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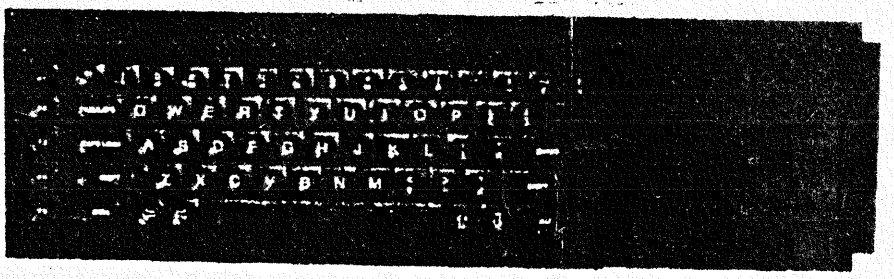
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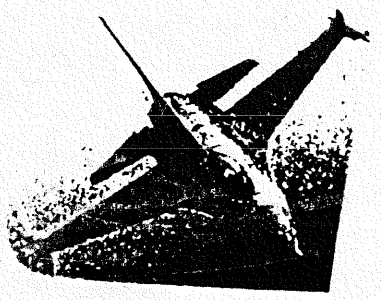
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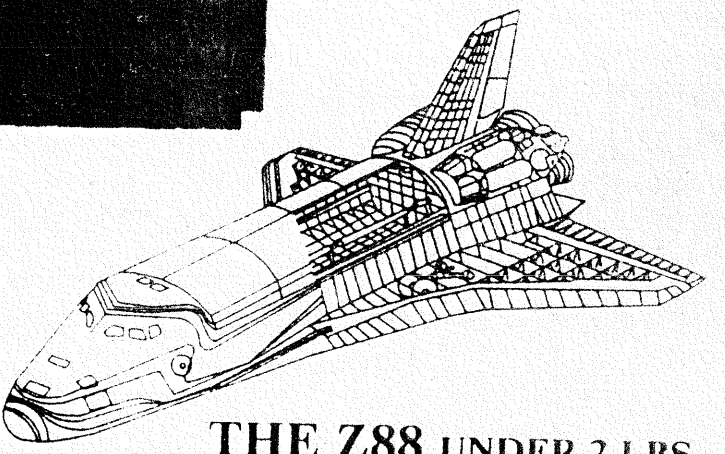
OF

SINCLAIR COMPUTERS

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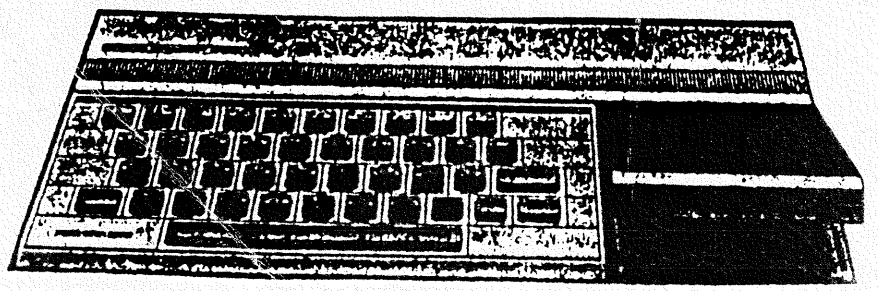




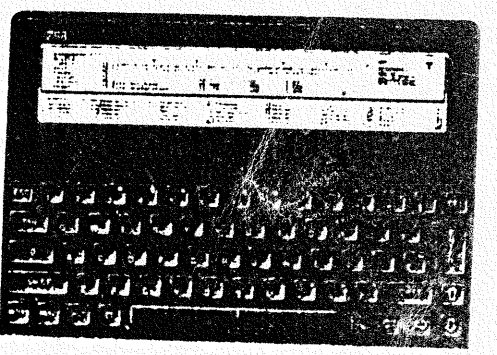


THE Z88 UNDER 2 LBS.

A Computer Without Compromise



The TS-2068 Workhorse



UPDATE COMPUTER SYSTEMS
P. O. Box 1095
Peru, Indiana 46970

NEWS AND NEW PRODUCTS

* UPDATE COMPUTER SYSTEMS *

UPDATE COMPUTER SYSTEMS is Edited and Published by Carol and Frank Davis of P.O. Box 1095, Peru, Indiana 46970. Phone number is 317-473-8031, with normal phone hours being between 5 P.M. and 9:30 P.M. Eastern Time during the week and Noon to 6 P.M. on weekends. When we are not there or unavailable, please leave a message with our answering machine. Unless urgent you will be answered by mail.

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Assistance in Publishing this magazine is provided by Eliad P. Wannum, poet, computer user and all round good guy. The magazine is made possible by the regular contributors such as Peter Hale, Bill Cable, Al Feng, Bob Hartung to name a few, and by the many contributions of other writers and programmers. Your contributions to this magazine are welcome. This is truly a magazine BY THE USER AND FOR THE USER OF SINCLAIR, TIMEX AND CAMBRIDGE COMPUTERS. When we cover other operating systems such as CPM or MSDOS it will be in relationship to our computers or emulators for our systems to run their software. We primarily cover disk based systems and software for the TS2068, Spectrum, QL, Z88...and will cover items on the TS1000 if disk drive based or in relationship to using it with the above mentioneed computers. We do accept reviews of peripherals that are useable by our systems, such as scanners, printers, modems, etc. Submissions should be on disk or hard copy (two copies and at least NLQ, no draft mode). If there is artwork, please let us know in what order it should be used, and provide it as a saved screen or hard copy screen dump. The format is very relaxed. Just pay attention to the width of the pages and allow 3/4 inch top and bottom, and make the left and right margins wide enough to accomodate a 3 hole punch that does not cut out some of the text. We have enlarge and reduction capacity to adjust a page, but may lose some print legibility in the process. Most important is legibility. Draft quality dot matrix does not reproduce well. Print size preference is ELITE 12 characters per inch. PICA 10 characters per inch is okay also, but please no condensed print. Please do not make programs submitted on cassette tape under any circumstance, disk or hardcopy only. Exceptions to this would be the wafers used on the Rotronics Wafadrive for the Spectrum or TS2068 with emulator. Z88 programs on disk may be in either IBM or QL format or hardcopy. TS2068 programs may be LLISTED in 32 chr. lines, but that is not solely necessary, just do not send a copy protected disk that needs to be LLISTED.

UPDATE COMPUTER SYSTEMS PAGE DIRECTORY, JANUARY 1991

The computer that an article concerns is marked by using the following mark at the start of the page number-TS2068 = *,QL = # ,Z88 = % . There will be no mark if the article or ad applies to all or several different computer systems.

Inside Front Cover contains magazine basic information
Page No. 1---Directory
Page No. 2---Editorial by Frank Davis
Page No. 3---Ed Grey Enterprises Ad
Page No. 4---LKDOS Software + Back Issues Update /Bill Jones
*Page No. 5---Hybiscus /Bill Jones
*Page No. 9---Oliger Auto-Menu /Bill Ferrebee
*Page No. 11---Speed Comparison Between 2068 Pascal and Compiled Basic /Larry Kenny
Page No. 12---Sir Clive's Castle BBS /Dave Solly
#Page No. 13---New QL Issue Disk, QLuMSi /Al Feng
Page No. 14---Wanted or For Sale Ads for Subscribers
*Page No. 15---LogiCall V4.3 /Bob Swoger
%Page No. 21---Some More Ideas On How to Create Multiple Columns In Z88 Pipedream /Dave Bennett
*Page No. 22---Oliger Disk Drive BBS Program Issue Disk / Paul Holmgren
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#Page No. 28---A Mail File in Archive /Bob Hartung
Page No. 30---Switching Printer Characters /Bob Hartung
Page No. 32---EMSoft Ad
Page No. 33---Mechanical Affinity Ad
Page No. 34---RMG Ad on Zebra Graphics
#Page No. 35---Merging Archive and Abacus Files /Peter Hale
%Page No. 36---Z88 Fax News-sample-
*Page No. 37---The Sinclair Desktop Publishing Journal /Mike Felerski
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Page No. 45---John McMichael Ad and Bottle Cap Software Ad
Page No. 46---Domino Cubes Ad
%Page No. 47---Datatronics 2400P Modem Review /Dave Bennett
Page No. 48---The GEnie Information Service /Dave Bennett
#Page No. 49---Quanta - Latest Updates on Library / Paul Holmgren
Page No. 50---Public Notice from Jack Dohany
Back Covers ---Issue Disks for TS2068 and QL

FROM THE EDITORS DESK

Greetings to our faithful readers. Once again Carol and I hope that you will find this issue of UPDATES to be worth reading. We have received quite a bit of feedback from quite a few of you. Some of your suggestions we have implemented, where they would be of help to you -such as marking in the directory as to just what computer model an article or program concerns. Check this out and you will see that you can now tell at the directory as to whether an article is for the TS2068, QL, Z88 or of general interest to all three.

There were some suggestions which we could not act upon, only try to be fair. A few people wanted the magazine to be only for the TS2068, and some for only the QL. A few wanted greater coverage for the Z88. What we will be doing, as close as is possible, is to represent the computers our users have and use. This comes out to about 40% TS2068, 40% QL and 20% for the Z88 at this time. As (or if) our readership changes we will try to reflect this. Some wanted us to include cassette based programs for the TS2068. We are open to type-in programs of short to moderate length that are for tape, or utilities and tips that apply to tape or disk, but not for ISSUE DISK PROGRAMS. My own aging cassette decks show less and less reliability after some have been in use for ten years. It is not easy to find a good reliable tape deck that is suited for computer use these days. Disks are far cheaper than cassette tapes and with the savings on that alone one could soon justify an Oliger, Larken, Aerco or other disk drive system. This does not even touch upon reliability or speed. Now I will just slide down off of my soap box and into my easy chair.

Tim Stoddard, what with too many commitments and not enough time, was not able to get his next installment on the Trump Card manual for the QL to us in time. He promises it next issue. He carefully researches each article to insure accuracy and this does take a fair amount of time.

Bill Ferrebee will be giving the magazine a new logo which you should see in the next issue. Bill is quite good at graphics for the TS2068. He is doing a regular column on Sinclairs for the Vulcan Computer Monthly, so check out this magazine by either subscribing or buying it at your newstand. He also has an article in this issue and more on tap for future issues.

Please note what Jack Dohany says in his news release. He is not leaving us; he just needs more time to program for TS2068 and is looking to have other dealers take over the sales of his products.I happen to know that Mechanical Affinity is interested in at least all of them and, I'm sure that RMG will also be, just to name a couple.

We were unable to fit in a few items that have gone onto the planning board for the next issue. These include some real meat on corrections to the TS2068 ROM to produce the type of machine it could and should have been. This is by Bill Pederson of Widjup. He has been slowly getting his health back to at least some extent. I wish his continued recovery. Another item is coverage of the QL and Desktop Publishing. They should both be in the April Issue.

Once again we fell a little behind in our schedule due to equipment problems, our photocopier, which is not easy to get repaired in a small Midwest town with only one repairman. From each little problem we learn. This may be our last delay!

Ed Grey Enterprises' Price List for Spring/Summer '90

Ed Grey Enterprises
P.O. Box #2186
Inglewood, CA 90305
(213) 759-7406

Call The Grey Matter BBS & RCP/M (213-971-6260)

PRICES

Spring/Summer 1990

Timex/SINCLAIR Products:

**Software.....

SPECTERM-64 (TS-4.1) on tape	$12.50	+ $2.50	S&H
SPECTERM-64 (ZX-4.1) on tape	$12.50	+ $2.50	S&H
SPECTERM-64 (TS-4.1) AERCO, JLO, Larken	$12.50	+ $3.00	S&H
MAX-COM Term/BBS SW (LKDOS v 3)	$25.00	+ $3.00	S&H
Loader V (Mterm 2 Enhancer)	$12.50	+ $2.50	S&H
PC-Draw (ver 3.0) on tape	$12.50	+ $2.50	S&H
COLOR2GREY (convert color to greyscale)	$12.50	+ $2.50	S&H

CP/M (2.2/3.0) Software (new).....

WordStar 3.3 (for CP/M-80, 8" disk)	$40.00	+ S&H
Turbo Pascal 3.0 (for CP/M or DOS)	$60.00	+ S&H
MIX 'C' Compiler (for CP/M 2.2, 5.25" disk)	$19.95	+ S&H
MIX Editor (for CP/M 2.2, 5.25" disk)	$19.95	+ S&H

*NOTE: See complete listing of CP/M software available on the (B) file of the (N)ews menu (or send SASE and $1.00).
*NOTE: Add $2.50/ disk to change disk format.
)) All CP/M software: S&H = $5.00 ((

**T/S Specific Hardware.....

QL Used/Tested w/ Cent I/F, cables, SW	$139.95	+ $10	S&H
1520 Printer/Plotter Tested, I/F, all SW	$125.00	+ $7.50	S&H
T/S2068 Used/Tested, CPU/Kybd only	$60.00	+ $5.00	S&H
T/S2068 Tested w/CPU, Manual, PS, Cables	$75.00	+ $6.50	S&H
T/S1500 Tested w/CPU, Manual, PS, Cables	$40.00	+ $6.50	S&H
T/S1000 Tested w/CPU, Manual, PS, Cables	$25.00	+ $5.00	S&H
T/S2050 Modem Tested w/ PS, Specterm-64	$50.00	+ $5.00	S&H
T/S2040 Printer w/ 1 roll paper	$30.00	+ $5.00	S&H
T/S1016 16K rampack	$12.50	+ $3.50	S&H
A & J Microdrive Tested w/ 2068	$50.00	+ $5.00	S&H
GE Cassette Recorder Tested w/ PS	$10.00	+ $3.50	S&H
Z-SI/O BB partially assembled, w/ 2050	$27.00	+ $3.50	S&H
T/S2068 Power Supply Only (Used/Tested)	$12.50	+ $3.50	S&H
Spectrum Computer Users Manual (new)	$10.00	+ $3.00	S&H

NOTE: All T/S hardware is subject to availability.

RS-232 Ribbon Cable	$12.50	+ $2.50	S&H
Dual Disk Drive Cable 30"	$12.50	+ $2.50	S&H
Dual Disk Drive Cable 42"	$15.50	+ $2.50	S&H

Call for prices on ANY other computer cables .....

AERCO Parallel Centronics Printer I/F	$59.95	+ $2.50	S&H
2050 Modem Cards (new, untested)	4/$12.00	+ $3.00	S&H
2050 Modem Power Supplies	$5.95	+ $2.50	S&H
	3/$16.00	+ $3.50	S&H
Keyboards..TI 99/4A, 48 key	$4.95	+ $3.50	S&H
	3/$12.00	+ $6.00	S&H
Disk Drive Power Supply	$12.50	+ $3.50	S&H
+12V @ 2.6A, +5V @ 1.8A			

Disk Drive Cases.....

5.25", HH, single, w/ power supply	$59.95	+ S&H
without power supply	$32.50	+ S&H
5.25", FH, single, w/ power supply	$69.95	+ S&H
without power supply	$35.50	+ S&H
5.25", HH, dual, w/ power supply	$89.95	+ S&H
without power supply	$35.50	+ S&H
5.25", FH, dual, w/ power supply	$94.40	+ S&H
without power supply	$39.95	+ S&H
3.50", single or dual, w/ power supply	$89.95	+ S&H
without power supply	$35.50	+ S&H

Software and Literature

Back issues of Update Magazine: Make your library complete.

1988 Year Issues- Covers TS-2068 only-----$18.00
1989 Year Issues- QL and TS-2068----------$18.00
1990 Year Issues- QL, TS-2068, some Z88---$18.00

Whole 3 yr series--$48.00
Single issues------$ 6.00 ea

Orders to: Bill Jones, 1317 Stratford Ave., Panama City, FL 32404 (Check or MO)

LKDOS SOFTWARE

"Daisy.B6" and "Udbm.B6" are two extensive softwares for LKDOS. The two softwares are fully integrated to be mutually supporting as a complete system. Each are offered separately but can be ordered as an integrated package.

DAISY.B6 --$26.00 Udbm.B6 --$26.00 Both Softwares --$36.00
Bill Jones, 1317 Stratford Ave, Panama City, FL 32404. Specify 40 or 80 tracks)

"Daisy.B6" is an "Administrative" software that provides easy to create Text Data bases with helpful Automatic Administrative Functions (Auto Letterheads, Business Blocks, signature line, and Mail Merge Processing of form letters). The Theme is "Disk Data Base Management" and Automatic Word Processing. (three disks)

"Udbm.B6" is a "Universal Data Base Manager" that allows one to create, manage and Word process all types of data bases that the TS-2068 is capable of handling. Includes three types of SEQUENTIAL FILES Data Bases, "page macros", Screen Macros, paragraph files, Line Files. (two disks)

Between the two programs there are TEN types of Data bases, each flexible to suit user needs. Each of the two programs Word Processes the opposite program's data files, either singly or "Chain Processing" of mixed disk data files. Menus provide cross over between programs.

The following Programs are included, and each will be given separately as UPDATE MAGAZINE ISSUE DISKS as publication space permits in future issues of the magazine.

1. "Dbx.B6", is a RECORD type data base manager and word processor. An independant program to create any type of RECORD File. Used with Daisy to create Mail Merge files. Used alone to create other data bases, print labels from a Disk File.
2. "Cdbse.B6", is a Code ASCII Data File Manager. Directly word processes any type of Code Ascii File. Transforms Chr Arry files to Mscript or Tasword. Transforms Mscript, Tasword, Modem files to Chr Array files for Editing, inclusion in other Dbases, word processing.
3. "Uptr.B6", is a Universal Word Processor that prints 10 types of data files "from disk" automatically. From one to 50 Disk Data files may be printed in any sequence desired, singly or in a continuous document. All you do is INPUT the File names to be word processed.
4. "Macro.B6", is a program to create, edit, color, and print-out SCREEN FILES. Also uses the screen as a data base.

OTHER TS-2068 Disk Systems: As time permits I will convert all of the above programs for operation with Oliger DOS and Aerco FD-68 (if sufficient interest is expressed. Drop me an interest card). -Bill Jones_

*** HYBISCUS ***

A TS-2068 Software System
Five Major Softwares Coordinated
By: Bill Jones

The five Softwares are: ***Daisy.B6, Dbx.B6, Udbm.B6, Uptr.B6, Cdbse.B6,*** and are each independant softwares designed to operate alone or in coordination with each other. All are programmed primarily in Basic with code utilities used as needed where speed is essential. Generally, these softwares make extensive use of the TS-2068 Variable file and the computer's ROM for Data Base and Disk Drive Management. All of the softwares allow easy access to the computer's Basic mode. Basic functions can be performed, and when finished the software can be re-entered.

A range of Disk Management functions are available at menus to allow "Disk Library Management" during program operation, and return to Program Menu. These functions allow us to manage from one to four disk drives "while the software is in use". The functions include: Disk Catalog View or Copy to Paper: Disk File Erase : Screen File view, paint, create, edit, or Copy to paper: Disk Data File View or LPRINT: Data File SAVE: Data File LOAD: Data File Delete. The use of these disk management utilities "without compromise of program parameters" adds immeasurably to the job of Data Base Management, especially for reading orientation during the task of creating a data base or in preparation for word processing.

Concepts of Software Integration

With Disk Drive

Computer memory and disk drive storage are fully coordinated. Disk Data Storage is used as if disk space is an extension of computer memory. Data Files are sent to disk as cumulative segments of the same document. Disk Data files are returned to memory for editing, re-save, or word processing.

The Printer is controlled by each software. Each program makes use of a common utility in disk named "Init.B6" which Merges as needed to Initialize the DOS, the Printer, and to establish a print style. The Init utility is programmed for Epson compatable printers and may be adjusted for other printer makes.

There are two methods used to conserve computer memory in order to provide extended software functions. One is to use the disk to store a plethora of menus that are organized by functions. These full screen menus are "subjective" providing a range of options for the tasks at hand. There are more than a dozen of these menus and their storage in disk reduces the overall computer memory use by the main program, thus providing more software capability and more data management capacity. The right menu for the job task in progress "pops on screen from disk" as needed during program operation.

The second method is to store "sections of the program" in disk, on stand-by, for use by the main program. As functions are elected at menu, the proper "program segment" MERGES to the main program. When its job is fininshed the program segment is DELETED from the main. As an example, the Daisy program has about twenty such program segments stored in disk. Their total size, if added to the main program would exceed the Computer's memory capacity by far. Of course, if the computer's memory were completely filled with such a large program then there would be no space at all to create or manage data.

The combination of these methods allows the Daisy software to be so large and comprehensive that requires two 360K disks to contain the programming. All of the five main softwares use these methods to provide a wide range of both Data Base Management and Word Processing, and maximum data file lengths.

The Five Main Hybiscus Programs

"DAISY.B6" is a software, originally named "Smart Text", that has evolved over a period of about 7 years. When Smart Text out-grew the memory capacity of the TS-2068 the methods described above were used to expand the program still further for the disk drive environment. Thus "Daisy.B6" emerged. The software then became a "Disk Data Base Manager" and Word Processor.

In 1987, as Daisy was being developed, it became the software used for publishing Update Magazine. Publishing brings forth many various needs for both Word Processing and Data Management. As these needs surfaced they were added to the Daisy functions. One such need was "offset word processing", where columns could be printed as masters to be overlayed and copied. This feature, when elected, automatically sets the printer to Condensed style and 50 chr lines. The text file (or files) are then word processed as "alternate columns". Another need was for "Centered Headers" to be automatically printed above or below paragraphs during word processing. This was added with the ability to elect "Large Headers". When large headers are needed the software automatically changes the printer mode to "Double High" characters, center prints the header, spaces down a line, and then returns to standard characters to continue word processing.

The theme of Daisy is to provide automatic

functions to lessen the distraction while Creating Data and to "take over" and accomplish functions that normally require much time to do manually. Automatic Letterhead, Business Block, and signature line support letter processing. Automatic Formatting for Centered Text printing is another feature. Centered Large Headers is another. Mail Merge is still another.

With Daisy we can type the text of a letter and then use mailing lists stored in disk to print the same letter to from 2 to literally hundreds of persons, each letter individually addressed, each with our own letterhead and signature line. And, Daisy will word process any number of disk data files, either singly or in-chain "from disk".

Daisy provides two data base files. The primary data base is a multiple "paragraph file", and the other a data base for creating "Outlines" as in a college class outline having major topics and a group of minor topics of each major.

An "annex" of Daisy is a MERGE program called "usrpgm.B6". This program (in disk) can be modified by the user to schedule "just anything" that is possible to Print-out. Also it is a "sequencer" for disk data files to be chain word processed, and for individual paragraphs within to be sequenced by paragraph. The usrpgm program is normally MERGED to schedule the main text data base(s) for word processing of memory or Disk files "in the existing paragraph sequence". The versatility of word processing can be greatly increased by user changes in the usrpgm program lines.

Daisy also does an outstanding job of printing labels and envelopes. Mail Files created with the next program to be discussed are loaded by Daisy for printing labels or envelopes that are on tractor forms

The "Dbx.B6" Software

Dbx.B6 is a "Records Data Base" and word processor. Originally this software was named "Mail Merge" and has since been expanded to provide Sorting and Search/Find functions as well as "user defined data base dimensions". Dbx.B6 Loads and operates independantly, and it is also MERGED to the Daisy software when selected to create smaller Mail Files to be used for Mail Merge, or to create such files as "Invoice Files". The Record Data base is flexible, in that the user elects the dimensions of the records. For example, a Mailing List may be needed having records of 4 lines and 30 characters per line. Or an Inventory file could be 3 lines of 12 characters per line. Or a set of Invoice files may be 4 lines of 48 characters each.

Sorting: Whatever the file dimensions may be, the file may be selectively Sorted by any line, and by either "first group or last group" within the sorting line. This flexible sorting capability is the key to the data base being adaptable for any type of Records Data Base imaginable.

Search and Find is another function of the Dbx.B6 program. We can input a search word and search any line of the records. When found the entire record is displayed. <Continue> resumes the search and the next Found Record is displayed, or a Not Found report is given.

A word processor is included in the Dbx program. The word processor is used to print-out the whole list, a partial list, or to print Labels or Envelopes on Tractor forms.

Dbx.B6 likely produces the largest data file of any software for the TS-2068. As many as 350 Mail Files (4 lines of 26 chrs per line) may be created. Or an inventory file of 550 Inventory records (3 lines of 20 chrs) can be developed.

But for creating record files to be processed by the Daisy program one must keep in mind that the files could be larger than that program can process.

The "Udbm.B6" Software

"Udbm" stands for "Universal Data Base Manager". This is a new software designed to create, manage, and word process all of the types of data bases that the TS-2068 and the Larken Disk System can manage. Udbm.B6 manages 7 types of data files as follows:

1. Character Array Paragraph Files (Identical to the Daisy.B6 Text File)

2. Character Array Line Files of the user's desired line length.

3. Page Macros: Chr Array Line files of finite number of lines of the user's preferred line length.

4. Sequential Paragraph Files: Paragraphs are sent to an opened Seq file. The file may be from short to enoromous length.

5. Sequential Line Files: Line files of the users desired line length are sent to an opened Seq file in disk. The total number of lines may be from one to hundreds.

6. Sequential Page Macros: Same as Line files except that the program terminates the file when a "page length" is entered.

7. Screen Macro Files: The screen is used to create a formatted data base to be saved to disk as a screen file... Or we can create menu screens and save them to disk.. Or any Screen File in disk may be loaded to be edited, painted, or copied to paper.

The Udbm Software also provides a Word Processor for all of its data files. The word processor pulls data files from disk drive and

processes them either singly or in-chain in a continuous document print-out.

The "Uptr.B6" Software

"Uptr" stands for "Universal Word Processor". It has all of the capabilities of the word processor described with the Udbm program above, plus the ability to Word Process "Mixed Files" of all of the 10 types of files created with the Daisy, Dbx, Udbm, and the Cdbse program yet to be discussed. The Uptr program presents a disk catalog as a menu to input the file names to be word processed. One file name, or up to 50 file names may be keyed in from the catalog listing. Some of these files may be "pre-formatted line files" and others may be un-formatted paragraph files.

As file names are keyed in the word processor "samples" the file and detects if the file is already formatted into lines, and if so, the file's line length is recorded in a buffer to be recalled to set the line length and margins during word processing.

When all file names to be processed are entered into the "scheduler" the program proceeds to word process all files elected, as a single continuous document print out. Line files are printed to paper "in their already formatted" line lengths. Un-formatted files are word processed to the user's input desired line length. Headers are printed if present in the files being word processed. The result is a word processed document that can contain from one to fifty disk data files, all files joined and sequenced in the order selected. The types of files word processed may be:

1. The Daisy and Udbm Text paragraph files.
2. Sequential paragraph files.
3. Sequential Line Files.
4. Page Macro Line Files.
5. Sequential Page Macro Files.
6. The Dbx Record files.
7. The Daisy Outline Files.
8. Code Ascii files that have been transposed into Page Macro Files.
9. Code Ascii Files that have been transposed into Sequential line files.
10. Screen Macro Files.

TEXT ORIENTATION: The use of the "built in" Disk Library manager allows the user to selectively view the data within any disk data file. The Viewing of several files before word processing them can be a big help in selecting the data files to be word processed, and deciding the sequence order for them to be processed. The word processor needs all data files to be "in the same disk". But during operation the disk utilities can be used and if data files need to be transfered one can break-in and LOAD a data file from one disk, then re-save it to the disk to be used for word processing. <CONTINUE> will then resume program operation. Such is the flexibility of choice when operating Basic programs.

The Uptr program word processes such mixtures of Data base files as; Random length two-dimensioned character array files, Random length Sequential Data base files, Record Character array files of three dimensions, Outline "twin character arrays" of two and three dimensions, Page length character array line files, Indefinite length Character array Line Files, Sequential line files, Sequential Page Macro Files, and such files as created by the Cdbse program to be discussed next.

The "Cdbse.B6" Software

"Cdbse" stands for Code Data Base. This is an unusual program that manages Code Ascii files "outside of their home software environment". If there is anything traditional about computer software it is the "exclusivity" of data files, and the inability to process data files "except by using the software that created the data file". Here-to-fore any data file, to be managed, required the data file to be loaded to "The Software that created the file". Indeed, if we intend to manage "just one data file" then the most efficient way to do it is to "Load the software that created the data". But perhaps we may want to manage two or more data files created by Mscript, Tasword, or Mterm.

Tasword files wont dance with Mscript, nor Mterm, and none will associate with the other. (We could relate this to some of the World's social problems, eh?)

Anyway, while publishing Update Magazine there were numerous occasions when there was a need to mingle Tasword, Mscript, and Mterm "Code Ascii Files", and the capability was not present in our vast TS-2068 software library..

"Cdbse.B6" was developed originally and given to public domain as the program named "MS-TAS". That program would "read and word process" any Code Ascii file that was originally created with the Tasword or Mscript programs.

Further needs resulted in the expansion of the original program. Now, Cdbse does much more. There was a need to be able to "join" Code Ascii Files and to word process them "in-chain" with other data base files "of the Sequential files and the Character array Files" varieties. An Editing capability was needed for Code Ascii Files when processing the files "outside of their "Mother's environment". So, two more Annex programs were

developed and the main program was re-named to become "Cdbse.B6".

Cdbse.B6 works on DISK DATA FILES that were Saved by Mscript, Tasword, or Mterm. These are "Code Ascii Files" stored in disk. The composition of these code files is "pre-formatted lines". Each of the files have different ways of separating the lines and formatting between paragraphs.

The Cdbse program gives us a Menu of management options. The first job to accomplish is to LOAD a code file from disk. The Cdbse program LOADS one of these different code files, and then DISPLAYS the text data on screen. We must then examine the displayed text and determine the "Line Length" that the text is formatted to. We only need to see the first few lines of a data file to examine and find the formatted line length. Once the line length is determined, we "Jab Break" to avoid having the whole text file scroll to its end. When we discontinue the viewing of the file, the program prompts for INPUT LINE LENGTH. Then the Menu is returned to screen, and we are ready for the options for processing the data file. The options at Menu are (not in order):

<5> Word Process the Code File. This elective prints the code file in the format that its "mother program" had formatted it (line length and spacing).

<4> Move Code to a Sequential File. This reads the code file being processed into a Sequential File of Lines, in disk, which can be later word processed either singly or "in chain" with data files of 9 other types (The Daisy and Udbm Data Files).

<6> Pagenate File. This elective results in the Code File being processed and changed into either "Page Length" or indefinite length Character array Files of Lines, which also may be word processed singly or in-chain with 9 other Daisy and Udbm data file types.

<7> Codenate a Data Base. This elective "reverses the electives 4 and 6 above. Existing Sequential Files or Character Array files in disk may be loaded and transformed into either Mscript or Tasword Code files to be processed by those two programs. As the files are transformed they are formatted to a desired line length and codes added for recognition by the Mscript of Tasword programs.

Electives 4 and 6 above will provide the capability to EDIT the lines of the transposed Code file, which are now in Character array form. Editing is accomplished by using the Udbm.B6 program.

Hybiscus Availability

All of the Hybiscus softwares (except the long Daisy program) will be published as Tutorial programs in the 1991 issues of Update Magazine, and possibly in User Group Newsletters (in order to hasten the presentation). The articles will be documentation acclumulative to the manual and the extensive HELP files contained in the Five disks provided with the softwares. The Hybiscus ensemble will be split into two Issue Disks, named "Daisy" and "Udbm.B6", and will be made available for ordering. Or, the whole ensemble of five disks and manual may be ordered from me as a package for the price of $38.00.

Previous purchasers of the Daisy Software may return their original disks for replacement with the up-graded Daisy Software for $4.00 mailing costs.

The distribution of this software ensemble is intended to be at the lowest cost possible to defray distribution expenses. As most TS-2068 users know, I am always available for telephone help, and I enjoy talking with other Sinclair Timex users.

Bill Jones. (904 871 4513)
1317 Stratford Ave.
Panama City, FL 32404

The Issue Disks

Two issue Disks are now available from Update Magazine. Please specify for either 40 or 80 Track Drive.

Daisy.B6 Ensemble. For LKDOS Systems only. Includes all programs described in the article except the Udbm.B6 software.
Price: $22.00 post paid.

Udbm.B6 Ensemble. For LKDOS Systems only. Includes all programs described in the article except the Daisy.B6 software.
Price: $22.00 post paid.

Oliger DOS Users who are interested in obtaining this software please send an Interest Card. If at least ten SAFE users express interest a Version will be programmed and supplied.

Issue Disk Orders to: Update Magazine
P.O.Box 1095
Peru, IN 46970

OLIGER AUTO-MENU

by Bill Ferrebee

I have owned and programed on the TS2068 since its introduction. But finally in the past month I have converted to disk drive. I obtained not one, but TWO disk interfaces - OLIGER and LARKEN. Until now I have relied on my lowly cassette recorder.

To avoid "technology shock", I decided to concentrate on learning one T/S DOS at a time. I flipped a coin, and the Oliger system won out.

I'm glad that I did start with the Oliger. The DOS is a natural extension to cassette I/O commands. Simply add a "/" between the command and the filename (ex: LOAD/ "abc"), and the disk interface does the rest. (By the way, the most recent version of Oliger DOS is 2.55)

Instead of waiting 2 - 3 minutes for a program to load, I'm ready to work in 2 - 3 seconds! The Oliger also auto-verifys all SAVEs, so I save even more time!

For a New Year's resolution, I have set a deadline of December 31, 1991 to have all of my software converted to disk. To make the goal even harder to attain, I am only going to use the NMI save when there is no way to break and modify a program.

To start my assult on this challange, I decided to convert all of the programs (except for the Larken utilities) on my BYTE POWER magazine tapes to Oliger format. I also converted their Desktop Publishing package, PRINT FACTORY.

I felt the best way to collect these programs on disk would be by catagory, such as Arcade Games, Graphics, Buisness, etc. With 12 tapes of material to work with (not including PRINT FACTORY), I knew I would end up with full disks for each catagory.

I knew that the Oliger DOS reserves Track 0 for the disk catalog, as well as room to include an Auto-Start menu program. I also wanted my converted disks to run and look as professional as possible. So I devised a very simple, yet good-looking menu system.

The simplicity comes from using INKEY$ to facilitate program selection. It allows almost instantaneous loading of a program, while providing efficient error-trapping.

The professional look comes from the use of a SCREEN$ as the menu itself. The SCREEN$ can be created with any TS2068 graphics program (I used BYTE POWER'S "QUICK SCREEN"). Through the use of a variety of fonts and graphics, an attractive, yet functional menu can be designed.

The listing accompaning this article is the one I designed to use with the PRINT FACTORY package. It can be easily modified to suit your needs. I have also included a few of the "menu" SCREEN$ I created for various disks.

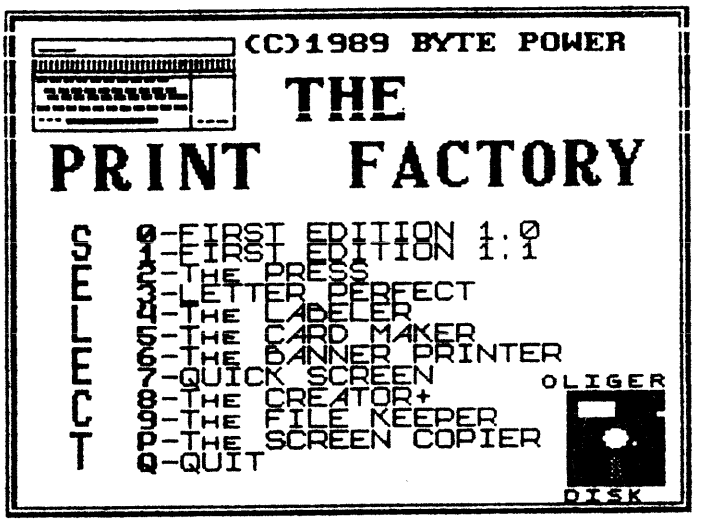
Once you have your listing completed, save it with: SAVE/ 0 . Then it can be loaded with: LOAD [ENTER].

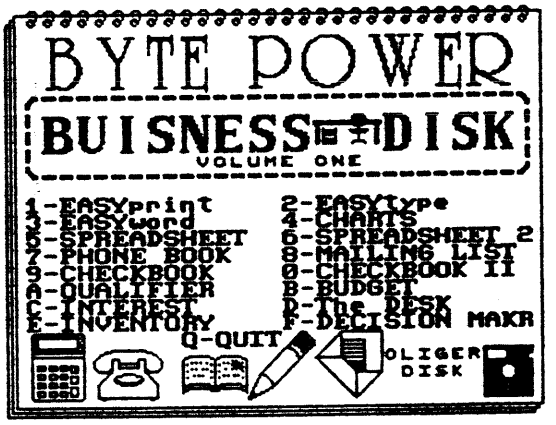
To complete the system, you need to modify each program on the disk to return to the "menu" when you quit a program. Break into each program, and determine where it "quits". At this point, add the command: CLEAR 65535: LOAD . This will reset the computer and reload the menu.

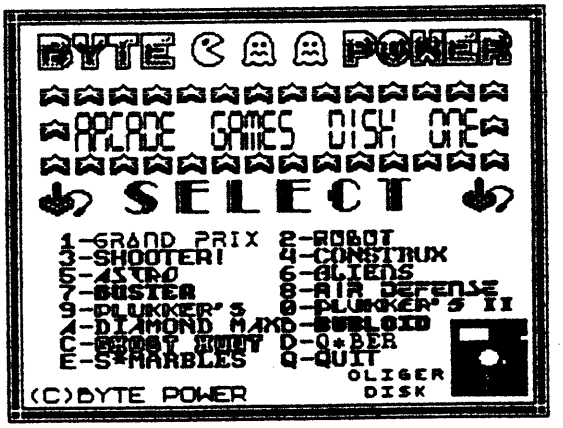
I hope you get as much use out of this idea as I have. Let me see what great looking "menus" you come up with for your disks!

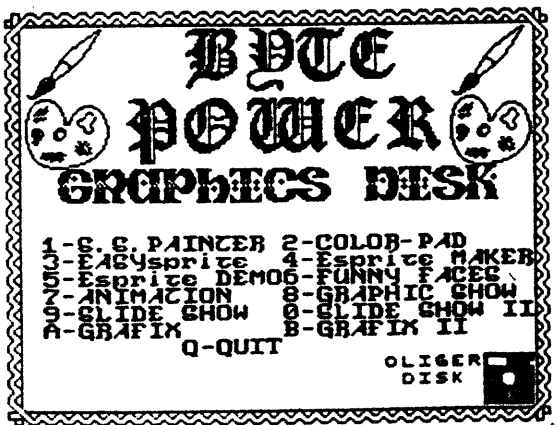
OLIGER Menu Program for 'PRINT FACTORY'

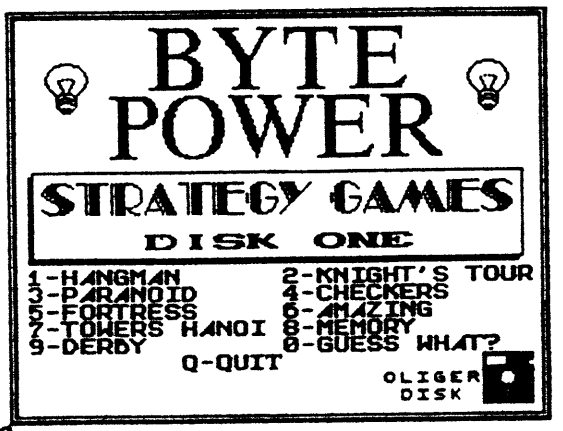
```
 1 BORDER 1: PAPER 1: INK 7: CLS
 2 LOAD /"PFMENU"SCREEN$
 5 IF INKEY$<>"" THEN GO TO 5
 6 IF INKEY$="" THEN GO TO 6
10 IF INKEY$="0" THEN LOAD /"FIRST1.0"
11 IF INKEY$="1" THEN LOAD /"FIRST1.1"
12 IF INKEY$="2" THEN LOAD /"PRESS"
13 IF INKEY$="3" THEN LOAD /"LETTER"
14 IF INKEY$="4" THEN LOAD /"LABELER"
15 IF INKEY$="5" THEN LOAD /"CARDMAKER"
16 IF INKEY$="6" THEN LOAD /"BANNER"
17 IF INKEY$="7" THEN LOAD /"QUICKSCRN"
18 IF INKEY$="8" THEN LOAD /"CREATOR+"
19 IF INKEY$="9" THEN LOAD /"FILEKEEPER"
20 IF INKEY$="p" THEN LOAD /"COPIER"
21 IF INKEY$="q" THEN GO TO 25
22 GO TO 6
25 PRINT AT 21,8;"Are you sure?(y/n)"
26 IF INKEY$<>"" THEN GO TO 26
27 IF INKEY$="" THEN GO TO 27
28 IF INKEY$="Y" OR INKEY$="y" THEN RANDOMIZE USR 0
29 IF INKEY$="N" OR INKEY$="n" THEN RUN
30 GO TO 27
```











SPEED COMPARISON BETWEEN
2068 PASCAL and COMPILED BASIC (TIMACHINE)

by Larry Kenny

Recently, I have been working on using my Timex/Sinclair 2068 to control a 3-axis drilling/routing machine using stepper motors. To make the machine move in arcs and circles I needed to use the sine and cosine functions in the Timex/Sinclair 2068 ROM. After trying some BASIC and machine language (using the floating point interpreter) routines I found that the program couldn't run nearly fast enough to keep the machine busy at full speed.

I asked David Solly, who is a long time HiSoft Pascal user, to write me a test program using its sine/cosine functions so I could test it against Timex/Sinclair 2068 BASIC and compiled BASIC.

The test program plots around a circle 100 times. Here are the results.

Timex/Sinclair 2068 BASIC interpreted	.....	150 seconds
Compiled BASIC (Timachine)	.....	126 seconds
HI-SOFT PASCAL	.....	18 seconds

Wow! The Pascal really flies even when doing floating point math. It has all its own math routines built in and doesn't do any ROM calls. That also means that the compiled code can be burnt into an eprom and run on a Z80 based CPU without the Timex ROM resident.

The compiled BASIC is only slightly faster that regular BASIC when the floating point routines are used. Even calling the Timex/Sinclair 2068 floating point routines from machine code doesn't make much difference.

If you are writing a program that does a lot of calculation such as a spread sheet, 3d graphics, or CAD etc, Pascal will far out perform BASIC.

Anyone interested in Timex/Sinclair 2068 Pascal can leave a message on the Ottawa TS BBS at (613)745-8838. If you have a LKDOS disk system I have converted Pascal's internal file routines for disk instead of tape. There are also numerous Pascal source files on the BBS.[1]

---

[1] The version of HiSoft Pascal which has been converted to address the Larken system is 1.7M which requires the use of a Spectrum emulator ROM to run on the Timex/Sinclair 2068. For additional information write to: David Solly, Sysop, Sir Clive's Castle BBS, 1402-1545 Alta Vista Drive, Ottawa, Ontario, Canada K1G 3P4.

Timex/Sinclair 2068 BASIC Circle Listing

```
5  REM ! OPEN #     (Timachine only)
10 LET RAD = 50
20 FOR A=0 TO 628 STEP .5
30 PLOT 80 + RAD * SIN A , 80 + RAD * COS A
40 NEXT A
50 PRINT "END OF PROGRAM "
```

HISOFT Pascal circle listing

```
1 PROGRAM CIRCLE;
2 PROCEDURE PLOT (ON : BOOLEAN; X,Y : INTEGER);
3  BEGIN
4       IF ON THEN WRITE(CHR(21),CHR(0))
5           ELSE WRITE  (CHR(21),CHR(1));
6 INLINE (#FD, #21, #3A,  #5C,
7         #DD, #46, 2, #DD, #4E, 4,
8         #CD, #E5, #22);
9   END;

10 PROCEDURE CIRC;
11  CONST RAD =50;
12  VAR
13      A : REAL; ON : BOOLEAN;
14  BEGIN
15      A := 0; ON := TRUE;
16          REPEAT
17              PLOT (ON, ENTIER(80 + RAD * SIN(A)),
18                    ENTIER(80 + RAD * COS(A)));
19              A := A + 0.5;
20              UNTIL A > 628;
21  END;

22 BEGIN (*MAIN PROGRAM*)
23   CIRC;
24   WRITELN ('END OF PROGRAM');
25 END.
```


Sir Clive's Castle BBS

ZX SPECTRUM * T/S 2068	
Q W E R T Y U I O P A S D F G H J K L RET Z X C V B N M S SP	LKDOS

1402-1545 Alta Vista Drive
Ottawa, Ontario
Canada
K1G 3P4

(613)745-8838

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- Message Bases
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NEW QL ISSUE DISK FOR UPDATE MAGAZINE

We are proud to once again be able to offer to our subscribers another piece of QL software done by a North American. For those who have need of learning how the MS-DOS world of computing works, or who have to work with them at work and have grown comfortable with them...we now have QLUMSI! This will allow your QL to act darn near as if it was an IBM compatible. For those with a QL who have contemplated buying Solution or PC Conqueror, it will provide an inexpensive way to decide if you want to invest the money. This program is available on disk from UPDATE COMPUTER SYSTEMS for $22.00. Other programs are added to help fill the disk.

QLuMSi DOS

QLuMSi DOS (QL.using.M'cr~S~ft.interface Disk Operating Simulation) is a MEMory_RESident front-end program which will give your QL much of the look and feel of an industry standard personal computer by converting standard DOS syntax to QDOS syntax at-the-PROMPT.

Note: an implicit '<ENTER>' follows statements such as "Typing 'HELP' ... " within the text explanations.

The following COMMANDS are supported (Typing "HELP" will display this list):

CLS	COPY	DATE	DEL
DIR	FORMAT	FREE	MEM
PRINT	RENAME	STAT	TIME
TYPE	VER	VIEW	

Typing "HELP ..." (where '...' is the name of a supported command) will reveal more detailed information.

Typing "BASIC" allows you to QUIT the program shell.

You can toggle to SuperBASIC with a 'ConTRoL C' key combination.

The PATH is the drive_device. The beginning PATH is 'A:'/'flp1_'. To change to 'flp2_' simply type 'b:' or 'B:' followed by the ENTER_key. To change to 'mdv1_' simply type 'm:' or 'M:'; etc.

As you probably know, the industry standard DOS for microcomputers is a non-multi-TASKing environment. As in the industry standard environment, simply typing a valid '[filename.ext]' at the PROMPT will EXEC_W any application:

If you mis-type the name, or the file does not exist on the medium, then QLuMSi will respond with a "Bad command or file name" message. If the '[filename.ext]' has an extension (e.g., '_exe') then you must include this in the '[filename.ext]'.

HAPPY TRAILS, AND COMPUTING, TO YOU ...

AL FENG
15 WAKE ROBIN COURT
WOODRIDGE, IL 60517
708-971-0495

WANTED OR FOR SALE

1) Programs for the TS100, TS1500 and TS2068, formerly offered by Games To Learn By, new or demo only. Price is $5 + .50 for shipping and handling. Send S.A.E. for list to Mark Yost, P.O. Box 187, Canton, CT 06019 or call 203-693-6511.

2) Wanted, customers needing repairs or mods to their Sinclairs! Business phone number as of 1991 is 417-469-4571 as the business has moved back to Cabool and left St. Louis. Dan Elliott, Rt 1, Box 117, Cabool, MO 65689.

3) UPDATE COMPUTER SYSTEMS, large quarterly magazine supporting the TS2068, Spectrum, QL and Z88. Sample at first class mail is $4.95 (counts toward subscription price if you decide to subscribe) or $18.00 per year to: UPDATE COMPUTER SYSTEMS, P.O. BOX 1095, PERU, IN 46970. NO PRICE INCREASE IN 1991.

4) Jerry Wheeler of 320 Elder St., Portland, IN 47371, has a TS2068, TS2020, TS2040, programs, etc. for sale. All working fine.

5) For Sale for QL: Integrated Accounts (3 mdv_carts) for $40, Nucleon (2 mdv_carts) for $15, Speedscreen ROM (1 mdv_cart) for $30. Al Feng, 15 Wake Robin Crt., Woodridge, Il 60517. 708-971-0495.

6) For Sale: TS1500, TS2040, 3 rolls 2040 paper, software and books. $140 or best offer to Brian Fouts, 211 Emerson Dr., Seymour, IN 47274 or phone 812-522-8987.

7) For Sale: A & J 2000 Stringy Floppy for the TS2068, with MSCRIPT on cartridge, plus 3 blank cartridge wafers for $65.00 which includes postage and handling. Frank Davis, 513 E. Main, Peru, IN 46970 or phone 317-473-8031.

8) Wanted: Some way of connecting my ZX-81 and my monitor. Armand Drucker, 194-02A 67 Ave., Flushing, NY 11365.

9) Wanted: Someone to handle the duplication and distribution of Public Domain program tapes for the SNUG Library, as I no longer am handling cassette tapes for the library. Just not enough time or reliability with my aging tape decks. Please? Contact Frank Davis at 513 East Main St., Peru, IN 46970.

10) Wanted: Back issues of QL World. Will pay $2 per issue, plus shipping if it is one I do not have in my library. Contact Eliad P. Wannum, c/o UPDATE COMPUTER SYSTEMS, P.O. Box 1095, Peru, IN 46970.

11) For Sale: TAX-I-QL, a tax program to use your QL to do your taxes, with the use of the spreadsheet program that came with your QL. You can file the printout from the computer to the IRS. It needs to have 256K RAM expansion. It is available on disk for $24.95 or $27.95 for MDV. Order from EMSoft division, P.O. Box 8763, Boston , MA 02114-8763.

LogiCall V4.3

by **Bob Swoger**

When I received my LarKen disk operating system for my T/S 2068 back in 1988 I found I could do everything the expensive machines could do even Sequential and Random Access files. The only thing that seemed strange was having utilities on disk that I used to have ready to call in ROM. Also having to type RANDOMIZE USR 100: GOTO 4: RANDOMIZE USR 100: LOAD "FORMAT.BL" seemed to me to be a lot to type just to format a disk. So what to do? I wrote LogiCall.

A GUIDED Tour:

John Shepard in Mississippi called me one evening after SMUGfest as he had a slight problem when he installed his LarKen DOS cartridge into his AERCO disk system. He had neglected to cut a wire mentioned in the instructions. But this gave me an opportunity to give him a guided tour of LogiCall.

"Put the LogiCall disk #1 into drive 0, hold down the ENTER key and turn on the power. What happened?" I asked. "Drive 0 came on and I have the CATalog on my screen .. except it's also telling me what drive I'm looking at." was John's reply. "That's the LogiCall screen and in the lower left of the screen?" "It's asking for a drive number." "Ok, just touch 0 or ENTER. You'll stay on drive 0." "Now it's asking for a program name." he said. "RIGHT! Now touch your FORMAT key and hit ENTER." "My FORMAT menu is on the screen except there is a 0 selection to EXIT." he replied. "Now touch 0" "I'm back to LogiCall." said he. "RIGHT! Now just hit ENTER at the Drive? prompt and touch your MOVE key and hit ENTER at the PROGRAM? prompt." "My MOVE menu is on the screen and there is a 0 selection to EXIT." he replied. "Now touch 0" "I'm back to LogiCall." said he. "I'll show you why, type H and ENTER" "A HELP menu is on my screen!" "RIGHT! hit ENTER again." "A second page!" "Yep, two pages of one key operation for LK-DOS with LogiCall. Now hit ENTER." "Back to LogiCall." he said. "At the PROGRAM? prompt type W and enter." "My TASWORD TWO word processor!" he was laughing at this point. "Now select either e or q on the TASWORD menu." "I'm back in LogiCall" "At the PROGRAM prompt type T and ENTER." "I'm in MTERM!" more laughter. "Now at the MTERM menu select E for exit to BASIC and then RUN and ENTER." "I'm back in LogiCall." he said. "Ok, now at the PROGRAM? prompt type BROOKE.C$ and enter." "I'm looking at a picture of Brooke Shields!" this time giggling. "Hit ENTER and at the PROGRAM? prompt type ldoc.CT" "That would be a TASWORD file wouldn't it? Hey! it's printing to the screen." "Yep, that is the LogiCall doc files and you will print it out from TASWORD to use as your LogiCall manual. Now let's say we are too lazy to want to type in a program name. At the PROGRAM? prompt just hit ENTER." "AUTOSTART just lit up." he said. "Now just use the arrow keys to get down the CATalog to VUCALC.B1 then hit ENTER." "OK, I'm looking at the VU-CALC start-up screen ... now I'm looking at the VU-CALC main screen with it's menu at the top." "Good, now type #q and ENTER. You are now looking at a new menu I wrote that gives the new VU-CALC help menu and an exit to LogiCall option. Press 0 and your back to LogiCall."

"Now consider the fact that you have just turned on your machine and have loaded SEVEN programs into your machine one after another, looked at two data files on the screen, all in less than three minutes, and have not yet turned off your machine to RESET it." I said. "NEAT! This is GREAT stuff!" he said, "But how do I make an AUTOSTART file to start up LogiCall on boot-up?" he asked. "Easy, at the PROGRAM? prompt type A, wait for the tune, then type D and the job is done." "Your kidding, what about disk space?" he asked. "AUTOSTART only uses one track and LogiCall only uses one. And of course they both work in the SPECTRUM mode."

"What is the DISKS.B1 file in the CATalog?" he asked. "Load it." I said. "It is there to assist you in locating all those great programs that you now own. I have over 300 disks to keep track of. You eyeball scan the menu boards using the 'N'[ext] and 'B'[ack] or number keys to find the needed disk(s) in your library cases, there is room for forty cases. DISKS.B1 is your Disk Filing System. S and ENTER saves your changes to DISKS.B1 and returns you to LogiCall. TAPES.B1 is the version for tape back-up storage."

WHAT is LogiCall:

LogiCall is an Auxiliary Operating System (AOS) that makes getting around in a LarKen multi-drive system as easy as entering the drive number you wish to go to and entering the program name you wish to run. Even if you don't have a multi-drive system yet, LogiCall will still be of benefit to you.

Unlike operating systems which reside in the computer's RAM and take up precious program space, LogiCall exits the machine when a new program is LOADed in and returns when you're through with that program. Some of the features of LogiCall are:

1.) Automatic display of disk directory. (Catalog)
2.) Asks you for the drive you wish to use next. TAPE? Sure!
3.) Asks you for the program you wish to run next.
4.) Allows you to SCAN select the program to LOAD in.
5.) Easily creates the AUTOSTART program on disk.
6.) Easily adds itself to disk.
7.) Easy ERASE routine.
8.) Easy RENAME routine.
9.) Easy Calls for FORMAT and MOVE.
10.) Easy call for Word processor.
11.) Easy call for Terminal software.
12.) Easy call for CRC (disk verification).
13.) Easy call for running AUTOSTART.
14.) Displays SCREEN$ and decoded RLE pictures on screen.
15.) Prints directory out on TS2040 for disk labeling.
16.) Displays WP files to screen without use of WP.
17.) Lets you change drives at the 'Program?' prompt.
18.) Runs on MAX DOS and SPECTRUM modes.
19.) Written in BASIC to allow user customization.
20.) Contains convenient HELP screens.
21.) No RESET switch needed to terminate programs!
22.) Keeps you informed as to current DRIVE. (V4.3_3 only)
23.) All of this on one block, [one disk track].

WHY LogiCall works:

LogiCall contains all the COMMAND strings needed to run LK-DOS. It can therefore prompt you for what you wish to do and it will do it for you without you having to do all the typing. LogiCall (L.B1) and AUTOSTART created by LogiCall should be on the RAM-DISK and every floppy you have. AUTOSTART can be modified to start programs other than L(ogiCall).B1 once it has been installed. This procedure will be discussed later. The program DISKS.B1 should be on the RAM-DISK or on the Boot-up disk in DRIVE 0 if you don't have the RAM-DISK.

INSTALLING the LogiCall Auxiliary Operating System:

Enter the program L.B1 into your machine, run it and enter the drive number that you wish to store it on. Then enter 'S'[ave] at the 'Program?' prompt, hit <ENTER> and the program, L.B1, will be stored on the current disk. Now enter 'A'[UTOSTART] at the 'Program?' prompt, hit <ENTER>, then 'D' and the program AUTOSTART will be stored on the disk. (If you are in the SPECTRUM mode, type GOTO 460 after the ERROR, then 'D' and the program AUTOSTART will be stored on the disk.)

MODIFYING AUTOSTART:

To modify the AUTOSTART program to run something other than LogiCall at boot-up, press 'A' and ENTER at the PROGRAM? prompt and wait for the tune. Then press 'A' instead of 'D'. This will break the AUTOSTART program. Modify line 420 with the name and extension of the file you wish AUTOSTART to run, then type GOTO 460 and 'D' to reinstall the modified AUTOSTART.

If you wish to use the 'PRINT #4:' feature that Larry Kenny mentions in his manual, then modify line 410 removing the REM from that line. However, do not do this if you are using LK-DOS on a JLO system or strange things may happen. If also conflicts with the ZEBRA TALKER.

MODIFYING existing programs:

You will now have to modify the other programs on disk to LOAD L.B1 upon completion of those programs. Most programs are saved on lines above 9990 or should be, so add line 9998 CLEAR: RANDOMIZE USR 100: LOAD "L.B1" to the program. L.B1 will then be run after each successful save. I use 9999 for tape back-up saves.

On programs that are menu driven, add a selection '0.) EXIT ' to the menu that directs the program to the new line 9998. On programs that end with a STOP statement you can either modify it to read 'STOP:GOTO 9998' so that entering CONTINUE <ENTER> after the STOP occurs will load L.B1, or change the STOP statement to read GOTO 9998. Also, modify MSCRIPT to use the extender .Cm and not .CM as Larry uses .CM for NMI saves.

USING LogiCall's features:

The HELP screen displays the keys that give the desired results. Just press 'H' or '?' at either prompt to see the HELP file. On it you will see that entering 'W' at the 'Program?' prompt will LOAD in the TASWOR.BA word processor and 'T' will LOAD in the MTERM2.B1 terminal software.

At the 'Program?' prompt you can enter '7' or 'E' <ENTER> and you will get the 'ERASE"",' prompt. Enter the name with the extender of the file to be erased, <ENTER> and the file will be removed from the directory.

If you enter '8' <ENTER> (sorry, but this is the only one that isn't logical), you will get the 'RENAME"",""' prompt. Enter the name and extender of the file to be renamed, <ENTER>, then the new file name with it's extender, <ENTER> and the file will be renamed. [MOVE.BL will try to LOAD in on V4.1_2]

If you enter '9' or 'L'[ist] <ENTER> you will get a fresh CATalog printed on your screen. Use this if you have just swapped disks in your current drive.

You can enter '0' or 'F'[ormat] <ENTER> and '6' or 'M'[ove] <ENTER> to call in FORMAT.BL and MOVE.BL, if they are on the current drive, to perform the FORMAT, COPY (BACK-UP), MOVE and RENAME functions.

If you enter 'Z' <ENTER> you will get a COPY on your T/S 2040 printer of the directory screen which can be placed in the sleeve with the disk to show what all is on the disk.

Use 'N'[ew] to activate AUTOSTART again.

If you enter 'R' or 'V'[erify] <ENTER> you will check your disk for CRC errors.

If the CATalog directory is too large for the screen, 'B'[reif] will give you a brief CATalog if you are not in the SPECTRUM mode.

At the 'Program?' prompt hitting <ENTER> without first typing in a filename will put you into the 'Scan LOAD' mode. The space bar or any key in the lower rows will advance the pointer down the screen and the top row of keys will send the pointer back toward the top. <ENTER> will LOAD in the selected program. The arrow keys and 'A' and 'Q', will work as expected.

If you enter a file with an extender of '.C$' at the 'Program?' prompt then LogiCall will assume that the file is a screen file and display it on the screen for you. If you enter a file with an extender of '.Cm' [not .CM] or '.CT' at the 'Program?' prompt then LogiCall will assume that the file is an MSCRIPT or TASWORD TWO word processor file and will display it on the screen directly from disk.

When you are finished with the program, you do one of four things:

1.) Quit from the program's menu.
2.) STOP the program and then CONTINUE <ENTER>.
3.) STOP the program and enter 'GOTO 9998' <ENTER>.
4.) RUN the program's BASIC driver which will LOAD L.B1.

The disk directory will again appear on the screen with the word 'DRIVE? ' at the bottom of the screen and you can go again as before. [No need for a RESET switch!!]

People, not computers, should be buligerent, so, if you enter '1', '2', '3' or '4' <ENTER> at the 'Program?' prompt LogiCall will access that drive and show you it's CATalog. If you know that FORMAT.B1 is not on the current drive then entering '0' <ENTER> will access Drive 0.

If you have TROUBLE:

The LogiCall version number in the first line of the program is followed by the LARKEN LKDOS EPROM version number L[ogiCall].B1 has to work with. Each system, AERCO, LARKEN, OLIGER and RAMEX, require different FORMAT programs. Also, version 2 EPROMS are unable to do RENAME, and other features, requiring different versions of this software. The program below is for LK-DOS version L3. If you have another version contact me by phone at the numbers listed at the end of the program. I'll be glad to help.

```
   2 GO TO VAL "49": REM -=== L.B1 ==-- WRITTEN BY ROBERT SWOGER
  1988 V4.3L3
   3 IF INKEY$<>"" THEN GO TO PI
   5 RETURN
   6 PRINT #RND;"DRIVE? ";: RETURN
  10 PAUSE PEEK VAL "23728"^(PEEK VAL "23728">H): RANDOMIZE USR
H: POKE VAL "8200",VAL "8195": LET D8=USR VAL "110": LET
D9=(D8=VAL "4")+(VAL "2"*(D8=VAL "8"))+(INT PI*(D8=VAL
"16"))+(VAL "4"*(D8=VAL "128")): INK VAL "9": PAPER SGN PI:
BORDER SGN PI: BRIGHT NOT PI: CLS : RANDOMIZE USR H: CAT "",:
PRINT "Drive #     00";D9;: RETURN
  20 GO SUB PI: FOR R=NOT PITO VAL "15": FOR C=NOT PITO VAL "16"
 STEP VAL "16"
  25 LET P$="": FOR I=C TO C+VAL "8": LET S$=SCREEN$ (R,I): LET
P$=P$+S$: NEXT I: IF P$(VAL "8" TO )="LK" THEN GO TO H
  30 IF CODE P$<VAL "33" THEN GO TO VAL "48"
  32 IF P$="AUTOSTART" THEN GO TO VAL "38"
  34 FOR J=SGN PITO VAL "7": IF P$(J)="." THEN GO TO VAL "38"
  36 NEXT J: NEXT R
  38 PRINT AT R,C; INVERSE SGN PI;P$: INPUT "": PRINT
#RND;"Program? ";P$: PAUSE NOT PI: PRINT AT R,C;P$
  40 IF PEEK L<>VAL "10" AND PEEK L<>VAL "11" AND PEEK L<>VAL
"54" AND PEEK L<>VAL "55" THEN GO TO VAL "44"
  42 LET R=R+(PEEK L=VAL "10")+(PEEK L=VAL "54")-(PEEK L=VAL
"11")-(PEEK L=VAL "55"): GO TO VAL "25"
  46 LET R=R+(PEEK L=VAL "9")+(PEEK L=VAL "10")+(PEEK L=VAL
"32")+(PEEK L=VAL "54")+(PEEK L=VAL "56")-(PEEK L<VAL
"58")-(PEEK L=VAL "81" OR PEEK L=VAL "113"): IF PEEK L=VAL "13"
THEN GO TO VAL "200"
  48 NEXT C: NEXT R: GO TO H
  49 CLEAR VAL "63222": POKE VAL "23658",VAL "8": LET H=VAL
"100": LET L=VAL "23560": GO SUB VAL "9"
  50 GO SUB PI: GO SUB VAL "6"
  60 PAUSE NOT PI: LET D$=CHR$ PEEK L: IF D$<"0" OR D$>"4" AND
D$<>"H" AND D$<>"T" AND D$<>"Q" THEN IF CODE D$<>VAL "13" THEN
GO TO VAL "60"
  65 IF CODE D$=VAL "13" THEN GO TO H
  70 IF D$="Q" THEN STOP : RUN
  75 IF D$="H" THEN GO TO VAL "500"
  80 IF D$="T" THEN INPUT "": PRINT #RND;"Start tape": LOAD "":
GO TO H
  85 PRINT #RND;USR H: GO TO VAL D$
  90 IF VAL D$=D9 THEN GO TO H
  95 GO SUB VAL "9"
 100 GO SUB PI: POKE VAL "23728",H: INPUT "Program? "; LINE P$:
IF P$="" THEN GO TO VAL "20"
 105 GO SUB PI: IF P$>="1" AND P$<="4" THEN LET D$=P$: GO SUB
VAL "6": GO TO VAL "85"
 110 IF P$="A" OR P$="a" THEN GO TO VAL "430"
 115 IF P$="B" OR P$="b" THEN CLS : RANDOMIZE USR H: CAT ".B^",:
 PRINT "Drive #     00";D$: GO TO H
 120 IF P$="D" OR P$="d" THEN GO TO VAL "50"
 125 IF P$="E" OR P$="e" OR P$="7" THEN GO TO VAL "300"
```

```
 130 IF P$="8" THEN GO TO VAL "320"
 135 IF P$="F" OR P$="f" OR P$="0" THEN RANDOMIZE USR H: LOAD
"FORMAT.B1": RANDOMIZE USR H: GO TO NOT PI: GO TO VAL "95"
 140 IF P$="H" OR P$="h" OR P$="?" THEN GO TO VAL "500"
 145 IF P$="K" OR P$="k" THEN RANDOMIZE USR H: GO TO SGN PI:
RANDOMIZE USR H: SAVE "S.C$"SCREEN$ : RANDOMIZE USR H: GO TO D9
 150 IF P$="L" OR P$="l" OR P$="9" THEN GO TO VAL "49"
 155 IF P$="M" OR P$="m" OR P$="6" THEN RANDOMIZE USR H: LOAD
"MOVE.BL": GO TO VAL "20"
 165 IF P$="Q" OR P$="q" THEN STOP : RUN
 170 IF P$="R" OR P$="r" OR P$="V" OR P$="v" THEN RANDOMIZE USR
H: VERIFY "": GO TO H
 175 IF P$="S" OR P$="s" THEN GO TO VAL "9990"
 180 IF P$="T" OR P$="t" THEN RANDOMIZE USR H: LOAD "MTERM2.B1"
 185 IF P$="W" OR P$="w" THEN RANDOMIZE USR H: LOAD "TASWOR.BA"
 190 IF P$="Y" OR P$="y" THEN RANDOMIZE USR VAL "54016"
 195 IF P$="Z" OR P$="z" OR P$="C" OR P$="c" THEN COPY : GO TO H
 200 IF P$="N" OR P$="n" OR P$="AUTOSTART" THEN CLS : RANDOMIZE
USR H: NEW
 205 FOR I=SGN PITO LEN P$
 210 IF P$(I)="." THEN LET P$=P$( TO I+VAL "2"): GO TO VAL "230"
 220 NEXT I: GO TO H
 230 IF P$(I+SGN PI)="B" THEN GO TO VAL "280"
 240 IF P$(LEN P$-SGN PITO )<>"C$" THEN GO TO VAL "270"
 250 RANDOMIZE USR H: INK NOT PI: RANDOMIZE USR H: PAPER NOT PI:
 BORDER NOT PI: RANDOMIZE USR H: LOAD P$SCREEN$ : PAUSE NOT PI:
RANDOMIZE USR H: INK VAL "7": RANDOMIZE USR H: PAPER NOT PI
 260 PAUSE NOT PI: RANDOMIZE USR H: INK VAL "6": PAUSE NOT PI:
RANDOMIZE USR H: PAPER SGN PI: BORDER SGN PI: GO TO VAL "95"
 270 IF P$(LEN P$-SGN PITO )<>"Cm" AND P$(LEN P$-SGN PITO
)<>"CT" THEN GO TO VAL "290"
 275 CLS : RANDOMIZE USR H: PRINT P$: INPUT " Press ENTER to
RETURN CAT "; LINE a$: GO TO VAL "95"
 276 REM PAPER VAL "7": BORDER VAL "7": CLS : RANDOMIZE USR VAL
"64300": PRINT CHR$ PI;: RANDOMIZE USR H: PRINT P$: INPUT "
Press ENTER to RETURN CAT "; LINE a$: GO TO VAL "95"
 280 RANDOMIZE USR H: LOAD P$: GO TO VAL "95"
 290 RANDOMIZE USR H: LOAD P$ CODE: GO TO VAL "95"
 300 INPUT " ERASE ";E$
 310 RANDOMIZE USR H: ERASE E$,: GO TO VAL "95"
 320 INPUT "RENAME ";R$;",";S$
 330 RANDOMIZE USR H: MOVE R$,S$: GO TO VAL "95"
 400 CLEAR VAL "65367"
 410 REM RANDOMIZE USR VAL "100": OPEN #VAL "4","dd"
 420 RANDOMIZE USR VAL "100": LOAD "L.B1"
 430 DELETE SGN PI,VAL "399"
 440 DELETE VAL "480",VAL "9999"
 450 DELETE VAL "430",VAL "459"
 460 CLEAR VAL "27577"
 470 RANDOMIZE USR VAL "102": GO TO VAL "400"
 510 GO SUB PI: CLS : PRINT "       H E L P    F I L E
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%";'" You may select drives T
thru 4"'"   at the  Program?  prompt:";'"ENTER & space scans
CAT for LOAD "
 520 PRINT "6   Calls in the MOVE program.","7   ERASEs file
from disk.","8   RENAMEs oldfile,newfile.","9   Refreshes the
CATalog.","0   Calls in the FORMAT program.";"Q   Quit, halts
this program.","R   VERIFYs CRC is OK."'"S   SAVEs this program
to disk.","T   Calls in TERMINAL program.","W   Calls in WORD
PROCESSOR.","Z   COPYs CATalog to printer."
 530 PRINT '"Holding down  CAPS SHIFT & BREAKduring  AUTOSTART
sequence willbreak into AUTOSTART program.";
 540 PRINT #RND;"    Press <ENTER> to CONTINUE ": PAUSE NOT PI
 560 GO SUB PI: PRINT AT VAL "7",NOT PI;"A   Adds AUTOSTART to
disk.","B   Gives a Brief CATalog.","C   COPYs CATalog to
```

```
printer.","D   Returns the Drive? prompt.","F   Calls in the
FORMAT program.";"H   Calls in this HELP file.","K   Saves
$creen to disk.","M   Calls in the MOVE program.","N   NEW,
reactivates AUTOSTART."'"V   VERIFYs CRC is OK.","Y   RETURNs to
 terminal mode."
 570 PRINT '" Press <ENTER> at the Program? prompt and use the
arrow keys to select a program to LOAD in.";
 580 PAUSE NOT PI: CLS : GO TO VAL "49"+(D$<>"H")*VAL "46"
9992 RANDOMIZE USR H: SAVE "L.B1" LINE VAL "49"
9999 GO TO H
```

If you wish to have the entire two disk LogiCall Ensemble call me weekdays at 708-576-8068 or evenings and weekends at 708-837-7957.

Some More Ideas on How to Create Multiple Columns in Z88 Pipedream

I will describe how to create these articles using Z88 Pipedream for a single page. This also works for multiple pages although its a little more tedious.

The first thing to do is change the width of Column A with <>W to 40. Then set a right margin of 38 with <>H.

At this time go to the Options Menu of Pipedream with <>O. Set Justify to Y. Set the page length. It is usually 50 to 60 lines depending on the document. Set Header, Footer and Bottom to 0 and Left to 2.

Now the hard part! Go back to Pipedream with ESCape and write the article entirely in Column A.

Editing is more difficult with multiple columns so 99% of the editing is done with the text in column A. Any insertions and deletions of lines of text in multiple columns must use the commands <>EIRC and <>EDRC. <>N and <>Y insert and delete in ALL the columns.

Once you are satisfied with the text set the width of Column B at 40 with <>W and the right margin at 38 with <>H.

Now you are going to separate and move your text into Column B.

There will be a jagged line across the column where you previously set the page length. Now move the cursor one line past this marker. Type <>Z and then move to the end of the text with <> and Down Arrow. Type <>Z again. All the selected text will be highlighted on the screen.

Press TAB to move your cursor to Column B and use the arrow keys to put the Cursor where you want the moved text to start.

Select Move from Pipedream's Blocks Menu or type <>BM. Your selected text will be moved to your cursor position.

That's all you have to do to put your text into two columns as you see it here.

Here is how to create the Enlarged text at the top. Go to the Printer Editor with Square E or from the Index. The control codes for Enlarged text on my printer are 14 for On and 20 for Off. Replace the codes for User Defined with these numbers. Now you must update the Printer Driver with <>FU.

Go to Pipedream and type <>PE (User Defined) in the first position of the text you want enlarged. The text will not appear on the screen as it does on the printer unlike the other codes. A highlighted 8 will appear where you typed this command. Add spaces before the text in this line to center the headline. Type <>PE at the end of the line of text if you have more than one line.

Now just print the document with <>PO and you are finished!

By Dave Bennett

Note: <> = Diamond Key

OLIGER DISK DRIVE BBS PROGRAM ISSUE DISK- UPDATE

The Mad Programmer: Paul Holmgren
Igor: Willie Jones

Welcome to a new experience in Timex telecommunications.

The Indiana Sinclair Timex Users Group was formed after the 1986 Mid-West TS computer Fest. Several of the members left the Fest with a copy of T/S Tinyboard by Randy Gordon. At an early meeting one of our members stated he had an extra phone line and wanted to run Tinyboard as a service to the group.

After we got the BBs up and running he found it very difficult to keep it running. It was decided that the program needed looking at. After many examinations we decided to start over with the goals of designing a reliable and easy to operate BBs.

Tinyboard, in the form we received it, did not work for us. No reflection on Randy, we just needed and wanted more, and set out to get it. After considerable trials and errors writing the program, up-loading or Pony Expressing it to the operating location to put it to the test; we succeeded. To test this type of program you really need to use it to gain accurate information when it crashs, of which we had our share.

A STRONG "Thank You" goes to Willie Jones. He ran each change as they were made available and reported the bugs and crashes accurately. Allowing the Mad Programmer to address the problems without having actually seen them sometimes. We shared lots of frustration before this was over.

Here are the results of many hours of design, testing, rewriting, and of course, lots of debugging.

1. You do not need any expansion memory devices.
2. a real time clock, also advances the date at midnight
3. 5-40 message, message bases.
4. A quick message scan that lists the mess. no., date and time left, and the To and From names.
5. a users log, if you wish.
6. A provision allowing non-Timex callers to use the bbs. (some use a different code for NEWLINE/RETURN)
7. The callers name and date/time called, mess. no. left, mess. read, Any messages to the SYSop, and when they log off are all LPRINTED. It uses the 2040 for its ease, but any setup will do. Our SYSop has found it a great tool for managing the BBs.
8. EMAIL, send, receive, delete, all with privacy.

Since none of us had an expanded machine we used all the programming tricks we could (at least the ones I know) to allow some free memory for changes for a mass storage device and its operation. Carefull study of the program will show you that we did a lot of seemingly strange things with BASIC. There is a reason to this madness. We worked real hard to save as much memory as we could and maintain reasonable program speed. Where program speed is important we did ok. Where we wanted to control the speed or where memory saving tricks would not hurt us we did the best we could. CAUTION: Because parts of the program jump around Be REAL carefull if you start to change parts of it we do not ask you to change.

CABLE COLUMN

By Bill Cable

ARCHIVE SERIES
PART 3 : First Commands or Close Encounters of the First Kind

In this column we will finally load ARCHIVE and use it. We will start out slowly using the most basic commands needed for database work : QUIT, LOOK, OPEN, CLOSE, DISPLAY, FIRST, LAST, NEXT, BACK. Extremely elementary so anyone can follow along. There will be no programming done. We will issue our commands directly to the ARCHIVE prompt utilizing its user friendly mode. Those who shun anything to do with programming have no excuse for not following along.

First I would like to pass on some interesting information about ARCHIVE. I have been converting my QL ARCHIVE programs to work on PCs. I have had pretty good success which is impressive considering how different the QL and PC are. PC ARCHIVE is significantly faster but my large programs have a tendency to have random pauses of several seconds now and again (memory management problems of some sort). Trying to get more information on this problem I called Rowan Prior of PSION USA in Watertown, CT. PSION created ARCHIVE and supplies it packaged as PC-FOUR with QUILL, ABACUS, and EASEL. ARCHIVE has not been revised in years and is essentially supplied as is with no vendor support. Rowan advised me to contact Colin Hughs of TRANSFORM Ltd, 7C Station Approach, Hayes, Kent, England, BR2 7EQ, Tel: 014481 462 4666. I did and Colin advised me to break my programs into 12k blocks. Something I don't have to do on the QL. He also told me that TRANSFORM has a new version of PC ARCHIVE which should be available in January. It is called ARCHIVE+ and has many new enhancements plus will be much faster. It will run under DOS or UNIX and will sell for about 250 pounds. I can be licensed to provide ARCHIVE+ with my software for 50 pounds a copy. This is all very good news for me since I use ARCHIVE as my primary programming language. Now it seems, my programming language will be up-to-date and well supported. I was considering shopping for another database language for my PC work but now I won't have to. Apparently the British military is a heavy user of ARCHIVE and that provided enough incentive for the development work. An excellent database system has risen from the software graveyard. Watch out DBASE, FOXBASE, PARADOX, CLARION, HYPERCARD. I will provide more information about ARCHIVE+ when I get a copy. This only indirectly helps the QL. But I have found the QL ARCHIVE adequate for my QL needs. At least QL users who take the time to learn ARCHIVE will be able to apply the knowledge gained to other computers.

PREPARATIONS FOR USING ARCHIVE

Now let us begin working with ARCHIVE. Make a working copy of your original database cartridge if you haven't already. It is important to always have multiple backups of important files. IF YOU EVER HAVE A FILE THAT BECOMES CORRUPTED NEVER START USING YOUR BEST BACKUP DIRECTLY. MAKE A COPY OF IT AND WORK WITH THE COPY. This is a universal principle no matter what computer you use. Open your QL manual to the ARCHIVE section. Become as familiar with it as you can. It is the best reference available. Pages 41-52 covering command and function definitions are most important. Read them over and over as you play with ARCHIVE. At first you won't understand much but each time you will pick up a little more. When you have error messages look them up on pages 52-54.

STARTING ARCHIVE

I will refer to microdrives (mdv) in my descriptions below but substitute floppies (flp) or RAM (ram) as you like. If you are confused about configuring ARCHIVE to work with floppies or RAM send a SASE for help. Reset your QL put your ARCHIVE database cartridge in mdv1_ and press <F1>. Archive will boot up

and you will see boxes at the top, an open middle area, a thick line near the bottom and a ">" below with the cursor. This is ARCHIVE's most user friendly mode. It is a good configuration for beginners. Later we will use more efficient modes as ARCHIVE is quite adaptable. ARCHIVE will execute each command directly when you type them on the command line where the cursor is. The boxes at the top provide helpful information about what to do and what is happening. Note that pressing <F1> will activate the HELP system. With it you can query about the various commands and functions of ARCHIVE whenever you want. It is fun to play with the various levels of help and learn at the same time. Pressing <F2> makes the top boxes go away or reappear. This allows you to free up more screen. Pressing <F3> cycles through 4 listings of all ARCHIVE commands in the top center box. A quick way to recall a command. The commands are not activated unless you type them out in full in the lower part of the screen and press <ENTER>. The command does not have to be currently listed in the box to be issued. Press <F3> 4 times and read all the commands. Notice that they all are familiar words and their actual function within ARCHIVE is closely connected with their standard English meanings. Many commands take arguments (more information). Often the arguments need to be in quotes (""). If you type the command and then <ENTER>, ARCHIVE will put in the quotes for you and tell you what additional information is needed and you can type it in and press <ENTER>. It doesn't matter if you type commands in lower or upper case. ARCHIVE allows you to type ahead. You can issue a new command before the first one has finished. Pressing <F5> will recall your last command line. You can press <ENTER> to reissue it or use the arrow keys to edit it. This feature saves lots of typing. ARCHIVE has a complete enough set of commands that it can be considered a self contained operating system of its own. In many ways it is a much friendlier environment than SUPERBASIC and QDOS because you have help at the top of the screen and a help file available by pressing <F1> and a friendlier error trapping system. It is essentially an operating system designed to handle databases (file cards). It turns out that many of our computer applications fit easily into this database structure so ARCHIVE is a natural environment to work in.

FIRST ARCHIVE COMMANDS

<ESC> Command

This is not really a command but it is a way to interrupt ARCHIVE or abort a command to get the ARCHIVE prompt again. Use it whenever you get confused by what is happening or want to cancel a command. Sometimes it works better by hitting several <ESC> quickly. It is equivalent to <CTRL-SPACE BAR> in SUPERBASIC. Some commands don't interrupt in the middle and you have to wait until they are completed.

QUIT COMMAND

It is very important to QUIT when done with ARCHIVE. QUIT closes all open files and returns you to SUPERBASIC. ARCHIVE supports access to many databases simultaneously and you should always close them when done. By using QUIT at the very end you make sure all files are closed. Turning off your QL with OPEN data files is a no-no with ARCHIVE as mentioned in earlier columns. Even if you get totally confused while working with ARCHIVE and no cursor can be seen. Press <ESC> many time and type QUIT<ENTER>. Wait a reasonable time for the <ESC> to have effect and the QUIT to be executed. After you QUIT you will see a blank screen with the cursor at the bottom. You are back in SUPERBASIC. Since windows have been closed it is best to reset you QL before continuing. If you are multitasking then always make sure you QUIT any ARCHIVE jobs before turning off your computer.

LOOK and OPEN COMMANDS

ARCHIVE deals with data and the data is stored in special files on microdrives called databases. These are like stacks of file cards. To access previously stored data we must use the LOOK or OPEN commands. The LOOK command provides a safe way to access a database. If you only want to inspect data but not alter or add to it then use LOOK. If you want to make changes to your

database then you have to access it with the OPEN command. Both commands need to be followed by information which identifies the device & file to be accessed. Later when we work with multiple files we will also need to assign a logical name when we OPEN or LOOK so we can keep track of which database is which. For now we will just work with just one database and ARCHIVE assigns a logical name of "main". One technique that minimizes database vulnerability is to always use LOOK and then switch to OPEN temporarily when changes are made. For now we will only use LOOK and explore OPEN next issue.

CLOSE COMMAND

After you are through working with a database you should always CLOSE it even if you stay in ARCHIVE to do other work. This insures that everything is properly tidied up. If you have accessed the database with the OPEN command it is extremely important to type CLOSE<ENTER> when done. If you fail to to that and also fail to QUIT ARCHIVE your database could be corrupted and you will not be able to access the data again.

DISPLAY COMMAND

This is an easy way to see one record of data in a database after you have used LOOK or OPEN to access it. Once a database has been accessed you are always positioned in it at a specific record (card). DISPLAY lists the fields and values of the current record. It is like displaying one card of your stack of file cards.

NEXT, BACK, FIRST, LAST COMMANDS

These are simple commands to move around the records of a database. They allow you to change your current record position in your database. Since your database is like a stack of file cards you can think of these commands as moving to a different card. They do exactly as they say. If you have used the display command you will see your current record. If you type NEXT<ENTER> you will move to the next record and see it (which becomes your current record). If you are at the last record and type NEXT<ENTER> nothing will happen because there is no next record. Remember when you use these commands you have to type the whole command and then enter. But after you have typed it once you can type <F5><ENTER> to repeat the command. It doesn't matter if you are displaying records or not. These commands still move your current record position whether visible or not.

USING THE COMMANDS

Below I will list exact key presses with comments in (). We will LOOK at the GAZET_DBF provided on your database cartridge. It consists of the information about the countries of the world. Each record consists of the values for a particular country for the fields of the database. You have loaded ARCHIVE as described above.

look "mdv1_gazet_dbf"<ENTER>
display<ENTER>
last<ENTER>
first<ENTER>
next<ENTER>
<F5><ENTER>
<F5><ENTER>
(do many times)
last<ENTER>
back<ENTER>
<F5><ENTER>
<F5><ENTER>
(do many times)
close<ENTER>
quit<ENTER>

The above exercise is indeed very simple without more commands we wouldn't find much use for ARCHIVE. Try experimenting with other commands on your own. Next issue we will cover more commands in detail.

ARCHIVE BASED SOFTWARE
FOR THE QL

Wood and Wind Computing
RR3 Box 92
Cornish, NH 03745

text87 and Quill Part III

Peter Hale, P.O. Box 8763, Boston, MA 02114

When **text87** arrives at your mailbox, it is not quite ready to meet your specific needs. It must be reconfigured to your standards.

RECONfigure First off, execute the **recon** file in order to reconfigure your working copy. Important defaults are then written into your working **text87**: millimeters vs. inches, various default drive names, Baud settings, etc.

You can change many **text87** defaults from the Parameter command later, but you must set your page length correctly to 66 lines per page, since **text87**'s default is 70 for A4 paper. This is the time to select default drives, the printer port (par, ser1 or ser2) and the Baud rate.

If you forget, all is not lost. Many defaults can be reset within the program and will auto-load if you save them in the **configure_C87** file.

When first executing **text87**, the program attempts to load three associated files that provide what you want in the way of features. These are the **driver_P87**, **founts_A87**, and **configure_C87** files.

Part II discussed **driver** and **founts** files, but first a quick review.

The **driver_P87** file holds all information about your printer. (Quill reads the printer_dat file each time a document is printed; the printer driver for **text87** is loaded into memory.) It also keeps information about Attached screen font representations (printypes) - for example, you may have let Roman16 screen font represent a double-high printer font or you may prefer green ink to white to represent normal fonts.

Also saved in the **driver_P87** file is your choice of hotkeys to select favorite printer fonts with Shift-F3 and Shift-F4.

You must create the **founts_A87** file, easily done, to automatically load your desired screen fonts. If it's not there, each screen font (other than Default11) must be individually loaded by name.

Finally, there is the **configure_C87** file which stores everything else.

A **CONFIGURE FILE** holds a range of working standards that you want each time you write a document. If you call it **configure**, it will load automatically each time you execute **text87**, but it can have any name you like. Indeed, I have a suite of files all called **update** that I load to write this column, so that text is ready for publication in UPDATE magazine.

A **CONFIGURE FILE** holds the details set by **Layout**, **Mode**, a chunk of the **Context** options, and all the details of **Ruler** 0.

LAYOUT Start with the simple stuff: press **F3** and **Layout**. Modify the page layout to your liking. The large block on the screen represents the page of paper. There are four choices: **T**ext area, **F**ooter, **H**eader, and number of **C**olumns. The maximum text area is 8" wide and 1" (25mm) less than the page length.

Set text area with cursor controls and the space bar. It is independent of the number of columns of text to a page. But if you want a footer or header, the text area must be shortened to make room for them. A footer or header requires at least 2/10's of an inch or a line won't fit.

MODE Next, change the **Mode** (**F3 M**). You can have the body of the text Frozen or automatically Re-formatted, and choose whether or not the margin Indent is automatically activated or manually set to the first tab on the Ruler.

CONTEXT Then, begin work on features reached from the **Context** command (**F3 C**).

The first choice is **W**indow, which lets you change the size and position of the working window (perhaps to make room for a concurrent clock or a CAPS indicator) or simply to meet your monitor's requirements.

The next choice in **C** is **V**ideo. You can have the screen Compressed or not, i.e. whether or not the screen presentation shows the scale of line feed you have set in a Ruler.

You can also choose whether or not the screen display is normal (colored ink on a black screen)

or Inverse (a white background to all text with white ink shown in black).

Finally, you can set the Scale at which pixels correspond to widths on the page. The default is 60 pixels per inch, but can be set from 50 to 180. At 180 it spreads out the words and lines so that a vision impaired person could Attach a huge screen font to normal printer text output and have no problem seeing the screen. At 50, it lets you see most of a condensed printype line on the screen.

At this point the next choice in **C** is **Save**. Pressing S prompts for a file named **configure**. If you accept the default, that file will be auto-loaded when you next use **text87**, but you can give it any name and thus have a range of settings available for use as required. Whatever name you give it will have the extension _C87.

After **S**aving the changes to date, (in case of a power failure, the only way that **text87** can crash), adjust the **P**arameters. You can choose <u>any</u> character as the Decimal tab (remember that the comma is used on the continent.) You can re-select Length unit, some default devices for file and document storage, and printer port and baud rate. (But you cannot change the range of alternate drives as well as in the **recon** session.) Finally, you can re-select the amount of memory **text87** grabs for itself the next time it is run. **S**ave the configure file again,

The next **Context** option is **Load**. It prompts for the configure file to be loaded. Enter the name used to save the configuration, in this instance **configure**, to reload the default settings.

The other three **Context** choices, **Attach**, **Driver** and **Founts** relate to **driver** and **founts** files.

RULER The last stage to complete a **configure** file is to check out **Ruler** (**F3 R**). Probably there will be only Ruler 0, which will have a thin vertical cursor next to the word Ruler. This Ruler (Ruler 0) is saved in the **configure** file. Press either T for Tabs or M for Margins to reset both. The Horizontal Coordinate changes as you move the cursor left or right giving its absolute position in tenths of an inch (or millimeters).

Press M for Margin to set a left or right Margin. The left Margin cannot be set to the right of the Indent (open right triangle) nor the right Margin to the left of a tab. If the Indent is at the same position as the left Margin, the left Margin sign disappears. The Indent can be placed to the right of the left Margin to create hanging paragraphs, that is, paragraphs with the first line to the left of the other lines in a paragraph.

For paragraphs with indented first lines, place a left tab where indent commences, and set the **M**ode to auto-Indent. (Are you confused yet? Indent doesn't mean indent unless you mean indent.)

Unlike Quill, which lets you put a tab in every column if you choose, **text87** limits you to twenty tabs between the Indent and the right Margin. You also cannot have tabs closer than 4/10's of an inch. (**text87** locates characters in absolute units and some screen fonts are more than two-tenths of an inch wide. The closest you might want tabs to be is two characters, anyway.)

Also unlike Quill, you can adjust line feed. Normal line feed is 1/6" (or an equivalent fraction). In **text87** you can micro-adjust line feed. This is handy for squeezing a line or two on a page to avoid the need for a second page.

Now go back to Context and save this ruler to your **configure** file so that it will always be there each time **text87** is run.

the end

So? Is evertning clear? Probably not, but this is the end of this series. For questions (or to submit tips) on using **text87** or any of the Psion software, write the author. If sufficient volume is received, we'll have a regular column.

If you require an immediate response please phone (617) 889-0830 or write and enclose an S.A.S.E.

text87 is £60 from Software87, 33 Savernake Rd., London, NW3 2JU United Kingdom. It includes Qtyp, an integrated spell checker with English, French and German dictionaries - a £30 value alone. It is available in the USA for $119.95 from EMSoft, P.O. Box 8763, Boston, MA 02114-8763 (617) 889-0830.

A Mail File In Archive

Bob Hartung, 2416 N. County Line Rd., Huntertown, IN 46748

While my DATA_FILE and the associated INFOwriter, MERGEwriter, and QL_LLIST programs satisfy my own devious purposes quite well, the fixed-size data fields are not as memory-efficient as those which are marked off by de-limiter codes and vary in size according to the actual number of characters entered. I used a fixed-size string matrix because it allows much more simple access to files as well as faster search and re-order in SuperBasic.

I experimented with variable-length fields in a massive string but found the QL limits the length of each string to no more than 32765 bytes. A sequential INSTR search or a sort of several such string-array elements is unacceptably slow.

Since the only other alternative is to directly access data to and from a reserved block of memory in RAM, which is best done in machine code, rather than trying to "re-invent the wheel" it seemed to me to make more sense to make use of Archive programming. Because of the large memory overhead to store the program itself, in an unexpanded QL the creation of a simple mailing list in Archive actually allows about 50 fewer file items than in my DATA_FILE. With added RAM, however, Archive is more efficient and faster.

(By the way, if you want to add the 8 or 16 ICs needed to fully populate your Trump Card board, the 41256AP-10 chips, available from suppliers like Sabina in CA for about $1.50 each, plus $10 S & H, are easily installed. Bend the pin-rows in slightly by pressing them evenly against a flat, clean surface before insertion into the sockets next to those already filled.)

No doubt this will all be old stuff to veteran QL users, but perhaps a once-over-lightly on the steps and procedures in setting up a mail file in Archive might be helpful. Please note that < > brackets mean ENTER is to be pressed after keying in the characters that are contained within the brackets. Also, remember that it is good practice to get into the habit of always using <close> on any open file if you will be giving your attention to something else for awhile. Using <new> will perform a close and CLS as well as clearing any file from memory.

Enter <create> then <mail> to open a new file for the definition of its field labels. Since we will be using only text or string entries, all the labels will have a $ suffix. Numeric entries or expressions do not use $ in the label. After entering <create> <mail> make these label entries:

```
<TLFIRST$>
<LASTNM$>
<ADDRESS$>
<PO$>
<STATE$>
<ZIP$>
<PHONE$>     (optional)
```

The use of separate fields for first and last names as well as for state and ZIP will allow re-ordering by last name or ZIP. Key ENTER by itself to invoke the endcreate command after the final field-name entry. This will also save these definitions to a formatted disk or mdv in drive 2. The file will remain open for entry of file data but <close> for now as we move on to writing the procedures for sorting, searching, and printing of files.

Enter <edit>, which produces a split screen with proc displayed, ready for entry of the first procedure name, which is <doprint>. This procedure prints a title (if any) and first name on the same line as last name, the address and P.O. on separate lines, then state and ZIP on the bottom line. The PHONE$ is not printed but displayed only during a search. The lprint "" line may be repeated as many times as necessary to adjust line-spacing for printing labels or a null-string input line may be used here to pause for insertion of the next envelope.

Procedures fprint and fsearch call doprint. It may also be called while in display mode to do a "snap-shot" print-out of the item currently on-screen. The forder procedure sorts a currently open file, which will be saved as re-ordered when closed, unless look mode is being used. The fprint procedure must then be called with a separate command unless you prefer to insert <forder> as the first line in the fprint procedure.

The file will be closed automatically at the conclusion of both fsearch and fprint unless N or n is keyed at the prompt. The lower(getkey()) converts either key-stroke to the lower-case character. Command-words and functions must be avoided in naming procedures, so I usually add an "f" prefix to any procedure name that accesses a file and "do" as a prefix if an action is performed on data. This allows more concise and meaningful names without conflict with Archive commands.

Enter the lines as listed for each procedure. If you see an error after a line has been entered, use the up/down cursor keys to highlight the line, then key F5 to edit it and re-enter. If insert mode is enabled, key ESC then F3 then N to commence the next procedure listing, or just F3 and N if in edit mode. F3 then C then ENTER will delete the line that is highlighted. Key SHIFT TABULATE together to backstep to a previous listing or key TABULATE to step downward. Listing indentations are supplied by Archive.

To save all procedures currently in memory key ESC (twice if in insert mode) then enter <save "dolprint"> or your own name of 8 or less characters. When Archive is booted up, procedures must be loaded in before they may be called. Use <merge "name"> instead of load to add procedures to any already in memory. Use <llist> to print out listing of all procedures currently in memory.

After saving the set of procedures that you have keyed in, key <open> then <mail> then <insert> to add data to the mail file. Key F5 to insert the data. Key ESC to exit ALTER/INSERT mode, and be sure to enter <close> before leaving Archive.

DOLPRINT LISTING

```
proc doline;x$
  lprint x$
  endproc
proc doprint
  lprint TLFIRST$+" "+LASTNM$
  lprint ADDRESS$
  lprint PO$
  lprint STATE$+"  "+ZIP$
  lprint ""
  endproc
proc fclose
  print "CLOSE will occur to protect
    file unless N or n is keyed"
  let yn$=lower(getkey())
  if yn$<>"n": close :endif
      endproc
proc forder
  print "Re-order by LASTNM$ or ZIP$ (L
    or Z)?"
  let ro$=lower(getkey())
  if ro$="l": order LASTNM$;a: endif
  if ro$="z": order ZIP$;a: endif
  endproc
proc fprint
  all
    doprint
    endall
  fclose
  endproc
proc fsearch
  cls
  input "Enter search-string: ";srch$
  find srch$
  while found()
    doprint
    continue
    endwhile
  fclose
  endproc
```

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Switching Printer Characters--Bob Hartung

About the time Epson began bringing out third and fourth generations of its 24-pin printers I finally scratched together enough shekels to go for their LQ-510. My decision to go with Epson vs Star, Panasonic, Citizen, Okidata, Alps et al was largely because of a marked cut in price and the inclusion of a 7-font module to sweeten up the deal by a discount supplier. I also was looking at true compatibility with SW that is set up for Epson code, and ribbon cartridges that cost less than half as much as those used by other printers.

The screen dump in QL Easel and the pre-set FX-80 codes in INSTALL_BAS work as is, although of course these and the TRANSLATE sequences may be modified to almost any printer command. One translation I made was to provide a cross-slash zero character, which is not in the normal U.S. font mode. To do this I used character 92 in the Denmark table by installing the sequence "0,ESC,"R,4,92,ESC,"R,0 as per the example given in the QLUG INFO section on page 6. A copy of this version of INSTALL_BAS printer data may be stored on another disk to have the option of doing printouts from the PSION SW with either the plain zero character (0) or with the cross-slash (0) as in this mss. just by switching disks before calling for a printout. If you have RAMdisk capabilities, by storing two or more customized printer_dat and install_dat copies on your QUILL disk, each with a distinguishing title as in listing 1 to boot QUILL, the selected one may be accessed from RAMdisk instead of from disk (or mdv). (CONFIG_BAS is used to set the system device to RAMn.)

However, for my own SW programs such as QL_LLIST on my UPDATE Issue Disk, I had to work out a way of scanning listing and text files for each zero, then translating it to the Danish character, and returning to the U.S. font table. Almost all alphanumeric characters will print correctly if the printer is left in the Denmark (or Norway) font table, except that the reverse-slash \ recognized by the QL as LF code would then print out as 0 everytime it occurred.

Listing 2 was used to do this printout of itself. It may also be used for printing any ASCII text file formed by my INFOwriter program or by any other text editor that does not insert formatting codes such as those used by the Psion SW. The routines used to set left margins, column width, and number of lines in each print-sequence will work with any printer. Change the character-switch code in zr$ (line 130) to that required by your printer.

Listing 3 is for reading Tasword 2068 files and translating marked characters to extended-font characters when printed out (which the Tasword printer-driver will not read). As listed, it shows commands and DATA characters/codes for my C. Itoh 8510, but may be adapted to any printer. The £ sign and @ are used to mark off any character(s) to be translated. EG: £ab@ would print as alpha and beta.

Either the Oliger printer-driver may be used or a SW driver such as the one in Tom Woods' ProFile may be stored in a first-line REM statement. Insert REM in either line 10 or line 20 to disable the one not being used. Page nos. and headers may be printed after each selected number of lines or whenever 0 is keyed.

BOOT ROUTINE FOR QUILL

```
10 CLEAR: FLP_USE mdv
20 INPUT "Cross-slash zero 0 y/n? ";yn$\
"Key ENTER to skip printer set ";a$: IF
a$="" THEN GO TO 100
30 INPUT 'PICA=P ELITE=M COND=g DRAFT=0
or LQ=1? ';F$
40 INPUT 'LF: 1/8"=0 or 1/6"=2?';L$
50 INPUT 'LM cols n? ';C: C$='1' & CHR$(
C)
60 INPUT 'BOLD=E or cancel BOLD=F? ';B$\
'PROP 1=ON  0=OFF? ';prp: prop$='p' & CH
R$(prp)
70 OPEN #7,ser1
80 PRINT #7,CHR$(27);F$;CHR$(27);L$;CHR$
(27);C$;CHR$(27);B$;CHR$(27);prop$
90 CLOSE #7
100 IF yn$=="y" THEN COPY mdv1_printerZ_
dat TO ram1_printer_dat: COPY mdv1_insta
llZ_dat TO ram1_install_dat: ELSE COPY m
dv1_printer_dat TO ram1_printer_dat: COP
Y mdv1_install_dat TO ram1_install_dat
110 WINDOW 512,256,0,0:CSIZE 2,1:CLS
120 AT 2,11:PRINT "LOADING QL-WP"
130 AT 4,13:PRINT "version ";2.1
140 AT 6,6:PRINT "copyright  1984 PSIO
N LTD"
150 AT 8,12:PRINT "word processor"
```

```
160 CLOSE #1:CLOSE #2:WINDOW #0,400,20,3
5,215
170 EXEC_W MDV1_QLWP
180 OPEN #1,scr:OPEN #2,scr
```

LPRINT0_0

```
10 PRINT 'Enter YOUR printer codes in li
ne 20'\' or omit 10-20 if  not needed':
PAUSE 100
20 CLS: INPUT 'CPI: P=10 M=12 panelset C
onds/Draft ';cpi$: OPEN #7,ser1: PRINT #
7,CHR$(27);cpi$: CLOSE #7
25 INPUT 'Use cross-slash 0 y/n? ';cz$
30 CLS: CLS #0: INPUT #0;'Q to quit'\\'P
rint listing or text in drive #';drv$: m
d$='mdv' & drv$ & '_': IF drv$='q' OR dr
v$='Q' THEN STOP: END IF : PRINT 'Change
 line 30'\'from mdv to flp for disc'
40 PRINT 'Key F5 TO SCROLL TK2 DIRECTORY
': PAUSE 100: DIR md$
50 INPUT #0; 'File Name? ';y$: md$=md$ &
 y$
60 CLS #0: curln=0: remln=0: REMark curr
ent line; remaining line
70 OPEN_IN #8,md$
80 OPEN #7,ser1
90 CLS: INPUT 'Enter zero to cancel ';(y
$)\\'No. lines this page-column: ';lines
: IF lines=0 THEN CLOSE #7: CLOSE #8: GO
 TO 30: END IF
100 INPUT "Columns per line: ";col
110 INPUT 'Left-margin setting: ';lm: lm
=lm-1: lm$='': lm$=lm$ & FILL$(' ',lm)
120 INPUT 'Key ENTER to skip title-print
      any chr to print ';t$: IF t$ <>''
THEN t1$='': t1$=t1$ & FILL$(' ',INT(col
/2+lm)-INT(LEN(y$)/2)): PRINT #7,t1$;y$\
: PRINT #7\: END IF
130 LET zr$=CHR$(27) & 'R' & CHR$(4) & C
HR$(92) & CHR$(27) & 'R' & CHR$(0)
140 cnt=0: IF t$<>''THEN cnt=2: END IF :
 REMark count print-lines
150 IF remln<>0 THEN cnt=cnt+curln-remln
: GO TO 300
160 nf=1000
170 IF EOF(#8) THEN CLOSE #7: CLOSE #8:
GO TO 30: END IF
180 IF cnt>=lines THEN GO TO 90: END IF
190 INPUT #8,p$: IF LEN(p$)=0 THEN p$='
 '
200 lp=LEN(p$)
210 IF p$(lp)=' ' THEN lp=lp-1: END IF
220 IF cz$=='y' AND lp<=col THEN cnt=cnt
+1: PRINT #7,lm$;: FOR x=1 TO LEN(p$): I
F p$(x)='0' THEN PRINT #7,zr$;: NEXT x:
PRINT #7: ELSE PRINT #7,p$(x);: END FOR
x: PRINT #7:END IF : END IF
225 IF cz$=='n' AND lp<=col THEN cnt=cnt
+1: PRINT #7,lm$;p$(1 TO lp)
230 IF lp<=col THEN GO TO 170
240 curln=INT(lp/col)
250 DIM lin$(curln,col)
260 FOR n=0 TO curln
270 LET clp=col*n+1: IF clp>lp THEN LET
clp=lp
280 lin$(n,1 TO col)=p$(clp TO lp)
290 END FOR n
300 FOR k=remln TO curln
310 IF cz$=='y' THEN PRINT #7,lm$;: FOR
x=1 TO col: IF lin$(k,x)='0' THEN PRINT
#7,zr$;: NEXT x: PRINT #7: ELSE PRINT #7
,lin$(k,x);: END FOR x: PRINT #7: END IF
 : END IF
315 IF cz$=='n' THEN PRINT #7,lm$;lin$(k
, 1 TO col)
320 cnt=cnt+1: IF cnt>=lines THEN remln=
k+1: IF remln>curln THEN remln=0: END IF
 : GO TO 90: END IF
330 END FOR k
340 remln=0
350 GO TO 170
360 DEFine PROCedure sv: SAVE mdv1_LPRIN
T0_0: END DEFine
```

TEXT PRINTER

```
   1 REM   Pad this line out
to 117 characters & put P/F driv
er here with LOAD "prtcode"CODE
PEEK 23635+PEEK 23636*256+5
   5 REM Printer commands for C.
 Itoh 8510
  10 REM POKE 26703,PEEK 23635+5
: POKE 26704,PEEK 23636: REM Use
 only with line 1 REM driver
  20 LET /p=o: POKE 23300,60: PO
KE 23301,3: POKE 23323,65: REM U
se only with Oliger driver
  25 ON ERR RESET
  30 CLEAR 33279
  35 INPUT "Key any CHR$ to repe
at printout"'"or key ENTER for n
ew file,"'"then key BREAK to ent
er title";a$: IF a$<>"" THEN GO
TO 60
  40 ON ERR GO TO 45: CAT
  45 ON ERR RESET : INPUT "TASWO
RD file title to load:"'f$
  50 LOAD /f$CODE 33280
  60 ON ERR GO TO 180: CLS : LET
 c$="0000": LET I=PI/PI: INPUT "
Left Margin=nnn? ";e$'"Pica-N E
lite-E Prop-P? ";f$'"Page heade
r--N/L none",a$'"Dbl.sp? y/NL "
;c$(I)'" LINE FOR auto-page OR
0? ";c$(I+I TO ): LET j0=VAL c$(
I+I TO )
```

```
  70 LPRINT CHR$ 27;f$;CHR$ 27;"
&";CHR$ 27;"!";CHR$ 27;"L";e$;
  80 LET b=I: LET c=j0: LET d$="
(I+INT (N-33280)/64)"
  90 FOR N=33280 TO 52480 STEP 6
4
 100 INPUT "": PRINT #NOT PI;AT
I+I,NOT PI;" LINE ";VAL d$;"  0
FOR PG OR LINE ";VAL c$(I+I TO )
+c*(j0=NOT PI)," BREAK LPRINT TO
 STOP "
 110 FOR J=N TO N+VAL "63"
 120 IF PEEK J=CODE "£" THEN GO
SUB 190: GO TO 140
 130 PRINT CHR$ PEEK J;: LPRINT
CHR$ PEEK J;
 140 NEXT J
 150 LPRINT
 160 IF INKEY$="0" OR VAL d$=VAL
 c$(I+I TO ) THEN GO TO 290
 170 NEXT N
 180 PRINT FLASH 1'" STOP LPRINT
 ": PAUSE 100: LPRINT : GO TO 25
 190 FOR f=J+1 TO J+63
 200 IF PEEK f=CODE "2" THEN LET
 J=f: RETURN
 210 RESTORE 320
 220 FOR g=1 TO 30
 230 READ e$: READ f$
 240 IF PEEK f=CODE e$ THEN PRIN
T e$;: LPRINT CHR$ VAL f$;
 250 NEXT g
 260 IF PEEK f=CODE "c" THEN LPR
INT "c";
 270 NEXT f
 280 LET J=f: RETURN
 290 LET c$(I+I TO )=STR$ (j0+VA
L d$): LET b=b+I: INPUT "Insert
PAGE ";(b);b$: LPRINT CHR$ 27;"X
Page ";b;" -- ";a$;CHR$ 27;"Y":
LPRINT : IF c$(I)="0" THEN LPRIN
T
 300 IF c=0 THEN LET c=VAL d$
 310 GO TO 170
 320 DATA "a","160","b","161","z
","162","d","163","e","164","f",
"165","g","166","h","167","i","1
68","j","169","k","170","l","171
","m","172","n","173","o","174",
"p","175","q","176","r","177","s
","178","t","179","u","180","v",
"181","w","182","x","183"
 330 DATA "G","185","D","184","L
","187","S","186","X","240","Z",
"188"
9999 SAVE /"tasprt" LINE 10
```

EG: αβγδεζηθικλμνξοπρστυφχψωΩΓΔΛΣΧ

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QL Internal ROM board- this allows you to put your favorite ROM version (JM, JS, JSU, MGUS, MGUK, etc.) on an eprom. This will lower power consumption by the QL by about 20% & drop the internal heat by close to 50 degrees fahrenheit. There is also room on the eprom for us to include one of the following programs if you are an owner of one of them: ICE, QFLASH, TKII, SPEED SCREEN, TKIII. Brd & eprom $40 -- Board alone $15 -- Custom eprom alone $25. Let us know which ROM version you want us to supply, or you can supply.

Speedscreen supplied on your ROM or for ROMport $25. For ROMport you need to have CARE eprom brd or similar plug in brd.

Internal battery backed clock for QL, uses lithium battery, so should be good for far longer than ordinary batteries. This plugs in where the 8032 goes, and the 8032 is then installed in it. $20 for brd & battery, or $26 installed.

Replacement or backup power supply for the QL, no serious user should be without one (personal opinion). $15

QL case, contains keys and bare motherboard, no microdrives. Can be used to replace bad case, keytops, or bad motherboard, or even as a start on building your own spare QL. $20

Keytops for QL $7.50 Use to replace broken or missing keys, or the whole set, if need be. These are originals.

Micro Drive Cartridges $5 each, till supply improves for ones with the tab. $4.00 without the tab, each.

MDV labels, 3 sheets for $1.25. For the QL.

QL membranes, from Paul for $15.

TS2068 dock eprom boards, bare $10.00. These can be used for a TS2068 program on an eprom or can be configured to use for Non-Volatile memory boards (32K to 128K), or as RAM Disk.

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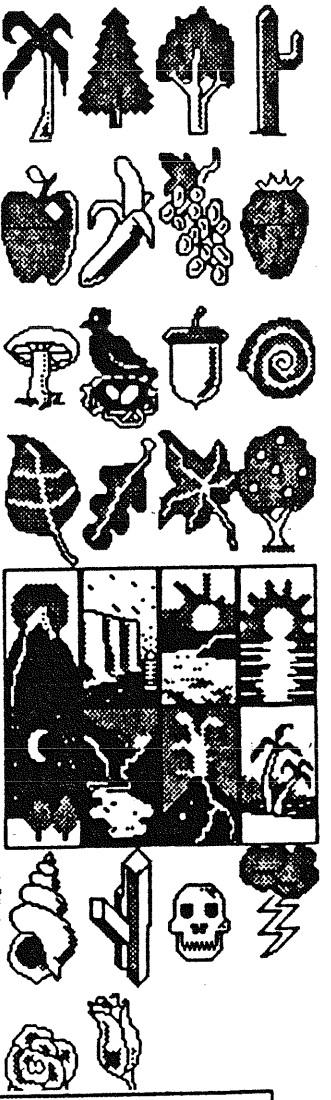
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MERGING ARCHIVE and ABACUS FILES

Peter R. Hale, P.O. Box 8763, Boston, MA 02114

For most QL users the first Psion program is Quill. Later they brave ARCHIVE and ABACUS.

A big let-down is discovering that Merge means something different in each program. ARCHIVE data files and ABACUS files do not merge.

Merging in ABACUS overwrites data (not text) in a spread-sheet if the file in memory and the files being merged are identical (except for differences in numerical data.) However, formulae are wiped out and the only advantage is that merging is quicker than loading another file.

In ARCHIVE only programs can be merged.

So what is the unhappy camper to do? It's rather easy, although no one bothers to spell it out in words of two syllables. You export and import.

Refer the Information Section of the User Manual for specific RULES on import and export between ABACUS and ARCHIVE, but the rest is fairly easy.

First, when merging two ARCHIVE databases, the files must have identical structures (i.e. at least the same kind of data in similar fields.)

In ARCHIVE, type look "fnm1" from the command line (where fnm1 is the first _dbf to merge.) Then type **export <ENTER>** then the name given the export file in the quotes that appear. Press **<ENTER>** again and the file in memory will be formatted so as to be imported to ABACUS. Close fnm1 and repeat the operation on fnm2. (Giving a different name to each export file.)

Now move to ABACUS. With the cursor in A1, press F3, F for Files and I for Import. Input an export file name, then press C to import by Columns.

When the first file is imported, ARCHIVE field names appear in the first row. Go to column A in the row below the one specified in the Grid Use window and import the next file at that cell.

The field names of that ARCHIVE _dbf appear. Delete this row with the Grid command.

If the two files are compatible, (i.e. all first names are in the same column, etc.), export the spread-sheet formatted for import to ARCHIVE.

The only limitation is that the combined total of the two _dbf files cannot exceed 252 records. (You can change or add field names to an ARCHIVE file by editing the text in the first row.)

Now what about merging ABACUS files?

It's not quite so simple, but it is quite useful and quick, once you get the hang of it.

For example, if you keep automobile expenses on one spreadsheet and home utility expenses on another, you may want to integrate data from both to report total household expenses.

Integrating two spreadsheets in their entirety is possible, but considerably trickier than can be covered here. What is simple is to integrate the important <u>data</u> from the two spreadsheets.

For example, it is probably not important to have oil, gas, repairs and insurance separately identified for each month in a combined spread-sheet. Monthly total automobile expenses are what count.

In a corner of the spread-sheet create a one word column heading in text (AutoMonExp), then gather monthly totals from whereever by the appropriate cell reference calls directly below this heading (no blank rows, please!) (You could also have a Month column with the names of each month.)

Use the File Export command to export the appropriate grid range to an Abacus compatible file by Columns (you must include the text headings in the specified range.)

Load the utiltiy expense spread-sheet and find some free space to set up identical columns as for the previously exported file. Now import that file (by columns) with the cursor in the cell that has the first column heading. The data (without formulae) will appear below.

The imported data can be added to existing data with appropriate formulae as TotalExp.

Yes, it's awkward, but if you can multi-task two copies of ABACUS and have ram-disking, the process is very quick, indeed.

And if you think hard about it and read the RULES on page 1 of the Information Section, you may figure out how to actually export an entire spread-sheet - text, blank cells and all - so as to import it (merge) to another spread-sheet.

SAMPLE

Z88 FAX NEWS

Publisher.....Curtis Claar
Facsimile.....Promo Productions
1820 MacTavish Ct. #112 • Rawlins, Wyo. 82301
Fax or voice (307) 324-6600

September 1990 Page Three

A little tab will do you in PipeDream

For the most part, Z88's PipeDream is fairly simple to use. However, the use of columns and the TAB key seems to be a regular cause of confusion, as was brought to my attention by a reader's recent letter.

The problem arises from the fact that PipeDream is an integrated program as Len discussed in his column this month. But this *is* potentially a very powerful combination.

The spreadsheet application requires a simple key sequence to move between columns. However, the arrow keys are reserved for cursor movement through text lines and numerical entries. Therefore the logical choice of the TAB key was made.

> But if you are just typing a letter or paper, (tabs and columns) can be annoying.

Yes, the TAB key does "tab" to the next column. Note the use of the word "column" here. The letters on the screen top do not represent traditional tabs. Instead they show actual column placement.

To clarify, when you type text starting in any column, it may extend beyond the end of the column, overlapping other columns. However, the text still belongs to the column it started in. When the text wraps around to the next line (controlled by ◇ H), it continues in the column it started in.

For example, use the TAB key to position the cursor into column C (the column between the letters "B" and "C"). Type text until the line wraps around. It will restart in column C.

Now move the cursor down a line and back to column A by hitting SHIFT-TAB twice or ◇ TAB. Type a few lines and you'll see that the text wraps in A.

To get a better feel for this, on the last line that starts in column A, use TAB to move to column B. You will notice that the text that started in column A is now "hidden" under an empty column B. Now move the cursor back to column A. You will see that your full line starting in A did not disappear.

Z88 TECH HELP
James Hunkins

Now move the cursor to the end of the A column. Keep trying to move the cursor past that point. The cursor will not move into column B as the text in column B is blocking it and the cursor can not move "under" column B's text. However, the text is still there as shown by its scrolling by in the now narrow column A.

If on rare occasion you can't seem to get the text back to the start in column A and the cursor is sitting in column A, just move the cursor to a different line or type ◇ ←. Things should then be correct.

Now all of this can be useful if you're doing some special layout tricks on your page or combining spreadsheet data in a letter. Or if you're trying to set up a data base. But if you are just typing a letter or paper, it can be annoying.

If they need to indent one line only (as in the start of a paragraph), most people resort to manually inserting spaces. This works fine most of the time and is nearly as fast as using the traditional TAB.

However, occasionally on the Z88 and commonly on printers when using microspacing, the extra spaces will confuse things.If this happens, use the "ghost space" (a dotted underscore) achieved by pressing ◇ SPACE instead of SPACE. This character will not show up on printouts but will guarantee the space's position.

By the way: You can also use this "ghost space" to keep the line from splitting between two words (ex. "Mr. Smith" or "Z88 Fax News").

There are a multitude of examples on how to take advantage of the tab and column features of PipeDream. Two books I use for examples are "Using Your Z88" and "Z88 Real Power Computing."

• • •

In upcoming issues I will review Z88 resources on bulletin board systems including THE CLUB Forum on Compuserve and several local boards. I will also be investigating adding a graphics header on your letters.

Keep the letters coming to me care of Z88 Fax News.

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The Sinclair Desktop Publishing Journal

Volume 1 Issue 4 Fall 1990
Edited By Mike Jelerski

Review: Rainbird's OCP Art Studio

Rainbird's OCP Art Studio is the BEST SCREEN$ graphics editing package available for the Sinclair Spectrum/Spectrum emulated TS2068.

Now that I have made such a bold statement, I must back it up with some facts. Those are the rules of the road for writers engaged in software review articles.

Art Studio is a SCREEN$ graphics editing package for the 48K Sinclair Spectrum or a Spectrum-emulated Timex Sinclair 2068 computer. The software package allows the user to draw lines, circles, boxes and polygons on screen as well as type text, add color, window cut and paste anywhere on screen, rotate, enlarge, shrink and stretch objects, and turn individual pixels on or off.

Hardware Support

The Art Studio software package comes on cassette along with an excellent 58 page manual. The first part of the program which loads into the computer is for configuration of input and output devices.

Art Studio supports several methods of manipulating its Arrow Pointer/Cursor. The Arrow is used to move around the screen in order to select Menu Bar choices, or to select points for drawing lines, circles, boxes, etc. Supported are the Kempston joystick I/F, Sinclair Interface 2 joystick port, the Keyboard Arrow Keys, User Defined Keyboard Keys or an AMX Mouse (with the latter being the choice of the author).

(See Art Studio, page 2)

Utilizing Pixel Print's SCREEN$ Save Utility

Prologue...

One very useful operation available in Pixel Print versions greater than v2.0 is the ability to SAVE the information on screen to a SCREEN$ file. At first look, this does not seem important. What would you want to save? Saving text or icons may have an ocasional use, and saving a SCREEN$ graphic which has already been imported into the column does not sound particularly useful either...or does it?

What if you had a program which included a Main Menu which took up the entire screen. You as the writer/editor wish to show this Main Menu in your newsletter, etc. along with arrows pointing to various areas within this Main Menu graphic accompanied by text. How could this "Page" be realized?

The trick is to expand your mind beyond the concept that a SCREEN$ is a SCREEN$ and is only one size. Remember that Pixel Print columns are really just a series of SCREEN$s one after another. So here is what we need to do: (See SCREEN$, page 4)

In This Issue Of TSDPJ.....

- Review: Rainbird's OCP Art Studio
- Utilizing Pixel Print's SCREEN$ Save Utility
- Something From The SDPJ's Oops Dept.
- Word-Master V2.0
- And more....

TSDPJ Doesn't Make Errors, Just An Occasional Typo!

From The Editor

It was brought to my attention that Jack Dohany is the North American distributor of Word-Master. Jack sent me a letter reminded me not to forget our cousins in Canada. This should not have been difficult since I have spent the last three weeks entering data into my "Country Inns of Ontario" database.

Jack also wanted me to mention that he customizes Word-Master for disk drives and printer interfaces, but NOT for printers. Word-Master comes with a "Custom!" extention program so the user can customize for his/her own printer.

Don't Forget...

Wafadrive users, **DON'T FORGET**, the Aerco parallel printer interface is Spectrum compatible and may be plugged into the back of the Wafadrive to provide additional printer support! This is extreamly useful when you transfer Print Factory programs to Wafadrive. With this configuration, there is no need to try and "patch" Wafadrive graphics code(s).

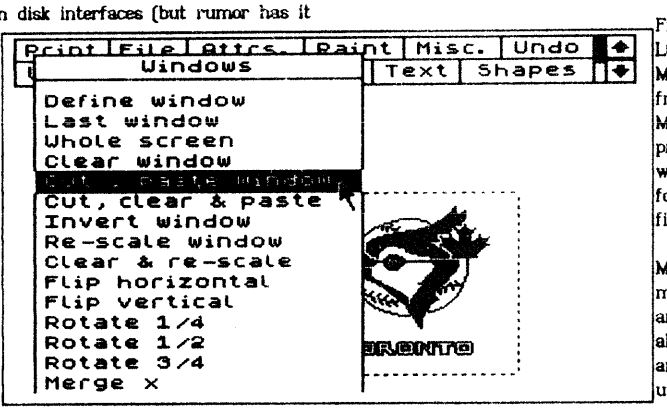
(Art Studio, from page 1)

Several printer interfaces are supported for printer output, and include: Kempston, Tasman parallel, Tasman serial, Interface 1 (serial) and the AMX Mouse built-in parallel printer I/F.

SCREEN$ (or graphics) as well as Font SAVEs and LOADs are all accomplished via cassette. There is both a Sinclair Micro Drive and Opus Discovery disk interface support version available for additional cost. Since the entire program is written in machine code, it is nearly impossible to convert the program to work with North American disk interfaces (but rumor has it that some hackers are currently working on it).

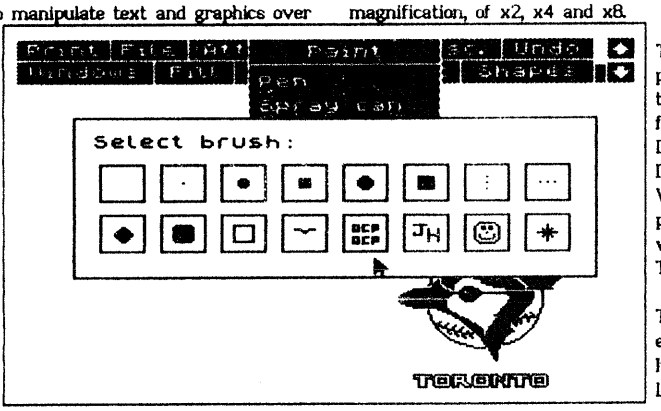
Software:

When the program first LOADs, the user is asked to configure Art Studio for input device (Keyboard, Joystick, Mouse, etc.) and for the printer interface and special printer codes which are to be used. Then the program LOADs additional machine code from tape and asks the user if he/she wishes to SAVE the "customized"copy of the program (to cassette).



Art Studio Features:

Art Studio allows the user to manipulate text and graphics over the entire computer screen. At the top of the screen is a Menu Bar with 13 menu Options. All but three of the menu Options will activate a pull-down menu of choices. Quite simply, the whole program operates very much like Apple MacIntosh software in that all Options and Choices are selected using "Point and Click". This is where the pointer is placed over a menu Option, or menu choice, and the fire button, keyboard key, or mouse button is pressed to pull down a menu or select a choice.



The first question to mind is: If the Menu Bar takes up the upper two screen lines, how can the whole screen be used to create graphics? The answer is in the up and down arrow Menu Bar Options. These (the up and down arrow) Options scroll the screen to allow the use of the entire screen for editing.

The rest of the Menu Bar Options include: Windows, Fill, File, Magnify, Text, Shapes, Print, File, Attributes, Paint, Misc. and Undo. Now let us look at each of the Menu Bar Options and each of their respective Choices to get a handle on what Art Studio can do:

Windows: This Option is used to cut, paste and manipulate user defined areas on the screen. Windows is probably the most power set of of tools within the package and it includes: Define Window, use Last Window, Clear Window, Cut and Paste or Cut, Paste and Clear. You can also Re-Scale, Rotate, Flip, Merge and place Multiple copies of a window on screen.

Fill: Like many other graphics programs, Fill allows an area on screen to be "Filled" with a particular pixel pattern. The difference with Art Studio is that "Fill" patterns can be edited by the user. There is also a Solid Fill choice.

File: SCREEN$ file SAVEs, LOADs, VERIFYs and MERGEs are accomplished from within File Option. The Microdrive and Disk versions provide catalogue features which are quite impressive for Microdrive/Disk SCREEN$ file management.

Magnify: This is one of the most important features of any graphics programs. It allows the user to choose an area on screen to "Zoom-In" upon. Once "Zoomed", individual pixels can then be turned on and off (again by Point and Click). This method was used by the Author to create the graphics in "You Don't Have to be Artistic to Create These Great Looking Graphics!", The Sinclair Desktop Publishing Journal, Volume 1, Issue 3. Art Studio provides three levels of magnification, of x2, x4 and x8.

Text: The Text Option provides the ability to place text anywhere on screen; from Left to Right, Downwards, at Normal, Double and Treble Height and Width. The user may also print Sideways, in Bold, and with Caps Lock on or off. There is also a Font Editor.

The Font Editor Choice is an entire Sub Option of its own. It provides the ability to LOAD, SAVE and Edit the working font set. Fonts can also be Rotated, Inverted and Flipped. The user may also copy the Spectrum ROM into the Art Studio font RAM. One other quite fascinating feature is the ability to capture a font from a defined window on the screen. On its own, the Font Editor alone is worth the price of the program.

Shapes: This is the basic building block Option for drawing. Points can be placed, Lines drawn (point A to point B), Continuous Lines (point A to B, to C, etc.), Rectangles, Triangles and Circles can be created on screen.

(Continued on page 3)

(Art Studio, from page 2)

There is even a Ray making Choice. Shapes can be drawn Elastically, and the vertices of shapes can be "Snapped" to each attributes square.

Print: Hardcopies to the printer can be in five different sizes 1x1, 2x2, 3x3, 4x4 and 5x5. The print Option provides Grey-Scale dumps, Single and Double Density, plus Sideways printing. Printouts can be Left, Centre or Right Justified. CRLF or CR can be choosen directly from the Print Pull-Down menu. There is also a provision to print to the ZX/Alphacom/TS2040 printer.

Attributes: Here the user selects Ink, Paper, Border, Bright, Flash, Over, Inverse and Transparent attributes. There is a Standard Choice to reset all attributes to normal. It is again important to note that all Choices are chosen via Point and Click.

Paint: The Paint Option controls some of the main facilities for "Painting" on screen. Three different tools are offered- a Pen, a Spray Can and a Brush. Different Pen and Spray Can widths may be Chosen, and Brushes can be edited just like a font character (only larger).

Finally there is the Misc. Option. Here the user can view the entire screen (the Menu Bar is removed), Clear the screen, turn on and off the large and small "Bright" grids or Change Colour over a Window Defined area.

Although this article seems to have been just a list of features, it must be remembered that the Users Manual is 58 pages long. I truly believe that just the list of features alone is enough to justify the purchase of such a package which costs approximately £15 (or $28). So if you plan to do ANY graphics work with your Sincalir/TS2068, this editing package is a definite MUST HAVE!

TSDPJ Gets a New Look

By Mike Felerski

Well now, this is the last issue of Volume 1, And by golly we made it through the first year. I hope that TSDPJ has met the expectations of our readers.

Starting with Volume 2, Issue 1 (Winter 1991) TSDPJ will have a slightly new look based on the new Word-Master 2.0. We are also planning to make each issue larger with more Pixel Print and Print Factory coverage, along with more graphics and utilities.

So, with continued support, The Sinclair Desktop Publishing Journal has a long and bright future ahead. MJF

P.S. Mum's the word, but look out for a SDPJ sister publication after January 1, 1991.

Making of this Issue

This issue of TSDPJ was created using Word-Master & Typeliner (first three pages) and Pixel Print Plus version 4.0 (for the last page) Tasword II was used to edit the text for the last page. Graphics were NMI saved with a Larken Disk interface and edited with Art Studio. Graphic transfers were made with TSXfer utility.

Word-Master USA Version 2.0 Now Available

Staff

Hot off the press is news that the awaited version two of Word-Master is now available from Jack Dohany. The new version includes the following improvements over the original release:

- The File Handling Menu has been reduced from three to two lines and now uses the numeric keys to select the desired disk drive.
- The current drive shown on the menu is now always correct (this was a bug in the early version.)
- With the Aerco and Larken versions, there are now two keys which catalog the current drive. K produces the standard catalog, and F produces a "full" catalog which shows file lengths and start addresses. With the Oliger and Zebra systems, a FORMAT command has been added.
- A new ZAP command has been added to clear all RAM files.
- The "List Files" or Q command now also shows the space remaining in RAM, and the total length of all files in RAM (at the top of the screen.)
- All Word-Master files are provided in an "Un-Packed" form plus 150 shareware graphic files. Thus version 2 occupies three 320K diskettes.
- Several other improvements have been made to the quirks in version 1.08. There was also a slight decrease in available file space which varies form disk system to disk system, but the space available is still at least 29K.

The price for this incredible upgrade if you are already a registered owner of Word-Master 1.08, is only $10 including postage. So now IS the time to upgrade...or if for some reason you don't own a copy of Word-Master, there will not be a better time to purchase it!

Where to Write

Word-Master: Jack Dohany
390 Rutherford
Redwood City, CA 94061

Art Studio,
AS+Genius Mouse: Datel Electronics •
Govan Road
Fenton Industrial Estate
Fenton, Stoke On Trent,
ST4 2RS, England

Microsnips •
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Wallasey,
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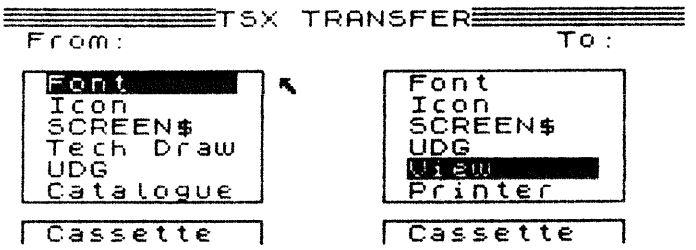
• Accepts VISA

First of all, LOAD in your SCREEN$ graphic into the middle of a Pixel Print column. Next, use the move function to move the column "Window" upward until just the UPPER HALF of the SCREEN$ Graphic is showing. Now use the Save function to SAVE the column "Window" as a SCREEN$, then SAVE the column. Once this is done, you can now leave the Pixel Print program (example below:)

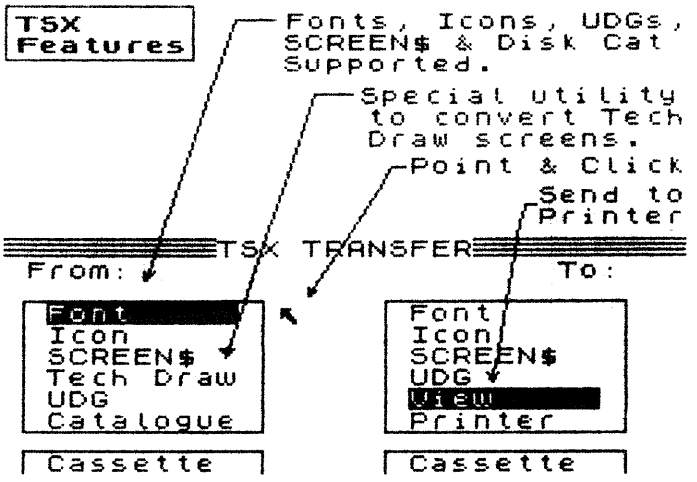
↑

<- BLANK AREA ABOVE GRAPHIC ->
(1/2 SCREEN OR 11 LINES)

↓



Next, LOAD in your favorite SCREEN$ graphics editing program and then load in the SCREEN$ graphic (from the column window). At this point, you may now add arrows with lines and text which extend above the (top half of the) SCREEN$ graphic into the empty half of the screen as seen below:

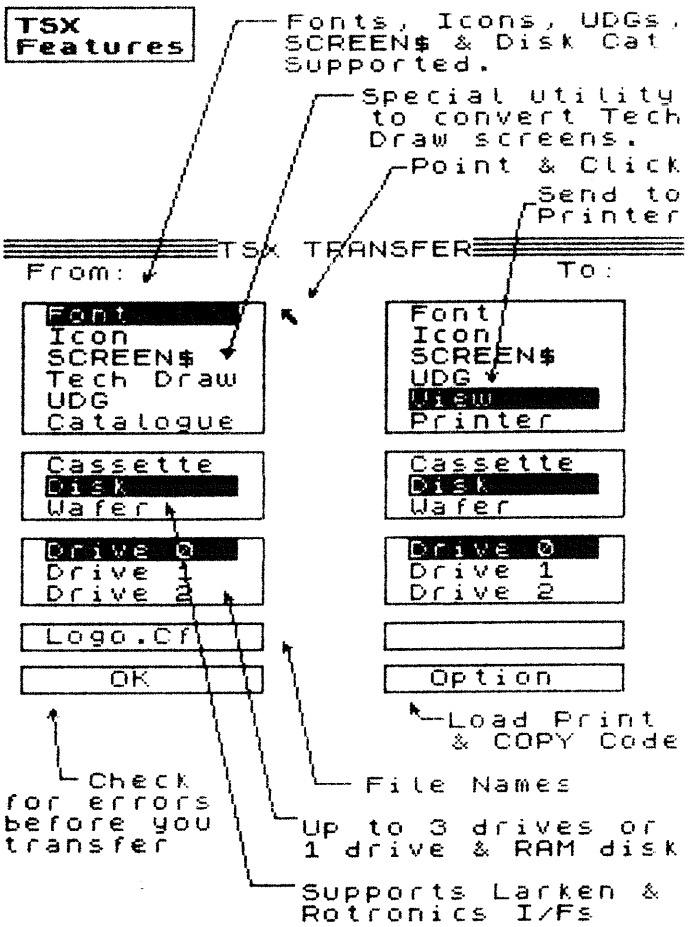


Finally, the finished graphic is SAVEd, the graphic editing program exited, then the Pixel Print program is LOADed and the column is reLOADed. The column "Window" should now be repositioned so that the "Edited" SCREEN$ graphic can be loaded back into the column from where it was removed.

The same steps can be taken to add arrows an text to the bottom half of a SCREEN$ graphic in a Pixel Print column creating an impressive and professional look (See Figure 3).

Epilogue...

At this point, many users of Pixel Print Professional version 5.0 are saying "Wait just a minute--there is an easier way than that!" and they are correct, there is. In the case of Pixel Print Professional, you can position the column "Window" just as described above, but instead of saving the SCREEN$, all you need to do is call up the Pixel Artist graphics program to add the lines and arrows. So all of this can be accomplished without leaving the column (or Pixel Print).



The Sinclair Desktop Publishing Journal

If you have any questions or comments about the journal please send them to:

Mike Felerski, Editor SDPJ
1284 Brushwood Avenue
Cincinnati, OH 45224

For replys, please send a self addressed stamped envelope.

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Subscriptions are available through Update Computer Systems magazine, and not through Bottle Cap Software or SDPJ directly.

QL EMULATOR for the AMIGA
And Some Miscellaneous Ramblings
by Al Feng

Yes, for those of you who may not have heard, there is a QL EMULATOR for the AMIGA hardware platform. The version of the Rainer Kowallik's [Berlin, Germany] emulator software (YES, software!) which Nazir Pashtoon and I tested on two AMIGA computers last summer must currently be considered a beta-version for most North Americans.

But first ... Since I have your attention for the next few moments, and my soap-box has not collapsed beneath me yet (times change: corrugated cardboard just isn't as sturdy as peach-wood ...), I want to make a few comments about the SINCLAIR community in North America.

It seems that we, as a community, we are now in some disarray; and, the number of users and vendors is diminishing for various reasons. I was amazed when I found that a factionalism had developed (existed) in the community; but, sometimes, I'm not looking at the wall on which the handwriting can be found. The SHARING of ideas and experience is what makes a community strong.

It would seem that 2068-users apparently have a (Z-80) chip on their shoulder (so to speak) with regard to the existence of the QL. Some seem to feel that the QL is the (in)direct reason for the demise of Sinclair Research Ltd.

While these same die-hard 2068 people seem to embrace their affiliation to the SINCLAIR SPECTRUM via add-on ROMs, they ignore the fact that their beloved TS-2068 is probably as much an affront to the "real" SPECTRUM user as the QL is to the 2068 die-hard [I've NEVER heard of any SPECTRUM owner inserting a 2068 ROM into his SPECTRUM!].

THE BIG IF. If Uncle Clive had stayed-the-course, stuck to what (t)he(y) knew ... If he just had NOT ventured off to un-charted territory with a "new" chip, he probably would not have been so bold as to try and build an electric car! Pandora's Box, indeed.

Similarly, 2068 users apparently fear that QL users are more likely to stray-from-the-fold. Of course, this is with the understanding that 2068-users really don't even want QL-users sharing the same wall outlet (sort of like have sheep and cattle drinking from the same watering-hole, or something ... still, better to associate with them than those sod-busting PC-users!).

Some of these ex-QL_usionists will describe the many wonderful GAMEs they have for their 2068 and lament that: "If they had only had a SPECTRUM/2068 emulator for the QL, I would have bought one five years ago!" Right.

Some 2068 users like to point to the Z-88 as "proof" that the Z-80 is a viable chip. But, if they think that there is anything similar between the SPECTRUM/2068 and the Z-88 other than the Z-80 processor, then they should take another look.

Regardless of copyrights and patents, Uncle Clive would have abandoned the SPECTRUM-based operating system due to limitations. More important than a worrying about the never-to-be SPECTRUM emulator for the QL, someone should be working on a Z-88 emulator for 2068!

YAWN. Well, that pretty much brings us back to the original topic of emulators for the QL.

Currently, Kowallik's QL EMULATOR is NOT a commercial product; I get the impression that it is a spin-off from some Doctoral research; and, I think that in North America we should consider this as being BETA-version software at the present time.

This is NOT the first EMULATOR for the QL. A DAUGHTER board developed by ABC-ELECTRONIK and currently marketed by JOCHEN MERZ SOFTWARE [Im stillen Winkel 12 - 4100 Duisburg 11 - Germany] is available (in/from the UK) for use in ATARI ST computers for about 170 BP Sterling (that's about $340 +/-; NOT cheap, to say the least!).

For those 2068 people out there who may be wondering why someone would want an emulator for the QL, it has been noted by people better "informed" than myself that QDOS may be the "best" 68000 operating system (OS) for a micro-computer, bar none. NETworking and multi-TASKing (of sorts) are just two of the advanced capabilities which can be implemented with minimal, additional code.

Of course, the penny-pinching penchant of Sinclair Research Ltd. probably influenced the decision to use the MC68008 rather than the MC68000. Their demise put an end to hardware evolution.

As good as QDOS may be as an OS, the hardware platform is getting long-in-the-tooth. The 68008 CPU pushing data through an 8-bit bus occassionaly makes it seem as though you are time-sharing with someone else on the computer.

The QL EMULATOR for the AMIGA hardware platform allows the current/potential QL user(s) the opportunity to maintain use of most of his/her existing software, while gaining the advantage of a 16-bit data bus.

Nazir assisted me with my informal tests. Learning to double-click the mouse was the first obstacle which I had to overcome! There are some other AMIGA-DOS "quirks" with which I was not familiar (e.g., the soft-reset key combination). By and by, after the proper sub-directory was opened, we had QDOS running on the AMIGA.

We "ran" it successfully on both an AMIGA 1000 w/512K (with a 2000 keyboard) as well as an AMIGA 500 w/1024K. This should be taken as a conditional statement since the apparent overhead on the AMIGA's system is well over 256K. The 512K AMIGA had something in the neighborhood of 196K FREE_MEM left after QDOS was on board. A 1 meg unit would have around 708K. I think current AMIGA 2000 allows for up to 2 meg of system memory.

The 68000 processor in tandem with the 16-bit data bus does make a visible difference ... TurboQUILL+ is even better -- probably comparable to using PC-QUILL on a(ny) clone.

The PC-CONQUEROR emulator (for those who might be interested), requires a 1 meg AMIGA. The available memory for QDOS was somewhere between the memory available on a 640K and 786K QL as one might suspect. MS-DOS probably runs at about 1.0 Mhz vs 0.5 Mhz on a standard QL.

FORMATting MS-DOS disks was problematical. This is in part due to the non-standard disk drives used on AMIGAs. The disk formatted to 723968/730112 bytes (i.e., 6144 bytes "bad"; or, 12 bad sectors).

TASKMASTER does NOT WORK.

QRAM does NOT WORK.

The preliminary conclusion as to why neither TASKMASTER nor QRAM may work is because Kowallik (as well as the ATARI TOS writers) apparently chose to ignore Motorola's request regarding use of the A-line (vs. F-line) in calls to the system (this has something to do with the TAS [Test and Set] instructions/calls). This is really beyond me and I may have gotten it wrong. The apparent code conflict should resolvable (though my understanding of the problem probably will never be).

TURBO-compiled programs DO work (e.g., QLUSTer); BUT, it does NOT seem that you can use the TURBO compiler (v.2.00) with the AMIGA.

The current screen display visible is "square" with the bottom 40 pixels not shown ... akin to running a monitor-only program on a NTSC television (testing was done with an RGB monitor). The problem has been forwarded to Harvey Taylor as he (apparently) currently uses an AMIGA 2000 and may find it to be a fascinating enough problem on which to spend a few moments of his time.

A REAL HARDWARE DEFICIENCY which I noted to was that disk access was incredibly slow ... untimed, but the impression is that it is s-l-o-w-e-r than loading from microdrive cartridges!

I queried Nazir as to whether this could not be overcome with dedicated" drives whereby the AMIGA's drive is shunted to "last-in-the-chain" and the STANDARD drives are activated. A dedicated interface may be needed ... Nazir had been considering my query ... he had considered using an IBM compatible drive as an AMIGA drive with an N.A.P designed interface card to make it think it was an AMIGA drive ...

The ATARI QL-EMULATOR should NOT experience the sluggish disk access since the ATARI and the QL both use the IBM-compatible drives.

For what may have been a limited time, the "original" AMIGA 1000s w/512K were available for around $300.00 (+/- $50.00). Some AMIGA dealers may still have the older units in stock as (it should be noted that the AMIGA 1000 uses a "different" set of proprietary chips than the 500/2000/3000).

A new(er) AMIGA 500 is cheaper than a THOR XVI (the AMIGA 500 is a keyboard/system box with an "okay" keyboard). But then, even a new ATARI w/ DAUGHTER board is cheaper than a THOR!

(NOTE: Neither emulator supports QL CLIENT/SERVER NETworking, while the THOR -- apparently -- does.)

There are some things that STILL need to be worked out as of mid-December (the screen display and the "dedicated" QDOS disk drives). But, if you think you can overcome these problems; or, if are willing to gamble that others will resolve the forementioned problems in the near future, then you should keep an eve out for a well priced, used/new AMIGA.

If it isn't already apparent, the reason that the QL/AMIGA emulator has significance is that it gives "new" legs to a familiar and proven operating system. Proprietary (i.e., "scarce") chips such as the ZX-8301/ZX-8302 are eliminated. Thus, as long as there is an AMIGA, you will have a platform on which you can run your software.

TIMES CHANGE. Now they raise llamas and ostriches where cattle and sheep used to graze; and, I keep hoping for a faster, INEXPENSIVE hardware upgrade for my QL ... with only an occassional glance at those OTHER computers.

HMMmm. If someone can just convince Rainer Kowallik to do the same for with QVIEW's MINERVA code (or, vice-versa) ... we could make those legs BIONIC (!) ...

Exploring DEF FN and FN

The little used DEF FN and FN functions are very Powerful and quite easy to use. Many have ask for an article explaining how to use DEF FN, so here it is.

<DEF FN> is used in a line of programming. The program line DEFines a Function. A very simple one (of no value) would be:
9000 DEF FN a()=10
This is similiar to the way we would assign a value to the variable a. But the formula in line 9000 DOES NOT assign a variable. Its "a()" is a Defined Function and NOT a variable.

<FN> is used to EXECUTE THE DEF FN Function.
EXAMPLE: To execute the Function in line 9000:
100 PRINT FN a()
(And 10 would be printed to screen).

Now lets use a trio of DEF FN statement lines to use for computing the simple formula for the area of a rectangle.

```
9000 DEF FN a()=L*W
9002 DEF FN L()=a/W
9004 DEF FN W()=a/L
```

Here we have three formula set up to compute Area, Length, and Width.

Now we will EXECUTE the formula with the FN function.

```
100 LET l=0:LET w=0:LET a=0
102 INPUT "<1> Find Area. <2> Find Length
<3> Find Width";x
104 IF x=1 THEN INPUT "ENTER L";l:INPUT ENTER w";w
106 IF x=2 THEN INPUT "ENTER A";a:INPUT ENTER W";w

108 IF x=3 THEN INPUT "ENTER Area";a: INPUT "ENTER
Length";l
110 IF x=1 THEN PRINT FN a()
112 IF x=2 THEN PRINT FN l()
114 IF x=3 THEN PRINT FN w()
116 STOP
```

DEF FN used for Literal Data

ADD a line: 9005 DEF FN y$()=a$

Now we will use the DIRECT MODE.
Type <LET a$="Fred">
Type <PRINT FN y$() >

The last little exercise tells us that a DEF FN statement can be much broader than we have thought before. It is not limited to MATH Functions. IN FACT, ANY FUNCTION that can be expressed in proper BASIC SYNTAX can be DEFined in a DEF FN statement!

CAN WE EXPAND DEF FN to exercise Machine Code Utilities? Why not, since BASIC can exercise a MC program? If a MC program produces NUMERIC value via <PRINT USR #> then we can make the DEF FN pick up the value: 9010 DEF FN a()=USR x>. Or, (9020 DEF FN a()=(USR x)+(USR y) >. But this is getting beyond the intent of this treatsie.

Already we have learned quite a bit about DEF FN.
1. DEF FN can define a math formula or any computer function to be executed.
2. The DEF FN "variable" has no relationship to a "computer variable".
3. The DEF FN assignment must be in a PROGRAM LINE
4. Once the DEF FN assignment is in a program line "It is just there", and no GO TO or GO SUB is needed to execute the Function.
5. The "FN" function executes the DEF FN statement.
6. The DEF FN Function is DEFined to the right of the "=" sign and can be ANY Computer Function.
7. The Function can be ANYTHING that the Computer is capable of doing (If in proper Syntax).

Now to really tie down the DEF FN and FN functions lets key in a couple of demonstration programs. Believe me, by doing so you'll never again ask about DEF FN and FN. AND a large new capability will be discovered. Experimentation will broaden the discovery.
Have Fun-- Bill Jones

Choo-Chooing Along With DEF FN

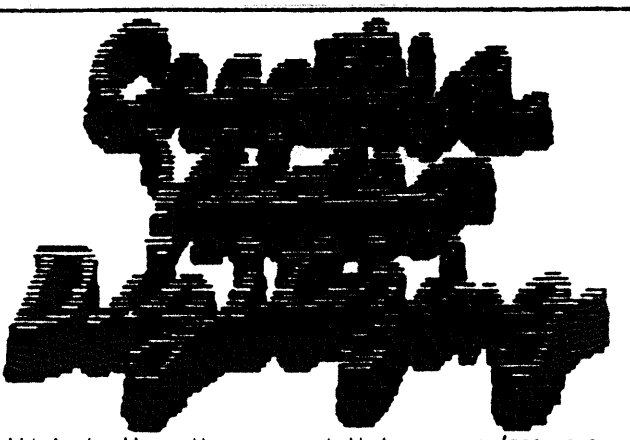
A Train of Examples

```
 300 CLS : PRINT "Investigating DEF FN"''
 302 GO SUB 480: PRINT "--Area of a Circle"
 304 INPUT "Enter Radius";r: PRINT "The Area is ";
FN a(): PRINT "ENTER": PAUSE 0
 306 CLS : GO SUB 480:: PRINT "DEF FN to Find Syst
ems Vars"''
 308 PRINT "Find VARS"'"VARS=";FN v(): GO SUB 480:
 PRINT "ENT": PAUSE 0
 310 GO SUB 480: PRINT "Find PROG": PRINT "PROG is
 on the Log at ";FN p(): PRINT "ENT": PAUSE 0
 312 GO SUB 480: PRINT "Find NXTLIN"'"NXTLIN=";FN
n(): PRINT "ENT": PAUSE 0
 314 GO SUB 480: PRINT "Find WORKSP"'"WORKSP=";FN
w(): PRINT "ENT": PAUSE 0
 316 GO SUB 480: PRINT "Find STKBOT"'"STKBOT=";FN
s(): PRINT "ENT": PAUSE 0
 318 GO SUB 480: PRINT "Find RAMTOP"'"RAMTOP=";FN
r(): PRINT "ENT": PAUSE 0
 320 GO SUB 480: PRINT "Find P-RAMT"'"P-RAMT=";FN
m(): PRINT "ENT": PAUSE 0
 322 CLS : GO SUB 480: LET x=4e4: PRINT "Doing Squ
are Roots"'': FOR n=1 TO x: INPUT "ENTER A Number-
 x To Quit";a: IF a=x THEN  GO TO 340
 324 PRINT "The Square Root of ";a;" is ";FN z():
NEXT n
 340 CLS : PRINT  INVERSE 1;"Seven Inter-dependant
 DEF FN    Formulae To Investigate          "; INVE
RSE 0''TAB 5;"How Much Water?"'': PRINT "Given: La
st Night a big Thunder-Storm rained over a 25 Squa
re   Mile Area."'"How many Inches do you suppose
 Fell?"'': GO SUB 480: INPUT "Input Inches";a
 341 CLS : PRINT "If ";a;" Inches over 25 Sq Mi  :
"''
 342 PRINT "There would be "; INVERSE 1;FN l(); IN
VERSE 0'"Cubic Inches of Water."'': GO SUB 480
 343 PRINT "This would be "; INVERSE 1;FN u(); INV
ERSE 0;" Cu Ft."; INVERSE 0'': GO SUB 480
 344 PRINT "This is "; INVERSE 1;FN g(); INVERSE 0
;" Gallons."'': GO SUB 480
 345 PRINT "The Weight is "; INVERSE 1;FN o(); INV
ERSE 0'"Pounds."'': GO SUB 480
 346 PRINT "The Water would Weigh "; INVERSE 1;FN
t()'" Tons."' INVERSE 0: GO SUB 480
 347 PRINT "A Choo-Choo Train of "; INVERSE 1;INT
(FN c()); INVERSE 0'"Tank Cars would be needed to
   haul the Water."'': GO SUB 480
 348 PRINT "The Train would be "; INVERSE 1;INT (F
N y()+.5);" Miles"' INVERSE 0;"in Length"'': GO SU
B 480
 350 PRINT '"At 100 Cars Per Engine, we wouldneed
"; INVERSE 1;FN h(); INVERSE 0;" Locomotives."'':
GO SUB 480
 352 PRINT "Engines extend the Train Length to ";
INVERSE 1;FN j(); INVERSE 0;" Miles long.": GO SUB
 480
 354 PRINT "ENTER": PAUSE 0: GO TO 340
 480 FOR n=1 TO 3: BEEP .15,n*14: NEXT n: RETURN
 500 DEF FN a()=(PI*r↑2)
 502 DEF FN v()=(PEEK 23627+256*PEEK 23628)
 504 DEF FN p()=(PEEK 23635+256*PEEK 23636)
 506 DEF FN n()=(PEEK 23637+256*PEEK 23638)
 508 DEF FN e()=(PEEK 23641+256*PEEK 23642)
 510 DEF FN w()=(PEEK 23649+256*PEEK 23650)
 512 DEF FN s()=(PEEK 23651+256*PEEK 23652)
 514 DEF FN r()=(PEEK 23730+256*PEEK 23731)
 516 DEF FN m()=(PEEK 23732+256*PEEK 23733)
 518 DEF FN z()=(SQR a)
 520 DEF FN l()=((5280*12)↑2)*a*25: REM Cubic Inch
es
 521 DEF FN u()=FN l()/1728: REM Cubic Feet
 522 DEF FN g()=(FN l()/231): REM Gallons
 524 DEF FN o()=FN g()*8: REM Weight Pounds
 526 DEF FN t()=(FN o()/2000): REM Weight Tons
 528 DEF FN c()=(FN o()/90000): REM Nbr Rail Cars
90000 lb Gwt
 530 DEF FN y()=(FN c()*80/5280): REM Train length
 80 Feet per Car
 532 DEF FN h()=INT (FN c()/100+.5) : REM # Engs
 534 DEF FN j()=INT (FN h()*80/5280+FN y()+.5) :
     REM TOTAL Length
```

Note: The Program beginning at line #340 uses 9 DEF FN Formulae. These begin at line #520 and are set up in a sequence so that each formula AFTER line 520 depends upon the calculation of earlier DEF FN functions. So, for the last calculation in line #352, the formula within lines 520, 521, 522, 524, 526, 528, 530, and 532, are all executed to find "FN j()" in line 352.

This difficult math problem was given in a test to a 12th grade high school class, accompanied by a table of values needed to solve the problem. Of three classes of 30 students each, none solved the problem within a 10 mile error allowance. The TS-2068 solves the problem in about 2 seconds, most of which is used for display. -BJ_

```
  50 REM ** Differential
  51 REM    Equations
  52 REM    Using DEF FN
  53 REM
  54 REM ** Area of a Circle
  55 REM    (for simplicity)
  56 REM
 100 LET a=0: LET r=0
 102 INPUT "<1> Find Area"'"<2> Find Radius";x
 104 IF x=1 THEN  INPUT "Enter Radius ";r
 106 IF x=2 THEN  INPUT "Enter Area ";a
 108 IF x=2 THEN  PRINT "The Radius is ";FN r()
 110 IF x=1 THEN  PRINT "The Area is ";FN a()
 120 GO TO 100
9000 DEF FN a()=PI*r^2
9002 DEF FN r()=SQR (a/PI)
9003 REM ----------------
9004 REM * After Breaking OUT of the above, do
some in the Direct Mode. TRY:
<LET r=3: PRINT FN a()> <LET a=60: PRINT FN r()>
9005 REM ----------------
9008 REM ** Note that A DIRECT  <FN a()> Command
works if there is a valid <DEF FN a()>Formula in a
 Line Statement.  If NOT then a Report Code would
be given.
9010 REM ----------------
9016 REM * Also prove that vars a and r are not
disturbed by the DEF FN assignments of DEF FN a()
and DEF FN r(). <PRINT a> and <PRINT FN a()>
<PRINT r> and <PRINT FN r()>
9018 REM ----------------
9020 REM * Now we are equipped  to construct a
better View Calc program, eh?
9022>REM ----------------
9024 REM * Add more lines with your favorite Math
Formulae to Compute the National Debt on a daily
basis.  (In Dollars, Yen, and Schekels)
```

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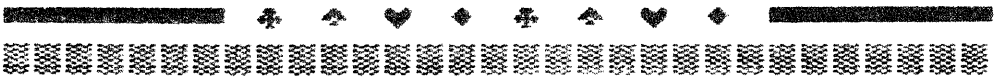
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Datatronics 2400P Modem Review

I recently bought a new 2400 Baud pocket modem to use with my Z88.

A pocket modem is just a smaller version of a full size modem. They are approximately one quarter the size of a standard modem.

The modem's dimensions are 5 inches by 2.5 inches by 1.12 inches. It weighs 0.33 pounds. The modem is beige colored to match most computers except Sinclairs.

There are five LEDs: Low Battery, Auto Answer, Modem Ready, High Speed and Carrier Detect.

It takes a 9 volt battery or an AC adapter. I get about 8 hours on an alkaline battery and 2 hours on a rechargeable Ni-Cad. I generally use an AC adapter at home and the batteries on the road.

There is a female DB25 connector on one end of the modem. This is designed to plug directly into the serial port of an IBM type computer. The Z88 has a DB9 connector so a cable is needed to connect to the modem. See the diagram in my article in the April 1990 Update or contact your dealer for a cable.

The modem is 100% Hayes compatible so it is compatible with all your software. It also has an extended command set so it has some commands that older Hayes modems do not have.

This modem has some features I have not seen on some other modems. There is a non-volatile memory to store two configuration profiles and 10 telephone numbers. The configuration profile is all the software switch settings and registers in the modem. You can view the non-volatile memory to see the status of all these settings in one display.

There are some diagnostic commands available to test your computer, modem, telephone line, remote modem and remote computer. These should be useful if you ever experience communication problems.

Other countries have different modem standards. They use different tones for tone dialing and different on hook/off hook intervals for pulse dialing. You can change these settings if you plan on doing some overseas traveling.

I have a couple telephone numbers stored. Other than that I have not changed any of the defaults that came with the modem. It may be neccesary to change some of the settings when using different telephone systems while traveling.

Performance wise I am getting some random garbled text at 2400 baud while logged onto GEnie. Setting Xon/Xoff on the Z88 Panel to Yes eliminated about 99% of the garbled text.

Some Bulletin Boards have Null settings. This is a variable delay that you can set. Setting the Nulls to a higher number should eliminate this garbled text.

Xmodem transfers work perfectly at 2400 and the extra speed is nice when downloading a long file. It's best to turn Xon/Xoff to No when using Xmodem.

Xmodem is a file transfer protocol designed to transfer any file even machine language.

I bought a 2400 baud modem at this time because GEnie changed their rates. 300, 1200 and 2400 baud all now cost $6.00 an hour. 2400 baud saves time and money. GEnie also has over 100 services at $4.95 per month. You don't pay the $6.00 an hour when you access these services.

2400 baud also makes long distance calls less expensive. Time is money here as well.

I bought the 2400P from Jameco Electronics in California and paid $139.95 for it. Pocket modems are generally more expensive than full sized modems. But I felt that this modem's extra features and small size were worth the price.

By Dave Bennett

The GEnie Information Service

Those of you using modems may or may not be aware of the large Information Services available to you. Most likely you can access them with a local phone call if you live near a city with a population of 50,000 or greater.

The most famous is probably CompuServe. This is a very good service. I was a member for several years. There is a Timex Sinclair Sig located in the Computer Club Forum.

But then I switched to the GEnie Service primarily because of support of the Z88 in the Laptops Roundtable. At the time there was little or no support of the Z88 on CompuServe.

Most of you know from my articles that I am just crazy about the Z88. It is a fantastic computer. It can do some things that are impossible for other 8 bit machines. But I am getting off track here.

GEnie has separate Bulletin Boards called Roundtables. These are further subdivided into Categories and then into Topics.

At the time that I joined GEnie the Z88 had a Topic in the Laptops Roundtable. Since then we now have a Z88 Category. Maybe in the future there will be a Z88 Roundtable. There certainly seems to be enough Z88s being sold to justify it. You do need a sponsor for a Roundtable though.

Currently the sponsor of the Laptops Roundtable is Traveling Software. They make Link-up software for PCs. In the past they produced Tandy Model 100 products.

The earlier Sinclair related computers such as the QL and the 2068 are supported in the TI Roundtable under Category 13 Orphans. Currently there are only topics available.

Right now there are few if any messages being written for these machines and no files are being uploaded. I think that if more people contributed there can at least be a 2068 and QL Category.

There is some incentive in joining GEnie rather than CompuServe. GEnie just reduced their rates. There are some other information services out there. One is a mainly IBM service called Prodigy. Prodigy just reduced their services to $5.00 a month. In response GEnie now provides over 100 services including Electronic Mail and an Electronic Encyclopedia at $4.95 a month. Any interests besides computers can be supported for this price.

Any of the Computer Roundtables and all of the download areas in the Roundtables are not supported under this plan. You must pay $6.00 an hour for 300, 1200 and 2400 baud to access these.

But still this is significantly less than CompuServe. They have rates of $6.00 an hour for 300 baud and $12.50 an hour for 1200 and 2400 baud. For some reason CompuServe does not offer flat rates like the other services.

GEnie is part of the General Electric Company. Their offices and computers are located in Rockville Maryland. Their Computer Network has phone numbers located in most larger cities.

To join GEnie call 1-800-638-9636 (voice).

Or set your modem for half duplex at 300 or 1200 baud. Dial 1-800-638-8369. Upon connection enter HHH. At the U#: prompt enter: XJM11999,GENIE. There will be a brief explanation and you will be given the opportunity to sign up.

You should have a major credit card handy or you can have the fees deducted from your checking account.

Your permanent password will be mailed to you. You will also get a User's Manual and a subscription to the GEnie Magazine LiveWIRE.

By Dave Bennett

QUANTA has released it's latest updates to the Users Group library. This is the revised list of disks and the approximate amount of free sectors per disk. As you can see the library is now over 24 megabytes of programming for the QL computer.

Disk Name	Contents	Free Sectors
DUAL_GUIDE	Archive based Library Guides	588
C.A.D_1	Computer Aided Design	312
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The USA Sub-Librarian is ready to update the QUANTA members on this side of the Atlantic. Details are just a SASE away. Address your questions to Paul Holmgren, 5231 Wilton Wood Ct., Indianapolis, IN. 46254.

PUBLIC NOTICE FROM JACK DOHANY dated January 1, 1991

As of January 1, 1991, I have retired from my 2068 support activities. I will accept no further orders from anyone for anything, nor will I accept phone calls or answer letters, except from close friends or fellow developers.

The reason is this: I've been spending far too much time on support, and virtually none on programming, which is my hobby and passion. So I'm going to stop trying to be a dealer/guru, and resume being just a programmer and hardware developer.

Of course I'm NOT defecting from the 2068 to another computer; the 2068 is still the ONLY computer I like and use. I plan to spend most of my free time for the next few years producing software and hardware for it, which I'll make available through dealers such as RMG and Ed Grey. Other dealers who would like to carry my stuff are invited to contact me.

What about support for my products? Dealers will forward any problems or questions they can't handle to me, and I'll get around to dealing with them eventually.

With luck, I'll find time now and then to write articles for UPDATE, which I've never had time to do.

I'd like to thank all of the many 2068 folks with whom I've dealt, for their generosity and patience... and please leave me alone now!

NOTES:
If you have asked for a catalog, or written to me in expectation of a reply, please accept my apologies: I no longer have a catalog, and I cannot reply to your letter. Please write or call a dealer of your choice. I know of these two dealers:

RMG Enterprises
1419 1/2 7th Street
Oregon City, OR 97045

Contact: Rod Gowen
Voice: 503-655-7484
Times: Tue-Sat Noon-10 PM

Ed Grey Enterprises
P.O. Box 2186
Inglewood, CA 90305

Contact: Ed Grey
Voice: 213-759-7406
The Grey Matter BBS & RCP/M:
213-971-6260 (CALAN)

If you want to keep posted, please subscribe to this quarterly magazine for users of Sinclair computers:

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Phone: 317-473-8031

Subscription rate: $18 per year in USA.
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Bill Jones, 1317 Stratford Ave, Panama City, FL 32404

TS2068 UPDATE ISSUE DISKS

These disks contain at least one major piece of software written specifically for disk drive and are guaranteed to be worth the money. The rest of the disks are filled with various utility programs taken from the issues of UPDATE and a few surprises thrown in. Half of the money goes to the author and is meant to encourage new programming for the TS2068 that makes use of the various disk drive systems. Presently we are offering disks for the Larken and Oliger Interfaces, but have programs available for the Aerco (just as soon as I hear that there is a demand to have available). All are $22.00 per disk (add $1.00 Canada) and include postage and handling. We have two new pieces of software coming out in the next issue, plus the return of some previously offered. Both 3 1/2 and 5 1/4 40 and 80 track available. Please add $5.00 for mailing to other countries. We accept personal checks, company checks, money orders as well as International Postal Money Orders. We do not have facilities for charge cards.

1) MITCHELL BUDGET DISK, with wide spreadsheet printer driver, MS-TAS and various other utilities. Available as either Larken or as Oliger format.

2) Bob Hartung DOSDEX UTILITY ISSUE DISK, a complete disk management group of programs for the Oliger Interface only. This includes Multi-Manager for file handling. This collection has recently been updated.

3) MAIL MERGE ISSUE DISK, Oct 87 and Jan 88 issues of UPDATE utilities added to fill out this disk. Includes a tutor program for the Mail Merge program, List Looker, Purity, J-Utilities and Extra Memory Utilities.

4) MITCHELL VIEW CALC ISSUE DISK, forget the old slow VC for tape! The rest of the disk is filled with other utilities plus some Public Domain for fillers. At this time for Larken format only.

5) OLIGER DISK DRIVE BBS PROGRAM, this allows users of the Oliger interface to be able to operate a disk based bulletin board from the TS2068. The disk is also filled with many other Oliger disk routines and tips on using the Oliger System. New by Paul Holmgren.

6)The HYBISCUS ENSEMBLE, consisting of two separate, but complimentary sets of programs. A) Daisy.B6 Ensemble, and B) Udbm.B6 Ensemble. LKDOS only, $22 each or $36 for both. The best file and database available for Larken, by Bill Jones.

UPDATE COMPUTER SYSTEMS invites you to submit software programs that may become Issue Disks. Please submit program on disk, with documentation and article to accompany the program. We are here to get North American software available and known. We also solicit minor programs, tips and utilities for print in future issues of the magazine. Please do not submit unlistable programs or copy protected programs.

QL UPDATE ISSUE DISKS

These disks contain at least one major piece of software written specifically for disk drive and are guaranteed to be worth the money. The rest of the disks are filled with various utility programs taken from the issues of UPDATE and a few surprises thrown in. Half of the money goes to the author and is meant to encourage new programming for the QL that makes use of the disk drive systems, and microdrives on both the expanded and unexpanded QL. Where possible we will give a version for each of these configurations. Some of the programs take advantage of TK2 by Tony Tebby. All are $22.00 per disk (add $1.00 Canada) and include postage and handling. Available as 3 1/2 or 5 1/4 disks. Add $5.00 for mailing to other countries. We accept personal checks, company checks, money orders as well as International Postal Money Orders, but no charge cards. If ordering on MDV, then please include one that is already formatted, so we will know it will run on your QL. Due to the expense of MDVs this is necessary. If two MDVs are required we will state so in the ad.

1) HARTUNG UTILITY ISSUE DISK- Several excellent programs such as stand alone data base, Address, and QSO files. All are in Superbasic. Lots of hints and tricks for programmers. Requires some knowledge of Superbasic or a yen to learn. Recently updated by Bob Hartung. Address file can be used as inventory program. It can print out labels. Both screen or paper printouts can be by Alpha sort, or be by last name.

2) CABLE ARCHIVE ISSUE DISK- Contains six Archive programs along with Doc files to get you going on making use of the Archive programming language. Also has Tasket, plus Doc file, to give you multi-tasking on your QL (much cheaper than QRAM or Taskmaster). Included is Arithmetic, a Superbasic program for math, along with math drills. This is for both the advanced and beginner user and greatly extends the use of Archive. To order on microdrive send two formatted microdrives, too much for one!

3) QLUSTER ISSUE DISK by Al Feng- Ql utilities to unclutter your disks and microdrives. COPY, DELETE, FORMAT, PRINT, VIEW, plus extended use of some Tool Kit 2 commands. TK2 is required. These are TURBO compiled for speed. Multitasks and uses minimal key presses. Includes Fast-Disk and Vegemat2, a super clone making program. Also Snap Shot-a directory column or condensed printout program.

4) DOS EMULATOR COMPANION ISSUE DISK by Al Feng- Just released in Oct. issue. Makes better use of Solution, PC Conqueror, DisCover, XOVER, QLuster and scr_codes. If you are going to use the emulators, then check this out.

5) QLuMSi DOS by Al Feng- a MSDOS simulator and front end program for the QL, also includes other programs by AL Feng for file management and cloning of programs.

UPDATE COMPUTER SYSTEMS invites you to submit software programs that may become Issue Disks. Please submit program on disk, with documentation and article to accompany the program. We are here to get North American software available and known. We solicit programs, tips, reviews and utilities for future issues.