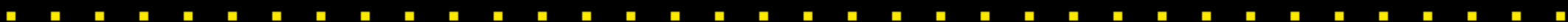




GAME DESIGN AND HISTORY

UNIVERSITY OF WALES
TRINITY ST DAVID





The Early Years

- In The Beginning...
- Early to Mid 1970s
- Late 1970s
- Timeline



MARIO
000000

 x00

WORLD
1-1

TIME

WORLD 1-1

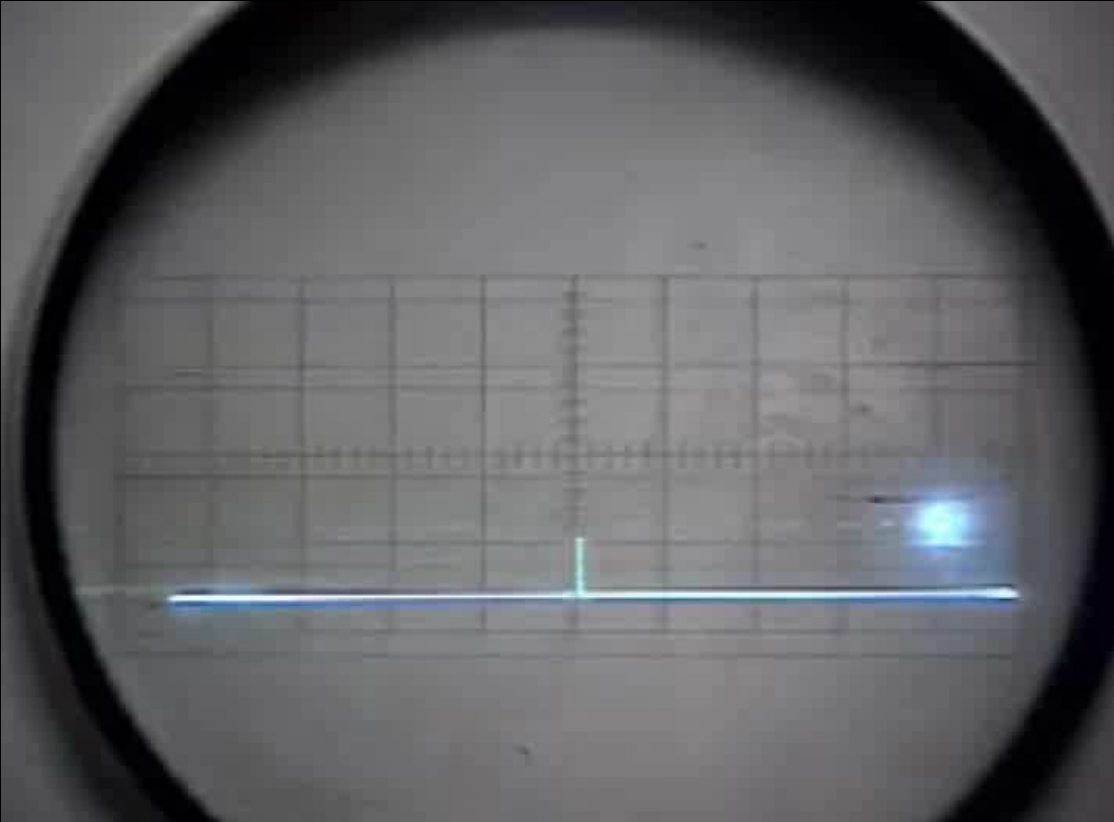


x 3

IN THE BEGINNING



Early Developments



One of the very first computer games, *Tennis for Two*, was created by physicist **William Higinbotham** in 1958 while working at the US Department of Energy.



Early Developments

In 1961 **Steve Russell** and his colleagues at MIT created what is considered to be the first well-known computer game, *Space War*.





Spacewar - 1961



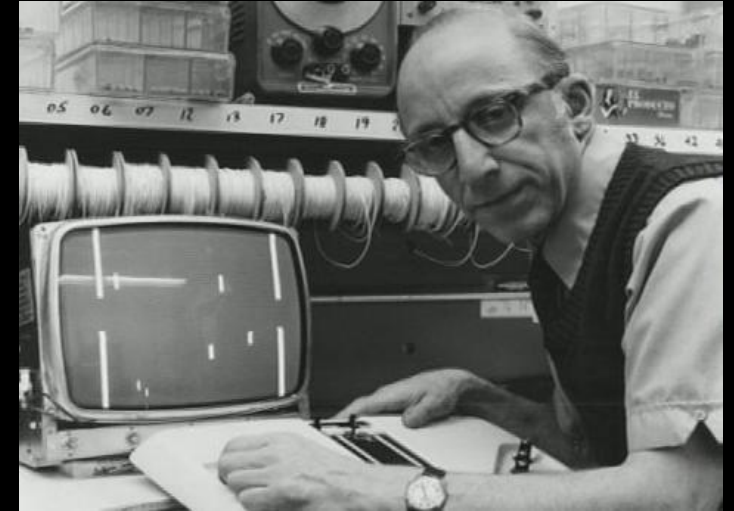
"It was a two-player game; there wasn't enough computing power available to do a decent opponent. I was the first person to not make money on a two-player game."

- Steve Russell



The first video game was created by engineers at **Sanders Associates**.

Sanders Associates was a **defence contractor** based in New Hampshire in the US.

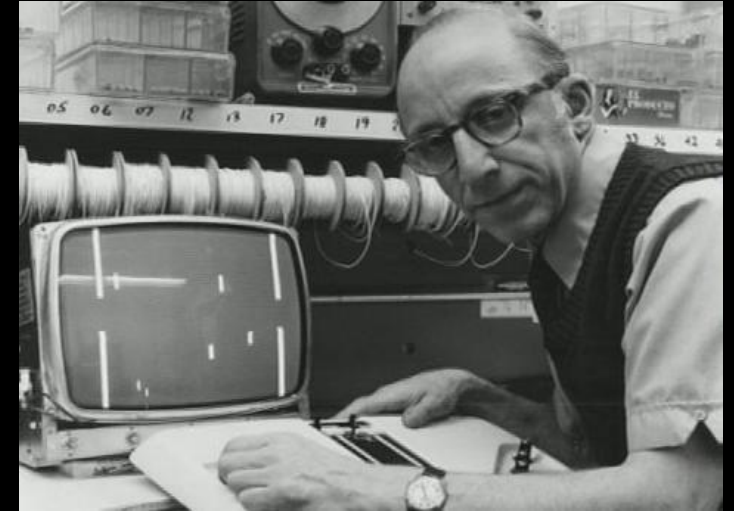




"I'm sitting around the East Side Bus Terminal during a bus trip to New York, thinking about what you can do with a TV set other than tuning in channels you don't want."

And I came up with the concept of doing games, building something for \$19.95. This was 1966, in August."

- Ralph Baer



MARIO
000000

 x00

WORLD
1-2

TIME

WORLD 1-2



x 3

THE 1970'S



Early Developments

In 1971 *Computer Space*, the first commercially-sold coin-operated video game was produced by **Nutting Associates**.

It was inspired by *Spacewar* and Developed by **Nolan Bushnell** and **Ted Dabney**.

Computer Space was **not** a commercial success – many found the concept and controls too complicated to grasp quickly.





Home Video Games

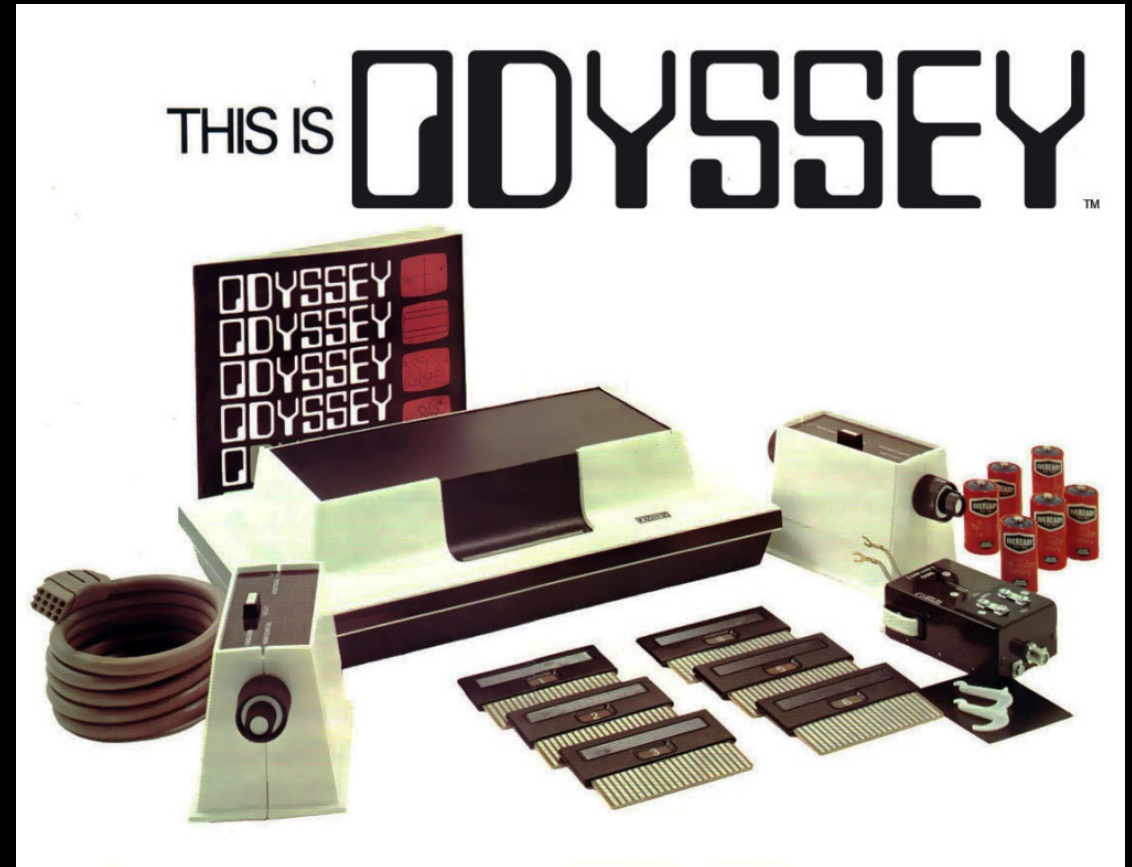
In 1971, Ralph Baer approached TV manufacturers with his television game prototype and after unsuccessful negotiations with General Electric and RCA, **Magnavox** signed a contract to produce the machine.





Home Video Games

The *Magnavox Odyssey* was released in the US in 1972.





Home Video Games

The Odyssey was noted for having the first **home light-gun**.



SHOOTING GALLERY



... offers you an exciting new dimension in the enjoyment of your **ODYSSEY**. The SHOOTING GALLERY, model 1TL950, includes an ELECTRONIC RIFLE, two Printed Circuit Game Cards and 4 different Target* Overlays in two sizes. The total unit offers 6 variations for creating your own home shooting gallery. **\$24⁹⁵**



SHOOTOUT SHOOTING GALLERY PREHISTORIC SAFARI DOGFIGHT



GAME DESIGN AND HISTORY

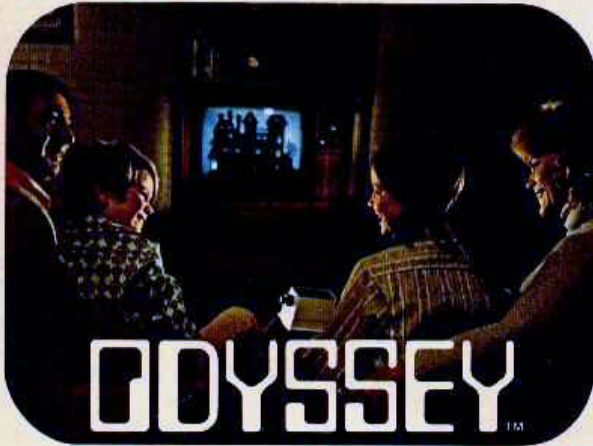
EARLY TO MID 1970'S

Home Video Games

However, the machine was considered to be **overpriced** (\$100 in 1972) and was **poorly marketed**, resulting in limited success.

Some believed that the Odyssey **would only work on Magnavox brand televisions**, and were only available to buy at Magnavox dealers.

All items shown on these two pages are regularly-priced, with no Annual Sale Savings



ODYSSEY

... the electronic game of the future. A total play and learning experience for all ages!



ODYSSEY is the fantastic new electronic game that easily attaches to any brand 18 to 25 inch (diagonal) television to create a closed circuit electronic playground. With ODYSSEY you participate in television ... you're not just a spectator! The fascinating casino action of Monte Carlo, the excitement of Wimbledon, the thrills of a heated game of football—all can be duplicated right in your own living room!

ODYSSEY is thought, action and reaction. ODYSSEY comes complete with a battery-powered master control unit (batteries included), six printed circuit game cards, twelve action and learning games for the entire family, eleven different game overlays and two player controls, as well as a wide variety of game aids. The master unit allows you to control the speed of the game; the player control lets you move your player vertically, horizontally and even apply "English." ODYSSEY is also an electronic teaching aid. Your child can learn numbers, letters, geography—even abstract thinking! And best of all, ODYSSEY makes learning fun. ODYSSEY... it's new from Magnavox... and works with any brand TV—black and white or color. Come in now for the fun of a demonstration. ODYSSEY—model 1TL200... **\$99⁹⁵**

All prices are Minimum Fair Trade Prices.



TABLE TENNIS. The basic Odyssey game that tests eye-hand coordination.



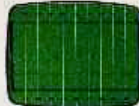
TENNIS. All the excitement of Wimbledon as you serve, volley and return.



HOCKEY. Face off, dig for the net, improve the puck control. Includes Score board.



CAT AND MOUSE. Can the clever mouse dodge the cat? A hilarious electronic indoor game of chase and rock.



FOOTBALL. Just like the game, there's your own strategy. Pass, run, even kick. Touchdown! Fly catch, game board, rules and scorecard included.



SHOOT. Place the clock as you shoot in and out between the rings.



Magnavox

presents

ODYSSEY



“Magnavox did a really lousy engineering job – [they] over-engineered the machine. Then they upped the price phenomenally so that the damn thing sold for \$100. Here’s this thing I wanted to sell for \$19.95 coming out at \$100.

Then in their advertising they showed it hooked up to Magnavox TV sets and gave everyone the impression that this thing only worked on Magnavox TV sets.”

- Ralph Baer





After *Computer Space*, **Nolan Bushnell** decided to start his own company with Ted Dabney and Larry Bryan.

Originally called **Syzygy**, Bushnell changed the name after it was already being used by another company.





He chose a word from the Japanese strategy game Go, re-naming his company **Atari**.

Within ten years, Atari would grow into a **\$2-billion-a-year giant**, making it the fastest growing company in US history.



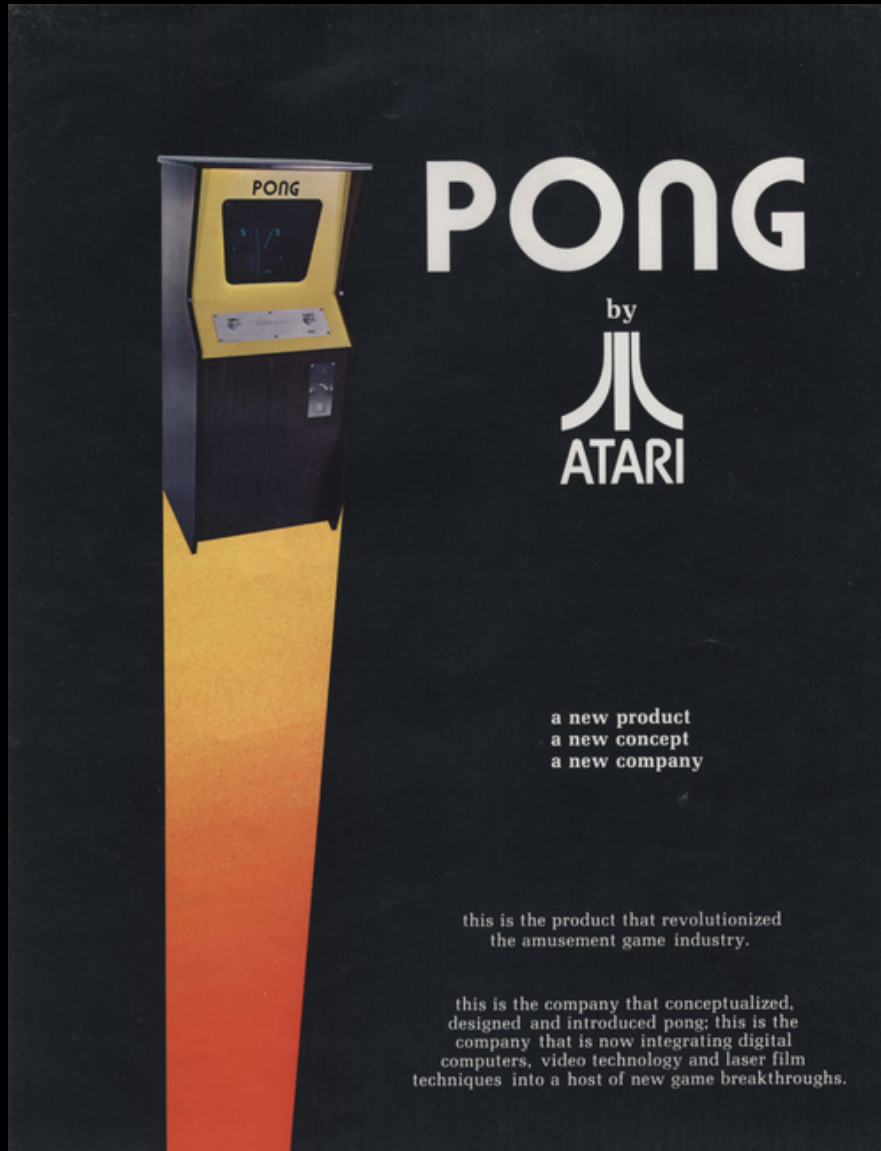


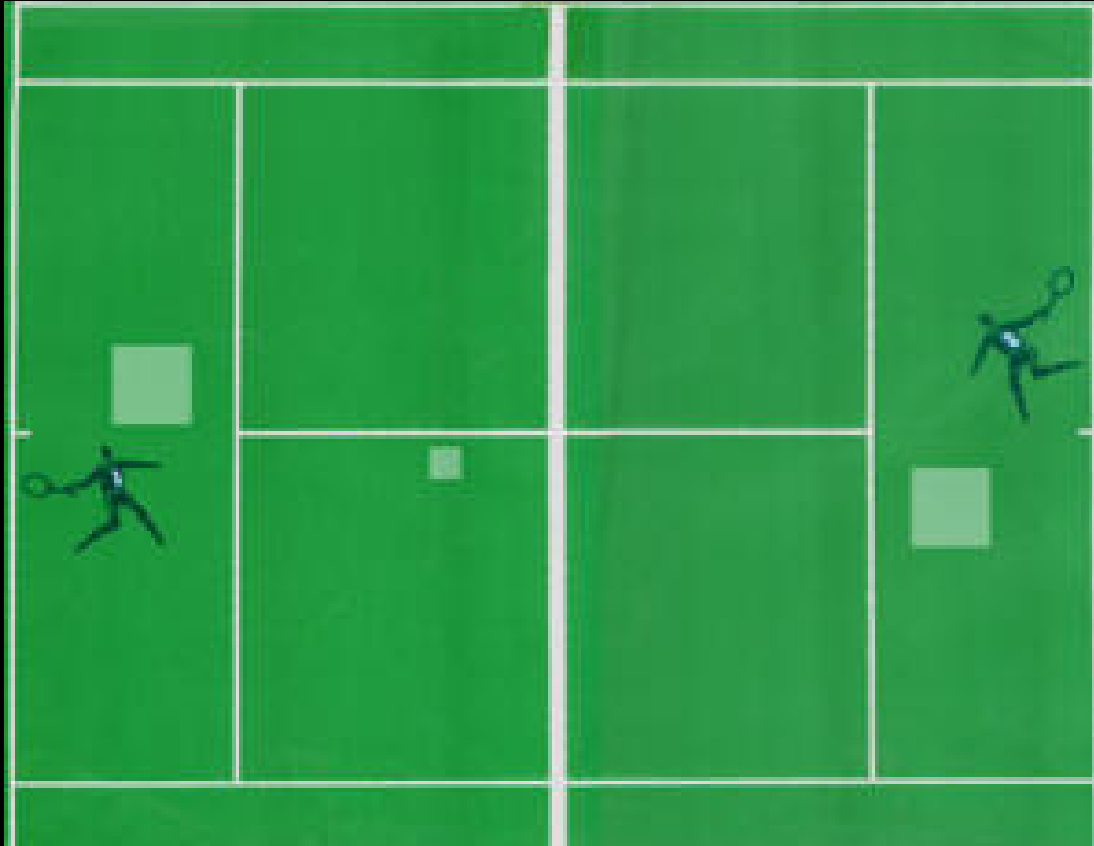
PONG

Nolan Bushnell, engineer Al Alcorn and Bushnell's new company, **Atari**, released **PONG** in 1972.

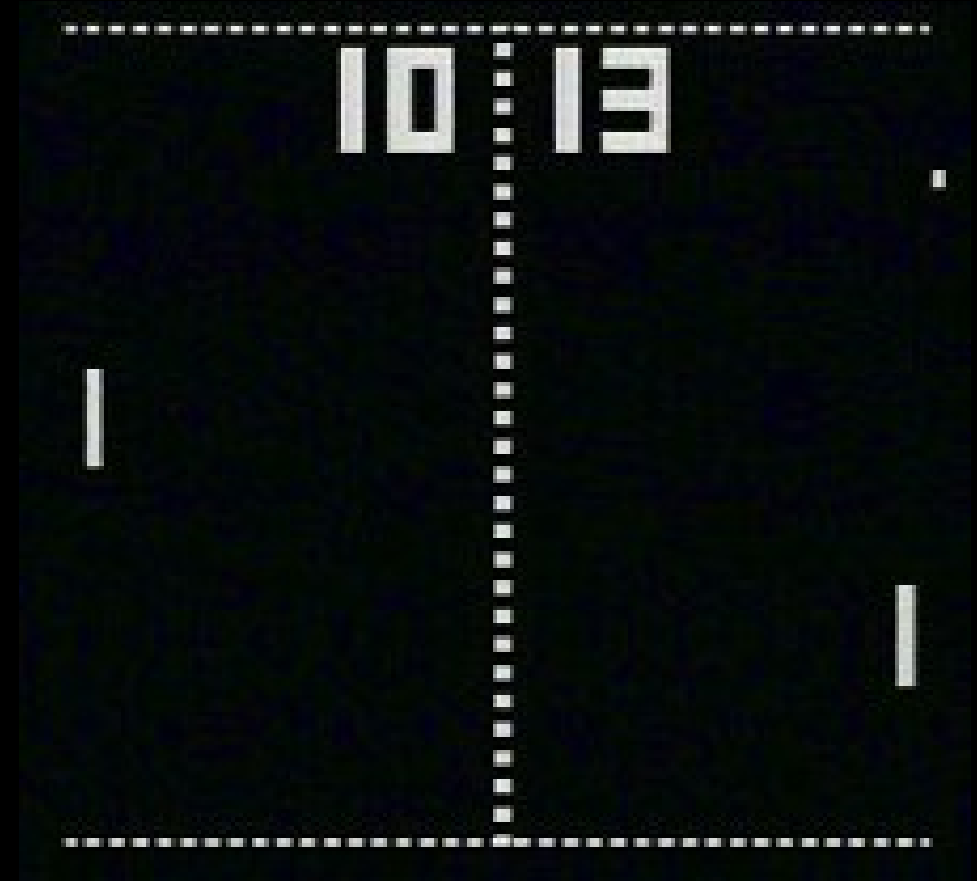
PONG was the first mass-market, commercial arcade game.

Due to its success, many competing companies developed imitations of the game.





Odyssey *Tennis*
(with screen overlay)



Atari *PONG*



In 1975, Atari released *Home Pong* and became the first company to make both arcade and consumer products.

Falling prices of digital circuits meant that Home Pong cost much less to manufacture than the Odyssey.

Initially, electronics buyers were skeptical, remembering that Odyssey has sold only 100,000 units, they claimed that consumers weren't interested in television games.

Introducing a new game from **Sears**

TELE-GAMES™
ELECTRONIC GAMES

Fast-paced games you play on your own TV

Wish Book value

"Pong" TV Table Tennis
with all the action and sound you find in commercial games costing hundreds of dollars more

An outstanding low price... only **\$98⁹⁵**

Tap action button to start the game, then twist knob on control panel to make your "paddle" dash vertically and smack the "ball" back to your opponent. Quick, easy hook-up... just attach antenna change-over switch to VHF antenna terminals, plug 15-foot cable from control panel into change-over switch and tune in channel 1 or 6. Works with any size black-and-white or color TV. Four "D" batteries included. High-impact control panel 10" x 5 1/2" x 1 1/2", inches high. TV not included. #C 25798C—Shipping weight 5 pounds **\$98.95**

AC Power Adapter. Converts 120-v. household current to low DC voltage. U.L. listed. 110-120 volts, 8 watts, 90 Hz. AC. Includes twenty-foot cord. #C 25792—Shipping weight 1 pound **\$7.95**

FULL ONE YEAR WARRANTY: For one year from date of purchase, we will repair "Pong" TV electronic game if it fails due to a defect in materials or workmanship. This warranty service is available by simply contacting your nearest Sears store or Service Center throughout the United States.

Designed for Sears by Atari—
one of the leading makers of electronic games

ACTION SPEEDS UP AUTOMATICALLY
After 4th and 8th volley, the speed of the "ball" increases automatically to challenge your skill

SCORE SHOWS UP ELECTRONICALLY
Scores from 1 to 15 flash on screen after each point and in color (if you have a color TV set)

YOU HEAR THE SOUND OF ACTION
Every time electronic "ball" hits "paddle" or sideline, you hear a beep

RELIABLE SOLID-STATE CONTROLS
Each player controls "paddle". Console uses little power... operates on low-cost, low-drain batteries

410 (Sears) 25798C



'Pong clone' Home Consoles



© Erik Klooster



© Erik Klooster



© Erik Klooster



© Erik Klooster



© Erik Klooster



© Erik Klooster



© Erik Klooster



© Erik Klooster



GAME DESIGN AND HISTORY

In 1976, Fairchild Camera and Instrument released the **Channel F**.

This was the first home system since Odyssey to have interchangeable games and the **first to use game cartridges** (known as Videocarts).



EARLY TO MID 1970'S



CHANNEL F

The first high-performance electronic video entertainment system.

Channel F introduces a new era in video entertainment.

The first cartridge game system.

High-performance entertainment you can change — for a new challenge, new action anytime.

Just change cartridges for more fun and games.

Every Channel F system begins with two exciting games — hockey and tennis — built into the console.

But that's just the beginning.

Fun! Action! Challenge!
Channel F has entertainment for the whole family.

Here are just some of the games and entertainment you'll find available in the Channel F Entertainment Library.

Want to try something different?
Just pop in a Videocart™ action cartridge, and you're ready for a whole new kind of fun.

The Channel F Entertainment Library.

Channel F gives you a whole library of cartridge entertainment to choose from.

Not just games, but exciting challenge of every kind. Action competition. Tests of skill. Learning fun. Games of chance. And much more. Entertainment your entire family will enjoy.

The Channel F cartridge library keeps growing, too. With 10 popular cartridge selections available today — up to four games per cartridge.

And more cartridges on the way.

Your Fairchild Dealer will be happy to show you the Channel F video entertainment system. And the complete Channel F library.

Tune to Channel F for the finest in video entertainment today — and stay tuned for more to come.

Baseball! It's bases loaded 3-2 count, bottom of the 9th. Swing for the fences!

Dragon Race! You're eating dust. Better stamp on it!

Maze! Don't get lost! First player through the perplexing puzzle wins!

Blackjack! Two can play. Pick up your bet! — It's a true 52-card deck!

Tic-Tac-Toe! Match wits with a computer. You could win!

Shooting Gallery! Electronic rifle vs. flying ducks. Ready, Aim, Fire!

Spill! Red Baron vs. Blue Max in a dogfight all over the screen!

Quadrangle! Watch your TV draw a kaleidoscope of color!

Space War! Your laser fires, but the other flying saucer quicker!

Math Quiz! Add, Subtract, Multiply, Divide! Fun for young players!

Desert Fox! You advance. The enemy fires, hits — and you're outfoxed!

YOU LOSE TURKEY

TRV AGAIN



After the **Channel F**, consumers no longer wanted single-game consoles.





Atari cemented their dominance of the games industry by releasing the **VCS** (later known as the Atari 2600) console in **October 1977**.





Despite competition from Magnavox, Fairchild, Coleco, and RCA, Atari held off competition with a **large software catalogue** and **third party support**.





Software developers would pay Atari a **royalty** (or licence fee) each time they produced a game for the VCS – a business model which has been retained in the industry to the present day.



INSERT COIN TO CONTINUE



- 1958 - **William Higinbotham**, of the Brookhaven National Laboratories in New York, invents an interactive table-tennis like game that is displayed on an oscilloscope.
- 1961- **Steve Russell**, a student at MIT, creates *Spacewar* – the first interactive computer game.
- 1966 - **Ralph Baer** begins researching interactive television games at Sanders Associates.
- 1968 - Baer patents his interactive television game.



1970 -

Magnavox licences Ralph Baer's television game from Sanders Associates.

Nolan Bushnell begins work on an arcade version of Russell's *Spacewar*, called *Computer Space*.

1971 -

Nutting Associates purchases *Computer Space* and hires Bushnell. *Computer Space* becomes the first arcade video game machine.



1972 -

Magnavox demonstrates Odyssey in private showings. Nolan Bushnell attends a demonstration of the console on May 24 in Burlingame, California.

Bushnell leaves Nutting and starts **Syzygy** with **Ted Dabney**. Syzygy is later renamed **Atari**.

Atari Engineer **Al Alcorn** creates *Pong*.

Magnavox releases the Odyssey.

Magnavox sues Atari on grounds that *Pong* infringes on Ralph Baer's patents. The matter is settled out of court.



- 1975 - Atari creates prototypical *Home Pong* unit and sells the idea to **Sears Roebuck**.
- 1976 - The **Connecticut Leather Company**, now known as **Coleco**, releases *Telstar*, a television tennis game.
- Fairchild Camera and Instrument** releases the *Channel F*, the first programmable home game to use cartridges.
- 1977 - Atari releases the *Video Computer System* (VCS), also known as the *Atari 2600*.



1977 -

Shigeru Miyamoto joins **Nintendo**.

Nintendo releases its first home video game in Japan.

1978 -

Magnavox releases the *Odyssey 2*.

1979 -

Atari game designer **Warren Robinett** introduces the concept of 'Easter Eggs' to video games by hiding a room with his name in in a 2600 game called *Adventure*.

Mattel Electronics introduces the *Intellivision* game console.



Hardware examples:



- Prinztronic Deluxe (PONG clone)



Hardware examples:



- Fairchild Channel F (Mk II)



Hardware examples:



■ Atari VCS / 2600



GAME DESIGN AND HISTORY

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TRINITY ST DAVID

