

PET ATARI APPLE SYM

EASTERN HOUSE SOFTWARE

3239 Linda Drive

Winston-Salem, N.C. 27106

INTRODUCING PET RABBIT OR CASSETTE ROM

The PET RABBIT contains high-speed cassette routines, auto-repeat key feature, memory test, decimal to hex, hex to decimal, and other features. Coexists with the BASIC PROGRAMMERS TOOLKIT. Works with 2.0 ROMS (New) and new style cassette deck.

Cassette versions configured for \$1800, \$3000, \$3800, \$7000, and \$7800.

Cassette and manual — \$29.95

ROM version configured to plug into P.C. board at SA000.

ROM and manual — \$49.95

FREE ROM RABBIT with purchase of 8K PET and tape deck.

SPECIAL — ROM RABBIT and cassette deck — only \$134.95

MACRO ASSEMBLER AND TEXT EDITOR

Macro and conditional assembly, string search and replace, 10 char./label, AUTO line numbering, MOVE, COPY, DELETE, NUMBER, and much more. 20+ commands, and 20+ pseudo ops.

PET cassette version (ASSM/TED) — \$49.95

PET disk version (MAE) — \$169.95

ATARI cassette version with machine language monitor — \$53.95

FREE ASSM/TED and ROM RABBIT with purchase of 32K PET and cassette deck.

FREE MAE with purchase of 32K PET and disk drive.

TINY-C FOR PET

An adaptation of the TINY-C interpreter sold by Tiny-C Assoc. Useful for learning a modern structured programming language. Diskette — \$45.00, Owners manual — \$40.00

FREE MAE and TINY-C with purchase of 32K PET, disk drive, and printer.

COMPILERS

Graphics Drawing Compiler for PET and SYM. Works with Macro ASSM/TED. The GDC is composed of a number of macros which emulate a high-level graphics drawing language. In addition to the macros, GDC provides some very useful enhancements to the ASSM/TED. Manual and Cassette — \$29.95

Music and Sound Composer for PET. Works with Macro ASSM/TED. The MSC is composed of a number of macros which emulate a high-level computer music language. In addition to the macros, MSC provides some very useful enhancements to the ASSM/TED. Manual and Cassette — \$29.95

I/O KIT

PET I/O Experimenters Kit. Allows easy access to IEEE or user port for the construction of external circuits. Kit — \$39.95

ORDERING TERMS

Send check or money order in U.S. dollars. Add 2% for postage for CBM orders. Overseas software orders add \$5.00. All software mailed free in USA and Canada. Purchase orders acceptable.

EHS IS NOW A COMMODORE DEALER

EHS offers a number of software products for PET, ATARI, APPLE, and other 6502 computers. Now we sell CBM hardware. If you're in the market for PET products, be sure to look for our FREE software offers.

CBM	PRODUCT DESCRIPTION	PRICE
2001-8KN	8K RAM-Graphics Keyboard	\$ 795.00
2001-32KN	32K RAM-Graphics Keyboard	\$1295.00
2001-32KB	32K RAM-Business Keyboard	\$1295.00
8032	32K RAM-30 Col -4 0 O/S	\$1795.00
2023	Friction Feed Printer	\$ 695.00
2022	Tractor Feed Printer	\$ 795.00
2040	Dual Floppy-343K-DOS 1.0	\$1295.00
2050	Dual Floppy-343K-DOS 2.0	\$1295.00
8050	Dual Floppy-974K-DOS 2.0	\$1695.00
C2N Cassette	External Cassette Drive	\$ 95.00
CBM to IEEE	CBM to 1st IEEE Peripheral	\$ 39.95
IEEE to IEEE	CBM to 2nd IEEE Peripheral	\$ 49.95
8010	IEEE 300 Baud Modem	\$ 395.00
2.0 DOS	DOS Upgrade for 2040	\$ 50.00
4.0 O/S	O/S Upgrade for 40 Column	\$ 100.00

EDUCATIONAL DISCOUNTS BUY 2 — GET 1 FREE

TRAP 65

TRAP 65 prevents the 6502 from executing unimplemented instructions. Have you ever had your system to crash on a bad opcode? This is a real machine language debugging tool and time saver. Also useful for teaching trap vectoring and extension of instruction set in schools. 3 1/2 x 4 3/4 printed circuit board which plugs into 6502 socket of any PET, APPLE, SYM. Only \$149.95

ATARI M.L. MONITOR

Load and save binary data on cassette. Display and change 6502 registers. Will coexist with BASIC. Monitor uses the screen editing capabilities of the ATARI to allow easy use. Cassette and manual — \$59.95 (specify memory size).

ATARI MEMORY TEST

When you purchase a new ATARI or add on new RAM modules, you need to be sure that the memory is working properly. (Remember, you only have a short guarantee on your memory!) Cassette and manual — \$59.95

APPLE PRODUCTS

Macro ASSM/TED — includes manual, on cassette — \$49.95, on disk — \$55.95

Apple MAE — similar to PET MAE. A powerful assembly development system on diskette. (Requires license agreement) — \$169.95

PIG PEN — 100% M.L. word processor for use with Apple ASSM/TED. Fast text formatting, vertical and horizontal margins, right and left justification, centering, titles, foots, shapes, etc. Manual and source included, on cassette — \$40.00, on diskette — \$45.00

Apple Mail List System. Provides sorting on zip code or last name. Approximately 1000 names/diskette. Manual and Diskette — \$34.95

EASTERN HOUSE SOFTWARE

3239 Linda Drive, Winston-Salem, N.C. 27106
Ph. Orders — 9-4 EST (919) 924-2889 or 748-8446
Send SASE for free catalog

EHS SOFTWARE

Full Line Product Descriptions of all
our Software and Hardware for
*** PET, APPLE, ATARI, SYM, KIM ***

PRODUCTS IN STOCK

<u>Product</u>	<u>For</u>	<u>Type</u>	<u>Page</u>
PET Rabbit (ROM or Cassette)	PET	Software	1
Macro ASSM/TED	PET,APPLE,SYM,KIM	Software	2
TRAP 65	any 6502 Computer	Assembled Hardware	11
Graphics Drawings Compiler	PET,SYM	Software	5
Music and Sound Composer	PET	Software	6
Experimenters I/O Kit	PET	Hardware Kit	11
Disk Macro ASSM/TED (MAE)	PET	Software	7
Disk Macro ASSM/TED (MAE)	APPLE	Software	10
Tiny-C Interpreter	PET	Software	4
Memory Test	ATARI	Software	Front
Machine Language Monitor	ATARI	Software	Front
Word Processor (Pis Pen)	APPLE	Software	12
Mail List System	APPLE	Software	10

We also sell COMMODORE hardware and software products.

ORDERING INFORMATION:

Send check or money order in US dollars.
All software shipped postpaid in U.S. and Canada.
For foreign air mail, enclose additional \$5.00.
CBM equipment shipments, add 2% shipping and handling.

NOTE:

EHS is a software house that is run and operated by J.R. Hall and C.W. Moser. We are in the process of accumulating a collection of quality products for sell to the 6502 microcomputer market. If you have quality software that you have developed and would like to have marketed on a Royalty basis, please write describing your product.

EASTERN HOUSE SOFTWARE

3239 Linda Dr.

Winston-Salem, N.C. 27106

(919) 924-2889 or 748-8446



THE PET RABBIT

(See Review in Compute.)



WOULD YOU AND YOUR PET RATHER BE A SLOW TORTISE OR A FAST RABBIT?

◊◊ Now in ROM or on Cassette ◊◊

Yes, if you have an 8K, 16K, or 32K New ROM PET with the Commodore external tape deck (like the one currently being sold for \$95), you can LOAD and SAVE on tape FASTER.....MUCH FASTER. For example, the RABBIT will LOAD and SAVE an 8K program in 38 seconds. Compare that with the "turtle" PET which takes 2 minutes 44 seconds!

BUT, even if you do not own that tape deck you can still use the following additional features:

- 1) AUTO REPEAT of any key held down for more than 1/2 second. This provides easy and convenient cursor movement and multiple character input.
- 2) RAM Memory Test. Convert decimal # to hex and vice versa, and toggle character set from graphics to upper/lower case.

12 RABBIT COMMANDS

SS - Save with short leader	D - Convert decimal # to hex #
SL - Save with long leader	H - Convert hex # to decimal #
L - Load a program	Z - Toggle character set
V - Verify a program	K - Kill the Rabbit
E - Load and then run	* - Go to monitor
T - RAM Memory Test	G - Go to Machine Language Program

Example: L "STAR TREK",2 or T 1,400,1FFF

Since the RABBIT is an extension of the operating system, the normal PET load, save, and verify commands can still be used. Also, the RABBIT can be used with the BASIC PROGRAMMERS TOOLKIT to enhance its commands.

PET RABBIT is 2K of machine code located at \$1800 for 8K PETS, \$3000 or \$3800 for 16K PETS, or \$7000 or \$7800 for 32K PETS. Specify location desired with order.

NOTE: Rabbit works with the new style tape decks. The way to determine if Rabbit will work with your deck is to examine the electronics. If the circuitry contains 3 IC's, it will work. If you recently purchased your tape deck, it is highly likely that it will work.

ROM version occupies socket I4 (Address \$A000)
MANUAL AND ROM = \$49.95
MANUAL AND CASSETTE = \$29.95

6502 MACRO ASSEMBLER AND TEXT EDITOR

FOR PET, APPLE, ATARI, SYM, KIM
\$49.95

See Review in Compute, Call Apple, Pet Gazette, and The Paper!

GENERAL

- Versions currently available for PET, APPLE II, ATARI, and SYM on respective compatible tapes. A KIM version is provided in a special high-speed cassette recording format (high-speed load/save routines included).
- Written entirely in Machine Language - Not in Basic like some we know of. Thus you get very fast and accurate assemblies.
- 36 Error Codes, 26 Commands, 22 Pseudo Ops.
- Macro and Conditional Assembly Capability.
- Apple II version works with Apple II or Plus, DOS or Cassette-based systems.
- Occupies 8K of memory starting at \$2000. Apple version with disk patches occupies just over 9K.
- Each copy is assigned a special serial number. If a major problem is ever encountered, an update will be issued.

TEXT EDITOR FEATURES

- Auto line numbering for easy source entry.
- String search command (>FIND)
- String search and replace command (>EDIT).
- Commands to copy or move one or more lines (>COPY, >MOVE).
- Renumber source file command (NUMBER).
- Command to delete one or more lines (>DELETE).
- Load and record commands (>GET, >PUT).
- Source files can also be appended to current file (>GET APPEND).
- Each source file loaded results in a status summary consisting of length in bytes plus the address range where loaded.

ASSEMBLER FEATURES

- Labels unique up to 10 characters. Labels may be made up of the following: A-Z 0-9 Plus 12 other characters.
- Label expressions may be entered. Ex: LDA TABLE-INDEX+1
- Hex, decimal, binary constants, and ASCII strings may be stored.
Ex: .BY 'THIS IS A TEXT STRING ENCLOSED IN QUOTES'
.BY %1101 #F3 49 'ABC' MASKBYTE
- Can specify hi or lo part of label.
Ex: LDA #H,OP.TABLE ;LOAD HI PART OF OP.TABLE
LDA #L,VALUE ;LOAD LO PART OF VALUE
- Free format input. Simply separate fields with one or more spaces and the fields will be automatically tabulated.
- Conditional Assembly and Macro capability.

- Macros can be nested.
- Non-repeating label capability for Macros.
- Conditional Assembly can be incorporated within MACROS.
- Assembler can store object code in memory at a different address from its execution address if desired.
- Complete listings can be generated during assembly (>ASSEM LIST) or an errors only listing can be generated.
- Command to output only the Symbol Table.

OPERATING FEATURES

- Commands may be abbreviated to first 2 characters.
- Commands, pseudo ops, and conditionals may be entered as upper or lower case characters.
- Except for PET version (Because PET uses these for Graphics), most control codes are displayed as to where o is the character that would be displayed if hex 40 was added to the code.
Ex: Control C = 1C, control X = 1X, etc.
- Machine Language programs can be executed via >RUN command.
Ex: >RUN MEMTEST, >RUN \$800, >RUN 4096
- User command for user created functions (>USER)
- Upper and lower memory boundaries for Text Buffer and Symbol Table assume a default size on cold entry, but can be changed or displayed via >SET command.

COMMAND SUMMARY *

AUTO	RUN	USER	ASSEMBLE
GET	LABELS	ENTER	SET
PUT	PASS	LOOKUP	CLEAR
DELETE	CLEAR	MANUSCRIPT	>n
HARD	COPY	BREAK	
PRINT	MOVE	EDIT	
NUMBER	FORMAT	FIND	

* Additional commands not listed are provided for each implementation that are not available for all versions.

PSEUDO OP SUMMARY

.BA	.OC	.MD	.SI	.CT	.MC	.ME	.DE
.CE	.SE	.ES	.DI	.LS	.RC	.EC	.EN
.LC	.EJ	.DS	.OS	.RS	.BY		

CONDITIONAL ASSEMBLY OPERATOR SUMMARY

IFE IFN IFP IFM SET ***

SOME SIMPLE MACRO EXAMPLES

```
;INCREMENT DOUBLE BYTE LOCATION VIA INCD MNEMONIC
!!!INCD .MD (LOC) ;MACRO DEFINITION PSEUDO OP
```

```

INC LOC
BNE ...SKIP ;...label IS NON-REPEATING TYPE
INC LOC+1
...SKIP .ME ;MACRO END DEFINITION

```

```

;IMPLEMENT SWEET16 MNEMONIC SET.
!!!SET. .MD (REG CONSTANT) ;SET REG. TO A CONSTANT
        .BY REG+#10 ;FORM MNEMONIC
        .SE CONSTANT ;FORM CONSTANT (2 BYTES)
        .ME

```

```

;SAVE REGISTERS VIA SAVEREG MENONIC IMPLEMENTATION
!!!SAVEREG

```

```

.MD
PHP ;SAVE PSR
PHA ;SAVE R(A)
TXA ;SAVE R(X)
PHA ; *
TYA ;SAVE R(Y)
PHA ; *
.ME

```

Tiny-C for 32K PET (2.0) and Disk

C is a programming language designed by Dennis Ritchie at Bell Telephone Laboratories. C is a versatile and expressive general-purpose programming language which offers economy of expression, modern control and data structures, and a rich set of operators.

Tiny-C, a subset of C, was designed by Tom Gibson and Scott Guthrie. Tiny-C for PET was implemented by EHS for use by those who want to study a modern structured programming language on a CBM computer.

Tiny-C for PET includes:

- Enhanced DOS which provides 6 additional Tiny-C oriented commands.
- Tiny-C interpreter, program editor, and library
- Drives IEEE printer
- Auto-repeat key function
- Installation manual describing how Tiny-C was adapted for the PET

Tiny-C Owners Manual is contained in a large ring binder and is required in order to understand and program in Tiny-C. This manual contains a tutorial and program walk-through so one can quickly understand the Tiny-C language. This manual also contains chapters on the theory of operation of the Tiny-C interpreter.

PET Tiny-C diskette and installation manual = \$45.00
 Tiny-C Owners Manual = \$40.00

GRAPHICS DRAWING COMPILER

\$29.95

Requires: The Eastern House Software PET or SYM Macro ASSM/TED. The SYM version is designed to work with the Synertek KTM 2/40 or KTM 2/80 CRT interface, but one could easily modify the Macro package for other CRT terminals. We recommend 24K RAM memory in order to effectively use this compiler.

The Graphics Drawings Compiler (GDC) is composed of a number of macros which emulate a high-level graphics drawing language. In addition to the macros, GDC provides some very useful enhancements to the ASSM/TED.

For those who are not familiar with the term, a compiler is a program which translates statements written in a high-level language into a sequence of machine instructions. Since this compiler generates pure machine code, no runtime package is required. In fact, after you have successfully compiled a program, it can be executed without the ASSM/TED and the GDC.

The main purpose of this work is to illustrate by example the anatomy of an easy to understand compiler, and to provide a mechanism whereby the reader could easily develop his own compiler - be it an industrial control compiler, music compiler, or just a collection of macros which aid in program development.

Whether you intend to use this information for graphics drawing or for some other macro implementation, the ideas presented apply to practically all applications. Macros can represent a high-level interface between the programmer and assembly language, making the source listings easier to read. Thus, coding should be easier for the programmer resulting in programs which are more reliable and less expensive to produce.

GDC provides the following:

A. ASSM/TED Enhancements:

For both SYM and PET: >BUILD command which provides ability
 ----- to build into ASSM/TED a library of
 symbols or set of macros which define a compiler.

For the PET: Provides for >FORMAT command to set the maximum
 ----- label length (max. = 31 characters/label), and
 preservation of zero page so Basic and ASSM/TED can coexist.

B. GDC Command Summary:

ADD, BEGIN, BELL, CLEAR, DO, DEFINE, DRAWU, DRAWD, DRAWL, DRAWR,
 END, GRAPHY, GRAPHN, HOME, INPUTB, INPUTC, JUMP, JUMPG,
 JUMPGC, JUMPL, JUMPLE, JUMPN, OUTPUTB, OUTPUTC, POSABS, POSREL,
 PRINT, REVRSN, REVRSY, SUB, VECTUR, VECTUL, VECTLR, VECTLL

MUSIC AND SOUND COMPOSER**\$29.95**

Requires: The Eastern House Software PET Macro ASSM/TED.
We recommend 28K RAM memory in order to effectively use this compiler.

The Music and Sound Composer (MSC) is composed of a number of macros which emulate a high-level computer music language. In addition to the macros, MSC provides some very useful enhancements to the ASSM/TED.

For those who are not familiar with the term, a compiler is a program which translates statements written in a high-level language into a sequence of machine instructions. Since this compiler generates pure machine code, no runtime package is required. In fact, after you have successfully compiled a program, it can be executed without the ASSM/TED and the MSC.

The main purpose of this work is to illustrate by example the anatomy of an easy to understand compiler, and to provide a mechanism whereby the reader could easily develop his own compiler - be it an industrial control compiler, music compiler, or just a collection of macros which aid in program development.

Whether you intend to use this information for music and sound or for some other macro implementation, the ideas presented apply to practically all applications. Macros can represent a high-level interface between the programmer and assembly language, making the source listings easier to read. Thus, coding should be easier for the programmer resulting in programs which are more reliable and less expensive to produce.

MSC provides the following:

A. ASSM/TED Enhancements:

- 1) >BUILD command which provides ability to build into ASSM/TED a library of symbols or set of macros which define a compiler.
- 2) Provides for >FORMAT command to set the maximum label length (max. = 31 characters/label).
- 3) Preservation of zero page so ASSM/TED and Basic can coexist.

B. MSC Command Summary:

- 1) Tempo from 60 to 130 beats per minute.
- 2) Four octaves of notes (including sharps and flats).
- 3) And these commands: ADD, BEGIN, BYTE, CLRSND, DO, END, FREE, JUMPE, JUMPG, JUMPL, JUMPH, SETx, SHRATE, SUB, WAIT.

**MAE - Macro Assembler/Text Editor
for the 2040 Disk**

See Review in Compute and Kilobaud!

MAE is a machine language development aid for the new ROM 32K PET and 2040 Disk Drive. A choice of two types of printers may be used with MAE - the Commodore 2022/2023 or an ascii printer with serial interface. An external CRT display/keyboard may be connected if for example an 80 column display is desired. MAE contains the most powerful 6502 assembler and text editor currently on the market. If you are looking for a professional development tool that can greatly increase the productivity of your programming staff, then MAE may be the answer. Check these features:

GENERAL

- MAE was written entirely in machine language - not in Basic like some assemblers we know of. Thus you set very fast and accurate assemblies.
- Coexists with Basic.
- Automatic repeat of any key held down for 0.5 seconds.
- 38 error codes, 27 commands, 26 pseudo ops, and 5 conditional assembly operators.
- Occupies 10K of memory starting at 5000 hex.
- Has built in software UART (110 - 9600 baud) which can drive an external device. Example: An 80 column/line external CRT. MAE can also direct output to 2022/2023 IEEE printer.
- Operates entirely with Disk - no tape operations supported.
- Macro, Conditional Assembly, and Interactive Assembly capability.
- Sorted Symbol Table.
- Optionally creates executable object code in memory or relocatable object code on disk.
- Command strings can be passed to 2040 Disk.

TEXT EDITOR FEATURES

- Auto line numbering for easy source entry.
- String search command (JFIND).
- String search and replace command (JEDIT).
- String search and conditionally replace by stepping thru file and prompting user for determination of replacement (JEDIT *).
- Commands to copy and move one or more source lines (JCOPY, JMOVE).
- Renumber source file command (JNUMBER).
- Command to delete one or more lines (JDELETE).
- Load and record commands (JGET, JPUT).
- Source files can also be appended to current file (JGET APPEND).
- Each source file loaded results in a status summary consisting of length in bytes plus the address range where loaded.
- Word Processor file included which adds capability to Right and Left Justify, center phrases, set margins, define text body shapes, titles, footers, plus other text processing features.

ASSEMBLER FEATURES

- Labels unique up to 31 characters. User specifies maximum label length via JFORMAT command.
- Label expressions may be entered. EX: LDA TABLE-INEXD+1
- Hex, decimal, binary constants, and ascii strings may be stored.
EX: .BY 'THIS IS A TEXT STRING'
.BY %1101 #F3 49 'ABC' MASKBYTE
- Can specify hi or lo part of label.
EX: LDA #H.OP.TABLE ;LOAD HI PART OF OP.TABLE
LDA #L.VALUE ;LOAD LO PART OF VALUE
- Free format input. Simply separate fields with one or more spaces and the fields will be automatically tabulated.
- Conditional Assembly operators: IFE, IFN, IFP, IFM, SET.
- Macro capability via .MD pseudo op (Macro Definition).
- Non-repeating label capability for macros.
- Macros can be nested.
- Both passes of assembly are accomplished automatically.
- Conditional Assembly can be incorporated within macros.
- Capability to store executable object code in memory and/or output relocatable object to disk during assembly.
- Assembler can store object code in memory at a different address from its execution address if desired (via .MC pseudo op). This is useful if object is to execute in memory space occupied by MRE.
- Can assemble source from memory or, for long programs, multiple source files from disk as follows:
.FI D8 "MODULE1"
.FI D8 "MODULE2"
.FI D8 "MODULE3"
- Complete listings can be generated during assembly (JASSM LIST) or an errors only listing can be generated. Three ways to generate an errors only assembly:
via JASSM NOLIST command
via .LC pseudo op
via DEL key during output
- Interactive Assembly feature which provides for assembler to output messages and accept input during assembly process.
EX: INPUT BEGIN ASSEMBLY ADDRESS
? 1000
- Command to output the entire symbol table or just certain types of symbols.
- Sorted symbol table.

OPERATING FEATURES

- Commands may be abbreviated to first 2 characters.
- Commands, pseudo ops, and conditionals may be entered as upper or lower case characters.
- Machine language programs can be executed via JRUN command.
- User command for user created functions (JUSER).
- Upper and lower boundaries for text file and symbol table assume a default size on cold entry, but can be changed or displayed via JSET command.

RELOCATING LOADER FEATURES

- Separate program from Assembler/Text Editor but is included in MRE package.
- Provides capability to quickly relocate the ASSM generated relocatable object code files in 3 separate segments:
 - 1) Program Body
 - 2) Absolute Variables
 - 3) Zero Page Variables
- One can also relocate but store the executable code at a different address.
- Included in the MRE package is an executable copy of the relocating loader plus a relocatable copy so that you can relocate the relocating loader practically anywhere you want.

EXTENDED MONITOR

- Developed by Bill Seiler and provided as a courtesy item.
- The MRE package includes a 2K extension of the PET monitor.
- The extended monitor includes the following commands: Disassembly, Enable Stop, Fill Memory, Hunt Memory, Interrogate Memory, Quick Trace, Memory Transfer, Undo Stop Keys, Walk Code, and others. A very powerful Machine Language Aid.
- On the MRE diskette is a file which provides an interactive review of the EXTENDED MONITOR commands.
- The extended monitor occupies 2K of memory at 1000-17FF. Instructions are provided which show how you can relocate the monitor to another area of memory.

MATERIAL SUPPLIED

- MANUAL = 40+ page manual with description of all commands and pseudo ops, many examples, and an example software listing of a program which illustrates the assembler format.
- DISKETTE = 5 1/4" 2040 compatible floppy diskette with the following files:
 - 1-) Extended DOS support program
 - 2-) Extended Monitor object code
 - 3-) Extended Monitor instructions
 - 4-) MRE object code
 - 5-) Relocating loader object code
 - 6-) Relocating loader relocatable object code
 - 7-) Library of PET ROM locations -useful for machine language work
 - 8-) Notes pertaining to MRE
 - 9-) Example program of a software uart driver
 - 10-) File of Machine Language Macros
 - 11-) Word Processor program

NOTE :

COMPLETION OF ATTACHED LICENSE AGREEMENT MUST ACCOMPANY ORDER.

APPLE Disk Macro Assembler/Editor

Apple MAE is an enhanced Macro Assembler and Text Editor with many of the same features as the PET MAE (see PET MAE description).
Apple MAE was designed to be exclusively disk oriented and provides an improved Disk I/O interface.

The Apple MAE diskette contains:

- Macro Assembler/Text Editor
- SWEET16 Macro file
- Word Processor (Pis Pen Software) Requires 48K and Disk
- UART Driver example program.
- Machine Language Macros file
- and more

Users of our \$49.95 Assembler thought it was great. But, we believe every Apple user will find Apple MAE to be the most powerful Apple machine language development aid on the market.

Manual and Diskette = \$169.95

*(Requires completion of license agreement.)

Apple II Mail List System

Provides sorting by zip code or last name.
Prints on summed labels with user defined spacings between labels.
Personalized codes may be used to identify retail or wholesale customers, etc. Approximately 1000 names/diskette.
Individual entries may be quickly changed or deleted.

Requires 48K, Applesoft ROM and Disk II.

Manual and Diskette = \$34.95.

**PET EXPERIMENTERS I/O KIT
COMPLETE KIT = \$39.95**

One of the many problems PET owners face is how to quickly and easily construct circuits we design or those we read about in magazines. The PET Experimenters I/O Kit helps alleviate this problem by providing capability to easily construct circuits connected to the User Port or IEEE Port. Now we can construct a multitude of circuits from CB2 Music to IEEE 488 interface circuits.

This kit consists of a connector to the User/IEEE Port, a 36-inch ribbon cable with 24 pin DIP connector on one end, heat shrinkable tubing, and a solderless breadboard which will hold up to six 16 pin integrated circuits.

You save money by assembling the kit yourself. Requires soldering iron and wire strippers for assembly.

TRAP 65**CIRCUIT AND MANUAL = \$149.95**

TRAP 65 is a circuit intended for use by machine language programmers to prevent execution of unimplemented 6502 opcodes. Since unimplemented opcodes will cause unpredictable 6502 operation and/or cause the system to crash, it would be desirable to prevent the 6502 from executing these opcodes. TRAP 65 is a circuit that will perform this function. Whenever TRAP 65 detects an unimplemented opcode, it will force an entry to your monitor and display the address+1 of the unimplemented opcode. The programmer can then easily correct the error without having to spend hours searching for the cause of the crash.

TRAP 65 can also be used to extend the 6502 instruction set on PETs, SYMs, and KIMs. You can do this by placing an address at the IRQ vector which points to a routine which executes code you assign to the unimplemented opcode. Imagine these: PHX, PHY, JMP (TABLE,X), one byte calls, 16 bit opcodes, etc.!!!

The TRAP 65 circuitry is mounted on a 4 3/4 x 3 1/2 inch Printed Circuit Board. Fully assembled and tested. Installs in seconds.

Pis Pen Word Processor

(Included free with PET or APPLE MAE Software)

The Pis Pen word processor is available for use with the EHS Apple II Macro Assembler/Text Editor (ASSM/TED). This is a fast machine language program which provides the functions to process and format text in order to obtain an error-free copy every time.

No software development system is complete without a word processing utility to provide documentation for the software package. Word processors are also invaluable for the generation of personal and business correspondence, reports, term papers, etc.

The Pis Pen resides in RAM simultaneously with the ASSM/TED. The text editing features of the ASSM/TED are used to create the raw text file which is then formatted by the Pis Pen. The formatting features provided by the Pis Pen are as follows:

- * User specified vertical and horizontal margins
- * Left and right justification
- * Raised right or left text
- * User defined paragraph specification
- * Optional page numbering at top and/or bottom
- * Titles and/or footers
- * Text processing in the form of user defined shapes

Disk Version = \$45.00

Includes object and commented source on diskette,
commented source listings, and instruction manual.

Cassette Version = \$40.00

Includes object code on cassette, commented source listings,
and instruction manual.

Instruction Manual only = \$4.00

Refundable with subsequent order of Pis Pen software.

MAE LICENSE AGREEMENT
(Attach with order)

EASTERN HOUSE SOFTWARE
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