# SoftBox adds CP/M capability to Commodore micros

#### **By Ned Heite**

CP/M is an artifact from the early days of microcomputing; it became a de facto operating-system standard by default. While newer, more advanced operating systems are on the market, CP/M is the industry's 300-pound gorilla. Love it or hate it, it sleeps wherever it wants. With near-simultaneous introduction of two add-on units for Commodore machines, the last major non-CP/M microcomputer now accepts this "standard" software environment.

SoftBox, from Small Systems Engineering (SSE), is a 60K, Z80 microcomputer that uses a Commodore PET or CBM as a terminal and communicates with Commodore peripherals on the IEEE-488 bus. It runs CP/M 2.2. On 8050 drives, it can store 496K bytes per diskette, with 64 directory entries.

Although SoftBox allows you to run CP/M on existing Commodore machines, you won't need it for the recently announced P, B and BX models. These have Z80 coprocessors and can run both Commodore BASIC 4.0 and CP/M without help. Whether the different implementations of CP/M will be compatible remains to be seen.

FEATURES: SoftBox is an external unit, in a metal cabinet about the size of a modem, color-matched to Commodore machines

A standard PET-IEEE cable connects the box to the bus. There is also a serial port for RS-232 devices and a socket for Corvus hard disks. The only control on the box is the on-off switch.

To use CP/M, SoftBox must capture and reconfigure the Commodore computer, and the task couldn't be simpler. You turn on the units and load a CP/M diskette with a standard Commodore shifted run/stop quick-load command. When the cursor returns, the Commodore computer is a terminal, and SoftBox is in control. Now you can read the CP/M directory from the same diskette.

CP/M has six built-in commands. Four have direct Commodore equivalents:

DIR	Directory	
SAVE	Print <sup>#</sup> or Dsave	
REN	Rename	
ERA	Scratch	

For two CP/M commands, there is no PET syntax equivalent: USER makes certain disk files available to different 'users" of the system; TYPE displays an ASCII text file on the screen-TYPE is something like WordPro's "recall" or the PET "list

Separate command files on the CP/M disk perform tasks, some of See SoftBox, page 60

MARKETI

HARD DISK



KENTFIELD, CA 94904



### SoftBox

continued from preceding page which are not available on PET:

• STAT: Displays directory, space remaining on the disk and logical-device assignments.

• PIP: Copies files; this command works like the PET "copy" routine, but it is a separate program that you must call from disk.

- ED: Text editor program.
- ASM: 8080 assembler program.
- LOAD: Hex format loader
- DUMP: Displays a file in hexadecimal format.
- DDT: Debugging program for the
- assembler. • SUBMIT: Allows users to chain

commands together for execution.

• FORMAT: Like the "header" or "new" disk commands in the PET, it formats a new disk.

 NEWSYS: Allows users to change and copy the CP/M system to a new disk that will receive an application program

• MEMTEST: This command is much like the PET disk-utility memory test, but it checks the SoftBox memory.

• SET: Shift-locks the screen to uppercase or lowercase, or to graphics mode-also can assign device number on the IEEE-488 hus

- XFER: Transfers files written for PET
- systems to be used on CP/M. BACKUP: Similiar to PET backup.
- TIME: Reads or sets the PET clock

• COLD: Returns the PET to cold start.

 READ: Transfers files via the SoftBox RS-232 port.

Where PET and CP/M commands can be compared directly, PET syntax is simpler and faster. CP/M has a long backlog of available software, however.

### Features of Unit Tested

60K RAM

CBM disk-system compatibility

- Corvus hard-disk compatibility
- CP/M

Price: \$895

ROCESSING

TEN

#### Small Systems

**Engineering Corporation** 222B View Street Mountain View, CA 94041



## shows you...

- How to professionally prepare news releases and articles so they will be accepted by the media.
- · How to develop your mailing
- · How to work with the news
- · How to measure the effectiveness of your publicity
- Dozens of ways to secure additional publicity at nominal cost.
- Over 600 outlets for free publicity and reference to thousands of additional sources.

In this comprehensive publicity guide Harry Barber eliminates the mystique of "free publicity"-shows you in detailed, step-by-step procedures, how and where to all the free publicity you'll ever want for yourself or your organization. How To Steal A Million \$ In Free Publicity is the ideal reference guide for business owners, corporate executives, political groups, non-profit organizations, and individuals in all walks of life.

#### About the author-

Nationally prominent advertising and public relations executive, Harry Barber, gives it to you straight in his latest book. The author has developed hundreds of publicity campaigns in conjunction with screen and television personalities, US Astronauts, USAC Racing, major corporations, and private individuals.

## Only \$14.95 postpaid SATISFACTION GUARANTEED!

Success Sellers Publishers & Booksellers P.O. Box 16801 Irvine, CA 92713

Please rush me a copy of Harry Barber's book, HOW TO STEAL A MILLION S IN FREE PUBLICITY. 1 enclose \$14.95.

Address		0.000
City		
State	Zip	

# **STONEWARE'S AMAZING NEW** GRAPHICS PROCESSING SYSTEM GRAPHICS

features: Grid Maker for work-ing with scale and proportion Colors can be mixed and used to color lines, objects and back-grounds **Two Zoom** powers

for greater detail resolution = 2-D Rotation to full 360° Duplication on screen, to disk, and from disk

Text Capabilities in upper case A-Z. 0-9, and all characters on the Apple keyboard - Modify or Erase

a portion of an image without having to



start from the beginning Enlarge or Reduce images Change Proportions vertically and/or horizontally
Print Overlays separately

and in different colors Accesses 16K RAM card

Compatible with other Apple HiRes graphics **■** Uses Apple compatible game paddles and joystick **■** Speaks directly to the Apple Silentype printer and accommodates graphic

dump programs for other printers • Professional Version is also compatible with Apple Graphics Tablet, Symtec

Light Pen, Houston Instruments HiPlot DMP 3, 4, 6 and 7, HP7470A Plotter, Strobe 100 Plotter, IDS 460 and 560 Graphics Printers, Epson MX80

Printer with Graphtrix.

Only \$179. for Professional Version and \$69. for Standard Version.

Requires 48K Apple II Plus, one or two Apple Dish drives, B&W or color screen, game paddles or joystick. Optional: 16K RAM Card or Language Card, Apple Silentype or other B&W or color printer. GPS is available through leading software distributors and Apple Dealers. Or send check, money order, Visa or MasterCard finclude expiration date) to Stoneware Incorporated. California residents add 6% sales tax Frg. Trafemarks: Apple Apple Computer Inc., Some, SYMTEC, Inc., HP34: Houson Instruments, Dir. of Barsch & Londs. HP34714, Hewiter Parkard Co., Storbe 100, Storbe, Inc., 105, 606 & 566; Instrum 20, Storber, Inc., Epont M206 Epont Anto

# Logo: Language of the 80's

Apple Logo and Logo for the Apple Il introduce you to a dynamic new computer language that not only enables educators to make full and innovative use of the teaching potential of modern computers but also offers programmers an easy-to-use system of considerable power.

Readers of this book will see that the designers' vision of Logo as a virtually unlimited educational tool has now become a reality. Logo enables even young children to use the computer in rewarding, self-directed projects, while at the same time providing sophisticated users with a powerful and expressive general programming system. This book presents the reader with a complete guide to the exciting applications of this unique procedural language.

The author introduces programming techniques through Turtle Geometry—a series of fascinating exercises involving both Logo programming and geometric concepts. Later chapters illustrate more advanced projects that utilize Logo's sophisticated list-processing capabili-ties; these include the conversational DOCTOR program with its simulated psychotherapist and an INSTANT program with which parents and teachers can create a programming environment for preschool children. The book also contains reference material of enduring

value to sophisticated users. Get in on the ground floor of the burgeoning Logo movement with this comprehensive, detailed guide to the up and-coming computer language of the Eighties!

This book is published in two versions: This book is published in two versions: Apple Logo is for users of Apple LogoTM software (distributed by Apple Computer Company) and contains an appendix for users of TI LogoTM. Logo for the Apple II is specifically for users of Logo software developed at MIT for the Apple II computer (distributed by Krell Software and Terrapin, Inc.). Logo for the Apple II also contains ap-pendices that enable users of Apple LogoTM and TI LogoTM to carry out the projects in the book. Be sure to specify Apple Logo or Logo for the Apple II when ordering!



by Harold Abelson Apple Logo \$14.95

240 pages softcover ar illustrated

Logo for the Apple II \$14.95 240 pages, softcover, illustrated

Add \$1.00 per book to cover postage and hand

### ORDER TOLL FREE 800-258-5420

**BYTE Books** 70 Main St. Peterborough, N.H. 03458

In spite of its shortcomings, its repertoire makes it attractive as a second software source.

No Commodore computer features survive the conversion; the PET is now a copy of a Lear Seigler ADM3A, Tele-Video 912C or Hazeltine 1500. The reverse-video key is now control, and run/stop is now escape. All keys have a repeat function. Drives 0 and 1 are now named A and B.

While SoftBox won't run PET BASIC, it has a utility to convert PET programs to Microsoft Extended BASIC (ASCII) format, or to convert Commodore sequential files to CP/M format. Softbox can peek and poke PET memory locations. Commodore DOS features contained in the drives' ROM memories remain, but under SoftBox control. SoftBox supports multiple Corvus hard disks, with the Mirror videocassette backup.

**PERFORMANCE:** My unit arrived damaged. The board is attached to its cabinet by four press-in plastic mounting feet, which succumbed to shipping abuse. The board apparently crossed the continent rattling around inside the case, but it worked when I plugged it in. I therefore decided that further abuse testing would be cruel and unusual.

To test endurance, I left the unit plugged in all day for a week. The transformer became almost too hot to touch, but everything worked. Since SoftBox is on the bus even when it's not active, it can send signals; when you turn on the switch, the printer executes a carriage return without a line feed.

EASE OF USE: The system is simple to plug in and run. The power switch is on the back—an inconvenience Commodore users have come to expect on peripherals.

Generically CP/M is not as easy or as fast as Commodore disk BASIC. Commands that are ROM-resident in Commodore 4.0 BASIC, are disk-command files in CP/M, and must be called from the disk. Moreover, the whole system is in RAM, which makes it difficult to compare the capacity of a 60K SoftBox against a 32K CBM computer with intelligent peripherals, a ROM operating system and a resident language.

Without a language loaded, the 60K SoftBox has about 54K bytes free of

RAM, some of which a language must consume; I did not have a language for review. Since conventional ASCII programs are larger than CBM BASIC programs, the net work-space probably is about the same on a SoftBox as on a 32K PET.

DOCUMENTATION: SoftBox comes with a 72-page indexed loose-leaf manual. Generally, the manual is well organized and clearly written, which is a welcome novelty. However, it is not designed to be an introduction to CP/M for PET owners.

In a section "for CP/M users," the authors state, correctly, "You need not be familiar with the PET or PET BASIC to use the SoftBox." Unfortunately, the manual has no section "for PET See SoftBox, page 62



September 6, 1982



### SoftBox

continued from preceding page users," who will, after all, be the primary market for a PET add-on box.

SERVICEABILITY: Four screws secure the top cover of the SoftBox; once it is removed, the entire component side is revealed. I needed to open the case to check shipping damage, which some sort of temporary tie-down device could have avoided. In case your unit should suffer, it has a 90-day warranty. The manual makes no mention of servicing arrangements, although you can return the unit to the distributor—and gives no schematics.

The board's circuits are all in sockets, for easy replacement if necessary. I had to realign the power-on indicator LED, which did not line up to the little hole in the box.

Software support is a different issue. On page 3 of the manual, the authors wax eloquent about the vast libraries of languages and applications available for CP/M, but nowhere do they tell you how to specify the format to order. The product's advertising mentions a software catalog, which was not included with my copy of the manual. I learned subsequently that the catalog does not yet exist.

To use CP/M software, you must either buy it from SSE or buy it on 8-inch single-density disks and send it to SSE for conversion—at a \$25 charge. Programs supplied by other vendors on standard mini-floppies will not run on the SoftBox. SETUP: I detected no setup problems. You just find a plug, anywhere among the PET cables, and plug it in. SUMMARY: As it comes, SoftBox is a complete CP/M computer, but no applications or languages (except assembler) are included.

Veteran PET users will be taken aback by the complexity of CP/M options. Because the system is portable and modular, it expects us to make configuration decisions that we customarily have left to Commodore.

The Soft Box is a well-designed machine that fills a perceived gap in the Commodore product line. Its designers and authors appear to have touched all bases. I suspect most users will buy it as an accessory not as a primary programming medium.

### IN STOCK! IMMEDIATE DELIVERY! **FACTORY FRESH!** QUME DT-8 \$475 QTY-1 TANDON TM-100 -1 SSDD 48TPI \$225 QTY 1 TM-100 -2 DSDD 48TPI \$315 QTY 1 51/4" DISK DRIVES TM-100 -4 DSDD 96TPI \$395 QTY 1 FOR IBM PERSONAL, SPECIAL! ZENITH/HEATH, NORTHSTAR DYSAN 204/2D DISKETTES 51/4" DSDD 96TPI \$59.50 BOX 4444 Scotts Valley Dr. Scotts Valley, CA 95066 COD, MC. VISA, CASHIER'S CHECK SHIPPING CHARGES ADDED (408) 438-5454 MEDIA DISTRIBUTING pdpdpdpdpdpdpdpdpdpdpdpdpdpdpdpdpdp P The Language for Authors of Serious Business Programs Complete - SBL supports "begin-end", "case-of" "while-do", and other conditional statements. SBL supports basic-like statements. SBL Easier has built-in functions and statements to make out-Faster - SBL supports direct disk access and DMA control. SBL also compiles to a true native maput routines faster and easier. Speeds System Development - SBL has a simple chine code. one step compiler-linker operation. **Options** - THESE OPTIONAL time saving routines available in source code. Powerful - SBL is more powerful than M-BASIC™ 1. B-tree subroutines 2. Universal console and photo drivers or C-BASICTMbecause it supports byte, word, fixed, BCD, single and double precision floating point as well as strings. MP/M time and date functions Formatted input functions 5. MP/M 2 file and record lock/unlock SBL Will Compile And Run On Any CP/M Hardware STRUCTURED BUSINESS LANGUAGE Business Systems, Inc. Distributed By: DP Business Systems Inc. 111 El Monte Way Concord, California 94519 Telephone (415) 680-0215 Dealer inquiries invited. nd C-BASIC a stered Trademarks of Digital Research of MICROSOFT Inc. SBL is a Trademarks of MICROSOFT Inc. SBL is a Trade pdpdpdpdpdpdpdpdpdpdpdpdpdpdpdpdpd

# **KEY MICRO**

offers you

The Best of Both Worlds

## MP/M 8-16

Compupro's Proprietary Implementation of MP/M 86. MP/M 8-16 is a Multi-User operating system that allows you to run 8 and 16 bit software at the same time. Hardware & Software Available for Immediate Delivery.

Software Products from KEY

RM/COBOL Ansi 74 Cobol for CP/M

## COGEN

R/M Cobol Program Generator Demo Disk Available

### EASYKEY

Wordstar Made Easy for Televideo 950 & 800 series.



MP/M & MP/M 86 are trademarks of Digital Research Compupio is a trademark of Godbout Electronics R/M COBOL is a trademark of Ryan-Mactarland Corp. COGEN is a trademark of Noropro International Verdstar is a trademark of Micropro International Televideo is a trademark of Televideo Systems Inc.