

**You're in The Year 1 A.B.**

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**Welcome to The Year 1 A.B.™**

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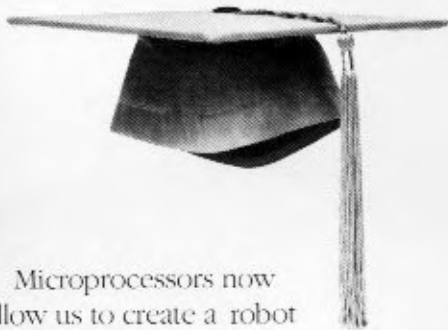
## Androbots. The world's first personal robots.

It is time.

The Year I A.B. opens a new era in technological history—a dream that has engaged man's imagination for centuries.

The microprocessor—a device that has made possible the personal computer (with the capability that only five years ago required a mainframe office computer) now makes possible the personal robot, and a profound change in our lives is about to take place.

We are now seeing another impossible dream become a reality:

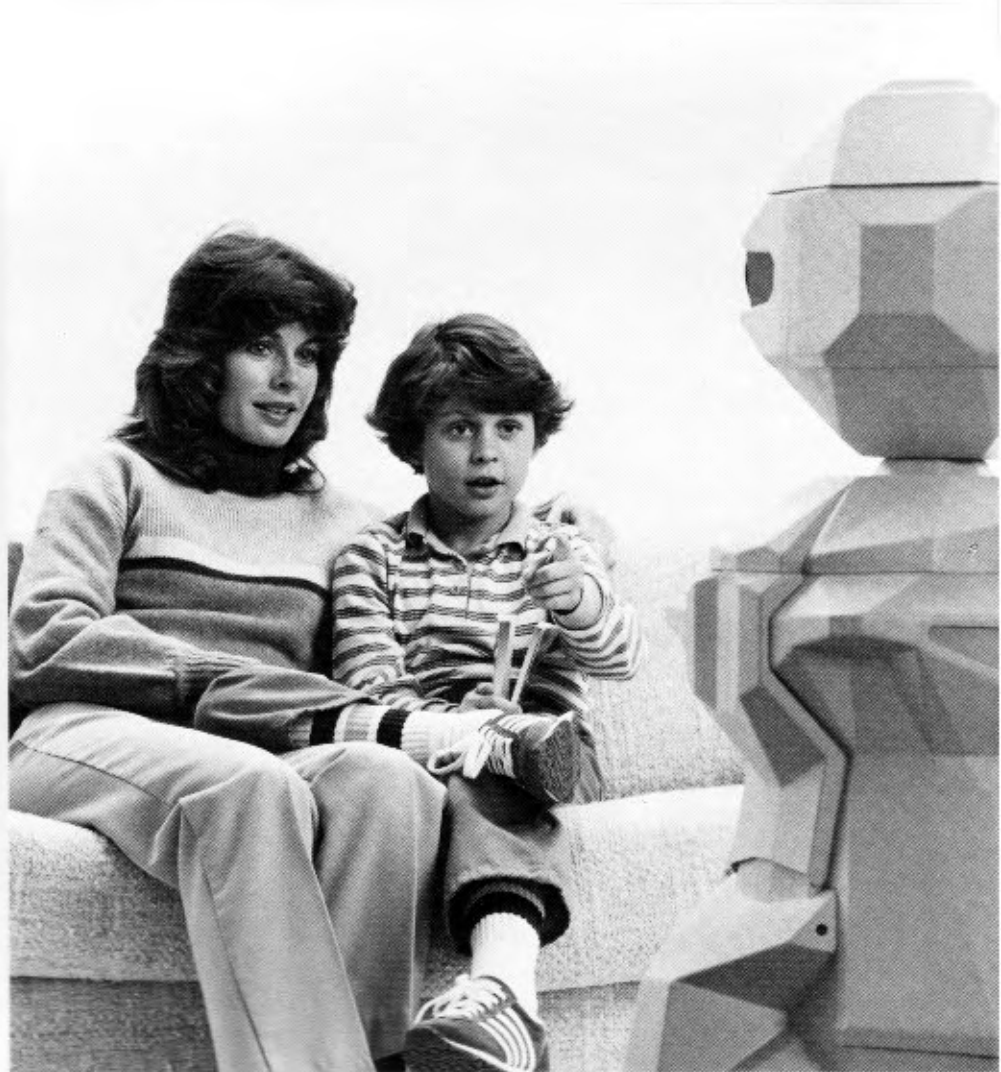


Microprocessors now allow us to create a robot with a "brain"—a complex group of internal computers that can give it the ability to "see," to "recognize," to "remember" and to make independent, autonomous decisions based on the computer software with which it has been programmed.

A personal robot—as we see it at Androbot—should be play-oriented, rather than work-oriented. Not an appliance, but a friend.

Thus, we have conceived our Androbots for home use—to interact socially with people. You will discover that Androbots have personalities and capabilities to make them entertaining, safe and educational.

We have designed them to relate with humans, as friendly-looking, inviting com-



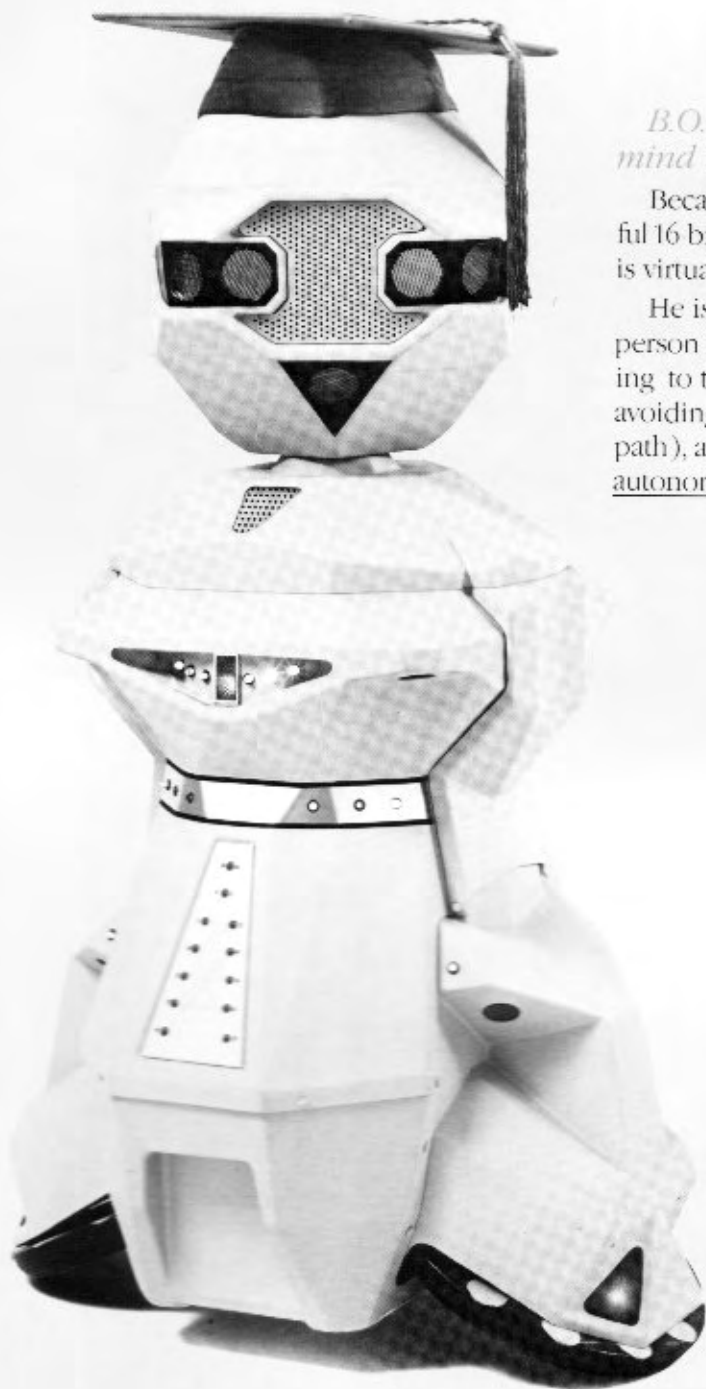
panions. Pursuing the limits of microprocessor technology, we have made them capable, not only of autonomous action, but of executing complex instructions provided by software.

And we have made them affordable.

In this spirit, and with no little pride, we have taken an age-old dream out of the lab and put it on your threshold: the first generation Androbots—B.O.B. and Topo.

## First Generation Androbots

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*B.O.B. is yours. But he has a mind of his own.*

Because his "brain" contains three powerful 16 bit Intel 8088 microprocessors, B.O.B. is virtually a computer on wheels. And more.

He is capable of finding a person in the room and going to that individual (while avoiding objects in his path), all on his own — autonomously.





How does he do it? His ultra-sonic sensors first find and measure the location of every object in the room: tables, chairs and people. His computers memorize this information.

His infra-red sensors then "recognize" people (while differentiating between human body temperature, fireplace heat and incandescent light heat). Autonomously deciding to whom he wants to go and talk, he then navigates the room, guided by his memory system, arrives at his newly chosen friend and strikes up a conversation.

Or, he may choose to sing a song in a sort of Androbot alto, while his function lights flash on and off in perfect rhythm. Should he get a less than great response, he will turn his head to look for new folks to impress.

When his energy runs low—unlike many human beings, he knows enough to excuse himself and get his batteries charged.

B.O.B.'s remarkable abilities are the result of the new and highly-sophisticated science of Artificial Intelligence.

Yet, you needn't know anything about computers or high technology.

A simple touch turns him on and off.

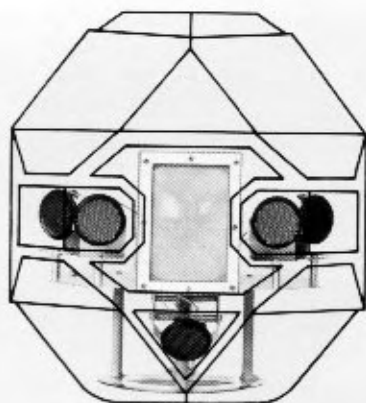
And you have a friend for life.

*The Dream comes closer.*

We've intentionally avoided making B.O.B. a doer of menial domestic tasks. He is capable of much more.

B.O.B.'s eye is on the stars.

What he does today and in the future comes from computer software. Androbot Inc. and its licensees will provide software to help him educate your children, teach you languages, protect your house at night and nudge you awake in the morning.



Ultra-sonic sensors locate objects in the room and measure their distance, to 1/10th of a foot accuracy. Infra-red sensors, attuned to the frequency of human body heat, enable B.O.B. to locate human beings. A loudspeaker provides means of communicating messages digitally-encoded in B.O.B.'s memory system.

And of course B.O.B.'s capacity for memory is prodigious: some day soon he'll likely give you that recipe for Vermicelli Primavera you found in Florence and haven't prepared for years; he could follow your young-one around the house, helping him or her learn the capitals of the States and checking homework for accuracy.

What can B.O.B. do?

He entertains. He communicates. Most important, he thinks. And decides for himself what his next action will be. His skills today are remarkable; his potential is unlimited.

And it's only 1 A.B.

*B.O.B.'s Vital Statistics*

*Full name:* Androbot B.O.B.

*Date of birth:* 1983 (The Year 1 A.B.)

*Place of birth:* Androbot, Inc., Sunnyvale, CA

*Citizenship:* International

*Ht:* 3'

*Intelligence:* Artificial

*Computers on board:* 3 Intel 8088 microprocessors.

*Memory:* Exceeds 3 megabytes, (3 million bytes of information). Expandable.

*Function lights:* To indicate ultra-sonic sensors active, infra-red sensors active, human companion targeted, forward, backward, left and right directions.

*Infra-red sensors:* Reading out at all times. To detect human body heat.

*Ultrasonic devices:* To determine the range and position of objects. Accuracy to 1/10th of a foot.

*Moving speed:* 2 ft. per second (may vary depending on surface conditions).

*Wheels:* Two, independently motor driven.

*Motor:* Two. High torque.

*Batteries:* Three: Gel electrolyte, sealed, rechargeable. Long life. Industrial grade. LED indicates if batteries need recharging.

All product specifications and prices are subject to change without notice.

More detailed product specifications are available from Androbot, Inc., upon request.

## First Generation Androbots

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*Give Topo an Apple™ and you become the teacher.*

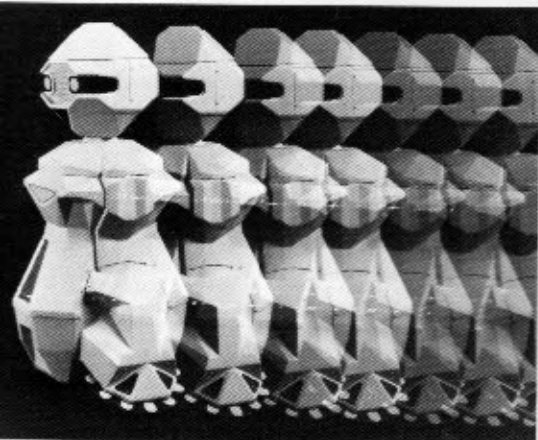
Topo is a mobile extension of your personal computer.

Your computer is Topo's brain; instead of moving spots of light around a screen, you can use those same electronics to move Topo around your house or your yard.





Or, you can move and control Topo with your computer joystick. Topo comes with a remote data link which will interface with your computer. His receiving unit will respond to instructions, up to 90 feet from your Androbot transmitter.



*Topo's software.*

Topo interfaces with your computer to perform a series of movements using Topo's standard software diskette.

Optional software packages for programming in Topologo™ and Topoforth™ will make it even easier for you to create an infinite number of complex maneuvers such as moving accurately throughout every room in your house. These computer languages will let you input geometric routines and recall them to action with the touch of a key, such as "Topo to front door," "Topo to kitchen."

As new software is developed to increase Topo's capability, your fun and utilization of Topo will continue to increase.

- Topo's Vital Statistics:*  
**Full name:** Androbot Topo  
**Date of birth:** 1983 (Year 1 A.B.)  
**Place of birth:** Androbot, Inc., Sunnyvale, CA  
**Citizenship:** International  
**Ht:** 3'  
**Intelligence:** External computer provided.  
**Command reception:** Internal radio frequency receptor to read joystick-controlled direction signal and software-directed signals at distances up to 100 feet.  
**Software controls:** Standard diskette for use with Apple II™ is included. Topologo and Topoforth software available at extra cost.  
**Wheels:** Two, independently driven.  
**Motor:** Two. High torque.  
**Lights:** Forward, backward, left and right indicator lights.  
**Moving speed:** 2 ft. per second (may vary depending on surface conditions).  
**Batteries:** Gel electrolyte, sealed, rechargeable. Long life. Industrial grade. LED indicates if batteries need recharging.

All product specifications and prices are subject to change without notice. More detailed product specifications are available from Androbot, Inc., upon request.

Apple II, Atari, Commodore, & Radio Shack are registered trademarks of Apple Computer, Inc., Atari, Inc., Commodore Business Machines, Inc., & Tandy Corporation respectively.

While you're in the kitchen guiding him, Topo can serve drinks to guests in the patio. (He never tires of pulling his optional Androwagon™.) A touch of your computer key can send him to the front door to usher in arrivals to your children's birthday party.

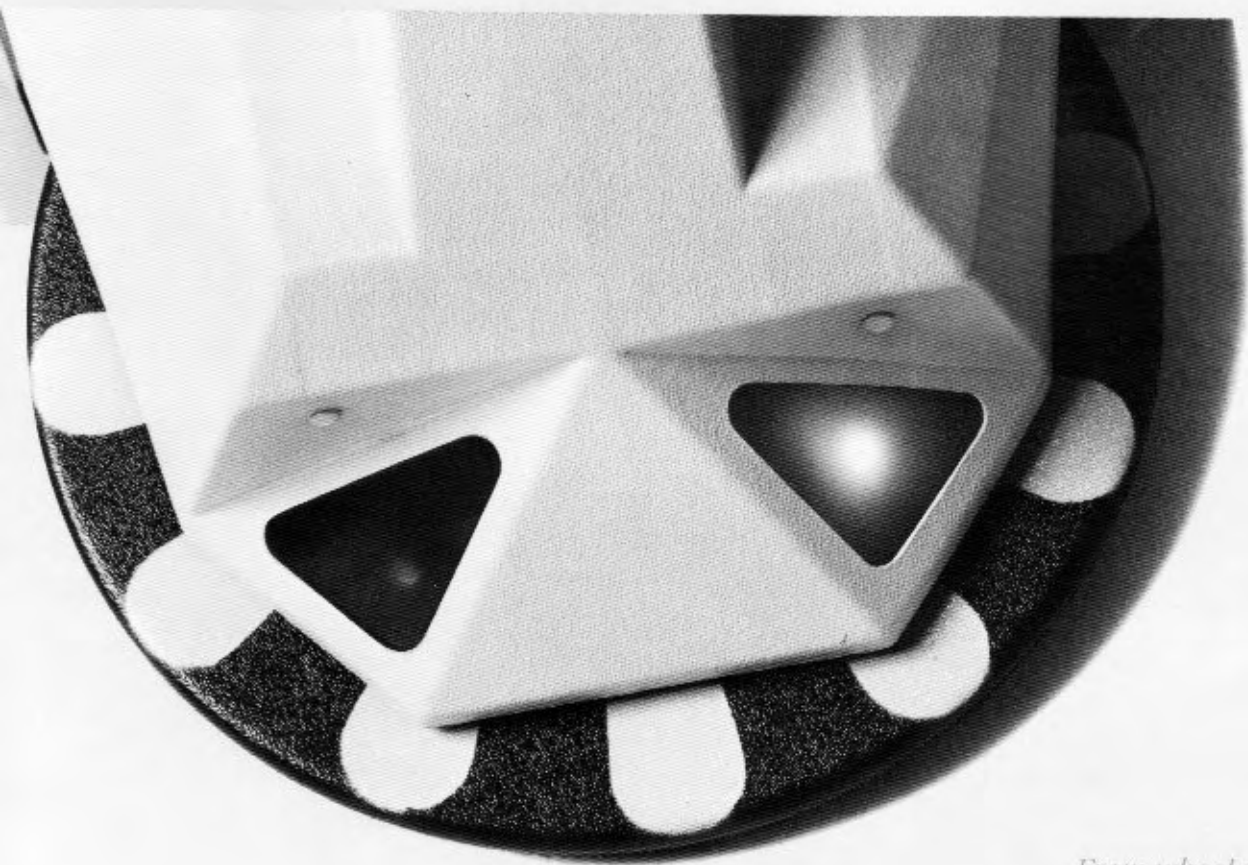
Topo is designed to interface with your Apple II™, and soon with Atari™, Commodore™, Radio Shack™ and many other computers.

Like B.O.B., Topo has lights in his "feet" to indicate movement and direction: green for forward, red for back. Unlike B.O.B., who has a mind of his own, Topo will follow your instructions precisely, whether controlled by joystick or programmed by your computer.



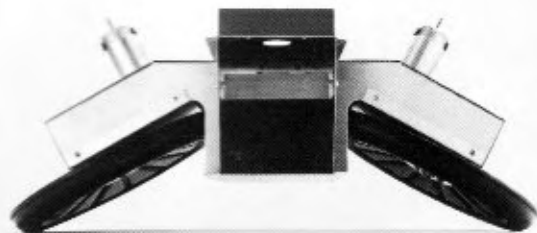
## Andromotion™: The Wheel Reinvented.

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*Four-wheel stability  
with two wheels.*

We wanted Androbots to have a unique drive system which would impart an individual "personality" to the Androbots, and provide maximum stability and safety with optimum maneuverability and control.



The result is a totally new engineering design and the world's first and only two-wheeled "vehicle" that is inherently stable—even when not in motion. (Consider: your two wheeled bicycle requires movement to remain upright.)





Each wheel is independently driven, giving your Androbot the ability to turn on the proverbial dime. Because the Androbot's center of gravity is extremely low, he will sway from front to back, but never tip over—even when going up or down a slight incline.

Androbot is pleased to have given that eons old institution—The Wheel—a totally new (and patented) engineering configuration.

We call it "Andromotion."™

*The Androbot Report. You're part of the team.*

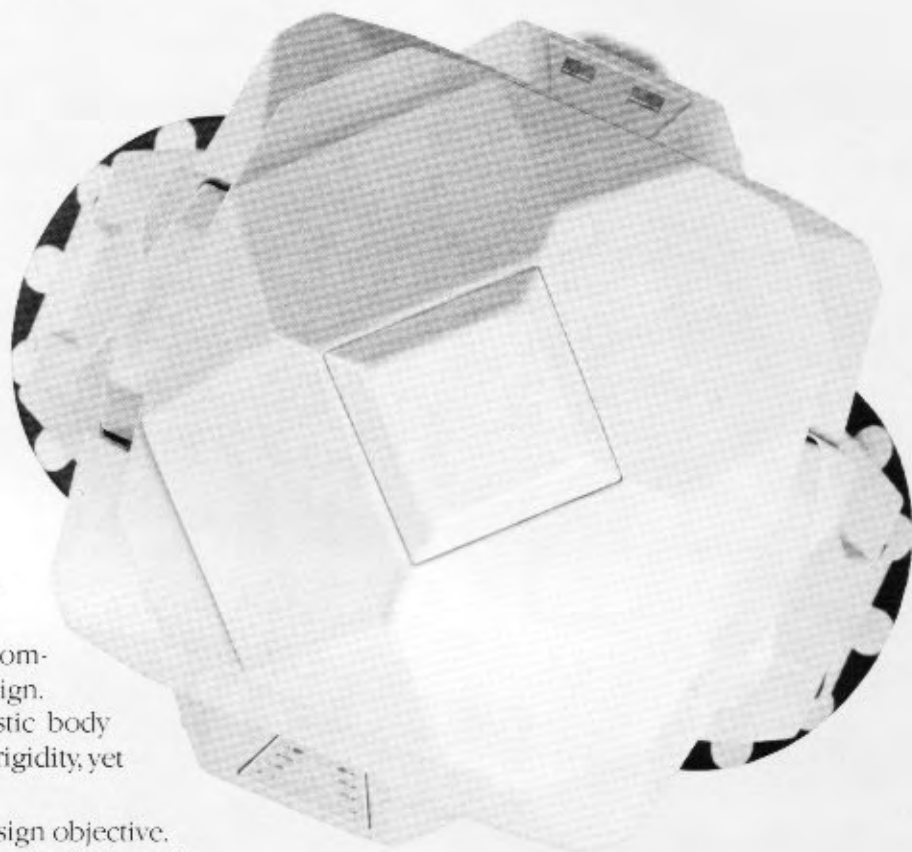
Together with Androbot owners, we are embarked upon an adventure with endless dimensions. The extension of the personal computer is as unlimited as the future of software. We intend to share this new adventure with you, on a regular basis, with a one-of-a-kind publication: The Androbot Report. In it, you're invited to share your ideas, to learn how other owners are using their Androbots, and be apprised of product advances and new software.

*Structural beauty is more than skin deep.*

B.O.B. and Topo's complex, three-dimensional bodies, like Andromotion, represent a breakthrough in the application of advanced trigonometry to a three-dimensional design. The resulting vacu-formed plastic body has tremendous strength and rigidity, yet is extremely light in weight.

Safety is also an ongoing design objective. One example: Bob's floor-triangulated "down" sensors prevent him from straying down the stairway or over a ledge. Safe at home, you might say.

Even a cursory look reveals that an Androbot is not a toy. Industrial-grade batteries, machined steel shafts and a fabricated steel superstructure, high-torque motors and cast aluminum gear boxes assure structural integrity throughout.



## Androbot, Inc. The Brain Trust.



The first generation of robots for personal home use are the offspring of Androbot, Inc.

Their complex trip from concept to consumer has been guided by a dedicated group of gifted mathematicians, scientists, engineers and marketing minds – all working together to turn one of mankind's cherished fantasies into a reality.

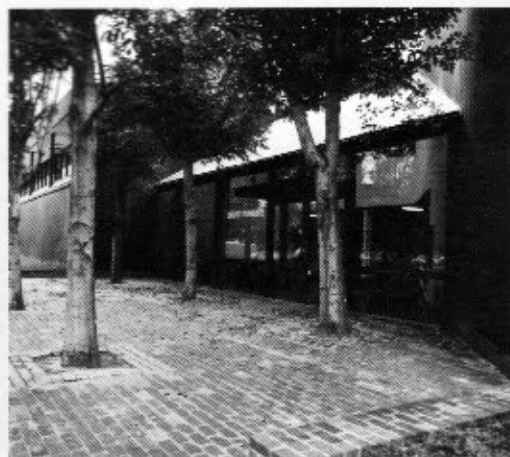
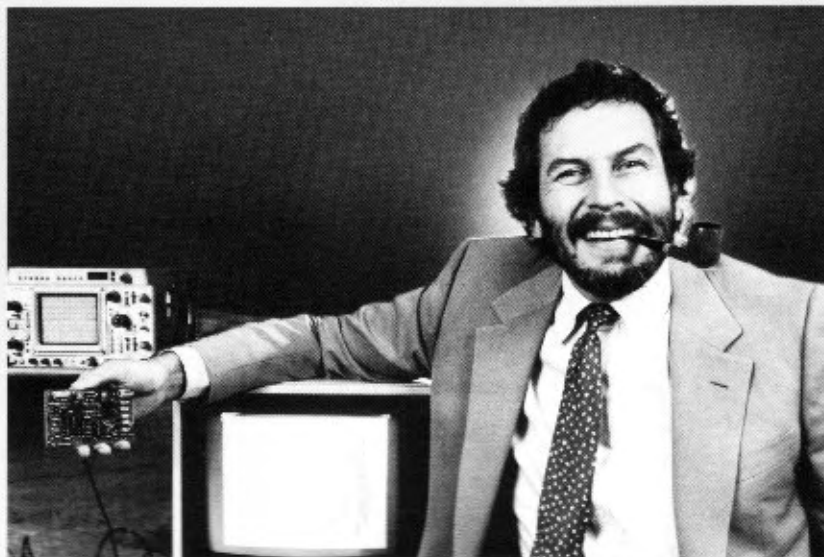
The Androbot concept came from Nolan Bushnell, Chairman of the Board. Bushnell has also provided the faith, encouragement,

space to grow, management structure and capital needed for such a venture, via his Sunnyvale corporate umbrella called Catalyst Technologies.

Founder of Atari and Pizza Time Theater restaurant chain, Nolan Bushnell is clearly more stimulated by possibilities of the future than by accomplishments of the past.

Frank Jones, *Director, Engineering Administration*  
Thomas A. Frisina, *President and Chief Executive Officer*  
Steve Kern, *Vice President and Chief Operating Officer*

Nolan Bushnell, *Chairman of the Board.*



*Robotic Development Managers (left to right)*  
Larry Dick, *M.S.C.S.*, Jack Larsen, *B.S.E.E.*, Doug Jones, *Ph.D.*,  
Sigfried Salat, *B.S.E.E.*, Dave Oppenheim, *M.S.E.E.*, Rick deVries, *B.S.E.E.*



# The Age of Androbotics™

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**ANDROBOT**

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