

Annual Report

Dear ESFOA member,

The last year has been one of tremendous growth for both Exatron and the Owners Association. There are now several thousand Stringy Floppies in use, more than 250 local Workshop Chairmen, and the ESFOA library has broken the 200 program barrier.

Exatron has never been a "sell it, and forget it" type of company, and is working hard to provide user support. With the network of local Workshop Chairmen, @NEWS in 80-US Journal, @LOAD magazine, the ESFOA software library and toll-free hotline, the Stringy Floppy is one of the best supported peripherals available.

Looking forward, 1982 is certain to be an exciting year. A major goal is to improve communications among all ESFOA members. Jim Perry has joined Exatron on a full-time basis, and will be busy preparing new manuals, catalogs and newsletters. Several new products have been developed, some are described later in this report, and several more are nearing completion. The preparation of support documentation always seems to be the pacing factor in getting new products to market—we will sell no manual until it has been written!

A new product of interest to all Model I owners is a 64K memory board, the MM800. It installs inside the keyboard in a similar fashion to the 48K Holmes board, but has several advantages. It uses the latest 64K dynamic RAM chips, includes a 50- or 100-percent speedup circuit, and allows you to replace ROM with RAM. The possibilities are endless with the ROM/RAM feature, for example, you can copy Level II into RAM and then modify it. The MM800 is \$199.50.

If you have an early Model I, with the ugly "up in the air" lowercase display, then the new Exatron character-generator kit may be of interest. The Radio Shack character-generator kit retails for \$39.95, the Exatron kit is only \$19.95. The Exatron kit has a couple of other advantages over the Shack's kit, besides being \$20.00 cheaper; it displays control codes in reverse video and, because it is based on a 2716 EPROM, can be modified for special characters (if you have access to an EPROM programmer).

For those of you who have been waiting patiently for the Model III ESF—it's now available! The recording format used is the same as that used by the Model I ESF, making program transfer straightforward. The single-drive version is \$349.50 and the twin-drive unit is \$449.50, more details inside.

A lot of good quality commercial software is available from Exatron, and many other sources, at reasonable cost. The latest additions to the commercial software catalog are described later on. If your software catalog is dated earlier than August 1981 then let us know, and we'll send you a current edition.

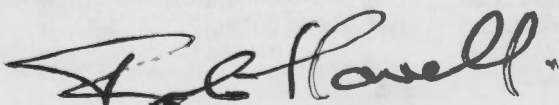
@LOAD 2 is now available. A big effort is being made to increase the number of @LOAD wafers in 1982. A major criteria in selecting programs for future @LOAD editions will be their educational value. If you haven't seen @LOAD 0 or @LOAD 1 then you're really missing out!

Speaking of education, a selection of public-domain educational programs have been put together for a school starter kit. This software package is available to schools purchasing starter kits in place of the normal starter kit software. The programs are also available through your local ESFOA library for the cost of wafers, and a nominal duplication charge.

A current list of library software, both public domain and magazine, is also included. These programs are only available through your local Workshop Librarian. Many local software libraries have been started in the last year, and hopefully many more will be founded this year.

Those of you who have accumulated a lot of wafers, and are looking for an efficient storage method, will be interested in the enclosed Wafer Wheel brochure. Developed by ESFOA Chapter 0 members, John Grass and Bill Stokes, the Wafer Wheel is a really useful addition to any work station.

Finally, if you haven't already, join and support your local Workshop—or start one yourself! 1982 is going to be a great year for both Exatron and the ESFOA.



Robert L. Howell,
Chairman of the Board.

MODEL III ESF NOW AVAILABLE

The Exatron Stringy Floppy for the TRS-80 Model III, operates just like, and is compatible with, its popular predecessor, the ESF for the TRS-80 Model I. This means that most BASIC programs written on the Model I and stored on an ESF wafer may be @LOADed and RUN on the ESF III.

The ESF III requires no special interface as it connects to the Model III through the 50-pin I/O bus on the rear of the computer. However, you must have at least 16K Level II BASIC and a cassette cable.

The ESF III will work together with a disk or cassette system—it does not eliminate any of the capabilities or functions that your present system now has.

The ESF III Operating System (ESF III O/S) with DATA I/O occupies about 4K bytes on non-relocatable memory (RAM) and is loaded through the cassette port (there are jacks on the ESF III to connect to your cassette cable). Once the ESF III O/S is loaded, the cassette cable may be removed. The ESF III O/S then relocates itself to high memory, and resets the top of memory to protect itself.

COMMANDS

The command set of the ESF III is summarized below. The suffix "n" is a number between 1 and 99 and designates a



file number. The number of files which may be stored on a wafer is determined by the length of the wafer and the data (or programs) to be stored.

- @LOADn** Equivalent to the commands CLOAD in cassette and LOAD in disk systems.
- @SAVen** Equivalent to the commands CSAVE in cassette and SAVE in disk systems.
- @NEWn** Certifies wafers by writing data to the wafer and reading this pattern back. This checks the tape for any dropouts and determines how many unused bytes are available on the wafer.

DATA I/O

The ESF III Data I/O program provides the ESF III with data-file handling capa-

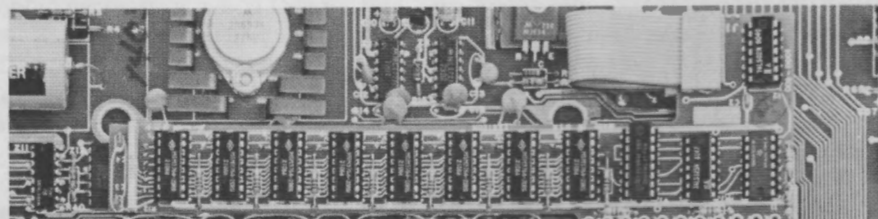
bilities. The Data I/O program is included in the Starter Kit when you purchase an ESF III. The Data I/O command set is summarized below. These commands, with examples of how they are used, are covered in great detail in the ESF III Data I/O program documentation.

- @OPEN** Initiates the link between the Data I/O program and the ESF III firmware in preparation for writing or reading a data file.
- @PRINT** Writes a data file to the wafer.
- @CLOSE** Closes the file.
- @INPUT** Reads a data file from wafer.
- @CLEAR** Similar to the @CLOSE command. Normally used in data handling and error trapping routines.

64K IN-KEYBOARD MODEL I MEMORY

The Exatron 64K In-Keyboard Memory Unit (MM800) modifies your TRS-80 Model I, and has the following features:

- Gives 64K bytes of RAM (61440 bytes user modifiable)
- Allows RAM to replace ROM.
- Easy return to normal TRS-80 mode (just press RESET key)
- Adds 50- or 100-percent speedup (software selectable).



- Easy installation
- Mounts in keyboard
- Uses 64K RAM chips—only 8 required.
- No expansion interface required.

In addition to having a full 48K of RAM available while in normal TRS-80 mode,

you can replace ROM with RAM and make BASIC work your way. Add to, change, delete, or replace ROM routines. It becomes possible to replace BASIC with other operating systems, such as CPM, Forth, FORTRAN, COBOL, or your own.

NEW CHARACTER GENERATOR

The new character-generator board from Exatron is easy to install, and gives two switch-selectable character sets. The first set has reverse video for control codes, and the second set displays control codes with an underline.

Based on a 2716 EPROM, you can even design your own displays (if you have access to an EPROM programmer).

ELECTRIC PENCIL VERSION 2.0

Michael Shrayer's *Electric Pencil* is one of the most popular word processors in the world. This is a totally new version, with built-in Stringy Floppy commands, as well as cassette operation.

All known "bugs" have been eliminated, several new features have been added, and the price has been dropped to only \$59.95, for the Model I or Model III version.

All existing Electric Pencil files can be used by this version, and it can also read Scripsit files. The 128-page manual was written by Harvard Pennington (of *Disk & Other Mysteries* fame), and anyone can learn to use the program in a few hours.

New features include saving of print parameters, separate print and control menus, three built-in print drivers, display of system status, and a multi-key type-ahead buffer.

SOFTWARE UPDATE

Some of these programs are new or enhanced versions of existing programs. If you purchased an earlier version then you can "upgrade" by paying the difference in cost of the versions (if any), plus \$3.95 for duplication costs.

To receive credit you must supply proof-of-purchase of the earlier version. This can be done by returning the original wafer (with its label still affixed), or a photocopy of your original invoice, with your order. To make life easier, the upgrade cost is shown where applicable.

BUSINESS

REAL ESTATE "SCRATCH PAD"

By Bob Sexton

Catalog #184 - \$24.95

This program provides a five-year projection for any property from single family to large apartments. It is unique in that any factor in the analysis can be changed at any time. Even loan strategy can be changed in analysis mid-stream. The "What if?" game can be played with instant answers.

Provisions are made for entering local parameters where necessary, and full or partial reports can be printed with the touch of a key.

SMALL HOME-BUSINESS PROGRAMS

By Fred Blechman

Catalog #179 - \$25.00

These programs are designed for the small entrepreneur with no employees, operating a home-based business such as Amway, Avon, Fuller Brush, Shaklee, Tupperware, Mail Order, Specialty Salesman, Insurance or Real Estate. The programs are designed for a 16K, Level II, Model I. No disk is required, but an 80-column printer is needed for three of the programs.

The 5 programs are:

- Speed-letter—a word processor.
- 12-Column Ledger—an accounting program.
- 3-Across Mailing Labels—a mailing list program.
- Telephone Auto-Dialer/Timer
- Toll-Charge—Real-time display of phone charges.

STRINGY MAILING SYSTEM

By Bob Sexton

Catalog #181 - \$99.95

Written to take full advantage of your Exatron Stringy Floppy, this program can be used as a conventional mailing list or for direct-mail advertising lists. The program features machine level data creation and editing, automatic computer created addresses, fast single-keystroke data entry for general

mailings and program control, and instructions for use with virtually any printer configuration.

Memory conservation features include the use of program overlays, tokens for certain data, and storage of a single address for multiple label printing in general mailings. (As many as 1300 different labels have been printed with a list of less than 80 address entries—this was done in a 16K machine with one data load.)

PATCHES

R. S. EDTASM

By David Purdue

Catalog #106 - \$11.95 (\$5.95 upgrade)

This is an enhanced version of the existing patch, to the cassette version of the Radio Shack Editor/Assembler (EDTASM). In this version both SOURCE and OBJECT codes may be saved and loaded with your ESF. The wafer contains patches for versions 1.1, 1.2 and Series 1 (version 1.0) of EDTASM.

CROWN MICROPRODUCTS ROM-116

By James Sladek

Catalog #186 - \$7.95

This patch changes the general-purpose, and main-text, routines in RTTY version 1.3 to work with an ESF. With it you can also read/write line and callsign buffers, display the read/write mode, exit without ESF action and verify wafers. A limited display of ESF error messages is also implemented.

Tape operation is limited, due to the file number prompt needed to write files.

R. S. TINY PASCAL (32K)

By L. S. Preston

Catalog #183 - \$9.95

A patch for the 32K version of Radio Shack's Tiny Pascal, which provides for ESF storage and/or retrieval of source and P-code files. Also available is a command to print source code on a line printer.

UTILITIES

SUPER LABEL MAKER (32/48K)

By Bill Burnham

Catalog #182 - \$9.95

This program provides the capability of printing up to five lines of text on a standard 3 1/2" by 5 1/16" mailing label. You can print special "Title Labels" that can be affixed to wafers for identifying program files, as well as printing mail and identifier labels for notebooks, file drawers, etc.

The number of characters printed per line is automatically set depending on which of four label formats is selected.

All text data can be saved as data files and loaded at a later date, for printing more titles or labels with the same text and format. These data files may

be saved or read in the standard Data I/O format, or by a method that does not require the use of the Data I/O program. This method will also verify the saved data file.

EASY DOES IT (48K)

By Bill Burnham

Catalog #185 - \$14.95

The ultimate in a screen display/formatter. Create mixed text and graphic displays, in either 32- or 64-character mode, with all or any portion of the screen automatically coded into packed strings—for fast, or animated, reproduction in your own program.

Choose your own packed string variable names and their resident line numbers. This program has screen editing functions similar to a word processor. Graphics can be generated utilizing the full graphics block (6 pixels at a time) or by utilizing just a single pixel.

Will automatically draw circles, rectangles, and diagonals of any size, anywhere on the screen. Just tell the program what you want and it will figure out how to do it for you.

ESOS 2.4

By Tom Wheeler

Catalog #169 - \$35.00 (\$13.95 upgrade)

ESOS 2.4 is an enhanced version of the original Extended BASIC (ESOS 1.4) and can operate with as little as 16K of memory, however, 32K or 48K is recommended.

The Extended BASIC part of ESOS 2.4 contains many useful new functions: Program Renumber, Hex to Decimal conversion (and vice-versa), flexible user-defined functions, screen (or directory) dump to line printer, and many others.

An "Intelligent" upper-lowercase driver is also included (it works with the Radio Shack modification). BASIC programs can control this driver.

All of these features are in addition to the original ESOS features of wafer directory, named files, passwords, etc. A 40-page manual takes you step-by-step through all the features of the operating system.

ZAP & DUMP

By Brad Kidder

Catalog #109 - \$9.95

These two machine-language utility programs may be used to display and modify memory in a 16, 32, or 48K Model I.

The display is in both hexadecimal and ASCII. The arrow keys are used to "scroll" the display through memory, and to position a cursor. Any byte in memory can be modified by simply typing over it on the display—just like using a word processor!

If you have ever wanted to know what is in memory, or needed to modify memory, then this wafer is the answer.

@LOAD 2 AVAILABLE

@LOAD 2 is now ready and orders are being taken. It contains five programs. Here is a brief description of each:

CHART OF ACCOUNTS: Data Input Module. First of a series of accounting programs that will be appearing in future issues.

SCREEN PRINT: Machine language utility. Will print any character (alphanumeric or graphic) that appears on the screen to a printer.

MISSOURI MULE: A game that is simple to play but not easy to win. Excellent graphics and the program code is written in a clean open style for easy study of programming techniques.

FRACTION BLOWOUT: An excellent educational game that first appeared in *Personal Computing* magazine. It has been reproduced with permission from *Personal Computing*.

PEEK AND POKE: A BASIC utility. Allows inspecting and changing memory contents directly.

We, as well as all ESF owners, appreciate the work being contributed to help make @LOAD a success. As a brief reminder of the @LOAD concept, the following is an excerpt from the @LOAD O covering letter.

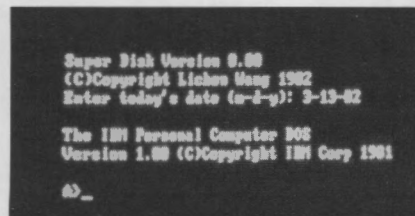
The three main objectives of @LOAD are to provide our ESFOA members with good software at a reasonable price; to give recognition to



SUPER-DISK FOR IBM

The Exatron Super Disk adds 192K of dynamic RAM to a 64K IBM Personal Computer, and it operates like a super-fast solid-state disk!

With the addition of a Stringy Floppy you can load and save the Super-Disk memory in seconds. Alternatively, if a disk drive is installed, the IBM DOS can be converted to SUPERDOS which will allow disk software to run in RAM.



The Super Disk was designed by Dr. Lichen Wang, the author of Palo Alto Tiny BASIC and the TRS-80 Stringy Floppy operating system. The 192K card is \$995.00, and the ESF drive is \$295.00.

the many capable authors out there in ESF land that have an unpublished quality program that they wish to share with others; and to point out and share examples of good programming techniques and useful routines that may be utilized in other programs of your own.

The per issue cost of @LOAD is \$9.95. This charge does not represent any cost to you for the programs contained on the @LOAD wafer. These programs are free. The charge is made only to help defray the costs of shipping and, wafer/documentation reproduction.

800 392 8766

ORDER FORM

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... MM800 64K RAM Board.	200.00
... ESF III (Starter Kit)	349.50
... ESF III (Twin drive)	449.50
... IBM Super Disk Card	995.00
... IBM ESF	295.00
SOFTWARE		
... Character Generator	19.95
... @LOAD 0	3.95
... @LOAD 1	9.95
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... Label Maker (182)	9.95
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... ESOS 2.4 (169)	35.00
... 169 Upgrade	13.95
... Zap & Dump (109)	9.95

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... 10' (SF110)	2.00 10' (SF210)	3.00
... 20' (SF120)	3.00 20' (SF220)	4.00
... 35' (SF135)	3.00 35' (SF235)	4.00
... 50' (SF150)	3.50 50' (SF250)	4.50

Shipping & Handling: Software & Wafers \$3.00. Hardware \$6.50. All Canadian orders \$10.00. C.O.D. an extra \$1.50. USA shipping includes insurance.

UPS is used for USA shipments. Allow two weeks for clearance of personal checks and/or four weeks for shipping.

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