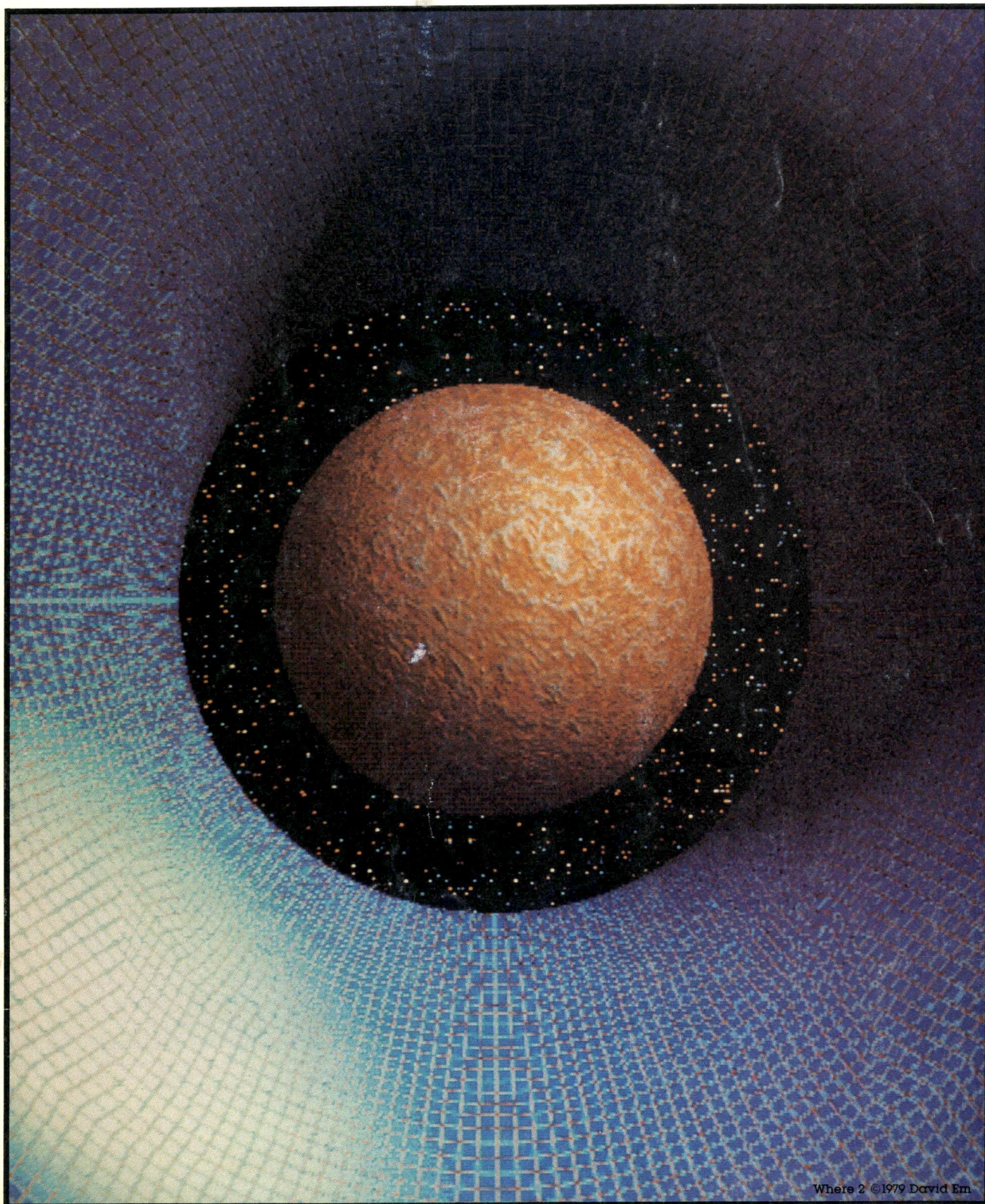


1983

BUYERS GUIDE TO COMPUTERS AND ELECTRONICS

\$2.50



Where 2 ©1979 David Em

ADVANCED COMPUTER PRODUCTS INC.

Dear Computer User:

Since 1976 ACP has been proud to service the burgeoning Personal and Small Computer Marketplace. When we first opened, we had no idea that the market would grow as fast as it has. This growth has created a new level of competition and has forced us to mature and grow with the market. ACP's staff is competent in computers and is dedicated to servicing your needs. Our customers continue to shop at ACP for all the right reasons. Here are seven of the best ones.

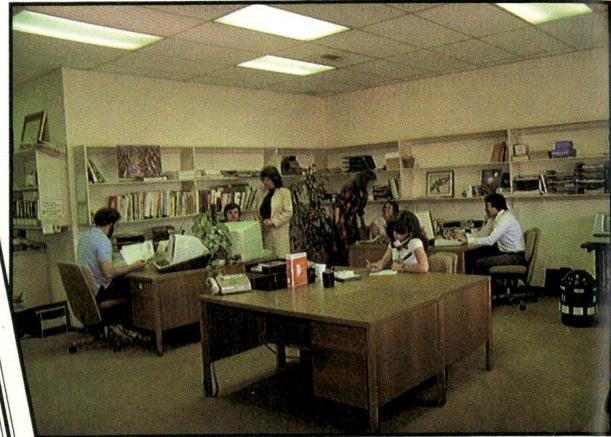
1. **OUR GUARANTEE IS ONE OF THE BEST IN THE INDUSTRY.** All of our products are guaranteed to meet your expectations or contact us for proper authorization to return your product within 10 days. This does not include kits or software and all returns must be in their original box. Some products carry a manufacturer's guarantee of up to 2 years. When you order from ACP, you get proven reliability.
2. **WE SHIP WITHIN 48 HOURS.** At ACP, we ship 92% of all approved orders within 48 hours. We are always working towards making it 100%. You can help by making sure your cashier's check is included or your credit card number and expiration date. Personal checks are held for bank approval.
3. **WIDE PRODUCT SELECTION.** We stock everything from IC's to terminals in this catalog, we have added more than 500 new items.
4. **REAL VALUE.** Because of our long-standing relationships with our vendors and our improved efficiency, we can offer our broad line of products at competitive prices.
5. **REAL QUALITY.** At ACP we go for the top-of-the-line products. Thumb through our catalog and you will see quality suppliers like CompuPro, Epson, Televideo, Bourns, Zilog, National and Motorola.
6. **EXPERT HELP.** Since ACP's staff is well-trained and knowledgeable in the computer field, we can specify products that are best suited for you. We have customized personal computer systems or second-sourced, hard-to-find IC's during shortage situations. Call us, we will give you straight answers. If we don't know, or don't have the information on hand, we'll get it as quickly as possible. We want to be your personal expert on computer products and components.
7. **FINANCING & LEASING.** ACP has preferred customer charge accounts available for initial purchases in excess of \$700.00 on approval of your credit. Several leasing plans are also offered.

Thank you
David Fuen

SANTA ANA
1310 East Edinger
Santa Ana, CA 92705
(714) 558-8813
10am - 7pm Mon-Thurs
10am - 6pm Fri
10am - 5pm Sat

SAN JOSE
542 West Trimble
San Jose, CA 95131
(408) 946-7010
10am - 7pm Mon-Thurs
10am - 6pm Fri
10am - 5pm Sat

**CATALOG SALES
TOLL FREE
(800) 854-8230**



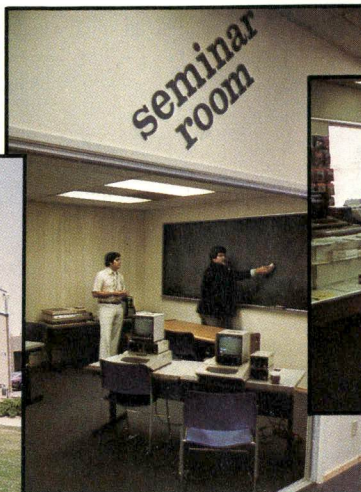
ACP's well-trained professional sales specialists provide prompt service in helping you with your electronics needs. We are capable of handling all requirements — from individuals to group and industrial inquiries.



Meet our team. These are a few of the over 100 people that make it happen for you. We all thank you for helping make ACP successful.



ACP San Jose provides the largest computer component selection available in the silicon valley area.



At ACP San Jose we offer comprehensive seminars — from basic computer literacy to advanced programs.



ACP retail stores offer a broad selection while maintaining a high level of service and support. ACP believes in supporting all products we sell.

ABOUT THE FRONT COVER
Our cover was created by "DAVID EM", currently recognized as the leading computer artist in the country. Details inside back cover.

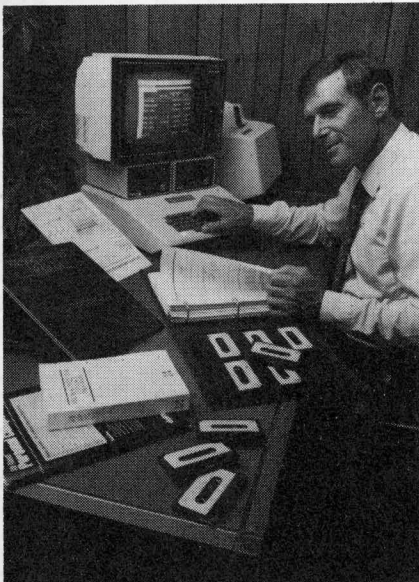
For anyone thinking of a desk-top computer who doesn't know where to begin or what to actually expect when it gets going.

Now, you can gain a clear understanding of whether your business will actually benefit from your having a microcomputer, and how much.

You can learn what a microcomputer will really do, how it does it, and what's required to make it happen within your organization.

You'll know the kind of computer that's best for you—in terms of your present needs and probable future requirements. Without paying too much for excess capacity, unnecessary functions, or the wrong peripherals; or, committing probably the greater mistake of paying too little for equipment inadequate to your needs. (There are more choices available than anyone can investigate on their own.)

You'll be able to evaluate the big name brands and the unfamiliar ones. Objectively and without having to depend on the "expertise" of a salesman.



The twelve-unit program includes nine cassettes, with vivid text, workbooks, binders, microcomputer dictionary, manual comparing the latest microcomputers, and a computer simulator that makes the flow of information through a computer system really easy to understand.

Removes every mystery, helps you over every hurdle

In other words, with McGraw-Hill's at-home seminar, quickly and inexpensively, through cassettes by experts and vivid text, you'll be able to draw on the experiences of hundreds of other, become comfortable with the technical complexities (only a few essentials from the user's point of view), make knowledgeable, intelligent decisions about entering the computer age.

You'll know what programming is all about. Not to do it yourself but to evaluate those programs (software) that are available in terms of your own needs. As you'll see, the secret is not getting the right programs, difficult enough in itself, but programs that will work together so all your functions are compatible, particularly as your system develops and expands.

We take you through every step. Clearly and concisely. Without technical jargon. Of course, since this is one seminar that you control, repeating whatever's necessary is easy, while you can quickly skip through anything you already know or that's irrelevant to your purpose.

We show you exactly what to expect and what has to be done to perform with speed and efficiency the functions you have in mind already—inventory, general ledger, word processing, etc.

Then you'll see how your command can be used to perform tasks no mechanical system can duplicate or human mind encompass. Controlling, coordinating, analyzing, forecasting... accessing information you never knew existed.

ONLY

COMPLETE SET \$129.95

+\$6.00 Shipping & Handling

PROGRAM OUTLINE

Presented on nine cassettes, with illustrated texts, workbook, and in two handsome, easy-to-use three ring binders.

Introduction . . . A short history of computing . . . Data Processing and information handling described . . . Hardware and software explained . . . Chief characteristics of the small computer system.

What a small computer will do for you . . . Common applications . . . Personal preparation for owning a computer.

Choosing a computer . . . Price and reliability . . . Renting vs. leasing vs. purchase . . . Support and service . . . Software availability, compatibility, flexibility . . . Hardware, memory and storage, input-output, keyboards, graphic capability . . . Peripherals and components, printers, couplers, interfaces . . . Contracting to get what you pay for, legal protection.

Comparing small computers . . . Similarities and differences . . . avoiding obsolescence . . . characteristics of available microcomputers.

Strategies for getting started . . . How to select and implement a microcomputer system . . . basic level, professional level for specific applications, multi-user level.

General services and in-company possibilities . . . Networking . . . Data Communication . . . Electronic mail . . . Concepts and applications for time sharing.

Survey of "off-the-shelf" software applications . . . word processing . . . Data-base management systems . . . Electronic spread sheets . . . Transactional systems, payroll, general ledger, accounting.

The office of the future . . . How the microcomputer is changing the way we do business and run offices . . . Computer networks and their impact.

Guided tour of microcomputer programming . . . A complete bonus program . . . Fascinating approach to one of the basic skills of the computer world . . . Open-ended format to use for understanding and dealing with professionals, or to develop BASIC programming skills for yourself . . . five sections cover programs, loops, data, arrays and decisions.

TAX DEDUCTIBLE

Treasury regulations permit an income tax deduction for educational fees undertaken to (1) maintain skills in one's employment or (2) meet express requirements of an employer.

INDEX

AP Products	71, 93
Apple	6-11, 14-19, 42
Atari	25, 42, 50
Beckman	88
Books	36-38
Bourns	64
Cables	69, 91
Calculators	28
Card Cages	43, 78
Computer Literacy	1, 12-13, 38
Computers	2-5
Crystals	66
D-Sub Connectors	70, 92
Diodes/Rectifiers	63
Disk Enclosures	43
Diskettes	40
Dysan	41
Educational Software	12-13
EZ Circuit	74-75
EZ Hook	72
Fans	67, 91
Fluke	89
Furniture	42
Fuses	66
Global Specialties	73, 84
Handheld Computers	26-28
Disks	50-51
Heatshrink Tubing	63
Heatsinks	67
IBM	20-24
IC's	53-61
IC Sockets	68
IC Test Clips	71-72
IDC Connectors	69
Keyboards	90
Lamps	41
LED's	58
Logic Probes	84
Meters	86-89
Modems	33
Monitors	35
OK Machine	79-80
Optoisolators	58
Oscilloscopes	86-87
Outlet Strips	94
Panavise	67
Plotters	32
Potentiometers	64
Power Supplies	91-94
Printers	29-31
Printwheels	39
PROM Erasers	65
PROM Programming	65
Prototyping Boards	71, 73-81, 93
Resistor Networks	64
Resistors	65
Ribbons	39
Robotics	95-96
Rockwell	48
RS-232 Accessories	69, 92
S-100	43-48
S-100 Enclosures	43
S-100 Power Supplies	43, 91
Single Board Computers	48
Software	7-13, 24-25
Soldering Equipment	82-83, 93
Supplies	39-41
Switches	67
Terminals	34
Test Probes	85
Tools	79-81
Transformers	91
Transistors	62
Vector	76-78
Verbatim	40
Video Connectors	72
Vista	19, 23, 43
Wirewrap Wire	73, 79

COMPUTER COMPARISON CHART

COMPUTERS

SYSTEM	MICRO-PROCESSOR	BASE PRICE	MEMORY & DISK STORAGE	OPERATING SYSTEM	DISPLAY	LANGUAGES	BUNDLED SOFTWARE	PORTABILITY	CRT SIZE
APPLE IIe	6502, 8 Bit	1330	4 Disks*, 140 per 64K to 128K	Apple DOS, CP/M*	40 Columns 280x192 Pixel	BASIC (PASCAL, FORTRAN, PILOT, COBOL, FORTH LOGO)*	DOS 3.3	NO	Optional
ATARI 800	6502, 8 Bit	599	4 Disks*, 88K per 48K to 128K	Atari OS	40 Columns 320x192 Pixel	BASIC (PILOT, FORTH, PASCAL)*	Atari OS	NO	Optional
COMMODORE 64	6510, 8 Bit	595	5 Disks*, 170K per 64K	Commodore OS	40 Columns 320x200 Pixel	BASIC	Commodore OS	NO	Optional
FRANKLIN 1000	6502, 8 Bit	1395	4 Disks*, 140 per 64K to 128K	Apple DOS	40 Columns 280x192 Pixel	BASIC (PASCAL, FORTRAN, PILOT, COBOL, FORTH LOGO)*	DOS 3.3	NO	Optional
BASIS 108	6502, Z80, 8 Bit	1995	4 Disks*, 140K per 64K	Apple DOS, CP/M	80 Columns	BASIC, CP/M	DOS 3.3 CP/M	NO	Optional
IBM PC	8088, 16 Bit	2205	4 Disks*, 320K per 64K to 512K	MS DOS, CP/M*	80 Columns 640x200 Pixel	BASIC, (COBOL, PASCAL, FORTRAN)*	None	NO	Optional
TRS 80 MOD III	Z80A 8 Bit	995	4 Disks*, 184K per 4K to 48K	TRS DOS, CP/M*	64 Columns 128x48 Pixel	BASIC, (COBOL, FORTRAN, PASCAL, PILOT)*	TRS DOS	NO	12"
LNW 80	Z80A 8 Bit	1995	2 Disks	TRS DOS, CP/M	80 Column 480x192	BASIC, CP/M (FORTRAN, PASCAL, COBOL)*	DOS 3.4 CP/M, BASIC	NO	Optional
VICTOR 9000	8088, 16 Bit	3295	2 Disks 1.2M to 2.4M	MS/DOS, CP/M-86	132 Columns 800x400	BASIC (COBOL, FORTRAN, PASCAL)*	CP/M-86, MS-00S	NO	12"
EAGLE 1600	8088, 16 Bit	6995	1 Disk (1 Mb) 1 Hard (12.5 Mb)	MS/DOS, CP/M-86	80 Columns 720x352	BASIC, (COBOL, XENIX, OASIS)*	MS-DOS, Word Proc., Financial Plan	NO	12"
EAGLE II (III, IV)	Z80A, 8 Bit	2995	2 Disks 780K to 1.6M	CP/M, C BASIC	80 Columns	BASIC, (COBOL)*	C BASIC, Nord Proc., Financial Plan	NO	12"
APPLE III	6502A, 8 Bit	2995	4 Disks 140K/Disk	SOS, CP/M	80 Columns 560x192	BASIC (PASCAL, COBOL)*	SOS & Sys. Software	NO	12"
DEC 100 RAINBOW	8088 (16 Bit) Z80 (8 Bit)	3495	2 Disks 400K/Disk	CP/M-86, CP/M-80	132 Columns No Graphics	BASIC	—	NO	12"
KAYPRO II	Z80, 8 Bit	1795	2 Disks 195K/Disk	CP/M	80 Columns No Graphics	BASIC (PASCAL, COBOL)*	CP/M, SBASIC, Perfect Writer, Perfect Speller, Perfect Filer, Perfect Calc, Profit Plan	YES	9"
OSBORNE 1	Z80, 8 Bit	1795	2 Disks 102K/Disk	CP/M	52 Columns No Graphics	BASIC	Basic CP/M, Wordstar, Mailmerger, Supercalc	YES	5"
NORTH STAR ADVANTAGE	Z80, 8 Bit	3495	2 Disks 360K/Disk	CP/M, CP/M	80 Columns 640x240	BASIC (FORTRAN, COBOL, PASCAL)*	—	NO	12"
OTRONA ATTACHE	Z80A, 8 Bit	3995	2 Disks 360K/Disk	CP/M	80 Columns 320x240	BASIC (PASCAL, FORTRAN, COBOL, FORTH)*	CP/M Basic, Wordstar, Valet	YES	5 1/2"

This list is for comparison only. ACP is not responsible for any errors or omissions. Consult manufacturer's specification sheet for complete specifications. ACP may not be an authorized dealer for all the above computer lines. We have selected a cross-section of the most popular computers for your comparison. Manufacturers with policies prohibiting mail order will not be shipped by ACP. *Optional.

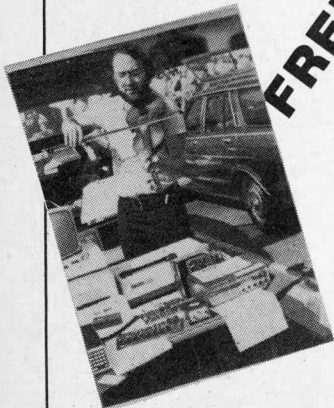
SWAP MEET

FREE ACP / NO CCC FREE
SWAP MEET

... this year our 8th bi-annual SWAP MEET will be held on
APRIL 17TH 1983 at ACP—Santa Ana Location.
 (Next meet will be in September of '83.)

This is the last day of the Applefest in Anaheim. We hope you will take in both events as they are close by. Last year over 100 Vendors and 5,000 buyers participated. It is a day of fun, surprises, and great deals on new and used equipment.

PLAN TO JOIN US!
April 17th, 1983 / 9:00am to 2:00pm
CALL FOR BOOTH SPACE!
—ADMISSION FREE—



COMPUTERS



MODEL Z-10 LOW-PROFILE DESKTOP COMPUTER

CHIP: 8088 (16-Bit) 8085 (8-Bit)
MEMORY: 128K w/Parity (exp. to 768K)
STORAGE: 2 Disks (320K/disk) Winchester optional
OPERATING SYSTEM: CP/M and/or Z DOS (Microsoft)

Zenith Desktop Computers are available low-profile and pictured above or all-in-one which includes Integrated Monitor. It features dual-processors allowing you to use 8 bit existing programs while expanding to future base of 16 bit programs that are rapidly becoming available. The design also features (4) S-100 slots for unlimited expansion peripherals. For RGB Color Graphics, the ZVM-134 13" Monitor should be used.

8/16-BIT COMPUTERS

P/N	DESCRIPTION	ACP
ZF-100-21	Low Profile Desk Top, single drive, monochrome graphics	\$3,249.00
ZF-110-22	Low Profile Desk Top, dual drive, color graphics standard	3,999.00
ZF-120-22	All-In-One, dual drive, integral monitor, monochrome graphics	4,099.00

8/16 BIT PERIPHERALS

P/N	DESCRIPTION	ACP
ZVM-134	Monitor, 13" RGB	\$ 699
ZVM-134-1	Cable: Z-100 to monitor	25.00
ZVM-134-2	Cable: IBM PC to monitor	25.00
Z-125	Printer, dot matrix, Z-100 tan	1,499.00

8/16 BIT SOFTWARE

P/N	DESCRIPTION	ACP
ZSS-100-1	Systems software bundle: Z-DOS, CP/M-85, Basic-85, Z-Basic, Multiplan	\$ 500.00
ZSS-100-1	Systems software bundle (16-bit only): Z-DOS, Z-Basic, Multiplan	300.00
OS-53-2	CP/M-85 for Z-100	150.00
OS-63-4	Z-DOS (version 1.25 of MS-DOS)	150.00
MS-253-1	Basic-80 for Z-100's 8-bit processor	175.00
MS-463-1	Z-Basic for Z-100's 16-bit processor (includes color commands)	175.00
MS-463-7	Multiplan electronic worksheet	250.00
MP-463-7	WordStar, version 3.2*	399.00
MP-463-8	MailMerge*	135.00
CD-463-1	Condor rDBMS, 16-bit version*	749.00
CD-463-2	Condor File Manager*	299.00
RS-463-1	16-bit Peachtree General Ledger*	399.00
RS-463-2	16-bit Peachtree Accounts Receivable*	399.00
RS-463-3	16-bit Peachtree Accounts Payable*	399.00
RS-463-5	16-bit Peachtree Inventory Management*	499.00
RS-463-6	16-bit Peachtree Sales Invoicing*	299.00

Additional hardware & software are available too numerous to list.

EAGLE COMPUTER



EAGLE II

CHIP: Z-80A
MEMORY: 4K (up to 780K/disk)
STORAGE: (2) Disks
OPERATING SYSTEM: CP/M
LANGUAGE: BASIC, COBOL

The Eagle II, III and IV Series packages software, memory, and large disk capacity for a true turn key system at an affordable price. Each system comes with Spellbinder Word Processing, Financial Planner, C-BASIC Language, and CP/M. Accounting Plus is also available, as well as several business oriented packages designed specifically for your marketplace. These are listed below:

COMPUTERS

P/N	DESCRIPTION	ACP
Eagle II	With (2) 5 1/4" floppy drives, 390K each, formatted	\$2,995.00
Eagle III	With (2) 5 1/4" floppy drives, 780K each, formatted	3,995.00
Eagle IV	With (10) megabyte hard disks and (1) 780K disk	5,995.00
Eagle 1600	With (10) megabyte hard disks and (1) 780K disk	6,995.00
File 10	Ten megabyte hard disk	2,995.00
File 40	Forty megabyte hard disk	3,995.00
ZEUS2	34MB Winchester, 20MB Cartridge Tape, 1-8 Users	16,290.00 to 22,280.00
ZEUS3	12.6MB Winchester, 20MB	9,595.00 to 15,565.00
ZEUSA	6.3MB Winchester, 250KB Floppy Disk, 1-4 Users	4,595.00 to 6,595.00

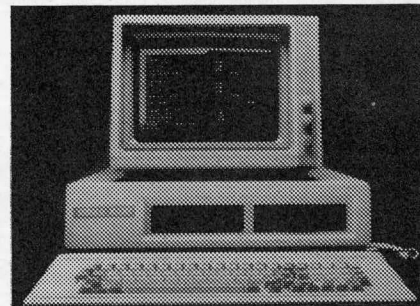
SOFTWARE

ACCOUNTING PLUS - fully integrated General Accounting System consisting of 8 modules-Accounts Receivable, Accounts Payable, Payroll, General Ledger, Inventory, Sales Order Entry, Purchase Order Entry and Point of Sale	2,000.00
CYMA - integrated or stand-alone Accounting System, bundled or unbundled. Modules include: Accounts Receivable, Accounts Payable, Payroll, General Ledger, and Inventory	3,395.00
DATA BASE MANAGERS	
dBASEII - User friendly data base management system	700.00
SIMPLE - Information filing and report system	395.00
CYMA Medical Practice Management	1,695.00
CYMA Dental Practice Management	1,695.00
CYMA Orthodontic Practice Management	1,695.00
CYMA Chiropractic Practice Management	1,695.00
CYMA Client Accounting	1,695.00
TCS Client Ledger System	Call
MANUFACTURING PLUS - material control which interfaces with Accounting Plus	1,500.00
ADVANCED LEGAL SOFTWARE - full blown Time and Billing and Trust Accounting for the Law Office	4,995.00
THE FIRM SOLUTION - Complete Legal Accounting package	2,995.00

EAGLE

PMS - Property Management System - Single or Multi-Units	795.00
CMS - Commercial Management System - Management of Commercial Properties with common area maintenance	995.00
RPM - Residential Property Management - Management of Single Units - i.e., houses or condos	895.00
CAM - Condominium Association Management - Management for Condominium associations with PMS features	795.00
MWS - Mini-Warehouse System - Mini warehouses or self-storage units	795.00
ROM - Real Estate Office Management	350.00
planEASe - Economic analysis system for the investment real estate broker, syndicator, mortgage banker, accountant, etc. Internal Rate of Return, Sensitivity Analysis, Monte Carlo Risk Analysis, Loans, Expense, Reenue, Depreciation, Unlimited "What If?" Possibilities	595.00
CARE - Comprehensive Analysis of Real Estate - analysis for beginners or experienced investors	795.00
PAS - Property Analysis System - appreciation, inflation, amortizations, tax benefits, cash flow, and other computations	250.00
EXCALIBUR FORTY-NINER - Sales Prospecting Management System Rates prospects, sources, product interest. Interfaces with Word Processing. Complete sorting and selecting. Once installed, a Sales Manager has complete control.	895.00
OAP - Office and Agent Productivity - Similar to above and specialized for Real Estate	250.00

EAGLE COMPUTER



EAGLE 1600 IBM PC COMPATIBLE

CHIP: Intel 8086 (8 MHz)
MEMORY: 128K (exp. to 512K)
STORAGE: (1) Double-Sided Disk (1M byte)
 (1) 12.5M Hard Disk
OPERATING SYSTEM: MS-DOS, CP/M 86 (optional)
INTERFACE CAPABILITIES:
 (2) RS-232 Serial Ports
 (1) Parallel
 (8) RS-232 Serial Ports (optional)
 (1) SASI (inc. w/hard disk sys.)
 (1) LAN Adapter (optional)
 (1) Slot IBM expansion bus
BUNDLED SOFTWARE (Included)
 MS-DOS,
 Word Processor & Financial Planner

Most computer manufacturers prohibit mail orders. ACP supports this policy and will not mail order any system from manufacturers with this policy. Our pricing is included for your reference only. All pricing subject to change without notice.

NNC ELECTRONICS



OASIS MODEL 53 MULTI-USER & TASKING

- IEEE-standard Z80 processor card • S-100 bus • 256K Bytes dynamic RAM (expandable to 1 MGB RAM) • 8" Winchester disk drive, 43M Bytes formatted • 8" removable cartridge, 10.6M Bytes formatted • 10 serial, 2 parallel ports • 30-Amp power supply • OASIS™ operating system standard, CP/M™ available

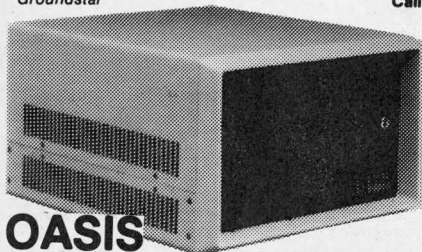
NNC's Model 53 Commercial Microcomputer System has been designed specifically for business, industrial, and educational applications requiring the high speed, large volume data storage capabilities of the Winchester fixed disk drive and the speed, convenience, and backup capabilities of a removable Winchester cartridge.

The OASIS™ multi-user, multi-tasking operating system is a standard and permits the use of additional work stations, mass storage device, printer, etc., to support up to 5 users per 256K Bytes. Each user is capable of performing a different task.

NNC's Model 53 Commercial Microcomputer System incorporates the latest, state-of-the-art Winchester fixed disk technology. The 43M Byte formatted (46.4M Byte unformatted) fixed disk drive is ideally suited for mass data storage in a business system. Enhanced read/write heads provide increased data integrity and reliability. Additional features include: embedded servo; MFM recording; linear voice coil actuator; and a microprocessor for servo, spindle monitoring, and interface control.

One of the Model 53's outstanding features is the 10.6M Byte formatted (11.6M Byte unformatted) 8" removable Winchester cartridge. It contributes an additional 10.6M Bytes of on-line mass data storage, provides an ideal way to on/off load data and serves as a backup device for the fixed disk drive.

DESCRIPTION	LIST	ACP
NNC Model 53 "Groundstar"	13,970.00	\$11,999.00 Call



OASIS MODEL 80 MICROCOMPUTER SYSTEM

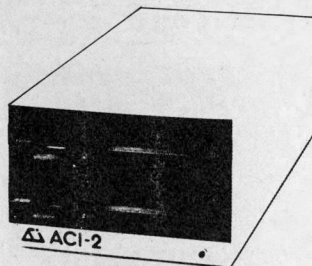
- 64KB RAM • 2 Shugart 8" Disk Drives • S-100 BUS • IEEE Std. Z80 CPU • 2 Serial, 3 Parallel Ports • CP/M™ Operating System • OASIS™ Multiuser Operating System Optional • 17 1/4" x 11 3/4" x 18 3/4" • 115/220V, 50/60 Hz power

DESCRIPTION	LIST	ACP
NNC Model 80 w/SS Drives	4850.00	4365.00
NNCC Model 80 w/DS Drives	5350.00	4815.00

Model 80W — Same as 80, with:
 • Shugart Winchester Disk (8.4MB formatted) • 1 Shugart 8" Disk Drive

DESCRIPTION	LIST	ACP
NNC Model 80W w/SS Drives	\$8750.00	\$7875.00
NNC Model 80W w/DS Drives	8999.00	8099.00

Alspa Computer, Inc.



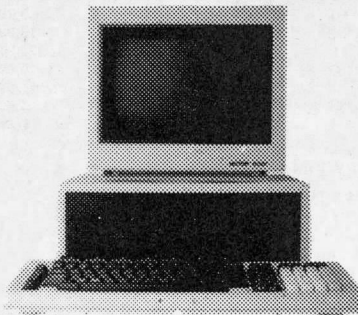
CHIP: Z80A (8-Bit)
MEMORY: 64K
STORAGE: (2) Disks 596K to 1.2M/disk
OPERATING SYSTEM: CP/M
LANGUAGES: CBASIC-2, BASIC 80, FORTRAN, FORTRAN, COBOL, PASCAL, PL/1-80

The ACI-2 combines (2) high performance thin-line 8" disk drives, an interrupt driven controller, 64K, (3) serial and (2) parallel ports in small compact case (20 lbs.) It is a highly efficient tool for word-processing, bookkeeping, and data base management. The large capacity disks can easily store over 100 pages of text per disk.

PRICING:

Alspa ACI-1 Single-sided, 8-inch drive, 596K 8-bit CPU	to	1,995.00
Alspa ACI-1 Double-sided, 8-inch drive, 1212K 8-bit CPU	to	2,095.00
Alspa ACI-2 2 Single-sided, 8-inch drives, 596K each 8-bit CPU	to	2,595.00
Alspa ACI-2 2 Double-sided, 8-inch drives, 1212K each 8-bit CPU	to	2,995.00
The ZERO For use in the Zero-network Computer up to 256 nodes	to	3,695.00
	to	3,795.00
	to	1,195.00

VICTOR



VICTOR 9000

CHIP: Intel 8088 (16-Bit)
MEMORY: 128K (exp. to 896K)
STORAGE: 2 Disks (600K/disk)
OPERATING SYSTEM: MS/DOS, CP/M
DISPLAY: 132 Columns (800x400)

The Victor 9000 is one of the most popular 16-bit computers. Victor has integrated state-of-the-art features which other computers do not have. Their bit-image-graphics screen is fully programmable. The screen tilts to 11% eliminating glare and adding user flexibility. It is available with a variety of keyboards depending on the application. There is a keyboard for word processing and another for programming. The built-in digital converter for human voice will allow use of voice commands.

P/N	DESCRIPTION	ACP
V9000-1	System with SS, DD Disks (1.2Mb) 128K, 94-key keyboard, Green Screen, CP/M-86, MS-DOS	\$3295.00
V9000-2	Same w/ DS, DD Disks (2.4Mb)	3945.00

Victor also offers complete selection of popular software as well as key application software for your business or office. For current list, please write to the attention of our Victor Product Manager.

olivetti



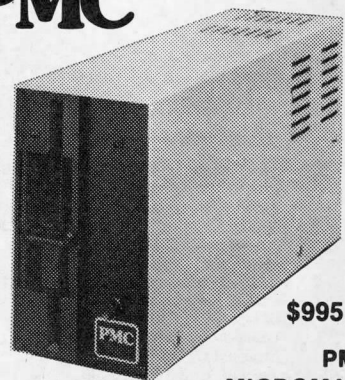
M20 COLOR or GREEN

CHIP: Z8001 (16-Bit)
MEMORY: 128K (exp. to 512K)
STORAGE: 2 Disks (320K/Drive)
OPERATING SYSTEM: PCOS
LANGUAGE: BASIC

The M20 is the truest 16-bit computer in the market today. It features a 16-bit bus with super high speed over other 16-bits. Every key on the keyboard is programmable. The color graphics is superb (512x256 resolution).

P/N	DESCRIPTION	ACP
24001	M20 with 128K	\$1988.00
24002	Disk Drive (Up to 2)	595.00
24015	Color Display Unit	1853.00
24016	32K Memory exp. for color display	229.00
24009	Parallel Cable	72.00
DS41036	Monochrome Green Display	382.00
PR1450	Dot Matrix Printer	960.00

PMC



\$995.00

PMC MICROMATE MICRO-MINI COMPUTER

CHIP: Z80A, (8-Bit)
MEMORY: 128K
STORAGE: 1 Disk 390K, 3 optional
OPERATING SYSTEM: CP/M +
SOFTWARE: Bundled T/Marker III (Elec. Spreadsheet, Word Proc., List Proc., Bar Charts)

The PMC MicroMate Computer is designed for compatibility with CP/M, the industry's most popular operating system. The MicroMate features 128K of RAM memory with bank switching under control of the new CP/M Plus operating system.

The MicroMate operates with your existing asynchronous terminal, dumb or smart, and will output printing to virtually any low cost printer, dot matrix or daisy wheel.

The PMC MicroMate is portable (8 lbs.), practical and powerful. It's portable because it's no bigger than a standard 5 1/4" disk drive and can be moved from terminal to terminal in your brief case. It's practical because it offers so much computing power and interface capability in a small package at a shockingly low price.

Most computer manufacturers prohibit mail orders. ACP supports this policy and will not mail order any system from manufacturers with this policy. Our pricing is included for your reference only. All pricing subject to change without notice.

COMPUTERS

TIMEX *sinclair*

**POWERFUL
PORTABLE
AFFORDABLE**



- Fully Programmable 2K with optional 16K RAM
- Single Key Command Entry
- Immediate Error Identity
- Graphy Drawing and Animated Display
- Variety of Cassette Programs

T/S 1000 \$79.95
1016 RAM Module 49.95

PROFESSIONAL POWER ... IN LIVING COLOR

- 16K or 48K RAM
- BASIC Programming
- Multifunction Keyboard
- Graphics
- Programmable Sound
- Color Select Controls

T/S 2000 16K \$149.95
48K 199.95
T/S 2040 Printer 99.95
T/S 1050 Modem 99.95
T/S Software Programs

HOME

03-2000	The Organizer	\$16.95
03-2001	The Budgeter	15.95
03-2002	Loan/Mortgage Amortizer	14.95
03-2003	Checkbook Manager	15.95
03-2004	Coupon Manager	12.95
03-2005	Car Pooler	14.95
03-2006	Stamp Collector	16.95
03-2007	Stock Option Analyzer	16.95
03-2008 16K	Home Improvement Planner	14.95
03-2009 16K	Home Asset Manager	12.95
03-2010 16K	IRA Planner	15.95
03-2011 16K	Auto Analyzer	12.95
02-2002	Keyboard Calculator	9.95

BUSINESS

03-1001	Vu-Calc	\$19.95
03-1001	Inventory Control	19.95
03-1002	Manufacturing Control	19.95
03-1003	Critical Path Analysis	19.95
02-1000	Statistics	9.95
02-1001	Money Analyzer I	9.95
02-1002	Money Analyzer II	9.95
03-1004 16K	List Manager	14.95
03-1005 16K	Stock Market - Tech. Analysis	17.95

EDUCATION

03-3000	Super Math	\$14.95
03-3001	States & Capitals	12.95
03-3002	Flight Simulator	19.95
03-3003 16K	Presidents	10.95
03-3004 16K	Astronomer's Guide	14.95
03-3005 16K	Punctuation Master	10.95
02-3001	Power Pack I	9.95

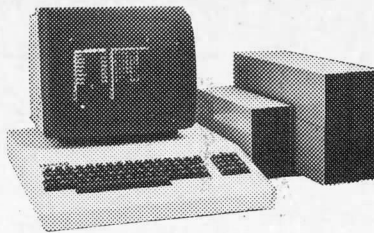
ENTERTAINMENT

03-4000	Chess & Chess Clock	\$14.95
4001	Backgammon & Dice	14.95
4002	The Gambler	14.95
4003	Cube Game	12.95
4004	Grimm's Fair Tales	9.95
4005	Mixed Game Bag I	9.95
4006	Supermaze	14.95
4007 16K	Big Flap Attack	12.95
4008 16K	Ram Runner	12.95
4009 16K	Puzzler	12.95
4010 16K	Pinball	12.95
4011 16K	Stock Market Game	12.95
02-4001	Mixed Game Bag II	9.95
4002	Challenger I	9.95
4003	Mixed Game Bag III	9.95



P/N	DESCRIPTION	ACPPRICE
OYT-01	THEQUIZ	14.95
OYT-02	WORDS	14.95
OYT-03	GRAPHICS I	14.95
OYT-04	MEGAMIND	19.95
OYT-05	SALVO	14.95
OYT-06	EXPOTICTACTOE	14.95
OYT-07	INCOMETAXES	17.95
OYT-08	HOMEINVENTORY	14.95
OYT-08	HOMEBUDGET	14.95
OYT-10	BIORHYTHMS	14.95
OYT-11	COMPATABILITY	14.95
OYT-12	RUNNING	18.95

LNW80 II

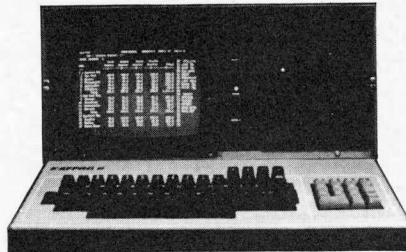


LNW 80 MODEL II

The LNW 80 Model II has all the features of the TRS-80™ Model I and more. It runs the TRS-80 Software + CP/M and the Cromemco development languages such as FORTRAN, PASCAL, and COBAL. The LNW 80 will also accept TRS-80 Model II and Model II files using the convert utility in DOS 3.A. Your system includes Level 2 BASIC (TRS-80 Model I Level II) stored in ROM. The DOS 3.4 and LNW Advanced Disk BASIC which provides graphics, color, and programmable key functions.

P/N	DESCRIPTION	ACP
LNW-80	System w/96K	\$1995.00
LNW-D1	Disk Drive	360.00
LNW-M2	B&W Monitor	100.00

Kaypro II



CHIP: Z80 (8-Bit)
MEMORY: 64K
STORAGE: (2) Disks 195K/disk
OPERATING SYSTEM: CP/M
DISPLAY: 80 Columns
LANGUAGES: BASIC

The Kaypro II offers all you need in a portable computer. Full ASCII Keyboard with control codes. A 9" monochromatic display, centronics parallel port, and an RS-232 port. It is bundled with Perfect Writer, Perfect Speller, Multiplan, and Profit Plan, making it a real value in the computer market today.

P/N	DESCRIPTION	ACP
Kaypro II	System w/64K	\$1795.00
Kaypro 5	System w/5Mb Hard Disk	CALL



P/N	DESCRIPTION	LIST	ACP
MMK-64K	Memopak64K	179.95	159.00
MMK-32K	Memopak32K	109.95	99.00
MMK-16K	Memopak16K	59.95	54.00
MMK-16KS	Memopak16K w/o Acc.Slot	49.95	44.00
MMK-HRG	High Res. Graphics	144.95	135.00
MMK-CPI	CentronicParallel Interface	104.95	95.00
MMK-RS232	RS232Interface	139.95	125.00
MMK-CPI-RC	CPI Cable		28.00
MMK-PR	GP100A Printer w/IO		369.95

MORROW DESIGNS



MICRO DECISION

Morrow Designs has been manufacturing computer products since 1976. They have succeeded in putting it all together in the Micro Decision. The system is ideal for any desk top solution for large or small businesses.

The terminal can be purchased separately which means you can purchase the computer and hook it up to your own terminal. There are (2) RS-232 Serial Ports. It has a high efficiency switching power supply. It comes bundled with software including Wordstar, Correct-it, Logic-Calc, CP/M, BASIC, Bazic, and Morrow P.lot.

P/N	DESCRIPTION	ACP
Morrow-1	System w/(1) Disk	\$1590.00
Morrow-2	System w/(2) Disks	1995.00
Morrow-2	Terminal	595.00

SYSTEL

Computers, Inc.



WORD PROCESSING FROM A TYPEWRITER

CHIP: Z80, (8-Bit)
MEMORY: 64K
DISK STORAGE: 175K () Disk
DISPLAY: 80 Columns 12" Tilt Screen
STORAGE: 36 Pages/Disk (II)
66 Pages/Disk (III)

SYSTEL II is an add-on word processor that plugs into an Adler, Canon, Facit, IBM, Olivetti, Olympia, Remington Rand, Royal or Silver Reed electronic typewriter ... and others to come.

It allows you to create error-free documents right on the typewriter. The words go on the display screen, instead of the paper. Then the text can be corrected or adjusted before it is automatically printed out on the typewriter. There's even an option that checks spelling.

The SYSTEL II also "files" the document, so revisions can be made without re-typing the whole thing.

And the typewriter still works by itself at the flip of a switch.

The Systel System is so user friendly that you will be Word Processing within 20 minutes.

INVESTMENT ANALYSIS

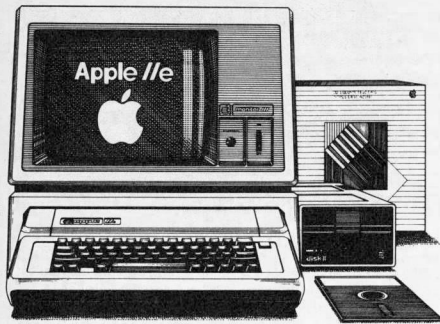
Computer Cost	\$3460.00
Less 10% ITC	[346.00]
Less Tax Rate	
Depreciation (40%)	[1242.00]
Actual Investment	\$1863.00

This is based on current tax law and is subject to change. Consult your Tax Accountant for current schedules.

SYSTEL II	\$2950.00
SYSTEL III	\$3450.00

COMPUTERS

Announcing Apple IIe



The most popular computer
in the world!!

Now—ENHANCED

New features:

- 64K standard memory with ability to add another 64K
- Optional 80-column display
- Upper and lower case
- Redesigned, typewriter-style keyboard
- Two new function keys
- New video and memory expansion slot

The above features are the difference between the popular Apple II-plus and the new Apple IIe.

IMPORTANT NOTICE

Apple computer does not allow us to mail order their products. The following pricing is for your reference and convenience only and is the manufacturer suggested retail pricing. For purchase and ACP's low retail pricing please contact our retail locations. We cannot and will not ship mail order.

COMPLETE APPLE IIe PRICE LIST

APPLE IIE SYSTEMS

Part No.	List Price
A2S2064	Apple IIe w/64K 1395.00
A2P2002	Apple IIe Starter System (includes: Apple IIe w/64K Monitor III (green, 80 column card, Applestand, Disk I w/controller (Note: Manuals not included) 1995.00

PERIPHERALS

A2M0044E	Disk drive w/controller 545.00
A2B2022	80-column Text Card 125.00
A2B2023	Extended 80-column Card 295.00
A2M2045	Silentye® Printer 395.00

ACCESSORIES

A2M0003	Disk II Drive Only 395.00
A3M0039	Monitor III (12" Green) 249.00
A2M0058	Apple Dot Matrix Printer 695.00
A2M0052	Parallel Interface Cable 14.00
A2M0260	Monitor Stand 29.95
A2M0009	Silentye® Adapter Kit 20.00
A2M2001	Handcontrollers IIe 34.95
A2M2002	Joystick IIe 59.95
A2M2003	Numeric Keypad 159.95

IMPORTANT NOTICE TO BIDS

ACP is an approved supplier on most GSA, Federal, State, School and Fortune 1300 firms. We offer special savings to these institutions.

SEND US YOUR PROPOSAL

State Buys	School Districts	Fortune 1300 Firms
User Groups	Federal Agencies	Elementary Schools
Students	Faculty Members	Technical Institutions
Corporations	Computer Clubs	Professional Associations

ACP has a complete staff of college degreed professionals to configure your system requirements. ACP manufacturer hardware and develops software to optimize your requirements and some additional time and money. Please give us an opportunity to bid on your next requirement.

COMPLETE APPLE IIe PRICE LIST—Cont.

INTERFACE CARDS

A2B0021	Parallel Interface Card 165.00
A2B0044	Super Serial Card 195.00

SOFTWARE

C2B2010	Apple Writer II 195.00
A2D2005	Quick File II 100.00

PRODUCT TRAINING PACKS

C2Z2001	Apple Writer II PTP 40.00
C2Z2002	Quick File II PTP 40.00

MANUALS

A2L2001	Apple IIe Owner's 20.00
A2L2005	Apple IIe Reference 30.00
A2P2001	Applesoft Manual Set* 50.00
A2L2004	Applesoft Reference 30.00
A2L2003	Applesoft Tutorial 25.00
A2L2006	80-Col. Text Card 20.00
A2L2007	Ext. 80-Col. Text Cd. 15.00

APPLE II PRODUCTS PRICE LIST

NOTE: Most Apple II products are compatible with the Apple IIe. Contact Sales Desk for exact compatibility. To avoid problems please specify your computer—Apple II or IIe!

APPLE II SYSTEMS

Part No.	List Price
A2S1048	Apple II w/48K 1330.00

APPLE II INTERFACE & EXPANSION CARDS

A2B0015	IEEE-488 Card 450.00
A2B0010	Integer BASIC ROM Card 200.00
A2B0043	Language Card 195.00
A2B0021	Parallel Interface Card 165.00
A2B0001	Prototyping/Hobby Card 24.00
A2B0044	Super Serial Card 195.00
D2B0034	Thunderclock Card 149.00
D2D0083	Thunderclock Dater 32.95
D2D0034	Thunderclock Pascal Software 34.95
D2M0047	Thunderclock X-10 Interface 59.95

APPLE II PERIPHERALS

A2M0003	Disk II—Drive Only 395.00
A2M0044	Disk II w/interface 545.00
A2M0058	Dot Matrix Printer 695.00
A2M0029	Graphics Tablet Call
A3M0025	Letter Quality Printer 2195.00
A3M0006	Monitor III (12" B & W) 249.00
A3M0039	Monitor III (12" Green) 249.00
A2M0036	Silentye® Printer Apple II 395.00

APPLE II ACCESSORIES

A2M0260	Apple II Stand 29.95
A2M0077	Cloth Ribbon, DMP 10.50
A2M0034	Desk 220.00
A2M0055	Joystick II 59.95
A2M0054	Hand Controllers II 34.95

COMPLETE APPLE II PRICE LIST—Cont.

A2M0074	Multi-Strike Ribbon (LOP) 10.50
A2M0076	Multi-Strike Ribbon (DMP) 10.50
A2M0056	Numeric Keypad 159.95
A2M0052	Parallel Interface Cable 14.00
A2M0081	Printwheel, Boldface 13.75
A2M0079	Printwheel, Courier 10 13.75
A2M0080	Printwheel, Gothic 15 13.75
A2M0078	Printwheel Prestige Elite 13.75
A2C0001	Silentye® Paper 4.50 roll
D2D0099	Telidon Graphics System 595.00
A2M0009	Vinyl Carrying Case 15.00

APPLECARE CARRY-IN SERVICE

A3G0020	Apple III Personal Computer 240.00/yr
A2G0038	Apple II Personal Computer 90.00/yr
A3G0021	Disk III 45.00/yr
A2G0039	Disk II 45.00/yr
A2G0041	Dot Matrix Printer 120.00/yr
A2G0042	Graphics Tablet 48.00/yr
A3G0024	Letter Quality Printer 228.00/yr
A2G0023	Monitor III 18.00/yr
A2G0043	Numeric Keypad 18.00/yr
A3G0022	ProFile™ Disk Drive 276.00/yr
A2G0040	Silentye® Printer 48.00/yr

APPLE II SOFTWARE LANGUAGES AND OPERATING SYSTEMS

A2D0050	Apple Co-PILOT 35.00
A2D0032	Apple FORTRAN 200.00
D2D0100	Apple Logo 175.00
A2D0024	Apple Pascal 250.00
A2D0028	Apple PILOT 100.00
A2D0051	Apple SuperPILOT 200.00
D2D0032	CIS COBOL with Forms-2 950.00
A2D0029	DOS Tool Kit 75.00

BUSINESS

C2B0004	APM 235.00
A2D0033	Apple Plot 70.00
A2D0013	Apple Post 50.00
A2D0049	Apple II Business Graphics 175.00
C2B0010	Apple Writer II 150.00
C2B0013	Comm-Pac 85.00
A2D0030	Dow Jones News & Quotes 135.00
A2D0007	Dow Jones Portfolio Evaluator 50.00
D20055	Micro Courier 150.00

D2D0056	Micro Telegram 150.00
C2B0001	Pascal Animation 75.00
C2B0003	Psort 85.00
C2B0011	Script II 100.00
C2B0012	Senior Analyst 225.00
D2D0075	The Analyzer 575.00
A2D0012	The Controller 1.1 625.00
D2D0057	Time Manager 150.00
C2B0002	VT-100 Emulator 75.00

SCIENTIFIC/INDUSTRIAL:

A2D0037	Applegraphics II 75.00
C2S0002	Data Tree Data Base 125.00
C2S0004	Designer's Toolkit 225.00

EDUCATION

D2D0100	Apple Logo 175.00
A2D0015	Elementary, My Dear Apple 30.00
C2E0013	Erie's Quiz 50.00

COMPLETE APPLE II PRICE LIST—Cont.

C2E0002	Geometry and Measure	50.00
C2E0001	Hand Holding BASIC	100.00
C2E0016	Instant Zoo	50.00
C2E0012	Magic Spells	45.00
C2E0010	Math Strategy	45.00
C2E0015	Mix and Match	50.00
C2E0011	Mop Town	50.00
C2E0004	Pilot Animation Tools	75.00
C2E0008	Speed Reader	70.00
C2E0009	Spelling Strategy	45.00
C2E0014	Spotlight	50.00
A2D0014	Shell Games Education I	30.00
C2H0003	Supermap	35.00

PERSONAL AND ENTERTAINMENT

A2D0034	Apple Adventure	35.00
C2H0001	Personal Finance	75.00
C2H0005	Utopia Graphics	75.00
C2H0009	World's Blackjack	50.00

APPLE II REFERENCE MANUALS

A2L0026	Apple Fortran Reference	25.00
D2L0013	Apple Monitor Peeled	19.95
A2L0042	Apple PILOT Editors	15.00
A2L0041	Apple PILOT Language	20.00
A2L0001A	Apple Reference Manual	20.00
A2L0006	Applesoft Reference	10.00
A2L0018	Applesoft Tutorial	10.00
A2L0005	BASIC Programming	7.00
D2L0011	CIS COBOL Manuals	95.00
A2L0012	Disk II Manual	10.00
A2L0033	Graphics Tablet Manual	10.00
A2L0004	Parallel Printer Manual	2.00
D2L0014	Pascal Hands On	14.95
A2L0027	Pascal Language Reference	20.00
A2L0028	Pascal Operating System	25.00
A2L0002	6502 Hardware Manual	15.00
A2L0003	6502 Programmer's Manual	15.00
A2L0034	Silentye Manual	2.00
A2L0036	The DOS Manual DOS 3.3	10.00



CATCH THE 3RD WAVE

There have been some changes in the Apple III Personal Computer. Sweeping changes. Improvements that make it, dollar for dollar, the most powerful personal computer on the market. To begin with, the memory on the new Apple III can be expanded to 256K from an already impressive standard 128K. And, unlike some computers, the user can upgrade to this capacity without using any expansion slots.

Exciting new software packages have been added, like VisiCalc III, Business Graphics, Apple Writer III and Mail List Manager. So the user can make full use of the Apple III's increased memory and Sophisticated Operating System. There's even a new Pascal development package (that takes advantage of all UCSD Pascal™ features). And one of the most exciting parts of Apple III's profile is, well, ProFile™. ProFile is Apple's new personal mass storage system. It can handle up to 5-million bytes very quickly and very quietly. And it includes everything needed to get up and running, like an Apple III interface card and driver software.

COMPLETE APPLE III PRICE LIST

APPLE III SYSTEMS

A3S0128	128K Bytes System (w/System Software)	2995.00
A3S0256	256K Bytes System (w/System Software)	3495.00

APPLE III INTERFACE CARDS

A3B0001	Apple III OEM Prototyping Card	45.00
A3B0002	Universal Parallel Card	225.00

COMPLETE APPLE III PRICE LIST—Cont.

APPLE III PERIPHERALS

A3M0004	Disk III	435.00
A2M0058	Dot Matrix Printer	695.00
A3M0025	Letter Quality Printer	2195.00
A3M0006	Monitor III (12" B & W)	249.00
A3M0039	Monitor III (12" Green)	249.00
A3M0305	ProFile™ Disk Drive	2195.00
A3M0001	Silentye® Thermal Printer	350.00

APPLE III ACCESSORIES

D3D0098	Apple SoftCard™ System	450.00
A3M0010	Cursor III	59.95
A3M0019	Modem Eliminator Cable (5/box)	29.95 box
A3M0013	Silentye® III Conversion Kit	40.00
A3M0018	256K Memory Upgrade (Exchg.)	600.00
A3M0009	Vinyl Carrying Case	20.00

BUSINESS

C3B0003	Apple Access III	150.00
A3D0003	Apple III Mail List Manager	150.00
C3B0001	Apple Writer III	225.00
C3B0002	Business Graphics	175.00
A3D0022	Professional Solution Software	595.00
C3B0004	Script III	125.00
C3B0005	Senior Analyst	350.00
A3D0002	VisiCalc® III	250.00
A3D0020	Quick File III	100.00

LANGUAGES AND

OPERATING SYSTEMS

A3D0004	Apple III Business BASIC	125.00
A3D0021	Apple III COBOL	495.00
A3D0005	Apple III Pascal	250.00
C3S0001	Pascal Utility Library	75.00

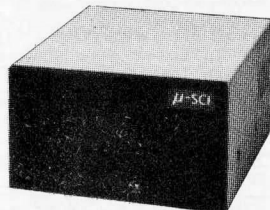
APPLE III REFERENCE MANUALS

A3L0002	Apple Business Basic Manual, Volumes 1 & 2	30.00
A3L0004	Pascal Introduction, Editor and Filer	20.00
A3L0005	Pascal Program Preparation Tools Manual	20.00
A3L0003	Pascal Programmer's Manual Two Volume Set	30.00

APPLE III PRODUCT TRAINING PAKS

C3Z0002	PTP - Apple III Business Graphics	40.00
C3Z0001	PTP - Apple Writer III	40.00
A3Z0001	PTP - Mail List Manager	40.00
A3Z0003	PTP - Apple III System Utilities	40.00
A3Z0002	PTP - VisiCalc® III	40.00

Finally—An Apple III Add-On Drive!



Expanding disk storage on the Apple III can be an expensive proposition.

But Micro-Sci has a better proposition, because our disk drives for the Apple III give greater capacity and performance for every dollar spent.

And no compatibility problems. The A3 is a direct replacement for Disk III drives, and the 70-track A73 and 140-track A143 are supplied with a driver that is added to the SOS driver module, affording extra storage and fast seek rates for all of the programs that run under SOS.

All three are the same 5 1/4" size, as the built-in drive and use the same diskettes.

They also use the Apple III's controller and power, saving an expansion slot and eliminating the AC power cord. And they can be mixed in any combination on the daisy-chain.

Part No	Description	List	ACP
MSC-A3	Apple III disk drive, 35 track	379	339
MSC-A4	Apple III disk drive, 70 track	529	489
MSC-A5	Apple III disk drive, 140 track	659	599

APPLE II/III SOFTWARE

VISICORP

	LIST	ACP
VIS-A1	Desktop Plan II	\$250.00 \$199.99
VIS-A2	VisiPlot	200.00 169.99
VIS-A3	VisiTrend/Plot	300.00 249.99
VIS-A4	VisiDex	250.00 199.99
VIS-A5	VisiTerm	100.00 75.99
VIS-A6	VisiCalc 3.3	250.00 199.99
VIS-A7	VisiFile	250.00 199.99
VIS-A8	VisiSchedule	300.00 249.99
VIS-A9	Business Forecasting Model (Requires VisiCalc)	100.00 89.99
VIS-A10	VisiLink	250.00 199.99
VIS-A11	VisiCalc Enhanced(IIe)	250.00 199.99

VOYAGER SOFTWARE

VGS-A1	Starship Commander	\$29.95 \$24.99
--------	--------------------	-----------------

WINNERS CIRCLE

WCS-A1	Disk Encryption System	\$60.00 \$49.99
--------	------------------------	-----------------

XEROX EDUCATION PUBLICATIONS

XES-A1	Sticky Bear Bop	\$39.95 \$32.99
XES-A2	Sticky Bear Numbers	39.95 32.99

XEROX EDUCATION PUBL—Cont.

XES-A3	Sticky Bear ABC	39.95 32.99
XES-A4	Old Ironsides	39.95 32.99

ZEITGEIST

VES-A1	Invader Roundup	\$49.50 \$39.99
VES-A2	Space Scanner	49.50 39.99
VES-A3	Invader Attack	49.50 39.99
VES-A4	Space Mouse	49.50 39.99

APPLE III SOFTWARE

APPLIED SOFTWARE TECHNOLOGY LIST ACP

APS-T1	Versaform III (soft/hard disk)	\$495.00 \$439.99
--------	--------------------------------	-------------------

DATAMOST

DMS-T1	Write-On III	\$129.95 \$109.99
--------	--------------	-------------------

DENVER SOFTWARE

DVS-T1	EASy III (Executive Accounting System)	\$749.95 \$599.99
--------	--	-------------------

INSOFT

INS-T1	TransForth III	\$125.00 \$109.99
INS-T2	ALD System III	75.00 67.99

LINK SYSTEMS

LKS-T1	Link Index	\$195.00 \$169.99
LKS-T2	Link Video	54.95 47.99
LKS-T3	Link Sampler, I III	59.95 49.99
LKS-T4	Datafax III	249.00 199.99
LKS-T5	Datalink III	149.00 129.99

MICROCOM

MCS-T1	Microterminal III	\$99.95 \$83.99
--------	-------------------	-----------------

MICRO LAB

MLS-T1	Data Manager III	\$750.00 \$599.99
--------	------------------	-------------------

SOFTWARE PUBLISHING CORP.

SUS-T1	PFS: Report III	\$125.00 \$109.99
SUS-T2	PFS: File III	175.00 149.99
SUS-T3	PFS: Graph III	175.00 149.95

VISICORP

VIS-T1	Desktop Plan III	\$300.00 \$249.99
VIS-T2	VisiCalc Advanced III	400.00 329.99
VIS-T3	VisiSchedule	300.00 249.99
VIS-T4	Business Forecasting Model III	100.00 89.99

APPLE II/IIe SOFTWARE

A NOTE ABOUT THE NEW APPLE IIe

Most of the Software designed for the Apple II will run on the new Apple IIe, however, some software designed specifically for the Apple IIe will not run on the Apple II. All of the software on this list is supplied on disk. Specify Apple II or IIe.

APPLE SOFTWARE

ACCENT SOFTWARE

	LIST	ACP
ASS-A1 Soft-Step	\$49.95	\$41.99
ASS-A2 Accu-Shapes	49.95	41.99
ASS-A3 Loop-Hole	24.95	20.99
ASS-A4 The Graphic Solution	149.95	126.99

ADVENTURE INTERNATIONAL

AIS-A1 Apple Spice	29.95	24.99
AIS-A2 Eliminator	29.95	24.99
AIS-A3 Combat	24.95	24.99
AIS-A4 Sea Dragon	34.95	27.99
AIS-A5 Rear Guard	29.95	24.99
AIS-A6 Tunnel Terror	29.95	24.99
AIS-A7 Labyrinth of Crete	29.95	24.99
AIS-A8 War	24.95	20.99
AIS-A9 S.A.G.A.#1-Adventureland	39.95	33.99
AIS-A10 S.A.G.A.#2-Pirate's Adventure	39.95	33.99
AIS-A11 S.A.G.A.#3-Mission Impossible	39.95	33.99
AIS-A12 S.A.G.A.#4-Voodoo Castle	39.95	33.99
AIS-A13 S.A.G.A.#5-The Count	39.95	33.99
AIS-A14 S.A.G.A.#6-Strange Odyssey	39.95	33.99
AIS-A15 S.A.G.A.#7-Mystery Fun House	39.95	33.99
AIS-A16 S.A.G.A.#8-Pyramid of Doom	39.95	33.99
AIS-A17 S.A.G.A.#9-Ghost Town	39.95	33.99
AIS-A18 S.A.G.A.#10-Savage Island I	39.95	33.99
AIS-A19 S.A.G.A.#11-Savage Island II	39.95	33.99
AIS-A20 S.A.G.A.#12-Golden Voyage	39.95	33.99
AIS-A21 Stone of Sisyphus	29.95	24.99

APPLIED SOFTWARE TECHNOLOGY

APS-A1 VersaForm	\$389.99	\$309.99
APS-A2 VersaForm/Hard Disk	495.00	409.99

ARTSCI

ARS-A1 Magic Window	\$99.95	\$84.99
ARS-A2 Magic Mailer	69.95	58.99
ARS-A3 Magic Words	69.95	58.99
ARS-A4 Magic Pack Combo (contains all 3: Window, Mailer, & Words)	225.00	189.99
ARS-A5 Magic Window II (40/70/80 Col)	149.95	126.99

ANTHRO-DIGITAL SYSTEMS

ADS-A1 Executive Secretary	250.00	199.99
ADS-A2 Versacalc	100.00	82.99
ADS-A3 Quicktrack	50.00	42.99
ADS-A4 Amper Magic	75.00	62.99
ADS-A5 Amper Magic II	35.00	29.99

ASHTON-TATE

ATS-A1 dBase II (Reg. Z-80)	700.00	499.99
ATS-A2 Financial Planning Language (req. Softcard)	700.00	499.99

AUTOMATED SIMULATIONS

AUS-A1 Introductory 3 Pack (Rescue, Morloc's, Datestones)	\$49.95	\$42.99
AUS-A2 Dragon's Eye	29.95	22.99
AUS-A3 Temple of Apsal	39.95	29.99
AUS-A4 Hellfire Warrior	39.95	29.99
AUS-A5 Datestones of Ryn	19.95	16.99
AUS-A6 Morloc's Tower	19.95	16.99
AUS-A7 Invasion Orion	24.95	18.99
AUS-A8 The Upper Reaches of Apsal	19.95	16.99
AUS-A9 The Keys of Acheron	19.95	16.99
AUS-A10 Ricochet	19.95	16.99
AUS-A11 Tuesday Morning Quarterback	29.95	22.95
AUS-A12 Star Warrior	39.95	29.99
AUS-A13 Rescue at Rigel	29.95	22.99
AUS-A14 Crush, Crumble & Chomp	29.95	22.99
AUS-A15 Sorcerer of Siva	29.95	22.99
AUS-A16 Curse of Ra	19.95	16.99

AUTOMATED SIMULATIONS-Cont.

	LIST	ACP
AUS-A17 Jabbertalky	29.95	22.99
AUS-A18 Forell	29.95	22.99
AUS-A19 Danger in Drindisti	19.95	16.99
AUS-A20 Monster Maze	29.95	22.99
AUS-A21 New World	29.95	16.99
AUS-A22 Oil Barons	100.00	79.99

AVALON HILL GAME COMPANY

AVS-A1 Computer Acquire	25.00	21.99
AVS-A2 Empire of the Overmind	35.00	29.99
AVS-A3 Tanktics	29.00	24.99
AVS-A4 Computer Stocks/Bonds	25.00	21.99
AVS-A5 Guns of Fort Defiance	25.00	21.99
AVS-A6 Dnieper River Line	30.00	25.99
AVS-A7 Voyager	25.00	21.99
AVS-A8 Shootout at O.K. Galaxy	25.00	21.99
AVS-A9 Andromeda Conquest	23.00	17.99
AVS-A10 GFS Sorceress	35.00	29.99
AVS-A11 Telengard	28.00	24.99
AVS-A12 VC	25.00	21.99
AVS-A13 Alien	28.00	24.99
AVS-A14 Galaxy	25.00	21.99

AVANT GARDE CREATIONS

AGS-A1 HI-RES Secrets	\$125.00	\$99.99
AGS-A2 HI-RES Computer Golf	29.95	23.99
AGS-A3 Zero Gravity Pinball	29.95	23.99
AGS-A4 Ultra/Plot/D.I.F./Data Graph	99.00	82.99
AGS-A5 Word Scrambler & Super Speller	19.95	17.99
AGS-A6 Lazer Maze	29.95	23.99
AGS-A7 Federation	29.95	23.99
AGS-A8 Graphics Application System	75.00	66.99

BEAGLE BROTHERS

BBS-A1 DOS Boss	\$24.00	\$19.99
BBS-A2 Utility City	29.50	24.99
BBS-A3 Alpha Plot	39.50	31.99
BBS-A4 Tip Disk #1	20.00	16.99
BBS-A5 Apple Mechanic	29.50	24.99
BBS-A6 Beagle Bag	29.50	24.99
BBS-A7 Frame Up	29.50	24.99
BBS-A8 Flex Text	29.50	24.99
BBS-A9 Typefaces (Req. Apple Mechanic)	20.00	16.99
BBS-A10 Pronto Dos	29.95	24.99

BEZ

BZS-A1 Bez-Wars	\$26.95	\$21.99
BZS-A2 Bez-Man	22.95	18.99
BZS-A3 Bez-Off	32.95	27.99

BPI SYSTEMS, INC.

BPS-A1 Time Accounting System	\$395.00	\$339.00
BPS-A2 Church Management	495.00	439.99

BRODERBUND SOFTWARE

BSS-A1 Galactic Empire	\$24.95	\$20.99
BSS-A2 Galactic Trader	24.95	20.99
BSS-A3 Galactic Revolution	24.95	20.99
BSS-A4 Tawala's Last Redoubt	29.95	24.99
BSS-A5 Galaxy Wars	24.95	20.99
BSS-A6 Alien Rain-"Galaxian"	24.95	20.99
BSS-A7 Tank Command	14.95	13.49
BSS-A8 Apple Panic	29.95	24.99
BSS-A9 Space Warrior	24.95	20.99
BSS-A10 Space Quarks	29.95	24.99
BSS-A11 Genetic Drift	29.95	24.99
BSS-A12 Red Alert	29.95	24.99
BSS-A13 David's Midnight Magic	34.95	28.99
BSS-A14 The Arcade Machine	54.95	47.99
BSS-A15 Track Attack	29.95	24.99
BSS-A16 Star Blazer	31.95	26.99
BSS-A17 Payroll	395.00	339.99
BSS-A18 Labyrinth	29.95	24.99
BSS-A19 Dueling Digits	29.95	24.99
BSS-A20 Chopflitter	34.95	28.99
BSS-A21 Serpentine	34.95	28.99
BSS-A22 Accounts Receiv.	395.00	339.99
BSS-A23 Sea Fox	29.95	24.99
BSS-A24 The Bank Street Writer	59.95	49.99
BSS-A25 AE	34.95	28.99

BUDGECO

BGS-A1 Raster Blaster	\$29.95	\$24.99
BGS-A2 Pinball Construction Set	29.95	32.99

CALIFORNIA PACIFIC

CPS-A1 Cosmos-Mission-"Super-Invaders"	\$24.95	\$20.99
CPS-A2 Hungry Boy	24.95	20.99

CALIFORNIA PACIFIC-Cont.

	LIST	ACP
CPS-A3 Bill Budge's Trilogy of Games	29.95	24.99
CPS-A4 Bill Budge's Space Album	39.95	32.99
CPS-A5 Bill Budge's 3D Graphics	39.95	32.99
CPS-A6 Apple-oids	29.95	24.99
CPS-A7 Akalabeth	34.95	28.99
CPS-A8 Ultima	39.95	32.99
CPS-A9 Fender Bender	24.95	20.99

CAVALIER

CVS-A1 Star Thief	\$29.95	\$24.99
-------------------	---------	---------

COMMSOFT

CTS-A1 Roots/M (Req. Z-80)	\$195.00	\$169.99
----------------------------	----------	----------

COMPUTER STATION

CNS-A1 Combined Enhanced Graphics Software	\$54.95	\$46.99
--	---------	---------

COMMSHARE TARGET SOFTWARE

CMS-A1 Target PlannerCalc (Req. Z-80)	\$50.00	\$47.99
CMS-A2 Masterplanner(Req. Z-80)	325.00	299.99
CMS-A3 PlannerCalc Combo Pkg. (Req. Z-80) (includes appl. pkg. below)	125.00	99.99
CMS-A4 PlannerCalc Applications Pkg.	50.00	47.99

CONTEXT

CXS-A1 The Context Connector	\$180.00	\$165.99
------------------------------	----------	----------

CONTINENTAL SOFTWARE

	LIST	ACP
CIS-A1 Hyperspace Wars	\$29.95	\$24.99
CIS-A2 L.A. Land Monopoly	29.95	24.99
CIS-A3 3-D Skiing	24.95	19.99
CIS-A4 Torpedo Terror	24.95	19.99
CIS-A5 The Home Accountant	74.95	62.99
CIS-A6 The Guardian	29.95	24.99
CIS-A7 Cross Country Rallye	29.95	24.99
CIS-A8 1st Class Mail	74.95	62.99
CIS-A9 CPA Module #1-General Ledger	250.00	199.99
CIS-A10 CPA Module #2-Accounts Rec.	250.00	199.99
CIS-A11 CPA Module #3-Accounts Pay	250.00	199.99
CIS-A12 CPA Module #4-Payroll	250.00	199.99
CIS-A13 CPA Module #5-Property Mgt.	495.00	429.99
CIS-A14 The Form Letter	29.95	24.99
CIS-A15 Tax Advantage	59.95	49.99

CPU SOFTWARE

CUS-A1 Auto Atlas	\$47.50	\$41.99
CUS-A2 Oil Rig	29.95	26.99
CUS-A3 Human Fly	29.95	26.99

CRANE SOFTWARE

CES-A10 Menu Generator	\$39.95	\$32.99
------------------------	---------	---------

CREATIVE CURRICULUM INC.

CCS-A1 Speed Reading Courseware	\$99.00	\$84.99
---------------------------------	---------	---------

CYBERTRONICS

CYS-A1 Karel the Robot	\$242.00	\$209.99
------------------------	----------	----------

DAKIN 5/LEVEL 10

DKS-A1 Dragon Fire	\$29.00	\$24.99
DKS-A2 Kaves of Karkhan	29.00	24.99
DKS-A3 A Fantasy Combo	49.00	41.99
DKS-A4 Alkemstone	29.00	24.99
DKS-A5 Rings of Saturn	29.00	24.99
DKS-A6 Programming Aids	90.00	86.99
DKS-A7 The Depreciation Planner	395.00	329.99
DKS-A8 The Budget Planner	150.00	129.99
DKS-A9 The Business Bookkeeping System	395.00	329.99
DKS-A10 Neutrons	25.00	21.99
DKS-A11 M.I.R.V.	25.00	21.99
DKS-A12 Space Rescue	25.00	21.99

DATAMOST

DMS-A1 Snack Attack	\$29.95	\$22.99
DMS-A2 Thief	29.95	22.99
DMS-A3 County Fair	29.95	22.99
DMS-A4 Swashbuckler	34.95	26.99
DMS-A5 Casino	39.95	29.99
DMS-A6 Baseball	29.95	22.99
DMS-A7 Missing Ring	29.95	22.99
DMS-A8 R.E.I.P. (Real Estate Investment Program)	129.95	99.99
DMS-A9 Gin Rummy	29.95	22.99

APPLE II/IIe SOFTWARE

APPLE SOFTWARE

DATAMOST-Cont.

	LIST	ACP
DMS-A10 Pig Pen	29.95	22.99
DMS-A11 Crazy Mazey	29.95	22.99
DMS-A12 Mars Cars	29.95	22.99
DMS-A13 Money Muncher	29.95	22.99
DMS-A14 Vortex	29.95	22.99
DMS-A15 Pandora's Box	29.95	22.99
DMS-A16 Aztec	39.95	29.99
DMS-A17 Tubeway	34.95	26.99
DMS-A18 Write-On	129.95	99.99
DMS-A19 Solitaire & Cribbage	34.95	26.99
DMS-A20 Spectre	29.95	22.99
DMS-A21 Personal Ledger	129.95	99.99
DMS-A22 The Market Technician	129.95	99.99
DMS-A23 The Property Manager	295.00	229.99
DMS-A24 Thorolian Tunnels	29.95	22.99

DATASOFT

DSS-A1 Micropainter	34.95	29.99
DSS-A2 Datasm 65 2.0	89.97	79.99
DSS-A3 LISP Interpreter	124.95	109.99
DSS-A4 Tumble Bugs	29.95	24.99
DSS-A5 The Basic Compiler	99.95	84.99
DSS-A6 Canyon Climber	29.95	24.99
DSS-A7 Fathoms Forty	34.95	29.99
DSS-A8 Zaxxon	39.95	32.99
DSS-A9 Moon Shuttle	39.95	32.99

DAVIDSON & ASSOCIATES

DAS-A1 Word Attack!	49.95	42.99
DAS-A2 MathBlaster!	49.95	42.99

DATA TRANSFORMS

DTS-A1 Graphrix 1.3	75.00	69.99
---------------------	-------	-------

DELTA SOFTWARE

DLS-A1 The Bookkeeper Master Program	89.95	79.99
DLS-A2 The Bookkeeper Check Writer	39.95	31.99

DENVER SOFTWARE

DVS-A1 Pascal Tutor	129.25	115.99
DVS-A2 Pascal Programmer	295.95	239.99
DVS-A3 Financial Partner	249.95	219.99

DIGITAL MARKETING

DGS-A1 Milestone	295.00	239.99
------------------	--------	--------

DJR ASSOCIATES, INC.

DJS-A1 FMS-80 (Req. Z-80)	1000.00	729.99
DJS-A2 FMS-81 (Req. Z-80)	500.00	399.99
DJS-A3 FMS-82 (Req. Z-80)	500.00	399.99

DON'T ASK SOFTWARE

DOS-A1 Wordrace	24.95	21.99
DOS-A2 Claim to Fame/Sports Derby (Req. Wordrace)	19.95	17.99
DOS-A3 S.A.M. (Software Automatic Mouth) (Comes with D/A Converter & Amplifier board)	124.95	114.99

DOUBLE GOLD SOFTWARE

DBS-A1 Rubik's Cube Unlocked	\$24.95	\$19.99
------------------------------	---------	---------

EAGLE SOFTWARE PUBLISHING, INC.

EWS-A10 Money Decisions (Vol. I)	\$199.00	\$149.99
----------------------------------	----------	----------

EDU-WARE

EWS-A1 Compu-Read	29.95	22.99
EWS-A2 Perception	24.95	19.99
EWS-A3 Statistics	29.95	22.99
EWS-A4 Spelling Bee w/Reading Primer	39.95	32.99
EWS-A5 Compu-Math/Arithmetic Skills	49.95	39.99
EWS-A6 Algebra I	39.95	32.99
EWS-A7 Fractions	49.00	39.99
EWS-A8 Decimals	49.00	39.99
EWS-A9 Algebra 2	39.95	32.99
EWS-A10 Counting Bee	29.95	22.99
EWS-A11 Compu-Spell/System	29.95	22.99
EWS-A10 Compu-Spell/Data Disk -Lev 4	19.95	25.99
EWS-A11 Compu-Spell/Data Disk -Lev 5	19.95	15.99
EWS-A12 Compu-Spell/Data Disk -Lev 6	19.95	15.99
EWS-A13 Compu-Spell/Data Disk -Lev 7	19.95	15.99
EWS-A14 Compu-Spell/Data Disk -Lev 8	19.95	15.99
EWS-A15 Compu-Spell/Data Disk -Secr.	19.95	15.99
EWS-A16 Metri-Vert	19.95	15.99
EWS-A17 Uni-Solve	24.95	19.99
EWS-A18 Windfall	19.95	15.99

EDU-WARE

	LIST	ACP
EWS-A19 Network	19.95	15.99
EWS-A20 Terrorist	29.95	22.99
EWS-A21 Empire I World Builders	32.95	26.99
EWS-A22 Empire II Interstellar Sharks	32.95	26.99
EWS-A23 Empire III Armageddon	32.95	26.99
EWS-A24 Rendezvous	39.95	32.99
EWS-A25 PSAT Word Attack Skills	49.00	39.99
EWS-A26 SAT Word Attack	49.00	39.99
EWS-A27 Algebra 3	39.95	32.99
EWS-A28 Prisoner II	32.95	26.99
EWS-A29 Spelling Bee	29.95	22.99

EPYX/AUTOMATED SIMULATIONS

EXS-A1 Introductory 3-Pack Rescue, Morloc's, and Datestones)	\$49.95	\$41.99
EXS-A2 Dragon's Eye	29.95	24.99
EXS-A3 Fore!	29.95	24.99
EXS-A4 Oil Barons	100.00	89.99
EXS-A5 Temple of Apschai	39.95	32.99
EXS-A6 Hellfire Warrior	39.95	32.99
EXS-A7 Star Warrior	39.95	32.99
EXS-A8 Rescue at Rigel	29.95	24.99
EXS-A9 Datestones of Ryn	19.95	16.99
EXS-A10 Morloc's Tower	19.95	16.99
EXS-A11 Crush, Crumble & Chomp	29.95	24.95
EXS-A12 Invasion Orion	24.95	19.99
EXS-A13 The Upper Reaches of Apschai	19.95	16.99
EXS-A14 The Keys of Acheron	19.95	16.99
EXS-A15 Ricochet	19.95	16.99
EXS-A16 Tuesday Morning Quarterback	29.95	24.99
EXS-A17 Sorcerer of Siva	29.95	24.99
EXS-A18 Jabbertalky	29.95	24.99
EXS-A19 Curse of Ra	19.95	16.99
EXS-A20 Danger in Drindisti	19.95	16.99
EXS-A21 Monster Maze	29.95	24.99
EXS-A22 New World	29.95	24.99

FOX & GELLER

FGS-A1 Quick Code (Req. Z-80)	\$295.00	\$249.99
FGS-A2 Dutil (Req. Z-80)	99.00	84.99

GEBELLI SOFTWARE

GES-A1 Firebird	\$29.95	\$25.99
GES-A2 Russki Duck	34.95	29.88
GES-A3 Horizon V	34.95	29.89
GES-A4 Neptune	29.95	25.99
GES-A5 Lazer Silk	29.95	25.99
GES-A6 Zenith	34.95	28.99
GES-A7 Phaser Fire	29.95	25.99
GES-A8 High Orbit	29.95	25.99

HAYDEN SOFTWARE

HYS-A1 Sargon II	\$34.95	\$28.99
HYS-A2 ORCA/M Macro Assm	99.95	87.95
HYS-A3 PIEWRITER II Ver 2.2	149.95	132.95
HYS-A4 Shuttle Intercept	34.95	28.99
HYS-A5 Applesoft Compiler+	99.95	79.99
HYS-A6 Laser Bounce	34.95	28.99
HYS-A7 Final Conflict	34.95	28.99
HYS-A8 Bellhop	34.95	28.99
HYS-A9 Championship Golf	24.95	19.99
HYS-A10 Shapes in Color	49.95	41.99

HIGHLANDS COMPUTER SERVICES

HCS-A1 CRAE 2.0	\$39.95	\$34.99
HCS-A2 MCAT 2.0	24.95	20.99
HCS-A3 E-Z Ledger	60.00	50.99
HCS-A4 Oldorf's Revenge	19.95	16.99
HCS-A5 Tarturian	24.95	20.99
HCS-A6 Creature Venture	24.95	20.99
HCS-A7 Goblins	27.50	22.99
HCS-A8 Mummy's Curse	30.00	25.99

HOWARD SOFTWARE

HSS-A1 Creative Financing	\$195.00	\$159.99
HSS-A2 Real Estate Analyzer II	195.00	149.99
HSS-A3 Tax Preparer 1983	225.00	179.99
HSS-A4 Tax Preparer California Supplement '83'	75.00	69.99

INFOCOM

IFS-A1 Zork I	\$39.95	\$32.99
IFS-A2 Zork II	39.95	32.99
IFS-A3 Deadline	49.95	39.99
IFS-A4 Starcross	39.95	32.99
IFS-A5 Zork III	39.95	32.99

INNOVATIVE DESIGN SOFTWARE

IDS-A1 Pool 1.5	\$34.95	\$29.99
IDS-A2 Shuffleboard	29.95	24.99
IDS-A3 Trick Shot	39.95	32.99
IDS-A4 Juggler	29.95	24.99

INSOFT

	LIST	ACP
INS-A1 TransForth II	\$125.00	\$99.99
INS-A2 ALD System II	75.00	64.99
INS-A3 GraForth II	75.00	64.99
INS-A4 Electric Duet	29.95	24.99
INS-A5 Zargs	34.95	29.99
INS-A6 Spider Raid	29.95	24.99

ISLAND GRAPHICS

IGS-A1 The Illustrator	\$125.00	\$99.99
------------------------	----------	---------

ISM

ISS-A1 MatheMagic	\$89.95	\$74.99
ISS-A2 GraphMagic	89.95	74.99
ISS-A3 Prism	19.95	17.99
ISS-A4 MatheMagic/Graph Magic Combo	149.95	124.99

IUS

IUS-A1 Datadex	\$150.00	\$129.99
IUS-A2 Professional EasyWriter	175.00	149.99
IUS-A3 TellStar Level I	39.95	32.99
IUS-A4 TellStar Level II	79.95	69.99
IUS-A5 FORTH Development System	140.00	122.99
IUS-A6 Professional EasyMailer	150.00	131.99
IUS-A7 Original EasyWriter	99.95	89.99
IUS-A8 Original EasyMailer	69.95	59.99
IUS-A9 EasyMover	99.95	87.99
IUS-A10 Datadex/Hard Disk	300.00	279.99
IUS-A11 Pro EasyWriter/Mailer Combo Pkg	300.00	259.99
IUS-A12 Orig. EasyWriter/Mailer Combo	145.00	129.99

KENSINGTON MICROWARE INC.

KMS-A1 Format II	\$250.00	\$219.99
------------------	----------	----------

L & S COMPUTERWARE

LSS-A1 Crossword Magic 2.0	\$49.95	\$42.99
LSS-A2 Acey Deucey	29.95	23.99

THE LEARNING COMPANY

LCS-A1 Juggles Rainbow	\$45.00	\$36.99
LCS-A2 Bumble Games	60.00	49.99
LCS-A3 Bumble Plot	60.00	49.99
LCS-A4 Gertrude's Secrets	75.00	61.99
LCS-A5 Gertrude's Puzzles	75.00	61.99
LCS-A6 Rocky's Boots	75.00	61.99

LIGHTNING SOFTWARE

LTS-A1 Master Type	\$39.95	\$35.99
--------------------	---------	---------

LINK SYSTEMS

LKS-A1 Datafax	\$199.00	\$179.99
LKS-A2 Datalink	99.95	89.99
LKS-A3 Link Index	195.00	179.99
LKS-A4 Link Video	54.95	45.99
LKS-A5 Link Sampler I	59.95	45.99
LKS-A6 Link Disk	69.95	59.99

LJK ENTERPRISES

LUS-A1 Letter Perfect	\$149.95	\$129.99
LUS-A2 Data Perfect	99.95	89.99
LUS-A3 Edit 6502	99.95	89.99

THE LOGICAL CHOICE

LGS-A1 Castles of Darkness	\$34.95	\$29.99
----------------------------	---------	---------

LOTUS

LOS-A1 Executive Briefing System	\$199.00	\$169.99
LOS-A2 Alpha Bytes Font Disk	24.95	21.99
LOS-A3 Alpha Bytes Decorative Fonts	24.95	21.99
LOS-A4 Lotus Alphabets (color fonts)	24.95	21.99

(Font disks require E.B.S. above)

MICROCOM

MCS-A1 Microterminal	\$84.95	\$72.99
----------------------	---------	---------

MICRO LAB

MIS-A1 The Invoice Factory	\$200.00	\$179.99
MIS-A2 The Merger	50.00	44.99
MIS-A3 The Learning System	150.00	135.99
MIS-A4 Painter Power	39.95	32.99
MIS-A5 U.S. Constitution Tutor	30.00	25.99
MIS-A6 English SAT #1	30.00	25.99
MIS-A7 Madventure	24.95	20.99
MIS-A8 Palace in Thunderland	24.95	20.99
MIS-A9 Crown of Arthain	35.00	29.99
MIS-A10 Dogfight II	29.95	25.99
MIS-A11 Visiblend	50.00	42.99
MIS-A12 Visifactory	75.00	65.99
MIS-A13 The Asset Factory	200.00	179.99
MIS-A14 The Tax Manager	180.00	159.99
MIS-A15 Roach Hotel	34.95	29.99

APPLE II/IIe SOFTWARE

APPLE SOFTWARE

MICRO LAB

	LIST	ACP
MIS-A15 Roach Hotel.....	34.95	29.99
MIS-A16 Peeping Tom.....	34.95	29.99
MIS-A17 Data Factory 5.0.....	300.00	249.99
MIS-A18 Wall Streeter.....	300.00	249.99
MIS-A19 Payroll Manager.....	300.00	249.99
MIS-A20 Miner 2049er.....	39.95	34.99

MICROPRO INTERNATIONAL

(All MicroPro Products require Z-80 card)

MPS-A1 WordStar.....	\$495.00	\$399.99
MPS-A2 DataStar.....	295.00	249.99
MPS-A3 MailMerge.....	250.00	209.99
MPS-A4 SuperSort.....	250.00	209.99
MPS-A5 SpellStar.....	250.00	209.99
MPS-A6 CalcStar.....	145.00	129.99
MPS-A7 WordStar-French.....	495.00	399.99
MPS-A8 WordStar-Spanish.....	495.00	399.99
MPS-A9 WordStar Customization Notes.....	495.00	399.99
MPS-A10 WordStar-German.....	495.00	399.99
MPS-A11 3 Pak Word/Mail/Spell.....	845.00	699.99
MPS-A12 2 Pak Word/Mail.....	645.00	499.99
MPS-A13 2 Pak Word/Spell.....	645.00	499.99
MPS-A14 Infostar.....	495.00	399.99
MPS-A15 Report Star.....	350.00	299.99
MPS-A16 Wordstar-External Terminal.....	495.00	399.99

MICROSEEDS

MRS-A1 Mon+.....	\$39.95	\$36.99
MSS-A2 Dark.....	34.95	29.99

MICROSOFT

MSS-A1 Olympic Decathlon.....	\$29.95	\$24.99
MSS-A2 Adventure.....	29.95	25.99
MSS-A3 Typing Tutor II.....	24.95	19.99
MSS-A4 TASC Compiler.....	175.00	159.99
MSS-A5 FORTRAN-80 (Requires Z-80).....	195.00	169.99
MSS-A6 A.L.D.S. (Req. Z-80).....	125.00	105.99
MSS-A7 BASIC Compiler (Req. Z-80).....	395.00	319.99
MSS-A8 COBOL-80(Req. Z-80).....	750.00	669.99
MSS-A9 muLisp/muStar-80 (Req. Z-80).....	200.00	169.99
MSS-A10 M-Sort-80 (Req. Z-80).....	195.00	174.99
MSS-A11 muMath/ muSimp-80(Req. Z-80).....	250.00	215.99
MSS-A12 ADIOS muMath/Simp-80 (Runs under Apple DOS).....	250.00	215.99
MSS-A13 Time Manager.....	150.00	129.99
MSS-A14 MultiPlan (Req. Z-80).....	275.00	219.99
MSS-A15 MultiPlan (Runs under Apple DOS).....	275.00	219.99

MICRO-SPARC, INC.

MOS-A1 Ampersoft.....	\$49.95	\$44.99
MOS-A2 Directory Master.....	29.95	25.99
MOS-A3 AMP.....	29.95	25.99
MOS-A4 V.I.P. II (Visicalc Interface Program).....	29.95	25.99
MOS-A5 LexiCom.....	39.95	34.99
MOS-A6 TeleText.....	79.95	69.99
MOS-A7 G.A.L.E. (Global Applesoft Line Editor).....	39.95	34.99

MUSE

MUS-A1 Best of Muse.....	\$39.95	\$33.99
MUS-A2 The Voice.....	39.95	33.99
MUS-A3 Elementary Math Edu-Disk.....	39.95	33.99
MUS-A4 Data Plot.....	59.95	51.99
MUS-A5 Three Mile Island.....	39.95	33.99
MUS-A6 ABM.....	24.95	21.99
MUS-A7 Robot War.....	39.95	33.99
MUS-A8 Castle Wolfenstein.....	29.95	24.99
MUS-A9 Address Book.....	49.95	41.99
MUS-A10 Form Letter Module.....	100.00	80.99
MUS-A11 Super Text 40/80.....	175.00	159.99
MUS-A12 Frazzle.....	24.95	21.99
MUS-A13 The Cube Solution.....	24.95	21.99
MUS-A14 Super Text 40/56/70 (HI-RES).....	125.00	110.99
MUS-A15 Firefly.....	24.95	21.99
MUS-A16 X-Mas Combo (Castle/ 3 Mile Island).....	59.90	51.99
MUS-A17 International Grand Prix.....	30.00	24.99
MUS-A18 Know Your Apple (Ile).....	24.95	21.99

NOVATION

NVS-A1 Deaf Disk.....	\$29.00	\$26.99
NVS-A2 Software Diskette.....	29.00	26.99

ODESTA CORPORATION

OCS-A1 Chess.....	\$69.95	\$62.99
OCS-A2 Checkers.....	49.95	44.99
OCS-A3 Odin.....	49.95	44.99

OPTIMIZED SYSTEMS SOFTWARE INC.

	LIST	ACP
OSS-A1 Speed Read Plus.....	\$59.95	\$52.99

PBL CORPORATION

PCS-A1 Personal Investor.....	\$145.00	\$129.99
-------------------------------	----------	----------

PEACHTREE

(All Peachtree products req. Z-80 card)

PTS-A1 Series 40-General Ledger.....	\$400.00	\$299.99
PTS-A2 Series 40-Accounts Receivable.....	400.00	299.99
PTS-A3 Series 40-Accounts Payable.....	400.00	299.99
PTS-A4 Series 40-Inventory Control.....	400.00	299.99
PTS-A5 Series 400-Payroll.....	400.00	299.99
PTS-A6 Series 9-Peachtext.....	500.00	399.99
PTS-A7 Series 9-Spelling Proofreader.....	300.00	249.99
PTS-A8 Series 9-Peachcalc.....	375.00	299.99
PTS-A9 Series 9-Mailing List Manager.....	375.00	299.99
PTS-A10 Series 9- Telecommunications.....	375.00	299.99
PTS-A11 Series 40-PeachPack (GL/AR/AP).....	595.00	499.99
PTS-A12 Series 80-PeachPak (GL/AR/AP)Videoterm.....	595.00	499.99
PTS-A13 Series 80-GL Videoterm.....	400.00	299.99
PTS-A14 Series 80-AR Videoterm.....	400.00	299.99
PTS-A15 Series 80-AP Videoterm.....	400.00	299.99
PTS-A16 Series 80-Inventory Mgmt. Videoterm disk.....	400.00	299.99
PTS-A17 Series 9-PeachPak (Text/Spell/Mail).....	500.00	399.99
PTS-A18 Spelling Proofreader.....	300.00	249.99
PTS-A19 Blacks Law Dict. (Req. Spelling Proofreader).....	150.00	129.99
PTS-A20 Stedmans Medical Dictionary.....	150.00	129.99

PENGUIN SOFTWARE

PGS-A1 Complete Graphics System.....	\$69.95	\$62.99
PGS-A2 Special Effects.....	39.95	33.99
PGS-A3 Graphics Magician.....	59.95	52.99
PGS-A4 Additional Fonts & Char. Sets.....	19.95	17.99
PGS-A5 Complete Graphics System II (Apple Tablet Version).....	119.95	105.99
PGS-A6 Special Effects (Apple Tablet Ver.).....	69.95	62.99
PGS-A7 Pie Man.....	29.95	24.99
PGS-A8 Transylvania.....	34.95	9.99
PGS-A9 Spy's Demise.....	29.95	24.99

PICADILLY

PYS-A1 Falcons.....	\$29.95	\$24.99
PYS-A2 Warp Destroyer.....	29.95	24.99
PYS-A3 Suicide.....	29.95	24.99
PYS-A4 Star Blaster.....	29.95	24.99
PYS-A5 Ribbit.....	29.95	24.99
PYS-A6 Succession.....	29.95	24.99

PHOENIX SOFTWARE

PXS-A1 The Birth of the Phoenix.....	\$22.00	\$19.99
PXS-A2 Adventure in Time.....	29.95	25.99
PXS-A3 Zoom Grafix.....	39.95	32.99
PXS-A4 Sherwood Forest.....	34.95	29.99
PXS-A5 The Queen of Phobos.....	34.95	29.99

PROGRAM DESIGN INC.

PDS-A1 The New Step-By-Step.....	\$79.95	\$69.99
PDS-A2 Astro Quotes.....	23.95	19.99
PDS-A3 Preschool IQ Builder.....	23.95	19.99

PROMPT DOC, INC.

PRS-A1 Manual Maker (Req. Z-80).....	\$245.00	\$209.99
---	----------	----------

QUALITY SOFTWARE

QSS-A1 Meteroids in Space.....	\$19.95	\$17.99
QSS-A2 Fastgammon.....	24.95	20.99
QSS-A3 Cross-Ref.....	24.95	20.99
QSS-A4 Fracas.....	24.95	20.99
QSS-A5 Beneath Apple Manor Hi-Res.....	29.95	24.99
QSS-A6 Battleship Commander.....	19.95	17.99
QSS-A7 Astroapple.....	19.95	17.99
QSS-A8 QS Reversi.....	29.95	24.99
QSS-A9 Bag of Tricks.....	39.95	32.99
QSS-A10 Ali Baba & the Forty Thieves.....	32.95	26.99
QSS-A11 GBS-DB Appl. Dev. Prgm. (Req. Z-80).....	650.00	549.99

ROCKROY INC.

RRS-A1 Conglomerates Collide.....	\$39.95	\$32.99
RRS-A2 Max-Command.....	39.97	32.79

SELECT

	LIST	ACP
SLS-A1 Select Word Processing Sys. (Req. Z-80).....	\$595.00	\$399.00
SLS-A2 Teach/M (Req. Z-80).....	75.00	69.99

SENSIBLE SOFTWARE

SSS-A1 Super Disk Copy III.....	\$30.00	\$26.99
SSS-A2 Multi Disk Catalog III.....	25.00	21.99
SSS-A3 Disk Recovery ("The Scanner").....	30.00	26.99
SSS-A4 Applesoft-Plus Structured Basic.....	25.00	21.99
SSS-A5 Disk Organizer II.....	30.00	26.99
SSS-A6 DOS Plus.....	25.00	21.99
SSS-A7 Quickloader.....	25.00	21.99
SSS-A8 Image Printer- Letter Quality.....	40.00	34.99
SSS-A9 Image Printer-Epson.....	40.00	34.99
SSS-A10 Image Printer-NEC Dot Matrix.....	40.00	34.99
SSS-A11 The Bug.....	50.00	42.99
SSS-A12 Build Using.....	30.00	26.99
SSS-A13 Edit-Soft.....	30.00	26.99
SSS-A14 Quadrant 6112.....	34.95	29.99
SSS-A15 The Sensible Speller.....	125.00	109.99
ASS-A16 The Sensible Speller (for Supertext).....	125.00	109.99
SSS-A17 The Sensible Speller (for Apple CP/M).....	125.00	109.99
SSS-A18 B.E.S.T. (Applesoft Prgm. Optimizer).....	40.00	34.99
SSS-A19 The Sensible Speller (Pascal).....	125.00	109.99
SSS-A20 The Sensible Speller (for Word Handler).....	125.00	109.99
SSS-A21 Cyclotron.....	29.95	24.99

SENTIENT SOFTWARE

SNS-A1 Oe-TOPOS.....	\$32.95	\$28.99
SNS-A2 Cyborg.....	32.95	28.99
SNS-A3 Congo.....	34.95	30.99
SNS-A4 Goldrush.....	34.95	30.99

SIERRA ON-LINE

SOS-A1 HI-RES Adv #0-Mission Asteroid.....	\$19.95	\$16.99
SOS-A2 HI-RES Adv #1-Mystery House.....	24.95	19.99
SOS-A3 HI-RES Adv #2-Wiz & Princess.....	32.95	27.99
SOS-A4 HI-RES Adv #3-Cranston Manor.....	34.95	29.99
SOS-A5 HI-RES Adv #4-Ulysses & The Golden Fleece.....	34.95	29.99
SOS-A6 HI-RES Adv #5-Time Zone.....	99.95	85.99
SOS-A7 Cross Fire.....	29.95	24.99
SOS-A8 Mouskattack.....	34.95	29.99
SOS-A9 Ultima II.....	59.95	45.99
SOS-A10 Marauder.....	34.95	29.99
SOS-A11 Sabotage.....	24.95	19.99
SOS-A12 Threshold.....	39.95	34.99
SOS-A13 Softporn Adventure (X-Rated).....	29.95	24.99
SOS-A14 Pegasus II.....	29.95	24.99
SOS-A15 Jawbreaker.....	29.95	24.99
SOS-A16 The Dictionary.....	99.95	82.99
SOS-A17 Screenwriter II.....	129.95	105.99
SOS-A18 LISA 2.5.....	79.95	69.99
SOS-A19 LISA Educational System.....	119.95	99.99
SOS-A20 The Artist.....	79.95	69.99
SOS-A21 Frogger.....	34.95	29.99
SOS-A22 E.P.F. IV (extended pro- gramming facility IV).....	79.95	69.99
SOS-A23 Cannonball Blitz.....	34.95	29.99
SOS-A24 Dark Crystal.....	39.95	34.99
SOS-A25 Laffpak.....	34.95	29.99
SOS-A26 Pest Patrol.....	29.95	26.99
SOS-A27 Screenwriter Professional (contains Screenwriter II and The Dictionary).....	199.95	169.99
SOS-A28 Lunar Leeper.....	29.95	26.99
SOS-A29 The General Manager II.....	229.95	199.99

SIERRA SOFTWARE

SRS-A1 Alien Lander.....	\$29.95	\$24.99
SRS-A2 Retro-Ball.....	29.95	24.99
SRS-A3 Space Adventure.....	29.95	24.99

SILICON VALLEY SYSTEMS

SVS-A1 Word Handler.....	\$199.00	\$169.99
SVS-A2 List Handler.....	89.95	79.99
SVS-A3 Dictionary.....	125.00	99.99
SVS-A4 E-Z Learner.....	39.95	32.99
SVS-A5 Snapper.....	32.95	28.99
SVS-A6 Toddler's Tutor.....	24.95	19.99

APPLE II/III SOFTWARE

SIRIUS SOFTWARE

	LIST	ACP
SIS-A1 Star Cruiser.....	\$24.95	\$19.99
SIS-A2 Both Barrels.....	24.95	19.99
SIS-A3 E Z Draw 3.3.....	49.95	42.99
SIS-A4 Cyber Strike.....	39.95	33.99
SIS-A5 Phantoms Five.....	29.95	26.99
SIS-A6 Space Eggs.....	29.95	26.99
SIS-A7 Pulsar II.....	29.95	26.99
SIS-A8 Orbitron.....	29.95	26.99
SIS-A9 Autobahn.....	29.95	26.99
SIS-A10 Gamma Goblins.....	29.95	26.99
SIS-A11 Gorgon.....	39.95	33.99
SIS-A12 Sneakers.....	29.95	26.99
SIS-A13 Epoch.....	34.95	29.99
SIS-A14 Pascal Graphics Editor.....	99.95	82.99
SIS-A15 Copts and Robbers.....	34.95	29.99
SIS-A16 Outpost.....	29.95	25.99
SIS-A17 Beer Run.....	29.95	25.99
SIS-A18 Hadron.....	34.95	29.99
SIS-A19 Dark Forest.....	29.95	25.99
SIS-A20 Borg.....	29.95	25.99
SIS-A21 Computer Foosball.....	29.95	25.99
SIS-A22 Twerps.....	29.95	25.99
SIS-A23 Snake Byte.....	29.95	25.99
SIS-A24 Audex.....	29.95	25.99
SIS-A25 Fly Wars.....	29.95	25.99
SIS-A26 Cyclod.....	29.95	25.99
SIS-A27 Kabul Spy.....	34.95	29.99
SIS-A28 Jellyfish.....	29.95	25.99
SIS-A29 Minotaur.....	34.95	29.99
SIS-A30 Bandits.....	34.95	29.99
SIS-A31 Lemmings.....	29.95	25.99
SIS-A32 Escape From Rungistan.....	29.95	25.99
SIS-A33 Free Fall.....	29.95	25.99
SIS-A34 Way Out.....	39.95	32.99
SIS-A35 The Blade of Blackpool.....	39.95	32.99
SIS-A36 Type Attack.....	39.95	32.99
SIS-A37 Flip Out.....	29.95	25.99
SIS-A38 Wavy Navy.....	34.95	29.99
SIS-A39 Repton.....	39.95	33.99

SIR-TECH SOFTWARE

STS-A1 Galactic Attack.....	\$29.95	\$25.99
STS-A2 Wizardry.....	49.95	42.99
STS-A3 Knight of Diamonds (uses Wizardry characters).....	34.95	29.99
STS-A4 Star Maze.....	34.95	29.99

SOF/SYS INC.

SFS-A1 Executive Secretary.....	\$250.00	\$199.91
SFS-A2 Executive Speller.....	75.00	69.99

SOFTAPE

SPS-A1 Apple '21.....	\$24.95	\$19.99
SPS-A2 Craps.....	24.95	19.99
SPS-A3 Gomoku.....	19.95	17.99
SPS-A4 Roulette.....	24.95	19.99
SPS-A5 Baker's Trilogy.....	24.95	19.99
SPS-A6 Apple Talker.....	29.95	25.99
SPS-A7 Disk Utilities.....	29.95	25.99
SPS-A8 Forte.....	29.95	25.99
SPS-A9 Screen Machine.....	29.95	25.99
SPS-A10 Pensoft.....	29.95	25.99
SPS-A11 Crosswords.....	24.95	19.99
SPS-A12 Journey.....	29.95	25.99
SPS-A13 Best of Bishop.....	39.95	33.99
SPS-A14 Forth II.....	69.95	59.99
SPS-A15 Star Mines.....	29.95	25.99
SPS-A16 Draw Poker.....	24.95	19.99
SPS-A17 Photar.....	29.95	25.99
SPS-A18 Casino Gaming Assortment.....	69.95	59.99

SOFTTECH MICROSYSTEMS

SMS-A1 UCSD P-System Software Set.....	\$625.00	\$499.99
SMS-A2 Basic Compiler & Runtime Pkg.....	225.00	199.99
SMS-A3 Xenofile.....	50.00	44.99
SMS-A4 Softech.....	125.00	99.99

SOFTWARE EMPORIUM

SWS-A1 Inferno.....	\$29.95	\$24.99
---------------------	---------	---------

SOFTWARE PUBLISHING CORP.

SUS-A1 PFS: Report.....	\$125.00	\$99.99
SUS-A2 PFS: File.....	140.00	119.99
SUS-A3 PFS: Graph.....	140.00	119.99

SOFTWARE TECHNOLOGY

SGS-A1 Professional Time & Billing.....	\$395.00	\$319.99
SGS-A2 Language Reading Dev. Program.....	175.00	149.99
SGS-A3 Apartment Manager.....	395.00	319.99
SGS-A4 Inventory.....	275.00	222.99
SGS-A5 IFO.....	200.00	189.99
SGS-A6 The Creator.....	200.00	189.99

SORCIM/ISA

	LIST	ACP
SBS-A1 SuperCalc (Req. Z-80).....	\$295.00	\$199.99
SBS-A2 Spellguard (Req. Z-80).....	195.00	169.99

SOUTHEASTERN SOFTWARE

SES-A1 Data Capture 4.0.....	\$65.00	\$55.99
SES-A2 Data Capture 4.0/80 Videx.....	90.00	72.99
SES-A3 Data Capture 4.0/80 Smarterm.....	90.00	72.99
SES-A4 Data Capture 4.0/80 Supe-R-Term.....	90.00	72.99

SOUTHWESTERN DATA SYSTEMS

SWS-A1 Apple Doc.....	\$39.95	\$32.99
SWS-A2 ACE.....	39.95	32.99
SWS-A3 List Master.....	39.95	32.99
SWS-A4 Speed Star.....	99.95	82.99
SWS-A5 Correspondent.....	59.95	49.99
SWS-A6 ASCII Express "The Professional".....	129.95	102.99
SWS-A7 Z-Term (Req. Z-80).....	99.95	82.99
SWS-A8 Z-Term "The Professional" (Req. Z-80).....	149.95	129.99
SWS-A9 P-Term "The Professional".....	129.95	102.99
SWS-A10 "The Alien Game".....	34.95	29.99
SWS-A11 Disk Library.....	49.95	43.99
SWS-A12 Double Time Printer.....	99.95	82.99
SWS-A13 Financial Management System II.....	64.95	56.99
SWS-A14 Merlin.....	64.95	56.99
SWS-A15 Munch-a-Bug.....	49.95	42.99
SWS-A16 Norad.....	34.95	29.99
SWS-A17 Printographer.....	49.95	42.99
SWS-A18 Spanish for Travelers.....	59.95	51.99
SWS-A19 Routine Machine.....	64.95	56.99
SWS-A20 The Combo (Merlin/Munch/Book).....	119.95	99.99

SPINNAKER SOFTWARE

SKS-A1 Snooper Troops #1.....	\$44.95	\$36.99
SKS-A2 Snooper Troops #2.....	44.95	36.99
SKS-A3 Story Machine.....	34.95	29.99
SKS-A4 Face Maker.....	34.95	29.99
SKS-A5 Delta Drawing.....	59.95	51.99
SKS-A6 Rhymes & Riddles.....	29.95	26.99

SSM MICROCOMPUTER PRODUCTS

SXS-A1 Transend I.....	\$89.95	\$79.99
SXS-A2 Transend II.....	149.00	129.99

STONEWARE PRODUCTS

SNS-A1 Bloody Murder.....	\$19.95	\$17.99
SNS-A2 Tranquility Base.....	24.95	21.99
SNS-A3 Micro Memo.....	39.95	34.99
SNS-A4 Electronic Price Sheet.....	100.00	82.99
SNS-A5 D.B. Master.....	229.00	199.99
SNS-A6 D.B. Master Utility Pack #1.....	99.00	79.99
SNS-A7 D.B. Master/Hard Disk Compucube.....	499.00	399.99
SNS-A8 D.B. Master Utility Pak #2.....	99.00	82.99
SNS-A9 D.B. Master Stat Pac.....	99.00	82.99
SNS-A10 Graphics Processing Sys. (Standard).....	69.00	59.99
SNS-A11 Graphics Processing Sys. (Prof.).....	179.00	159.99

STRATEGIC SIMULATIONS

SIS-A1 Computer Bismark.....	\$59.95	\$49.99
SIS-A2 Computer Ambush (2nd Ed).....	59.95	49.99
SIS-A3 Computer Air Combat.....	59.95	49.99
SIS-A4 Torpedo Fire.....	59.95	49.99
SIS-A5 Operation Acpocalypse.....	59.95	49.99
SIS-A6 The Warp Factor.....	39.95	32.99
SIS-A7 The Cartels & Cutthroats.....	39.95	32.99
SIS-A8 Computer Quarterback (2nd Ed).....	39.95	32.99
SIS-A9 The Shattered Alliance.....	59.95	49.99
SIS-A10 Computer Baseball.....	39.95	32.99
SIS-A11 President Elect.....	39.95	32.99
SIS-A12 Southern Command.....	59.95	49.99
SIS-A13 Napoleon's Campaign 1813 & 1815.....	59.95	49.99
SIS-A14 The Road to Gettysburg.....	59.95	49.99
SIS-A15 Pursuit of the Graf Spree.....	59.95	49.99
SIS-A16 Cytron Masters.....	39.95	32.99
SIS-A17 Guadalcanal.....	59.95	49.99
SIS-A18 S.E.U.I.S. (Shoot'em Up in Space).....	39.95	32.99
SIS-A19 Galactic Gladiators.....	39.95	32.99
SIS-A20 Germany 1985.....	59.95	42.99
SIS-A21 Bomb Alley.....	59.95	42.99
SIS-A22 Epidemic.....	34.95	28.99

STRATEGIC SIMULATIONS-Cont.

	LIST	ACP
SIS-A23 Galactic Adventure.....	\$59.95	\$49.99
SIS-A24 The Battle of Shiloh.....	39.95	32.99
SIS-A25 Tigers in the Snow.....	39.95	32.99
SIS-A26 Cytron Masters.....	39.95	32.99
SIS-A27 Galactic Gladiator.....	39.95	32.99
SIS-A28 The Cosmic Balance.....	39.95	32.99
SIS-A29 Battle for Normandy.....	39.95	32.99

SUBLOGIC

SUS-A1 Flight Simulator.....	\$33.50	\$29.99
SUS-A2 Whole Brain Spelling.....	34.95	29.99
SUS-A3 Escape.....	29.95	25.99
SUS-A4 Pinball.....	29.95	25.99
SUS-A5 Graphics Combo Pkg.....	119.95	99.99
SUS-A6 Saturn Navigator.....	34.95	29.99
SUS-A7 Music Maker.....	39.95	34.99
SUS-A8 Zendar.....	29.95	25.99
SUS-A9 Front Line.....	29.95	25.99
SUS-A10 Space Vikings.....	49.95	42.99

SYNERGISTIC SOFTWARE

SCS-A1 Odyssey.....	\$29.95	\$25.99
SCS-A2 Planetary Guide.....	30.00	25.99
SCS-A3 Atlantis.....	39.95	33.99
SCS-A4 Soft Seventy.....	49.95	42.99
SCS-A5 Flexible Fonts.....	15.00	13.99
SCS-A6 The Linguist.....	40.00	35.99
SCS-A7 The Star Gazer's Guide.....	30.00	24.99
SCS-A8 Higher Text II.....	40.00	35.99
SCS-A9 Higher Graphics II.....	35.00	29.99
SCS-A10 Mailing List Database.....	50.00	42.99
SCS-A11 Program Line Editor.....	40.00	35.99
SCS-A12 Modifiable Database.....	79.50	69.99
SCS-A13 The Data Reporter.....	250.00	199.99
SCS-A14 Integer Basic Compiler.....	149.95	129.99
SCS-A15 Nightmare Gallery.....	34.95	29.99
SCS-A16 U-Boat Command.....	29.95	24.99
SCS-A17 Global Program Line Editor.....	65.00	55.99
SCS-A18 Data Reporter/Hard Disk.....	220.00	189.99
SCS-A19 Crisis Mountain.....	34.95	29.99
SCS-A20 Game Animation Pkg.....	49.95	42.99
SCS-A21 The Inventory Manager.....	149.95	129.99
SCS-A22 Bolo.....	34.95	29.99
SCS-A23 Microbe.....	44.95	38.99

SYNTONIC

SQS-A1 Interlude.....	21.95	18.99
SQS-A2 Decision Master.....	39.95	33.99

SYSTEMS PLUS

(All Systems Plus Products require Z-80 card.)

SLA-A1 Accounting Plus—General Ledger.....	\$395.00	\$329.99
SLA-A2 Acctng. Plus—GL, AP, & AR.....	995.00	699.99
SLA-A3 Acctng. Plus—GL, AP, AR, & Inventory.....	1250.00	899.99

TAURUS SOFTWARE CORPORATION

TUS-A1 CP+ (Req Z-80).....	\$150.00	\$129.99
----------------------------	----------	----------

TERRAPIN, INC.

TPS-A1 Terrapin Logo.....	\$149.95	\$129.99
---------------------------	----------	----------

T.M.Q. SOFTWARE, INC.

TQS-A1 File Fax.....	\$175.00	\$159.99
----------------------	----------	----------

TURNKEY SOFTWARE

TKS-A1 Ceiling Zero.....	\$29.95	\$24.99
--------------------------	---------	---------

ULTRASOFT

ULS-A1 Mask of the Sun.....	\$39.95	\$34.99
-----------------------------	---------	---------

UNITED SOFTWARE OF AMERICA

USS-A1 Appleworld.....	\$59.95	\$51.99
USS-A2 3-D Supergraphics.....	39.95	32.99
USS-A3 Space Raiders.....	22.50	19.99
USS-A4 Star Dance.....	24.95	21.99
USS-A5 Survival Adventure.....	24.95	21.99
USS-A6 KRAM.....	99.95	79.99
USS-A7 Super KRAM.....	135.00	109.99
USS-A8 Conquest w/Super KRAM card.....	250.00	209.99
USS-A9 Bug Battle.....	22.50	19.99

VERSA COMPUTING

VCS-A1 VersaWriter Expansion Pac-I.....	\$39.95	\$32.99
VCS-A2 VersaWriter Expansion Pac-II.....	39.95	32.99
VCS-A3 Meet the Presidents.....	39.95	32.99
VCS-A4 AXE (Apple Extended Editor).....	69.95	59.99
VCS-A5 Here's Hollywood.....	24.95	19.99
VCS-A6 Battlesight.....	39.95	32.99

EDUCATIONAL SOFTWARE

Proven Software Preferred by Educators
If You're a Teacher please take 10% Discount on Educational Software

EDUCATION SOFTWARE

CLASS ORGANIZATION

Score: The Academic Assistant

A well-formulated classroom management program that automatically scores multiple-choice exams, using data entered by keyboard, optical mark reader or disk file, and then performs item analyses and maintains comprehensive records. "A useful file management product."

Scientific Software Associates, Ltd. Apple II Plus with 80-column printer, program disk with backup, and data disk: \$395.

SCHOOL AND CLASSROOM MANAGEMENT

Magic Window

A readily usable word processing program that enables school personnel to produce, revise and store written documents such as letters, memos and manuscripts. Also useful for teaching word processing to high school students. Includes detailed reference manual. "Very good use of computer technology."

ARTSCI, Inc. Apple II Plus, disk: \$99.95; printer required.

COMPUTER LITERACY

Apple Logo

Three separate versions of the outstanding Logo computer language suitable for both children and adults. Each allows the user to enter an exciting and unique computer "environment" to work with color graphics and learn structured programming. Students acquire strong physical and mathematical concepts and develop critical thinking skills. Each version, which includes excellent teacher support materials, offers unique features; thus, a separate review of each is recommended. Judges' comments: "A superior learning tool for all ages." "A language that children and adults can learn quickly to use to control their own learning."

Apple Computer. Apple II Plus (64K), disk, \$175.00

How To Program In The BASIC Language

A two-disk program of 12 well-designed and sequential tutorial that teach programming in BASIC to teachers and older students through interaction with the computer. A student workbook is available for added reinforcement after the completion of each lesson. A "very good interactive programming teacher."

Sterling Swift Publishing Company. Apple II Plus, two-disk set: \$74.95.

SCIENCE

Science Volume 3

Five separate "general science" programs that demonstrate blood circulation in fish, food chain interrelationships, how the epicenter of an earthquake is located, the rotation of constellations, and the identification of minerals. Highly effective programs with fine use of graphics and excellent teacher support materials. "A best buy for the price."

Creative Computing Software. Apple II Plus, disk: \$24.95. (Junior high — high school.)

Laws of Motion

Computer-stimulated experiments with free-fall, an inclined plane and an A-machine. Students are able to specify conditions and observe their effects upon the velocity and acceleration of different masses. Results are displayed through animation, graphs and data tables. "Basic data gathering, good for high school physics."

Educational Materials & Equipment Company. Apple II Plus, two-disk set: \$93.50.

Wave and Vibration Series

A sequence of five program modules that teach the fundamentals of periodic motion and waves in physics with extensive use of graphics. Provides help for the student as needed, and offers options to repeat material after errors in understanding are discerned. "Goo step-by-step presentation."

Merlan Scientific, Ltd. \$138; Apple II Plus (school.)

The Electronic Tool

For older students, a comprehensive program that demonstrates the major uses of computers in busi-

ness, industry, school and home, with clear and specific examples. Uses are presented interactively, and include storing information, organizing information, conducting simulations and solving problems. Rapid access to substantial amounts of information. *Micro Power & Light Company. Apple II (32K) with Applesoft BASIC, disk: \$34.95. (High school — adult.)*

Simulated Computer

A highly specialized graphics-centered program that demonstrates the operation of machine language in a small computer. The dynamic model presented makes difficult concepts understandable. Program is suitable for advanced computer education students in high school and is a good value in this application. "The quality is good. Being able to stop the program and see what is happening is useful."

Edu Soft. Atari 400 or 800, disk: \$21.95; also available on cassettes for the Apple II Plus, the TRS-80 Model I and Model III, (High school — adult.)

READING AND LANGUAGE

Juggles' Rainbow

A playful, musical program with colorful graphics. It introduces young children to pre-reading skills and to the concepts of above/below and left/right. "Excellent practice with the concepts," said one evaluator.

The Learning Company. Apple II Plus, disk: \$45. (Primary.)

Capitalizatio

An effective program of tutorial, drill and testing activities for applying the rules of capitalization and sentences. Content includes pronouns, proper nouns, days of the week, months, holidays and titles. A reading specialist commented, "It uses words in context, so it provides students with meaningful reading opportunities."

Hartley Courseware, Inc. Apple II Plus, two-disk set: \$49.95. (Intermediate.)

Speed Reader

A detailed reading development program to help build speed and comprehension through a variety of student-selected passages, with options that affect the speed and format of presentation. Provides warm-up, eye-movement and column-reading exercises, and includes useful teacher support materials.

Apple Computer. Apple II Plus, disk: \$70. (Junior high.)

German Vocabulary Drill

A "simple, clear and useful" program that provides drill in German-to-English and English-to-German vocabulary. Initial word-list categories include vegetables, colors, beverages, numbers and animals. Program design allows teachers to add their own list to the disk.

Compu-Tations. Apple II Plus, disk: \$24.95. (High school.)

SOFTWARE FOR TEACHERS

Proven Software preferred by Teachers across U.S.A.!

MATH

Bumble Games

Six imaginative and highly motivating computer games in which students use positive numerals to describe locations on a map, to interpret charts and graphs, and to make simple computer graphics. "Exceptionally creative and well-designed instructional programs" that make outstanding use of color, graphics and sound in a fanciful theme.

The Learning Company. Apple II Plus, disk: \$60. (Primary — Intermediate.)

Base Ten on Basic Arithmetic

A variety of involving activities that focus on student ability to multiply using basic facts, multiples of ten and decimals. Fine use of graphics and student-selected options, strong teacher support materials.

Minnesota Educational Computing Consortium. Atari 400 and 800, disk: \$30; \$15 within Minnesota. (Intermediate.)

Math Ideas With Base Ten Blocks

A series of program options, with exceptional computer graphics, using base-ten blocks to teach number concepts. "Highly motivating."

Cuisenaire Company of America, Inc. Apple II Plus, disk: \$45. (Intermediate.)

Mathematics for Science Series

Several series of programs designed to teach basic

measurement and mathematics techniques for use in science course. "Clear and well organized." (Also listed under Science.)

Merlan Scientific, Ltd.: \$180; Apple II Plus. (High school.)

Bursar

A school management program to help administrators keep track of funds generated by such extracurricular activities as athletic teams, bands, newspapers, year-books and scholarships. A functional product with detailed support materials.

Addison-Wesley Publishing Company. Apple II Plus, disk: \$195.



TRAINING

Now you can learn about productivity software with the following disk based programs with reference books.

OPERATING SYSTEMS

ATI for CP/M	ATI-CPU	75.00
ATI for PC-DOS	ATI-PCU	75.00

DATABASE MANAGEMENT

ATI for dBASE II	ATI-DBU	75.00
ATI for EasyFiler	ATI-EFU	75.00

FINANCIAL PLANNING

ATI for SuperCalc	ATI-SCU	75.00
ATI for VisiCalc	ATI-VCU	8%.))
ATI for Multiplan	ATI-MUU	75.00
ATI for MicroPlan	ATI-MIU	75.00
ATI for EasyPlanner	ATI-EPU	75.00

PROGRAMMING

ATI for MBASIC	ATI-BAU	75.00
----------------	---------	-------

WORDPROCESSING

ATI for WordStar-Vol 1		
and Vol 2	ATI-WSU	75.00
ATI for EasyWriter II	ATI-EWU	75.00

ACCOUNTING

ATI for BPI		
General Ledger	ATI-BGU	75.00

SWIFT LEARNINGWARE™

- Computer Literacy: Problem Solving w/Computers - Book **13.95**
- How to Program in Basic Tutorial, Book & Disk **74.95**
- Discover Basic: Problem Solving with the Apple II. Teachers Guide with (2) Disks **74.95**
Student Workbook for above **5.95**
- Apple-Based Elementary Mathematics Class Room Learning System
System 1 Whole Numbers **495.00**
System 2 Fractions/Decimals **495.00**
- The Arithmetic Classroom 9 Programs on disk with a 3-game disk for math reinforcement **Complete set 399.00**
- Computer Programming for Kids - Book **9.95**
- Dial-A-Command (reference wheel) **9.95**
- Fundamentals of Mathematics (6) disk set w/89 Programs **249.95**
Student worksheets for above **29.95**
- Will someone please tell me what an Apple can do? - Book **12.95**
- Apple Education Software Directory - Book **14.95**

MILTON BRADLEY

Packages include diskette, Teacher Guide and reproducible worksheets.

MATH SKILLS

Division Skills	49.95
Mixed Numbers	49.95
Decimal Skills	49.95
Ratios/Proportions	49.94
Percents	49.95

LANGUAGE SKILLS

Punctuation/Commas Skills	49.95
Punctuation/Endmarks, Colons	49.95
Vocabulary/Context	49.95
Vocabulary/Pre & Suffix	49.95
Building Sentences	49.95
Building Sentences/Complex	49.95
Reading Comprehension I	49.95

EDUCATIONAL SOFTWARE

EDUCATION SOFTWARE

THE PROFESSOR

- "the Apple Core"
Introductory Software for the beginner. Learn about the computer and how to create your own programs. 49.95
- Part II The Seed, more of the above 59.95
- **Counting Plus** 34.95
(pre-school & primary)
- **Subtraction Minus** 34.95
(pre-school & primary)
- **DOS Helper** 29.95
- **Type-Writer** 59.95
Multi-Language Word Processor

PHYSIC SERIES

- Vectors & Graphing 54.95
- Statics (beam problems) 54.95
- Motion 54.95
- Conservation Laws 54.95
- Circular Motion 54.95
- Thermodynamics 54.95
- Electricity/Magnetism 54.95
- Optics 54.95
- Atomic Physics 54.95
- Solar System 54.95
- Stellar Astronomy 54.95

THE LEARNING COMPANY

The Learning Company was founded by Ann Piestrup, Ph.D., Educational Psychology, and publishes software for children ages 3-13 to teach logical thinking skills, problem solving, math, spelling and reading. Their software has received national recognition and many awards from educators. All software features color graphics and sound.

TLC-A01	Juggles' Rainbow (age 3-6)	45.00
TLC-A02	Bumble Games (4-10)	60.00
TLC-A03	Bumble Plot (8-13)	75.00
TLC-A04	Rocky's Boots (7-up)	75.00
logic circuitry electronic skillsTLC-A05		
TLC-A05	Gertrudes' Secrets (4-9)	75.00
TLC-A07	Moptown Parade	39.95
TLC-A08	Moptwon Hotel	39.95
TLC-A09	Magic Spells	34.95

VIDEOTAPES "EASY VIDEO LESSONS"

Your school, computer club, or your home could benefit from the learning library of video cassettes by Stoneware. The instructional cassettes allow you to learn on a hands-on basis at your own pace. The tapes are available in VHS or BETA formats. Please specify on your order which format you desire.

The cassette is designed for new users of Apple II, Apple III, and IBM PC. Entitled "How to Use Your Apple II, Apple III, or IBM PC in 10 Easy Lessons." Chapters include: Introducing Computer Fundamentals, Assembling Your System, Operating Your Computer, Using Disks, Running Software, Software Overview, Application for Software, Programming in Basic, and Graduation.

P/N	DESCRIPTION	ACP PRICE
SWV-01	Apple II Course	119.94 ea
SWV-02	Apple III Course	119.95 ea.
SWV-03	IBM PC Course	119.95 ea.

APPLE GIFT LIST

There is something about the Apple logo. Here is a list of gifts that display the multi-colored Apple logo.

Apple Coffe Mugs	.....	\$ 4.95 ea.
Apple Tumbler Glasses (4/pack)	.....	12.95/pk
Apple Tee-Shirts (Blue or Tan)	.....
Men's S, M, L, X-L	.....	6.50 ea.
Women's S, M, L	.....	8.95 ea.
Child's S, M, L	.....	6.50 ea.
Apple Brass Belt Buckle	.....	6.95 ea.
Apple Playing Cards	.....	2.49 ea.
Apple 10 kt. Cross Pen (gold-fill)	.....	21.95 ea.
Apple Enamel Pin	.....	1.95 ea.
Apple Enamel Keychain	.....	4.50 ea.
Apple Pendant w/Chain	.....	4.50 ea.
Apple Stitched Patch	.....	4.50 ea.



NEW APPLE PINS

Apple IIe Pin (new design)	.....	2.50 ea.
Apple Lisa Pin (new design)	.....	2.50 ea.

ACP TEE-SHIRT

Men's S, M, L, X-L	.....	6.95 ea.
Women's S, M, L	.....	7.95 ea.

MICRO[®]

MICRO[™] INSTRUCTIONAL INC. TRAINING TAPES

Each Tape includes the Beginner's CP/M SERIES.

P/N	DESCRIPTION	ACP
CP-AR	Accounts Receivable	\$ 39.95
CP-AP	Accounts Payable (Ledger, Vendor Accounts, Bank Balance and more)	39.95
CP-DI	Cash Disbursements Journal	29.95
CP-RI	Cash Receipts Journal	29.95
CP-PA	Payroll (Weekly, Bi-Weekly, Hourly & 941)	39.95
CP-D2	Depreciation Schedules (Double Declining Balance, Line, Sum of Years, Production Output)	29.95
CP-FS	Full System (Contains all of the above. General Journal and Integrated Financial Statements, automatically updated from all systems.)	169.95

SYSTEMS

MI-AP	APPLE II +	29.95
MI-FA	FRANKLIN	29.95
MI-PD	IBM-PC DOS	29.95
MI-PC	IBM-PC CP/M	29.95
MI-01	OSBORNE CP/M	29.95
MI-82	XEROX-820-II CP/M	29.95
MI-HC	ZENITH-90 (H-89) CP/M	29.95
MI-ZD	ZENITH-100 (DOS & CP/M)	29.95
MI-GN	CP/M GENERAL	29.95

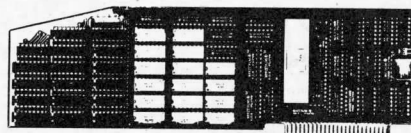
For use with any CP/M Based System.

BEGINNING USERS TAPES contain many examples in applying the operating system (P/M or DOS). The user quickly learns to format copy and configure disks. PIP, STAT, RENAME, ERASE and other file manipulations are taught permitting first time users inputting without further assistance and no reading.

SOFTWARE

WORD PROCESSING		
MI-XA	EXEC. SEC'Y-APPLE	29.95
MI-XF	EXEC. SEC'Y-FRANKLIN	29.95
MM-Z9	MAGICWAND-Z-90	29.95
MM-Z1	MAGICWAND-Z-100	29.95
MI-PT	POWERTEXT-IBM-PC	29.95
MI-PA	POWERTEXT-APPLE II +	29.95
MW-WA	WORDSTAR-APPLE	29.95
MW-WF	WORDSTAR-FRANKLIN	29.95
MW-90	WORDSTAR-Z-90 & 100	29.95
MW-01	WORDSTAR-OSBORNE	29.95
MW-82	WORDSTAR-ZEROX 820-II	29.95

NUMBER NINE GRAPHICS SYSTEM



- HIGH RESOLUTION, up to 1024 by 1024 pixels.
- COLORS, up to 16 displayed simultaneously. For more colors parallel additional boards.
- HARDWARE DRAWING of vectors, circles, arcs, and rectangles, down to 800 nanoseconds per pixel.
- APPLE II and IBM PC bus compatible.
- OUTPUT MODULES support industry standard TTL, RGB, and Composite Video.
- LIGHT PEN interface.

STANDARD RESOLUTION (Apple IIe Compatible)..... 750.00

max no. of colors	nom-resolution interlaced	nom-resolution non-interlaced	min pixel period
4	700 x 700	500 x500	50ns
16	500 x 500	350 x 350	100 ns

More colors by ganging more boards together.

MW-GN	WORDSTAR (other systems) General—Without install and disk configuration. Can be used with all CP/M based systems.	29.95
MW-AW	WORDSTAR—Advanced Applications With MailMerge—DataStar	39.95
NUMBER PROCESSING:		
MI-CA	CALCSTAR (XEROX, Z-90 & 100)	29.95
MI-MP	MULTIPLAN (All Systems)	29.95
MI-SC	SUPERCALC	29.95
MS-01	SUPERCALC-OSBORNE	29.95
MS-82	SUPERCALC- XEROX 820-II	29.95
MS-90	SUPERCALC-Z 90 & 100	29.95
MI-VA	VISICALC-APPLE	29.95
MI-VB	VISICALC-IBM-PC	29.95
MI-VF	VISICALC-FRANKLIN	29.95
DATA BASE MANAGEMENT:		
MI-CO	CONDOR-20-1	39.95
MI-CN	CONDOR—20-2	39.95
MI-DA	DASTAR	49.95
MI-D1	dBASE II	29.95
MI-D2	dBASE II (Basic & Advanced)	39.95
MI-DM	DB MASTER	39.95
MISCELLANEOUS:		
MI-SP	SPELLGUARD	24.95
MI-SS	SUPERSORT	54.95
MI-FI	VISIFILE	29.95

These CALC-PLUS[™] programs will be released during 1983:

- Cash Flow Analysis
- Cash Flow Forecasting
- Rate of Return on Investment
- Cost-Volume-Profit Analysis

CALC-PLUS[®] ACCOUNTING SYSTEM OVERLAYS FOR USE WITH CALCSTAR[™] SUPERCALC[™] AND VISICALC

Calc-plus[™] has been designed to complement your electronic spread sheet programs, CALCSTAR, SUPERCALC or VISICALC. These accessory programs are ideal for business use wherein the user either lacks the technical training to develop such an application or simply does not have the time to do so. This service of accounting programs increases the usefulness of CalcStar, SuperCalc and VisiCalc.

P/N	DESCRIPTION	ACP
CP-AR	Accounts Receivable	39.95
CP-AP	Accounts Payable (Ledger, Vendor Accounts, Bank Balance and more)	39.95
CP-DI	Cash Disbursements Journal	29.95
CP-RI	Cash Receipts Journal	29.95
CP-PA	Payroll (Weekly, Bi-Weekly, Hourly & 941)	39.95
CP-D2	Depreciation Schedules (Double Declining Balance, Straight Line, Sum of Years, Production Output)	29.95
CP-FS	Full System (Contains all of the above, General Journal and Integrated Financial Statements	169.95

HIGH RESOLUTION 895.00

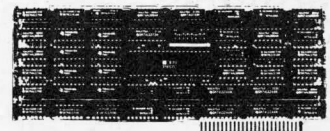
max no. of colors	nom-resolution interlaced	nom-resolution non-interlaced	min pixel period
2	1000 x 1000	—	25 ns
4	700 x 700	700 x 700	25 ns
16	500 x 500	500 x 500	50 ns

RGB MODULE..... 195.00

NTSC Composite

Video Module 145.00

6502 BOOSTER CPU



Its 3.6 MHz operation transforms the Apple II into one of the most powerful microcomputers available. With a bus cycle time of 280 nano-seconds, it matches or outperforms the best 16-bit microprocessors (2X the performance of a 4MHz Z-80).

ACP PRICE 699.00



APPLE COMPATIBLE HARDWARE

APPLE COMPUTER

APPLE IIe COMPATIBILITY?

NOTE: You must specify Apple II® or Apple IIe® on your order. Most boards are compatible but to insure that there are no problems, indicate which computer you are using. The majority of the Apple IIe compatibility problems come from the elimination Slot-O, the addition of special memory and 80 column slot, and the enhancements to the key board. Most 80 column cards still work on the Apple IIe. Lower case is no longer required. Most extended memory cards must be re-designed to work on the Apple IIe. Contact our Sales Desk if you have any questions concerning specific card and software compatibility. ACP has a list of most products and their compatibility to the Apple IIe.

ADVANCED BUSINESS TECHNOLOGY

P/N	DESCRIPTION	LIST	ACP
ABT-A1	B 13 Key Pad	\$125.00	\$119.00
ABT-A2	Bar Code Reader	195.00	179.00
ABT-A3	Softkey 15 Key Pad (Basic)	150.00	139.00
ABT-A4	Softkey 15 Key Pad (Pascal)	150.00	139.00
ABT-A5	Spare Tip for Bar Code Reader	7.00	7.00



P/N	DESCRIPTION	LIST	ACP
AMK-A1	Digital Video Multiplexor Apple II R6B I/O	\$199.00	\$169.00

CALIFORNIA COMPUTER SYSTEMS

P/N	DESCRIPTION	LIST	ACP
CCS-A1	7710 Asynchronous Serial (DCE)	\$150.00	\$135.00
CCS-A2	7711 Asynchronous Serial	150.00	135.00
CCS-A3	7720 Parallel Interface	120.00	110.00
CCS-A4	7811 Arithmetic Processor w/Disk	360.00	329.00

COPROCESSORS

P/N	DESCRIPTION	LIST	ACP
COI-A1	88 Co-Processor Card	\$899.00	\$799.00

CORONA

P/N	DESCRIPTION	LIST	ACP
CDS-AD	5 MB Starfire Winchester Disk Drive	\$2495.00	\$2129.00
CDS-AD1	10 MB Starfire Winchester Disk Drive	2995.00	2549.00

ELECTRONIC PROTECTION DEVICES

P/N	DESCRIPTION	LIST	ACP
EPD-A1	Lemon (AC Surge Protector)	\$59.95	\$49.00
EPD-A2	Lime (AC Surge Protector W/ON-OFF Switch)	89.50	75.00
EPD-A3	Orange (EMI-RFI Filtered, AC Surge Protector, W/ON-OFF Switch)	139.95	119.00
EPD-A4	Plum (EMI-RFI Filter)	49.50	0

GILTRONIX

P/N	DESCRIPTION	LIST	ACP
GTX-01	RS232 2-Way 8 Wire	119.00	99.00
GTX-02	RS232 2-Way 24 Wire	159.00	139.00
GTX-03	RS232 3-Way 8 Wire	179.00	159.00
GTX-04	RS232 3-Way 24 Wire	198.00	179.00
GTX-05	IEEE-488 2-Way	198.00	179.00
GTX-06	IEEE-488 3-Way	259.00	229.00



APPLE PRODUCTS AND MODEMS

P/N	DESCRIPTION	LIST	ACP
HMP-A1	Micromodem II-Apple II 300 Baud	\$379.00	\$299.00
HMP-A2	Smartmodem 1200 Baud Full Duplex	699.00	549.00

APPLE COMMUNICATION SOFTWARE

P/N	DESCRIPTION	LIST	ACP
HMP-A3	Smartmodem-300 Baud for RS232	\$289.00	\$249.00
HMP-A4	Micromodem 100 for S-100	399.00	339.00
HMP-A5	Chronograph (Clock) for RS232	249.00	219.00
HP-A6	Terminal Program for Micromodem II	99.00	85.00

H & L ELECTRONICS

P/N	DESCRIPTION	PRICE	ACP
HLI-A1	Game I/O Extender	\$29.95	\$26.00

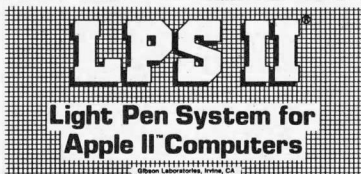


PRINTER INTERFACE MODULES

P/N	DESCRIPTION	LIST	ACP
IDS-AG-E	Epson MX-80/100	\$165.00	\$149.00
IDS-A6-11	IDS Color Prism	195.00	179.00
IDS-A6-12	Integral Data Systems 460/560	165.00	149.00
IDS-A6-N	NEC PC-8023-A	165.00	149.00
IDS-A6-O	Okidata Microline 80-83	165.00	149.00
IDS-A9	Apple II Adaptor Support Kits for I	36.00	36.00
IDS-A10	Adaptor Kits for Apple III	36.00	36.00

MICROTEK

P/N	DESCRIPTION	LIST	ACP
MTK-A1	Dumpling GX-P w/Cable	\$160.00	\$140.00
MTK-A2	Dumpling 0 Graphics in ROM	199.00	179.00
MTK-A3	Dumpling 16 w/16K Buffer	249.00	219.00
MTK-A4	Dumpling 32 w/32K Buffer	299.00	269.00
MTK-A5	Dumpling 64 w/64K Buffer	399.00	349.00
MTK-A6	64K Memory	379.00	349.00
MTK-A7	128K Memory	479.00	439.00
MTK-A8	Apple Disk Memory	529.00	419.00



M & R ENTERPRISES

P/N	DESCRIPTION	LIST	ACP
MRE-A1	Supermod II RF Modulator	\$69.95	\$49.00
MRE-A2	Apple II 80 Col Video	349.95	220.00
MRE-A3	Sup'r Switcher	295.00	229.00
MRE-A4	RGB Module Interface	79.95	69.00
MRE-A5	Sup'r Filer	189.95	129.00
MRE-I1	Supermod 5/1BM	69.95	49.00
MRE-A6	Sup'r Ran	49.95	35.00
MRE-A7	Sup'r Access NEW!	Call	Call



HARDWARE

P/N	DESCRIPTION	LIST	ACP
MSO-A1	Softcard with CP/M	\$345.00	\$249.00
MSO-A2	16K Card	99.95	89.00
MSO-A3	Premium Pak	685.00	549.00

ORANGE MICRO

P/N	DESCRIPTION	LIST	ACP
OMI-A1	Grappler Plus	\$165.00	\$139.00
OMI-A2	The Bufferboard		

PASSPORT DESIGNS

P/N	DESCRIPTION	LIST	ACP
PAD-A1	Soundchaser Digital Basic System	1190.00	\$1050.00
PAD-A2	Soundchaser Digital Complete System	1450.00	1299.00
PAD-A3	Soundchaser Keyboard with Turbo-Traks	795.00	749.00
MC-MS	Mountain Music Sys	395.00	339.00
PAD-A5	Notewriter	99.00	89.00
PAD-A6	Music Tutor	195.00	179.00

PRACTICAL PERIPHERALS, INC.

P/N	DESCRIPTION	LIST	ACP
PRP-A1	Microbuffer II (16K) Parallel Interface	\$259.00	\$229.00
PRP-A2	Microbuffer II (32K) Parallel Interface	299.00	250.00
PRP-A3	Microbuffer II (16K) NEC Parallel Interface	259.00	229.00
PRP-A4	Microbuffer II (16K) IDS Parallel Interface	259.00	229.00
PRP-A5	Microbuffer II (32K) NEC Parallel Interface	299.00	250.00
PRP-A6	Microbuffer II (32K) IDS Parallel Interface	299.00	250.00
PRP-A7	Epson Printer (8K) Serial Buffer Interface	159.00	135.00
PRP-A8	Epson Printer (16K) Parallel Buffer Interface	159.00	135.00
PRP-A9	Snapshot Option	119.00	110.00
PRP-A10	Serial Card 300/1200 Baud - Selectable Baud 32K	299.00	250.00
PRP-A11	Microbuffer In-Line Serial Stand-A-Lone Printer Buffer	299.00	250.00
PRP-A12	Microbuffer In-Line Parallel Stand-A-Lone Printer Buffer	299.00	250.00
PRP-A13	Serial Card 300/1200 Selectable Baud 16K	259.00	230.00
PRP-A14	Serial In-Line Data Buffer (64K)	349.00	299.00
PRP-A15	Parallel In-Line Data Buffer (64K)	349.00	299.00

ACP \$299⁰⁰
Price \$299⁰⁰

MOUNTAIN COMPUTER

P/N	DESCRIPTION	LIST	ACP
APPLE II APLE DISK SYSTEMS			
Apple II			
MTC-AD2	5M Byte Disk System Complete	\$2695.00	\$2299.00
MTC-AD21	10M Byte Disk System Complete	3395.00	2889.00
Apple III			
MTC-AD3	5M Byte Disk System Complete	2495.00	2129.00
MTC-AD31	10M Byte Disk System Complete	3195.00	2719.00
Apple Card Reader			
TTC-CR	Model 1100A Card Reader	1495.00	1279.00
MTC-CRA	Model 1100A Interface Kit for Apple II	199.00	169.00
MTC-CRO	14" Card Holder & Adapter	29.95	27.00
MTC-CRC	Model 1100A to Apple Serial Card	24.95	22.00
Cards (Box of 2000)			
MTC-C1	40 Column General Purpose Card		60.00
MTC-C2	80 Column General Purpose Card		60.00
MTC-C3	50 Answer Test Scoring Card		60.00
MTC-C4	100 Answer Test Scoring Card		60.00
MTC-C5	50 Answer Survey Card		60.00
MTC-C6	80 Column Mark Sense Punch Card		60.00
APPLE II APPLE INTERFACE CARDS			
MTC-AEC	Expansion Chassis	750.00	639.00
MTC-CPS	CPS MultiFunction (includes BASIC and Z-80 Softcard/Pascal diskettes)	239.00	169.00
MTC-MS	MusicSystem	395.00	339.00
MTC-CLK	The Clock (Includes BASIC and Pascal diskette)	280.00	239.00
MTC-AD	A/D + D/A	350.00	299.00
MTC-ST	Supertalker SD200	199.00	179.00
MTC-IXO	Introl/X-10	200.00	179.00
MTC-ROM	Romplus+	155.00	139.00
MTC-KB	Keyboard Filter Rom ¹	55.00	48.00
MTC-CRM	CopyRom ¹	55.00	48.00
MTC-RMW	RomWriter	175.00	159.00

PLEXA-LOK

PROTECT YOUR KEYBOARD
HIGH QUALITY CLEAR PLEXIGLASS

APPLE STAND



P/N	DESCRIPTION	ACP
LEA-A1	Plexa-lok	\$24.95



Knickerbocker



APPLE CASE

Knickerbocker has created a custom design case that snugly fits one Apple II computer and two disk drives inside. The lining is made of a firm shock-resistant foam that is covered by a plush red felt. This case is constructed with the highest quality wood and covered by tough Armorclad™ vinyl.

Outside Dimensions of the Case

Height 5 7/16" x Width 20 1/8" x Length 23 1/2"
Bottom Section 2"

P/N	DESCRIPTION	ACP
KBK-A1	Apple Case	\$119.00

ESM PRODUCTS

P/N	DESCRIPTION	LIST	ACP
SOFTWARE			
Transend 1	Electronic Mail Software	\$89.00	\$75.00
Transend 2	Electronic Mail Software	149.00	119.00
Transend 3	Electronic Mail Software	275.00	229.00
MODEMS			
AMC-300	ModemCard 110/300 Baud Auto-Dial/ Auto-Answer	299.00	249.00
MDM-1200	TransModem-1200: 110/300/1200 Auto-Dial/Auto-Answer (External Modem)	695.00	549.00
TRANSEND PACKAGES			
Transpak-1	Transend 1 + ModemCard (300 Baud)	388.00	349.00
Transpak-2	Transend 2 + ModemCard	448.00	399.00
Transpak-3	Transend 3 + ModemCard	569.00	499.00
Transpak-2 +	Transend 2 + ASIO + Modem Cable + MDM-1200	999.00	899.00
Transpak-3 +	Transend 3 + ASIO + Modem Cable + MDM-1200	1100.00	999.00
INTERFACE PACKAGES			
COMPAK-1	AIO-II + Cable + Transend 1	289.00	259.00
COMPAK-2	AIO-II + Cable + Transend 2	339.00	289.00
BOARDS			
APLTM	TimeCard - Clock	139.00	119.00
AIO-11	Four Serial/Parallel	225.00	199.00
AIO	Serial/Parallel Interface & Cables	195.00	169.00
APIC	Apple Parallel	129.00	99.00
APIO	Parallel Interface	90.00	79.00
ASIO	Serial Interface	149.00	129.00
A488	IEEE-488 Controller	475.00	429.00
AKB1	Prototyping Board		25.00
AXB1	Extender Board		29.00
APPLE III PRODUCTS			
APIO W/C02	Parallel Printer Interface, Cable, SOS-DD	139.00	119.00
ASIO	Serial Interface, SOS-DD	149.00	129.00
SOS-DD	SOS Driver: ASIO, APIO		35.00
Serial Interface Cables			
ASC-01	Interface Cable for AIO-II		20.00
ASC-02	Serial Modem Interface Cable for AIO-II & ASIO		25.00
ASC-03	Interface Cable for AIO-II & ASIO		25.00
ASC-04	Extension Cable for AIO, AIO-II, ASIO		30.00
ASC-05	72" Interface Cable for NEC Printer/ ASIO or AIO-II		25.00
Parallel Interface Cables			
APC-01	Unterminated Cable for AIO-II & APIO		15.00
APC-02	Centronics-type Cable for AIO-II & APIO		25.00
APC	Centronics 730/737/ 739 Cable for AIO-II & APIO		35.00
APC-04	IDS Printer Cable		25.00



Apple II 16K

Compatible with

Z80 Softcard™ ... PASCAL CP/M™

Full 1 year Warranty. Top Quality by COEX

NEW LOW PRICE **\$59⁹⁵**

Also from COEX NEW EPSON Parallel Interface for Apple.

With cable..... **\$39.95**

PROMETHEUS

INTERFACE MODULES

P/N	DESCRIPTION	LIST	ACP
PRO-A1	Versacard (VCD)	\$199.00	\$149.00
PRO-A2	Graffiti Card (Epson 80/100)	125.00	99.00
PRO-A3	Graffiti Card (NEC-8023 C-10th Pro Writer)	125.00	99.00
PRO-A4	Graffiti Card (Okidata)	125.00	99.00
PRO-A5	Parallel Card w/Cable	99.00	85.00
PRO-A6	Disk Controller Card	Call	Call
PRO-A7	Hard Disk Drive	Call	Call

SOFTWORKS, INC.

P/N	DESCRIPTION	LIST	ACP
SWI-A1	Remote Operating System (ROS) Starter Pack (1 Central Board, 2 Remote, Software, & Cables)	\$640.00	\$549.00
SWI-A2	STOCK-PAC	110.00	99.00
SWI-A3	COMM-PAC	85.00	75.00

SOUTH COAST ENTERPRISES

APPLE II ACCESSORIES

P/N	DESCRIPTION	LIST	ACP
SCE-A1	Plexiglass Cover for Apple II	\$24.95	\$21.99
SCE-A2	Dust Cover for Apple II	9.95	8.99
SCE-A3	Dust Cover Disk Drive	5.95	5.95
SCE-A4	Dust Cover - Apple & 2 Drives	13.95	12.99
SCE-A5	Dust Cover - Business Combo	15.95	14.99
SCE-A6	Apple II Dual Disk Cover	7.95	6.99
SCE-A7	Apple III Computer Cover	13.95	12.99
SCE-A8	Apple II W/Nec 12" Cover	13.95	12.99

FOR NON APPLE COVERS SEE ... ACCESSORIES

SATURN SYSTEMS INC.

P/N	DESCRIPTION	LIST	ACP
SAT-A1	32K Ramcard	\$219.00	\$179.00
SAT-A2	64K Ramcard	349.00	\$289.00
SAT-A3	128K Ramcard	499.00	439.00
SAT-A4	VC-Expand Software	69.00	59.00
SAT-A5	VC-Expand/80 S/W	89.00	79.00
SAT-A6	VC-80 Software	49.00	44.00
SAT-A7	Pascal Option S/W	39.00	35.00
SAT-A8	CP/M Option S/W	39.00	35.00
SAT-A9	VC-Expand 80/Nestar	400.00	339.00

SIGNALMAN MODEMS

P/N	DESCRIPTION	LIST	ACP
SMM-A1	Mark I Direct Connect Connect 300 Baud RS232 (req. Comm. Card or Super Serial)	\$99.50	\$89.00



P/N	DESCRIPTION	LIST	ACP
STR-A1	4K Serial Board	\$85.00	\$69.00

T G PRODUCTS

APPLE ACCESSORIES

P/N	DESCRIPTION	LIST	ACP
TGP-A1	Game Paddles	\$39.95	\$21.95
TGP-A2	Joy Stick	59.95	49.00
TGP-A3	Select A Port	59.95	49.00

Apple II™ is a trademark of Apple Computer, Inc.
Softcard™ is trademark of Microsoft Consumer Products



APPLE COMPATIBLE HARDWARE

VOICE MACHINE COMMUNICATIONS

NEW!

State-of-the-art Voice Recognition. 98% perf Developed at major technology corporation.



This is an exciting and practical new product for use on your Apple II® computer. No longer must you be tied to your keyboard as you now have freedom to speak to your computer. The intelligent Voice Input Module, VIM, allows anybody to speak isolated words or phrases to their computer and have it respond in digital form. The VIM converts spoken words to commands for your application program.

P/N	DESCRIPTION	LIST	ACP
VIM-A1	Voice Input Module	\$749.00	\$640.00
VIM-A1	Above w/higher quality microphone	825.00	695.00

VOTRAX TYPE-'N-TALK

P/N	DESCRIPTION	LIST	ACP
VTX-AT	Type-'N-Talk	\$249.00	\$174.00
VTX-AP	Personal System	395.00	339.00

IC SPECIAL!

The Votrax uses their popular SC-01 Speech Synthesizer Chip. You can purchase the IC for only **\$44.95**



VYNET CORPORATION

"giving the personal computer a VOICE"

P/N	DESCRIPTION	LIST	ACP
VNC-A1	Apple II Interactive Voice Synthesizer	\$395.00	\$349.00
VNC-A2	Apple II Interactive Telephone Interface	295.00	249.00
VNC-A3	300 Word LPC Vocabulary and Phrase Editor for Apple CP/M, Apple PASCAL, or CP/M-86	35.00	35.00
VNC-A4	1300 Word LPC Vocabulary for Applesoft, Apple CP/M, Apple PASCAL, IBM MSDOS, or CP/M-86	495.00	439.00

- FCC-certified direct interface to telephone network via modular jack
- Automatically answers telephone calls
- Dials and detect Touch-Tone® signals
- Allows transfer of information from computer by synthesized voice
- Fully interactive, under user program control
- Polled or interrupt operation
- Selection of 300- or 1300-word LPC vocabulary

ALO ON IBMPC



Strawberry Tree Computers

DUAL THERMOMETER CARD



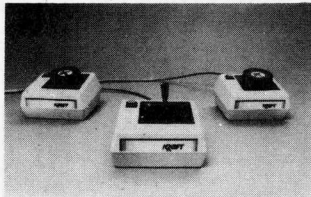
- Accuracy: + 0.4 degrees C from -20 to 50 degrees C (-4 to 122 degrees F).
- - 1.0 degrees C from -50 to -20 and 50 to 100 degrees C (-58 to -4 and 122 to 212 degrees F).
- Repeatability: - 0.1 degrees C.

P/N	DESCRIPTION	LIST	ACP
STC-A1	Dual Thermometer	\$260.00	\$239.00
STC-A2	New Expander	330.00	299.00

*Connect 9 temp probes reading 9 temp. Probes are separate \$49.00/pair & Connectors for Relay Outputs \$5.00/pair.

KRAFT

THE INDUSTRY STANDARD! NO ONE SHOULD HAVE ANOTHER TYPE JOYSTICK!



FEATURES

- Dual-Axis Trim Control
- Flat Fire Button
- Linear Potentiometers
- Rugged Case
- Patented Gimbal Mechanism

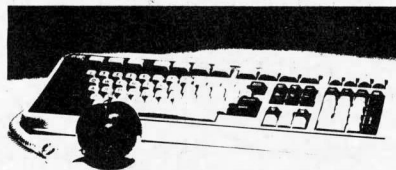
P/N	DESCRIPTION	LIST	ACP
KJS-A1	Apple II	\$64.95	\$49.00
KJS-I1	IBM PC	69.95	54.00
KJS-T2	TRS-80	69.95	49.00
KJS-AP	Paddles Apple	49.95	39.00
KJS-IP	Paddles IBM	49.95	39.00

• Mode Selection

Recessed toggle switches on the bottom of the case let you instantly select "spring-centering" and "free-floating" modes on either axis. Eliminates the need to open case for changing stick mode. (For mode change, hold stick to corner.)

ONE YEAR LIMITED WARRANTY

EPS



Gives Apple II® Owners A Choice!

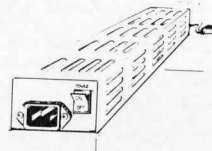
A Full Function, Detachable Keyboard for the Apple® Computer!

P/N	DESCRIPTION	LIST	ACP
EPS-AKB	Apple Keyboard	\$399.00	\$339.00

Upgrade Your Apple Power Supply

- Accupower Switcher
- 7 Amps @ + 5 Volts
- Removable on-off switch
- One year limited warranty

- #1 +5V 7 Amps max.
- #2 +12V 4 Amps max.
- #3 -12V 1 Amp max.
- #4 -5V 1 Amp max.



P/N	DESCRIPTION	LIST	ACP
APR-APS	Apple Power Supply	\$295.00	\$249.00

MicroStand

INTRODUCING The MicroStand



Sturdy steel construction Matching Apple™ beige color & texture 16"x9"x9"
Large ventilation slots
Shipping Weight 9 lbs.
Microstand II for Apple II **\$44.95**
Microstand 2.2 (RH Fan Comp.) **\$44.95**
Microbridge Printer 80001 Stand **\$26.95**
Microbridge 132 Col. Printer **\$34.95**
Copy Stand **\$19.95**

RH ELECTRONICS, INC.

SUPERFAN II



(2) extra 120V outlets. Fits on Apple Monitor Stand!

P/N	DESCRIPTION	LIST	ACP
RHE-SF	Super Fan	\$ 74.95	\$ 63.95
RHE-SF1	Super Fan (w/transient sup.)	109.00	90.00
RHE-GA	Guardian Angel Uninterruptable Power Source	595.00	535.00

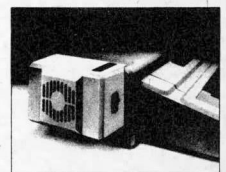
12 VOLT SUPPLY

Runs from your cigarette lighter!

P/N	DESCRIPTION	LIST	ACP
RHE-VT	12V Transverter	\$149.00	\$139.00

KENSINGTON MICROWARE

SYSTEM SAVER Compatible with



P/N	DESCRIPTION	LIST	ACP
KMW	System Saver	\$89.25	\$74.95

NEW!

Byte Box®

Now you can enclose your Apple II in an attractive case. Open it and shut it. Great for office environments.



Now you can enclose your Apple II in an attractive case. Open it and shut it. Great for office environments.

Complete with Cooling Fan and Surge Suppression.

P/N	DESCRIPTION	LIST	ACP
KT-BB/X	Byte Box	\$289.00	\$259.00
KT-BB/Y	Byte Box (Wood)	314.00	274.00

To order:

X = Color 1 = Almond 2 = Gold 3 = Avocado
4 = Red 5 = Blue 6 = Saddle Brown 7 = Black Y = Wood
8 = Oak 9 = Teak 9A = Walnut

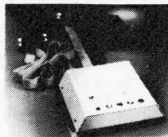


APPLE COMPATIBLE HARDWARE



INTERACTIVE STRUCTURES

IS PipeLine™



P/N	DESCRIPTION	LIST	ACP
IDS-A1	102 16-Ch 8-Bit A/D	\$299.00	\$269.00
IDS-A2	A113 16-Ch 12-Bit A/D	550.00	499.00
IDS-A3	A003 8-Bit D/A, or 8 Ch	437.00	339.00
IDS-A4	D109 32-Line Digital Interface	330.00	299.00
IDS-A5	PL12 Plotting Sys	1250.00	999.00
IDS-A6	PKASO Printer Interface	165.00	139.00
IDS-A7	SC14 Signal Cond 16 Ch	440.00	399.00
IDS-A8	U116 Isolated Dig Inter 16 Ch	155.00	139.00
IDS-A13	PLU-64K Universal Buffer (any Parallel Centronics)	328.00	289.00
IDS-A14	PLU-128K (above w/128K)	440.00	399.00
IDS-A15	PLP-64 Same as PLU but Direct Conn to PKASO I/O	293.00	279.00
IDS-A16	PLP-128 (above w/128K)	405.00	379.00



COMPU-HOME

"INDUSTRIAL & HOME APPLICATIONS"

- In most states, purchase of an Apple Computer with this system qualifies you for up to 40% in ENERGY TAX CREDITS.
- If you incorporate this control system with solar equipment, you can realize additional tax credits.
- Contact your tax advisor for complete details on tax savings.

FEDERAL TAX CREDIT

- Owners or Renters
- Credit for energy consideration - 15% of first \$2000.00, \$300.00 max.

CALIFORNIA STATE TAX CREDIT

- Residential Properties
- Combined State & Federal tax credit not to exceed 40% of the cost. State credit must be reduced to obtain this result.
- Non Residential Properties - the State credit must be reduced by amount of State credit. (For exact tax impact, consult your Tax Accountant)

P/N	DESCRIPTION	LIST	ACP
CHS-ATH	Tomorrow Home	\$900.00*	\$799.00

Requires BSRX-10 Modules, Thunderclock W/BSR Option, ECHO Speechcard.

BI-COMM SYSTEMS

HOME SYSTEM

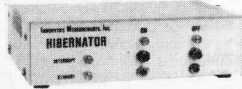
- On board **directional carrier communications** interface
 - Carrier frequency: 121 KHz
 - Modulation: AM
- On board **real time clock**
 - CMOS
 - Time accuracy: +30 sec./mo.
 - Lithium battery backup: 2 yrs.
 - Battery shelf life: 10 yrs.
- Interrupts
 - Switch or software selectable: 1 hr., 1 min., 1 sec., 1024 Hz clock; receiver interrupt

P/N	DESCRIPTION	LIST	ACP
BCS-PC-1	Powerline Controller BSRX-10 Options Available	\$295.95	\$249.95

IMI INNOVATIVE MEASUREMENT, INC.

NEW REVOLUTIONARY CONVENIENCE PRODUCT ALLOWING YOUR APPLE TO TURN ITSELF OFF & ON!

- Apple Wake-Up
- Burglar Alarm
- Off-Site Operation



HIBERNATOR

Numerous Application areas now open up to the user, ranging from using a Computer as an intelligent burglar/fire alarm (booting up at a switch closure to **The Hibernator**) to an Apple based industrial data logging system where readings are remotely taken twice per day. Controlled by **The IMI RealClock**, the **IMI Hibernator** is turned on, causing the Apple to boot up and turn off at the program-controlled times. This results in the power being on for only minutes each day, helps prevent overheating problems, and conserves energy. Please specify on your order Apple II or Apple IIE.

P/N	DESCRIPTION	LIST	ACP
IMI-AH	Hibernator	\$95.00	\$85.00
IMI-AC	Real Time Clock	190.00	175.00



APPLE COMPUTER LITERACY COMPUTER LEARNING

- What each key does
- How to use the essential commands
- How to load and run a program
- How to save programs and data
- How to prepare diskettes for use
- How to copy a diskette or a program
- How to protect your program
- How to use your computer as a super-calculator
- And much more!

We recommend the Flip Track Training Tapes system for those who need to learn the operation of the Apple II Plus computer. The system allows a student to learn at his own pace. The teacher is relieved of time-wasting repetition of basics that are a characteristic of any fundamentals course.

Required equipment includes an Apple II Plus system, one disk drive, and a standard cassette player. Price is \$49.95.

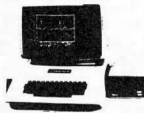


P/N	DESCRIPTION	ACP
FLS-ATI	Apple Training Tape	\$49.95

R.C. ELECTRONICS, INC. APPLESCOPE

All Applescope hardware units contain:

- Analog to Digital Converter
- Direct Memory Access Controller
- Buffer Memory
- Programmable Timing Logic
- External Trigger Capability
- Programmable Triggering Logic
- BNC Input Connector
- Programmable Pretrigger Logic



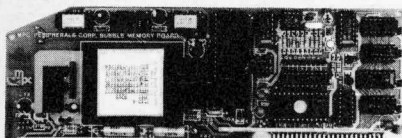
TURN YOUR APPLE INTO A SCOPE.

The APPLESCOPE-D2 is our standard 8 bit dual channel system for general laboratory use. It is a two board unit connected by a twenty pin flex circuit which plugs directly into any two of the Apple or Franklin peripheral expansion slots. D2's maximum single channel data acquisition rate is 3.5 Million samples per second (1.75 Mhz. in the dual channel mode) with a 1024 sample buffer memory.

The APPLESCOPE-HR12 is our 14 bit single channel system featuring 12 bit absolute accuracy. It is a single board unit for use where high resolution and high speed date acquisition is a necessity. The HR-12 has a 2048 sample buffer memory with a maximum data acquisition rate of 1 Million samples per second. From one to four HR-12 units may be combined for a high performance multichannel data acquisition system.

P/N	DESCRIPTION	LIST	ACP
RCE-AS	APPLESCOPE-D2 (two board dual channel system)	\$695.00	\$665.00
RCE-HR	APPLESCOPE HR-12	695.00	665.00
RCE-L1	SCOPE DRIVE LIBRARY (includes first year of Library Service)	345.00	325.00
RCE-L2	SCOPE DRIVER LIBRARY UPDATE	195.00	185.00
RCE-SP	SCOPE PROBES	45.00	42.00

MPC PERIPHERALS



BUBBLE MEMORY

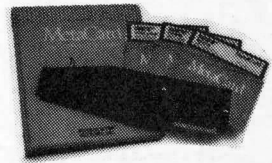
"ULTIMATE MEMORY CARD"

128K of NON VOLATILE MEMORY complete with Disk Emulator. No loss of data. Take your data to and from the office and not miss a bit.

P/N	DESCRIPTION	LIST	ACP
MPC-BD	BUBDISK 128K	\$875.00	\$699.00

MetaCard

FIRE UP YOUR APPLE WITH 8088 CARD!



MetaCard will turn your Apple II personal computer into tomorrow's high performance machine. It triples the memory of your Apple, and at the same time, greatly increases the processing speed with an Intel 8088 16-bit microprocessor. The future for your Apple is built into MetaCard.

8088 Operates at 5 MHz
CP/M-86 included
UCSD Pascal also available
Requires 64K

P/N	DESCRIPTION	LIST	ACP
MSI-MC	MetaCard	\$980.00	\$865.00

Just want a 8088 IC? Its in the Microprocessor Section in front part of this Catalog.

als CP/M 3.0 CARD BREAKTHROUGH

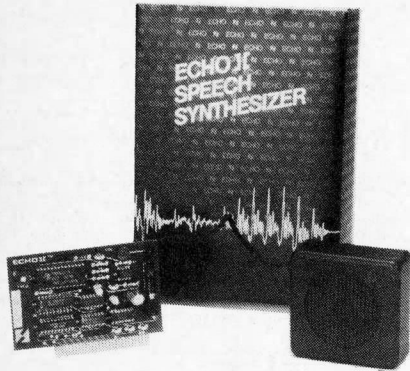
The CP/M CARD™ is an interface to add the complete hardware and software to operate the latest, most powerful version of CP/M® on your Apple II or Apple II Plus®. CP/M (Control Program for Microprocessors) is the most popular operating system for Z-80™-based computer systems.

P/N	DESCRIPTION	LIST	ACP
CP/M Operating System			
ALS-CM	The CP/M Card	\$399.00	\$319.00
ALS-Z	Z-Card	169.00	149.00
Video Interface Cards			
ALS-ST	Smarterm II	179.00	159.00
ALS-CV	Dirt Cheap Video	89.00	77.00
ALS-CII	Color II	179.00	149.00
Other Interface Cards			
ALS-DC	Printer	139.00	99.00
ALS-PC	PrinterMate	99.00	69.00
Integrated Hardware & Software Packages			
ALS-SP	Synergizer	750.00	599.00
ALS-CW	CP/M CARD + WordStar	695.00	579.00
ALS-CS	CP/M Card + SuperCalc	625.00	568.00
ALS-CD	CP/M Card + Condor	625.00	568.00

SPEECH SYNTHESIZERS

STREET ELECTRONICS

ECHO II™ SPEECH SYNTHESIZER



With the ECHO II speech synthesizer whatever you type on the keyboard, your Apple computer can say. The ECHO's text-to-speech system gives your computer an unlimited vocabulary while using a minimum of memory. And now a diskette of fixed, natural-sounding words is available to enhance the ECHO II's voice output.

Nearly 400 language rules are contained in the ECHO's text-to-speech algorithm. These rules enable the computer to pronounce most correctly spelled words. The user can select any of 63 different pitch levels, and have words spoken either monotonically or with intonation by using simple control character sequences. The rate of speech can be fast or slow; words can be spoken in their entirety or spelled letter by letter. The ECHO also pronounces punctuation and numbers. Adding speech to your programs is as simple as adding print statements to those words, phrases, and sentences requiring voice output.

An ECHO-PC plug-in card for the IBM-PC is also available.

ACP PRICE.....\$149.95

Voice Machine Communications Inc. VOICE INPUT MODULE for Apple II®



DESCRIPTION

The VIM converts spoken words to commands or data for your application programs. The Voice Input Module has unexcelled spoken word recognition accuracy at an unmatched price.

FEATURES

No application programming necessary • Near perfect recognition 98%+ • Unlimited vocabulary using eighty word/phrase subsets • Recognizes anybody's voice • Multi-lingual recognition • Allows simultaneous input of voice and keyboard

APPLICATIONS

The VIM is designed to add voice input to ANY existing APPLE II application: • Word processing • Data input and retrieval • Education • Business • Graphics • Industrial automation • Programming • Measurement, inspection and testing • Control systems • Games and entertainment • Aid for handicapped

VIM FOR APPLE II CONTAINS:

Voice Input Module 2020C with: • 16 channel audio spectrum analyzer • 6803 high speed micro-computer • 8K bytes of RAM, 4K bytes of ROM

Voice Utility Diskette with: • Vocabulary builder/editor • Recognition software • Prompting vocabulary trainer • Vocabulary tester

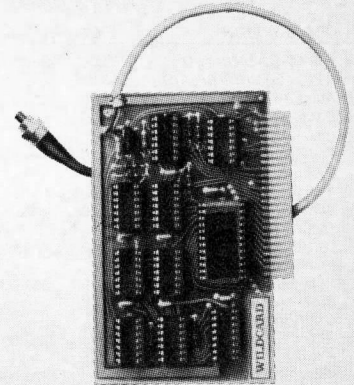
Microphone, users manual, cables and connectors.

ACP PRICE.....\$749.00

DESIGN HARDWARE

WILDCARD

MAKES BACK-UP COPIES OF PROTECTED SOFTWARE QUICKLY, EASILY, WITH JUST A PUSH OF A BUTTON.



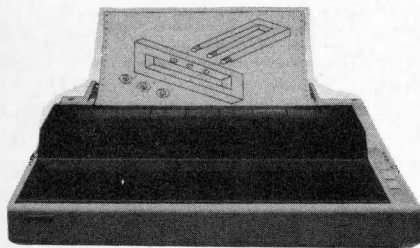
New software locking schemes have rendered even the latest generation of copy programs virtually unusable. Locksmith™, Nibbles Away™ and other "Nibble copiers" require complicated parameter settings, much patience and great effort to use. More often than not, the results are disappointing. WILDCARD is different. Rather than copying disks track by track, WILDCARD ignores the disk and any copy protection encrypted on it. Instead, WILDCARD takes a snapshot of memory in your Apple® II. Now you can make back-up copies of protected software with the push of a button.

ACP PRICE **\$115.00**

Features

- Hardware copying device ... push button operation.
 - Copies ALL* 48K memory resident software, most 64K software.
 - No Parameters are necessary.
 - WILDCARD lives in any slot.
 - WILDCARD is undetectable by software.
 - Produces autobooting disk in 2 minutes.
 - Copies become accessible for alterations.
 - Copies are DOS 3.3 compatible.
 - Software and utilities included.
- System requirements: Apple II Plus with 64K and DOS 3.3.
*Wildcard does not operate with CP/M® or other micro-processor based software.

The Grappler™ + Printer Interface



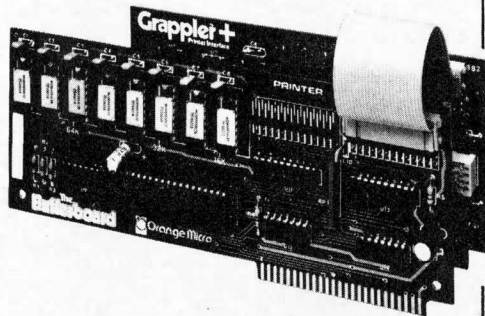
The Grappler+ works with the following printers:

- Anadex • Centronix • C.ltoh Pro-Writer • Datasouth DS-180 • Epson® MX70, MX-80, MX-80-FT, MX-100 • NEC 8023 • Okidata® 82A, 83A • And Future Printers.

The Bufferboard is used in conjunction with most all printer interface boards, including the Grappler®/Grappler+® Interface, and Apple printer interface. Installing the Bufferboard is made easy by the Bufferboard's unique Interface Docking System. In 30 seconds the Bufferboard fits right into your Apple and "docks" onto your printer interface. A single hook-up is all that's required; no bulky or expensive power supplies are needed.

ACP PRICE.....\$149.00

The Bufferboard™



All Bufferboard features are controlled by its own unique on-board micro controller, including the Bufferboard's automatic memory configuration. This feature eliminates the need to change switch settings when additional chips are installed. Also, the Bufferboard is equipped with its own built-in RAM Diagnostic Self Test, which alerts the user of any abnormal conditions related to the memory chips.

The Bufferboard. The most convenient and economical way available to add buffering to your current Apple system. Give your Apple the freedom to reach its full computing potential. Give your Apple the Bufferboard.

ACP PRICE.....\$159.00

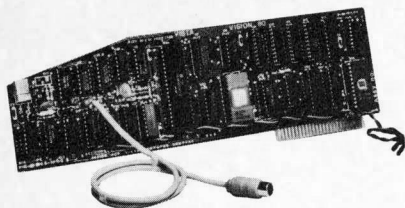
LEGEND

regarding Apple II's compatibility

The 128KDE and 69KC will work with factory modification. Please let us know whether your going to use your product in Apple II, Apple IIe, Franklin, or etc. As of this catalog 80 column IIe capabilities cannot be used but they are soon to resolve the problem. Don't forget Legend were the guys that first invented extended memory for the Apple II.

P/N	DESCRIPTION	LIST	ACP
64KC	64K RAM II/IIe	327.00	269.00
128KC	128K RAM II/IIe	599.00	499.00
18SRC	18K Static w/backup	149.95	134.95
SLOT8	Add'l Slot II/IIe	64.95	59.95
SLOT8EXS	External Switch	34.95	31.95
SOFT8	Slot 8 Board plus DOS Modification	84.95	76.95
PASCAL SUPER SYS inc.			
	128K +Stellation 6809 Card & Software		
CPM Fast Disk	Fast Ram Disk	69.95	62.95
Disk Emulator	Fast Disk Access	34.95	29.95
Memory Mgr.	64K Manager	34.95	29.95
VC PLUS	ext. Visicalc™	34.95	29.95

VISION 80[®] Video Display Card



- Full upper and lower case character capability with 3 dot descenders
- 9x10 dot matrix per line U.S. (9x11 Europe)
- 128 ASCII character set
- BASIC, FORTRAN and Pascal languages supported
- Z80™ and CP/M™ compatible
- Compatible with all standard Apple™ peripherals
- Shift and lock for upper and lower case
- Source switches between 40x24 and 80x24 software and hardware
- Rated #1 video card by **Softalk** and **Call Apple**

MODEL 150[®] Type Ahead Buffer



- Up to 40 character type ahead capability
- Enter commands or data while your Apple is processing previous instructions
- Compatible with all Apple computers, keyboards and software
- No cuts — no jumpers — no software patches required
- Includes complete instructions for quick and easy installation

NEW APPLE III PRINTER CARD III

The bustronix PrinterCard III allows parallel printers to be used with the Apple III. It comes with software to print both text and graphics. Please call for pricing.

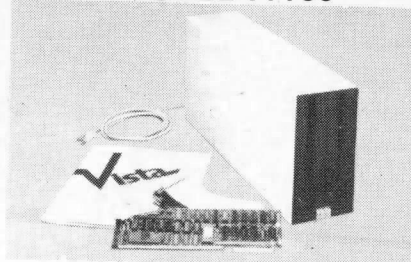
8" FLOPPY FOR APPLE III

Vista has just released new 8" Floppy subsystem for the Apple III Computer. Uses the Thinline V-1100 Disk Drives.

VISTA PRICING

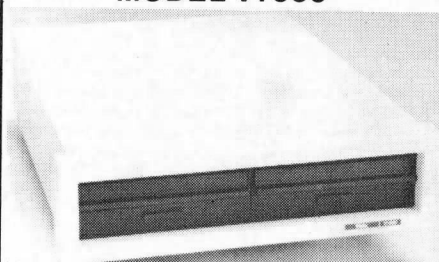
P/N	DESCRIPTION	ACP PRICE
3101	Solo 5 1/4" Disk Drive	249.95
3111	Solo w/ Controller	329.95
3401	Quartet w/Controller	779.00
1810S	V1000 w/SS drives (Siemens)	SALE 999.00
1810	above w/ Shugart 801R	
1820	V1000 w/ Qume DS, DD	1599.00
1830	V1100 w/ Tandon DS, DD	1899.00
1840	V1200 w/6Mb cartridge	1299.00
0158	A800 8" Controller	339.00
0159	A801 6Mb cart. Controller	339.00
0101	Apple III Timecard	SALE 99.00
0101X	APPLE III 8" Floppy Controller	CALL
0101P	APPLE III PrinterCard III	CALL
0194	Keyboard Buffercard	34.95
0100	GN/75 IBM Interface	159.00
0180	Vision 80 80 columns	199.00
0102	Vision 20 Lower case	20.00
0104	Vision 40 Softscreen	99.00

MODEL V1100



Slim and refined, the Vista TRIMLINE V1100 8" floppy subsystem is ideal for O.E.M. Office and home computers. The space saver is the answer — 2.4 MB of storage in the same space as 1.2 MB. It can be placed vertically or horizontally, whichever the space allows.

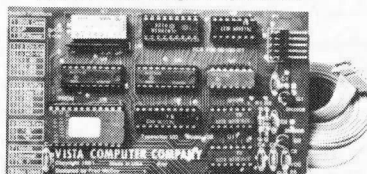
MODEL V1000



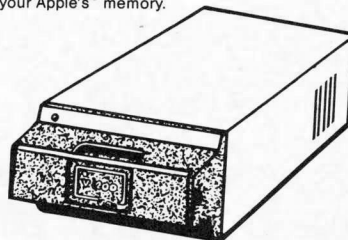
FEATURES:

- High Performance Power Supply Features $\pm 5\%$ Regulation, Low Output Ripple Control, and Over-Voltage Protection.
- Houses One or Two Eight-Inch Single or Double-Sided Disk Drive Units.
- Compatible with TRS-80™ Model II, Apple II™ and most popular S100 Based Microcomputer Systems.
- On-Line Floppy Disk Storage Capacity from 250 Kilobytes to 2.5 Megabytes.

GB-75 IBM TYPEWRITER INTERFACE CARD



Vista's answer to the printer problem. Use your IBM Selectric II™ Model 50, 60 or 75. It will double as both a line printer, and an input terminal. It also has speed. Nearly 13 characters per second. Switch selectable upper/lower case input and output. 60, 66, 78 continuous form-feed page lengths. By using the IBM keyboard, you can have 40 thru 132 column character readouts, as well as full utilization of your Apple's™ memory.



V1200

Now hard disk storage and speed can be yours with the added capability of interchangeable media. The V1200 eliminates the worries of head crashes, drive alignments, lost data, or backup with a new application of field-proven floppy technology.

The removable VistaPak cartridges offer 6 Megabytes of removable storage each and can be backed up like a floppy.

The VistaPak cartridges hold 6MB of formatted data each. The removable cartridge allows you to keep duplicates of your valuable data as well as to keep separate paks for your accounting, wordprocessing, spreadsheet and other applications. No other storage device offers more in flexibility and capability.

VISTA QUARTET



The Quartet system is the COMPLETE, one-stop solution to your storage requirements on the Apple or Apple Compatible Computer. No other two-drive package offers as much value at any price. And the Quartet offers all this with a price comparable to single drive, single sided systems.

Features:

- Thinline Drives for low profile
- 2 Double Sided Drives for 640K Storage
- Quartet Controller for Single/Double Sided Operation
- Emulates Apple Disk II under a single sided mode
- Boots & Runs All Apple Software
- Double Sided 40 Track Patch software for DOS, CP/M™ & Pascal
- Full Vista 120 Day Warranty

\$779.00

VISTA SOLO



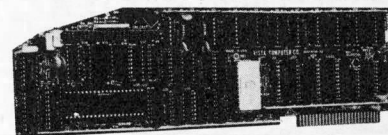
The Vista Solo incorporates the proven reliability of the Shugart™ 5 1/4" Drive. To date Shugart has over one million units in operation throughout the world. Solo is also available as the Solo Plus, which comes with the Solo Controller. The pair give you total compatibility with Apple Hardware and Software.

Features:

- Shugart Drive
- Totally Compatible
- Cost Effective
- 35 Track Compatible Drive
- 143K Storage
- Full Vista 120 Day Warranty

\$249.95

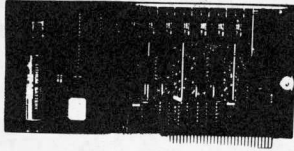
MODEL A800[®] Double Density 8" Controller



- High speed DMA transfer of data (1 micro-second/byte)
- Complete documentation provided — includes theory of operation, source code for DOS enhancement utilities, schematics and diskette
- Uses all standard Apple DOS commands (OPEN, CATALOG, LOCK, DELETE, LOAD, etc.) except for INIT which has been improved and enhanced in a Vista format routine
- Compatible with Apple DOS 3.2/3.3, Pascal 1.1 and CPM 2.2 (with the Z80 soft card by Microsoft)
- 2K x 8 PROM contains Autoboot functions and all eight-inch floppy driver code allowing complete compatibility with Apple DOS 3.2/3.3

IBM COMPATIBLE ADD-IN CARDS

Z-80 FOR IBM PC

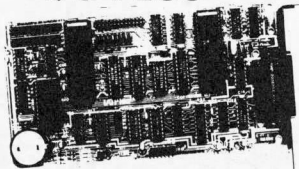


- Fully integrated CP/M system - version 2.2
- 64 K on-board RAM doubles as printer buffer
- Battery backup real time calendar clock
- Concurrent 5 MHz Z80 processor increases throughput
- Supports all standard IBM Personal Computer peripherals

This concurrent processor from I.D.S. opens you up to the immense library of CP/M software. Now, you can turn your IBM PC into the most sophisticated word processing system, write programs in any high level languages or play Chess or Adventure games. Not only that, under normal IBM PC operation, this processor card performs as a 64 K printer buffer hence freeing your IBM from laborous printing tasks.

P/N	Description	List	ACP
IDS-Z80	Z80 CARD IBM		

AST I/O PLUS



KEY FEATURES: • Total of 4 features (1) Clock Calendar (std.); (2) Serial Port -1 (std.); (3) Optional Parallel Printer Port; (4) Optional Serial Port -2 • All ports are compatible with IBM PC software • Option ports are userfield ungradeable and upgrade kits are available • Clock Calendar features Lithium Battery-Back-Up • Printer Port is configurable as LPT1, LPT2 • Serial Ports are configurable as COM1, COM 2 • Serial Port -2 provides both DCE & DTE outputs.

MODEL NUMBER

IO - YY

IO= I/O Plus with standard
 1 Serial port & 1 Clock calendar
 YY: S=Serial option
 P=Printer option
 SP=Both S & P

P/N	DESCRIPTION	LIST	ACP
I/O-XX	I/O W/Serial, Clock	\$165.00	\$129.00
I/O-S	Additional Serial Port	215.00	169.00
I/O-P	Additional Parallel Port	215.00	169.00
I/O-SP	Add'l Serial & Parallel	265.00	209.00

VISTA PC DISK MASTER



Works with 5 1/4" mini floppies, 8" standard floppies, and 5 1/4" cartridge disks.

ACP Price \$299.00

ABM TELEPHONE RECEPTIONIST ADAPTER

The telephone receptionist adapter connects directly into a modular phone jack and provides a fully featured 300/1200 baud Bell 103/202 compatible modem with auto dial and auto answer. A voice synthesis unit and touch tone decoder provide interfaces for automatic telephone answering and remote data input. Audio and control outputs enable the IBM PC to function as a telephone answering machine. Configurable.

ABM-TR	Telephone Adapter	875.00
--------	-------------------	--------

BSRX-10 CONTROL MODULE

This integrated module plugs into the DIN cassette connector of the IBM Personal Computer and provides full remote control of 256 BSR appliance or switch modules and comes with sample software listing.

ABM-BSR	BSR X-10	85.00
---------	----------	-------

COLOR TO MONOCHROME INTERFACE CABLE MODULE



Plugging conveniently between the IBM monochrome display and the RGB connector of the IBM color graphics adapter, this integrated, module gives you the capability to use all the graphics and character line features of the IBM color graphics adapter with IBM monochrome display.

ABM-CM	Color to Monochrome	89.00
--------	---------------------	-------

MORE PRODUCTS FROM ABM 3270/BSC & 3270/SNA/SDLC COMMUNICATIONS

P/N	Description	ACP
PS-3276/BSC	Control Unit Display Station and 3287-2 Printer Emulation	1149.00
PC-3276/SNA/SDLC	W/Printer (LV2/LV3) Emulation	1699.00
PC-3276/BSC/SNA SDLC	Combined Emulation	1699.00
PS 3274-51C/BSC	Adds 3274-51C Control Unit	649.00
PS3274-51C/SNA SDLC	Adds LVC Control Unit	649.00
PD3276/BSC & PD-3276/SNA/SDLC	Batch disc emulation upgrade	140.00
PS-GCA	Z80B Card with 64K (4) Serial Ports (1) Parallel (8) Programmable Timers	899.00
ABM-DS	Disk Soner Program Utility to create back-up Copies of most protected software diskettes. Ultimate protection for your valuable software	45.00
ABM-PS1	Pascal Graphics Library	89.00
ABM-PSL	Pascal Support Library	45.00

NEW PRODUCTS AST PC DISK+™

Hard Disk Host Adapter to Tallgrass and Corvus (others currently being added) 64-256K on-board memory (1) one Asynchronous Port

P/N	Description	ACP Price
MD-064	Disk+w/64K	479.00
MD-256	Disk+w/256K	899.00

CONNECTALL™

AST Designed modular connector block fits on back plane of P.C. provides 4 connector I/O's and a gameport.

CN-OA	Connectall	24.95
-------	------------	-------

ADVANCE COMMUNICATION PRODUCTS

AST-3780 Emulation Pkg. Supports IBM Bisync and SDLC and HDLC. Supports 3780 remote work station (req. CC-232 interface)

P/N	Description	ACP Price
AST-3780	3780 Emulator	799.00
CC-232	Dual RS232 Port	249.00

AST-3270 Emulation Pkg. SNA Emulation Package for IBM 3270. Comes with CC-332 Interface.

P/N	Description	ACP Price
AST-3270	3270 Emulator	749.00

OTHER AST PRODUCTS

WW-070	Wire wrap card	89.95
WW-069	Extender card	49.95
WW-068	Wire wrap card	69.95
AST-SD	Superdrive™	39.95
AST-SS	Superspool™	39.95
AST-MEM	Memory Diagnostics	14.95

VISTA PC MASTER High Level Multifunction I/O



The PC Master represents the highest level of Multifunction I/O available for the IBM PC at any price.

The PC Master features a Hard Disk Host Adaptor. When used in conjunction with a SASI Interface Board, such as the Xebec, it will interface the IBM PC to any Seagate-Compatible Hard Disk Drive.

FEATURES

- 2 RS-232 Serial Ports • Primary Serial Port configurable as DTE or DCE • 1 Parallel Printer Port (IBM Compatible) • Fully Compatible Joystick Port • Real Time Calendar/Clock • Auto-Recharge Nicad option • Votrax Speech Synthesis System • Built-in 2 Watt Amplifier • Built-in Hard Disk Host Adaptor (SASI Compatible) • Xebec & Seagate Compatible

ACP Price \$459.00

NEW FROM MAYNARD HARVEST™ MODULES

Maynard Electronics has just released their line of new Harvest Modules allowing you to construct your own optimum card. Several additional Modules are in-design and will be released at a later date.

HARVEST CARDS

P/N	Description	ACP
MAY-HMC	Multifunction Card. Plain board with space for up to 6 Harvest Modules	Call
MAY-HFC	5 1/4" / 8" Disk Controller with space for 3 Harvest Modules.	Call
MAY-HMM	Memory Card exp to 516K (up to 3 Modules)	Call

HARVEST MODULES (partial listing)

P/N	Description	ACP
MAY-MP	Parallel Port Module	Call
MAY-MS	Serial Port Module	Call
MAY-MC	Clock Calendar Module	Call
MAY-MG	Game Port Adapter Module	Call
MAY-MM	Memory Module (for Memory Card only)	Call

5 1/4" Disk Controllers

P/N	Description	ACP
MAY-FDC	5 1/4" Disk Controller	189.00
MAY-FSP	Controller w/Serial	260.00
MAY-FPP	Controller w/Parallel	249.00

8" Disk Controllers

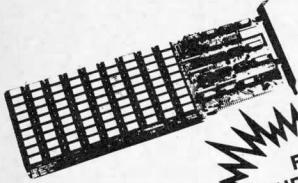
Card is capable of handling both 5 1/4" and 8" Disk Controllers. Up to (2) each. Cards come with internal cable. For disk drives and external cables please see the disk drive section of this catalog.

P/N	Description	ACP
FDC/PS8	5 1/4" / 8" Controller	229.00
FDC/PP8	above w/Parallel Port	299.00
FDC/JEL	"J" Software for above	60.00

IBM COMPATIBLE ADD-IN CARDS

Vista COMPUTER COMPANY, INC.

64K to 576K "MAXICARD"



Using only one slot, it allows you to populate any and all 64K blocks up to the maximum of 640K. The addresses are dipswitch selectable and blocks are not required to be contiguous. This is the optimum amount of internal memory that is recognizable by the IBM PC POS.

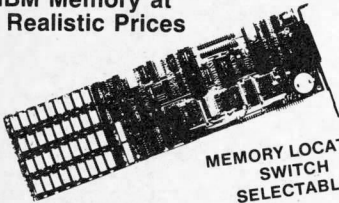
- Includes Dynadisk™ Ram Disk Software.
- Includes print spooler software.
- Runs at full speed with no wait states.
- Parity can be disabled at User's option.
- On board parity bit on each Byte.
- 4 layer board design for reduced noise.
- Fully expanded, a full 576KB on one card.

P/N	Description	List Price	ACP Price
0576-64	64K Maxicard	\$379.00	299.00
0576-576	576K Maxicard*	\$1299.00	899.00

*FREE SUPERCALC ELECTRONIC WORKSHEET WITH PURCHASE OF FULLY POPULATED CARD
NOTE: SUPERCALC 295.00 VALUE

64K to 256K "MULTICARD"

- Super Low Cost Combo Card
- IBM Memory at Realistic Prices



The MultiCard offers a combination of 256K Memory, a RS-232 Serial port an IBM parallel port, a battery-backed up Real Time Clock/Calendar.

The MultiCard is perfect for those applications that require maximum performance at the lowest possible cost. The MultiCard will be available with memory configurations of 64K, 128K, 192K, or 256K.

- Up to 256K of Parity Memory in 64K increments
- IBM Compatible RS-232 Serial Port
- IBM Compatible Printer Port
- Joystick Input Port
- Real Time Clock Calendar with Battery Back up

™Multicard is a trademark of Vista Computer Co., Inc.

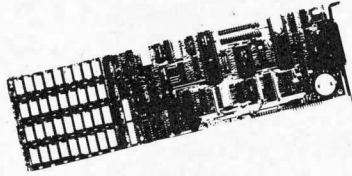
P/N	Description	ACP Price
V064SPC	64K MultiCard	369.00
V256SPC	256K MultiCard *Special	599.00

*SPECIAL OFFER FREE FOR 256K MULTICARD AND SUPERCALC™
NOTE: SUPERCALC 295.00 VALUE

Call Sales Desk if you desire to purchase memory cards with different memory population. See page for memory up-grade pricing.

AST
RESEARCH INC.

"MEGAPLUS"™



FEATURES: • Maximum 8 Features (1) 64K-512 Parity memory (2) *Expandable to 512K with MegaPak option (3) IBM Compatible Serial Port 1 (COM1) (4) IBM DOS 1.1 Compatible Clock-Calendar with Lithium Battery (5) IBM Compatible Parallel Printer Port (optional) (6) IBM Compatible Serial Port 2 (COM2, optional) (7) SuperDrive™ software included (8) SuperSpool™ software included • Options can be factory installed or field upgraded.

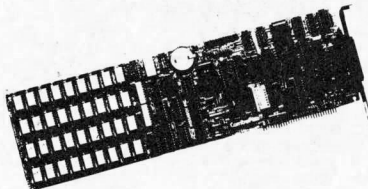
P/N	Description	List Price	ACP Price
MG 064	64K w/Serial, Clock	\$595.00	\$449.00
MG 064 S	64K w/(2) Serial, Clk	645.00	475.00
MG 064 P	64K w/parallel, serial	645.00	475.00
MG 064 SP	64K w/(2) Serial & Parallel	695.00	499.00

MG 256	256K w/Serial, Clock	995.00	695.00
MG 256 S	256K w/(2) Serial, Clock	1045.00	729.00
MG 256 P	256 K w/par, Serial, Clk	1045.00	729.00
MG 256 SP	256K w/(2) Serial, par, Clk.)	1095.00	749.00

MEGAPAK OPTION: TO ADD ADDITIONAL 256K

MP 256	256K MEGAPAK Option	\$495.00	\$399.00
--------	---------------------	----------	-----------------

"COMBOPLUS"



ComboPlus cards feature storage capacity of up to 256KB per card. In addition to parity memory, the card offers optional Async, Printer and Clock-Calendar on one single IBM PC card. The Async and printer ports are totally compatible with IBM's Async and printer adaptor and thus can be operated with the IBM Async and Printer programs. The Clock-Calendar option provides time-of-day and calendar.

Features: • Up to 256KB of Parity memory + 1 Async communication port + 1 Parallel port + 1 Clock-Calendar with Battery Back-Up • Fullyfield upgradeable • bipolar memory mapping • Allows full 1 Megabyte addressing • Printer Port is compatible with IBM Printer adaptor • Async Communication port is compatible with IBM Async adaptor • Clock Calendar.

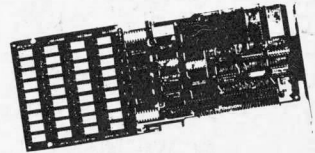
P/N	Description	List Price	ACP Price
MC-064*	64K w/one option	\$495.00	\$399.00
MC-064**	64K w/two options	555.00	439.00
MC-064SPC	64K w/S, P, Clk	595.00	469.00
MC-256*	256K w/one option	895.00	625.00
MC-256**	256 w/two options	955.00	665.00
MC-256SPC	256K w/S, P, Clk	995.00	695.00

OPTIONS: SERIAL, PARALLEL, CLOCK
* INDICATES 1 of 3 options
** INDICATES 2 of 3 options

Super Computer, Inc.

"SUPERMEMORY"

Expandable add-in memory plus EPROM sockets



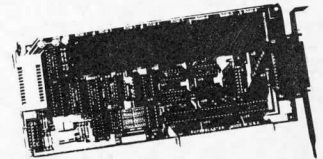
Features:

- Up to 256K Bytes of dynamic RAM on one module
- Four EPROM sockets provided for storing programs
- Can accommodate +5V EPROM 2716 or 2732
- EPROM addresses selectable
- Field expandable in 64K increments
- Parity generate and check
- Thoroughly tested and burn-in

P/N	Description	List Price	ACP Price
SMR-64	64K Supermemory	\$295.00	\$269.00
SMR-256	256K Supermemory	625.00	459.00

"SUPERBLASTER"

Programs EPROM and builds your programs right in the system



- Programs +5V EPROM 2716 or 2732
- Provides 8 EPROM sockets for storing programs up to 32K
- EPROM addresses selectable
- ZIP socket for easy operation
- On board power supply for programming voltage
- External EPROM sockets available
- Fits in any IBM PC expansion slot

P/N	Description	List Price	ACP Price
SBT-32	32K EPROM Burner	\$225.00	\$199.00

NOTE: Compatible 2716 EPROMS
2732 EPROMS

2716	16K EPROM	8 for 5.95 ea.
2732	32K EPROM	8 for 7.95 ea.

MEMORY EXPANSION Upgrade Your IBM PC & Others



64K UPGRADE

Upgrade your Memory! Most Memory cards are field upgradeable. Simply add (9) additional RAM IC's for each 64K increment (includes parity). Uses IBM compatible 64K RAMS. Each of (9) P/N RAM 64 S ACP Price ONLY \$50.00.

16K Upgrades also available!

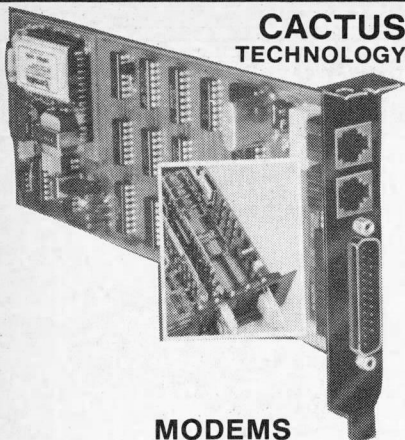
Uses 16K IC's — IBM Motherboard compatible
Each Set of (16) P/N RAM 16S ACP Price ONLY \$24.95.

Retail Showrooms San Jose and Santa Ana, CA

IBM HARDWARE

IBM COMPATIBLE HARDWARE

IBM HARDWARE

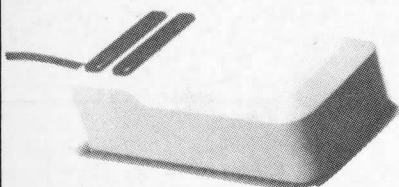


CACTUS TECHNOLOGY

MODEMS

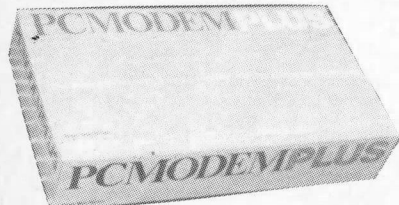
There is no other modem like the PC-COM-300. Why put up with all of the extra equipment required to fit an external modem to the IBM-PC — just plug our PC-COM-300 into one of the system expansion slots and get the communication capabilities you really need. It's easily installed, user friendly and menu driven. You also get an auxiliary RS232 port for serial peripheral devices. Fully software compatible with PC DOS, BASIC and CP/M-86™.

ACP PRICE ONLY 329.00



OptoMouse is a microprocessor-controlled, "smart" mouse which can effortlessly position a cursor. OptoMouse employs an optical, rather than an electro-mechanical, imaging system for more efficient use with CAD/CAM or computer graphics. It is smaller than a deck of cards, requires five volts of power from the host system and can interface with a RS-232C serial port.

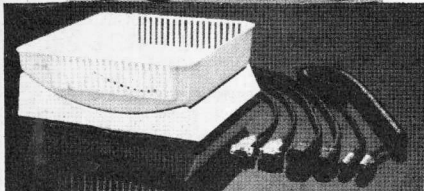
ACP PRICE ONLY 269.00



PC MODEM PLUS is a communications package providing everything an IBM PC-user needs for communications with independent information services such as The Source or Dow Jones or to send electronic mail. It includes a microprocessor-based, auto answer/auto-dial, 300-baud modem with buffer, an extra serial port and high-speed expandability to 1200 baud. Also included are full-service, menu-driven communications software, instructions and a standard modular phone cable.

ACP PRICE ONLY 369.00

CURTIS



"PC PEDESTAL™"

Allows you to "tilt and swivel" your IBM display. No more neck and eyestrain. A must for the serious IBM user.

P/N	DESCRIPTION	LIST	ACP
PC-PED	Display Pedestal	79.95	68.95
PC-CAB-D	3' Display Extension Cable Set	49.95	44.95
PC-CAB-K	3'-9" Coiled Keyboard Extension Cable	39.95	35.95

CONO#GRAPH™ COLOR

"the intelligent Color Display Graphics System." Available in a (2) board set which utilizes (1) slot in the IBM PC. The Color board is available stand-alone but the processor board must be used with the color board.

BOARD 1 Features: (Available June '83)

- Up to 640X400 resolution
- 16 Colors on screen selector from 256 color spectrum
- Memory Paging available
- Outputs: IBM IRGB, True NTSC at all resolution, RGB Analog, and RF Modulated.
- Light Pen I/O to ±pixel

BOARD 1 Features: (Available June '83)

- On board 6809 Microprocessor
- Hardware vector generator
- Hardware Conocolor generator
- Plus several Graphics features

P/N	DESCRIPTION	ACP PRICE
Conograph I	Board I Colorboard	795.00
Processor board	plugs into Board I	745.00
CONO/LIB	Software Library	125.00*

*Free w/total system purchase

MAYNARD FLOPPY

P/N	DESCRIPTION	ACP
FDC/P8	8" & 5 1/4" Disk controller w/Internal Cable	229.00
FDC/PP8	8" & 5 1/4" Disk Controller w/Parallel Port & Internal Cable	229.00
FDC/JEL	5 1/4" & 8" Software	60.00

NEW FROM MAYNARD MODULAR EXPANSION BOARDS

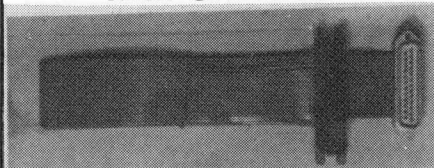
Now you can customize your own PC ADD-IN Board. Call for pricing on the following modules:

1. Modular multifunction card plain board which (6) modules can plug into. No memory.
2. Floppy Drive Modular Card Floppy board with (3) modules.
3. Modular Memory Card expandable up to 576K with (3) modules.

MODULES:
 Parallel Port Module
 Serial Port Module
 Clock/Calendar Module
 Game Adapter Module
 Memory Module (Mem. Card Only)
 Plus more modules coming.

AVAILABLE SOON
CALL ORDER DESK

IBM CABLES



CAB-IO1	IBM to Epson Parallel (M25 to ME) 8'	44.95	34.95
CAB-IO2	IBM (RS232 Serial to Printer/ Modem (M25 to M25) 8'	39.95	34.95
CAB-IO3	IBM (RS232 Serial to Printer /Modem (M25 to F25) 8'	39.95	34.95
CAB-IO4	RS232 Cable w/all pins wired (M25 to F25) 8'	44.95	34.95
CAB-IO5	RS232 Cable w/all pins wired (M25 to F25) 8'	44.95	34.95

8" FLOPPY DISK CABLE

36" 10"

CAB-IO6	8" FLOPPY CABLE (150 to E50 to E50)	39.95	34.95
---------	-------------------------------------	-------	-------

5 1/4" FLOPPY DISK CABLE

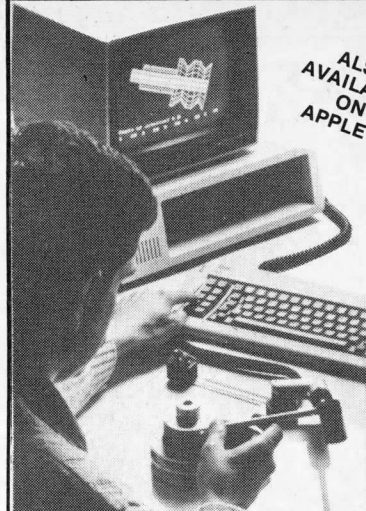
CAB-IO7	5 1/4" FLOPPY CABLE	34.95	29.95
---------	---------------------	-------	-------

(I34 to E34 to E34)

CONNECTOR CODE:

25=DB (25 Pin RS232) M=Male
 50=50 Pins F=Female
 34=34 Pins I=IDC
 E=Epson E=Edgcard

SPECIAL NOTE: ACP builds Custom Cables. If you have a special requirement please contact our Toll Free Sales Desk. We also can supply your connector and cable needs.



ALSO AVAILABLE ON APPLE II

"3D" CAD SYSTEM

Space Table™/Space Graphics™ system from MCS.

Now, microcomputer users can construct, manipulate and even transmit 3-dimensional wireframe drawings to other users with affordable, easy-to-use CAD system from Micro Control Systems. It starts with the Space Tablet.

MCS HARDWARE (IBM)

P/N	DESCRIPTION	ACP PRICE
ST400	4-axis tablet	469.00
T2000	Hi-res 2d tablet	1199.00
ST4000S	4-axis target mounted on Hi-res 2d tablet	2199.00

MCS SOFTWARE (IBM)

SG1000	Space Graphics Software	495.00
SG1010	Advanced Space Graphics	800.00

(Also available on Apple II)

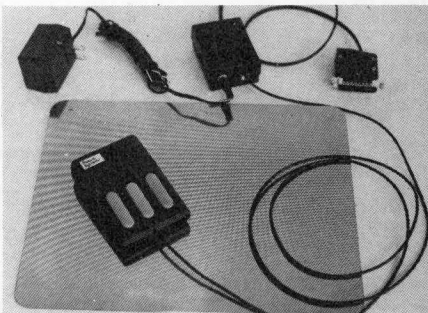
SYSTEM SPECIAL

The professional system with top end CAD system consisting of ST4000 4-axis tablet mounted on T2000 Hi-res 2d graphics tablet. Plus ST1000 Space Graphics & ST1010 Advanced Space Graphics software.

ACP SPECIAL SAVINGS PRICE 2699.00

Mouse Systems CORPORATION

M-1 MOUSE w/MOUSE PAD AND RS232 INTERFACE BOX



WHAT IS A MOUSE?

A mouse is a small hand-held device used to move a cursor on a CRT. As a user slides the mouse around his desk top, the cursor makes corresponding moves on the screen. Buttons on top of the mouse allows the user to activate functions or make selections.

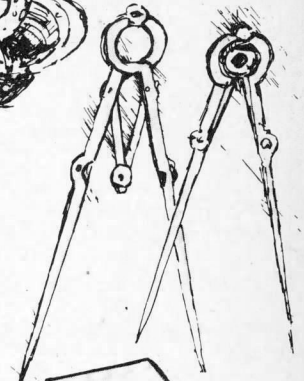
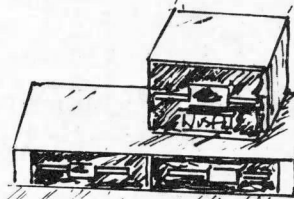
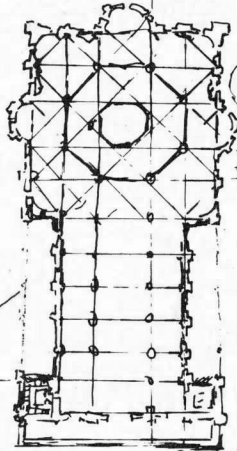
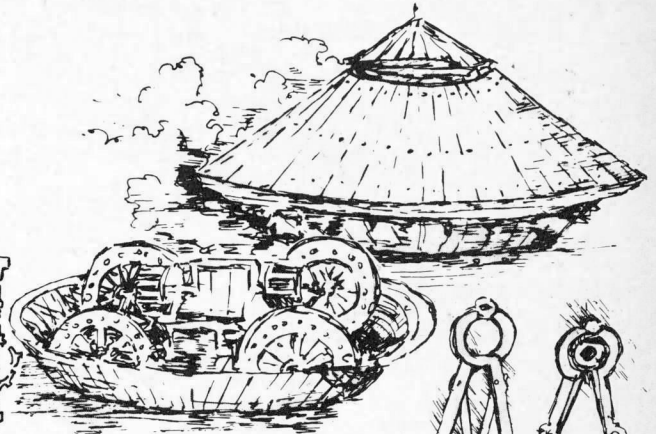
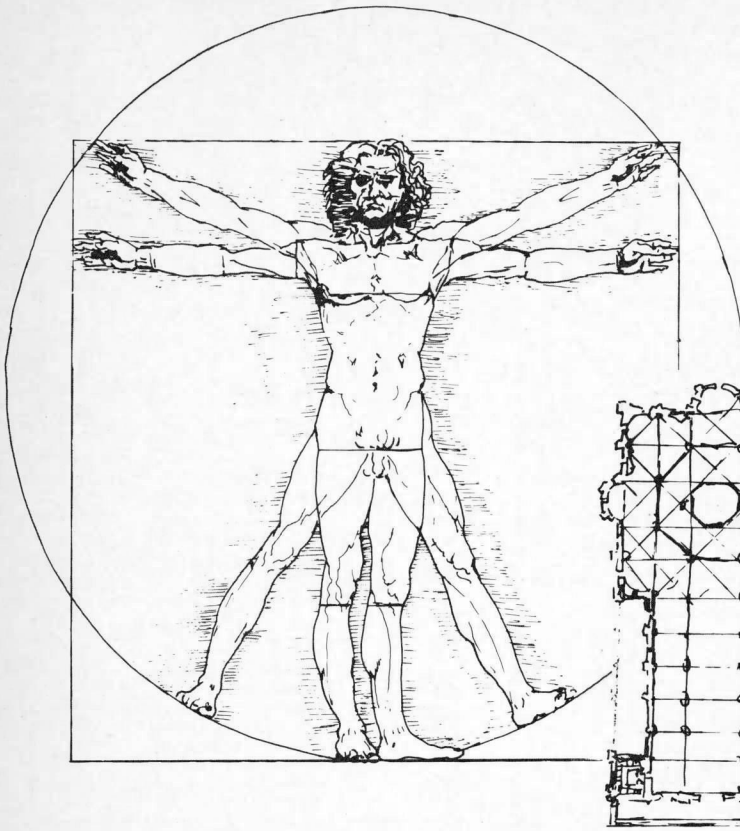
MISCELLANEOUS

- Works by imaging a two color grid of .5mm wide lines onto a four quadrant photodetector
- 3 buttons
- Uses special "mouse pad" included with mouse (228mm x 280mm)
- Size: 98 x 66 x 28 (LxWxH in mm)
- .025 mm resolution (100 counts/inch)
- Typical acceleration: (5 G's (50 M/sec-sec nonrotatable; 1.25 G's rotatable).
- Depth of field > 1 mm

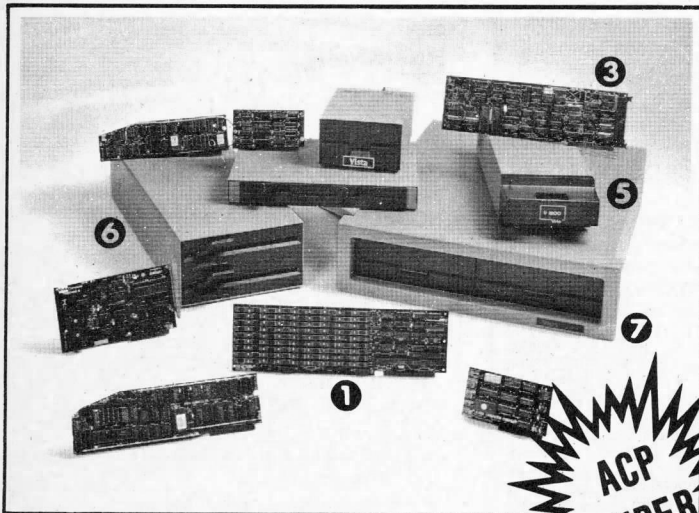
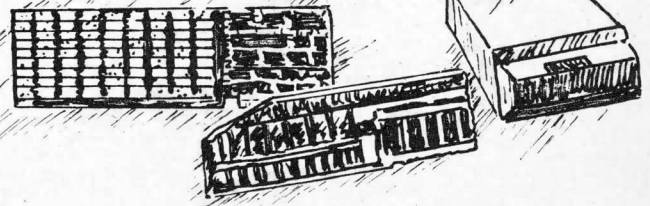
P/N	DESCRIPTION	ACP PRICE
M-1-AA34	Mouse w/Mouse Pad	279.00
IB-1-P3	RS232 Interface for IBM, Radio Shack, Xerox, Apple, Osborne, etc.)	26.00

IBM PERIPHERALS

Vista DaVinci GREAT INNOVATORS



Vista Computer strives to answer the complex problems of today's computer high technology. Vista excels in many areas also: Apple® Disk Storage® Drive Subsystems, Vision Series Video Cards, IBM™ Memories and IBM™ I/O.



5. **V-1200I**—6Mb cartridge drive for IBM PC. Cartridge pak of (5) diskettes automatically fed into the computer.
6. **V-1100I**—8" Thinline floppy subsystem for the IBM PC. Consists of (2) Tandem 848 Thinline drives with case, power supply, cable, disk controller and software. Total capacity 2.4Mb.
7. **V-1000I**—8" Standard size floppy subsystem. This is offered with Double-sided, Double-density Qume Datatrack 8 Drives, Shugart or Siemens Single-sided, Double-density Drives.

VISTA IBM PRICING

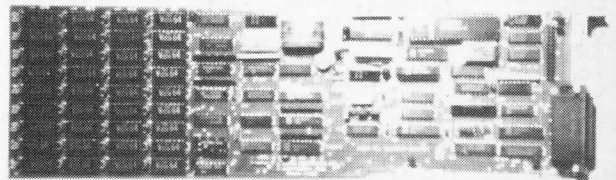
P/N	DESCRIPTION	ACP PRICE
MAXICARD 64K	RAMCARD w/64K	299.00
MAXICARD 256K	RAMCARD w/256K	549.00
MAXICARD 576K	RAMCARD w/576K	899.00*
	*w/FREE SUPER CALC	
PC EXTENDER	7 FUNCTION I/O	459.00
MULTICARD 64K	RAM I/O w 64K	369.00
MULTICARD 256K	RAM I/O w/256K	599.00*
	*w/FREE SUPERCALC	
DISKMASTER	DISK CONTROLLER	299.00
V1200I	6Mb CARTRIDGE SYS.	1249.00
V1100I	8" Thinline Floppy Sys.	1599.00
V1000I	8" QUME QS, DS SYS.	1499.00
V1000IS	8" SIEMENS SD, DS SYS.	999.00

Vista Family

© Apple II is a registered trademark of Apple Computer Co.

IBM PC ADD-IN BOARDS

1. **MAXICARD™**—576K Memory Card that optimizes the amount of memory addressable under PC DOS. PC DOS can address 640K which includes the 64K on the mother board. Multilayer card utilizes (1) slot. Expandable from 64K to 576K.
2. **PC MASTER™**—In one slot you can add (7) functions to your IBM PC. (2) Serial, (1) parallel, joystick port, Ni-cad recharge, clock/calendar, Votrox speech synthesis, 2 watt amplifier, and Hard Disk Host Adapter (SCSI spec). Combine this card with the 576K Maxicard and you have full utilization of your IBM PC using just **TWO SLOTS**.
3. **MULTICARD™**—Combination card consisting of 64K-256K expandable memory, (1) serial, (1) parallel, and clock/calendar. Card also has available Disk Emulation Software. and Print Spooler Software.
4. **DISK MASTER™**—Floppy disk controller for IBM PC for any (4) of the following: 5¼" Minifloppys, 8" Floppys or 5¼" Amlyn cartridge pak.



MULTICARD W/256K

Vista

COMPUTER
COMPANY, INC.

IBM SOFTWARE

IBM SOFTWARE

ACORN SOFTWARE

ACS-11	Everest Explorer	16.99
ACS-12	Lost Colony	24.99

ADVANCED OPERATING SYSTEMS

ADS-11	The Programmer	169.99
--------	----------------	--------

APPLIED SOFTWARE TECHNOLOGY

ADS-11	Versaform	259.00
--------	-----------	--------

ASHTON-TATE

ATS-11	dBASE II (CP/M-86)	445.00
ATS-12	dBASE II (MS DOS)	445.00

AUTOMATED SIMULATIONS

AUTO068	Curse of Ra	16.99
AUTO080	Temple of Apshai	32.99
AUTO082	Upper Reaches of Apshai	16.99
AUTO101	Jabbertalky	16.99
AUTO105	Oil Barons	79.99

AVALON HILL GAME COMPANY

AVS-11	Galaxy	21.99
AVS-12	B-1 Nuclear Bomber	17.99
AVS-13	Midway Campaign	17.99
AVSI-4	Computer Stocks and Bonds	21.99
AVS-15	Voyager	21.99
AVS-16	Draw Poker	17.99
AVS-17	Computer Football	17.99
AVS-18	Andromeda Conquest	19.99
AVS-19	Computer Facts and Five	20.99
AVS-110	Nuclear Bomber	12.99

BRODERBUND SOFTWARE

BSS-11	Apple Panic	21.99
--------	-------------	-------

COMPREHENSIVE SOFTWARE, INC.

COS-11	PC Tutor	69.99
--------	----------	-------

COMSHARE TARGET SOFTWARE

CMS-11	Planner Calc	45.99
--------	--------------	-------

COMPUTER SOFTWARE TECHNOLOGY

CXS-11	Word/PC	72.99
--------	---------	-------

CONTINENTAL SOFTWARE

CIS-11	The Home Accountant Plus	125.99
CIS-11	1st Class Mail	99.99

DATA MOST

DMS-11	Write-On	89.00
DMS-12	Pig Pen	24.00
DMS-13	Space Strike	24.00
DMS-14	Real Estate Investment Program	105.99

DAVIDSON & ASSOCIATES

DAS-11	Speed Reader	64.99
--------	--------------	-------

DENVER SOFTWARE

DVS-11	EASy (Executive Accounting System)	555.00
--------	------------------------------------	--------

DIGITAL MARKETING

DCS-11	Astro Dodge	32.99
DCS-12	Milestone	239.99

DIGITAL RESEARCH

DRS-11	Concurrent CP/M-86	299.99
DRS-12	CBasic 86	169.99
DRS-13	Pascal/MT + 86	329.99
DRS-14	Speed Programming Package 86	169.99
DRS-15	CSI Cobol 86	699.99

EAGLE SOFTWARE PUBLISHING, INC.

ESS-11	Money Decisions	130.00
ESS-12	Money Decisions Vol. II	170.00
ESS-13	Money Pac (Vol. I & II)	295.00

EPYX/AUTOMATED SIMULATIONS

EXS-11	Temple of Apshai	30.00
EXS-12	Upper Reaches of Apshai	16.00
EXS-13	Jabbertalky	24.00
EXS-14	Curse of Ra	16.00
EXS-15	Oil Barons	75.00

HOWARD SOFTWARE

HSS-11	Creative Financing	199.00
HSS-12	Tax Preparer 1983	199.00
HSS-13	Real Estate Analyzer II	189.00
HSS-14	Tax Preparer California Supplement "83"	79.00

INFOCOM

IFS-11	Deadline	39.00
IFS-12	Zork I	31.00
IFS-13	Zork II	31.00
IFS-14	Starcross	31.00
IFS-15	Zork III	31.00

INFORMATION SOLUTIONS, INC.

ILS-11	The 25th Hour - 25:01	79.99
--------	-----------------------	-------

INNOVATIVE DESIGN

IDS-11	Pool 1.5	29.99
--------	----------	-------

INNOVATIVE SOFTWARE

IVS-11	T.I.M. III	305.00
IVS-12	Fast Graphs	275.00

INSOFT

INS-11	Wordtrix	26.00
--------	----------	-------

ISM

ISS-11	MatheMagic	70.00
ISS-12	Graphmagic	70.00
ISS-13	Prism	21.00
ISS-14	Math/Graphmagic Combo	115.00

IUS

IUS-11	Easy Speller 1.1 (PC DOS Compatible)	99.00
IUS-12	Easy Filer	295.00
IUS-13	Easy Writer II	255.00
IUS-14	Easy Planner (DOS)	185.00
IUS-15	Accounts Receivable	499.00
IUS-16	Accounts Payable	499.00
IUS-17	General Ledger	499.00
IUS-18	Financial Management Series	1,249.00

LIGHTING SOFTWARE

LTS-11	MasterType	44.00
LTS-12	Datafax	239.00

LOTUS

LOS-11	1-2-3 (Req. double-sided drive)	399.00
--------	---------------------------------	--------

MICRO LAB

MLS-11	The Tax Manager	190.00
--------	-----------------	--------

MICRO PRODUCTIONS

MXS-11	Galactic Encounters	31.00
--------	---------------------	-------

MICROPRO INTERNATIONAL

MPS-11	WordStar	310.00
MPS-12	MailMerge	175.00
MPS-13	SpellStar	150.00
MPS-14	3 Pak Word/Mail/Spell	599.00
MPS-15	2 Pak Word/Mail	499.00
MPS-16	2 Pak Word/Spell	499.00
MPS-17	InfoStar	389.00
MPS-18	ReportStar	250.00

MICROSOFT

MSS-11	MuLisp/MuStar	190.00
MSS-12	MuMath/MuSimp	230.00
MSS-13	Flight Simulator (Req. graphics adapter)	39.00

MICROSTUF

MFS-11	Crosstalk	160.00
--------	-----------	--------

NORTH AMERICAN BUSINESS SYSTEMS

NAS-11	Answer	189.00
--------	--------	--------

OMRIC CORPORATION, INC.

OCS-11	Space Guardian	26.00
OCS-12	Bling Splat	29.00

SIERRA ON-LINE SYSTEMS

SOS-11	Ulysses & The Golden Fleece	29.00
SOS-11	Crossfire	26.00
SOS-12	Mouskattack	29.00
SOS-13	Frogger	29.00

PBL CORPORATION

PCS-11	Personal Investor	125.00
--------	-------------------	--------

PEACHTREE

PTS-11	Series 4 - General Ledger	399.00
PTS-12	Series 4 - Accounts Receivable	399.00
PTS-13	Series 4 - Accounts Payable	399.00
PTS-14	Series 4 - PeachPak (GL/AR/AP)	390.00

PETER NORTON COMPUTING

PNS-11	Norton Utilities	80.00
--------	------------------	-------

SELECT

SLS-11	Select Word Processing Sys	350.00
--------	----------------------------	--------

SIRIUS SOFTWARE

SIS-11	Cyborg	30.00
SIS-12	Gorgon II	33.00

SOFTWARE PRODUCTS INTERNATIONAL

SXS-11	Logi Calc	149.00
SXS-12	Pro Calc	269.00
SXS-13	Logi Quest II	210.00
SXS-14	Logi Quest III	430.00

SOFTWORD SYSTEMS, INC.

SZS-11	Wordmate	375.00
--------	----------	--------

SORCIM/ISA

SBS-11	SuperCalc	179.00
SBS-12	SuperWriter	259.00
SBS-13	Spellguard	139.00

SOUTHEASTERN

SES-11	Data Capture	99.00
--------	--------------	-------

SPINNAKER SOFTWARE

SKS-11	Snooper Troops #1	39.00
SKS-12	Snooper Troops #2	39.00
SKS-13	Story Machine	29.00
SKS-14	Face Maker	29.00
SKS-15	Rhymes & Riddles	25.00

STRATEGIC SIMULATIONS

SIS-11	The Warp Factor	32.00
SIS-12	Tigers in the Snow	32.00
SIS-13	Epidemic	32.00

SYNAPSE SOFTWARE

SYS-11	File Manager	129.00
--------	--------------	--------

SYNERGISTIC

SCS-11	Data Reporter	199.00
--------	---------------	--------

T.M.Q. SOFTWARE, INC.

TQS-11	File Fax	149.00
--------	----------	--------

VERSA COMPUTING

VCS-11	Graphics Hardcopy System	19.99
--------	--------------------------	-------

VISICORP

VIS-11	Desktop Plan I	235.00
VIS-12	VisiTrend/Plot	235.00
VIS-13	VisiDex	189.00
VIS-14	ViciCalc/256K	175.00
VIS-15	VisiFile	219.00
VIS-16	VisiSchedule	219.00
VIS-17	Business Forecasting Model	79.00
VIS-18	Visiword	299.00
VIS-19	VisiSpell	169.00

BEST PROGRAMS

BPS-11	Personal Finance Program	85.00
--------	--------------------------	-------

CONSULTANT SYSTEMS

CUS-11	The Real Estate Consultant	179.00
--------	----------------------------	--------

CONTEX MBA

CTS-11		529.00
--------	--	--------

FINANCIER

FIS-11	Personal Series	179.00
FIS-12	Tax Series	119.00

INSOFT

IXS-11	Spellguard	225.00
--------	------------	--------

LIFETREE SOFTWARE

ILS-11	Volkswriter	165.00
--------	-------------	--------

NORELL

NRS-11	Easy Data DBMS	165.00
NRS-12	Visualize	73.00

COMPUTER INNOVATIONS

CCS-11	C86C Compiler	218.00
--------	---------------	--------

NORELL

NRS-11	Bit Copier	37.00
--------	------------	-------

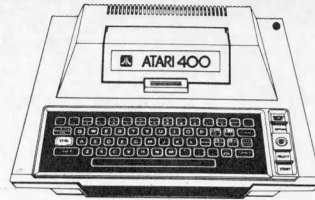
FRIENDLYWARE

FWS-11	Disk 1, PC Intro + Games	40.00
FWS-12	Disk 2, 13 Games	40.00
FWS-13	Disk 3, 8 Business Progs.	40.00

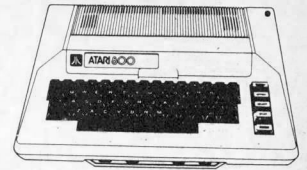
**ACP
SPECIAL
SORCIM
SUPERCALC
\$179.00**

ATARI®

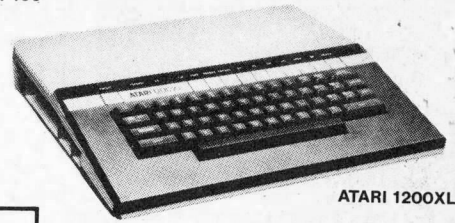
400™/800™/1200XL™ PERSONAL COMPUTER SYSTEMS



ATARI 400



ATARI 800



ATARI 1200XL



COMPUTERS

BASE UNITS

Atari 400	16K Computer	219.00
Atari 800	48K Computer	539.00
Atari 1200XL	64K Computer	699.00

ACCESSORIES

1020	40 Col. Color Printer	239.00
1025	80 Column Printer	449.00
CX85	Numerical Keypad	109.00
1010	Program Recorder	89.00
810	Disk Drive	469.00
850	Interface Module	189.00
CX-30-04	Paddle Controller Pair	15.00
410	Program Recorder	89.00
CX40	Joystick Controller	9.99
835	Direct Connect Modem	CALL
830	Acoustic Modem	149.00
CX81	I/O Data Cord	19.95
CX87	Interface/Modem Cable (830 Cable Replacement)	39.95
CX89	Monitor Cable (clr. monitor)	49.95
CX853	16K RAM Memory Mod.	99.95
CX8100	Atari 810 Blank Diskettes(5)	25.00
CA014746	T.V. Switch Box	9.95
CA014748	Power Adapter	19.95

KITS

CX418	The Home Manager Kit—includes 1/ea. Home Filing Manager (2d), Family Finance (2d)	79.95
CX419	The Bookkeeper Kit—Includes 1/ea. The Bookkeeper (4d), Numerical Keypad (CX85), Bookkeeper Simplified Guide, Bookkeeper Users Guide, Bookkeeper CX85 Numerical Keypad User's Guide	245.00
CX482	The Educator Kit—Includes 1/ea. 410 Program Recorder, Atari Basic Cart., States & Capitals (c)	149.95
CX483	The Programmer Kit—Includes 1/ea. Atari Basic Cartridge, Atari Basic Reference Manual, Self Teaching Guide, Atari Basic Book	59.95
CX488	The Communicator II kit—Includes 1/ea. Atari 835 direct connect modem (no 850 needed if connected to 1200XL), TeleLink II Cartridge, 1 free hour of connect time	279.95
KX7101	The Entertainer Kit—includes 1/ea. Joystick controller pair, star raiders (cart.), Pack-Man (cart.)	89.95

SOFTWARE

LEARNING

CX405	Pilot (Educator's Package, cart., 2 manuals, ref. card & 2 demo c)	129.95
CXL4018	Pilot (Home package, cart., manual & ref. card, 2c)	79.95
CX4101	Invitation to programming 1(c)	24.95
CX4106	Invitation to programming 2 (2c)	29.95
CX4112	States & capitals (c)	14.95
CX4114	European countries & capitals (c)	14.95
CX4117	Invitation to programming 3 (2c)	29.95
CX4129	Juggles Rainbow (c)	29.95
CX4130	Juggles House (c)	29.95
DX5050	Mickey in the Great Outdoors (d)	49.95
CX8135	My 1st Alphabet (d)	34.95
CX8137	Juggles Rainbow (d)	29.95
CX8138	Juggles House (d)	29.95
TX9035	Mickey in the Great Outdoors (c)	49.95

PERSONAL DEVELOPMENT

CXL4005	Video Easel (cart./joystick)	34.95
CXL4007	Music Composer (cart.)	39.95
CX4110	Touch Typing (2c)	24.95
CX4118	Conversational German (5c)	59.95
CX4119	Conversational French (5c)	59.95
CX4120	Conversational Spanish (5c)	59.95

SOFTWARE—Cont.

CX4121	Energy Czar (c)	14.95
CX4123	Scram (c/uses joystick)	24.95
CX4126	Atari speed reading (5c/ joystick)	74.95
DX5048	Paint (d)	39.95

HOME MANAGEMENT

CX404	Atari word proc. (3d/1 audio c)	149.95
CX414	The Bookkeeper (4d)	149.95
CX415	The Home Filing Manager (2d)	49.95
CX421	Family Finances (2d)	49.95
CXL4015	Telelink I (1 cart.)	29.95
CX4104	Mailing list (c)	24.95
CX4109	Graph It (2c)	19.95
DX5047	Time Wise (d)	29.95
DX5049	VisiCalc (d)	199.95
RX8036	Atari Writer (cart.)	79.95

EDUCATION

APX10048	Video math flash cards (c)	15.95
APX10082	Mathematical Tic Tac Toe (c)	15.95
APX10096	Letterman (c)	22.95
APX10097	Number Blast (c)	15.95
APX10099	Word Maker (c)	22.95
APX10101	Cubbyholes (c)	22.95
APX10145	Spelling Genie (c)	22.95
APX10148	Counter (c)	29.95
APX10151	Math UFO (c)	22.95
APX10165	Monkey Up a Tree (c)	22.95
APX20165	Monkey Up a Tree (d)	22.95

PERSONAL EDUCATION & RECORD KEEPING

APX20059	Data Management Systems (d)	22.95
APX20079	Weekly Planner (d)	22.95
APX20080	Family Cash Flow (d)	22.95
APX20108	Family Budget (d)	22.95
APX20128	Family Vehicle Expense (d)	22.95

PERSONAL INTEREST & DEVELOPMENT

APX20100	Advance Music System (d)	29.95
----------	--------------------------	-------

ENTERTAINMENT

APX10003	Avalanche (c)	22.95
APX10043	747 Landing Simulator (c)	22.95
APX10047	Terry (c)	15.95
APX10050	Eastern Front (1941)(c)	29.95
APX10072	Attank (c)	22.95
APX10089	Solitaire (c)	15.95
APX10115	The Midas Touch (c)	15.95
APX10120	Salmon Run (c)	22.95
APX10174	Quarxon (c)	29.95
APX10175	Yahtman (c)	22.95
APX10178	Melt Down (c)	22.95
APX10187	Air Raid (c)	29.95
APX20047	Terry (d)	15.95
APX20050	Eastern Front (1941)(d)	29.95
APX20089	Solitaire (d)	15.95
APX20115	The Midas Touch (d)	15.95
APX20132	Galahad & The Holy Grail (d)	29.95
APX20168	The Game Show (d)	15.95
APX20174	Quarxon (d)	29.95
APX20175	Yahtman (d)	22.95
APX20178	Melt Down (d)	22.95
APX20184	Phobos (d)	29.95
APX20187	Air Raid (d)	29.95
APX20188	Grid Iron Glory (d)	22.95
CXL4004	Basketball (cart.) uses joystick	34.95
CXL4006	Super Breakout (cart.) uses paddles	34.95

CXL4008	Space invaders (cart.) uses joystick	34.95
CXL4009	Computer chess (cart.) uses joystick	34.95
CXL4011	Star raiders (cart.) uses joystick	44.95
CXL4012	Missile command (cart.) uses joystick	34.95
CXL4013	Asteroids (cart.) uses joystick	34.95

SOFTWARE—Cont.

ENTERTAINMENT—Cont.

CXL4020	Centipede (cart.) uses joystick	44.95
CXL4022	Pac-Man (cart.) uses joystick	44.95
CXL4024	Galaxian (cart.) uses joystick	44.95
CXL4025	Defender (cart.) uses joystick	44.95
CXL4027	QIX (cart.) uses joystick	44.95
CX4105	Blackjack (c)	14.95
RX8026	Dig Doug (cart.) uses joystick del. 4/30	44.95
RX8030	E.T. phone home (cart.) uses joystick	49.95
RX8037	Star Trux (cart.) uses joystick del. 5/31	44.95
RX8038	Superman III (cart.) uses joystick del. 6/30	49.95
RX8039	Eastern Front (1941) (cart.) uses joystick, del. 6/30	49.95
CX8130	Caverns of Mars (d) uses joystick	39.95

PROGRAMMING

AX2025	Atari Microsoft Basic II (d)	89.95
CXL4002	Atari Basic Cartridge	49.95
CXL4003	Assembler editor (cart.)	59.95
CX8121	Macro assembler & program text editor (d)	89.95
CX8126	Microsoft basic (d)	89.95

COSMI

AC16-002	Galactic Avenger (c)	9.95
AC16-016	Crypts of Plumbous (c)	9.95
AC16-008	Aztec Challenge (c)	12.95
AC16-010	Spider Invasion (c)	12.95
AD16-002	Galactic Avenger (d)	14.95
AD16-016	Crypts of Plumbous (d)	14.95
AD16-008	Aztec Challenge (d)	17.95
AD16-010	Spider Invasion (d)	17.95

DATASOFT, INC.

1142-WCO	Canyon Climber (c)	29.95
1148-WCO	Shooting Arcade (c)	29.95
1154-WCO	Pacific Coast Hwy.(c)	29.95
1160-WCO	Clowns & Balloons (c)	29.95
1001-WDO	Micropainter (d)	34.95
1090-WDO	Text Wizard (word proc.) (d)	99.95
1114-WDO	TeleTalk (Communication) (d)	49.95
1120-WDO	Graphic Master (d)	39.95
1132-WDO	Basic Compiler (d)	99.95
1138-WDO	Graphics Generator (d)	24.95
1142-WDO	Canyon Climber (d)	29.95
1148-WDO	Shooting Arcade (d)	29.95
1154-WDO	Pacific Coast Highway (d)	29.95
1160-WDO	Clowns & Balloons (d)	29.95
1180-WDO	Sands of Egypt (d)	39.95

MILLIKEN PUBLISHING CO.

AMHC01	Aliencounter/Face Flash (4-8 yrs.) (c)	29.95
AMHC02	The Jar Game/Chaos (5-9 yrs.) (c)	29.95
AMHC03	Gulp!/Arrow Graphics (7-12 yrs.) (c)	29.95
AMHC04	Golf Classic/Compuhar (9&up)(c)	29.95
AMHC05	Frenzy/Flip Flop (8-12 yrs.) (c)	29.95
AMHC06	Battling Bugs/Concentration (9-14 yrs.) (c)	29.95
AMHD01	Aliencounter/Face Flash (4-8 yrs.) (c)	32.95
AMHD02	The Jar Game/Chaos (5-9 yrs.) (c)	32.95
AMHD03	Gulp!/Arrow Graphics(7-12 yrs.)(c)	32.95
AMHD04	Golf Classic/Compuhar (9 & up)(c)	32.95
AMHD05	Frenzy/Flip Flop (8-12 yrs.) (c)	32.95
AMHD06	Battling Bugs/Concentration (9-14 yrs.) (c)	32.95

T & F SOFTWARE CO.

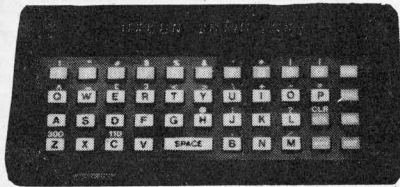
PMP2000	Property Management Program	219.95
---------	-----------------------------	--------

PORTABLE/HANDHELD COMPUTERS



AXLON[®]

DATALINK[™]



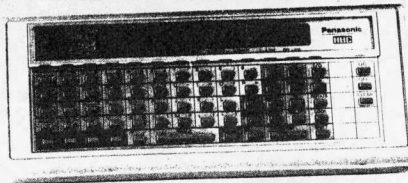
TELECOMMUNICATIONS TERMINAL

- Communicates with any computer from any standard telephone.
- Truly portable — 6 3/4" x 3 9/16" x 1 5/8" — weighs only 10 oz.
- Full typewriter-style keyboard — Six non-alphanumeric function keys for easy operation.
- Standard modular handset jack allows direct connection with the widest variety of telephones available today.
- Built-in modem with selectable baud rates.
- Select 110 baud for easy display reading.
- Select 300 baud for output to T.V. screen or high speed printer.
- Operates on batteries or A.C.
- Built-in RS-232 Interface.
- Bell 103 compatible.
- 16 character, non-ghosting green fluorescent display, visible in any lighting condition.
- Applications include sales information systems, order entry, electronic banking, on-line information services, message switching, electronic mail, etc.

DESCRIPTION	LIST	ACP
Datalink	\$395.00	\$369.00
TV Display Interface	156.00	145.00
Acoustic Coupler Interface	96.00	89.00
40 Character Line Printer	395.00	369.00

HANDHELD

Panasonic



RL-H1400 "THE LINK"

The Link is a total computer system, able to handle a broad range of processing, computing and telecomputing needs. Even in its portable form with options, The Link can contain up to 52K of RAM and 64K of ROM, more than many desk-top computers on the market today.

When hooked up to a TV set, The Link becomes a visible showcase of valuable information. Programs being developed can be seen with 16 lines of 32 characters per line instead of one line at a time, giving a clear understanding of the computation. Data being received from another computer for assessment and evaluation can be easily studied, edited and understood.

With the use of a color TV, The Link has the capability of producing color graphics and charts, useful and impressive for presentations.

With the RS-232C Serial Interface, The Link can be connected to a main frame computer.

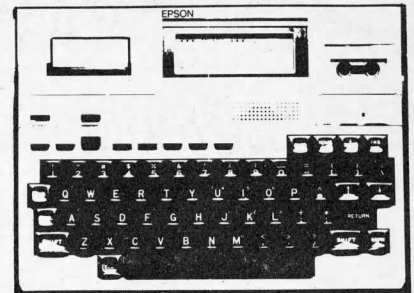
The RS-232C Serial Interface can also connect The Link to a large format printer.

With the power and performance of a desk-top computer, and the ability to become portable at any moment, The Link is the total computer system.

P/N	DESCRIPTION	ACP	PRICE
RL-H1400	Handheld Portable Computer		\$349.00
PERIPHERALS			
RL-P9001	4K Programmable Memory		149.00
RL-P9002	8K Programmable Memory		239.00
RL-P4001	Acoustic Modem		239.00
RL-P2001	TV Adaptor		329.00
RL-P3001	RS-232C Serial Interface		239.00
RL-P1003	Micro Printer		219.00
RL-P6001	I/O Adaptor		149.00
ACCESSORIES			
RL-P6006	I/O Cable		\$ 39.00
RD-9145	RS-232C Cable		35.00
RD-9498	AC Adaptor/Recharger		45.00
RD-9808	Attache Case		159.00

Call for available software.

EPSON HX-20



SPECIFICATIONS

CPU and Memory	
Main CPU	COS 8 bit microprocessor 6301, 614 KHz clockrate
Slave CPU	CMOS 8 bit microprocessor 6301, 614 KHz clockrate
RAM	16K (standard) expandable to 32K with expansion unit
ROM	32K (standard) expandable to 40K internally; to 64K with expansion unit
Built-In Peripherals	Display, Printer, Clock, Tone Generator
Communications	
RS-232C	Full/half duplex, 110 to 4800 baud rate, 8-pin DIN connector
Serial	Full/half duplex, 150, 600, 4800, 38.4K baud rate, RS-232C level, 5-pin DIN connector
Peripheral Interfaces	
Barcode Reader	HP barcode reader with special connector
Cassette	Standard audio cassette interface
System Bus	16-bit address bus; 8-bit data bus and control lines, 40 pin connector.
ROM Cartridge/Microcassette Interface	I/O port with 3 input, 6 output lines
Power Supply	Four NiCd batteries, internal; Sub C type, 1100 mA/H capacity; 50-hour capacity running BASIC
Keyboard and Character Set	
Options	ASCII, Interruptible, 68 Keys
Expansion Unit	5 function keys, 13 special keys, 32 graphic characters, international character set
Microcassette	8K RAM plus 24K ROM or 16K RAM plus 16K ROM. Total expansion is 32K
ROM Cartridge	Uses standard microcassette tapes
	Uses 8, 16 or 32K ROM to load program into RAM
CX-20 Acoustic Coupler	
DESCRIPTION	ACP
HX-20 Computer	\$749.95
CX-20 Acoustic Coupler	Call
Expansion Units	Call
Microcassette	Call
ROM Cartridge	Call

Novation

Infone[™]

DESCRIPTION	LIST	ACP
INFONE MAXI - 6K of RAM, Audio Package, Handset and Telephone Acoustic Adapter, Serial RS-232 Port, AC Power Adapter, Desktop Stand	\$1150.00	\$1069.00
INFONE EXECUTIVE - 2K of RAM, Audio Package, Battery Operation, Serial RS-232 Port, A.C. Power Adapter	945.00	889.00
Acoustic Adapter		49.00
Handset		49.00
Carrying Case-Softpak		49.00
Desk Top Stand		14.95
AC Power Adapter		19.00
Modular Line Cable		4.95
Speaker Cable		4.95
Tape Recorder Cable		4.95
40 Column Printer Cable		18.95

It's a 2 1/2 lb. computer terminal and modem.

It's a telephone.

It's an electronic appointment book.

It's a message center.

It's an electronic mail station.

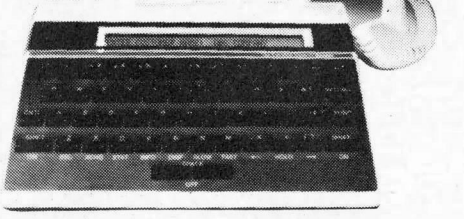
It's a data entry device.

It's a remote inquiry station.

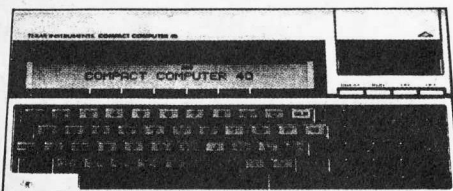
It's a telephone directory and automatic dialer.

It's portable, so it can go anywhere you go.

It's also battery operated.



TEXAS INSTRUMENTS



- CC-40**
- 6K RAM, 34K ROM (Expandable)
 - Built-In BASIC
 - Battery Operable up to 200 Hours

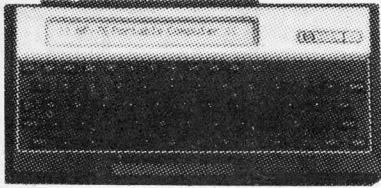
DESCRIPTION	LIST	ACP
TI CC-40	\$249.95	\$221.95
4 Color Printer/Plotter	199.95	184.95
RS-232 Interface	99.95	89.95
TI Wafertape [™] Drive	139.95	127.95

Solid State Software	
Finance	\$ 59.95
Advanced Elec. Engineering	59.95
Statistics	59.95
Mathematics	59.95
Business Graphics	59.95
Games I	39.95
Games II	39.95
Editor Assembler	124.95
Wafer Tapes Software	
Perspective Drawing	19.95
Regression/Curve Fitting	19.95
Pipe Design	19.95
Inventory Control	19.95
Photography	19.95
Solar Energy	19.95
Quality Assurance: Sampling Plans	19.95
Quality Assurance: Control Data	19.95
Thermodynamics	19.95
Electrical Engineering	19.95
Elementary Dynamics	19.95
Nonparametric Statistics	19.95
Production and Planning	19.95
Profitability Analysis	19.95

PORTABLE/HANDHELD COMPUTERS



HEWLETT PACKARD



HP-75C

Battery-powered, lightweight, trim-line computer designed for versatile performance. You can use the HP-75C for a variety of problem-solving applications—as a stand alone computer, as a truly portable system, or with its array of desktop peripherals.

With 41 preprogrammed numeric functions and 95 programmable BASIC statements and commands, your customers have the tools they need to manipulate equations, perform immediate or remote data collection, create files, write memos, and more.

Built-in user memory (RAM) contains 16K bytes and is expandable to 24K with an 8K Memory Module. There's more than enough room to store information, memos, BASIC programs, appointment flags, and more. Continuous Memory provided by the 8-bit CMOS Series 80 CPU makes sure the information is there when you need it.

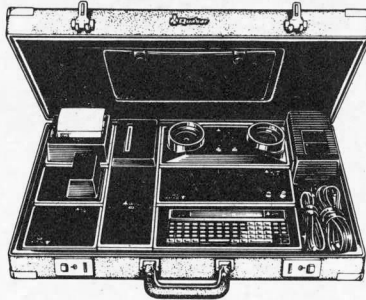
Plus, three module ports enable users to plug in up to 48K of applications ROM without affecting user memory. The built-in card reader allows for low cost storage flexibility.

P/N	DESCRIPTION	ACP PRICE
75C	Mainframe/Enhancement Portable Computer	\$799.00
82700A	8K Memory Module	184.00
	Accessories	
00075-90001	Owner's Manual	25.00
00075-90004	Reference Manual	10.00
82001B	Rechargeable Battery Pack	15.00
82004A	Reserve Power Pack	40.00
82059B	AC Adapter/Recharger 110 VAC	12.50
82701A	Security Cradle	40.00
82703A	Field Case	40.00
82707A	30 Blank Mag Card Pac	25.00
82708A	100 Blank Mag Card Pac	70.00
82710A	Overlay Kit (Qty. 5)	10.00
82715A	Notebook Card Holder (Qty. 5)	10.00
82717A	Blank Overlay Kit	95.00
	Portable Peripherals	
82161A	Digital Cassette Drive	395.00
82162A	Thermal Printer/Plotter	395.00
82168A	HP-IL Acoustic Modem	Call
	Desktop Peripherals	
82905B	Impact Printer	689.00
Opt 248		
7470A	Graphics Plotter	1325.00
Opt 003		
82912A	9" Video Monitor	279.00
82913A	12" Video Monitor	299.00
	Interfaces	
82163A	Video Interface—U.S.	225.00
82163B	Video Interface—Euro.	279.00
82164A	HP-IL/RS-232C Interface	Call
82165A	HP-IL/GPIO Interface	279.00
82166A	HP-IL Converter Prototyping Kit	319.00
82166B	HP-IL Converter (10-pack)	1099.00
82169A	HB-IB Interface	Call
82938A	HP-IL/Serial 80 Interface	279.00
	Solution Books — Complete w/Preprogrammed Mag Cards	
00075-13008	Electronics	32.95
00075-13009	Finance	32.95
00075-13006	Games I	32.95
00075-13007	Games II	32.95
00075-13013	I/O Utilities	32.95
00075-13003	Math I	32.95
00075-13004	Math II	32.95
00075-13005	Math III	32.95
00075-13010	Real Estate	32.95
00075-13011	Statistics	32.95
00075-13012	Test Statistics	32.95
	Software Tools	
82713A	Plug-in Module Simulator	Call

Note: All HP-75 Solution Books are available recorded on mini-data cassettes from either a Hewlett-Packard dealer or the HP Users' Library for an additional \$12.00 each.

Quasar®

A REVOLUTIONARY BREAKTHROUGH IN TECHNOLOGY



HK 2500

The Quasar HHC HK2500/2600 Handheld Computer is a new concept in computing that compresses the power of microprocessor-based computers into a package roughly half the size of a book. Its sophisticated systems concepts, languages, and design techniques give its users the computing, information handling, and telecommunicating capabilities normally found only in much larger desktop computers.

The Quasar HHC is unlike many of the similar handheld computers available today. It is built around a microprocessor (6502) which is fast, powerful, and has a rich instruction set. Its memory capacity is high, which gives programmers and end users room to write and store comprehensive application programs. It supports I/O and data storage peripherals that make it a true computer system, and it gives users limited color graphics capabilities.

P/N	DESCRIPTION	ACP PRICE
	MAIN UNIT	
HK2500TE	6502 Processor with 2K Programmable Ram	\$295.00
HK2600TE	6502 Processor with 4K Programmable Ram	379.00
HK2608TE	6502 Processor with 8K Programmable Ram	479.00
	PERIPHERALS	
PC900TE	I/O Adaptor	\$150.00
PC901TE	I/O Cable	85.00
PC905TE	RS-232C Serial Interface	250.00
PC911TE	Micro Printer	225.00
PC912UE	Mini Printer	295.00
PC916UE	4-Color Plotter/Printer	475.00
PC920TE	Acoustic Modem	250.00
PC921UE	Modem/Cassette Interface	295.00
PC930TE	TV Adaptor	295.00
PC940TE	Programmable Memory-4K	150.00
PC942TE	Programmable Memory-8K	250.00
PC943UE	Programmable Memory-16K	350.00
	ACCESSORIES	
KT657TF	Attache Case	\$170.00
KT674TF	RS-232C Cable	35.00
KT781UF	Paper Rolls	4.95
KT593TE	AC Adaptor	45.00
	SOFTWARE	
LK300TES	Snap Forth	\$150.00
LK302TEB	Microsoft Basic	77.00
LK303TEBI	Extended Basic	165.00
LK310UEF	Portalex	80.00
LK311UEC	Portacalc™	165.00
LK315TET	Telecomputing I™	38.00
LK316TET	Telecomputing II™	42.00
	Telecomputing III™	
LK317TER	RS-232C Interface	38.00
LK323UEG	Graphic Plotter	50.00
LK325UET	Time/Trac™	135.00
LK327UEF	Financialist™	50.00
LK330TES	Scientific Calculator	45.00
LK336UES	Statistik	50.00
LK341UEB	Portabudget™	60.00
LK342UEW	Portawriter™	90.00

SHARP

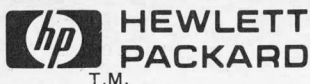


PC-1500

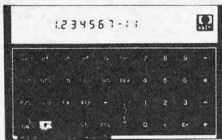
- **Large Memory Capacity**
16K bytes of ROM and 3.5k bytes of RAM (2.6K bytes in the user area) are packed within a compact body. By adding the optional CE-151 4K-byte memory module, RAM can be expanded to 7.5K bytes.
- **Memory Safe Guard™** is an added feature that conveniently prevents erasure of programs or data, even when the model is turned off.
- **Mini-Graphic Display**
The multi-graphic display area (7x156 dots) enables almost any display thanks to its mini-graphic functions. Even game symbols can be programmed and displayed. A line 26 digits wide can be displayed when using characters and numbers.
- **High-Speed Data Processing**
C-MOS 8-bit CPU (Central Processing Unit) enables swift data processing, while consuming little energy. Complicated technical or business calculations require far less time.
- **Operational Superiority**
Typewriter keyboard, the first in a pocket computer, further enhances operational ease. With the optional CE-150 color graphic printer/cassette interface, the PC-1500 can serve as a small personal typewriter. Six software keys are yours to use freely. They can serve as reservable keys to reserve functions or commands, or as definable keys to define programs. They can also be used as game keys to command displays. By virtue of their three-level rotary system, the six keys can actually do the work of eighteen different software keys.
- **More BASIC Language Terms**
BASIC language, the most simple computer language, is used for programming ease. **Added BASIC language terms** provide variables that can be freely defined using one or two characters, variables in two-dimensional arrays for easier matrix calculations, variable strings, commands for mini-graphic display, and many other advanced features.

P/N	DESCRIPTION	ACP
	COMPUTERS	
PC-1500	Handheld Personal Computer	\$199.00
CE-150	4-Color Printer/Cassette Interface	230.00
CE-151	4K RAM Expansion Module	75.00
CE-152	Cassette Tape Recorder	80.00
CE-155	8K RAM Expansion Module	150.00
CE-159	8K RAM Expansion Module w/Battery	175.00
CE-158	RS-232C/Parallel Interface	225.00
	SOFTWARE	
CE-501A	Graphics	65.00
CE-501B	Bus. Graphics	65.00
CE-502A	General Statistics	65.00
CE-502B	Statistical Distribution	65.00
CE-503A	Electrical Engineering	65.00
CE-504A	Finance	65.00
CE-505A	Math	65.00
CE-507A	Sharp Calc	65.00
	ACCESSORIES	
EA-158C	Cables for CE-158, RS-232C	\$75.00
EA-850B	Replacement Pens for CE-150, 4 ea. (Black per pkg.)	3.95
EA-850C	Replacement Pens for CE-150, 4 ea. (4 colors per pkg.)	3.95
EA-1500P	Roll paper for CE-150, 5 rolls per pkg.	1.95
EA-1250P	Roll paper for CE-125, 5 rolls per pkg.	1.95

HANDHELD



ADVANCED PROGRAMMING POWER

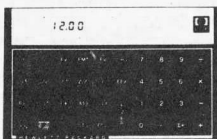


HP-11C New for the scientific user. Nonvolatile memory and 203 program lines plus a full range of logarithmic and trigonometric functions. Statistical features allow for one or two variable analysis. European or U.S. display separator and decimal points.

ACP PRICE \$79.95

(Includes Handbook, Batteries & Case)

BUSINESS SOLUTIONS

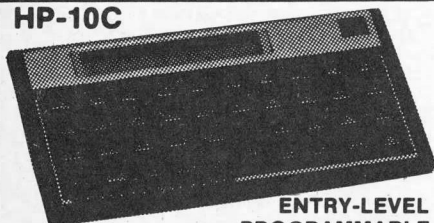


HP-12C Hewlett-Packard's new standard for the business user. A full range of time/money functions. Amortization schedules. Bond calculations including yield to maturity Net present value and internal rate of return. Plus, statistical functions and up to 99 program steps for solving your unique business problems. Nonvolatile memory.

ACP PRICE \$109.95

(Includes Handbook, Batteries & Case)

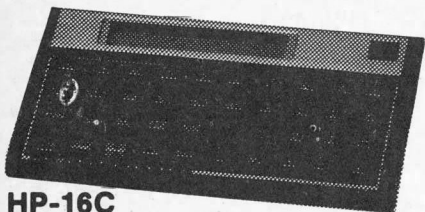
HP-10C



ENTRY-LEVEL PROGRAMMABLE

- Trig calculations made easy
- 10 digit accuracy
- Easy programmability
- Convenient statistical functions
- Comes complete with Owner's Handbook, batteries and case

ACP PRICE \$59.95



HP-16C

ADVANCED PROGRAMMABLE FOR THE COMPUTER SCIENTIST

- Set word size up to 64 bits
- Versatile bit manipulation
- Manipulate binary quantities easily
- Quick error recovery
- Comes complete with Owner's Handbook, batteries and case

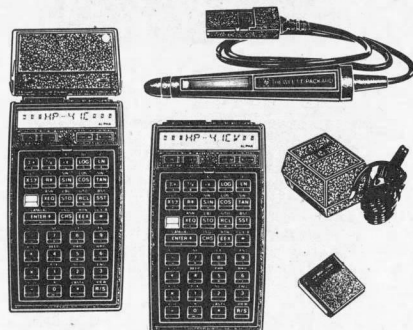
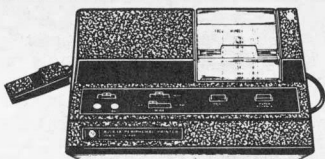
ACP PRICE \$104.95

HP-15C

ADVANCED PROGRAMMABLE SPECIAL FUNCTION SCIENTIFIC

- Rapid matrix operations
- Simplifies complex arithmetic
- Solves real roots
- Streamlines numerical integration
- Comes complete with Owner's Handbook, batteries & case

ACP PRICE \$104.95



HP-41C/41CV

The new HP-41C from Hewlett-Packard is a powerful programmable calculator that features an LCD display with alphanumeric capability; 63 registers of data storage or up to 400 lines of program memory—expandable to 319 registers or up to 2,000 program lines; up to 6 levels of subroutines; 10 conditionals and 56 internal flags; specific loop control; indirect addressing; local and global branching; Continuous Memory; RPN logic.

The HP-41C lets you reassign any standard function, any programs you've written, or programs provided in the Application Modules—to any keyboard location you want. And of course Hewlett-Packard backs the HP-41C with total software support including an Owner's Manual and thousands of programs in the HP-41C Applications Pacs, Solutions Books, and the HP User's Library.

The unique difference between the HP-41C and HP-41CV is that the HP-41CV has 5 times more memory built-in. Specifically, it contains 319 storage registers versus 63 storage registers in the HP-41C. For those of you who have programming experience, the HP-41CV gives you the memory capacity to store a host of programs continuously. And with all this memory built-in, you have four free ports to add the peripherals of your choice, making your system even more powerful and versatile.

	LIST	ACP
HP-41C	\$195.00	\$164.95
HP-41CV	275.00	219.95



SAVE UP TO \$120.00 with this

SPECIAL OFFER

GOOD UNTIL APRIL 30, 1983

PURCHASE ONE OF THESE:

- HP-41C or HP-41CV
- HP Card Reader
- HP Printer/Plotter
- HP Optical Wand
- HP Cassette Drive
- HP Thermal Printer/Plotter
- HP Video Interface

GET ONE OF THESE FREE:

- HP-IL Module
- HP Quad Memory Module
- HP Extended Functions/Memory Module
- HP Extended Memory Module
- HP Time Module

HP-41 PERIPHERALS

Plug-in Card Reader	\$185.00
Battery Operated Printer/Plotter	325.00
Optical Wand	115.00
Digital Cassette Drive	430.00
Thermal Printer/Plotter	430.00
Video Interface - U.S.	215.00

HP-41 ACCESSORIES

Memory Module	\$25.00
Quad Memory Module	75.00
Standard Application Module	30.00
Overlay Kit	7.50
Module Holders (2)	7.50
Multipurpose Rechargeable Battery Pack	30.00
Extended Functions/Memory Module	70.00
Extended Memory Module	70.00
Time Module	70.00
HP-IL Interface Module	120.00

HP-41 APPLICATION PACS

Aviation Pac	\$30.00
Circuit Analysis Pac	30.00
Clinical Lab & Nuclear Medicine Pac	30.00
Financial Decisions Pac	30.00
Financial Decisions Pac - Spanish	30.00
Games	30.00
Home Management Pac	30.00
Machine Design Pac	30.00
Mathematics Pac	30.00
Mathematics Pac - Spanish	30.00
Securities Pac	30.00
Statistics Pac	30.00
Statistics Pac - Spanish	30.00
Stress Analysis Pac	30.00
Structural Analysis Pac	45.00
Surveying Pac	45.00
Thermal & Transport Science Pac	30.00

HP-41 SOLUTIONS BOOKS

Business:	
Business Statistics/Marketing Sales	\$12.50
Home Construction Estimating	12.50
Lending, Savings & Leasing	12.50
Real Estate	12.50
Small Business	12.50
Taxes	12.50
Engineering:	
Antennas	12.50
Chemical Engineering	12.50
Civil Engineering	12.50
Control Systems	12.50
Electrical Engineering	12.50
Fluid Dynamics & Hydraulics	12.50
Heating, Ventilating & Air Conditioning	12.50
Mechanical Engineering	12.50
Solar Engineering	12.50
Surveying	12.50
Computation:	
Geometry	12.50
High-Level Math	12.50
Test Statistics	12.50
Other:	
Calendars	12.50
Cardiac/Pulmonary	12.50
Chemistry	12.50
Games	12.50
Optometry (General)	12.50
Optometry II (Contact Lens)	12.50
Physics	12.50

HP-11C/12C SOFTWARE

HP-11C Solutions Handbook	\$20.00
HP-12C Solutions Handbook	20.00
HP-12C Real Estate Applications	15.00

LINE PRINTERS



Integral Data Systems, Inc. PRISM 80 F/T COLOR MATRIX PRINTER



FEATURES

Print Columns (10 CPI) 80
Paper Width Up to 10.5 in
Tabbing Bidirectional
Print Speed Up to 200cps • Correspondence—Data (Sprint Mode™)* Correspondence quality: 24x9 overlapping dot matrix • Dot quality: 18x9 open matrix front
Paper Feed Tractor feed—Auto cut sheet feed* (optional). Print mode, line spacing, forms length, intercharacter spacing, margins, tabs 10/12/16.8 CPI plus double width characters
Character Spacing Fixed and Proportional • Software Selectable • Switch and software selectable: 3.0, 3.5, 4.0, 7.0, 8.5, 11.0, 12.0, 14.0 in. • 6 or 8 lines per inch switch selectable • 7.5 inches per second
Interfaces Parallel, Centronics compatible Serial, RS232 (DTR or XON/OFF) • Automatic, multiple line buffering or 1500 bytes • 300/1200/2400/9600 bits per second
Dotplot™ Graphics (optional) 84 x 84 DPI—9w staggered head
Character Set Full 96 characters ASCII
Ribbon Cartridge

PRISM 80 with sheet feed, graphics & sprint mode	1547.00	1315.00
PRISM 80 with all the above plus color	1795.00	1495.00

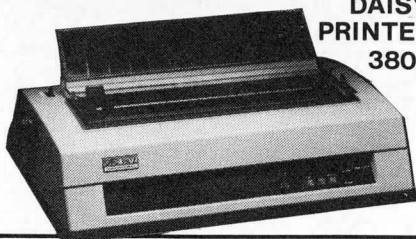
IDS ACCESSORIES

	LIST	ACP
Color Module	399.00	349.00
Sprint Mode	149.00	139.00
Dot Plot Graphics	99.00	89.00
Prism Apple II Software	60.00	49.00
Prism Color Ribbon		25.00
Ribbon 6 pak (black)		26.00
Cable, serial		35.00
Cable, parallel		49.00
Prism Paper Catch		22.00



Data Terminals & Communications

DAISY PRINTER 380Z



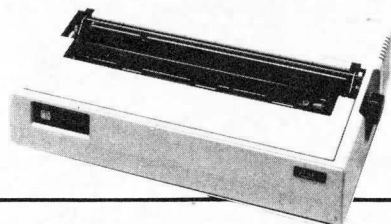
The DTC 380Z is an entirely new and exciting letter quality daisy wheel printer designed to meet the needs of the personal computer user. With considerable experience and involvement in the personal computer printer market, DTC has identified the need for a letter quality daisy wheel printer which combines reliability with the advanced hardware and software features that are necessary to enable the printer to be readily driven at maximum efficiency. A Z-80 microprocessor is used to provide software compatibility with Diablo 10640/1650/630, so software applications programs that work with the Diablo printer will work with the DTC 380Z. Interconnecting cables are available for hooking up the printer to major personal computers which include Apple, Osborne, TRS-80 and IBM. Some of the more exciting features offered are automatic bidirectional printing, automatic proportional spacing, hard-copy print-out from a CRT, and graphic plotting.

FEATURES

Print Element 96 character printwheel cassette
 • 25,000,000 impression life minimum
Print Speed Up to 32 cps
Paper Width 16.5 inch maximum (420mm)
Printable Line 13.2 inches (334mm)
Paper Original and 7 copies • Paper-out sensor
 • Single sheet stop-go
Ribbon IBM-compatible single and multi-strike cartridges Ribbon-cut sensor
Paper Feed Friction, bidirectional, 2 ips max., manually adjustable, 1/48 inch vertical increments
Carriage Movement Bidirectional, program-controlled, tab speed 13.75 inches (350 mm) per second
Interfaces Centronics, RS232C, IEEE-488.
ACP PRICE..... **\$1049.00**
 Forms Tractor **150.00**



MICROLINE 84



The bidirectional Microline 84 offers both correspondence quality and data processing speed in the same printer. Short line seeking logic and fast horizontal slew increase throughput. The Microline 84 offers condensed and expanded fonts, superscripts and subscripts, proportional spacing, and Okigrah™ dot addressable graphics, all as standard. With the Microline 84, you can print charts, graphs and illustrations as well as text. And the 84 prints on a variety of paper forms. The standard roller platen accommodates friction feed forms, and standard paper feed tractors easily snap into place for sprocket-fed forms up to 16" wide.

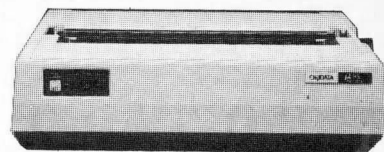
FEATURES

Print speed Up to 200 cps
Print technique Dot matrix impact
Character Matrix 9 x 9 DP • 13 x 17 corres.
Serial RS 232C, 9600 baud* with current loop
Characters per line Up to 231 characters
Okigrah™ 72 x 72 dpi • 144 x 144 dpi
Ribbon Standard four mil, 1/2" wide on 3" spools
Interfaces Parallel, Centronics-compatible IEEE 488 compatible (optional) • Serial, RS 232C, 9600 baud with current loop.

	LIST	ACP
84A PARALLEL	1395.00	1199.00
84A SERIAL	1495.00	1299.00



MICROLINE 93



Precision manufacturing combined with the latest advances in dot matrix technology have resulted in a wide-column printer that provides exceptional performance. With the ML 93, you can print text, charts, graphs and illustrations on a variety of forms. The standard roller platen accommodates friction and tractor feed forms, up to 16" wide. Operates with TRS-80, Apple, IBM, Xerox, and other popular personal computers with most available software packages.

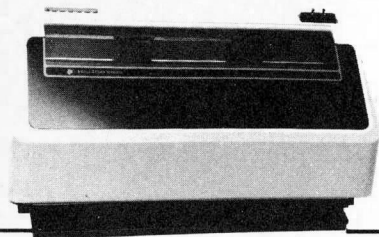
FEATURES

Print speed Up to 160 cps
Print technique Bidirectional/short line seeking
 • Dot matrix impact
Parallel Centronics-compatible* • IEEE 488 compatible (optional)
Serial RS 232C, 9600 baud* with current loop
Tabbing Horizontal
Character matrix (HXV) 9 x 9 Data processing • 9 x 17 correspondence
Characters per line Up to 233 characters
Paper width Up to 16 inches
Okigrah™ dot addressable graphics 60 x 72 dpi • 72 x 72 dpi
Ribbon Spool type
Warranty Ninety days, parts and labor; one full year on print head.

P/N	LIST	ACP PRICE
93A	1249.00	1049.00
92A	699.00	619.00
94A(PorS)	Call	—
82A	549.00	489.00
83A	899.00	729.00
2350 Parallel	2695.00	2399.00
2350 Serial	2845.00	2599.00



Integral Data Systems, Inc. PRISM 132 COLOR MATRIX PRINTER



Print Columns (10 CPI) 132
Paper Width Up to 14.875 in.
Tabbing Bidirectional
Print Speed Up to 200 cps • Correspondence—data (Sprint Mode™)
Paper Feed Tractor feed—auto cut sheet feed
Character Spacing Fixed and proportional
Interfaces Parallel, Centronics compatible • serial, RS232 (DTR or XON/OFF)
Dotplot™ Graphics 84 x 84 DPI—9w staggered head
Character Set Full 96 characters ASCII

	LIST	ACP
PRISM 132G with sheet feed, graphics and sprint mode	1747.00	1589.00
PRISM 132G with all the above plus color	1998.00	1789.00



P/N	LIST	ACP PRICE
CR-1-S Serial	1199.00	969.00
CR-1-C Parallel	1115.00	899.00
CR-1-Q Qume Interface	1099.00	899.00
Comrex Printwheel		24.00
Comrex Multistrike Ribbon		6.00
Comrex IBM Cable		45.00

ORDER BY PHONE

outside California
(800) 854-8230
 inside California
(714) 558-8813

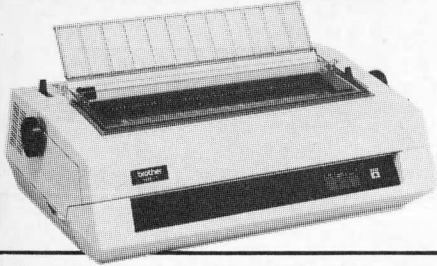
PRINTERS

LINE PRINTERS

PRINTERS

brother®

HR-1 DAISY WHEEL PRINTER



The HR-1 Daisy wheel RO Printer is designed especially for word processing applications and assures high reliability as well as quiet and high quality printing. A microprocessor reduces the number of mechanical parts and a linear step motor simplifies the drive mechanisms to increase the reliability and durability. One-touch interchangeable and dust-free cassette-type daisy wheel and ribbon assures easy operation.

FEATURES

Print Speed 16 cps (Shannon text)
Character/Line 132 characters (1/10"), 158 characters (1/12"), 198 characters (1/15")
Paper Width 16.5 inch (420 mm)
Copy Capacity Original (45 kg) + 4 copies (15 kg)
Carriage Motion Bi-directional, 60 position/inch
Carriage Return Speed 1,000 ms Max.
Paper Feed Bi-directional, Friction platen
Paper Feed Speed 2 inch/second
Line Spacing 48 position/inch
Ribbon Cassette type, single strike ribbon (120,000 characters max.), multi-strike ribbon (500,000 characters max.)
Interface Qume Sprint 3 • RS-232C • Centronics Parallel • IEEE 488

		LIST	ACP
HR-1A	Parallel	\$1150.00	\$ 999.00
HR-1A	Serial	1250.00	1099.00

COEX 80 F/T



The new Coex 80 F/T 80 column dot matrix printer is a unique, heavy duty printer that provides the high performance features of expensive printing terminals at a remarkably low cost. The Coex F/T comes with a wide range of outstanding features and offers many low cost options such as tractor feed assembly, EIA RS-232C serial interface and block graphics.

FEATURES

Character Set Standard 96 ASCII plus block graphics and international script. Up to 224 characters with EPROM generator
Character Formation Process Serial, impact dot matrix
Standard Font 9 x 7 (7 needles) 6 x 6 for graphics printing
Printing Direction Bi-directional
Number of columns 80, 96 or 132 (40, 48 or 66 for enlarged characters)
Character Size 2.57 mm (.101") x 2.0 mm (.079") for standard 80-column line
Character Density 5 CPI for 40 column, 10 CPI for 80 column, 12 CPI for 96 column and 16.7 CPI for 132 column
Line Spacing 1/6", 1/8" and 1/12"
Printing Speed 80 characters per second
Number of Copies 2 (original plus 2 copies for carbonless sets)
Paper Width 8" to 10" for friction-fed paper and 3" to 10" sprocket-fed paper
Inked Ribbon Standard Underwood spool type 1/2" (13 mm) wide by 11.5 yards (10.5 m) long
Interface Centronics standard EIA RS232C, 20mA current loop (optional)
ACP PRICE \$279.00

DIABLO 620



The Diablo 620 Performer works in perfect harmony with your word processing or data processing system. If this is your first printer, you'll be amazed at how easy The Performer is to use, how comfortably it slips into your workstyle.

It prints letters, updates documentation, completes forms, and even plots like a virtuoso.

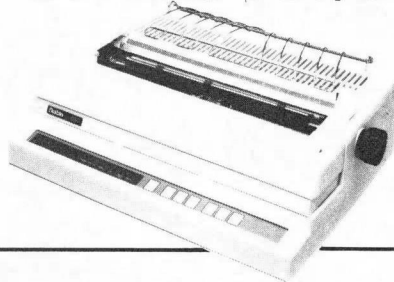
And the Diablo 620 needs little prompting to keep performing. Change print styles simply by dropping the printwheel into its envelope-like compartment and snapping it shut. The Performer automatically positions the printwheel and adjusts for the characteristics of the print wheel style you've selected.

The Diablo 620 Performer plays a long time between intermissions, too. When service is required, you'll find a national service network to immediately assist you.

FEATURES

Print Speed	Up to 25 CPS	
Character Set	98 Characters	
Printwheel	98 Character Plastic Wheel	
Print Line	13.1 inches, up to 198 columns	
Paper Width	15.2 inches max.	
Serial Interface	RS-232C and CCITT/V.24 Bell 103A, 113A, 212 Modem Compat.	
Multicopies	1 to 5 Part Forms	
Tabbing	Bidirectional	ACP Price
620 SPI	.....	\$1075.00

DIABLO 630/6



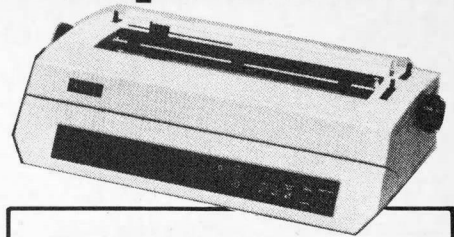
All-Purpose Interface for the IBM Personal Computer, Apple II, TRS-80 and Centronics 703 plus RS-232-C Serial and IEEE-488 Parallel.

FEATURES

• Printer	Fully formed character serial up to 40 CPS	
• Print Speed	Up to 40 CPS	
• Character Set	128 ASCII, 96 printable	
• Print Wheel	Metal or plastic, interchangeable	
• Serial Interface	RS-232C and CCITT V. 24	
• Tabbing	Bidirectional	
• Print Buffer	768 byte	
• Type Style	More than 120 print wheel type styles and fonts	
• Carriage Movement	Bidirectional	ACP Price
630 API	.....	\$1899.00

COMPUTERS INTERNATIONAL

Daisywriter™ 2000



The Intelligent Daisywriter™ 2000 daisywheel printer is designed for word and data processing applications where letter-quality printing is desired. It is ideally suited for personal computers and small business systems, is plug-to-plug compatible with any machine and will operate with any word processing software. The intelligent Daisywriter 2000 has a standard 16K byte buffer memory. A 48K byte memory is optional. This allows for off-line operation during which time the host computer can be used for other operations. A microprocessor, utilizing three CPU's, reduces the number of mechanical parts and a linear motor is used to simplify the drive mechanism. Both contribute to a long life of trouble-free operation.

FEATURES

Print Element 96 character print wheel cassette
Print Speed 16.5 cps min. (Shannon text at 10 cpi)
Paper Width 16.5 inches (420 mm)
Printable Line 13.2 inches (334 mm)
Interfaces EIA RS-232C/CCITT V.24, ETX/ACK and DC1/DC3 (XON/OFF) • Centronics 8 bit parallel TTL logic levels • Current loop, 20 mg ± VDC • IEEE-488, 8 bit ASCII parallel

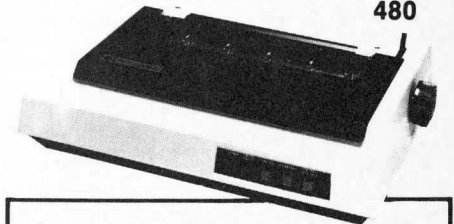
DESCRIPTION

	LIST	ACP
Daisywriter 2000 16K	1395.00	1195.00
Daisywriter 2000 48K	1495.00	1250.00
Cut Sheet Feeder	850.00	775.00
Tractor DTP-1	175.00	169.00
Print Wheel		25.00
Ribbon Single-Strike		2.25
Ribbon Multi-Strike		5.50
Cables - Parallel or Serial	50.00	45.00
Daisywriter 1500P	1250.00	1049.00
Daisywriter 1500 1E	1250.00	1049.00
Daisywriter 1500 SR	1295.00	1085.00



Integral Data Systems, Inc.

MICROPRISM™ 480



The new Microprism Printer enables you to produce correspondence quality text like that of more expensive daisy-wheel printers, in a single pass. Bold, well formed characters make your output impressive and easy to read. You get a dual speed capability, with throughput in correspondence quality at 75 cps and in high-speed data mode at 110 cps. And high-density graphics in an 84 x 84 dpi format . . . again, in a single pass! Add other standard features such as proportional spacing and text justification.

FEATURES

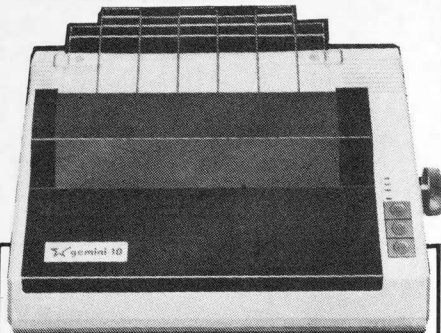
• 24 x 9 overlapping matrix • bi-directional printing
 • short line seeking • automatic proportional spacing
 • dual interfacing: parallel and RS232C serial • 1.4K buffer • dot resolution graphics • auto skip over perforation

	LIST	ACP
Microprism 480	\$799.00	\$689.00

LINE PRINTERS



GEMINI-10 PRINTER



Superior quality is the hallmark of every Star printer. In the Gemini, quality means more standard features like: 100 cps print speed • a thruput time of 48 lpm (virtually a page a minute). Star has been able to develop in the Gemini a wide spectrum of impressive features that give you more flexibility like: super/sub script • underlining • backspacing • double strike mode • emphasized print mode • 2.3K buffer (additional 4K buffer optional) • compatibility with most software packages that support the leading printers. Gemini printers are designed with the user in mind—incorporating features that combine convenience and ease like: a user replaceable print head • easy access dip switches and 3 way paper handling (tractor, roll paper & cut sheets).

FEATURES

Printer Serial, impact dot matrix
Print Speed 100 cps, bidirectional logic seeking
Number of Columns Up to 132
Character Sets 96 ASCII char., plus others
Paper Width Up to 10" wide
Ribbon Standard 2" twin spools, Underwood style
Interface Standard parallel (Centronics compatible)
 Serial RS 232C/20mA Cur. Loop (Xon/off or ACK)
List Price \$499.00 **ACP Price \$379.00**



SP830 SERIAL PRINTER

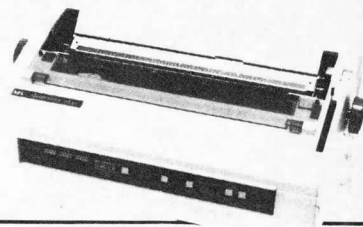


The SP830 is a new daisy printwheel serial printer featuring a maximum print speed of 80 characters per second with excellent print quality. Its extremely simplified mechanism substantially increases reliability and maintainability. The SP830 is available in "Naked" and "Receive Only" types. The SP830 offers an assortment of options for flexible and versatile applications. Its various interfaces make the SP830 compatible with a variety of printers including Diablo and Qume. Also, RS-232C (CCITT V-24) and DC Current Loop interfaces are available for international compatibility. Interchangeable daisy printwheels allow virtually all characters and symbols of any language in any type style. In addition to a friction feed platen with optional form tractors and cut sheet feeders, platens with front feed tractor, rear feed tractor, or bottom feed tractor are available. With the "Receive Only" type, a broad choice of integrated power supplies is provided.

FEATURES

Printwheels 127-character plastic/metallic wheels, 96-character plastic/metallic wheels
Print Speed Maximum 80 characters per second, average 70 characters per second
Character sets 127 characters, 96 characters
Tabulation Vertical, horizontal
Paper Size 101.6 to 406.4mm (4 to 16 inches) wide, maximum 0.7mm (0.03 inches) thick
Multi-copies Maximum 6 (including original)
Ribbons Cartridge, single-color fabric ribbon, two-color (black and red) fabric ribbon, multi-strike carbon film
Interfaces Hytype II (standard), Sprint 5, RS-232C (CCITT V-24), DC Cur. Loop (20 or 60mA) (optional)
ACP Price..... \$3399.00

NEC INFORMATION SYSTEMS, INC. 3500 SPINWRITER®

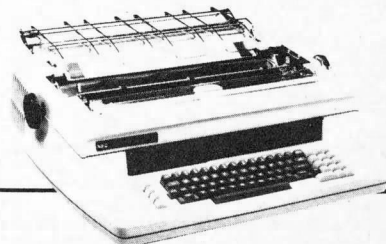


FEATURES

Print Speed Up to 33 characters per second
Character Set Up to 128 characters
Print Line 136 col. @ 10 cpi • 163 col. @ 12 cpi • 204 col. @ 15 cpi
Paper Width Up to 16 inches
Carriage Return Time 800 milliseconds (maximum)
Column Spacing 120 positions per inch
Line Feed 48 positions per inch
Tabbing Horizontal and vertical in any direction
Interface Type EIA RS-232-C/CCITT V.24 (Models 3510, 3515, 3520 and 3525) Centronics-Compatible (Model 3530)

P/N	LIST	ACP
3510	1895.00	1649.00
2515	1925.00	1799.00
3520	2625.00	2499.00
3525	2650.00	2520.00
3530	2190.00	1999.00
3550	2350.00	2199.00
Bi-Direct. Tract Feed		265.00
Cut Sheet Guide		117.00
Cut Sheet Feeder		1125.00
Two Pin Adapter		225.00
Envelope Handler		315.00

NEC INFORMATION SYSTEMS, INC. 7700 SPINWRITER®



FEATURES

Print Speed Up to 55 characters per second
Character Set Up to 128 characters
Print Line 136 columns at 10 characters per inch • 163 columns at 12 characters per inch
Paper Width Up to 16 inches
Carriage Return Time 400 milliseconds (maximum)
Column Spacing 120 positions per inch
Line Feed 48 positions per inch
Spacing Speed 16 milliseconds at 12 characters per inch
Tabbing Horizontal and vertical in any direction
Interface Type EIA RS-232-C/CCITT V.24 (Models 7710, 7715, 7720 and 7725) Centronics-compatible (model 7730)

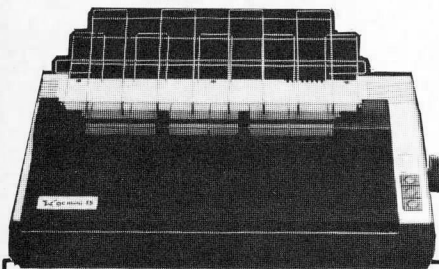
P/N	LIST	ACP
7710	3085.00	2799.00
7715	3165.00	2849.00
7720	3610.00	3349.00
7725	3710.00	3449.00
7730	3085.00	2799.00
Vert. Form Tractor		250.00
Pin Feed Platin		215.00
Horiz. Form Tractor		175.00
Bi-Direct. Tract Feed		400.00
Cut Sheet Feeder		1400.00

NEW



THERMAL PRINTER \$199.00

GEMINI-15 PRINTER



The Gemini-15 printer incorporates all of the outstanding features of the Gemini-10 but includes up to 233 print columns on 15.5" inch wide paper as standard. Also available on the Gemini-15 is a bottom paper feed.

FEATURES

Printer Serial, impact dot matrix
Print Speed 100 cps, bidirectional logic seeking
Number of Columns Up to 233
Character Sets 96 standard ASCII characters, plus
Tabbing Bidirectional
Copies 3 copies
Paper Width Up to 15.5" wide
Ribbon Standard 2" twin spools, Underwood style
Interface Standard parallel (Centronics compatible)
 • Serial RS 232C/20mA cur. (Xon/Xoff or ACK)
List Price \$649.00 **ACP Price \$479.00**

NEC 8023/ C ITOH 8510A



NEC 8023/C.Itoh 8510A is a revolutionary advancement in printer development. Pro/Writer offers professional quality: productivity through a combination of high-speed matrix printing, logic seeking bi-directional printing, and quick return head motion; and even proportional spacing combined with excellent character resolution. Graphics capability is built-in and includes shape and high resolution features. It is by design perfectly integrated into the NEC PC-8000 Series Micro-computer System, and accordingly features the comprehensive character set of the PC-8001A, along with the ability to print dot graphic screen images on paper. Parallel interface is standard for easy compatibility to most microcomputers.

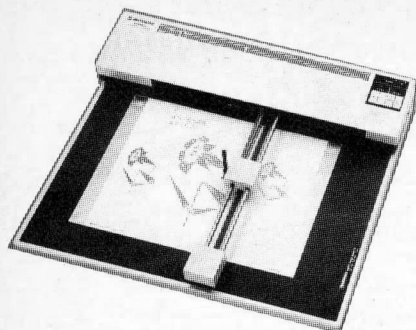
FEATURES

Print Speed 100 CPS
Character Set 96 ASCII upper & lower case
Print Line Up to 136 column 17 char./inch • 1/144 inch incremental line feed
Paper Width 4.5-10 inches
Tabbing Bi-directional
Graphics Resolution 144 x 160 dots per inch
Ribbon 113mm x 11 meter cartridge or spool
Copy Capacity Original and up to 3 copies
Pro/Writer 539.00
NEC 8023 539.00
Serial Card 149.00

PRINTERS

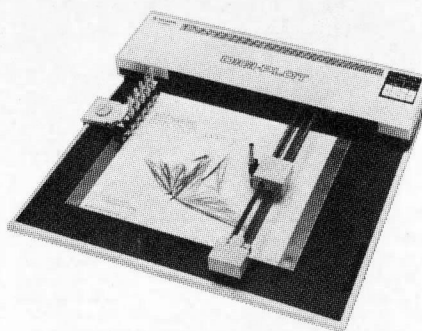
PLOTTERS

PLOTTERS



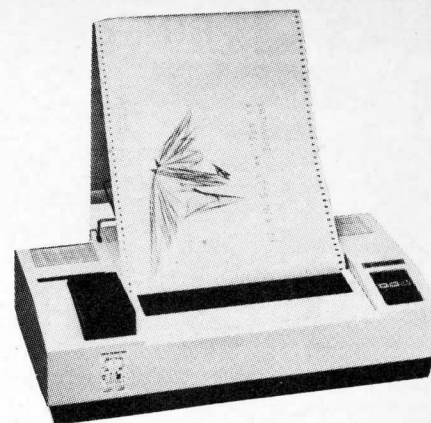
WX 4671
DIGITAL X-4 PLOTTER

Plotting Area 360mm x 260mm
Plotting Speed 50mm/second
Pen Type Hard fiber-tip
Paper 420mm x 300mm max.
Operation Modes Plotting mode • Self test mode
 • Printer mode
Parallel 7-bit input using ASCII code
ACP PRICE \$999.00



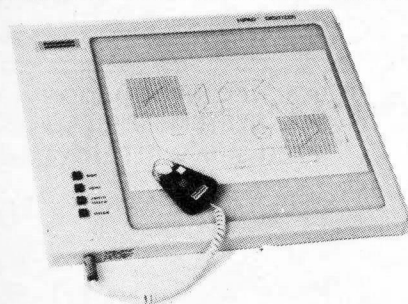
WX 4675
FLAT-BED INTELLIGENT PLOTTER

Plotting Area 345mm x 260mm
Plotting Speed 50mm/second
Pen Type Fiber-tip or ink pens • water based (4 colors) • Oil based (8 colors)
Paper 420mm x 300mm max.
Operation Modes Plotting mode • Self test mode
 • Printer mode • Pen test mode
Parallel 7-bit input using ASCII code
ACP PRICE \$1199.00



WX 4731
PLOTWRITER

Plotting Area 287mm x 1000mm
Plotting Speed 8 IPS
Pen Type Ball point (4 colors)
Paper Roll paper 320mm x 40mm max.
Operation Modes Graphic mode • Print mode
RS232 standard. GPIB-IEEE-488 or parallel 8-bit ASCII optional
ACP PRICE \$2099.00



MODEL DT-114 HIPAD™ DIGITIZER

HIPAD™ is a digitizer designed for the practical, inexpensive market. The HIPAD has an 11 x 11 inch (27.94 x 27.94 cm) digitizing area with a resolution of 0.005 or 0.01 inches (selectable at interface connector). An exceptional feature is user selection of various operating parameters by interface logic signals (or jumpers). Among these are a choice of English or Metric scaling, Data Format (Binary/BCD ASCII), Baud Rates, Resolution of either 0.005" or 0.01". Complete HIPAD standard with 4-button magnified cursor. Providing four function levels definable by the user.

DT-114A

Designed as the interface option for the APPLE II™, this package includes a parallel interface card, menu overlay, 4-button magnified cursor, and user contributed software on diskette.

DT-11 and DT-11A

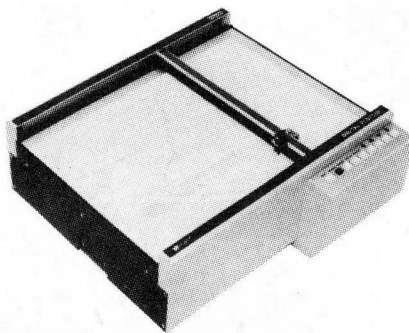
Same as DT-114 and DT-114A, but has single function level and comes standard with 1-button magnified cursor.

	LIST	ACP PRICE
DT-114	\$ 920	\$825
DT-114A	1075	975
DT-11	840	795
DT-11A	985	875

MULTI-PEN OPTIONS

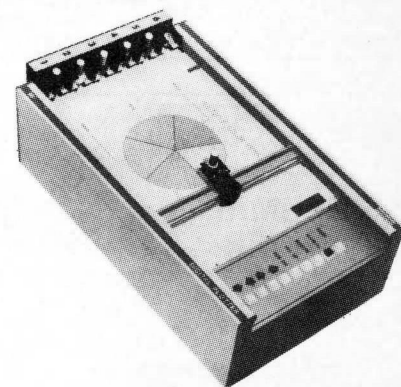
The Six Pen Option, designed for the smaller HIPLLOT plotters, the DMP-2, 3, 4, has six colors, black, blue, red, orange, violet, and green, as standard. The Eight Pen Option, designed for the larger HIPLLOT plotters, the DMP-5, 6, and 7, offers the standard Six Pen Option colors with the addition of brown and yellow pen colors. For the finest line quality and color reproduction, ball pens have been selected for use with both of the multi-pen options.

BAUSCH & LOMB
houston instrument division



HIPLLOT™
11" x 17" MICROGRAPHIC PLOTTERS

MODEL	LIST PRICE	ACP
DMP-5	\$1685	\$1495
Similar to DMP-2 but with larger plotting surface		
DMP-6	\$1985	1795
Similar to DMP-3 but larger plotting surface and horizontal or vertical mounting capability.		
DMP-7	\$2185	1995
Similar to DMP-6 but with electronic controls for quick X and Y axes positioning, remote and local functions and plotter self-test. Detachable controls.		
With 8 Pen Option		
DMP-5-593	\$2180	1995
DMP-6-593	2480	2295
DMP-7-593	\$2680	2495
8 Pen Retrofit Kit DMP 593	\$.595	525



HIPLLOT™
8 1/2" x 11" MICROGRAPHIC PLOTTERS

MODEL	LIST PRICE	ACP
DMP-2	\$1085	\$ 995
Built-in RS-232-C and parallel interfaces. 2.4 inches per sec. pen speed. 0.005 or 0.01 inches resolution.		
DMP-3	\$1385	1295
Built-in RS-232-C or optional Centronics™ parallel interface. 3 inches per sec. pen speed, includes built-in microprocessor.		
DMP-4	\$1485	395
All features of DMP-3 plus electronic pushbutton controls.		
With 6 Pen Option:		
DMP-2-443	\$1480	1395
DMP-3-443	\$1780	1695
DMP-4-443	\$1880	1795
6 Pen Retrofit Kit DMP-443	495	425

MODEMS



U.S. ROBOTICS INC.

PHONE LINK™



ACOUSTIC MODEM

The Phone Link provides half and full duplex operation in both originate and answer modes at rates of up to 300 baud. The self test mode and LED displays simplify diagnostics. In addition to verifying the performance of the Phone Link, these features aid in testing the terminal or computer to which it is connected.

DESCRIPTION	LIST	ACP
Phone Link	\$149.00	\$139.00

MICRO LINK



DIRECT CONNECT MODEMS

The Micro Link series modems connects any RS-232 interface computer on terminal to the phone lines. It provides half and full duplex operation in originate and answer modes at rates up to 300 baud. The design is based on two LSI integrated circuits and is crystal controlled. The 300 is Bell 103/113 compatible, the 1200 is Bell 212A compatible.

DESCRIPTION	LIST	ACP
Micro Link 300 (0-300 baud dc)	\$179.00	\$169.00
Micro Link 1200 (1200 baud dc)	449.00	419.00

AUTO LINK DIRECT CONNECT AUTO ANSWER MODEMS

The Auto Link series modems connects any RS-232 interface computer or terminal to the phone lines. It provides half and full duplex operation in originate and answer modes at rates up to 1200 baud. The digital (300) or microprocessor (212 and 1200) designs are based on 2 (300), 10 (1200), and 12 (212) integrated circuits. The 300 is Bell 103/113 compatible. The 1200 is Bell 212A compatible.

DESCRIPTION	LIST	ACP
Auto Link 300 (0-300 baud auto/dc)	\$219.00	\$209.00
Auto Link 1200 (1200 baud auto/dc)	499.00	459.00
Auto Link 212A (0-300, 1200 baud auto/direct)	549.00	499.00

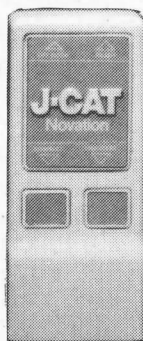


Novation
CAT



ACOUSTIC MODEM

Data Rate: 0-300 Baud
Compatibility: Bell 103
Interface: EIA-RS-232C
Modes: Answer, Originate, Test
Duplex: Half, Full
Indicators: Power, Carrier (Ready)



J-CAT MODEM

FEATURES:

- Auto Search
- Disconnect/Test Key
- Connect/Break Key
- Self-Test
- Audio Indicator for Line Status
- Dialtone/Busy Status at I/O connector
- Off-Hook Control at I/O connector
- Compatible with EIA-RS-232C Interface
- Low Power



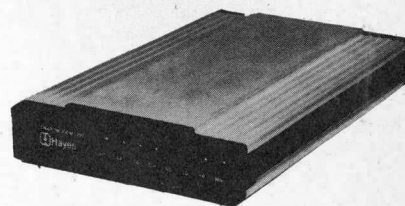
D-CAT MODEM

Data Rate: 0-300 Baud
Compatibility: Bell 100 series
Interface: EIA RS-232C
Modes: Data, Talk, Monitor, Normal and Test
Duplex: Half, Full
Indicators: Ready, Power

DESCRIPTION	LIST	ACP
CAT™	\$189.00	\$169.00
J-CAT™	149.00	119.00
D-CAT™	199.00	179.00
AUTO-CAT™ (300 baud, full or half duplex)	249.00	219.00
103 SMART-CAT™ (300 baud, full duplex)	249.00	219.00
103/212 SMART-CAT™ 300 or 1200 baud full duplex)	595.00	495.00
212 AUTO-CAT™ (1200 baud full duplex)	695.00	595.00
APPLE-CAT II™ (300 baud full or half duplex, 1200 baud half duplex)	389.00	329.00
212 APPLE-CAT II™ (plug in module only, 1200 baud full duplex)	389.00	329.00
212 APPLE-CAT II™ SYSTEM (APPLE-CAT II w/212 module)	725.00	629.00



SMARTMODEM 1200



Features: 1200 or up to 300 bps operation • Automatic speed selection • Full or half duplex • RS-232C interface • Connects directly to telephone lines • Touch-Tone™ and pulse dialing • Auto-answer and auto-dial • Redial last number dialed • Controllable using any programming language • Compatible with Bell 212 A or Bell 103 (300bps) modems • Built-in Audio monitor • Self-test

SMARTMODEM

FEATURES

- Auto-Answer and Auto-Dial for completely unattended operation
- Touch-Tone™ and pulse dialing for use with any telephone system
- Audio Monitor alerts you to busy signals, wrong numbers, etc.
- Programmable—can be controlled using any language
- FCC-approved direct-connect design
- Repeat last command, loop-back self-testing
- Full or half duplex, 300-baud operation
- RS-232C Interface

MICROMODEM II™

- Direct-connect Microcoupler provides direct access into your local telephone system.
- Auto-Answer/Auto-Call. The Micromodem II can automatically answer the phone and receive input; it can also dial a number automatically, either from the keyboard or from a BASIC program, and effect the transfer of data.
- High-performance 110 or 300 baud Bell 103-compatible modem. Supports originate and answer modes.
- Interactive programming and distributed computing capabilities between your Apple II and another Apple II, or a terminal, another microcomputer, minicomputer, or a large time-sharing computer anywhere in North America, over regular telephone lines.

CHRONOGRAPH

A high-tech calendar/clock that gives your computer the added dimension of precise time-keeping. Monitor every minute of computer activity. Instruct your computer to execute programs unattended—anytime. Batch and transfer data while phone rates are cheapest. Develop programs for housekeeping chores, like turning on lights and activating burglar alarms. Dozens of imaginative uses. Will plug into any RS-232 compatible system.

MICROMODEM 100®

The Micromodem 100 is similar to the Micromodem II. It is used to upgrade an S-100 bus computer into a fully operational data communications system. The Micromodem 100 hardware consists of a printed circuit board and the Microcoupler that connects to any standard modular phone jack. Easy to install, it gives any S-100 microcomputer the ability to communicate with another microcomputer, a minicomputer or time-sharing network. Under program control, the Micromodem 100 features auto-dialing and answering.

DESCRIPTION	LIST	ACP
Smartmodem 1200	\$699.00	\$589.00
Smartmodem	279.00	269.00
Micromodem II	379.00	359.00
Chronograph	249.00	219.00
Micromodem 100	399.00	369.00



100/300 BAUD APPLE™ PLUG-IN MODEM

FEATURES

- Auto-Dial/Auto-Answer capability
- Advanced "single-chip" technology
- Bell 103 compatible with 110 or 300 baud being software selectable

DESCRIPTION	LIST	ACP
AMC-300	\$299.00	\$249.00

MDM-1200 EXTERNAL MODEM



LIST \$695.00 ACP \$549.00

- For package savings see Transpak special in Apple Section.

TERMINALS

CRT TERMINALS

TeleVideo Systems, Inc.



MODEL 910 PLUS

LIST PRICE \$699.00
ACP PRICE \$599.00

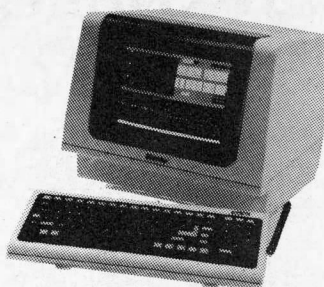
TeleVideo Systems, Inc.



MODEL 925

LIST PRICE \$995.00
ACP PRICE \$749.00

TeleVideo Systems, Inc.



MODEL 950

LIST PRICE \$1195.00
ACP PRICE \$999.00

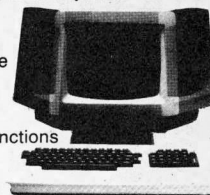
TeleVideo Systems, Inc.



MODEL 970

LIST PRICE \$1495.00
ACP PRICE \$1149.00

SOROC
TECHNOLOGY, INC.



- Swivel
- 14 User Programmable Function Keys
- Edit Commands
- Graphics
- Transmit and Print Functions
- Calculator Style Numeric Pad
- Video Fields
- Cursor Control
- RS232 Interface

A unique Softstart™ concept connects your Challenger 530 almost effortlessly with its soft-key interface set-up capability. Absolutely no mechanical switch settings to adjust desired baud rate, word structure and display format—just type it in once, and your Challenger is ready to go; and remains in that condition unless you alter it. An industry code structure capability further assures straightforward interconnect.

IQ 130

Attached Keyboard, VDT editing, block and conversational modes.

IQ 150

Full featured, VDT with graphics 5 page memory, 117 key detachable keyboard.

MODEL	LIST PRICE	ACP PRICE
C135	995	825
C530	595	499
IQ130	695	599
IQ150	1395	1125

ADDS



VIEWPOINT®

Keyboard: Detachable, stepped and sculptured profile, typewriter-like layout plus a separate array that has a numeric pad with cursor control keys and three discrete function keys. Keyboard lock/unlock under computer control. Typematic feature is standard.

Display Presentation: Light characters on a dark background (reversible through switch selection).

Visual Attributes: Offers normal video plus choice of one visual effect per screen - blinking, underline, reverse video, half intensity, zero intensity.

Communication Interface: EIA RS-232C/CCITT V.24 operates through the range of 110 to 19,200 baud, switch selectable.

Operating Mode: Conversational (character at a time) transmission.

Transmission: Full duplex or half duplex, switch selectable.

Auxiliary Interface: EIA serial output peripheral interface.

Monitor Mode: Terminal will display all ASCII codes received from host computer.

Parity: Choice of even, odd, marking or spacing, switch selectable.

Print Transparent: Terminal will pass all received data to Auxiliary interface and not react to commands of the data stream.

Refresh Rate: 60 frames per second (50 optional for export model).

Screen Size: 12" diagonal.

Addressable Cursor: Direct positioning by absolute address.

Cursor: Blinking or steady, block or underline, switch selectable.

Screen Format: 24 lines by 80 characters per line.

Alphanumeric Character Set: 96 displayable ASCII codes, each formed by a 5x7 dot matrix.

Weight: CRT Unit—20 lbs. (9.08kg), Keyboard—2 lbs. (.91 kg).

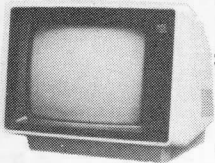
ACP PRICE \$595.00

TELEVIDEO SPECIFICATION SUMMARY

Function	910 PLUS	925	950	970
Visual Attributes	Rev. video, half intensity, blink, blank, underline	Same	Same	Blink, blan, underline, half intensity, reverse video
Emulations	ADM-3A/5, Hazeltine 1410, ADDS 25 (Option)	920 Emulation	None	ANSI x 3.64, VT compatible
Graphics	None	None	15 graphic char.	15 graphic char.
Keyboard	Selectric, keyboard	Detachable Selectric, Keyboard	Detachable Selectric, Keyboard	Detachable, Slim-Line Typewriter
Options	Integral Modem	Up to 2 pages memory, modem	Up to 4 pages memory, modem	RS-422 interface, 20ma current loop interface
Function Keys	10, numeric pad shiftable	22	22 programmable	32, num pad, prog
Power Requirements	115/230 VAC, 50/60 Hz, 65w	Same	Same	115/230 VAC, 50/60 Hz
Weight	30 lbs.	37 lbs.	37 lbs.	
Dimensions	13 1/4"H x 16 1/2"W x 20-1/16"D	Same	Same	Touch-tilt, 14" P31 green
Screen	Non Glare Screen	Same	Same	24x80,
Display Format	24x80	Status Line	Status Line	Status Line
Character Formation	8x10 Resolution	8x10 Resolution	14x10 Resolution	6x8 dot matrix, 8x10 cell with half-dot shift
Character Set (Switchable)	128 Displayable ASCII, Spanish, English, French, German	128 Displayable ASCII Plus, English, French, German, Spanish	128 Displayable ASCII, English, 96 Alpha and 32 Control	2 working sets from 8
Communication Interface (Optional)	20 MA Current Loop (Optional)	20 MA Current (Optional), RS-232C	20 MA Current Loop (Optional), RS-232C	Computer: RS-232C Printer: RS-232C
Communication Modes	FDX, HDX, BLK	HDX, FDX, BLK,	HDX, FDX, BLK, LOC	Conversational (full or half duplex) block, local monitor and self-test
Baud Rates	50 to 19.2KB	50 to 19.2KB	50 to 19.2KB	50b to 19.2Kb
Editing	Insert/Delete Line, Insert/Delete Char.	Insert/Delete Line, Insert/Delete Char.	Line Insert/Delete, Line on Page Edit, Char. Insert/Delete	Char/line insert and delete, line/page erase

MONITORS

NEC



12" GREEN-SCREEN MONITOR

ACP PRICE
\$189.00

JB-1201M(A)

CRT
12 inch diagonal, 90° deflection
Phosphor P31 (green) Non-glare screen(ARF)

Scanning Frequency
Horizontal 15.75kHz
Vertical 60Hz

Resolution
Horizontal 800 lines (at center)
Vertical 230 lines

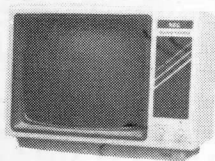
Video Bandwidth 20MHz

Input Signal Video Composite

Active Display Area 231(W)x175(H)mm

Power Consumption 30 watts

Display Characters 80 Characters with 25 lines—8x8 dots



LOW COST 12" GREEN SCREEN MONITOR

ACP PRICE
\$139.00

JB-1260M(A)

CRT
High contrast, dark bulb, 12" diagonal, 90° deflection
Phosphor P31 (green)

Scanning Frequency
Horizontal 15.75kHz
Vertical 60Hz

Resolution
Horizontal 600 lines (at center)
Vertical 230 lines

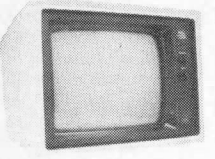
Video Bandwidth 15MHz

Input Signal Video composite

Active Display Area 180(W)x137(H)mm

Power Consumption 30 watts

Display Characters 80 Characters with 25 lines—8x8 dots



IBM COMPATIBLE 12" COLOR MONITOR

ACP PRICE
\$699.00

JC-1203DH(A)

CRT
12" diagonal, 76° deflection
In-line gun, dot type black matrix high resolution CRT (0.31mm dot spacing)

Scanning Frequency
Horizontal 15.75kHz (63.5µS)
Vertical 60Hz (16.67mS) 50Hz(20.0Ms)

Resolution
Horizontal 690 dots 690 dots
Vertical 230 lines 280 lines

Video Bandwidth 8MHz

Input Signal R/G/B/direct drive system

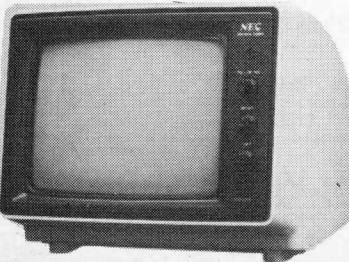
Vertical Sync. TTL Level, Pos./Neg. (Switchable)

Horizontal Sync. TTL Level Pos./Neg. (Switchable)

Active Display Area 215(W)x160(H)mm

Power Consumption 67 watts

Display Characters 80 Characters with 25 lines 8x8 dots

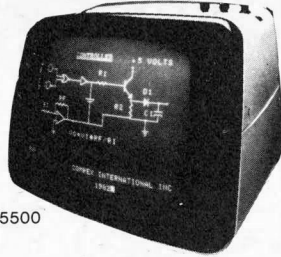


9" HIGH RESOLUTION MONITOR

CP PRICE
\$174.00

JB-902M(A)

COMREX



CR5500

CR-5500 \$89.00
12" MONOCHROME DISPLAY MONITOR

CR-6500 \$399.00
12" COLOR COMPOSITE MONITOR

CR-6600 \$529.00
12" COLOR CHARACTER DISPLAY MONITOR



HIGH RESOLUTION GREEN OR AMBER SCREEN MONITORS

Display Area: 80 Characters
24 lines

Phosphor: P-31 (green)
P-27LA (Amber)
1000 lines

Horizontal resolution at center: 1000 lines

Power requirements ± 10% @ 60 Hz: 115 V, 30 watts

Horizontal Rate: 15,600 Hz

Vertical Rate: 60 Hz

Input Jack: SO-239
RCA phono jack

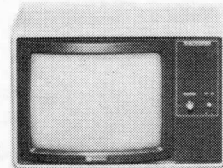
Pi-1 \$139.00 Pi-3 \$189.00

9" Green (Stackable) 9" Amber (Stackable)

Pi-2 \$159.00 Pi-4 \$199.00

12" Green 12" Amber

ELECTROHOME



1302

#	DESC.	LIST PRICE	ACP PRICE
1226	12" Green	199.00	185.00
1226A	Black & White	199.00	185.00
1302-1	13" Color RGB (TTL) Medium Resolution	550.00	479.00
1302-2	13" Color RGB (TTI) High Resolution	950.00	789.00
1302-IN	1302-1 w/NTSC Interface	595.00	499.00
926	9" Black & White	189.00	179.00
926A	9" Green Phosphor	189.00	179.00

CRT
9" diagonal, 90° deflection
Phosphor P31 (green)

Scanning Frequency
Horizontal 700 lines (at center)
Vertical 230 lines

Resolution
Horizontal 700 lines (at center)
Vertical 230 lines

Video Bandwidth 20MHz

Input Signal Video composite

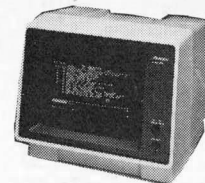
Active Display Area 165(W)x126(H)mm

Audio Output Power 1.0 watts

Power Consumption 28 watts

Display Characters 80 Characters with 25 lines—8x8 dots

AMDEK CORP.



ACP PRICE ONLY
\$189.00
VIDEO-300

12" GREEN PHOSPHOR MONITOR

- Green phosphor for easier viewing
- Non-glare screen eliminates distracting reflections
- 18 MHz band width
- 80 x 24 character display
- Built-in handle for portability
- Light-weight, industrial grade construction (17 lbs.)

VIDEO-310 (IBM Compatible) \$219.00

SPECIAL VIDEO-100 \$69.00
12" Black & White

COLOR I

- Built-in speaker and audio amplifier
- Quality 260(H)x300(V) line resolution
- Front controls for easy adjustment

COLOR I 349.00

COLOR II

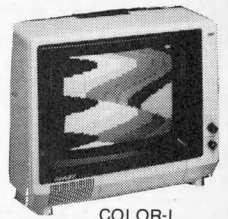
- RGB video input
- 560(H)x240(V) line resolution
- 80x24 character display
- 16 color intensity modulation for computer controlled graphics

COLOR II 899.00

COLOR III

- Economical RGB input monitor
- 280(H)x300(V) line resolution
- 80x24 character display capacity
- Built-in carrying handle, lightweight

COLOR III 459.00

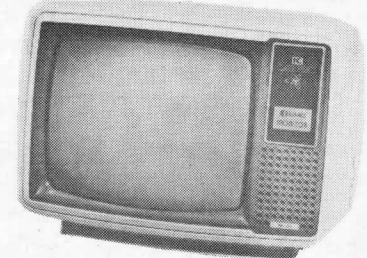


COLOR-I

COLOR IV

- High resolution 720(H)x 420(V) line resolution
- 96x24 character display
- RGB analog input for an infinite number of software controlled colors

COLOR IV 1099.00



BMC

12" GREEN CRT DISPLAY
ACP ONLY
\$95.00

Input Signals Composite Video Signal, Negative SYNC. +0.5

CRT Size 1.0—0.3 Vp-p, 75 ohm

Phosphor P1 (GREEN)

Semiconductors IC 1
Transistors 14
Diodes 14

Video Amp Bandwidth 15MHz

Display Format 1920 Characters max. (80 char. x24 lines)

Power Input AC, 120 V, 60 Hz

Power Consumption 26 W

BMC 12" Non-Glare, High Resolution. \$145.00

BMC 13" Color Composite. \$295.00

MONITORS

ELECTRONIC/COMPUTER BOOKS

Addison-Wesley

TITLE	PRICE
Executive VisiCalc	13.46
How to Choose Your Small Business Computer	8.96
Picture This! An Intro to Computer Graphics For Kids of All Ages	13.46
Picture This Tool (Including Apple II Super Pilot)	13.46

ALFRED PUBLISHING

TITLE	PRICE
How to Use VisiCalc/Super Calc (Handy Guide)	2.66

CBS BUSINESS AND PROFESSIONAL PUBLISHING

TITLE	PRICE
Apple Pascal: A Programming Guide	17.06

CREATIVE COMPUTING BOOKS

TITLE	PRICE
Basic Computer Games	7.15
Computers in Mathematics: A Sourcebook of Ideas	14.36

DATAMOST

TITLE	PRICE
Assembly Language by Randy Hyde	17.96



dilithium Press

TITLE	PRICE
How to Make Money With Your Microcomputer	11.66
Instant (Freeze-Dried) Computer Programming in BASIC - 2nd Astounding Edition	11.66
Microbook Data Base Management for the Apple II	17.96
Microsoft Basic, 2nd Edition	13.46
Microsoft Fortran	14.36
Computers for Everybody, 2nd Edition	6.26
Practical Guide to CP/M	13.46
The Sinclair ZX 81	8.96
A Tenderfoot's Guide to Word Processing	8.96
Are You Computer Literate?	8.96
Basic BASIC - English Dictionary	9.86
Computers for People	7.15
How to Get Started with CP/M	12.56
Instant BASIC, 2nd Edition	11.66
Small Computers for the Small Businessman	15.26
Sinclair ZX 81, Programming for Real Applications	8.96

DOW JONES-IRWIN PRESS

TITLE	PRICE
Analysis of Financial Statements	15.75

MIS - MANAGEMENT INFORMATION SOURCE

TITLE	PRICE
The Power of Multiplan	13.46
The Power of VisiCalc Book I	8.96
The Power of VisiCalc Book II	8.96
The Power of VisiPlot - VisiCalc - VisiFile	13.46



JG COMPUTER SERVICES

TITLE	PRICE
Custom Apple & Other Mysteries	22.46
Custom TRS-80 & Other Mysteries	26.96
BASIC Faster and Better	26.96
TRS-80 Disk and Other Mysteries	20.25
Microsoft BASIC Decoded	26.96

Hayden Book Company, Inc.

TITLE	PRICE
Basic BASIC	11.66
Basic Computer Programs for Business, Vol. 1	11.25
Basic Computer Programs for Business, Vol. 2	12.56
Basic Computer Programs for the Home	10.76
Basic Conversions Handbook Apple, TRS 80 and Pet	8.06
Codes, Ciphers & Computers: An Intro to Information Security	13.46
Intro to 8080 & Z-80 Assembly Language Programming	9.68
Stimulating Simulations	5.85
I Speak BASIC to My Apple	7.61
S-100 Bus Handbook	15.75
8086 Primer	10.76

McGraw-Hill



TITLE	PRICE
Beginners Guide for UCSD Pascal	10.76
Computer Animation Primer	17.06
"CRUNCHERS:" 21 Simple Games for The Timex Sinclair 1000 (2K)	8.06
Intro to VisiCalc Matrixing for Apple and IBM	20.66
8080/8088 16-Bit Microprocessor Primer	15.26
Word Processing Primer	13.46
Hands-on BASIC: for the IBM PC	17.95
Beyond Games: 6502	13.45

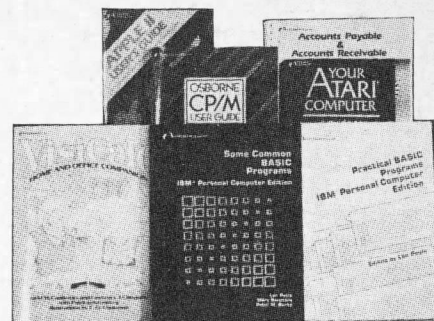


PRENTICE-HALL BOOKWARE™

TITLE	PRICE
Apple Basic for Business	14.36
Apple Personal Computer for Beginners	11.66
Apple II: An Introduction to Programming and Applications	13.46
Atari Assembler	11.66
BASIC Programs for Home Financial Management	11.66
C Programming Language	16.16
The Essential Computer Dictionary and Speller	6.26
IBM Basic for Business and Home	13.46
Making the Most of Your ZX-81	9.86
Science & Engineering Sourcebook	8.96
UCSD Pascal. A Beginner's Guide to Programming Microcomputers	11.66
UCSD Pascal Handbook	14.36
Using the IBM Personal Computer	13.46
Apple Machine Language	13.46
The Atari Assembler	11.66
Basic Programming for Home Financial Management	11.66
Computer Dictionary & Speller	6.26
Word Processing Handbook	8.06

MICROPRO

TITLE	PRICE
Wordstar Training Guide	18.00



OSBORNE BOOKS

TITLE	PRICE
Armchair Basic	10.76
CP/M User's Guide, 2nd Edition	14.36
Data Base Management Systems: A Guide to Software	15.26
Intro to Microcomputers Volume 0	11.25
Intro to Microcomputers Volume 1 - Basic Concepts	14.36
Trade Secrets: How to Protect Your Ideas and Assets	17.96
VisiCalc; Home and Office Companion	14.39
Wordstar Made Easy, 2nd Edition	10.76
VisiCalc Made Easy	11.65
6502 Assembly Language Programming	15.29
68000 Microprocessor Handbook	8.96
Your Atari Computer	15.26
Some Common Pascal Programs	13.49
Some Common Basic Programs	13.49
Some Common Basic Programs IBM PC	13.49
Some Common Basic Programs Atari	13.49
Some Common Basic Programs Apple II	13.49
68000 Assembly Language Programming	15.29
Z80 Assembly Language Programming	15.29
Business Systems Buyer's Guide	8.96
A User's Guide to the UNIX System	14.39
Apple II User's Guide	15.26
Assembly Language Programming Apple II	11.66
6502 Assembly Language Subroutines	14.36
Practical Basic Programs - IBM PC	14.39
6809 Assembly Language Programming	15.29
6809 Microcomputer Design Guide	17.96
8080A/8085 Assembly Language Programming	14.39
8086 Book	15.29

STONEWARE

TITLE	PRICE
Wordstar Applications Manual	13.46

STERLING-SWIFT

TITLE	PRICE
Swifts Educational Software Dictionary	13.46

THE BOOK COMPANY

TITLE	PRICE
Apple Graphics and Arcade Designs	17.96
The 1983 Book of Apple Software	17.96
What If...? A Guide to Computer Modeling	17.96

VITAL INFORMATION INC.

TITLE	PRICE
Van Love's 1983 Apple II/III Software Dictionary	22.46

ELECTRONIC/COMPUTER BOOKS



SAMS BOOKS

TITLE	PRICE
Advanced 6502 Interfacing	11.66
Apple II Assembly Language	14.36
Basic Business Software	10.76
Circuit Design Programs for the Apple II	14.36
Computer Dictionary 3rd Edition	14.36
Introduction to FORTH	8.96
Z-80 Microcomputer Handbook	10.76
16 Bit Microprocessor	14.36
6502 Software Design	11.66
Z-80 Microprocessor Programming & Interface Book 1	11.66
Z-80 Microprocessor Programming & Interface Book 2	15.26
Howard W. Sams Crash Course in Microcomputers	17.96
Programming & Interfacing the 6502 With Experiments	15.26
Z-80 Microprocessor Design Projects	13.46
Mostly BASIC Applications for Your Apple II, Book 1	11.66
Mostly BASIC Applications for Your Apple II, Book 2	11.66
CP/M Primer	13.46
Pascal Primer	15.26
Applesoft Language	9.86
Modern Computer Concepts	20.66
Foundations of Computer Technology	20.66
Apple Interfacing	9.86
Commodore Software Encyclopedia	8.96
VIC 20 Programmer Reference Guide	15.26
ZX-81 BASIC Book	11.66
TTL Cookbook	10.76
CMOS Cookbook	12.56
Computer Graphics Primer	12.99
Basic Programming Primer	9.99
Microcomputer Primer	12.99
BASIC: Fundamental Concepts	17.99
BASIC: Advanced Concepts	17.99
Computer Assisted Home Energy Mgmt.	13.99
Apple Fortran	10.99
Interfacing to S-100 Micros	13.39
Microcomputer Database Mgmt.	11.49
The 68000: Principles and Programming	12.99
16-Bit Microprocessors	12.99
Advanced 6502 Interfacing	11.79
Enhancing Your Apple II	14.35



TITLE	PRICE
BASIC for Business	11.66
CP/M Handbook	13.46
DON'T (Or How to Care for Your Computer)	10.76
Mastering VisiCalc	11.66
Pascal Handbook	17.96
Programming the Z80	14.36
Programming the 6809	13.46
Programming the 6502	12.56
Advanced 6502 Programming	11.66
Intro to Wordstar	10.76
6502 Applications Book	11.66
Your First Computer	8.06
International Microcomputer Dictionary	3.56
The Apple Connection	11.66
Intro to Word Processing	11.66
Doing Business with VisiCalc	10.76
Doing Business with SuperCalc	11.66
BASIC Exercises For the IBM Personal Computer	12.56
Executive Planning with BASIC	11.66
Introduction to Pascal	14.36
Introduction to the UCSD p-System	13.46
Doing Business with Pascal	14.36
Mastering CP/M	14.36
VisiCalc™ Applications	10.49
Fifty BASIC Exercises	11.79
Inside BASIC Games	12.99
Programming The Z8000	13.99

Wm C. BROWN PUBLISHERS

TITLE	PRICE
User's Guide with Applications for the IBM Personal Computer	16.16
User's Guide with Applications for the IBM Personal Computer(book and diskette)	35.96
Data and File Management for the IBM Personal Computer	15.26
Data and File Management for the IBM Personal Computer(book and diskette)	35.96
Introduction to Graphics for the IBM Personal Computer	14.36
Introduction to Graphics for the IBM Personal Computer(book and diskette)	35.96
Advanced Uses of VisiCalc for the IBM Personal Computer	15.26
Advanced Uses of VisiCalc for the IBM Personal Computer(book and diskette)	35.96
VisiCalc for the IBM Personal Computer	15.26
VisiCalc for the IBM Personal Computer(book and diskette)	35.96
VisiCalc for the Apple II Plus Computer	15.26
VisiCalc for the Apple II Plus Computer(book and diskette)	35.96
Principles of Information Systems for Management	25.16
ANSI FORTRAN 77: An Introduction to Structured Software Design	17.06
ANSI FORTRAN IV with FORTRAN 77 Extensions: A Structured Programming Approach, 2nd Ed.	17.96
ASSEMBLY Language Programming for PDP-11 and LSI-11 Computers: An Introduction to Computer Organization	19.76
Assembly Language Programming for the IBM Systems 360 and 370 for OS/DOS, 2nd. Edition	21.56
Fundamentals of Structured COBOL Programming, 4th. Edition	23.36

ADVANCED SOFTWARE TECHNOLOGY, INC.

TITLE	PRICE
Van Loves 1983 Apple II/III Software Dictionary	22.45

BRADY

TITLE	PRICE
IBM PC: An Intro To Programming and Applications	13.45

COMPUSOFT

TITLE	PRICE
Learning IBM BASIC	17.95
Learning Timex/Sinclair BASIC	13.45

KERN PUBLICATIONS

TITLE	PRICE
Graphic Software for Microcomputers	19.76
How to Sell Your Micro Software	13.46

RESTON

TITLE	PRICE
Using the IBM Personal Computer	11.65
Mastering Machine Code On Your ZX-81	11.65
Making the Most of Your ZX-81	9.95

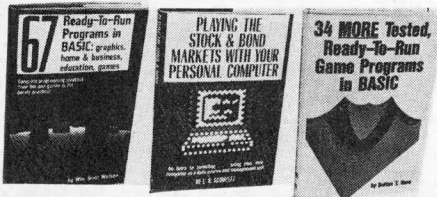
SKARBEEK CORP.

TITLE	PRICE
Software Directory for Apple	13.45



JOHN WILEY & SONS, INC.

TITLE	PRICE
Atari Basic Reference Guide	39.83
Byteing Deeper into Your Timex/Sinclair 1000	11.66
6502 Assembly Language Programming	11.66
8080/Z-80 Assembly Language	9.86
Data File Programming In BASIC	11.66
Golden Delicious Gamewes for the Apple	11.65
Cryptography	35.95
Introduction to ADA	26.95
Structured Programming with COMAL	22.45
Real Time Languages	72.00
A Practical Guide to Computer Communications and Networking	35.95
Principles of Text Processing	45.00
Successful Software for Small Computers	13.45
Programmer Productivity	20.65
The TRS-80 Model III User's Guide	11.65
Critical Issues in Software	22.50
Microcomputers in Education	31.45
Data Processing Manager's Survival Manual	22.50
Design of Operating Systems for Small Computer Systems	28.95
First Course in Data Processing with BASIC, COBOL, FORTRAN, RPG, 2nd Edition	22.50
Understanding Computers	21.55
A Practical Introduction to Computer Graphics	15.25
Data Base	30.55
PASCAL Implementation	59.45



TAB BOOKS Inc.

TITLE	PRICE
Atari Programming	10.76
The IBM Personal Computer	9.86
Machine and Assembly Language Programming	8.96
Making Money with Your Microcomputer	7.16
Playing the Stock & Bond Markets With Your Personal Computer	8.96

ELECTRONIC/COMPUTER BOOKS

COMPUTER BOOKS

VAN NOSTRAND REINHOLD

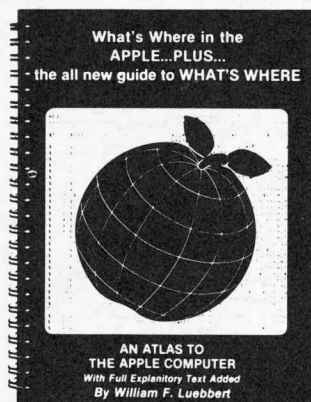
TITLE	PRICE
A Guide to Programming IBM PC	15.25

WIDL VIDEO

TITLE	PRICE
The Blue Book for the Apple Computer.....	22.45

APPLE ATLAS

WHAT'S WHERE IN THE APPLE... PLUS...
The All New Guide to What's Where
Revised Edition of the Famous
APPLE ATLAS



ACP Price \$19.95

1983 IC MASTER

1983 **IC MASTER**



2 Compact Volumes Provide Information and Specifications On The Most Commonly Used IC's From The Leading Manufacturers.

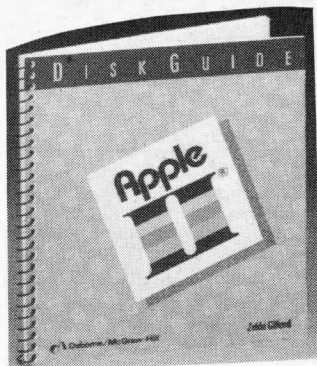
ACP Price \$79.95

ORDER BY PHONE

outside California
(800) 854-8230
inside California
(714) 558-8813

DISK GUIDES

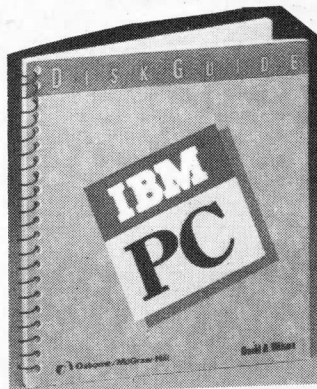
Introducing a new concept in computer-user aids... the **DiskGuide™** series. Specially designed for use as a compact, computer-side reference, our five DiskGuides contain the vital commands, keys and functions of computing systems and software packages you need for everyday use. For all the times you need a quick reminder and you don't want to wade through the manuals—the **DiskGuide™** series is here!



Apple® II DiskGuide
by Zelda Gifford

This Apple® II DiskGuide™ gives users quick reference tips on DOS, BASIC, EXEC files, machine language monitor, PEEK and POKE locations, the system memory map and more. Includes illustration for easier understanding.

ACP PRICE \$7.95



IBM® PC DiskGuide™
by David A. Wilson

The IBM® PC DiskGuide™ summarizes all statements, commands, and keywords applicable to DOS, EDLIN and BASIC on the IBM® PC. Organized by function, with labels, charts, and diagrams for additional clarity.

ACP PRICE \$8.95

ATARI® 400/800 DiskGuide™
by John Taylor

ATARI® computer user, if you can't remember all the commands and functions used in operating your 400/800, here's something to jog your memory. Whether it's DOS, ATARI, BASIC, numeric functions, machine functions or any other ATARI® command or function you need to find, this DiskGuide™ is so handy and easy to use, you'll want to have one right beside your computer.

ACP PRICE \$7.95

VisiCalc® DiskGuide
by David A. Wilson

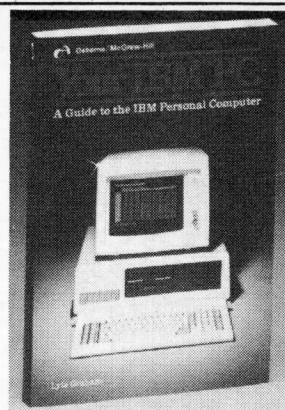
For VisiCalc® users who value their time, here's an excellent investment. With this DiskGuide™ you can locate special keys, entries, commands, and files at a glance. And there are even examples showing the use of each specific command and function.

ACP PRICE \$6.95

CP/M® DiskGuide™
by Curtis Ingraham

CP/M® and CP/M-86 users will find excellent diagrams and illustrations that highlight CP/M® concepts. Divided into four parts, the author presents CP/M® system information, a built-in command summary, a transient command summary, and CP/M® technical information.

ACP PRICE \$8.95



Your IBM® PC: A Guide to the IBM PERSONAL COMPUTER
by Lyle J. Graham

Packed with information and resources. You IBM® PC will smoothly guide you through all the steps you need to know to get your computer up and running from easy-to-understand instructions on how to operate your computer, its peripherals and software, to lessons in beginning and more advanced programming. You'll also learn about color graphics and sound. An indispensable book for all IBM® PC users.

ACP PRICE \$16.95

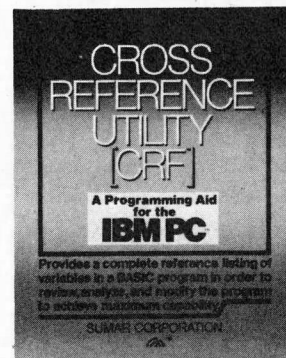
LIST™

The Software Resource Book
For Personal Computer Users

ACP
PRICE
\$12.50

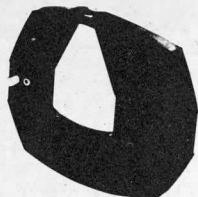


IBM NEW PC



ACP PRICE \$29.95

MEDIA SUPPLIES



PRINTER RIBBONS

DIABLO COMPATIBLE WORD PROCESSING RIBBONS

CARBON FILM RIBBONS

T-471 Hy-type 2 multi-strike carbon film ribbon. Char. yield: 235,000 approx. **4.99 59.90**

NYLON FABRIC RIBBONS

T-472 Hy-type 1 nylon fabric ribbon. Char. yield: 500,000 approx. **5.99 54.90**

T-473 Hy-type 2 nylon fabric ribbon. Char. yield: 800,000 approx. **4.99 59.90**

PRINTER RIBBONS

T-415 Microline 80, 82, 83 **3.95 34.95**

T-416 $\frac{1}{2}$ " x 40 yards. Dual spool Microline 84. **4.75 57.00**

T-417 $\frac{1}{2}$ " x 16 yards. Dual spool for Anadex DP8000, C.Itoh 8300, Microtek MT-80P printers. **3.19 29.50**

T-418 $\frac{1}{2}$ " x 30 yards dual spool. Anadex 9500. **11.25 135.00**

T-461 1" x 36 yards. Dual spool for Centronics M101, 102, 103, 300, 301, 306 and over 60 other printers. **6.99 62.50**

T-480 1" x 60 yards. Dual spool for new style Printronix 150, 300 and 600 printers and over 40 others. **13.25 119.50**

T-495 $\frac{1}{2}$ " x 40 yards. Single spool for Texas Instruments 810 and over 20 other printers. **4.65 42.00**

T-496 $\frac{1}{2}$ " x 40 yards. Single spool. Extra sharp inking for DEC writer LA 30+36. DEC writer II and many others. **4.70 42.50**

T-498 $\frac{1}{2}$ " x 60 yards. Single spool for DEC LA120, LS120, LA180 DEC writer III; TI 820 and many others. **6.25 56.50**

CARTRIDGE RIBBONS

G-240 Teletype 43 style $\frac{1}{4}$ " x 39'. Cartridge. **9.95 89.50**

T-420 IBM "doughnut" style, 9/16" x 10 yds. Cartridge for IBM System 32 Model A printer and many others. **4.70 42.50**

T-421 Centronics "zip-pack" style, 9/16" x 16 yards, E-Z load cardboard box for Centronics 700 series printers and other. **5.25 47.50**

MX-80 Epson MX70/MX80 $\frac{1}{2}$ " x 20 yds. **5.83 70.00**

MX-100 Epson MX-100, $\frac{1}{2}$ " x 30 yds. **11.25 135.00**

MX-100 refills Epson MX-100 refill. **4.58 55.00**



CARBON FILM RIBBONS

PRODUCT NUMBER	DESCRIPTION	ACP PRICE	
		Each	Dozen
80029-02	Multi-strike carbon film ribbon. Char. yield: 190,000 approx.	\$4.99	\$45.90
83990-01	Qume multi strike 2 carbon film ribbon. Char. yield 190,000 approx.	4.99	49.90
83991-01	Qume multi strike 3 carbon film ribbon. Char. yield 270,000 approx.	5.99	54.90
80039-02	Single strike carbon film ribbon for offset master production. Char. yield 40,000 approx.	5.67	68.00
80029-37	Cocoa brown multi-strike carbon film ribbon. Char. yield: 190,000 approx.	5.67	68.00
83100-01	Multi-strike 4 carbon film ribbon—Char. yield: 375,000 approx.	9.10	109.00

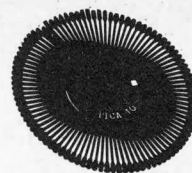
NYLON FABRIC RIBBONS

80009-01	Heavy inking nylon fabric ribbon. Char. yield: 1,200,000 approx.	4.99	45.90
80009-02	Medium inking nylon fabric ribbon. Char. yield: 800,000 approx.	4.99	45.90
80009-63	Red/black nylon fabric ribbon (packaged 8 each to a box). Char. yield: 800,000 approx.	5.55	49.90



SPINWRITER WORD PROCESSING RIBBONS

NEC-021	Multi-strike carbon film ribbon. Char. yield: 190,000 approx.	\$8.25	\$74.90
NEC-011	Black nylon fabric ribbon. Char. yield: 800,000 approx.	8.25	74.90
NEC-010	Red/black/ nylon fabric ribbon. Char. yield: 800,000 approx.	9.95	88.90
NEC 3500 Series	Multi-strike carbon film ribbon. Char. yield: 360,000 approx.	12.21	146.50
NEC 3500 Series	Nylon black fabric ribbon. Char. yield: 2,250,000 approx.	10.42	125.00
NEC-8023A-01	<u>NEC dot matrix</u> ribbon	13.00	156.00



PRINT WHEELS



Product#	Description	
38101-01	Pica 10A	
38102-02	Elite 12	
38105-01	Prestige Legal Elite 12A	
38100-01	Courier 12	
38104-01	Legal Courier 10	
38108	Legal Courier 10A	
38107-01	Courier 72	
303201-01	Artisan Legal 12	
38146	OCR-B 10	
303202-01	Emphasis 10	
Diablo Printwheels		\$9.95



Product#	Description	
212A	Courier 72	
222A	Pica 10	
232A	Elite 12	
242A	OCR-A	
252A	OCR-B	
262A	Courier 10	
312A	Emperor PS	
372A	Courier Legal 10A	
382A	Prestige Elite Legal 12A	
392A	Presige Elite/Prestige Renown	
472A	Prestige Elite Legal 12B	
482A	Super Courier	
522A	Dual Gothic 12B	
NEC Thimbles		\$14.95



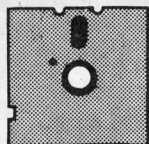
Product#	Description	
82050	WP Courier 10	
82051	WP Pica 10	
82052	WP Prestige Elite 12	
82057	WP Orator 90% 10	
82058	WP Prestige Pica 10	
82089	WP Letter Gothic 12	
82090	WP Gothic 15	
82096	WP Polygo Pica 10	
82164	Legal 2 Courier 10	
82165	Legal 2 Prestige Elite 12	
82166	Legal 2 Dual Gothic 12	
82167	ASCII 96 Prestige Elite 12	
Qume Standard Printwheels		\$10.95
82190	WPS Boldface PS	
82191	WPS Boldface Italic PS	
82193	WPS Arcadia PS	
82194	WPS Modern PS	
82195	WPS Title PS	
82196	WPS Essay Italic PS	
82199	WPS Essay PS	
82250	WPS Cubic PS	
Qume WPS Series Printwheels		\$12.95

COMPATIBILITY CHART

Printer	Ribbon	Printwheel*	NEC Thimble*
Epson MX-80	MX-80	NO	NO
Epson MX-100	MX-100	NO	NO
Integral Data Systems	460/560 Paper Tiger	NO	NO
Integral Data Systems	Paper Tiger Spool	NO	NO
Qume Sprint 7, 8, 9	83100-01	YES	NO
Qume Sprint 3-5	80029-02 and others	YES	NO
5500/7700 NEC Spinwriter	NEC-021 and others	NO	YES
NEC 3500 Series	3500 Series	NO	YES
NEC-Dot Matrix	8023A-01	NO	YES
Diablo 630	301980	YES	NO
C. Itoh Starwriter 25	Flat design Diablo multistrike	YES	NO
C. Itoh Prowriter	Prowriter	YES	NO
Star-Micronic S8480	Underwood SF02B	NO	NO
COEX-80 FT	Underwood SF-02B	NO	NO
TRS-80 (Daisywheel II)	Ricoh	YES	NO
TRS-80 (Daisywheel 410)	Ricoh	YES	NO

*Variety of type styles available

MEDIA SUPPLIES



DISKS and DISKETTES

Verbatim.

Data Life...5 year warranty

8" Diskettes		Box of 10
Product Number	Description	ACP PRICE
FD-34-9000-18113	IBM Compatible, 26 sectors, 128 bytes/sector SSSD	34.60
FD-34-9000-22646	For DEC application with hub reinforcement ring SSSD	42.50
FD-32-9000-18700	Shugart type 32 hard sector with hub ring SSSD	42.50
FD-65-9000-22634	Memorex 651/Vydec type 32 sectors & 1 index hole on outside diameter SSSD	45.00
DD-34-4001-20957	Soft sector, uninitialized with hub ring for the control data 9406, Qume Data Trak 8 DDDD	51.50
DD-34-4008-20948	8 sector, 1024 bytes with hub ring for IBM systems DDDD	54.60
FD-34-8000-18137	Soft sector for all Centurion systems, Sperry Univac UTS 700-400 and others SSSD	39.20
5 1/4" Mini Diskettes		
MD-525-01-18158	Soft sector for the Apple II, the ITT2200 and others SSDD	29.20
MD-525-10-18167	10 sector for the Wang PCS-11, Heathkit, WH17, H80-H89, H-77 SSDD	29.20
MD-525-16-18176	16 sector for the Burroughs/Redactron R-11240, CompuCorp 655 SSDD	29.20
MD-550-01-18188	Soft sector for the A.B. Dick Magna III, Hewlett Packard 85/series and others DDDD	40.00
MD-550-10-18197	10 sector for the Vista Computer V200, Northstar 1-32K-D DDDD	40.00
MD-550-16-18208	16 sector for the Ontel OPI-150, Redactron III 320 DDDD	40.00
MD-577-01-18212	Soft sector for the Micropolis Mega Floppy, Sord M203-Mark II, quad density SSQD	38.50
MD-577-10-182	10 sector for the MPI 91 Teac, Mark II, quad density SSQD	38.50
MD-577-16-18230	16 sector for the Vector Graphic, Vector MZ, Compal WP56D & 80, quad density SSQD	38.50
MD-557-01-18239	Soft sector for the Pertec FD250 Intelligent System 8351-8352, Micropolis, 1055 IV quad density DSQD	50.80
MD-557-10-18248	10 sector for the North Star 2-32 K-P BASF 6108 quad density DSQD	50.80
MD-557-16-18257	16 sector for the X mark Office Nete, Burroughs/Redactron R11250, quad density DSQD	50.80

SYNCOM

1500102	8" SSDD, soft sector, unformatted, write protect tabs	29.20
15050-02	8" SSDD, IBM compatible, unformatted. Write protect tabs	38.50
1510302	8" DSDD, IBM system 34. Unformatted with write protect	45.40
15353-02	5 1/4 SSDD, soft sector with write protect & hub ring	23.10
15400-02	5 1/4 DSDD, soft sector with write protect, hub ring	39.30

Verex™

FD-341500-22991	8" SSDD—unformatted, 26 sectors, 128 bytes/sector	26.90
FD32-1500-22988	8" SSDD, 32 sector, uninitialized	26.90
MD200-01-23534	5 1/4 SSDD, soft sector, uninitialized	25.40
MD-200-AS-23862	5 1/4 SSDD, Apple compatible	24.60

GENERIC DISKETTES (BULK)

GEN-05-999	5 1/4" SSDD, with write protect and reinforced ring, and envelopes and labels	19.99
GEN-08-999	8" SSDD, with write protect and envelopes and labels	24.99

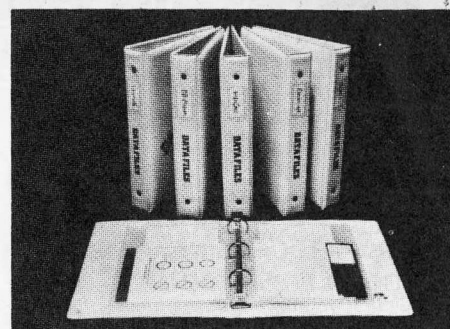
DATA FILES

You know the problem...your best software came in nice padded ten-inch high binders, and you have a row of them; VisiCalc, three word processors, two databases, etc.

DATA FILES are ten-inch high binders, padded, with ten vinyl disk-holding pages. Each binder can hold up to 25 disks; more pages are available separately, in packages of ten.

With **DATA FILES**, you can throw away the cigar boxes, and attractively solve your own problem of "media madness."

MODEL NO.	DESCRIPTION	PRICE
1001	Mini disk jacket	\$8.95
1002	8" disk jacket	8.95
1003	Jacket w/envelope	8.95



MODEL NO.	DESCRIPTION	PRICE
1005	10" binder inserts	.35
1007	Disk pockets	.45
1010	Hanging jacket 5"	1.25
2017	Disk labels 5"	.40
1006	5" flip sort box	29.95
1008	8" flip sort box	39.95
1009	Library case	4.75
	Disk head cleaners 5"	19.95
	DATA FILES	13.95

CONTINUOUS FORM COMPUTER PAPER

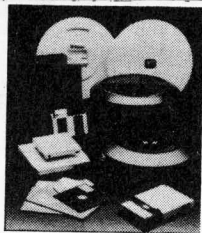
Product Number	Description	Carton Quantity/Weight	Retail Price
14 1/8"x11" Single Part			
6410	14 1/8"x11", plain white, 20 lb. bond, no side perfs	2400 sheets/44 lbs.	\$39.00 ctn
641 GHS	14 1/8"x11", 1/2" Greenbar, 18 lb. bond, no side perfs	2600 sheets/44 lbs.	38.00 ctn
14 7/8"x11" Multi-Part, Carbon Interleaf			
641G-2	14 7/8"x11", 1/2 Greenbar, 2 part, no side perfs	1300 sheets/45 lbs.	47.00 ctn
641G-3	14 7/8"x11", 1/2 Greenbar, 3 part, no side perfs	950 sheets/42 lbs.	53.00 ctn
641G-4	14 7/8"x11", 1/2 Greenbar, 4 part, no side perfs	650 sheets/40 lbs.	48.00 ctn
641G-5	14 7/8"x11", 1/2 Greenbar, 5 part, no side perfs	500 sheets/42 lbs.	46.00 ctn
641G-6	14 7/8"x11", 1/2 Greenbar, 6 part, no side perfs	450 sheets/45 lbs.	49.00 ctn
14 7/8"x11" Multi-Part Carbonless			
641GTC-2	14 7/8"x11", 1/2 Greenbar, 2 part, no side perfs	1500 sheets/40 lbs.	50.00 ctn
641GTC-3	14 7/8"x11", 1/2 Greenbar, 3 part, no side perfs	950 sheets/40 lbs.	53.00 ctn
641GTC-4	14 7/8"x11", 1/2 Greenbar, 4 part, no side perfs	700 sheets/40 lbs.	55.00 ctn
641GTC-5	14 7/8"x11", 1/2 Greenbar, 5 part, no side perfs	600 sheets/40 lbs.	72.00 ctn
641GTC-6	14 7/8"x11", 1/2 Greenbar, 6 part, no side perfs	500 sheets/40 lbs.	72.00 ctn
9x11", Single-Part			
6910PP-1	9 1/2"x11", plain white*, 15 lb. bond, tears to 8 1/2"x11"	3500 sheets/35 lbs.	36.00 ctn
9 1/2"x11" Multi-Part, Carbon Interleaf			
6910PP-2	9 1/2"x11", plain white*, 2 part, tears to 8 1/2"x11"	1500 sheets/33 lbs.	42.00 ctn
6910PP-2	9 1/2"x11", plain white*, 3 part, tears to 8 1/2"x11"	1050 sheets/30 lbs.	45.00 ctn
6910PP-4	9 1/2"x11", plain white*, 4 part, tears to 8 1/2"x11" *For 1/2" Greenbar order 691 (G)	750 sheets/30 lbs.	44.00 ctn
Premium 20 lb., 9 1/2"x11" Single Part			
6910PP	9 1/2"x11", plain white, 20 lb. bond, tears to 8 1/2"x11"	2700 sheets/27 lbs.	36.00 ctn
8 1/2"x11", Single Part			
6810-1	8 1/2"x11", plain white**, 18 lb. bond, no side perfs	3500 sheets/28 lbs.	36.00 ctn
6810-2	8 1/2"x11", plain white**, 2 lb. bond, no side perfs	1500 sheets/30 lbs.	41.00 ctn
6810-3	8 1/2"x11", plain white**, 3 part, no side perfs	1050 sheets/28 lbs.	42.00 ctn
6810-4	8 1/2"x11", plain white**, 4 part, no side perfs **For 1/2" Greenbar Order 681 (G)	750 sheets/28 lbs.	40.00 ctn

All computer paper is shipped FOB shipping point from our nearest distribution center to you. Shipments are made via UPS if possible or via the fastest common carrier. Distribution centers are located in:

Buena Park, CA / Chicago, IL / Columbus, OH / Denison, TX / Detroit, MI / Gainesville, GA / Houston, TX / Kansas City, MO / New York, NY / Petersburg, WV / San Jose, CA / St. Louis, MO

MEDIA SUPPLIES

MEDIA SUPPLIES



5 1/4" MINIDISKETTES CERTIFIED 35/40 TRACKS

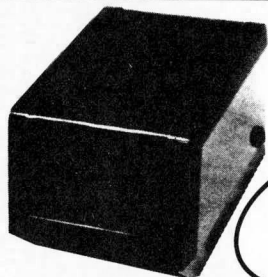
P/N	DESCRIPTION	Box of 10
DY-1041	Soft-sectored SSSD	37.95
DY-1041D	Soft-sectored SSDD	39.95
DY-1051D	16 Hard sectored SSDD	39.95
DY-1071D	10 Hard sectored SSDD	39.95
DY-1042D	Soft sectored DSDD	46.95

CERTIFIED 77/80 TRACKS

DY-2052	16 Hard sectored DSDD	52.95
---------	-----------------------	-------

CERTIFIED 8" DISKETTES

DY-3740-1	Soft sectored SSSD 38.50	
DY-3740-D	Soft sectored SSDD	46.95
DY-3742-D	Softsectored DSDD	54.95



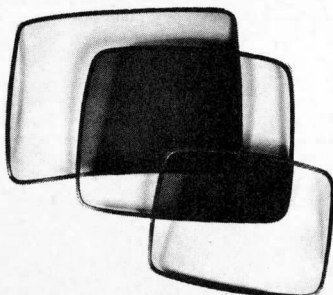
**HOLDS
75
DISKETTES**

NEW! FLIP SORT™

The new Flip Sort™ has all the fine qualities of the original Flip Sort™, with some added benefits. Along with a new design, the capacity has increased 50%, to hold 75 diskettes.

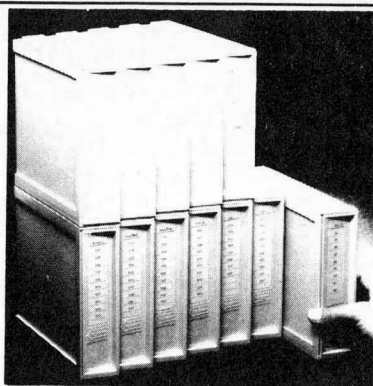
P/N (wt. 3 lbs)	DESCRIPTION	ACP PRICE
QDF-5	The New Flip Sort 5 1/4"	24.95
QDF-8	Flip Sort 8"	34.95

OPTECH CRT FILTER



The Optech CRT Filter diffuses ambient light while improving contrast and reducing eyestrain. Data has never been clearer. We recommend using Gray for Green Screen. The Green is universal. Other CRT versions are also available. (wt 1 lb.)

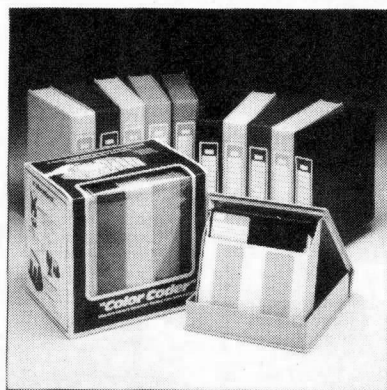
P/N	DESCRIPTION	ACP
OPT-01	Amdek Color I, II, III, Gray	29.95
OPT-02	Amdek Video100 Green	27.95
OPT-03	BMC-BM-12EU Gray	29.95
OPT-04	BMC-BM-12EU Green	29.95
OPT-05	IBM PC Mono Gray	29.95
OPT-06	IBM PC Mono Green	29.95
OPT-07	Kaypro II Gray	29.95
OPT-08	Televideo 925 Gray	29.95
OPT-10	Zenith ZVM121 Gray	29.95
OPT-11	Zenith ZVM121 Green	29.95



DISK BANK

The Disk Bank is a versatile system that is portable, modular, interlocking, and safe for your diskettes. And so very easy to use! It allows you to add new units as your needs expand. Use horizontally, vertically, or even for file drawer use.

P/N	DESCRIPTION	1	ACP	6	12
DBK-01	5 1/4" Disk Bank	8.50	7.50	6.50	
DBK-02	8" Disk Bank	9.50	8.25	7.95	



DISK LIBRARY SYSTEMS

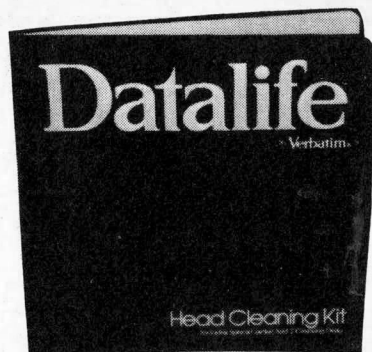
COLOR CODED KIT

- 5 Different Colors in Kit
- Standard K-10 Cases
- Diskette Labels included

P/N	DESCRIPTION	ACP PRICE
SRW-01	5 1/4" Color Kit	14.95
SRW-02	8" Color Kit	20.50

CASSETTE/8™

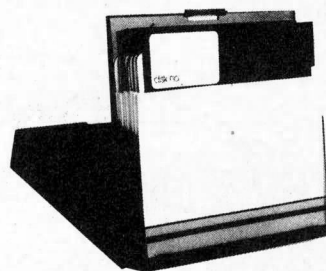
Holds 8 Digital Cassettes. Case is same size as the 8" Kasette 10. Comes in beige color. **ACP ONLY 14.95**



DISK HEAD CLEANER

New from Verbatim! Includes solution plus (2) cleaning disks. Additional cleaning disks are available.

P/N	DESCRIPTION	ACP PRICE
VEB-01	5 1/4" Head Cleaner	12.00
VEB-02	8" Head Cleaner	14.50
VEB-01A	10 additional disks 5 1/4"	19.95
VEB-02A	10 Additional Disks 8"	21.95



THE FLIP PAK™

is molded from a transparent durable smoked plastic. It provides dustfree protection for diskettes and the design is elegant in its simplicity. Each Flip Pak™ has a capacity of 10 diskettes. The unique lid provides for easy access and doubles as a stand for desktop use.

P/N (wt. 1 lb)	DESC.	1	6	24	96
QDF-FP	5 1/4" Flip Pak	3.60	2.90	2.50	1.90

KASSETTE/10 BOX Standard K-10 Box

(See Color Kit Photo)

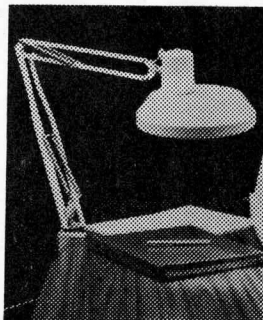
P/N (wt 1 lb)	Description	1	6	24
SRW-03	5 1/4" K-10 box (blue std.)	3.95	3.50	2.50
SRW-04	8" K-10 (blue std.)	4.35	3.75	2.75

(Specify Color. Available in Grey, Black, Blue, Biege, Red, Green, Yellow)

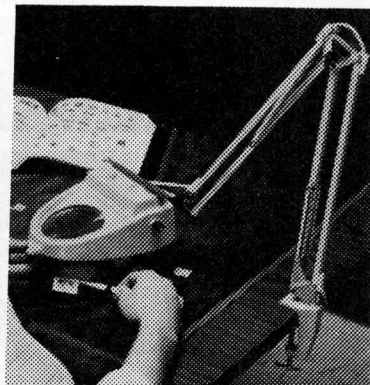
LEDU® LAMPS



SUPER XL LAMP
\$24.95 (Blk or White)



ASYMMETRIC LAMP
\$49.95 (Almond)



POLARIS MAGNIFIER
\$43.95 (Beige)

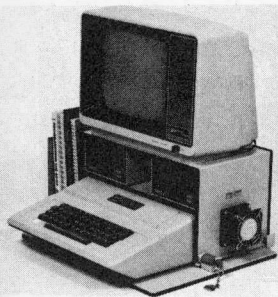
FURNITURE & ACCESSORIES

ACCESSORIES

FMJ INC.

COOL STACK™

- IT LOCKS
- IT COOLS
- IT TILTS
- IT STORES



The COOL STACK Sentry II offers the features of locking, cooling, easy tilt action access, and efficient organization and storage for the APPLE II computer system, all in one compact unit. The precision all steel construction is designed for optimum strength and durability. An attractive textured finish is color matched to the Apple II.



DESCRIPTION	ACP
Cool Stack Sentry II	\$265.00
Cool Stack Standard (Without Lock & Tilt Features)	85.00

VideoBase™, Inc.

VIDEO GAME STAND

Now an attractive and functional video game stand. Front storage for 27 cartridges, back storage for controllers. Fits Atari and Sears units. Size 18"x24"x26" (H). Shipping Wt. (32 lbs.) Formica Woodgrain.

P/N	DESCRIPTION	ACP
VBI-01	Videogame Stand	\$79.95

Also Available for
Mattel and Coleco Vision

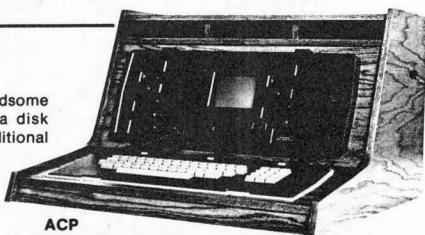


OSBORNE

Slide your Osborne 1 into a handsome oak veneer cabinet with extra disk space and level space for additional monitor.

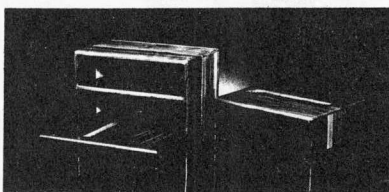
P/N	DESCRIPTION	ACP
------------	--------------------	------------

OZZ-01 Osborne Case (12 lbs.) \$189.95
(Please specify if your Osborne case is blue or tan.)



APPLEWOOD

"SWIVEL STAND"

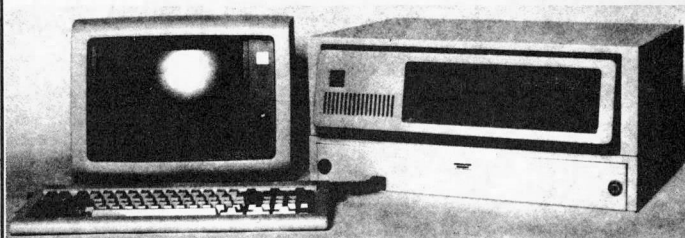


Solid Oak, Walnut, or Cherry and the computer can swivel. Ideal for office or home environments where you want to access your computer from different directions.

P/N	DESCRIPTION	ACP
AWT-01	Computer Turntable (10 lbs.)	\$95.00
AWT-02	Drive/Monitor Stand (12 lbs.)	105.00
AWT-03	Printer Stand (10 lbs.)	75.00
AWT-04	Package (all 3 above)	235.00

Specify type of wood -Oak, Walnut, Cherry. For Walnut add \$20.00 ea. item.

COMPUTER ESCORT FOR IBM-PC



- Stores your keyboard behind a locked door
 - Secures the unit to a table top
 - Stores excess cables and accessories
 - Textured steel construction — color matched to the IBM
- \$155.00**

American Innovations, Inc.

COMPUTER STAND

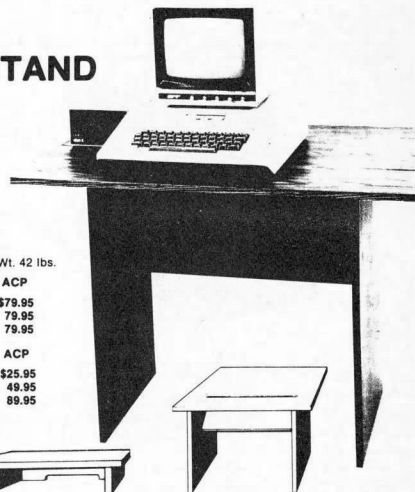
**INNOVATIVE!
ATTRACTIVE!
EASY ASSEMBLY!
UPS SHIPPABLE!**

Height: 26", Width 36", Depth 24", Shpg. Wt. 42 lbs.

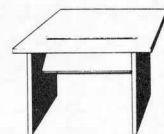
P/N	DESCRIPTION	ACP
CS101	Computer Stand Almond	\$79.95
CS102	Oak Finish	79.95
CS103	Walnut Finish	79.95

P/N	DESCRIPTION	ACP
MS201	Monitor Stand* (9 lbs.)	\$25.95
MS301	Printer Stand* (18 lbs.)	49.95
MS401	Deluxe Printer Stand* (31 lbs.)	89.95

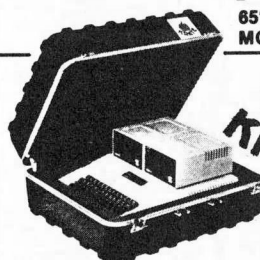
*Almond, Oak, or Walnut



65"x24"x12
MONITOR STAND



20.5"x22"x16
PRINTER STAND

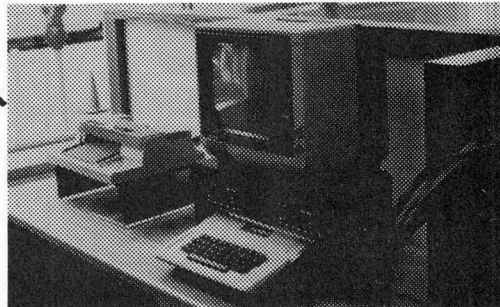


APPLE KRATE

- Holds (1) or (2) disk drives.
- Space for power cords & disks.
- Shock absorbing foam lined.

P/N	DESCRIPTION	ACP
AKK-01	Applekrate	\$159.95

THE ULTIMATE IN COMPUTER STANDS



These units are the most popular type sold at our retail stores. In fact, we have sold 100's. They are attractive, sturdy, and designed for computer and printer use.

PRINTER STANDS

Small (Epson, Gemini, Okidata, NEC) \$32.95
Large (Letter Quality, MX100, etc.) .. \$42.95

COMPUTER CONSOLES

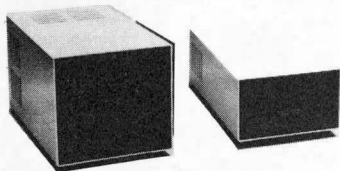
DESCRIPTION	ACP
Apple II/III Stand (holds (2) disks)	\$44.95
Osborne/Kaypro Stand	49.95

EASY READER (15% Angle Stand)

Small (Epson, Gemini, Oki, NEC, etc.) \$42.95
Large (Letter Quality, MX100, etc.) .. \$47.95

ENCLOSURES

Vista COMPUTER COMPANY, INC.

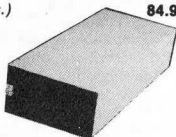


5 1/4" DISK ENCLOSURE SINGLE OR DUAL

Vista high quality enclosure with power supply. For single-drive 5V @ 1A, 12V @ 1.5A. For dual-drive 5V @ 2A, 12V @ 3A.

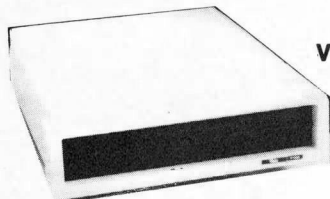
P/N	DESCRIPTION	ACP
VCC-01	Single 5 1/4" (5 lbs.)	\$69.95
VC-02	Dual 5 1/4" (8 lbs.)	84.95

DUAL THINLINE ENCLOSURES



Designed to house (2) 8" thinline drives. Includes fan, power supply 5V @ 2A, 24V @ 4A.

P/N	DESCRIPTION	ACP
VCC-03	Thinline Cabinet	\$174.95



V1000

8" DISK ENCLOSURE

Vista's V1000 dual, eight-inch enclosure was engineered with the user in mind. From its innovative mechanical design to its distinctive styling, the V1000 subsystem represents the ultimate in flexibility, modularity and ease of use.

At home in both the micro and minicomputer fields, the V1000 cabinet will accommodate mass storage units ranging from single-sided eight-inch floppies, to twenty megabyte streaming tape cartridges, and forty megabyte Winchester disk drives. User-oriented design allows sliding extension of inner chassis to gain access to the drives for configuration of options or preventive maintenance. Releasing of an easily accessible latch enables the entire inner chassis to be withdrawn from the outer cabinet to facilitate testing of power supply and mounting/removal of drive units.

FEATURES

- High performance power supply features + regulation, low output ripple control, and over-voltage protection.
- Houses one or two eight-inch single- or double-sided disk drive units.
- Compatible with TRS-80™ Model II, Apple II® and most popular S100 based microcomputer systems.
- On-line floppy disk storage capacity from 250 kilobytes to 2.5 megabytes.
- Die-cast zinc front bezel for enduring mechanical/esthetic integrity.
- Deluxe, industrial quality cabinet.
- Desk-top or Retma rack mount at no additional cost.
- Modular design approach simplifies field support and upgrade capabilities.

P/N	DESCRIPTION	ACP
VCC-04	8" Enclosure (35 lbs.)	\$335.00

SPECIAL OFFER!

Add (2) Siemens FDD100-8 Disk Drives, Double-Density & Save!

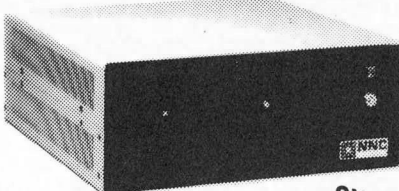
Vista Enclosure plus (2) Disk Drives.
YOU INSTALL THEM ONLY \$699.00

Also available with Shugart 801R, Oume Datatrack 8, and others. See Floppy Disk Section for pricing or call Sales Desk for today's price.

FD-206 FLOPPY DISK POWER SUPPLY TRIPLE OUTPUT \$99.95

Voltage	OUTPUT	Current
+5V		2.5A
+24V		3.0A/3.4A PK
-5V		.05A

NNC ELECTRONICS



NNC MODEL 75 S-100 ENCLOSURE

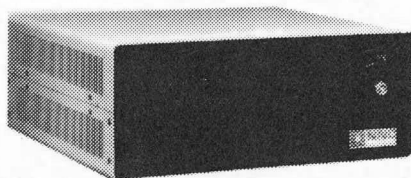
SYSTEM ONLY \$575⁰⁰

- Keyed power on/off switch • Cooling fan
- Switched and fused convenience outlet
- Backlighted reset switch • Card cage with nylon card guides — optional • Enclosed 30A modular power supply 110/220V, 50/60Hz

The NNC Model 75 enclosure has been designed for applications requiring up to two 5 1/4" disk drives. Its advanced structural design, the use of rugged heavy gauge aluminum (.090) and dry powder-baked epoxy coating assure maximum strength and durability.

The NNC Model 75 enclosure provides the user with a wide selection of options. It is available with or without CPU card, memory, I/O controllers, disk controllers, etc. (The 5 1/4" drives are available from ACP). The optional 8-slot S-100 motherboard and 10 DB-25 connector outlets provide the user with a wide range of customizing capabilities.

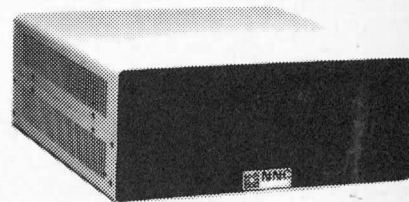
DESCRIPTION	LIST	ACP
NNC Model 75	\$295.00	\$266.00
8 Slot S-100 Motherboard	185.00	166.00
S-100 Power Supply	175.00	158.00
System Special (All Above)		575.00



NNC MODEL 100 S-100 ENCLOSURE

ACP SUPER SAVER \$639⁰⁰

- Keyed on/off switch • Switched and fused convenience outlet • Lighted reset switch • Cooling fan • Openings for 10 DB-25 outlets in back plate • 19-slot S-100 motherboard (terminated with resistor networks) • Complete card cage with nylon card guides for all slots • Enclosed 30 A modular power supply 110/220V 50/60 Hz



NNC MODEL 90 FLOPPY DISK ENCLOSURE

- Individually mounted drives • Heavy gauge (.090) aluminum enclosure • Dry powder baked epoxy coating • Switched and fused convenience outlet • Power on/off switch • Enclosed power supply 110/220V, 50/60Hz — optional • Two 8" Single-Sided, Double-Density or Double-Sided, Double-Density Shugart disk drives — optional

The NNC Model 90 enclosure was designed for dual 8" horizontal disk drives and is available with or without the drives. Its low profile makes it the ideal mass storage companion for most microcomputers. The Model 90 comes complete with power cables, power on/off switch, cooling fan and strong, single-piece die cast aluminum front panel.

Measuring 17 1/2" W x 7" H x 17 1/2" D, the NNC Model 90 provides the user with maximum flexibility in disk drive selection . . . A choice of single- or double-sided, single- or double-density drives.

DESCRIPTION	LIST	ACP
NNC Model 90 w/o Drives	\$349.00	\$315.00
NNC Model 90 w/Drives 55, DD	1995.00	1795.00
Floppy Disk Power Supply	215.00	195.00

The NNC Model 100 enclosure was designed to provide the S-100-based system user with a convenient desktop cabinet that is attractive, durable and compatible with most peripherals on the market today.

The low-profile Model 100 measures 7" H x 17 1/2" W x 18 1/2" D and is made of heavy gauge (.090) aluminum. The dry powder-baked epoxy coating adds to the system's durability. NNC's Model 90 dual 8" disk drive enclosure is an ideal companion unit and gives a pleasant "matched pair" appearance to the system.

DESCRIPTION	LIST	ACP
NNC Model 100	\$295.00	\$265.00
S-100 19 Slot Motherboard	265.00	240.00
S-100 Power Supply	175.00	158.00
System Special (All Above)		639.00

QT COMPUTER SYSTEMS INC.

S-100 MOTHER BOARDS

P/N	DESCRIPTION	ACP
QTC-05B	4 Slot BB (1 lb.)	\$ 20.00
QTC-05K	4 Slot Kit (2 lbs.)	33.00
QTC-05A	4 Slot A&T (2 lbs.)	43.00
QTC-06B	6 Slot BB (1 lb.)	29.00
QTC-06K	6 Slot Kit (2 lbs.)	47.00
QTC-06A	6 Slot A&T (2 lbs.)	62.00
QTC-07B	8 Slot BB (1 lb.)	35.00
QTC-07K	8 Slot Kit (2 lbs.)	59.00
QTC-07A	8 Slot A&T (2 lbs.)	89.00
QTC-08B	12 Slot BB (1 lb.)	38.00
QTC-08K	12 Slot Kit (3 lbs.)	90.00
QTC-08A	12 Slot A&T (3 lbs.)	123.00
QTC-09B	18 Slot BB (1 lb.)	65.00
QTC-09K	18 Slot Kit (3 lbs.)	125.00
QTC-09A	18 Slot A&T (3 lbs.)	179.00

For more S-100 Motherboards, see Vector Section of catalog. S-100 Edge Connectors, see Connectors.

S-100 CARD CAGES

QT Card Cages designed for use with their Motherboards (listed below). Super for roll-your-own-systems and OEM applications. Available in 4, 6, 8, or 12 Slots, has opening for 4" muffin fan and is metal anodized construction.

DIMENSIONS

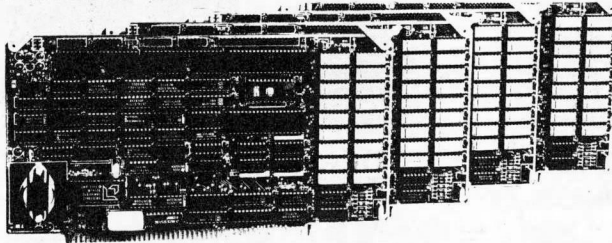
- A Slot (3.5" W x 10 13/16" D x 6" H)
- 8 Slot (5 1/4" W x 10 1/2" D x 6" H)
- 8 Slot (6 1/4" W x 10 1/2" D x 6" H)
- 12 Slot (10" W x 10 1/2" D x 6" H)

P/N	DESCRIPTION	ACP
QTC-01	A Slot Cage (2 lbs.)	\$ 20.00
QTC-01S	Above w/Motherboard & Card Guides (3 lbs.)	75.00
QTC-02	6 Slot Cage (2 lbs.)	25.00
QTC-02S	Above w/MB & CG (3 lbs.)	89.00
QTC-02F	Above w/Fan (4 lbs.)	104.00
QTC-03	8 Slot Cage (2 lbs.)	32.00
QTC-03S	Above w/MB & CG (3 lbs.)	92.00
QTC-03F	Above w/Fan (4 lbs.)	119.00
QTC-04	12 Slot Cage (3 lbs.)	57.00
QTC-04S	Above w/MB & CG (5 lbs.)	129.00
QTC-04F	Above w/Fan (7 lbs.)	189.00
QTC-04K	Above w/(2) Fans (9 lbs.)	219.00

S-100 COMPUTER COMPONENTS

**ADVANCED
DIGITAL
CORPORATION**

S-100 SYSTEM ON SINGLE BOARD



MULTI-USER MULTI-PROCESSING SUPER SLAVE™

The Super-Slave is a powerful single-board slave processor designed to run in an S-100 environment or a stand alone configuration. When multiple slaves co-exist within a system, computing power is a dedicated CPU (Z-80) to each individual user or sharing it between 2 or 3 users.

- Z-80™ CPU
- S-100 IEEE-696
- 4 Serial I/O Ports, 2 Parallel I/O
- 2/4K of EPROM
- Independent Baud Rate Switch
- 64/128K of Bank Switched RAM
- One Year Warranty
- Runs with Turbo-Dos™

As a slave processor, any number of Super-Slave cards may exist in a single S-100 system, by providing a dedicated Z-80 CPU to each user. Each slave is linked through the S-100 Bus to the master (Super Quad®).

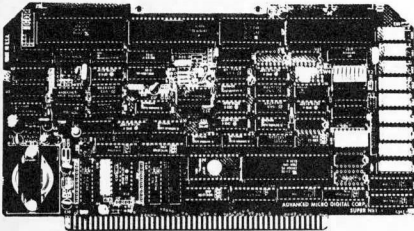
Turbo-Dos™ operating system is being used on this set up. Turbo-Dos is a state-of-the-art operating system designed for use as a superior direct replacement for Digital Research CP/M® or CP/NET®; because of its modular architecture that consists of a set of "Building Block" modules which may be combined to produce a family of compatible operating systems, including single task, multi-task and networking.

P/N	DESCRIPTION	ACP PRICE
AMD-SS	Super-Slave 64K	\$599.00
AMD-SSI	Super-Slave 128K	659.00

Note: Main Frame Also Available.

Operating System: Turbo-Dos™ multi-user operating system. **\$550.00**

SUPER QUAD™

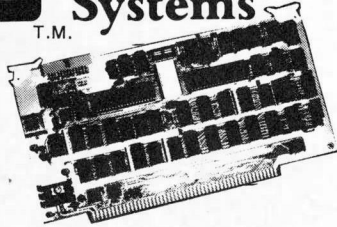


- Z-80 A CPU @ 4MHZ
- Floppy Disk Controller, Single- & Double-Density (Supports up to 4 Disk Drives, 8-inch or 5¼-inch)
- 64K Bytes of Memory, Bank Selectable in 16K Banks

- S-100 Extended Address A16-A23
- 2 Serial I/O Ports
- 2 Parallel I/O Ports
- Real Time Interrupt Clock
- Unconditional One Year Warranty
- Runs with CPM™, MPM™, CP/NET™, & Turbo-dos

P/N	DESCRIPTION	ACP PRICE
AMD-SN	Super Quad/I S-100 SBC	\$799.00
AMD-SS	PS Net/I Serial Port Adapter	25.00
AMD-SP	PS Net/Par Parallel Port Adapter	35.00
HARD DISK CONTROLLER		
AMD-HDC-5	Hard Disk Controller (5¼")	499.00
AMD-HDC-8	Hard Disk Controller (8")	499.00

**California
Computer
Systems
T.M.**

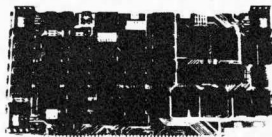


MODEL 2810 Z-80 CPU

- 2 or 4 MHz operation, switch-selectable
- 158 instructions, including the 8080's 78 instructions for complete 8080 software compatibility
- On-board RS-232-C Serial Port with software-controllable handshaking, serial data format, and baud rate

CCS-Z80	Z80 CPU A&T	\$295.00
---------	-------------	----------

SEM T.M.

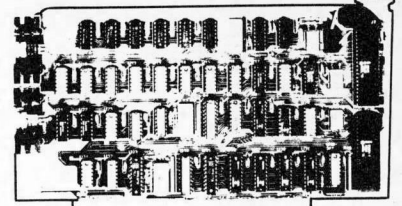


CB2 THE BRAIN

Z-80 microprocessor — 2 or 4 MHz operation; DIP switch selectable — Socketed for, but not including, two EPROMs either 2716 or 2732, and 2K of TMS4016 RAMs — Jumper selected MWRITE signal allows use with or without front panel — All lines buffered — Memory with DIP switch addressing and disable — Output port controls 8 extended address lines allowing use of more than 65K of memory.

SSM-SM	Z80 CPU A&T	\$319.00
SSM-M	Monitor	\$ 85.00

CompuPro
SYSTEMS



CPU BOARDS

CPU 8085/88

- 8085 CPU is downward compatible with the vast library of 8080 software; 8088 CPU is upward compatible with 8086/8088 software, Intel's coming P-series, and other hardware and software not yet developed.
- Provides true 16 bit power with a standard 8 bit S-100 bus.
- Accesses 16 megabytes of memory.
- Fully conforms to all IEEE 696/S-100 bus specifications.

CPU 68000

Based on 68000 16 bit CPU plus has socket for 68451 Memory Management Unit and sockets for 16K bytes of EPROM 8MHz standard, CSC is 10 MHz.

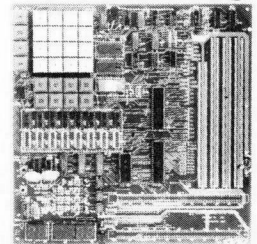
DUAL 16 BIT CPU 8086/8087

Uses 8086 plus socket to add 8087. Operates with CP/M-86™ and the 80130 Operating System Firmware.

P/N	DESCRIPTION	LIST	ACP
GOD-C85	8085/88 CPU (6 MHz)	\$425.00	\$389.00
GOD-C85C	CSC 8085	525.00	489.00
GOD-C86	CSC 8086 (10 MHz)	695.00	599.00
GOD-C86C	8086 w/8087 (8 MHz)	850.00	725.00
GOD-C87	8086 w/8086 (8 MHz)	995.00	899.00
GOD-C87C	8086 w/8087 (10 Mhz) CSC	1150.00	1025.00
GOD-C68	68000 CPU	695.00	620.00
GOD-C68C	68K CPU (10 MHz) CSC	850.00	780.00
GOD-SFH	Forth Operating Sys.		200.00
GOD-C80	Z80B CPU (6 MHz)	295.00	269.00
GOD-C80C	Z80B CPU/CSC	395.00	369.00

Note: CSC denotes 200 hour BURN-IN plus full 2 year warranty (exchange). All boards carry standard 1 year warranty.

QT COMPUTER SYSTEMS INC.



QT Z-80 BEGINNER KIT

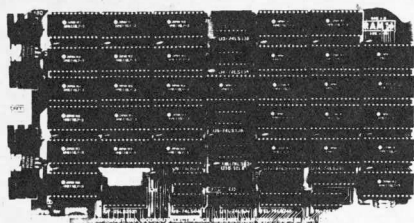
- Z80 CPU with 158 Instructions
- On-Board Keyboard and Display
- On-Board PROM Programmer
- Cassette, RS-232
- 2K RAM

QT-Z80K	Z80 Kit	\$350.00
QT-Z80	Z80 A&T	\$399.00
QT TB	TINY BASIC ROM	\$ 25.00

S-100 MEMORY

CompuPro

SYSTEMS

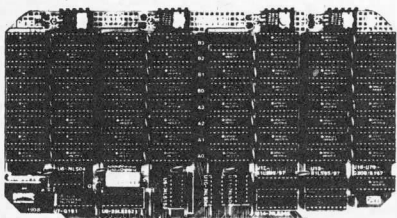


RAM 16 (12 MHz)
32K x 16 or 64K x 8

Compatible with 8085/86/88 and 68000 S-100 CPU Boards. Switch selectable memory addressing. Static, low-power (2 watts typ.) uses static CMOS 16K RAMS.

RAM 17 (12MHz)
64K STATIC

With 8088/86 CPU's, it runs up to 12 MHz. Low power — less than 2 watts. Any 16K block may be disabled.



RAM 21 (12MHz)
128K STATIC

Can be used as 128K x 8 or 64K x 16. Can you believe only 1.2 watts (typ.)? Fully S-100 compatible to IEEE 696.

- Operates at 12 MHz with 8088, 8086, 68000, 80286, and 16032 type CPUs.
- Extremely low power consumption.
- Meets or exceeds all IEEE 696/S-100 specifications, including timing.
- Performs byte (8 bit or word (16 bit) transfers as per IEEE 696 specifications.
- Fully static design eliminates timing problems associated with dynamic memories.
- Guaranteed to perform flawlessly with any IEEE 696/S-100 DMA device.
- DIP switch settable 24 bit addressing.
- Board addressable as one 128K x 8 or 64K word x 16 block.
- Single +5 Volt operation (requires no other supply voltages).
- High quality double-sided circuit board with solder mask, legend, and gold plated contact fingers.

RAM 20 (10 MHz)
32K STATIC RAM

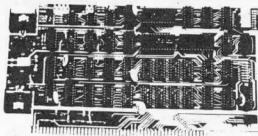
Board is addressable as one 32K x 8 block or any 4K boundary. Low power and meets or exceeds IEEE 696 specs. Available in 16K or 32K versions.

P/N	DESCRIPTION	LIST	ACP
GOD-R16	64K A&T	\$650.00	\$595.00
GOD-R16C	64K CSC	750.00	695.00
GOD-R17	64K A&T	599.00	549.00
GOD-R17C	64K CSC	699.00	649.00
GOD-R21	128K A&T	1350.00	1199.00
GOD-R21C	128K CSC	1450.00	1299.00
GOD-R20/	RAM 20 w/16K	285.00	255.00
GOD-R20C/	Same w/CSC	355.00	319.00
GOD-R20/	RAM 20 w/32K	425.00	379.00
GOD-R20C/	Same w/CSC	495.00	440.00

ORDER BY PHONE
outside California
(800) 854-8230
inside California
(714) 558-8813



VIDEO BOARDS



VB1 B VIDEO BOARD

This VB1 B is software controlled and memory mapped. Memory Mapping means that locations in the 1K (1024 byte) on-board RAM memory correspond with locations in the 64x16 (1024) character display.

The 1K memory can be addressed at any 1K increment via DIP switch.

The VB1B features a 128x48 matrix for graphics, upper and lower case, Greek letters, and black on white or white on black. Software includes a driver routine for cursor control, scroll up, and X-Y graphic control.

The board can be used with a modified television or commercially available monitor.

VB2 I/O MAPPED VIDEO BOARD

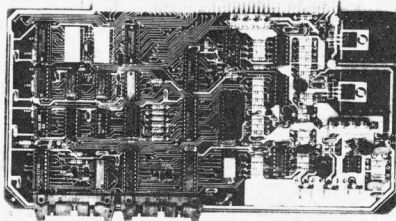
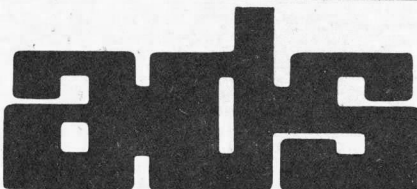
The VB2 is an I/O controlled video interface board. With a TV monitor, the VB2 becomes a video terminal. No other I/O card is required for keyboard input and video display.

The VB2 cursor, linefeed, carriage return, backspace, and clear screen are hardware controlled. The display is 64x16, all upper case, and is selectable for white on black, or black on white. The board produces a clear, bright display, and features adjustable picture size and character width. Circuitry is provided to drive a speaker for a "beep" tone.

VB3

80x24 display, or 80x48 for a full page of text • Upper and lower case characters • Up to 256 user defined symbols • 160x204 graphics matrix • Memory mapped, but occupies memory only when activated • Software includes a CP/M® compatible driver routine • Keyboard port with status • All lines buffered • 4K of 2114L RAM on-board.

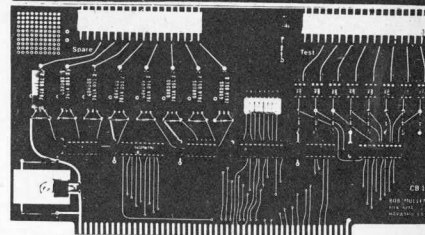
P/N	DESCRIPTION	LIST	ACP
SSM-VB1	Video Board	\$242.00	\$210.00
SSM-VB2	Video Board	269.00	225.00
SSM-VB3	Video Board	499.00	439.00
SSM-VB3-1	I03 Upgrade to (80x48)		30.00
SSM-VBS-5	I03 Software		50.00



S-100 SYNTHETALKER™

The ADS Synthetalker™ is an IEEE 696/S-100 compatible speech synthesis board with extras. It provides your computer with speech, sound, and I/O capability. Speech is generated with the phoneme driven Votrax SC-01 capability, sounds may be generated by the SC-01 and/or the on-board 8 bit digital to analog converter. Two versatile I/O ports reduce the application's board count.

P/N	DESCRIPTION	ACP
ADS-ST	Synthetalker A&T	\$299.00
ADS-BB	Bareboard	64.95



RELAY/OPTO BOARD

THE MULLEN CB-1 lets you control external devices and sense external conditions.

Each board allows individual control of up to eight devices and can input from eight switch settings. The CB-1 has switch selectable port addresses, so it can be assigned to any unused port. Self-tested feature can check addresses and test input and output, this makes final board check out easy.

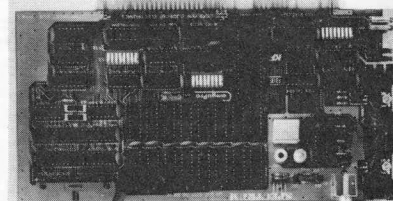
S-100 CARD EXTENDER ZERO INSERTION

Mullen has designed a fast, super flexible extender card for trouble shooting S-100 cards. Has fuse protection and LED's. Also available S-100 w/Logic Probe. This model does not have the zero insertion feature.

P/N	DESCRIPTION	LIST	ACP
MUL-CB1	Relay/Opto Board	\$239.00	\$219.00
MUL-EXT	S-100 Extender	159.00	139.00
MUL-EXL	Ext. & Logic Probe	99.00	85.00

CompuPro

SYSTEMS



SPECTRUM

The SPECTRUM COLOR GRAPHICS Board is actually three products in one: a full-function color graphics generator; a parallel I/O port; and an 8K static RAM board. Features for each section include:

- 6847-based graphics controller with internal character generator, displays all 64 ASCII characters, in normal or inverted video.
- 10 modes of operation, from alphanumeric/semigraphics in 8 colors to ultra-dense 256x192 graphics.
- 75 Ohm RS-170 line output for direct connection to NTSC compatible color monitors.
- Four pin male video output connector (which also carries power) drives standard video modulators.
- Software support from SubLogic's 2D and 3D Universal Graphics Interpreters.

RAM

- 8K of low power high speed static RAM conforms fully to all IEEE 696/S-100 specifications (6K is used for display memory in graphics mode).
- Operates as standard 10MHz 8K program memory when not in graphics mode.
- IEEE standard 24 bit (16 megabyte) extended addressing allows the memory to be removed from base page.
- Includes memory features such as PHANTOM disable, block disable, and write protect.

PARALLEL I/O

- Full duplex parallel I/O channel includes 16 data lines along with strobe, enable, and attention bits (interfaces with keyboards, LEDs, joysticks).

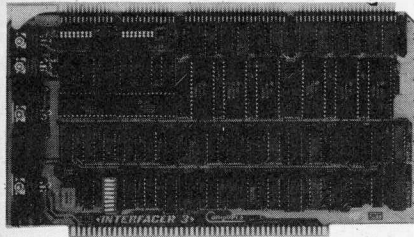
- +5V, +12V, and -12V are available on the 25 pin parallel connector for powering external devices.

P/N	DESCRIPTION	LIST	ACP
GOD-CGB	Color Graphics A&T	\$399.00	\$345.00
GOD-CGBC	Color Graphics CSC	449.00	395.00

S-100 COMPUTER COMPONENTS

S-100 BOARDS

CompuPro SYSTEMS



INTERFACER 3

INTERFACER 3, an eight channel serial I/O board that conforms to all IEEE 696/S-100 timing specifications, is optimized for multi-user and interrupt-driven environments. Six asynchronous DCE Interfaces (with full RS-232 handshaking), along with two synchronous/asynchronous DTE/DCE high speed channels (with full RS-232 handshaking and bi-directional clock drivers), connect to CRT's, printers, modems, or other computers with a minimum of effort and a maximum of flexibility. A unique user selection port allows cascading of up to four INTERFACER 3 boards, providing for 32 contiguous users at only 8 physical port locations. INTERFACER 3 also incorporates interrupt structure, with full maskability and flexible strapping.

INTERFACER 2

The multi-function INTERFACER 2 includes three full duplex parallel ports for handling I/O data, one full channel of serial I/O (identical to an INTERFACER 1 serial port), and a selectable rate interrupt timer.

INTERFACER 1

The INTERFACER 1 is a dual channel, RS-232 and I/O board that conforms to all IEEE 696/S100 standards. To increase speed and reliability, hardware (rather than software) UART's perform all basic I/O operations.

INTERFACER 4

3 Serial, 1 Parallel, 1 Centronics Multipurpose I/O for just about any application. Has (2) async./synch. DTE/DCE serial, (1) fully async. DCE serial, one parallel and one Centronics parallel.

SYSTEM SUPPORT MULTI-FUNCTION BOARD

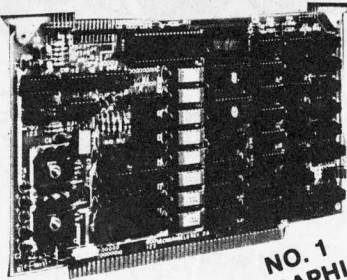
Housekeeping on one board. 15 level Interrupts, (3) 16 bit interval timers. RTC/Calendar w/battery back-up. RS-232, 9511 or 9512 ALU option.

MPX MULTIPLEXER

Enhance the performance of your multiuser system by relieving your CPU of overhead. 5MHz 8085 CPU w/2K ROM, DMA and DPA. This card is compatible with existing CompuPro Interfaces.

P/N	DESCRIPTION	LIST	ACP
GOD-I01	Interfacer 1 A&T	\$249.00	\$219.00
GOD-I01C	Interfacer 1 CSC	324.00	289.00
GOD-I02	Interfacer 2 A&T	249.00	219.00
GOD-I02C	Interfacer 2 CSC	324.00	289.00
GOD-I03	Interfacer 3 A&T	699.00	625.00
GOD-I03C	Interfacer 3 CSC	849.00	775.00
GOD-I03-5	Above w/5 Serial A&T	599.00	549.00
GOD-I03C-5	Above w/5 Serial CSC	699.00	629.00
GOD-I04	Interfacer 4 A&T	395.00	349.00
GOD-I04C	Interfacer 4 CSC	495.00	449.00
GOD-SSM	System Support Card A&T	395.00	359.00
GOD-SSMC	System Support Card CSC	495.00	449.00
GOD-MC1	9511 Math Chip (Option)	195.00	165.00
GOD-MC2	9512 Math Chip (Option)	195.00	165.00
GOD-MPX	Multiplexer w/4K RAM A&T	495.00	449.00
GOD-MPXC	Multiplexer w/4K RAM CSC	595.00	549.00
GOD-MPX-16	Multiplexer w/16K	649.00	579.00
GOD-MPX-16	Multiplexer w/16K	749.00	669.00
CABLES/OPTIONS			
GOD-PPC	Parallel Port Cable		15.00
GOD-3SP	3 Serial Ports		45.00
GOD-CEP	Centronics Port		23.00
GOD-3AP	3 Asynch. Port Cable		45.00

SCION



NO. 1 IN GRAPHICS!

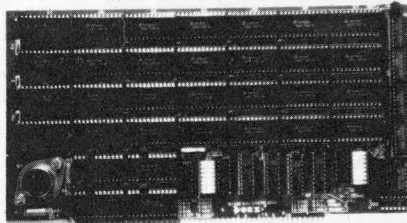
MA520 GRAPHICS

SCION enhanced version of its popular S-100 Micro-Angelo graphics single board computer. The MA520 offers, in addition to the basic features of the Micro-Angelo MA512 single board computer, the following:

- An additional 32K byte buffer for secondary images or user defined functions, for a total of 64K bytes.
- 50 percent additional firmware space, to 12K bytes
- Up to 25 percent faster code execution
- Complete I/O port decoding
- 512x480 display

P/N	DESCRIPTION	ACP
SCN-545	Microangelo 520 w/Screenware Plus	1549.00
SCN-512	Single Board Graphics Microangelo 512	749.00
SCN-520	Microangelo 520	999.00
SCN-SPI	Upgrade Firmware for 512/520	100.00
SCN-LP	Light Pen	417.00

COEX



ACP SUPERSAVER

64K STATIC LOW POWER S-100 IEE696

STATIC RAM AT DYNAMIC PRICES \$299.00

Uses low-power CMOS RAM's (TM 2016 or 6116). 24 bit extended addressing. Power consumption less than 500 ma (typ.). 2716's can be implemented above 48K.

P/N	DESCRIPTION	ACP
COX-64K	64K A&T	\$299.00
COX-64K B	Bare Board	39.00

COEX 32K STATIC S-100

P/N	DESCRIPTION	ACP
COX-32K	32K Static Kit (4 MHz)	\$129.00
COX-32	32K A&T (4 MHz)	179.00

COEX EXTENDER CARD S-100

P/N	DESCRIPTION	ACP
COX-EXK	Kit Extender w/conn	\$18.95
COX-EX	Extender (A&T)	26.95
COX-PRO	S-100 Protocard	23.95

MORROW DESIGNS SWITCHBOARD®

Specifications:
Eight I/O Ports: I/O ports DIP switch selectable for location on any boundary of the I/O address space divisible by 8.

Two RS-232C/TTY current loop serial ports — fully independent serial ports — sixteen selectable baud rates.

One serial status port — serial port #1 — least significant 4 bits — serial port #2 — most significant 4 bits — receiver buffer full status — transmitter buffer empty status — parity error status — over-run error status.

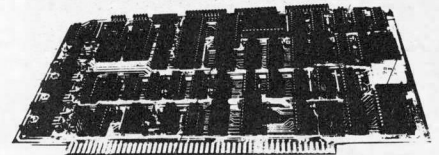
Four Independent Parallel I/O Ports: Thirty-two lines of I/O available. Each group of eight lines DIP switch selected as input or latched output. Attention status bit for each group of eight I/O lines.

MULTI I/O 3 SERIAL 2 PARALLEL CLOCK CALENDAR

General purpose card for multi-user system. (3) programmable serial ports with programmable interrupt controller.

P/N	DESCRIPTION	LIST	ACP
MOR-SB	Switchboard 8 A&T	\$259.00	\$230.00
MOR-MIO	MVH I/O	359.00	325.00

SSM



105

I/O board with 8 serial interfaces each programmable and an interrupt clock. Timer supports real-time or multi-user applications.

108

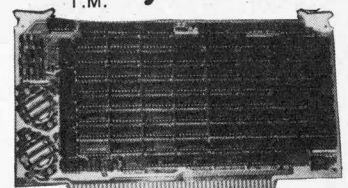
I/O board has (2) RS-232 ports plus (3) parallel ports. 8 jumper selectable baud-rates from 110 to 19,200.

P/N	DESCRIPTION	LIST	ACP
SSM-I04	104 A&T	\$290.00	\$249.00
SSM-I05	105 A&T	329.00	299.00
SSM-I08	108 A&T	550.00	499.00

CABLES/OPTIONS

SSM-CP1	Parallel 6' Open End	15.00
SSM-CP2	Parallel 6' Centronics	25.00
SSM-CP3	Parallel 6' Edgcard	35.00
SSM-CP4	Parallel 6' DB25S	25.00
SSM-CS1	Serial (2) 2' open end	20.00
SSM-CS2	Serial 2' DB25S (DTE)	20.00
SSM-DCC	Daisy Chain Interrupt Cable 24' Ribbon w/(4) Conn.	20.00

California Computer Systems T.M.



64K DYNAMIC RAM

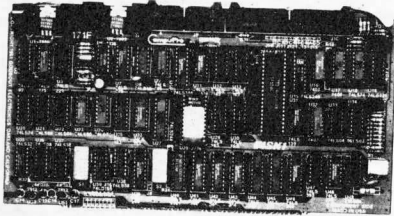
CCS popular 64K dynamic RAM uses 4116 RAMS and meets S-100/IEEE 696 4 MHz with Bank Select.

P/N	DESCRIPTION	ACP
CCS-64	64K RAM A&T	\$299.00

S-100 COMPUTER COMPONENTS

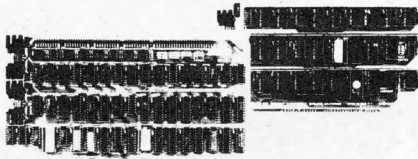
CompuPro

FLOPPY DISK CONTROLLER DISK 1



Conforming fully to all IEEE 696/S-100 specifications, including DMA arbitration, **DISK 1** delivers exceptional performance which is suitable for the highest level industrial, commercial, and scientific microcomputer systems. Based on the most advanced LSI floppy disk controller available today, and taking advantage of the **CompuPro** design team's extensive experience in designing computer peripherals,

DISK 2 SELECTOR CHANNEL



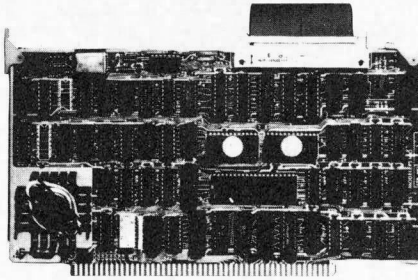
CompuPro's DISK 1 has already set new standards for floppy disk controllers, and now the **DISK 2** board set is leading the way to ultra-high performance S-100 Winchester disk systems as well. The **DISK 2/SELECTOR CHANNEL** combination conforms fully to all IEEE 696/S-100 specifications (including DMA arbitration), and delivers the extremely high speed performance required by the highest level industrial, commercial, and scientific microcomputer applications. Capable of directly accessing the full 16 MByte address space on the IEEE 696/S-100 bus (thanks to high speed DMA protocol), **DISK 2** makes processor dependent data transfer a thing of the past.

P/N	DESCRIPTION	LIST	ACP
GOD-FD1	Floppy Cont. A&T	\$495.00	\$445.00
GOD-FDIC	Floppy Cont. CSC	595.00	549.00
SOFTWARE			
GOD-SC1	CP/M 2.2 for 8085/ Z80 Single Density		175.00
GOD-SC2	CP/M-86 for 8086/87		300.00
GOD-SC3	CP/M-86 for 8086		300.00
GOD-SC4	OASIS 8 Bit 8" Single Density		500.00
GOD-SC5	OASIS 8" Single Density Multi-User		850.00
GOD-HD1	Hard Disk 2 A&T	795.00	740.00
GOD-HD1C	Hard Disk 2 CSC	895.00	835.00

DISK 3 SA100 SEAGATE INTERFACE

GOD-HD2	Disk 3 A&T	Call
GOD-HD2	Disk 3 CSC	Call

Tarbell Electronics T.M.

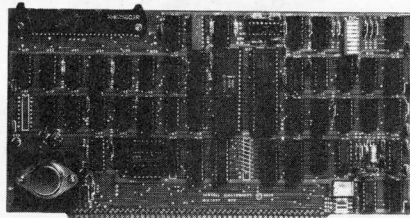


HARD DISK CONTROLLER

FEATURES

- Supports up to 4 PRIAM drives, from 10 to 154 megabytes each
- Control either 8-inch or 14-inch drives
- Hardware CRC error detection on data
- Overlapping seeks are supported

5 1/4 HARD DISK CONTROLLER



DOUBLE DENSITY DISK CONTROLLER

FEATURES

- Fully software supported by Tarbell with CP/M® disk operating system and the MP/M® multi-user multi-tasking operating system.
- Single or double density, software selectable.
- The on-board phase-locked-loop and write-precompensation circuits provide highly reliable operation with a variety of drives.
- Non memory-mapped, so all 64k bytes of address space is available.
- No on-board buffer, so data can be transferred at maximum possible speed: one full track per revolution.
- True Direct Memory Access (DMA) in single or double density mode makes possible efficient multi-user and multi-tasking systems.

P/N	DESCRIPTION	ACP
TAR-HDX	8" & 14" Hard Disk Controller	Call
TAX-HDM	5 1/4" Hard Disk Controller	800.00
TAR-FDC1	Single Density Floppy Cont.	299.00
TAR-FDC2	Double Density Floppy Cont.	469.00

DISK 4 ANSI HARD DISK INTERFACE

GOD-HD2	Disk 4 A&T	Call
GOD-HD3	Disk 4 CSC	Call

California Computer Systems T.M.



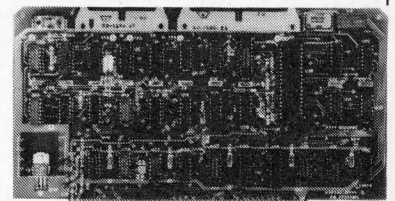
MODEL 2422

- Double-side and side select signals implemented for double-side drives
- Reads and writes diskettes conforming to the IBM 3740 format standard for single-density diskettes and the IBM System 34 format standard for double-density diskette Z-80 compatible, ROM-resident bootstrap loader for loading CP/M into system memory from diskette
- Z-80 compatible, ROM-resident MOSS 2.2 disk monitor
- Plug-compatible with Shugart 800/850 and 400/450 drives
- Fast seek for voice-coil drives hardware or software-enabled
- Can be assigned to one of eight banks through bank byte/bank port system used by Cromenco and others
- Optional auto wait circuitry for wait on data or board status when data register is not ready for data transfer
- PINT, NMI, or V10-V17 can be used to interrupt the CPU when the 2422 is ready for data transfer or a new command
- Write precompensation circuitry for double-density diskettes
- Digital phase locked loop for read data separation
- LEDs to indicate ROM, Bank, and Board
- Address decoding ROMs handle ROM and register addressing
- Optional Wait state for ROM

CCS-FDC Disk Controller A&T w/8" CP/M \$389.00
CCS-FDC-1 Disk Controller A&T w/5 1/4" CP/M \$429.00

CONTROLLERS

SD SYSTEMS T.M.



VERSAFLOPPY II

- IBM 3740 compatible soft sectored format for single density drives
- Operates with single- and dual-sided drive, single- or double-density drives and 5" and 8" drives in any combination of four simultaneously
- Drive select and side select circuitry
- Vectored interrupt operation optional
- Phase locked loop data recovery circuits
- Operates with Z-80 CPU's
- Uses FD 1791-1 controller chip
- Control and diagnostic software available in PROM

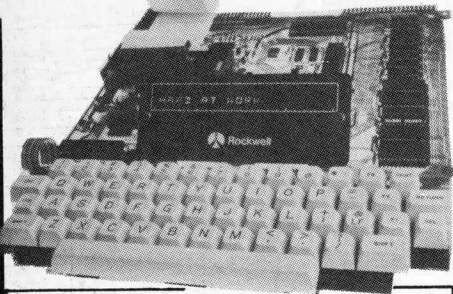
SD Systems Versafloppy II A&T \$450.00
SD Systems Versafloppy I A&T \$450.00

SINGLE BOARD COMPUTERS



Rockwell
International

AIM 65



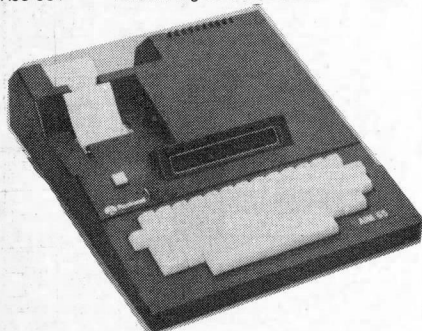
The AIM 65 single board computer features expandability, flexibility and low price. It is an excellent development tool for 6502 based systems. ACP has sold thousands to engineers, scientists, and educators. If you're working on a 6502 CPU project the AIM 65 should be for you.

Since the introduction of the AIM 65, Rockwell has been steadily offering new products to enhance the system. It is now possible to add a card cage holding up to (16) RM65 series board level products. These include Video Controllers, ACIA Adapters, PROM Programmers, Disk Controllers and others. They also offer a modular power supply that fits into their enclosure. Languages are now available in BASIC, FORTH, PASCAL, PL65, and Floating Point Math.

The AIM65 options are listed below under pricing. The RM65 boards can also be used with the AIM65 but they require the optional card cage and mother board.

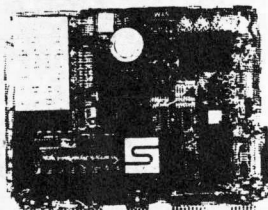
AIM 65 PRICE LIST

P/N	DESCRIPTION	ACP PRICE
A65-415	AIM65 with 4K RAM & BASIC	530.00
A65-010	Assembler ROM	35.00
A65-030	PL/65 Compiler ROMs	85.00
A65-040	Math Package ROM	35.00
A65-050	FORTH ROMs	65.00
A65-060	Instant PASCAL ROMs	100.00
A65-002	AIM65 Enclosure	95.00
A65-003	Service Test Board	200.00
A65-004	Power Supply & Cable	106.00
A65-901	PROM Prog & CO-ED Module	195.00



A65-520 Desk Top Series Enclosed System w/BASIC & 4K RAM and Assembler. (Inc. power supply) 795.00

SYM-1



FEATURES:

- Kim-1 Compatible
- 4K ROM Monitor
- 11K Bytes 2114 RAM
- 65K Memory Expansion
- User EPROM 2716

NOW
\$239⁰⁰

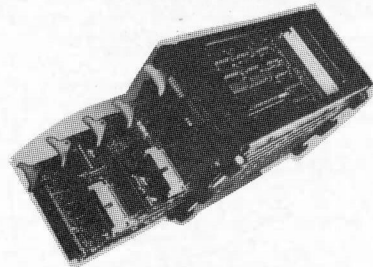
NEW AIM 65/40 SBC

Now Rockwell has a new generation of highly integrated microcomputer modules that meet small-volume industrial and laboratory uses. Expandability and cost performance are the keys as you only add the function cards to the SBC that are required for your applications.

The AIM65/40 features: 6502, 67 key keyboard, 40 character display, 240 LPM 40 column printer, up to 48K, 32K ROM, and other options listed below.

AIM65/40 PRICE LIST

P/N	DESCRIPTION	ACP PRICE
A65/40-5000	AIM65/40 SBC w/32K RAM Monitor ROMs, keyboard, 40 character display, and graphics 40 column printer	1345.00
A65/40-0210	Extended Keyboard	120.00
A65/40-0800	Video Display Controller (VDC)	425.00
A65/400004	Power Supply & Cable 1.5A@12V, 1A@-12V, 4A@24V	540.00
A65/40	Assembler ROM	35.00
A65/40-7020	BASIC Interpreter ROM	65.00
A65/40-7030	PL/65 Computer ROM	85.00
A65/40-7040	Math ROMs	35.00
A65/40-7050	FORTH ROMs	65.00



RM 65/40 MODULES

P/N	DESCRIPTION	ACP PRICE
RM65-1000	PROM/EEROM Prog.	295.00
RM65-3108	8K Static RAM	295.00
RM65-3132	32K Dynamic RAM	298.00
RM65-3216	16K PROM/ROM Module	115.00
RM65-5101	Floppy Disk Module	395.00
RM65-5102	CRT Controller Module	298.00
RM65-5104	DMA Controller Module	275.00
RM65-5222	GPIO	235.00
RM65-5223	MPI Mult. I/O	225.00
RM65-5302	Analog Input Module	372.00
RM65-5303	Analog I/O Module	468.00
RM65-5451	ACIA Module	249.00
RM65-7102	IEEE-488 I/O	295.00
RM65-7008	8 Slot Card Cage	180.00
RM65-7008N	8 Slot Card Motherboard	30.00

BARE BOARDS

Build your own S-100 based system.

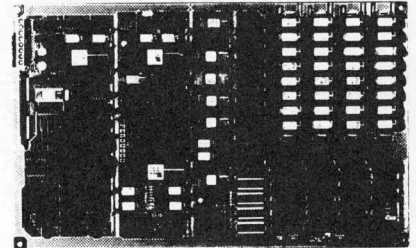
COEX WAMECO

COEX-64B	64K static RAM CMOS uses 2016 or 6116	34.95
COEX-32B	32K static RAM uses 2114L	34.95
COEX-PRO	Prototype board S-100	34.95
COEX-X	Extender w/conn. kit	19.95
BHEUSER-B	8K EPROM (2708)	29.95
FPB-1A	Front panel, IMSAI size w/hex displays	49.95
QM-12	Motherboard 13 slot w/terminations	37.95
CPU-1	8080A CPU processor	29.95
RTC-1	Realtime clock board	29.95
EPM-2	2708/2716 16K/32K EPROM	24.95
QM-9	9 slot mother board	31.95
PTB-1	Power supply & terminator board	29.95
CPU-2	Z-80 card	32.95
MEM-1A	8K static RAM card	29.95

THE BIG BOARD[®]

SINGLE BOARD COMPUTER KIT

from Digital Research
Computers of Texas



ONLY **\$299.00** KIT

FEATURES:

- PFM 3.0 2K System Monitor including Dump Memory, Boot CP/M[®], Copy, Examine, Fill Memory, Test Memory, Go To, Read and Write I/O Ports, Disk Read and Search
- 64 K RAM all 64K available to the user
- Z-80 CPU runs at 2.50 MHz. Handles all 4116 RAM refresh and supports Mode 2 interrupts. Fully buffered and runs 8080 software
- 24x80 CHARACTER VIDEO crisp, flicker-free display. Hardware scroll and full cursor control. Composite video or split video and sync. 5x7 matrix - Upper & Lower case
- FLOPPY DISK CONTROLLER WD1771 w/ TTL Data Separator. Supports up to 48" drives. Runs CP/M[®] 2.2
- BASIC I/O Z-80 P10 for use with an ASCII encoded keyboard for input
Size: 8 1/2" x 13 3/4"
Required power: +5V @ 30 amps ±12V @12V .5 amps

Complete for **\$299.00**

OPTIONS:

- CP/M[®] 2.2 modified by MICRONIX **\$150.00**
- SERIAL I/O KIT-2 channels w/Z-80 SIO and SMC 816 baud rate generator. Full RS232 for sync or async communication. Both channels can be set up for either data-communications or data-terminals. Supports mode 2 interrupts **\$49.00**
- TWO PORT PARALLEL I/O uses Z-80 P10. Full 16-bit, fully buffered, bi-directional. User-selectable hand-shake polarity **\$24.95**
- REAL TIME CLOCK uses Z-80 CTC. Can be configured as counter or real time clock **\$14.95**
- BARE BOARD **\$119.00**

WE STOCK



6800 MOTOROLA
EXORCISER COMPATIBLE BOARDS



SPECIAL OFFER!

DISKETTES

**5 1/4" SINGLE SIDED
DOUBLE DENSITY
WITH JACKETS**

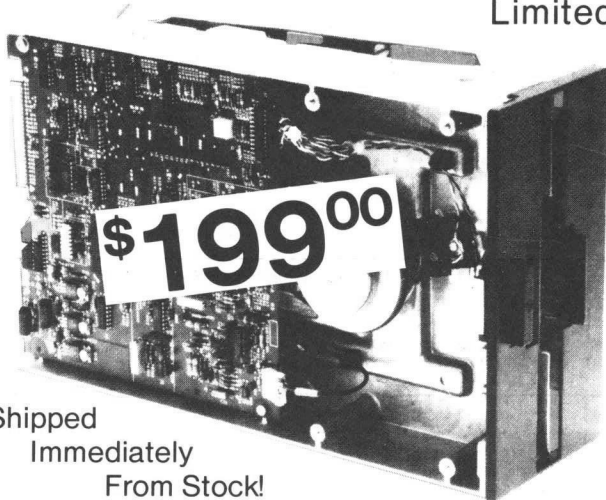
PACK OF TEN \$18⁵⁰ Please Specify Computer
Used with Order

BUY BULK AND SAVE

Pack of 100 w/o Sleeves **\$149⁰⁰** Pack of 100 w/Sleeves **\$164⁰⁰**

8" Disk Drives

Limited Offer!

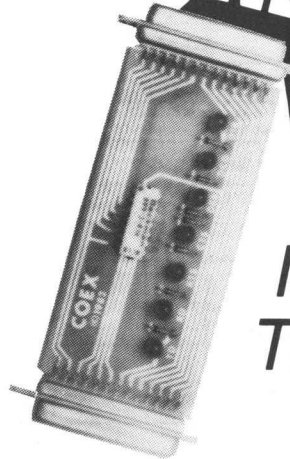


Regular
Price
\$495.00

Shipped
Immediately
From Stock!

Siemen's SSDD FDD100-8.....\$199.00
Siemen's DSDD FDD200-8\$369.00

Also with purchase of Disk Drives you can buy the
VISTA V-1000 Dual Case with Power Supply and Cable
for only **\$375.00** Regularly \$495.00

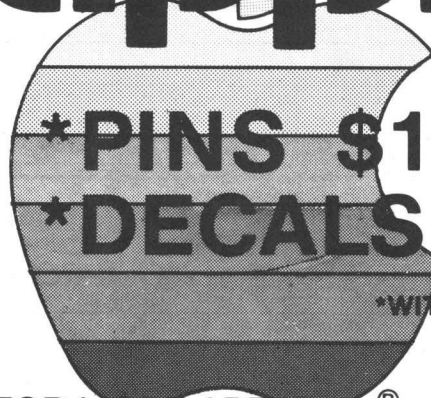


RS232

INLINE TESTER

\$29⁹⁵

apple



*** PINS \$1.95**

*** DECALS .49**

***WITH ORDER**

FOR MORE APPLE[®]
GIFT ITEMS, SEE
OUR APPLE SECTION!

LOW LOW PRICES!

DURACELL[®]

BATTERIES

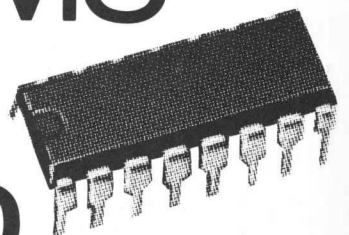
LIST PRICE ACP PRICE

D.....	\$1.43	.....	\$ .85
C.....	\$1.43	.....	\$ .85
AA.....	\$1.10	.....	\$ .66
9V.....	\$2.85	.....	\$1.65
AAA.....	\$1.10	.....	\$ .66

SET OF 9

ONLY

\$50⁰⁰



What! \$50.00 is too high? Call
and let us know. We will beat it!

CUSTOMER NUMBER

THIS IS THE NUMBER THAT APPEARS DIRECTLY ABOVE YOUR NAME ON PREVIOUS ORDERS.



P.O. Box 17329, Irvine, CA 92713
1310 E. Edinger, Santa Ana, CA 92705
(714) 558-8813

CONTROL NUMBER

S* _____
O _____
L _____
D _____
T _____
O _____

S** _____
H+ _____
I _____
P _____
T _____
O _____

*On Credit Card Orders this must be the EXACT name as it appears on card and the address where the Bank mails your monthly statement.

+UPS will not deliver to a post office box.
**IF SAME AS "SOLD TO," WRITE "SAME".

PURCHASE ORDER#		SHIP VIA <input type="checkbox"/> UPS BLUE (AIR) <input type="checkbox"/> UPS <input type="checkbox"/> OTHER			FOB Santa Ana	TERMS <input type="checkbox"/> Check Enclosed <input type="checkbox"/> VISA <input type="checkbox"/> Other <input type="checkbox"/> MasterCard <input type="checkbox"/> American Express	<input type="checkbox"/> TAXABLE <input type="checkbox"/> EXEMPT
<input type="checkbox"/> VISA <input type="checkbox"/> Am. Exp. <input type="checkbox"/> M.C.	CARD #	EXPIRES			AUTH/PPD AMT		
DATE	PHONE (DAYS)	EXT.	PHONE (NIGHTS)	EXT.	SIGNATURE		

QTY. ORD.	PART NUMBER	DESCRIPTION	WEIGHT	UNIT PRICE	AMOUNT
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

ORDER BY PART NUMBERS EXACTLY AS SHOWN

CHECK HERE IF YOU HAVE <input type="checkbox"/> MOVED SINCE YOUR LAST ORDER.		CHECK HERE IF THIS IS <input type="checkbox"/> YOUR FIRST ORDER FROM US.		SEND <input type="checkbox"/> CATALOG
NOTES & SPECIAL INSTRUCTIONS				
COMMENTS				
DATE SHIPPED	INVOICE #	EB	CR. CK. AMT.	
P.O. NOS.	PB	LOC.	D&B.	

TOTAL WEIGHT	Sub-Total (minimum \$10.00)	
	6% Sales Tax (CA Only)	
	Shipping (minimum \$3.00)	
	Credit Card Orders Over \$100 Please Add 3%	
TOTAL \$		

"DAVID EM" COMPUTER ART \$9.95

CUSTOMER NUMBER

THIS IS THE NUMBER THAT APPEARS DIRECTLY ABOVE YOUR NAME ON PREVIOUS ORDERS.



P.O. Box 17329, Irvine, CA 92713
1310 E. Edinger, Santa Ana, CA 92705
(714) 558-8813

CONTROL NUMBER

S* _____
O _____
L _____
D _____
T _____
O _____

S** _____
H+ _____
I _____
P _____
T _____
O _____

*On Credit Card Orders this must be the EXACT name as it appears on card and the address where the Bank mails your monthly statement.

+UPS will not deliver to a post office box.
**IF SAME AS "SOLD TO," WRITE "SAME".

PURCHASE ORDER#		SHIP VIA <input type="checkbox"/> UPS BLUE (AIR) <input type="checkbox"/> UPS <input type="checkbox"/> OTHER			FOB Santa Ana	TERMS <input type="checkbox"/> Check Enclosed <input type="checkbox"/> VISA <input type="checkbox"/> Other <input type="checkbox"/> MasterCard <input type="checkbox"/> American Express	<input type="checkbox"/> TAXABLE <input type="checkbox"/> EXEMPT
<input type="checkbox"/> VISA <input type="checkbox"/> Am. Exp. <input type="checkbox"/> M.C.	CARD #	EXPIRES			AUTH/PPD AMT		
DATE	PHONE (DAYS)	EXT.	PHONE (NIGHTS)	EXT.	SIGNATURE		

QTY. ORD.	PART NUMBER	DESCRIPTION	WEIGHT	UNIT PRICE	AMOUNT
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

ORDER BY PART NUMBERS EXACTLY AS SHOWN

CHECK HERE IF YOU HAVE <input type="checkbox"/> MOVED SINCE YOUR LAST ORDER.		CHECK HERE IF THIS IS <input type="checkbox"/> YOUR FIRST ORDER FROM US.		SEND <input type="checkbox"/> CATALOG
NOTES & SPECIAL INSTRUCTIONS				
COMMENTS				
DATE SHIPPED	INVOICE #	EB	CR. CK. AMT.	
P.O. NOS.	PB	LOC.	D&B.	

TOTAL WEIGHT	Sub-Total (minimum \$10.00)	
	6% Sales Tax (CA Only)	
	Shipping (minimum \$3.00)	
	Credit Card Orders Over \$100 Please Add 3%	
TOTAL \$		

"DAVID EM" COMPUTER ART \$9.95



Special Thanks to:
 Overnight Graphics, Inc.
 Graphic Images
 Shook & Associates
 Thor Associates

MINIMUM ORDER

\$10.00 on prepaid orders.

PAYMENT

Payment may be made via MasterCard, Visa, American Express credit cards, check, money order or bank transfer. Orders paid for by personal check will not be shipped until check clears. No COD orders. Financing and leasing plans available. Contact Sales Desk.

We will accept purchase orders from government, educational institutions and companies. Those firms with a published A1 rating from Dun & Bradstreet, Inc. may be invoiced. Payment is to be made within thirty days of invoice date; delinquent accounts are subject to a 1 1/2% per month finance charge.

U.S. SHIPPING AND HANDLING

All orders are FOB Santa Ana, CA. Orders under 50 lbs. will be shipped via UPS insured unless otherwise specified. Orders over 50 lbs. will be shipped via motor freight collect. Minimum shipping charge \$3.00. ACP will also ship Federal Express, Emery or UPS Next Day Air. Please specify if you desire this service.

To compute your shipping and handling charges, consult the table below. Overpayments of shipping charges will be refunded.

UPS SHIPPING CHARGES

UPS GROUND*		
LBS.	LBS.	LBS.
1 \$ 3.00	18 \$ 8.53	38 \$15.45
2 \$ 3.00	19 \$ 8.95	36 \$15.85
3 \$ 3.00	20 \$ 9.35	37 \$16.26
4 \$ 3.00	21 \$ 9.76	38 \$16.66
5 \$ 3.26	22 \$10.16	39 \$17.07
6 \$ 3.66	23 \$10.57	40 \$17.47
7 \$ 4.08	24 \$10.97	41 \$17.88
8 \$ 4.47	25 \$11.38	42 \$18.28
9 \$ 4.88	26 \$11.78	43 \$18.69
10 \$ 5.29	27 \$12.20	44 \$19.10
11 \$ 5.70	28 \$12.60	45 \$19.51
12 \$ 6.10	29 \$13.01	46 \$19.91
13 \$ 6.44	30 \$13.44	47 \$20.32
14 \$ 6.91	31 \$13.82	48 \$20.72
15 \$ 7.32	32 \$14.22	49 \$21.13
16 \$ 7.72	33 \$14.63	50 \$21.53
17 \$ 8.13	34 \$15.03	

(*Not available to Alaska or Hawaii)

UPS 2ND DAY AIR (FORMERLY BLUE LABEL)**

LBS.	LBS.	LBS.
1 \$ 4.85	18 \$25.12	35 \$45.39
2 \$ 6.05	19 \$26.31	36 \$46.58
3 \$ 7.24	20 \$27.50	37 \$47.77
4 \$ 8.43	21 \$28.70	38 \$48.96
5 \$ 9.62	22 \$29.89	39 \$50.15
6 \$10.81	23 \$31.08	40 \$51.35
7 \$12.01	24 \$32.27	41 \$52.54
8 \$13.20	25 \$33.46	42 \$53.73
9 \$14.39	26 \$34.66	43 \$54.92
10 \$15.58	27 \$35.85	44 \$56.12
11 \$16.77	28 \$37.04	45 \$57.31
12 \$17.97	29 \$38.23	46 \$58.50
13 \$19.16	30 \$39.43	47 \$59.69
14 \$20.35	31 \$40.62	48 \$60.88
15 \$21.54	32 \$41.81	49 \$62.08
16 \$22.74	33 \$43.10	50 \$63.27
17 \$23.93	34 \$44.19	

(**Not available to Arizona, California, Nevada or Utah. Add \$2.00 to above for Alaska or Hawaii)

UPS NEXT DAY AIR

LBS.	LBS.	LBS.
1 \$12.48	18 \$33.29	35 \$54.09
2 \$13.70	19 \$34.51	36 \$55.31
3 \$14.93	20 \$34.51	37 \$56.54
4 \$16.15	21 \$36.96	38 \$57.76
5 \$17.38	22 \$38.18	39 \$58.99
6 \$18.60	23 \$39.40	40 \$60.21
7 \$19.82	24 \$40.63	41 \$61.43
8 \$21.05	25 \$41.85	42 \$62.66
9 \$22.27	26 \$43.08	43 \$63.88
10 \$23.49	27 \$44.30	44 \$65.10
11 \$24.72	28 \$45.52	45 \$66.33
12 \$25.94	29 \$46.75	46 \$67.55
13 \$27.17	30 \$47.97	47 \$68.78
14 \$28.39	31 \$49.19	48 \$70.00
15 \$29.61	32 \$50.42	49 \$71.22
16 \$30.84	33 \$51.64	50 \$72.45
17 \$32.06	34 \$52.87	

SALES TAX

Add 6% sales tax to the prices of all goods delivered in California. If merchandise is for resale, include a signed, standard resale permit card to qualify for exemption from sales tax.

FOREIGN ORDERS

ACP has been shipping to customers and agents all over the world since 1976. Our export department is experienced in Export Licenses and should be contacted if you wish to utilize our services.

Minimum order \$25.00 must be prepaid in one of the following ways:

- 1) MasterCard, Visa, American Express credit card.
- 2) Bank Transfer
- 3) MICR magnetically encoded bank check or money order payable in US dollars through a US bank.

CANADA

All orders must be prepaid. All orders shipped air freight, mail or motor collect. No UPS shipments to Canada. All mail packages to Canada are insured and the minimum shipping/handling charge is \$3.50 plus \$1.00 per each additional lb. Orders in excess of \$400.00 require Canadian Invoice. ACP charges additional \$5.00 for completion of "MA" Forms.

All freight/handling/charges collect.

Call, write, Telex or TWX for information.

LARGE QUANTITY ORDERS

Advanced Computer Products will quote or bid on quantities in excess of the maximum amounts priced in this catalog. Call or write the Industrial Sales Dept. Telephone (714) 558-8822.

ACP GUARANTEE

ACP offers 10-day guaranteed satisfaction from day of shipment. You must obtain RMA number (Returned Material Authorization) from our Customer Service Desk prior to returning your merchandise. ACP is not responsible for shipping and handling charges incurred. Goods returned without RMA number will be refused by ACP. All returns must be in original shipping box. This guarantee does not include kits, software, surplus or used equipment. This policy may vary from our Retail Return Policy and covers only Mail Order Purchases. Customer satisfaction is the key ingredient to the continued growth of ACP. We want you to be satisfied. Retail pricing may vary from catalog price.

TELEPHONE

ORDER DESK (800) 854-8230
 outside CA only
 (714) 558-8813
 inside CA
INDUSTRIAL SALES (714) 558-8822
CUSTOMER SERVICE (714) 558-8813
TELEX/TWX 910-595-1565

CLAIMS AND RETURNS

Inspect all shipments immediately upon receipt. Missing cartons or obvious damage to cartons should be noted on the delivery receipt before signing. Concealed damage or loss should be reported to the freight forwarders at once and an inspection requested. All claims for shortage or damage must be made within five days of receipt of shipment. Save damaged or rifled cartons until claim is settled.

No goods may be returned or exchanged without prior Returned Material Authorization. Call or write the Customer Service Dept. for an RMA number. Goods returned without prior authorization and/or not prepaid will be refused by the Receiving Dept., resulting in additional delay, expense and possible loss to the customer. Advanced Computer Products accepts no responsibility for goods returned without an authentic RMA number.

If RMA goods are the result of customer error, customer will be liable for a 20% restocking charge. All goods must be returned in their original box.

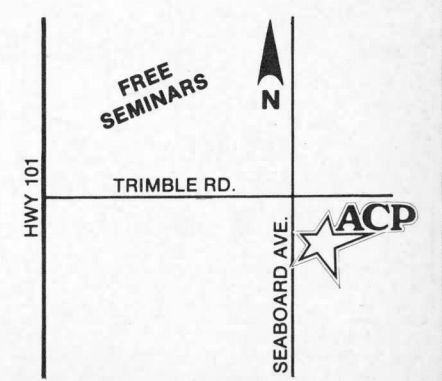
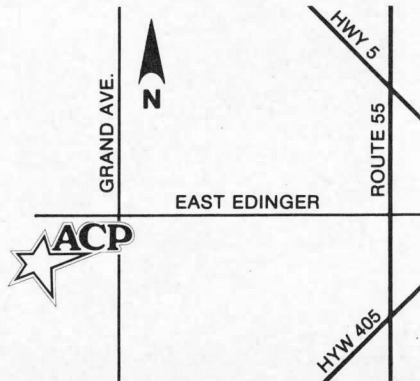
LIMITED WARRANTY

Advanced Computer Products brings you products manufactured by the most respected companies in the industry. The warranty of the products you purchase from Advanced Computer Products is the responsibility of the respective manufacturer(s) and consists of whatever is so stated in writing by the manufacturer. You may request by mail from the manufacturer a copy of the complete warranty and it is usually found included in the packaging of the product. Advanced Computer Products does not guarantee any product under any circumstances, nor is Advanced Computer Products responsible for product specifications or limitations. Since Advanced Computer Products cannot control the manner or use of its products after their sale, Advanced Computer Products shall not be responsible for any consequential or indirect damages. Advanced Computer Products assumes no responsibility for any errors that may occur in this product catalog. Any product recommendation is not binding and shall not eliminate customers' responsibility to check the suitability of the products for their particular applications. All prices are subject to change without notice.

Retail Stores:

SANTA ANA
 1310 East Edinger
 Santa Ana, CA 92705
 (714) 558-8813
 10 a.m. - 7 p.m. Mon. - Thurs.
 10 a.m. - 6 p.m. Fri.
 10 a.m. - 5 p.m. Sat.

SAN JOSE
 542 West Trimble
 San Jose, CA 95131
 (408) 946-7010
 10 a.m. - 7 p.m. Mon. - Thurs.
 10 a.m. - 6 p.m. Fri.
 10 a.m. - 5 p.m. Sat.



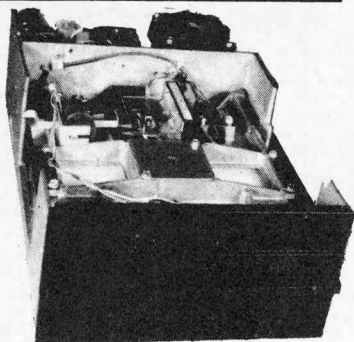
Map Not To Scale

FREE SEMINARS

Contact our San Jose location for free introductory seminars.

8" DISK DRIVES/WINCHESTERS/TAPE

DISK DRIVES

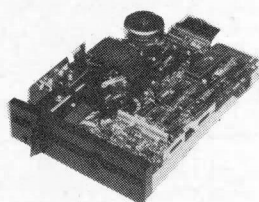


SA 801R/851R 8" DISK DRIVE

Industry standard 8" Drive with standard IBM format. Capacity is 250K bytes or 500K bytes for single or double density applications. The 801R Model is also the ,most popular 8" in the industry.

P/N	ACP PRICE
SA801R Single-Sided	379.00
SA851R Double-Sided	499.00
Manual (Not Included)	10.00

(For case & power supply see Vista enclosures)



MODEL TM848

Tandon half-high 8" offers new high performance in half the space of a standard 8" floppy. Vista Computer offers a case & power supply for housing (2) drives. For interfacing to Apple or IBM see the Vista Peripheral Section. For S-100 Disk Controller see the S-100 section.

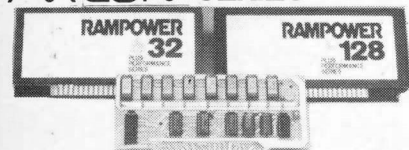
P/N	ACP PRICE
TM848-1 Single-Sided	375.00
TM848-2 Double-Sided	495.00
Manual (Not Included)	10.00

(For DC Power Connector Set please add 3.95 ea.)



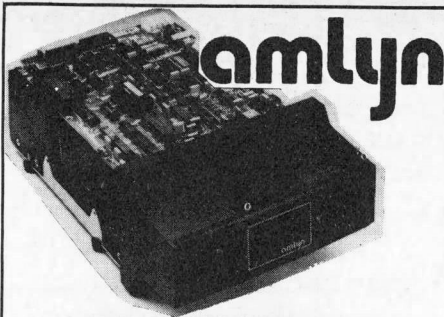
ATARI

PLUS PERFORMANCE
SERIES™



Atari memory upgrades for Atari 400 & 800. Available in 32K, 48K, and 128K versions.

P/N	DESCRIPTION	LIST	ACP
AXL-01	Rampower 32K	120.00	105.00
AXL-02	Rampower 48K	185.00	162.00
AXC-03	Rampower 128K	475.00	399.00



5Mb HARD DISK KILLER FLOPPY CARTRIDGE DRIVE

The Amlyn 5460 disk drive uses Minipac diskette cartridges which holds (5) extended density diskettes. The drive is compatible with the Stugart 851 interface. The 5460 appears to the computer as if it were (5) drives, with each of the (5) diskettes in the cartridge addressable as if it were a single drive. The data transfer rate is 250K bytes/sec. Avg. access time is 95 Ms. The drive is compatible to standard 5 1/4" minifloppies. For IBM PC or Alpha II Interface see Vista Computer Section of catalog.

P/N	ACP PRICE
5460 (inc. cartridge pack)	629.00
5460-FM 5 cartridge media pack	89.00
Manual	10.00



TAPE BACK-UP 5 1/4" MINI

The Archive Scorpion Series of 1/4" streaming cartridg-tape drives stores 20Mb on (4) tracks or 45 Mb on (9) tracks. It's compatible to standard 5 1/4" floppies. It can back up 5 1/4" Winchesters from 5Mb to 50Mb with data transfer rates of 20Mb in 4 minutes and 45 Mb in 9 minutes. It is compatible to all Archive Products using industry standard QIC-II interface.

P/N	ACP PRICE
Scorpion	999.00
Manual	10.00



Micro-Winchester uses thin-film disks

MODEL 206

The ST206 half-high 5 1/4" Winchester stores 6.38 Mb of unformatted data on two surfaces of thin-film-plated rigid disk. It is compatible to ST506 industry standard interface.

Transfer Rate 5 M bits/sec.
Avg. Access 85 Msec.

P/N	ACP PRICE
ST206 5Mb(1/2 high)	999.00
ST506 5Mb (standard)	649.00
Manual	10.00



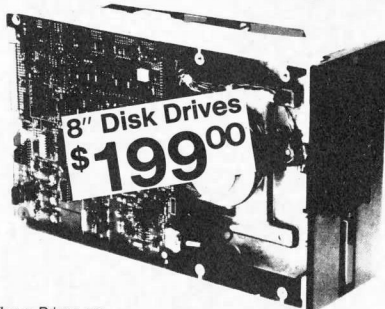
MODEL 706/712

The Shugart Model 706 & 712 offers 6Mb and 13Mb of unformatted capacity. it uses a 16 pole stepper motor design which offers greter positioning accuracy and allows an increase in track density from 256TPI to 360TPI. Compatible to SA412 interface.

P/N	ACP PRICE
SA706 6Mb (1/2 high)	1099.00
SA 712 13Mb (1/2 high)	1450.00

SIEMEN'S SALE

You can now purchase Shugart compatible 8" Disk Drives below your existing factory direct pricing!



These Prices are the lowest ever published.

*Siemen's SDDD FDD100-8 ... \$199.00



Also, with purchase of Disk Drives you can buy the Vista V-1000 Dual Case with Power Supply and Cable for only \$375.00..... Regular Price \$495.00

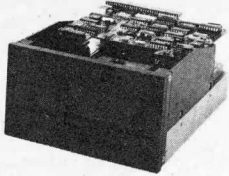
OFFER LIMITED! SHIPPED IMMEDIATELY
FACTORY FROM STOCK!
WARRANTY 90 DAYS! *OEM QUANTITIES

DISK DRIVES

DISK DRIVES



MICRO PERIPHERALS INC.



MODEL 51/52
SINGLE-SIDED
5/4" SINGLE-SIDED DRIVE

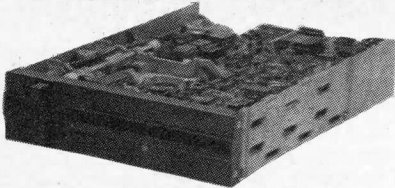
TRACKS
Model 51 (250K) 40
Model 52 (500K) 80
Density 48 TPI
ACCESS TIME
Track to Track 5 MS

MODEL 91/92
5/4" DOUBLE-SIDED DRIVE

TRACKS
Model 91 (500K) 80
Model 92 (1000K) 160
Density 96 TPI
ACP PRICE
P/N wt.(6 lbs) 1 2 10

MPI-51	210.00	208.00	198.00
MPI-52	299.00	289.00	275.00
MPI-91	349.00	339.00	328.00
MPI-92	379.00	369.00	348.00
Manual	10.00		

(For power supply cabinets see enclosures)



The popular TM100 series of 5/4" Floppies offers high storage and consistent high reliability. Many OEM's such as IBM have made the TM100-2 in great demand. ACP has purchased this model in volume and is passing the cost savings on to the end-user. All drives come with standard factory warranty.

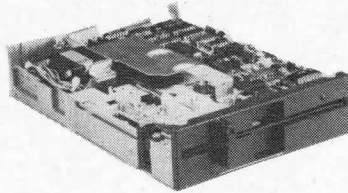
TM 100-SERIES
5/4" SINGLE-SIDED DRIVE

TRACKS
Model TM-100-1 (250K) 40 Tracks
Model TM-100-3 (500K) 80 Tracks
Density 48/96

5/4" DOUBLE SIDED DRIVE

TRACKS
Model TM-100-2 (500K) 40 Tracks
Model TM-100-4 (1000K) 80 Tracks
Density 48/96
P/N wt. (6lbs.) 1 2 10

TM-100-1	199.00	195.00	190.00
TM-100-2	310.00	299.00	279.00
TM-100-3	329.00	319.00	299.00
TM-100-4	389.00	375.00	349.00
Manual (Not included)	add \$10.00		



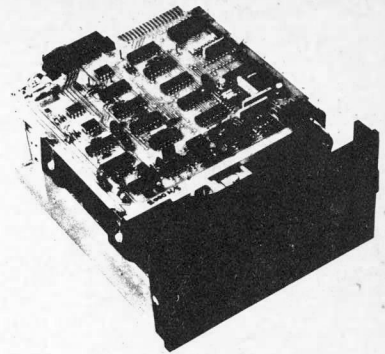
MODEL 455/465
HALF-HIGH 5/4" DOUBLE-SIDED DRIVE

TRACKS
SA455 (500K) 40
Density 48TPI

TRACKS
SA465(1000K) 80
Density 96TPI

Both Models feature improved positioning accuracy and greater reliability over earlier models. It is compatible with most 5/4" Half-High Drives.

P/N		ACP PRICE
SA455	1/2 high	299.00
SA465	1/2 high	399.00
Manual		10.00



MODEL SA400
SINGLE-SIDED DRIVE

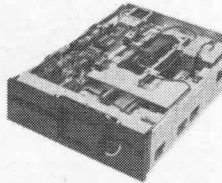
TRACKS
SA400 (125K/250K) 40
Single & Double Density
Density 48TPI

MODEL SA450
DOUBLE-SIDED DRIVE

P/N	ACP PRICE		
	1	2	10
SA400	210.00	208.00	195.00
SA450	345.00	339.00	315.00
Manual	10.00		



FD55
SERIES
SINGLE-SIDED
DRIVE



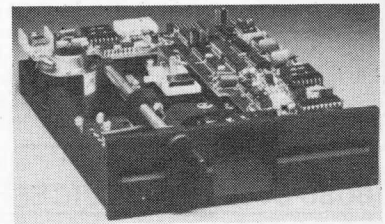
TRACKS
FD55A (250K) 40
FD55E (500K) 80
Density 48/96

DOUBLE-SIDED DRIVE

TRACKS
FD55B (500K) 40
FD55F (1000K) 80
Density 48/96

For IBM PC replacement use Model FD-55B. This is compatible with PC-DOS.

P/N	ACP PRICE		
	1	2	10
FD55A	210.00	200.00	195.00
FD55E	339.00	332.00	325.00
FD55B (500K)	299.00	289.00	266.00
FD55F	399.00	389.00	365.00
Manual	10.00		



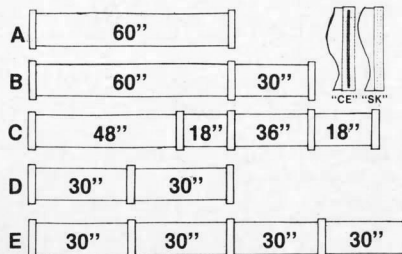
QUME TRACK 142
SLIM-LINE 5/4"

Qume, known for quality, reliability and performance on its Datatrack 8 Floppy, is now offering the Model 142 half-high drive. The 142 offers 500K Bytes of unformatted storage, double-sided with 48 TPI. This drive can replace (2) standard size Floppies and is compatible with most standard size floppies.

TRACKS
Model 142 (500K) 80
Density 48TPI

P/N	ACP PRICE		
	1	2	10
Model 142	289.00	279.00	265.00
Manual	10.00		

Disk Drive Cables



PART #	CABLE TYPE	DISK SIZE	NO OF DRIVES	CONNECTOR TYPE	PRICE
CECE	A	8"	1	Card Edge/Card Edge	\$19.95
CESK	A	8"	1	Card Edge/Socket	\$19.95
SKSK	A	8"	1	Socket/Socket	\$19.95
CECE2	B	8"	2	Card Edge/2xCard Edge	\$39.95
SKCE2	B	8"	2	Socket/2xCard Edge	\$34.95
SKSK2	B	8"	2	Socket/2xSocket	\$34.95
SKCE4	C	8"	4	Socket/4xCard Edge	\$49.95
CECE2	D	5 1/4"	2	Card Edge/2xCard Edge	\$29.95
SKCE2	D	5 1/4"	2	Socket/2xCard Edge	\$29.95
CECE4	E	5 1/4"	4	Card Edge/4xCard Edge	\$39.95
SKCE4	E	5 1/4"	4	Socket/4xCard Edge	\$39.95
AC/DC Connectors					
ACDC1	8"			for Shugart 801 per set	\$ 3.95
ACDC2	8"			for Shugart 850	
DC5	5"			Qume 5 per set	\$ 4.95
				DC Cable	\$ 2.95

MICROCOMPUTER COMPONENTS

MICROPROCESSORS

AM2901	4-Bit CPU	\$6.95
AM2901A	4-Bit CPU Hi-Speed	8.95
CDP1802	8-Bit CMOS CPU	8.95
F-8	8-Bit CPU (3850)	16.95
IM6100	12-Bit CPU	29.95
INS8060	SC/MP 8-Bit	14.95
INS8070	8-Bit 64K RAM	24.95
INS8073	8-Bit 64K RAM, Basic	49.95
MC68000	16-Bit CPU	149.95
TMS9900JL	16-Bit CPU	49.95
Z-8	RAM	29.95
Z-8(8671)	8-Bit with Tiny Basic	49.95
Z-80	8-Bit CPU (2.0 MHz) (3880)	4.50
Z-80A	8-Bit CPU (4.0 MHz) (3880-4)	5.50
Z-80B	8-Bit CPU (6.0 MHz)	9.95
Z-8001	16-Bit CPU exp. to 8 Mb	44.95
Z-8002	16-Bit CPU exp. to 16K	51.00
Z-8030	Serial Communication	39.95
Z-8036	Counter/Timer	24.95
2650	8-Bit CPU	12.95
3002	2-Bit Slice CPU	19.95
4004	4-Bit CPU	11.95
6502	8-Bit CPU	6.50
6502A	8-Bit CPU	7.50
6502C	CMOS 8-bit CPU	19.95
6504	CPU	6.25
6507	CPU	6.25
6800	8-Bit CPU (1.5 MHz)	4.50
6800B	8-Bit CPU (2.0 MHz)	19.95
68000L	16-Bit CPU	49.95
6802	8-Bit CPU	6.95
6809	Hi-Performance CPU	24.95
8008-1	12 uS	14.95
8035	8-Bit with 64K Byte RAM	3.95
8039	8-Bit with 64K RAM I/O	5.95
8040	8-Bit CPU	5.50
8080A	8-Bit CPU	3.25
8085A	1.3 uS	5.50
8085A-1	4 MHz 00 nS	7.95
8086	16-Bit CPU	49.95
8087	Arithmetic Processor	195.00
8088	16-Bit CPU	49.95
8089	16-Bit I/O Preprocessor	89.95
8748	8-Bit with EPROM	21.95
8755	16K EPROM w/16 I/O Lines	49.95

8080 SUPPORT DEVICES

MC3232	4K Refresh/Address MUX	\$9.25
3001	Microprogram Control Unit	30.50
3242	4K, 16K Refresh	12.95
3245	Quad TTL to MOS Driver	8.50
3404	6-Bit Latch	8.95
8155	256x8 x/22 I/O	5.95
8156	256x8 x/33 I/O High	5.95
8202	Dynamic RAM Controller	34.95
8205	1 of 8 Binary Decoder (74S138)	1.95
8212	8-Bit I/O Port	2.10
8214	Priority Interrupt	3.75
8216	Bi-Directional Bus Driver	2.10
8224	Clock Generator Driver	2.25
8224-1	4MHz Clock Gen./Driver	9.95
8226	Bus Driver Inverting	2.25
8228	System Controller	3.25
8238	System Controller	4.25
8243	I/O Expander	5.50
8250	Asynch Communication	14.95
8251	Prog. Communication I/O	4.25
8251A	Prog. Communication I/O	5.95
8253	Prog. Interval Timer	6.50
8255	Prog. Peripheral I/O	4.25
8257	Prog. DMA Controller	7.50
8259	Prog. Interrupt Control	6.95
8272	Floppy Disk Controller	34.95
8273	Prog. Protocol Controller	49.95
8275	Prog. CRT Controller	26.50
8278	Prog. Keyboard Int	19.95
8279	Prog. Keyboard/Display	8.50
8282		6.95
8284	Clock Generator	6.95
8286	Octal Bus Transceiver NI	6.95
8287	Octal Bus Transceiver Inv	6.95

6800 SUPPORT DEVICES

S2350	USRT	\$9.95
68B10	128x1 RAM, 4.0 MHz	6.95
68B21	PIA	12.95
68B40	PTM	23.95
68B50	ACIA	15.95
68B52	SSDA	19.95
68047	CRT (MC1372 Modulator 8.95)	24.95
6810	128x8 RAM	3.50
6820P	PIA	4.50
6821	PIA	4.50
6828P	Priority Interrupt Controller	13.95
6834-1	512x8 EPROM (750nS)	19.95
6840	PTM	13.50
6843	Floppy Disk Controller	49.95
6844	DMA Controller	29.50
6845	CRT Controller	15.50
6847	Color CRT	15.50
68488	IEEE I/O, GPIA	8.50
6850P	ACIA	4.50
6852P	Synch Serial Adapter	4.95
6854	ADLC	19.50
6860P	Modem	8.95
6862P	2400 RPS Modulator	11.95
68652P2	Communication Controller	22.95
68661P8	Communication I/O	8.50
6871A	1.0 MHz Crystal Osc	29.95
6875	MPU Clock Generator	5.75
6880P	MPU BiDirectional Bus	2.10

SPECIAL OFFER

NSC 16032 32-bit CPU Kit

P/N NS160 Kit-S4 (4MHz) \$149.95

P/N NS160 Kit-S6 (6MHz) \$189.95

Includes: CPU, Clock Gen./Mem Mgr Unit, Manuals.

Z-80 SUPPORT DEVICES

Z-80-P10	2.5 MHz	\$5.50
Z-80A-P10	4.0 MHz	5.75
Z-80B-P10	6.0 MHz	11.95
Z-80-CTC	2.5 MHz	5.50
Z-80A-CTC	4.0 MHz	5.90
Z-80B-CTC	6.0 MHz	11.95
Z-80-DMA	2.5 MHz	14.95
Z-80A-DMA	4.0 MHz	15.95
Z-80-SIO/0	2.5 MHz	12.95
Z-80A-SIO/0	4.0 MHz	13.95
Z-80-SIO/1	2.5 MHz	11.95
Z-80A-SIO/1	4.0 MHz	13.95
Z-80-SIO/2	2.5 MHz	13.50
Z-80A-SIO/2	4.0 MHz	13.95
Z-80-SIO/9	2.5 MHz	13.95
Z-80A-SIO/9	4.0 MHz	13.95
Z-80A-DART	4.0 MHz	10.50

ZILOG Data

Prod. Binder	12.95
Data Book	8.50
App Book I	27.50
Z8/Plz Assy	44.00
Z8000 Assy	44.00
Z80 Assy Prg	27.50

We stock all

ZILOG Databooks
and Ref. Manuals.

1802 SUPPORT DEVICES

CDP1821SCE	1Kx1 RAM Static SOS	\$7.95
CDP1823CE	32x8 RAM	13.95
CDP1824CE	32x8 CMOS RAM	7.95
CDP1852CE	8-Bit I/O Port	4.95
CDP1854ACE	UART	8.95
CDP1856CE	I/O Bus Separator/Buffer	4.25
CDP1857CE	I/O Bus Separator/Buffer	4.25
CDP1858CE	4-Bit Latch	4.25
CDP1859CE	4-Bit Latch	4.25
CDP1861CE	Video Display Controller	7.95

6502 SUPPORT DEVICES

6520	PIA	\$3.75
6522	MULTI	5.95
6530-002	RAM/ROM I/O Timer	20.50
6530-003	RAM/ROM I/O Timer	20.50
6530-004	RAM/ROM I/O Timer	20.50
6530-005	RAM/ROM I/O Timer	20.50
6532	RAM/ROM I/O Timer	15.75
6550	Memory	14.95
6551	ACIA	17.95

9511 SUPPORT DEVICES

9511	Arithmetic Processor	\$175.00
9511-1	Arithmetic Processor (4.0 MHz)	225.00
9512	Arithmetic Processor	175.00
9513	Universal Timing	29.95
9517	DMA Controller	18.95
9519	Universal Interrupt	18.95
8087	Arithmetic Processor	195.00

AM2900 SERIES

2904	S/S Controller	\$3.95
2905	Quad Bus Transceiver	6.95
2907	Quad Bus Transceiver	6.25
2908	Quad Bus Transceiver	6.25
2909	4-Bit Micro Sequencer	7.95
2910	12-Bit Micro Controller	22.95
2911	4-Bit Micro Sequencer	6.95
2912	Quad Bus Transceiver	9.95
2918	Quad D Register	3.85
2920	Octal D Flip Flop	3.85
29701		4.95
29702		4.95
29705	16x4 RAM	4.95
29720	Static RAM	4.95
29721	Static RAM	4.95

F-8 SUPPORT DEVICES

3850	CPU	\$16.95
3851	PSU	14.95
3853	Static Memory Interface	14.95
3861	Peripheral I/O Interface	14.95

VIDEO/CRT GENERATORS

COM5027	Prog. Video Controller	\$19.95
COM5037	Prog. Video Controller	29.95
DM8678A	Upper ASCII Generator	19.95
DM8678B	Lower ASCII Generator	19.95
DP8350	CRT Controller	39.95
MC6845	CRT Controller	15.50
MC6847	Video Display Generator	15.50
P8275	CRT Controller	26.50
68047	Color Video Display	24.95

GENERAL INSTRUMENT/ GAME CHIPS

AY3-8500-1	TV Game Chip	\$5.95
AY3-8500	European TV Game	12.95
AY3-8615-1	Color Converter	5.95
AY3-8603-1	Road Race Game	8.95
AY3-8605-1	Warfare Game	9.50
AY3-8606-1	Wipeout Game	9.50
AY3-8607-1	Shooting Gallery	8.95
AY3-8610-1	10 Games Color	15.95
MM5320/21	TV Synch Generator	9.95
MM57100*	National Colorgame	6.95
MM53104*	Clock	3.75
LM1889*	Modulator	3.95
*NSC Games Require All Three Chips		
MEM4963	Smoke Detector	11.95
AY5-3507	40KHz DVM	9.95
AY3-3550	40 pin DIP DMM Counter	29.95
AY3-8112	Digital Tuning Freq. Counter	14.95
AY5-8320	TV Time/Channel Display Cir.	11.95
AY3-8910**	Prog. Sound Generator	12.95
AY5-8600-1		8.95
AY3-8912	Sound Generator	9.95
SC-01	Votrax Speech Synthesizer	49.95
SN76477**	Sound Generator Synthesizer	2.49
SN76488	Sound Generator	9.95
SN76489	Sound Generator	6.95
TMS5220	Sound Generator	19.95

**Application Notes ... Add \$3.00

ACP inventories a large quantity of obsolete IC's. Some are included in this catalog and are subject to availability.

MICROCOMPUTER COMPONENTS

DYNAMIC RAMS

PART NO.	DESCRIPTION	PINS	1-7	8-24	25-99	100 UP
41256	256Kx1, 200nS	16	CALL FOR PRICE			
4164-15	64Kx1, 150nS	16	\$9.95	\$8.95	\$6.95	\$5.95
4164-20	64Kx1, 5V, 100nS	16	6.95	6.10	5.70	4.95
4116-200	16Kx1, 200nS	16	1.49	1.40	1.30	1.20
4116-150	16Kx1, 150nS	16	1.89	1.70	1.65	1.50
4116-120	16Kx1, 120nS	16	2.75	2.60	2.49	2.35
4115/2108/5298	8Kx1, 200nS	16	.99	.90	.85	.80
TMS-4060	4Kx1, 300nS	22	3.25	2.96	2.75	2.50
UPD410	4Kx1, 200nS	22	6.95	6.50	6.25	5.50
UPD411D	4Kx1, 300nS	22	8.95	8.50	8.25	7.50
2107B-4	4Kx1, 270nS	22	3.25	2.96	2.75	2.50
MCM6605AL	4Kx1, 250nS	22	8.95	8.50	8.25	7.50
MM5280	4Kx1, 200nS	22	3.50	3.25	3.10	2.95
TMS-4050	4Kx1, 300nS	18	4.75	4.50	4.10	3.75
4096	4Kx1, 300nS	16	3.25	3.05	2.95	2.75
4027N-4	4Kx1, 250nS	16	2.99	2.80	2.50	2.35
MK4015 (4027)	4Kx1, with 1mS Refresh	16	1.49	1.39	1.19	.99
MCM6604	4Kx1, 300nS	16	4.95	4.75	4.40	3.95
5262	2Kx1, 350nS	22	1.49	1.40	1.30	.99
MM5270	4Kx1, 270nS	18	4.80	4.70	4.49	3.95
MM5271	4Kx1, 270nS	18	4.95	4.75	4.49	3.95
6002	1Kx1	22	3.95	3.85	3.35	3.10
1103 (5261)	1Kx1, 300nS	18	1.99	1.85	1.75	1.49
1103A	1Kx1	18	3.95	3.85	3.45	3.25
ECL10146	1Kx1, 29nS	16	9.95	9.25	8.80	8.25
ECL10415	1Kx1, 25nS	16	9.95	9.25	8.80	8.25
MK4008L	1Kx1	16	4.25	3.95	3.75	3.50

STATIC RAMS

PART NO.	DESCRIPTION	PINS	1-7	8-24	25-99	100 UP
6116P-3/2016	2Kx8, 200nS	24	\$6.95	\$6.75	\$6.50	\$5.50
MPS6550 (PET)		22	12.95	11.95	10.25	9.50
2114N (4045)	1Kx4, 650nS	18	1.90	1.85	1.80	1.50
2114L-4	1Kx4, 450nS, Low Power	18	2.00	1.95	1.90	1.65
2114L-2	1Kx4, 200nS, Low Power	18	2.10	2.00	1.90	1.75
2141N-3	4Kx1, 150nS	18	3.85	3.75	3.60	3.40
4044-4L	4Kx1, 450nS, Low Power	18	3.50	3.35	3.25	2.95
4044-3L	4Kx1, 300nS, Low Power	18	3.95	3.75	3.65	3.50
4044-2L	4Kx1, 250nS, Low Power	18	4.95	4.75	4.60	4.50
ZIL6104-4	4Kx1, 450nS, Low Power	18	1.95	1.75	1.65	1.49
MM5257NL	4Kx1, 450nS, Low Power	18	3.95	3.75	3.65	3.50
21L02-4	1Kx1, 450nS, Low Power	16	1.30	1.25	1.10	1.05
21L02-2	1Kx1, 250nS, Low Power	16	1.50	1.35	1.20	1.10
2102	1Kx1, 650nS	16	1.10	1.05	.99	.95
2101-1	256x4, 450nS	22	2.40	2.35	2.30	2.20
2111-1	256x4, 450nS	18	2.75	2.60	2.50	2.40
2112-1	256x4, 450nS	16	2.95	2.80	2.50	2.40
EMM4200A	4Kx1, 200nS	22	9.00	8.75	8.25	7.95
EMM4402	4Kx1	22	8.55	8.25	7.75	7.50
4804	4Kx1	18	14.95	14.50	14.25	13.95
5101C-E	256x4, 450nS, CMOS	22	4.50	4.40	4.30	4.10
AMD9130/31	1Kx4	22	8.95	8.65	8.25	7.95
FSC460CCD	16K, Charge Coupled Device	22	9.95	8.95	7.95	6.95
P2125/93425	1Kx1 (TS)	16	8.95	8.25	7.95	7.50
93415	1Kx1 (OC)	16	7.95	7.75	7.25	6.95
74S89	64-Bit, 35mS	16	2.95	2.85	1.75	1.70
8155	256x8, with 22 I/O (Low)	40	7.95	5.75	5.50	4.95
8156	256x8, with 22 I/O (High)	40	7.95	5.75	5.50	4.95
2147	4Kx1, 70mS, Low Power	18	4.95	4.75	4.65	4.50
2148N	1Kx4, 70mS	18	8.50	8.25	8.10	7.95
1101 (MK4007)	256x1, 650mS	16	2.95	2.25	2.10	1.95
6508 (74C929)	1Kx1, CMOS	16	3.95	3.75	3.50	3.40
6518 (74C930)	1Kx1, CMOS	18	3.95	3.75	3.50	3.40
74C89	64-Bit, CMOS	16	5.75	5.65	5.50	5.40
3101	16x4	16	2.95	2.75	2.50	2.40
7489	64-Bit, 50mS	16	1.90	1.85	1.75	1.65
74S201	64-Bit, 80mS	16	4.95	4.50	4.25	4.10
74S189	64-Bit, 35mS	16	1.90	1.80	1.75	1.60
74S200	64-Bit, 80mS	16	3.75	3.65	3.50	3.45
74S289	64-Bit, 35mS	16	1.95	1.75	1.60	1.50
6514	1Kx4, CMOS	16	7.95	7.75	7.25	6.95

CALL FOR VOLUME PRICING ON 4116 RAMS Set of 8 \$11.95

FLOPPY DISC CONTROLLERS

upd765	Floppy Controller (18272)	\$34.95
1691	Data Separator	11.95
1771-B01	Single Density	19.95
1781	Double Density	29.95
1791-B01	Double Density	29.95
1791-B02	Double Density	34.95
1792-B01	Single Density	39.95
1793	Double Density Double-Sided	39.95
1794	Single and Double Density	44.95
1795	Single and Double Density	39.95
1797	Double Density Double-Sided	39.95
1931	Synchronous DLC	19.95
1933	Synchronous DLC	19.95
2143	Winchester Controller Chip Set	99.95

CHARACTER GENERATORS

MCM6571A		\$9.95
MCM66710P	128x9x7 ASCII shift	13.00
MCM66714		13.00
MCM66740P	128x9x7 Math Symbol	15.50
MCM66750P	128x9x7 Alpha cntrl character	13.00
SIG2513	(CM2140)	9.95
SIG2513	(CM3041)	10.95
2513-001	5x7 ASCII Upper (5V)	9.50
2513-002	ADM-3 Lower Case	14.95
2513-005	5x7 ASCII Lower (5V)	10.95

A TO D CONVERTERS/ DATA ACQUISITION

AD542J	Precision Bipolar JFET	\$7.95
ADC804LCN	8-Bit A/D (1 LSB)	4.95
DA0806LCN	8-Bit D/A (0.78% Lin)	2.95
DAC08CN	8-Bit D/A	5.95
DAC100	10-Bit D/A	16.10
DAC86EX	8-Bit D/A	9.95
HI5041D	2xSPST CMOS Analog Switch	4.10
ICL8211	Voltage Rel.	2.95
RC4151	Voltage to Frequency Converter	3.95
1408L6	6-Bit D/A	4.25
1408L8	8-Bit D/A	5.95
7103	3 1/2 Digits Integrating	12.95
7107	3 1/2 Digit LED Driver	9.95
8700	8-Bit Binary	13.50
8701	10-Bit Binary	24.95
8702	12-Bit Binary	29.95
8703	8-Bit Tri-State	13.50
8750	312 Digit BCD	13.95
9400	Voltage to Frequency Converter	7.25

SHIFT REGISTERS

CCD460	4096x4 CCD	\$18.95
MK1007	80x4	4.95
MM500H	Dual 25 Bit	2/99
MM5016H	512 Bit	4.95
MM5056N	Dual 256 Bit	6.95
MM5057N		6.95
TMS3002N	50x2 Bit	4.95
TMS3113N	2x133 Bit	4.95
TMS3120N	80x4 Bit	3.95
TMS3409N		3.95
1402N	256x4 Dynamic	4.95
1403N	512x2 Dynamic	4.95
1404N	1024 x1 Dynamic	4.95
2401N	2048 Dynamic	10.95
2501N		4.95
2504V	1024 Dynamic	4.95
2507V		3.95
2510N	Dual 100	3.95
2511H or N	Dual 200	4.95
2517N		3.95
2518N	32x6 Static	4.95
2519N	40x6	4.95
2521		3.95
2522	132x2	4.95
2524		3.95
2525N		4.95
2527N		3.95
2528N		3.95
2529N		3.95
2808	256x4 Dynamic	3.95
2833N	1024x1	4.95
2847N	Quad 80	4.95
3347N	Quad 80	4.95
5011	4xSPST JFET	3.95

74S00/74L00/74H00 & ECL

74S00

74S00	Quad 2-input NAND Gate	\$.29
74S02	Quad 2-input NOR Gate	.35
74S03	Quad 2-input NAND Gate (OC)	.32
74S04	Hex Inverter	.42
74S05	Hex Inverter (OC)	.42
74S08	Quad 2-input AND Gate	.39
74S09	Quad 2-input AND Gate (OC)	.39
74S10	Triple 3-input NAND Gate	.32
74S11	Triple 3-input AND Gate	.32
74S15	Triple 3-input AND Gate (OC)	.32
74S20	Dual 4-input NAND Gate	.32
74S22	Dual 4-input NAND Gate (OC)	.33
74S30	6-input NAND Gate	.33
74S32	Quad 2-input OR Gate	.45
74S37	Quad 2-input NAND Gate	.85
74S38	Quad 2-input NAND Buffer (OC)	.85
74S40	Dual 4-input NAND Buffer	.35
74S51	Dual 2-input AND-OR-Inverter	.35
74S64	AND-OR-Inverter Gate	.39
74S74	Dual D Flip Flop	.49
74S85	4-Bit Magnitude Comparater	1.75
74S86	Quad Exclusive OR Gate	.55
74S89	64 Bit RAM	2.90
74S112	Dual JK Flip Flop	.52
74S113	Dual JK Flip Flop (Preset)	.52
74S114	Dual JK FF with Comm. Clk	.52
74S124	Dual Voltage-Controlled Osc.	2.49
74S132	Quad Schmidt Trigger	1.69
74S133	13-input NAND Gate	.43
74S134	Tri-state 12-input NAND Gate	.69
74S135	Quad Exclusive OR/NOR Gate	.69
74S136	Quad Exclusive OR Gate	1.29
74S138	Expandable 3/8 Decoder	.85
74S139	Expandable 2/4 Decoder	.85
74S140	Dual 4-input NAND Driver	.69
74S151	8-input Multiplexer	.95
74S153	Dual 4/1 Multiplexer	.95
74S157	Quad 2-input Multiplexer	.95
74S158	Quad 2-input Multiplexer (Inverted)	.95
74S160	Decade Counter with Asynch Clear	2.30
74S161	Presetable Binary Counter	2.30
74S262	Presetable Decade Ctr. Synch	2.30
74S163	Synchronous 4-Bit Counter	2.30
74S174	Hex D Flip Flop	.95
74S175	Quad D Flip Flop	.95
74S181	Arithmetic Logic Unit (ALU)	3.60
74S185	Look Ahead Carry Generators	1.45
74S188	256-Bit (32x8) PROM (OC)	1.49
74S189	64-Bit (16x4) RAM 3-state	1.90
74S194	4-Bit Bi-Directional Shift Reg.	1.45
74S195	4-Bit Parallel Shift Register	1.45
74S196	Preset Decade Counter (82S90)	1.45
74S197	Binary Counter	1.99
74S200	256-Bit (256x1) RAM 3-state	3.75
74S201	256-Bit (256x1) RAM 3-state	3.75
74S206	256-Bit (256x1) RAM (OC)	3.75
74S240	3-state Octal Line Driver	2.00
74S241	3-state Octal Line Driver (Non-Inv)	2.00
74S242	Quadruple Bus Transceiver	2.29
74S243	Quadruple Bus Transceiver	2.29
74S244	3-state Octal Line Driver	2.29
74S251	3-state 74S151	1.15
74S253	3-state 74S153	1.15
74S257	3-state 74S157	1.15
74S258	3-state 74S158	1.15
74S260	Dual 5-input NOR Gate	1.75
74S280	9-Bit Parity Generator	1.79
74S287	1K-Bit (256x4) PROM 3-state	1.79
74S288	256-Bit (32x8) PROM 3-state	1.79
74S292	64-Bit (16x4) RAM (OC)	1.95
74S299	8-Bit Univ. Shift/Storage Reg.	2.55
74S373	Octal D-type Latch	2.30
74S374	Octal D Flip Flop 3-state	2.30
74S379	4-Bit Register Common Enable	2.30
74S387	1K-Bit (256x1) PROM (OC)	1.75
74S412	8-Bit Input/Output (8212)	2.15
74S428	Sys Controller Bus Driver (8228)	3.35
74S438	Systen Controller (8238)	5.49
74S471	2K-Bit (256x8) PROM 3-state	3.95
74S472	4K-Bit (512x8) PROM 3-state	4.50
74S473	4K-Bit (512x8) PROM (OC)	4.50
74S474	4K-Bit (512x8) PROM 3-state	4.50
74S475	4K-Bit (512x8) PROM (OC)	4.50
74S476	4K-Bit (1024x4) PROM 3-state	6.25
74S478	8K-Bit (1024x8) PROM (OC)	7.95
74S570	2K-Bit (512x4) PROM (OC)	2.70
74S571	2K-Bit (512x4) PROM 3-state	2.70
74S572	4K-Bit (1024x4) PROM (OC)	4.50
74S573	4K-Bit (1024x4) PROM 3-state	4.50
74S940	Octal Buffer with 3-state	2.30
74S941	Octal Buffer with 3-state	2.30

SPECIAL

74S188 (82S23) PROM99¢

ECL

MC10014P	256x1 RAM	\$ 1.95
MC10100P	Quad 2-input NOR w/Strobe	.58
MC10101P	Quad OR-NOR w/Strobe	.58
MC10102P	Quad 2-input NOR Gate	.58
MC10103P	Quad 2-input OR Gate	.58
MC10104P	Quad 2-input AND Gate	.58
MC10105P	Triple 2-3-2-input OR-NOR	.58
MC10106P	Triple 4-3-3-input NOR Gate	.58
MC10107P	Triple Exclusive OR-NOR	.63
MC10109P	Dual 4-5-input OR-NOR Gate	.58
MC10110P	Dual OR Line Driver	.58
MC10111P	Dual NOR Line Driver	.58
MC10112P	Dual 3-input/output Line Driver	.58
MC10113P	Quad Exclusive OR Gate	.63
MC10114P	Triple Line Receiver	.63
MC10115P	Quad Line Receiver	.58
MC10116P	Triple Line Receiver	.58
MC10117P	Dual 2-Wide 2-3-input OAO/OAI	.58
MC10118P	Dual 2-Wide 3-input OR-AND	.58
MC10119P	4-Wide 4-3-3-input OR-AND	.63
MC10121P	4-Wide OAO/OAI Gate	.63
MC10123P	Triple 4-3-3-input Bus Driver	.95
MC10124P	Quad TTL to MECL Trans	1.52
MC10125P	Quad MECL to TTL Trans	1.52
MC10128L	Quad Bus Driver	5.72
MC10129L	Dual Bus Receiver	5.72
MC10130P	Dual D Latch	1.52
MC10131P	Dual D Master/Slave FF	1.84
MC10132P	Dual MUX w/Latch and Reset	1.84
MC10133P	Quad Latch	1.84
MC10134P	Dual MUX w/Latch	1.84
MC10135P	Dual JK Master/Slave FF	1.84
MC10136P	Univ. Hex Counter	8.05
MC10137P	Univ. Decade Counter	8.05
MC10138P	Bi-Quinary Counter	5.30
MC10140P	64x1 RAM w/90 ohm Drive	4.25
MC10141P	4-Bit Univ. Shift Register	5.45
MC10153P	Quad Latch	1.84
MC10154P	Binary Counter	4.93
MC10158P	Quad 2-input MUX (Non-Inv)	2.50
MC10159P	Quad 2-input MUX (Inv)	2.50
MC10160P	12-Bit Parity Gen./Clk	2.50
MC10161P	Binary to 1-8 Dec (Low)	2.50
MC10162P	Binary to 1-8 Dec (high)	2.50
MC10163P	Error Det Correction Cir.	5.38
MC10164P	8 Line Multiplexer	2.87
MC10165P	8-input Priority Encoder	4.18
MC10166P	5-Bit Comparitor	4.33
MC10168P	Quad Latch Com. Clk	1.94
MC10170P	9 + 2-Bit Parity Checker	3.34
MC10171P	Dual Binary to 1-4 Dec (Low)	2.60
MC10172P	Dual Binary to 1-4 Dec (High)	2.60
MC10173P	Quad 2-input MUX/Latch	2.95
MC10174P	Dual 4 to 1 Multiplexer	2.95
MC10175P	Quint Latch	2.45
MC10176P	Hex D Master/Slave FF	3.77
MC10177L	Triple MECL to NMOS Trans	4.60
MC10178P	Binary Counter	4.93
MC10179P	Look-Ahead Carry Block	4.13
MC10180P	Dual 4-Bit Adder/Sub	6.20
MC10181P	4-Bit ALU/Function Gen	10.18
MC10182P	2-Bit ALU/Function Gen	12.80
MC10183L	4x2 Multiplier	29.93
MC10186P	Hex D Mas/Slave FF w/Reset	3.58
MC10188P	Hex Buffer w/Enable	1.70
MC10189P	Hex Inverter w/Enable	1.70
MC10190P	Quad MST to MECL Trans	3.80
MC10191P	Hex MECL 10K to MST Trans	3.80
MC10192P	Quad Bus Driver	2.65
MC10193P	Error Det Correction Cir	5.53
MC10194P	Dual Bus Transceiver	2.00
MC10195P	Hex Inverter/Buffer	1.25
MC10197P	Hex AND Gate	1.25
MC10198P	One Shot Multivibrator	13.55
MC10210P	Hi-Speed Dual Line Driver-OR	.85
MC10211P	Hi-Speed Dual Line Driver-NOR	.85
MC10212P	Hi-Spd Dual Line Dvr-OR/NOR	.85
MC10216P	Hi-Speed Triple Line Rec	.85
MC10231P	Hi-Spd Dual D Mas/Slave FF	3.50
MC10287P	Hi-Speed 2x1 Bit Array Mult	12.94
MC10571L	Dual Binary 1-4 Dec (Low)	6.84
MC10807L	5-Bit Transceiver	6.30
MCM10139L	32x8 Field PROM	10.45
MCM10143L	8x2 Multiport Reg File	12.75
MCM10144L	256x1 MECL 10K RAM	8.40
MCM10145L	16x4 MECL RAM	6.65
MCM10146L	1Kx1 MECL RAM (10415)	13.35
MCM10147L	128x1 MECL RAM (10405)	9.95
MCM10148L	64x1 MECL RAM	9.95
MCM10149L	256x4 MECL PROM	12.75
MCM10152L	256x1 MECL RAM	11.45
MCM10422L	256x4 MECL RAM	23.25
MCM10470L	4096x1 MECL RAM	37.00

CALL ACP FOR ECL

74L00

74L00	Quad 2-input NAND Gate	\$.39
74L02	Quad 2-input NOR Gate	.32
74L03	Quad 2-input NAND Gate (OC)	.45
74L04	Hex Inverter	.49
74L05	Hex Inverter (OC)	.55
74L10	Triple 3-input NAND Gate	.45
74L20	Dual 4-input NAND Gate	.45
74L30	8-input NAND Gate	.45
74L32	Quad 2-input Positive OR Gate	.69
74L42	BCD to Decimal Decoder	1.69
74L51	Dual 2-Wide 2-input AND-OR-Inv.	.45
74L54	4-Wide 2-input AND-OR-Inv.	.45
74L55	Dual 4-input	.45
74L72	JK Master/Slave Flip Flop	.69
74L73	Dual JK Master/Slave Flip Flop	.79
74L74	Dual D Flip Flop	.69
74L75	Quad Latch	.75
74L76	Dual JK Flip Flop with Preset	.49
74L85	4-Bit Magnitude Comparator	1.75
74L86	Quad Exclusive-OR Gate	.89
74L90	Decade Counter	1.99
74L91	8-Bit Shift Register	2.35
74L93	4-Bit Binary Counter	1.99
74L95	4-Bit Right Shift Register	1.99
74L98	4-Bit Storage Register	1.99
74L121	Monostable Multivibrator	.99
74L123	TTL/Monostable Multivibrator	.99
74L154	4-Line to 16-Line Decoder/Demux	3.60
74L164	8-Bit Serial Shift Register	2.49
74L165	Parallel Load 8-Bit Serial Shift Reg.	2.49
74L192	BCD Up/Down Counter	1.89
74L193	4-Bit Binary Up/Down Counter	1.89
74L195	4-Bit Parallel-Access Shift Reg.	1.89

74H00

74H00	Quad 2-input NAND Gate	\$.25
74H01	Quad 2-input Gate (OC)	.25
74H04	Hex Inverter	.28
74H05	Hex Inverter (OC)	.28
74H08	Quad 2-input AND Gate	.35
74H10	Triple 3-input NAND Gate	.35
74H11	3-input Positive AND Gate	.35
74H20	Dual 4-input NAND Gate	.35
74H21	Dual 4-input Positive AND Gate	.29
74H22	4-input Positive NAND Gate	.37
74H30	8-input NAND Gate	.35
74H37	Quad 2-input NAND Buffer	.39
74H38	Quad 2-input NAND Buffer (OC)	.39
74H40	Dual 4-input Buffer	.32
74H50	Exp Dual 2-input AND-OR-Inv.	.35
74H51	Dual 2-input AND-OR-Inv.	.35
74H52	Expandable 4-Wide AND-OR	.30
74H53	Exp 4-Wide 2-input AND-OR-Inv.	.35
74H54	4-Wide 2-input AND-OR-Inv.	.35
74H55	2-Wide 4-input AND-OR-Inv.	.35
74H60	Dual 4-input Expander	.35
74H61	Triple 3-input Expander	.35
74H62	4-Wide AND-OR Expander	.35
74H71	R-S Flip Flop	.55
74H72	JK Master/Slave Flip Flop	.55
74H73	Dual JK Master/Slave Flip Flop	.55
74H74	Dual D Flip Flop	.55
74H76	Dual JK Master/Slave Flip Flop	.55
74H78	Dual JK Flip Flop with Preset	.55
74H101	JK Neg Edge Triggered Flip Flop	.65
74H102	Neg Edge Triggered FF AND Input	.89
74H103	Dual JK Neg Edge Trig Flip Flop	.65
74H106	Dual JK Neg Edge Trig Flip Flop	.65
74H108	Dual JK Neg Edge Trig Flip Flop	.65
74H183	Dual Carry-Save Full Adders	1.89

QUOTE ACP ON VOLUME

CALL FOR VOLUME PRICING

OUTSIDE CALIFORNIA

800-854-8230

IN CALIFORNIA

714-558-8813

MICROPROCESSOR COMPONENTS

7400 TTL

7400 TTL Cont.

74LS TTL Cont.

7400N	Quad 2-input Positive NAND	\$.18
7401N	Quad 2-input Positive NAND (OC)	.18
7402N	Quad 2-input Positive NOR	.22
7403N	Quad 2-input Positive NAND (OC)	.22
7404N	Hex Inverters	.22
7405N	Hex Inverter (OC)	.29
7406N	Hex Inverter Buffer Driver (OC)	.29
7407N	Hex Buffer/Driver (OC)	.29
7408N	Quad 2-input Positive AND	.25
7409N	Quad 2-input Positive AND (OC)	.23
7410N	Triple 3-input Positive NAND	.22
7411N	Triple 3-input Positive AND	.29
7412N	Triple 3-input Positive NAND (OC)	.29
7413N	Dual 4-input NAND Schmitt Triggers	.39
7414N	Hex Schmitt Triggers Inverters	.49
7416N	Hex Inverter Buffer/Driver (OC)	.29
7417N	Hex Buffer/Driver (OC)	.29
7420N	Dual 4-input Positive NAND	.19
7421N	Dual 4-input Positive AND	.35
7422N	4-input Positive NAND	.39
7423N	Expandable Dual 4-input NOR	.49
7425N	Dual 4-input NOR w/Strobe	.29
7426N	Quad 2-input H.V. Interface NAND	.29
7427N	Triple 3-input NOR	.23
7428N	Quad 2-input Positive NOR Buffer	.39
7430N	8-input Positive NAND	.23
7432N	Quad 2-input Positive OR	.29
7433N	Quad 2-input Pos NOR Buffer (OC)	.49
7437N	Quad 2-input Positive NAND Buffer	.25
7438N	Quad 2-input Pos NAND Buffer (OC)	.29
7440N	Dual 4-input Positive NAND Buffer	.24
7441N	BCD to Decimal Nixie Driver	.79
7442N	BCD to Decimal Decoder	.49
7443N	Excess 3 to Decimal Decoder	.79
7444N	Excess 3 Gray Code to Decimal	.79
7445N	BCD to Decimal Decoder (OC)	.79
7446N	BCD to 7-Segment Decoder (OC)	.79
7447N	BCD to 7-Segment Decoder	.79
7448N	BCD to 7-Segment Decoder	.79
7450N	Dual 2-wide 2-input AND-OR-INV	.19
7451N	Dual 2-wide 2-input AND-OR-INV	.19
7453N	Expandable 4-wide AND-OR-INV	.19
7454N	4-wide AND-OR-INVERT	.14
7460N	Dual input EXP for AIO	.39
7470N	AND-Gated J-K Pos-Edge-Trig. FF	.29
7472N	AND-Gated J-K Master-Slave FF	.38
7473N	Dual J-K Flip Flop w/Clear	.35
7474N	Dual D Type Pos-Edge-Trig. FF	.35
7475N	Quad Bistable Latch	.38
7476N	Dual J-K Flip Flop w/Preset & Clear	.38
7479N	Dual D Type Flip Flop	4.60
7480N	Gated Full Adder	.59
7482N	2-bit Binary Full Adder	1.10
7483N	4-bit Binary Full Adder	.55
7485N	4-bit Magnitude Comparator	.65
7486N	Quad 2-input Exclusive-OR	.39
7489N	64-bit Read/Write Memory	1.75
7490N	Decoder Counter	.39
7491N	8-bit Shift Register Ser. In/Ser. Out	.59
7492N	Divide-by-12 Counter	.39
7493N	4-bit Binary Counter	.39
7494N	4-bit Shift Register Ser. In Par. Out	.72
7495N	4-bit Rt Shift Lt Shift Par-Access SR	.49
7496N	5-bit Shift Register	.72
7497N	6-bit Binary Rate Multiplier	3.75
74100N	Dual 4-bit Latch	2.75
74104N	J-K Flip Flop	.69
74105N	J-K Flip Flop	.69
74107N	Dual J-K Master Slave Flip Flop	.39
74109N	Dual J-K Pos-Edge-Trig. Flip Flop	.32
74110N	Dual J-K FLIP Flop	.99
74116N	Dual 4-bit Latch	1.49
74120N	Dual Pulse Sync	1.95
74121N	Monostable Multivibrator	.39
74122N	Retrig. Monostable Multivibrator	.59
74123N	Dual Retrig. Monostable Multi	.49
74125N	3-State Quad Bus Buffer (8093N)	.59
74126N	3-State Quad Bus Buffer (8094N)	.49
74128N	5 Ohm Line Driver	1.19
74132N	Quad 2-input NAND Schmitt Trig.	.69
74136N	Exclusive-OR	.69
74141N	BCD to Decimal Decoder Driver	.69
74142N	Decade Counter/Latch/Decoder	2.95
74143N	Decade Ctr/Latch LED/Lamp Dvr	2.95
74144N	Decade Ctr/Latch Led/Lamp Dvr	2.95
74145N	BCD to Decimal Decoder Dvr (OC)	.59
74147N	10-line to 4-line Priority Encoder	1.49
74148N	8-line to 4-line Priority Encoder	.99
74150N	16-line to 1-line Data Select/Multi	.99
74151N	8-line to 1-line Data Select/Multi	.59
74153N	Dual 4 to 1-line Data Select/Multi	.59
74154N	4 to 16-line Decoder/Demultiplexer	1.19
74155N	Dual 2 to 4-line Decoder/Demulti	.59
74156N	Dual 2 to 4-line Decoder/Demulti	.59

74157N	Quad 2 to 1-line Data Selector	\$.59
74158N	Quad 2-input Multiplexer	1.65
74159N	4 to 16-line Decoder/Demulti	2.49
74160N	Sync Decade Counter w/Clear	6.69
74161N	Sync 4-bit Counter w/Clear	.69
74162N	Fully Sync Decade Counter	.69
74163N	Fully Sync 4-bit Counter	.69
74164N	8-bit Serial Shift Register	.69
74165N	Parallel-in Serial-out 8-bit SR	.69
74166N	Parallel-in Serial-out 8-bit SR	.99
74170N	4x4 Register File	1.19
74172N	Register File	5.95
74173N	3-state Quad D Type Flip Flop	.69
74174N	Hex D Type Flip Flop w/Clear	.69
74175N	Quad D Type Edge Trig. Flip Flop	.69
74176N	Presetable Decade Ctr (35Mhz)	.69
74177N	Preset 4-bit Binary Ctr (35Mhz)	.69
74180N	9-bit Odd/Even Parity Gen/Ckr	.69
74181N	HS ALU/Function Generator	1.75
74182N	Look-Ahead Carry Generator	.75
74184N	BCD to Binary Converter	4.50
74185N	Binary to BCD Converter	4.50
74186N	512-bit PROM	9.95
74188N	256-bit PROM	9.90
74190N	Sync Up/Down Decade Counter	.69
74191N	Sync Up/Down 4-bit Counter	.69
74192N	Sync Up/Down +10 Ctr w/Preset	.69
74193N	Sync Up/Down 4-bit Ctr w/Preset	.69
74194N	4-bit Bidirectional Univ. SR	.69
74195N	4-bit Parallel Access Shift Reg.	.69
74196N	Preset Decade Counter (50MHz)	.85
74197N	Preset 4-bit Binary Ctr (50MHz)	.85
74198N	Parallel-in Parallel-Out 8-bit SR	1.19
74199N	Parallel-in Parallel-Out 8-bit SR	1.19
74247N	BCD to 7-seg. Decoder Driver	2.25
74248N	BCD to 7-seg. Decoder Driver	2.25
74251N	3-state 8-line Data Selector/Multi	.95
74259N	8-bit Addressable Latch	1.95
74265N	Quad Complement-Out Elements	.99
74273N	D Type Flip Flop	1.05
74276N	Quad J-K Edge Trig. Flip Flop	2.25
74279N	Quad Set/Reset Latch	.79
74283N	A Bit Binary	1.49
74284N	TS 4-bit MUX	3.90
74285N	TS 4-bit MUX	3.90
74290N	4-bit Binary Counter	1.25
74293N	4-bit Binary Counter, (Ripple)	1.69
74365N	3-state Hex Buffer (8095N)	.59
74366N	3-state Hex Inverter (8096N)	.59
74367N	3-state Hex Buffer (8097N)	.59
74368N	3-state Hex Inverter (8098N)	.59
74390N	Dual Decade Counter (ripple)	1.49
74393N	Dual 4-bit Binary Counter	1.90
74408N	8-bit Parity Tree	3.25
74416N		4.25
74453N	Dual Binary Counter (Sync)	4.25
74468N	Dual MOS to TTL Translator 3-st	4.25
74490N	Dual Decade Counter	4.25

74LS TTL

74LS00	Quad 2-input NAND	\$.25
74LS01	Quad 2-input NAND (OC)	.25
74LS02	Quad 2-input NOR	.25
74LS03	Quad 2-input NAND (OC)	.25
74LS04	Hex Inverter	.28
74LS05	Hex Inverter	.28
74LS08	Quad 2-input AND	.28
74LS09	Quad 2-input AND (OC)	.28
74LS10	Tripple 3-input NAND	.28
74LS11	Tripple 3-input AND	.29
74LS12	Tripple 3-input NAND (OC)	.39
74LS13	Dual Schmitt Trigger	.39
74LS14	Hex Schmitt Trigger	.59
74LS15	Tripple 3-input AND	.39
74LS20	Dual 4-input NAND	.26
74LS21	Dual 4-input AND	.29
74LS22	Dual 4-input NAND (OC)	.29
74LS26	Quad 2-input NAND (High Voltage)	.29
74LS27	Tripple 3-input NOR	.29
74LS28	Quad 2-input NOR	.39
74LS30	Single 8-input NAND	.26
74LS32	Quad 2-input OR	.35
74LS37	Quad 2-input NAND	.35
74LS38	Quad 2-input NAND Buffer (OC)	.35
74LS40	Dual 4-input NAND Buffer	.26
74LS42	BCD-Decimal Decoder/Driver	.59
74LS47	BCD to 7-seg. Decoder/Driver	.69
74LS48	BCD to 7-seg. Decoder/Driver	.69
74LS49	BCD to 7-seg. Decoder/Driver	.69
74LS51	Quad 2-input AND-OR-INV	.26
74LS54	Quad 2-input AND-OR-INV	.29

74LS55	Dual 4-input AND-OR-INV	\$.29
74LS73	Dual J-K Flip Flop w/Preset & Clear	.39
74LS74	Dual D Type Flip Flop	.39
74LS75	Quad Latch	.39
74LS76	Dual J-K Flip Flop w/Preset & Clear	.39
74LS78	Dual J-K Flip Flop w/Preset	.39
74LS83	4-bit Full Adder	.39
74LS85	4-bit Magnitude Comparator	.69
74LS86	Quad Exclusive-OR	.39
74LS90	Binary Counter	.59
74LS91	8-bit Shift register	1.29
74LS92	Divide by 12 Counter	1.29
74LS93	Binary Counter	.59
74LS95	4-bit Shift Register	.79
74LS96	4-bit Shift Register	.89
74LS107	Dual J-K Flip Flop	.39
74LS109	Dual J-K Flip Flop Pos. Edge Trig.	.39
74LS112	Dual J-K Flip Flop Neg. Edge Trig.	.39
74LS113	Dual J-K Flip Flop Neg. Edge Trig.	.39
74LS114	Dual J-K Flip Flop Neg Edge Trig.	.39
74LS122	Retriggerable Mono. Multivibrator	.49
74LS123	Dual Retrig. Mono. Multivibrator	.79
74LS124	Dual VCO	1.45
74LS125	3-state Quad Buffer	.59
74LS126	3-state Quad Buffer	.59
74LS132	Quad Schmitt Trigger	.59
74LS133	13-input NAND	.59
74LS136	Quad Exclusive-OR	.49
74LS138	Exp Single 3 to 8 Decoder	.59
74LS139	Exp Dual 2 to 4 Decoder	.59
74LS145	Decoder	1.25
74LS148	8-input Priority Encoder	1.49
74LS151	Single 8 to 1 MUX	.59
74LS153	Dual 4 to 1 MUX	.59
74LS154	Single 4 to 16 Decoder	1.49
74LS155	BCD to 2 to 4 DEMUX	.69
74LS156	Dual 2 to 4 DEMUX (OC)	.69
74LS157	Quad 2 to 1 MUX	.69
74LS158	Quad 2 to 1 MUX (Inverted)	.69
74LS160	Preset Decade Counter	.69
74LS161	Preset Binary Counter	.69
74LS162	Preset Decade Counter (Syn Clr)	.69
74LS163	Preset Decade Counter (Syn Clr)	.69
74LS164	8-bit Shift Register	.69
74LS165	8-bit Shift register	.99
74LS166	8-bit P1650 Shift register	1.19
74LS168	Sync Decade Up/Down Ctr	1.19
74LS169	Sync Binary Up/Down Counter	1.49
74LS170	4x4 Register File	.00
74LS173	3-state Quad D Type Register	.69
74LS174	Hex D Type Flip Flop	.59
74LS175	Quad D Type Flip Flop	.59
74LS181	Arithmetic Logic Unit	2.20
74LS189	16x4 Static RAM	2.99
74LS190	Up/Down Decade Counter	.89
74LS191	Up/Down Binary Counter	.89
74LS192	Up/Down Decade Counter	.79
74LS193	Up/Down Binary Counter	.79
74LS194	4-bit Bidirectional SR	.69
74LS195	4-bit FIFO Shift Register	.69
74LS196	Preset Decade Counter	.89
74LS197	Preset Binary Counter	.79
74LS221	Dual Mono. MUX (Schmitt Trigger)	.89
74LS240	Octal Bus/Line Driver (Inv)	1.19
74LS241	Octal Bus/Line Driver	1.19
74LS242	Quad Bus Transceiver (Inv)	1.19
74LS243	Quad Bus Transceiver	1.19
74LS244	Octal 3-state Bus Driver Non-Inv	1.19
74LS245	Octal Bus Transceiver	1.29
74LS247	BCD to 7-seg. Decoder/Driver	1.10
74LS248	BCD to 7-seg. Decoder/Driver	1.10
74LS249	BCD to 7-seg. Decoder/Driver	1.69
74LS251	8-input MUX	.79
74LS253	Dual 4-input MUX (3-state)	.59
74LS257	Quad 2-input MUX	.59
74LS258	Quad 2 to 1 MUX	.59
74LS259	8-bit Addressable Latch	1.19
74LS260	Dual 5-input NOR	.69
74LS261	Binary Multiplier	2.49
74LS266	Quad Exclusive-OR	.59
74LS273	Octal Edge Trig. Flip Flop	1.49
74LS275	7-bit Slice Wallace Tree	4.40
74LS279	Quad Set/Reset Latch	.59
74LS283	4-bit Full Adder	.79
74LS289	64-bit (16x4) RAM (OC)	2.95
74LS290	Decade Counter 2/5	.89
74LS293	4-bit Binary Counter	.79
74LS295	Dual Retrig. Multivibrator	1.29
74LS298	Quad 2-input Multiplexer	.89
74LS323	8-bit Universal SR	2.75
74LS324	Voltage Controlled Oscillator	1.75
74LS347	BCD to 7-seg. Decoder/Driver	1.95
74LS348	8 to 3-line Priority Encoder	1.95
74LS352	4-bit Multiplexer (Inv)	1.29

7400 TTL

74LS TTL

MICROPROCESSOR COMPONENTS

74LS TTL Cont

74LS353	Dual 4-bit MUX (Inv)	1.65
74LS363	8-bit Transparent D Type Latch	1.49
74LS364	Octal D Type Flip Flop	2.75
74LS365	Hex Buffer (3-state)	.49
74LS366	Hex Inverter (3-state)	.49
74LS367	Quad 2-input Hex Buffer (3-state)	.49
74LS368	Quad 2-input Hex Inverter (3-state)	.49
74LS373	3-state Octal D Type Flip Flop	1.29
74LS374	3-state Octal D Type Flip Flop	1.29
74LS375	Quad Bistable Latch	.69
74LS377	Octal D Type Flip Flop w/Enable	1.49
74LS378	Hex D Type Flip Flop	1.49
74LS379	Quad D Type Flip Flop	1.49
74LS385	Quad Serial Adder/Subtractor	1.95
74LS386	Quad Exclusive-OR	.65
74LS390	Dual Decade Counter (Ripple)	1.19
74LS393	Dual 4-bit Binary Counter	1.19
74LS395	4-bit Parallel-In/Parallel-Out SR	1.70
74LS399	Quad D Type Flip Flop	2.95
74LS424	Clock Generator	2.95
74LS574	A to D Converter	6.95
74LS629	Dual Voltage Controlled Osc	4.75
74LS640	Octal Bus transceiver	3.95
74LS641	Octal Bus transceiver	3.95
74LS645	Octal Bus transceiver	8.95
74LS668	Decade Up/Down Counter	1.75
74LS669	Binary Up/Down Counter	1.89
74LS670	16-bit (4x4) Register File	1.49
74LS682	8-bit Comparator	5.95
74LS684	8-bit Comparator	5.95
74LS686	8-bit Comparator	5.95
74LS688	8-bit Comparator	5.95
25LS2518	Quad D Type Flip Flop	4.75
25LS2519	Quad D Type Flip Flop	4.75
25LS2520	Octal D Type Flip Flop	5.75
25LS2569	Binary Up/Down Counter	4.75
26LS31	Quad Driver receiver	4.75
26LS32A	Quad Driver receiver	4.75
81LS95	3-state Octal Buffer	1.49
81LS96	3-state Octal Inverter	1.49
81LS97	3-state Octal buffer	1.49
81LS98	3-state Octal Inverter	1.99
8304	Octal Driver	4.75

KEYBOARD ENCODERS

AY32376	88x3x9 ASCII	\$13.75
AY33600	90 Key 4 Mode	13.75
MM5740	90 Key Encoder	19.95
74C922	16 Key Encoder	4.95
74C923	20 Key encoder	5.95

EPROMS

2764	8Kx8 3-state	\$12.95
2732	4Kx8 3-state	7.95
2716/2516	2Kx8 3-state (5V)	5.95
TMS2716	5V, 12V	17.95
2758	5 Volt 450nS	5.50
2708	450nS	3.65
1702A		7.50
MM5203AQ		14.50
MM5204Q		9.95
2532	32K (5V) EPROM	8.95
27128		49.95
27C16	2Kx8 CMOS EPROM	8.95
27C32	4Kx8 CMOS EPROM	12.95

BI-POLAR PROMS

P/N	PINS	ORGANIZATION	PRICE
74S188	16	32x8 (OC)	\$1.39
74S288	16	32x8 (3-state)	1.89
74S287	16	256x4 (3-state)	1.89
74S387	16	256x4 (OC)	1.89
74S471	20	256x8 (3-state)	5.95
74S472	20	512x8 (3-state)	4.89
74S473	20	512x8 (OC)	4.89
74S474	24	512x8 (3-state)	6.49
74S570	16	512x4(OC)	2.89
74S571	16	512x4 (3-state)	2.89
74S572	18	1024x4 (OC)	4.79
74S573	18	1024x4 (3-state)	4.79
82S23	16	32x8 (OC)	2.79
82S115	24	512x8 (3-state)	7.89
82S123	16	32x8 (3-state)	2.89
82S126	16	256x4 (OC)	3.89
82S129	16	256x4 (3-state)	3.89
82S130	16	512x4 (OC)	5.79
82S131	16	512x4 (3-state)	5.79
82S137	24	1024x4 (3-state)	6.79
82S140	24	512x8 (OC)	6.79
82S141	24	512x8 (3-state)	6.79
82S147	20	512x8 (3-state)	5.89
82S180	24	1024x8 (OC)	9.79
82S181	24	1024x8 (3-state)	9.79
82S184	18	2048x4 (OC)	9.79
82S185	18	2048x4 (3-state)	9.79
82S190	24	2048x8 (OC)	18.79
82S191	24	2048x8 (3-state)	18.79
82S321	24	4096x8 (3-state)	49.95

Many Other PROMS Available!

Please Call for Availability

We reserve the right to substitute manufacturers

See Page 65 for PROM Programming Prices.

BAUD RATE GENERATORS

34702	Harris FSC Baud Rate Gen.	\$13.95
	2.4576 Crystal	5.75
MC14411	Bit Rate Gen. (14 Diff)	11.25
	1.8452 Crystal	5.75
WD1941	Dual Baud Rate Generator	9.95
	5.0688 Crystal	4.95
COM5016	Dual Baud Rate Generator	15.95
	5.0688 Crystal	4.95
COM8116	5V Dual Baud Rate Generator	21.95
	5.0688 Crystal	4.95

COUNTERS/TIMERS

ICM7045	CMOS Precision Timer	\$23.95
ICM7207	Oscillator Controller	7.50
ICM7208	Seven Decade Counter	18.95
MK5007	Ctr/Display 7-segment BCD	8.95
MK5009	Counter Time Base	11.95
11C90	Divide by 10/11 Prescaler	19.95
95H90	Hi-speed 10/11 Prescaler	19.95

FIFO

AM9813	9x32 FIFO	\$10.95
AM3341	64x4 FIFO	6.50
AM2841	64x4 FIFO	11.95
WD1502	40x9 FIFO	9.95
WD1510	128x9 FIFO	19.95
3351	40x9 FIFO	22.95
9403	16x4 FIFO	24.95
82S09	FIFO	24.95
67401	FIFO	19.95

UART/USRTS

AY51013A	30K Baud (-5V, -12V)	\$4.95
AY51014A/1612	30K Baud (5V to 14 V)	6.95
AY51015/1863	30K Baud (5V)	6.95
TR16028	30K Baud (-5V, -12V)	3.95
TR1402B	20K Baud (-5V, -12V)	7.95
IM6402	200K Baud (5V) CMOS	7.95
IM6403	200K Baud (10V) CMOS	8.95
INS8250	USRT	14.95
AMI2350	USRT	9.95
TR1671A	ASTROS	24.95
TR1472	PSAR	9.95
TR1482	PSAT	9.95

MISCELLANEOUS

8000 SERIES

8090N	Dual 2-input NAND Inverter	\$1.89
8091N	Quad 2-input NAND Buffer	.69
8092N	Dual 5-input NAND	.69
8093N	3-state Quad Buffer	.49
8094N	3-state Quad Buffer	.49
8095N	3-state Hex Buffer	.75
8096N	3-state Hex Buffer	.75
8097N	3-state Hex Buffer	.99
8098N	3-state Hex Inverter	.99
8121N	3-state 6-channel Digital Multi	.99
8122N		.99
8123N	3-state Quad 2-input Multi	1.49
8130N	10-bit Comparator	2.75
8131N	6-bit Comparator	2.95
8200N	4-bit Comparator	2.95
8202N	10-bit Register	10.95
8203N	10-bit Register	10.95
8210N	8-channel Digital Switch	3.10
8211N	8-channel Digital Switch	2.75
8214N	3-state Dual 4 to 1 Multiplexer	1.79
8220N	Parity Generator/Checker	1.60
8225N	64-bit RAM (16x4)	4.95
8230N	3-state Demultiplexer	2.50
8231N	8-input Digital Multiplexer	2.95
8233N	2-input 4-bit Digital Multiplexer	1.95
8234N	2-input 4-bit Digital Multiplexer	1.99
8235N	2-input 4-bit Digital Multiplexer	1.75
8241N	Quad Exclusive OR	1.75
8242N	4-bit Comparator	1.75
8250N	Binary to Octal Decoder	1.95
8251N	BCD to Decimal Decoder	1.95
8262N	9-bit Parity Generator/Checker	3.25
8263N	3-input 4-bit Digital Multiplexer	4.75
8264N	3-input 4-bit Digital Multiplexer	4.50
8266N	2-input 4-bit Multiplexer	2.15

8000 SERIES Cont.

8267N	2-input 4-bit Digital Multiplexer	\$3.75
8269N	4-bit Comparator	4.90
8270N	J-K Flip Flop	2.75
8271N	4-bit Shift Register	1.65
8273N	10-bit Serial-in Parallel-out SR	2.50
8274N	10-bit Parallel-in Serial-out SR	7.50
8276N	8-bit Shift Register	5.25
8277N	Dual 8-bit Shift Register	2.60
8280N	Presetable Decade Counter	.79
8281N	Presetable Binary Counter	.79
8288N	Presetable Divide by 12 Counter	1.30
8290N	Hi-speed Presetable Decade Counter	.99
82S90N	Schottky Decade Counter	3.95
8291N	Presetable Hi-speed Decade Counter	.99
82S91N	Schottky Counter	3.95
8292N	Low Power Presetable Decade Ctr	2.45
8293N	Low Power Presetable Binary Ctr	2.45
8511N	Dual Gated D Type Flip Flop	.90
8512N	Dual Gated J-K Flip Flop	1.90
8520N	Modulo N Divider	4.95
8542N	3-state Quad I/O	6.95
8544N	Quad Contact-Bounce Eliminator	2.40
8551N	3-state Quad D Type Flip Flop	1.75
8552N	3-state Deade Counter/Latch	3.95
8553N	3-state 8-bit Latch	3.75
8554N	3-state Binary Counter/Latch	2.25
85L54N	3-state Low Power	2.25
8556N	Synchronous Binary Counter	3.75
8599N	3-state 64-bit RAM	4.50
8800N	Dual TTL/MOS Translator	6.95
8802N	Dual MOS Sense Amp	1.69
8806N	Dual MOS Sense Amp	2.95
8808N	8-input NAND Gate	1.29
8810N	Quad 2-input TTL to MOS Interface	.55
8811N	Quad 2-input TTL to MOS Interface	.99

8000 SERIES Cont.

8812N	TTL MOS Hex Inverter	\$.55
8815N	Dual 4-input NOR Gate	.95
8816N	Dual 4-input NAND Gate	1.20
8820N	Dual Line Receiver	1.50
8822N	Dual J-K Flip Flop	4.00
8825N	Multi. Input J-K Binary	1.75
8826N	Dual Hi-speed J-K Binary	3.15
8828N	Dual Hi-speed D-type Binary	2.25
8829N	AND Input J-K Binary	1.39
8830N	Dual Differential Line Driver	1.90
8831N	3-state Line Driver	2.60
8832N	3-state Line Driver	2.60
8833N	3-state Quad Transceiver	1.99
8834N	Quad 3-state Transceiver	2.49
8835N	Quad 3-state Transceiver	1.99
8836N	Quad NOR Unified Bus Receiver	.60
8837N	Hex Unified Bus Receiver	1.35
8838N	Quad Unified Bus Transceiver	1.45
8840N	Dual AND/OR Inverter	1.10
8844N	7-digit LED Driver	1.95
8855N	Dual 4-input Power Gate	1.10
8859N	TTL Compatible Hex LED Driver	4.50
8861N	5-segment	4.00
8864N	9-digit LED Driver	2.49
8865N	8-digit LED Driver	1.90
8866N	7-digit LED Driver	2.49
8875N	3-state 4-bit Multiplexer	7.90
8880N	H-V, 7-segment Decoder/Driver	1.20
8884N	H-V, 7-segment Decoder/Driver	2.89
8885N	MOS to Sperry Display Driver	6.90
8887N	8-in, 8-out Panaplex Anode Driver	1.25
8889N	8-in, 8-out Panaplex Cathode Driver	1.29
8890N	TV Vertical Count Down	1.25
8895N	Dual MOS Sense Amp	1.25

MISC Cont.

8TXX SERIES

8T01	Nixie decoder Driver	\$3.50
8T09	3-state Quad Bus Driver	4.25
8T10	Quad D Type Register	4.25
8T13	Dual Line Driver	3.99
8T14	Triple Line Receiver	2.95
8T15	Dual EIA Receiver	3.75
8T16	Dual EIA Driver	3.75
8T20	Bi-directional One Shot	3.75
8T22	One Shot	1.95
8T23	Dual Line Driver IBM	2.99
8T24	Triple Line Receiver IBM	2.99
8T26	3-state Quad Bus Transceiver	2.20
8T28	Quad Bus Transceiver	2.40
8T37	Single End Line Receiver	2.30
8T38	Single End Line Transceiver	2.30
8T80	Quad 2-input NAND Interface	2.75
8T90	Hex Inverter Interface Element	2.75
8T93	High Speed Hex Inverter	3.50
8T94	Buffer/Inverter	1.95
8T95	High Speed Hex Buffer Inverter	1.95
8T96	High Speed Hex Buffer Non-Inv	1.49
8T97	High Speed Buffer	1.49
8T98	High Speed Buffer	1.49

9000 SERIES

9000N	J-K Master/Slave Flip Flop	\$.39
9L00N	Low Power J-K Flip Flop	.25
9002N	Quad 2-input NAND	.39
9003N	Triple 3-input NAND	.39
9004N	Dual 4-input NAND	.39
9005N	Dual AND Gate	.39
9006N	Dual 4 Expander	.39
9007N	8-input NAND Gate	.39
9009N	Dual 4-input NAND Buffer	.49
9016N	Hex Inverter	.39
9022N	Dual J-K Master/Slave Flip Flop	.99
9024N	Dual J-K Pos. Edge Flip Flop	.99
9158	CTL	4.95
9159	CTL	4.95
9160	CTL	6.95
9300	4-bit Shift Register	2.75
93L00	Static Shift Register, 5Mhz	2.95
9301	BCD to Decimal Decoder	2.75
9304	Dual Full Adder	3.25
9305	4-bit Binary Counter	3.95
9307	BCD to 7-segment Decoder Driver	4.60
9308	Dual 4-bit Latch	2.95
93L08	Dual 4-bit Latch	2.95
9309	Arithmetic Overflow detect	2.95
93L09	Arithmetic Overflow Detect	2.95
9310	Decade Counter	2.75
9311	4-6 Line Decoder/Demultiplexer	3.25
93L11	4-6 Line Decoder/Demultiplexer	3.45
9312	8-input Multiplexer	2.75
93L12	8-input Multiplexer	2.95
9314	Quad Multifunction Latch	1.95
9316	Binary Synchronous Counter	2.75
93L16	Binary Synchronous Counter	2.95
9318	8-input Priority Encoder	2.75
9321	Dual 1 of 4 Decode/Demultiplexer	2.75
9322	Quad 2-input Multiplexer	2.75
9324	4-bit Magnitude Comparitor	2.75
93L24	4-bit Magnitude Comparitor	2.95
9328	8-bit Serial In/Out Shift Reg.	2.90
9334	8-bit Addressable Latch	3.75
93410	256 x 1 Static RAM	6.95
93411	256 x 1 Static RAM	6.95
93412	256 x 4 Static RAM	6.95
93415	1024 x 1 Static RAM	4.95
93419	64 x 9 Static RAM	8.95
93421	256 x 1 Static RAM	6.95
93422	256 x 4 Static RAM	7.95
93425	1024 x 1 Static RAM	4.95
9368	Display Driver/Decoder	4.25
9374	Display Driver/Decoder	4.95
9401	TTL/LSI Redundancy Check	8.95
9403	FIFO 16 x 4	14.95
95H03		2.95
9528	Dual D Type Flip Flop	4.95
95H90	Divider	9.95
9601	Retrig Monostable Multivibrator	.69
9602	Dual Retrig. Monostable Multi Shift Register	1.35
96S02		2.60
96L02	Dual Retrig. Monostable Multi	2.40
9614	Line Driver/Receiver	3.95
9615	Line Driver/Receiver	3.95
9616	Line Driver/Receiver	3.95
9620	Line Driver/Receiver	3.95
9621	Line Driver/Receiver	3.95
9624	Dual 2-input NAND Translator	3.95
9625	Dual MOS to TTL Translator	3.95
9637	Dual Rec EIA RS422/423	4.75
9645	(3245) Quad TTL to MOS Driver	9.95
9667	Seven Segment Driver	2.75

OPTO ELECTRONICS

OPTOELECTRONICS DISPLAYS

TIL & 5082/7300 TYPE		MAN 2A		FND 357		FND 500			
P/N	SIZE	CLR	DESCRIPTION	PRICE	P/N	SIZE	CLR	DESCRIPTION	PRICE
DL704/MAN74	.300	Red	Comm. Cathode (RHDP)	.99	MAN2A	.320	Red	Array	5.95
DL707/MAN72	.300	Red	Comm. Anode (LHDP)	.99	MAN10A	.270	Red	Alpha Numeric	8.95
FND357	.357	Red	Comm. Cathode (RHDP)	.99	XAN3061	.300	Red	Comm. Anode (RHDP)	1.25
FND	.500	Red	Comm. Cathode (+1)	.99	XAN3062	.300	Red	Comm. Anode (LHDP)	1.25
FND503 (500)	.500	Red	Comm. Cathode (RHDP)	.99	XAN3063	.300	Red	Overflow, CA, (LHDP)	1.25
FND507 (510)	.500	Red	Comm. Anode (RHDP)	.99	XAN3064	.300	Red	Comm. Cathode (RHDP)	1.25
FND508	.500	Red	Comm. Anode (+1)	.99	XAN3051	.300	Green	Comm. Anode (RHDP)	1.99
FN803 (800)	.800	Red	Comm. Cathode (RHDP)	1.75	XAN3052	.300	Green	Comm. Anode (LHDP)	1.99
VND807 (810)	.800	Red	Comm. Anode (RHDP)	1.75	XAN3053	.300	Green	Overflow CA, (LHDP)	1.99
HP5082-7340	.600	Red	4x7 Hexidecimal (RHDP)	20.95	XAN3054	.300	Green	Comm. Cathode, (RHDP)	1.99
HP5082-7300	.600	Red	4x7 Sgl Digit (RHDP)	18.95	XAN3081	.300	Yellow	Comm. Anode, (RHDP)	2.10
HP5082-7731	.300	Red	Comm. Anode (RHDP)	.99	XAN3082	.300	Yellow	Comm. Anode, (LHDP)	2.10
TIL305	—	Red	Array 5x7	7.95	XAN3083	.300	Yellow	Overflow CA, (LHDP)	2.10
TIL308	.270	Red	Numerical Display	10.95	XAN3084	.300	Yellow	Comm. Cathode (RHDP)	2.10
TIL309	.270	Red	Numerical Display	9.95					
TIL311	.270	Red	4x7 Hexidecimal	10.95					

RED GREEN LEDS YELLOW AMBER

T 1 3/4 JUMBO STANDARD STYLE			
DIFFUSED-BI-COLOR RED GREEN REVERSE POLARITY TO CHANGE COLOR			
P/N	1-99	100-999	
XC556R	10/1.00	.10	
XC556G	5/7.9	.15	
XC556Y	5/7.9	.17	
XC556C	5/7.9	.18	
XC5564	5/7.9	.18	
POINT-SOURCE 1%			
P/N	1-99	100-999	
XC554R	6/1.00	.15	
XC5546	5/1.00	.19	
XC554Y	5/1.00	.19	
XC554C	5/1.00	.19	
WIDE-ANGLE DIFFUSED 1%			
P/N	1-99	100-999	
XC111R	6/1.00	.19	
XC111G	4/1.00	.19	
XC111Y	4/1.00	.19	
5 VOLT RESISTOR LED			
P/N	1-99	100-999	
XC4850-5VR	2/1.19	.49	
XC4850-5VY	2/1.49	.66	
XC4850-5VG	2/1.49	.66	

125" DIAMETER MINI SIZE LEDS			
DIFFUSED .125 dia.			
P/N	1-99	100-999	
XC209R	10/1.00	.09	
XC209G	5/1.00	.18	
XC209Y	5/1.00	.18	
5" - 8" LEADS			
6V MINI LAMP INCANDESCENT			
P/N	DESCRIPTION	1-99	100-999
LMB-6VC	Clear	10/1.00	.09
LMB-6VR	Red	8/1.00	.10
POINT SOURCE-RED			
P/N	DESCRIPTION	1-99	100-999
MV50	Mini Led	10/1.00	.09
PHOTO TRANSISTOR GENERAL PURPOSE			
P/N	DESCRIPTION	1-99	100-999
FPT-C		2/1.00	.45
BAR GRAPH DIODE RED-DIFFUSED			
P/N	DESCRIPTION	1-99	100-999
LBL-R		2/1.00	.45
MOUNTING CLIPS			
P/N	DESCRIPTION	1-99	100-999
LMC-556		10/1.00	.07

OPTO ISOLATORS

Type	Isol. Volts	Trans Ratio %Min.	Min. BVceo Volts	Net ea.
TRANSISTOR OUTPUT				
4N25	2500	20	30	.65
4N26	1500	20	30	.65
4N27	1500	10	30	.85
4N28	500	10	30	.85
4N38	1500	20	80	.98
MCT2	1500	20	50	.59
MCT6	150	20		1.29
MCT66	1500	15		.55
TIL117	2500	50		.79
DARLINGTON TRANSISTOR OUTPUT				
4N29	2500	100	30	.98
4N30	1500	100		.89
4N31	1500	50	30	.89
4N32	2500	500	30	.98
4N33	1500	500	30	.89
SPECIAL: SPX33 OPTOISOLATER				5/1.00

OPTO SENSOR

Model OPB 813		
Industry Standard Optical Limit Switch		\$2.95
LEGEND		
R = Red	RHDP = Right Hand Decimal Pt.	
Y = Yellow	LHDP = Left Hand Decimal Pt.	
G = Green	CA = Common Anode	
C = Clear	CC = Common Collector	
A = Amber		
LITRONIX RGB 1000		
10 Segment bar display (red)		
20 pin pkg.		1.25 ea.

IC'S/OPTO

CMOS

4000

CD4000	Dual 3-input NOR Gate + Inv.	\$.25
CD4001	Quad 2-input NOR Gate	.25
CD4002	Dual 4-input NOR Gate	.29
CD4006	18 Bit Shift Register	.85
CD4007	Dual Complimentary Pair	.29
CD4008	4-Bit Full Adder w/Parallel	1.39
CD4009	Hex Inverting Buffer	.38
CD4010	Hex Buffer	.38
CD4011	Quad 2-input NAND Gate	.29
CD4012	Dual 4-input NAND Gate	.25
CD4013	Dual D Flip Flop	.35
CD4014	8-Bit Shift Register	.75
CD4015	Dual 4-Bit Shift Register	.35
CD4016	Quad Bilateral Switch	.35
CD4017	Decade Counter Divider	.75
CD4018	Presetable/Divide by "N" Ctr	.75
CD4019	Quad AND/OR Select Gate	.39
CD4020	14-Bit Ripple Carry Ctr	.75
CD4021	8-Bit Shift Register	.75
CD4022	Divide-by-8 Counter Divider	.75
CD4023	Triple 3-input NAND Gate	.29
CD4024	7-Bit Binary Counter	.65
CD4025	Triple 3-input NOR Gate	.22
CD4026	Decade Counter	2.30
CD4027	Dual JK Flip Flop	.42
CD4028	BCD-to-Decimal Decoder	.69
CD4029	Presetable Up/Down Counter	.75
CD4030	Quad EX-OR Gate (74C86)	.39
CD4031	64-Bit Shift Register	6.25
CD4032	Triple Adder	2.15
CD4034	8-Bit Shift Register	1.90
CD4035	4-Bit Parallel In/Out S/R	.89
CD4037	Triple AND/OR	1.95
CD4040	12-Bit Binary/Ripple Counter	.79
CD4041	Quad True/Compliment Buffer	.79
CD4042	Quad D Latch	.65
CD4043	Quad 3-state NOR R/S Latch	.75
CD4044	Quad 3-state NAND R/S Latch	.75
CD4046	Phase-Locked Loop	.85
CD4047	Monostable-Astable Multivibrator	.89
CD4048	Expandable 8-input Gate	.79
CD4049	Hex Inverting Buffer	.35
CD4050	Hex Buffer	.35
CD4051	Single Channel Multiplexer	.79
CD4052	Differential 4-Channel MUX	.79
CD4053	Triple 2-Channel Multiplexer	.75
CD4054	4-Line LCD Driver	1.89
CD4055	BCD to LCD	3.95
CD4056	BCD to 7 Segment	2.90
CD4059	Programmable Divide by "N"	7.70
CD4060	14-Stage Ripple Counter	.85
CD4063	4-Bit Magnitude Comparater	1.79
CD4066	Quad Bilateral Switch	.38
CD4068	8-input NAND Gate	.38
CD4069	Hex Inverter (MM74C04)	.28
CD4070	Quad Exclusive-OR (74C86)	.38
CD4071	Quad 2-input OR Gate	.29
CD4072	Buffered-Dual 4-input OR Gate	.28
CD4073	Triple 3-input AND Gate	.28
CD4075	Triple 3-input OR Gate	.28
CD4076	3-state Quad D FF (74C173)	.75
CD4077	Quad Exclusive-OR	.89
CD4078	8-input NOR Gate	.49
CD4081	Quad 2-input AND Gate	.28
CD4082	Buffered Dual 4-input AND Gate	.28
CD4085	Dual 2-Wide 2-input AOI	1.15
CD4089	Binary Rate Multiplier	2.95
CD4093	Quad 2-input NAND Schmitt Trig	.48
CD4098	Dual Multivibrator	1.95
CD4099	8-Bit Addressable Latch	2.25
CD40103	Preset. 8-Bit Binary Down Ctr	1.89
CD40104	4-Bit Parallel In/Out Shift Reg.	2.49
CD40106	Hex Schmitt Trigger (74C14)	1.65
CD40160	Sync Decade Counter (74C160)	2.39
CD40161	Sync Binary Counter (74C161)	2.39
CD40162	Fully Sync Decade Ctr (74C162)	2.39
CD40163	Fully Sync Binary Ctr (74C174)	2.39
CD40174	Hex D Flip Flop (74C163)	2.75
CD40175	Quad D Flip Flop (74C175)	2.75
CD40192	Sync Up/Down Decade (74C192)	2.39
CD40193	Sync Up/Down Binary (74C193)	2.39
CD40194	4-Bit-dir. Shift Register	2.39
CD40195	4-Bit Parallel SR (74C195)	2.39
CD4501	Triple Gate	.39
CD4502	Strobed Hex	1.65
CD4503	Hex Bus Driver	.39
CD4506	Dual Exp. AOI Gate	.99
CD4507	Quad EX-OR Gate (74C86)	.95
CD4508	Dual 4-Bit Latch	3.95
CD4510	BCD Up/Down Counter	.85
CD4511	BCD-to-7-segment Decoder	.85
CD4512	8-Channel Data Selector	.85
CD4514	4-Bit Latch 4-to-16 Line	1.69
CD4515	4-Bit Latch 4-to-16 Line	1.69

4000 Cont.

CD4516	Binary Up/Down Counter	\$.95
CD4518	Dual BCD Up Counter	.95
CD4519	4-Bit AND/OR Selector	.37
CD4520	Dual Binary Up Counter	.75
CD4522	Programmable Dived by "N"	2.99
CD4526	Programmable Dived by "N"	1.19
CD4527	BCD Rate Multiplier	3.95
CD4528	Dual Retriggerable Multivibrator	1.15
CD4529	Dual 4-Channel Analog Data Sel.	1.15
CD4531		1.69
CD4536	Programmable Timer	4.50
CD4538	Dual Precision Mono. Multivib.	1.15
CD4541	Oscillator/Programmable Timer	1.15
CD4543	BCD-to-7-segment Decod. (LCD)	1.19
MC4551	Switch with Driver	2.49
CD4555	Dual Binary 1 of 4 Decoder	1.49
CD4556	Dual Binary 1 of 4 Decoder (Inv)	1.15
CD4562	128-Bit Static Register	6.80
CD4566	Industrial Time Base	1.35
CD4572	Hex Gate	.49
CD4580	4 x 4 Multiport Register	3.75
CD4581	4-Bit Arithmetic Logic Unit	3.75
MC4582	Look Ahead Carry Block	2.49
CD4583	Dual Schmitt Trigger	2.40
CD4584	Hex Schmitt Trigger	.55
CD4585	4-Bit Comparator	1.90
CD4723	Dual 4-Bit Addressable Latch	1.15
CD4724	8-Bit Addressable Latch	1.15
CD4725	64-Bit 3-state RAM (74C89)	5.70
MC14409	Binary to Phone Pulse Conv.	13.95
MC14410	2 of 8 Tone Encoder	13.95
MC14411	Bit Rate Frequency Generator	11.95
MC14412	Universal Low Speed Modem	13.95
MC14419	2 of 8 Keypad to Binary Encoder	7.95
MC14433	3 1/2 Digit A/D Converter	13.95
MC14490	Hex Contact Bounce Eliminator	4.95

74HC00

74HC00	Quad 2-input NAND Gate	\$.75
74HC02	Quad 2-input NOR Gate	.75
74HC04	Hex Inverter (Unbuffered)	.75
74HC08	Quad 2-input AND Gate	.75
74HC10	Triple 3-input NAND Gate	.75
74HC20	Dual 4-input NAND Gate	.75
74HC27	Triple 3 NOR Gate	.75
74HC74	Dual D Flip Flop	.99
74HC75	Quad Latch	.99
74HC86	Quad 2-input Exclusive-OR	.99
74HC109	Dual JK Flip Flop	1.39
74HC138	3 to 8 Line Decoder	1.49
74HC139	Expandable Dual 2/4 Decoder	1.49
74HC147	10/4 Priority Encoder	1.19
74HC151	8-Channel Digital Multiplexer	1.19
74HC157	Quad 2-input Multiplexer	1.19
74HC160	Synchronous Decade Counter	1.79
74HC161	Synchronous Binary Counter	1.79
74HC164	8-Bit Serial Shift Register	1.79
74HC174	Hex D Flip Flop with Clear	1.39
74HC175	Quad D Type Flip Flop	1.39
74HC242	Inverting Quad 3-state Trans.	2.79
74HC243	Quad 3-state Trans.	2.79
74HC251	3-state 8-Channel Multiplexer	1.19
74HC266	Quad 2-input Exclusive-OR	.99
74HC280	9-Bit Odd/Even Parity Gen	4.95
74HC373	3-state Octal D Latch	3.95
74HC374	3-state Octal D Flip Flop	3.95
74HC533	3-state Octal D FF (Inv Output)	3.95
74HC534	Octal Type Flip Flop	3.95
74HC4075	Triple 3-input OR Gate	.75
74HC4538	Dual Retriggerable Multivibrator	2.95
74HC4543	BCD to 7 Seg Latch Dec. (LCD)	4.95

PALS

PAL10H8	Octal 10-input AND-OR Array	\$5.95
PAL12H6	Hex 12-input AND-OR Array	5.95
PAL14H4	Quad 14-input AND-OR Array	5.95
PAL10L8	Octal 10-input AND-OR-Inv Array	5.95
PAL12L6	Hex 12-input AND-OR-Inv Array	5.95
PAL14L4	Quad 14-input AND-OR-Inv Array	5.95
PAL16L8	Octal 16-input AND-OR-Inv Array	9.95
PAL16R4	Quad 16-in. Reg. AND-OR Array	9.95
PAL16R6	Hex 16-in. Reg. AND-OR Array	9.95
PAL16R8	Octal 16-in. Reg. AND-OR Array	9.95

74C00

MM74C00	Quad 2-input NAND Gate	\$.29
MM74C02	Quad 2-input NOR Gate	.34
MM74C04	Hex Inverter	.29
MM74C08	Quad 2-input NAND Gate	.34
MM74C10	Triple 3-input NAND Gate	.34
MM74C14	Hex Schmitt Trigger	.55
MM74C20	Dual 4-input NAND Gate	.34
MM74C30	8-input NAND Gate	.34
MM74C32	Quad 2-input OR Gate	.29
MM74C42	BCD to Decimal Decoder	1.35
MM74C48	BCD to 7 Segment Decoder	1.90
MM74C73	Dual JK Flip Flop	.75
MM74C74	Dual D Flip Flop	.65
MM74C76	Dual JK Flip Flop	.99
MM74C83	4-Bit Binary Full Adder	1.49
MM74C85	4-Bit Comparator	1.90
MM74C86	Quad Exclusive-OR Gate	.39
MM74C89	64-Bit RAM	5.95
MM74C90	Decade Counter	1.10
MM74C93	4-Bit Binary Counter	1.10
MM74C95	4-Bit R-S-L S Register	1.35
MM74C107	Dual JK Flip Flop	.85
MM74C150	16 to 1 Multiplexer	2.49
MM74C151	8-Channel Digital Multiplexer	2.40
MM74C154	4 to 16 Line Decoder	3.39
MM74C157	Quad 2-input Multiplexer	1.99
MM74C160	Sync Decade Counter	1.10
MM74C161	Sync Binary Counter	1.10
MM74C162	Fully Sync Decade Counter	1.10
MM74C163	Fully Sync Binary Counter	1.10
MM74C164	8-Bit Ser. In/Par. Out Shift Reg.	1.39
MM74C165	8-Bit Par. In/Ser. Out Shift reg.	2.39
MM74C173	3-state Quad Flip Flop	.75
MM74C174	Hex D Flip Flop	1.10
MM74C175	Quad D Flip Flop	1.10
MM74C192	Sync Up/Down Decade Ctr	1.45
MM74C193	Sync Up/Down Binary Ctr	1.65
MM74C195	4-Bit Parallel Shift Register	1.30
MM74C200	256-Bit (256x1) RAM	12.95
MM74C221	Dual Monostable Multivibrator	1.89
MM74C240	Octal 3-state Buffer	1.90
MM74C244	Octal 3-state Buffer	1.90
MM74C373	Octal Flow-Through Latch	2.40
MM74C374	Octal D Flip Flop 3-state	2.40
MM74C901	Hex Inverting Buffer (TTL)	.59
MM74C902	Hex Buffer (TTL Interface)	1.25
MM74C903	Hex Inverting Buffer (MOS)	.59
MM74C904	Hex Buffer (MOS Interface)	1.25
MM74C905	Successive Approx. Reg.	12.95
MM74C906	Open Drain Buffer (down)	.59
MM74C907	Open Drain Buffer (Up)	.99
MM74C908	Dual -30V Buffer	1.99
MM74C909	Linear Comparator	2.90
MM74C910	256-Bit (64x4) RAM	12.95
MM74C911	Display Cont 4-Digit 8 Segment	8.95
MM74C912	Display Cont 6 Digit 8 Segment	8.95
MM74C914	Hex Schmitt Trigger	2.95
MM74C915	7 Segment to BCD Decoder	1.10
MM74C917	Display Cont 6 Digit 8 Seg Hex	8.95
MM74C920	1K (256x4) Static RAM	3.95
MM74C921	1K (256x4) Static RAM	3.95
MM74C922	16-Key Kybd Encoder (INS8245)	4.49
MM74C923	20-Key Kybd Encoder (INS8246)	4.95
MM74C925	4-Digit CTR w/MUX D Seg Drv.	5.95
MM74C926	4-Digit CTR w/MUX D Seg Drv.	5.95
MM74C929	1K (1024x1) Static RAM	3.95
MM74C930	1K (1024x1) Static RAM	3.95
MM80C95	3-state Hex Buffer	.39
MM80C97	3-state Hex Buffer (4503)	.39
MC146508	1K (1024x1) CMOS RAM	6.95
MC146518	CMOS RAM	8.95
MC14505	64x1 Static RAM	8.95

CALL FOR VOLUME PRICING

OUTSIDE CALIFORNIA

800-854-8230

IN CALIFORNIA

714-558-8813



ELECTROLYTIC CAPACITORS AXIAL TYPE



P/N	Cap MFD	Working DC Voltage	Pkg./Price	25-99	100-499
CEA - .47	50	3/49	.15	.13	
CEA - 1	16	3/49	.15	.13	
CEA - 1	25	3/59	.16	.14	
CEA - 1	50	3/59	.16	.14	
CEA - 3.3	50	3/49	.14	.12	
CEA - 4.7	16	3/49	.14	.12	
CEA - 4.7	25	3/49	.15	.13	
CEA - 4.7	50	3/59	.16	.14	
CEA - 10	16	3/49	.14	.12	
CEA - 10	25	3/49	.15	.13	
CEA - 10	50	3/59	.16	.14	
CEA - 22	16	3/59	.14	.12	
CEA - 22	25	3/59	.17	.15	
CEA - 22	50	2/49	.23	.20	
CEA - 47	16	3/59	.17	.14	
CEA - 47	25	3/59	.19	.17	
CEA - 47	50	2/49	.23	.21	
CEA - 100	16	2/49	.19	.15	
CEA - 100	25	2/49	.23	.20	
CEA - 100	50	2/75	.35	.32	
CEA - 220	16	2/69	.29	.27	
CEA - 220	25	.49	.33	.31	
CEA - 220	50	.49	.44	.40	
CEA - 470	16	.49	.38	.35	
CEA - 470	25	.49	.46	.43	
CEA - 470	50	.89	.73	.63	
CEA - 1000	16	.69	.65	.59	
CEA - 1000	25	.79	.73	.63	
CEA - 2200	16	.79	.75	.65	

CERAMIC DISC CAPACITORS



P/N	Cap.	V	Pkg/Price	25-99	100-499
CCD-22	22pf	50	7/49	.06	.05
CCD-39	39pf	50	7/49	.06	.05
CCD-47	47pf	50	7/49	.06	.05
CCD-68	68pf	50	7/49	.06	.05
CCD-100	100pf	50	7/49	.06	.05
CCD-220	220pf	50	7/49	.06	.05
CCD-330	330pf	50	7/49	.06	.05
CCD-470	470pf	50	7/49	.06	.05
CCD-.001	.001pf	50	7/49	.06	.05
CCD-.0047	.0047pf	50	7/49	.06	.05
CCD-.01	.01pf	50	7/49	.06	.05
CCD-.022	.022pf	50	6/49	.07	.05
CCD-.033	.033pf	50	6/49	.07	.05
CCD-.047	.047pf	50	6/49	.07	.05
CCD-.1/12	.1pf	12	8/1.00	.12	.05
CCD-.1	.1pf	50	6/1.00	.15	.05

MYLAR CAPACITORS



+ 10% POLYESTER FILM

P/N	Cap.	V	Pkg/Price	24-99	100+
MY.001/100	.001mf	100	.12	.10	.07
MY.0015/100	.0015mf	100	.12	.10	.07
MY.0022/100	.0022mf	100	.12	.10	.07
MY.0047/100	.0047mf	100	.12	.10	.07
MY.01/100	.01mf	100	.12	.10	.07
MY.022/100	.022mf	100	.13	.11	.08
MY.033/100	.033mf	100	.17	.14	.11
MY.047/100	.047mf	100	.21	.17	.13
MY.1/100	.1mf	100	.27	.23	.17
MY.22/100	.22mf	100	.33	.27	.22
MY.33/100	.33mf	100	.39	.32	.26
MY.47/100	.47mf	100	.45	.37	.31

TRIMMER CAPACITORS



P/N	CAPACITANCE	PKG/PRICE
CTC-28	2-8pf	2/1.39
CTC-313	3.5-13pf	2/1.39
CTC-518	5.5-18pf	2/1.39
CTC-725	7-25pf	2/1.39
CTC-735	7-35pf	2/1.39
CTC-1560	15-60pf	2/1.39

Capacitance range may vary slightly, based on current availability of exact range.

MONOLITHIC DISK CAPACITOR



HIGH QUALITY MONOLITHIC CAPACITORS

P/N	Cap.	V	Pkg/Price	25-99	100-499
CMD-.1	.1pf	50	6/1.00	.15	.12
CMD-.01	.01pf	50	6/1.00	.15	.12

DIPPED (Solid) TANTALUM + 20%



P/N	Cap.	Volts	1-24	25-99	100
CST-.1/35	.1mf	35V	.38	.35	.29
CST-.1/50	.1mf	50V	.45	.42	.36
CST-.15/35	.15mf	35V	.38	.35	.29
CST-.22/35	.22mf	35V	.38	.35	.29
CST-.33/35	.33mf	35V	.38	.35	.29
CST-.47/35	.47mf	35V	.38	.35	.29
CST-.68/35	.68mf	35V	.38	.35	.29
CST-1/35	1mf	35V	.38	.35	.29
CST-1/50	1mf	50V	.49	.45	.41
CST-1.5/35	1.5mf	35V	.39	.36	.30
CST-2.2/35	2.2mf	35V	.43	.40	.35
CST-3.3/35	3.3mf	35V	.49	.45	.41
CST-3.3/25	3.3mf	25V	.43	.40	.35
CST-4.7/25	4.7mf	25V	.41	.38	.33
CST-4.7/25	4.7mf	25V	.59	.55	.45
CST-6.8/25	6.8mf	25V	.59	.55	.45
CST-10/25	10mf	25V	.65	.59	.49
CST-10/35	10mf	35V	.89	.79	.63
CST-15/25	15mf	25V	1.10	1.02	.83
CST-22/6	22mf	6V	.59	.49	.39
CST-33/25	33mf	25V	2.60	2.40	1.90
CST-47/25	47mf	25V	3.40	3.20	2.70
CST-100/6	100mf	6V	2.25	1.90	1.60

SILVER DIPPED MICA CAPACITORS



DM15 + 5% TOLERANCE (CMOS TYPE)

P/N	Cap.	V	Pkg/Price	24-99	100+
*DM15-100J	10pf	500	.35	.35	.25
*DM15-220J	22pf	500	.35	.35	.25
*DM15-270J	27pf	500	.35	.35	.25
*DM15-330J	33pf	500	.35	.35	.25
*DM15-470J	47pf	500	.35	.35	.25
*DM15-560J	56pf	500	.35	.35	.25
*DM15-680J	68pf	500	.35	.35	.25
*DM15-820J	82pf	500	.35	.35	.25
*DM15-101J	100pf	500	.35	.35	.25
DM15-121J	120pf	500	.42	.37	.32
*DM15-221J	220pf	500	.49	.42	.35
*DM15-271J	270pf	500	.55	.50	.45
*DM15-331J	330pf	500	.59	.52	.45
*DM15-471J	470pf	500	.60	.55	.50
DM15-561J	560pf	300	.62	.57	.52
*DM15-681J	680pf	300	.65	.60	.55
DM15-821J	820pf	300	.80	.75	.70
*DM15-102J	1000pf	100	.75	.67	.59

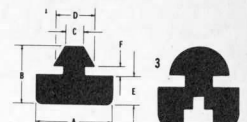
RADIAL TYPE



CER - .47	25	3/49	.13	.12
CER - .47	50	3/59	.16	.14
CER - 1	16	.18	.13	.12
CER - 1	25	3/49	.15	.13
CER - 1	50	3/59	.16	.14
CER - 4.7	16	3/49	.13	.12
CER - 4.7	25	3/49	.13	.12
CER - 4.7	50	3/59	.16	.14
CER - 10	16	3/49	.14	.12
CER - 10	25	.15	.13	
CER - 10	50	3/59	.16	.14
CER - 47	50	2/49	.22	.19
CER - 100	16	3/59	.17	.15
CER - 100	25	2/49	.24	.20
CER - 100	50	.45	.33	.30
CER - 220	16	2/49	.23	.17
CER - 470	25	.45	.31	.28
CER - 1000	16	.65	.54	.50

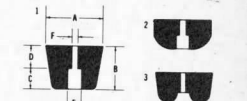
BUMPERS & GROMMETS

BUTTON BUMPERS \$1.69/PACKAGE



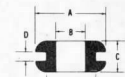
PART NO.	A	B	C	D	E	F	NOMINAL DURO-METER	FIG. NO.
BUT-4181	3/8	1/32	3/16	1/4	1/8	3/32	60	1
BUT-3072	1/2	21/64	9/32	3/8	1/8	3/64	60	1
BUT-4171	1/2	7/16	3/16	1/4	3/16	1/16	55	1
BUT-407	1/2	7/16	1/4	11/32	1/4	1/16	55	3

RECESSED BUMPERS \$1.69/PACKAGE



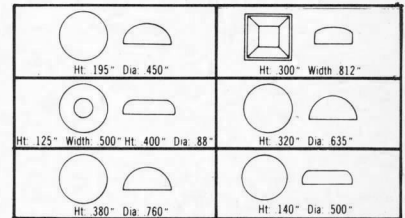
PART NO.	A	B	C	D	E	F	NOMINAL DURO-METER	FIG. NO.
REC-2082	3/8	1/4	3/16	1/16	1/4	5/32	75	1
REC-2082S	5/8	1/2	1/4	1/4	5/16	5/32	71	1
REC-2085S	5/8	5/8	7/16	3/16	5/16	1/47	75	1
REC-2085S	3/4	3/8	3/16	3/16	7/16	3/16	75	1
REC-2095S	15/16	5/8	7/16	3/16	7/16	1/32	75	1
REC-2075	1/2	1/4	1/8	1/8	1/4	1/8	75	2
REC-2085S	3/4	3/8	3/16	3/16	5/16	5/32	75	2
REC-2085	13/16	1/2	1/4	1/4	5/16	5/32	75	2
REC-2095S	15/16	3/8	3/16	3/16	3/8	5/32	75	3

GROMMETS \$1.69/PACKAGE

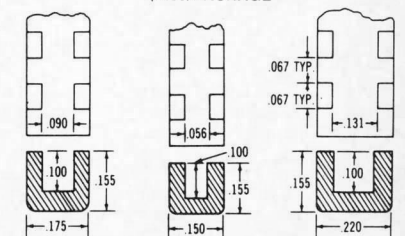


PART NO.	A	B	C	D	E	NOM DURO-METER
G0B-210	1/32	1/8	3/16	3/16	1/4	65
G0B-215	7/16	3/16	7/32	1/16	5/16	65
G0B-217	1/2	3/16	7/32	1/16	3/8	65
G0B-219	17/32	7/32	13/32	3/32	11/32	60
G0B-220	9/16	1/4	1/4	1/16	3/8	65
G0B-221	9/16	9/32	1/4	1/16	3/8	65
G0B-3251	5/8	1/4	3/8	1/8	3/8	50
G0B-3252	5/8	5/16	1/4	1/16	7/16	65
G0B-225	5/8	3/8	1/4	1/16	1/2	65
G0B-1101-1	3/4	3/8	1/2	1/8	17/32	60
G0B-230	13/16	1/2	9/32	1/16	5/8	65
G0B-1102-2	1-1/16	1/2	11/32	1/8	13/16	65

MOLDED POLYURETHANE ADHESIVE BACKED BUMPERS \$1.69/PACKAGE (SPECIFY BLACK OR WHITE)



CATERPILLAR GROMMETS \$1.69/PACKAGE



PART # CAT-2 For Metal Thickness: .052-.085
 PART # CAT-1 For Metal Thickness: .015-.052
 PART # CAT-3 For Metal Thickness: .085-.128

MACHINE BUMPERS \$1.69/PACKAGE



PART NO.	A	B	C	SCREW SIZE	NOMINAL DURO-METER
MAC-51	1/2	1/4	1/4	8-32	75
MAC-82	5/8	5/16	1/4	8-32	75
MAC-75	3/4	3/8	1/4	8-32	75
MAC-87	7/8	1/2	1/2	10-32	75
MAC-100	1	1/2	1/2	10-32	75
MAC-112	1-1/8	1/2	1/2	10-32	75

LINEAR IC's

LINEAR IC'S

FAIRCHILD

FPQ2222	Transistor Array	\$1.95
FPQ2369	Transistor Array	2.25
FPQ2907	Transistor Array	1.95
FPQ3724	Transistor Array	1.95
FPQ3725	Transistor Array	1.95
FSA2706	Transistor Array	2.95
FSA2719	Transistor Array	2.95
LM702H	Wideband DC Amp	2.99
LM709CH	Op Amp	.75
LM709N	Op Amp	.40
LM710CH	Voltage Comparator	.95
LM710N	Voltage Comparator	.65
LM711CH	Dual Comparator	1.10
LM711CN	Dual Comparator	.69
LM715DC	Hi-Speed Op Amp	1.89
LM723CH	Voltage Regulator	.55
LM723CN	Voltage Regulator	.55
LM725CH	Instrumentation Op Amp	2.75
LM725CN	Instrumentation Op Amp	3.00
LM733CH	Differential Video Amp	1.15
LM733CN	Differential Video Amp	.95
LM734H	Comparator	1.69
LM739N	Dual Op Amp	1.69
LM741CH	Op Amp	.49
LM741CN/N	Op Amp (8 or 14 pin)	.32
LM747CH	Dual Op Amp	.89
LM747N	Dual Op Amp	.65
LM748CH	Op Amp	.55
LM748N	Op Amp (8 pin)	.55
LM760N	Hi-Speed Differential Comp	2.90
LM767N	FM Multiplex Decoder	4.50
LM777N	Op Amp	4.50
LM1014N	Motor Speed Control	1.10
UA771	Op Amp	2.45

RCA Solid State

CA3001	Video RF/IF Amp	\$1.99
CA3010H	6 Volt Op Amp	.75
CA3011	Video RF/IF Amp	1.99
CA3013H	Band Amp Discrim. (MC1355)	1.99
CA3015	Wide Band Op Amp	1.99
CA3018	Darlington Transistor Array	1.99
CA3023H	Low Power Video Amp	3.10
CA3035H	Wide Band Amp	5.70
CA3039H	Diode Array (UA3039)	1.19
CA3045	Transistor Array	2.49
CA3046N	Transistor Array (ULN2045)	.85
LM3053H	Differential RF/IF Amp	.85
CA3059N	Zero Voltage Switch	3.10
CA3050N	Variable Op Amp Array	3.10
CA3065N	TV FM Sound System	1.40
CA3075	FM IF Amp Detector	2.95
CA3080E	Operational Transcond Amp	.75
CA3080H	Operational Transcond Amp	1.10
CA3081N	Com Emit NPN Array (ULN2081)	1.40
CA3082N	Com Col NPN Array (ULN2082)	1.40
CA3083N	Trans. Array NPN (ULN2083)	1.40
CA3086N	Trans. Array NPN (ULN2086)	.65
CA3089N	FM/IF System (ULN2289)	1.60
CA3094	Power Amp	2.95
CA3096N	NPN/PNP Trans. Array	1.10
CA3097	T/T Array	2.95
CA3130E	Super CMOS Op Amp	1.40
CA3130T	Super CMOS Op Amp	1.89
CA3140E	Bi-MOS Op Amp	1.39
CA3146E	High Voltage Trans. Array	1.79
CA3160T	Bi-MOS Op Amp	1.80
CA3189E	FM/IF System	1.50
CA3401N	Quad Amp (LM3900N)	.55
CA3600N	COS MOS Trans Array	3.70

SPRAGUE

ULN2001N	Driver 7 Channel MOS/TTL	\$1.25
ULN2002	Driver 7 Channel MOS/TTL	1.75
ULN2003A	7 Channel CMOS/TTL (MC1413)	.65
ULN2004	Driver 7 Channel MOS/TTL	1.29
ULN2064	Quad Darlington Switch	2.95
ULN2068	Quad Darlington Periph Driver	1.95
ULN2501T	Binary Up/Down Counter	2.95
ULN2501N	Binary Up/Down Counter	2.95

FAIRCHILD



MOTOROLA

MC1437	Dual 709	\$1.95
MC1455	Timer	1.00
MC1596G	Modulator/Demodulator	1.95
MC1650	Dual Analog/Digital Comp	2.95
MC1660	Dual 4 Input OR/NOR Gate	2.95
MC3232P	4K Dynamic RAM Refresh	6.95
MC3242P	16K Dynamic RAM Refresh	6.95
MC3302	Quad Comparator	1.19
MC3401	JFET Input Op Amp	.79
MC3403P	Op Amp	1.10
MC3423N	Overvoltage Protector	1.50
MC3440P	Quad GPIB Transceiver	2.90
MC3446P	Quad GPIB Transceiver	2.90
MC3448P	Lin-Octal GPIB Transceiver	3.65
MC3456P	Dual 555 Timer	.95
MC3459P	Quad Address Driver	2.95
MC3460	Quad NMOS Memory Driver	2.95
MC3470P	Floppy Disk Read Amp	8.25
MC3480P	Dynamic Memory Controller	8.25
MC4741N	Dual 741 Op Amp	1.75
MC4741H	Dual 741 Op Amp	1.25
UA3045	Transistor Array	1.25



SILICON GENERAL

SG3524N	Switching Regulator	\$3.95
SG4501T	Dual Adjustable Regulator	3.95
RC4131T	High Gain Amp	2.95
RC4131N	High Gain Amp	2.95
RC4136N	Quad 741	1.10
RC4151CN	Frequency/Voltage Converter	1.90
RC4194N	Dual Adjustable Regulator	2.80
RC4194TK	Dual Tracking Regulator	3.85
RC4195TK	Dual Fixed Regulator	3.90

MISCELLANEOUS

AD542	Analog Op Amp	\$ 4.25
DG181	Off/On RF Switch	3.75
DG182	JFET	3.75
DG508	Analog Multiplexer	5.75
OP12CJ	Op Amp	2.95
SL652	Phase Locked Loop	3.95
SSI201	Dual Tone Receiver Circuit	9.95
5041-5	Analog Switch w/Driver	3.95

MODEM CHIP AMD

AM7910	24 Pin "World Modem Chip" (1200 Baud 5V)	\$79.95
--------	--	---------

VOICE CHIPS

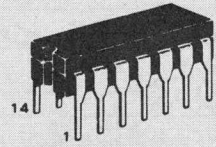
SC-01	22 Pin VotraxX	\$44.95
DT1050	DIGITALKRX 3 Chip Set	39.95

NOTE: ACP is not an authorized dealer for AMD, EXAR, Fairchild, Motorola, National, RCA, Signetics, Silicon General, Sprague or Texas Instruments.

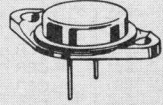
VOLTAGE REGULATORS

LM300H	Positive Regulator	\$.95
LM304H	-40-0.0V 25mA TO-5	1.80
LM305H	+4.5-40V 25mA TO-5	.95
LM309H	+5V 200mA TO-5	1.89
LM309K	+5V 1.0A TO-3	1.25
LM317K	+1.2-37V 1.5A TO-3	3.89
LM317LZ	100mA TO-92 Adjustable	.75
LM317MP	500mA Positive Adj.	1.10
LM317T	Adj 1.2-37V 1.5A TO-220	1.15
LM320K-5/7905K	-5V 1.5A TO-3	1.35
LM320K-6/7906K	-6V 1.5A TO-3	1.35
LM320K-8/7908K	-8V 1.5A TO-3	1.35
LM320K-12/7912K	-12V 1.5A TO-3	1.35
LM320K-15/7915K	-15V 1.5A TO-3	1.35
LM320K-18/7918K	-18V 1.5A TO-3	1.35
LM320K-24/7924K	-24V 1.5A TO-3	1.35
LM320T-5/7905T	-5V 1.5A TO-220	1.35
LM320T-6/7906T	-6V 1.5A TO-220	1.35
LM320T-8/7908T	-8V 1.5A TO-220	1.35
LM320T-12/7912T	-12V 1.5A TO-220	1.35
LM320T-15/7915T	-15V 1.5A TO-220	1.35
LM320T-18/7918T	-18V 1.5A TO-220	1.35
LM320T-24/7924T	-24V 1.5A TO-220	1.35
LM323K	+5V 1.5A TO-3	5.75
LM337K	1.5A Negative Adj. Reg.	3.95
LM337MP	0.5A Negative Adj. Reg.	.99
LM337T	1.5A Negative Adj. Reg.	1.79
LM338K	5A Positive Adj. Reg.	6.50
LM340K-5/7805K	+5V 1.5A TO-3	1.35
LM340K-6/7806K	+6V 1.5A TO-3	1.35
LM340K-8/7808K	+8V 1.5A TO-3	1.35
LM340K-12/7812K	+12V 1.5A TO-3	1.35
LM340K-15/7815K	+15V 1.5A TO-3	1.35
LM340K-18/7818K	+18V 1.5A TO-3	1.35
LM340K-24/7824K	+24V 1.5A TO-3	1.35
LM340T-5/7805T	+5V 1.5A TO-220	1.35
LM340T-6/7806T	+6V 1.5A TO-220	1.35
LM340T-8/7808T	+8V 1.5A TO-220	1.35
LM340T-12/7812T	+12V 1.5A TO-220	1.35
LM340T-15/7815T	+15V 1.5A TO-220	1.35
LM340T-18/7818T	+18V 1.5A TO-220	1.35
LM340T-24/7824T	+24V 1.5A TO-220	1.35
LM341P-5	+5V 0.5A TO-220	.75
LM341P-12	+15V 0.5A TO-220	.75
LM341P-15	+18V 0.5A TO-220	.75
LM342P-5	+5V 250mA TO-220	.75
LM341P-15	+15V 250mA TO-220	.75
LM341P-18	+18V 250mA TO-220	.75
LM350K	3A Positive Adj. TO-3	4.75
LM723CH	+2-37V 150mA TO-5	.99
LM723N	+2-37V 150mA 14 Pin	.55
LM78L05CZ	+5V 100mA TO-92	.69
LM78L08CZ	+8V 100mA TO-92	.69
LM78L12CZ	+12V 100mA TO-92	.69
LM78L15CZ	+15V 100mA TO-92	.69
LM78L18CZ	+18V 100mA TO-92	.69
LM78L24CZ	+24V 100mA TO-92	.69
78H05	+5V 5A Voltage Reg.	6.95
78H12	+12V 5A Voltage Reg.	7.95
78S40	Switching Regulator	7.95

PACKAGE STYLES



14 PIN Dual-In-Line
"L" or "N" Package



TO-3
"K" Package



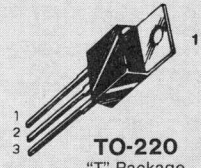
TO-18
"2N" (Metal Package)



TO-39
"H" (Metal Package)



TO-92
"PN" BR "2"
(Plastic Package)



TO-220
"T" Package

LINEAR IC's



NATIONAL



NATIONAL



TEXAS INSTRUMENTS

AH0133CD	DPST Analog Switch	\$ 7.95
DS0025CN	Dual LC MOS ClockDriver	2.75
DS0026N-8	Dual MOS Clock Driver	2.75
DS0026N-14	Dual MOS Clock Driver	2.75
DS0056	Dual MOS Clock Driver	2.75
DS1631H	Dual Peripheral Driver CMOS	4.85
DS3612	Dual H V Peripheral Driver	3.50
DS3613	Dual H V Peripheral Driver	3.50
DS3630	Hex CMOS Buffer	4.50
DS3645N	Latch Driver MOS Memory	2.95
DS3647N	Hex Inverter/ MOS Driver	1.49
DS3649N	Quad MOS Memory I/O Reg.	1.95
DS3653	Quad Hi-Speed MOS Sense Amp	1.95
DS3673N	Quad MOS Clock Driver	1.95
DS3675	MOS Latch Driver	3.45
DS3679	Hex MOS Driver	3.45
DS36147N	Quad MOS Memory I/O	1.95
LF351N	Bi-Fet GP Op Amp	.55
LF353N	Dual Bi-Fet	.95
LF355N	Bi-Fet	.99
LF355H	Bi-Fet	1.75
LF356N	Bi-Fet Wide Band	.99
LF356H	Bi-Fet Wide Band	1.25
LF398H	Sample and Hold Amp	3.75
LF398N	Sample and Hold Amplifier	3.75
LF13201	JFET Analog Switch 4 SPST NC	8.95
LF13508	JFET Analog Multi 8-Channel	8.95
LH0002CD	Special Purpose Current Amp	7.95
LH0042CH	Op Amp Low Cost FET Input	4.95
LH2101	Op Amp	5.95
LM10CLH	Low Volt Op Amp (1.1V)	4.95
LM11CLH	Precision Op Amp	3.75
LM101N	Op Amp, G P Uncompensated	2.25
LM105H	Positive Regulator	1.49
LM108AH	Hi-Gain Op Amp	2.95
LM210N	Volt Follower Op Amp	2.49
LM300H	Positive Voltage Regulator	.95
LM301AH	Operational Amplifier	.79
LM301AN	Operational Amplifier	.32
LM302CH	Voltage Follower	1.49
LM304H	Negative Voltage Regulator	1.15
LM305H	Positive Voltage Regulator	1.99
LM306CH	Voltage Comparator/Buffer	2.49
LM307CH	Op Amp (Super 741 or 1439)	.79
LM307N	Op Amp (Super 741 or 1439)	.29
LM308AH	Super Gain Op Amp	2.99
LM308ACN	Super Gain Op Amp	3.00
LM308CH	Hi-Gain Op Amp	1.10
LM308CN	Hi-Gain Op Amp (8 pin)	.65
LM309H	5 Volt Regulator	4.95
LM309K	5 Volt Regulator	1.25
LM310CH	Voltage Follower	1.69
LM311D	Hi Performance Voltage Comp	1.99
LM311CH	Hi Performance Voltage Comp	1.09
LM311CN	Voltage Comp/Buffer (8 pin)	.65
LM312CH	Super Gain Op Amp	2.35
LM316H	Op Amp	2.95
LM317K	3 Term Adjustabl Regulator	4.95
LM317T	Adjustable 1.2 to 33 Volt Reg.	1.95
LM318CH	Op Amp Precision Hi-Speed	1.95
LM318CN	Op Amp Precision Hi-Speed	1.79
LM319CH	Dual Comparator	1.95
LM319N	Dual Comparator Hi-Speed	1.80
LM320K-xx	Voltage Regulator	1.65
LM320T-xx	Voltage Regulator	1.25
LM321H	Precision Preamplifier	2.95
LM322N	Precision Timer	1.60
LM323K	5 Volt 3 Amp Regulator	5.75
LM324N	Quad Op Amp	.55
LM329DZ	Precision Zener 100ppm/C° 6.9V	.69
LM331N	Precision Volt/Freq Converter	3.75
LM334Z	Constant Current Source	1.10
LM335Z	Voltage Temperature Sensor	1.35
LM336Z	Voltage Reference	1.10
LM337T	Adjustable 1.2 to 37 Volt Reg.	2.50
LM337K	Adjustable 1.2 to 37 Volt Reg.	5.95
LM338K	Adjustable 1.2 to 33 (5A) Reg.	8.95
LM339N	Quad Comparator	.65
LM340H-xx	Voltage Regulator	1.29
LM340K-xx	Voltage Regulator	1.55
LM340T	Voltage Regulator	1.25
LM343H	High Voltage Op Amp	2.95
LM344H	High Voltage Op Amp	2.95
LM348N	Quad 741 Op Amp	.95
LM350N	Dual Peripheral Driver	1.00
LM350K	Adjustable 1.2 to 32 Volt Reg	6.95
LM358N	Low Power Dual Op Amp	.65
LM359N	Hi-Speed Norton Op Amp	1.69
LM360N	Comparator	1.49
LM370N	AGC Squelch	4.30
LM372	AM/IF Amplifier	4.95

LM373N	AM/FM SSB	\$3.65
LM373H	AM/FM SSB	3.95
LM377N	Dual 2 Watt Audio Amp	1.85
LM380N/CN	Audio Power Amp	.80
LM381N	Low Power Dual Preamp	1.75
LM382N	Low Noise Quad Preamp	1.35
LM383T	8 Watt Op Amp	5.95
LM384N	Audio Power Amp	1.69
LM386N	Low Voltage Audio Amp	.85
LM387N/CN	Low Noise Dual Preamp	.85
LM388N	1.5 Watt Audio Amp	3.49
LM389N	Low Volt Audio Amp w/Sxtr	1.10
LM390N	Battery Operated Audio Amp	1.95
LM392N	Op Amp/Comparator	.65
LM399H	Voltage Reference	1.10
LM555	See NE555	.35
LM567	See NE567.65	
LM1303N	Dual Stereo Preamp	1.80
LM1304N	FM Multiplex Stereo Demod.	1.10
LM1305N	FM Multiplex Stereo Demod.	1.10
LM1307N	FM Multiplex Stereo Demod.	.75
LM1310N	Phased Locked Loop FM Stereo	1.45
LM1414N	Dual Dif. Voltage Comparator	2.29
LM1458CN	Dual Op Amp	.52
LM1458CH	Dual Op Amp	.84
LM1488N	RS232 Driver	.65
LM1489N	RS232 Receiver	.65
LM1496H	Balanced Mod. Demodulator	1.89
LM1496N	Balanced Mod. Demodulator	1.89
LM1556N	Op Amp High Performance	1.60
LM1596J	Balanced Mod. Demodulator	2.95
LM1800N	PLL Demodulator	1.45
LM1812N	Ultrasonic Receiver	6.50
LM1818N	Cassette IC	2.49
LM1820	AM Receiver	2.95
LM1850N	Ground Fault IC	1.95
LM1871N	Radio Control 4 Channel XMTR	1.89
LM1872N	Radio Control 4 Channel RCVR	2.45
LM1877N-9	Dual Power Amp	1.40
LM1889N	TV Video Modulator	1.80
LM1896N	Low Volt Audio Amp	2.89
LM2111N	FM Detector & Limiter	.95
LM2877P	Power Audio Amp	1.89
LM2878P	6 Watt Audio Amp (SIP)	2.19
LM2896P-1	Low Volt Audio (SIP)	1.50
LM2900N	Quad Amplifier	.89
LM2901N	Quad Comparator	.95
LM2902N	Quad Op Amp	.85
LM2903N	Dual Comparator	1.39
LM2907N	Frequency to Voltage Converter	2.40
LM2917N	Frequency to Voltage Converter	2.00
LM3064N	TV AFT System	4.50
LM3900N	Quad Amp	.55
LM3905CN	Precision Timer	1.10
LM3909N	LED Flasher	.79
LM3911CN	Temperature Controller	2.25
LM3914N	Dot/Bar Display Driver	3.39
LM3915N	Dot/Bar Display Driver 3dB Step	3.39
LM3916N	VU Meter Display Driver	3.39
LM4024N	MC4024P Dual VCO	3.50
LM4044N	MC4044P Freq. Phase Detector	3.50
LM4250CH	Programmable Op Amp	1.79
LM4250CN	Programmable Op Amp	1.10
LM4558N	MC4558P Wideband 741	.75
LM5556N	Dual 555 Timer	1.69
LM5558N	Dual Comparator Op Amp	.99



EXAR

XR205	Waveform Generator	\$5.95
XR210	FSK Demodulator	3.75
XR215	High Frequency PLL	3.75
XR320	Precision Timer	1.10
XRL555	Micro Power 555	.95
XR1468CN	±15V Tracking Regulator	.95
XR2206	Function Generator	3.80
XR2207	Voltage Controlled Oscillator	2.65
XR2208	Operational Multiplier	2.39
XR2209	Precision Oscillator	2.39
XR2211	FSK Demodulator	3.59
XR2212	Precision PLL	3.59
XR2216	Mono Compander	2.19
XR2240	Programmable Counter Timer	1.80
XR2242CP	555 Timer w/8-Bit Counter	1.40
XR2264	Pulse Proportional Servo	3.95
XR2556	Dual Timing Circuit	1.75
XR2567	Dual 567 Decoder	1.40
XR3403	Quad Op Amp	1.15
XR4194	Dual ±35V Tracking Volt Reg.	2.80
XR4202	Quad Programmable Op Amp	1.40
XR4212	Quad 741	1.10
XR4739	Dual Low Noise Op Amp	.95
XR4741	Quad Op Amp	1.10

TBA641A12	Audio Power Amp	\$3.50
TBA800	Audio Power Amp	3.50
TBA810	Audio Power Amp	3.50
TBA820	Audio Power Amp	3.50
TL071CP	Low Noise Bi-Fet	.75
TL072CP	Low Noise Dual Bi-Fet	1.35
TL074CN	Quad Low Noise Bi-Fet	1.90
TL081CN	JFET Input Op Amp	.55
TL082CP	Op Amp Bi-Fet	.99
TL494CN	Switch Regulator	2.75
TL496CP	Single Switching Regulator	1.15
SN7520N	Dual Channel Sense Amp	1.49
SN7522N	Dual Channel Sense Amp	1.49
SN7524N	Dual Sense Amplifier	.89
SN7525N	Dual Core Mem Sense Amp	1.49
SN7534N	Core Mem Sense Amp	1.69
SN7535N	Core Mem Sense Amp	.85
SN75107N	Dual Line Receiver	.75
SN75108N	Dual Line Receiver	.75
SN75109N	Dual Line Driver	2.25
SN75110N	Dual Line Driver	2.25
SN75121N	Dual Line Driver	.85
SN75123N	Dual Line Driver	.95
SN75124N	Triple Line Driver	.95
SN75136N	Quad Bus Transceiver	2.25
SN75138N	Quad Bus Transceiver	1.89
SN75150N	Dual Line Driver (8 pin)	.95
SN75150N	Dual Line Driver (14 pin)	1.95
SN75154N	Quad Line Receiver	.95
SN75182N	Dual Line Receiver	1.15
SN75183N	Dual Diff Driver	1.15
SN75188N	Quad Line Driver	.65
SN75189N	Quad Line Receiver	.65
SN75207N	Dual Sense Amplifier	2.25
SN75208N	Dual Sense Amplifier	2.25
SN75234N	Dual Sense Amplifier	2.25
SN75238N	Dual Sense Amplifier	2.25
SN75322N	Dual NAND Buffer	1.89
SN75324N	Memory Core Driver	2.50
SN75325N	Memory Core Driver	1.89
SN75361N	Dual NAND Buffer	1.99
SN75364N	Dual MOS Log/Mem Driver	1.95
SN75365N	Quad NAND Buffer	1.95
SN75370N	Dual Channel Interface to MOS	1.95
SN75381N	Sense Amplifier	1.95
SN75450N	Dual Peripheral Driver	.55
SN75451N	Dual Peripheral Driver	.39
SN75452N	Dual Peripheral Driver	.39
SN75453N	Dual Peripheral Driver	.39
SN75454N	Dual Peripheral Driver	.39
SN75462N	Dual Peripheral Driver	.59
SN75463N	Dual Peripheral Driver	.59
SN75471N	Dual Peripheral Driver	1.25
SN75491N	4 Channel MOS to LED Driver	.75
SN75492N	Six Channel Driver	.75
SN75493N	4-Segment LED Driver I/O	1.10
SN75494N	Six Channel Driver w/Enable	1.15

signetics

SIGNETICS

NE510A	Diff Amp	\$3.95
NE521N	Diff Amp	3.95
NE529V	Comparator	2.75
NE531N	Op Amp	4.50
NE531V	Op Amp	2.75
NE536H	FET Op Amp	8.50
NE540H	Power Driver	4.75
NE550	Positive Adjustable Voltage Reg.	4.75
NE555V	Timer	.35
XRL555	Low Power 555	.95
NE556B	Dual 555 Timer (LM556N)	.65
NE561T	Phased Locked Loop	9.95
NE562B	Phased Locked Loop	5.89
NE565H/V	VCO/Phase Comp (LM565N/H)	1.10
NE566H/V	VCO/Func Gen. (LM566N/H)	1.49
NE567T/V	Tone Decoder (LM567N/H)	1.59
NE592N	Addressable Peripheral Driver	2.75
NE595	TV Video Circuit	.99
SP374	Audio Power Amp	.89
SP377	Audio Power Amp	.89
SP380	Gate Array	.89
SP381	Dual Audio Preamp	.89
SP384	Audio Power Amp	.89
SP387	Dual Audio Preamp	.89
SP391	Audio Power Amp	.89
SP616	TV Camera Video Processor	.89
SP629	I/O Transceiver	.89
SP631		.89
SP659		.89
SP670	TS 4 Channel Switch Amp	.89

See following page for drawings of package styles and pin connections.

LINEAR IC'S

TRANSISTORS

SILICON TRANSISTORS (Plastic)

PART NUMBER	CT AY SP EE	BV ceo (V)	hfe Min/Max	Ic Max (mA)	PKG/ \$	100 PCS \$
PN2222A	A/N	40	100/300	150	7/1.00	.12
PN2369	A/N	15	40	500	5/1.00	.18
PN2907	A/P	60	100/300	150	7/1.00	.12
2N3415	A/N	25	180	100	3/1.00	.31
2N3416	B*/N	50	75	100	2/1.00	.42
2N3563	A*/N	12	20	50	4/1.00	.22
2N3565	A/N	25	150/600	1	4/1.00	.22
2N3567	A/N	40	40/120	150	4/1.00	.20
2N3568	A/N	60	40/120	150	5/1.00	.19
2N3569	A/N	40	100/300	150	5/1.00	.19
2N3638A	A/P	25	100	50	5/1.00	.19
2N3640	A*/P	12	20	30	6/1.00	.12
PN3643	A/N	30	100/300	150	4/1.00	.22
2N3646	A/N	15	30	200	4/1.00	.22
2N3903	A/N	40	50/100	10	4/1.00	.19
2N3904	A/N	40	100/300	10	5/1.00	.16
2N3905	A/P	40	50/150	10	4/1.00	.19
2N3906	A/P	40	100/300	10	5/1.00	.17
2N4123	A/N	30	50/150	2	4/1.00	.22
2N4124	A/N	25	120/360	2	4/1.00	.22
2N4125	A/P	30	50/150	2	4/1.00	.22
2N4126	A/P	25	120/360	2	4/1.00	.22
2N4248	A/P	40	50	.1	3/1.00	.26
2N4249	A/P	60	100/300	.1	4/1.00	.21
2N4250	A/P	40	250/700	.1	4/1.00	.22
2N4258	A*/P	12	30	—	3/1.00	.26
2N4400	A/N	40	20	600	5/1.00	.18
2N4401	A/N	40	40	600	5/1.00	.18
2N4402	A/P	40	30	600	5/1.00	.18
2N4403	A/P	40	60	600	5/1.00	.18
2N5135	A/N	25	50/600	10	4/1.00	.19
2N5137	A/N	20	20/400	150	4/1.00	.19
2N5138	A/P	30	50/800	.1	4/1.00	.19
2N5139	A/P	20	40	10	4/1.00	.19
2N5400	A/P	120	30	600	2/1.00	.45
2N5401	A/P	150	40	600	2/1.20	.55
D42C5	G/N	45	220	3A	1/1.25	.95
D43C5	G/P	45	120	3A	1/1.25	.99
MJE2955T	D/P	60	70	15A	1/1.25	1.12
MJE3055T	D/N	60	70	15A	1/1.00	.89
MPSA05	A/N	60	50	500	2/1.00	.42
MPSA06	A/N	80	50	500	2/1.10	.44
MPSA13	A/N	30	—	300	2/1.00	.39
MPSA55	A/P	60	50	500	2/1.10	.42
MPSA65	A/P	30	50	300	2/1.00	.48
MPS918	A/N	15	20	—	3/1.00	.28
MPS2369	A/N	15	40	500	4/1.00	.22
MPS3693	A/P	25	100	500	5/1.00	.19
MPS3693	A/N	45	40	—	4/1.00	.22
MPS6518	A/P	40	150	100	2/1.00	.44
MPS6530	A/N	40	85	600	3/1.00	.32
MPS6532	A/N	30	30	600	3/1.00	.29
MPS6533	A/P	40	40	600	2/1.00	.41
MPS6544	A/N	—	—	—	2/1.00	.39
MPS6560	A/N	25	35	600	2/1.00	.39
MPS6562	A/P	25	35	600	2/1.00	.40
MPS6571	A/N	20	250	50	2/1.00	.40
MPSU10	G*/N	300	25	1A	1/1.00	.69
MPSU51	G*/P	30	70	1.5A	2/1.49	.55
MPSU55	G*/P	60	100/800	1A	2/1.49	.53
TIP29A	D/N	60	60	1A	2/1.00	.45
TIP30A	D/P	60	60	1A	2/1.00	.49
TIP31A	D/N	60	3A	2/1.10	.45	
TIP32A	D/P	60	3A	2/1.10	.50	
TIP33A	D/N	60	10A	1/1.00	.89	
TIP34A	D/P	60	10A	1/1.25	.99	
TIP35A	D/N	60	25A	1/1.75	1.49	
TIP36A	D/P	60	25A	1/1.89	1.59	
TIP50A	D/N	400	Darl	1A	2/1.49	.65
TIP120	D/N	60	Darl	8A	2/1.49	.65
TIP125	D/P	60	Darl	8A	2/1.59	.69
TIP140	D*/N	60	Darl	10A	1/1.69	1.49
TIP141	D*/P	80	Darl	10A	1/1.99	1.59

NOTE: Manufacturers use PN, EN and 2N prefix interchangeably for plastic transistors. If you must have transistor in metal can, please specify on your order. If you don't see your P/N listed on the Plastic or Metal Transistor listings then contact our Sales Desk as we maintain a large inventory of additional part types. ACP has in excess of 2,000,000 transistors in stock.

SILICON TRANSISTORS (Metal)

PART NUMBER	CT AY SP EE	BV ceo (V)	hfe Min/Max	Ic Max (mA)	PKG/ \$	100 PCS \$
2N656	C/N	60	30/90	—	1/1.99	\$1.49
2N718A	B/N	75	40/120	150	2/1.29	.49
2N918	B/N	15	20	3	3/1.00	.29
2N930	B/N	45	100/300	10	3/1.00	.32
2N1016B	H/N	—	10	5A	1/1.75	1.65
2N1613	C/N	32	40/120	150	2/1.49	.69
2N1893	C/N	80	40/120	150	2/1.49	.69
2N2102	C/N	65	35	10	1/1.49	.99
2N2218A	C/N	40	40/120	150	3/1.00	.32
2N2219A	C/N	40	100/300	150	3/1.00	.32
2N2221A	B/N	40	40/120	150	4/1.00	.24
2N2222A	B/N	40	100/300	150	4/1.00	.22
2N2369A	B/N	15	40/140	10	3/1.00	.32
2N2483	B/N	60	40/120	10	2/1.00	.45
2N2484	B/N	60	100/500	10	4/1.00	.21
2N2904A	C/P	60	40/120	150	2/1.00	.35
2N2905A	C/P	60	100/300	150	2/1.00	.35
2N2906A	B/P	60	40/120	150	3/1.00	.32
2N2907A	B/P	60	100/300	150	4/1.00	.22
2N2925	B/N	25	235/470	2	4/1.00	.23
2N2919	C/N	30	50	—	1/3.90	2.99
2N3019	C/N	80	100/300	150	2/1.39	.46
2N3020	C/N	80	40/120	150	1/3.50	2.65
2N3053	C/N	50	50/250	150	2/1.00	.39
2N3054	F/N	60	25/100	4A	1/1.10	.85
2N3055	E/N	70	20/70N	15A	2/1.49	.70
2N3227	B/N	40	100	200	1/2.95	2.29
2N3251	B/P	40	100	200	2/1.15	.42
2N3414	B/N	25	75/225	2	2/1.00	.45
2N3439	C/N	350	40/160	1A	1/1.00	.79
2N3440	C/N	250	40/160	1A	1/1.00	.65
2N3445	E/N	60	20/60	7.5A	1/3.50	2.99
2N3467	C/P	40	40/120	1A	1/3.80	2.99
2N3585	F/N	300	8/140	2A	1/1.49	1.29
2N3716	E/N	80	50/150	10A	1/1.49	1.23
2N3724	C/N	30	60/150	100	2/1.00	.46
2N3725	C/N	50	60/150	100	2/1.49	.60
2N3743	C/P	300	25/250	50	1/4.49	2.85
2N3771	E/N	40	15/60	30A	1/2.49	1.89
2N3772	E/N	60	15/60	20A	1/2.10	1.69
2N3773	E/N	140	5/60	16A	1/2.79	2.10
2N3789	E/P	60	25/90	10A	1/1.49	1.25
2N4013	B/N	30	60/150	100	2/1.10	.52
2N4036	C/P	65	40/140	1A	2/1.69	.61
2N4240	F/N	300	6/240	2A	1/1.49	1.29
2N4413	B/P	30	120	—	1/1.00	.90
2N4917	C/P	30	150	—	2/1.00	.45
2N4923	G/N	80	20/100	1A	1/1.39	1.19
2N5232	B/N	50	250/500	2	2/1.00	.45
2N5320	C/N	75	30/130	2A	2/1.75	.85
2N5322	C/P	75	30/130	2A	1/1.00	.90
2N5876	E/P	80	20/100	8A	1/1.69	1.32
2N5881	E/N	60	20/100	12A	1/1.59	1.27
2N6249	E/N	200	10/50	15A	1/4.69	3.69
2N6545	E/N	400	12/60	8A	1/4.90	3.95
MJ411	E/N	300	90	5A	1/2.55	Call

GERMANIUM TRANSISTORS

PART NUMBER	CT AY SP EE	BV ceo (V)	hfe Min/Max	Ic Max (mA)	PKG/ \$	100 PCS \$
2N404A	C/P	—	40	100	1/2.49	Call
2N651	C/P	30	50	—	1/2.95	Call
2N652A	C/P	30	100	500	1/3.50	Call
2N1304	C/N	20	40	300	1/2.49	Call
2N1305	C/P	30	40	300	1/2.75	Call
2N1307	C/P	30	60	300	1/3.50	Call
2N1309	C/P	30	80	300	1/4.50	Call
2N1414	C/P	25	44	200	1/2.95	Call
2N1535	E/P	30	35/70	5A	1/4.90	Call
2N2137	E/P	20	30/60	3A	1/4.50	Call
2N3613	E/P	30	60/120	7A	1/3.49	Call
2N3617	E/P	60	45/90	7A	1/4.50	Call

Please Note: Germanium transistors have a lot of obsolete part types. If you are having trouble locating transistors, please contact our Sales Desk at (800) 854-8230.

NOTE: All parameters are for reference only. Consult Data Book for exact characteristics.

DARLINGTONS

PART NUMBER	V _{ceo}	I _c	CASE/TYPE	Misc.	PKG/ \$	100 PCS \$
2N6034	40V	4A	D/P	Comp.	1/1.49	\$1.29
2N6037	40V	4A	D/N	Pair	1/1.69	1.49
2N6057	60V	12A	E/N	Comp.	1/2.39	2.10
2N6050	60V	12A	E/P	Pair	1/2.89	2.45
2N6282	60V	20A	E/N	Comp.	1/3.10	2.85
2N6285	60V	20A	E/P	Pair	1/2.90	2.60
2N6388	8V	10A	D/N	—	1/1.10	.85
MPSU45	40V	2A	G*/N	—	2/1.50	.65

More Darlingtons — See TIP Series

UNI-JUNCTION

PART NUMBER	I _p	m	I _v (mA)	CASE	PKG/ \$	100 PCS \$
2N2646	5uA	.56/75	4.0	B	2/1.49	\$.59
2N2647	2uA	.68/82	3.0	B	1/1.00	.89
2N4870	5uA	.56/75	2.0	A	2/1.69	.65
2N4871	5uA	.70/85	4.0	A	2/1.49	.59
2N6027	Program'ble m ₁	R _{BB} , I _p , I _v	—	—	2/1.00	.45

FET's

PART NUMBER	CASE/TYPE	V _p	I _{d(on)}	BV _{gss}	PKG/ \$	100 PCS \$
2N3819	A/N	8V	20mA	25V	2/1.00	\$.43
2N3820	A/P	8V	15mA	20V	2/1.49	.68
2N3823	C*/N	8V	20mA	30V	1/1.00	.78
2N4093	B/N	5V	8mA	40V	1/1.00	.82
2N4858	B/N	4V	80mA	40V	1/1.00	.82
2N4860	B/N	6V	100mA	30V	1/1.10	.89
2N4861	B/N	4V	80mA	30V	1/1.19	1.03
2N5459	A/N	8V	9mA	25V	2/1.00	.42
2N5951	A*/N	5V	13mA	30V	2/1.00	.42
3N140	J/N	—	50mA	20V	1/2.50	Call
MPF102	A/N	8V	20mA	25V	2/1.00	.44
MPF161	A/P	8V	14mA	40V	1/1.29	1.02
TISS9	B/N	9V	25mA	25V	2/1.00	.43

SCR's/TRIAC's

PART NUMBER	PIV	I _f	CASE	Misc.	PKG/ \$	100 PCS \$
2N3898	400V	35A	H	C38B	1/5.95	\$4.60
2N3899	600V	35A	H	C38M	1/6.95	5.60
2N6240	400V	4A	G	C106	1/1.25	.99
2N6241	600V	4A	G	C106	1/1	

DIODES

ZENER DIODES

Select Part Number for Desired Voltage
PART NUMBER
400mW 500mW 1WATT 5 WATT
ZENER 10% TOL 5% TOL 10% TOL 10% TOL
VOLTAGE 1N7xxA 1N52xxB 1N47xxA 1N53xxA

2.4	—	21	—	—
2.5	—	22	—	—
2.7	—	23	—	—
2.8	—	24	—	—
3.0	—	25	—	—
3.3	46	26	28	—
3.6	47	27	29	—
3.9	40	28	30	—
4.3	49	29	31	36
4.7	50	30	32	37
5.1	51	31	33	38
5.6	52	32	34	39
6.0	53	33	—	40
6.2	54	34	35	41
6.8	—	35	36	42
7.5	55	36	37	43
8.2	56	37	38	44
8.7	—	38	—	45
9.1	57	39	39	46
10	58	40	40	47
11	—	41	41	48
12	59	42	42	49
13	—	43	43	50
14	—	44	—	61
15	—	45	44	52
16	—	46	45	53
17	—	47	—	54
18	—	48	46	55
19	—	49	—	56
20	—	50	47	57
22	—	51	48	58
24	—	52	49	59
25	—	53	—	60
27	—	54	50	61
28	—	55	—	62
30	—	56	51	63
33	—	57	52	64
36	—	—	53	65
39	—	—	54	66
43	—	—	55	67
47	—	—	56	68
51	—	—	57	69
56	—	—	58	70
60	—	—	—	71
62	—	—	59	72
68	—	—	60	73
75	—	—	61	74
82	—	—	62	75
91	—	—	63	77
100	—	—	64	78

ZENER PRICES

PART NUMBER	CASE	PKG/ PRICE	100- 999	1000- 9999	10K UP
1N746A to 59A	DO7	6/1.00	.13	.11	Call
1N4728A to 52A	DO41	6/1.00	.13	.11	Call
1N4753A to 64A	DO41	3/1.00	.29	.25	Call
1N5221A to 57B	DO35	6/1.00	.13	.11	Call
1N5336A to 78A	DO41	2/1.25	.46	.39	Call

SWITCHING & SIGNAL DIODES

PART NUMBER	I _f PIV (mA)	PKG/ PRICE	100- 999	1000- 9999	10K UP
1N270	100 200	3/1.00	.22	.18	Call
1N277	125 100	3/1.25	.32	.28	Call
1N456A	30 100	7/1.00	.12	.11	Call
1N458A	150 10	7/1.00	.12	.11	Call
1N459A	200 3	6/1.00	.15	.13	Call
1N914	100 10	16/1.00	.05	.04	Call
1N3064	75 10	10/1.00	.07	.06	Call
1N3600	50 200	4/1.00	.22	.20	Call
1N4148	75 10	20/1.00	.04	.035	Call
1N4154	25 10	16/1.00	.04	.035	Call

NOTE: Electrical Parameters are for reference only. Consult datasheet for exact specifications.

POWER DIODES & RECTIFIERS

(Limited To Stock On Hand)



PART NO.	\$	PART NO.	\$	PART NO.	\$
1N1200A	1.25	1N3047	1.49	1N3492R	1.25
1N2382	3.95	1N3208	2.00	1N3827A	1.49
1N2384	5.95	1N3311B	1.95	1N3880A	1.75
1N2978B	2.95	1N3324B	1.95	1N3911	1.95
1N2979B	3.50	1N3337B	2.95	1N4720	1.00

RECTIFIERS

PART NUMBER	PIV (A)	PKG/ PRICE	100- 999	1000- 9999	10K UP
1N4001	50 1A	13/1.00	.05	.04	Call
1N4002	100 1A	12/1.00	.05	.04	Call
1N4003	200 1A	11/1.00	.06	.05	Call
1N4004	400 1A	10/1.00	.07	.06	Call
1N4005	600 1A	10/1.00	.07	.06	Call
1N4006	800 1A	10/1.00	.075	.065	Call
1N4007	1K 1A	9/1.00	.08	.07	Call
1N5400	50 3A	6/1.00	.15	.12	Call
1N5401	100 3A	5/1.00	.16	.13	Call
1N5402	200 3A	5/1.00	.17	.14	Call
1N5403	300 3A	5/1.00	.18	.15	Call
1N5404	400 3A	4/1.00	.19	.16	Call
1N5405	500 3A	4/1.00	.20	.17	Call
1N5406	600 3A	4/1.00	.21	.18	Call
1N5407	800 3A	4/1.00	.23	.19	Call
1N5408	1K 3A	3/1.00	.26	.22	Call
1N1183	50 35A	1/1.49	1.29	1.05	Call
1N1184	100 35A	1/1.65	1.35	1.15	Call
1N1186	200 35A	1/1.75	1.55	1.32	Call
MR750	50 6A	2/1.10	.45	.40	Call
MR751	100 6A	2/1.49	.55	.49	Call
MR752	200 6A	2/1.49	.57	.51	Call

NOTE: If you order quantity of less than 100, please order in multiples of packages. (Example: 20 pcs 1N4004, order (2) 1N4004 pkgs @ 10/1.00)

FULL WAVE BRIDGE RECTIFIERS



1.5A FULL WAVE BRIDGE RECTIFIERS

PART NUMBER	I (A)	V	1-99	100- 999	1K UP
W005	1.5	50	4/1.00	.24	.21
W02M	1.5	200	3/1.00	.29	.24
W04M	1.5	400	3/1.00	.30	.25
W06M	1.5	600	2/ .85	.35	.31



4A FULL WAVE BRIDGE RECTIFIERS

PART NUMBER	I (A)	V	1-99	100- 999	1K UP
MDA970A1	4.0	50	1/ .89	.79	.69
MDA970A3	4.0	200	1/ .99	.89	.75



12A FULL WAVE BRIDGE RECTIFIERS

PART NUMBER	I (A)	V	1-99	100- 999	1K UP
MDA980A1	12	50	1/1.89	1.59	1.38
MDA980A3	12	200	1/2.15	1.89	1.69
MDA990A6	25	600	1/2.39	2.10	1.89

TECH SPRAY



P/N	DESCRIPTION	PRICE
TES-01	"INSTANT WONDER COAT" provides tough flexible coating for PCB's components, transformers, etc.	\$6.95
TES-02	"INSTANT FD" Zero Residue Cleaner	4.95
TES-03	"KLEEN-ALL" Relay Contact Cleaner	3.95
TES-04	"INSTANT MP" Microprocessor Cleaner	4.95
TES-05	"INSTANT BLOW OFF" Jet Dry Air	3.95
TES-06	"FREEZE SPRAY" Anti-Static Freeze Spray	4.95
TES-07	"INSTANT CHILLER" Trouble-shooting Aid	3.95
TES-08	"SCREEN & TERMINAL CLEANER"	4.95
TES-09	"ANTI-STATIC SPRAY"	4.50
TES-10	Industrial Tech. Swabs (50)	2.60
TES-11	"INSTANT STICK" Glue	2.95

DIODES/RECTIFIERS



russell industries

HEAT SHRINKABLE TUBING

PART NO.	COLOR	EXPANDED DIA.	SHRUNKEN DIA.	ACP PRICE
HUG 332-5V	—	3/32" I.D.	3/64" I.D.	1.95
HUG 18-5V	—	1/8" I.D.	1/16" I.D.	1.85
HUG 316-5V	—	3/16" I.D.	3/32" I.D.	1.95
HUG 14-5V	—	1/4" I.D.	1/8" I.D.	2.25
HUG 38-5V	—	3/8" I.D.	3/16" I.D.	3.30
HUG A-5V	—	Assorted	—	1.50

(10) 6" Lengths/Package

SPECIFY:
BLACK OR CLEAR

DRI-TRANSFER ELECTRONIC LETTERING \$1.59/PACKAGE

P/N	DESCRIPTION
EXP-1	Experimenter, Home & Intercom
AUD-	Audio, TV & Hi-Fi
TES-1	Test & Industrial
HAM-1	Amateur Radio & CB
DMK-13	Dial Marking
TC-13	Terminal & Chassis
AM-13	Alphabet 1/8" High
AM-23	Alphabet 1/4" High
NM-13	Numerals 1/8" High
NM-23	Numerals 1/4" High

SPECIFY BLACK OR WHITE

WE STOCK



6800 MOTOROLA EXORCISER COMPATIBLE BOARDS

Call TOLL FREE For Volume Prices On Any Diode or Rectifier Requirement
800-854-8230

RESISTOR NETWORKS/POTENTIOMETERS



RESISTOR NETWORKS

†STANDARD AVAILABLE RESISTANCE VALUES

Ohms	Ohms	Ohms	Ohms	Ohms
22	68	220	680	2200
27	82	270	820	2700
33	100	330	1000	3300
39	120	390	1200	3900
47	150	470	1500	4700
56	180	560	180	5600

Ohms	Ohms	Ohms	Ohms	Ohms
6800	22K	68K	220K	820K
8200	27K	82K	330K	1 Meg
10K	33K	100K	390K	2.2 Meg
12K	39K	120K	470K	
15K	47K	150K	560K	
18K	56K	180K	680K	

MULTIPLE EQUAL-VALUE RESISTOR NETWORKS

Circuitry and Applications: Types 4306R and 4606X, 3 isolated resistors; Types 4308R and 4608X, 4 isolated resistors; Types 4310R and 4610X, 5 isolated resistors; Type 4114R, 7 isolated resistors; Type 46116R, 8 isolated resistors. Each resistor is connected between two discrete PC board pins. Intended for power gate pull-up, impedance balancing, current limiting, line termination and ECL output pull-down. The 4600 Series are conformal coated.

Bourns No.	Pkg.	No. of Pins	Resistance Values, Ohms			ACP
			R1	R2	R3	
4308R-102	SIP	8	†	.....	.....	.55
4310R-102	SIP	10	†	.....	.....	.57
4114R-001	DIP	14	†	.....	.....	1.15
4116R-001	DIP	16	†	.....	.....	1.20
4306R-102	SIP	6	†	.....	.....	.53
4606X-102	SIP	6	†	.....	.....	.52
4608X-102	SIP	8	†	.....	.....	.54
4610X-102	SIP	10	†	.....	.....	.57

Circuitry and Applications: Types 4306R and 4606X, 5 resistors with pin 1 common; Types 4308R and 4608X, 7 resistors with pin 1 common; Types 4310R and 4610X, 9 resistors with pin 1 common; Type 4114R, 13 resistors with pin 14 common; Type 4116R, 15 resistors with pin 16 common. Each resistor is connected between a common bus and a discrete PC board pin. The 4600 Series are conformal coated.

Bourns No.	Pkg.	No. of Pins	Resistance Values, Ohms			ACP
			R1	R2	R3	
4310R-101	SIP	10	.....	.....	.....	.57
4308R-101	SIP	8	†	.....	.....	.55
4608X-101	SIP	8	†	.....	.....	.54
4114R-002	DIP	14	†	.....	.....	1.20
4116R-002	DIP	16	†	.....	.....	1.25
4306R-101	SIP	6	†	.....	.....	.53
4606X-101	SIP	6	†	.....	.....	.52
4610X-101	SIP	10	†	.....	.....	.57

TERMINATING NETWORKS

Bourns No.	Pkg.	No. of Pins	Resistance Values, Ohms			ACP
			R1	R2	R3	
4308-104-						
181/391	SIP	8	180	390	.....	1.18
221/271	SIP	8	220	270	.....	1.18
221/331	SIP	8	220	330	.....	1.18
4116R-003-						
181/291	DIP	16	180	290	.....	2.30
221/271	DIP	16	220	270	.....	2.30
221/331	DIP	16	220	330	.....	2.30

ORDER BY PHONE

outside California
(800) 854-8230
inside California
(714) 558-8813

TRIMPOT® POTENTIOMETERS COMMERCIAL SINGLE-TURN POTENTIOMETERS

TRIMIT® WIRWOUND MODEL 3305

Sealed to prevent contamination from fluxing, soldering and cleaning. Stops provided at each end of travel. **Mechanical Rotation:** 300° norm. **Power Rating:** 0.5 watt at 70°C. **Operating Temperature:** 125°C max. **Tolerance:** +5%. **Size:** 0.31" dia. x 0.19" H. (P); 0.250" W x 0.375" H. (W).

Bourns Model	Specify Terminal	Resist. Range, Ohms	ACP
3305	P	10, 20, 50, 100, 200, 500, 1K, 2K, 5K, 10K, 20K, 25K	\$3.31
	W	10, 20, 50, 100, 200, 500, 1K, 2K, 5K, 10K, 20K, 25K	4.20



CERMET MODEL 3386

Wide choice of terminal styles cover almost any PC board layout requirement. Meets MIL humidity test; sealed to withstand wave soldering processes. **Electrical Rotation:** 280° nom. **Power Rating:** 0.5 watt at 85°C. **Operating Temperature:** 125°C max. **Tolerance:** +10%. **Mounting:** F, M, P, Y, T, and R are top adjust PC pins; B, C, H, S, X, and W are side adjust PC pins. H, P, X (TO-5), C, W, T (0.100" inline), B, M, R, S (0.150" inline), F, Y (0.200" grid). **Size:** 3/8" square x 0.19" d.

Bourns Model	Specify Terminal Top Side	Resist. Range, Ohms	ACP
3386	F	100, 200, 500, 1K, 2K, 5K, 10K, 20K, 25K, 50K, 100K, 200K, 250K, 500K, 1 meg., 2 meg.	.77
	B		
	C		
	H		
	S		
	W		
	X		



CERMET MODEL 3352

Choice of 7 terminal styles covers almost any PC board layout requirement. Meets MIL humidity test; withstands industrial board-cleaning processes with less than 1% shift in total resistance. **Mechanical rotation:** 225° nom. **Power Rating:** 0.75 W at 40°C. **Operating Temperature:** 125°C max. **Tolerance:** +20% standard, closer tolerances available. **Mounting:** T, E, and P are top adjust PC pins; W, H, and V are side adjust PC pins. Has thumb wheel with crossed slots.

Bourns Model	Specify Terminal Top Side	Resist. Range, Ohms	ACP
3252	T	10, 20, 50, 100, 200, 500, 1K, 2K, 5K, 20K, 25K, 50K, 100K, 200K, 250K, 500K, 1 meg., 2 megs, 5 meg	.58
	W		
	H		
	V		

COMMERCIAL MULTITURN POTENTIOMETERS



CERMET MODEL 3006

Low cost industrial model only 0.25" high above the printed circuit board. **TC:** +100 ppm/°C. **Power Rating:** 0.75 watt at 70°C. **Operating Temperature:** 125°C max. **Tolerance:** +10%. **Mechanical Adjustment:** 15 turns nom. **Size:** 0.75" x 0.190" x 0.250".

Bourns Model	Specify Terminal	Resist. Range, Ohms	ACP
3006	P	10, 20, 50, 100, 200, 500, 1K, 2K, 5K, 10K, 20K, 25K, 50K, 100K, 200K, 250K, 500K, 1 meg, 2 megs	1.00
	W		
	Y		



CERMET MODEL 3299

Sealed to withstand wave-soldering and cleaning processes; humidity meets MIL-STD-202. **Mechanical Adjustment:** 25 turns nom. **Power Rating:** 0.5 watt at 70°C. **Operating Temperature:** 125°C max. **Tolerance:** +10%. **Size:** 0.37" w. x 0.39" h. x 0.25" lg.

Bourns Model	Specify Terminal	Resist. Range, Ohms	ACP
3299	P	100, 200, 500, 1K, 2K, 5K, 10K, 20K, 25K, 50K, 100K, 200K, 250K, 500K, 1 meg	1.82
	W		
	X		
	Y		
	Z		

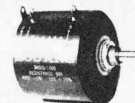
STAINLESS STEEL BLADE POTENTIOMETER SCREWDRIVER

For use on all Bourns potentiometer models. Complete with clip. Bourns No. H-90-- .90

PRECISION POTENTIOMETERS

BUSHING MOUNT PRECISION POTENTIOMETERS

Lockwasher and mounting nut supplied. Standard resistance range given; special resistances available. **Resistance Code:** First 2 digits indicate significant Nos.; 3rd digit number of zeroes, e.g., 101-100 ohms.



10-TURN 1-13/16" DIAMETER WIREWOUND

Power Rating: 5 watts at 40°C. **Independent Linearity:** +0.15%. **Operating Temperature:** 105°C max. **Resistance Tolerance:** +3%. **Size:** 1-13/16" dia. x 1 1/4" lg.

Bourns Model	Resistance Range, Ohms	ACP
3400S-1	100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 200K	47.05



3500/3501 10 TURNS WIREWOUND/INFINITRON

10-TURN 3/8" DIAMETER WIREWOUND MODEL 3500

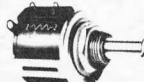
Power Rating: 2.0 watts at 70°C. **Independent Linearity:** +0.20%. **Operating Temperature:** 125°C max. **Resistance Tolerance:** +3%. **Size:** 3/8" dia. x 1" lg.

Bourns Model	Resistance Range, Ohms	ACP
3500S-2	500, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 224.0	22.40

10-TURN 3/8" DIAMETER CONDUCTIVE PLASTIC MODEL 3501

Power Rating: 2 watts at 70°C. **Independent Linearity:** +0.5%. **Operating Temperature:** 105°C max. **Resistance Tolerance:** +10%. **Size:** 3/8" dia. x 1" lg.

Bourns Model	Resistance Range, Ohms	ACP
3501S-1	1K, 5K, 10K, 200K, 500K	32.41



3540 10 TURNS WIREWOUND

10-TURN 3/8" DIAMETER WIREWOUND MODEL 3540

Power Rating: 2.0 watts at 70°C. **Independent Linearity:** +0.25%. **Operating Temperature:** 125°C max. **Resistance Tolerance:** +5%. **Size:** 3/8" dia. x 3/4" lg.

Bourns Model	Resistance Range, Ohms	ACP
3540S-1	100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K	8.74
	100K	9.28
	100K	9.89



TURNS-COUNTING DIALS

H-400 Series: 1" dia./ for use with precision potentiometers or other rotating devices up to 10 turns. Readability of 1 part in 1000 for 10 turns.

H-400 Series: 1" dia.; for use with precision potentiometers or other rotating devices up to 30 turns. Readability of 1 part in 1000 for ten turns.

Bourns Model	Finish	Shaft Dia.	Bushing Size	Brake
H-412	Black	1/8"	3/8"-32NEF-2A	Yes
H-462	Clear	1/8"	3/8"-32NEF-2A	Yes
H-491-3	Clear	1/8"	3/8"-32NEF-2A	No
H-492-3	Clear	1/8"	3/8"-32NEF-2A	Yes
H-493-3	Black	1/8"	3/8"-32NEF-2A	No
H-494-3	Black	1/8"	3/8"-32NEF-2A	Yes

RESISTORS

1/4W 5% Resistors Must be ordered in EXACT multiples 5, 100, or 1000

1.0	10	100	1.0K	10K	100K
1.1	11	110	1.1K	11K	110K
1.2	12	120	1.2K	12K	120K
1.3	13	130	1.3K	13K	130K
1.5	15	150	1.5K	15K	150K
1.6	16	160	1.6K	16K	160K
1.8	18	180	1.8K	18K	180K
2.0	20	200	2.0K	20K	200K
2.2	22	220	2.2K	22K	220K
2.4	24	240	2.4K	24K	240K
2.7	27	270	2.7K	27K	270K
3.0	30	300	3.0K	30K	300K
3.3	33	330	3.3K	33K	330K
3.6	36	360	3.6K	36K	360K
3.9	39	390	3.9K	39K	390K
4.3	43	430	4.3K	43K	430K
4.7	47	470	4.7K	47K	470K
5.1	51	510	5.1K	51K	510K
5.6	56	560	5.6K	56K	560K
6.2	62	620	6.2K	62K	620K
6.8	68	680	6.8K	68K	680K
7.5	75	750	7.5K	75K	750K
8.2	82	820	8.2K	82K	820K
9.1	91	910	9.1K	91K	910K
					1.0M

1/2W 5% Resistors Must be ordered in EXACT multiples 5, 100, or 1000

1.0	10	100	1.0K	10K	100K
1.1	11	110	1.1K	11K	110K
1.2	12	120	1.2K	12K	120K
1.3	13	130	1.3K	13K	130K
1.5	15	150	1.5K	15K	150K
1.6	16	160	1.6K	16K	160K
1.8	18	180	1.8K	18K	180K
2.0	20	200	2.0K	20K	200K
2.2	22	220	2.2K	22K	220K
2.4	24	240	2.4K	24K	240K
2.7	27	270	2.7K	27K	270K
3.0	30	300	3.0K	30K	300K
3.3	33	330	3.3K	33K	330K
3.6	36	360	3.6K	36K	360K
3.9	39	390	3.9K	39K	390K
4.3	43	430	4.3K	43K	430K
4.7	47	470	4.7K	47K	470K
5.1	51	510	5.1K	51K	510K
5.6	56	560	5.6K	56K	560K
6.2	62	620	6.2K	62K	620K
6.8	68	680	6.8K	68K	680K
7.5	75	750	7.5K	75K	750K
8.2	82	820	8.2K	82K	820K
9.1	91	910	9.1K	91K	910K
					1.0M

ACP PRICES: (Same price for 1/4 or 1/2 W)

Multiples of 5 pcs/value = 5 cents each.
 Multiples of 100 pcs/value = \$ 1.69 per package of 100.
 Multiples of 1000 pcs/value = \$14.90 per package of 1000.

ACP EPROM/PROM PROGRAMMING SERVICES

EPROM Programming Prices:

	1-99	100-499	500-999	1000 up
2708	.60	.50	.40	CALL
2716	.65	.55	.45	CALL
2732	.70	.60	.50	CALL
2764	.80	.70	.60	CALL
27128	1.25	1.00	.90	CALL

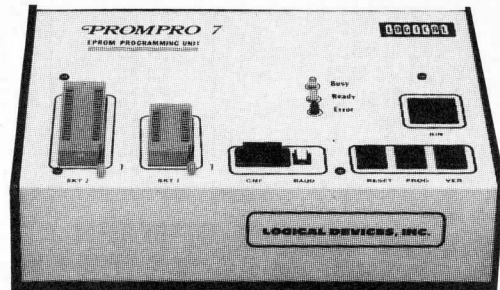
Bipolar PROMS (Estimated due to vast number of PROMS):

	1-99	100-499	500-999	1000 up
32 x 8	.35	.30	.25	CALL
256 x 4	.50	.45	.40	CALL
256 x 8	.50	.45	.40	CALL
512 x 4	.60	.55	.50	CALL
512 x 8	.60	.55	.50	CALL
1K x 8	.80	.75	.70	CALL



LOGICAL DEVICES, INC.

PROMPRO-7 EPROM PROGRAMMING UNIT



The PROMPRO-7 EPROM Programmer is a self contained stand-alone unit designed for the professional and industrial environment with a maximum amount of performance and capability for the price.

PROMPRO-7 can program a variety of EPROMs either by remote computer or terminal operation, or as a stand-alone unit. Some powerful remote edit features are built in the unit, allowing the operator to perform online changes to the 4K internal RAM buffer. PROMPRO-7 interfaces to a terminal or a computer by means of an EIA RS-232C serial interface. User can select several baud rates for the serial port. The unit can be used to copy one EPROM to another without requiring any external control. Each EPROM is verified after programming against the RAM contents. All of the ZIF socket pins are taken to 0 VDC when the unit is not in the programming mode. This is in order to prevent any damage done to the EPROM whenever they are inserted in the socket.

\$459.00

ULTRA-VIOLET PRODUCTS, INC.

UVS DE-4 EPROM ERASING SYSTEM

MEMORASE® DE-4, UVP, Inc's most recent addition to their family of EPROM erasing equipment, features the fastest erasing time, greatest capacity and lowest price of any 4-watt system on today's market.

MEMORASE DE-4 erases up to eight 24/28 pin EPROMs in 51 minutes with fool proof safety. The captive drawer prevents accidental exposure. Easy to operate: just load and push the button. EPROMs are ready for re-programming in minutes.



ACP PRICE
\$74.95



S-52T

THE FASTEST MOST POWERFUL UV ERASING SYSTEM

This short wave powerhouse provides 3 feet of exposed, gridformed tubing for quick erasure. It will erase up to 16 chips at one time in about seven minutes. The timer assembly provides a stable base for the lamp maintaining the tube surface at a constant height above the work surface. When used separately from the timer assembly, it is lightweight and evenly balanced for convenient hand use.

- Unmatched intensity at 254nm
- Special formulation for ozone-free UV transmittance
- Tube life in excess of 10,000 hours
- Complete erasure in minutes

ACP PRICE
\$349.95

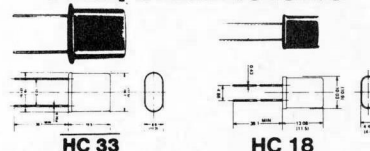
RESISTORS

CATALOG NO. /FREQUENCY	UNIT PRICE	EXAMPLE APPLICATION	TYPE SPECIFICATION	ENCLOSURE
CY-1.0000 MHz	5.75	6800 CPU/6860, F8	-10 to 55°C ±20 PPM	HC-33
CY-1.8432 MHz	5.75	MC14411 Baud Rate Gen		HC-33
CY-2.0000 MHz	5.75	F-8 (3850) CPU		HC-33
CY-2.0100 MHz	3.95	AY-3-8500/TV Games		HC-33
CY-2.097152 MHz	5.75	MM5378, 5379, Auto Clock		HC-33
CY-2.4576 MHz	5.75	F-8, 34702 Baud Rate Gen		HC-33
CY-2.5000 MHz	5.75			HC-33
CY-3.2768 MHz	5.75			HC-33
CY-3.579545 MHz	2.95	Intersil ICM 7205		HC-33
CY-4.0000 MHz	4.95	MM5369, TV Colorburst		HC-18
CY-4.194304 MHz	4.95	Z80, 4004, 4040, 4201		HC-18
CY-4.91520 MHz	4.95	8038 Waveform Gen		HC-18
CY-4.9160 MHz	4.95	Standard Clock Freq.		HC-18
CY-4.9160 MHz	4.95	Z-80		HC-18
CY-5.0000 MHz	4.95	CP1600		HC-18
CY-5.0688 MHz	4.95	SMC COM5016		HC-18
CY-5.7143 MHz	4.95	Pace, NSC		HC-18
CY-6.0000 MHz	4.95	Misc.		HC-18
CY-6.1440 MHz	4.95	Intel 8085	HC-18	
CY-6.4000 MHz	4.95	RCA 1802	HC-18	
CY-6.5536 MHz	4.95	ICM 7045 Stopwatch	HC-18	
CY-8.0000 MHz	4.95	Z-80	HC-18	
CY-9.0000 MHz	4.95	General Purpose	HC-18	
CY-10.000 MHz	4.95	General Purpose	HC-18	
CY-13.000 MHz	4.95	General Purpose	HC-18	
CY-14.31818 MHz	4.95	General Purpose	HC-18/U	
CY-32.768 KHz	2.95	MSM5832, Watch	HC-18	
CY-18.000 MHz	4.95	8080A, 8008, 8224	HC-18	
CY-18.432 MHz	4.95	8080A, 8008, 8224	HC-18	
CY-20.000 MHz	4.95	General Purpose	HC-18	
CY-22.1184 MHz	4.95	8080A	HC-18	
CY-27.000 MHz	4.95	GP	HC-18	
CY-16.0 MHz	4.95	Gen. Purpose	HC-18	
CY-36.000 MHz	4.95	GP	HC-18	
CY-48.000 MHz	4.95	GP	HC-18	

TYPICAL SPECIFICATIONS MICROPROCESSOR CRYSTAL

Frequency Range	0.8 - 6 MHz	3 - 9 MHz	10 - 50 MHz
Holder	HC-33	HC-18	HC-18
Mode	Fundamental	Fundamental	*Fundamental Overtone
Equivalent Resistance (Ohms)	100 Max	25 Max	40 Max
Frequency Tolerance			
Ambient	±20 PPM	±10 PPM	±10 PPM
Over Temperature	±20 PPM	±15 PPM	±15 PPM
Operating Temp. Range	-10C +55C	-30C +60 C	-30C +60C
Drive Level	10 mv Max	2 mv Max	2 mv Max

SIZE/DIMENSIONS



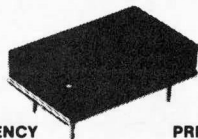
SPECIAL OFFER CRYSTAL SPECIAL OFFER

(WHILE SUPPLY LASTS)

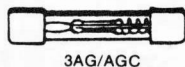
13.100 MHz HC18	.....	\$3.95
4.1943 MHz HC18	.....	2.95
21.840 MHz HC18	.....	3.95
422.400 KHz HC33	.....	1.95

CALL FOR VOLUME PRICES

CRYSTAL CLOCK OSCILLATORS



P/N	UNIT FREQUENCY	PRICE
CO 1.000	1.000 MHz	\$10.95
CO 1.8432	1.8432 MHz	10.95
CO 2.000	2.000 MHz	10.95
CO 2.4576	2.4576 MHz	13.95
CO 4.000	4.000 MHz	10.95
CO 5.0688	5.0688 MHz	13.95
CO 6.144	6.144 MHz	10.95
CO 8.000	8.000 MHz	10.95
CO 10.000	10.000 MHz	10.95
CO 16.000	16.000 MHz	10.95
CO 18.4320	18.432 MHz	10.95
CO 20.000	20.000 MHz	10.95
CO 22.1184	22.1184 MHz	13.95



3AG/AGC

P/N
AGC - ¼ - ½ - ¾ - 1 - 2
MDL FUSES

Slo-blo. 250V or less

P/N
MDL 1/16 - ¼ - ½ - 1/21 - ¾ - 1 - 2

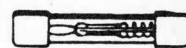
FUSEHOLDERS 30 AMPS - INDUSTRY STD.

P/N	1-10	11-99	100+
HTA	.75	.69	.65



P/N	1-10	11-99	100+
HKP	.75	.69	.65

FUSES



Box of 5
\$2.49

FUSE CLIPS

EARLESS PC BOARD

P/N	1-25	25-99	100+
EAR-1	6/.49	.075	.065
PCC-1	6/.49	.075	.065

FUSE BLOCKS

P/N	1.49
FFB-1	1.49
FFB-2	.69



FUSE ASSORTMENT

P/N	59.95
FFA-1	59.95



PANA VISE



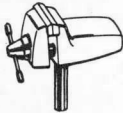
Model 380
Vacuum Base
\$21.95



Model 312
Tray Base Mount
\$13.95



Model 311
Bench Clamp
\$19.95



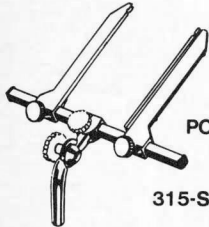
Model 303
Standard
Vise Head
\$16.95



Model 304
Horizontal
Jaw Vise Head
\$18.95



Model 300
Standard Base
\$13.95



Model 315
PC Board Holder
\$19.95

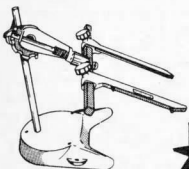
315-S for S-100 Boards
\$21.95



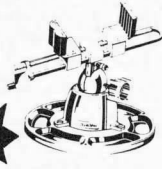
Model 305
Low Profile
Base
\$13.95



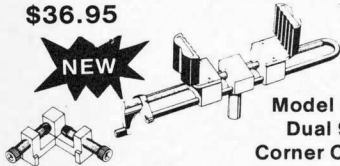
Model 366
Wide Opening
Vise Head
\$16.95



Model 333
Rapid Assembly
Circuit Board
Holder
\$36.95



Model 350
Multi-Purpose
Work Center
\$43.95

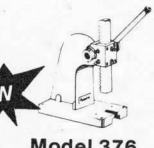


Model 390
Dual 90
Corner Clamp
\$6.95

Model 371
Solder and
Iron Holders
\$5.95

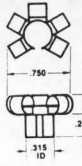


Model 502
Precision
Panapress
\$59.95

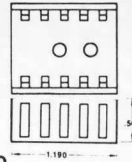


Model 376
Self-Centering
Extra Wide
Opening Head
\$20.95

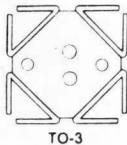
HEATSINK



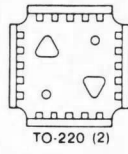
Model 135
for TO5
\$.15 10/\$1.00



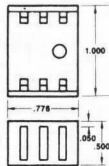
Model 372
for TO220
\$.29 4/\$1.00



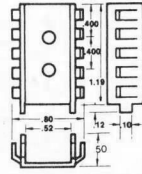
Model 401-3
for TO3
\$.95



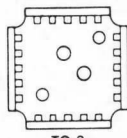
Model 401-220
for TO220
\$.95



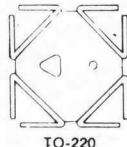
Model 373
for TO220
\$.29 4/\$1.00



Model 367
for TO220
\$.29 4/\$1.00



Model 490-3
for TO3
\$.95



Model 490-220
for TO220
\$.95

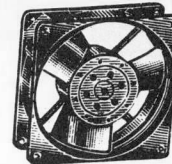
THERMAL COMPOUND

ALL WEATHER TYPE
Z-5 silicone compound
that prevents corrosion

99¢
TUBE
2.5 Grams

FANS

FANS AND FINGERGUARDS



8" fan **\$24.95**
fingerguard **2.95**
4" fan **15.95**
fingerguard **1.75**
2 3/4" fan **14.95**
fingerguard **1.49**

CARD EJECTORS **\$1.49 Pair**

BUS BAR STRIP **2 for 99¢**



KEYSWITCH
\$3.50

ARCO® LIGHTED POWER STRIP
ACP PRICE **\$1.49**

RS232 CUTOUT COVER
4 for \$1.00

LINE CORDS

2 Conductor Cord **\$1.19**
3 Conductor Cord **\$1.49**

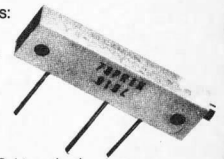
STANDOFFS

3/8" 10/1.00
1/2" 10/1.00
1" 10/1.00

Grab Bag - 100 pcs **\$2.49**

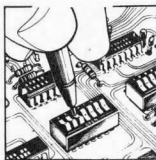
MULTITURN POT SPECIAL
99¢

Available in values:
50-100-500-1k-
2K-5K-10K-50K-
200K-250K.



Order multturn pots: MPS (+ value)
example MPS 50, MPS 250K
MULTITURN POT GRAB BAG
10 for **\$5.95**
Order PGB (+ value) ex: P6B50K

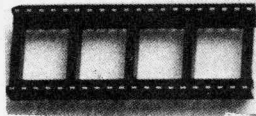
SWITCHES



	Model No.	Style	Mounting Hole Dim.	Circuitry	1-9	PRICE 10-99	100+
SUB-MINIATURE TOGGLE 6 AMP 124VAC	FTE01/ JMT-121	SPDT	1/4"	on-off-on	2.15	1.85	1.59
	FTD01/ JMT-123	SPDT	1/4"	on-none-on	1.65	1.29	1.15
	FTP01/ JMT221	DPDT	1/4"	on-off-on	2.95	2.59	2.29
	FTN01/ JMT223	DPDT	1/4"	on-none-on	2.25	1.95	1.69
	206-1	SPST	2-pin dip	2 switch	1.35	1.25	1.10
DIPSWITCH	206-2	SPST	4-pin dip	4 switch	1.40	1.25	1.10
	206-4	SPST	8-pin dip	8 switch	1.49	1.29	1.15
	206-5	SPST	10-pin dip	10 switch	1.55	1.40	1.30
	206-6	SPST	12-pin dip	12 switch	1.60	1.45	1.30
	206-7	SPST	14-pin dip	14 switch	1.69	1.49	1.32
	206-8	SPST	16-pin dip	16 switch	1.95	1.69	1.49
	206-9	SPST	18 pin dip	18 switch	2.25	1.89	1.59
	206-10	SPST	20 pin dip	20 switch	2.30	1.95	1.65
	206-12	SPST	24 pin dip	24 switch	2.35	2.00	1.70

HEATSINKS/SWITCHES

SOLDERTAIL

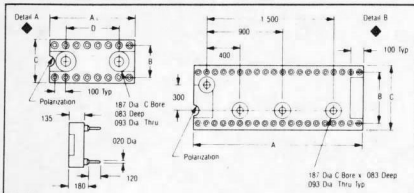


LO-PROFILE SOLDERTAIL-TIN



P/N	PINS	PRICE		
		1-24	25-99	100+
8L/P	8	.15	.12	.08
14L/P	14	.18	.14	.12
16L/P	16	.19	.16	.13
18L/P	18	.22	.19	.17
20L/P	20	.24	.22	.19
22L/P	22	.28	.24	.20
24L/P	24	.33	.31	.28
28L/P	28	.38	.34	.25
40L/P	40	.45	.41	.38
48L/P	48	.65	.60	.55
64L/P	64	3.95	3.65	3.25

HIGH-RELIABILITY SOLDERTAIL



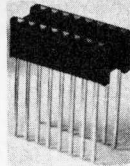
P/N	PINS	PRICE		
		1-24	25-99	100+
HR 8ST	8	.65	.48	.40
HR14ST	14	.79	.60	.55
HR16ST	16	.95	.70	.60
HR18ST	18	1.10	.85	.70
HR20ST	20	1.25	.90	.80
HR22ST	22	1.40	.95	.85
HR24ST	24	1.50	1.10	.95
HR28ST	28	1.75	1.25	1.05
HR40ST	40	2.60	1.85	1.45

TRANSISTOR SOCKETS PHENOLIC TO-5

P/N	PINS	PRICE		
		1-9	10-99	100+
TS-3	3	.55	.45	.38
TS-4	4	.78	.73	.68
TS-8	8	1.47	1.36	1.25
TS-10	10	1.69	1.59	1.49

PLASTIC TO-3	100+	1000+
MP-3452T	1.95/C	16.00/M

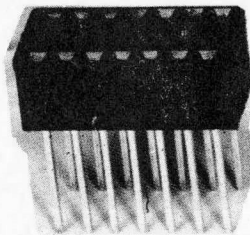
WIRE-WRAP



WIRE-WRAP SOCKETS 3 LEVEL-TIN

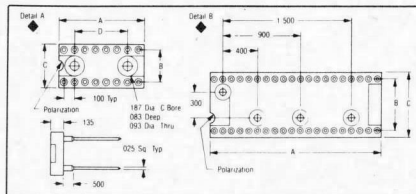
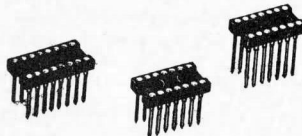
P/N	PINS	PRICE		
		1-24	25-99	100+
8WWT	8	.45	.39	.35
14WWT	14	.45	.42	.39
16WWT	16	.50	.46	.43
18WWT	18	.80	.70	.65
20WWT	20	.90	.85	.70
22WWT	22	1.00	.92	.85
24WWT	24	1.10	.95	.85
28WWT	28	1.35	1.15	1.00
40WWT	40	1.75	1.45	1.25

WIRE-WRAP SOCKETS, 3 LEVEL GOLD



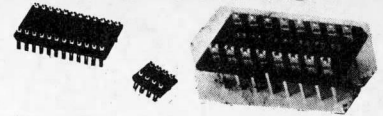
P/N	PINS	PRICE		
		1-24	25-99	100+
8WWG	8	.59	.55	.49
14WWG	14	.69	.65	.59
16WWG	16	.74	.69	.62
18WWG	18	.99	.90	.85
20WWG	20	1.10	1.00	.90
22WWG	22	1.35	1.25	1.05
24WWG	24	1.40	1.25	1.00
28WWG	28	1.70	1.55	1.25
40WWG	40	2.00	1.85	1.65

HIGH-RELIABILITY WIRE-WRAP SOCKETS



P/N	PINS	PRICE		
		1-24	25-99	100+
8HRWW	8	1.10	.85	.75
14HRWW	14	1.60	1.45	1.10
16HRWW	16	1.80	1.60	1.20
18HRWW	18	2.00	1.75	1.50
20HRWW	20	2.35	2.10	1.60
22HRWW	22	2.50	2.25	1.75
24HRWW	24	2.75	2.45	1.85
28 HR WW	28	3.15	2.95	2.25
40 HR WW	40	4.30	3.50	3.30

DIP PLUGS



P/N	PINS	PRICE		
		1-24	25-99	100+
8DP	8	.65	.60	.55
14DP	14	.66	.61	.56
16DP	16	.69	.63	.59
18DP	18	.89	.82	.75
20DP	20	1.00	.90	.85
22DP	22	1.10	.90	.85
24DP	24	1.20	.95	.90
28DP	28	1.35	1.10	1.00
40DP	40	1.70	1.50	1.40

ZERO INSERTION FORCE SOCKETS

ZERO INSERTION FORCE TEST SOCKETS



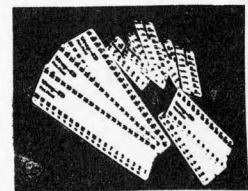
P/N	PINS	PRICE		
		1-9	10-49	50+
14ZIF	14	5.95	5.75	4.95
16ZIF	16	5.95	5.95	4.95
18ZIF	18	7.95	7.25	6.95
20ZIF	20	7.95	7.25	6.95
24ZIF	24	7.95	7.25	6.95
28ZIF	28	9.95	9.25	8.95
40ZIF	40	10.75	9.95	9.25
64ZIF	64	19.95	18.95	16.95

ZERO INSERTION FORCE RECEPTACLES

P/N	LEADS	PRICE
ZIR14	14	8.85
ZIR18	18	9.65
ZIR20	20	10.35
ZIR22	22	11.65
ZIR24	24	10.85
ZIR28	28	12.75
ZIR40	40	14.45

SOCKET WRAP - ID's

IC PINS	PART NO.	QTY.	PRICE	PART NO.	QTY.	PRICE
14	141D	10	1.95	141DB	100	9.50
16	161D	10	1.95	161DB	100	9.50
18	181D	10	1.95	181DB	50	9.50
20	201D	5	1.95	201DB	50	9.50
22	221D	5	1.95	221DB	50	9.50
24	241D	5	1.95	241DB	50	9.95
28	281D	5	1.95	281DB	50	9.95
40	401D	5	1.95	401DB	25	9.50



CONNECTORS

EDGE CONNECTORS

.156" EDGEBOARD CONNECTORS

Pins	Type	Cat#	Application	1-9	10-24
12	S/E	EC6DSE-15	Commodore	1.89	1.69
20	S/T	EC100ST-15		1.99	1.79
20	S/E	EC100SE-15		1.99	1.79
24	S/E	EC12DSE-15	Commodore	2.99	2.79
30	S/E	EC15DSE-15		2.99	2.79
30	S/T	EC15DST-15		2.99	2.79
30	W/W	EC15DWW-15		3.25	2.95
36	S/E	EC180SE-15		2.99	2.79
36	S/T	EC18DST-15		2.99	2.79
44	S/T	EC22DST-15		2.99	2.79
44	S/E	EC22DSE-15		3.49	3.29
44	W/W	EC22DWW-15		3.99	3.79
56	S/T	EC28DST-15		4.99	4.79
56	S/E	EC28DSE-15		4.99	4.79
72	S/T	EC36DST-15		5.99	5.79
80	W/W	EC40DWW-15		5.99	5.79
86	W/W	EC43DWW-15	MOT	14.95	14.50
86	S/T	EC43DST-15	Exorciser	6.95	6.50

.1" CONTACT CENTER CONNECTORS



S/T=Soldertail
S/E=Solder Eyelet
W/W=Wire Wrap
D=Dual Row


Pins	Type	Cat#	Application	1-9	10-24
20	S/T	EC10DST-10		2.29	2.05
30	S/T	EC15DST-10		2.95	2.75
40	S/T	EC20DST-10	TRS-80	6.95	6.25
44	S/T	EC22DST-10		4.25	3.95
44	S/E	EC22DSE-10		4.25	3.95
44	W/W	EC22DWW-10		4.95	4.50
50	S/E	EC25DSE-10	Apple	5.50	4.95
50	S/T	EC25DST-10	Apple	4.50	3.95
62	S/T	EC31DST-10		5.95	5.50
62	W/W	EC31DWW-10		6.95	6.50
80	S/T	EC40DST-10		6.75	5.95
86	S/T	EC43DST-10		6.95	6.50
86	W/W	EC43DWW-10		7.95	7.25
100	W/W	EC50DWW-10		6.95	6.50
100	S/T	EC50DST-10		6.50	6.00

.125" CONTACT CENTER CONNECTORS

Pins	Type	Cat#	Application	1-9	10-24
80	W/W	EC40DWW-12		5.75	5.25
100	S/T	EC50DST-12	S-100 Imsai	5.75	4.25
100	W/W	EC50DWW-12	S-100 Imsai	5.75	5.25
100	S/T	EC50DST-12	S-100 Altair	6.95	6.25
140	S/T	EC70DST-12		7.95	7.25


"D" TYPE CONNECTORS

IDC "D" TYPE SUBMINIATURE CONNECTORS



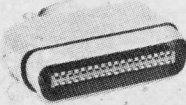
PART NO.	PINS	1-9	10-24	25-99
IDC9P	9	3.95	3.75	3.50
IDC9S	9	4.25	3.95	3.75
IDC15P	15	4.25	4.00	3.75
IDC15S	15	4.95	4.75	4.25
IDC25P	25	5.75	5.35	4.75
IDC25S	25	6.25	5.95	5.00
IDC37P	37	7.95	7.50	7.00
IDC37S	37	9.50	9.00	8.95
IDC50P	50	9.95	9.75	9.50
IDC50S	50	10.95	10.25	9.95

INSULATION DISPLACEMENT SOCKETS



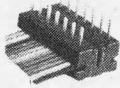
Pins	Socket Connector	1-9	10-24	25-99	Strain Relief
10	IDS10	1.40	1.20	1.10	.25
20	IDS20	2.00	1.85	1.75	.25
26	IDS26	2.50	2.40	2.30	.25
34	IDS34	3.25	3.10	2.95	.25
40	IDS40	3.95	3.70	3.55	.25
50	IDS50	5.00	4.60	4.40	.25

CENTRONICS IDC



PART NO.	1-9	10-24	25-99
IDC30360 MALE	8.95	8.50	7.95
IDC40360 FEMALE	9.95	9.50	8.95

"D" TYPE CONNECTORS—Cont.



CABLE PLUGS

- Provides pluggable termination of cable to PCB thru IDP plugs and standard DIP sockets
- Single piece design for easy handling and assembly
- Cover latch allows cover swivel for easy cable insertion
- Tapered pin tip permits easy insertion into IC sockets
- Strong leads for multiple insertions without damage

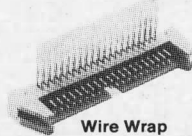
Pins	1-9	1-24	25-99	Pins	1-9	1-24	25-99
14	1.50	1.35	1.25	24	2.25	2.15	2.00
16	1.70	1.60	1.50	40	3.75	3.50	3.25

INSULATION DISPLACEMENT CONNECTORS IDH Series—Headers



PC Mounting

Pins	Straight	Right Angle	Price
10	IDH-10S	IDH-10R	1.25
20	IDH-20S	IDH-20R	1.65
26	IDH-26S	IDH-26R	1.99
34	IDH-34S	IDH-34R	2.75
40	IDH-40S	IDH-40R	2.95
50	IDH-50S	IDH-50R	4.25



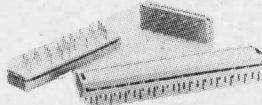
Wire Wrap

Pins	Straight	Right Angle	Price
10	IDH-10W	IDH-10WR	2.55
20	IDH-20W	IDH-20WR	2.75
26	IDH-26W	IDH-26WR	4.25
34	IDH-34W	IDH-34WR	4.95
40	IDH-40W	IDH-40WR	5.75
50	IDH-50W	IDH-50WR	6.50

IDE Card Edge Connectors

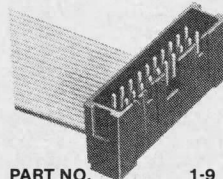
Pins	1-9	10-24	Pins	1-9	10-24
20	4.15	3.75	40	6.50	5.80
26	4.75	4.30	50	7.00	6.30
34	5.70	5.10			

TRANSITION CONNECTOR



Part No.	Pins	1-9	10-24
TRNS10	10	2.00	1.60
TRNS16	16	2.20	1.80
TRNS20	20	2.50	2.00
TRNS26	26	3.00	2.40
TRNS34	34	4.00	3.10
TRNS40	40	4.50	3.50
TRNS50	50	5.50	4.40

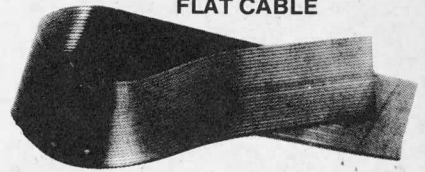
IDP PLUG CONNECTORS



PART NO.	1-9	10-24	25-99
IDP20	4.95	4.75	4.50
IDP26	5.65	5.25	4.75
IDP34	6.25	5.75	5.25
IDP40	6.75	6.00	5.50
IDP50	7.75	6.75	5.75

"D" TYPE CONNECTORS—Cont.

FLAT CABLE



- Wire spacing .050"±.002", .28 ga stranded.
- 10 thru 50 conductor laminated cable solid color (with wire one mark)
- Available in 100 foot rolls, or 10 foot lengths
- Meets UL FR-1 vertical flame test

Parts on this may be subject to gold adder.

Conduc-tors	10 ft.	100 ft.	Conduc-tors	10 ft.	100 ft.
10	2.90	17.00	25	6.25	42.50
14	3.40	23.80	26	5.40	44.20
16	3.70	27.20	34	6.80	57.80
20	4.40	34.00	40	7.80	68.00
24	5.00	40.80	50	9.50	85.00

RS232 AND "D" SUBMINIATURE CONNECTORS SOLDER TYPE: P=MALE TYPE S=FEMALE TYPE



Pins	P/N	1-9	10 Up	Hood Price
			A	B
9	DE-9P	2.75	2.60	
9	DE-9S	3.25	3.10	1.49 1.99
15	DA-15P	3.60	3.45	
15	DA-15S	3.95	3.65	1.75 2.49
25	DB-25P	3.50	3.35	
25	DB-25S	3.95	3.79	1.75 2.49
37	DE-37P	5.25	4.95	
37	DE-37S	5.95	5.25	1.75 2.49
50	DD-50P	6.25	5.95	
50	DD-50S	8.95	8.65	1.95 2.95

RS232 HARDWARE 1.00/SET

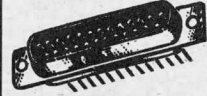
RS232 CUTOUT COVERS 4/1.00



RIGHT ANGLE D-SUBMINIATURE CONNECTOR

PART NO.	PINS	1-9	10-24
RADE9P	9	4.50	4.10
RADE9S	9	4.70	4.30
RADA15P	15	4.80	4.50
RADA15S	15	5.10	4.90
RADB25P	25	6.30	6.00
RADB25S	25	6.75	6.40
RADC37P	37	9.00	8.10
RADC37S	37	9.50	8.95
RADD50P	50	10.50	9.95
RADD50S	50	12.50	11.75

PC MOUNT D-SUBMINIATURE CONNECTOR



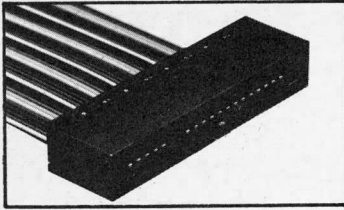
PART NO.	PINS	1-9	10-24
PCDE9P	9	3.50	3.25
PCDE9S	9	3.75	3.50
PCDA15P	15	4.50	4.25
PCDA15S	15	4.75	4.50
PCDB25P	25	4.50	3.75
PCDB25S	25	4.95	3.95
PCDC37P	37	8.95	8.25
PCDC37S	37	9.95	9.25
PCDD50P	50	10.95	9.95
PCDD50S	50	11.95	10.95

CENTRONICS PARALLEL CONNECTOR

PART NO.	PINS	1-9	10 UP
*57-30360	36-MALE	7.95	6.95
57-40360	36-FEMALE	8.95	7.95

*STANDARD PARALLEL CONNECTOR

CONNECTORS



EDGECARD JUMPERS RIBBON CABLE

Edge connector for .062 PCB with .100 centers. Gold plated with probe slots. Single ended or double ended (dbl).

P/N	DESCRIPTION	1-14	15-49
PG10E36	10 Pin CE 36" Sgl.	4.50	3.75
PG10E06E	10 Pin CE 06" Dbl	6.25	4.95
PG10E12E	10 Pin CE 12" Dbl	6.35	4.98
PG10E18E	10 Pin CE 18" Dbl	6.50	5.25
PG10E24E	10 Pin CE 24" Dbl	6.60	5.45
PG10E36E	10 Pin CE 36" Dbl	6.85	5.75
PG10E36	10 Pin CE 36" Sgl	6.15	5.35
PG16E36E	16 Pin CE 36" Dbl	9.50	8.35
PG20E36	20 Pin CE 36" Sgl	7.25	6.33
PG20E06E	20 Pin CE 06" Dbl	9.75	8.48
PG20E12E	20 Pin CE 12" Dbl	9.95	8.58
PG20E18E	20 Pin CE 18" Dbl	10.15	8.95
PG20E24E	20 Pin CE 24" Dbl	10.50	9.18
PG20E36E	20 Pin CE 36" Dbl	10.95	9.69
PG26E36	26 Pin CE 36" Sgl	8.50	7.49
PG26E06E	26 Pin CE 06" Dbl	10.95	9.69
PG26E12E	26 Pin CE 12" Dbl	11.25	9.75
PG26E18E	26 Pin CE 28" Dbl	11.50	9.85
PG26E24E	26 Pin CE 24" Dbl	11.75	9.95
PG26E36E	26 Pin CE 36" Dbl	12.40	10.90
PG34E36	34 Pin CE 36" Sgl	10.50	9.20
PG34E06E	34 Pin CE 06" Dbl	13.10	11.20
PG34E12E	34 Pin CE 36" Dbl	13.50	11.90
PG34E18E	34 Pin CE 18" Dbl	13.95	11.95
PG34E24E	34 Pin CE 24" Dbl	14.35	12.50
PG34E36E	34 Pin CE 36" Dbl	15.15	12.95
PG40E36	40 Pin CE 36" Sgl	12.95	10.25
PG40E06E	40 Pin CE 06" Dbl	15.00	12.90
PG40E12E	40 Pin CE 12" Dbl	15.80	13.20
PG40E18E	40 Pin CE 18" Dbl	16.00	13.25
PG40E24E	40 Pin CE 24" Dbl	16.50	13.85
PG40E36E	40 Pin CE 36" Dbl	17.50	14.25
PG50E36	50 Pin CE 36" Sgl	15.00	12.75
PG50E06E	50 Pin CE 06" Dbl	18.75	15.49
PG50E12E	50 Pin CE 12" Dbl	19.25	16.20
PG50E18E	50 Pin CE 18" Dbl	19.85	16.80
PG50E24E	50 Pin CE 24" Dbl	20.45	17.20
PG50E36E	50 Pin CE 36" Dbl	21.65	18.10
PG60E36	60 Pin CE 36" Sgl	18.85	16.20
PG60E36E	60 Pin CE 36" Dbl	25.65	21.10



I/O CONNECTOR JUMPERS

Connects "D" Sub 25 pin standard to Edgecard connector or socket connector. SKT is Socket Connector. CE is Edgecard Connector. DB25P = Male

P/N	DESCRIPTION	1-14	15-49
PG26S06DP	26 Pin SKT/DB25P 06"	12.90	10.79
PG26S12DP	26 Pin SKT/DB25P 12"	13.20	10.99
PG26S18DB	26 Pin SKT/DB25P 18"	13.55	11.29
PG26S24DP	26 Pin SKT/DB25P 24"	13.85	11.49
PG26S36DP	26 Pin SKT/DB25P 36"	14.50	11.79
PG26S60DP	26 Pin SKT/DB25P 60"	15.70	12.79
PG26S06DS	26 Pin SKT/DB25S 06"	13.70	11.29
PG26S12DS	26 Pin SKT/DB25S 12"	14.05	11.49
PG26S18DS	26 Pin SKT/DB25S 18"	14.30	11.69
PG26S24DS	26 Pin SKT/DB25S 24"	14.65	11.99
PG26S36DS	26 Pin SKT/DB25S 36"	15.30	12.49
PG26S60DS	26 Pin SKT/DB25S 60"	16.55	13.49
PG26E06DP	26 Pin CE/DB25P 06"	14.40	10.59
PG26E12DP	26 Pin CE/DB25P 12"	14.70	11.99
PG26E18DP	26 Pin CE/DB25P 18"	15.05	12.49
PG26E24DP	26 Pin CE/DB25P 24"	16.38	12.89
PG26E36DP	26 Pin CE/DB25P 36"	16.00	13.19
PG26E60DP	26 Pin CE/DB25P 60"	17.20	13.99
PG26E06DS	26 Pin CE/DB25S 06"	15.20	12.49
PG26E12DS	26 Pin CE/DB25S 12"	15.55	12.69
PG26E18DS	26 Pin CE/DB25S 18"	15.85	11.79
PG26E24DS	26 Pin CE/DB25S 24"	16.15	11.99
PG26E36DS	26 Pin CE/DB25S 36"	16.80	12.49
PG26E60DS	26 Pin CE/DB25S 60"	18.05	14.79

Single-ended

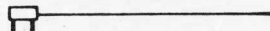
Part No.	Contacts	Length	Price
924012-36	20	36"	5.80
924013-36	26	36"	7.20
924014-36	34	36"	9.13
924015-36	40	36"	10.85
924016-36	50	36"	13.35

Daisy Chain

Part No.	Contacts	Length	Price
924072-06	20	6"	8.30
924073-06	26	6"	10.85
924074-06	34	6"	14.20
924075-06	40	6"	16.65
924076-06	50	6"	20.70

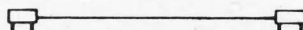
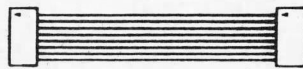
DIP Jumpers

• Flat ribbon cable assemblies with DIP connectors. • Available with 14, 16, 24, and 40 contacts. • Mate with standard IC sockets. • Fully assembled and tested. • Integral mold-on strain relief. • Line-by-line probeability.



Single-ended DIP Jumpers

Part No.	Contacts	Length	Price
924102-6	14	6"	3.20
924102-12	14	12"	3.40
924102-18	14	18"	3.60
924102-24	14	24"	3.80
924102-36	14	36"	4.20
924112-6	16	6"	3.35
924112-12	16	12"	3.60
924112-18	16	18"	3.85
924112-24	16	24"	4.10
924112-36	16	36"	4.60
924122-6	24	6"	5.40
924122-12	24	12"	5.90
924122-18	24	18"	6.30
924122-24	24	24"	6.70
924122-36	24	36"	7.50
924132-6	40	6"	8.05
924132-12	40	12"	9.70
924132-18	40	18"	10.35
924132-24	40	36"	11.00
924132-36	40	36"	12.30



Double-ended DIP Jumpers

Part No.	Contacts	Length	Price
924106-6	14	6"	4.70
924106-12	14	12"	4.90
924106-18	14	18"	5.10
924106-24	14	24"	5.30
924106-36	14	36"	5.70
924116-6	16	6"	4.90
924116-12	16	12"	5.15
924116-18	16	18"	5.40
924116-24	16	24"	5.65
924116-36	16	36"	6.15
924126-6	24	6"	7.75
924126-12	24	12"	8.15
924126-18	24	18"	8.55
924126-24	24	24"	8.95
924126-36	24	36"	9.75
924136-6	40	6"	13.25
924136-12	40	12"	13.90
924136-18	40	18"	14.55
924136-24	40	24"	15.20
924136-36	40	36"	16.50

Intra-Switches

• Permits instant line-by-line switching for diagnostic or QA testing. • Switches actuated with pencil or probe tip. • Mates with standard .10" x .10" dual-row connectors.

Part No.	No. of Contacts	Price
922578-20	20	15.95
922578-26	26	16.45
922578-34	34	18.45
922578-40	40	21.25
922578-50	50	24.25

• Permits quick testing of previously unprovable circuits. • Provides both straight-in and right angle functions. • Mates with standard .10" x .10" dual-row connectors.

Part No.	No. of Contacts	Price
922576-20	20	7.25
922576-26	26	8.35
922576-34	34	9.75
922576-40	40	10.75
922576-50	50	12.50

SOCKET JUMPERS

Single or double row plugs into IDC or AP headers. Gold plated. Single or Double Sided.

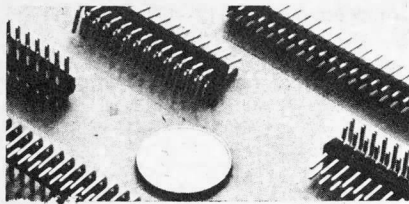
P/N	DESCRIPTION	1-14	15-49
PG10S36	10 Pin SKT 36" Sgl	3.65	3.35
PG10S06S	10 Pin SKT 06" Dbl	4.25	3.60
PG10S12S	10 Pin SKT 12" Dbl	4.40	3.80
PG10S18S	10 Pin SKT 18" Dbl	4.5-	3.85
PG10S24S	10 Pin SKT 24" Dbl	4.60	3.87
PG10S36S	10 Pin SKT 36" Dbl	4.85	3.98
PG20S36	20 Pin SKT 36" Sgl	5.50	4.65
PG20S06S	20 Pin SKT 06" Dbl	6.25	5.13
PG20S12S	20 Pin SKT 12" Dbl	6.50	5.35
PG20S18S	20 Pin SKT 18" Dbl	6.75	5.55
PG20S24S	20 Pin SKT 24" Dbl	7.00	5.75
PG20S36S	20 Pin SKT 36" Dbl	7.50	6.35
PG26S36	26 Pin SKT 36" Sgl	6.95	5.85
PG26S06S	26 Pin SKT 06" Dbl	7.85	6.48
PG26S12S	26 Pin SKT 12" Dbl	8.15	6.72
PG26S18S	26 Pin SKT 18" Dbl	8.50	7.00
PG26S24S	26 Pin SKT 24" Dbl	8.80	7.35
PG26S36S	26 Pin SKT 36" Dbl	7.85	7.85
PG34S36	34 Pin SKT 36" Sgl	8.85	7.49
PG34S06S	34 Pin SKT 06" Dbl	9.85	8.29
PG34S12S	34 Pin SKT 12" Dbl	10.25	8.50
PG34S18S	34 Pin SKT 18" Dbl	10.65	8.99
PG34S24S	34 Pin SKT 24" Dbl	11.10	9.29
PG34S36S	34 Pin SKT 36" Dbl	11.90	9.89
PG40S36	40 Pin SKY 36" Sgl	10.35	8.99
PG40S06S	40 Pin SKY 06" Dbl	11.50	9.99
PG40S12S	40 Pin SKY 12" Dbl	11.95	10.10
PG40S18S	40 Pin SKY 18" Dbl	12.50	11.10
PG40S24S	40 Pin SKY 24" Dbl	13.40	11.20
PG50S36	50 Pin SKT 36" Sgl	12.75	10.49
PG50S06S	50 Pin SKT 06" Dbl	14.00	11.49
PG50S12S	50 Pin SKT 12" Dbl	14.65	12.20
PG50S18S	50 Pin SKT 18" Dbl	15.25	12.79
PG50S24S	50 Pin SKT 24" Dbl	15.85	13.25
PG50S36S	50 Pin SKT 36" Dbl	17.05	14.25
PG60S36	60 Pin SKT 36" Sgl	15.15	12.99
PG60S36S	60 Pin SKT 36" Dbl	20.25	17.20

"D" SUB CONNECTOR JUMPERS

RS232 to RS232
DB25S or P Connector
P=Male S=Female

P/N	DESCRIPTION	1-14	15-49
PG25D36P	DB25P 36" Sgl	12.00	9.99
PG25DP06DP	DB25P 06" Dbl	17.95	14.99
PG25DP12DP	DB25P 12" Dbl	18.25	15.29
PG25DP24DP	DB25P 24" Dbl	18.85	15.99
PG25DP36DP	DB25P 36" Dbl	19.45	16.49
PG25DP60DP	DB25P 60" Dbl	20.65	17.49
PGDS36	DB25S 36" Sgl	12.80	10.99
PG25DS06DS	DB25S 06" Dbl	19.60	16.49
PG25DS12DS	DB25S 12" Dbl	19.90	16.99
PG25DS24DS	DB25S 24" Dbl	20.60	17.29
PG25DS36DS	DB25S 36" Dbl	21.10	17.99
PG25DS60DS	DB25S 60" Dbl	22.30	18.99
PGDP06DS	DB25P/DB25S 06"	18.80	15.99
PG25DP12DS	DB25P/DB25S 12"	19.10	16.29
PG25DP24DS	DB25P/DB25S 24"	19.75	16.99
PG25DP36DS	DB25P/DB25S 36"	20.35	17.29
PG20DP60DS	DB25P/DB25S 60"	21.00	18.99

DOUBLE-ROW MALE HEADERS

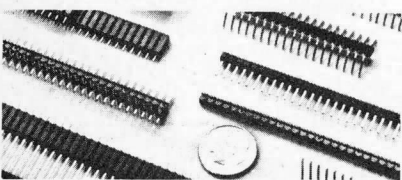


• Ideal mates for "Great Jumpers". • Solder to PC boards for instant plug-in access via socket-connector jumpers • .025" square posts are molded into plastic header strip on a .10" x .10" matrix. • Choice of straight or right angle configurations.

Part No.	Straight		
	No. of Posts	Pkg	Price
923862	20	2/Pkg	\$1.85
923863	26	2/Pkg	\$2.20
923864	34	2/Pkg	\$2.75
923865	40	2/Pkg	\$3.20
923866	50	2/Pkg	\$3.90

Part No.	Right Angle		
	No. of Posts	Pkg	Price
923872	20	2/Pkg	\$2.20
923873	26	2/Pkg	\$2.75
923874	34	2/Pkg	\$3.45
923875	40	2/Pkg	\$4.00
923876	50	2/Pkg	\$4.95

SINGLE ROW MALE HEADERS



• For economical attachment of complete matrices of .025" square posts to PC boards to serve as male contacts for interconnection systems. • Ideal for mating with single and dual-row female connectors. • 36 posts per row molded into nylon header strip. • "Break-to-length" feature allows making of shorter rows of contact.

Wire Wrapping Models (.600" tail)

Part No.	Rows		Price
	Type		
929834-05	1	Straight	\$2.29
929836-05	2	Straight	\$4.59
929835-03	1	Rt angle	\$2.09
929838-03	2	Rt angle	\$4.59

PC Board Models (.100" tail)

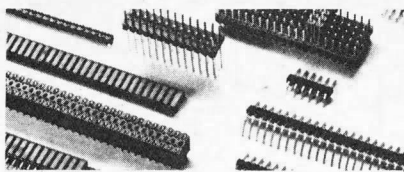
Part No.	Rows	Type	Price
929834-01	1	Straight	\$1.09
929836-01	2	Straight	\$2.29
929835-01	1	Rt angle	\$1.28
929838-01	2	Rt angle	\$2.99

SUPER-STRIPS

• Combine power/signal distribution system with universal .10" x .10" matrix of 128 terminals, each with 5 tie points. • 840 solderless plug-in tie points. • Accommodates up to nine 14 pin DIPs. • Compatible with all DIPs and discretes with lead diameters to .032". • Require no special patch cords.

923252	Alloy 770.....	\$18.50
923748	Gold-plated.....	\$37.00

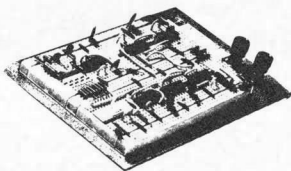
FEMALE HEADERS



• Mate with matrices of .025" square or round posts on .100" centers. • Ideal as single and dual row cable connectors for back panels and patchboard matrices. • 36 "tuning fork" contacts per row in rugged nylon header strip. • May be cut-to-length for shorter rows of contact.

Part No.	Rows	Type	Price
929974	1	Straight	\$1.49
929975	2	Straight	\$3.09

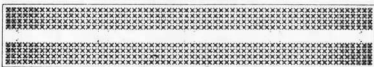
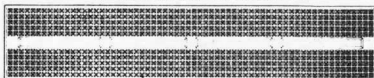
ALL-CIRCUIT EVALUATOR



• ACE for fast, solderless, plug-in circuit building and testing. • Plug in any components with leads up to .032" diameter. • Interconnect with solid wire up to 20 gauge. • Gold-anodized aluminum base/ground. • Non-corrosive nickel-silver terminals.

Part No.	DIP Cap	No Bus	Board Size	Price
200-K	8	2	4 1/2" x 5 1/2"	\$18.95
201-K	12	2	7" x 16"	\$24.95
208	8	8	4 1/2" x 5 1/2"	\$28.95
212	12	8	4 1/2" x 7"	\$34.95
218	18	10	6 1/2" x 7 1/8"	\$46.95
227	27	28	8" x 9 1/4"	\$59.95
236	36	36	10 1/4" x 9 1/4"	\$79.95

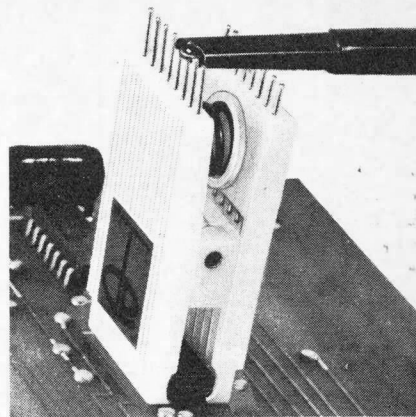
TERMINAL STRIPS



• Facilitate quick, solderless circuit build-up and check-out on universal .10" x .10" matrix. • Offered in 11 configurations. • Accepts all components with leads up to .032" in diameter. • Requires no special patch cords. • Includes integral non-shortening instant-mounting backing.

Part No.	Terminals	Tie-Points	Price
923261	128	5	\$14.00
923277	Bus strip for above ...		\$ 3.50
923265	96	5	\$11.20
923281	Bus strip for above ...		\$ 2.80
923269	68	5	\$ 9.55
923285	Bus strip for above ...		\$ 2.40
923273	12	5	\$ 5.35
923289	128	4	\$11.20
923291	54	4	\$ 6.75
923292	54	4	\$ 7.85
923273	bus strip for above ...		\$ 5.35

IC TEST CLIPS



STANDARD TEST CLIPS

New "nail-head" pins keep probe hooks from sliding off ends

PART NO.	MODEL NO.	ROW TO ROW SPACING	PRICE	
			1-24	25-40
AP923695	TC-8	.3 in	8.50	7.69
AP923698	TC-14	.3 in	5.15	4.69
AP92370	TC-16	.3 in	5.40	4.89
AP923702	TC-16LSI	5/6 in	10.15	9.20
AP923703	TC-18	.3 in	11.35	10.29
AP923704	TC-20	.3 in	13.00	11.49
AP923705	TC-22	.4 in	14.15	12.99
AP923714	TC-24	5/6 in	14.95	13.29
AP923718	TC-28	5/6 in	16.50	14.99
AP923720	TC-36	5/6 in	21.00	18.99
AP923722	TC-40	5/6 in	21.10	19.99
AP923724	TC-48	5/6 in	25.00	22.79
AP5923726	TC-64	.9 in	32.00	28.99

HEADLESS TEST CLIP

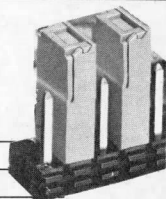
Both rows of contacts are the same length (not offset) and do not have "nail-heads".

AP923690-8	LTC-	.3 in	PRICE	
			8.50	7.69
AP923690-14	LTC-14	.3 in	5.15	4.69
AP923690-16	LTC-16	.3 in	5.40	4.89
AP923690-18L	LTC-16LSI	5/6 in	10.15	8.99
AP923690-18	LTC-18	.3 in	11.35	9.99
AP923690-20	LTC-20	.3 in	13.00	11.49
AP923690-22	LTC-22	.4 in	14.45	12.99
AP923690-24	LTC-24	5/6 in	14.95	13.29
AP923690-28	LTC-28	5/6 in	16.50	14.99
AP923690-36	LTC-36	5/6 in	21.00	18.99
AP923690-40	LTC-40	5/6 in	21.95	19.99
AP923690-48	LTC-48	5/6 in	25.00	21.99
AP923690-64	LTC-64	.9 in	32.00	28.50

BERG

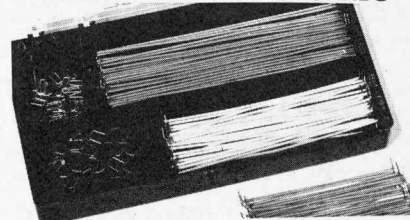
SHORTING BLOCKS

Pkg of 10



PART NO.	1-9	10-24
BERG-SB02	2.50	2.00

WIRE KIT FOR BREADBOARDS



• Each kit contains 350 wires cut to 14 different lengths from 0.1" to 5.0". • Each wire is stripped and the leads are bent 90° for easy insertion. • Wire length is classified by color coding. • All wire is solid tinned 22 gauge with PVC insulation.

923351	Wire Kit.....	\$13.95
--------	---------------	----------------

E-Z-HOOK

ELECTRONIC TEST ACCESSORIES / VIDEO CONNECTORS

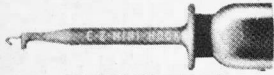
TEST EQUIPMENT



XM MICRO-HOOK
1.75"

The XM Micro-Hook is designed for difficult IC test connections. Light weight (less than 1 gram) and Finger-eze Hypo Action permit direct hook up to delicate wires where weight and leverage may damage component.

XM-COLOR \$1.25
XM-S - 1 ea. 10 colors \$12.00



X100W Mini-Hook
2.25"

The X100W Mini-Hook combines all the proven features that have made all E-Z Hook products the most used Test and Trouble Shooting Aids available. The concave Plunger configuration and built-in Washer provide tireless Finger-eze Hypo-Action for fast, safe, short-free testing. Hook is large enough to span most component leads, yet small enough to get into tight places. Tough, for continued use production testing, yet so gentle, it will not damage delicate components. Insulated to a single contact point for true readings.

X100W-COLOR \$ 1.05
X100W-S - 1 ea. 10 colors \$10.00



XL MINI HOOK
5"

The XL Mini-Hook combines all the proven features of the X100W Mini-Hook with an extra long body. It will make safe, short-free test connections in card racks and through wiring nests up to 4" deep. Insulated to single contact point to assure true readings.

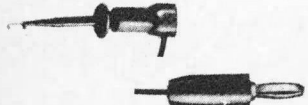
XLI-COLOR \$ 1.60
XLI-S - 1 each, 10 colors \$16.00



SPECIFY LENGTH

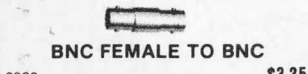
JUMPER—MICRO-HOOK TO MICRO-HOOK

Part Number	Wire Lgth. Inches	PRICE
XM-12-COLOR	12	\$2.50
XM-12-S 1 ea. 10 colors	12	\$2.40
XM-24-COLOR	24	\$2.50
XM-24-S 1 ea. 10 colors	24	\$2.40
XM-36-COLOR	36	\$2.50
XM-36 S 1 ea. 10 colors	36	\$2.40



JUMPER MICRO-HOOK TO STANDARD BANANA PLUG
32"/80cm

MICRO-HOOK TO STANDARD BANANA PLUG 32"/80cm
BXM-RD or BK \$2.35

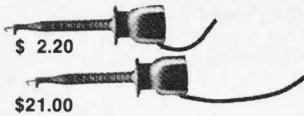


BNC FEMALE TO BNC
9220 \$3.25



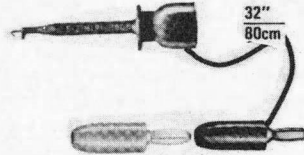
BNC FEMALE PANEL RECEPTACLE
9230 \$1.50

JUMPER—MINI-HOOK TO MINI-HOOK



\$ 2.20
\$21.00

Part Number	Wire Lgth. Inches	PRICE
204-12 COLOR	12	\$2.35
204-12-S 1 ea. 10 colors	12	\$22.00
204-24-COLOR	24	\$ 2.20
204-24-S 1 ea. 10 colors	24	\$21.00
204-36-COLOR	36	\$ 2.20
204-36-S 1 ea. 10 colors	36	\$21.00



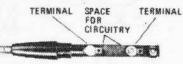
BNC T ADAPTOR - 2 FEMALE AND 1 MALE CONNECTIONS
9238 \$8.00

MINI-HOOK TO STACKING BANANA PLUG
32"/80cm

201W-RD or BK \$2.50

MINI-HOOK TO MINIATURE BANANA PLUG

CZIW-RD or BK \$ 2.50



SLIM-LINE TEST CONNECTOR

Slim Line Probe with lightweight construction. Screw on cover for ready access to repair or replace internal circuitry or connections.

54-1-RD or BK \$2.49



MICRO-HOOK TO MINIATURE BANANA PLUG

No. CXM Description Micro-Hook, Miniature Banana Plug
Lead Wire: 22 AWG 65 x 40 Thermoplastic \$2.50



ALLIGATOR CLIP LEAD SETS

10 color coded mini clip leads 15 inches long 2 each red, green, yellow, black, and white.

CAL-ACL-1015 \$2.99

10 color coded standard clip leads 15 inches long 2 each red, green, yellow, black, and white.

CAL-ACL-101H \$3.49

IMPORTANT ORDERING INFORMATION

MOST ITEMS AVAILABLE IN 10 RETMA COLORS: BLACK, BROWN, RED, ORANGE, YELLOW, GREEN, BLUE VIOLET, GREY, WHITE. SPECIFY WHEN ORDERING. EXAMPLE: EZH-X100W-RED, EZH-204XM-12W-BLUE or -S (1 each of all 10 colors).

PART SUBSTITUTION CLIP

71-1-BK pkg. 2 \$ 2.25



MICRO-HOOK TO LEAD ONLY
SPECIFY LENGTH

THERMOPLASTIC LEAD 22 AWG 65 x 40

Part Number	Wire Lgth. Inches	PRICE
213XM-12-color	12	\$1.65
213XM-24-color	24	\$1.65
213XM-36-color	36	\$1.65

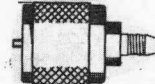
STANDARD BANANA PLUG

9202-COLOR pkg. 2 \$1.50



STACKING BANANA PLUG

9203 RD or BK pkg. 2 \$ 1.65



UHF MALE CONNECTOR FOR RG58C/U CABLE

8911 \$2.50



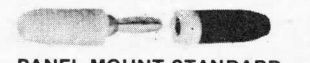
STACKING DOUBLE BANANA PLUG

DR750 \$ 2.25



STANDARD BANANA JACK

9210 RD or BK pkg. 2 \$ 1.65



PANEL MOUNT STANDARD BANANA JACK

9217-COLOR pkg. 4 \$3.10



BNC MALE TO BNC MALE, WEATHERPROOF, WITH STRAIN RELIEF BOOTS
SPECIFY LENGTH

Part Number	Wire Lgth. Inches	PRICE
1026-24	24	\$7.75
1026-36	36	\$7.75
1026-48	48	\$7.75

RCA to RCA Video Cable — 8 ft. \$4.25
RCA to RCA Video Cable — 4 ft. \$3.30
"F" plug to "F" plug Video Cable—8 ft. \$4.25
"F" plug to "F" plug Video Cable—4 ft. \$3.30



75 Ohm to 300 Ohm Matching Transformer \$1.75



300 Ohm to 75 Ohm Balun \$1.75

COAX SPLITTER \$4.95



TV GAME SWITCH \$3.95

RCA to "F" plug adapter jack \$2.50
"F" plug to RCA adapter jack \$2.25
RCA to RCA Female adapter \$2.25
Double "F" plug adapter \$1.90



BNC MALE CONNECTOR FOR RG58C/U CABLE

8901 \$2.75



BNC FEMALE TO UHF MALE ADAPTER

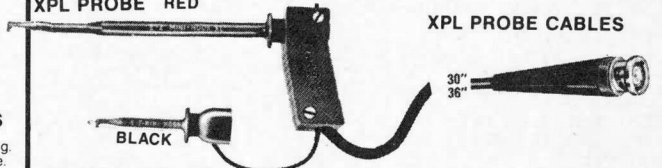
9001 \$4.95



BNC FEMALE TO STANDARD DOUBLE BANANA PLUG ADAPTOR

9225 \$4.25

XPL PROBE RED



XPL PROBE CABLES

X100W GROUND

Interior Circuit Area capable of holding a wide variety of components.

4061XPL \$12.50

PROTO BOARDS



PROTO-BOARD® UNITS

All the speed and convenience of QT Sockets and Bus Strips plus backplanes and binding posts in both kits and preassembled units. Assemble, test and modify circuits as fast as you can think.

PROTO-BOARD PB-6 KIT

Contains one preassembled QT-47S socket, two preassembled QT-47B bus strips, four binding posts, metal ground/base plate, non-marring feet and all hardware. Ten minute assembly time. Size: 6" x 4" w x 1.4" h. Weight: 7 ozs.

Model PB-6 Kit—Complete.
List Price \$ 19.95

PHOTO-BOARD PB-100 KIT

Contains two preassembled QT-35S sockets, one preassembled QT-35B bus strip, two binding posts, non-metallic base plate, non-marring feet and all hardware. Ten minute assembly time. Size: 4.5" x 6" w x 1.4" h. Weight: 7.5 ozs.

Model PB-100 Kit—Complete.
List Price \$ 21.95

PROTO-BOARD PB-101

Fully assembled breadboard contains two QT-35S sockets and four QT-35B bus strips mounted on metal ground/base plate with non-marring feet. Excellent for audio and small digital projects. Size: 6.0" x 4.5" w x 1.4" h. Weight: 9 ozs.

Model PB-101 Breadboard—Complete.
List Price \$ 28.95

PROTO-BOARD PB-102

Fully assembled breadboard contains two QT-47S sockets, three QT-47B bus strips and one QT-35B bus strip on a metal ground/base plate with non-marring feet. Excellent for intermediate digital needs. Size: 7.4" x 4.5" w, x 1.4" h. Weight: 10 ozs.

Model PB-102 Breadboard—Complete.
List Price \$ 34.95

PROTO-BOARD PB-103

Fully assembled breadboard contains three QT-59S sockets, four QT-59B and one QT-47B bus strip, four binding posts on a metal ground/base plate with non-marring feet. Build calculators, interfaces, networks, etc. Size: 9" x 6" w x 1.4" h. Weight: 21 ozs.

Model PB-103 Breadboard—Complete.
List Price \$ 59.95

PROTO-BOARD PB-104

Fully assembled breadboard contains four QT-59S sockets, seven QT-59B bus strips and four binding posts on a metal ground/base plate with non-marring feet. Build a CPU, encoder, complex display, etc. Size: 9.8" x 8" w x 1.4" h. Weight: 29 ozs.

Model PB-104 Breadboard—Complete.
List Price \$ 77.00

PROTO-BOARD PB-203

Fully assembled breadboard contains built-in, short-proof, fused, 5 VDC at 1 Amp, regulated power supply, in addition to three QT-59S sockets, four QT-59B bus strips, one QT-47B bus strip and four binding posts. Capacity for most digital and many analog projects. Size: 9.75" x 6.6" w x 3.25" h. Weight: 5 lbs.

Model PB-203 Breadboard—Complete.
List Price \$133.00

PROTO-BOARD PB-203A

Provides all the features of Proto-Board PB-203 with additional +15 and -15 VDC at 0.5 Amp power supplies with internally adjustable output voltages. Size: Same as PB-203. Weight: 5.5 lbs.

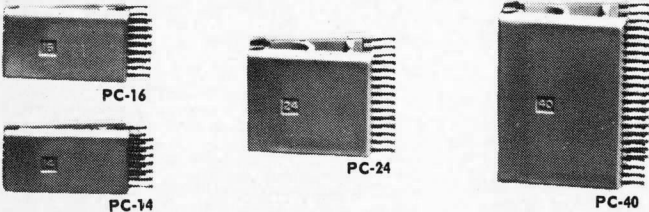
Model PB-203A Breadboard—Complete.
List Price \$174.00

PROTO-BOARD KIT PB-203AK

Kit version of Model PB-203A. Kit contains all components of Model PB-203A plus solder, hook-up wire and easy-to-follow instructions. Weight: 5.5 lbs.

Model PB-203AK Proto-Board Kit—
Net Each \$149.95

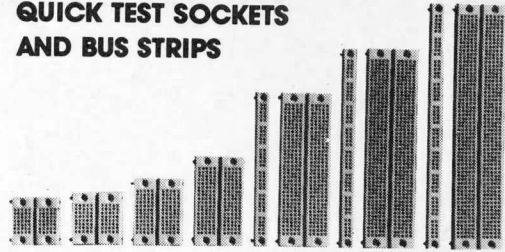
PROTO-CLIP™ CONNECTORS



Model No.	Description	List Price
PC-14	14-pin standard DIP spacing	\$ 4.50
PC-16	16-pin standard DIP spacing	4.75
PC-24	24-pin wide LSI DIP spacing	9.00
PC-40	40-pin wide LSI DIP spacing	14.00

The clip-on, short-proof way to bring up leads from crowded circuit boards for testing, signal tracing, signal injection, etc. Nickel-silver contacts give low-resistance connections to all IC leads; molded-in spacers prevent shorts. Test probes or clip leads connect to slip-proof teeth on top. All plastic construction eliminates troublesome springs and pivots.

QUICK TEST SOCKETS AND BUS STRIPS

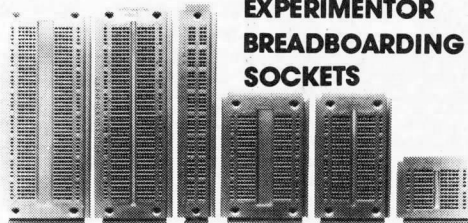


Universal solderless breadboarding system includes Quick-Test sockets and bus strips. Socket terminals are arranged with two rows of five pre-connected tie points running crosswise. Bus strip terminals are arranged in two rows of five pre-connected tie points running lengthwise. Base is molded of high-temperature plastic. Contacts are pre-stressed, spring-loaded, nickel silver alloy; accept wire sizes .015" to .032". Units feature snap-lock mechanism for mating two or more units together, end to end.

SPECIFICATIONS AND PRICING

Model	Strip Length (Ins.)	Strip Width (Ins.)	Mount Dimen. (Ins.)	Tie Points	Term. Clips	IC Qty. (14-pin)	Net Each
QT-59S	6.5	1.32	6.2	590	118	8	\$12.50
QT-59B	6.5	.36	6.2	100	20	.....	2.99
QT-47S	5.3	1.32	1	470	94	6	10.24
QT-47B	5.3	.36	5	80	16	.....	2.59
QT-35S	4.1	1.32	3.8	350	70	5	8.50
QT-35B	4.1	.36	3.8	60	12	.....	2.25
QT-18S	2.4	1.32	2.1	180	36	2	4.50
QT-12S	1.8	1.32	1.5	120	24	1	3.75
QT-8S	1.4	1.32	1.1	80	16	1	3.00
QT-7S	1.3	1.32	1	70	14	1	2.75

EXPERIMENTOR BREADBOARDING SOCKETS



Solderless breadboarding sockets accept DIP's, transistors, LED's, resistors, capacitors, and most all types of discrete components, as well as AWG 22-30 solid hookup wire. An interlocking system permits boards to be snapped together for optimum configuration for any circuit. Sockets are molded of durable, abrasion resistant material and feature prestressed, nickel-silver contacts. A vinyl plastic backing prevents shorts when sockets are mounted on metallic surfaces. Tie-points are alphanumerically identified for faster wiring and circuit tracing. Sockets can be used loose or fastened to a mounting surface.

SPECIFICATIONS AND PRICING

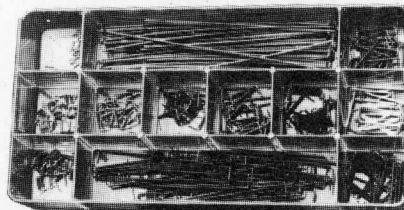
Model	Center Channel Lgth. (Ins.)	Strip Lgth. (Ins.)	Strip Width (Ins.)	Tie Pts.	Term. Clips	IC Cpty.	Net Each
EXP-600	0.6	6	2.4	550	110	3'	\$14.75
EXP-300	0.3	6	2.1	550	110	6†	12.00
EXP-4B	.....	6	1	180	32	.....	4.75
EXP-650	0.6	3.6	2.4	270	54	1‡	8.75
EXP-350	0.3	3.6	2.1	270	54	3†	6.75
EXP-325	0.3	1.9	2.1	130	26	1*	3.50

28-pin. †14-pin. §40-pin. *22-pin.

EXPERIMENTOR MATCH BOARD

EXP 300P	Matchboard	\$2.70
EXP 302	(3) 50 sheet workpods	\$3.30
EXP 303	(2) Matchboards (1) EXP 300	\$16.00
EXP 304	(2) Matchboards (1) EXP 300 (1) Scratchboard	\$17.00

WK-1 WIRE JUMPER KIT



For use with Quick Test sockets and bus strips. Experimentor solderless breadboards, Proto-Boards, Matchboard, etc. AWG-22 insulated solid wire, pre-cut, pre-stripped and pre-formed, 14 color-coded lengths include 0.1 through 1 inch (in 0.1" increments), 2, 3, 4 and 5 inches; length does not include 1/4" ends, stripped and bent, 90 degrees. Jumpers come in compartmented plastic case with hinged lid.

Model WK-1 Wire Jumper Kit—Net Each \$10.00

DESIGN HARDWARE

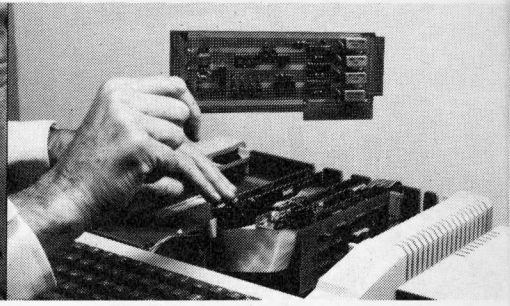
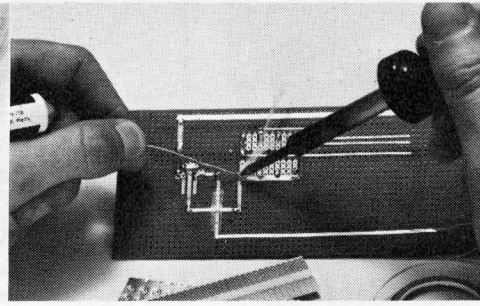
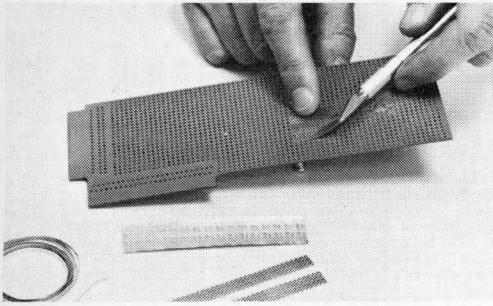
INSTANT PC BOARDS

Pressure-Sensitive Copper Products Now, As Easy As 1...2...3...

You Can Build, Prototype Or Repair PC Boards Instantly!

E-Z CIRCUIT™

by Bishop Graphics, Inc.



COPPER TAPE, PRESSURE SENSITIVE (Fig. 1)

One oz., .0014" thick copper. 6 ft. per roll.

E-Z Circuit No.	Width	Net per Roll	E-Z Circuit No.	Width	Net per Roll
EZ300151	.015"	\$1.50	EZ300621	.062"	\$1.50
EZ300201	.020"	1.50	EZ301001	.100"	1.85
EZ300311	.031"	1.50	EZ301251	.125"	1.85
EZ300401	.040"	1.50	EZ302001	.200"	1.85
EZ300501	.050"	1.50	EZ302501	.250"	1.85

INSULATING TAPE, PRESSURE SENSITIVE (Fig. 1)

For insulating crossovers, etc.

E-Z Circuit No.	Width	Length	Net per Roll
EZC3500	.100"	10 ft.	\$1.25
EZC3502	.150"	10 ft.	1.25
EZC3504	.200"	10 ft.	1.25
EZC3506	.300"	10 ft.	1.25

PRESSURE SENSITIVE COPPER DONUT PADS (Fig. 2)

E-Z Circuit No.	Dimensions		Qty. per Pkg.	Net per Pkg.
	O.D.	I.D.		
EZ7201	.100"	.040"	96	\$1.95
EZ7202	.125"	.040"	96	1.95
EZ7203	.187"	.040"	96	2.25
EZ7204	.250"	.040"	96	2.25
EZ7205	.150"	.040"	96	1.95

"CUT-N-PEEL" PRESSURE SENSITIVE COPPER SHEETS

E-Z Circuit No.	Dimensions		Qty. per Pkg.	Net per Pkg.
	Width	Length		
EZ7251	5"	9"	3 shts.	\$3.60
EZ7253	5"	9"	2 shts.	3.60

MULTIPURPOSE BOARDS

E-Z Circuit No.	Description	Size (In.)		Net Each
		W	L	
EZ7301	Plain epoxy-glass, drilled, .100" x .100" hole matrix	8 1/2	17	\$16.95
EZ7302		4 1/4	8 1/2	4.70

GENERAL PURPOSE PLUG BOARD (Fig. 3)

Designed for standard card cages and rack and panel hardware. Board thickness, .055". Hole pattern, .1" x .1".

E-Z Circuit No.	Dimensions in Inches				Net Each
	A	B	C		
			Positions	Centers	
EZ7402	4 1/2	6 1/2	22/44	.156	\$5.90

E-Z BUSTM BOARDS

Pre-shaped E-Z. BUS boards are designed to permit maximum flexibility in program experimentation, interface design, and memory expansion in popular microprocessor systems.

E-Z Model No.	Fig.	Description	Net Each
EZ7464	4	Apple	\$4.90
EZ7472	5	S-100	9.95
EZ7475	...	Standard bus	5.90

ALUMINUM ALIGNMENT PINS

Each alignment pin features an easy-to-grip head and tapered tip for smooth insertion into a printed circuit board and accurate alignment of E-Z CIRCUIT copper products. Catalog Number EZ7574—Four Pins per Pack \$1.25

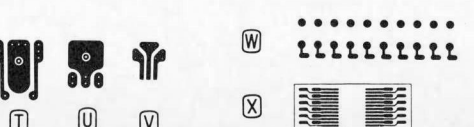
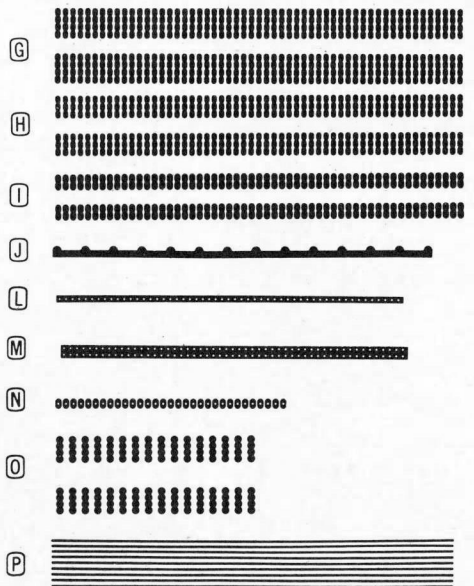
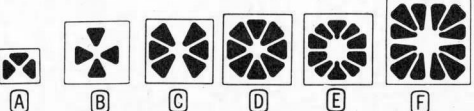
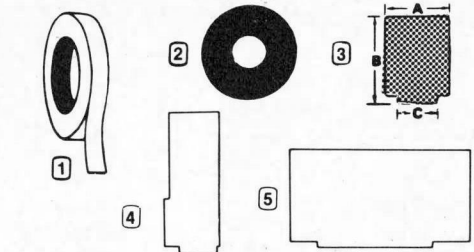
Professional Printed Circuit Design Kits (Fig. 1A)

E-Z Circuit No.	Description	Net Each
EZ8951	Eurokit	\$67.50
EZ8952	Standard bus	62.80
EZ8953	S-100	68.20
EZ8954	APPLE	63.20

Everything you need to get started creating Instant PC boards...the convenient, economical way.



(Fig. 1A)



PRESSURE-SENSITIVE COPPER COMPONENTS

A variety of pressure-sensitive copper components to suit just about any need for producing a PC breadboard or prototype. All holes .042" dia., NC* drilled (computerized, automated, numerically controlled drilling).

COPPER 90° ELBOWS (NOT SHOWN)

Model No.	Line Width	Qty.	Price
EZ7121	.050"	36	\$1.95
EZ7123	.062"	36	1.95
EZ7124	.100"	36	1.95
EZ7125	.125"	36	1.95

DUAL IN-LINE PACKAGE PATTERNS

.100" lead spacing. .300" row center, except as indicated.

E-Z Circuit No.	Fig.	Leads per Pkg.	Holes per Pad	Row Spacing	Qty. per Pkg.	Net per Pkg.
EZ1201	G	6-18	4	.300"	1	\$2.65
EZ1205	G	6-20	4	.300"	1	2.65
EZ1206	H	6-20	3	.300"	1	2.25
EZ1202	...	6-18	3	.300"	1	2.25
EZ1209	...	22-40	3	.400"	1	2.25
EZ1221	...	6-10	2	.300"	1	2.10
EZ1223	I	6-18	2	.300"	1	2.10
EZ1233	...	10-18	1	.300"	1	2.00

COPPER POWER AND GROUND DISTRIBUTION STRIPS

E-Z Circuit No.	Fig.	No. of Pads	Cond. (In.)		Qty. per Pkg.	Net per Pkg.
			Width	Length		
EZ1321	J	14	.100"	5.3	3	\$1.95
EZ1322	...	28	.100"	5.3	3	2.25
EZ1325	L	55	.100"	5.5	3	1.95
EZ1326	M	110	.200"	5.5	3	2.25

PRESHAPED, INSULATED TERMINAL (PAD) STRIPS

E-Z Circuit No.	Fig.	No. of Pads	Pad Size (In.)	Holes per Pad	Pad Centers	Qty. per Pkg.	Net per Pkg.
EZ1340	N	31	.062" OD	1	.100"	5	\$2.25
EZ1341	...	31	.100"	1	.100"	5	2.25
EZ1344	...	11	...	1	.300"	5	2.50
EZ1346	...	32	.100" OD	1	.200"	5	2.75
EZ1303	...	48	.125" OD	1	.200"	5	3.00

PRESPACED, INSULATED CONDUCTOR STRIPS

E-Z Circuit No.	Fig.	Conductor		Spacing Between Conductors	Cond. per Strip	Net per Strip
		Width	Length			
EZ1329	P	.020"	5.5"	.050"	10	\$2.50
EZ1330031"	5.5"	.081"	10	2.50
EZ1331040"	5.5"	.090"	10	2.50
EZ1332050"	5.5"	.100"	10	3.00
EZ1333062"	5.5"	.112"	10	3.00
EZ1334080"	5.5"	.130"	10	3.00
EZ1337125"	5.5"	.175"	10	3.25

"INSERTION TYPE" CONNECTOR PATTERNS

E-Z Circuit No.	Fig.	No. of Positions	Contact Centers	Net per Set	
EZ1355	...	15/30	.156"	1 set	\$2.95
EZ1359	...	50/100	.125"	1 set	4.60
EZ1361	...	28/56	.125"	1 set	2.65
EZ1363	...	25/50	.100"	1 set	2.05
EZ1364	...	20/40	.100"	1 set	2.05
EZ1365	...	22/44	.156"	1 set	4.20

COPPER POWER TRANSISTOR PATTERNS

TO-3 PACKAGE FLANGE MOUNTING (FIG. T)

Model No. EZ1404—5 Patterns per Pkg. \$2.25

RECTIFIER SCR TRJAC, STUD MOUNTING PACKAGES (FIG. U)

Model No. EZ1405—5 Patterns per Package \$2.25

SCR & TRANSISTOR FLAT PLASTIC PACKAGE (THRU HOLE MTNG.) (FIG. V)

Model No. EZ1406—5 Patterns per Package \$2.25

COPPER TEST POINT STRIP (FIG. W)

Cut for number of test points required. Model No. EZ1381—10 Test Points/Strip, 1 Strip/Pkg. ... \$1.30

UNDRILLED, COMPACT FLAT PACK CONFIGURATIONS (FIG. X)

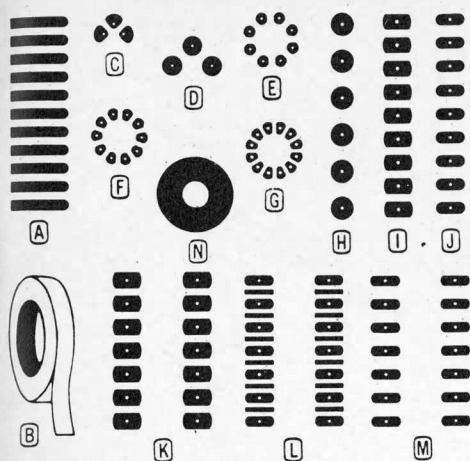
.050" lead spacing. Solder pads are staggered for maximum compactness, and are compatible with .100" grid material. Model No. EZ1067—2 Patterns per Pack \$2.25

TO-5 COPPER PATTERNS

E-Z Circuit No.	Fig.	No. Leads	Qty. per Pkg.	Net per Pkg.
EZ1022	B	4	10	\$3.00
EZ1031	A	3	10	3.00
EZ1033	C	6	10	3.00
EZ1034	D	8	10	3.00
EZ1035	E	10	10	4.00
EZ1036	F	12	12	4.00

Pressure-Sensitive DRAFTING AIDS

For Precision Printed Circuit Artworks



PRESSURE SENSITIVE PC DRAFTING AIDS

Everything you need for designing and drafting your own PC board circuits. Pressure-sensitive printed circuit artwork consists of multi-purpose preshaped pads, insertion-type connector patterns, dual in-line package (DIP) and "TO" style patterns, precision PC artwork tape, tape shapes, tees, 90-degree elbows and universal corners.

INSERTION-TYPE CONNECTOR PATTERNS

Use when contacts on edge of PC board mate directly with those in a push-on board-edge receptacle connector.

E-Z Circuit No.	Fig.	Center-To-Center Spacing	Scale	Contacts per Strip	Strips per Pkg.	Net per Pkg.
EZ6805	A	.100"	1X	44	2	\$1.95
EZ6809	A	.100"	2X	22	5	1.95
EZ6704	A	.125"	1X	35	2	1.95
EZ6716	A	.125"	2X	17	4	1.95
EZ6708	A	.156"	1X	28	3	1.95
EZ6708	A	.156"	2X	14	5	1.95

PRECISION PC ARTWORK TAPE (FIG. B)

E-Z Circuit No.	Width	Net per Roll	E-Z Circuit No.	Width	Net per Roll
STANDARD MEASURE 20 YDS. PER ROLL					
EZC3000	.020"	\$1.35	EZC3014	.093"	\$1.50
EZC3002	.026"	1.35	EZC3015	.100"	1.50
EZC3004	.031"	1.45	EZC3018	.125"	1.50
EZC3006	.040"	1.45	EZC3020	.200"	1.55
EZC3008	.050"	1.45	EZC3022	.250"	2.05
EZC3010	.062"	1.50	EZC3024	.500"	2.55
EZC3012	.080"	1.50			

"TO" STYLE PATTERNS

E-Z Circuit No.	Fig.	Pattern	Scale	Patterns per Pkg.	Net per Pkg.
EZ6003	C	TO-18	1:1	36	\$1.95
EZ6048	D	TO-18	2:1	32	1.95
EZ6009	D	TO-5, 3-lead	2:1	36	1.95
EZ6053	D	TO-5, 3-lead	2:1	36	1.95
EZ6434		TO-5, 4-lead	1:1	32	1.95
EZ6288		TO-5, 4-lead	2:1	32	1.95
EZ6379		TO-5, 6-lead	1:1	36	1.95
EZ6280		TO-5, 6-lead	2:1	36	1.95
EZ6021	E	TO-5, 8-lead	1:1	36	1.95
EZ6197	E	TO-5, 8-lead	2:1	36	1.95
EZ6022	F	TO-5, 10-lead	1:1	36	1.95
EZ6198	F	TO-5, 10-lead	2:1	36	1.95
EZ6023	G	TO-5, 12-lead	1:1	36	1.95
EZ6203	G	TO-5, 12-lead	2:1	32	1.95

MULTI-PURPOSE PRESPACED PADS

Use to speed tape-up for rows of axial lead component pads.

E-Z Circuit No.	Fig.	Center-To-Center Spacing	Scale	Size (In.)	Pads per Strip	Strips per Pkg.	Net per Pkg.
EZ5000	H	.100"	1:1	.062 O.D.	40	6	\$1.95
EZ5001	H	.200"	2:1	.124 O.D.	20	7	1.95
EZ5003	H	.100"	1:1	.075 O.D.	40	6	1.95
EZ5004	H	.200"	2:1	.150 O.D.	20	7	1.95
EZ5017	I	.100"	1:1	.070 x .125	40	6	1.95
EZ5018	I	.200"	2:1	.140 x .250	20	7	1.95
EZ5020	J	.100"	1:1	.050 x .125	40	6	1.95
EZ5021	J	.200"	2:1	.100 x .250	20	6	1.95
EZ5014	H	.156"	1:1	.100 O.D.	25	6	1.95
EZ5015	H	.312"	2:1	.200 O.D.	13	7	1.95

DUAL IN-LINE PACKAGE (DIP) PATTERNS

Preshaped artwork patterns accurately conform to the lead (or pin) patterns of DIP ICs. All pads on .100" centers (1:1 scale) or .200" centers (2:1 scale). Rows spaced on .300" centers (1:1 scale) or .600" centers (2:1 scale).

E-Z Circuit No.	No. of Leads	Scale	Quantity per Pkg.	Net per Pkg.

CUT PAD (FIG. K)

EZ6014	14	1:1	32	\$1.95
EZ6038	14	2:1	28	1.95
EZ6004	16	1:1	32	1.95
EZ6109	16	1:1	32	1.95
EZ6900	18	1:1	28	1.95
EZ6901	18	2:1	26	1.95
EZ6535	24	1:1	12	1.95
EZ6536	24	2:1	12	1.95
EZ6903	28	1:1	12	1.95
EZ6904	28	2:1	12	1.95
EZ6906	40	1:1	8	1.95
EZ6907	40	2:1	8	1.95

CUT PAD WITH CONDUCTORS (FIG. L)

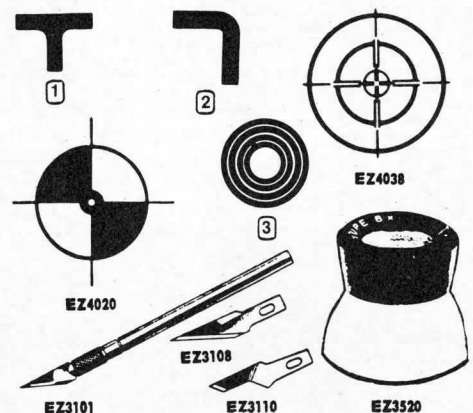
EZ6760	14	1:1	32	\$1.95
EZ6761	14	2:1	28	1.95
EZ6763	16	1:1	32	1.95
EZ6764	16	2:1	28	1.95
EZ6984	40	1:1	8	1.95
EZ6985	40	2:1	8	1.95

NARROW CUT PAD (FIG. M)

EZ6013	14	1:1	32	\$1.95
EZ6071	14	2:1	28	1.95
EZ6453	16	1:1	32	1.95
EZ6244	16	2:1	28	1.95
EZ6987	40	1:1	8	1.95
EZ6988	40	2:1	8	1.95

PREKUT TAPE DONUT PADS

E-Z Circuit No.	Size		Qty. per Pkg.	Net per Pkg.
	O.D.	I.D.		
STANDARD MEASURE (IN.)				
EZD216	.080"	.031"	96	\$1.50
EZD101	.100"	.031"	96	1.50
EZD239	.120"	.031"	96	1.50
EZD102	.125"	.031"	96	1.50
EZD144	.150"	.031"	96	1.50
EZD103	.156"	.031"	96	1.50
EZD247	.160"	.040"	108	1.50
EZD138	.187"	.031"	108	1.50
EZD139	.200"	.031"	108	1.50
EZD109	.250"	.062"	128	1.50
EZD111	.300"	.062"	112	1.50



PREKUT COMBINATION PACK

Pack includes tees, 90-degree elbows and universal corners.

E-Z Circuit No.	Quantity per Pkg.				Net per Pkg.
	Line Width	Tees (Fig. 1)	Elbows (Fig. 2)	Corners (Fig. 3)	
STANDARD MEASURE (IN.)					
EZK101	.040"	40	42	21	\$1.95
EZK102	.050"	40	42	20	1.95
EZK103	.062"	40	42	20	1.95
EZK107	.080"	40	40	12	1.95

PRINTED CIRCUIT ARTWORK TARGETS

Designed to simplify and improve photo reduction and registration (accurate placement of symbols and circuitry) during all stages of PC artwork and board production. Choice of universal or modified crosshair target. 32 symbols per package.

E-Z Circuit No. EZ4038 Universal Target—Net per Pkg. \$1.95
E-Z Circuit No. EZ4020 Modified Crosshair Target—Net per Pkg. \$1.95

SEQUENTIAL REFERENCE DESIGNATION KIT

Features the most used sequential sets, letters and numbers. Each character individually pre-cut. Opaque black letters and numbers for identifying individual electronic components on PC artwork and assembly drawings. Characters .125" high. Kit includes 1 set each of C1 thru C20, CR1 thru CR10, U1 thru U20, R1 thru R40 and Q1 thru Q20.

E-Z Circuit No. EZ80051 Sequential Reference Designation Kit
Net per Kit \$3.25

THE DESIGN & DRAFTING OF PRINTED CIRCUITS REFERENCE BOOK

An invaluable and practical "How-To" guide for both the experienced and beginning electronic designer and drafter. Covers every subject from schematics to the finished PC artwork. Over 400 pages, over 200 diagrams, photos, charts & illustrations. Truly the most complete, informative and authoritative book of its kind available today.

E-Z Circuit No. EZ10001 The Design & Drafting Of Printed Circuits Reference Book
Net per Book \$44.95

E-Z CIRCUIT™

by Bishop Graphics, Inc.

SEQUENTIAL ALPHABET KIT

Features extra quantities of the most commonly used letters. Characters .125" high. Each set includes 4 each of A, E, I, O, R and T; 3 each of C, L, N, S, and U; 2 each of D, G, H, M, P and Y; 1 each of B, F, J, K, Q, V, W, X and Z. Two sets per kit.

E-Z Circuit No. EZ80451 Sequential Alphabet Kit—
Net per Kit \$2.10

SEQUENTIAL NUMBERS KIT

Kit contains 12 each of numbers 0 thru 9. Characters .125" high.

E-Z Circuit No. EZ80551 Sequential Numbers Kit—
Net per Kit \$2.25

X-ACTO KNIFE HOLDER AND BLADES

E-Z Circuit No. EZ3101 X-Acto No. 1 Knife—Includes X-Acto No. 11 blade. Net Each \$1.75

E-Z Circuit No. EZ3108 X-Acto Refill Blades—Set contains 5 X-Acto No. 11 blades. Net per Set \$1.50

E-Z Circuit No. EZ3110 X-Acto Refill Blades—Set contains 5 X-Acto No. 16 blades. Net per Set \$1.50

8 POWER MAGNIFIER

Ideal for checking PC artwork and boards. Features 8 power magnification and 360-degree viewing area. 1.4" field of view.
E-Z Circuit No. EZ3520 Magnifier—Net Each \$8.10

PC AND GENERAL PURPOSE TEMPLATES

PRINTED CIRCUIT DESIGN TEMPLATES

E-Z Circuit No. EZ3367—2X scale template contains 9 sizes of axial-lead and 7 sizes of radial-lead components, TO-5, TO-18 and TO-92 transistor body outlines, 3-, 4-, 6- and 8-lead patterns on .200" lead centers, 8-, 10- and 12-lead patterns on .230" lead centers, 10-lead pattern on .400" lead centers. Flatpack patterns up to 16 leads, 14- and 18-lead DIPs on .300" centers and up to 24 leads on .600" centers, plus an 8" scale, .030" thick. Size: 6" x 9".

E-Z Circuit No. EZ3367—Net Each \$8.90

E-Z Circuit No. EZ3368—2X scale template contains 3 large size universal axial-lead components, 7 common potentiometer outlines, TO-3 and TO-66 semi-conductor power components, connector strips on .100", .125" and .156" centers and an 8" scale, .030" thick. Size: 6" x 9".

E-Z Circuit No. EZ3368—Net Each \$8.90

E-Z Circuit No. EZ3365—1X scale template contains 9 sizes of axial-lead, 3 sizes of radial-lead and 3 large sizes of axial-lead components, TO-5, TO-18 and TO-92 transistor body outlines, TO-3 and TO-66 semi-conductor power components, 3-, 4-, 6- and 8-lead patterns on .200" lead centers, 8-, 10- and 12-lead patterns on .230" lead centers, 10-lead pattern on .400" lead centers, flatpack patterns up to 16 leads, 14-, 16- and 18-lead DIPs on .300" centers and up to 24 leads on .600" centers, 7 common potentiometer outlines, connector strip patterns on .100", .125" and .156" centers, and a 5" scale, .030" thick. Size: 5" x 6".

E-Z Circuit No. EZ3365—Net Each \$13.10

DUAL IN-LINE TEMPLATES

Contains 5 most popular DIP pad patterns and DIP IC body outlines, including the 40-pin package. Pads on .100" centers.

E-Z Circuit No. EZ3375—1X scale DIP Template.
Net Each \$4.35

E-Z Circuit No. EZ3376—2X scale DIP Template.
Net Each \$5.40

ELECTRICAL AND ELECTRONIC SYMBOLS TEMPLATE

Complies with ANSI Y32.2, 1970 and the IEEE Standard No. 315, March 1971. Contains all popular schematic and logic symbols. Designed for use with a .200" grid. .030" thick.

E-Z Circuit No. EZ3378—Net Each \$6.45

POLYESTER GRIDS

For printed circuit artwork and layout preparation to insure maximum accuracy on the final circuit board. Using a grid system facilitates the placement of components, terminal areas (donut pads), and conductor traces on the layout. Most multiple lead components, such as dual in-line packages (DIPs), conform to standard grid increments.

10 X 10 LINES/IN. (.100" = 2.54mm)

HEAVY CUT CONFORM TO 10TH LINE

Model No.	Sheet Size	Price Per Sheet
EZ1463	8 1/2" x 11" (21.6 x 27.9cm)	\$2.35
EZ1466	11" x 17" (27.9 x 43.2cm)	3.55

ACCUVEL DRAFTING AND TRACING VELLUM PADS

Use these handy sheets of Bishop's ACCUVEL™ drafting vellum for preliminary printed circuit artwork sketches and layouts.

SAME GRID PATTERN AS ABOVE

Model No.	Sheet Size	Net Each, Per 50 Sheet Pad	
		Plain (Ungridded) 16# .0027" Thick (0.07mm)	10 x 10 Grid Dropout Blue 16# .0027" Thick (0.07mm)
EZ20207	8 1/2" x 11" (21.6 x 27.9cm)	.....	\$ 6.75
EZ20208	11" x 17" (27.9 x 43.2cm)	.....	12.75
EZ20211	11" x 17" (27.9 x 43.2cm)	.....	\$10.25

ACCUFILM® ANTI-STATIC, STABLE-BASED DRAFTING FILM

Absolutely anti-static... no static electricity build up from erasing, brushing, etc. ideal for Bishop's pressure-sensitive symbols. Matte one-side, .003" thick.

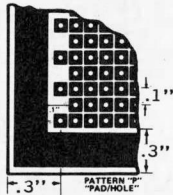
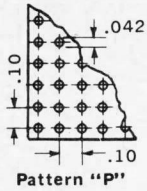
Model No.	Sheet Size	Net Each 2 Sheets Per Pack
EZ8850	8 1/2" x 11"	\$1.65
EZ8858	11" x 17"	2.50

CTF (CLEAR TAPING FILM)

For generating master PC artwork. Specially designed to save money on any PC artwork or taping job. .005" thick.

Model No.	Sheet Size	Net Each 2 Sheets Per Pack
EZ8451	8 1/2" x 11"	\$1.65
EZ8460	11" x 17"	2.50

Micro Vectorbord®



DESIGN HARDWARE

Material	Catalog Number	Length Inches	Width Inches	Thick. Inches	Price	
					1-19	20 up
Note 1: Boards with "WE" in part no. are epoxy glass; boards without "WE" are epoxy glass comp.	29P29	3.00	3.00	1/16	1.47	1.32
	44P29	4.50	3.00	1/16	1.41	1.27
	44P44	4.50	4.50	1/16	2.10	1.89
	59P44-032	6.00	4.50	1/32	2.02	1.82
	64P44-032	6.50	4.50	1/32	2.09	1.88
	64P44	6.50	4.50	1/16	1.99	1.79
	64P44WE	6.50	4.50	1/16	2.42	2.18
	84P44	8.50	4.50	1/16	2.45	2.21
	84P44WE	8.50	4.50	1/16	2.49	2.69
	169P44	17.00	4.50	1/16	5.61	5.05
	164P44WE	17.00	4.50	1/16	5.69	5.30
	169P59-032	17.00	6.00	1/32	7.41	6.67
	169P59-047	17.00	6.00	3/64	7.76	6.98
	169P79	17.00	8.00	1/16	8.48	7.63
169P84	17.00	8.50	1/16	9.90	8.91	
169P84WE	17.00	8.50	1/16	11.42	10.28	
169P99	10.00	17.00	1/16	13.54	12.19	
copper clad; see Note 1 above	169P44C1	17.00	4.50	1/16	6.95	6.26
	169P44C2	17.00	4.50	1/16	8.46	7.61
	169P44WEC1	17.00	4.50	1/16	7.95	7.16
	169P59C1	17.00	6.00	1/32	8.47	7.62
	169P84C1	17.00	8.50	1/16	12.14	10.93
epoxy paper	169P84WEC1	17.00	8.50	1/16	13.99	12.59
	64P44EP	6.50	4.50	1/16	2.34	2.11
	84P44EP	8.50	4.50	1/16	2.92	2.63
	169P44EP	17.00	4.50	1/16	5.31	4.78
epoxy paper copper clad	169P47EP	17.00	4.80	1/16	5.53	4.98
	169P84EP	17.00	8.50	1/16	9.50	8.55
	64P44EPC1	6.50	4.50	1/16	3.04	2.74
169P44EPC1	17.00	4.50	1/16	7.46	6.71	
phenolic	64P44XXXP	6.50	4.50	1/16	1.70	1.53
	169P44XXXP	17.00	4.50	1/16	4.02	3.62
	169P59XXXP	17.00	6.00	1/16	5.38	4.84
Following pad-per-hole Vectorbord has P-pattern holes with etched and tinned 2 ounce copper pads on both sides around each hole.						
epoxy glass comp.	45P80-1	8.08	4.50	1/16		
	106P106-1	10.60	10.60	1/16		

SLIT-N-WRAP®

wiring tools — wire for .025" sq. posts
P184 SERIES FOR 28 GAGE TEFZEL INSULATED WIRE

- 300' & 50' wire spools mounted with tension regulators to reduce wire breakage.
- Removable wire-grip housing on power tools eliminates need to hand-hold wire end at start of wrap.
- Replaceable bits, set-screw mounted, simplify maintenance & insure reliability, reduce costs and down-time.

No Stripping • No Precutting • No Pre-measuring • No Loading • Daisy Chain Wraps • Quick Change Bits • Reliable Wraps Meet MIL-STD 1130A, par. 5.6 • U. S. & Foreign Patents

The patented tool has a specially designed tip which slits the wire insulation just before it is wrapped on a post. Wire feeds from a spool on the tool making "daisy chain" connections with single level wraps. Insulation is slit only during wrapping.

P184-3 Power Slit-N-Wrap Tool (110V AC)

Has 300' spool of Tefzel 28 ga. wire with tension regulator spring to reduce wire breakage and new 2-piece housing for wrap bit shaft with stationary wire gripper at tip to avoid need to hold wire end at start of wrap. Wrap bit shaft no. 02 is set-screw mounted to rear half of bit housing for easy and low cost replacement. Power transformer with cord supplied. **List \$115.00 ACP PRICE \$98.00**

P184-2 Battery Operated Slit-N-Wrap Tool

Features same as above P184-3 except is nickel cadmium battery powered. Will wrap more than 7000 posts per charge. AC recharging unit included. **List \$115.00 ACP PRICE \$98.00**

P184-1 Manual Slit-N-Wrap Tool for Tefzel Wire

Mounts 50' spools of Tefzel 28 ga. wire. New tension regulator spring reduces wire breakage. Wrap bit no. 02 is set-screw mounted to rear half of bit housing for easier and lower cost replacement. One extra 50' spool of Tefzel wire supplied. **List \$34.00 ACP \$28.00**

P184-7 Turns Counter Model

110V AC power Slit-N-Wrap tool with electronic 7-turn counter (also adjustable to 3, 5, 9 turns or continuous run). Assures uniform number of turns for each pull on trigger. Other features same as for P184-3. **List \$175.00 ACP PRICE \$155.00**

P160-1B Unwrap tool

List \$13.50

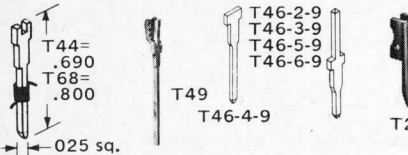
02 Set Screw Mounted Replacement Bits

List \$24.00

REPLACEMENT WIRE

AWG 28 Tefzel Insulated Silver Plated Wire

Part No.	Color	Spools Per Pkg.	Price	Part No.	Color	Spools Per Pkg.	Price
W28-6A	Green	2	5.67	W28-6AS	Green	1	15.73
W28-6B	Red	2	5.67	W28-6BS	Red	1	15.73
W28-6D	Blue	2	5.67	W28-6DS	Blue	1	15.73
W28-6E	White	2	5.67	W28-6ES	White	1	15.73
W28-6F	Yellow	2	5.67	W28-6FS	Yellow	1	15.73
W28-6H	Black	2	5.67	W28-6HS	Black	1	15.73



SOLDERABLE TERMINALS & PINS

T42-1 Miniaturized Compact Push-In fits .042" dia. holes such as in "P" pattern Micro-Vectorbord and can be mounted on 0.1" centers side-to-side. Tintillate plated. Ideal for IC work because leads can be laid in slots or pass through terminals vertically.

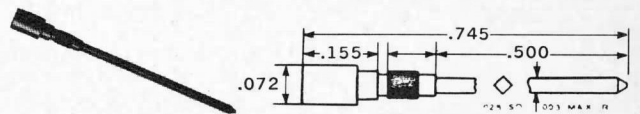
T28 — Compact push-in terminals fit 0.062" dia. holes in PC boards and Vectorbord.

Part No.	Length Below 1/16" Board	Height Above Board	Package of 100	Package of 1000
T28	.175	.200	\$1.91	\$11.84
T42-1	.107	.281	1.91	12.30

WIRE WRAPPABLE TERMINALS FOR .042" DIAMETER HOLES

Series	Part No. Finish		Material	Post Size	Height Above 1/16" Board	Length Below 1/16" Board	25 pcs		50 pcs		100 pcs		1000 pcs	
	Gold	Tinned					Gold	Tin	Gold	Tin	Gold	Tin		
T44	T44-1	T44	Copper Alloy	.025" sq.	.120	.500	1.50 lot	1.00 lot	2.75 lot	1.75 lot	4.55	3.55	30.74	15.64
T46	T46-1	T46	Copper Alloy	.028" sq.	.400	9/16	1.75 lot	1.25 lot	3.00 lot	2.25 lot	7.14	4.65	47.12	34.32
T46-2-9	T46-2A9	T46-2-9	Copper Alloy	.028" sq.	.360	.300						3.12	23.41	
T46-3-9	T46-3A9	T46-3-9	Copper Alloy	.028" sq.	.460	.520						3.49	26.51	
T46-4-9	T46-4A9	T46-4-9	Copper Alloy	.028" sq.	.040	.300						3.02	19.36	
T46-5-9	T46-5A9	T46-5-9	Copper Alloy	.028" sq.	.280	.240						3.18	23.59	
T49	T49A	T49	Copper Alloy	.025" sq.	.200	.560	1.75 lot	1.25 lot	3.10 lot	2.25 lot	6.44	3.59	56.41	29.32
T49-1	T49A-1	T49-1	Copper Alloy	.025" sq.	.200	.388	1.75 lot	1.25 lot	2.90 lot	1.90 lot	7.04	4.23	62.30	33.56
T68	T68-1	T68	Copper Alloy	.025" sq.	.172	.790						3.27	20.61	
R32	R32	R32	Brass	.025" sq.	.155	.500	6.73					23.08	215.54	

R32 SOCKET PINS



High Quality Copper Alloy Gold Plated Four Fingered Contacts are housed inside gold plated screw machine terminals with solderable or .025" sq. wire wrappable tails for installing wherever required in 1/16" thick circuit boards.

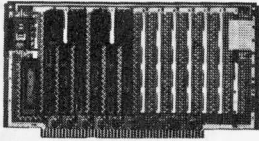
WIRE WRAPPABLE TERMINALS & PINS

T44/T68 Mini-Wrap for 0.042" Holes — Low profile wire wrappable terminals have slotted upper end for soldered wires. Ideal for miniature assemblies.

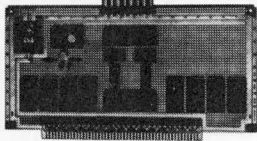
T49 Trifurcated Klip-Wrap — Unique three-fingered clip on upper end makes this a time-saving terminal for production or experimental uses. Spring clip holds leads from 0.018" to 0.025", 0.032" or 0.040" until soldered.

T46 Series Press-in Wrap Posts have rectangular base with stepped shank for better holding in 0.042" holes.

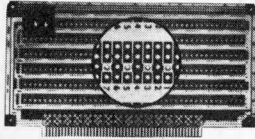
S100 AND IEEE 696 SYSTEM PACKAGING



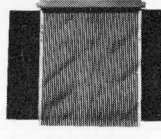
8800V



8801



8804



3690-12

Plugboards for interface, memory expansion, breadboarding. Nickel/gold plated contacts, 50 each side on 0.125" centers. 0.042" holes on 0.10" grid for DIP sockets, push-in terminals and socket pins. Fire retardant epoxy glass composite material.

8804: "ANY DIP" -- full power and ground planes back-to-back on opposite board sides with offset pads. Two regulator positions provided, one heat sink furnished. Holds 70 16-pin DIPs.

8800V: Power distributed to each DIP location by heavy copper tinned power and ground planes on opposite board sides for low impedance. Prewired regulator circuit and two heat sink provisions. Holds 36 16-pin DIPs.

8801: Individual tinned square pads surround most holes. Heavy tinned power and ground buses are provided and prewired regulator position. Pads for mounting I/O connectors. Holds 82 14-pin DIPs.

8801-1: No etched circuitry except plug contacts. Holds 121 14-pin DIPs.

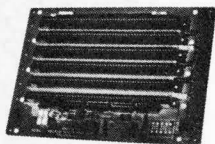
3690-12: Provides 7.5" long extension to facilitate testing. Mounted connector.

Connectors with 50/50 gold/nickel plated contacts on .125" centers:

R681 Dip Solder Tail. **R681-1** Wrap Post Tail. **R681-2** for mother board use.

Catalog Number	Prices		
	1-4	5-24	25-99
8804	26.89	24.20	21.51
8800V	24.50	22.05	19.60
8801	25.20	22.68	20.16
8801-1	17.08	15.37	13.66
3690-12	29.33	26.40	—

MOTHER BOARDS



8803-6-1

Hi speed - up to 10MHz, shielded, two-sided, plated thru holes, FR4 epoxy glass, .000050" gold plated connector contacts, liberal decoupling capacitors, "reset" switch wiring pads, fully assembled.

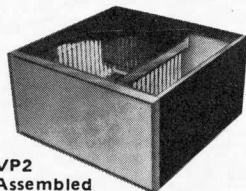
8803-6-1 6-position **8803-18-1** 18-position.

Cat. No.	Size	Price
8803-6-1	6-Position	126.00
8803-18-1	18-Position	230.00



CCK100
Rack Mounting
Cage

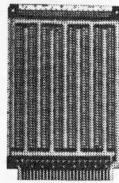
Especially designed to accommodate S100, Exorciser and Micromodule Plugboards. 19" w. x 12.2" h. x 8.9" d. Furnished with 21 pairs of guides. Adjustable rear struts mount mother boards or connectors.



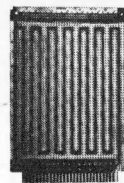
VP2
Assembled
Case

Sturdy blue vinyl finished aluminum, fully assembled, with card guides, mounting for mother board or connectors. Power supply chassis plate, and I/O rear connector panel with 10 cutouts for DB25S connectors included.

Price		Price		
1-9	10-49	1-4	5-24	25-49
56.45	50.81	173.63	156.27	147.59



4610



4610-2

STANDARD BUS

Plugboards for interface, memory expansion, experimentation. Flame retardant epoxy glass composite 1/16" x 4.5" x 6.5" with 2 oz. tinned copper buses and pads. 28/56 nickel/gold plated contacts on .125" centers. Power and ground bus terminations per STD Bus .042" dia. holes on 0.1" grid. I/O connector pads.

Cat. No.	Description	1-4	5-24	25-99
4610	For soldering or wire wrapping	20.66	18.59	16.53
4610-2	For wire wrapping	20.66	18.59	16.53
4610-1	Has no etched circuitry except for plug contacts	17.39	15.65	13.91
3690-16	Extender board has nickel/gold contacts connected to mounting receptacle	23.35	21.02	—



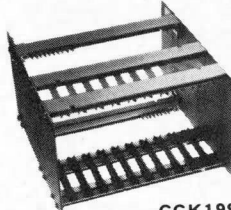
4610-8-1

Cat. No.	Description	1-4	5-24	25-99
4610-8-1	8-Position board	120.00	108.00	96.00
4610-16-1	16-Position board	175.00	157.50	140.00

MOTHER BOARDS

Hi-speed — up to 10MHz, shielded, 2-sided, plated thru holes, FR4 epoxy glass, .000050" gold plated connector contacts, liberal decoupling capacitors, "reset" switch wiring pads. Fully Assembled.

CARD RACKS

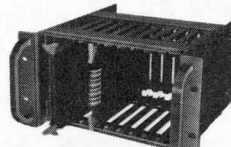


CCK19S

CCK19S "drop-in" card racks, all aluminum, 5 1/4" h x 8 1/2" w x 8 1/8" d. 20 nylon card guides supplied for card mounting on .250" increments, rear cross members for mother board or connector mounting.

CCK19S	1-9	10-49
	43.06	38.75

Cat. No.	Description	1-9	10-49
CCK19SMB8	Fully assembled 4610-8-1 8-position motherboard with CCK19S card rack	130.00	—

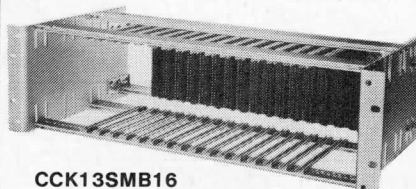


CCK135S
with added handles,
filler panels, cards

CCK135S rack mounting all-aluminum card cage, 5 1/4" h x 10" w x 9" d. with 20 nylon card guides supplied. Adjustable rear cross members to mount mother boards or connectors.

CCK135S	1-9	10-49
	40.81	36.73

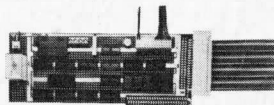
Cat. No.	Description	1-9	10-49
CCK13S	For 19" rack mounting. 5 1/4" h x 19" w x 9" deep with 21 pairs nylon card guides	46.48	41.83



CCK13SMB16

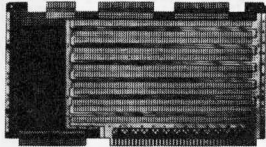
CCK13SMB16 Fully assembled 4610-16-1 16-position motherboard with CCK13S card rack **\$195.00**

APPLE II • SUPERKIM • PET COMMODORE • With Expandamem



4609 Plugboards: Hi capacity, mounts 18 16-pin DIPs. 1" grid of .042" holes. 7.7" x 3.06". Two gold plated I/O card edge connectors. Wirewrap or solder. Tinned 2 oz. copper power and ground buses.

Cat. No.	Description	1-4	5-24	25-99
4609	Expandamem Plugboards	25.07	22.56	20.06



4608-1

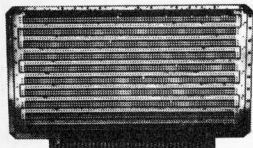
MULTIBUS

4608 Plugboard: Series 80 size, shape, and connectors. Solder or wrap wire. .042" dia. holes on 0.1" grid. Prewired for regulator. Dual bus for power and ground.

4608-1: Same size and connectors as 4608 but no other etched circuitry.

3690-18 Card Extender. Every line has labeled test points.

PRICES		
1-4	5-24	25-99
43.62	39.26	34.90



4611

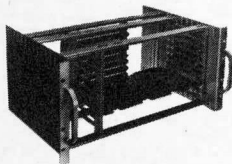
MOTOROLA EXORCISOR - MICROMODULE - ROCKWELL AIM65 EXPANSION

4611 Plugboard: 3-hole pads + 2 buses per Motorola standard, 43/86 nickel/gold contacts on .156" centers. Epoxy glass composite with .042" dia. holes on 0.1" grid for solder or wrap wire.

4611-1: Same as 4611 except no etched circuits except plug contacts.

3690-20 Card Extender. Every line has labeled test points.

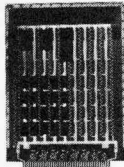
PRICES		
1-4	5-24	25-99
32.65	29.39	26.12



CCK80 HORIZONTAL CARD CAGE

CCK80 horizontal card cage for S100 Bus - Multibus - Motorola Exorcisor, Micromodule - Rockwell AIM65 Expansion. 10 card positions. Fully assembled.

PRICES		
1-9	10-49	80.60
89.55	80.60	



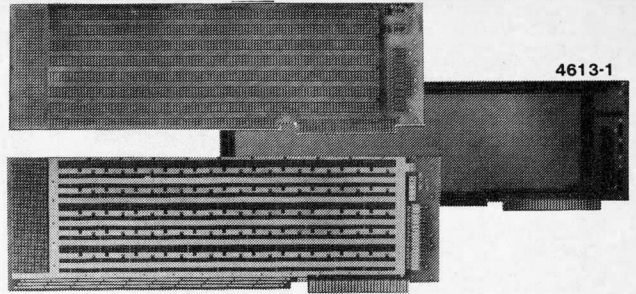
TI 980

4350 Plugboard: 7" w. x 9.6" l. 40/40 nickel/gold contacts on .125" center. Will hold 63 16-pin DIPs. Heavy back-to-back tinned copper buses. Extra plus or minus voltage zig-zag power buses. Epoxy glass composite. Mating connector R680-1. Mounts in CCK17P rack mounting card cage. See Sec. 1400, P.

3690-14 Card Extender.

PRICES		
1-19	20-99	100-199
26.09	23.48	20.87

4613 Same Circuitry Both Sides



4613-2 Same Circuitry Both Sides

PROTOTYPING BOARDS FOR IBM PERSONAL COMPUTER

COMMON FEATURES:

- Full size boards: 13.325" x 4.2" x .062" overall.
- Fit any slot in IBM Personal Computer.
- Accept any width DIP ICs.
- 31/62 gold plated contacts on 0.200" centers.
- Card guide and universal mounting bracket included for use with or without I/O connector.
- Component lead holes on 0.1" grid.
- Layout planning sheets and instructions included.
- Buses terminated to connector per IBM standard.
- Border numbers mark hole, row, and columns for convenient reference.

4613 3-HOLE-PAD AND BUS BOARD

- For soldering or wire wrapping.
- Easy interconnections to 3-hole pads with wires and component leads.
- Conveniently interposed heavy power and ground buses on each side. Buses are back-to-back and through-connected.
- All holes drilled and plated .043" dia. on 0.1" centers.

4613-1 BARE BOARD WITH PERIPHERAL BUSES

- Bare board for unlimited component placement.
- Convenient heavy peripheral power and ground buses both sides (back-to-back). Holes not plated.
- .042" dia. drilled holes on 0.1" centers.

4613-2 WIRE WRAPPING BUS BOARD

- Full power and ground planes.
- All holes drilled and plated .043" dia. on 0.1" centers.
- 3 extra buses along lower edge back-to-back plated thru for auxiliary power or analog buses.

3690-22 CARD EXTENDER

- Every line has labeled test point. Large power and ground buses. Thick 2 oz. copper lines. Long-life thick gold contacts. Protective surface insulation. Includes bracket and fasteners for mounting.

PRICES				PRICES					
		1-4	5-24	25-99			1-4	5-24	25-99
4613	39.00	35.10	31.20	4613-2	36.95	33.26	29.56		
4613-1	26.95	24.26	21.56	3690-22	22.35	20.12	—		

UNIVERSAL PLUGBOARDS

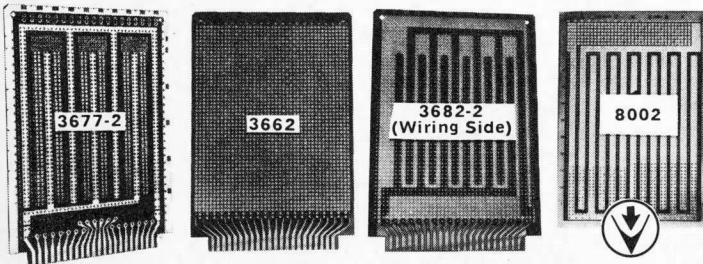
Use for prototype, test, and short run plug-in circuits. All boards are 1/16" thick and have an overall grid of 0.042" holes on 0.1" centers (pattern "P"). All etched circuitry above contact area is tinned for easy soldering. Boards are available with varied contact arrangements and mating connectors are listed. Back-to-back contacts terminate in independent hole pads. Layout paper furnished with all boards.

PLUGBOARD SPECIFICATIONS

Flame Retardant Epoxy Glass Composite.

Copper Cladding: 2 oz. (.0027" thick) 1 or 2 sides. Solder coated except contacts.

Contacts: Nickel plated and gold flashed.



Part No.	Size	Contacts		Max. No. 16-pin DIPs Accom.	Circuitry Description
		No.	Spacing		
3662	4.5 x 6.5	44	.156	50	Contacts only.
3662-2	4.5 x 9.6	44	.156	90	
3662-5	4.5 x 4.5	44	.156	40	
3662-9	4.5 x 6.5	44	.156	50	Same as 3662 but with solder pads around ea. hole both sides
3662A6	4.5 x 6.5	44	.156	54	Ground plane, component side.
3673	7.98 x 9.6	80	.125	152	Contacts only.
3677	4.5 x 9.6	44	.156	21	3-hole pad groups for component mounting and interconnection. Interleaved ground & voltage buses.
3677-2	4.5 x 5.5	44	.156	12	
3677-6	4.5 x 8.1	none	none	21	Sim. to 3677, but without contacts.
3682	4.5 x 9.6	44	.156	48	For wire wrapping. Interleaved ground & voltage buses. 3682-4 has ground plane on component side.
3682-2	4.5 x 6.5	44	.156	24	
3682-4	4.5 x 6.5	44	.156	24	
8001	4.5 x 6.5	No contacts — I/O area for connector mtg.		20	3-hole pads, 2 buses, solder or wrap. 2 buses - best for wire wrapping. Pad-per-hole board. Clearance ground plane.
8002	4.5 x 6.5		35		
8003	4.5 x 6.5		60		
8004	4.5 x 6.5		40		

Prices			
Part No.	1-19	20-99	100-199
3662	10.86	9.86	8.77
3662-2	11.83	10.65	9.46
3662-5	8.37	7.53	6.70
3662-9	26.80	24.12	21.44
3662A6	16.08	14.47	12.86
3673	21.39	19.25	17.11
3677	14.53	13.08	11.62
3677-2	12.93	11.64	10.34
3677-6	7.66	6.89	6.13
3682	14.86	13.37	11.89
3682-2	12.58	11.32	10.06
3682-4	14.38	12.94	11.50
8001	10.85	9.77	8.68
8002	10.85	9.77	8.68
8003	10.85	9.77	8.68
8004	10.85	9.77	8.68



Unwrapping Tools, Wire, and Kits

KYNAR INSULATED WIRE ROLL

AWG 30		
Length of Roll	OK No. †	Net per Roll
100'	R30X-0100	\$ 4.11
500'	R30X-0500	11.70
1000'	R30X-1000	18.93

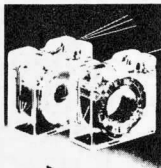
AWG 28		
Length of Roll	OK No. †	Net per Roll
100'	R28X-0100	\$ 4.56
500'	R28X-0500	14.46
1000'	R28X-1000	23.74

*Length of insulation between stripped ends; ends stripped 1". †Replace X in OK No. with color code B for blue, W for white, Y for yellow, R for red, or BLK for black. AWG 28 available in blue, white, and yellow only.

HOOK-UP WIRE

An assortment of solid and stranded hook-up wire.

OK No. HK-18—25 ft. of AWG 18 solid conductor	Net Each	\$1.39
OK No. HK-20—25 ft. of AWG 20 solid conductor	Net Each	\$1.19
OK No. HK-22—25 ft. of AWG 22 solid conductor	Net Each	\$1.49
OK No. HK-24—25 ft. of AWG 24 solid conductor	Net Each	\$1.49
OK No. HK-26—25 ft. of AWG 26 solid conductor	Net Each	\$1.49
OK No. SHK-18—25 ft. of AWG 18 stranded conductor	Net Each	\$1.39
OK No. SHK-20—25 ft. of AWG 20 stranded conductor	Net Each	\$1.19
OK No. SHK-22—25 ft. of AWG 22 stranded conductor	Net Each	\$1.49
OK No. SHK-24—25 ft. of AWG 24 stranded conductor	Net Each	\$1.49
OK No. SHK-26—25 ft. of AWG 26 stranded conductor	Net Each	\$1.49



WIRE DISPENSER

- AWG 30 Kynar wire-wrapping wire
- 50 foot roll
- Built-in plunger cuts wire to desired length.
- Built-in stripper strips 1" of insulation
- Refillable (see below)

OK No. WD-30-B Blue Wire—Net	\$5.49
OK No. WD-50-Y Yellow Wire—Net	\$5.49
OK No. WD-30-W White Wire—Net	\$5.49
OK No. WD-30-R Red Wire—Net	\$5.49

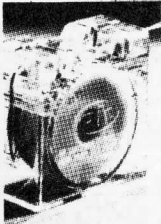
DISPENSER REPLACEMENT ROLLS

OK No. R-30-B-0050 Blue Wire—Net Each	\$3.49
OK No. R-30Y-0050 Yellow Wire—Net Each	\$3.49
OK No. R-30W-0050 White Wire—Net Each	\$3.49
OK No. R-30R-0050 Red Wire—Net Each	\$3.49

TRI-COLOR WIRE DISPENSER

- 2 rolls of wire in one dispenser
- 3 colors: blue, red, white
- 50 feet of each color
- AWG 30 Kynar insulated wire
- Built-in plunger cuts wire to desired length
- Built-in stripper strips 1" of insulation
- Refillable (see below)

OK No. WD-30-TRI Tri-Color Dispenser—Net Each	\$8.49
OK No. R-30-TRI Replacement Rolls—Net Each	\$6.49



CLIP AND STRIP TOOL



A unique new design for stripping 1" of insulation from AWG 30 wire. Insert wire squeeze tool closed to cut off excess wire, pull wire through stripping slot to remove insulation. Handy pocket size, only 1 3/4" x 1" x 5/8". OK No. CAS-130 Clip and Strip—Net Each \$2.19

VACUUM VISE



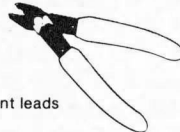
Unique vacuum-based, light-duty vise for precision handling of small components and assemblies. Rugged ABS construction. Jaws are 1 1/2" wide and have 1 1/4" travel. Also features screw lugs for permanent installation.

OK No. VV-1 Vacuum Vise—Net Each \$3.79

MINI-SHEAR

- Flush cutter for component leads
- Cuts in tight areas
- Cuts up to AWG 16 wire

OK No. MS-10 Mini-Shear—Net Each \$4.95
OK No. MS-20 Mini-Shear with Safety Clip—Keeps clipped leads from flying. Net Each \$5.95

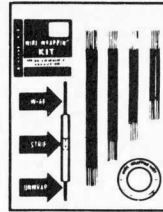


WIRE WRAPPING KITS

WIRE WRAPPING KIT WK-2

Ideal for the prototype engineer and hobbyist alike, this kit includes the combination tool that wraps and unwraps AWG 30 wire on .025" square pins, plus it strips the wire using a handy built-in stripper. The wire is top quality Kynar insulated, silver plated solid copper. Supplied in the kit are a 50 ft. roll plus pre-cut and stripped wire in insulated lengths from 1 to 4 inches each stripped 1" on each end.

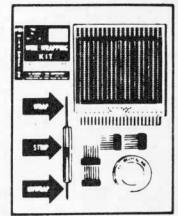
OK No. WK-2-B Kit—With blue wire. Net Each \$13.95
OK No. WK-2-Y Kit—With yellow wire. Net Each \$13.95
OK No. WK-2-W Kit—With white wire. Net Each \$13.95
OK No. WK-2-R Kit—With red wire. Net Each \$13.95



WIRE WRAPPING KIT WK-3

This kit includes the WSU-30 combination tool that wraps and unwraps AWG 30 wire on .025" square pins, plus it strips the wire using built-in stripper. The wire is top quality Kynar insulated, silver plated solid copper. The DIP wrap pins .025" square on .100" centers, phosphor bronze leaf spring contacts, and UL recognized glass-filled, thermoplastic bodies. The H-PCB-1 board measures 4" x 4 1/2", is made of glass-solder-coated 1 oz. copper pads. Also, the board has 22 22-edge-connector contacts on standard .156" spacing.

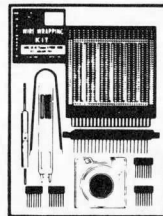
OK No. WK-3B Kit—With blue wire. Net Each \$17.95



WIRE WRAPPING KIT WK-4

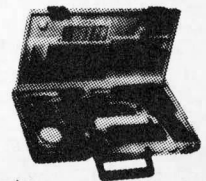
This kit features a full range of tools and parts for prototype and hobby applications. The kit includes a universal PC board, an edge connector with wire wrap terminals, two 14-pin and two 16-pin industrial quality, wire wrapping DIP sockets, a DIP inserter, a DIP extractor, a wire dispenser with 50 ft. of wire, and a new wire wrapping and unwrapping tool.

OK No. WK-4B Kit—With blue wire. Net Each \$27.95



WIRE WRAPPING KIT WK-5

Battery wire wrap tool with the Hobby wrap bit
Hobby wrap tool WSU-30M
PC edge connector CON-1
DIP IC extractor EX-1
DIP IC inserter INS-1416
PC card guides and brackets TRS-2
Mini-shear with safety clip
14-, 16-, 24-, and 40-pin DIP sockets
Terminals WWT-1
Tri-Color wire dispenser
Hobby board H-PCB-1
Product catalog
Wire wrap tool operates on "C" NiCad batteries (not supplied)
OK No. WK-5 Kit—Net Each \$79.95



page

DIGITAL

WIRE WRAP WIRE

#30 AWG KYNAR PRE-STRIPPED INSULATED

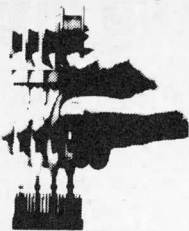
Packaged in Plastic Tubes with Color Coded Caps.

LENGTH	PACKAGE OF 100	PACKAGE OF 500	PACKAGE OF 1000	COLOR
2.5"	\$1.60	\$4.70	\$8.20	SPECIFY: RED BLUE YELLOW BLACK VIOLET GREEN ORANGE WHITE
3"	1.60	4.70	8.20	
3.5"	1.65	5.00	8.90	
4"	1.75	5.40	9.60	
4.5"	1.80	5.75	10.30	
5"	1.85	6.10	11.00	
5.5"	1.90	6.50	11.75	
6"	2.00	6.85	12.50	
6.5"	2.30	7.80	14.30	
7"	2.40	8.20	15.05	
7.5"	2.50	8.55	15.85	
8"	2.60	8.95	16.60	
8.5"	2.65	9.30	17.40	
9"	2.70	9.80	18.15	
9.5"	2.80	10.00	18.95	
10"	2.90	10.50	19.70	



Wire Wrapping Tools

Just Wrap®



Designed to wrap AWG 30 wire on .025" square posts without prior stripping or slitting of wire insulation. Tool holds 50 ft. spool of AWG 30 wire and will wire continuously through any number of posts (daisy chain). Tool is equipped with a built-in wire cutoff so that it is equally suitable for point-to-point wiring.

- OK No. JW-1-B Just Wrap Tool—With roll of blue wire. Net Each \$15.95
- OK No. JW-1-Y Just Wrap Tool—With roll of yellow wire. Net Each \$15.95
- OK No. JW-1-R Just Wrap Tool—With roll of red wire. Net Each \$15.95
- OK No. JW-1-W Just Wrap Tool—With roll of white wire. Net Each \$15.95

Rolls of AWG 30 Tefzel insulated wire (50 ft.) for use with the Just Wrap Tool.

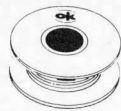
- OK No. R-JW-B Blue Wire—Net Each \$3.29
- OK No. R-JW-W White Wire—Net Each \$3.29
- OK No. R-JW-Y Yellow Wire—Net Each \$3.29
- OK No. R-JW-R Red Wire—Net Each \$3.29

Unique tool specifically designed to remove wraps made by the Just Wrap tool. Facilitates corrections and modifications.

- OK No. JUW-1 Unwrapping Tool—Net Each \$3.79

Kit contains the Just Wrap Tool, unwrapping tool, and 50 ft. spools of blue, white, red, and yellow wire in plastic box.

- OK No. JWK-6 Just Wrap Kit—Net Each \$26.95



BATTERY WIRE-WRAPPING TOOL

INSTALLATION AND FIELD SERVICE



OK Model	Description	Net Each
BW-928	Wrapping/unwrapping tool without Back-Force	\$58.87
BW-928-BF	Wrapping/unwrapping tool with Back-Force	\$62.40

Model BW-928, a battery operated wire wrapping tool, accepts all standard bits and sleeves for AWG 22 thru AWG 30 wire. Features positive and indexing strong Lexan® housing, and weighs only 8 ounces (225 grams). To reverse the tool for unwrapping, simply turn the batteries over. Uses two standard "C" size, rechargeable Ni Cad batteries (not included). Model BW-928-BF features "Back Force" to prevent over wrapping. Bits and sleeves must be ordered separately.

BATTERY WIRE-WRAPPING TOOL

- Revolutionary battery-powered tool for wrapping to standard .025" square DIP socket terminals.
- Built-in device to prevent over-wrapping.
- Tool weighs 11 ozs. and operates on two "C" size, chargeable Ni Cad batteries (not included).
- Positive indexing mechanism.
- For AWG 30 wire, use BT-30 bit (not included).
- For AWG 26-28 wire, use BT-2628 bit (not included)

- OK No. BW-2630 Wire Wrap Tool—Net Each \$21.95

- OK No. BT-30 Bit—For AWG 30 wire Net Each \$ 4.19

- OK No. BT-2628 Bit—For AWG 26 and 28 wire Net Each \$ 8.49

HOBBY WRAP TOOLS

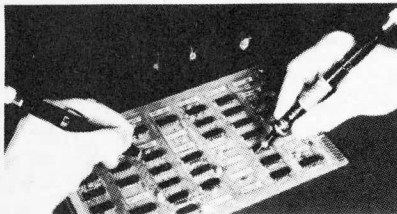
Tools perform complete wire-wrapping functions for AWG 30 onto .025" square DIP socket posts. Unwraps and strips AWG 30 wire nick-free. Compact all-metal construction for years of dependable service.

- OK N. WSU-30—For regular wrap. Net Each \$7.49

- OK No. WSU-30M—For modified wrap. Net Each \$8.49

Tools, Connectors and Probes

DIGITAL LOGIC PROBE AND PULSER



PRB-1 DIGITAL LOGIC PROBE

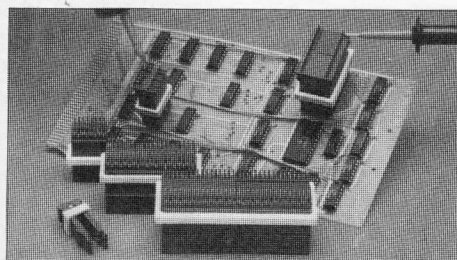
- 10 nsec pulse response
- Open circuit detection
- Pulse stretching
- Automatic thresholds
- Finger-tip indicators
- Power supply overvoltage protection
- OK No. PRB-1 Logic Probe
- Net Each \$39.95

PLS-1 DIGITAL LOGIC PULSER

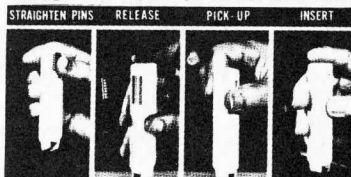
- Multimode—single pulse or pulse train
- Automatic level sensing
- Automatic current limiting
- Automatic output voltage
- Low output impedance
- Finger-tip pushbutton
- OK No. PLS-1 Logic Pulser
- Net Each \$54.95

ACCESSORIES

- OK No. PC-1 Power Cord—With alligator clips Net Ea. \$ 5.95
- OK No. PC-2 Power Cord—With Micro Hooks. Net Ea. \$10.95
- OK No. PA-1 High Voltage Adapter—Net Each \$ 9.95
- OK No. PT-2 Replacement Probe Tip—Pkg. of two—Net Pkg. \$ 1.95



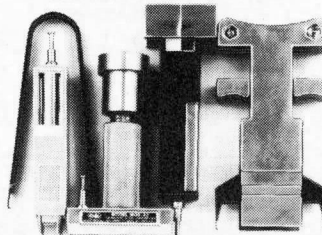
INS-1416 IC INSERTER



Inserts both 14- and 16-pin IC packages into sockets of pre-drilled boards in an easy one-hand operation. Has built-in pin straightener and features precision parts for long life. The narrow profile permits tool to work on densely spaced boards, while unique insertion mechanism insures accuracy. The automatic ejector delivers the IC ready to be placed in the insertion end of the tool for installation in the board or socket.

- OK No. INS-1476 IC Inserter—Net Each \$3.95

IC INSERTION/EXTRACTION KIT



Kit includes DIP IC extractors and inserters to accommodate all ICs from 14 to 40 pins. Tools that engage conductive surfaces are CMOS safe and include grounding lugs where needed. Kit includes extractors Ex-1, for 14-16 pin devices, EX-2 for 24-40 pin devices, MOS-1416 for 14-16 pin devices, MOS 2428 for 24-28 pin devices and MOS-40 for 36-40 pin devices.

- OK No. WK-7 IC Insertion/Extraction Kit—Net Each \$34.95

EX-1 IC EXTRACTOR

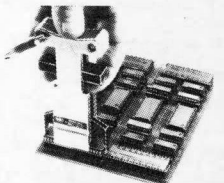


Net Each \$1.95

One-piece, spring steel construction and will extract all LSI, MSI, and SSL devices with 8 to 24 pins.

- OK No. EX-1 IC Extractor—

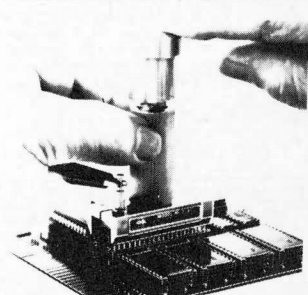
EX-2 IC EXTRACTOR



The Model EX-2 is safe and self-adjusting while it gently lifts an IC from a socket or board using uniform pressure applied simultaneously at both ends of the IC. Designed for one-hand operation and heavily chrome plated for reliable static dissipation. Features attaching terminal lug for ground strap (strap not included). Extracts all 24 to 40 pin IC's having standard .600" pin spacing.

- OK No. EX-2 C Extractor—Net Each \$9.95

MOS-40 IC INSERTER



Aligns bent-out pins. A twist of the handle compresses the pins to proper .600" spacing and locks the IC into the tool. Tool features heavy chrome plating throughout for reliable static dissipation. Includes terminal lug for attachment of ground strap (strap not included).

- OK No. MOS-40 IC Insertion Tool—Net Each .. \$9.95

IC TEST CLIPS "CHIP-CLIP"™

CHIP-CLIP attaches by means of a snap-action locking ring that ensures reliable contact with virtually no stress. The clamshell design is spring loaded in outward direction instead of inward. Molded separators eliminate shorts between legs.

ITEM NO.	PIN SIZES	PRICE
CC-8	8 PIN	6.95
CC-14	14 PIN	6.00
CC-16	16 PIN	6.50
CC-2428	24-28 PIN	15.95
CC-3640	36-40 PIN	23.95
CC-64	64 PIN	36.00



PROBLEM SOLVING TOOLS

ELECTRONIC PLIERS

4" Diagonal Cutter



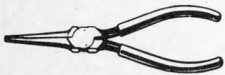
70277 Flush Edges **\$14.82**
70278 Hairline Edge **15.00**

5" Diagonal Cutter



70279 Flush Edges **\$15.48**

Long Nose



88105 Long Nose **\$11.14**

4" Round Nose



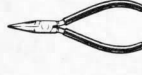
70302 Round Nose **\$13.02**

4 1/2" Flat Nose



70304 Serrated Tip **\$12.22**

5" Bent Nose



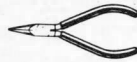
70281 Bent Nose **\$16.25**

Small pointed and rounded nose, for forming and looping fine wire.

Serrated tip for holding, pulling and clamping.

Long tapered body for gripping, twisting and looping fine wires. Polished & buffed finish.

4" Chain Nose



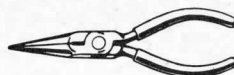
70301 Chain Nose **\$12.38**

5" Long Reach



70280 Long Reach **\$15.79**

Long Needle Nose w/Cutter

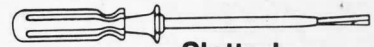


88102 Needle Nose **\$11.70**

Serrated tip for pick-up, looping and twisting.

Serrated tip plus knife and anvil cutting edge for bending and cutting wire.

SCREW HOLDING DRIVERS

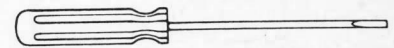


Slotted

P/N	Blade Size	
K-21*	1/8 x 3"	\$3.47
K-28	1/8 x 8"	3.71
K-36	3/16 x 6"	4.50
K-44	1/4 x 4"	4.63
K-48	1/4 x 8"	4.94
K-76	3/16 x 6"	3.98

*Specially ground tip for use on miniature screws.

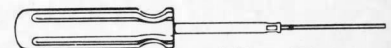
SCREWDRIVERS



Electrician & Cabinet Styles

P/N	Blade Size	
A-216-3	1/8 x 3"	\$1.68
A-216-6	1/8 x 6"	1.75
A-216-10	1/8 x 10"	2.15
A-316-4	3/16 x 4"	2.28
A-316-8	3/16 x 8"	2.66
A-316-10	3/16 x 20"	2.91

RECESSED HEAD HEX DRIVERS



Allen Type

P/N	Blade Size	
AL-2	.050 x 3/4"	\$2.22
AL-5	5/64 x 3/4"	2.22
AL-7	7/64 x 3/4"	2.58
AL-9	9/64 x 3/4"	2.58
AL-10	5/32 x 5/4"	2.58



NIBBLING TOOL

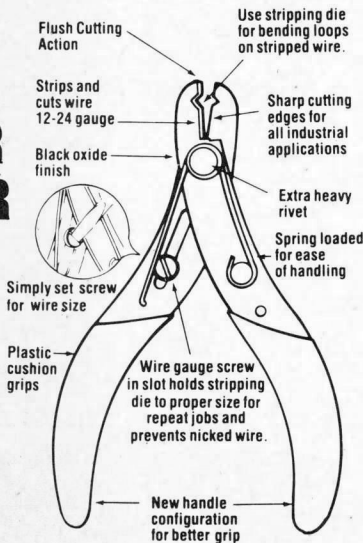
This Nibbling Tool is perfect for cutting, trimming, or notching sheet metal up to 18 gauge. It operates like a punch and die and also works well on aluminum or plastic up to 1/16" thick. This tool can be a real time-saver for our customers when working on chassis, printed circuit boards and prototype model parts. Size: 6-1/2"

NT-01 Nibbling Tool **\$7.50 each**
NT-02 Replacement Punch **\$3.95 each**

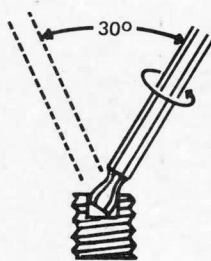
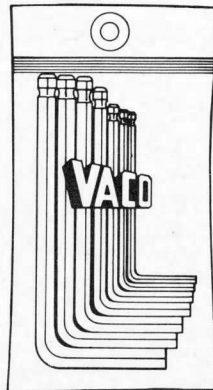
WIRE STRIPPER & CUTTER

ACP ONLY
\$319

WS100C Wire Stripper



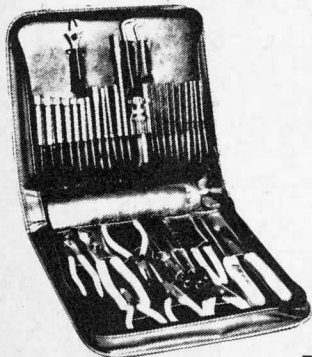
7-PC BALL END HEX KEY SET



Works on angles up to 30°

70172 7 Piece Ball End Hex Key Set **\$9.80**

VACO SUPER ZIP



The Vaco Super Zip holds 36 popular professional tools. Includes interchangeable 90-series handle and screwdriver, nutdriver and hexdriver blades plus pliers, electrical tools, and offset and regular screwdrivers.

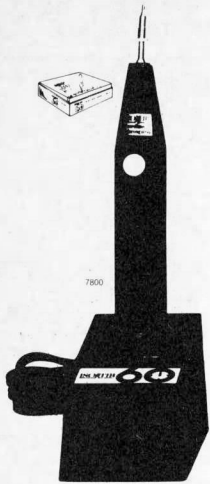
ACP ONLY
\$189⁰⁰

70390 Super Zip

VACO FULL LIFETIME WARRANTY

Each product carrying the VACO trademark is warranted by VACO Products Company to give a full measure of satisfaction based on the product being used for the purpose for which it was intended, and is warranted to be free from any defect in material or workmanship.

TOOLS



ISOTIP® "60" Fastest recharging, cordless soldering iron on the market. Solders up to 125 electronic joints* per charge. Recharges full in one hour — or enough for reuse in a few minutes. Allows "20% continuous use" when kept in charger between uses. Stand switches automatically to energy-saving trickle-charging rate when battery becomes full. LED indicator shows when battery is charged.
No. 7800 Kit contains cordless soldering iron, recharging stand, #7577 tip, #7545 tip and instructions.

Price \$43.95
Shipping Wt. 2 lbs.

"Quick Charge" ISOTIP® Recharges completely in 3 to 4-1/2 hours. A partially discharged battery returns to full capacity in an hour or two. Long lasting, premium quality nickel cadmium battery withstands high-rate charging without damage. Fully charged unit can make up to 125 electronic joints* per charge. Cannot overcharge.
No. 7700 Kit contains cordless soldering iron, recharging stand, #7545 tip, #7546 tip and instructions.

Price \$32.00
Shipping Wt. 2 lbs.

The Original introduced as the greatest advance in soldering since electricity. Capacity equals the newer units, with up to 125 electronic joints* per charge. Recharges in 12-16 hours from complete discharge. Economically priced, it makes cordless soldering convenience attractive to even the infrequent user. Cannot overcharge.
No. 7500 Kit contains cordless soldering iron, recharging stand, #7545 tip and instructions.

Price \$28.50
Shipping Wt. 2 lbs.

12V AUTO CHARGER NO. 7585 plug recharges cordless soldering irons from cigarette lighter. Will not recharge No. 7900 gun, No. 7920 gun or No. 800 iron. Will charge No. 7700 iron at the 12-16 hour recharge rate.
\$5.95

PC DRILL ATTACHMENT NO. 6500 unit fits in place of tip on any ISOTIP® cordless soldering iron. Will not fit guns. Ideal for cleaning lead holes and solder from printed circuit boards. #56 bit included with drill. Bit (No. 6550) is replaceable.
\$11.95

ACCESSORIES

16 snap-in tips to fit any ISOTIP® soldering tool to any job.

No. 7571 BEVELED TIP 1/16" (1.6 mm) **\$2.95**

No. 7579 BEVELED TIP 1/32" (2.4 mm) **\$2.95**

No. 7573 TINNING TIP 5/32" (4 mm) **\$2.95**

No. 7569 "V" TIP 5/32" (4 mm) **\$2.95**

No. 7593 BEVELED TIP high wattage 3/16" (4.8 mm) **\$2.95**

No. 7566 MICRO SOLDERING TIP 1/64" (4 mm) **\$2.95**

No. 7577 CHISEL TIP 5/32" (4 mm) **\$2.95**

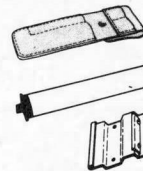
No. 7535 REGULAR TIP 5/32" (4 mm) **\$2.95**

No. 7545 FINE TIP 1/16" (1.6 mm) **\$2.95**

No. 7546 HEAVY DUTY TIP high wattage 3/16" (4.8 mm) **\$2.95**

No. 7596 KNIFE TIP 1/32" (8 mm) **\$2.95**

*Maximum joints obtained in laboratory test on new fully charged guns. Charger 100/127V 60Hz.



Leather Carrying Pouch No. 7598 holds iron and tip. **\$ 5.95**

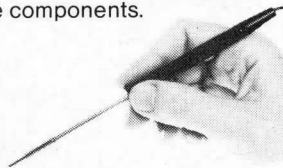
Protective Carrier/Storage Tube No. 7595 for iron and 12V plug. **\$ 1.00**

Wall Bracket No. 0160 to mount recharging stand on vertical surface. **\$ 3.95**

Miniature Low Wattage Soldering Station

Complete soldering station with pencil-size 6 Watt iron allows precise soldering while minimizing the possibility of damage to miniaturized circuits or heat-sensitive components.

Part No.	Description	Sugg. Retail
7240	6 Volt Soldering Iron	\$18.95
7230	6 Volt Iron/Station	38.00
(See Chart)	Nickel Plated Tips	2.00
(See Chart)	Iron Plated Tips	3.50



Long Life Copper Alloy "Micro" Tips

NICKEL PLATED	STYLE	IRON PLATED	DIAMETER
7252		7262	5/32"
7253		7263	3/32"
7254		7264	1/16"
7255		7265	1/16"
7256		7266	1/25"
7257		7267	1/25"
7258		7268	1/25"

PORTABLE DESOLDERING TOOLS

DS017 DELUXE SOLDAPULLT® **\$19.90**
Rugged manual loading tool for volume desoldering. High vacuum. Heavy duty plastic. Fully enclosed shaft. Plunger lock feature for compact storage. Wt. 4 oz (113g)

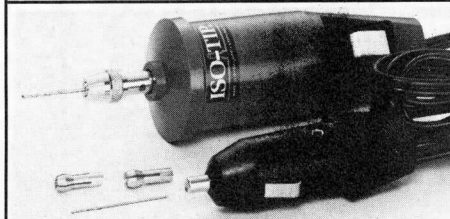
AS196 SILVERSTAT SOLDAPULLT® **\$24.00**
Special purpose SOLDAPULLT for low static work. Delux features. Static conductive construction reduces component damage. Wt. 4 oz (113g)

US140 UNIVERSAL SOLDAPULLT® **\$9.75**
Compact manual loading tool. Easy one hand operation. Adjustable 3 position loading stroke. Low mass plunger. Rapid vacuum impulse. Negligible recoil. Wt. 1.6 oz (45g)

US340 LOW STATIC POTENTIAL UNIVERSAL SOLDAPULLT® **\$13.25**
Completely portable. One hand loading. Three position stroke adjustment. Swift vacuum action. Wt. 1.6 oz (45g)

PT109 SOLDAPULLT®III **\$13.75**
Sturdy tool for routine desoldering. Slim profile. Smooth action. Very low recoil. Plunger lock feature for compact storage. Wt. 3 oz (85g)

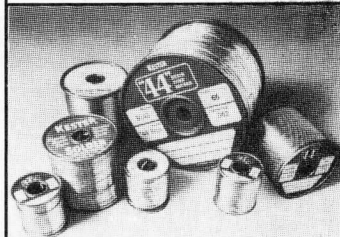
MV124 SNORT®INI™ **\$6.65**
Designed for desoldering microminiature components and fine wiring. Resilient teflon tip. Spring plunger with cleaning shaft. Wt. .7 oz (20g)



ELECTRONIC TECHNICIAN DRILL

No. 6275 Kit includes Electronic Technician Drill with 110V Transformer, 3 Collets, #56 and #71 Drill Bits.

ACP PRICE **\$39.95**



KESTER SOLDER

60% Tin 40% Lead Rosin Core Solder - Price Per Spool.

.025 dia.	1 lb	\$13.64
.031 dia.	1 lb	\$12.86
.050 dia.	1 lb	\$12.06

TIN PLATING KIT

- Professional Results
- Excellent Solderability and Protection from Oxidation

Tin Plating Kit . . . **\$10.57**



SOLDER BLOTTER

"The Solder Blotter"

QUICK SOLDER REMOVER

SOLDER REMOVER FOR MICRO-LOGIC AND MICRO-MINIATURE CIRCUITRY

Cat. No. 500	1/8"	\$1.69ea.
Cat. No. 600	1/32"	\$1.69ea.
Cat. No. 700	1/16"	\$1.79ea.
Cat. No. 800	1/4"	\$1.79ea.



SOLDERING EQUIPMENT



TEMPERATURE CONTROLLED SOLDERING SYSTEMS

FEATURES

- New, THERMO-DURIC™ heater element
- Non-magnetic temperature control
- Fully grounded tip
- Grounded input: 120VAC
- Wide selection of interchangeable tips
- Fast heat-up
- Quick temperature recovery
- High thermal efficiency
- Lower power consumption
- Higher insulation breakdown levels than nichrome heaters
- U.L. Listed
- Electronic, closed-loop temperature control
- Temperature range of 420°F to 800°F

SYSTEM 9000

Includes: • System Module • Base • Micro-Size handle with THERMO-DURIC™ heater • 1/16" #9012 screwdriver tip • Sponge & tip tray, sponge • Iron holder

LIST PRICE	ACP PRICE
\$170.00	\$149.00

SYSTEM 9100

Includes: • Base Unit with built-in controller • Micro-Size handle with THERMO-DURIC™ heater • 1/16" #9012 screwdriver tip • Sponge & tip tray, sponge • Iron holder

LIST PRICE	ACP PRICE
\$120.00	\$109.00

SYSTEM 9200

Available in three preset temperatures: **Model #9260, 600°F; Model #9270, 700°F; & Model #9280, 800°F;** at a constant 2° 20°F. This high-capacity 50 Watt system has the flexibility to handle virtually any soldering job.

The 9200 is the power module only, without handle or base assembly. Models 9260, 9270 & 9280 include: system module, base, handle with THERMO-DURIC heater, 1/16" screwdriver tip (#87), tip tray with sponge, iron holder, operating instructions.

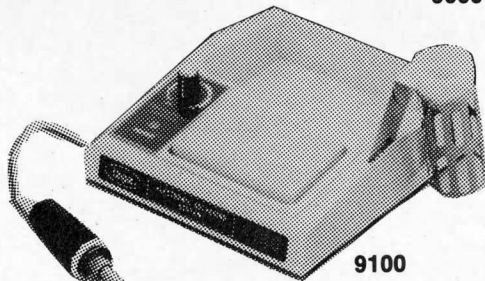
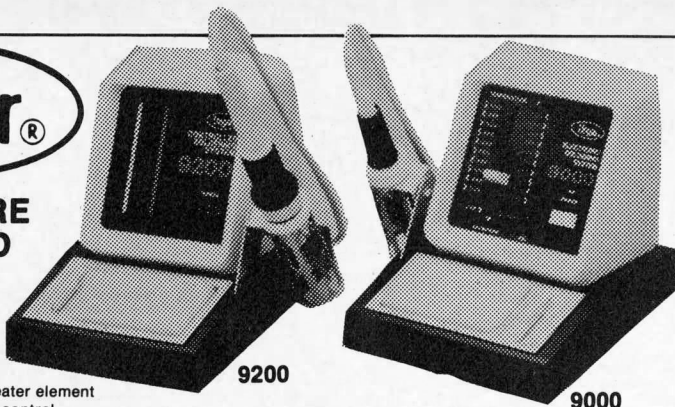
MODEL	LIST	ACP
9200	67.00	59.00
9260	101.00	89.00
9270	101.00	89.00
9280	101.00	89.00

REPLACEMENT HEATERS

MODEL	DESCRIPTION	ACP
9020 for 9000		15.00
9120 for 9100		15.00
76 for 9260		26.00
77 for 9270		26.00
78 for 9280		26.00
9337 for 9380		15.00
9338 for 9380		15.00

ACCESSORIES

MODEL	DESCRIPTION	ACP
8000	Iron Holder (All Irons)	6.50
8800	Iron Holder (All Irons, Hot VAC, includes Sponge & Tray)	13.00
400	Kleen-Tip Sponge & Tray	3.50
500K	Ungarmatic™ Desoldering Kit	15.00
510K	Dip Desolder Kit	13.50
6980	Dip Extractor Pliers	18.50
6982	Dual In-Line Extractor	5.50
6948	Desolder Tip	6.50



SYSTEM 9300

The 9370 (700°F) and 9380 (800°F) irons both feature a micro-size handle, THERMO-DURIC™ heater and come with a 1/16" screwdriver tip (#9012).

The above 9300 Series Irons feature individually replaceable tip retainer, tip, heater, retainer clip and handle for maximum convenience and economy.

MODEL	LIST	ACP
9370	33.00	28.00
9380	33.00	28.00

TIP SELECTION FOR 9000, 9100 AND 9300

Precision Point		#9010
1/32" Spade		#9011
1/16" Screwdriver		#9012
5/64" Screwdriver		#9015
3/32" Screwdriver		#9016

FOR 9200

	MODEL	PRICE
	#80	3.40
	#81	3.70
	#82	3.40
	#83	3.40
	#84	3.70
	#85	3.50
	#86	3.40
	#87	3.40
	#88	3.40
	#92	3.40
	#93	3.40
	#94	3.40
	#95	2.00

MODULAR SOLDERING TOOLS 3-WIRE LINE



1270/1350/1450

Consists of three outstanding production irons with three temperature ranges: #1270 650° to 750°F; #1350 750° to 850°F; #1450 900° to 1000°F. Features flexible heat-resistant cord set, built-in replacement heater, and grounded from plug to tip. Designed for use with more than 40 soldering tips, nibs and tipleets, plus Princess desoldering tips.

MODEL	LIST	ACP
1270	20.53	17.00
1350	20.53	17.00
1450	20.53	17.00

THREAD-ON TIPS AND ADAPTERS



P/N	Tip Shape	Ovrl. Lgth.	Tip Dia.	ACP
PL111	Pencil	1-1/4	1/8	2.40
PL113	Chisel	1-1/4	1/8	2.40
PL114	Micro spade	1	.05	2.40
PL133	Taper chisel	1-1/16	1/8	2.50
PL138	Needle	1-1/4	3/64	2.40
PL151	Screwdriver	1-1/4	1/8	2.40
PL153	Chisel	1-1/16	3/16	2.40
PL155	Stepped chisel	1-1/4	1/16	2.40

ADAPTERS

100	1/4" thread on heaters to 1/8" thread-in tips	.80
101	1/4" thread-on heaters to 3/16" thread-in tips	.80

1/8" IRON CLAD AND COPPER PLATED PRINCESS NIBS

6960	Pencil (Iron)	%	1/16	2.10
6961	Screwdriver (Iron)	7/16	1/16	2.10
6962	Spade (Iron)	%	1/16	2.10
6963	Precision (Iron)	%	1/16	3.80
6953	Precision (Copper)	%	1/16	2.10

HOT VAC™ DESOLDERING SYSTEM

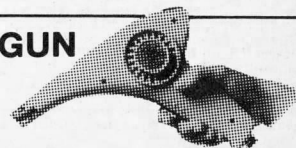


Complete 120V, 60 Hz., 2.5 Amp Rated system includes Power & Vacuum Supply, Grounded Handle Assembly, Integral Holder plus one each #2005 Tip, #2006 Tip, #2007 Tip, #2008 Tip, #2002 Cleaning Tool, #2039 Ten-pack Handle Filters and #400 Kleen-Tip Sponge and Tray.

MODEL	LIST	ACP
4000	475.00	399.00
2000A	475.00	399.00
200A	407.00	369.00

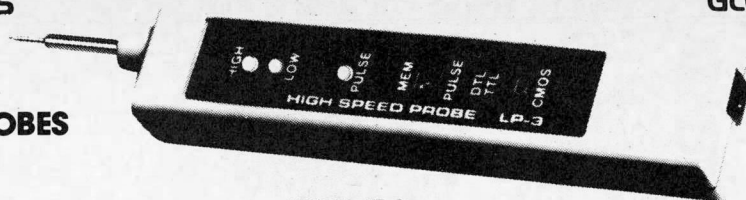
(Shop Air)

HEAT GUN



Ruggedly constructed, yet weighing only 13 oz., the 6966C is comfortable to the grip, easy to use, and the handle remains cool to the touch even after extended use. There is a convenient 3-way switch at the trigger position. A 3/4" air stream from the nozzle directs the heat to the exact area desired. Air flow temperature at the nozzle reaches approximately 750° F - 800° F in seconds.

MODEL	LIST	ACP
6966C	70.00	65.00



DIGITAL LOGIC PROBES

MODEL LP-1

- Use to 50 nanoseconds, 10 MHz
- Circuit powered and portable
- Compatible with most logic families

Instant readings of logic levels for DTL, TTL and CMOS.
Input Impedance: 0.12 MegOhms.
Min. Detectable Pulse: 50 nsec.
Max. Input Signal Frequency: 10 MHz.
Pulse Detector (LED): High-speed train or single event
Pulse Memory: Pulse or level transition detected and stored.
Input: Protected to 50 VDC, 117 VAC for 15 sec.
Controls: Threshold Select and Pulse Memory.
Display: Discrete High, Low, Pulse LEDs.
Model LP-1 Digital Logic Probe—

LIST ACP
50.00 42.95

MODEL LP-2

- High, constant input impedance minimizes circuit loading
- Use to 300 nanoseconds, 1.5 MHz
- Perfect for CMOS

Economy version of Model LP-1.
Input Impedance: 1 MegOhm.
Min. Detectable Pulse: 300 nsec.
Max. Input Signal Frequency: 1.5 MHz.
Pulse Detector (LED): High-speed train or single event.
Input: Protected to 50 VDC, 117 VAC for 15 sec.
Controls: Threshold Select.
Display: Discrete High, Low, Pulse LEDs.
Model LP-2 Digital Logic Probe—

LIST ACP
32.00 29.50

MODEL LP-3

- High speed—use to 6 nanoseconds, 70 MHz
- Pulse memory stores pulse events

Instant readings of logic levels for DTL, TTL and CMOS.
Input Impedance: 1, 2 Megohm.
Min. Detectable Pulse: 6 nsec.
Max. Input Signal Frequency: 70 MHz.
Pulse Detector (LED): High-speed train or single event.
Pulse Memory: Pulse or level transition detected and stored.
Input: Protected to 50 VDC, 117 VAC for 15 sec.
Controls: Threshold Select and Pulse Memory.
Display: Discrete High, Low, Pulse LEDs.
Model LP-3 Digital Logic Probe—

LIST ACP
77.00 65.00

ACCESSORIES FOR LP-1, LP-2, LP-3, DP-1

- Model LDA-1 Probe Tip—1 1/2" probe tip. \$ 1.25
- Model LDA-2 Probe Tip—2 1/2" probe tip. \$ 1.25
- Model LDA-3 Easy-Clip Jumper—3" jumper, threaded to replace probe tip. \$ 5.30
- Model LDA-4 Easy Clip Ground Wire—Plugs into connector adjacent to probe tip. \$ 5.65
- Model LDA-5 Alligator Clip Ground Wire—Plugs into connector adjacent to probe tip. \$ 3.70
- Model LDA-6 Easy-Clip Adapter—Slips over probe tip. \$ 4.95

- Model LDA-7 Banana Plug Adapter—Threaded to replace probe tip connector. \$ 2.00
- Model LDA-8 Power Cord with Alligator Clips—36" coaxial DC power connector to alligator clips. \$ 3.70
- Model LDA-9 Power Cord with Easy Clips—36" coaxial DC power connector to easy clips. \$ 8.70
- Model LDA-A Accessory Assortment—Includes LDA-2, LDA-3, LDA-4, LDA-5, LDA-6, LDA-7 and LDA-9. \$ 21.90
- Model LDA-10 BNC Input Adapter— \$ 10.00
- Model LDA-11 Wire Wrap Pin Input Adapter—3" long. \$ 4.95
- Model LDA-12 Wire Wrap Pin Ground Adapter—3" long. \$ 4.95
- Model LDA-B Accessory Assortment—Includes LDA-1, LDA-3, LDA-5, LDA-8, LDA-10, LDA-11, and LDA-12. \$ 28.50

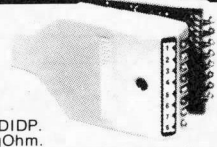
TEST EQUIPMENT

LOGICAL ANALYSIS KITS



Model LTC-1 Logical Analysis Kit—Complete with LP-1 Logic Probe, DP-1 Logic Pulser, LM-1 Logic Monitor, twolip Ground Wire, LDA-5 Alligator Clip Ground Wire, LDA-7 Banana Plug Adapter, two LDA-8 Power Cords, instruction manuals and custom vinyl carrying case.
List \$240.00 **ACP PRICE \$218.00**
Model LTC-2 Logic Analysis Kit—Same as Model LTC-1, except LP-3 Logic Probe replaces LP-1, and an additional LDA-5 is supplied.
List \$270.00 **ACP PRICE \$242.00**

16-CHANNEL LOGIC MONITOR



Input: Clips to 16 pins of DIDD.
Input Impedance: 0.1 MegOhm.
Reference: Threshold Voltage reference determines turn-on point for each of 16 discrete LEDs. Threshold corresponds to DTL, TTL or other logic families whose logic 1 to logic 0 differentials are 5-7 volts.
Threshold: 2 ± 0.2 VDC.
Mode: Single mode, single logic threshold.
Display: 16 discrete LEDs, numbered 1-16, each light up when logic 1 level appears at corresponding pin of DIP IC clip.
Power Required: 4 VDC min., 15 VDC max. across any two inputs; derived from circuit under test. Max. current drain. 200 mA at 10 VDC.
Operating Temperature: 5-45° C.
Size: 4" x 2" w x 1 1/2" d.
Weight: 3 oz.
Model LM-1 16-Channel Logic Monitor
List \$79.00 **ACP PRICE \$69.95**
LM2A For TTL, CMOS, Variable applications **ACP**
(W/A/C adapter) **\$133.00**
LM4A Logic Monitor (40 pin) **\$185.00**
LM6A LM4A option for 16 pin **\$92.00**
LMAs LM4A option for 40, 24, 16, 14 pin **\$72.00**

DIGITAL PULSER



Input Impedance: 20 MegOhms min.
Output: Logic state of node sensed at probe tip by input circuit determines whether output pulse will source or sink current; low node automatically pulses to high (sourcing); high node to low (sinking).
Pulse Width: TTL, 1.5 µsec ± 30%; CMOS, 10 µsec ± 30%.
Rise Time: Less than 100 nsec.
Fall Time: Less than 500 nsec at 1 TTL load; CMOS, less than 8 µsec at 0.1 MegOhm load.
Pulse Current: 100 mA max., sink or source.
Inactive Mode (Pushbutton Not Pressed): Senses state of node; output is high impedance.
One-Shot Mode (Pushbutton Pressed For Less Than 1 Sec): Outputs single pulse to force node to opposite state.
Pulse Train Mode (Pushbutton Pressed and Held For Over 1 Sec): Outputs 100 pps pulse train.
Display: Discrete LED flashes once for a single pulse, stays on for pulse train.
Operating Temperature: 0-50° C.
Power Required: 5-25 VDC; circuit powered.
Size: 5.8" x 1 1/2" w x 0.7" d.
Weight: 3 oz.
Model DP-1 Digital Pulser—List \$83.00 ACP \$75.00

MAX-100 PORTABLE FREQUENCY COUNTER



• Portable • 5 Hz to over 100 MHz response • TTL compatible • 8-digit display
Input Impedance: 1.5 MegOhms, 10 pF.
Response: 5 Hz to 100 MHz, tested to 110 MHz.
Sensitivity: 40 mV rms from 5 Hz to 1 KHz; 30 mV rms from 1 to 100 KHz; 10 mV rms from 100 KHz to 10 MHz; 40 mV rms from 10 to 60 MHz; 120 mV rms from 60 to 100 MHz.
Reference: 3.579545 MHz crystal oscillator; ± 4 ppm from 5 to 45° C.
Gate Time: 1 sec.
Resolution: 1 Hz.
Accuracy: ± 1 count ± timebase error.
Display: 8-digit, 7-segment, 0.43" LED.
Lead Zero Blanking: Decimal point indicates MHz position.
Overflow: When input exceeds 100 MHz, left-most digit flashes.
Display Update: 1/16 sec, 1 sec, gate time.
Low-Battery Indication: Entire display flashes at 1 Hz.
Operating Temperature: 5-45° C; calibrated at 25° C ± 5%.
Power Required: 6 "AA" cells (internal), 110 or 220 VAC, charger/eliminator, auto cigarette lighter adapter, or 7.5 to 10 VDC external supply.
Battery Charging Time: 12 to 14 hours.
Size: 1.75" h x 5.63" w x 7.75" d.
Weight: Less than 1 1/2 lbs. with batteries.
Model MAX-100 Frequency Counter—List \$149.00 **ACP PRICE \$135.00**

ACP ONLY \$135.00

MAX-100 ACCESSORIES

- Model 100-CLA—Mobile charger/adapter. \$ 5.95
- Model 100-CA1-110 VAC charger/adapter. \$12.45
- Model 100-IPC—Input cable with clip leads. \$ 7.45
- Model 100-LLC—Low-loss coupler. \$18.70
- Model 100-MWA—Mini-whip antenna. \$ 6.20
- Model 100-CC—Carrying case. \$12.45
- Model 500 Prescaler 500MHz 10:1. \$69.00

MAX-50 FREQUENCY COUNTER



SAVE! ONLY \$71.00

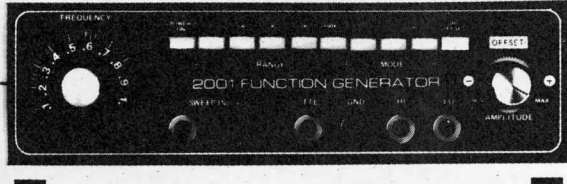
- 100 Hz to 50 MHz • 100 Hz resolution
- Battery or AC powered

Input: AC coupled, diode protected.
Input Impedance: 1 MegOhm, 25 pF.
Response: 100 Hz to 50 MHz.
Sensitivity: 30 mV rms from 100 Hz to 30 MHz; 100 mV rms from 30 to 50 MHz.
Max. Input Voltage: 200 V pk below 100 Hz; 62 V pk from 100 Hz to 1 KHz; 20 V pk from 1 to 10 KHz; 7 V pk from 10 to 100 KHz; 5 V pk from 100 KHz to 50 MHz.
Reference: 3.57945 MHz crystal oscillator; ± 4 ppm from 5 to 45° C, trimmable ± 40 ppm.
Mode: Single mode, 0.1 sec. gate time.
Display: Magnified 6-digit, 7-segment, 0.1" LED with anti-glare window. Decimal points in both kHz and MHz positions. Lead zero blanking. Display updates 6 times per sec.
Operating Temperature: 5-45° C; calibrated at 25° C ± 5%.
Power Required: 9 VDC alkaline battery or external power with AC adapter.
Size: 3" h x 6" w x 1 1/2" d.
Weight: 8 oz.
Model MAX-50 Frequency Counter—List \$77.00 **ACP PRICE \$71.00**

MAX-50 ACCESSORIES

- Model MM-AC2 Adapter—For 100 VAC. \$12.45
- Model MM-A4 Mini Antenna. \$ 4.95
- Model MM-IPC Input Cable Clip Leads. \$ 4.95
- Model MM-C5 Carrying Case. \$ 7.45

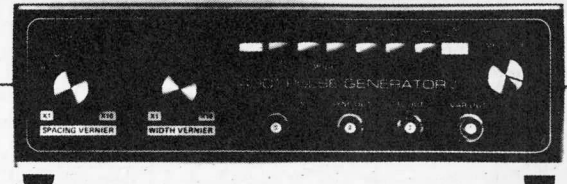
2001 FUNCTION GENERATOR



SPECIFICATIONS

Frequency Range: 1 Hz to 100 KHz in 5 overlapping decade ranges (1-10 Hz, 10-100 Hz to 1 KHz, 1-10 KHz, 10-100 KHz), pushbutton selectable with a 10:1, 50-increment vernier dial.
Dial Accuracy: ±5% of dial setting; calibrated at 10 Hz, 100 Hz, 1 KHz and 10 KHz.
Sine Wave Distortion: Less than 1% THD typ.; calibrated to less than 1.5%.
Triangle Wave Linearity: Better than 1%.
Square Wave Rise and Fall Times: Less than 100 nsec into 600 Ohms, 20 pF.
Square Wave Time Symmetry: ±1% typ.; calibrated to less than 1.5%.
Sweep Range: 100:1 max.; linear range, 10:1 max.
Sweep Input: 0-10V.
Input Impedance: 30,000 Ohms.
Outputs: High, Low, TTL; DC coupled banana jacks.
Output Impedance: Constant 600 Ohms; short circuit proof.
High Output Level: 0.1-10V p-p, open circuit; .05-5 V p-p into 600 Ohms.
Low Output Level: -40 dB of High output; 1-100 mV, open circuit; 0.5-50 mV into 600 Ohms.
TTL Output: TTL-level square wave (in all modes), buffered to drive 10 TTL loads; rise and fall times, less than 25 nsec; synchronous with HI and LO outputs.
High Output DC Offset: Variable from +5 to +5 VDC, open circuit; total AC (signal) plus DC (offset) output limited to ±10 V p-p, open circuit, ±5 V p-p into 600 Ohms; offset zero when feature not selected.
Low Output DC Offset: ±50 mV max.
Operating Temperature: 0-50°C; calibrated at 25°C ±5%.
Power Required: 105-135 VAC, 47-63 Hz, 6 VA max.; 215-250 VAC, 50-60 Hz optional.
Size: 3" h x 10" w x 7" d.
Weight: 2.2 lbs.
Model 2001 Function Generator—Net Each \$200.00

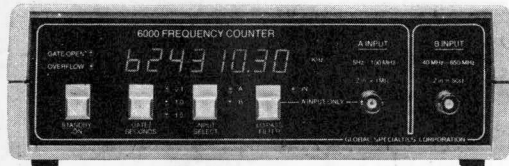
4001 DIGITAL PULSE GENERATOR



SPECIFICATIONS

Frequency Range: 0.5 Hz to 5 MHz.
Pulse Width and Spacing: Independently variable from 100 nsec to 1 sec with 10:1 verniers over 7 decade ranges.
Accuracy: ±5%; calibrated at min. and max. settings.
Pulse Jitter: Less than 0.1% ±50 psec.
Run Mode: 0.5 Hz to 5 MHz, selectable through pulse width and spacing controls.
Trigger Mode: DC to 10 MHz.
Gate Mode: Generator starts synchronously with leading edge of gate signal.
One-Shot Mode: Single pulse, width determined by Pulse Width control; occurs synchronously with manual activation of One-Shot momentary pushbutton.
Square Wave: Converts output to symmetrical square wave in any mode; period equal to twice the sum of the Pulse Width and Pulse Spacing control settings.
Complement: Inverts output signal; sync out leads falling rather than rising edge.
Trigger/Gate Input Signal: 1.7 V rms sine wave, 2.4 V pk. pulses; TTL compatible.
Input Pulse Width: Greater than 40 nsec wide.
Input Impedance: 400 Ohms, DC coupled.
VAR OUT: Amplitude, 0.1-10 V, open circuit; 0.05-5 V into 50 Ohms; variable with Amplitude control; rise/fall time, less than 30 nsec; 50 Ohms constant impedance.
TTL Drive: Standard TTL levels, buffered to drive up to 40 TTL loads; rise/fall time, less than 20 nsec.
Sync Out: 2.4 V, TTL compatible pulse, buffered to drive 10 TTL loads.
Sync Timing: 20 nsec pulse width, leads main outputs by more than 20 nsec; rise/fall time, less than 20 nsec.
Operating Temperature: 0-40°C; calibrated at 25°C ±5%.
Power Required: 105-135 VAC, 57-63 Hz, 6 VA max.; 215-250 VAC, 50-60 Hz optional.
Size: 3" h x 10" w x 7" d.
Weight: 2.2 lbs.
Model 4001 Pulse Generator—Net Each \$249.95

6000 FREQUENCY COUNTER



- 5 Hz to 650MHz range • Switchable low pass 60KHz filter
- Selectable 0.1, 1.0 and 10 sec gate times • Easy-to-read 8 digit LED display
- Easy-touch push button controls • Steam-lined ultrafunctional front panel

SPECIFICATIONS

A INPUT
Impedance: 1 megohm @ 25 pF
Response: <5 Hz to >100 MHz
Sensitivity: 10mVRMS 5Hz - 1MHz;
 25mVRMS 1MHz - 50MHz;
 40mVRMS 50MHz - 100MHz
Max. in. Volt.: 280VRMS 5Hz-160Hz;
 120VRMS 160Hz-16KHz;
 14VRMS 16KHz-470KHz;
 7VRMS 470KHz-100MHz

B INPUT
Impedance: 50 ohms @ 10 pF
Response: <40MHz to >650MHz
Sensitivity: 50mVRMS 40MHz-100MHz;
 100mVRMS 100MHz-600MHz;
 150mVRMS 600MHz-650MHz
Maximum input voltage: ±5 pk

Reference: ±(timebase error) x frequency ±trigger error ±1 LSD
 Trigger error = $\frac{\text{signal slope (V/S)}}{\text{peak-to-peak noise voltage on input}}$

Timebase: 3.579545MHz crystal oscillator, ±1 ppm from 0-40°C ambient. Aging <4 ppm/year.
Optional timebase: 3.579545MHz crystal oven oscillator, ±0.1 ppm from 0-40°C ambient, over temp 55°C. Aging <1 ppm/year.
Controls: Standby/On, Gate Time Select (0.1; 1.0; 10 secs), A/B Input, LO Pass Filter In/Out.
Display: 8-digit 7-segment 0.43-inch LED display, decimal point indicates frequency in KHz, leading-zero blanking; discrete Overflow (counter overflow) and Gate LEDs.
Power: 105-135VAC, 57-63Hz, 15VA maximum (215-250VAC, 50-60Hz version available). Standby power 6VA maximum.
Dimensions: 3 x 10 x 7 inches (H x W x D) (76 x 254 x 178 mm).
Weight: 3.5 lbs. (1.6Kg). **Op Temperature:** 0-40°C.
Model 6000 Frequency Counter \$399.95
Model 6500 Frequency Counter with Oven Oscillator Option \$449.95

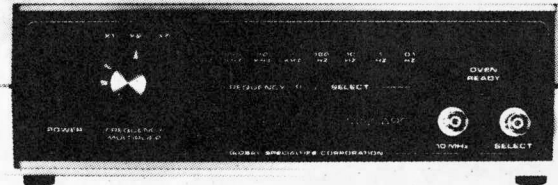
5001 UNIVERSAL COUNTER-TIMER



SPECIFICATIONS

Input Impedance: 1 MegOhm, 25 pF.
Response: 10 MHz max. at A input; 2 MHz max. at B input.
Sensitivity: 20 mV rms to 10 MHz.
Frequency Mode: 10 MHz max., 4 ranges, with gate times of .01, 0.1, 1.0, 10 sec; display in KHz; A input only.
Model 500 Universal Counter-Timer—Net Each \$360.00

MODEL 4401 FREQUENCY STANDARD



SPECIFICATIONS

Outputs: Two outputs; 10 MHz. Select. DC coupled; BNC connectors; 50-ohm TTL-compatible square wave, buffered to drive up to 10 TTL loads; short-circuit protected; 20 nsec rise and fall into 50 ohms.
Reference Timebase: 10 MHz crystal oven oscillator; ±0.5 ppm from zero to 40°C.
Aging: Less than 1 ppm/year.
Display: Eight discrete LEDs indicate selected frequency decade; selected frequency LED also serves as power pilot; additional LED indicates Oven Ready.
Power Required: 105-135 VAC, 57-63 Hz, 5 VA max.; 215-250 VAC, 50-60 Hz optional.
Sizes: 3" h x 10" w x 7" d.
Weight: 2 lbs.
Model 4401 Frequency Standard—Net Each \$298.00

ACCESSORIES

Model PSA-2 Input Cable—BNC-to-BNC input cable for Models 5001 and 4401 36" long. Net Each \$14.95
Model 620 Input Fuse Kit—For Model 6001. Includes two miniature 1/10 Amp fuses for B input protection. Net Each \$7.50

3002 AUTORANGING CAPACITANCE METER

NEW!



- Handheld, battery-operated
- Measures capacitance from 1 pF to 19,990 μF
- 8 automatically selected ranges
- Typical 0.2% accuracy
- 3-1/2 digit, 0.5 inch LCD display
- LED range indicators

\$210.00

5000 COUNTER TIMER

NEW!



- Measure Frequency, Period and Pulse Width
- Full input signal conditioning AC/DC Coupling, Variable trigger level
- Battery or Charger/Adapter operation
- Unique automatic master reset logic
- High contrast 0.43 inch, 8 digit LCD display
- LCD indicators: Overflow, Gate Open, Low Battery
- Display storage function maintains last reading

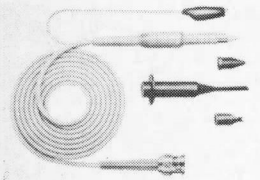
\$349.95

TEST PROBES, INC. TPI

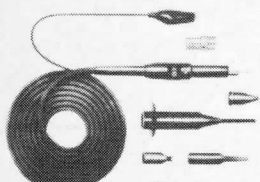
OSCILLOSCOPE PROBES



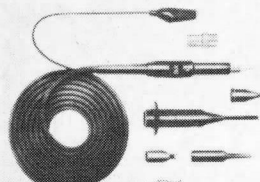
MODEL SP100
x1, x10, and
Gnd. Rfrnc.
100 MHz B.W.
39.95



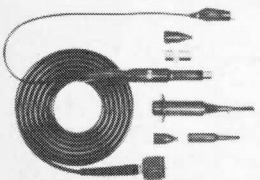
MODEL 1P20
x1 Probe
20 MHz B.W.
27.00



MODEL P100
x10 Attn.
100 MHz B.W.
36.00

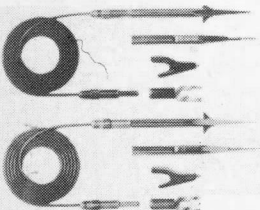


MODEL 2P150
x10 Attn.
100 MHz B.W.
57.00

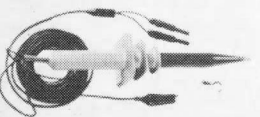


MODEL P100AP
x10 Attn.
100 MHz B.W.
Activator Pin
For x10 S.F.
47.00

DVM, DMM, VOM, PROBES



MODEL TLS2000
Professional
Test Lead Set
25.00



MODEL HV40B
High Voltage
Probe 40KV
75.00



NON-LINEAR SYSTEMS

PANEL METERS

- RM-350TB 3 1/2 digit, 0.5" LED, DC Rdg. **99.15**
- RM-351TB 3 1/2 digit, 0.6" LCD, DC Rdg. **85.35**
- RM-450TB 4 1/2 digit, 0.5" LED, DC Rdg. **146.00**
- RM-451TB 4 1/2 digit, 0.4" LCD, DC Rdg. **153.00**
- PM-3.5 3 digit, 0.3" LED, Unipolar, AC Rdg. **99.50**
- PM-4 4 digit, 0.3" LED, DC Rdg., DC Pwr. **170.00**
- PM-350 3 1/2 digit, 0.3" LED, DC Rdg., DC Pwr. **69.95**
- PM-450 4 1/2 digit, 0.3" LED, DC Rdg., DC Pwr. **134.00**

MULTIMETERS, PORTABLE

- LM-3A 3 digit, LED, Test leads, NICAD batteries and charger unit. **134.00**
- LM-3.5A 3 1/2 digit, LED, Test leads, NICAD batteries and charger unit. **165.85**
- LM-300 3 digit, LCD, Test leads, without batteries. **125.40**
- LM-350 3 1/2 digit, LCD, Test leads, without batteries. **169.50**
- LM-353 3 1/2 digit, LCD, Test leads, w/o batteries. **169.00**
- LM-4A 4 digit, LED, Test leads, NICAD batteries & charger unit. **250.00**
- LM-40A 4 digit, LED, Test leads, NICAD batteries & charger unit. **229.00**
- TT-20 3 1/2 digit, LED, Temp. Probe, Test leads CMPNT Test adapter, line operation. **379.00**

TEMPERATURE METERS

- LT-31 3 1/2 digit, LCD, Degrees F or C, without battery. **91.50**
- PT-31 3 1/2 digit, miniature case, LCD, Degrees F or C, DC Pwr. **79.85**
- PT-3 3 1/2 digit, miniature case, LED, Degrees F or C, DC Pwr. **68.95**
- RT-3TB 3 1/2 digit, DIN/NEMA case, LED, Degrees F or C, DC Pwr. **77.00**

DIGITAL COUNTERS

- PR-5 5 digit preset counter, panel mount with connectors. **185.00**
- RC-5TB 5 digit universal counter, DIN/NEMA case. **158.00**

FREQUENCY MONITORS

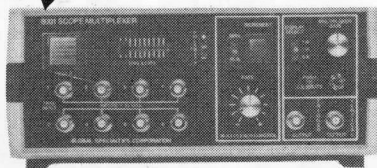
- FM-3TB LED, 45.0-99.9 HZ, 115 VAC. **113.95**
- FM-300TB LCD, 45.0-99.9 HZ, 115 VAC. **122.95**
- FM-340TB LCD, 045-450 HZ, 115 VAC. **125.95**

FREQUENCY COUNTERS

- SC-5 Prescaler 10:1, Batteries & charger, BNC to BNC Cable & input probe. **107.80**



8001 SCOPE MULTIPLEXER



- Expands single or dual channel oscilloscope to 8 channels
- Analog and digital applications
- Built-in calibration
- Built-in scope synchronization
- Broad bandwidth to 20 MHz
- Unique trigger circuitry

ACP PRICE \$345.00

IT'S ALMOST A MULTIMETER!

This is not just another continuity checker. In fact, this amazing pocket tester is so unique, it's patented. It does everything! And it does it without expensive meters and hard-to-handle test leads. **CORDLESS! SWITCHLESS!** With just a touch of the probe, you can test for:

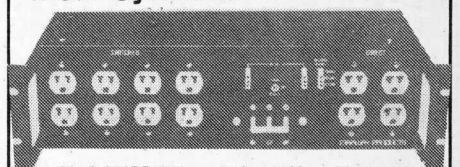
- Continuity
- Voltage
- Polarity
- Floating grounds
- Capacitors
- Leakage
- Fuses
- AC line voltage
- DC voltage
- DC polarity
- Lamps
- Diodes

- Auto voltage check
 - Breaks in printed circuit boards
 - AC neutrals
 - Ground potential on medical and other equipment
 - Much more
- Once you try the Workman CVP Multitester you'll never be without one again.

Uses 3 "N" cells (not included)



AC Power Distribution and Control for Computer Industrial Control and Test Equipment Systems.



- Model MPD115 controls 115V ac, 30 amperes, Model MPD230 controls 230V ac, 20 amperes.
- Four direct (unswitched) ac receptacles for auxiliary and test equipment.
- Eight ac receptacles switched either locally or remotely. Control selected by LOCAL-OFF REMOTE switch.
- INPUT and OUTPUT connectors permit remote Enable and Disable of other. Ac Power Controllers, using a remote mechanical or solid-state switch closure. INPUT/OUTPUT may be chained between Ac Power Controllers. Disable feature is valuable for emergency shutdown, interlock, etc.
- EMI Line Filter (line-to-line) and line-to-ground type) to prevent electrical noise from disrupting sensitive equipment.
- Transient Suppression to protect equipment from high-energy power line transients and noise.
- Magnetic Circuit Breakers with time delay to control inrush currents on power-up.
- Optional Delayed Output feature available to permit sequencing ac power with multiple units.
- Optional Power Fail/Restart feature available.
- Mechanically and electrically interchangeable with Digital Equipment Corporation's Model 861 Power Controller. Standard 19-inch mounting width, 5 1/4 inches high.
- UL/CSA-approved components.

\$495.00



HITACHI OSCILLOSCOPES

TEST EQUIPMENT



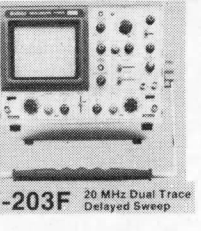
V-134 10 MHz Dual Trace Storage

ONE OF THE MOST POPULAR MODELS

50 dv/ms Stored Writing Speed
8 x 10 div Bistable Storage CRT
Auto Erase
Remove Control Erase
High Sensitivity 1 mv/div (7MHz)
Full TV Triggering
Single Sweep
X-Y Operation
High Reliability 20,000 Hours

ACP PRICE \$1469

Shpg. Wt. 27 lbs.



V-203F 20 MHz Dual Trace Delayed Sweep

20 MHz

Single Time Base Delay Sweep
High Sensitivity 1mv/div (5MHz)
X-Y Operation
CH1 Output
x10 Sweep Time Magnification
High Reliability, MTBF 20,000 Hours

“Dual Trace Delayed Sweep”

ACP PRICE \$669

Shpg. Wt. 27 lbs.

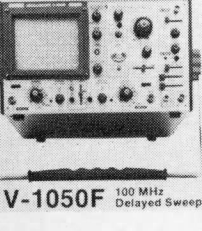


V-509 50 MHz Dual Trace Mini Portable Delay Sweep

PORTABLE

Small Size and Lightweight: 11 lb.
AC/DC and Battery (Option)
Rectangular CRT with Internal Graticule, Auto Focus
10ns/div Sweep Rate
Variable Trigger Hold-Off
Large Dynamic Range of 8div to Full Bandwidth
Full TV Triggering, Single Sweep
X-Y Operation; CH 1 Output
Built-In Signal Delay Line
High Sensitivity 1mv/div (10MHz)
Delay Jitter 1/20,000 or less
High Reliability, MTBF 20,000 Hours

ACP PRICE \$1399



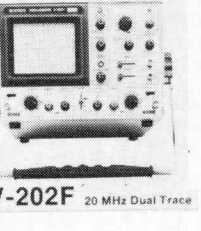
V-1050F 100 MHz Delayed Sweep

DUAL TRACE

Large, Bright 8 x 10 cm Screen
Auto Focus
Quad Trace Operation (CH1, CH2, A Trigger and B Trigger)
High Sensitivity 500 μv/div (5MHz)
High Accuracy +2% (+10 to +35°C)
Alternative Timebase Operation
20 MHz Bandwidth Limiter
Full TV Triggering
Delay Jitter 1/20,000 or less
High Reliability, MTBF 20,000 Hours

ACP PRICE \$1675

Shpg. Wt. 31 lbs.



V-202F 20 MHz Dual Trace

20 MHz

Rectangular CRT with Internal Graticule
High Sensitivity 1mv/div (7MHz)
Large Dynamic Range of 8 div to Full Bandwidth
Full TV Triggering
X-Y Operation
CH 1 Output
x10 Sweep Time Magnification
High Reliability, MTBF 20,000 Hours

“Dual Trace”

ACP PRICE \$629



V-209 20 MHz Dual Trace Mini Portable

“2 Hr. BACKUP”

Small Size and Lightweight: 9.9 lb.
AC/DC and Built-In Battery
Rectangular CRT with Internal Graticule
Auto Focus
Full TV Triggering
X-Y Operation
High Sensitivity 1mv/div (5MHz)
Easy-To-Operate
High Reliability, MTBF 20,000 Hours

ACP PRICE \$849

PORTABLE
Shpg. Wt. 16 lbs.



V-650F 60 MHz Dual Trace Delayed Sweep

60MHz

Large, Bright 8 x 10 cm Screen
Auto Focus
High Sensitivity 1mv/div (10 MHz)
5ns/div Sweep Rate
3rd Channel Display (Trigger View)
Variable Trigger Hold-Off
Full TV Triggering
Single Sweep
Delay Jitter 1/20,000 or less
High Reliability, MTBF 20,000 Hours

ACP PRICE \$1075

“DUAL TRACE”



V-302F 30 MHz Dual Trace

30 MHz

High Sensitivity 1mv/div (5MHz)
Full TV Triggering
X-Y Operation
CH 1 Output
x10 Sweep Time Magnification
Built-In Signal Delay Line
High Reliability, MTBF 20,000 Hours

ACP PRICE \$725

Shpg. Wt. 27 lbs.



V-059B 7 MHz Mini-Portable Oscilloscope & TV Waveform Monitor

Small Size and Lightweight: 6.4 lb.
AC/DC or Battery Powered
Sharp Trace CRT with Parallax-Free Internal Graticule
Keyed DC Restorer
TV Sync Separator Automatically Selected by Time/Div Control Switch
Selectable Input Impedance, 1M ohm/75ohm
All-Solid State Reliability and Easy Maintenance
2V/2H Sweep Rate Selectable
External Horizontal Sweep
External 40, 0. IRE Unit

ACP PRICE \$1075



V-353F 35 MHz Dual Trace Delayed Sweep

35 MHz

Single Time Base Delay Sweep
Rectangular CRT With Internal Graticule
High Sensitivity 1mv/div (7MHz)
Large Dynamic Range of 8 div to Full Bandwidth
Full TV Triggering
X-Y Operation
CH 1 Output
x10 Sweep Time Magnification
Built-In Signal Delay Line
High Reliability, MTBF 20,000 Hours

ACP PRICE \$849

“Trace Delayed Sweep”
Shpg. Wt. 27 lbs.



V-152F 15 MHz Dual Trace

15 MHz

High Sensitivity 1mv/div (5MHz)
Full TV Triggering
X-Y Operation
CH 1 Output
x10 Sweep Time Magnification
High Reliability, MTBF 20,000 Hours

ACP PRICE \$545

Shpg. Wt. 27 lbs.



V-099 Mini Portable TV Waveform Monitor

Small Size and Lightweight
Three Units Mountable in 19" Rack Mount
AC/DC and Battery (Option)
Four Sweep Modes
Three frequency responses
Auto Focus
DC Restorer

ACP PRICE \$849



V-352F 35 MHz Dual Trace

35 MHz

Rectangular CRT with Internal Graticule
High Sensitivity 1 mv/div (7MHz)
Large Dynamic Range of 8 div to Full Bandwidth
Full TV Triggering
X-Y Operation
CH 1 Output
x10 Sweep Time Magnification
Built-In Signal Delay Line
High Reliability

ACP PRICE \$775

“DUAL TRACE”
Shpg. Wt. 27 lbs.



V-151F 15 MHz Single Trace

High Sensitivity 1mv/div (5MHz)
X-Y Operation
CH 1 Output
x10 Sweep Time Magnification
High Reliability, MTBF 20,000 Hours

ACP PRICE \$449

209/509 ACCESSORIES		
HITAD509	Ni-Cad. Rechargeable Battery for V509	\$200.00
HITFC5020	Front Cover for V509 and V209	\$16.00
HITAP5020	Accessory Pouch for V509 and V209	\$35.00
HITVH5020	Viewing Hood for V509 and V209	\$8.00
HITSB5020	Shoulder Belt for V509 and V209	\$28.00
F SERIES ACCESSORIES		
HITDC1530	Dust Cover w/Accessory Pocket (For V151F, V152F, V302F)	\$35.00
HITDC2035	Dust Cover w/Accessory Pocket (For V202F, V203F, V352F, V353F)	\$35.00
HITDC60101	Dust Cover w/Accessory Pocket (For V650F, V1050F)	\$35.00
HITFC5010	Front Cover for V650F and 1050F	\$18.00
HITAP5010	Accessory Pouch for V650F and 1050F	\$40.00
HITVH3510	Viewing Hood for V353F, V352F, V203F, V202F, V302F, V152F, V151F, V134	\$8.00
HITVH6010	Viewing Hood for V650F and V1050F	\$8.00
SERVICE MANUALS		
HITV134M	HITV134 Service Manual	\$50.00
HITV152FM	HITV151F/152F Service Manual	\$50.00
HITV302FM	HITV302F Service Manual	\$50.00
HITV202352FM	HITV202F/V352F Service Manual	\$50.00
HITV203353FM	HITV203F/V353F Service Manual	\$50.00
HITV650FM	HITV650F Service Manual	\$50.00
HITV1050FM	HITV1050F Service Manual	\$50.00

For additional probes see Test Probes Inc.

BECKMAN

... Beckman Multimeters keep going

Here are digital multimeters you can rely on that will keep up with the tougher jobs. Beckman multimeters have been carefully designed to incorporate state-of-the-art advances to provide consistent reliability. In addition, all Beckman meters have been put through exten-

sive testing to insure that your meter is the highest quality.

The Beckman full line of 3½-digit, handheld multimeters combine superior reliability, ease of operation, and a highly versatile selection of features.

TEST EQUIPMENT

- Insta-Ohms® Continuity Function
- 10 Amp ac/dc Current Capability
- 22 Megohm Input Impedance
- 1500V Overload/6kV Transient Protect
- RF Shielding
- Safety-Designed Test Leads

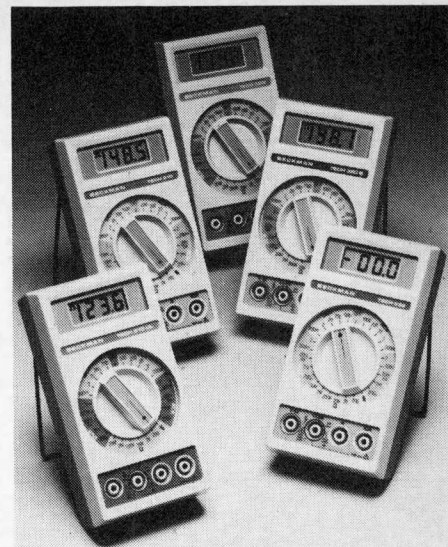
- Two-Year Battery Life
- In-Circuit Resistance Measurements
- In-Circuit Diode/Xsistor Test Function
- Single Center Switch Makes It Easy
- Easy to Carry and Use
- Completely Equipped

TECH 300: 3½-digit multimeter; 0.5% Vdc accuracy. **\$120.00**

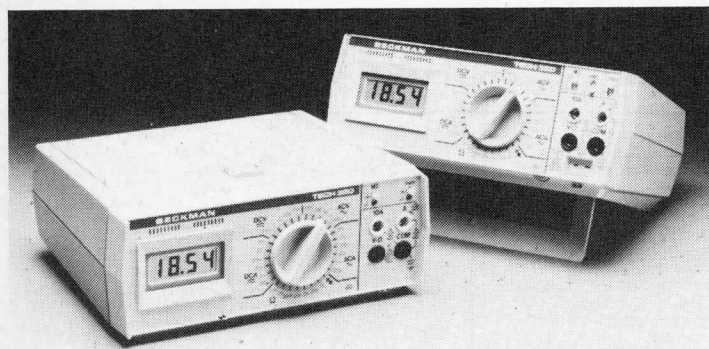
TECH 310UL: 3½-digit multimeter; 0.25% Vdc accuracy, 10 amps ac and dc ranges, Visual Continuity Indicator, Underwriters Laboratories™ listed **\$155.00**

TECH 310: 3½-digit multimeter; 0.25% Vdc accuracy, 10 amps ac and dc ranges, Visual Continuity Indicator **\$145.00**

TECH 320B: 3½-digit multimeter; 0.1% Vdc accuracy, 10 amps ac and dc ranges, Audible/Visual Continuity Indicator..... **\$189.00**



TECH 330: 3½-digit multimeter; True RMS, 0.1% Vdc accuracy, 10 amps ac and dc ranges, Visual Continuity Indicator **\$219.00**



TECH 350: Bench/Portable 3½-digit multimeter; 0.1% Vdc accuracy, 10 amps ac and dc ranges, Visual Continuity Indicator **\$229.00**

Reliability and Versatility Beckmans New Bench/Portable Meters Combine the Best of Both

Beckman has put all the extras together to give you a winning combination . . . and what a combination! Many new features are designed to give you the utmost in versatility. And useability. Features like 1/100 ohm resolution, True RMS capability, built-in temperature measurement capability and more.

You also get the latest in convenience features to make your measurements faster and easier. No other single meter offers you features like 12,000 hour battery life, a single selector rotary switch, and a convenient storage compartment.

TECH 360: Bench/Portable 3½-digit multimeter; True RMS 0.1% Vdc accuracy, Temperature Measuring Capability, 10 amps ac and dc ranges, Audible/Visual Continuity Indicator, 0-20 ohms, 4 year batt. life . . . **\$289.00**



HD-100:
Heavy Duty 3½-digit industrial multimeter; 0.25% Vdc accuracy, contamination-proof, drop-proof, high overload protection, Visual Continuity Indicator . . . **\$169.00**

HD-110:
Heavy Duty 3½-digit industrial multimeter; 0.25% Vdc accuracy, 10 amps ac and dc ranges, contamination-proof, drop-proof, high overload protection, Visual Continuity Indicator. **\$169.00**



TC-253 Temperature/ Voltage Converter

Beckman makes your multimeter more useful than ever with the TC-253 Temperature/Voltage Converter. With this new accessory, you can now measure °C or °F temperatures using the meter you already own. What's more, the TC-253 gives you *direct* temperature readings . . . mathematical conversions to °C or °F are unnecessary.

No other temperature measuring device in its price range offers the versatility or measurement ranges of the Beckman TC-253. You can use any K-type thermocouple in your measurements, whether on wire leads or in a probe. And the temperature range limits are wide: -50°C to +900°C and 58°F to +1652°F..... **\$65.00**



ACCESSORIES

- VC-201 Black Vinyl Carrying Case (see note 1 and 2) **\$10.00**
- DC-205 Delux Carrying Case (see note 1) **24.00**
- DC-206 Deluxe Bench Meter Carrying Case (see note 3) **35.00**
- HV-211 High Voltage Probe—50KV DC Max. (see note 1, 2 and 3)..... **40.00**
- RF-221 RF Probe—2KHz-200MHz (see note 1, 2 and 3)..... **35.00**
- CT-231 AC Current Transformer—10-150 amps (see note 1, 2 and 3)..... **59.00**
- CT-232 AC Current Transformer—10-1000 amps (see note 1, 2 and 3) **169.00**
- DL-241 Deluxe Test Lead Kit (see note 1)..... **12.00**

- TL-242 Spare Test Leads (see note 1)..... **\$ 6.00**
- DL-243 Deluxe Test Lead Kit (see note 2 and 3)..... **12.00**
- TL-245 Spare Test Leads (see note 2 and 3) **6.00**
- FP-260 Multimeter Fuses, 2A/600V, packet of 4 (see note 1 and 2) **2.00**
- TP-254 Thermocouple Temperature Probe K-type nickel chromium/nickel aluminum (see note 1, 2 and 3)..... **49.00**
- TP-255 K-type thermocouple, four foot leads (see note 1, 2 and 3) **10.00**
- TC-253 Temperature/Voltage Converter °C or °F (see note 1 and 2) **65.00**

NOTES: (1) Compatible with TECH300, 310, 310UL, 320B, 330 meters. (2) Compatible with HD-100 and 110 meter. (3) Compatible with TECH350 and 360 bench/portable meters.

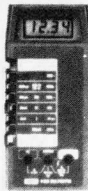
MULTIMETERS

TEST EQUIPMENT



D-SERIES DIGITAL MULTIMETERS

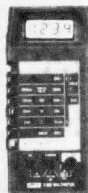
- Six Functions
dc voltage
ac voltage
dc current
ac current
resistance
diode test
- 3 1/2 digit resolution
- 0.5% basic dc accuracy
- LCD display
- Overload protection
- Safety-designed test leads
- Full year parts & labor warranty



D-800

List Price ACP Price
130⁰⁰ 117⁰⁰

- Seven Functions
dc voltage
ac voltage
dc current
ac current
resistance
diode test
conductance (1/R)
- 3 1/2 digit resolution
- 0.1% basic dc accuracy
- LCD display
- Overload protection
- Safety-designed test leads
- Full year parts & labor warranty



D-802

List Price ACP Price
194⁰⁰ 175⁰⁰

- Nine Functions
dc voltage
ac voltage
dc current
ac current
resistance
diode test
conductance (1/R)
logic level and continuity detect
temperature (K-type thermocouple)
- Peak hold on voltage and current functions
- Selectable audible indicator for continuity or level detection
- 3 1/2 digit resolution
- 0.1% basic dc accuracy
- LCD display
- Overload protection
- Safety-designed test leads
- Full year parts & labor warranty



D-804

List Price ACP Price
249⁰⁰ 224⁰⁰

D 810/811 TRUE RMS MULTIMETERS

- Seven Functions
dc voltage
ac voltage
dc current
ac current
resistance
diode test
conductance (1/R)
- 10 amp current range
- Rechargeable Ni-Cad Batteries (D 811)
- True RMS
- 3 1/2 digit resolution
- 0.1% basic dc accuracy
- 2 fuse current protection
- 6 kV transient protection
- Safety-designed test leads
- Full year parts & labor warranty



List Price ACP Price
D 810 269⁰⁰ 242⁰⁰
D 811 309⁰⁰ 279⁰⁰



4 1/2 DIGIT, FULL FEATURED MULTIMETERS



8060A



8062A

- Wideband True RMS AC measurements to 100kHz
- Frequency measurements 50-200kHz
- dBm and relative dB
- 10 Microvolt sensitivity
- Direct resistance measurements to 300 Megohms
- Relative reference useable with any range or function
- Microcomputer-based self diagnostics for all major components and functions

Feature:	8060A	8062A
4 1/2-Digit Resolution	YES	YES
10 ⁻⁶ V, 10nA 10msensitivity	YES	YES
Wideband True RMS AC	100 kHz	30kHz
Continuity (Audible & Visual)	YES	YES
dBm, Relative dB	YES	—
Frequency (to 200 kHz)	YES	—
Relative Reference	YES	YES
Autoranging Megohms (to 300M Ω)	YES	YES
Conductance (200 nS)	YES	—
Constant Current Diode Test	YES	YES
Self-Diagnostics	YES	YES
Basic DC Accuracy	0.4%	0.05%

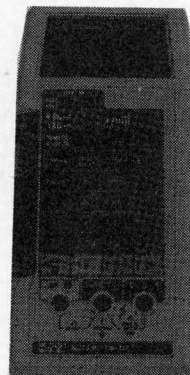
ACP PRICE

8060A	339.95
8062A	274.95

3 1/2 DIGIT HANDHELD MULTIMETERS

- 1 dc voltage
- 2 ac voltage
- 3 dc current
- 4 ac current
- 5 resistance
- 6 diode test
- 7 conductance
- 8 audible and visual logic level detection
- 9 high-speed audible and visual continuity indicators
- 10 temperature (via K-type thermocouple)
- 11 peak hold on voltage and current

- 3 1/2-digit resolution
- 0.1% basic dc accuracy
- Extensive overload protection with 600V double-fused current input
- Safety-designed test leads
- Two-year parts and labor warranty

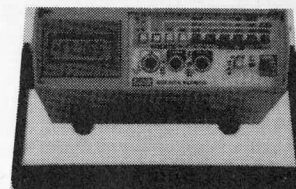


8024B

Model	Functions	Accuracy	Price
8024B	Functions 1-11	.1%	245.00
8020B	Functions 1-8	.1%	190.00
8021B	Functions 1-7	.5%	155.00
8022B	Functions 1-6	.25%	140.00



4 1/2 DIGIT BENCH-TYPE MULTIMETER



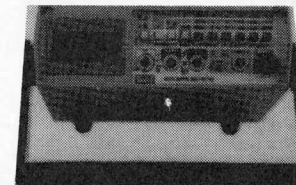
8050A

- 4 1/2 digits
- Nine functions, including—Relative reference, dB, dBm, dBV, dBW, (8 $\frac{2}{3}$), Conductance, Diode test
- 0.03% basic dc accuracy
- True RMS from 20 Hz to 50 kHz
- Microprocessor-based
- Extensive overload protection
- Rechargeable battery version (-01)
- Touch-hold probe compatibility (80 T-H)
- Probes for rf, high voltage, high current

The 8050A provides superior performance and measurement capabilities in a low-cost, benchtop instrument. The 4 1/2-digit DMM has the following measurement functions: Dc volts, True RMS ac volts, dc amps, True RMS ac amps, ohms, dBm (with selectable reference impedances) conductance, and diode test. It also has a relative-reference feature that works with all measurement functions.

ACP PRICE

8050A	379.00
8050A01 w/Battery option	427.00



8010A

LOW COST PORTABLE MULTIMETER

- 3 1/2 digits
- Seven functions, including—Conductance, Diode Test
- 0.1% basic dc accuracy
- True RMS ac, from 45 Hz to 50 kHz
- 10A range (8010A only)
- 2 $\frac{1}{2}$ and 20 $\frac{1}{2}$ range (8012A only)
- Optional touch-hold probe (80T-H)
- Extensive overload protection
- Rechargeable-battery model (-01)
- Extended measurements with optional accessories

The 8010A and 8012A are 3 1/2-digit portable/bench DMM's, that offer exceptional performance and features at a low cost. Measurement functions include: Dc volts, True RMS ac volts, dc amps, True RMS ac amps, ohms, conductance, and diode test. The difference is that only the 8010A has a high current (10A) range and only the 8012A features two low-resistance ranges (2 ohms and 20 ohms). Rechargeable-battery versions are available as Models 8010A-01 and 8012A-01. The 8010A and 8012A operate on ac line power only.

Model	ACP PRICE	PRICE
8010A	10 amp True RMS bench DMM	254.00
8010A01	8010A with Ni-Cad Battery option	295.00
8012A	Low-Ohms True RMS bench DMM	329.00
8012A01	8012A with Ni-Cad Battery Option	365.00

KEYBOARDS

KEYBOARDS



UNENCODED 15 KEY PAD

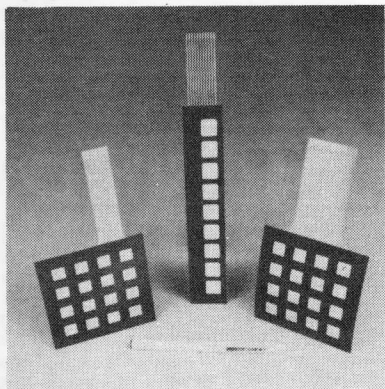
15 Key Keypad
with 1-10 Keys.
Tab, Return, (-),
(,) (0) and (.).

ACP
PRICE
\$9.95
Each



Sheldahl FLEXSWITCH

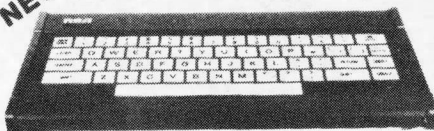
These high-quality membrane keyboards are only .030" thick and come with a self-adhesive backing. They can be cut into smaller sizes with scissors or can be stacked with other Flexswitch panels to create a unique switch array without the high cost of custom tooling. These switches are designed to fit any of the commonly available flexible-circuit connecting systems. Switches are available as white buttons on a black velvet finish or as a clear label design for those who may wish to use their own custom graphics. **Life: One million cycles. Actuation Force: 3-10 ounces. Contact Bounce: Less than 8 milliseconds. Storage Temperature Range: -40°F to +120°F. Electrical Parameters: 50 mA at 28 VDC.**



RCA Micro Computer Products

ASCII ENCODED KEYBOARDS AS LOW AS \$70

NEW



The RCA VP-601 keyboard has a 58 key type-writer format for alphanumeric entry. The VP-611 offers the same typewriter format plus an additional 16 key calculator type keypad.

Both keyboards feature modern flexible membrane key switches with contact rated at greater than 5 million operations, plus two key rollover circuitry.

A finger positioning overlay combined with light positive activation key pressure gives good operator "feel", and an on-board tone generator gives aural key press feedback.

The utilized keyboard surface is spillproof and dustproof. This plus the high noise immunity of CMOS circuitry makes the VP-601 and VP-611 particularly suited for use in hostile environments.

The keyboards operate from a single 5-volt, DC power supply, and the buffered output is TTL compatible.

- RCA VP-601 58 Key 8 Bit Parallel..... **\$70.00**
Shpg Wt 4 lbs.
- RCA VP-611 74 Key 8 Bit Parallel..... **\$95.95**
Shpg Wt 4 lbs.
- RCA VP-606 58 Key
Asynchronous Serial..... **\$109.95**
Shpg Wt 4 lbs.

ACP
SPECIAL
\$29.95

58 KEY UNENCODED KEYBOARD

New 58 Key Terminal Keyboard made by a major manufacturer. unencoded with SPST Keys unattached to any PC board. Solid molded plastic 11" x 4" base.



GEORGE RISK
INDUSTRIES, INC.

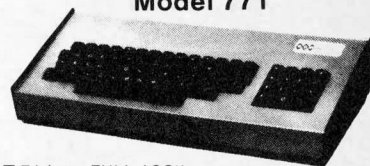
STANDARD KEYBOARDS Model 756



- 56 keys FULL ASCII
- 128 character, lower case
- Versatile interface
- Shift or alpha lock
- Pulse or level strobe
- Pos or Neg logic

756 Kit **\$89.95**
756 Assembled..... **\$102.95**

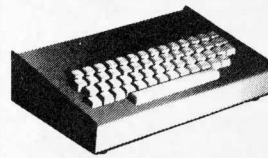
Model 771



- 71 keys FULL ASCII
- Numeric and cursor pad
- Autorepeat on all keys
- Alpha lock mode
- Various power options
- Versatile interface
- Rugged Steel enclosure

771 Assembled..... **\$165.00**

KEYBOARD ENCLOSURES



Steel **\$60.00**
Plastic **\$20.00**

Sheldahl Number	Matrix	Circuit	Color	Net Each, lots of						
				1-50	51-100	101-250	251-500	501-1000	1001-2500	2501-5000
1000-44-SG-BW	4x4	Short-to-ground	Black & White	\$10.00	\$8.95	\$8.05	\$7.10	\$6.35	\$5.80	\$5.35
1000-44-SG-C			Clear	7.10	6.25	5.60	4.95	4.40	4.05	
1000-44-XP-BW		Cross Point	Black & White	10.00	8.95	8.05	7.10	6.35	5.80	5.35
1000-44-XP-C			Clear	7.10	6.25	5.60	4.95	4.40	4.05	3.75
1000-19-SG-BW	1x9	Short-to-ground	Black & White	9.10	8.00	7.15	6.25	5.60	5.15	4.80
1000-19-SG-C			Clear	6.20	5.45	4.85	4.35	3.80	3.50	3.30
1000-19-XP-BW		Cross point	Black & White	9.10	8.00	7.15	6.25	5.60	5.15	4.80
1000-19-XP-C			Clear	6.20	5.45	4.85	4.35	3.80	3.50	3.30

POWER CABLE FOR 8" FLOPPY

Take the aggravation out of wiring your 8" Floppy Disk to your AC and/or DC power connections. Please specify your disk drive. All cables are 12" and 14 awg.

P/N		ACP PRICE
H-PC-S	800/801 Shugart	14.95
H-PCQ	Qume Datatrack 8	14.95
H-PCMT	MPI/TANDON	8.95
H-PCU	Universal Set (8")	17.95

MUFFIN® FAN

The dependable, low cost, largest selling fan for commercial cooling applications.

- 105cfm free air delivery
- 4.68" sq. x 1.50" deep. Wt.-17 oz.

SPECIAL PURCHASE

NEW! \$9.50 ea.



CORCOM FILTER

Popular, CORCOM Filter, 6 amps.

\$4.95

Compatible Line Cord add \$3.50



WALL TRANSFORMERS AC & DC ADAPTERS

(Most with Female Plugs)

P/N	Output (117 V/60Hz)	ACP Price
DC61	6V@100ma	4.50
DC121(DIN)	+12V, -12V@100ma	8.95
DC84	8V@ 400ma	2.95
DC612	6, 9, or 12V@ 300ma	9.95
DC95	9V@ 500ma	4.50
DC123	12V@300 ma	4.50
AC122	12VAC@ 250 ma	4.50
AC125	12VAC@ 500 ma	4.95
AC121	12VAC@ 1 amp	5.95
AC 92	9VAC@ 1.7 amp	4.50

DC-DC-CONVERTERS

300MW	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT
DCP12	3.0-7.0 VDC	12±0.8 VDC	0-25MA
DCN512	3.0-7.0 VDC	-12±0.6 VDC	0-25MA
DCP515	3.0-7.0 VDC	15±0.7 VDC	0-20MA
DCN515	3.0-7.0 VDC	-15±0.7 VDC	0-20MA
DCP528	3.0-7.0 VDC	28±1.5 VDC	0-10MA
DCN528	3.0-7.0 VDC	-28±1.5 VDC	0-10MA

ACP PRICE 6.95 EACH

1.5WATTS	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT
1.5WP512	4.0-7.0 VDC	12.0±0.6 VDC	125MA
1.5WN512	4.0-7.0 VDC	-12.0±0.6VDC	125MA
1.5WP515	4.0-7.0 VDC	15.0±0.7 VDC	100MA
1.5WN515	4.0-7.0 VDC	-15.0±0.7VDC	100MA
1.5WP528	4.0-7.0 VDC	28±1.4 VDC	50MA
1.5WN528	4.0-7.0 VDC	-28.0±1.4VDC	0MA

ACP PRICE 22.95 EACH

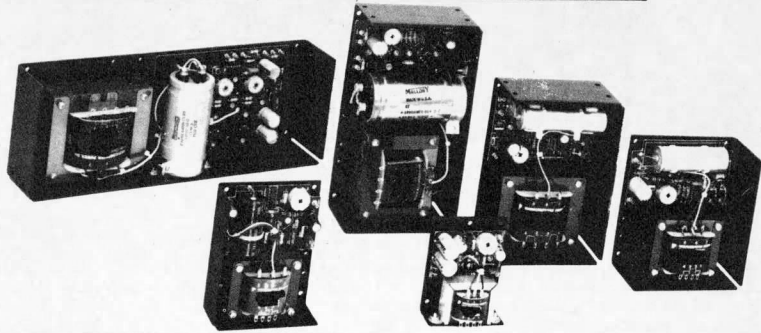


TRANSFORMER

Low voltage transformers ideal for games, clocks, or other electronic appliances.

TRAN-01	117VAC@6.3V	1 amp	3.75 (.5 lbs)
TRAN-02	117VAC@12.6V	1 amp	4.95 (.5 lbs)
TRAN-03	117VAC(CT)@12.6V	500mA	3.75 (.5 lbs)
TRAN-04	117VAC(CT)@18V	1 amp	5.25 (2 lbs)
TRAN-05	117VAC(CT)@12.6V	3 amp	8.50 (2 lbs)
TRAN-06	117VAC@24V	1 amp	5.50 (1 lb)

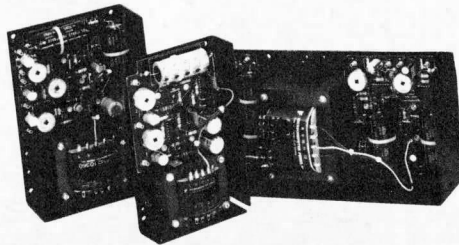
SLIM OPEN FRAME DC SINGLE VOLTAGE



XX= Desired Voltage	DC SINGLE VOLTAGE SUPPLIES			
	Part No.			
	SOLV 15-XX	SOLV 30-XX	SOLV 45-XX	SOLV 60-XX
5V	3A	6A	9A	12A
12V	1.5A	4.0A	6.0A	8.0A
15V	1.2A	3.3A	5.0A	6.6A
24V	.75A	2.0A	3.0A	4.0A
Wgt.	2 lbs	5 lbs	8 lbs	9 lbs
SIZE (approx)	5"x4"x2"	5"x6"x3"	5"x9"x3½"	5"x7"x3½"
ACP PRICE	34.95	59.95	74.95	79.95

To order specify part no. & desired voltage
Example: SOLV 15-5 P/N for 5 volts @ 3 amps
CALL FOR VOLUME REQUIREMENTS

FLOPPY DISK, HARD DISK & MULTIPLE VOLTAGE SUPPLIES



**SPECIAL
SAVINGS**
8"
FLOPPY SUPPLY
\$99.95

- SHUGART SA400, TANDON TM100, etc.
5¼" FLOPPY DISK POWER SUPPLY

P/N	DESCRIPTION	ACP PRICE
FDPS-5F	5V@1A, 12V@1.2A	59.95 (3 lbs)

- SHUGART 801, SIEMENS FDD 100-8, ETC.
8" FLOPPY DISK POWER SUPPLY (FD206)

FDPS-8F	24V@3A, 5V@2.5A, -5V@.5A	99.95 (6 lbs)
---------	--------------------------	---------------

- DUAL FLOPPY 8" POWER SUPPLY

FDPS-8FD	5V@3A, 24V@4.0A, 5V@1.0A	129.00 (12 lbs)
----------	--------------------------	-----------------

- MULTIPLE OUTPUT SUPPLIES-OPEN FRAME

MPS-01	12V@1A-12V@1A	59.95 (5 lbs)
MPS-02	15V@.75A, -15V@.75A	59.95 (5 lbs)
MPS-03	5V@1.2A, 5V@1.2A	74.95 (5 lbs)
MPS-04	5V@1.2A, 15V@0.5A	74.95 (5 lbs)
MPS-05	5V@1.0A, 12V@.25A, -12V@.25A	74.95 (8 lbs)
MPS-06	5V@1.0A, 15V@.25A, -15V@.25A	74.95 (8 lbs)
MPS-07	5V@3.0A, 12V@.5A, -12V@.5A	99.95 (10 lbs)
MPS-08	5V@6A, 12-15V @1.5A, 12-15V @1.5A	124.95 (12 lbs)
MPS-09	5V@12A, 12-15V@ 3A, 12-15V@ 3A	159.95 (16 lbs)

- 8" HARD DISK/FLOPPY DISK/TAPE STREAMER

MPS-10	5V@9A, -5V@1.2A, +24V@3.5A	199.95 (14 lbs)
--------	----------------------------	-----------------

- S-100 MODULAR POWER SUPPLY (REGULATED 310 WATTS)

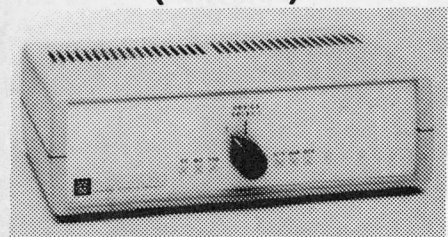
(UL & CSA approved, also LA City Schools approved)
(If you're using Mini-Winchester specify need for +12V@ 5A)

MPS-11	8V@30A, ±16V@, +5V@5A, -5V@1A, +12V@3A	219.00
--------	--	--------

RS-232 ACCESSORIES



RS-232 SELECTO-SWITCH (SERIAL)



Expand available Serial or Parallel computer ports with low cost Data Switches. Maximize use of terminals, printers, plotters, and modems. Eliminate plugging and unplugging cables.

FEATURES **SPECIAL MODEL 24ABC \$169⁰⁰**

- Switches "basic" 8 or 24 lines asynchronous
- **P.C. Board construction**
- No power required
- 5 year limited warranty
- Desk top case; 10" x 7" x 3"
- Optional LED monitoring of six handshaking signals

FOR LED MONITORING ADD 45.00

P/N	DESCRIPTION	LIST	ACP
GRS232-S8-AB	2 Way; 8 lines switched	\$ 99.00	\$ 90.00
GRS232-S8-ABC	3 Way; 8 lines switched	159.00	145.00
GRS232-S8-AD	4 Way; 8 lines switched	198.00	180.00
GRS232-S24-AB	2 Way; 24 lines switched	159.00	145.00
GRS232-S24-ABC	3 Way; 24 lines switched	198.00	169.00
GRS232-S24-AD	4 Way; 24 lines switched	239.00	217.00

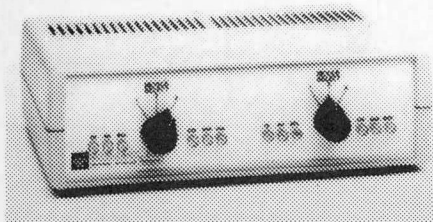
CENTRONICS SELECTO-SWITCH (PARALLEL)

MOST POPULAR PRINTER SWITCH

- Switches ALL 36 lines
- Easy expansion of computer's parallel port

P/N	DESCRIPTION	LIST	ACP
GCENT-P36-AB	Two way	\$225.00	\$205.00
GCENT-P36-ABC	Three Way	251.00	229.00

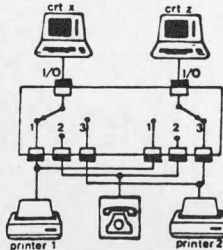
DUAL THREE-WAY SELECTO-SWITCH



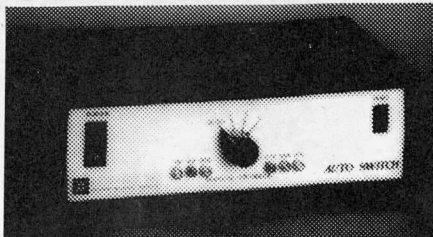
FEATURES

- Switches RS-232 Serial data; 24 lines
- Two three-way switches in one unit
- Optional LED monitoring of six handshaking lines

GRS232-2S24-ABC Dual 3-Way Above with monitoring option **\$349.00**
\$445.00



AUTOMATIC SWITCHING UNIT



The Giltronix ASU enables placing of peripherals in local or remote locations from the computer, and allows selection without leaving the keyboard. Communication with the ASU is via the I/O port. Once a port is selected, the ASU is transparent to data until re-addressed.

FEATURES

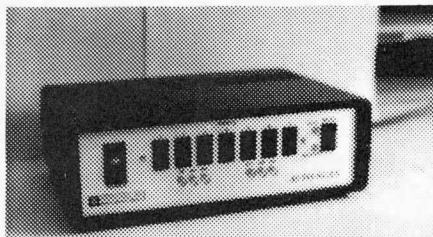
- Keyboard or Computer Selection of peripheral
- Fixed or automatic Baud Rate (110-9600 Baud)
- 3, 5, or 7 port models
- Switches RS-232 pins (TD, RD, RTS, CTS, DTR, DSR, DCD, & TC)
- Asynchronous, ASCII control

P/N	DESCRIPTION	LIST	ACP
ASU-3-00	Three Way Auto-switch	\$449.00	\$409.00
ASU-5-00	Five Way Auto-switch	499.00	455.00
ASU-7-00	Seven Way Auto-switch	549.00	500.00

Options:

FP	(Manual override & display)	50.00	46.00
FPM	(Manual override, display, LEDs)	89.00	82.00

AUTOMATIC SCAN UNIT 5 PORTS \$349.00

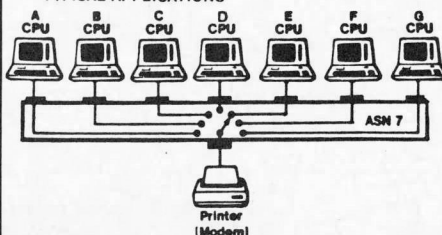


FEATURES

"DCE" CONFIGURED

- Keyboard or Computer controlled connection to shared device
- Switches 8 pins; RS-232 interface
- Manual override & front panel display of selected port

TYPICAL APPLICATIONS



The ASN enables sharing of a common RS-232 device or port between numerous peripherals or computers. The device requiring connection must have capability to control one of the RS-232 "handshaking" lines. At power up, the ASN polls each port for an active (positive) control signal (RTS or DTR). Connection is then made locking out all other devices. When communication is complete and the control signal is dropped, ASN is released and begins scanning for the next connection.

P/N	DESCRIPTION	LIST	ACP
ASN-3-FP	Three port Auto-Scan	\$299.00	\$272.00
ASN-5-FP	Five port Auto-Scan	\$399.00	\$349.00
ASN-7-FP	Seven port Auto-Scan	499.00	455.00



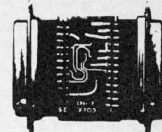
RS-232 IN-LINE TESTER



WITH 7 LED INDICATORS

\$29.95

RS-232 MODEM ADAPTER



MALE TO MALE
MALE TO FEMALE
FEMALE TO FEMALE

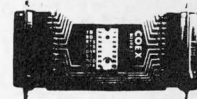
19.95
19.95
19.95

RS-232 "T" ADAPTER

CONNECTS TWO PERIPHERALS TO ONE OUTPUT
\$29.95

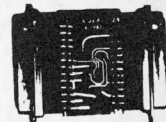
RS-232 CONFIGURATION BLOCK

\$24.95



(Elsewhere at \$29.95 or more)

RS-232 GENDER CHANGER



MALE TO MALE
FEMALE TO FEMALE

19.95
19.95

"D" SUB CONNECTORS



DB 25P		3.50
DB 25S		3.95
DB HOOD	(set of 2)	2.45
DB HARDWRE	(set)	1.00
DB 25 PANEL CUT-OUT COVERS		4/1.00



Wall Plates

EIA & Coaxial Wall Plates brushed stainless with female mounting posts.

P/N	DESCRIPTION	ACP
EIA-01	Coax plate w/female conn.	14.50
EIA-02	Coax plate w/o conn.	6.25
EIA-03	EIA plate w/female conn.	9.95
EIA-04	EIA plate w/o conn.	5.25

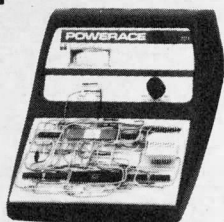
EIA Junction Panels

• 16 connectors, single row (9"x3 1/2")		
EIA-05	w/25 pin female conn.	125.00
EIA-06	Junction panel w/o conn.	55.00
• 32 connectors, double row 19"x7"		
EIA-07	Junction panel w/25 pin female conn.	75.00
EIA-08	Junction panel w/o conn.	75.00

POWER ACCESSORIES



POWERACE®



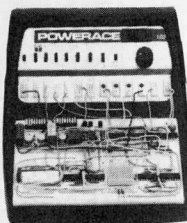
POWERACE 101

POWER SUPPLY is required and adjustable from +5 to +15 VDC at 600 mA. Ripple/noise is ≤ 10 mV at full load. Line and load regulation is $\leq 3\%$.

METER is built in 0-15 VDC. Inputs are accessible at tie-point blocks on control panel which allows monitoring of power supply or circuits. Meter accuracy is 5% of full scale.

ACP PRICE

\$96.95



POWERACE 102

POWER SUPPLY is regulated +5 VDC at 1 amp. Ripple/noise is ≤ 10 mV at full load. Line and load regulation is $\leq 1\%$.

PULSE DETECTION WITH MEMORY is built-in. Will detect positive or negative going pulses as short as 10 nanoseconds. Memory is reset by momentary switch on control panel. THREE LOGIC INDICATORS (LED's) have buffered inputs that required 1 microamp max.

TWO LOGIC SWITCHES, momentary, with debounce circuitry. Both Q and Q outputs can sink 15 mA, and source 5 mA.

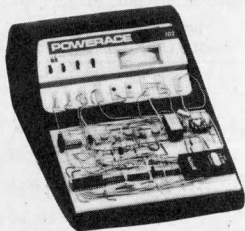
FOUR DATA SWITCHES with logic 1 or logic 0 outputs have unlimited sinking capabilities and can source 10 mA.

CLOCK GENERATOR has the following frequencies available: 1 Hz, 10 Hz, 100 Hz, 1 KHz, 10 KHz and 100 KHz with a 50% duty cycle. C output will sink 15 mA and source 5 mA. C output will sink or source 50 mA.

ONE-SHOT PULSE GENERATOR has output of 7 ms pulse, positive or negative going. Both Q and Q outputs can sink 15 mA and source 400 microamps.

ACP PRICE

\$149.95



POWERACE 103

TRIPLE-OUTPUT POWER SUPPLY has outputs of +5 VDC at 750 mA, +15 VDC at 250 mA, and -15 VDC at 250 mA. Ripple/noise is ≤ 10 mV at full load for all outputs. Line and load regulation is $\leq 1\%$ for all outputs. ± 15 -volt outputs track.

METER is built in 15-0-15VDC. Input is accessible at tie-point blocks on control panel which allows monitoring of power supply or circuits. Meter accuracy is 5% of full scale.

TWO LOGIC INDICATORS (LED's) have buffered inputs that require 1 microamp max.

TWO LOGIC SWITCHES, momentary, with debounce circuitry. Both Q and Q outputs can sink 15 mA and source 5 mA.

TWO DATA SWITCHES with logic 1 and logic 0 outputs have unlimited sinking capabilities and can source 10 mA.

ACP PRICE

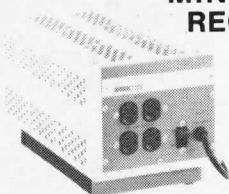
\$149.95

SOLA



MINICOMPUTER REGULATORS

**120VAC 60Hz
Single Phase**



The Sola Micro/Mini Computer Ultra Isolated Regulator provides instantaneous regulation, and ultra isolation from both transverse and common mode noise for any type of load. It also suppresses transients, protects against overloads and serves as a portable dedicated line. It is the ultimate in AC line conditioning equipment.

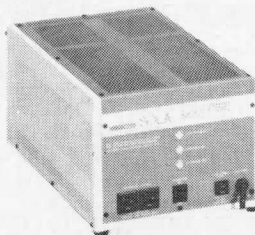
The Sola "Micro/Mini" is particularly applicable in systems involving mini or micro computers, POS equipment, microprocessors, or data terminals—where noise and transients cause errors, or low voltage and short term disruptions can result in loss of memory. The output wave-shape is sinusoidal and contains less than 3% harmonic distortion, making it ideal for any electronic load.

Common mode noise rejection exceeds 120db for the regulator, while transverse noise rejection is better than 60db—true ultra-isolation. Brownout protection is a real bonus feature. Input line voltage variations as great as $\pm 15\%$ are instantaneously regulated to a maximum output deviation of $\pm 3\%$. And, the output will remain within NEMA voltage specifications for input voltages as low as 65% of nominal.

The portable 70 to 2000VA models are designed for office type environments and have a low sound level of 43 db.

P/N	MAX	Dimensions	List	ACP
6313070	70	12x6x6 (10 lbs)	192.50	165.00
6313114	140	12x6x6 (18 lbs)	251.85	215.00
6313125	250	14x8x8 (31 lbs)	300.15	257.00
6313150	500	17x9x9 (47 lbs)	416.30	356.00
6313175	750	17x9x9 (60 lbs)	530.15	453.00
6313210	1000	17x9x9 (75 lbs)	614.10	525.00
6313220	2000	17x11x11 (108 lbs)	1044.20	873.00

SOLA MINI UPS'



True UPS: The Mini UPS is always between the AC line and the critical load.

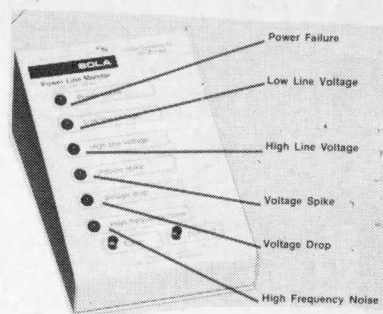
Complete Brownout and Noise Protection: The rectifier charger powers the inverter at all times; line noise and transients are isolated from the load. The AC line never directly powers the load.

Regulated Output: The Mini UPS output voltage is regulated to $\pm 3\%$ when operating from the AC lines as well as when operating from the internal battery.

Battery Backup: If the Mini UPS is operated at less than full load the battery backup time will be extended. If operated at full load and additional backup time is needed, add on battery packs are available.

P/N	Output /TIME	DIMENSIONS	LIST	ACP
400-3000	400/10 min.	12x19x11 (85 lbs)	1587.00	1347.00
400-3001	400/20 min.	12x19x11 (99 lbs)	1617.00	1379.00
750-3000	750/10 min	12x19x11 (120 lbs)	1722.00	1485.00
MINI UPS ADD-ON battery pack (120 lbs)				999.00

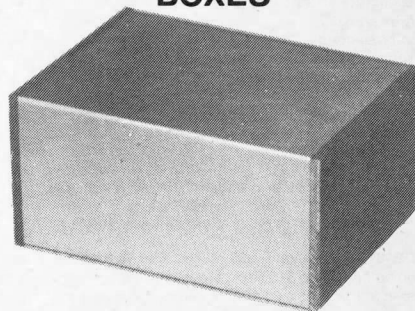
POWER LINE MONITOR



The Sola Power Line Monitor can be used to examine potential sites for electronic equipment or to monitor power already being fed to microcomputers. P.O.S. terminals, medical and test equipment, word processors or communication systems. The unit is completely portable. To install simply plug into any standard power outlet.

P/N	V	Freq.	List	ACP
001-60	120VAC	60Hz (41 lbs)	295.00	275.00

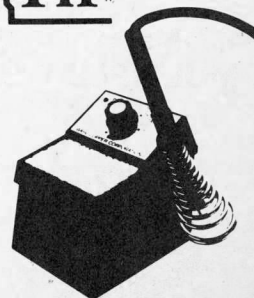
DESIGNER ELECTRONIC BOXES



These boxes are handcrafted for ACP and feature solid wood stained walnut sides. Enclosure is brushed aluminum. Rubber bumpers are included.

P/N	SIZE (H"xD"xL")	PRICE
BBX-01	2"x7"x8"	\$9.50
BBX-02	2"x4"x6"	8.50
BBX-03	2 3/4"x8"x8"	12.50
BBX-04	4"x6"x8"	13.50

ISO-TIP®



TEMPERATURE ADJUSTABLE MICRO SOLDERING STATION

A production line tool for soldering micro circuits. Station is complete with sponge holder, tip-wiping sponge, soldering iron and stand. Equipped with 3-wire grounded cord; iron is less than one-half ounce to minimize fatigue. With proper tip, micro-iron puts heat only where needed. A red safety LED indicates when heat is on. Features a wide range of tip materials and styles as stock items. Supplied with tip #7253 (Wt. 1 lb.).

P/N 7470 **\$46.99**

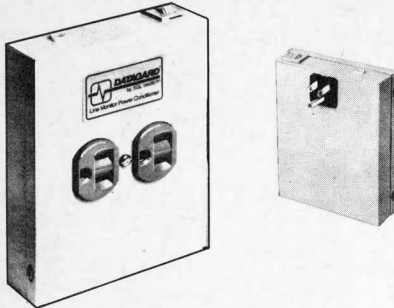
POWER ACCESSORIES

POWER ACCESSORIES

POWER ACCESSORIES



Now that you have invested in a word processing or computer system, you should protect it from voltage transients and power surges.



TRANSIENT & NOISE HANDLING SPECIFICATIONS

Maximum spike energy dissipation: 50 joules one time, 25 joules repeated usage, self restoring

Maximum spike voltage: 7,000 volts

Clamping spike voltage: 225 volts

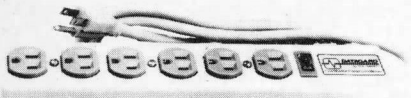
Maximum spike current: 2,000 amps
(For an 8x20 microsecond spike pulse)

Clamping response time: 10 nanoseconds
10x10⁻⁹ sec.)

Noise rejection
Filter network
Frequency range: 1 KHz to 100 MHz
Attenuation: 20 to 40 db (voltage ratio)

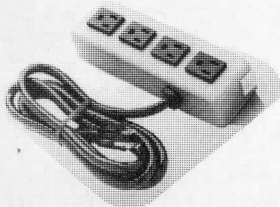
Maximum electrical rating: 1) 15A, 125VAC, 60Hz, 1875 watts continuous duty

DG-315 Series features 3-stage spike filter and (4) stage noise filter. The 315 Series looks the same as 115 Series except for improved specification.



P/N	DESCRIPTION	LIST	ACP
DG-115P	Wall Plug Unit (2 lbs.)	\$ 49.95	\$ 37.95
DG-115S	6 Outlet Strip (3 lbs.)	61.95	47.95
DG-315P	Wall Plug Unit (2 lbs.)	153.95	109.95
DG-315R	6 Outlet Rack (7 lbs.)	193.95	137.95
DG-315S	6 Outlet Strip (3 lbs.)	193.95	137.95

COMPACT GROUP MULTIPLE OUTLET STRIPS



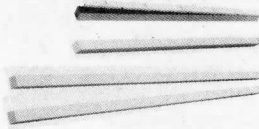
ALL SUPPLIED W/5 AMP CIRCUIT BREAKER

P/N	OUTLETS	LENGTH	SW	ACP
DG-602CB	5	6'	—	\$20.95
DG-603CB	4	6'	—	19.95
DG-605CB	3	6'	(1)	21.95
DG-15CB	7	6'	(1)	28.95
DG-24CB	6	6'	(1)	26.95
DG-32PCB	4	6'	(4)	37.95

DELUXE GROUP MULTIPLE OUTLET STRIPS

P/N	OUTLETS	LENGTH	SW	ACP
DG-25CB	7	6'	(8)	\$47.95
DG-25PCB	7	6'	(8) w/Pilots	59.95

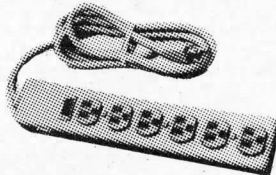
PERMANENT INSTALLATION GROUP



P/N	OUTLETS	LENGTH	OUTLET CENTERS	ACP
DG-4309	9	3'	3 1/2"	\$27.95
(3 lbs.)				
DG-4407	7	4'	7"	28.95
(4 lbs.)				
DG-4413	13	4'	3 1/2"	36.95
(4 lbs.)				
DG-4508	8	5'	7"	29.95
(5 lbs.)				
DG-4610	10	6'	7"	34.95
(6 lbs.)				
DG-4619	19	6'	3 1/2"	49.95
(6 lbs.)				

LOW PROFILE

All UL listed, with 6' line cords and baked-on beige finish.



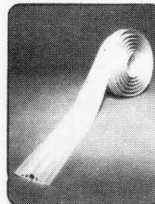
P/N	OUTLETS	SW	CB	ACP
DG-4TME	4	1	1	\$21.95
DG-6TME	6	1	1	26.95

CORD REEL



POWER MASTER UL Approved, 25 ft. 3 wire ACP only \$19⁵⁰

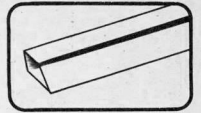
CORDGUARD ELECTRICAL CORD DUCTING



Cord easily fits inside for protection against accidents and hides ugly wirings. All models come with tape.

P/N	LENGTH	COLOR	ACP
DG-6BE	6'	Beige	\$10.50
DG-6BR	6'	Brown	10.50
DG-15BE	15'	Beige	23.95
DG-15BR	15'	Brown	23.95
DG-50BE	50'	Beige	72.95
DG-50BR	50'	Brown	72.95

WALLGARD



Allows you to organize and support your datalines and cables along walls or baseboards. Just peel tape backing.

P/N	LENGTH	ACP
DG-4BE	Pkg. of 4 (4 lbs.)	4' \$14.95

LEMON LIME, etc.

ELECTRONIC PROTECTION DEVICES

AC Power Line Filters with 3 to 6 outlets that fit into any standard three-wire duplex outlet plug. This is the most convenient solution to surge protection for your computer.

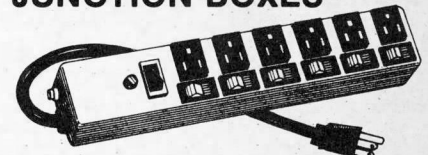
P/N	DESCRIPTION	LIST	ACP
PLUM	3 Outlets Wall Plug	\$ 49.50	\$ 41.95
LEMON	6 Outlets Wall Plug	59.95	51.95
LIME	Lemon w/5' Cord & Switch	89.50	79.95
ORANGE	Lime w/EMI/RFI	139.95	124.95
PEACH	6 Outlets w/EMI/RFI	97.50	87.95

UNINTERRUPTABLE POWER SUPPLY

(FOR UNIVERSAL INSTALLATION)

P/N	DESCRIPTION	LIST	ACP
Grizzly 200	250 Watt U.P.S.	1525.00	1399.00
Grizzly 750	750 Watt U.P.S.	1975.00	1799.00

ANTRONIC Corporation JUNCTION BOXES



Reliable push-to-meet circuit breaker — tough, rugged, dark brown housing. Full 15 amp, 125V AC rating. All have separate on-off switches. The L versions have lighted switches. Shipping weight (3 lbs.).

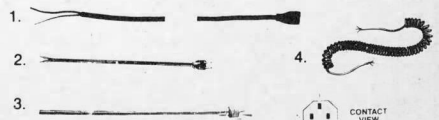
P/N	SWITCHED OUTLETS	LENGTH	ACP
UL40L	4	6'	\$29.95
UL40	4	6'	24.95
UL70L	6	6'	44.95
UL70	6	6'	38.95



SURGE SUPPRESSOR
Surgeonics®
Power Sentry
16 Amps 250 Volts
transient suppression
ACP PRICE \$39.95

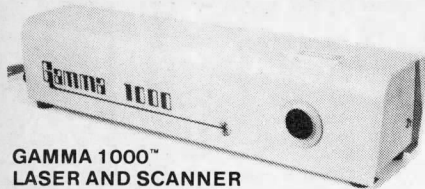
LINE CORDS

- 3 Conductor Specify Length 6', 15 ft. 1.95/2.95 (15 ft.)
- 2 Conductor 6', 12 ft. 1.49/2.25 (12 ft.)
- Beldon Power Cord, Apple II, HP, Standard Plug. Also Corcom compatible plug available (add \$5.95). 4.95 ea.
- Coil Cord 1.49 ea.



LASERWORKS™

LASER PROJECTOR SYSTEMS



GAMMA 1000™ LASER AND SCANNER

The "Gamma 1000 Laser Projector" manipulates laser light into endless geometric patterns that can fill an entire wall with brilliant red light.

ACP Price \$475.00



GAMMA 1000™ PATTERN GENERATOR

Use of the "Gamma 1000 Pattern Generator", with its eight controls allows an infinite selection of patterns that can be modulated by an optional audio input. Patterns may be recorded on tape for easy storage and retrieval.

ACP Price \$235.00

THE LASER COMPUTER

Our latest innovation, "The Laser Computer" provides interface to popular computers via an RS-232 input. Complete shows may be created allowing the Gamma 1000 to be directed in precise placement and selection of laser patterns.

ACP Price \$520.00

Use of the "Laser Computer" is simplified with our software disks for your IBM, Radio Shack or Apple Personal Computer. Each disk contains an editor and program examples you can load and run immediately.

ACP Price \$40.00

The Laser Scanner comes with a 10' control cable. Extension control cables come in 25' lengths including connectors (100' maximum length is recommended).

ACP Price \$35.00

Power Requirements: 117VAC, 60 Hz, .05A
BRH Regulated Class II Lase 1 15VAC

GIVE EYES TO YOUR COMPUTER

DIGI/CAM

THE AFFORDABLE DIGITAL CAMERA



A programmable, microprocessor controlled, solid state digital camera that simply connects to the RS-232 serial port of any computer or terminal. **Digi/Cam** accepts your commands in ASCII code, and gives you a picture with a resolution of 256x128 pixels and up to four gray levels. You can even program it to compare successive pictures and tell you if they are different.

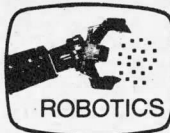
Use **Digi/Cam** for pattern recognition, graphics input, OCR, process automation, robotics, games, size and position monitoring, quality control, or ... ??

ACP PRICE \$395.00

PIXELCASTER INTELLIGENT VISUAL PREPROCESSOR

DIGITAL CONTROLLER PDC 8100

- 256 x 256 x 4 Sample Resolution per Field
- 1024 Sample Points independently positioned anywhere on the screen
- Programmable Sample Output Order
- Z80A CPU Intelligent Image Preprocessor
- Pixel Positions base register addressed
- NMI Switch for program development



VIDEO INTERFACE PVD-8000

- NTSC Video Input - RS170
- Precision Window Digitizer - dual threshold
- 32 Sample Modes - 32 Output Display Modes
- Intelligent Sync Extraction



VIDEO EXPANSION CARD PVE-8800

- 14 MHz Sample Clock - resolves 70 ns
- 4-Bit Video Digitizer - resolves 16 levels
- Dual 8-Bit DACS - set digitizer window
- 4-Way Input Max.

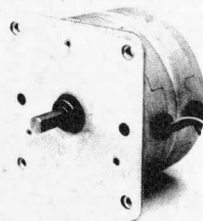


P/N	DESCRIPTION	LIST	ACP
PDC-8100	Digital Controller	\$995.00	\$899.00
PVD-8000	Video Interface	995.00	899.00
PVE-8800	Video Expansion Card	895.00	819.00

Suggest the Advanced Digital Systems S-100 Single Board Computer Card as the CPU for a complete system. Standard S-100 motherboards and card cages are also recommended, and are listed in catalog.

LOGIC STEPPING MOTORS

ACP inventories new surplus stepper motors of various specifications. Please call to check for current inventory position. Our prices range from \$2.95 to \$29.95 ea.



Votrax SC-01A

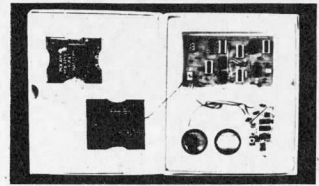


SPEECH SYNTHESIZER

The SC-01A Speech Synthesizer is a completely self-contained solid state device. This single chip phonetically synthesizes continuous speech of unlimited vocabulary. The SC-01A contains 64 different phonemes which are accessed by a 6-bit code. Computer interfaces and text-to-speech algorithms also available for product development.

ACP PRICE \$44.95

EYES FOR ROBOTS



POLAROID'S ULTRASONIC RANGING SYSTEM

Use the science of ULTRASONICS to give your robot vision. Bats use this technique to navigate.

The ultrasonic Ranging System sends out bursts of high frequency sound waves which will reflect from objects in their path. The reflected "Echo" is detected by the electrostatic transducer and distance to the object is automatically computed and displayed. Interface this to your computer!!

Use the science of ULTRASONICS to give your robot vision. Bats use this technique to navigate.

Polaroid's Ultrasonic Ranging System Designer's Kit contains: technical manual, two Polaroid instrument grade electrostatic transducers, a Polaroid ultrasonic circuit board, an experimental demonstration board with LED display, two Polaroid Polapulse batteries, battery holder, and necessary wires and connectors. Complete and ready to use.

ACP PRICE \$150.00

ROBOTICS BOOKLIST

CHALLENGE YOUR IMAGINATION!

R101	<i>How to Build a Computer-Controlled Robot</i> Tod Loofbourrow	\$ 8.60
R102	<i>Android Design: Practical Approaches for Robot Builders</i> Martin Bradley Weinstein	12.95
R103	<i>Handbook of Advanced Robotics</i> Edward L. Safford, Jr.	15.95
R104	<i>The Year of the Robot</i> Wayne Chen	8.95
R105	<i>Robot Intelligence... With Experiments</i> David L. Heisermann	10.95
R106	<i>The Complete Handbook of Robotics</i> Edward L. Safford, Jr.	9.95
R107	<i>How to Build Your Own Working Robot Pet</i> Frank DeCosta	7.95
R108	<i>Artificial Intelligence; Making Machines "Think"</i> Neil Graham	7.95
R109	<i>Projects in Machine Intelligence for Your Home Computer</i> Neil Graham	7.95
R110	<i>Build Your Own Working Robot</i> David L. Heiserman	6.95
R111	<i>How to Build Your Own Self-Programming Robot</i> David L. Heiserman	6.95
R112	<i>Robots, Robots, Robots</i> Harry M. Geduld & Ronald Gottesman	14.95
R113	<i>I, Robot</i> Isaac Asimov	2.50
R114	<i>Tron</i> Brian Daley	2.75
R115	<i>Blade Runner (Do Androids Dream of Electric Sheep?)</i> Philip K. Dick	2.75
R116	<i>Computer Vision</i> Dana Ballard & Christopher Brown	39.95
R117	<i>Machine Perception</i> Ramakant Nevatia	28.00
R118	<i>Handbook of Remote Control & Automation Techniques</i> John Cunningham	8.95



MICROBOT

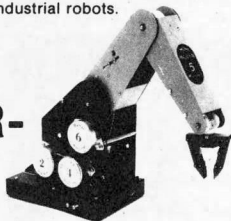
TEACH MOVER



The TeachMover is the only low-cost robotic arm with the features offered by an industrial-level teach control. Microbot's teach control makes programming the TeachMover as simple as operating a hand-held calculator—but permits surprisingly sophisticated routines. As many as 53 positions may be recorded in the unit's memory. With the finished program in memory, it can be verified step-by-step, edited, and run any number of times.

The teach control gives the TeachMover tremendous potential. For example, it can exhibit low-level intelligence by pre-programming the gripper and then sensing its status. The TeachMover can also be programmed to pause for as many as 255 seconds or until it receives an external signal; to move at 10 different speeds; and to perform numerous other functions in the simulation of full-size industrial robots.

MINI-MOVER-5™



The TeachMover's precursor, the MiniMover-5, features the same arm construction but has no teach control. Instead, it interfaces directly to Apple II and TRS-80 computers. Microbot's proprietary ARM-BASIC® commands, written in extended BASIC language, are specifically designed to operate the MiniMover-5 and greatly simplify the mechanics of programming for individuals who are primarily interested in highly complex programs.

P/N	DESCRIPTION	ACP PRICE
TCM	TeachMover Robotic Arm 5 Axis plus Gripper	\$2595.00
MIM-5	MiniMover Robotic Arm 5 Axis plus Gripper requires Computer Software.	1895.00
ACCESSORIES		
AAB-II	Apple II Interface	225.00
ABS-80	Radio Shack TRS-80, Model I, Levell II. Includes ARMBASIC on Cassette	39.95
RS-7A	Power Supply — 105-125V AC	64.95
RRA-1	Reference Manual for MIM-5	16.95
RRA-2	Reference Manual for TeachMover	16.95
CC-1	Carrying Case for Robotic Arm and Power Supply.	69.95

NOVAG™

CHESS ROBOT ADVERSARY

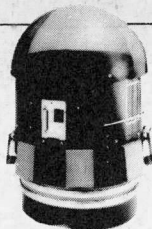


As soon as you make your move (without pressure), the ROBOT's new SENSOR TECHNOLOGY® has registered it. After the MYCHESS® programme has computed the counter move, the ROBOT's arm is set in motion. Like magic it picks up the piece to be moved and sets it down in its new location.

NOVAG-1	ROBOT CHESS	\$1399.00
---------	-------------	-----------

RB — Robot Corporation

THE FIRST MANUFACTURED INTELLIGENT ROBOT FOR THE HOME EXPERIMENTER.



The RB5X robot learns from its experience. With its own microprocessor, memory, programs and tactile sensors, the RB5X detects and responds to objects in its path. Once a successful random response is achieved, the RB5X remembers its actions and repeats the correct response when confronted again with the same situation. These same principles are intended to be applied with other sensors and with more complex programs by the home experimenter using the RB5X as a starter system.

Designed for technically-oriented consumers (engineers, scientists, computer programmers, educators, hobbyists, etc.) the features of the RB5X support experimentation in the field of robotics. Users may increase the "experience" and capability of the robot by installing additional mechanical functions and additional sensors, such as Polaroid's Rangefinder™ sonar sensor.

The robot's standard RS-232 interface makes it compatible with the Apple, TRS-80, IBM PC, and other popular microcomputers to allow for program entry and data transfer. For example, its memory can be transferred to a personal computer to enable the user to study the memory patterns generated and alter the programs of the RB accordingly.

One particular circuit in the RB5X enables it to recharge its batteries automatically. The robot senses when its batteries are low, seeks out its battery charger, fully charges over a period of time, and detaches itself from the charger to resume its adventures.

Additional memory, the Polaroid Rangefinder sonar sensor, and a pulsating light is included.

Options that will be available for the RB5X are: a mechanical arm, a voice synthesizer, digital radio communications between RB5Xs, and application programs. Call for availability.

RB5X Robot	\$1495.00
16K Memory Add On	\$ 125.00

RHINO ROBOTICS, INC.



RHINO XR-1 SYSTEM

Now available for Apple IIe. Requires RASP-1 Software.

P/N	DESCRIPTION	ACP PRICE
ROB-01	Rino® XR-1 Robot w/manual and standard hand	2400.00
ROB-02	Rino® XR-2 Robot (Same as XR-1 but w/deluxe hand)	2850.00
ROB-03	Linear Slide Base	650.00
ROB-04	Rotary Indexing Carousel	300.00
ROB-05	Chain Belt Conveyor	600.00
ROB-06	Deluxe Hand	600.00
ROB-07	F-1.5 Finger Attachment	100.00
ROB-08	F-2 Finger Attachment	100.00
ROB-09	F-3 Triple Finger Attachment	150.00
ROB-10	F-M Magnetic Pickup	75.00
ROB-11	F-CS Clamshell Attachment	100.00
ROB-12	Vacuum Fingers	175.00
ROB-13	F-SV Shovel Attachment	65.00
ROB-14	F-MD Moto-Dreme® Holder	150.00
ROB-15	Heavy-Duty Power Supply (Exchange for Standard Power Supply)	500.00
ROB-16	Experimental Motor Kit (small or large)	110.00
ROB-17	X-Y Table Kit	1400.00
ROB-18	8-Axis Controller (without Power Supply)	1000.00
ROB-19	Standard Hand	300.00
ROB-20	Standard Power Supply with 8-Axis Controller	1250.00
ROB-21	Heavy Duty Power Supply with 8-Axis Controller	1500.00
ROB-22	XR-1 Robot without Power Supply and 8-Axis Controller	1400.00
ROB-23	Robotics, The Manual for XR-1™	20.00
ROB-23	RASP-1 Software for IIe	250.00



B.O.B.

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 that 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 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 a 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.

(Available Sept. '83)

TOPO

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.

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.

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."

TOPO	\$ 995.00
TOPO with Digital Sound	1195.00

The computer art of DAVID EM is now available through ADVANCED COMPUTER PRODUCTS.

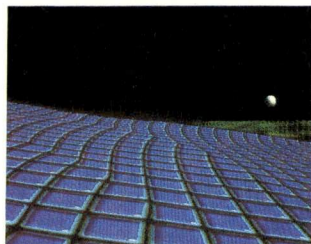
DAVID EM's popular computer art has been internationally acclaimed by museum curators, cinematographers, and scientists for its intricacy of composition, balance, and form.

Featured on the covers and pages of such diverse publications as NEWSWEEK, POPULAR PHOTOGRAPHY, SCIENCE DIGEST, BYTE, and The ENCYCLOPEDIA BRITANNICA, it is celebrated for its sophisticated use of computer graphics technology. Exemplifying the intersection of art and science, David Em works with state of the art programs written by Dr. Jim Blinn of NASA's Jet Propulsion Laboratories.

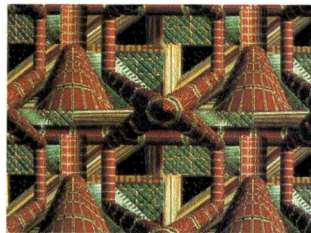
A representative collection of David Em's most popular images are now available as high quality posters printed on presses personally supervised by the artist.



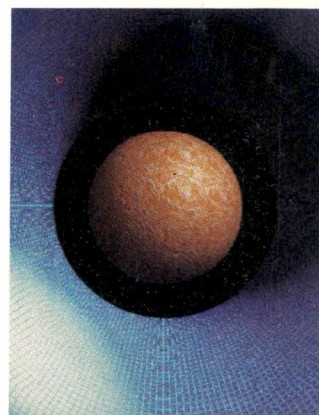
Transjovian Pipeline



Approach



Escher



Where 2



Fine Art Posters \$9.95 each
Add \$1.95 shipping & handling

Signed and numbered
LIMITED EDITIONS
are also available

Approx. Size 20" x 26"

P.O. Box 17329, Irvine, CA 92713
(800) 854-8230 Order Desk
(714) 558-8813 Inside CA

THE BLUE COLLAR COMPUTER IS LOOKING FOR WORK.

Hard work. Economy. Reliability. Those are the working-class virtues of the Rockwell International family of microcomputer modules. Our RM 65, AIM 65 and AIM 65/40 form compatible, cost-effective solutions for process control.

The Blue Collar Computer's roots are in a hard-working chip. Its 6502 processor remains the world's most popular CPU* year after year.

There's a Blue Collar Computer for every job. You can start with one of the three computers, each on a single board, then add functions in a Eurocard format. For savings and convenience, there are two pre-packaged AIM microcomputer modules with on-board keyboard, printer and display. Rockwell also offers modular intelligent peripherals, including printers and displays.

The Blue Collar Computer arrives ready for work. You can program your systems using BASIC, Instant Pascal, assembly language or FORTH.** All are available on easy-to-install ROMs. BASIC and FORTH compilers are available on disk.

In any configuration, the Blue Collar Computer is easy to buy and easy to use. The modular design and pre-packaged AIMs allow you to add or subtract functions quickly and economically. All modules you receive are

burned-in, fully tested and ready to use. If you're designing an OEM product that could use an economical, hardworking Blue Collar Computer, contact

Advanced Computer Products,
SANTA ANA,
1310 East Edinger,
Santa Ana, CA 92705,
(714) 558-8813;
SAN JOSE,
542 West Trimble,
San Jose, CA 95131,
(408) 946-7010.

* Source: Dataquest
** Trademark FORTH, Inc.
AIM 65 is a registered Trademark of Rockwell International Corp.



Rockwell International

...where science gets down to business

**ADVANCED
COMPUTER
PRODUCTS**
P.O. BOX 17329, IRVINE, CA 92713-7329

BULK RATE
U.S. POSTAGE
PAID
ADVANCED COMPUTER
PRODUCTS, INC.