

OHIO SCIENTIFIC  
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1333 S. Chillcothe Road • Aurora, Ohio 44202

TAKE A GIANT STEP  
FORWARD  
IN PERSONAL  
COMPUTING

WITH

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Aurora, Ohio



## YOUR NEXT COMPUTER

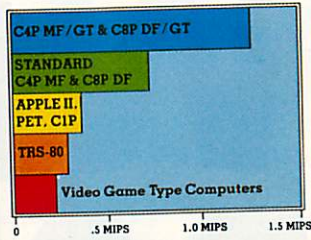
You know about computers. In fact, you probably own one now. One that you might be thinking of expanding. We have a better idea. Take a really giant step into the personal computing future with a C4P or C8P from Ohio Scientific. These two new premium computer systems offer the best specs in the personal computing industry with built-in performance levels that you could never achieve with your present system, even with all the add-ons available. We'll show you why.

## THE FACTS SPEED

Speed separates the computers from the toys. The faster the processor executes instructions the more elaborate and greater the I/O can be. The C4P and C8P have execution speed that is twice as fast as Apple II, or Commodore PET and over THREE times as fast as TRS-80. They are many times faster than the recently introduced flock of video game type computers.

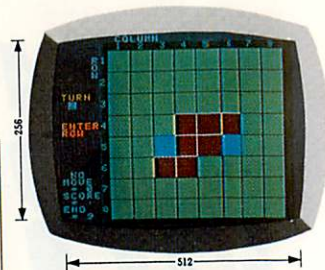
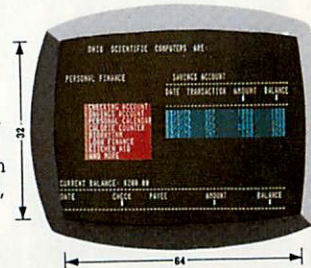
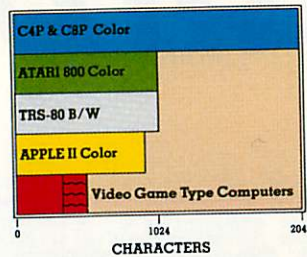
**GT OPTION** As if that weren't fast enough, the C4P and C8P's speed is nearly doubled when equipped with the Ohio Scientific GT option. By utilizing a 6502C microprocessor in conjunction with ultra-fast static memories, a C4P or C8P equipped with the GT option, will yield the following performance:

1.2 million instructions per second. Average.  
Memory to accumulator ADD time — 600NS.  
JUMP extended — 900NS.



## DISPLAY

The C4P and the C8P offer more display than other personal computers — 2048 characters — 32 rows of 64 columns with upper and lower case. Long display width makes user instruction easier to program and to read. The effective graphics resolution of 256 x 512 points allows these computers to match the display limit of even the best color television sets.



## 16 COLORS

The C4P and C8P offer a brilliant array of 16 colors including black available in both alphabetic and graphics.



## CONSTRUCTION

The C4P incorporates a fully RF shielded aluminum case with 2-step baked on enamel finish. It is trimmed with solid oiled walnut and die-cast chromed dress panels. Compare its construction to the plastic cases that are standard on other personal computers.

The quality doesn't stop at the surface. The C4P and C8P are modular BUS orientated computers with 4 and 8 slots respectively. The internal electronics are built to rigorous industrial standards.

Modularity means expandability and obsolescence protection. In fact, the original 1977 vintage C2-4P can be upgraded to a C4P by changing PC cards at substantially less cost than purchasing a new computer.



The C4P MF is shown with optional accessories (clockwise). Home Color TV set (requires RF modulator), 2 joy sticks, AC-Remote console and 2 modules, wireless smoke detector and window detector, modem, printer and wireless remote security console (on top of TV.)



# JUST LOOK AT ALL THE I/O OF THE C4P MF — BUILT IN

# AVAILABLE ON THE BACK AND READY TO RUN.

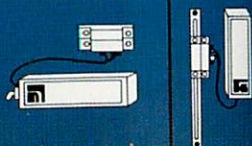
## INTERFACES

I/O capabilities. The most important feature to look for when you purchase your next computer. Compare these standard features of the C4P and C8P disk systems to any other computer system. Regardless of price, you'll find none that even come close.



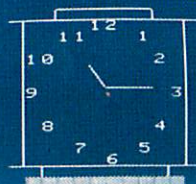
### HOME SECURITY INTERFACES

1-home security interface with fire and intrusion detection



### CONTROL INTERFACES

16 parallel I/O lines



### CLOCK

1-Real time clock and count down timer

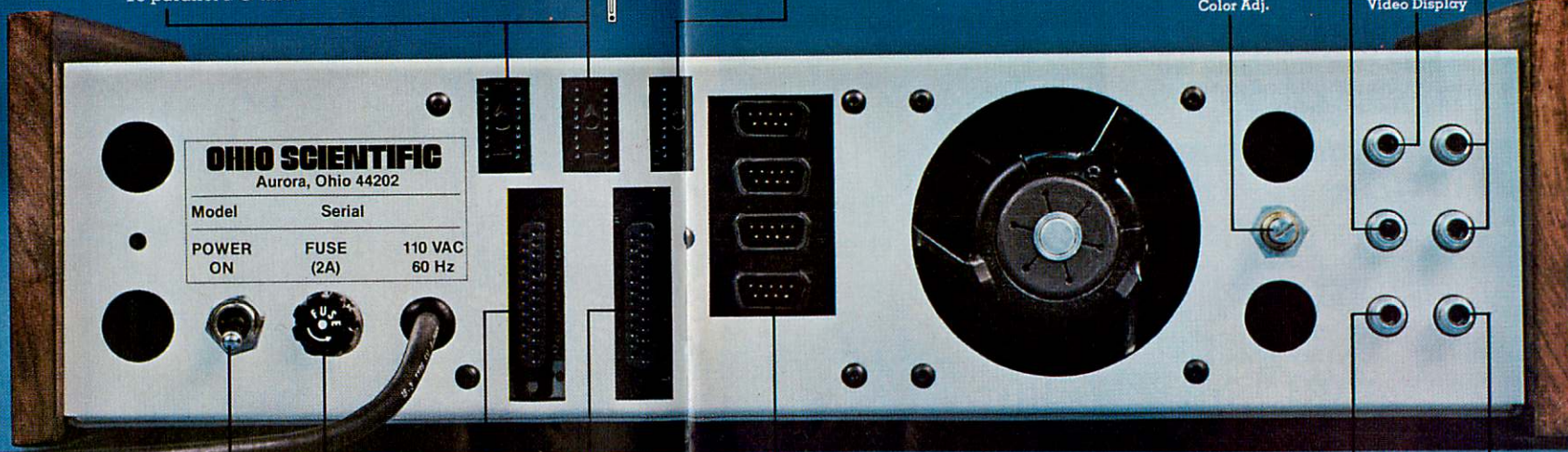
### ACCESSORY BUS

One accessory BUS connector for an external 48 line I/O board, PROM blaster, analog data module or education board.



### SOUND

1-programmable tone generator 200 — 20KHz  
1-8 bit companding digital to analog converter (DAC) for music and voice output



Cassette IN  
(Cassette Versions Only)

Color Adj.

Video Display

<b>OHIO SCIENTIFIC</b>		
Aurora, Ohio 44202		
Model	Serial	
POWER ON	FUSE (2A)	110 VAC 60 Hz

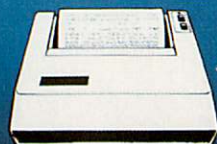
ON/OFF Switch Fuse

Cassette OUT  
(Cassette Versions Only)

Only an Ohio Scientific C4P MF or C8P DF can offer you all this I/O.

### RS — 232 PORTS

1-300 baud modem port  
1-300/1200 baud printer port  
Directly connect to an optional modem and printer



### HUMAN INPUT EXPANSION

2-8 axis joystick interfaces  
2-10 keypad interfaces



### HOME INTERFACES

1—AC-12 AC remote control interface





## EXPANSION

As you can see, the C4P and C8P are truly exceptional premium computers with just their standard features alone. Above and beyond that they are easily expandable to add exciting advanced features like word processing, additional memory, voice I/O, and our new universal telephone interface (UTI).

### C4P VS. C8P

The C4P is a 4-slot portable computer with one open slot for expansion. The C8P is an 8-slot mainframe class computer with five open slots. It features over 3 times the expansion capability of the C4P for advanced home, experimental and small business applications. The C8P's dual 8" floppies store about 8 times the information of a single mini-floppy and access it many times faster.

### ADVANCED FEATURES FOR C8P DF EXPANSION

#### Voice I/O

The C8P DF can be optionally equipped with a voice I/O system that includes a Votrax module capable of generating English speech phonetically. It also has provisions for a user populated 5-channel feature extractor for voice input experimentation.

#### Universal Telephone Interface (UTI)

Optionally equipped with a Universal Telephone Interface system, the C8P DF has the ability to dial any telephone number, utilizing rotary dial or touch tone telephone lines. It can respond to touch tone or modem signals and can route voice to tape recorders.

It can answer by touch tone, modem, stored message or Votrax voice output (when equipped with Votrax module or used in conjunction with a CA-14 Voice I/O.)

A C8P DF with UTI, voice output, AC-Remote, home security and its clock yield the home computer of the future with uncannily human-like capabilities to communicate via phone lines and operate and monitor typical home functions.

### FOREGROUND/ BACKGROUND OPERATION

This means that your computer can be engaging in home monitoring activities at the same time it is running other programs.



Computers come with keyboards and floppies where specified. Other equipment shown is optional.

**Just starting  
out in personal  
computing?  
Check out  
these cost-  
effective  
computers.**

Here's the way to get into personal computers, and stay in. You won't be discarding or trading away the C1P as you move on to more powerful systems. You can easily expand the C1P.

The C1P has 8K BASIC-in-ROM, an effective graphics display of 256 x 256 points, gaming elements, 53-key keyboard, upper and lower case, and 4K of RAM (expandable to 8K).

The C1P is backed by a large and imaginative library of instant loading personal applications software for home entertainment that ranges from simple to mind-teasing games and contests. There are applications covering basic finance and checkbook maintenance, self-teaching subjects, educational reviews, small business problem solving and the recently introduced home control.

Your C1P can be expanded to handle single or dual floppy disks and to support a line printer and modem. It is a cassette-based computer and costs only \$349.



\*Monitor and cassette recorder not included.



# THE CIP MF.

**The first floppy-disk based personal computer to sell for less than \$1000.**

The CIP MF's mini-disk system features Ohio Scientific's renowned 8K ultra-fast BASIC-in-ROM and 12K of RAM.

The basic configuration is very powerful, but may be expanded to meet your needs. Memory can be enlarged by adding more RAM, and additional 4K RAM (4096 bytes)

costs only \$69.00. A second mini-floppy can be added simply by plugging this option in. Once the system is expanded to 20K or more you can use our powerful OS-65D V3.0 operating system. It gives you named program and data files as well as random and sequential access capabilities. The CIP MF can also support a printer, modem, real time clock and AC remote interface.

The system features full graphics display capability that has resolutions equal to systems costing much more. The system includes 10K total ROM with (2K monitor) 12K of program memory and 1K display memory (23K total memory!)



\*The video monitors shown in this catalog are not part of any of the personal computers listed. A closed circuit TV Monitor or a combination unit such as our AC-3P can be used. You can connect your home TV for use as a monitor by connecting an appropriate R.F. converter between the computer and your TV.

**"We can heartily recommend the Superboard II computer system for the beginner who wants to get into microcomputers with a minimum of cost. Moreover, this is a 'real' computer with full expandability."**

*Popular Electronics March, 1979*

**"(Their) new Challenger 1P weighs in at \$349 and provides a remarkable amount of computing for this incredible price."**

*Kilobaud Microcomputing February, 1979*

**"The Superboard II is an excellent choice for the personal computer enthusiast on a budget."**

*Byte May, 1979*

## Completing Your System

All Ohio Scientific systems listed here come complete with manuals, connecting cables and demonstration software on cassettes or diskettes. On disk systems, all that's required to

be up and running is a video display device such as our AC-3P; cassette systems also require a conventional audio cassette recorder. Additional software and accessories can be purchased as desired.



**Superboard II.  
A great way to start  
computing for just \$279!**

Superboard II is the world's first complete computer system on a board including keyboard, video display, audio cassette interface, 8K BASIC-in-ROM and 4K RAM. Requires +5V at 3 Amp power supply. And your optional enclosure.



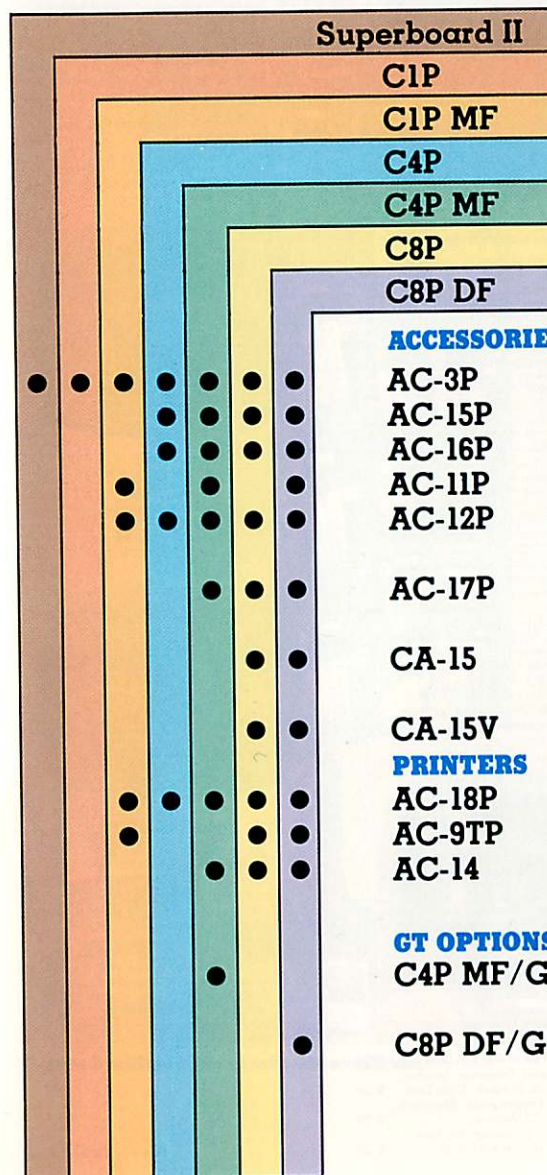
# SPECIFICATION CHART

FEATURES	Super-Board II	C1P	C1P MF	C4P	C4P MF	C8P	C8P DF
Microprocessor type GT option 6502C	6502	6502	6502	6502	6502A	6502	6502A
Full 53-Key Keyboard	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BASIC in ROM	Yes	Yes	Yes	Yes	No	Yes	No
BASIC on Disk	No	No	Yes	No	Yes	No	Yes
Minimal Config. RAM	4K	4K	12K	8K	24K	8K	32K
Minimal Config. Total Memory RAM + Display + ROM	14K	14K	23K	19.5K	27.5K	19.5K	35.5K
Maximum RAM	8K	8K	32K	32K	48K	32K	48K
TV/Video Monitor	Acc'y	Acc'y	Acc'y	Acc'y	Acc'y	Acc'y	Acc'y
Cassette Recorder	Acc'y	Acc'y	Acc'y	Acc'y	No	Acc'y	No
Mini-Floppy Disk	Acc'y	Acc'y	Yes	Acc'y	Yes	No	No
Dual Mini-Floppy Disk	Acc'y	Acc'y	Acc'y	Acc'y	Acc'y	No	No
Dual 8" Floppy Disk	No	No	No	No	No	Acc'y	Yes
Video Display	30x30	30x30	30x30	32x64	32x64	32x64	32x64
Color Graphics (Up to 16 colors). Upper and Lower Case Graphics + Gaming Elements	No	No	No	Yes	Yes	Yes	Yes
Effective Screen Resolution	256x256	256x256	256x256	256x512	256x512	256x512	256x512
Audio Output (200 to 20 KHz)	No	No	No	Yes	Yes	Yes	Yes
DAC for Voice and Music Generation	No	No	No	Yes	Yes	Yes	Yes
Key Pad Interfaces	No	No	No	Yes	Yes	Yes	Yes
Joystick Interfaces	No	No	No	Yes	Yes	Yes	Yes
AC Remote Control Interface	No	No	Acc'y	Yes	Yes	Yes	Yes
Audio Cassette Interface	Yes	Yes	No	Yes	No	Yes	No
Real Time Clock	No	No	Yes	No	Yes	No	Yes
Home Security System Interface	No	No	No	No	Yes	No	Yes
Printer Interface	Acc'y	Acc'y	Acc'y	Yes*	Yes	Yes*	Yes
Modem Interface	Acc'y	Acc'y	Acc'y	No	Yes	No	Yes
16 Parallel Lines + Acc'y BUS	No	No	No	No	Yes	No	Yes
GT Option	No	No	No	No	Acc'y	No	Acc'y
Winchester Hard Disks Options	No	No	No	No	No	Acc'y	Acc'y
Voice I/O	No	No	No	No	No	Acc'y	Acc'y
Telephone Interface	No	No	No	No	No	Acc'y	Acc'y

\*Not wired to connector.

# HARDWARE

## COMPUTERS



8K BASIC in ROM, 4K RAM	\$ 279
8K BASIC in ROM, 4K RAM	349
8K BASIC in ROM, 12K RAM and 2 demo disks	995
8K BASIC in ROM, 8K RAM, Demo Cassette	698
24K RAM, Single Mini-Floppy, OS-65D 3.1 operating system and 2 demo disks	1,695
8K BASIC in ROM, 8K RAM, Demo Cassette	895
32K RAM Dual 8" floppies, OS-65D 3.1 and 2 demo disks	2,597

## ACCESSORIES

<b>AC-3P</b>	12" B/W Combination Monitor/TV	\$ 115
<b>AC-15P</b>	12" Color Monitor	399
<b>AC-16P</b>	2-8 Axis Joy sticks with cables	39
<b>AC-11P</b>	Answer/Originate 300 baud modem with cable	199
<b>AC-12P</b>	AC-Remote starter set, console, 2 lamp modules, 2 appliance modules, OS-65D home control operating system.	175

<b>AC-17P</b>	Home security starter set (wireless), console, 1 fire detector, 2-window units, one door unit and Demonstration software.	249
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<b>CA-15</b>	Universal telephone interface with touch tone encoder / decoder, 300 baud originate / answer modem, analog signal mux / demux.	499
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<b>CA-15V</b>	As above with Votrax voice module for computer generated voice response.	799
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## PRINTERS

<b>AC-18P</b>	Low cost high speed 8 1/2" aluminized paper printer with upper/lower case.	\$ 695
<b>AC-9TP</b>	Centronics 779 110 cps tractor feed Business printer with interface.	1,250
<b>AC-14</b>	NEC Spinwriter—word processing printer with high speed parallel interface.	2,795

## GT OPTIONS

<b>C4P MF/GT</b>	(must be purchased with computer) 24K, 120NS Memory, 6502C processor, 2 speed clock	add \$950
<b>C8P DF/GT</b>	48K, 120NS Memory, 6502C processor, 2 speed clock	add 1,825

For other expansion accessories such as add-on memory, additional floppy drives and other accessory boards consult the current full line price list.



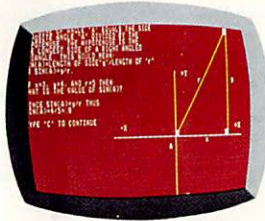
# HERE'S THE OHIO SCIENTIFIC SOFTWARE STORY

The simple fact is nobody — nobody in the personal computer industry — offers more software than Ohio Scientific! Right now, as you read this, Ohio Scientific has just about 2 million bytes of software available for our C4P MF computer.

This software is also available for Ohio Scientific C8P DF. Most is available for the C1P MF and cassette-based Ohio Scientific computers. Consult full line price list for cassette software.

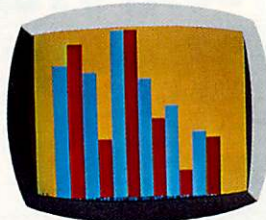
Software includes educational programs, personal programs, business programs, utility programs, game programs and operating systems. Each month Ohio Scientific is developing additional programs for your use and enjoyment.

Each diskette has 6 to 10 programs. Highlights of each are listed below.



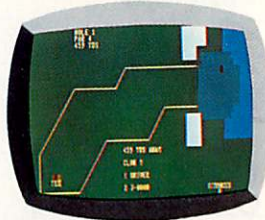
## Educational Programs

- ED1 Math, spelling and geography tutors; Hangman, an addition game and more. \$ 29
- ED2 Six "How To" lessons on beginning BASIC techniques. \$ 26
- ED3 Trig tutor, presidents, continents and solar system quizzes, math drills and more. \$ 29
- ED4 Comprehensive math disk covering trig functions, logarithmic functions, matrices and more. \$ 29
- ED5 Covers the metric system (tutor, quiz and conversions) Roman numerals and time telling. \$ 29
- ED6 Advanced sciences (2-disk set) including nuclear and organic chemistry, genetics, physics equations and function graphics. \$ 29
- \*ED7 Alphabet tutor and quiz, number tutor, memory match and recall game (color & B/W). \$ 29
- ED8 Language disk, covering vocabulary and verbs for German, French and Spanish. \$ 29
- ED9 Word search game and Hangman drawing, with large on-line data bases, and more. \$ 29
- MDMS—EDUCATION SYSTEM. Easily create your own quizzes and tutorials with built-in grading. \$ 29



## Business Programs

- BD1 Ratio analysis, bonds, loan interest, bar graph and more. \$ 29
- BD2 BASIC word processor, mailing list, address book, advertisement demo and more. \$ 29
- \*BD3 Comprehensive annual histogram plotting & editing (color and B&W). \$ 29
- MDMS Ohio Scientific's mini data base management systems. Master file create, edit, dump, report writer and much more. \$ 49
- MDMS—AUX 1 Repack, keyfile, sort, report writer, record access and more. \$ 29
- MDMS—A/P Update anytime, print journals, age analysis, vendor list and more. \$ 29
- MDMS—A/R Update anytime, print journals, age analysis, customer list and more. \$ 29
- MDMS—INVENTORY Updates, editing, item search, summary report and more. \$ 29
- MDMS—PAYROLL Complete employee records including earnings and all tax deductions. \$ 29
- MDMS—MAILING LIST Enter, delete and print out. \$ 29
- MDMS—CHECKING, SAVINGS ACCOUNTS Precise disk-based account records for your finances. \$ 29
- MDMS—PERSONAL CALENDAR/ADDRESS-PHONE BOOK. Daily appointments, addresses and phone numbers at your fingertips. \$ 29
- \*OS-WP2 full word processing on a mini-floppy. \$200



## Game Programs

- GD1 Starwars, Hectic, Bomber, Torpedo, Space War and Breakout. \$ 29
- GD2 Sketch, Racer, Destroyer, Lander, Hide 'n Seek, Bomber, Tiger Tank. \$ 29
- GD3 Star Trek, Cryptograms, Blackjack, Hangman, 23 Matches. \$ 29
- GD4 Frustration, Battleship, Tic-Tac-Toe, Civil War, Mastermind. \$ 29

- GD5 Baseball, Golf, Bowling, Hockey. \$ 29
- GD6 Poker, Blackjack, Spades, Hearts, Slot Machine. \$ 29
- \*GD7 (Joystick systems only) Joystick Sketch, Tiger Tank, Roadrace, Space Attack, Blockade. \$ 29
- \*GD8 (Joystick systems only) Zulu 9, High Noon, Star Wars, Bomber, Surround. \$ 29
- GD9 Othello, Concentration, Flip-Flip, Illusion and more. \$ 29
- \*GD10 (2 disk set) Cartoons, Fairy Tales and animations, including Hero, Three Little Pigs, Humpty Dumpty and many more. \$ 29



## Personal Programs

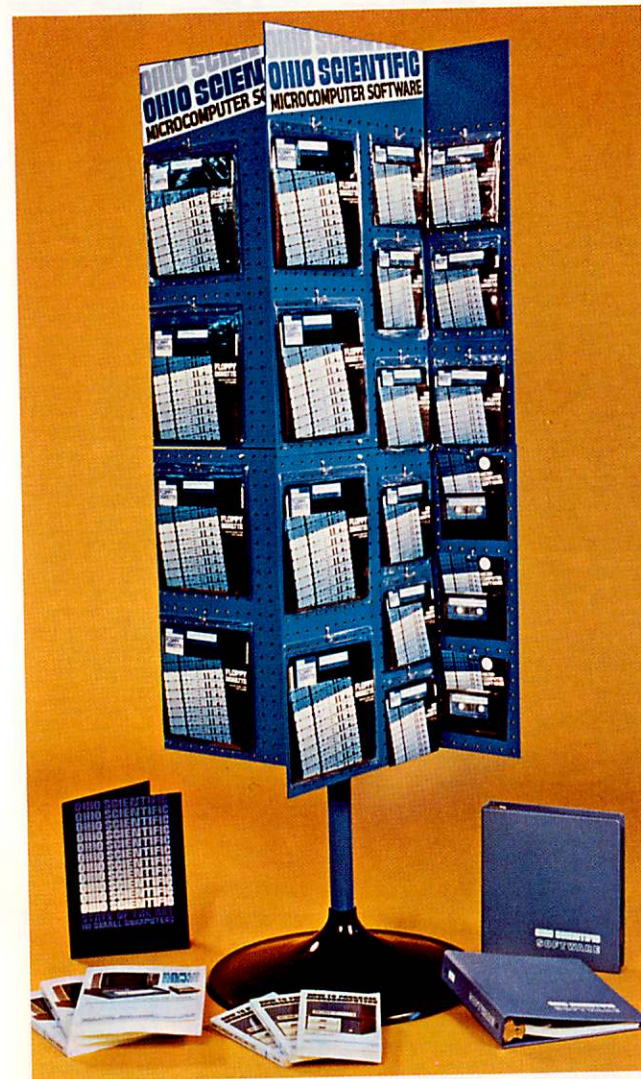
- PD1 Annuities, rate of return, biorhythm, calorie counter, checking and savings. \$ 29
- PD2 Trend line, base conversions, powers, integrals and more. \$ 29



## Utility Programs

- 65D Aux. 1 Resequence, BASIC disassembler, memory test, sort and more. \$ 29
- \*Graphics 1 Fast, high resolution (64 x 128) plotting of functions and parametric equations, plus easy keyboard set up and storage of graphics displays. \$ 29
- \*DAC 1 (2 disk set) State-of-the-Art DAC music generation, capable of producing up to 4 note chords, with disk storage option. \$ 39
- \*Home Control II Advanced home control programs. \$ 39

\*Not available for C1P MF.



Close to 2 million bytes of software available!



## Operating Systems

(These programs come with your Ohio Scientific computer.)

OS 65D V3.1 The standard Ohio Scientific mini-floppy operating system. 9 digit floating decimal point, Microsoft BASIC, random, sequential files and graphics.

\*Home Control I This new disk-based operating system affords the user flexible, real-time based AC monitoring and control.

## Standard

\*Customer Demo. Self-starting demo for the first-time user. Introduces the main categories of Ohio Scientific personal computer software.

\*Dealer Demo. More advanced demo, highlighting many of the optional accessories.

\*Not available for C1P MF.

**to be continued, continuously!**

All of Ohio Scientific's family of personal computers offer the fastest BASIC-in-ROM — or on Disk in the microcomputer industry. When ordering, be sure to specify series. Many additional educational, business and personal programs and games are available. Consult your Ohio Scientific Dealer.



