



**NEWSLETTER OF SYDTRUG INC.
SYDNEY TRS-80/MS-DOS USERS' GROUP**

P.O. BOX 75, PANANIA 2213
AUSTRALIA

Volume 12 Issue 1 JANUARY 1992 Price \$2.00

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MEETING ARRANGEMENTS

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* Meetings will be held on SECOND and FOURTH Saturday
* afternoons each month commencing at 1:00 P.M. at the
* 1st Sefton Scout Hall, 2 Waldron Road, SEFTON
*
* Meetings this month will be held on
* 11th and 25th of January
*

SYDTRUG Bulletin Board

TRUG-86, the MS-DOS/TRS-80 Bulletin Board, (02) 790-5681
For full details see the Services page overleaf.

CREDIT CARDS

We have the facility to charge your membership fees, or renewal fees to either **BANKCARD**, **MASTERCARD** or **VISA**. Additionally, purchases made on your behalf by the group may also be charged to your credit card. If you wish to use this service, please quote your card number, type of card, expiry date of card, and **SIGN** your request.

WHO'S WHO

President	Denis J. PAGETT	772-4848
Vice President	Tom FOLEY	389-6157
Secretary	Bruce RAMSAY	580-2217
Treasurer	Gordon SYMONDS	Sick
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Hardware Co-ordinator	Errol ROSSER	796-7646
Membership Secretary	Peter WIGNELL	759-8024
Newsletter Editor	John MERCER	579-2915

*
* **Virus Detection and Removal** *
*
* On 11th January, following the formal portion of the *
* meeting, Errol Rosser (our SYSOP and Hardware Coordina- *
* tor) plans to present a talk on how the above can be *
* performed with the use of shareware applications. *
*

**Closing Dates for
February 1992 Newsletter:**

Hard Copy only - 4th January 1992 -
On Disk - 11th January 1992 -
or Via Bulletin Board

*
* **Market Day - 8th February** *
*
* If you have hardware or software for sale - Hire a *
* table for \$5 and display your merchandise. *
* If you are looking for hardware or software - then *
* bring your money with you. *
*

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SYDTRUG Inc. Information

MEMBERSHIP FEES:

There is a ONCE ONLY joining fee of \$20, plus, for single membership, \$45 per standard financial year (July to June) or, for family membership (which includes all family members living at the same address), \$55 per standard financial year. These fees fall due on 1st July each year and are payable by Cash, Bankcard, Mastercard or Visa Card. They cover the cost of the monthly newsletter and admission to Saturday meetings, access to the bulletin board, access to the group library, and reinking of fabric printer ribbons.

For those who wish to insure against possible future fee increases, payment of \$200 for single membership, or \$250 for family membership, will cover five years fees. This represents a saving of \$5 per year and any increases which may occur during the five years.

For those who join between 1st January 1992 and 30th June 1992 a special reduced fee of \$25 will apply for single membership. The joining fee remains the same at \$20

Our NEWSLETTER ("SYDTRUG News"):

Distributed on a regular basis, includes group business information along with software and hardware articles and information from local and overseas sources. Contributions from members are always welcome. See below for advertisements.

COST: Included in your membership fee. Back issues available at \$2.00 ea plus postage (within Australia) \$0.70.

Other NEWSLETTERS:

We receive numerous exchange newsletters from similar groups, both locally and from overseas. See the resume which appears regularly in "SYDTRUG News". Copies are available for borrowing from our Sefton meetings. You can also borrow by mail if you drop us a line including outgoing postage, as for back issues of "SYDTRUG News" shown above, one magazine at a time for one month.

DISKS:

The committee have located a new source of disks at new low prices. These prices are conditional upon purchasing in lots of 100. At this time the committee is not prepared to outlay group funds in purchasing bulk stocks of disks on members' behalf. However, if any member, or group of members acting cooperatively, wish to pay in advance for 100 or multiples of 100 of the same type and size of disk, the committee will arrange to purchase them on the members' behalf. Any member wishing to purchase less than 100 disks of any one type and size may pay in advance and, when orders have been received for 100 of the same type and size, the committee will arrange to purchase them. The new prices are as follows:

5.25 DS DD (360K) 0.50 each
5.25 DS HD (1.2M) 1.00 each
3.50 DS DD (720K) 1.00 each
3.50 DS HD (1.4M) 1.90 each

LIBRARY:

We maintain a library of interesting books, mainly at present on TRS-80 matters, along with most issues of "80-MICRO". There are a number of other magazines available as well as copies of some local computer magazines. These are available for borrowing from the group for one month at a time.

FABRIC RIBBON RE-INKING:

Most printer ribbons can be reinked quite successfully, so long as they have not been thrashed. There needs to be a reasonable fabric base to absorb the ink. NOTE: Fabric ribbons only, carbon film ribbons cannot be reinked. If given to the reinker person at meetings they will normally be ready at the same meeting of the next month. By mail, send them to the Group P.O. Box in a padded jiffy bag. Before you mail it, get it weighed and pop postage value of stamps into the bag before you seal it so that we can return it.

COST: This service is free to members, but postage and packing charges will apply where applicable.

DISCLAIMER:

No Patent liability is assumed with respect to the use of the information contained herein. While every precaution has been taken in the preparation of this publication, neither SYDTRUG Inc. nor its appointed office bearers assume any responsibility for errors or omissions. Neither is any liability assumed for damages arising from the use of any information contained herein. Any opinions expressed are those of the author concerned, and not necessarily those of the Group or its committee.

SIGs (Special Interest Groups):

On the second meeting of the month we often have either hardware or software tutorials. If you can present an area of interest or can suggest something that you might like to learn about, please contact a committee member.

SOFTWARE:

MS-DOS Public Domain/Trial Ware:

We have an ever increasing range of MS-DOS Public Domain and Trial Ware disks from a number of sources. Watch the newsletter for details.

COST: The software is normally available on a 5.25 inch 360K disk format for a cost of \$5, plus postage and packaging if applicable. Alternatively, the software can be supplied on a 3.5 inch 720K disk for an additional \$1.00. Two programs normally available on two 360K disks can be supplied on the one 3.5 inch disk format for the cost of two 360K disks plus \$1. The group does not charge for the software but charges a disk purchase price to cover the cost of the disk medium and the cost that SYDTRUG Inc. has to outlay to maintain the software library. Members have the option of picking the order up at a SYDTRUG meeting (provided the order is placed 5 days in advance) or having the disks posted to them in a disk mailer box.

The additional cost of postage and packaging will vary depending on the destination and the current charges are as shown:

1 - 5 disks:	Within Australia:	\$2.00
	Overseas Airmail:	\$5.00
6 - 10 disks:	Within Australia:	\$4.00
	Overseas Airmail:	\$10.00

TRS-80 Public Domain:

A huge range of TRS-80 Public Domain Software is available for Mod I/Sys 80 along with Mod III, 4/4P. See our catalogue disks for details, if you don't have them write and ask, including \$8.00 to cover disks and P/P. Be sure to let us know in what format you require the disks written.

COST: \$3.00 per disk, plus postage and packing as for MS-DOS disks above.

BULLETIN BOARD:

Our MS-DOS/TRS-80 BBS called TRUG-86, now up and running on (02) 790-5681, is still in the process of development. So please bear with us if it does not yet have all the bells and whistles which you may expect. All members of SYDTRUG Inc. will have access, while limited access is available to visitors.

Initially your password is your membership number, so it would be a good idea to log on and change your password to one which only you know.

The following formats are available:-

CCITT V21 (300/300), V22 (1200/1200)
V23 (1200/75) and V22 bis (2400/2400)
BELL 103 (300 FULL Duplex), 212 (1200/1200)
2400 (2400 FULL Duplex)

All formats utilise 8 DATA bits, 1 STOP bit and NO Parity

You should set your Modem and/or software for "Originate", except for V23 (1200/75) which should be set for VIATEL or 1200 Receive/75 Transmit.

COST: This service is FREE to MEMBERS.

ADVERTISEMENTS:

Members may place "For Sale", "Exchange", or "Wanted" advertisements in "SYDTRUG News". There is no charge, but inclusion is dependent upon space being available. The editor reserves the right to amend advertisements as thought fit.

Editorial Comment

This month we take great pleasure in commencing a series of articles which are being reprinted from newsletters exchanged with a computer club in America. These are titled "MS-DOS Novice Nook" and originally appeared under the title of "Novice Nook" in "The Voice of the '80", the newsletter of the Fairfield County Computer Users Group. It has been decided to amend the title as they are slanted towards readers who are exclusively MS-DOS oriented. They may at times appear to be a little dated as the series originally commenced in May 1988. They were not reprinted earlier due to a misunderstanding about copyrights. We have recently been in communication with the author and he has graciously agreed to allow us to reprint them. He even suggested that it might be desirable to edit out local American references which could be confusing to SYDTRUG members.

Readers should bear in mind that many computer users have absolutely no knowledge of personal computers other than IBM and their compatibles or clones. We raise this point because, in places in the articles, statements are made which could well confuse the owners of TRS-80 machines if they were not aware that the articles referred almost exclusively to MS-DOS oriented machines. A quick check of our membership list reveals that although 12 of our members do not admit to owning a computer at all, 47 have only TRS-80s, 50 have both TRS-80 and MS-DOS machines, while 27 use MS-DOS machines exclusively. Having made that point, we feel sure that the series will prove to be very useful to those readers who are just beginning with MS-DOS, and perhaps for some who are more advanced.

We wish to thank Roger Giler for his enthusiastic welcome to our suggestion that we reprint these articles. MS-DOS beginners, and others, have some valuable reading in store in this series.

On the TRS-80 front, we have another interesting article from Ivan Kennedy on the subject of word processors for the TRS-80. In it he gives us, as usual, lots of information. Thank you Ivan.

This month we are taking the unusual step of publishing an extract from a letter of resignation from a former member. We do so because he includes some information which may well be of interest to some of our members.

The committee wish to draw the attention of members to two particular events planned for the near future. Firstly, this month, during the first meeting, Errol Rosser is planning to give a talk on a subject which is of great importance to owners and users of MS-DOS computers. The subject is Computer Virus Detection and Removal Using Shareware Programs. It is planned that this will be after the general meeting.

The other item is a Bring and Buy Sale to be held in conjunction with the first meeting in February. Members who have either Software or Hardware which they wish to dispose of may bring it along. For a small fee of \$5 they may have the exclusive use of one of the tables for the purpose of setting out their goods for sale. If two or more members wish to share a table, that is quite all right so long as the \$5 for the table fee gets paid to the treasurer.

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MS-DOS USER SUPPORTED SOFTWARE

by Peter WIGNELL

The next group of SYDTRUG Inc. MS-DOS software to be released for MS-DOS compatible computers is listed below. The software includes a selection of public domain and shareware/trial software. This software is available to members only.

Members may order the disks either by contacting the Secretary and placing their order by phone or by writing to the Secretary of SYDTRUG Inc. via the group's postal address.

SYDTRUG Inc. MS-DOS SOFTWARE
P.O. Box 75
PANANIA NSW 2213
AUSTRALIA

The Secretary's phone number is listed on the front cover of this newsletter. A catalogue disk listing the complete MS-DOS software library is available from the secretary.

The software is normally available on a 5.25 inch 360K disk format for a cost of \$5 plus postage and packaging if applicable. Alternatively, the software can be supplied on a 3.5 inch 720K disk for an additional \$1.00. Two programs normally available on two 360K disks can be supplied on the one 3.5 inch disk format for the cost of two 360K disks plus \$1. The club charges a disk purchase price to cover the cost of the disk medium and the cost that SYDTRUG Inc. has to outlay to maintain the software library. Members have the option of picking up the order at a SYDTRUG meeting (provided the order is placed 5 days in advance) or having the disks posted to them in a disk mailer box.

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	Overseas Airmail:	\$5.00
6 - 10 disks:	Within Australia:	\$4.00
	Overseas Airmail:	\$10.00

Many of the disks have their files archived to save space on the disk. If the files on the disk are archived, then, if there is sufficient space, the disk will include a program to dearchive the files. Most, but not all, of the disks contain documentation files for the programs.

DISCLAIMER

The programs are provided "as is", and they are without warranty of any kind that the programs on the disk(s) will work correctly in any or all situations. No liability shall be assumed by SYDTRUG Inc., its committee, or its officers, for direct or consequential damage caused by the use of this software.

REGISTRATION

Computer programs distributed as Shareware have not been placed in the Public Domain. They are copyright, and therefore if you are going to use the program you are required to pay a registration fee to the holder of the copyright. SYDTRUG Inc. encourages all members who purchase Shareware programs from our software library to complete the program registration if they are going to use the program.

PROGRAM UPDATES

The SYD0128 MS-DOS Software disk has recently had its program files updated to a later version. Copies of the updated SYD0128 disk can be obtained for free either by returning your original SYD0128 disk to a Sydtrug Inc. meeting or to the group's PO Box at the address shown above and include the return postage as listed above. Otherwise order the updated disk as a new order, including the cost of the disk and postage as listed above and make sure you specify the type of disk format required.

VIRUSCAN ANTI VIRUS BY MCAFEE V84

The McAfee viruscan suite of programs including Scan, Clean and Vshield have been updated to version 7.9V84. (7-Oct-91)

Disk: SYD0128

LEARNING COMPUTERS

TUTOR DOS Version 1.2

TUTOR DOS was created by a professional computer instructor to assist beginners who are trying to learn DOS. It was written with the novice in mind, and starts with the basics of RAM and DOS before moving on to topics such as formatting disks, manipulating sub-directories, and creating batch files.

TUTOR DOS consists of 21 interactive lessons. Students are able to practice their newfound skills as they acquire them. TUTOR DOS will recognize a variety of answers to its questions and prompts users with hints. Each lesson ends with a short quiz to help students review what they have learned. At the end of the program, students take a multiple-choice test to evaluate their knowledge. Based on this test, TUTOR DOS either recommends lessons for review or rewards the student with a custom printed certificate.

Special Requirements: None.

Disks: SYD0169, SYD0170, SYD0171, SYD0172

UTILITIES

MODEM DOCTOR V3.0S

Comprehensive serial port diagnostics for IBM and compatible computers to test the serial ports and an attached 'AT' command set compatible modem. Provides comprehensive tests including hand-shaking, UART tests, loop back tests, carrier tests etc. Provides hotkeys, on-line help, and detailed documentation. This Shareware version of the program supports Com1 through Com4 at baud rates from 300 bps to 2400 bps.

Special Requirements: MS-DOS/PC-DOS 2.2 or higher, MDA or CGA display adapter and at least one serial port.

Disks: SYD0177

4DOS COMMAND INTERPRETER

4DOS is a Shareware program designed to help you get the most out of your IBM PC or compatible system. It replaces COMMAND.COM, the command interpreter that comes with all versions of MS-DOS and PC-DOS.

You'll find 4DOS provides a wide variety of capabilities COMMAND.COM can't, ranging from a vastly enhanced DIR command, to point-and-shoot file selection for any command, to the ability to completely redefine your system's commands. Yet 4DOS is fully compatible with COMMAND.COM.

4DOS is a "DOS shell" (a program that gives you access to DOS functions and commands), but it's unlike most DOS shells on the market. Virtually all of these shells are designed to isolate the novice user from the DOS command line. 4DOS, on the other hand, is intended to make DOS easier to use and to make you more productive while working at the command line. It provides enhancements to most of the DOS commands, as well as more than 40 new commands. These improvements make 4DOS a much richer and more powerful working environment than COMMAND.COM, without sacrificing the compatibility, flexibility and control you get from working at the command line. If you're tired of the limitations of COMMAND.COM, you'll love 4DOS!

Special Requirements: None

Disks: SYD0168

COMPUTER GRAPHICS

CROPGIF (GIF File Cropper) v1.1

With this program you can crop smaller fragments out of your GIF files. Use the GRAPHIC WORKSHOP to convert other formats into GIF files for cropping. CROPGIF uses a simple mouse interface to make cropping image fragments no more complicated than using a paint program.

Special Requirements: 640K RAM, and a mouse.

Disks: SYD0175, SYD0176

GRAFCAT V1.9

This program prints a visual catalog of your image files, with sixteen to a page. Drives all LaserJet and PostScript laser printers, and works with any mixture of GIF, MAC, and IMG files.

Special Requirements: Laser printer.

Disks: SYD0175, SYD0176

GRAPHIC WORKSHOP v1.9

If you need to convert GIF or PCX files for inclusion as half-toned art in desktop publishing, or use MACPAINT pictures for WORDPERFECT then try this program -- the last word in image programs.

It converts, prints, views, dithers, transforms and halftones: MACPAINT, GEM/VENTURA, IMG, GIG, TIFF, WPG, MSP, and ESP files. Batch processing is featured if you need to convert many files. Extended and expanded memory are supported. It has an intuitive user interface, and easy-to-follow menus. With GRAPHIC

WORKSHOP, you can even convert colour image files into superb black and white clip art for desktop publishing.

Other features include the ability to Rotate image files in 90 degree increments, Flip image files horizontally and vertically and Print to most laser and dot matrix printers. Support for IFF/LBM files allows pictures which originate in Amiga and Deluxe Paint files to be converted into more common PC formats.

Special Requirements: None.

Disks: SYD0175

COMPUTER PROGRAMMING

'C' COMMUNICATIONS LIBRARY V1.0

The C COMMUNICATIONS LIBRARY is an asynchronous communications library designed for experienced software developers programming in Microsoft 'C' or Turbo 'C'.

Sixteen communications functions as well as six support functions are provided.

Communications rates from 300 to 115,200 baud are supported. The Receive queues are adjustable from 8 bytes to 16KB. All four ports, COM1 through COM4, are supported. (Most libraries only provide support for COM1 and COM2.) Additionally, two ports can be run concurrently.

The 'C' COMMUNICATIONS LIBRARY provides complete modem control and status.

Eleven different communications errors can be trapped and reported. There is even support for the CTRL-BREAK error exit. The library supports all memory models and was written in optimized assembly language for small size and fast speed.

The source code for a simple terminal emulator program is provided as an example of the use of the library functions. This sample program can be used to call up bulletin board services and mainframe computers, or even to build a specialized communications interface for your application.

The 'C' COMMUNICATIONS LIBRARY can be called from any language that supports the C-language calling convention and FAR arrays and functions.

Special Requirements: C compiler and modem.

Disks: SYD0174

NUMERICAL RECIPES IN PASCAL

This NUMERICAL RECIPES PASCAL SHAREWARE DISKETTE contains Pascal procedures originally published as the Pascal Appendix to the FORTRAN book NUMERICAL RECIPES: THE ART OF SCIENTIFIC COMPUTING by William H. Press, Saul A. Teukolsky, Brian P. Flannery, and William T. Vetterling (Cambridge University Press, 1986), and test driver programs originally published as the NUMERICAL RECIPES EXAMPLE BOOK (PASCAL) (Cambridge University Press, 1986).

The procedures on this diskette are translations from FORTRAN. Subsequently, new versions of all the procedures have been written in native Pascal.

Special Requirements: None

Disks: SYD0173

Worth Repeating

It is not the function of the government to keep the citizens from falling into error; it is the function of the citizens to keep the government from falling into error. -- Justice Robert H. Jackson

Mother nature is providential. She gives us 12 years to develop a love for our children before turning them into teenagers. -- William A. Galvin

TRS-80 Word Processors

by Ivan KENNEDY - SYDTRUG M137

In an earlier article, I promised to write a series on the really capable programs available for TRS-80 computers (particularly the Model 4). So far we have looked at PROFILE 4+, the excellent database manager (see "SYDTRUG News", September 1991). At least one club member told me he found that article helpful and, encouraged by it, he has now set up his own User Menus, that allow single key-stroke performance of the most complicated database => spreadsheet tasks for financial analysis, etc. It's good to have feed-back. Another member has asked me to indicate whether programs I discuss for the Model 4 run on the TRS-80 Model I and Model III machines. I have never used a Model I or a Model III, although my Model 4's have been run as Model III's on numerous occasions, and also very occasionally as Montezuma CP/M machines.

My friend, Graham Read, has several Model III's, one of which he bought for \$3,000 or so in the early 1980's when it was the best available. Others, he has been given. He is now moving over to Model 4's, but expects to keep his Model III's for process control, etc., using Alpha Products boards that can be interfaced through the I/O bus to the Z-80 (recently, we bought \$1,000 of such products for our research work - but more about that later when the systems are up and running). The Model III is a pretty dependable computer, like the Model 4, hardly requiring service at all, apart from routine disk drive maintenance or in upgrading. This means I have some acquaintance with Model III operating systems and programs.

So I will keep this request in mind and mention the older TRS-80s where I know of them. Some regular club members also run System 80s, the Dick Smith Model I clone. I expect that these machines run whatever runs on the TRS-80 products. Certainly, Errol Rosser's old System 80 had a very extensive range of programs. Incidentally, I did say in the earlier article that PROFILE 4+ will run on the Model III with LDOS. Of course, it is PROFILE 3+ that runs here, a program almost identical, I believe, to the Model 4 program. Both were designed to run on hard drives if available.

In this article I want to talk about TRS-80 word processors. These days, WordPerfect and WORD on MS-DOS and Macintosh machines are the most commonly used programs, with WordStar having vacated its preeminent role on MS-DOS computers. But people who are interested in processing text without a fuss about screen features will be well served by TRS-80 programs. And these users have a wealth of excellent programs to choose from. I suppose this is the most common use of microcomputers. I am familiar with several of the TRS-80 programs available and have copies of most of them. But the only ones I have used routinely have been SuperScript and ever since then, ALLWRITE. This fact will doubtless affect my assessment of the programs available. Word processing is also rather personal, with the needs of each user being different. What is best for one may not be for another and you're likely to quickly buy an argument if you choose one above all others. Having said that, I can say that for my money, ALLWRITE is the most able and the best matched to my needs. Each TRS-80 user must make up his/her own mind on this score. To help assess them, however, I'll give a brief summary of their capabilities. But remember, for most purposes, ALLWRITE is outstanding. Ask our editor. (But even he has the odd criticism of ALLWRITE).

Certainly, don't assume that the big-name MS-DOS/Mac programs are better than the array of TRS-80 programs. Far from it. In my opinion, the TRS-80 programs have a significant advantage in that they are relatively easy to learn, and they have a minimum intellectual overhead requirement when you've actually got them in use. I find that the very capable MS-DOS programs are becoming so complex that a tremendous effort is required to fully master them. It can leave you exhausted with less to put in the actual task you've set. As a result, you end up using fewer programs than you would have on a TRS-80 computer and you could be no better, or even worse, off. That is my view.

This is why I will never give up using ALLWRITE for my writing. Roy Soltoff complained mightily recently when he 'upgraded' with WORD for WINDOWS on his MS-DOS machine from his WORD 4 software. The update was so different, it was like learning a completely new program and it held him up for weeks. He offered as justification the fact that the new system could do an excellent job of preparing a Table of Contents and an Index (but ALLWRITE could do that as well or better seven years ago!). The moral is, unless there is a very significant advantage from changing to a new program or a new system, don't do it.

The word processing programs that were written for TRS-80 computers cannot all be discussed here. There simply isn't room. The main ones that I know something about are listed in the follow-

ing table. Some readers may be disappointed to see other programs they know of (e.g. Electric Pencil) not listed. So be it.

WORD PROCESSORS FOR TRS-80 COMPUTERS

Program	Printers	Capability	Support	Available
Scriptsit (M1,3,4)	DW,DM	Adequate	No	No
SuperScriptsit (*)	DW,DM,LSR	Very good	No	No
Lazywriter (M1-4)	DW,DM	Very good	Yes	Maybe
WordStar (M3)	DW,DM	Good	Never	No
Typitall	DW,DM	Good	Maybe	Yes
DotWriter (M1-4)	DM	Good	No	No
LeScript (M1,3,4)	DW,DM,LSR	Excellent	Yes	Yes
ALLWRITE (M1,3,4)	DW,DM,LSR	Outstanding	No	Maybe
Script (M3,4)	DW, DM	Very good	Yes	Yes

Printer drivers: DW=Daisy wheel; DM=Dot matrix; LSR=Laser

Of these, only LeScript (Anitek) and the new Script (David Goben/CN80) are currently supported. ProSoft seems definitely to have abandoned its support of ALLWRITE, although a few copies may still be held for sale without support by Cornucopia Software (\$US64.99 + Postage, 1625 Beverly Place, Berkeley, CA 94707, Tel 1-415-528-7000 - Visa, MasterCard). Scriptsit and SuperScriptsit were Tandy products. If you can get a copy, Scriptsit can be upgraded from a fairly limited capability (but adequate for letter writing, etc.) with PowerSCRIPT (Misosys, P.O. Box 239, Sterling, VA 22170-0239, U.S.A.) to give it more of the capabilities of advanced word processors.

Scriptsit and Typitall

Scriptsit was Tandy's original, with very few advanced features, although its simplicity was a plus for many. It was the first I ever saw, amazing me with its ability to scroll horizontally. Scriptsit was copied in Typitall, which was also provided with many of the features that more demanding users seek, such as form letters and mail merge. Typitall is also unique in being able to support spooling of its printer output, so that your word processing can be multi-tasking. Typitall (a product of Howe Software) is available from CN 80.

Lazywriter

LazyWriter, first appearing on the Model I in 1980, seems to have some nice features and used to be beloved by our late esteemed club member, Cliff Richards, before he went over to WordPerfect and MS-DOS. John Pearce, our illustrious club member (how about another article, John?), also swore by it, while he had his Model 4 until he, too, chose to use WordPerfect on an IBM compatible. Up to a couple of years ago, John prepared first rate newsletters, using Lazywriter to write files to run DotWriter. LazyWriter, uniquely, has built-in RS-232 communication facilities that enable you to send text or receive it while processing. It also has some limited graphics and calculation facilities built-in and seems to be easy to use. Although I'm not sure, it may still be possible to communicate with its authors (Alphabit Communications, 13349 Michigan Ave., Dearborn MI 48126, U.S.A. - author, David Welsh).

WordStar

I have a copy of WordStar that I used a bit when I wanted to interchange files with a friend who had the same program on an IBM-compatible. It was apparently going to be sold by Tandy in the U.S. but was never really pushed. This particular version runs on LDOS, and certainly behaves like WordStar, though not as capably as the latest versions for MS-DOS computers. However, this program is not recommended, and you'd be hard pressed to find it in any case. A second version of WordStar runs on the Model 4 under CP/M. I also have a copy of this and it appeared to be more or less identical to the LDOS version. If you like to use CP/M (Montezuma Micro CP/M is still available from CN-80), this is probably the word processor you will have to use, although LeScript was also available in a CP/M version at one stage.

SuperScriptsit

SuperScriptsit has its strong supporters, including Computer News 80, one of the last remaining magazines supporting the TRS-80 computers. They use it to produce their fine magazine copy. David Goben has recently written LaserJet drivers for SuperScriptsit, enabling it to keep up with the latest printer technology. These drivers are available from CN-80 for \$US20. I started with a copy of SuperScriptsit when I bought my first Model 4P, and to be frank, I rather liked it, particularly the ruler at the bottom of the screen that was able to indicate accurately the line length even when you were preparing proportional text. It also provides lots of menus that provide help in its use. It takes a little while to learn but it has lots of help screens.

Some people have used SuperScript without serious problems for many years. But my experience was that having a very careful attitude to backing up of your files was essential. On at least three or four occasions over 12 months or so, I had serious file access problems that at the very least resulted in loss of formatting. The main problem with SuperScript may be the procedure for disk storage. It uses a linked list approach, so that any modifications of the text are not actually corrected directly on the disk file, but added sequentially as a new block of code that replaces an earlier one. This results in a very complex file if extensive editing is performed. So complex is it, in fact, that the Z-80 chip sometimes loses its way in file saving, retrieval, etc. If a problem does occur, the file structure is so complex that reconstructing the document is almost impossible.

I wouldn't recommend SuperScript unless your word processing is fairly straightforward. It's a program that does a lot of disk access, keeping only a small section of the file in memory at any one time. This has the advantage of allowing long files up to about 170Kb, avoiding the problem of limited memory in a 64Kb microcomputer. However, the unusually large amount of disk access necessary is probably the main reason for the occasional glitch that I observed. But if you only have documents that don't require extensive editing, SuperScript is certainly still a very serious program receiving some support from user groups if not from Tandy. It's probably as close to WYSIWYG that we're going to get on TRS-80 computers. It achieves this by hidden formatting codes that are revealed and selected in the status line at the bottom of the screen.

LeScript

This is a serious word processor that some claim to be the best available for TRS-80 computers. If you qualify this by author-supported program, this claim is probably correct. Gary Shanafelt has written in The Misosys Quarterly that he prefers it to ALLWRITE, but I didn't find his reasons convincing. I suspect this is very much a case of, what you begin with you sometimes like best. LeScript also gives the fanciest screens in the TRS-80 line, such as in its dynamic flashing indicators for sub- and superscripts or italics, and it even accesses the high resolution screen for line or box drawing in the later versions. Like ALLWRITE discussed below, it controls printers by codes in the text. It is also available for all TRS-80 computers and is the only one available for MS-DOS computers. This may be an important factor for some. It also supports a vast range of printers and gives excellent printer control, now (Version 1.9 up) including the HP LaserJet (but not the HP DeskJet family of printers).

LeScript would also be favoured by French users of the Model 4 computer, since it supports a French (AZERTY rather than QWERTY) keyboard and even had Help and screen functions in French in the standard program (Ver. 1.7) earlier, but not in Ver. 1.9. You invoke the French keyboard when the program is loaded with LSCRIPT % <Enter>. Both of my Model 4Ps must have the ROM with the European character generator.

In earlier versions, LeScript was criticised for slowness, particularly in its MS-DOS form. This is no longer the case and it is quite a snappy word processor from version 1.9 up, at least with small files. Unlike SuperScript, it keeps the whole file in memory and is very aggressive about accessing available memory. In fact, it is capable of handling a file up to 3 megabytes in size (1,500 pages of text) if you've got about \$750 to spare for extended memory (1 meg HyperMem plus 2 meg Megamem, available from Anitek), have enough floppy disks to hold it and are patient enough to put it together. It could be good when the Model 4 is able to handle a CD-ROM drive (bound to happen eventually), but for the time being, such a large file is abnormal. However, it does mean that you can have the program, your file and a spelling checker all in memory at once, making correction very faaaasssst indeed. XLR8er or extended memory owners would benefit, though, from ease of access to this memory using LeScript.

None of the other word processors are capable of accessing memory above 128K as LeScript is, and only ALLWRITE of the others can even go above 64Kb (it can use the upper 64Kb for storing two 30Kb files, giving three in all).

Whether having access to so much memory with LeScript is really an advantage is up to each user to decide. I am perfectly satisfied with ALLWRITE's method of linking files of up to 30Kb each, enabling one to print a document as long as you wish spread across many disks, but with no more than 30Kb in memory at one time. From my own experience I can state that ALLWRITE'S soft key (<CLEAR &>) makes it possible to step through a document totalling 600Kb in about 40 seconds, enabling a mass search and replace in less than a minute on a half megabyte document. I suspect that this would be much faster than attempting to do the same

task using LeScript. I also understand that LeScript runs more slowly with large files, so that even a half Mb file may be something of a monstrosity. Please let us know, if you have experience with such large files.

ALLWRITE

That brings us to ALLWRITE. As you will gather from reading other articles I have written, I can hardly extol its virtues too much. This program was modelled by its author on the Unix TROFF formatter, and uses control codes on separate lines in the text to control various printing functions. LeScript also does this, as mentioned above. But ALLWRITE is particularly flexible because its editor and printing formatter are separate programs, controlled by /DEF default files and /TAB files that allow extensive user choices of types of printer, print formatting, character set (font) selection, macro keys for involved task sequences ("soft keys") etc. Considering that it was more or less complete in 1984, ALLWRITE has been a truly remarkable word processor for TRS-80 computers. It can be run on IBM compatibles, but only if you own PC-III or PC-4, the excellent TRS-80 emulator programs from HyperSoft. (By the way - if ever proof was needed about the very logical, orderly basis of TRS-80 computers (MIII and 4), these emulators provide it.) SuperScript is also said to run on PC-4, but LeScript wouldn't be able to, since it addresses the hardware too directly. LeScript in its latest versions also has many of the features of ALLWRITE, but these are built-in in a way over which the user has no control. It's worth observing that an MS-DOS version of LeScript is available.

I swear by ALLWRITE, having recently used it to prepare some very pleasing camera-ready copy in Century and Chancery fonts for a 250-page book to be published in the new year. This program is capable of automatically preparing Tables of Contents as well as perfectly formatted Indexes, as well as excellent footnotes, page headers and footers, mixing of fonts and so on. As I mentioned above, Roy Soltoff recently suggested that the new WORD for WINDOWS 3.0 was now rather capable in being able to prepare an index from many chained files totalling 600Kb, but ALLWRITE has been this capable for all of the past seven years. And NEWSSCRIPT, ALLWRITE's forerunner, could too, in 1980. So the big boys on MS-DOS and Macintosh computers have been playing catch-up all this time. It is infinitely capable of being matched to printers or downloadable printing fonts and cartridge fonts. Gary Shanafelt and Lee Rice in the U.S.A. have recently given us the tools to achieve this, improving on the initial efforts of ProSoft to provide laser printing from ALLWRITE. (CN 80 is providing these tools for a nominal cost.) LeScript and SuperScript also provide laser printing, but this is limited in that only certain styles of fonts are selectable. Provided you are able to get hold of disk copies of the fonts, HPLASER/TAB files can easily be prepared that include character width tables that allow proportional printing. All LaserJet fonts can be converted to DeskJet fonts by Moody's LJ2DESKJET as well. ALLWRITE is really unique in this versatility.

ALLWRITE is also the most capable TRS-80 word processor in a rather obscure and unexploited area. It can use variables and perform arithmetic in its text. This enabled John Jones, a colleague of Lee Rice, to set up ALLWRITE as an outliner, where text blocks can be automatically assigned priority in a series of indented sections. These can be designated by numbers, or even using lower and upper case Roman numerals. Any text with sequentially numbered items could be set up and coded using such arithmetic, so that new items could be inserted within the text and in printing, the proper sequence of numbers would be maintained. Such capabilities are extremely rare. They have existed in ALLWRITE for obscure reasons, not at all obvious from reading the manual. Possibly, they were for future developments, but ProSoft has decided not to exploit these after all. So it is up to the user to work out how to get the most out of these hidden features. Another advanced feature of ALLWRITE is its capacity to wrap text around tables or spaces for figures using the footnote feature to control the positioning of these large footnotes (see my article in "SYDTRUG News", "In Praise of ALLWRITE" in 1988). The capability of ALLWRITE can be gauged from the menu for its help screen which is by no means comprehensive of ALLWRITE's features (see next page).

From this partial list of advanced features, you're probably thinking that ALLWRITE is a rather complex program that is hard to master. This is far from the truth, because it can be run without using any of its advanced features simply by relying on the default settings. This is the form in which this article is being prepared, since our newsletter editor likes files without formatting codes in pure ASCII text. Thus, text files created in ALLWRITE are completely portable to other editors.

 MOVE CURSOR TO TOPIC, PRESS ENTER. THEN, TO REPEAT, USE"?"

*COMMAND LIST	*CTRL KEY LIST	*CONTROL WORDS	AUTOSAVE
BLANK LINES	BLOCKS	BOLDFACE, DARK	CASE, FLOW
CENTERING	COLOR	COMMAND MODE	CONTROL KEY
CURSOR SHAPES	DIRECTORY	THE ENTER KEY	ERRORS
FILE COMMANDS	FORM LETTERS	GET/MERGE TEXT	HARD SPACE
HELP	HYPHENATION	INDENT	INSERT,DELETE
JOIN, SPLIT	JUSTIFICATION		
MAILING LABELS	LAW DOCUMENTS	LINE LENGTH	LINKED FILES
MARGINS	MEMORY AREAS	MINI EDIT	PAGINATION
PAGE NUMBERING	PAPER CONTROL	PITCH (FONT)	NAMED POINTS
PARAGRAPHS	PRINTING	NUMBERED LISTS	BLOCK PUTFILE
TEXT RECOVERY	REPEAT	WORD REVERSAL	RUN A DOS CMD
SCROLLING	SEARCH/REPLACE	SOFT KEYS	LINE SPACING
TEXT STATUS	SPECIAL SYMBOL	ON-SCREEN TABS	
PRINT-TIME TAB	TITLES	UNDERLINING	PREVIEWING
TRANSLATION			

NEWSSCRIPT was an early version of ALLWRITE that Model I owners no doubt recall. I obtained a manual at one of SYDTRUG's handouts and found that it is quite similar to ALLWRITE, lacking only a few features.

DotWriter is actually a printing formatter similar to ALF/CMD in ALLWRITE, with similar controls. It was sold by the same company, ProSoft, but is probably no longer available. I haven't seen it advertised for ages. However, DotWriter doesn't have an editor (you must use some other editor producing an ASCII file such as ALLWRITE or Lazywriter) and it can only be used with a dot matrix printer, since it prints text as a series of graphics using the bit image mode of the printer. With a little effort, it produces some spectacular output. I have almost 3 Meg of DotWriter lettersets or fonts on my hard drive that provide a very wide variety of printing styles to suit many occasions. These can be accessed from PROWAM's PHRASE application, using a keyboard macro that can be invoked from the DOS Ready line. Fontasy on MS-DOS computers is an IBM-compatible form of DotWriter, using the same ProSoft font library and then some. Dotwriter has around 200 fonts that can be printed for all sorts of purposes such as banners, greetings cards, foreign language characters including Russian, Greek, Hebrew, Etrurian, Tolkien's scripts and any you could care to manufacture using the Model III program, TGEAP. You might even come up with Chinese language fonts (with perhaps 2000 characters stored in 4 font sets of 500 each) if you were prepared to do the work.

Perhaps the main feature of DotWriter is that it runs very quickly, loading each font into memory and sending the bit image of each character directly to the dot matrix printer, using an ASCII file to guide selection of each character. These characters can be magnified, although they then tend to become blocky in appearance when printed. I wrote an article earlier where I explained how it was even possible to display DotWriter characters on the high resolution screen. This is okay for single page output or cards, but too slow a process on the Model 4 for long documents.

Some of the features that one seeks in the most popular TRS-80 word processors are summarised in the table:

Feature	SuperScriptit	LeScript	ALLWRITE
Automatic indexing	No	No	Yes
Chain files for printing	No	Yes	Yes
DOS commands?	Yes	Yes	Yes
Extended memory access	No	Yes, 3 Mb	128K
File size	170K	3 Mb	32K
Form letters	Yes	Yes	Yes
Footnotes	No	Yes	Yes
Hanging indents	Yes	Yes	Yes
Indexed manual?	Yes	No	Yes
Laser printing	Yes, some	Yes, some	Yes
Line numbering	Yes	Yes	Yes
Macro (soft) keys	Yes	Yes	Yes
Multi-column printing	No	Yes	Yes
On-line Help	Yes	Yes	Yes
Printer control	Limited	Yes	Yes
Proportional printing	Yes	Yes	Yes
PROWAM compatible?	No?	In part	Yes
Screen printing	No	Yes	Yes
Spelling check	Yes*	Yes, own	Yes*
Table of contents	No	No	Yes

*Electric Webster, Cornucopia

LazyWriter can perform many of these functions too, though not form letters, multi-columns or line numbering and its indexing is rudimentary. Many users will want a spelling checker with their word processor. You should understand that a spelling check program is not just to correct the spelling of words. More likely, it will find typing errors, and if you like to put your ideas on the screen at a brisk pace, investing in a program such as Electric Webster (available from Cornucopia and which can be configured to run with almost any TRS-80 WP), or LeScript (built-in checker, except for Version 1.9 available for \$US65 from Cornucopia) is a good idea. I have EW with a grammatical corrector also and it's marvellous to use.

If you ask me which word processor I would recommend to a TRS-80 user, I would say choose David Goben's new CN80-sold program Script (Models 1 to 4, all DOS's, \$US37.95) if you want an inexpensive program for simple tasks (it even has a spelling checker, also \$37.95). If you want something more capable but ready to go, with the possibility of continued support and upgrades, choose LeScript. But if you don't mind spending some time organising the program and its accessories such as printer drivers, etc. and you want real power in formatting as close to desk-top publishing as it is possible to go with a TRS-80 computer, you must choose ALLWRITE. You should be able to obtain a copy by asking around to purchase second hand. You will be on your own as far as the manufacturer is concerned, but you will find that many TRS-80 users are working hard to keep ALLWRITE up to date and as powerful as it can be. Expect that a full set of ALLWRITE public domain utilities (900Kb of laser-printing utilities, fonts, etc.) will appear for downloading from TRUG-86 sometime in 1992.

Some Key addresses if you want to purchase:

(Script, ALLWRITE & SuperScriptit Laser fonts, Montezuma CP/H)
 Computer News 80,
 P.O. Box 680,
 CASPER, WY, U.S.A. 82602-068
 Tel. 1-307-265-6483

(Advice on ALLWRITE Laser fonts)
 Dr. Lee Rice,
 Marquette University
 Philosophy Dept.
 Milwaukee, WI U.S.A. 53233

(PowerScript)
 Misosys Inc.,
 Roy Soltoff,
 P.O. Box 239,
 Sterling, VA U.S.A. 22170-0239
 Tel. 1-703-450-4181

(ALLWRITE, LeScript, Electric Webster)
 Cornucopia Software, Inc.
 1625 Beverly Place,
 Berkeley, CA U.S.A. 94707

(LeScript, MegaMem, HyperMem)
 Anitek Software,
 P.O. Box 361136,
 Melbourne, FL U.S.A. 32936
 Tel. 1-407-259-9397

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For Sale

Members wishing to purchase MS-DOS type hardware should first contact:

MICRO EXPRESS

mention SYDTRUG Inc. and quote their membership number. They should be pleasantly surprised by the discounts available to members.

Voice Phone: (02) 484-6507 after 8:00 PM
 FAX: (02) 481-0236

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Worth Repeating

It is not only the most difficult thing, to know oneself, but the most inconvenient one, too. -- Josh Billings

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MS-DOS Novice Nook Sleuth That Diskette

by Roger GILER

[Reprinted from "Voice of the '80", newsletter of the Fairfield County Computer Users Group Inc., 14 Wakefield Road, WILTON CT 06897, May 1988]

Many moons ago, I started a column called "Roger's Ramblings". Well, many bytes have poured over the bus since, and I think it is time to again spout off about very basic things, geared to the newcomers to our club.

At this point, the format that I plan to use is to concentrate on the [MS-DOS commands, maybe one per column. And, space permitting, in order to also allow you to sound more erudite at cocktail (or soda) parties, I will start a glossary, from A to -- hopefully -- Z. This should instill in you the confidence that can only come from using big words, or TechnoSpeak, as our editor calls it.

And now down to brass tacks. It is time for us to start doing useful things with our computer. But how? The programs that we need are on a diskette that may have been bestowed on us by a friend, purchased from Jeff, our shareware provider, or maybe just appeared from nowhere. Right now it is nothing more than a piece of plastic, hopefully replete with fine programs. What's on it? How do we use it?

I will assume that you have found the ON-OFF switch on your computer. When you see the A> on your screen, remove the system diskette that was used to start the machine and put it safely away. Then insert the unknown diskette into the disk drive in exactly the same way and close the disk drive door. If you have a machine with two disk drives, leave the system diskette in drive A and place the mystery diskette in drive B, then type B: <CR> <CR> always means, press the return key). Instead of A> you should now see B> on the screen. The letter indicates which of the two drives is the current drive. In computerese, "current" means the drive which the computer is ogling right now.

Use the DIRectory command to see what is on that diskette. Try it now. Type DIR/W <CR>, in either upper or lower case. The /W means that you want a wide display, rather than a single column listing, so that you can see more on the screen. If all is well, the name of the files will miraculously appear. If not, you will get a message saying "Not ready error reading drive B - Abort, Retry, Ignore?". This is nothing to worry about. Briefly it means one of three things: a mechanical error, an incompatible or unformatted disk, or a special system disk.

I hate to start with trouble, since there should not be any, but let us not put our head in the sand, just in case. As an engineer, I am well acquainted with Murphy's Law which simply states "Anything that can go wrong, will". A mechanical error is usually due to an improperly inserted diskette or the drive door left open. Check it, correct it and press R, for Retry.

Possibility 2 could be that we are trying to read a brand new (blank) diskette, or one intended for another type of computer. And lastly, we may have run across a self-booting diskette, typical of many games, where we do not need our DOS and everything needed to enjoy the program is right on that diskette. In that case we must place the diskette in drive A and reboot (reset the computer by pressing three keys at the same time: Ctrl, Alt and Del). If that is the answer the program will start to run by itself. If not, we will need to reboot again, this time with our system diskette.

Where to start? Assuming that no problem is encountered, we will need to look in the directory list displayed for any hint of helpful files which we can recognise by friendly names, typically, README, README.COM, READ ME.1ST, or READ.ME. These are placed there to explain what the diskette is all about. If these files have an extension of .BAT, .COM, or .EXE, they are executable files. This means that if you type their name, the diskette will eagerly disgorge a wealth of information. There may even be options to print out a whole instruction manual, assuming of course, that a printer is connected to the computer.

Second best, are files with an extension of .DOC, or .TXT. These are files in ASCII - pronounced askey - which stands for American Standard Code for Information Interchange. ASCII is an Equal Opportunity language common to computers of all makes or nationalities. To read these files we need a program. Fortunately, TYPE, one of the internal commands of our DOS is there just for that purpose. If you see a file named INSTRUCT.DOC, just type TYPE INSTRUCT.DOC <CR>, and the helpful data will appear on your screen. If there is too much for one screen, the information will

slither off the top of the screen, as more words come up from the bottom. This is called Scrolling. To stop the flow, press the Ctrl and Scroll Lock keys at the same time. Some keyboards also have a Pause Key which performs the same function with a single key. To restart the scrolling, press any Key.

You might even want to try another MS-DOS command, called MORE which is on the system diskette as MORE.COM. If you type TYPE INSTRUCT.DOC;MORE <CR>, the text will stop at the bottom of each page with the word --more--, and show the next page when you touch any key. The symbol after DOC is the bar shown as "|" (not a colon ":") and obtained with "Shift \". This is using an advanced concept of MS-DOS - complex enough to give goose pimples to any true computer nerd. It is called Piping. A pipe is a connection between two MS-DOS commands, in this case TYPE and MORE. TYPE displays the file on the screen while MORE allows single page viewing.

MS-DOS Novice Nook Learn to Program. Today!

by Roger GILER

[Reprinted from "Voice of the '80", newsletter of the Fairfield County Computer Users Group Inc., 14 Wakefield Road, WILTON CT 06897, July 1988]

I know that, in these modern times, there is no need to know how to do your own programming. There are so many programs available that do almost exactly what you need. The key word here is "almost". Well, almost should not be good enough for a SYDTRUG member. If you have never programmed from scratch before, here is your chance, and if you don't like it, so be it!

We will use BASIC, a simple but extremely powerful language. By the way, BASIC stands for Beginners All Symbolic Instructions to Computers. What I am going to review now works with all computers.

[SYDTRUG News Editor's Note: Roger really should say "MS-DOS computers" when he says all computers. What he says later about Function Keys, certainly does not apply to BASIC on TRS-80 computers.]

The first thing that we have to do is bring up our programming environment from the DOS. Depending on your machine, it could be BASIC <CR>, BASICA <CR>, or GWBASIC <CR> -- <CR> means press the ENTER key. Go ahead, try that! One of these programs is on your DOS diskette. Your screen will then change, tell you that you are in BASIC, the prompt becomes the word OK, and a list of the function key assignments (duties) appears at the bottom of the screen. We will start with a simple program, which will show you first hand, at the risk of offending professionals, how easy it really is. We will calculate interest on a loan.

In BASIC, all lines have a number, and will be executed in numeric order. I will explain each line as we type it. Do not worry if you make an error, the program will flag it when you attempt to run it, and you will have a chance to make corrections by editing your entries. Enter in either upper or lower case:

```
10 INPUT "Principle Amount "; AMOUNT <CR>
```

The keyword INPUT requests that you enter information into the keyboard. The words between the double quotes " will be printed as is, with a question mark added. Do not use the apostrophe or single quote. AMOUNT is a variable -- a name that we assign to a value in the computer. We could have called it MONEY, or MOOLAH, or just plain M; it is not important, as long as we are consistent.

```
20 INPUT "Yearly interest rate, in % "; RATE <CR>
```

Here we will ask the user to enter the interest, in percent.

```
30 INPUT "Duration of loan in months "; MONTHS <CR>
```

And finally, the computer will prompt for the duration of the loan.

```
40 COST = AMOUNT * RATE / 100 / 12 * MONTHS <CR>
```

This is where the calculation will be made to provide our answer. It multiplies the amount borrowed by the interest rate divided by 100, divided by the number of months per year, times the duration of the loan in months. The resulting value is then placed

in the variable that we have called COST. We could have split the calculation into multiple parts, but we want to act sophisticated. The division by 100 is to convert the percentage to a decimal value.

50 PRINT COST <CR>

Here we will get the answer. Isn't that utterly simple? The keyword PRINT tells the computer to place the information on the screen. Now, let us proceed to the acid test! Touch F2 -- this is the "run" function key. The computer will start asking for input and after you have humoured it for the third time, it will give you an immediate answer. According to Murphy's Law, you will probably get an error message along the way. This indicates that you made a mistake in entering the data, possibly something as simple as a punctuation mark. The computer will show you where. Use the cursor, and the Ins and Del Keys as needed. Make sure to <CR> after correcting each line, then try F2 again. One comment: do not use a comma when entering your value for the amount or you will get an error message telling you to enter it again.

You now qualify as a programmer. Of course, it does not look elegant, but it works! So let's spiffy it up a little. Type on another line, anywhere:

5 CLS <CR>

All this does is clear the screen before you start. And because the screen is cluttered, let us add a blank line just before we get the answer. So type:

45 PRINT<CR>

Now get a new listing by touching F1 <CR> and watch how the computer has put your instructions in the right order. Just run it again with F2. But maybe you would like to make more than one calculation, so we will loop around and do this by adding a line:

70 GOTO 10 <CR>

Here we are telling the program that when it reaches line 70, it should go back to the first question, or if we desired to clear the screen, we would just send it to line 5. However, since we want time to see the answer, we will make it wait for us to touch a key with a fake INPUT command:

60 INPUT "Press <CR>"; Z <CR>

Unfortunately, the computer now will continue asking for input forever, and give us answers, unless we give it a way out. We will do that by telling it that if the value AMOUNT is equal to zero, which means that we did not enter a value for the amount, it should quit by going to line 100, the end of our program:

100 END <CR>

15 IF AMOUNT = 0 GOTO 100

Note that this is a zero, not an upper case O. Now list again with F1 and run with F2. Save your masterpiece for posterity with the F4 key. You will have to give it a name, up to eight letters long such as INTEREST, and the program will be stored on the default drive. To retrieve it, in order to amaze 'your' friends in the future, go to BASIC, as before, touch the F3 key, and type in the name of your file. You can then run it with F2, or list it with F1.

While we're on a roll, let us clean it up just a bit more, so that we can be really proud of our achievements. After all, there are probably too many decimals, and not enough commas -- if you borrow a lot. We will do that with a mask which is a template into which we will plop our numbers. This is not necessary, but try it anyway. Type all on the same line (let it automatically flow to the next line):

2 MASK\$="#####,### at ##.##% for ### months costs #####,###.###"<CR>

A mask is a picture of what we want the data to look like on the screen. Make sure that it is typed exactly as given above, or you may encounter some errors. We will also have to tell the computer to use that mask and what values to dump into it. This will be done with the statement:

55 PRINT USING MASK\$; AMOUNT,RATE,MONTHS,COST <CR>

You might want to insert a few lines in the appropriate places with PRINT or CLS statements preceded by a line number. Suit yourself with those. If we use line 55, we no longer need 50 and can wipe it out by typing:

50 <CR>

Now press F2 to run the program, debug it (make corrections) if necessary, list it with F1, and save it with F4 to have a permanent record of your achievement.

I might want to add that if the computer freezes up because of errors, use the Ctrl and Break keys to escape. Also, to leave BASIC when finished, type SYSTEM <CR> and you will be thrown back to the DOS. That is all there is to programming. If you have a printer, simply replace the PRINT statements with LPRINT.

We have used many computer commands: INPUT entered data, the "=" calculated the results, CLS cleared the screen, PRINT showed us data, IF made a logical decision, GOTO allowed us to loop and we even used a mask to provide sophisticated output. This program is small and not very useful but I hope you can see where it is possible to do far more advanced programming, simply by using these building steps.

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Treasurer's Report for
November 1991

by Tom FOLBY

INCOME:	November	Year to Date
Members' Subscriptions:		
Renewals:	45.00	1,560.00
New: Joining Fees	100.00	240.00
Annual Fees	230.00	565.00
1 year subs in adv.	0.00	45.00
5 year Subs to 1996	0.00	320.00
5 year Subs to 1997	0.00	450.00
	-----	-----
	375.00	3,180.00
Software Eval. Deposit	109.00	143.00
Members' Purchases:		
MS-DOS Shareware	10.00	149.00
P/D Disks	48.00	127.00
Hardware	0.00	131.00
Blank Disks	26.00	389.00
Sundries	18.00	98.60
	-----	-----
	102.00	894.60
Other Receipts:		
Donations	0.00	115.00
Software Eval. Fee	33.00	41.00
Sundries	0.00	5.40
	-----	-----
	33.00	161.40
	-----	-----
TOTAL INCOME	\$619.00	\$4,379.00
	=====	=====
EXPENDITURE:		
Newsletter Costs:		
Printing	135.00	725.00
Postage	0.00	264.01
Other	0.00	51.50
	-----	-----
	135.00	1,040.51
Meeting Costs:		
Rent	50.00	265.00
Purchases for Members:		
Software & Manuals	6.00	206.00
Blank Disks	0.00	787.00
	-----	-----
	6.00	993.00
Admin Costs:		
Advertising	0.00	285.00
Bank Charges and fees	4.55	53.98
Committee Expenses	0.00	15.62
Post and Telephone	9.80	133.16
Photocopier Maintenance	99.00	198.00
General Expenses	0.00	27.40
	-----	-----
	113.35	713.16
Bulletin Board Running	0.00	92.89
Capital Expenditure	0.00	75.00
Sundries	96.76	396.76
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TOTAL EXPENDITURE	\$401.11	\$3,576.32
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New Members

We wish to extend a warm welcome to the following new members of our group. We hope that they will find their membership rewarding. Interaction between members enables us to improve our utilisation of our machines, as it often saves us having to "reinvent the wheel". What presents a problem to you now, may very well have been overcome already by another member, and if you ask, you may well find the answer for which you are looking.

- Julia ALLISON - MINTO (02) 603-7506
- Neil J. CALLADINE - GLENROY - VIC (03) 304-1366
- Gilda F. HAMILTON - BANKSTOWN (02) 708-3825
- Mogens HANSEN - WEST BRUNSWICK - VIC (03) 386-8357
- Horst HOFFMANN - COLYTON (02) 623-6389
- Stephan HOFFMANN - COLYTON (02) 623-6389
- Denise B. MARTIN - MALAK - NT (009) 27-4306
- Cesar MIRANDA - SEVEN HILLS (02) 831-8450
- Brian D. ROSSER - YASS (062) 26-1722
- Geoffrey THOMPSON - WYOMING (043) 23-2708
- David L. THORNE - BACCUS MARSH - VIC (053) 67-5434
- Colin C. WALE - CONCORD WEST (02) 736-2557
- Sandra M. WALE - CONCORD WEST (02) 736-2557
- Una May WELLS - WESTON (049) 37-4640

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How to Catch an Elephant

by Peter THEOBALD

[Reprinted from "Hawtug News", newsletter of the Hawaii Tandy Users Group, 366 Elelupe Road, HONOLULU HAWAII 96821, MAY 1991 where it was reprinted from PC Connection, April 1991, where it was reprinted from Westchester PC News, March 1991]

Here is submitted a bold new proposal for matching High-technology people and professions.

Over the years, the problem of finding the right person for the right job has consumed thousands of worker-years of research and millions of dollars in funding. This is particularly true for high-technology organisations where talent is scarce and expensive. Recently, however, years of detailed study by the finest minds in the field of psychoindustrial interpersonnel optimization have resulted in the development of a simple and foolproof test to determine the best match between personality and profession. Now, at last, people can be infallibly assigned to the jobs for which they were truly best suited.

The procedure is simple:

1. Each subject is sent to Africa to hunt elephants.
2. The subsequent elephant-hunting behaviour is then categorised by comparison to the classification rules outlined below.
3. The subject should be assigned to the general job classification that best matches the observed behaviour.

Classification Guidelines

Mathematicians hunt elephants by going to Africa, throwing out everything that is not an elephant, and catching one of whatever is left. Experienced mathematicians will attempt to prove the existence of at least one unique elephant before proceeding to step 1 as a subordinate exercise. Professors of mathematics will prove the existence of at least one unique elephant and then leave the detection and capture of an actual elephant as an exercise for their graduate students.

Computer scientists hunt elephants by exercising Algorithm A:
Algorithm A:

1. Go to Africa.
2. Start at Cape of Good Hope.
3. Work Northward in an orderly manner, traversing the country alternately East and West.
4. During each traverse pass:
 - a. Catch each animal seen.
 - b. Compare each animal caught to a known elephant.
 - c. Stop when a match is detected.

Experienced computer programmers modify Algorithm A by placing a known elephant in Cairo to ensure that the algorithm will terminate.

Assembly language programmers prefer to execute Algorithm A on their hands and knees.

Engineers hunt elephants by going to Africa, catching gray animals at random, and stopping when any one of them weighs within plus or minus 15 percent of any previously observed elephant.

Statisticians hunt the first animal they see N times and call it an elephant.

Consultants don't hunt elephants, and many have never hunted anything at all, but they can be hired by the hour to advise those people who do.

Operations Research consultants can also measure the correlation of hat size and bullet colour to the efficiency of elephant hunting strategies, if someone else will only identify the elephants.

Politicians don't hunt elephants, but they will share the elephants you catch with the people who voted for them.

Lawyers don't hunt elephants, but they do follow the herd around arguing about who owns the droppings.

Software lawyers will claim that they own an entire herd, based on the look and feel of one dropping.

Vice presidents of engineering and research and development try hard to hunt elephants, but their staff are designed to prevent it. When the vice president does get to hunt elephants, the staff will try to ensure that all possible elephants are completely scattered before the vice president sees them. If the vice president does see an elephant, the staff will:

1. Complement the vice president's keen eyesight and,
2. Enlarge itself to prevent any recurrence.

Senior managers set broad elephant hunting policy, based on the assumption that elephants are just like field mice, but with deeper voices.

Quality assurance inspectors ignore the elephants and look for mistakes the other hunters made when they were packing the Jeep.

Salespeople don't hunt elephants but spend their time selling elephants they haven't caught, for delivery two days before the season opens.

Software salespeople ship the first thing they catch and write up an invoice for an elephant.

Hardware salespeople catch rabbits, paint them gray, and sell them as desktop elephants.

Validation

A validation survey was conducted about these rules. Almost all the people surveyed about these rules said they were valid. A few said they were invalid. Based on the survey, a statistical confidence level was determined: Ninety-five percent of the people surveyed had at least a score of 37% in Statistics.

Acknowledgment

This study has benefited from the suggestions and observations of many people, all of whom would prefer not to be mentioned by name.

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Hash Code Computation

by Jim SMITH

[Reprinted from "MICROBITS", official newsletter of New Zealand TRS-80 Users Group Inc., P.O. Box 19000, AVONDALE AUCKLAND 7, NEW ZEALAND, May 1991]

The problem of how hash codes are created has been mentioned in recent issues of "Microbits" and in the April issue there appeared an Assembly Language program for computing a hash value from an 11-character file name.

This program is repeated here (some comments changed):

```

LD      B,11      no of characters to hash
LD      C,0       zero hash register
LOOP   LD      A,(DE)  get one character of name
      INC      DE      go to next character
      XOR      C       use XOR operation on A and C
      RLCA     perform a rotation
      LD      C,A     new value in hash register
      DJNZ    LOOP    repeat for all characters
      LD      A,C     put hash value in A register
      OR      A       don't allow zero
      JMP     DONE    exit
      INC     A       change a zero to a one
DONE   exit
    
```

What does this program actually do?

Let us carry out the instructions step by step for a particular filename, say, A. We require first to add ten spaces to give an 11-character name.

Load register B with 11 to count the number of passes through the loop.

Load register C with the 8-bit number zero. C is 00000000

Load register A with the first character, A, which has an ASCII value 65, converted to an 8-bit number. A is 01000001

The exclusive OR operator, XOR C, examines the corresponding bits in turn of A and C. If the bits are the same, the result is 0: If different, the result is 1. The answer is put in A. A is 01000001

RLCA stands for Rotate Left Circular A. The bits in A are moved to the left, the first bit being put at the end. A is 10000010

Register C is loaded with this value of A. C is 10000010

DJNZ LOOP decreases register B by 1 and if B is not zero a jump is made to the line labeled LOOP.

Load register A with the next character of the filename, which in this case is a space, ASCII value 32. A is 00100000

The effect of XOR C is to change the third bit in C and put the answer in A. A is 10100010

Rotate again. A is 01000101

Load into register C. C is 01000101

Since in this example all subsequent characters are spaces, the routine is the same for each pass through the loop. The XOR C instruction changes the third bit in the number from 1 to 0 or from 0 to 1 and the RLCA instruction rotates the number.

After the third pass,	C is 11001010
After the fourth pass,	C is 11010101
After the fifth pass,	C is 11101011
After the sixth pass,	C is 10010111
After the seventh pass,	C is 10010111
After the eighth pass,	C is 10011110
After the ninth pass,	C is 01111101
After the tenth pass,	C is 10111010
After the eleventh pass,	C is 00110101

This number is now loaded into register A. If the result happens to be zero, 1 is added.

[SYDTRUG News Editor's Note: Some readers may be confused by a typographical error which appeared in the original text and has not subsequently been corrected. The original source for the Z-80 code was "MICROSOFT BASIC DECODED & OTHER MYSTERIES for the TRS-80" by James Farvour, published by IJG. One can only suppose that Jim Farvour was familiar with 8080/8085 Assembly language, because the JMP instruction which is shown above belongs to that language and not to Z-80 Assembler. The instruction which should be shown is, of course, JR NZ,DONE. In the event that the hash value was NOT zero the program would proceed directly to the code labelled DONE. If the hashcode was zero then the accumulator would be incremented making the hashcode 1.]

In our example, the hash code is 00110101 in binary, which converts to the hexadecimal number 35.

Thus the hash code for filename A is 35.

To check this result, load SUPERZAP and use the function DNTH, which stands for Display Name/Type Hash code.

Answer File Name with A and for File Type press <enter>. The result comes out:- 35

The hash code for any other filename can be worked out in a similar manner. It becomes rather laborious, especially when the file name does not contain as many spaces. Let us try getting the computer to do the work for us using a BASIC program.

In Assembly Language the numbers involved are held in the registers as 8-bit binary numbers. In BASIC we use ordinary, i.e. decimal numbers, which will be in the range 0 to 255. The main problem is to find BASIC equivalents of the operations RLCA and XOR.

The first of these, RLCA, can easily be done mathematically. If the first bit is zero, moving the bits to the left will double the value of each bit and hence the number is doubled. If the first bit

is 1, the value of this bit is doubled from 128 to 256 but becomes 1 when demoted to the right-hand end. In this case, we double the number and subtract 255.

The operation XOR can be derived from the Boolean (or logical) operators OR and AND. As explained above, we examine corresponding bits in two binary numbers. results are as follows:-

	Both 0	0 and 1	Both 1
OR	0	1	1
AND	0	0	1
XOR	0	1	0

which leads to the relationship

$$A \text{ XOR } B = (A \text{ OR } B) - (A \text{ AND } B)$$

The BASIC program is now fairly straightforward. Line 20 asks for the filename. Lines 30 and 40 add spaces if necessary to give the required 8 characters. Similarly with lines 50 to 70 for the extension. The XOR operation is in line 110 and the RLCA rotation is in line 120. Lines 150 to 180 convert the result into hexadecimal form for printing.

If you ever have occasion to require the hash codes for a long list of filenames, you will find that this program is more convenient than Superzap, where you have to go back to the menu and type in DNTH for each filename.

```

10 REM CALCULATION OF HASH CODES
20 INPUT"ENTER FILE NAME (WITHOUT EXTENSION) ";A$
30 L=LEN(A$):IF L>8 THEN 20
40 IF L<8 THEN A$=A$+CHR$(32):GOTO 30
45 B$=""
50 INPUT"ENTER EXTENSION. (IF NONE, PRESS <ENTER>);"B$
60 L=LEN(B$):IF L>3 THEN 50
70 IF L<3 THEN B$=B$+CHR$(32):GOTO 60
75 PRINTA$+ "/" + B$
80 A$=A$+B$:C=0
90 FOR N=1 TO 11
100 A=ASC(MID$(A$,N,1))
110 C=(A OR C)-(A AND C)
120 IF C<128 THEN C=2*C ELSE C=2*C-255
130 NEXT N
140 IF C=0 THEN C=1
150 H(1)=INT(C/16):H(2)=C-16*H(1)
160 PRINT"THE HASH CODE IS : "; FOR I=1 TO 2
170 IF H(I)<10 THEN PRINTCHR$(48+H(I)):ELSE
PRINTCHR$(55+H(I));
180 NEXT I
190 PRINT:PRINT:GOTO 20
    
```

FOR SALE - RS-232 Boards

These are brand new, genuine Tandy, TRS-80 RS-232 boards which were obtained as a special deal when Tandy were clearing out TRS-80 stock.

They are designed to fit both Model III and Model 4

There are still a few left but this may well be your last opportunity to get one of these.

Catalogue Number - 26-1148

Price \$22 plus shipping charges where applicable.

For further information contact a committee member.

Worth Repeating

A problem is not solved in a laboratory. It is solved in some fellow's head, and all the apparatus is for is to get his head turned round so he can see the thing right. -- Charles F. Kettering

When a man throws an empty cigarette packet from a car, he is liable to a fine; when a man throws a hoarding across a view, he is liable to be richly rewarded. -- Gov. Edmund Brown of California

Nothing, with the possible exception of a fire or the whistle to quit work, can break up a discussion as quickly as a fellow who actually knows what he's talking about. -- Roy A. Brenner

Exchange Newsletters

Some of what is included in our library. These newsletters may be borrowed by members. Members attending meetings at Sefton should see our Librarian. Other members may apply to our P.O. Box. Postage will, of course, be charged for those forwarded by mail.

August 1991***Adelaide Micro User News***

Newsletter of the Adelaide Micro User Group
G.P.O. Box 214, ADELAIDE S.A. 5001

The RS-232-C Blues - The first of a series of articles arising from some problems experienced by the author:
SAV2FILE/TXT - Mention of a file describing how to get LeScript to output to a disk file:
As Easy As 1-2-3 Version 4 - Review of a shareware spreadsheet which is claimed to be compatible with Lotus 1-2-3:
Sending Control Codes to Printer - For MS-DOS users:
Shadow RAM - About IBM PC and compatible usage of RAM:
Magnetic Disk Storage - Part 1 - Has already appeared in "SYDTRUG News":
More Dots on Your Screen - Mentions a possible solution to the present confusion of "standards" for Super VGA:
What Do You Mean -- G U I ? - Some light hearted comments:
LDOS and TRSDOS 6 Patches - Reprinted from "SYDTRUG News":
The IBM Mouse - Reprinted from "SYDTRUG News":
52 Element KSM Files Under LDOS - A Patch for LDOS 5.1.3 to let you use Shifted as well as unshifted keys for your KSM files:
Test For Model I Lower Case - A simple test for use with the Model I or System 80.

Canberra Micro-80

Newsletter of the Canberra Micro-80 Users Group
18 Callabonna Street, KALEEN ACT 2617

The Battle of the Word Processors - Part 3 - Hopefully the end to a discussion which has generated more heat than light:
AMI Professional - Some additions to his earlier review:
BBS Windows - Edited items from the bulletin board.

Computer News 80

P.O. Box 680, CASPER WYOMING 82602-0680, US of A

Editorial Comments - About support for TRS-80s, from CN 80 and from readers:
News Items - Closing of Tandy's US Computer Centres also Aerocomp. Howe Software now available from CN 80:
Programming Tutor - Part 31 - DEBUG + DUMP:
A Visit With David Gobin - Special Hard Disk Instalment - Part 1:
ED-IT Reviewed - ED-IT is a file editor program for the Model 4:
SMARTWATCH for Model I - A Real Time Clock chip cum socket that piggybacks a ROM chip:
Installation Instructions for SMARTWATCH in a Model III, 4 or 4P - Detailed step by step instructions:
Using LIST - Details of differences in various operating systems:
My Adventures With Hard Disks - Part 8 - Radio Shack Hard Drives and the "Three Wires":
Special Characters On the TRS-80 - Some interesting and often unrealised information:
Open Forum - Letters, questions and, sometimes, answers.

The Voice of FCUG

Newsletter of The Fairfield County Computer Users Group
14 Wakefield Road, WILTON CT 06897, US of A

MS-DOS 5.0 Revisited - Part 2 - Continuing from last month:
Abstract Computing - Reading BBS messages off line. While this refers to a specific board and comms program, the ideas may give you something to think about:
MS-DOS 5.0 Tips 'N Tricks - Some more information:
Windows & MS-DOS 5 - Some notes on compatibility:
ZOOMRACKS - Favourable review of a database from PC-SIG:
A Black Night at the Old Console - A poem:
Bill's Bumbblings No. 65 - LP - A further exercise in linear programming:
Saving Storage Space - Of interest to hard drive users:
Is Bigger Better ? - Questioning the need for huge many faceted programs etc.

"Thuggery"

Newsletter of The Hobart Users Group
P.O. Box 420, MOONAH TASMANIA 7009

Exclusively dealing with their annual meeting.

NATGUG News

Newsletter of the National Tandy & General User Group
6 Houston Way, FROME SOMERSET ENGLAND BA11 3EU

Dorchester Dottings - Mainly about converting Model 4 BASIC programs to run under GW-BASIC:
See What Happens in the String Space - Reprinted from "Bits & Bytes":
More DRDOS - As per the title, plus some personal ramblings:
Differences in NEWDOS 80 Version 2 - Reprinted from "Bits & Bytes":
P.R.O.'s Notes - Reporting on his recent activities:
A Leicestershire Letter - Mainly of local interest:
SCRIPSIT - Reading Tape From Disk Version - Zaps for use with NEWDOS 80:
Everything You Ever Wanted to Know About Floppy Disks - Already appeared in "SYDTRUG News":
The History and Technology of TSR - Already appeared in "SYDTRUG News":
More on CONFIG.SYS & AUTOEXEC.BAT - How his are set up.

National Capital Tandy Computer Users Group

Newsletter of the National Capital Tandy Computer Users Group
P.O. Box 949, ARLINGTON VIRGINIA 22216, US of A

The President's Column - On the problems associated with using the bulletin board as the media for the newsletter:
Microsoft DOS 5.0 - An overview of MS-DOS 5.0:
GeoWorks Ensemble - Reprinted from "Voice of FCUG":
The Myth of Lower Prices - He claims you just get more for the same amount of money:
The Care and Feeding of Computer Geeks - A light hearted approach to a serious subject:
Alleviate Eye Stress Caused by Computers - Reprinted from "WNYTUG News":
Is Windows 3.0 a Threat to Your Computer System ? - Alerting readers to the fact that in some situations Windows 3.0 can trash your hard disk contents:
Device Primer - About the devices available with MS/PC-DOS:
Stop Modem Mess-Ups - How to prevent "Call Waiting" from interfering with communication via a Hayes compatible modem:
Model 100/PC File Transfer - How to transfer files between Model 100 and an MS-DOS machine.

MICROBITS

Newsletter of New Zealand TRS-80 Users Group,
P.O. Box 87082, Meadowbank, Auckland, New Zealand

A Chess Computer Grand Master - Some history of chess playing computers:
A Baker's Dozen - List of files on thirteen disk from 'The File Cabinet':
[C Tutorial] Chapter 12 - Dynamic Allocation.

The Interface

Newsletter of The San Gabriel Valley Tandy Users Group
P.O. Box 6818, BURBANK CA 91510, US of A

The President's Column - Mainly local interest:
A Fast System Drive - 128K Model 4 Memdisk:
Screen Saver - How it can be done in GWBASIC:
PC Hints & Tips - PC Tools, WordPerfect, dBASE and Lotus 1-2-3.

Bits & Bytes

Newsletter of the TRS-80 System 80 Computer Group
41 Montclair Street, Aspley Qld. 4034

Magnetic Disk Storage - Already appeared in "SYDTRUG News":
Why Fidonet - Author explains some of the benefits of participating in Fidonet:
Shadow RAM - Reprinted from "Voice of FCUG":
A Little Gem - About a shareware program to load System modules into High Memory:
Configuring the TEAC FD55GFV 1.2 Meg Drive to Run on the TRS-80 - This drive can also work as 720K.

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