you can 1) learn, compose, or play music with the unit's music synthesizer and keyboard, 2) control various functions in your home, and 3) interface through your telephone with large data banks. Your computer can literally have access to information that even the largest library will not be able to contain.

WHERE DO I START

You start first with the basic module for $220 plus any of the cartridges or accessories you wish to add. We recommend at least two pistol grips and two of the optional cartridges.

Each month, announcements of new cartridges and accessories will be sent to you, and you may purchase them by mail or through our Dial-A-Bargain program.

In August of this year, we will start offering the add-on module to our customers. They will receive notice of add-on modules before they are made available to the general public.

We urge you to at least test the home computer revolution by ordering the Home Library Computer. Use it for 30 days in your home. Experience the interaction between you and your computer. Watch how you actually develop a relationship with it. Then after 30 days, if you are not fully convinced that the home computer will pay for itself many times over in education, enjoyment, and other benefits, return your unit and accessories for a prompt and courteous refund including your $3.00 postage and handling. We couldn't be more confident of its performance and lasting value.

NATIONAL SERVICE

JS&A has just completed negotiations for a national network of service technicians in all 50 states. If anything ever goes wrong with your unit, you will be able to either send it to our prompt service-by-mail facility or arrange to have a technician fix the unit at your home or business. Although this program won't start until the fall of 1978, JS&A's service-by-mail facility will repair your unit promptly. We do not expect many service problems. However, we wanted to assure you that service was an important consideration in our program.

IN SUMMARY

JS&A offers each reader of this catalog the opportunity to purchase the finest system available at the lowest possible cost. We offer you the opportunity to join the exciting home computer revolution so you can experience for yourself the excitement and challenge of this new electronic breakthrough. But please act soon before we launch our new national advertising campaign, and allow approximately four weeks for delivery. Simply use the order form in the center of this catalog, or call our toll-free number. We will promptly schedule a shipping date.

Now is the time to join the home computer revolution. Order your home library computer at no obligation today.

Basic Unit **$220**
One Pair (2) Pistol Grips **30**
Cartridges . . . .(See Listing)

Features

The Home Library Computer has several unique features that add to its value. The following are a few of these features.

The basic Bally unit has several unique features that add to its value. The following are a few of those features:

High Resolution Good resolution on your TV screen is one of the end products of having so much memory power. The best programmable TV game image is projected on a screen composed of 64 dots wide by 64 dots deep or 4,096 total dots. The Bally unit has 100x160 dots or 16,000 dots—almost four times more—so the Bally image is sharper and has finer detail, better resolution, smoother motion, and clearer letters for math or text applications.

Large Internal Library The unit's ROM is programmed with an extensive library of tasks that it can perform without further outside instructions. This means that your computing power is already in the unit you own. Your unit can complete a function faster and more efficiently because it depends less on the data it gets and more on what it can already do. This library of tasks includes **1)** the timing, scoring, and sound effect functions for teaching and arcade games, **2)** the extensive sound generation system which will permit you to add a keyboard and play music and record and play back your musical compositions, **3)** capabilities which expand the use of your unit to accept high-level math programs, **4)** the ability to handle large amounts of data, **5)** a pause function which freezes action during an arcade game so that interruptions won't upset the scoring, and **6)** an automatic cut-off feature that automatically blanks out your TV if your unit is left unattended for more than five minutes. Most TV set manufacturers have excluded sets that use TV games from warranty coverage because of the possible lines that may appear on the screen from sets left on too long with the same picture. This is impossible with the Bally.

Handsome Styling Each module of the JS&A computer was designed to look like part of an entire system. If you buy just the basic module or if you get the add-on module, your unit will look like one cohesive system and not a series of unrelated boxes.

Fully Expandable The basic unit will be fully expandable to meet practically any personal computing requirement. The most significant expansion accessory will be the alphanumeric (typewriter) keyboard. With this accessory package which will cost under $400, you can do everything you do on any mainframe computer system within the data storage capacity of the Bally unit. This additional module is a major breakthrough in computer technology because: **1)** It will add an additional 16K RAM and 16K ROM to the basic system's 4K RAM and 8K ROM; **2)** It will provide more computing power than is presently available in any home computer and in many business mini-computers, and finally, **3)** It uses the BASIC language which is the easiest programming language to understand and use.

Library of Programs The extensive program library will include more than just arcade, educational, and math programs. There will be business application cartridges such as payroll, inventory control, accounting, and payables. There will be personal home computing programs such as recipe storage, home inventory, and personal net worth statements. A biorhythm program will be able to tell you which day to throw a party by determining the compatibility of all your guests for various days. A chess program will permit you to play chess against the computer or over the phone with another player. The list is as extensive as your imagination because if a program does not exist, you can create it yourself.

Dial-A-Bargain® You can use a home computer to transmit digital data over the telephone to another home computer. By purchasing JS&A's entire system, you'll eventually be able to play chess, checkers, or other games of skill over the telephone with someone else using his home computer, and you'll be able to see both sides of the play action on your TV screen. To do this, you'll need a phone coupler which will be available later this year.

Want products from our catalog? We'll have them ready to ship to you in less than an hour with our program called "Dial-A-Bargain." It works like this. You first insert a special JS&A ordering cartridge into your home computer. On your TV screen will appear our order form. You fill out the form using your keyboard and then place your phone in a phone coupler attached to your home computer. You dial a special toll-free number which is answered by our main computer. You then press a button on your unit, and your order, which is entered directly into our computer, is confirmed and the scheduled shipping date is flashed on your TV screen. If we are back ordered on an item, it will advise you and give you the option of canceling your order.

Meanwhile, your order is processed and a label is printed out at our warehouse. Our warehouse employees will respond the minute a label is printed, even during our night shift, so it is possible that your order will be ready to ship within a few minutes. All JS&A customers who own JS&A computers will be eligible for this truly space-age program.

Comparison Chart

	Home Library	Pet	ECD	Apple II	Heath H11	Heath H8	Sol	Radio Shack	Fairchild
MICROPROCESSOR	Z80	6502	6505	6502	LSI-11	8080	8080	Z80	F8
MEMORY RAM(Scratchpad)	20K	4K	4K	8K	8K	8K	2k	4K	2K
ROM(Resident)	24K	14K	4K	8K	1K	1K		4K	2K
ROM(Cassette)	24K						4k		2K
Std. Cassette Recorder	•	•	•	•	•	•	•	•	
BPS	300to1200	1200	3200	1500	1200	1200	300to1200	500	
INOUTS Typewriter Keyboard	•	•	•	•	•	•		•	
Calculator Keypad	•	•					•		•
Dial	4			2					
Joystick	4								2
VIDEO Display(Characters)	800	1000	5120	960	960	960	1024	1024	
Text Display(Capacity)	40x20	40x25	128x40	40x24	80x12	80x12	64x16	64x16	
Graphics Resolution	16,320	128,000	19,200	1920			1024	6144	4096
Graphics Configuration	160x102	320x400	120x160	40x48			64x16	128x48	64x64
Video Display (B&W)	•	•	•	•	•	•	•	•	•
(Color)	•			•					•
No. of Colors Avail.	256			16					16
Standard TV	•			•					•
AUDIO Output(Channels)	2			1					1
Music Synthesizer(Voices)	6			1					1
Suggested Retail	$650	$595	$990	$1400	$2508	$1472.50	$1295	$600	$179.95
PRICE Not Included in Price	TV			TV			Monitor		

the Hardware

The finest hardware package ever assembled.

Standard audio cassettes are used to store and retrieve programs. There are 8 bits per byte. The speed in bits per second, **(BPS)**, indicates how quickly programs can be changed. **Inputs** are the devices you use to control your computer. **Joysticks** move and position images on the screen. **Dials** enter analog or variable information like a volume control.

Video is the output to the TV or monitor. The number of typewriter-like **characters** that can be shown on the screen indicates the amount of written material the user can see at one time. **Graphic resolution** determines the amount of detail in the pictures drawn by the computer.

Audio output is usually limited to "beep" sound effects. The Bally is the only computer with a complete sound synthesizer and outputs for any high fidelity music system. The user can program a musical performance or a sonic environment for a game simulation.

Expansion capabilities are not shown on the comparison chart. The SOL, for example, can be expanded to include the same memory capacity (RAM and ROM) and input flexibility (joysticks and dials) as the Bally Home Library Computer. This expansion hardware alone would cost over $1,000 and would require custom software development. Even with this extension, the SOL does not have color graphics capability.

No other unit in this comparison can be modified to match the input flexibility, computational power, and output graphics capability of the Bally Home Library Computer.

The prices and features of the add-on module are subject to minor revisions prior to our national introduction. The add-on module must also be submitted to the FCC for final approval.

This presentation is a preview look at the JS&A system. All JS&A customers will be given advance notice of the availability of the add-on module and may purchase it before the general public. First priority, however, will be given to JS&A customers who already own the basic system. JS&A expects to introduce the add-on module to its customers in August and plans to ship units in October, 1978.

the Cartridges

The best of the popular arcade games and teaching programs.

After reading the descriptions below, you will have a strong insight into why the home computer revolution will be as big as we predict it will be. Each game or cartridge replaces equipment costing from fifty dollars to fifteen hundred dollars—games that would be impossible to offer without a sophisticated microprocessor-based electronics system. The more you realize how much value you are getting by using a computer as your base and by purchasing cartridges to expand its value and applications, the more you will see why the computer will eventually be the single most important new home or business product during the next decade.

The cartridges now available will teach, entertain, and fascinate you. Here's a sample:

Math and Math Bingo This is probably the most popular cartridge in the program. It's actually designed to teach math, but it has turned out to be just as much fun as an arcade game. In Math Bingo, two bingo cards are displayed on your TV screen. You and your opponent use pistol grips to move a small solid square, called a cursor, on the screen. The computer first asks you what type problems you wish to solve (addition, subtraction, multiplication, division, or a mixture of them all). You answer by pressing a symbol on the calculator keyboard that corresponds to the type problem you wish to answer, and the game begins.

A math table problem appears under each bingo card. Each player's problem is different. You figure out the answer and then with your pistol grip, you move your cursor to the square on the bingo card that has the right answer. The first player to move to the correct square and pull the trigger blanks out that square, and the other player is prevented from scoring. The first player who blanks out all the squares in a row wins the game and gets one point.

The computer also does something unique. It measures the speed and accuracy with which the questions are answered and adjusts the complexity of the problem to correspond to each player's ability. This means that a father can play against his daughter or grandma can play against her grandchild with each player having an equal chance of winning.

The game also uses sound effects which add to the action. Math Bingo lasts about three minutes, and the game can be played for hours since the score accumulates to 99 points. There are a million different bingo card possibilities, so there's no chance to figure out a way to beat the computer except, of course,

by learning the math tables. Only $20.

Baseball and Paddle Games Baseball is the same game that is a very successful two-player arcade game for Bally. Your TV shows a baseball diamond and outfield. At the start of the game, the players run out onto the field. You actually see little figures with their feet in motion running across your screen.

The first batter steps up to the plate. Your team is on the field. You can move your outfielders around by using the knob at the top of your pistol grip handle. By pressing the joystick on the pistol grip, you fire the ball to the batter. You can pitch a curve ball or a fast ball. You control your pitches using your pistol grip.

The second player plays against you on the batter's team. The batter swings his bat each time he presses the pistol grip trigger. If he swings too early or too late, he fouls off the pitch, so there's a challenge to hit the ball at just the right time.

When the ball is hit, the outfielders can be moved to chase the ball. The game is so realistic that you hear the roar of the crowd and the sound of a hit ball. The pitcher automatically runs to cover first base when the ball is hit to right field—just like in the real game.

The cartridge also contains several paddle ball games but with a difference. Instead of holding your paddle in one plane of action and moving it up and down, you move it horizontally as well. This adds a challenging new dimension to all the paddle ball games on the cartridge. The cartridge is only $25.

Sea Wolf and Bombardier This arcade game is the most popular video arcade game in Bally's history. Boats float across your TV screen at different speeds. You then try and torpedo the boats using your pistol grips.

The faster the boat, the more points you're awarded if you hit it. To make it even more interesting as the game progresses, land mines appear and block some of your shots, so you must learn to shoot around them.

The game is a huge success at arcades throughout the country and costs arcade owners $1500 to buy. Whereas the arcade game could only be played by one player, the newer home version can be played by one or two players to make the game even more fun than the original version.

The other game in the Sea Wolf cartridge is called Bombardier and is the aerial version of the Sea Wolf game. In this game, airplanes bomb targets for points. The cost of this very powerful cartridge is only $20.

Panzer Attack and Red Baron The Panzer Attack cartridge is similar to the very popular arcade game called Tank. Two tanks navigate around obstacles and fire at each other. Each time you strike an opponent, you win a point. The rumbling sounds of tanks and the explosions when the tank shells strike their targets add a realistic touch to one of the most popular video arcade games in history. The game is timed, so after a few minutes, the winner is determined by the highest score and a new battle begins.

The second game, called Red Baron, is the

aerial version of Panzer Attack. Two planes shoot at each other with points scored for direct hits. The entire cartridge costs only $20.

280 Zzzap/Dodgem Although this is also an arcade game, we do not highly recommend it unless you own the other cartridges and wish to complete your collection. We have found that it is the least enjoyable of the arcade games, and your family will tire of it rapidly.

280 Zzzap puts you in a car. By pressing your pistol grip trigger, you accelerate. You drive between white posts stationed along a highway. You steer your car by use of the knob at the top of the grip. The faster you go, the faster you have to steer. Each time you crash, you must start accelerating again. The object is to go the farthest distance in the shortest time. This can be mastered very quickly.

Dodgem is simply an aerial view of a race track in which you dodge in and out of traffic trying to reach a goal. The object of the two-player game is to reach the goal with the least amount of crashes. This cartridge is $20.

BlackJack/Acey-Deucey/Poker These one, two, three, or four player games are part of the home entertainment series. Pictures of the playing cards are shown and shuffled right on the screen. The cartridge is a great party game and available for only $20.

The pistol grip accessory is used for the video games and is an optional accessory.

Tiny-Basic This is a great introduction to the world of programming. Using this cartridge, you turn your calculator keypad into an alphanumeric keyboard with the addition of a plastic keypad overlay. Then you can enter letters and numbers and several programming steps using the BASIC language. With a little practice, you'll be able to actually create your own arcade games. A booklet telling you how to program your computer with your own programs comes with the cartridge.

The cartridge costs $50 complete with instructions. When you receive your add-on module, you will no longer need Tiny-Basic. We will, however, give you a full $50 credit towards the purchase of the add-on module when you return the cartridge to us.

The program library was designed to fit in the top portion of the basic module which will hold 12 cartridges. We suggest that you order at least two of the cartridges to get a thorough idea of the Bally system. Postage and handling for each cartridge order is $1.00 no matter how many you purchase. If you order the basic unit and several cartridges at the same time, there is no additional postage and handling for the cartridges.