Computer News 80

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DEDICATED TO TRS-80 SUPPORT

Computer News 80 is dedicated to the support of TRS-80 computers, Model I,II,III, 4/4P and users who operate their computers using TRS-DOS, LS-DOS 6.3, or TRS-80 cassette based systems.

Since third party support along with 80 Micro has dropped their TRS-80 support and because there are a lot of computer users out there who do not plan on giving up their Model 4 and older computers. We are publishing this news letter in support of all those who plan to continue to use their TRS-80 machines.

Most of the users of TRS-80 who will continue to use their machines are individuals and small business people who have made a considerable investment in their equipment and software for particular operations in their home and business. Just because the industry has newer and possibly better computers using MS-Dos and other disk operating systems. There is no trend to replace costly equipment not to mention the cost of software on the shelf by these users. Not at least until their machines are no longer usable or repairable.

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Many of these users may have, like us, several hundred dollars invested in single sided double density disks alone. There are ways to convert your TRS-80 program application software to the new dos systems but it is time consuming and if you farm it out expensive. Have you ever tried to sell your software packages with your computer hardware? You will find that it will bring next to, or nothing compared to the price you paid for it. There are some software publishers who claim that it is illegal for you to sell your software to a second party, (see editors note under copyright) even though you are selling it with the original equipment that you purchased it for. They claim you only had a license to use the software and now that you are no longer using the software that it should revert back to the writer but you don't see any offers to buy it back. Whatever your position in this regard might be, you still will find it next to impossible to recoup the investment that you have in software once you decided that you can no longer can use it on the computer that you have selected for your use in the future.

For these reasons and many more Computer News 80 will endeavor to publish this monthly news letter in support of those application users who still continue to own and use Model I, II, III, 4/4P & 4D and all the other TRS-80 machines.

The articles will be slanted heavily to those who are not computer programers, but to those who are users of application programs. User help in the use of Super Scripsit, Visicalc, and PFS:file will be featured, along with many other application program.

In short we are taking the TRS-80 computers from the Model 4D marketed today and looking back over our shoulder in support of all the computers that are still in use today, but no longer sold by Tandy, or are no longer supported by the magazines that only report current industry tends.

Remember these are the same people who told us how good the computers were and how great the operating systems were and how great the application programs would be if we only bought them. Well we bought and bought! Now they tell us that we are old hat, not up to date and out of step.

But we say "if it ain't broke, don't fix it" and till my application outgrows the machine I have, I don't need the latest model. And maybe, just maybe, the model that I have now might be a little better, and a little easier to use, than the new latest super versions being produced by the clone industry.

There is a question and answer column, in each edition. So send in your questions, we will endeavor to answer them or find some user out there that has the answer.

We plan to have a large and qualified technical advisory staff and your questions will be referred to them, sorry no phone calls please. We will however publish your questions and the answers in the Open Forum or reply to your individual questions by mail.

When writing please be as specific as you can. We need to know what machine you are using, what DOS you are operating under and the program version number that you are using when experiencing your problems.

We have some of the finest, most experienced technical staff available. Not only are they experienced in programing, but they include people who are experienced in the application of programs used daily in business and the home. They also include marketing and business consultants, along with housewives and hobbyist for fun and games, we don't expect that too many people out there are having problems with fun and games, but we might know of some new games that may be more fun."

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PFS:file AND LS-DOS 6.3 ON THE MODEL 4

There are several problems in using PFS:file with the new LS-DOS 6.3 disk operating system. If you want to create a program disk that operates like the original PFS:file program/system disk that can be removed from the computer after boot up, and by using only the data storage disk in drive O, you need to create a minimum system disk for each data storage disk that you use for storing PFS:file data files and which will have the ability to date the directory past 1987.

You could of course eliminate the date option from the systems disks and continue to use the program without dating the directory.

If you have previously created PFS:file data files, using the PFS:file program/system disk and disk drives only to create the data files and you want to install them on your hard drive that has been updated with LS-DOS 6.3, here is one way that you can do it.

Boot up your hard drive using your LS-Dos 6.3 hard boot disk. Place your PFS:file program/system disk in any drive, and at LS-DOS Ready, type the command FILE then ENTER. This will set up the PFS:file program in memory and use the DOS system that has been installed on the hard drive. You can then remove the PFS:file program disk, or leave it in. New data files that are created on the hard drive or disk drives will have the correct date on them, past Jan. 1, 1988.

If you create additional new data files using just your floppy disk PFS:file program/system disk, without your hard drive turned on, they will not be dated past December 31, 1987, or will show the date as 1980 as a default. But you can move the new PFS:file data file to the hard disk, and that will update it. Copy the PFS:file data files to the hard drive, using either the Copy mode of PFS:file (Option 3 on the menu) or by using the TRS-DOS copy command.

You will not have to use the command DATECONV to update the directory on the hard drive with the data files on it, as this is done during the copy process.

This seems to cause no problems in data loss and your PFS:file program does not have to be placed on your hard drive, unless you want to have it there or have already placed it on your hard drive.

Minimum System Disks for PFS:file

The following is the method of creating a PFS:file system disk that will operate when taken out of drive zero, just like the original system/program disk. But it must have minimum system disks created to store data on, not just formatted disks for data storage.

1. Boot up the computer using LS-DOS 6.3, then using DISKCOPY make a backup of a "backup working copy" of the PFS:file program/system disk. (DISKCOPY will by-pass the copy protection on your working copy. Do not use your original PFS:file disk, because it has a limited number of copies available.)

2. Do the system disk update provided by LSI for LS-DOS 6.3 on page one of their instructions.

3. Rebuild Sysgen File, using appendix D-5 of your, PFS:file manual. (If you do not have the latest version of this manual, Radio Shack systems support will send you one, or send us a SASE and we will send you a copy.

4. Create data disks using the minimum system. Using the instructions for minimum system diskette page D-2 of Appendix D, PFS:file manual, with the following exception.

When step #4 has been reached, you should at that point place the data disk that you are creating in drive #1 and put a full system disk in drive #0 in order to have the proper system files present to execute the "system" type commands in step #4.

When you reach the typed entry in step #4, type the command SYSGEN (DRIVE=1), instead of just SYSGEN.

Now the data disk should be ready to use with the updated program disk removed from your drive #0 as always.

This seem like it might be a lot of trouble but it does speed up the entry of data over having to leave the program disk in the drive all the time. or switching back and forth from drive to drive during use.

As suggested, once one new working data disk is set up, use DISKCOPY to create several more disks to use for data storage, so that you do not have to go through the building of a minimum system disk, be sure to add to your store of minimum system data disks prior to adding data to the last one.

PFS:file and LS-DOS 6.3 on two disk drives

The only way we could get the PFS:file, version 01.00.00, program disk to work with the new LS-DOS 6.3, on the Model 4, without creating minimum system data disks, is to leave the LS-DOS system disk in drive 0 and type the command FILE with the PFS:file disk in drive one, then we could remove the PFS:file program from disk drive one and use disk drive one to store data on a data disk. But we had to leave the LS-DOS 6.3 system disk in Drive Zero or we were without a system. This method seems like it is more sensible than creating several minimum system data storage disks, if you only have a two disk drive system.

Because you can not use the TRSDOS COPY command to place PSF:file programs from a backup working disk copy, on your hard drive, you must use the original limited copy program disk of the PFS:file. Each time you use it it eats up one of the five available copies that you can make. Tandy will replace the original disk when you run out, but it may take several weeks to a couple months to get your new one.

By using the DISKCOPY of LS-DOS 6.3, you can make as many copies of a "working backup copy" as you want. Thus saving your original available copies for use on your hard drive, or future backups.

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COPYRIGHT

The Copyright Law was amended in 1980 to permit computer programs to be copyrighted. The amendment also provides that you, as the owner of a copy of a copyrighted program, are authorized to make copies of the program if you need to do so in order to use the program properly, or for archival and backup purposes.

The law also states that you may transfer (give, sell, lease, etc.) a copy of the program to someone else only - if you transfer all of your copies and rights to the program. In other words you cannot keep a copy for your own use, and give a copy of

it to someone else. You can provide a copy of your material to another for the purpose of assisting you in the use of your program, such as giving a copy to a consultant to assist you in your understanding and use of the application in the program.. The main purpose today of the copyright protection laws are to prevent the commercial use and sale of copyrighted material, be it programs, books, records, or any other reproducible material.

(Editors Note: Don't depend on this article or any other to explain or defend the copyright status, if you have a copyright problem, see a lawyer who specializes in copyright law.)

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INTO 1988 AND BEYOND
LS-DOS 6.3 AND ?

Some times we find ourselves so close to the chip that we can't see the bytes.

Bill Schroeder, President of Logical Systems Inc. and his staff at Grand Junction, Colorado have been taking a lot of flack on their policy of requesting that you buy one LS-DOS operating system for each computer that you plan on using it on. Some of the flack has been taken gracefully and some has not, and we were one of the first to raise a lot of that flack.

When the new updated system was announced back in January or so of this year we immediately sent in our order, which arrived in short order and because the thought was, well it is only a patch to up grade our existing TRS-DOS system disks to give us the new dating, it was put on the shelf for several months without even reading the manual. Typical right! I don't really need it now, but I want it, so I'll get around to it one of these days. We have several application programs on the shelf right now that are in that same category, which are waiting to see the light of the day.

We have two Model 4s in the office that are used daily and a third that we rent if we have problems with one of our work stations. These Model 4s go 8 hours a day every day, and more hours, and more days more times than not.

About the time I decided to dust off the LS-DOS 6.3 package, it was the middle of July and we were having a heat wave. Because we publish several weekly newsletters with weekly deadlines it was no time to be experimenting. But I did. I installed the new LS-DOS 6.3 system on one machine. Well not really. What I did do was upgraded my existing system disks for our Superscripsit programs. One for correspondence and one for the weekly publications. I was still thinking in terms that this was just a patching tool.

I think I updated the VisiCalc program disk too, at that time. Its still updated, but not used very much.

About that time we received the new SuperSCRIPSIT update version 1.02, you know that complete program and system disk that was to end all the problems with the buggie, buggie older versions that were patched and repatched.

This new disk got the LS-DOS 6.3 treatment right away and was put to work.

Then for the next six weeks we worked overtime every week to reconstruct our weekly work! Just before putting the final touches to our weeks work for the weekly newsletters, the computer ate the text, or we had frozen paragraphs, or garbage text that could not be reconstructed even by cut and paste methods.

We went around in circles literally for several weeks trying to find out what was causing the problem. First the power supply went on one machine. That was fixed, then disk drive 0 decided to act up, but we had two machines and the data disks passed back and forth, and did the same things, so even if one machine was bad it couldn't be a hardware problem, right! It had to be a system and/or an application program problem.

We immediately went to Tandy support, on the frozen paragraphs. At the same time I was updating our subscription and mailing list files that we keep on PFS:file, and decided to update that with LS-DOS 6.3, and that didn't get beyond first stroke of the keyboard. But we had more important problems that were keeping us working late and having to come back on Saturday and Sunday to get our publications out. So the

PFS:file problem was put on the back burner.

Just about that time I read the article by Hardin Brothers in 80 Micro, that reviewed part of the LS-DOS 6.3 where he mentioned the one machine one system policy, and its protection system, and that it could affect some data storage, (it couldn't and didn't but we didn't know that at the time). We called Logical Systems, and were really not assured that the protection system could not hurt our data, but that we needed to buy another system package, and if we would send our original back, with the purchase price of one more they would key two systems disks alike. They couldn't answer any of my application problem questions, or wouldn't. I am sure that the person on customer service was really having a bad day, that day, but I was really having a worse day and a disaster of a week. Anyway, a long three page letter was immediately written, before the computer could eat that, it was sent to Bill Schroeder, President of Logical Systems, along with copies of data disks, system disks and program disk, with the message, Look what your system did!

I was surprised to get a phone call the same day that Bill got our package. Several other people got the same package the same day, including Tandy support group, Hardin Brothers, and others that I hoped could help us.

Bill, took the time to explain the system and that the protection system, if the disk was not tampered with, could in no way destroy any of our data, and even if we had used it on fifty machines, it would do no harm, except to occasionally flash a message that I was illegally using only one dos package on more than one machine. He also offered to send me two packages keyed alike, and if I found out that he was right, and was sure that our problems were not their fault that I could then send the payment for the second system package, or send the whole thing back to them and they would refund our original purchase price.

He also gave me several welcome tips on what could be causing our problems.

We were willing to try anything, so I passed over my irritation at the time about not getting the message of one package one machine when I bought the original.

We take great pride in the fact that all of our programs have been bought and paid for, and it supports those who write the programs and who we hope will support us in the use of the programs for years to come, while we are finding new ways to stretch, break, and bend their original intent.

While all this was going on we had to put our number one machine through Radio Shack repair station, three times, two weeks at a stretch, before it was finally running correctly. Number two machine was on the brink of going but we didn't know that at the time, fortunately for us it waited one week after number one was healthy again to have a power supply heart attack and die. Thank god for implants.

The reason in going into all of this is to point out the fact that while we were without our number one machine for six weeks, and our number two machine for three more weeks, we were renting Model 4 machines from a local computer store to fill in and not once during that time did the LS-DOS prove out to be our data destroyer.

We have not yet solved the problem of frozen paragraphs locked into the text, that can not be removed from Superscripsit version 1.02, but we have solved the PFS:file compatibility, and as yet did not have any problems with VisiCalc.

We sent in our payment for the second system disk, gladly, with apologies about our first irrational fears, and our publications have been going out on time, every week, with the normal amount of time and effort.

This brings me to some thoughts that we users tend to forget over time. If we are users who are not programmers and hackers, or real computer buffs, but just simple folk who use the computer in the course of helping us do our work, in our homes and businesses, we need the programers, and their support. Without them we would have nothing to work with, without many, many long hours of program writing to have

anything at all to use as a tool for our work, without even referring to the the long hours to learn to program in the first place!

We also tend to forget when we bought our first Model 4 from Radio Shack, there was included a TRS-DOS operating system disk, and a manual, and when we bought our second Model 4, there was a TRS-DOS operating system disk, and manual. These system cost were hidden in the price we paid for the computers, and we didn't think much about the fact we were getting two of the same disk operating system disks while getting two of the machines, but we did. I am sure that those of us with two machines or more, did not tell the store that we already had one of "those" (system disk and book) and that they could deduct it from the price of the package for the machine.

In fact in the early years, of my experience I received a flyer from Radio Shack that they were having a sale on TRS-Dos Operating Manuals and I bought one, because I was really having trouble understanding the one that came with the machine and thought I was getting a "how to do-it book". I now have three TRS-DOS original disk operating system disks and three manuals, for two machines!

The nice thing that came out of my learning experience, was that the manual that I bought without the machine, had a hard disk drive manual for a Radio Shack hard drive, and a hard disk driver disk in it. I didn't have a hard drive then, and I learned something.

We have since added hard drives to each machine, not Radio Shack though, but if I ever do buy a Radio Shack hard drive, I would have to be rich to do so, I will at least have the driver on hand ready to go.

We might mention here that we installed LS-DOS 6.3 on the hard drives, per instructions and not one problem has been encountered. We have one fixed exterior hard drive, and one Konan 5 meg. cartridge exterior unit.

If Radio Shack sold me a disk operating system with each machine, why would I object to buying one each of the LS-DOS 6.3.

After all it is a complete operating system and not just patches, with many new and advanced operating programs built in.

We had the first knee jerk reaction to the "buy one for each machine" question, and that is, why should I buy one for each when I only need one system? That is true, but lets look at the market situation for a moment.

If we want to continue to use our Model 4s far into the future, we need the support don't we. Support costs money, and for the small amount of $39.95, for one operating system package, how long do we expect support to be supplied.

If someone ask me to spend, lets say $200.00, to keep my Model 4s running for the next five years, I would think that would be a bargain. I shudder to think of what the cost would be to replace all this equipment, not to mention software, and the special uses we have learned to put the programs and machines to doing for us.

LSI is selling a product to a dead end market, to start with. There are no more Model 4s or 4/Ps being produced, and the time for the Model 4D seems to be short.

I don't think that we can blame them for using a method of marketing that will allow them increased sales, up front, to pay for development time and advertising cost. Just to keep us Model 4 users in business a little longer.

I am sure that the majority of users, will buy only one package for their machine anyway. I am also sure that those with more than one machine will only buy one package once they find out there is no danger to data from using only one system package.

But lets be fair, if we want the support, we need to support those who are providing the service.

True, Radio Shack has turned us over to a third party for system support, because they no longer have an interest in selling the

package, they say they will support the new operating system only where the support they supply applies to their application program packages that they have sold, and they have supported us in our change over and with all the problems we were having.

We have all gone to third party for application programs over the years, and if anyone should be held to blame for the current situation it is Radio Shack, for not supporting the Model 4s into the future by providing updates, or update patches for the TRS-DOS directly. So we can't blame the third party, in this case Logical Systems, Inc., remember they are really coming to our rescue. And they are providing much more than just a time patch.

I would much rather pay for one DOS package per machine, in the hope that LSI will be around to support us when we need their support in the future.

The other choices are the town dump for this equipment and a visit to the IBM compatible store. Even thinking about it leaves me with a pain in the hip pocket, you know, the one we carry our wallets in.

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BOOK REVIEW

Recently I bought a book called Mod-4 by Jack©, it was the last one Discount Data in Plano, Texas had in stock. I didn't know this at the time and I had been seeing the ad for it for a long time. After I finally bought the book, I liked it so much that I called Discount Data to buy some more as Christmas gifts for a few users friends and found out that they were no longer in stock, and that they were no longer in print either. "We just sold the last one a couple weeks ago was the reply." A couple of weeks ago is when I ordered my copy.

What put me off from buying it before was a review in 80 Micro (August 1985, pg 114, by Mark D. Goodwin) that said "The books only reference to the TRSDOS job control language (JCL) states that the JCL is useful and that you should read the manual for more details." earlier he said " Jack's organization is identical to that of the Disk Systems Owner's Manual" by Tandy.

Having little use for the JCL, or as the review stated "Mod-4 by Jack doesn't provide any machine language programming information"

One comment in favor was "While missing some information, it is a good source for day-to-day needs." Well with a review like that - sorry Mr. Goodwin, we are not all programers and something simple might just be what I need.

With a lukewarm review like that and the put-down because it wasn't a programers guide to heaven, and because I had in my confusion bought duplicate material in book after book, I didn't buy one.

But what a surprise, I learned more in a few hours of just looking thru Mod 4 by Jack, than I had in years of reading the Tandy Disk Operators Manual.

Mod 4 is a 6 by 9 inch 218 page spiral bound book, that is very handy and at the side of my computer all the time now. It has thick card stock pages that will stand up to plenty of wear and tear, and has lots of space to write notes on the pages.

Its convenient size and layout gives fast simple explanations of DOS commands for TRS-80, with a short concise statement of what the command is all about. With examples of how to apply the command, with non technical examples.

The sequence of TRS-DOS and BASIC commands follows the Tandy Manual, but the explanation and examples are much more clearly written.

The first section is devoted to the explanation of TRS-DOS commands.

The second section is an Introduction to Basic statements, with an explanation of terms that anyone can understand.

Some examples:

<ENTER> Means "I'm done with this line! Enter it into the mechanism now!

EDIT 100 Calls up the editor, puts line 100 in the editing buffer, and show "100" on the screen. You can then use the editing commands at this point.

EDIT. The EDIT command followed by a period allows you to edit the last line edited, run, or somehow mentioned or used.

The next section explains Basic Terms, with examples.

STRING EXPRESSION String expressions express information in the form of one or more characters "strung" together in strings of characters.

X$ X$ is a string of 1 or more characters.

JERRY The name JERRY is a string. Many times it is shown or defined as a string by being enclosed in quote marks.

"JERRY" + "MARY" Expresses string data in that the characters in "MARY" are combined with the characters in "JERRY" (by the + sign) to form a somewhat longer string.

The next section lists all the Basic Commands with clear definitions and examples.

The next section lists in numerical order all the Basic Error Messages, and what they mean.

TRSDOS Errors are listed on the back of this page the same way.

The next page has a cross reference chart of Character Codes, Dex, Hex, OCT, Binary, ASCII Abrv. and Keyboard

The next section contains this paragraph

JCL-JOB CONTROL LANGUAGE

"The normal office worker will never get into the JCL functions. Those interested individuals who want to delve deeper into the capabilities of the Model 4, however will soon discover that the JCL is a powerful as well as fascinating tool. The ideal of JCL is to setup routines, MACROS, to handle some specified operations with a minimum of easily entered commands. It is very similar to using MACROS with lotus 123 and other programs that use MACROS. Using JCL requires a fair amount of effort and time, but will surely reward those who pay their dues. Detailed instructions can be found in the Model 4 Owner's Manual. Some magazines articles have appeared that show some unique applications of JCL, and it seems a sure bet that whole books will shortly surface covering JCL in minute detail."

The next section explains, again in simple straightforward language SYSTEM FILES (/SYS)

"TRSDOS 6 for the model 4 is made up of a number of individual modules that are shuffled in and out of memory on an "as needed" basis rather than having all of the operating system in memory at all times. This has the effect of preserving a large amount of (RAM) memory for application programs. The implications pertain not only to volatile memory, but also to floppy (or hard) disk storage. By PURGEing or REMOVEing unneeded modules from your disk, you can streamline the disk to handle only those functions needed and free up more of the disk for potential applications."

"All of these files have the /SYS extension and are normally invisible on the directory listing"

"Note that it is possible to put needed SYSTEM files in high memory (using SYSRES) so that additional disk storage space can be opened up for other applications."

Followed by an explanation of what each TRSDOS file such as SYS4/SYS is used for and which ones you can safely remove if you are not using its function to make more room in your memory.

The next section shows the full list of "BUILT-IN TRSDOS PROGRAMS" with explanations. Such as MEMDISK, CLICK/FLT, COM/DRV, FORMS/FLT.

The next section is a Glossary of common computer terms in use, with explanations such as,

.password - An optional word used in protection schemes. It is made up of up to 8 characters, the first of which must be a letter. Note that a password is preceded with the period symbol.

And finally there is an 10 page index for cross referece.

We have covered just a little of what the book provides, and to have a small handy referece manual such as this within an arms reach has proved invaluable to us.

In the words of the immortal Mr. Remington Shaver, "we liked the book so much we bought the copyrights".

If you would like a copy, write to us as we may have enough interest to reprint it about February or March. Price about $15.00 plus S & H.

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Book Reviews will be a regular monthly feature of our newsletter.

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RIBBONS AND RIBBON CLERKS

If you use a lot of ribbons like we do, or even just a few a year, you know that the cost of multi-strike ribbons are quite expensive to use up, unless you are writing a lot of finished product letters, otherwise most of us use nylon ribbons to get the most use out of the ribbon for draft work, and in-house use.

We use a Radio Shack DWP 410 daisy wheel printer, and a DMP 130 dot matrix.

We have found that the lowest priced quality multi-strike ribbons can be purchased from the office supply mail order houses, Such as Reliable Corporation, or Quill Corporation rather than the Computer Supply Mail order houses. (We will make their addresses available at the bottom of this article).

Our last order from Quill Corporation was $3.82 each for six, even we don't buy more than six at a time, but could get a better price if we did. Many months they are on sale in there monthly sales catalogs.

Because we use a lot more nylon inked ribbons and they run anywhere from $7 ea. for the daisy wheel and $9 ea. for the DMP 130, we purchased a MAC INKER™ from Computer Friends® in Portland, Oregon, the universal inker sells for $68.50, and with one bottle of ink at $3.00 and shipping charges we invested about $80.00, but have re-inked all our nylon ribbons up to nine times now.

At a savings of $7 to $9 each, we made back the original investment within the first two months we had the inker.

Some users tell us they have gotten over 18 to 20 reinks on a ribbon and depending on how hard your printer strikes, the ribbons should last longer than that.

We did try buying replacement inked ribbons and replacing old ribbons in the cartridges, but we only saved a dollar or so over buying a new nylon cartridge and you have to have four hands to insert most ribbons.

They have some really exotic, inks too, like gold and silver, purple and orange, and can supply multi-color ribbon reinkers.

We also use their Mac-Switch in one application to switch printers from computer to computer. And it did fail after a few months of pretty hard switching, however their service department fixed it, no charge, and returned it to use by return mail.

If you have a Radio Shack DWP 410, any Ricoh Ribbon will fit, and so will the Ricoh Print Wheels, Quill sells these at $23.94 to 22.49 in quantity, and they can be mixed fonts to get the best price.

Both Quill and Reliable have good prices on other computer supplies and paper, but most of all they break their back with service, and no questions asked if you return an item.

Addresses:

Quill Corporation®
PO Box 5900
Lincolnshire, IL 60197-5900
312-634-8000

Reliable Corporation®
1001 W. Van Buren Street
Chicago, IL 60607
1-800-621-4344

Computer Friends®
14250 N. W. Science Park Drive
Portland, OR 97229
1-800-547-3303

(No we haven't turned the paper over and fed it through again, but sometimes when I think about it, it might not be a bad idea).

We will have many more money saving tips in future issues to help you enjoy your computing more. Such as office procedures, what is the best time to buy supplies and what is new on the market. Such as the Label Peeler™ at $29.95, can you believe it and you can make your own for about 50 cents. We'll put the directions for that one in next month.

A VISIT WITH DAVID GOBEN: PATCHES TO GO AND OTHER THOUGHTS

Over the past few years I have amassed and devised one of the largest single collections of TRS-80 patches ever. It never fails that no matter how good a product is; someone else always wants something different; a new feature; a CHANGE. Thus patches. And so it is that through this article, and perhaps, if you wish, a continuing column, that will hopefully help you out of a pinch.

First some history. When the Technical Department at 80 MICRO took over FEEDBACK LOOP from Terry Kepner, who was leaving to take charge of his purchase of PORTABLE 100 Magazine, I was contacted to aid in some SuperScripsit problems. Since then I have filled that column with several dozen fixes (some misprinted, but giving Mercedes Silver the 'credit', especially for those). That is why some of you who wrote to Mercedes got a letter from me instead.

I would like to take a moment and clarify my current position with 80 MICRO. I have already received numerous letters from TRSDOS users who have called me a traitor since I've started writing for MS-DOS, as is evident by the cover story of the December 1987 issue. You'll be shocked again in February. And later as well, as I have numerous article ideas in the works. It is not that I have abandoned the Z80 machines; it is only a matter of survival. How can I make a living by writing articles for a machine which the magazine no longer supports?

As Bob Dylan sang, 'The times are a-changing,' and they certainly are. If you feel outraged at the MS-DOS world encroaching on you, don't cry to me. I've already been through that hell myself, but in my case it was about 9 years ago. Back then I was happily computing on an Altair. This was an 8080-based system (the 8080 was the father of the Z80), and was the FIRST personal computer. But a thing called a TRS-80 invaded our turf, and took all our support from manufacturers and magazines away. For some time, I cursed the Tandy machine by calling it a TRASH-80. But you can either be a victim of change, or a participant in it. I chose to be a participant. Almost begrudgingly, I purchased a 16K Level II machine. Once I grew accustomed to this new environment (it seems harder than what it actually is when you get used to computing a certain way), I fell in love.

One thing I will forever attest to for the TRS-80 line: The operating system is the best and friendliest I have ever seen. You'll never see anything like it on mainframes, mini-computers, or those provided by Apple, Commodore, or IBM. As a matter of fact, I am working up plans for an LDOS environment for MS-DOS computers. Think it'll be worth it?

Anyway. The patches. These are for LS-DOS 6.3 and TRSDOS 6.2. The very first patch disables password checking, and so if you

install it, you will not need to add the password extension on any of the other patches, which is SYSTEM for SYS files, and UTILITY for all the others. Due to column width, lines with a trailing percent sign '%' indicate a CONTINUATION of a single line. For example, patch # 1 actually resides on only ONE line. Remove the percent symbol and write the two lines as one.

1) Disable password checking. This patch removes the need to enter a file password to access a file:
P A T C H S Y S 2 / S Y S . S Y S T E M %
(D02,50=18:F02,50=28)

2) Boot up in all-caps. This patch will allow you to begin typing in upper-case after a boot-up. thus you never have to worry about first pressing the CAPS key:
PATCH SYS0/SYS (D00,80=20:F00,80=00)

3) Enable Drive 3 on boot-up:
PATCH BOOT/SYS (D02,84=C3:F02,84=C9)

Enable Drive 4 on boot-up:
PATCH BOOT/SYS (D02,8E=C3:F02,8E=C9)

4) Bypass printer I/O error counter. Normally the computer will wait 10 seconds, and then abort printer output if the printer isn't on-line. This is a bother if you are in the middle of changing a printer ribbon that just ran out. This patch will force the computer to wait until the printer goes back on-line:
PATCH BOOT/SYS (D0C,21=3E 08 EF FE %
80 18 04:F0C,21=C5 01 08 00 CD 82 03)

5) Allow DUMP to dump memory below X'3000':
PATCH SYS7/SYS (D13,D6=37 00:%
F13,D6=ED 42)

6) Speed up MemDISK formatting. If your MemDISK always formats without errors, then install this patch to drop several seconds from its formatting time:
PATCH MEMDISK/DCT (D06,78=18 0D:%
F06,78=3E FF)

7) Speed up file backups. If your drives are always maintained in good order (cleaned and alignment checked regularly), then installing this patch will bypass the VERIFY READ done by BACKUP. Use this patched version only with non-critical backups. Build a file called BU/FIX, and enter the following lines:
D12,E3=4B
F12,E3=49
D14,1E=4B
D14,1E=49
D14,43=4B
D14,43=49

Install the patch using PATCH BACKUP BU

8) If you wish to bypass master password checks during backups, include the following two patch lines into the above patch file:
D06,DA=00 00 00
F06,DA=CD 11 31

Well, that does it for this time around. In a future installment I'll provide you with patches to allow a more liberal date entry (no need for leading zeros for single-digit months and days), a patch to allow you to continue JCL processing even after the SYSTEM drive has been changed, and if space permits, a program that will allow you to change system drives, yet still maintain logical drive number order (drive :0 STAYS drive :0).

If you are in need of a patch for your Model I/III/4 system, or just some help on getting a (stupid) program to do what you want it to, please address them to this publication, and we'll see what we can do. Please include system information: Model number, memory, number and type of drives, operating system, and program name and its version number. Obviously we don't have all the programs, so if possible, include an original copy as a 'gift'. I will check your problem out, and destroy the information on the disk when I'm done (to protect copyrights).

— David Goben

(Editors Note: David Goben is an associate editor for 80 Micro, and author of many articles and programs for other publications. He is also a programming consultant who specializes in troubleshooting programs and writing utilities.)

Note* We will in future publications attempt to box program line listings so that the program lines will be printed in full length without the need for a column (%) break line.

GLITCHED GREMLIN?

This subject was touched on briefly in a preceding article "INTO 1988 AND BEYOND...", but I have to know - is there anyone out there with a SuperSCRIPSIT 1.2, alias "Pac-Man" that gobbles text faster than you can hit CTRL-W or am I alone with a "Glitched Gremlin"?

First off, a little background, I have been using SS 1.1 for about 4 years, on a Mod 4, 64K, 2 disk drive with a 5-MEGA byte hard-drive, updated with the latest version of TRS-DOS 6.X as it became available.

The quirks I encountered with SS 1.1 were realized through the school of "Hard-Knocks", but I learned to live with them, much like having a temperamental car - it's all you've got and all you can get for the time being. SS 1.1 has it's DO's and DON'Ts or at least mine has. Here are some of my "DO's and DON'Ts" for the SS 1.1:

1. DON'T change header's or footer's on a previously written document that you are going to edit or you'll get "Please Wait A Moment" and never see the text again. You have to print it first (a couple of paragraphs will do) then edit the header's and footer's.

2. DON'T move a block of text, use Block Action Copy, recall the copy where you want to reposition the text, then edit the text at the new location, if necessary, then go back to the original block and delete it with F2 function key. For some reason the block move wants and does leave residue text at the old site and could present problems because you either miss it (rendering the remaining text where you originally moved it from unintelligible) or discovered it and tried to delete it without any success.

3. DON'T Block Action Delete more than two pages plus a few paragraphs - more than this amount seems to be more than the program can handle. You'll get "Please Wait A Moment" - I'm still WAITING! On occasion hitting the BREAK key will bring you out of the Block Action function, but DON'T count on it! The two page plus limit also seemed to be a factor in Block Action Move or Copy.

4. DO use the ASCII function in SS and run text over to ASCII and back into a new SS file, when extraneous text creeps in. Try as I may to eliminate some extraneous text, all to no avail, the act of running the text into ASCII and back to a new SS file seemed to take out the wrong flags and I can then edit the text as needed.

Needless to say I was delighted to hear about SS 1.2! At Last, I could hang up the kid gloves and use all the functions that I had so carefully avoided before.

The new SS 1.2 disk arrived, a complete new program and system disk with TRS-DOS 6.2.1, not just a patch, but a whole new program. I immediately made my backup's, and set up our issue format on a working disk copy, updated the hard-drive to TRS-DOS 6.2.1, took the text written under SS 1.1 and Compressed it using the SS 1.2 (this is a prerequisite to editing any old text on the new SS 1.2), I was off and running! I could use Block Action Delete for more than two pages - It Didn't Hang-Up! I could use Block Action Move and edit the text - Works Great! I can type fast and the computer is right there, responding, waiting for more - Hey, THIS, IS, GREAT!! (A little more background: The text I enter, edit, delete, and add to, is in date sequence, written in a specific style about 15 lines in length per entry. Hence old dated entries are deleted from the beginning of the text and notices of interest are deleted from the bottom. New text is inserted into the body or at the bottom of the old text using the F1 and F2 function keys where needed. The finished text now contains new and old entries in proper date sequence.) I do all the necessary work to insert new entries, move a block to change a date and eventuality arrive at the bottom of the issue - THIS 1.2, IS, REALLY, GREAT!! I then hit SHIFT-ARROW UP, then CTRL-Q, then "E" - make a backup of what I have just finished. Go back into the original text at the top of the file and begin the paging sequence.

DOWN ARROW-P - add necessary lines, put in page number - GOING GREAT!
...Hit DOWN ARROW-P, look at the bottom of the screen - "End of File Encountered" -W?H?A?T?! I'm on page FOUR of a 30 PAGE ISSUE!

What in the world is that text on page 4? Looks like part of the text on PAGE 30! RELAX, don't PANIC!

Go to the top of text - use DOWN ARROW-N, insert a page number beyond page 4 -
WHOWEE, I have page 6 - so what's this "End of File Encountered" at page 4?!
Go to top of text - scroll down - seems to have some garbled text - well, I'll just use F2 and take it out -

WHAT DO YOU MEAN? "Can't Delete Frozen Paragraph"? I DIDN'T FREEZE ANYTHING!!

Use Block Action - Mark Block - Use Freeze function with option to UNfreeze - done.

Now I'll use F2 and get the garbage out - "Can't Delete Frozen Paragraph" - OH, NO! I have a dead-line! This CAN'T be happening! Calm down! It's summer the temperature is fast approaching 80 degrees - That must be It! Shut down the computer, set the alarm for 4AM, try again in the morning.

4:30AM next morning, twelve hours to press time. OH, MY, GOD, it still WON'T work!

Well, I'll use the ASCII trick - done!
UH, OH, still can't get the garbage out! I know, I'll copy what is good text to a new SS file and type in the missing text - done!

Where are those KID GLOVES!? careFUL! NO sudden moves - got it - now it's paged - it's printed - it's out!

I thought possibly by having used the old text from SS 1.1 something had been carried over. So, I proceeded to retype (all thirty pages) the text using SS 1.2 - this proved to be a futile effort. I still encountered the same problems. On one occasion, while at the end of the text, using SHIFT-ARROW UP, I received "Please Wait a Moment" and lost the entire text. I DO make frequent back-up's, and always have a hard copy of last weeks issue, but that can still leave you with four hours of nerve wrecking work do! I have also tried purging MOVE/CTL from drive:0, thinking the carry over was coming from the MOVE/CTL file after a Block Copy, Move, etc. - this didn't seem to make any difference one way or the other.

Solution: Since then (six unholy weeks worth!) I have gone back to my temperamental SS 1.1; had a new power pack put in my computer; updated to LS-DOS 6.3; and ordered a new SS 1.2 disk.

No, I didn't call Tandy, somebody else did - I was too hot! I have also received a working copy of SS 1.2 from a concerned individual. No, I haven't tried it - but I will, when the bad memories of the whole experience have had a chance to recede into the dark corners of my gray matter. No, I haven't got the replacement disk yet from Tandy - boy, are they slow.

Am I alone with the "Glitched Gremlin" or do I have company? If I'm alone then it's back to the drawing board (I must remember to remove all sharp objects and heavy blunt instruments from the room). If not, maybe Tandy is working on the problem and this is why I haven't received a new SuperSCRIPSIT 1.2 disk?

- Ron Gatlin

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WINTER DREAMS

Outside the wind is blowing up a windchill factor of minus 30 degrees. But here I sit all cozy and nice in front of the warm, crackling, flashing glow of my computer. Oh, how I wonder if an amber screen wouldn't be a little bit warmer!

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NEW COMPUTERS WITH BUGS

We recently read of where a user went into a Radio Shack and bought a new computer and when he got it home he found that it had a big bug in it, so he immediately returned the computer to the store. After killing the big ugly bug that had taken up residence inside the computer. It wasn't said how much the bug ate before being squashed by the new owner.

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OPEN FORUM

Send your questions and problems to the Open Forum, a regular feature of Computer News 80 providing for the exchange of information for our readers.

Your questions will be referred to our technical staff, sorry no phone calls please. We will however publish your questions and the answers in the open forum and reply to your individual questions by direct mail.

When writing please be as specific as you can. We need to know what machine you are using, what DOS you are operating under and the program version number that you are using when experiencing your problems.

Questions that our technical staff can not answer will be published, so that our readers will be able take a crack at it.

We will also advise you as to who the proper manufacturer or software publisher is that could be of help.

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Q: How do I convert data from a PFS:file data disk to Super Scripsit version 1.01.
L. B. - Denver, CO

A: There are two ways to send data from a PFSfile data disk to Super Scripsit. Because a Super Scripsit file wants to read file length in 256 only.

One, you could create an ASCII file by printing from the PFS:file data disk to a file on disk. Under option 5, print to *Disk (file Name:drive number) this will create an ASCII file with the same file length as the PFSfile data disk, and it has to be sent to another file with 256 line length.

Take the file that you have printed to from PFS:file and make a backup to a second file using the command:

Copy ASCII FILE NAME TO NEW ASCII FILE NAME space (LRL=256)

This will create a new ASCII file, with line length of 256.

Then use the SuperScripsit Menu selection A to covert the new ASCII file to a SuperScripsit file.

Have patience and wait for the file to be converted under Menu A, it takes a while.

Or you could, write patch SuperScripsit so it accept variable LRL's.

The following works on version 1.1x SuperScripsit on the Model 4

PATCH SCRIPSIT/CTL (X'6F31'=E5 21 7C
% 00 CB C6 E1)

PATCH SCRIPSIT/CTL (X'6F38'=C3 8F 54)

PATCH SCRIPSIT/CTL (X'5450'=31 6F)

Remove the % mark when typing the patch, as it indicates only the column width, and type the patch as a complete line.

Always use a backup program disk to install your patches on and test out your patched disk before using on your main disks. A mistyped patch can wreck your favorite program disk before you know it. And be a job to correct if you are inexperienced in programing. However it is simple if you get the patch wrong the first time on a backup disk, you just format the disk and start over again, being a more careful typist.

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Q: The top of form command which is clear > in my SuperScripsit 1.1 program does not work at the bottom of the page on line 60 or 66 as shown in the manual. It will work if the command is embedded in the page somewhere above line 60, with the second page set off like the manual indicates.
T. S. - St. Louis, MO

A: We don't have an answer for that one, maybe some one out there does. But we are researching it and will let you know what we find out as soon as we can.

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Q: Do you have a simple program I could write to set my DMP Printer without having to type the printer commands each time.
T. P. -Albuquerque, NM

A: The simple way is to write a short Basic program for each pitch you want.
Sample:
for 10 pitch:
while in basic write,

new
10 LPRINT CHR$(27)CHR$(19)
20 SYSTEM
30 END
SAVE TO "PITCH10":drive number

Then when your DMP 130 printer is on, and you are still in TRS-DOS type Basic Pitch10, to call up the program which will enter basic, set the printer and return to the system.

for 12 pitch:
new
10 LPRINT CHR$(27)CHR$(23)
20 SYSTEM
30 END
SAVE "PITCH12":drive number

Check your printer manual for the printer codes to be inserted ** in the command line CHR$(27)CHR$(**). And you don't have to type the quotation marks while you are in the TRS-DOS mode, just type BASIC space and the program name you want.
i.e. BASIC PITCH12

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To the users group president who wrote that he thought that the use of a question and answer column, was in his words "Our club's observations are that a Q & A section benefits a very narrow segment of readers while at the same time taking up a lot of space in a publication"
W. B. - Independence, MO

A: While it may take up space to answer subscribers questions, we feel that it is important to do so, and will publish the questions and answers that would be of the most interest to all, the others we will answer directly.

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COMMENTS FROM OTHERS

"I'm very interested in TRS-80 support."

"Since 80 Micro is dropping the Model one support - and I've just got a model I Level 2, 48K, I will need a source of information & help."

"I have a TRS-80 III and need a source of information for the same."

"I have a TRS-80 Model 4, and need help!"

"I am one of the TRSDOS users who have been recently abandoned by 80 Micro magazine (where I saw your classified ad) and am in search for something (anything) to fill the void. If I like what I see in your publication, my check for a full year's subscription will be forthcoming."

Q: "Am working under LDOS 5.1.3. Do you have a patch for date after 1987, enclosed is a check for one years subscription."
F. W. MD, Springfield, NJ

A: Michael Jacobs Consulting
PO Box 552, Station K, Toronto, Ontario, Canada M4P 2G9, phone 416-489-1403, has a shareware patch program disk that sells for $14.95 plus $3.00 shipping called SIX2XTND That patches the TRS-DOS 6.2.x on Model 4. and DATECOV date conversion for many data disks created under TRS-DOS 6.2.x, LS-DOS 6.3, LDOS 5.3, DOSPLUS 1.0. He also says he has LDOS 5.1.4 versions for the Model I and Model 3.

Delivery takes several weeks because it comes thru US customs. Find a friend that has a copy and copy it, because it is shareware. If you do use it send the author $15.00. Lets be fair. If you don't like what you see, destroy the data on the disk.

Misosys Inc. PO Box 239, Sterling, VA 22170, Phone 703-450-4181, has a program for updating LDOS 5.1.4 version to LDOS 5.3, Model III or Model 4 operating in the Model III mode. for $24.95 (+S&H). You may have to upgrade to LDOS 5.1.4, but if it is a complete system disk, you should not have to do anything but date convert your existing data disks, and run the new system version, as you do with LS-DOS 6.3.

80 Micro BBS, 603-924-6985, has a patch under the file name Datefix.DOC, by Mike Zarowitz with a patch that can be downloaded, to extend TRSDOS to the year 2000.

Has anyone else written or developed date extensions for the TRS-80? Let us know.

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Classified Computer News 80 Classified

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RADIO SHACK, TANDY OWNERS Find the computer equipment Tandy no longer sells. Pacific Computer Exchange buys and sells used Tandy TRS-DOS, MS-DOS, and Xenix computers and peripherals. We sell everything from Model 3's to Tandy 6000's and all the printers and hard disks to go with them. If we don't have it in stock, we will do our best to find it for you. We have the largest database of used Tandy equipment to draw from. All equipment comes with warranty. Pacific Computer Exchange: The ONE source for used Tandy equipment. Call 503-236--2949. 1031 SE Mill, Suite B, Portland, OR 97214.

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EDITORIAL COMMENT

We want to thank all of you who have subscribed to, or ordered sample copies of our Computer News 80. We hope that it will grow into a thirty to forty page magazine. From the response we have been receiving, it looks as if it won't take very long to grow to that size.

But we hope that Computer News 80 will grow slowly, and contain the things that you, our readers, request and that Computer News 80 will be source a for the help you want so you can get the most out of your application programs and your systems.

"Will you carry display advertising" has been the request we have received most often from people who phoned in their subscription orders or who sent in notes and letters with their subscription orders. Their main reason in asking for display advertising was that the display ads in 80 Micro and other magazines was their only source to find TRS-80 products and programs that are still being sold and supported.

As you know from our first issue, we did not plan on carrying any display advertising. However now that so many subscribers and producers of TRS-80 programs and materials have requested display advertising we have decided that it would be a good idea.

It is only natural for advertisers to want to make a buck, and for this reason they would like to have their advertising dollar cover as many potential buyers as possible. This means circulation.

We want to clearly state our position concerning display advertising and that is that "this is a subscriber supported publication".

We do not want to ever be in the position that we have to depend on advertising dollars to keep our newsletter going.

The evils of advertising supported publications should be fairly obvious. But, the one major evil that we want to avoid, is that of having to publish a "nice review" just because the amount of the advertising dollars being spent in the publication.

We want to be totally independent in our reviews. If it is a good product we will say so, if it is a lousy product we will say so.

Most publications try to put on a face that they are independent of the influence of their advertisers. But, if 90% of your paycheck came from advertisers, what would you do? (i.e. 80 Micro and others).

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Once the advertising dollar dries up so does the magazine, and the subscriber is left holding the bag.

We are sure that there are a lot of good, loyal advertisers out their who are more than willing to support their TRS-80 products and who will let us know that they still intend to support the TRS-80 systems and want our business, by spending advertising dollars.

Others have dumped their inventories (sale 50% off, and no support) and will be gone as soon as they can. These advertisers are out of business.

So, we will make every effort to make room somehow to get the word out to our readers of what is still available and from what sources directly through our reviews, news items, or paid advertising.

We also expect that through our open forum, reviews, and our research of products and programs to provide you with the sources that exist for products for the TRS-80 systems, regardless of whether we have paid advertising or not.

You can help too, by letting us know if you have public domain programs that you like or dislike. Please include the source, along with the name and description of the programs application and why you like or dislike the program.

If you have written a favorite program that you would like to share with your fellow users send that in too.

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PROMISES TO KEEP

Our first issue contained a large amount of Sermonizing and I hope a forgivable amount. Which will not be forthcoming in future issues, or at least kept to a minimum.

Our purpose in these first two issues is to make you acquainted with the people, goals, and expectations of Computer News 80.

As the Tandy Texan said to the Buffalo Wyoming cowboy, "Hope yaall will bare with us!"

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CALL FOR ARTICLES

Recently we have seen an effort on the part of two magazines to call for articles, and then two issues later, editorialize on how the people who submitted the articles could not write and put down those who had made an effort to supply material.

I wouldn't blame anyone who sent in an article to one of these magazines if they never sent one again, or blame someone who was planning on submitting an article to them if they just said, forget it.

You don't have to worry about that with us, we don't care if you can't write perfect english, or can't spell. As long as your idea, article, hint, or program, is honest, and clearly explained it will fly here. And, we are here to help, we have automatic spelling checkers (that's what they are for). We like to read articles that are in general, informal english, just the way you might be talking to us or your best friend over the phone.

Sure we have some nit/picks out there, but the overwhelming number of us could care less as long as the information is useful. That's why there are plumbers, carpenters, small shop keepers, contractors, policemen, house wives, electricians, factory workers, farmers, ranchers, nurserymen and others all using personal computers which help them get the work they do best done more easily. And to provide some of the answers to daily and business problems when even they don't know why the computer works the way it does, just as long as the problem gets solved.

Your publisher will be 55 years young this year, and even though he has been in the mainstream of business for the past 40 years, as an electrical contractor, distributor manager, salesman, management consultant, publisher, cost estimate engineer, and market developer. He still doesn't know exactly why everything does what it does, and if he were to have relied on perfectionism in the extreme all those years nothing would have ever gotten done.

Our Associate Publisher is 47, and experienced with a blue pencil, and journalism, and raises orchids for a hobby.

So come on, lets share those experiences, programs and gained expertise with others and please don't consider that your solution to a problem, or your approach to getting a job done is too small and unimportant - it may be just what someone else has been looking for.

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MEDIA FOR SUBMISSION OF ARTICLES

Send your input material in double spaced upper and lower case. You may send 5-1/4 single sided or double sided disks, be sure that you save your file in ASCII format. (We can take SuperSCRIPSIT text or LeScript text at this time and hope to soon be able to read ALLWrite and Scripsit Pro) But, a file saved in ASCII format is the best bet for any article, or program for publication.

Long programs which take up three and four pages will be reviewed and the program will be made available on disk, for a very small fee to cover handling, in most cases that would be only three or so dollars.

We could never enjoy looking at page after page of closely packed program text which didn't tell us anything, except that there were long hours of typing and debugging ahead.

Besides, the way some magazines are photo reducing their program text you would need a seeing-eye-dog just to copy it.

Submitted Program Policy

Programs published in Computer News 80 will be considered for use as Public Domain Material, and our magazine policy shall have no copyright restrictions other than the reproduction of articles, or copying the publication in total or in part, without permission.

Letters to the Editor and Open Forum Policy

We will not publish the name of the individuals who write to us, except when they specifically request it, initials and city will be used for reference. If you have something that will help the reader send it to this publication for publishing. If requested we will pass your name along to to the person asking the question, and if he then feels the need, he can contact you directly. If you have something to sell commercially place an ad in the classified.

Articles submitted

Articles submitted will carry your full name as the author and not your address unless specifically requested to do so.

We had hoped to keep our publication very informal and not have to take up space with the kind of explanations as above, but with some of the stuff we have been receiving (very few, thankfully), we can't help but lay it all out.

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WHERE DID ALL THE MODEL IV's GO

A recent check of several major city newspaper classified ads came up with the fact that the classified ads did not have any Model 4's advertised for sale.

This means that all the Model 4's that Tandy manufactured and sold are still out there and still being used. And in a lot of cases they're right beside the Model I and III's that are still in use today.

Where did all the Model 4's go? Why, somebody out there is still using them!

It may be that the market for software for the Model 4's has been saturated and that this is the reason that most vendors of Mod 4 products have jumped the rail and have decided to jump on the MS-DOS wagon. We just can't believe this, Model I, III, 4/4P, and 4D users are still going to buy products for their equipment.

Let's face it though, the only way to make money in the software publishing and distribution market is to keep writing and selling software. But sooner or later there must come a point when every conceivable system program for a particular model and make of computer has been written, leaving only the special dedicated application programs to be written and sold.

Either way the market is limited for the software publisher. That is why we feel that many suppliers have dropped their TRS-80 software development and support, not because TRS-80 Model owners have stopped using their computers, nor do they intend to stop using TRS-80 computers.

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UNCONFIRMED RUMOR - CONFIRMED

Our unconfirmed rumor that Tandy was going to put the Model 4D on sale at half price has been confirmed, and to a such degree that we just bought one at the $600 price, and may buy another to add to our office. Talk about commitment to a product!

The Model 4D came with Deskmate, TRSDOS 6.2.1, LS-DOS 6.3 , and an introduction package to Compuserv with $15.00 of free time offered. Quite a load of stuff if bought separately as software.

Remember LS-DOS 6.3 disk is a complete system disk, and not a patching disk. You use it just like any other original system disk. This means that you could just put the TRSDOS 6.2.1 system disk that comes with the computer on the shelf and forget it.

We were all wondering if the LS-DOS 6.3 was going to be supplied by Tandy or if we had to buy it separately from LSI if we had bought a TRS-80 computer after Jan. 1, 1988. Now we know.

Surprisingly, there were registration cards for the TRSDOS 6.2.1 and DeskMate, but not for the LS-DOS 6.3.

Does this indicate that there will be no future updates for LS-DOS 6.3?

Or, does this mean that whatever deal was made between TANDY and Logical Systems, they still can't agree on who will support the package?

Tandys reprint of the LS-Dos documentation briefly mentions the "Phantom Protection Scheme" on page 32 of Questions and Answers where the question is asked by someone who is afraid of using it because of the protection scheme, called anti-piracy protection scheme of LS-Dos 6.3.

The answer claims that it does exists, and that it is highly sophisticated, but do not worry. No legitimate user will ever lose data. Pirates or users who violate the license agreement will have trouble with the system, according to the statement.

And how will they have trouble? The answer goes on to say that based upon the problems that are reported by the user, "We will know if, and when, a violation occurs." And again the assurance that under no circumstances will the protection system ever damage data.

Tandy has printed a no liability disclaimer in the front of the manual.

It is a shame that Tandy got themselves in this box with trying to come up with some form of date extension for their new machines, and the policies of the software programer. But for you users out there; use the LS-Dos 6.3 program and don't worry about what statements the publisher has tried to make to squeeze the last nickel out of a market they thought had ended. It is still a good disk operating program and we still recommend it over all others at this point, it has added value even at $39.95.

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SuperSCRIPSIT DEFENDED

In our first issue we published two long articles (Horror stories) on the problems we were having with SuperSCRIPSIT version 1.1 and 1.2.

We did have a lot of problems, and the author of SuperSCRIPTSIT and Tandy are still working to debug version 1.2.

But with all its inbred problems we still like the program and the way it works, for certain applications.

We didn't mean to imply that we would throw the baby out with the bathwater.

Our one particular need is for very long documents that require weekly updating, and much more block moving, deletions, and new text insertions than would the average business letter correspondence, or manuscript for a book.

For very special and perhaps personal reasons, we like SuperSCRIPTSIT and wish that the author and Tandy could remove all the final bugs. We also like LeScript version 1.7 for other reasons, and use it for different applications.

SuperSCRIPTSIT just doesn't seem to hold up to a lot of tampering with on a huge multi-page document, by using a lot of block actions, and deletions after the original text has been entered.

But for a powerful system that reads/writes to disk, rather than being memory based, where you have to chain document files, or have to install a huge memory board in your computer (added expense) that will carry you into and beyond 32K of Ram with a hard disk. SuperSCRIPTSIT is a powerful program for your Model 4, without needing any special adaptation or hardware expense.

It may just be stubborn pride to make something we paid for work like it is supposed to. As we find out all the patches to debug the program we will certainly report them to our readers.

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PERSONAL PET PROGRAMS

Every computer user has his or her "preferred" personal pet programs, which, they use for word processing, data bases, file systems, or graphics, and they are usually unwilling to change, either because of the lack of time to learn a new program, or because their old program fits a particular application, or because it fits their computer system size, or just plain stubborness to make something work that they have bought and paid for.

All application programs have bugs, just some have more than others, or the bug shows up only under very sophisticated usage of the program.

The truth of the matter is that there aren't any programs on the market that will be all things for all people. If you do much computing, you may need a couple word processors, one that works better than the other one on certain types of work. The same holds true for all other packaged computer programs.

We would like to hear from you! What is your favorite program? What do you use it for - word processing - data base - accounting - spreadsheet?

Tell us what you like best about your favorite program, and what you like least.

If you have a basic program that you have created you think will be a boon to all users send it in.

We happen to be particularly weak in computer graphics experience, mainly because of the lack of time, not because we don't find graphics a fascinating subject.

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OUR GOALS REPEATED

Our main goal is to serve the everyday user with tips, hints and solutions to problems that they may be experiencing with their application programs.

There is a raft of new programs, public domain and otherwise out there that are available and it is not our desire to provide our readers with just some more new programs. But to help them apply the programs and equipment that they already have.

But we do have a great interest in patches, new short application enhancement programs and will publish all that seem appropriate to meet the goals we have set forth.

IT IS ALSO OUR GOAL TO KEEP THIS PUBLICATION AS INFORMAL AS POSSIBLE AND USER FRIENDLY AS POSSIBLE.

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VISICALC TO SCRIPSIT

If you want to transfer your Visicalc data to Scripsit or SuperSCRIPSIT, load the data file to the screen if it has been previously written and saved, then from the screen print the data / P F commands in Visicalc, and print to a new file name on a disk, this will create a file with the name you have given it and with the extension of /PRF (check your directory) Use the A option on the Scripsit menu to convert from ASCII to a Scripsit file.

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THE PATCH COMMANDMENT

The patch commandment number one, and only one is never, never apply a patch to your working disk, or original disk.
Always make a backup copy to apply your patches to. Then check the patched program disk out before using on your valuable data.

You could also build and store a DO file, which can be checked very carefully to see that the patch is correctly typed before applying it your program disk.

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FidoNet PUBLIC BULLETIN BOARD LIST

DAK Industries of Canoga Park, California has made available a list of the FidoNet Association's Public Bulletin Boards, giving over 2,000 BB's across the country.

The User's Guide portion is written for IBM compatibles, but it is helpful in explaining the electronic bulletin board terms, and if you are not familiar with a BBs operation, there is a full explanation of the procedures.

They are also giving all of the proceeds over and above the cost from the sale of the list to the American Cancer Society.

The company has set up a special PO Box for this service.

To get a copy: Send your order with checks only (no cash or credit cards) with the word "List" to DAK P.O. Box 3045, Canoga Park, CA 91306

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CHICAGO SYSLINK NETWORK

(312) 622-4442 300/1200 Baud

System Operator: George Matyaszek

Syslink is a network of computer operated bulletin boards with more than 50 locations around the country. The Chicago site is promoting their board as a direct-marketing medium primarily for computer products and services. They have a section for general retailers and a special section which carries ads and an aviation newsletter from a local aviation supplier. Advertisers are charged $20.00 per-user annual subscription fee and orders are place directly to the advertisers thru Syslink's electronic mail system. Other Syslink sites have special interest such as professional scuba diving in Fort Myers Florida, astrology and "New Age Issues" in Sault Ste. Marie, Ontario. Syslink also offers Info-Mat, an on-line electronic mail service.

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NEWS ITEMS

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Mickey Slonaker of Discount Software, Middeltown, New Jersey has a large stock of software, (see classified) which he says consists of new factory sealed and opened packages used for demo, which were purchased from Radio Shack in bulk to increase their own library. He also said that they purchased a number of complete inventories to protect their computer investment and to insure their future requirements.

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Anitek Software Products, PO Box 361136, Melboure, Florida 32936 publishers of LeScript has announced their version 1.80 of LeScript with a Spelling Checker with a 70,000 word dictionary. The spelling checker is a built-in part of the LeScript program. Updates $35 for version 1.7, $50 for version 1.6, $60 for version 1.5, $65 for version 1.4 and $70 for versions 1.1,2 or 3. Add $3 if original disk is not returned. A one year full support contract is $75.00. Plus $2 shipping and handling.

Send them any other word processor program, costing more than $80 for TRSDOS or $120 if an IBM program and they will sell you a LeScript 1.8 with word spelling checker for $64.95 for the TRSDOS version.

They have promised an enhancement to LeScript to include a print driver for laser printers.

LeScript version will not be available to run on TRS-80 Model 2-12-16 or CPM.

There was mention of plans to release the spelling checker as a separate program to be used with older versions of LeScript in place of Electric Webster.

LeScript is a memory based word processing program and documents are restricted to the size of your computers memory, chained document files are used or expanded memory boards are required.

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A VISIT WITH DAVID GOBEN: 1988 DATE PATCHES AND SYSTEMS REVIEW

I'm going to start off with some thoughts about the 1988+ date-stamping patches for TRSDOS 6.2. There were a few mentioned in issue 1.1 of this publication. The first is the patches from Michael Jacobs Consulting. It is quite an involved piece of work, and is in fact a complex series of JCL files that apply the patches. In the final analysis of this product, it does in fact do its job, but with exceptions. If you are one who is willing to convert ALL your TRSDOS disks to this new dating format (for some this would be a monumental task), then this is the route to go. It is cheap ($14.95 registration fee), but is not, in my mind, the best route to follow. The problem with it is that it changes the dating method so dramatically that displaying a directory of an unconverted disk under a converted system disk, will show garbage on the screen. But as I said, if you're willing to convert ALL your disks, then this is it.

The second is the one on the 80 MICRO BBS. Again, it manages to do its job, and with MINIMAL patches, but in my mind it fails. All this one does is do a date OFFSET, so a directory listing of a disk that was created prior to applying the patches will show an incorrect modification date.

Personally, I would not recommend these two patches. BUT, in the event that you truly need date stamping AND are in a financial pinch, then I would prefer that you went with the $14.95 package. It is available from Michael Jacobs Consulting, PO Box 553, Station K, Toronto, Ontario, Canada M4P 2G9. Include $3.00 for shipping and handling.

My personal recommendation is to upgrade to LS-DOS 6.3 from LSI. Not only does this update your system without the fuss of patching, but it allows you to use unconverted disks without a problem, as it will recognize the older dating method as well as the new. In addition, some powerful features have been added, as well as some utilities which are no doubt worth far more than the upgrade fee ($39.95). BASIC is enhanced, allowing you to use abbreviated editing commands, selective blocks for renumbering, faster loads and saves, down and up arrow consecutive line listing, DOS SVCes, and search and display variables, line numbers and keywords. LS-DOS 6. is available from Logical Systems Inc., PO Box 55239, Grand Junction, CO, 81505.

Model III LDOS users can upgrade by purchasing LDOS 5.3 from MISOSYS, Inc., PO Box 239, Sterling VA, 22170-0239. The cost is $24.95 with $2 postage and handling for US, $3 Canada, and $6 foreign.

If you look around anymore, you might notice that there aren't many new products out on the market for the TRSDOS world. About the only active I/III/4 distributor is MISOSYS, Inc., which did the major design work on LDOS and TRSDOS/LS-DOS 6. And so it would not be surprising, just as INFOCOM is backing out of producing adventures for the TRSDOS world, that MISOSYS has stepped in. MISOSYS has just released an interactive fiction adventure called LAIR OF THE DRAGON. It is the largest adventure in the genre of interactive fiction to date. If you are new to adventuring, it starts out quite simply, so as not to intimidate you, but deeper into it, it gets quite complex. The reason that I mention it is that it was written by yours truly. You can purchase it through MISOSYS for $29.95, plus the postage rates mentioned above. This III and 4 version comes on a special distribution disk that will boot up on either system and transfer their files to your own disk formats, such as NEWDOS80, LDOS, TRSDOS 1.3, LS-DOS, DOSPLUS, and MULTIDOS. I suppose that it is just another sign of the times, but an MS-DOS version is available as well.

I now want to share my thoughts on the LS-DOS 6.3's so-called 'protection' scheme: I would LOVE for someone to come forward and prove to me that it exists. I have gone through the DOS byte by byte from one end to the other, and have not found any code, encrypted or otherwise, that would perform such a task. The fact is, a backup of such a protected disk, if the data were indeed stored between tracks, would be ignored during a disk backup, and so the copied disk would then be considered an ORIGINAL by such a scheme. If there were, any time that you added or removed a disk drive, added memory, or an internal modem, hi-res board, or anything else, this act would change the environment, and would

thereafter be considered by such a protection scheme as a foreign system. But this has not been the case. But simply because the device may not exist, this does not release you to make several copies for any possible other Model 4 systems you may have, or to be a real scum and give copies away. As stated in the last issue of this publication, by rights you SHOULD purchase one copy of the DOS for EACH machine that you own, for in fact you did so when you first purchased each machine. It was not, as some advertising may have claimed, been supplied FREE (NOTHING is free in the marketplace). Support those who support your machine. After all, the reason that the market has moved away from the TRSDOS world is that the businesses cannot financially justify the support, as the revenue from the TRSDOS field is about bone-dry.

As promised in my last column, I said that I would provide some useful patches to enhance your system. Since it is now 1988, I will focus these on LS-DOS 6.3. These patches will not work as presented on TRSDOS 6.2. If there are enough request for the .6.2 versions, I will provide them, but with hesitation, as I will not try to work around any of the patches that you may apply to 6.2 to update its date-stamping, but will leave that for you.

The first patch allows you to perform a more liberal date entry on boot-up. Normally to enter January 1, 1988 you would have to key in 01/01/88. With this patch you can ignore leading zeros and enter instead 1/1/88. To use the patch, BUILD a file called DATE63/FIX, and enter the following lines:

```
D0F,9F=57 CD AC 21 38
F0F,9F=5F CD 2F 21 30
D0F,A4=02 AF 53 82 37
F0F,A4=04 83 5F 37 7B
D10,46=7E D6 30 FE
F10,46=00 00 0 00
D10,4A=0A D0 23 C9
F10,4A=00 00 00 00
```

Apply this patch using the command line PATCH SYS0/SYS.SYSTEM USING DATE63

The next patch allows continued JCL processing even when the base system drive has changed. Changing the base system drive is when you change logical drive :0 from the current base drive to another physical drive. This is done using the command SYSTEM (SYSTEM=d), where 'd' is the new drive, such as 1, or your harddisk, or even your memdisk drive. A system (at least minimal) must exist on the drive. The problem is that if a JCL file does this system switch, and the JCL file was executing from the base (or destination) drive, that JCL processing will abort, for it will try to continue running from the logical drive it began on, which will no longer be true. I fixed this so that if a system switch occurs, that the JCL file will continue to operate from the proper physical drive, no matter where it is operating from. To apply the patch, BUILD a file called SYSJCL/FIX, and enter the following lines:

```
D05,B4=CD A2 2B
F05,B4=21 74 04
D05,E5=B4 2B
F05,E5=17 24
D08,35=3A C6 00 B7 28 04 91
F08,35=00 00 00 00 00 00 00
D08,3C=20 05 4F 79 32 C6 00
F08,3C=00 00 00 00 00 00 00
D08,43=21 74 04 C9 3E 0C EF
F08,43=00 00 00 00 00 00 00
D08,4A=21 00 00 C3 09 24
F08,4A=00 00 00 00 00 00
```

Apply this patch using the command line PATCH SYS8/SYS.SYSTEM USING SYSJCL

Well, that's it for this time around. In my next column I'll show you how to change SYSTEM drives WITHOUT changing the logical drive numbering as SYSTEM (SYSTEM=) will do. If you have a particular subject that you would like for me to cover, that you feel will be of interest to other readers as well, send them to me in care of this publication, and I will be glad to consider it. If, on the other hand, you have some expertise in that field you may consider submitting it to Computer News 80, and have an article published with YOUR OWN by-line. NEVER be afraid of a POSSIBLE rejection (I have a box FULL of rejection slips that attest to my own perseverance). Happy computing!

—David Goben

(Editors Note: David Goben is a associate editor for 80 Micro, and author of many

articles and programs for other publications. He is also a programming consultant who specializes in troubleshooting programs and writing utilities.)

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READERS LETTERS AND COMMENTS

"Thank you for picking up where 80 Micro left off. I was pleased to receive my first copy in this mornings mail. It was interesting and well worth the investment. Count me in on your first year." -M. S. Middletown, NY

"I enjoyed your first issue. Is PFS:file the same as Profile 4 Plus" - J. C. Easton, MD
(PFS:file is not the same as Profile 4 Plus, PFS:file is a filing program, and Profile 4 Plus is a data base program with many more functions and options. - Editor).

"I have retained the Model I because of its little value and one program, I can't use on the Model 4. That is Mactronics M80 Ham Interface used with an interface device that allows the Model I to receive and transmit morse code. Incidentally, if anyone knows how to convert that tape loading program to disk, single sided, soft sector 5-1/4", that can be used with TRSDOS 2.3 or Dosplus, I'd be most appreciative.

I am impressed with your sample copy, so I'm going to give it a whirl." -W. H. Humbolt, TN

"Thank you for sending a sample copy so quickly. Usually I have to wait so long for things like that I forget what I sent for. Your speed in responding is a breath of fresh air!" - S. L. South Haven, MI

"Also own an 'Older Than Dirt' TRS Color Computer, was an 8K model, but had surgery for 32K. Later was souped- up with an external 5-1/4" disk drive, really like this 'Little Guy', it is a fun computer and have 'tons' of special application programs and games. Also have a modem equipped for my Model 4 or Color." -M. B. Nevada City, CA

"I've just finished reading your first issue and it appears to be a very original and helpful news letter. Congratulations on your good start! I hope to read about different application programs in upcoming issues, as well." -R. R. Brooklyn, NY

"I have found the article in the February issue of 80 MICRO telling about your intention to publish a newsletter covering the TRS-80 machines. This is the best thing I have seen in that magazine for the past few issues. I am sure you are aware that there is a great 'silent majority' of us out here that do not partake of all the modem-BBS-online hoopla that seems to be the rage. Lots of us have a machine that we thoroughly enjoy, would like to see something about what could be available to us without having to fight the telephone lines, and write to someone about their product, instead of purchasing it cold turkey.
-M. O. Temple, TX

"I am a 74 year old retiree and do not have the knowledge to design my own programs. I originally purchased a TRS-0 Model III cassette unit. Later having a keyboard problem updated to a mode IV Disk.

Since my original purchase I have subscribed to all TRS publications for the respective units. When they ceased publication I then subscribed to 80 Micro gleaning whatever help that was available. However upon receipt of the February 1988 issue and seeing the changed format along with the deletion of Model III and IV data it has resulted in my cancellation of the subscription.

Seeing the memo regarding your publication on Page 8 of the Feb. 1988 issue it has resulted in my subscribing and hope others will do the same, and that you may have a successful operation. - A. G. Pt.Pleasant, WV

"My entire focus is word processing with SuperSCRIPSIT as I am at the beginning stages of becoming a self-publishing writer. I intend to remain with my primitive technology indefinitely and not allow myself to be overwhelmed by the upgrading bug in the mad rush to the future, although I am avidly interested in everything new that happens in the computer world." - P. D. Waterbury, VT

"February is my last issue of 80 Micro and I'm not going to renew, even though I was a charter subscriber in Jan 1980, (continuous to the present). I may subscribe to PC Resource, since I do have one of the assembled PC XT clones from JDF. The Model 4, however is (and will remain) my main interest. I got started with a Model I in 1979 and presently have a 4P and a 4D, both with Grayfyx Solution." - R. G. Wellington, KS

"We wish you success. Since our retirement we, my wife and I do mailing lists using our Model IV." - B. H. Beaumont, TX

"I'm glad your doing this, will be dropping 80 Micro (after all these years)." -D. M. Greenbrier, TN

"I received my sample copy today and spent the next 45 minutes in reading pleasure. As a Model 4 user, I too was concerned that we had nowhere to turn for tech info or just communicating with other Model 4 users. But your newsletter (also hoping to see you grow to a magazine) has come to save the day. Anxiously awaiting the next issue!
P.S. I would like to see a letters to the editor section. Also if there is anyway you could print my BBS phone number. It is called 'The Kingdom of Nyrand' 300/1200 Baud, 24 hrs, daily, its run on a Model 4, with an external 5 meg. hard drive, using an, also defunct BBS program ERAC56Plus package. Looks like I am just lucky-I guess! The number is 817-551-0649." Randall Bales, Ft. Worth, Texas.

OPEN FORUM

Send your questions and problems to the Open Forum a regular feature of Computer News 80, for the exchange of information for our readers.

We have a very large and qualified technical staff and your questions will be referred to them, sorry no phone calls please. We will however publish your questions and the answers in the open forum and/or reply to your individual questions by direct mail.

When writing please be as specific as you can. We need to know what machine you are using, what DOS you are operating under and the program version number that you are using when experiencing your problems.

Questions that our technical staff can not answer will be published, so that our readers will be able take a crack at it.

We will also advise you as to who the proper manufacturer or software publisher is that could be of help.

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Q: Recently we purchased several program packages from software publishers for the Model 4, at reduced prices, when the packages arrived they were stamped "NO SUPPORT", what do we do now?

Granted we bought the programs at lower prices because we did not know if we really wanted them or not. But we had been reading the advertising hype for years, and a close out prices we felt that we could take a look-see, and like all programs that were sold at full price, we couldn't return them, but had to eat the look-see cost.
P. W., Miami, FL

A: Sounds familiar, I am sure that we all purchased some pretty fine programs, and some that were not so fine, and we didn't have the eyesight that was good enough to read the small print in the ads that said "programs sold at these reduced prices, are sold with out support" or some just said "no support".

But when Tandy sold a software package at reduced prices, they did not pull the support to back up the programs, and you could return it within 30 days. Now it seems like most software publishers are dumping their inventories of TRS-80 programs as fast as they can, along with dumping the support too. I don't feel that we owe them much support if we are abandoned to our own devices to support ourselves, I would not hesitate to send a copy of a protected disk to a friend who could give me the support that I needed, when the author/publisher did not supply me with any kind of support after buying his product at any price, first issue price or close out price.

The only thing left for support is our fellow users out there who can share their expert advice and experiences with programs that are new to us.

POWERSOFT of Dallas, Texas, Publishers of Super Utility for Mod I,III & 4, PowerMail+, and several utilities, said when contacted, that all their items for the Model 4 were on sale at half price, with no support. That "Support Not Included" in their ads, really meant that you couldn't phone them for support, but you could write them with your problem and they would take care of it. It seems that they have no full time programmer who could answer questions over the phone because he only comes in one day a week.

Ron Malo, of PROSOFT in North Hollywood, California, publishers of Allwrite and Dotwriter for TRS-80 Model I, III, and 4 said when contacted, that they would support their TRSDOS programs even though they were selling them at half price, just as they always have. But, there would come a time when they would have to refuse or stop sales of the products because the support liability would greatly exceed the profit margin in the sale of a TRS-80 package. He would not predict how long they would continue to sell their products in the TRS-80 format, but said he would not sell anything without offering full support.

(Editors Note: We ordered Allwrite and a Dotwriter for our own use, we will try to have an objective review in our next issue.)

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Q: My PFS file will not boot up when I enter the date, it just keeps reverting to asking for the date, and I am on my last back up on the limited backup master disk.
B. S. - Portland, OR

A: PFS:file will not accept a date beyond Dec. 31, 1988, type any date in when you boot up to get into the open PFS:file menu, exit to TRSDOS, menu #7, then with the read-write removed from the master work disk, go to system and type SYSTEM (DATE=NO) which will shut off the date request, and then you can boot the disk as normal. None of your files will be dated though from that time on. (Read PFS:file and Model 4 in last months issue, for methods to use PFS:file with LS-DOS 6.3

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Q: I need a copy of the NewDos80 system to operate some very special equipment, or a copy of the NewDos80 manual. Most of all I need to know what the commands are to boot in NewDos
H. M. - Vernon, IL

A: Since the publisher Apparat, is out of business, I am sure that some of the NewDos users out there could be of help with the information you need. (If you have NEWDOS and you can help, drop us a line and we will put you in touch with the person in need).

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Q: We are looking for NEWDOS80/2.0 owners and users.
G. M. Chicago, IL

A: Any experts in NEWDOS out there who are willing to contribute support, articles, etc. Let us know. It looks like we could use a monthly NEWDOS column.

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Q: I have a problem. I managed to get SuperSCRIPSIT to work properly with a Xerox Memorywriter 610c11 used as the printer. (Its input is serial.) To do so, I used the DW2/CTL driver and filtered regarding CRLF. But Scripsit Pro (used with its version of DW2/CTL) leads to a condition of no space between words when in proportional mode. I thought of getting a scripsit Pro driver from Alps, but before I got SuperSCRIPSIT to work with the 610cl, I bought a driver from ALPS, but it never worked, and they never answered my request for help. I studied elementary assembly language, and disassembled several drivers from different sources, but I understand on fragments of what I then see. Any ideas?

The utility that is needed in two versions (Epson FX and Tandy) is a short menu-driven Mod 4/CMD program to facilitate invoking printer set-up options. A friend wrote one for the Mod III and old Epson MX-80, and it is really handy. I did one in BASIC for the Epson FX-80, but that necessitates having on line, and invoking, BASIC. -R. D. Rolla, MO

A: Have you checked with Powersoft in Dallas (214) 484-2976, they seem to be very experienced in oddball print drivers for TRS-80. If anyone else has a print driver or suggestion let us hear from you.

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Q: Will a commercial program such as Print Commander allow me to use my DMP-200 printer with an MS-DOS machine? The boys at the Tandy Computer Store say it can't be done (a good reason NOT to buy a Tandy 1000; I like my DMP-200). -D A Athens, GA

A: The answer to that one on the DMP-200 should be available from Tandy Hardware Support Group in Fort Worth, 817-338-2394, keep dialing till you break through, sometimes we have punched the phone non-stop for 15 minutes, but we got someone on the line, and they were always most helpful.

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Q: My main interest would be in seeing articles that can help me convert my Model I assembly language software to the Model III mode of the Model 4, and then to the native Model 4 mode. I could also use help in converting the Peek and Poke statements in Basic programs.

A: Unfortunately our program files do not go back to the Model I, but we are sure that some reader will be able to send us a conversion program from I to III that we can pass along to you.

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Q: I am an avid user of the TRS Scripsit Version 6.00.01, 1983 I could disable the date prompt during startup but I don't want to. Need a patch to extend the date beyond 12/31/87 any help?

A: All kinds of help here, see our last issue Vol 1. No.1 and David Goben's column in this issue.

==========

Q: "You are not the only one who bought a disk full of gremlins! The thing that 'bugs' me the most is <Down Arrow!> <V> and <Down Arrow> <P>. After block action <delete> both of those functions start moving up the page instead. To cure this, I have to perform <CTRL> <Q> and then type <R> from the menu. This is only a temporary fix. Also when performing block action delete, I have to check closely that the Last Character of the deleted block has not been left on the screen. And like you, I have had to struggle with 'frozen' paragraphs, especially after hitting an unknown combination of keys. One other thing that happens; sometimes I suddenly hear the disk drives running and find a 'command' to go to the help screens! I am about to buy another word processor even though I cannot afford it." -S. L. South Haven, MI

A: You have our deepest sympathy, but we recommend that you go back to SuperSCRIPSIT version 1.1.0 without using the latest Tandy updated version 1.2.0 which was supposed to fix the bugs has the frozen paragraph that can't be removed short of burning the disk, or using it as a frisbee over Lake Michigan. Ignore the call for help notice it pops up all the time. Right now our mail is equally split with 1/3 for LeScript, 1/3 for Allwrite, and 1/3 for SuperSCRIPSIT, and a few for Scripsit Pro, but for Scripsit Pro we are talking $249.95 and requiring 128K. The 128K chips can be purchased now for under $30. If your requirements are not very fancy, such as just letter writing, try just plain Scripsit Cat. 26-1563, check your discount distributors for super close out prices on it.

==========

Q: I would like to operate the Home Acct. (Mod III) in Mod IV mode, I've written many letters with no response? -A. T. Lompoc CA

A: We assume you are referring to the Home Accountant by Continental Software which is not supported by Tandy, as it was an express order item in their catalog. Have you tried using the @CONVert utility in your TRSDOS 6.x. which is used to convert data files from TRSDOS 1.3 to TRSDOS 6.x, i.e. @CONV:1 :0 Converts all files, visible, invisible and system files from the source disk on drive one to the destination disk on drive zero. The source disk is a DOS 1.3 disk, and the destination disk is a DOS 6.x, as each file is displayed, you are asked to be sure you want to convert it. (QUERY). Note that the Repair utility command is used to massage information on a specified drive into a form usable by TRSDOS 6.x, and reworks disks with data generated by other Radio Shack operating systems. Including Model 1 Versions 2.0, 2.1, 2.2, 2.3 and 2.3A. TRSDOS 1.2 and 1.3 must not be REPAIRed. They must be CONVerted using the CONV utility.

If the convert utility has not worked you may have to try to find a utility that will convert your Model III programs to the Model 4 mode. Check with EMSI, PO Box 471, Chester, New Jersey 07930 201-879-5982 for a program conversion utility from Model III to Model 4.

==========

REPRINTED FROM MOD 4 by JACK

SYSTEM FILES (/SYS)

TRSDOS 6 for the Model 4 is made up of a number of individual modules that are shuffled in and out of memory on an "as needed" basis rather than having all of the operating system in memory at all times. This has the effect of preserving a large amount of (RAM) memory for application programs. The implications pertain not only to volatile memory, but also to floppy (or hard) disk storage. By PURGEing and REMOVEing unneeded modules from your disks, you can streamline the disk to handle only those functions needed and free up more of the disk for potential applications.

All of these files have the /SYS extension and are normally invisible on the directory listing.

Note that it is possible to put needed SYSTEM files in high memory (using SYSRES) so that additional disk storage can be opened up for other applications.

SYS0/SYS (SYSzero/SYS) - contains the so called "resident" portion of the operating system and is needed for dynamically allocating disk space for files. It can be purged from a disk if it is not used for booting.

SYS1/SYS - contains the interpreter for all commands, and the routines needed to use @CMDI, @CMDR, @FEXT, @FSPEC, AND @PARAM. This module must reside on any SYSTEM disk.

SYS2/SYS - used for opening and initializing disk files and devices. contains the routines needed to use @CKDRV, @GTDCB, and @RENAM. This module must reside on any SYSTEM disk.

SYS3/SYS - needed to close files and devices, as well as handle @FNAM. You need this on any system disk.

SYS4/SYS - contains the error messages. If not on the disk, all errors will be indicated using the message "SYS ERROR", which may or not be acceptable.

SYS5/SYS - needed only if you will be using the regular DEBUG command.

SYS6/SYS - needed for use with all "Library A" commands. It can be removed, but this will leave a rather anemic version of the operating system.

SYS7/SYS - needed for use with all "Library B" commands. The most often used library commands are in "A", so this module can many times be deleted.

SYS8/SYS - needed for all "Library C" commands. Usually you can delete this one.

SYS9/SYS - needed only if you will be using the extended DEBUG command. If SYS5/SYS is removed, you should also purge this one.

SYS10/SYS - needed for removing files. You should keep this one.

SYS11/SYS - needed only for Job Control Languarge operations. If SYS6/SYS (Library A) is removed, you should also purge this one.

SYS12/SYS - needed for @DODIR, @GTMOD, AND @RAMDIR, and should remain.

SYS13/SYS - is currently not used by TRSDOS. You could remove it since it will release one additional directory slot.

The above text is an excerpt from MOD 4 by Jack, the TRSDOS® operating manual written in plain english, which we reviewed in our last edition.

Reprints of the entire book in a 8-1/2 by 11 format in a three ring binder is now available for $17.95 plus $2.00 for shipping and handling. A smaller format version may be reprinted at some future date as a soft bound paper back. (Wyoming Residents add 4% sales tax, Canada add $4.00)

==========

PRINTER COMMAND PROGRAM - MOD III - C.ITOH 8510 PRINTER

- by David Frecker

How to set up a printer without having to type in the printer commands.

The program was used with AIDS Plus, in itself a rather good little Data Base system for the Model III, which explains line 170 in the program.

```
10 ' PRINTSET/BAS - SET UP PRINTER TYPE FOR WORD PROCESSING - C.ITOH PROWRITER
20 ES$=CHR$(27) : WI$=CHR$(14) : WO$=CHR$(15) : EI$=CHR$(33) : EO$=CHR$(34) : CLS
30 INPUT "DO YOU WANT THE PRINTING EMPHASIZED"; IN$
32 IF IN$="Y" OR IN$="y" THEN LPRINT ES$ EI$; : M$="EMPHASIZED " :CLS       ELSE
IF IN$="N" OR IN$="n" THEN LPRINT ES$ EO$; : M$="" : CLS
  ELSE CLS : GOTO 30
40 PRINT "SELECT NUMBER FOR TYPE OF PRINTING DESIRED:"
50 PRINT "1 - CONDENSED 15"
60 PRINT "2 - ELITE 12"
70 PRINT "3 - PICA 10"
80 PRINT "4 - PROPORTIONAL"
90 PRINT "5 - WIDE CONDENSED"
100 PRINT "6 - WIDE ELITE"
110 PRINT "7 - WIDE PICA"
120 PRINT "8 - WIDE PROPORTIONAL"
130 INPUT A : IF A<0 OR A>8 THEN GOTO 40
140 ON A GOSUB 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800
150 CLS : PRINT W$; " "; M$; "PRINT MODE IS SET"
160 ' FOR I = 1 TO 1000 : NEXT I
170 CMD "I","AIDS"
180 END
1100 ' SET CONDENSED MODE
1110 LPRINT WO$; ES$ "Q"; : W$="CONDENSED"
1120 RETURN
1200 ' SET ELITE MODE
1210 LPRINT WO$; ES$ "E"; : W$="ELITE"
1220 RETURN
1300 ' SET PICA MODE
1310 LPRINT WO$; ES$ "N"; : W$="PICA"
1320 RETURN
1400 ' SET PROPORTIONAL MODE
1410 LPRINT WO$; ES$ "P"; : W$="PROPORTIONAL"
1420 RETURN
1500 ' SET WIDE CONDENSED MODE
1510 LPRINT WI$; ES$ "Q"; : W$="WIDE CONDENSED"
1520 RETURN
1600 ' SET WIDE ELITE MODE
1610 LPRINT WI$; ES$ "E"; : W$="WIDE ELITE"
1620 RETURN
1700 ' SET WIDE PICA MODE
1710 LPRINT WI$; ES$ "N"; : W$="WIDE PICA"
1720 RETURN
1800 ' SET WIDE PROPORTIONAL MODE
1810 LPRINT WI$; ES$ "P"; : W$="WIDE PROPORTIONAL"
1820 RETURN
2000 END
```

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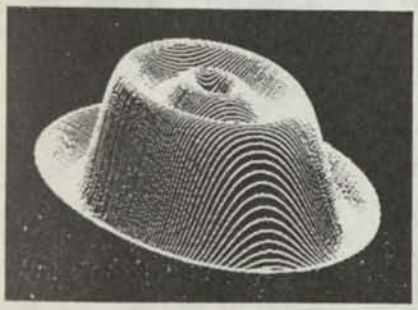

Superior Hardware. The Grafyx Solution provides 153,600 pixel elements which are arranged in a 640 × 240 or on the Model III a 512 × 192 matrix. Hundreds of new business, personal, engineering, and educational applications are now possible. The hi-res display can be shown on top of the standard display containing text, special characters, and block graphics. This simplifies program debugging, text labeling, and upgrading current programs to use graphics. The Grafyx Solution fits completely within any tape or disk based Model 4, 4D, 4P, or III. Installation is easy with the plug-in, clip-on Grafyx Solution board.

Superior Basic. Over 20 commands are added to the Basic language. These commands will set, clear or complement points, lines, boxes, circles, ellipses, or arcs. The hi-res screen can be printed on any of 30 popular printers or saved or loaded to disk without leaving Basic. Areas may be filled in with any of 256 patterns. Sections of the screen may be saved and then put back using any of five logical functions. Labels can be printed in any direction. The viewing area can be changed. The entire screen can be complemented or cleared. Graphics Basic provides dot densities of 640 × 240, 320 × 240, 160 × 240, and 160 × 120, all of which can be used in the same display.

Superior Software. The board comes with over 40 programs and files which make it easier to use, serve as practical applications, demonstrate its capabilities, and serve as programming examples. The software works with TRSDOS 1.3, 6.1.2, 6.2, 6.3; Dosplus 3.4, 3.5, 4; LDOS; and Newdos80. The Grafyx Solution is also supported by 30 optional applications programs: Draw, Bizgraph, xT.CAD, 3D-Plot, Slideshow, Mathplot, Surface Plot, Chess, etc.

The Grafyx Solution package is shipped complete for $149.95 (reduced from $299.95). The manual only is $12. Payment may be by check, Visa/MC, or COD. Domestic shipping is free on pre-paid orders. Texas residents add 7% sales tax.

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VOLUME 1 No. 3

EDITORIAL COMMENTS

First of all let me again thank all you wonderful users who have taken time to write letters of encouragement for our efforts.

If some of you were wondering if we would survive our first issue, yes we have and we will continue to publish as long as there are loyal readers such as yourself out there that want us.

As you know by now, your second issue was sent by bulk mail and it took a little longer to get to you than we had expected, or at least it seemed so.

The main reason for this is that the early subscribers copy of Vol. 1 No. 1 was mailed starting on December 16, when we had it finished and there were just a few subscribers. We then mailed every new subscription order the day we received it until No 2 was ready. Vol. 1 No. 2 was mailed bulk rate which takes a little longer than first class mail on January 27th. (The post office claims that all bulk rate mail is delivered in 10 days.)

Vol. 1 No. 1 is really the January 1988 issue, and Vol. 1 No. 2 is February 1988. The reason we have not printed a month and date on the issues, is that we think that the issues will be valuable as information tools for a long time and should Not be dated as is the usual custom.

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It is just as easy to refer back to a Volume and issue number as to a month and year.

We just received an note from a subscriber saying "don't change it from Vol.1 No. 1, because I am going to punch holes in it and store it in a three ring binder so I will have a whole set."

Anyway, we should be on schedule now without too many problems, so you will receive your copies at regular intervals from now on. Even with the compiling of text, writing, editing, proofing, and printing, we should now have it under control, and with more time taken in proofing. Our type setter still has some typo and word transpositions that are embedded in his fingers that the proofer just doesn't seem to catch. We hope soon to have both of them debugged and programmed smoothly.

We have been toying with the idea that if some of you want the publication mailed first class we could do that for an extra charge of $7.00 to cover the additional postage and envelope. Please let us know if you would like to have your copy sent first class.

Our real feeling is that we want to put the cost of publishing into more articles and a bigger monthly publication with more pages than to spend it all with Uncle Sam.

Also please let us know if your copy arrives in good condition. The copies of self-mailers such as catalogs and other material that we receive usually comes to us very clean and in good condition. But if you do get a copy that the pet bulldog at the post office has had some fun with, please let us know and we will get a replacement off to you right away.

As promised, more text and useful material coming up and less sermonizing.

We really have been receiving some wonderful stuff from people so we want to get as much as we can into this issue.

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be made available on disk, for a very small fee to cover handling, in most cases that would be only three or so dollars, provided you send a formatted disk, a mailer and postage for the return.

Submitted Program Policy
Programs published in Computer News 80 will be considered for use as Public Domain Material, and our magazine policy shall have no copyright restrictions other than the reproduction of articles, or copying the publication in total or in part, without permission.

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We will not publish the name of the individuals who write to us, except when they specifically request it, initials and city will be used for reference. If you have something that will help the reader send it to this publication for publishing. If requested we will pass your name along to the person asking the question, and if he then feels the need, he can contact you directly. If you have something to sell commercially place an ad in the classified.

Articles Submitted
Articles submitted will carry your full name as the author and not your address unless specifically requested to do so.

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NEWS ITEMS

The latest COMPUTRONICS catalog #28, still lists several programs and casette based programs for Model IV scattered in among all the MS-Dos programs. Versa Business Products updates are still available for most computers. You must know your current serial number, appearing on your original diskette. Updates are not returnable.

CHECKBOOK PLUS™is still available for TRS-80 for $99.95. Mail Pac II, Business Pac 100, Master Pac100 all for $99.95 each are still available, with full support and most importantly come under their return and refund privileges within 30 days.

Computronics, is one of the few distributors left that still give you 30 days to send the software back for a full refund.

All the other TRS-80 products that used to be in their catalog are gone.

Computronics, Inc. 1-800-431-2818
46C Route 303, Balley Cottage, NY 10989

—

The new 1988 Tandy® Computer Catalog & Software Reference Guide is out, but in short supply in some stores. You can get one mailed to you by calling Tandy in Fort Worth 1-817-390-3549.

We thought about printing a list of software products still in their catalog, but it would be better for you to get a copy for yourself. Then you would have the full explanation of what they are still marketing.

Look in the listing under "Support" as to whether Tandy is going to support it or the original publisher. The publisher may not be around to support the product in the future. Tandy will be, and that is the tough choice.

—

In a recent interview with Roy Solthoff of MISOSYS, he stated that "We are getting out of the TRS-80 market, so we are not doing any pushing in that regard. There is no rationale for doing anything further in the TRS-80 market, other than supporting what we have, we are extending all our energies somewhere else. The more we try to exert our energies in the TRS-80 market the more we will be closing up on our future. Very few people are buying. The only people who are trying to do something in the TRS-80 market are so devoted that they have no concern for an on going commercial operation and I see no justification for that. We don't have the time to do anything except serve our own customer base as the TRS-80 market has deserted us."

—

Stan and Sharon Felden of Discount Data, 22701-C West 15th, Suite 612, Plano, Texas 75075, 1-214-680-8268, have indicated that they still have many products for the TRS-80 market available and will continue to stock and support the market.

—

Mr. Lynn Gallup, one of our subscribers reports that he has put a great deal of effort into a comprehensive program for creating /HLP files compatible with the HELP/CMD utility provided with TRSDOS 6.2 and LS-DOS 6.3. The distributed version of these operating systems contain only one help file, DOS/HLP, and means is not provided by which to create more of them.

Lynn says his new program will create new /HLP files, edit or expand topics in existing /HLP files, create added topics and even provides a method for converting ASCII text into HLP/files.

He says the program is an extensive menu driven design having well over 200 lines of compact Basic code, and is user friendly and user tolerant "to the point of being obsequious". He says he has thoroughly checked out the program and it does the job in a professional fashion.

Lynn says he will provide the program to anyone who will send him a formatted disk in a reusable mailer together with payment of three dollars to cover postage and handling. Five dollars "to the more affluent who wish to encourage him to do more of this". He will accept your judgement on how much to send. In addition he will include three new /HLP files he wrote, ASCCODES/HLP, PDS/HLP and HELPGEN/HLP. The latter one thoroughly explains the structure of /HLP files as well as serving as the user manual for the program.

For more information: Contact:
Lynn W. Gallup, 5932 Grove Street, Edina, MN 55436, or phone (612) 920-4947.

(Editors Note: We have not reviewed any of the programs, maybe Lynn will send us a set so we can).

---

80 Micro is still going to make the Load 80 (Now The 80 MICRO) series of program disks available for the price of $17.95 for a disk with the Load-80 programs, and $23.95 for the disk with the back issue of the magazine that contains the documentation and explanation of the programs on the disk for that month.

They tell us that their storage space for all the publications that are printed by IDG Communications/Peterborough Inc. (used to be CW Communications) the publishers of 80 Micro is very limited and orders for back issues and program disks should be made as early as possible to assure that the magazine issue is still available. They will have the disks only available for sometime yet, depending on sales.

Regardless of your feeling for 80 Micro, they do have some very good programs in that series of disks, and only available from them. Such as @PACK4, which is covered in David Goben's column for next month, and was used as a bonus program on their December 1987 Disk Series.

The also have two special collections of programs for the Model III and Model IV, see block ads in our TRS-80 Product Source section. The ads which we placed in our publication as a service to our readers are not paid for ads by 80 Micro by the way.

If you don't have the @Checksum program yet, we would strongly recommend that you get it, especially if you want to program in Basic and as many of our published programs will have checksum verification numbers added. You will also find the program printed in the "How to Use 80 Micro Program Listings", if you want to type it yourself.

The last issue that had a the disk series listed as Load 80 was March 1987 of 80 Micro, it is now called 80 Micro Disk Series. Model III/4 programs are available as monthly disks; MS-DOS programs are available on the Quarterly Disk series. The last Index for the disk series for 1987 is in the 1988 January issue of 80 Micro on page 73. If you dropped your subscription before that issue send us a self-addressed stamped envelope and we will mail you a copy. Or better yet write to 80 Micro, The Disk Series sales dept. and maybe they will send you a complete list of what is available.

HINTS, TIPS, AND BOOK REVIEWS

When we were searching for a newsletter or magazine that would fill the gap created when 80 Micro dropped the last coverage of TRS-80, and hence the birth of Computer News 80, we looked at all the newsletters that we could find. Especially "Code Works", "The Misosys Quarterly", and "Northern Bytes", which were the ones listed in the January 1988 issue of 80 Micro Side Tracks.

Out of our efforts to review these publications we found that for the user who was not into programming none of these three publications filled the bill.

Northern Bytes, published by The Alternate Source, 704 North Pennsylvania Ave., Lansing, Michigan 48906, Phone (517) 482-8270. It is published on an irregular basis, no subscriptions; you pay for each issue as it is printed. It is a publication of merit if you are into heavy programming and circuit hacking. Their stated focus for coming issues is from the low level programming to a higher level programming.

The Misosys Quarterly which is published by Roy Solthoff in support of the products that they sell, and a reprint of the conversations on their CompuServe bulletin board forum between buddy programers, does not serve the needs of the regular "what's under the hood - doesn't matter" user. $25.00 for 4 issues.

We did find one gem though, and that is "CodeWorks" a magazine published every two months (bi-monthly) by 80-Northwest Publishing, Inc. 3838 South Warner Street, Tacoma, Washington 98409 - Phone 206-475-2219 for $24.95 per year (6 issues). If you subscribe in the middle of the year you will get all the issues for that year, the back issues and the ones yet to be printed for that year.

But CodeWorks is not for you if you only want to take ready-made/off-the-rack application programs and use them. Or, if you are not into programming with Basic. However, if you want a pleasant experience while becoming a basic programing hobbyist - and I quote from their Jan/Feb 1988 issue "to make entertainment out of learning how programming works and as an 'idea generator'. As a bonus, you get useful programs very economically, that do something and are explained in such detail that you can create your own, personalized, versions which do exactly what you want them to." - Irv Schmidt, Editors Notes, CodeWorks.

They have a "CodeWorks Download System" with all the programs for the last several issues which are available to download on the subscriber side of their bulletin board. You are invited to to access the board and look at the demo side, where all CodeWorks non-subscribers have the opportunity to look at a few programs and where they also give you a brief description of who they are and what they do. Phone for the system is (205) 475-2356, protocol is standard: 300/1200 baud, 8 bits, no parity and one stop bit. If you are into BB's it might be interesting to check it out.

At this point we feel that CodeWorks is the only other publication that merits a TRS-80 users attention. That is, if you are into basic programming.

SCRIPSIT PRO DOCUMENT CONVERSION PROGRAM PATCH

P A T C H P R O C O N V / C M D (D00,B3=EA:F00,B3=E4)

This patch debugs the Scripsit Pro conversion program transfer problem
- D. G.

PROFILE 4 PLUS CONVERSION TO LS-DOS

I had some problems in converting Profile 4 PLUS to the LS-DOS operating system. You may want to pass on this information.

In converting my Profile 4 Plus V. 01.00.08 Creation and Runtime operating disk to the LS-DOS 06.03.00 I ran into some problems. The original TRS-DOS 6.02.01 Creation and Runtime disks SYSGENed on a boot or reset but after the conversion to LS-DOS the SYSGEN had to be reset. I first followed the instructions LSI had in their ADDENDUM #1A, (question and answer section) on the bottom of page 7 about reSYSGENing an

operating disk. It produced a Runtime and Creation disk that when booted would make the disk drive read head jump erratically over the floppy disk. It sounded as if someone stuck a screw driver in it as it was running.

In rereading the SYSGEN section (page 1-138 thru 1-139) in the TRS-80 Model 4/4P Disk Systems Owner's Manual, I decided to reSYSGEN the LS-DOS disk a different way.

A: Use LS-DOS diskcopy to make copies of your master backups of the TRS-DOS Creation and Runtime operating disk.

B: Upgrade the TRS-DOS Creation and Runtime copies to LS-DOS as described in the LS-DOS manual, page 1, "Updating System disks".

C: Now place the backup copy of the TRS-DOS Creation disk in drive zero, and reset it. After the date prompt, the word "SYSGEN" appears and the TRS-DOS Ready prompt comes up, then remove the TRS-DOS Creation copy from drive zero.

D: Place the LS-DOS creation disk in drive zero, but do not reset. Type: SYSGEN and hit enter at the TRS-DOS Ready prompt. The LS-DOS Creation disk will be copied with the original TRS-DOS Creation SYSGEN. At the LS-DOS ready prompt boot the LS-DOS Creation Disk and is should SYSGEN and run as the original TRS-DOS version did except it now boots/resets to CAPS (on) instead of CAPS (off) as the original version did.

E: Repeat steps C and D substituting the TRS-DOS and LS-DOS creation Disk with the copies of TRS-DOS and LS-DOS Runtime Disk that was made earlier. Then your copies of Profile 4 Plus should be ready to run under LS-DOS, at least mine have been, so far.

I hope this information can be of help to someone else.
-E. G. Carleton, Michigan

SCRIPSIT FAN SHARES USER TIPS
by Donald G. Shelton

I have used and been satisfied with Scripsit for many years now, and have not moved on to other word processors that are, I'm sure, better in many ways, because Scripsit serves my needs. (Come to think of it, that's why I still use my Model 4's).

Using blocks has always been confusing to me with Scripsit, and setting up page margins is tedious. One day I realized that I didn't have to type all those commands for each document. I could save them in a file (I call the file START) and simply load that file before entering text, then save the document under another name. This makes margin adjustment and page size adjustment simply a matter of typing over the numbers on the screen (and since most of my documents can use the settings already in the file, I rarely have to even fool with changing anything).

I also include in my START file the instructions for a page numbering footer that begins numbering on page 2. If my document is only one page document, this operation does not kick in. Since I can never use blocks without struggling with the manual, this has saved many hours. Obviously you could set it up any way you wish, and even have several different START files (START1, START2, or whatever) for different situations you regularly encounter.

For those who use Scripsit and have not patched it with the upgrade from POWERsoft, I highly recommend them.

Here is my START file:

```
>PN=1 PL=58 BM=52 TM=6 RM=80 LM=10
F=2
[FW>C=Y
[P>##]
]
```

This configuration begins page numbering at page 1, but does not start printing the page number until page 2, page length of 58, bottom margin of 52, top margin of 6, right margin of 80, left margin of 10. While this is specifically for SCRIPSIT, the principal can work with other word processors.

HINT FROM A LAZYWRITER FAN USING A MODEL 100 AND MODEL 4/4P

Lazywriter is a word processor still available, which is written on Multidos, or Lazydos (an abbreviation of Multidos) which is a Model III DOS that can read Model 4 files and other TRSDOS files.

Conveniently, David Welsh who wrote Lazywriter, built in a convenient communications program which hooks into the Model III communications system. Thus, if you have a Model 100 you are liberated from your stationary computer and free to write wherever and whenever on your Model 100. Then into telcom with stat 38N1D, attach null-modem, go into Lazywriter and upload your file. All it requires is two toggles from Lazywriter. This combination has proved most convenient for this writer, freeing up Model 100 memory, eliminating the need for other modems and complex protocols. If you require a faster modem for telephone, one can be purchased for the Model 100.

The files transfer into the memory of the Model 4 (upload) or the Model 100 (download) and then are picked up and formatted by Lazywriter, with the exception that paragraph indentation must be inserted. Lazywriter indicates where the paragraphs are. But they can be found by going into Insert mode <I>, getting to the next paragraph <P>, hitting <right arrow> for indent, then <enter>. Repeat this loop for each paragraph.

You will need a Model 4 or 4P, Model 100, null-modem, and Lazywriter Word Processor. Lazywriter can be purchased from Alphabit Communications, Dearborn Michigan or DiskCount Data in Plano, Texas.
-C.H.,MD Island Heights, NJ

(Editor) DiskCount Data 2701-C.W. 15th, Suite 612, Plano, Tx 75075, (214) 680-8268 is currently selling Lazywriter for $109.95

BOOK REVIEW

by Robert M. Doerr
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(314)-364-1275

BOOK: Cuellar, Gabriel. Advanced Programming in Microsoft BASIC. Reston Publishing Co., 1984, 157 pp., $16.95.

Cuellar presents seven chapters best described by his chapter titles, Input, Output, Handling Data, Disk Files, User Defined Functions, Pointers, and Utilities. Of course, these titles simply describe all of computing. I found this little book, which is for programmers familiar with BASIC, to be extremely helpful for programming the Mod 4. Exercises are included in each chapter.

Cuellar begins with an Introduction that emphasizes the need for, and shows means for, structured programming and readable program listings. The language version on which the book is based in BASIC-80; there are small differences between Mod 4 BASIC and BASIC-80, but not enough to interfere with the use of the book for Mod 4. (Mod II BASIC is also very much like the Mod 4 version; Mod 4 users should not overlook Mod II programs.) I tried using Cuellar's techniques for readable program listings with BASICA (MSDOS) and got a mess.

The chapter on input provides means to enable the unfamiliar program user to avoid foul-ups. This is achieved by keeping control of the screen in the 'hands' of the program.

The chapter on output deals with PRINT USING and includes some new fast screen draw routines.

In the chapter on data handling, Cuellar outlines sorting, searching, and efficient editing of data. If his short numerical search routine, which I have not tested, does not miss elements, then mine, designed for string searching, is probably excessively lengthy! If anything, I find some of Cuellar's input routines lengthy, but thorough.

The chapter on files goes from the elementary to the important characters or codes that can be stored in random files but not in sequential datasets. He describes in detail the use of the disk for virtual arrays far larger than will fit into memory. He says that the default record length for random files is 128; it is 256 for Mod 4.

Ever since reading Rosenfelder's BASIC Faster and Better, I've made much use of user functions. But Cuellar, while not listing as many functions as did

Rosenfelder, is stronger at providing principles for constructing functions, and uses the MOD Boolean, which was unavailable to Rosenfelder, who dealt with the Mod III. But Cuellar adds a MOD function for use with real values, not just integers.

The chapter on pointers deals with powerful concepts that enable the programmer to use subroutines with local variables via the VARPTR function, which is also used for fast moves of arrays.

He covers Booleans in the chapter on utilities, after having used them in the chapter on user functions.

I can heartily recommend this book to BASIC programmers and to libraries.

—

A VISIT WITH DAVID GOBEN: TECHNICAL REFERENCE MANUALS REVIEWED, AND SuperSCRIPSIT PATCHES, AND SYSTEM BASE DRIVE PROGRAM

Hello again. I'm going to start this out by talking about sources of information for Model 4 machine language programmers. I will not dwell (at least right now) about sources for learning Z80 machine language, but rather the next step, which is communicating with your host computer; the Model 4/4P/4D. Those of you interested in such machine language programming can find system interfacing information in just a few places. I will address three that I feel are the very best. First, there is of course the Model 4/4P/4D Technical Reference Manual, available at Radio Shack as stock number 26-2119. This is also becoming a rare animal, and so you might want to dash to your local dealer and order it right away. It sells for $29.95. Of most interest is the software section, which addresses disk organization, disk file structure, file type descriptions, how they are stored on disk, device, disk, and file accessing, and most importantly, how to take advantage of the supervisory call structure for system interfacing. Numerous example programs are included to demonstrate their usage.

Roy Soltoff, down at MISOSYS, Inc., PO Box 239, Sterling, VA 22170-0239 has re-released "THE PROGRAMMER'S GUIDE TO LDOS/TRSDOS VERSION 6". This 11 x 8 1/2 spiral-bound manual sells for $25 plus $3 postage and handling. In my mind, this is a MUCH better source than the RS manual, as it goes into greater detail, explaining system interfacing in an exacting way, providing you with all the grusome details. It takes great pains to explain to you exactly how the system is set up, how file and devices are addressed, and how to interface with them. What I really like is that you will find in the manual important details that no other manual has addressed. Of course you would expect this from the person who did the major design work on the DOS.

The third source I will discuss is "THE SOURCE". This 3-volume set comprises the ENTIRE source code of TRSDOS version 6. Here for all to see is the code that shows how the system does its magic. System programmers will find this an absolute MUST HAVE! Volume 1 provides you with the SYSTEM portion of the DOS. This consists of BOOT/SYS, and all the other SYS files (except for the LIBrary files 6, 7, and 8). It's ALL there in assembly format, complete with hexidecimal machine code at absolute addresses. Of course proprietary information belonging exclusively to TANDY is not displayed, but the comments for those lines are there, AS WELL as the hex machine code; so it is an easy matter to simply 'fill in the blanks' to complete it. Rest assured that there are so FEW of these instances that you would hardly notice them (they are usually about 2 or 3 bytes long). Volume 2 gives you the LIBrary SYS files 6, 7, and 8. This is a gold mine for examples of system interfacing. The fact is, I used examples in SYS8/SYS in this manual to write one of the programs I am providing you with this month, later in the column. In this volume you can see exactly how all those neat DOS commands are used to create the most powerful DOS ever written for any computer ever made. Volume 3 gives you the source code for the utilities. Here you can see how BACKUP works, or FORMAT, MEMDISK, PATCH, COMM, CLICK and many more. The only file missing is HELP/CMD, which was added to the TRSDOS 6 as an additional feature by Radio Shack (even though HELP/CMD was still created by Logical Systems, Inc., the authors of the system).

This 3-volume set sells for only $74.95, plus $5 postage and handling, and is available

from MISOSYS, Inc. Not only do they provide you with many hours of fascinating reading, but they will constantly be at the side of any programmer devoted to providing smooth interfacing with the operating system. These volumes and the programmer's guide or the technical reference manual are truly a MUST for any programmer who wants to know the environment they are writing for. If you decide to purchase any of the manuals from MISOSYS, let them know were you got the scoop on their products (here!). Be sure to ask for a catalog of their many other superior software and hardware products.

A pet project that I would like to eventually get going is to amass enough public domain programs as to make special disks available; each focusing on a certain system and toward a certain application. If enough interest is generated, I would like to expand this enough so as to develop a marketing center, where we can produce software packages produced by you, and market them for you, making you not only a published software author, but put some money back into your pocket. Of course, not just ANY program will be accepted, as we would be looking for products that are of excellent quality, and are well documented. I will regress further on this, and how such a product would be marketed in another column. I will also outline, perhaps in an article by itself, how to write good documentation.

I have been in contact with the folks at 80 MICRO, discussing the future and availability of their Model I/III/4 LOAD 80 disks. In fact, at the end of the last sentence, I talked again with Michael Nadeau, their new Editor-in-Chief. They are currently still making available these disks, so you may want to contact them to see what's available. But currently their stock dates back to only about 1985. I will have more to report later on, when a decision is made on what will come of LOAD 80. It is my hope that if they do release this stuff into the public domain, that I might be able to obtain copies of all their masters (which date back much further), and make them available for a copying charge, and even to create the special disks that I mentioned earlier. I would like to see several "Best of" disks come out of it, focusing on games, business, and hobby.

And speaking of 80 MICRO; let's give them a break. Sure many of you feel shafted, but that is nothing new to the many other computer users who have had their products dropped, not to mention the number of support magazines (numbering at a factor times that) that have fallen by the wayside. And advertisers that have dropped out. Geez, you could fill a dictionary. The problem is, the people at 80 Micro that made the decision to drop it so suddenly are not the same ones who usually end up reading your hate mail. Those unfortunate souls are more than likely those who also sympathize with you. In fact, Michael Nadeau is an avid Model III fan. He feels really bad about the decision, which is also the feeling of most of the staff. But the fact is that 80 MICRO is almost wholly supported by advertising, and so when the market shifts, so must they.

The focus of Computer News 80 is to be a user-supported publication. The idea of a publication supported primarily by its readership is a WONDERFUL idea. But the only way to make such a thing possible is to get its subscriber-base up to a significant level. That is where YOU come in. Let your friends know that Computer News 80 is available. Tell them how to contact its publisher and subscribe. If you have a favorite TRS-80-based BBS, put the word out on it about CN80. After all, to do so will do no less but to benefit you in the end. What we want to do is share our experiences with these wonderful little computing machines. But not only ours, but YOURS as well.

So if you know how to get something done faster or better with an application program, or have a program you'd like to share with others, PLEASE write. Besides, there's NOTHING like the feeling you get when you show off to friends your name in print.

Anyway, in the OPEN FORUM of Volume 1, Number 1, some patches were provided to allow Model 4 SuperSCRIPSIT 1.1.x to read ASCII files during ASCII conversion; that is, ASCII files having a logical record length of other than 256, such as 1. The patch will work, but unfortunately ONLY in RARE cases. Even more unfortunate was that when I had first developed that patch for 80 MICRO several months ago, it just happened

to work perfectly with the test ASCII file that I tried it on. Not good. Since then I have worked out a better way. What's nice about this is that it will also work with version 1.2.x. So if you have applied the patch, remove it by recopying an original copy of SCRIPSIT/CTL onto your work disk.

Next type into Model 4 Disk BASIC the program in Listing 1, and then RUN it. It will create a program called PFSTO256/CMD. This program is used from the DOS prompt, and what it does is take any file of any logical record length, and change it to have a record length of 256. This way SuperSCRIPSIT will be able to read it, and not report the "LRL Open Fault" that it would otherwise flash on your screen. PFSTO256 is easy to use. From the DOS ready prompt, enter PFSTO256 pfsfile, where pfsfile is the name of the file whose logical record length is other than 256. If there is a problem, it will give you a report. If all went well, then a successful completion report will be given. After doing this, you can go into SuperSCRIPSIT and use its ASCII conversion utility to convert the file data to SS format.

Last month I promised to provide you with a program that will allow you to change the system base drive without altering the logical drive assignments. Well this month you get it. Type program listing 2 into Model 4 Disk BASIC and RUN it. It will create a program on disk called SYSDRV/CMD. Using this program you can install a system on MEMDISK, for example, and then use Drive :0 as a data disk drive, and STILL address it as Drive :0; not some other drive, as SYSTEM (SYSTEM=drv) will do.

As an example, suppose you wanted to install MEMDISK as Drive :2 and make it the system drive. You would do this, providing that MEMDISK/DCT, BACKUP/CMD, and SYSDRV/CMD are resident on an on-line drive, by using the following commands:

```
SYSTEM (DRIVE=2,DRIVER="MEMDISK")
D
D
Y
BACKUP /SYS:0 :2 (S)1SYSDRV :2
```

That's all there is to it. You will notice that any time a system file is needed, that MEMDISK will be accessed. However, if you want to access any other file, the drive search will still begin at Drive :0, not the memdisk drive, simply because outside of the system, Drive :0 is still considered the base drive.

Well, that wraps up another month. Keep those letters, good and bad, coming in. In upcoming issues I will discuss how to write documentation (normally the bane of a software author), and how the marketing process works. I'll also give you a report on my progress in getting special disks made available to you. If there is enough interest generated, I will show you how to upgrade Model I machine language programs to run on the Model III, and how to convert some Model III machine language programs to run in the Model 4 mode. If this is well taken, I will diversify a bit and show you how to convert cassette programs to disk-based, as well as show you how to convert some of those Model I protected disks to run on your Model III's. Remember, if you know of, or are a software or hardware vendor, we would like to hear from you. There's a lot of people out here who want to know WHERE they can still get WHAT. Also, be sure to let us know what you want to see. Do you want some Model III stuff, or Model I? And how many are there out there that do? Silence on your part in this respect can only hurt you. Big business is saying that we do not exist as an important market. Are you going to agree, or are you willing to unite in our effort to proclaim your importance in the computer world? Somehow I think that in the upcoming year, reading Computer News 80 will tell an interesting story.
——David Goben

If you have not disabled your password checks on TRS-DOS/LS-DOS 6, use LSIDOS in place of SYSTEM on the SYSJCL/FIX and DATE63/FIX patches I supplied in last months issue, apologies for the omission.
-D. G.

(Editors Note: David Goben is an associate editor for 80 Micro, and author of many articles and programs for other publications. He is also a programming consultant who specializes in troubleshooting programs and writing utilities.)

Program Listing Number One - David Goben

```
1 'PFSTO256/CMD AND PFSTO256/BAS WRITTEN 1987 BY DAVID GOBEN
10 'DATA POKE FORMAT CREATED ON DATAPOKE/BAS
20 CLS:PRINT"BUILDING 'PFSTO256/CMD'":RESTORE
30 OPEN"O",1,"PFSTO256/CMD":L=80
40 CS=0:L=L+10
50 READ A$:IF A$="END"THEN CLOSE:END
60 IF LEFT$(A$,1)<>"-"THEN A=VAL("&H"+A$):PRINT#1,CHR$(A);:CS=CS+ A:GOTO 50
70 IF VAL(MID$(A$,2))=CS THEN 40 ELSE PRINT"CHECKSUM ERROR IN LINE"L:END
80 ''' DATA AREA '''
90 DATA 01,82,20,30,E5,21,77,30,3E,0A,EF,E1,7E,FE,0 D,-1569
100 DATA 28,36,11,00,30,3E,4E,EF,20,32,3E,65,EF,FD,C B,-1478
110 DATA 12,C6,21,20,30,06,00,3E,3B,EF,20,25,D5,FD,E 1,-1455
120 DATA FD,46,07,FD,7E,06,E6,07,4F,3E,57,EF,E5,FD, E1,-2126
130 DATA FD,36,04,00,3E,58,EF,21,C8,30,FD,21,E4,30,F D,-1796
140 DATA 21,F9,30,FD,21,06,31,3E,0A,EF,21,00,00,3E,1 6,-1099
150 DATA EF,50,46,53,54,4F,32,35,36,20,2D,2D,20,43,6F ,-1124
160 DATA 6E,76,65,72,74,20,46,69,6C,65,73,20,77,69,74, -1462
170 DATA 68,20,77,69,74,68,20,6F,64,64,20,4C,01,7C,A 0,-1316
180 DATA 30,52,4C,73,20,74,6F,20,32,35,36,0A,57,72,69 ,-1085
190 DATA 74,74,65,6E,20,31,39,38,38,20,62,79,20,44,61, -1141
200 DATA 76,69,64,20,47,6F,62,65,6E,0A,0D,46,69,6C,6 5,-1253
210 DATA 20,73,75,63,63,65,73,73,66,75,6C,6C,79,20,63 ,-1480
220 DATA 6F,6E,76,65,72,74,65,64,0D,4E,6F,20,66,69,6 C,-1420
230 DATA 65,73,70,65,63,20,73,75,70,70,6C,69,65,64,0D, -1443
240 DATA 42,61,64,20,66,69,6C,65,6E,61,6D,65,0D,46,69 ,-1316
250 DATA 6C,65,20,64,6F,65,73,20,6E,6F,74,20,65,78,69 ,-1395
260 DATA 73,74,0D,02,02,20,30,-328,END
```

Program Listing Number Two - David Goben

```
1 'SYSDRV/CMD AND SYSDRV/BAS WRITTEN 1987 BY DAVID GOBEN
10 'DATA POKE FORMAT CREATED ON DATAPOKE/BAS
20 CLS:PRINT"BUILDING 'SYSDRV/CMD'":RESTORE
30 OPEN"O",1,"SYSDRV/CMD":L=80
40 CS=0:L=L+10
50 READ A$:IF A$="END"THEN CLOSE:END
60 IF LEFT$(A$,1)<>"-"THEN A=VAL("&H"+A$):PRINT#1,CHR$(A);:CS=CS+ A:GOTO 50
70 IF VAL(MID$(A$,2))=CS THEN 40 ELSE PRINT"CHECKSUM ERROR IN LINE"L:END
80 ''' DATA AREA '''
90 DATA 05,09,00,00,00,53,59,53,44,52,56,05,09,00,00, -519
100 DATA 26,20,20,20,20,20,20,01,FE,00,26,3E,65,EF,F D,-1178
110 DATA 7E,1B,FE,62,38,05,3E,6A,EF,20,34,E5,21,D7,2 6,-1572
120 DATA 3E,0A,EF,E1,7E,23,FE,20,28,FA,FE,3A,28,2F ,FE,-1926
130 DATA 0D,20,2D,21,46,27,DD,21,56,27,DD,21,B0,27,D D,-1301
140 DATA 21,CC,27,DD,21,F5,27,DD,21,4D,28,DD,21,17, 28,-1502
150 DATA 3E,0C,EF,21,FF,FF,FD,7E,1B,FE,62,D8,3E,6A ,EF,-2237
160 DATA C9,7E,23,6E,D6,30,FE,08,30,CC,32,A6,26,67, 3E,-1667
170 DATA 0D,BD,20,C3,FD,7E,1B,FE,62,38,C0,7C,B7,20, 07,-1781
180 DATA 3A,13,00,FE,0E,20,B9,4C,3E,28,EF,20,B7,3E, 21,-1289
190 DATA EF,20,B6,3E,51,EF,FD,56,09,21,00,1D,5D,3E,5 5,-1485
200 DATA EF,20,AF,2E,CD,CB,7E,20,A5,2E,00,1E,05,3E ,55,-1451
210 DATA EF,20,A0,7E,E6,50,FE,50,20,95,21,0E,00,22,1 3,-1482
220 DATA 00,7C,32,92,00,21,BB,18,B7,28,0B,3E,C3,32,1 5,-1126
230 DATA 00,22,16,00,21,13,00,22,BA,1A,21,6D,27,20,07 ,-574
```

```
240 DATA AF,32,13,00,21,88,27,3E,0A,EF,21,00,00,C3,4 C,-1067
250 DATA 26,53,59,53,44,52,56,20,2D,31,2E,30,2D,20,53, -909
260 DATA 65,74,20,53,79,73,74,65,6D,20,44,72,69,76,65, -1432
270 DATA 20,74,6F,20,61,6E,6F,74,01,FE,FC,26,68,65,7 2,-1589
280 DATA 20,4C,6F,67,69,63,61,6C,20,44,72,69,76,65,0 A,-1279
290 DATA 57,72,69,74,74,65,6E,20,31,39,38,37,20,62,79, -1249
300 DATA 20,44,61,76,69,64,20,47,6F,62,65,6E,2E,20,20, -1153
310 DATA 20,20,20,46,6F,72,20,66,72,65,65,20,64,69,73, -1193
320 DATA 74,72,69,62,75,74,69,6F,6E,0A,0D,50,61,72,61 ,-1403
330 DATA 6D,65,74,65,72,20,45,72,72,6F,72,0D,4E,65,65 ,-1388
340 DATA 64,20,44,4F,53,20,36,2E,32,20,6F,72,20,68,69, -1042
350 DATA 67,68,65,72,0D,4E,65,77,20,53,59,53,54,45,4D, -1250
360 DATA 20,64,72,69,76,65,20,69,6E,73,74,61,6C,6C,65 ,-1462
370 DATA 64,0D,53,59,53,44,52,56,20,64,72,69,76,65,72, -1288
380 DATA 20,6E,6F,77,20,77,69,74,68,64,72,61,77,6E,20, -1420
390 DATA 66,72,6F,6D,20,73,79,73,74,65,6D,0D,53,59,53 ,-1413
400 DATA 44,52,56,20,64,72,69,76,65,72,20,6E,6F,74,20, -1321
410 DATA 69,6E,20,73,79,73,74,65,6D,0D,53,65,6C,65,63 ,-1429
420 DATA 74,65,64,20,64,72,69,76,65,20,6E,6F,74,20,65, -1389
430 DATA 6E,61,62,6C,65,64,20,69,6E,20,44,4F,53,20,73 ,-1270
440 DATA 79,73,74,65,6D,0D,4E,6F,20,01,82,F8,27,64,69 ,-1419
450 DATA 73,6B,20,70,72,65,73,65,6E,74,20,69,6E,20,73, -1417
460 DATA 65,6C,65,63,74,65,64,20,64,72,69,76,65,0D,49, -1382
470 DATA 2F,4F,20,65,72,72,6F,72,20,69,6E,20,61,63,63 ,-1286
480 DATA 65,73,73,69,6E,67,20,6E,65,77,20,44,72,69,76, -1448
490 DATA 65,2E,20,43,68,65,63,6B,20,61,6E,64,20,74,72, -1258
500 DATA 79,20,61,67,61,69,6E,0D,53,65,6C,65,63,74,65 ,-1387
510 DATA 64,20,64,72,69,76,65,27,73,20,64,69,73,6B,20, -1315
520 DATA 69,73,20,4E,4F,54,20,61,20,53,59,53,54,45,4D, -1139
530 DATA 20,64,69,73,6B,0D,02,02,00,26,-514,END
```

WATCH YOUR ZERO's & "O's"

This is a ZERO....00000000000.....(oval as in GOOSE EGG!)
This is an OH, OH....OOOOOO.....(round as in OH-OH!)

OPEN FORUM

Send your questions and problems to the Open Forum a regular feature of Computer News 80, for the exchange of information for our readers.

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Q: I have solved my SuperSCRIPSIT and Gemini-10X printer incompatibility by buying "PowerDriver+" from Powersoft. I have two other TRS-80 programs that call for Radio Shack printers that don't respond to the "PowerDriver+". These programs are "Formation", Catalog No. 26-1527 and "Accounts Payable" Catalog No. 26-1542. Have I overlooked something, or is there a patch to resolve this problem?
R. H.- Amherst, OH

A: Powerdriver+ uses a printer driver diversion feature. Apparently the programs in question go to the printer port directly, bypassing the DOS SVC that handles printer I/O. Since I don't have these programs, I can not suggest a patch.
- D.G.

(Editor)-Does anyone else know of a patch?

Q: What KILL command do you use to delete System files CONVert/CMD, XFERSSYS/CMD etc. I've tried everything in the manual and nothing works.
G. H. - Santee, CA

A: To remove CONVERT/CMD AND XFERSYS/CMD, use the PURGE command as outlined in your DOS manual. -D.G.

(Editor) Remember when using the PURGE command that you need the full file name and drive number i.e. Purge XFERSYS/CMD:1, for REMOVE command the drive number is not always needed and the file will be searched out if more that one drive is existing.

(Editor, P.S.) There will be plenty of Model I and III material in the future. Along with more on NEWDOS.

Q: On the Deskmate program the last year you can address is 1987, could there be a patch to update this program? Surely, Tandy never sent me any updates for this program. I purchased this package in 1985 and 2 years doesn't seem a long enough time when you pay $200.00 for Deskmate and can only use it a couple of years.
J. R.- Lowville, NY

A: TRS-DOS systems reside on your master Deskmate disk along with the application programs. Update your disk using LS-Dos 6.3 or one of the other update packages discussed in our last to issues. That will take you into 1988 and beyond.

(Editor) It is surprising how many calls we still get concerning the date not being accepted when booting up the computer, but we are still getting quite a lot of calls. We know that a lot of folks out there don't use their computers everyday and it is hard to keep up with everything, so we don't mind repeating the solution over. If you don't have a date extension package yet. Either put in a dummy date, or disengage the date request with the command SYSTEM (DATE=NO) until you can get a date extension package.

Q: My computers are a TRS-80 Model 4 and 4P, and the printers are DMP105. Using SuperSCRIPSIT 01.01.00 OR 01.02 since Jan. 1, 1988, I have been unable to open SuperSCRIPTSIT using the 88 year requested. They will open using the year 87. Why? How can this be fixed?

When Trying to make a copy of Version 01.02.00 on DD/DS disks, I get "PARITY ERROR DURING READ" on reading cylinder 3. What's that?
J. B. -Rio Grande, CA

A: This is due to using the older TRSDOS that come on your original SuperSCRIPSIT disk, you need to up date the DOS system on your SS disk to LS-DOS 6.3 to get the date extension. When copying from single sided disks to double sided disks, be sure that each disk has been formatted properly, the default format command FORMAT :1(Q=N) will default to single sided instructions.

One additional note, if you are having all kinds of problems with SuperSCRIPSIT 01.02.00, put it on the shelf till TANDY has it fixed, and update the system on your SS 01.01.00; problems yes, but fewer than on the 1.2 version.

Q: 80 Micro had some articles on installing Scripsit in Memdisk. I tried the original instructions without success. (I have a TRS-80 Model 4, SuperSCRIPSIT 01.02, LS-DOS 6.3, and 128K).

Using Scripsit in Memdisk sounds like a highly advantageous method. Do you use it yourself?

Is there a simple way of setting up a basic program to print and leave more left hand margin to permit punching holes to fit the page into a 3-ring notebook? Moving the paper guides to the left helps, but still doesn't provide as much margin as I would like.

I have programmed User Keys to Quit a document and return to DOS with CTRL/O/e/en, works fine. I also programmed it to Quit a document and bring the screen to "Open a document", with CTRL/Q/o,en this worked with the TRSDOS 6.2 but with LS-DOS 6.3 I get the message "Illegal File Name", and then have to use Break and O. I don't see why it would work with one sequence and not with the other. Any clues?
W.B.-Fort Worth, TX

A: First we don't use Memdisk very much, even though we have 128K expanded computers, there are some special applications that memdisk serves very well. But, because the memdisk just acts as a temporary false disk drive and you loose everything that you install on it as soon as you shut the machine off, it becomes a pain to go through and split up your system files without an auto set up program to use, and then loose it all when you shut down.

The main reason for using memdisk with a word processor program that reads/writes to disk is to increase the size of the space on drive zero that a document can be stored in on drive zero with the Scripsit system and application programs installed. We have hard drives installed that eliminate this problem of short disk space, even though writing your document to drive 1 will hold a lot of text and we don't always use the hard drive. Using memdisk with Scripsit or SuperSCRIPSIT may prove your talents as a computer buff, but is hardly worth the time to set it up every time for short documents, and by short I mean what will fill a 178K single sided disk, that's a lot of text pages. In question number two and from what you told us about your system we assume that you are using your DMP 200 printer. We don't have a DMP 200, but you would more than likely want to set your rotary switch to 12 pitch if you want a really wide margin on the left of the paper. Then write a small change to your print driver codes that changes the starting dot column for each line start.

"HOW TO USE YOUR RADIO SHACK PRINTER, Cat.# 26-1242 is currently on sale at most RS stores for $1.95, regular $14.95 and it covers the DMP 200 along with almost all the other RS printers, and even though it doesn't name the DMP-130 most of the instructions have worked for us using the DMP-120 instructions. We highly recommend that anyone with a RS printer grab a copy of this book now. You might think that you won't understand it all, but don't worry one of these days you might grow into it and then all the books might be gone while your printer is still happily pecking away.

Question three; (CTRL/Q/O, en) User Key code, your problem is with the 'en' on the end of your code, remove that and it will work fine. Your line should read @Q,O

A useful tip in setting up user keys is to make sure the sequence instruction lines are blank for the key you want to set up, then go into a document and use CTL-U command, after selecting your key number, go through the steps that you want while still in your document, then hit CTL-U again to set the control sequence to that code. Thus eliminating the errors that might creep in by writing the codes directly while in the system set up mode.

READERS NEED HELP

Q: I recently acquired a TRS-80 Model 1 computer. The previous owner had converted the video DIN plug to an RCA type, which he said fit right into a monochrome monitor. As the machine had a slow video roll, I put it in for repair at a RS repair facility. The repair people "brought it up to RS standards", which meant that my video mod was gone.

How can I convert my Model I back to a standard RCA type output so I can use my mono monitor? Can I just combine the verticle and horizontal sync signals? I would like to keep the modification external to the unit if possible.

I plan on storing the Model I and someday showing the kids, "Yeah, look at the hi-res 127 x 47 video". I wonder if they will know what Black and White video was...?
-M. B. Corona, Ca.

(Editor) I hope Computer News 80 will be around to support the kids when they start using the Mod I.

Q: In August 1987 issue of 80 Micro, pg. 12 there is a program to save a screen to disk and print it again; and a second graphics SCREEN-DUMP program for the Epson with a Model 4. Do you know of these two programs being available to use with Mod III and the Epson?

I'm delighted someone cares. I'm not "swuft" on my Mod III, but am learning more each day since I've retired.
-J. P. Marbelton, GA

Q: How can we get NEWDOS Version 2.0 to run on both sides of the disk on our new Tandy Model 4D. We have been all through the Apparat manual. The closest solution we have is to change the Pdrive according to Chapter 2 in the manual, (disks or drives incompatible) when we try to copy from the single side disk in drive zero to the double side in drive 1.

Our tax program fills two disks, and runs fine as is, but it would be nice to put the whole thing on one disk.
-J.H. Hampton, GA

READERS LETTERS AND COMMENTS

I Read you ad in Computer News 80 in which you wish to buy books and manuals for the TRS-80. I do not have any to sell but I do need operating manuals for the Model I and its disk system. If you obtain extra copies or have these you would be willing to sell, I would welcome the opportunity to purchase them.
-W. P. Sacramento, CA

—

I started with a 48K VR Data Mod.III & 80 Microline (added a 182 last year) printer. I learned enough basic to modify/customize checkbook program for spreading personal/business checks yearly for taxes and converted a Osborne Genealogy program that a co-worker wrote and used Bruce Tonkin's creator to write a women's bowling tournament program.

Then I helped a friend of my wife set up her business on dBASEII on a model 1000 and a Mod 4P with Profile 4 Plus. Eventually I bought a Mod 1000 to work on the dBASE programs at home (the final tally was 140 programs in dBASE) finally swapping my Model 1000 for her Mod 4P and Profile 4+ program. My final goal is to check/verify/convert all my Mod III programs and then sell the Mod III with Dos-Plus DOS and a General Ledger Program.

Both of the above were 'ordeals'!!!!

Lastly I would like to Max out my 4P eventually if possible/feasible to internal Hard Disk and increase K memory. I haven't had time to learn TRSDOS 6 or the 4P much.

I am willing to correspond with readers but have little time so there may be slow-ness in answering, but please publish my name and address.

Kenneth C. Meyer
Msgt. U.S.A.F. Ret.
1532 10th Ave. Fairbanks, AK 99701

(Editor) Thanks Ken, we have many retired, and retired military, subscribers. And a lot who haven't got to the retired spot yet. I bet some of them would love to have a pen pal like you with your equipment and background.

—

****

Reprints of MOD4 by Jack - The TRSDOS® operating manual written in plain english are now avaiable.

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****

PRINTSET/BAS - Model 4 BASIC 01.01.00
or Model III BASIC 1.3 - DMP 130 Printer
by Tom Rudolph

PRINTSET/BAS is written in Model 4 BASIC 01.01.00. It can be used in Model III BASIC 1.3 by modifying lines 290 and 310. Model III commands CMD"S" for 290 and CMD"I","PSCRIPT/CMD" for 310. The letterhead selection can be omitted. (Lines 110 and 280). PRINTSET/BAS sets the DMP 130 to the type of print you desire at the outset of the word processing session. The program can easily be modified to accomodate any printer. The word processor I use most is PSCRIPT, PowerSoft's enhancement of SCRIPSIT.

```
5 '******  PRINTER SETUP PROGRAM  ******
10 CLS
20 PRINT TAB(8)"PRINTER SETUP MENU"
30 PRINT:PRINT TAB(4)" 1.....STANDARD NORMAL"
40 PRINT TAB(4)" 2.....STANDARD ELITE"
50 PRINT TAB(4)" 3.....NLQ NORMAL"
60 PRINT TAB(4)" 4.....NLQ ELITE"
70 PRINT TAB(4)" 5.....NLQ PROPORTIONAL"
80 PRINT TAB(4)" 6.....ITALICS"
90 PRINT TAB(4)" 7.....CONDENSED"
100 PRINT TAB(4)" 8.....MICROFONT"
110 PRINT TAB(4)" 9.....PRINT LETTERHEAD"
120 PRINT TAB(4)"10.....EXIT TO TRSDOS"
130 PRINT TAB(4)"11.....EXIT TO BASIC"
140 PRINT TAB(4)"12.....RUN PSCRIPT"
150 PRINT:INPUT"PRESS THE NUMBER OF YOUR CHOICE";X
160 ON X GOSUB 200,210,220,230,240,250,260,270,280,290,300,310
170 GOTO 10
200 LPRINT CHR$(27);CHR$(19):RETURN 'STANDARD NORMAL
210 LPRINT CHR$(27);CHR$(23):RETURN 'STANDARD ELITE
220 LPRINT CHR$(27);CHR$(18):RETURN 'NLQ NORMAL
230 LPRINT CHR$(27);CHR$(29):RETURN 'NLQ ELITE
240 LPRINT CHR$(27);CHR$(17):RETURN 'NLQ PROPORTIONAL
250 LPRINT CHR$(27);CHR$(66);CHR$(1):RETURN 'ITALICS
260 LPRINT CHR$(27);CHR$(20):RETURN 'CONDENSED
270 LPRINT CHR$(27);CHR$(77):RETURN 'MICROFONT
280 RUN"LETTERHD/BAS" 'MUST HAVE PROGRAM ON DISK
290 SYSTEM 'GO TO TRSDOS
300 CLS:END 'GO TO BASIC
310 SYSTEM"RUN PSCRIPT/CMD"
```

(Editors Note: Modify line 140 & 310 to NAME YOUR word processing program)

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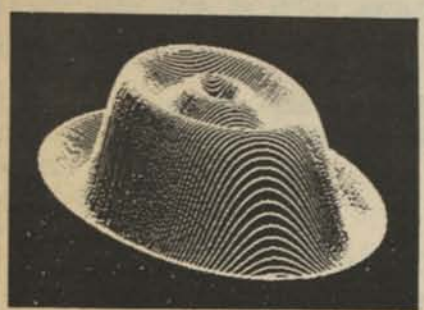

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EDITORIAL COMMENTS

Again let me thank all of you who have been sending us such nice letters, and if you have sent a letter with a problem, a program or article and you have not heard from us yet, it is because we have been swamped with letters. We hope to answer each and everyone either directly or in this publication. But it is going to take awhile to get back to all of you that have written. But never get the feeling that your letters are being ignored.

Secondly our printer didn't do us any favors by printing Vol 1 No 3 on the wrong paper, and we thought it was more important to get it out to you than wait for a reprinting, so we sent it. We have now selected another printer. One we hope that we will be able to use every month so our publication is uniform each month.

Vol 1 No 3 was 4 pages larger than previous issues, and this issue is 4 pages larger than that, so we are growing in size and will continue to grow as long as you continue to support us with your letters, articles, programs, comments, and most of all your recommendation to your friends about us. Thanks to all of you for a wonderful start!

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NEWS ITEMS

Reprinted from Tandy User Group Newsletter...March, 1988 - Ed Juge, Director of Market Planning.

TRSDOS- A gentleman from La Jolla, California wrote this month, asking about three rumors. The first rumor was that we were about to lower the price of the Model 4D; second, that we had purchased LSDOS 6.3; and third that we were preparing a new and improved TRSDOS Z-80 computer.

Unfortunately, none of the above are true. It is true that in relative terms, we offer more computer for less money in our MS-DOS line. However, the reason MS-DOS prices can be cost-effective is that the demand is extraordinary. The more of an item a manufacturer builds, the lower the cost can be. Demand for our non-MS-DOS computers is in general shrinking.

Of course we will continue to furnish LSDOS for the Model 4D, but we haven't "bought out" the vendor.

And finally, new versions of a computer are also products of demand. It's unlikely you'll see anyone introduce new 8-bit personal computers at this stage of industry development. We do intend to continue to support the TRSDOS products. Of Course "support" has been discussed before, and needs to be qualified. In computerese, "support" has been used to describe just about everything you could name that is or ever has been remotely connected with computers.

Our "support" in this instance, refers to repair of the products and answers to questions concerning the system and our software for it. It is not likely you will see significant new peripherals or software designed specifically for the TRSDOS machines.

Dennis Brent of Powersoft in a conversation with your editor has stated that Powersoft plans on continuing their full support of the TRS-80 products, except that it will have to be by mail as previously reported. He also stated that their ad in 80 Micro which reads "Our 'Final TRS-80 Ad in 80 Micro'" is meant to covey that they are no longer going to advertise TRS-80 products in that magazine, as it states in the fine print of the ad, and that their garage sale items and other TRS-80 products are no longer stamped - - no support as they once were. For support of PowerSoft software, write PowerSoft Technical Support, PO Box 6488, Dallas, TX 75379-6488

So send a self-addressed stamped envelope to PowerSoft, 17060 Dallas Parkway, Suite 114, Dallas, Texas 75248 and request the "Garage Sale" sheet. You might just run into the bargain application you were looking for.
He mentioned an inventory of some real classics and lots of games for the TRS-80's

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David Welsh of AlphaBit Communications says that Registered Owners of Multidos for the Model I, III, and IV computers and the Max-80, can now update to version 2.1 of Multidos.

Multidos 2.1 now creates directories compatible with directories created by LS6 and the current version of LDOS, which allow dates beyond 1987 but sacrifice the access password, according to the news release.

A new utility program, called "FIXDATE" will convert a 2.0 or earlier directory to the 2.1 format.

Registered Multidos owners of version 2.0 can purchase an update by sending $19.95 plus $ 1.00 Shipping to AlphaBit Communications Inc. 13349 Michigan Ave. Dearborn, MI 48126 or call (313) 551-2896.

HINTS, TIPS, AND VISITS WITH YOUR FELLOW READERS

SuperSCRIPSIT ENVELOPE ADDRESSING TIP

For those who have been struggling with having to type envelopes individually to match their letters, here are a couple of tips.

When you use single sheet stationary for your letters, use the User Code setup to print a four line address on the envelope (or five lines, or whatever you need).

Example of User Key setup for Control 9

@X,G,G,G,G,B,P,do,do,do,do,do,do,do,4,0, en

After placing your envelope into the printer at the line you want to start printing the address, position the cursor on the first line of the address in your letter. Then hit CTRL key and the number 9 key.

You will see that the screen goes into block action, continues to block out the full four lines (which is the number of G's in the command sequence) then proceeds to the printer command and starts printing on column 40 (which can be changed to any column that you want depending on your left hand margin setting for the letter and how far to the right you want the address lines to start printing.

If you are using fan fold paper for letters, it is best to save your addresses to a separate document (called Labels for example) you can setup a user key to do this also, that will take you into block action copy four lines of the letter text and place it in the Labels file and then close the label file and recall the open document file.

Once you have written all your letters, saving the name and address to the Label file as you go, you can then exit your letter writing file. Then you can open the Label document and by placing one envelope in the printer at a time, position the cursor on the first line of the address you want printed, then Hit the CTRL and number 9 keys, which will start the sequence of address printing.

If you are using labels to put on your envelopes you could print the saved addresses that you placed on the Label document file by just printing the whole file of addresses from top to bottom using the settings of 6 lines per page, and 6 lines for paper size.

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80 Micro reader misses the point!

80 Micro is sending out 20,000 extra free copies of their magazine from now thru December in the hopes of attracting some of its readers back. Yes we still subscribe and we received copies for previously cancelled subscriptions, in any event we were reading the letter from Marc Chiarello, Oconomowoc, WI in the Input column, and his letter seems to define the feelings that 80 Micro must still have for us TRS-80 users, we certainly hope not, but as it is the only letter printed touching on the TRS-80 we have to assume the worst.

If you have not seen it, as many of you are no longer subscribers, Mr. Chiarello says that he owned a computer that lost its support and that he is not a millionaire, but we TRS-80 users have to face the fact that no magazine will support a computer that is five years out of date, and we shouldn't act like a lot of babies who have lost their favorite teddy bear. He also says that we are a few die-hards who love their antiques so much that we are going to keep them all the way to our retirement home.

He may be right in a lot of respects, I love my Model 4, and we know a lot of retired people who can't afford to upgrade even if they had the desire to do so. I just received one letter where someone loved their Model 4 enough to give it to his seventy year old father. And yes, his father is a subscriber of CN80. Mr. Chiarello suggests that we give them to our kids, and go out and buy a MSDOS compatible machine that is on sale. I recently purchased a computer for a client, and the bare cost after putting in the current minimum requirements of today's standards, which are 512k ram, one disk drive and one 20 meg hard drive, was $1,048, plus I got nothing with it, the MS-DOS system disks cost an additional $69.00 (Remember I told you in the last issue that I bought another Model 4D for our office when they were on sale in January). My client really needs all the bells and whistles that came on the Turbo Clone that we bought for him, because he needed those bells and whistles for the application program that he is going to use in his business.

I don't think even Mr. Chiarello would invest $1,048 just to give his kids the old computer that he had outgrown, maybe he would!

In any event while I was de-frosting over the implied insults of that letter in 80 Micro we received the wonderful letter that follows.-Ed.

A Visit with Rosemary Gainer

Dear Editor:

I am a writer who has been working on a Model 4 TRS-80 computer since December 1983. Here is my response to the passing of the Model 4.

P.S. This letter was originally formatted as a cover letter to 80 Micro. They declined to print my article, but suggested that I send it to you.

MODEL(T)4(D): IN DEFENSE OF THE MODEL 4 by Rosemary Gainer

There is an old story about a farmer who bought a Model-T Ford. He really liked that car, and refused to trade it in for a new model. Thirty or forty years later, his friends and neighbors were amazed to see him driving a brand new Model-T down the road. "Where on earth did you get that?" they asked. "I liked my first Model T so much that I went out and bought me a spare-- put it in the barn. Well, the first one just wore out 'tother day."

This story came to mind recently when my husband told me that brand new Model-4 TRS-80 computers are selling for six-hundred dollars apiece.

"I wish I had the money to buy one," I said.

"I wish we could by two of them," he grinned and then we both had a laugh remembering the story about the farmer and the Model-T.

Speaking seriously, there is no good reason

why I should ever change from my Model 4 to a PC Compatible computer. For my purposes, mostly the writing of novels, with an occasional essay or short story thrown in the Model 4 loaded with the Prosoft Allwrite PROGRAM is equal to my every need. Even documents of an academic nature, from term papers to doctoral dissertations can be formatted with ALLWRITE. Using simple mnemonic commands from a manual that ought to be used as a model text for a course in technical writing, ALLWRITE will automatically do footnotes, tables of contents and indexes. Changes in pitch, line spacing and indentation, type modifications such as italic and boldface, are all handled on the spot. Files can be appended together to form long, properly paginated documents. War and peace could be printed in one pass, if the paper box didn't run out.

In the past couple of months I have had an opportunity to compare the Model 4 with the KAYPRO PC, using the HYPERSOFT PC CROSS-ZAP and PC-FOUR EMULATOR programs to de-alienate my disks. Of course the comparison is not really fair. The Model 4 has had four years of constant pounding, and the Kaypro is brand new. The Model 4 key board is smooth and comfortable, and it seems that I type faster and more accurately on it. I like having the "apostrophe" and "quote" keys next to my right little finger instead of up on the number row. Having said this, I must add that the cluster of direction arrows and the "Page Up" and "Page Down," etc. cluster do not suit my style of typing as well as the equivalent arrangement on the Model 4, where the arrow keys and also the "Control" key are within easy reach of the little fingers without moving the hand.

The KAYPRO PC included MICROPRO WORDSTAR word processing, and in order to broaden my outlook, I made my way through a couple of the WORDSTAR tutorials, and emerged somewhat dazzled by its complexity. Since I already had four novels in various stages of construction on LSDOS formatted disks, I haven't tried to do anything beyond the practice documents in the tutorials. Retooling with WORDSTAR would be an onerous job, and so far I haven't found any exciting new features in the WORDSTAR manual to make it worth the trouble.

There are two reasons why I'm using the PC machine to work on my current novel, and putting up with the pain and suffering of using CROSS-ZAP and EMULATOR. (The programs themselves aren't bad, but the instruction manuals are bears.) One: the power supply on the Model 4 is old and cranky. Every once in a while it reboots without warning and loses whatever of my text hasn't been taken care of by AllWRITE'S auto-save feature. Two: The worn disk drives are hazardous to the health of my precious disks. After all, one of those disks may have a New York Times Best Seller lurking in its sectors. New disks drives can be had-- for a price-- and a good technician could fix the power supply-- also for a price. Or I could get a brand new Model 4 for six-hundred bucks. The only other problem that I can foresee is that, O happy thought! If a publisher were to become interested in one of my novels and ask for a copy on a floppy disk, said disk would undoubtedly have to be PC compatible. For that I have CROSS-ZAP. I think I'll hang onto my Model(T)4(D)--and get me a spare. Sometime after the turn of the century, when TRSDOS is just a dim memory, there it will be, still in its packing carton, brand new.

Its a good thing that publishers did not turn down Mark Twain, because he wrote with a pencil in longhand, even after the fountain pen was available. We are looking forward to Rosemary's best seller, written on an Model (T)4(D). -Ed.

I/O Comments from Klaus Meinssen

Dear Editor

This is my first attempt at sharing my 6 or 7 odd years of Model 4, TRSDOS 6.x experience with other Model 4 owners outside of my immediate circle of computer acquaintances. I am not a programmer, but have done "rudimentary" programming in Basic, to enable me to make my use of the Model 4 and printers easier. My thanks to mastering my Model 4, aside from studying the documentations that come with operating systems, programs, etc. go in great part to the supporting magazines, from TRS-80 Microcomputer News and Basic Computing to 80 Micro and - finally, as the last one - to Computer News 80.

My thanks therefore go to Ron Gatlin and Stan Slater, the publishers of Computer News 80. There is still so much more to be learned, little things at times, for example David Goben's recent patch to SYS2/SYS for removing the password checking. These are things I didn't understand much in the earlier years, when it might have come up before someplace.

So, at this juncture then, I like to contribute to "Computer News 80". I even came up with a kind of title: "I/O's". It is meant to mean my input to "Computer News 80" and - in turn - its output to its readers. It will cover a little of everything that comes to mind and may help others. I am not working on computers professionally and have no desire of spreading my name. The editors may use as much or as little of it as they see fit. If it works, I would have a lot more as time goes on. So, here goes, for my first attempt:

I/O's

Two events, aside from the original purchase of my Model 4, have done more to the enjoyment of using a Model 4 than any others: a 5 megabyte Radio Shack hard drive and, much later, a reallocation of the granules on the four hard drive platters. For those of you who are still on floppies only and get tired of the slow hum of reading or writing to floppies, now is the time to try and find a good buy on a 5 meg hard drive. The speed improvements are phenomenal. I stopped using Memdisk after that, because it wasn't worth the time anymore to set it up. The 5 meg Radio Shack drive has a build in hard disk controller board and will simply plug into your Model 4. Getting it formatted and loaded up, etc. requires a little patience but it's worth it. I have had mine for four years now and never had a hardware problem with it. (knock on wood)

I am a member of NCTCUG (National Capitol Tandy Computer Users Group). An article in it's June/July issue covers formatting of the 5 meg Radio Shack hard drive to only 1k per granule, instead of the standard 4k per granule. Since I use a lot of small /jcl and Profile 4 Plus menu files, etc. the resultant savings of 25 to 40 % (!) in hard disk space, i.e. after the appropriate reformatting, were again phenomenal. An article "How I Did It", by Ron Schmidt, in the June/July NCTCUG issue describes it beautifully. Most of the NCTCUG's writings now are for MS-DOS.

While on the subject of hard drives, did you, its users, know that you can boot it up with a SYSGEN'ed floppy, containing only 5 /SYS files? They are: BOOT/SYS, DIR/SYS, SYS0/SYS, SYS2/SYS and - of course - CONFIG/SYS. I admit that I really have no good need for doing it, but someone else who needs a lot of space on his/her boot diskette might.

If any of You have not done anything yet to take advantage of the available Model 4, TRSDOS keystroke filter, you are missing something. After boot up I access most of what I want to do do with just two simultaneous keystrokes, <CLEAR> and a preassigned letter <A> thru <Z>. <CLEAR><D> gives me DIR :, to which I add the drive number before I <ENTER>. <CLEAR><P> loads a BASIC PRINTER program to help me send printer control codes, <CLEAR><W> loads DOTWRITER, <CLEAR><B> invokes BACKUP :, etc.

I am using about 20 different letters to call something up or run it. Many keystrokes run /JCL dofiles involving multiple tasks. The keystroke filter uses a /KSM file, to get it started. Thereafter I SYSGEN'nd it and never have to think about it again. I can even call up a menu, using LIST, in cases where I do not remember, what key does what. The /KSM file is in ASCII and can

readily be edited, using ALLWRITE or similar.

If anyone wants to get going on it, send me a blank TRSDOS62 or LS-DOS63 formatted diskette and sturdy SASE. It will include a /JCL file to load it.

Where did all the Model 4's go ? (Vol.1, No. 2) - An article in the Wallstreet Journal of January 21st reports that Tandy/Radio Shack was swamped with calls from Model 4 owners, wondering why their otherwise faithful computer would suddenly not respond anymore to their date insertions. Looks like a lot of users just use it and have no need to read up on things. The Journal states that there are 400 000 Model 4's out there. That's true "longevity" for a computer! LS-DOS 6.3's dates go only to 1999; will it be LS-DOS 6.4 then? The way I feel right now, I may well have mine still by then.

Tired of being asked for the time during boot up and hitting <ENTER> always for nothing? Do a SYSTEM (TIME=OFF) and you won't have to do it ever again, for that diskette, anyway.

David Goben (Vol.1, No.2, Page 8) writes how to do a patch for a more liberal date entry. It works the way he writes it, but I have a few questions nevertheless: should the 6th line have been =00 00 00 00, rather than =00 00 0 00? Can the SYSx/SYS Password be either SYSTEM or LSIDOS? Both seem to work. Is "USING" a normal way to let a dofile do the actual patching? Is the extension /FIX recognized for that purpose? Would appreciate a little elaboration.

Klaus Meinssen
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SIX2XTND UPDATE from Michael Jacobs

I would like to thank David Goben for his accurate review of SIX2XTND. In a new version 1.25 I have included a program that will create a program ODIR/CMD which is the de-libraried TRSDOS 6.2.X DIR command. Of course, if you used the CAT command the screen wouldn't be scrambled. However, you don't get the date. There was a reason why I didn't provide for reading the old format in the DIR patch. I purposely avoided using the normal patch areas so that the SIX2XTND patches could be applied to almost every patched TRSDOS 6.2.x. To include this date check as well would have required going into the patch area. I personally had applied in excess of 50 patches to my TRSDOS 6.2.1 and when the SIX2XTND patches were applied, they went in smoothly.

There is one very good reason for applying patches as opposed to installing a new release. All things considered patches are inherently more reliable. A new release has new code, usually some repositioning, and requires re-compiling and re-linking of the modules(overlays etc.). All of which is subject to errors. Errors with patches are on the other hand usually limited to the few lines of code. This does not mean that you should never go to a new release. A new release may have some nifty features that you wish to use. If you have a stock Model 4 with no add-ons then going to a new release should present little problem. This however, does not seem to typify the Model 4 owner. I have heard of all kinds of configurations. One board that apparently does not (as yet anyway) work reliably with LS-DOS 6.3 is the XLR8er board. I don't have one so I can't verify this.

I have the following versions. SIX2XTND for TRSDOS 6.20 or 6.2.1 (not 6.1 and prior); FIV3XTND for Model 3 LDOS 5.1.3 or 5.1.4 and Small LDOS 5.1.3 or 5.1.4; FIV1XTND for MODEL 1 LDOS 5.1.3 or 5.1.4. Price for each $14.95 + $3.00 s/h.

Any owner of the above patches can get the latest version which includes the ODIR/CMD generator by sending a disk +$1.

I have decided not to distribute the latest version through shareware as this method of distribution has been very disappointing.

It may be of interest to note that I offer a no questions asked 30 day money back guarantee. To date only 1 person did this. He bought both SIX2XTND and LS-DOS 6.3 and tried to install SIX2XTND on top of a LS-DOS 6.3 system.

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MODEL 4 MEMORY
By Frank Gottschalk

This is a sequel an article which was written for a local club about putting expanded memory into my two model III's. I installed 768K of memory from Alpha Technology about a year ago. It installed easily, and worked beautifully right away. My first step was to put in double sided 360K drives and switch to LDOS 5.3 to use the drive capacity, extend the useable date to 1999, add the convenience of the Key Stroke Multiplier program, and gain the use of TED the text editor program which I found very useful.

I use the 768K as a RAMDRIVE for 550K of programs including SuperScripsit and Profile III+ for word processing and an invoicing program. It has been working fine for almost a year now. Once loaded, all automatically, at boot up (11 minutes to load) it runs FAST, calling up documents and programs from memory and with programmed KSM keys switches to various parts of the Invoice program and SScrip documents very quickly. I believe it is faster than a Hard Disk and at the time, less expensive. About $300 per machine vs. $900 at the time for a Hard Disk and a controller board. Hard Disk drives of course have come way down in price and capacities are way up, but mine is all internal and easy to use and move around.

Now on to the Model 4 version. It has been a long ordeal to get it going the way I wanted it to work. NOT due to the memory installation, but the programs, and note the "way I WANTED it to work".

The idea of going to a Model 4 was to double (or triple) the already fast Model III operation. Again I installed double sided drives, which by now was incredibly easy, changed over to LSDOS 6.3. This time I got the full 1Meg of memory, which installed quite easily in about four hours with the removal of several small capacitors around the memory banks, the cutting of a few traces, and soldering in ten jumper leads. True, this precludes the use of Radio Shack Service in the future, but for the price, and the reliability of the Model 4, well worth the risk.

I ordered the 6Mhz speed up kit also, but have not received it yet. Does anyone know of any other available speed up kit for the Model 4 that will run with my memory? Actually, I think it is fast enough already, in that I can't stay ahead of it's operation as it is, even using the Typeahead feature.

The first problem was that the RamDrive would not install properly like it did so easily in the Model III. Several tries later by Anitek, the RamDrive software people at least got it loaded, but not as controllable as the Model III. I could not for the life of me get it to set up the RamDrive, load the system files, and then my system programs. I had to set up the RamDrive, and it then loaded the system files but then aborted my AutoStart program. It required a second Keystroke command to complete the program loading. Well, as someone said I would need to make some compromises.

The problems really started when I started to run the programs. Some of the problems were my own stupidity, mistakes, or just lack of knowledge. I tell you all this in case you want do this in your machines, or are having trouble with some programs in your machines, even without added memory. My first problem was with Profile 4. It didn't run with LSDOS. I found out from Misosys that I needed Profile 4+. I got a copy from a club member to try out, but it hung up when trying to set it up. After hours of trying and dissecting, it was found to have a bad file in it!

More hours of phone calls finally found me a good replacement. It ran just fine by itself and got it all set up the way I wanted it. All set now, right?, just put it on my system disk and load it into Ramdrive. WRONG! It locked up the minute I put it in with my Keystroke Multiplier (which resides in high memory?). A few calls to the Small

Computer Co. that wrote Profile confirmed that Profile 4 does not respect High memory like Profile III did! Now what? I already had about 20 keystrokes programed in. More conversations with members of the South Bay Club (it pays to belong to more than one club) found that if the Keystrokes are kept small enough, Profile 4 would not crash into them. How small? 256 bytes or so, but I had 1350 bytes programmed. Well, a little reprogramming let me cut it way down. I cut each Keystroke to "DO X", and made a separate JCL program to do what I wanted. This still left me very limited compared to what I wanted to do. A call to the memory supplier Alpha Technology saved the day. Sent them a copy of my programs and they patched Profile 4 to respect my Keystrokes in High memory.

The next feature I wanted to install, was DoubleDuty so I could jump back and forth between word processing and invoicing. Easy, just load it and call it up, right? WRONG! It locked up my SuperScripsit! Oh well, more compromise.

Well how about a Keystroke calling up a JCL file to get me into the Profile invoice program up to the record # prompt, or the customer code prompt, which I could typeahead while it was getting into the program? Easy, just build the keystrokes into the JCL file and "DO" it. WRONG again, JCL lost accurate control. Worked sometimes, but not always. Misosys Typein Utility to the rescue! Well, I just couldn't get it to work for beans. More compromise.

After many hours of trying and rereading the instructions I finally got the hang of it. Some more experimentation and suddenly I could get the RamDrive to install, load the system files and continue on and load all my 550K of programs! I did this by making my Autostart program use Typein instead of a JCL.

More fooling around with DoubleDuty and Profile showed me that if I loaded DoubleDuty first, and then Profile, Profile would now respect a large chunk of used High memory. Well, what about SuperScripsit? Load DoubleDuty first, and it was okay!

My nine month bout with my Model 4 upgrade was making progress, and I was winning. Now what?

Let's get some faster LETTER QUALITY printer(s?) (none of this dot matrix "near letter quality" stuff for my wife!). I found a good deal on a Diablo 1650 daisy wheel printer with keyboard that would print twice as fast as the Radio Shack DWP210's we have. Okay, but needs a driver. Okay, Alps in Colorado sells them. Okay, order one. It arrives, and I install it. Print a document with it, okay? Wrong, it won't right justify while proportional spacing. This is one of the primary requirements, and the reason we've stuck with SuperScripsit so long. Several phone calls and driver modifications after sending them sample printouts, they finally got it going right.

Now I needed a cut sheet feeder to speed up the printing of multipage documents without needing to stop printing to load each sheet manually. Scrounged up one of these too and made the interface cable and pronto, it worked!

In the process of scrounging, found a good deal on a Diablo D80IF printer with dual bin sheet feeders built in. Great, but you'd think the Diablo drivers would be the same? WRONG, it required a different driver. I am currently waiting for the fifth try by Alps to get it right.

You might know that just after buying the D80 printer, I won a Diablo 635 printer in a raffle. Bought three cut sheet feeders for it at an auction. Anybody need them?

Okay, now I've got two fast printers (really three), so pick up a switch box at a swap meet for $20, add the internal buffer into the D1650 and use the buffer I had for the DWP210 for the D80. Now I can really fly, right? RIGHT for change!

I forgot to mention that my Model 4 came with an external 80 track 720K drive. I dragged it out, put my 550K of programs in it and leave it there. Why not add a second one to easily backup all documents to in chronological order? Great idea. I bought one from a more than helpful South Bay club member and plugged it in. It didn't work, kept telling me "no disk". Took it back and plugged it into his system and it was fine! Oh boy, now what? Well he gave me another one fully tested before my eyes.

Went home and plugged it in but it wouldn't format any disks for me, all bad tracks it said. Took it to an East Bay club I/III/IV meeting along with my machine where another member had a drive to try. It didn't work either. Must be my machine has a problem. Bad controller maybe? Well another very helpful member there started investigating the problem with various approaches and suddenly it started working. Don't know why, but it did. Took it home and it worked good for an hour, then gave me a directory read error just after I had re-formatted my backup system disk to make sure it was good to make an updated backup! It blew my only good system disk!

Back to the original supplier with the blown disk for some surgery. He was able to resurrect my disk minus four files which I did have some original copies of. I'm sure he was getting tired of my problems by now, but gave me a third different make drive, again fully tested on his system. Same results on my system. I took my whole system to his house and it worked fine on his family room floor! What's different? I've got a cordless phone at home that chirps sometimes while accessing my drives, that must be it, RF interference! Go home and unplug the phone. Same results after a few disk operations. Okay, I've got a controller problem, it won't work with a second external 80 track drive, or I've got some heat failure problem after an hour or so. Now what?, more compromise? Radio Shack won't touch my system with the extra memory installed. Well let's do some swapping around. The controller works fine with my original drive as :4, so swap it to logical :3 and the new drive as :4. Original drive okay, new one still flaky, so controller is okay. That's a relief.

Did some heatup testing, but couldn't determine anything positively. Now what? I talked to another East Bay club member who has also been more than helpful during this whole ordeal (but was also the cause of some of it) who suggested more swapping around of drives, and systems. Took my whole system to his place and spread it out on his floor for easy access. Got mine to malfunction and started swapping. One of his drives worked fine when plugged in place of mine and mine malfunctioned when re-plugged in. I've been using his drive heavily now for a week, error free. Maybe my system has a problem, but it sure works great now, but just wouldn't with three other drives. Perhaps some signals are weak or marginal (and perhaps on their way out), and I finally lucked onto a drive that can work with them anyway.

Only one vital key thing left now. The key shortcoming of working in RAM is that all is lst during a power failure, or an inadvertent shutdown!!! To help this, after a Scripsit document is closed, one Keystroke automatically saves it to disk and goes directly to the invoice program for billing update. At lunch break and at the end of the day, a different Keystroke saves all memory documents to the large external disk as a chronological backup and the latest invoice updates to the boot disk for next day's loading.

A clue for you SuperScripsit fans as to how fast this system is, this 2500 word document was proofed with the dictionary in 37 seconds. The slowest thing as always is unloading to the disks. I've tried some fast loading programs but they either don't work the way I used them, or really didn't save that much time.

What have I got after this long ordeal? and what did it cost? Well, I've got a tried and tested Model 4 running at 4Mhz (soon to be 6Mhz) that I can't stay ahead of even with the Typeahead going, with 1 Megabyte of memory used as a super fast RAMdrive that holds my 550Kb of programs, including SuperScripsit and Profile 4+ with all its invoice data for 70 clients, as well as the Dictionary, with room to spare. It runs under LSDOS 6.3 with about 20 keys programmed in the Keystroke Multiplier, and switches back and forth like lightening between two documents or the invoicing program with DoubleDuty. I have two external 80 track drives, one to hold all the working programs for loading, and one to hold an automatic chronological backup of all documents worked on. It all loads automatically after date insertion, including setting up the Supermem RAMdrive, loads all the programs, and comes up in SuperScripsit Open Menu. It takes 3-1/2 minutes to load. Hooked up to this are two Diablo 40+ CPS Letter Quality Daisywheel printers both with buffers and cut sheet feeders with a selector switch between them. Both of which can be printing while

working on a third document or updating the invoice program. Agreed, it's pretty specialized, but certainly does a job, and fast.

The cost? Well the Supermemory and its software and self test programs were about $300, compared to about $500-$900 for a 5meg hard drive when I started this project a year ago. I picked up both printers for $550 plus $100 for the two drivers and $20 for the switch. The Model 4, with the two external 80 track drives totaled $500. The total cost was $970 and lots of frustrating time to get the programs debugged and the system set up the way I WANTED IT.

I could never have done it without the endless help from several members of both the East Bay Nybblers and South Bay Users clubs. I thank you all for your help and am thankful that you and the clubs exist. I hope that someday I'll catch up with you and be able to help you out. Thanks again.
- F. G.

(Editors Note) "Frank also wrote that he couldn't wait to see the next issue. Best supporting info for my level of use I've ever seen. Keep it up. If this article is too long feel free to chop it up and print whatever you think might be useful to others." We don't know where to chop on an article like this and not leave something out that might be useful and/or enjoyed by others so we printed the whole thing.

A VISIT WITH DAVID GOBEN: LDOS 5.3 PATCHES, READING NEWDOS80 FROM LDOS AND TRS/LS-DOS, NEWDOS80 PURGE, PROGRAM UPDATES, ETC.

Hi gang! You're still here, and so are we. Boy, have I got some stuff for you. But not only in this issue, but in up-coming ones as well. Stan told me to dig through my old files and find material to present here in CN80. I didn't think I had much, but once I looked, I couldn't believe the amount of material I had. Add to that the slick program I finished up today for you that appears in this column. We have heard several complaints that not enough Model III or I stuff has been coming out. That will be changing. As a matter of fact, my back-log of material favors the III and I more than the 4. But what about the II, the 100 (and cousins), and the CoCo? I can only cover those systems that I have (I have a Tandy 1200, but I don't think you want me to cover that). But if you do have a CoCo, II, or 100 -- SUBMIT! Just about everyone has come up with an idea that they wish that they could get out to everyone. Here's your chance. Heck, we're not going to laugh at you. The only people I laugh at are those who say "I can do better than that," but never prove it.

Hey! I just got a Model 4D! Wowie-kazowie! Two 360K drives (actually 378K, since I format cylinders 0-41). This is like having 4 drives, compared to my 4P. I let it run long enough to prove that it was working OK, and then didn't even pause as I broke the seal and installed an additional 64K RAM and the hi-res board from my 4P. I had to experiment a little bit to find the right jumper to move for the memory (it ended up being J13). The jumper for the hi-res board was easy; it was right on the connector for the board. All I had to do was remove it. The outfit also came with LS-DOS 6.3, but no registration card. TRSDOS 6.2.1 was included, and a card accompanied it. Also included was DESKMATE. I already had that. Bought it when there was a half-price sale. I also have Deskmate I and II for my PC. Guess Tandy thinks I really need it. What I really liked about the TRSDOS manual was its small size, not like my older and larger 6.1 and 6.2 manuals. But then they went and printed up the LS-DOS 6.3 inserts in the usual 8 1/2 x 11 format. I just punched holes along the top and folded them over. Works for the time being, until I get to a printing service and have them reduced. By the way, If you bought a 4D on or after January 1, 1988, you should have found a copy of LS-DOS 6.3 in your computer box. If you didn't, your dealer should have ordered special part # 700-2297 for you. If you didn't get it, and your dealer didn't order it, then put some fire under their hind-end. Roy Soltoff gave me the scoop on this, and since he's the principle author of LS-DOS, he ought to know.

MODEL 4P PROBLEM

By the way, if you have a Model 4P and its screen glitches (periodic or sometimes continuous swelling or shrinking) when nothing is operating, then it may be that the power supply is missing a resistor. I

found this out by accident when I was trying to figure out what was going on with mine, and noticed in a photo in the January 1986 issue of 80 Micro (page 46) that there was a resistor on the printed-circuit side of the power supply board. There wasn't one on mine. A quick check with some Tandy insiders proved that the resistor should be there. I installed a 4700 pF resistor with 5% tolerance (a rather small resistor with yellow / purple / red / gold color bands), and the problem disappeared. A 4600 pF resistor (yellow / blue / red / gold) will also work. By the way, if you're thinking of installing the surge protector shown in that issue while your at it, refer to the June 1986 issue (page 27) for better placement of the three metal oxide varsitors (MOVs). They are disk-like jobbers with a coating of black plastic on them, and they cost about $1.69 apiece. Look for the ones with 20K20IU printed on them. They're available at Radio Shack.

LDOS 5.3 PATCHES

Next line of business. Let's talk LDOS 5.3. Roy Soltoff did a first class job on writing this DOS. If before, you were hesitant to purchase it due to a certain infamous review in the June 1987 issue of 80 MICRO (page 108), then be sure to read the review in this issue. It will clear up the poor service that Mr. Feldman rendered to this fine piece of software. Some of you may have read my letter to Input on page 110 of the December 1987 issue of 80 Micro ("Did Someone Cry Wolf?"). I'm as tough on reviewers as I can be on products. If I think something stinks; that's what I'll say. LDOS 5.3 is a bed of roses.

So as we smell these roses, let's roll in them for a moment. In Volume 1.2 of Computer News 80 (page 8), I presented a patch to LS-DOS 6.3 to simplify date entry on boot-up. This simplified entry allowed you to forget about typing leading zeros on days or months that normally do not already have two digits, like January 1, 1988. This patch will fix LDOS so that you can enter that date as 1.1.88, rather than the usual 01.01.88. To use the patch, BUILD a file called SYS0DATE/FIX, and enter the following lines:

```
D0F,C0=57 CD F8 50 38 02 AF 53 82 37
F0F,C0=5F CD 7E 42 30 04 83 5F 37 7B
D10,3C=7E D6 30 FE 0A D0 23 C9
F10,3C=00 00 00 00 00 00 00 00
```

Install this patch using the command PATCH SYS0/SYS.SYSTEM USING SYS0DATE. Try it out by turning your system off and then booting it back up.

I have received a letter from a gentleman who had asked me not only for this patch, but also another one for LDOS 5.3 so that system processing could continue (after he changed system drives) from a JCL file. Although LS-DOS 6.3 needed to be patched to have this capability, LDOS 5.3 ALREADY has it. It was one feature that Roy Soltoff put in that he didn't have time for on LS-DOS, due to deadline limitations.

Well, it looks like I'm on an LDOS roll. Let's pull some more patches off the shelf. If you also use LS-DOS,and have grown accustomed to the REMOVE command, rather than the harsh KILL command, here's a patch that changes KILL to REMOVE on LDOS 5.3:

```
PATCH SYS1/SYS.SYSTEM (D01,86=52 45
4D:F01,86=4B 49 4C)
PATCH SYS1/SYS.SYSTEM (D01,89=4F 56
45:F01,89=4C 20 20)
```

If you would like to eliminate the clear screen from a directory display screen scroll (after a pause) to be like that for LS-DOS, install the following patch:

```
PATCH SYS6/SYS.SYSTEM (D0C,0F=00 00
00:F0C,0F=CD C9 01)
```

Finally, if you would like to disable password checking n LDOS 5.3 (so you won't have to keep entering things like '.SYSTEM' to all my patches), use this:

```
P A T C H  S Y S 2 / S Y S . S Y S T E M
(D02,31=18:F02,31=28)
```

NEWDOS/80 FILTER FOR LDOS/LS-DOS

Here's a neat program. (See program listing # 1). If you've upgraded to LDOS, or moved on from your Model I or Model III to a Model 4, and have previously been using NEWDOS/80 2.0, then you are faced with

the task of transferring a lot of files between the different systems. The usual method has been to save the data to a single density disk under NEWDOS80, and then copy them to you LDOS or TRS/LS-DOS 6 disk. This month I'll take the drudgery out of it by allowing you to use LDOS or TRS/LS-DOS 6 to read your NEWDOS80 disks DIRECTLY! Of course, like with anything, there are limitations. First, you can only use single-sided, double-density disks. Second, you have to have at least 2 disk drives, as Drive :0 is illegal for usage, unless you have a minimal system set up in memdisk, and have used the SYSTEM (SYSTEM=drv) command to switch system drives.

The somewhat long program listing is to be typed into Disk BASIC on the Model I, III, or 4 under LDOS or TRS/LS-DOS 6. RUN it, and it will create a program called NEWDOS/CMD. You use NEWDOS from the DOS level. The syntax is NEWDOS :d (parameter). The :d represents a legal drive, other than drive :0. The parameters are '1', '3', or 'Y'. '1' sets up the drive filter for the Model I version of NEWDOS80. These are disks that contain a single-density track zero, while all others are in double density. '3' sets it up for the Model III version, and 'Y' yanks (removes) the filter from the system. Note that while the filter is active, that you cannot use other-format disks, or even system-familiar disks. To change the drive's recognition between different NEWDOS80 formats, you must first YANK the current filter, unless you use another drive. Please note that you cannot WRITE to the NEWDOS80 disk.

If you are using TRS/LS-DOS 6, notice the '?' flag after the filenames on a directory listing of a NEWDOS80 disk. This indicates that the OPEN bit in the directory is sometimes set. This is because NEWDOS80 uses the corresponding bit to indicate that at least one bit has been written to since the last time the bit was turned off. So, once you have copied the files over to your TRS/LS-DOS disk, use the RESET command to reset the OPEN bit. For example, if you have copied LETTER/DOC, reset it by entering RESET LETTER/DOC. Again, this is only for TRSDOS 6 and LS-DOS 6 users.

NEWDOS80 PURGE

I have become the local 'expert' for 80 MICRO on NEWDOS80, as for a long time it was my 'DOS of DOSes'. I know my way around just about every nook and cranny in that DOS, and since APPARAT has dropped support, I am perfectly willing to help. One problem that a lot of NEWDOS80 users have been asking for is how to speed up purging. Under NEWDOS80, purging is a long and drawn out process, even if you specify a partspec, such as USR or /DAT, since you must STILL respond with Y or N for each file prompted for. The patch I am about to provide is very powerful, and can in some instances be dangerous if you are not careful. What it does is allows you to purge files from a disk without answering ANY prompts. It is BEST to use this feature with files that are identifiable in some way, such as by extension, or another means that will prevent you from purging the ENTIRE disk. How do you use this new feature? Easy. After entering your purge line, such as PURGE,0,/DAT, when you press the ENTER key, first press and hold down the SHIFT key, thus effective pressing SHIFT-ENTER (pressing ENTER normally will result in prompts). Note that you can release the ENTER key, but should continue to hold down the SHIFT key until at least one file prompt has been displayed. This will cause purge to answer 'Y' to ALL following prompts. Therefore, be SURE that there are not any files containing the same partspec (oops, there's one of those technical words) as the desired files, that you do NOT want purged.

The patch, in SUPERZAP format, is:

SYS3/SYS,3,FE change 67 44 to C5 51

SYS3/SYS,4,D9 change zeros to
E5 21 67 44 22 EE 50 E1 3A 80 38 E6 03
CA 67 44 E5 21 3E 59 22 F0 50 E1 C3 67
44

As a check, the next bytes should be 02 02 00 4D.

PROGRAM UPDATES

The July 1987 issue of 80 MICRO carried my article "Jumping Jack Flashback" (page 69). Where do they come up with these titles? Anyway, there were a few problems with my ONEPASS/CMD program. 1) on 2-sided drives, if the drive was not logged as 2-sided, then an improper copy will occur. 2) if the destination disk's original

directory cylinder differed from the source, AND the source disk does not contain data on the corresponding cylinder, AND no reformat is requested, then 2 directory cylinders will be on the destination disk after the backup. It will work properly as long as you LOG it, but in RARE cases it will fight you. 3) If the source is 2-sided and the destination is already formatted as 1-sided, you might be prompted for a reformat (in this case it should do a reformat by default), and you say NO, then problems will crop up.

If you have single-sided drives, or you are backing up single-sided disks, then you will probably never have any problems. However, I have completed version 1.1. It fixes all of these gremlins so that double-sided operations are smooth and easy. It also displays more disk diagnostics, such as current cylinder count, side-count, and density. It now does this not only for the destination disk, but for the source disk also. The prompts have been re-vamped to be more accurate and also more informative, such as always displaying which drive is the source drive, and which is the destination. Another improvement is the elimination of the L-O-N-G pause when it is checking a disk that is completely blank. A final improvement is that it will now recognize Model III NEWDOS80 and TRSDOS 1.3 disks, rather than just report an UNREADABLE Directory message.

If you have been using DISKCOPY, which came with LS-DOS 6.3, then you may find ONEPASS 1.1 a GREAT replacement. Not only does it do a disk copy faster, but it provides a diagnostics report on the disks as well, which can save you some heartaches if you thought a disk was blank, but in fact contained valuable information. If you would like to obtain a copy of version 1.1, send me a formatted data disk with a copy of either ONEPASS/CMD or ONEPASS/BAS (even if it has typos) on it, and I'll put the new version on it. PLEASE include a return address label, return postage, and $3.00 US for handling. Finally, send the disk in a mailer. Some of my best mailers have been home-made, constructed out of stiff cardboard taped together. If you forget something, I will send you a postcard informing you, and will hold your goods until the requirements are met. As a bonus, I'll include a great public domain disk catalog program that can read TRSDOS/LS-DOS, TRSDOS 1.3, and CP/M disks, which was written by Chuck Harper of Cross Lanes, West Virginia. It will make a good addition to your Model 4 library.

Another program I've enhanced is PACK4/CMD. This is a packer, compressor, and unpacker for BASIC program files. It works on tokenized files, and squeezes them so tight together that a mouse couldn't poof between them. What's more, it will either unpack it, placing each statement on an individual line, or pack it, making multiple-statement lines. A really slick feature is that if you choose to retain remarks lines or not, it will repoint any line references to them down to actual program code lines. It has been called the best utility ever written for Model 4 BASIC. One of its best features is that those huge BASIC programs that ran under TRSDOS 6, but not under LS-DOS 6 due to the LS-DOS BASIC's smaller buffer space, will now run like a champ, as PACK4 will shrink it down (usually by a few thousand bytes), to fit into the buffer. This is one of those programs that has to be seen to be believed.

If you've never heard of PACK4; it's no wonder. Due to 80 MICRO dropping the TRSDOS machines, they used it as a bonus program on their December 1987 Disk Series Disk. If you've never purchased one of their disks before, then this is a GOOD reason to do it. The disk sells for $17.95, which includes postage. Call 1-800-258-5473, or write to 80 MICRO DISK SERIES, 80 Elm Street, Peterborough, NH 03458. If you're mad at 80 MICRO for dropping TRSDOS, don't let your anger stand in the way of opportunity. You only hurt yourself anyway.

The main things I've added to PACK4 is support of the hi-res board's BASIC tokens, such as CIRCLE, SCREEN, PSET, and so on. An added feature is that /BAS is now a default extension to the files, so you no longer have it add it to each filename. To obtain a copy of this newer version, the same requirements as for ONEPASS are in force. Of course, to get a copy of PACK4 1.1, you must have first purchased the December 1987 Disk Series Disk.

As a side-note, I noticed that the February 1988 issue of 80 MICRO features a similar

program. What a clunker. My MS-DOS version, called GWPACK.EXE, will take a program that program has compressed, and in turn squeeze it down so tight that it'll squeak. I've already submitted it to 80 MICRO. Maybe if I'm lucky, they won't drop MS-DOS before it's published.

PUBLIC DOMAIN SOFTWARE

In a previous column I told you that I was working on obtaining PD software. Well, I have just obtained about 100 disks from 80 MICRO, from which I plan to create some specialized disks, focusing each on a certain application for a certain machine. This will take a while, but it's coming. Further, I want to hear from you. If you have some great PD stuff, please send it to me, or simply write to me, telling me about it so that I can tell people where they can get copies of it. If you write to me, don't try to be TOO brief in your descriptions. 'Sell' the idea to me. I will be writing reviews of the programs I receive. Also, be sure to let me know if you have written something that you would like included on a PD disk, or you yourself want to make available. Currently I am preparing two of my own. The first is UTILLITY4. Some of you may have this already. But I have just released version 1.2, which fixes some known bugs. It's repeat FIND function now works as described in the on-disk manual, and double-sided disk operations have been improved, including the Display File Sector function. The Other disk is MODSCRIP. This takes the Model I version of disk SCRIPSIT and does some amazing things to it. It will even run on the Model 4 using the 80 x 24 screen. It makes all these other Scripsit modification programs look like nothing. In many respects, it is more powerful than SuperSCRIPSIT. I'll provide ordering information and detailed reviews elsewhere.

STAY TUNED FOR ANOTHER EPISODE...

The purpose of Computer News 80 is to be a forum for exchanging ideas. Here you can write to us and ask for FREE advice. If we know how to solve your problem, we will answer them. If we cannot, then they will be published in the hope that someone ELSE can answer it. So let's pool our resources. If someone has an answer for a problem that we cannot solve, or if you have a better solution, let us know! So goes another column. Future columns will be jammed with more neat stuff. For example, next month I'll cover the Model 4P, and how to boot up MODELA/III on NEWDOS/80, DOSPLUS, and MULTIDOS. I'll also give you a program that will recover KILLed files on the Model I and III (maybe by then I'll have the lines needed to work on the Model 4 also). A third treat is a I/III program that will encode and decode passwords. Finally, let me bounce this one off your ear: would you be interested in a machine language programming tutorial column? If so, at what level would you like for it to start at? It would focus on the I/III/4, but hints or tricks for the II and 100 will be passed on if you would care to submit them. And what about the CoCo? Even though I do not have one, it is in my mind the most powerful personal computer ever made. Its power, under OS-9, certainly blows the MS-DOS computers out of the water. AND it's a whole lot cheaper. If your knowledge rests here, and there is enough demand for information on these or the other computers, you may find an article or even a regular column with your by-line in future issues. But it will never happen if you don't submit. I doubt that God is going to do it for you by sneaking into our dreams and sing praise of your abilities. Do a little singing of your own.

Happy computing!

—David Goben.

LDOS 5.3: 1988 AND BEYOND — A REVIEW BY DAVID GOBEN

LDOS 5.3 runs on the Model III/4/4P/4D (in the III mode). MISOSYS, P.O. Box 239, Sterling, VA 22170-0239. 800-697-6747. $24.95 plus $2 S&H.

The best got better. If you have been wondering whether to upgrade your LDOS 5.1 system, then wait no more. All the bad rumors you may have heard about LDOS 5.3 just are NOT true. The smooth date interfacing that is famous on LS-DOS 6.3 is exactly the same as that which is supplied on LDOS 5.3 (which is easy enough to explain, since the principle designer of TRSDOS/LS-DOS 6 did the 5.3 upgrade). The fact is, the new version 5.3 is like running LS-DOS on a Model III; they are so much alike.

LDOS 5.3 is an upgrade to LDOS 5.1.4. If you have LDOS 5.1.3; don't sweat it. The LDOS 5.3 upgrade is not a series of patches, but is in fact a totally new disk containing a complete operating system and utilities. With it, the dating range has been extended from January 1, 1980 to December 31, 1999. Another great feature is time stamps. They may seem a bother to most, but already it has saved me a lot of work by allowing me to quickly find the very LATEST version of a program I had been working on. If you don't like the time prompt during each reboot, simply enter SYSTEM (TIME=N) at the DOS prompt. From there on files will be stamped with 'relative time', from the last boot-up.

Even though the system uses a different method of storing dates in the disk directory, they are still compatible with your older disk formats, and handles them with the same kid-glove care as it does for its own. You can read or write to those older format files completely without fear. A new program, DATECONV, allows you to convert those older files to the new format if you wish. You really don't have to, especially if you are not that concerned about maintaining current dates on them. Unlike some patches available for TRSDOS 6.2, you're not damned if you don't convert them.

But date and time stamps are not the only improvements. The COPY, KILL, DEBUG, DO, DEVICE, DIR, LIB, LIST, MEMORY, ROUTE, SYSTEM, TIME, and FREE commands have been greatly improved or enhanced. SETCOM will now report back with its current RS232 settings if you enter SETCOM without parameters. Other commands that now provide feedback are COPY and KILL. BACKUP has been enhanced so that you can now create a SYSTEM disk from a formatted DATA disk. FORMAT has been improved to generate DATA disks after formatting, meaning that the 14 SYSTEM file slots are now free for use, instead of being reserved, as on earlier versions of LDOS. PATCH now includes an "F" (find) parameter, just like LS-DOS, which allows you to verify that the bytes that you think you are over-writing are actually there.

QFB, a single-pass disk format and backup program, is provided on the upgrade disk. With this, running FORMAT and BACKUP separately is a thing of the past.

Two additional programs are TED and HELP. TED is a simple text editor, perfect for creating or editing or modifying a complex (or simple) JCL file, or use it as a simple word processor. HELP provides on-line help for all the DOS and BASIC commands.

BASIC on LDOS 5.3 is called BASIC rather than LBASIC, and it also contains several improvements. You can use the arrow keys to list lines in the BASIC buffer, or use single-letter edit commands, such as 'A' for AUTO, 'E' for EDIT, and so on. My favorite is ',' to edit the current line. This version of BASIC also features a new INPUT@ command, which combines PRINT@ and INPUT, PLUS it allows you to limit the kind of input keyed in. For example, if the required data in the field should only be numeric, you can set it up to accept only numerals and number-related symbols.

In conclusion, LDOS 5.3 is the BEST DOS I have ever seen for the Model III (and you are hearing this from a long-time NEWDOS80 fan). Running LDOS 5.3 is like running LS-DOS 6.3 in the III-mode. For all the power that it offers, and its 100% compatibility with LS-DOS 6.3, it should be a must for any Model III user, as well as any Model 4 user who frequents the Model III mode.

--David Goben

Correction: The last line of the patch shown on page 11, Vol. 1 No. 3 should be
BACKUP /SYS:0 :2 (S)SYSDRV :2
It was misprinted as:
BACKUP /SYS:0 :2 (S)1SYSDRV :2
-D.G.

(Editors Note: David Goben is an associate editor for 80 Micro, and author of many articles and programs for other publications. He is also a programming consultant who specializes in troubleshooting programs and writing utilities. You may write to David Goben at 67 Highland Road, Mansfield Center, CT 06250).

(Editors Note: Do not confuse the LDOS 5.3© which runs in the Model III mode on your Model 4, and of course on the Model III, with the LS-DOS 6.3® updated and upgraded

DOS (i.e. Disk Operating System) system package sold to upgrade the TRS-DOS® systems, actually the LS-DOS package is a complete TRSDOS system disk package with many enhancements, and you use it instead of your current TRSDOS system disk. The authors of these programs and the companies who sell the system packages are two different companies, even though at one time they were closely related.

Because of the similarity in the names of the DOS systems, the wrong company has been getting many many calls about the systems that do not belong to them, and vice versa.

Understandably they can get pretty irritated when this happens, but also understandably they should recognize that we lay people are sometimes totally confused -- (not stupid, just confused) and they should have the courtesy to point us in the right direction by referring us to the correct supplier. Neither Logical Systems, or Misosys will help if the application program that you are trying to upgrade using their systems programs are not sold by them. Neither will they help if the dos operating system that you are calling about is not theirs, but belongs to the other fellow. Tandy got into this trap, but we can't blame Tandy completely, we should also blame the people who sold Tandy the operating systems that we now have to live with. There is such a thing as a manufacturer being the victim of their suppliers. Its really a question of who lead who down the primrose path. We as users really don't care at this point, who did what to whom. We are the ones who are living with their creations and trying our best to enjoy using their equipment and their systems. All we ask for is a little help along the way.

For numbers to call when having trouble:

LDOS© call Misosys Inc. (703) 450-4181

LSDOS® call Logical Systems Inc. (303) 243-7070

TRSDOS® call Tandy, Fort Worth

For TRSDOS Group (817) 338-2392
For Hardware Group (817) 338-2394
For Application Programs sold and supported by Tandy (817) 338-2390
For Communications Group (817) 338-2394
For Accounting Software (817) 338-2391
For CoCo & small PC's (817) 338-2395
For Education Software (817) 338-2396

For National Mail Order (817) 624-1196
You can place orders here with a credit card.

For National Parts (817) 870-5600
You can call them to verify part numbers for equipment and publications that are not in the current catalog, but you then have to place the order with your local store or through the National Mail order number.

One tip when calling any of the support group numbers dial the number and when you get the busy signal hang up and dial again, again, again and again until you get the ring through. Plan on doing this for at least fifteen minutes. Tandy tells us that they have over fifty phone lines, with eighty people to answer them. But they are busy all the time during peek periods.

When you do get through and I have many many times over the years, I have always found the people to be very pleasant, more than helpful and bend over backwards to solve the problem, I have never had a complaint with the group in Fort Worth. Local store and service personnel is another story, and I am sure we all have enough horror stories there to fill a book each.

For application programs that are not sold by either Misosys or Tandy, you must call the original publisher of the software, if he still exists, or drop us a line telling us about it and we will try and find the answer for you, or drop us a line telling us how you solved the problem anyway.

Program Listing Number One - David Goben

```
10 'NEWDOS/CMD & NEWDOS/BAS WRITTEN 1988 BY DAVID GOBEN
20 CLS:PRINT"BUILDING 'NEWDOS/CMD'":RESTORE
30 OPEN"O",1,"NEWDOS/CMD":L=90:HX$="0123 456789ABCDEF"
40 CS=0:L=L+10
50 READ A$:IF A$="END"THEN CLOSE:END ELSE IF LEFT$(A$,1)="-"THEN 80
60 A=INSTR(HX$,LEFT$(A$,1))*16+INSTR(HX$, RIGHT$(A$,1))-17
70 PRINT#1,CHR$(A);:CS=CS+A:GOTO 50
80 IF VAL(MID$(A$,2))=CS THEN 40 ELSE PRINT"CHECKSUM ERROR IN LINE"L:END
90 ''' DATA AREA '''
100 DATA 05,09,00,00,00,4E,45,57,44,4F,53,05,09,00,00, -492
110 DATA 52,20,20,20,20,20,20,01,FE,00,52,CD,72,54,C D,-1219
120 DATA C0,54,4E,45,57,44,4F,53,2F,38,30,20,32,2E,30 ,-1067
130 DATA 20,44,49,53,4B,20,46,49,4C,54,45,52,20,46,4F ,-998
140 DATA 52,20,4D,4F,44,45,4C,20,31,2F,33,2F,34,20,4 C,-869
150 DATA 44,4F,53,2F,4C,53,2D,44,4F,53,2E,0D,43,4F,5 0,-996
160 DATA 59,52,49,47,48,54,20,28,43,29,20,31,39,38,38, -901
170 DATA 20,42,59,20,44,41,56,49,44,20,47,4F,42,45,4E, -974
180 DATA 2E,20,41,4C,4C,20,52,49,47,48,54,53,20,52,45 ,-975
190 DATA 53,45,52,56,45,44,0D,52,45,4C,45,41,53,45,44, -1051
200 DATA 20,49,4E,54,4F,20,54,48,45,20,50,55,42,4C,49 ,-1015
210 DATA 43,20,44,4F,4D,41,49,4E,20,46,4F,52,20,46,52 ,-986
220 DATA 45,45,20,44,49,53,54,52,49,42,55,54,49,4F,4E, -1098
230 DATA 2E,0D,0D,00,7E,23,FE,20,28,FA,FE,3A,28,F6, FE,-1661
240 DATA 0D,20,1D,CD,C0,54,50,41,52,41,4D,45,54,45,5 2,-1228
250 DATA 20,45,52,52,4F,52,0D,00,CD,8E,54,C2,2D,40,3 E,-1235
260 DATA 16,EF,32,BD,54,D6,30,38,DC,FE,08,30,D8,B7, 28,-1871
270 DATA D5,4F,CD,DA,54,FD,7E,00,FE,C9,20,12,CD,B3 ,54,-2151
280 DATA 4E,4F,54,20,41,43,54,49,01,FE,FC,52,56,45,0 D,-1319
290 DATA 00,C3,CF,52,7E,23,FE,20,28,FA,FE,28,C2,BB ,52,-1978
300 DATA 46,23,7E,FE,0D,28,05,FE,29,C2,BB,52,78,FE, 59,-1764
310 DATA CA,D1,53,FE,79,CA,D1,53,FE,31,28,08,6,33, C2,-2173
320 DATA BB,52,32,43,55,CD,9A,54,20,2C,CD,C0,54,46, 49,-1614
330 DATA 4C,54,45,52,20,41,4C,52,45,41,44,59,20,49,4E ,-1040
340 DATA 53,41,54,4C,4C,45,44,00,CD,C0,54,20,4F,4E,2 0,-1223
350 DATA 00,CD,B3,54,0D,00,C3,CF,52,FD,E5,E1,11,4E, 55,-1852
360 DATA 01,0A,00,ED,B0,DD,21,4E,55,DD,7E,03,E6,07, F6,-1674
370 DATA C0,DD,77,03,DD,7E,04,E6,0F,F6,40,DD,77,04, CD,-1990
380 DATA E4,54,22,13,55,E5,1B,D5,A7,ED,52,EB,2A,28, 55,-1807
390 DATA 19,22,28,55,2A,48,55,19,22,48,55,E1,D1,01,47 ,-1105
400 DATA 00,ED,B8,EB,CD,FD,54,23,FD,74,02,FD,75,01, FD,-2228
410 DATA 36,07,09,FD,36,08,24,CD,C0,54,46,49,4C,54,4 5,-1274
420 DATA 52,20,49,4E,53,54,41,4C,4C,45,44,00,C3,52,5 3,-1146
430 DATA CD,9A,54,28,19,CD,C0,54,46,49,4C,54,45,52, 20,-1475
440 DATA 4E,4F,54,20,50,52,45,53,45,4E,54,00,C3,52,53 ,-1178
450 DATA FD,66,02,FD,6E,01,E5,01,3D,01,FE,F8,53,00,0 9,-1607
460 DATA E5,DD,E1,DD,46,02,DD,4E,01,FD,70,02,FD,71, 01,-2002
470 DATA CD,E4,54,23,D1,A7,ED,52,28,3B,CD,C0,54,46, 49,-1970
480 DATA 4C,54,45,52,20,59,41,4E,4B,45,44,2C,20,42,55 ,-1014
490 DATA 54,20,43,41,4E,4E,4F,54,20,52,45,43,4C,41,49 ,-1031
500 DATA 4D,20,48,49,47,48,20,4D,45,4D,4F,52,59,20,53 ,-1017
510 DATA 50,41,43,45,0D,00,C3,CF,52,EB,23,23,5E,23,5 6,-1298
520 DATA EB,CD,FD,54,CD,C0,54,46,49,4C,54,45,52,20, 59,-1833
530 DATA 41,4E,4B,45,44,20,46,52,4F,4D,20,00,C3,5A,5 3,-1095
540 DATA E5,21,00,00,7E,47,2F,77,BE,70,28,0E,3A,25,0 1,-1077
550 DATA FE,49,3E,02,28,01,AF,3C,32,91,54,E1,C9,C5, 47,-1640
560 DATA 3E,00,B7,28,02,FE,02,78,C1,C9,FD,66,02,FD, 6E,-1777
```

```
570 DATA 01,23,23,23,23,11,15,55,1A,BE,C0,47,13,23,1 A,-823
580 DATA BE,C0,10,F9,C9,CD,C0,54,44,52,49,56,45,20, 3A,-1797
590 DATA 30,20,00,E3,7E,23,B7,28,05,CD,CD,54,18,F6,E 3,-1687
600 DATA C9,CD,8E,54,C2,33,00,C5,4F,3E,02,EF,C1,C9 ,CD,-2055
610 DATA 8E,54,C2,8F,47,3E,51,EF,C9,CD,8E,54,28,0A, 38,-1754
620 DATA 04,2A,11,44,C9,2A,49,40,C9,C5,01,5C,F4,54, 21,-1363
630 DATA 00,00,44,3E,64,EF,C1,C9,CD,8E,54,28,0A,38, 04,-1404
640 DATA 22,11,44,C9,22,49,40,C9,C5,06,00,18,E7,18,0 A,-1184
650 DATA 00,00,07,24,4E,45,57,44,4F,53,78,FE,0B,3E,0 F,-969
660 DATA D0,FD,E5,D5,FD,21,4E,55,E5,D5,6A,26,00,54, 5D,-2115
670 DATA 29,29,19,29,D1,16,00,19,1E,12,AF,3C,ED,52,3 0,-1054
680 DATA FB,19,3D,3C,57,5D,E1,CD,4E,55,D1,FD,E1,C9 ,02,-2060
690 DATA 02,00,52,-84,END
```

WATCH YOUR ZERO'S & "O'S"

This is a ZERO...00000000.....(oval as in G00SE EGG!)
This is an OH,OH....OOOOO.....(round as in OH-OH!)

OPEN FORUM

Q: I have an immediate problem, and hope you or your readers can help. It's with pfs:file, version 1.00 on TRSDOS 6.2.x: I have been using this program and the data discs for several years but suddenly, for the first time it's locked up on me. The program disc will boot up and the master menu appears on the screen. After inserting the data disc (and its back-up in drives 0 and 1, respectively, I cannot enter any command from the menu to the files without a "CAN'T FIND FILE" error message.
C. W. -Ft. Lauderdale, FL

A: This can happen for several reasons, but when ours started doing the same thing we found that the drives needed to be tuned. pfs:file requires a closer tuning job on the disk drives than most other programs. If you have RS service center check your drives, send them a copy of your pfs:file to test before they return the computer. When we had that problem, it took four return trips to the service center to get the settings right. On the last trip we finally insisted that they use our pfs:file for the test run complete with our data disks.

If by chance your pfs:file disk has developed a glitch, go back to your master disk and make a backup copy. If you have used up all your backups allowed, because it is a limited copy disk, use DISKCOPY of LS-DOS 6.3 which will override the copy protection and will make a mirror image of the master disk. Backup will not work, so if you have used up your allowed copies of the master disk return it to RS for a replacement. With proof of purchase, if you didn't send in your registration card when you bought it. The wait will be two to three months but you will get one.

Someone else also asked if you could get a copy of pfs:file for a hard drive. To our knowledge there is only one version of pfs:file for the Model 4, and to install it on a hard drive you have to use the master disk and backup command to install it to a hard drive. This uses up one of your allowed copies every time you make a backup to hard drive. DISKCOPY command should not be use to install this program on a hard drive because DISKCOPY command will attempt to format, read, write, the hard drive. There are only two files that are needed to install on a hard drive to make pfs:file work, see our Vol 1 No. 1 for more details.

One more point, do not make disk backups of your pfs:file data disks with any backup program other than the COPY function from the pfs:file menu, or with the TRS-DOS that is supplied with the original pfs:file program

disk, or with the DISKCOPY of LS-DOS 6.3 from Logical Systems, which will make a mirror image of the original disk.

In other words when working with pfs:file be sure that the computer has been RESET and booted up with the pfs:file master disk and proceed with your work without switching between DOS versions. Blank formatted disks can be formatted with any TRSDOS/LS-DOS, but once you start putting data on them stick to the pfs:file program disk and the instructions book for pfs:file.

Q: I am thinking about adding 2 external disk drives to my Model 4D. I was wondering if TEAC FD55B Drives, called out for the IBMXT, would be electrically compatible with the Model 4. Somehow I have the idea that all later Floppy Disk Drives are electrically equivalent-that is signal pin numbers arrangements and signals for the Double Density/Double Sided would be equivalent.

I tried to put a TEAC FD-55B inside the Model 4D, but the signal cable connector on the FD-55B is turned over with respect to the original drives in the 4d, and there was not enough slack in the cable to reach, even with the drive turned over. Possibly I could have fabricated a new cable and made it work. - A. D. Melbourne, FL

A: It is our understanding that the TEAC FD-55B disk drives are the same if you mount them internally or in an external enclosure, but that the pin configuration for the cables are different from machine to machine.

Aerocomp sells internal TEAC FD-55B double sided drives for $99.00 each and the cable to match your computer and for two disk drives for $24.00.

Be sure to specify which computer you have when ordering the cables.

Two Double sided drives and separate power supply in an external case is listed in their ad at $239.00

The addition of an extra power supply seems to be worth the price on external drives, because if the external drive goes it will not shut you down completely, and it will also take the load off the computer power supply. We are given to understand that the power supply in the Model 4 and 4D is large enough to supply four drives with no overload.

John Lancione, President of Aerocomp supplied the following information on putting double sided drives in the Model 4 to replace the single side drives.

"In order to enable the double-side feature of the disk drive the standard Tandy supplied cable may be modified instead of purchasing a new one ($24). The modification consists of enabling pin 32 in each of the three 34-position card edge connectors. This is accomplished by carefully disassembling the connector, to be undertaken after careful study of the construction of the connector, and removing the 34-conductor cable from the pins. You will see that one row of contacts (17 of them) is complete and the other row (17 contacts) is missing three contacts. Your mission is to remove any one contact from the complete side (they are all common and are signal at ground) and transfer it to the pin 32 position. A jewelers screwdriver and small needle-nose pliers will facilitate this operation. If you break the connector you will have to repair it, replace or obtain another cable/connector assembly. Don't get me wrong, I would be happy to sell the cable but, in my opinion, it's worth the try in order to save $24."

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(Editors Note) Here's my order for the cable John, my ten thumbs approach would surely have me ordering the cable anyway! Next month we plan on publishing a report on how to install the two-sided drives in the Model 4 to replace the single-sided drives. It is less expensive to replace the drives with the double sided drives, than to repair or replace the old single sided drives that Tandy installed. Plus you not only will have double side storage on your disk drives, but have a much more reliable disk drive than the original ones, manufactured for and installed by Tandy. You could install up to four TEAC FB-55B double-sided drives in

your Model 4, and still be able to read and continue using all the single sided disks in your library.

There may be some people who sell lower than Aerocomp, but for the few bucks difference you can't get the support and knowledge of products that the people at Aerocomp provide.

Q: Would someone please tell me, basing their tale on the assumption that I know nothing at all about it, how to properly clean my two disk drives? I'm sure there's nothing to it; on the other hand, I'm not at all sure I'm doing it right. And the instructions remind me of cookbooks that start a recipe by saying, "First, filet a turtle..." I would be very grateful for a set of comprehensible and detailed instructions on the disk-cleaning task, in words of one syllable. - S. E. Huntsville, AR

A: How about it, anyone with a good recipe that tells how and how often to clean with out grinding the heads down to a pulp. All we have is manufacturer's kit instructions that tell us to drop the dope on the disk supplied and run till it stops, and all for $19.95!

Q: Please advise which SYSGEN files I can remove from my LS-DOS 6.3 disk in order to free up about 20-30K if I use the system disk only for the following: 1. Load PFS/file and Report (with and without DDUTY); 2. Basic for printer commands; simple letters and listings which I cannot do on PFS/file due to interspersed printer commands.
Please give me a sample of the necessary REMOVE commands. I have a Model 4P and a DMP 120 printer.
- H. F. Sun City, AZ

A: We assume you are referring to the SYSn/SYS files rather than the SYSGEN function that is required for all boot up disks. We printed the list of /SYS files that you can safely purge from a system disk or a disk that has both your system and application program files, in Vol 1 No 2.

Use the PURGE command to remove these files. i.e. at LS-DOS ready type
PURGE SYS13/SYS:0
notice that to use purge command you must name the drive number, then verify that it is the correct file that you want purged before hitting "y" and enter.

Files that are really not needed are:
SYS4/SYS, SYS5/SYS, SYS7/SYS, SYS8/SYS, SYS9/SYS, and SYS13/SYS. These were taken from the TRS-DOS manual and should be the same under LS-DOS.

The second part of your question, if we understand it correctly would be to get a simple public domain word processing program and use that instead of trying to use the PFS/file, we assume also that you have a LS-DOS system disk, there is supposed to be a word processing program on that disk, but we have not had time to follow that up yet.

Basic printer commands, first go into basic of your LS-DOS system and basic interpreter disk after boot-up; all start with the following commands,
LPRINT CHR$(nn);
nn= the number of the printer code being sent.
27 is the code to let the printer know that something special is coming next. Such as in LPRINT CHR$(27); CHR$(29)
which sets the printer for 12 pitch. (Check your DMP 120 manual for all the codes that you can use. In the case of basic use the codes that are listed under the Dec. column. For in depth coverage of you printer pick up "How to use your Radio Shack Printer Cat. # 26-1242 that we mentioned last month, it maybe still available for $1.95.

Reader looking for help and contacts

Thanks for the much needed support! I would like to be able to contact others still using the Model I's with Omikron Boards and Omikron CP/M. Am also trying to get information on converting the 4P to external Drives 8" as well as 5-1/4".

Has anyone found a 1 meg (or more) ram disk either internal or external which will satisfactorily run under Montezuma Micro CP/M on the Model 4P.

John T. Troxell, PO Box 203, Vineland, NJ 08360.

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READERS LETTERS AND COMMENTS

==========

For B. S. Portland, OR
I used all of my limited back-up on pfs:file and was using my Master when I purchased a program disk from 80 Micro Magazine called "UNPUBLISHED GEMS - MODEL 4". On the disk is a program called "Backup4/cmd". This program has copied all of my "limited backup" disks nicely. It will also copy pfs:file and pfs:report backups.
-H. H. North Las Vegas, NV

For those of you languishing with Profile 4 Plus, there are two items that I would like to bring to your attention. 1. Radio Shack published a patch 1635-01 April 11, 1985 to correct an error, but the patch itself contains an error. The error made the printer on reports stop after about 100 lines. I brought the problem to Small Computer (now located in Hawthorne NY) and they figured out a correction to the error. Change patch line 7 of the RS version of the patch EFCA/CMD from (X'61F3'=CD 40 6F) to (X'61F3'=C3 40 6F)

Clay Watts Software 68C north Loop, Cedar Hill Texas 75104, has created an excellent basic program to provide forms and lookup to the Profile 4 Plus. The program has been a godsend for me. Watts personally is very helpful and gives excellent support, although the docs are adequate. This adjunct to Profile 4 Plus implements the power of the already powerful Profile.
-C.H.,MD Island Heights, NJ 08732

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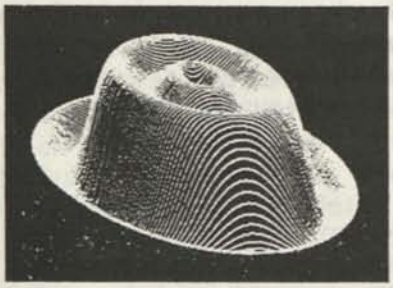

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The Grafyx Solution package is shipped complete for $149.95 (reduced from $299.95). The manual only is $12. Payment may be by check, Visa/MC, or COD. Domestic shipping is free on pre-paid orders. Texas residents add 7% sales tax.

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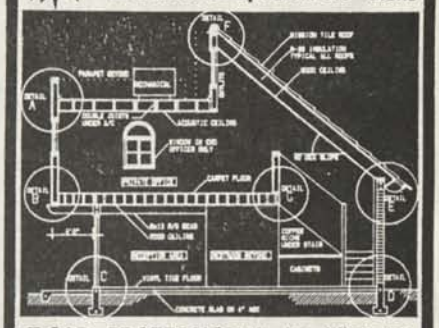

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80 MICRO CLOSES ITS DOORS

ITS OFFICIAL
THE LAST ISSUE IS JUNE 1988
AND IS NOW IN THE PRINTERS HANDS
THE PUBLICATION CEASED TO EXIST
AS OF MONDAY APRIL 11

We were notified this morning, by the publishers of 80 Micro, just before this issue was sent to the printer that 80 Micro Magazine ceased to exist as of Monday Morning April 11.

While we are sorry to see such a magazine with a fine history of support for the Tandy computers succumb to the pressures of the commercial market place and understanding that the publishing corporation had some hard decisions to make, albeit decisions that none of the TRS-80 users appreciated, we still think fondly of all the years of support and help their editorial and technical staff provided to us TRS-80 users. It is to them we wish all the best and hope that the experience they have stored up while supporting TRS-80 computers and programs will not be lost forever.

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NEW DISK DRIVES FOR THE MODEL 4

What a difference a drive makes. If you recall the horror story we told you about in Vol 1 No 1 where we were having all kinds of problems with a sick drive in our Number One Mod4. That's the one that required four consecutive round trips to Tandy's repair clinic to get well. And that we were told on the last trip that drive zero was so sick that it had to have a transplant with a brand new drive.

Well this past weekend we had the pleasant experience of standing by in the surgery and watching our resident Tandy Surgeon, Gary Rambo, dissect and replace the old single sided drives with new double sided drives. And yes folks, Rambo is Gary's real last name.

We received the new drives from Aerocomp, and during the operation, which only took about an hour, our surgeon kept saying "Boy, they (meaning Aerocomp) really did a nice job on these." and "They really made them idiot-proof, see - look here, they even took these two contacts and put them there - and they cut this over to there and Wow, look at this, they even (I'll have to use the use the word gismos, not being a hacker) took these two gismos and hard soldered them to the board, and I don't have to do any jumpering. Wow, they really made these idiot-proof!" (again Gary, you said that once or was it three times?).

I gathered from what he was so excited about, that the double sided drives he used for replacement in the past were TEAC 55B's from a different source and that he had received the drives in the same condition as the factory shipped them to his supplier. In their full generic form,

complete with documents on how to modify them to fit any computer. Requiring several modifications before installation. Where Aerocomp did all the modifications to make the drives ready to install in the computer that they were being purchased for. The price might be slightly higher from Aerocomp than from a bargain house, but you can't beat this kind of assistance. Check the prices before you buy and see if it is really worth it not to have to make all the pre-installation changes yourself.

But if you are interested in having a drive that you could change from machine to machine, see the article by Dallas C. Jensen that follows.

Back to our story with Number One Mod4, and the Tandy clinic for a moment. When Gary first tested the drives with his super drive diagnostic program. You guessed it, the supposedly brand new single sided drive replaced last summer in good "Old Number One" was in the worst condition, out of tune, and with such a sloppy disk grabbing action that we turned it over to Gary to dissect for parts. The second single sided drive he removed was in good enough shape to keep as a backup for the single sided drives that are in our Number Two Mod 4.

I have a repair bill from Tandy that states "Replace flakey drive #0, one AXX-5019 Drive 0 ...$117.00 plus labor $55.00".

Two thoughts come to mind, first if you own a disk diagnostic program you probably don't need this advice. If you don't have one and have a friend that has one, get him to run a test on your drives.

Most of us don't have or need a disk diagnostic program, let alone know what to do if it tells us that we have a sick drive. But what we learned this week end is one - don't get the diagnostic program that Radio Shack sells, because all it will tell you if you have a sick drive, is to call Tandy Repair Center for a fix.

(We will review several, we hope, diagnostic programs for you next month. And how about you computer surgeons out there letting us know what you think is the best.)

A sick disk can really cause problems, for weeks Ron has been screaming about the program he was using getting lost in the hard drive and the was screen going blank because the trip between the system files and the application files were too much for the computer and it was getting lost in between. Which means that messages like "Can't find the file" or "Can't boot a data disk". I kind of like the last error message the best, because it has bigger and prettier letters. In this case we were blaming the software as having glitches and bugs, and what should we do? Unload and reload files to see if we could eliminate the bugs, when all the time it was a wacky drive, or as my bill from Tandy says a "flakey drive".

The second thought we have is that when you come to the point of needing to have your single sided original drives repaired or replaced, don't replace them with single sided drives, and certainly not with the original ones Tandy supplied, if they are even available any more. It is much better to buy the new TEAC double sided drives and install them. Not only can you install them for the same amount as a repair bill on the old drives, you get double the disk storage space.

For $99.00 each and a new $12.00 cable from Aerocomp, and a couple of hands that are not all thumbs, you can replace your drives as simply as removing the case from the computer (be careful here! the end of the picture tube comes very close to the back parts of the cabinet, opp's sorry, I mean the end of the monitor tube), take out four mounting screws from the old drives and slide the drive forward far enough to pull the connector plug from the back of the drive and remove the drive from the yoke.

Remove the original cable, it isn't long enough anyway, and because there is the need for a nice reverse of the connector on one drive. The cable that Aerocomp sent with the drives is folded and creased perfectly to fit for you.

Remove the original cable from its connector to the computer, and replace with the new cable, plug these into the computer end, and the two drives, slide the drives into the yoke and put the holding screws in. Simple wasn't it - well it was the simplest operation I ever watched.

Oh yes, there is just one modification that has to be made to the drives that tell them if they are to be drive zero or drive one, and that is a little green jumper, which looks like a two prong fork with plenty of plastic on it to get a good grip, called a strap that you pull out and put back in as per instructions. Don't worry its easy to see, and easy to find, and it moves just a hole or two over in the same location. As I said it was the simplest operation I ever watched.

We were sitting around the stove today and came up with the bright idea that we could use another Mod 4D, just in-case. If we could get one at the sale price, even if we left it in the box as a backup. Nothing is ever left in the box around here, but it justified the cost of the extra computer.

We called every Tandy dealer we could find a phone number for in Texas, and they all said that the sale ended last week. The price now was $879.00, $929.00 and $895.00 which included freight, two said - "Nope, don't have any more.".

So we wound up ordering the upgrade chips to bring our other two Mod 4's up to 128K. at a cost of $34.00 a set including the PAL chip and that's another minor surgery task for Gary.

One prominent dealer told us that if we wanted a Model 4 with 128K they insisted on selling it with installation at a $79.00 added price to the computer. There is nothing to installing your own. Just find the right holes on the board and plug them in. We know - because we watched that too!

If you want, we will go into why you need to upgrade your computer memory to 128K and why you don't need too, in a later issue.

We really want to do an article on installing internal hard drives. That one we can't afford to watch just yet, so if you readers out there can send us your "How I did it my way" stories, please do.

One of the questions that comes up from time to time from our users is -"If I change to double sided drives do I need to redo all my single sided disks to double sided?". The answer is no, you don't need to convert any single sided disks that you now have. Almost all the programs you buy from RS are on single sided disks and even Deskmate that is packed with the Model 4D is on single sided disks. We are also informed that using single sided disks in a double sided drive causes no harm to the second side drive head. More to come on disks next month. Like, what is the story on single sided, verses double sided, and what do they mean "life-time warranty" whose lifetime are they talking about, and are expensive disks better than cheap disks.

NEWS ITEMS

In an interview with Hubert Howe, publisher of HOWE SOFTWARE, he informed us that he is still supplying his products with full support and has no plans at this time to discontinue that support. Some of the packages that he still offers are: Typitall word processor, Smart Terminal communication program, System Diagnostic program which according to the ad has a test for everything in your system including the line printer characters, cassette recorder and RS-232-C interface, and disk cleaner. All for Model 1,3, 4.

We haven't heard much about Typitall, everyone seems to be divided between SuperSCRIPSIT, Scripsit, ScripsitPro, Lazywriter, leScript, and Allwrite. How about letting us know what you think of Typitall.

Mr. Howe also said that their small business has accounting with payroll, mailing list, and home budget with checkbook analyst software packages still available for TRS-80 Models 1,3,4 and for 2 and 12 models. We also took note of his 30 day Money Back Guarantee.

For your information : HOWE SOFTWARE, 64 Windmill Road, Armonk, New York 10504 1-800-428-7824 ext 169 or (914) 273-3998

In following up on the recommendations of our local computer surgeon, we called J & M Systems, in Albuquerque, NM to see if they were still in business, and still supplied the diagnostic program for TRS-80 disk drives. Yes, they are still in business and supplying the diagnostic programs both single sided for $79 and double sided for $89. But said that they were no longer advertising the product. Gene, who answered the phone said that they still were shipping power supplies and some of the other products that they originally manufactured for the TRS-80. We hope to be able to report on more of what they are still providing and supporting in our next issue.
J & M Systems, 137 Utah NE, Albuquerque, NM 87108, Phone (505)-292-4182

During a recent business trip to Denver we tried to find the people at Apparat Personal Computers who created NEWDOS. Both locations listed in the current Denver phone book were closed and the phones disconnected. Its a shame that such a fine program which is used by so many TRS-80 users has closed it doors, leaving us with nothing but our own mutual-support. We hope to report more NEWDOS in the future as we develop those who have a good background, along with David Goben, to support the systems with their articles, hints and tips.

HINTS, TIPS, AND VISITS WITH YOUR FELLOW READERS

We hope that the dating-game that has consumed so much of our readers time and space in our publication, plus other publications has settled down for most of our readers. But we have a request for a patch for DOSplus to extend the dating.

The authors of DOSplus say they are no longer supporting the system.

Option 5 of Michael Jacobs "SIX2XTND" PROGRAM converts a DOSPLUS 1.0 disk to a TRSDOS 6.2x+ disk.

Option 3 converts a LS-DOS 6.3 disk to TRSDOS 6.2x+ disk.

This will not allow you to remain with the DOSplus operating system, but converts the data disks created under these programs to operate under TRSDOS 6.2 after they have been upgraded with Michael's program.

DISK INSTALLATION FOR THE MORE TECHNICAL MINDED -by Dallas C. Jensen

Instructions for installing half high floppy drives in the TRS Model 4 computer.
By Dallas C. Jensen

I believe that almost any 5 1/4 or 3 1/2 inch floppy drive can be used in the Model 4 computer. The half high drives consume less power and generate less heat than the old full size drives so these factors are of little concern. Drive 0 should be a 40 track, single or double sided drive as most programs come in this format and could not be run until they are copied to an 80 track drive. The double sided 40 track drives on the Model 4 will be able to read and format single or double sided disks from 35 to 42 tracks. The 80 track double sided drives will read and format single or double sided disks from 80 to 84 tracks. There is a program on Logical Systems LS-UTILITY disk called READ40 that will let you read and convert 35 and 40 track disks on an 80 track drive, however you can not REPAIR, FORMAT or write to a 40 track disk with this program.

The floppy drive controller board in the Model 4 is configured to run drives 0 and 1 from the top connection and drives 2 and 3 from the bottom or external connection. All drives must be configured to the drive that it will be. This is done with a DRIVE SELECT shorting strap or jumper that is provided with the drive. On the drive circuit board you will find a row of double pins, usually marked DS0, DS1, DS2, and DS3 this jumper must be on the pins marked for the drive it is to be, just lift it off and put it on the correct set of pins. There will also be a 14 pin TERMINATOR RESISTOR NETWORK on each drive and it must be removed from the drives that are not connected to the last connection on the cable. As you remove the tandy drives look for this plug-in resistor pack, it will be on drive 0 but not on drive 1, now look for a simular resistor pack on the new drive, on

my TEAC drives it is plugged into a socket.

Each drive will have two cable connections, a power connector, usually a three wire cable, one ground, one +5V DC, and one +12V DC, this cable is keyed so it can't be plugged in wrong. This cable is made in a Y configuration, with one input connector and two output connections, you will need two more of these cables to hook up 3 or 4 drives. The other cable is the signal cable, a 34 wire flat cable with three card edge connectors on it, these connectors can be removed by carefully prying them apart, if you find that you have to make up new cables. The cable will have #1 wire marked and the connectors will have the pins marked and must always be assembled correctly.

NOW THIS YOU MUST REMEMBER! These card edge connectors are not keyed and can be plugged in incorrectly, so make sure to find #1 pin on the circuit board and match it up with #1 pin on the cable connector. If you have a TEAC drive, and I believe most other half high drives, will have #1 pin on the opposite side of the drive from the old drive. So you must twist the cable 180 deg. before you connect it. If you fail to do this you will see all drives come on when the computer is turned on and continue to run till the computer is turned off. That is why you may have to make up a new signal cable, it may be too short after you twist it. Do not think that you can get around this by inverting the drive, on page 215 of the TEAC disk drive instruction manual is says that the drives should only be mounted with the red indicator light in the upper left corner when horizontal, or the red indicator light in the lower left corner if mounted vertical. They explain that to mount the drive in any other position may disturb the stable contact between the magnetic head and the disk and may cause misalignment of the head. If you go with 3 or 4 drives you will have to make up a signal cable without the input connector installed till after you twist it and pass it out the bottom through a ventilation slot near the right rear corner of the computer in line with the external floppy drive connection. Now match up the #1 pin and wire, and install the connector on the cable, this is best done by laying the connector on a solid flat surface, line up the wires and the top of the connector and tap it down with a flat object, then plug the connector in and pull the slack up into the computer. I removed the rubber foot and reinstalled it on top of the cable being careful not to damage any of the wires.

To get into the computer, unplug it and lay it on its back and remove 10 screws, if the warranty seal is intact, you will find one screw under it. You will see that some screws are different so don't try to put them in the wrong holes when you go back together. Now tip the computer back down and remove one screw from the back. Lift the top of the computer very carefully straight up and to you a little, look through the drive opening and observe the neck of the CRT as you come up, when it is clear lay it on it's side to the left of the computer. You can now unplug the two connectors from the video board and move it out of the way, keep your fingers away from the high voltage wire on the CRT, it still might have a little kick in it. Each of the drives are secured with two screws on each side, remove them all now, lift off the metal RFI shield, slide the drives forward and unplug the cables, it might be a good idea to mark the drives so you know which one was 0 and which was #1 after you set them down. Now slide one of the new drives into the bottom slot, look down the back of it and you will see that in order to plug in the cable you will have to cut away most of the back of the tower. This you can do with a saw after you remove the towers, you will also want to lower the drives 1/8 inch by cutting away that much of the tabs that they sit on, this is done to make room at the top of the drive openings for the lever of the top drive in each opening to operate, you may also have to remove some material from the top of the opening to clear the lever and give you a better view of the "red" drive in operation light. To mount two half high drives in each slot you will need to drill 1/8 inch holes in line with and 5/8 inch below and 1 5/8 inch above the holes in the towers that were used for the old drives. The screws are #6-32, you need four for each drive, there may be other tapped holes in the drives that are for metric screws so be sure to use the correct holes. If your new drives have push buttons instead of levers you may not have to enlarge the drive openings. You may have to use a piece of the material that you cut from the back of the tower as a filler

between the drive and the RFI shield for the top screws on the right side tower. Make sure each drive is grounded, ether by the mounting screws or with a ground wire, make sure the ground wire is connected to the metal RFI shield when you put it back together.

Now that you have your computer up and running with double sided drives I'll give you some useful information about formatting the double sided drives. My TRS-DOS 6 manual does not list SIDES=2 as one of the parameters to be used with FORMAT but it is in there so if your manual is like mine you best write it in. Or if you want to patch it so it will always format two sides unless told to format one side with the parameter SIDES=1, here are the patches.

MODEL III LDOS 5.3

```
.FORMAT53/FIX
DO9,D6=EE:F09,D6=AE
DOA,49=01:FOA,49=02
DOA,4F=AE:FOA,4F=EE
.Eop
```

MODEL 4 LS-DOS 6.3

```
.FORMAT63/FIX
DOA,8A=EE;FOA,8A=AE
DOB,06=01;FOB,06=02
DOB,OC=AE;FO,OC=EE
.Eop
```

LS-DOS users, note that the statement separator is a semicolon; a colon is used for LDOS. These patches were found in The Misosys Quarterly - Winter 1987 Volume I.iii

If you don't already know it you can make more room on your disks by using the FORMAT parameter CYL=42, on the 40 track drives and CYL=84, on the 80 track drives. No you can't go any higher!

On my four drive Model 4 the top drive is the 0 drive and 1,2,3 below it, I like it this way, the top drive is the 40 track drive and comes on and continues to run when I turn the computer on, it prompts me for a diskette, I put in my boot disk and close the door and the computer boots up without hitting the reset button. You will have to use the SYSTEM command to enable drives 2 & 3 and then SYSGEN it to your boot disk. You may want to open up the computer and look it over before you order any drives so you will know what you are getting into.

I see on page 81 in the Winter 1988 Volume II.iii of THE MISOSYS QUARTERLY that the 3.5" drives will work with the Model 4 and they will format 86 tracks with no problem. The information also states that the new high density (1.2Meg) 5.25" or (1.44Meg) 3.5" drives will not work on the Model 4 without modifications to the driver.

If you want to wait two years, I'll then be retired and in a motor home, I'll be glad to stop in and help you, in the winter if you live south, and in the summer if you live north. Till then if you have any questions give me a call at 402-283-4261 after 5:00 PM central time on week days and Sat. or Sun. afternoons and evenings on weekends.

-Dallas C. Jensen
PO Box 68
Coleridge NE 68727

I/O Comments from Klaus Meinssen

What a pleasant surprise it was to see my first contribution appear in Volume 1, No. 4 of "Computer News 80". It gave me the courage to continue, so here are a few more I/O's ... experiences that I like to share with other Model 4 (I,III) users, as they share their experiences with me. One thing I learned during some 7 years of computerizing: there are a lot of folks out there, who are way above my head ... pro's mostly, but there are also a lot more, who are still behind me in utilizing the convenience and power of their Model 4's, etc.

A lot of what's being written now has been written somewhere before, either too far back for us to know about it or in some format that we did not comprehend when we were beginners. So, don't be reluctant in writing about something that has come up before; it'll still help someone.

In this contribution, I like to cover the use of MULTIPLAN, Version 1.06, Radio Shack Cat. No. 26-1530. If anyone knows of an upgraded version to this, will he/she please let me know.

First, why would one want to use MULTIPLAN? Aside from many business uses, mostly preparation of electronic spreadsheets - cost analysis, sales and marketing statistics, etc. - MULTIPLAN is an ideal program for me for preparing my annual Income Tax Return, which includes several Schedules and Forms, all linked together, vacation and travel schedules and itineraries, duplication of many identical (address) labels, loan, amortization and payment schedules, preparation of a family tree, stock and bond purchase/sale and dividend records, any type of "statistical" work like keeping track of one's gas and electric consumptions - if that's what You like to keep track of -, etc. I even know of someone who is using it for occasional word processing; MULTIPLAN has an edit feature.
It's good for anything that is best summarized in the form of many vertical columns. They can be as little as 3 characters wide or as wide as 32 characters; for that matter, columns can be linked together to any width, i.e. hundreds of characters wide or just 80 or 68 wide for typical printing on an 8 1/2 inch wide sheet. You can tell MULTIPLAN to print at 10, 12 or 16.7 characters per inch, so an 8 1/2 inch sheet can have up to 132, a 14 inch sheet up to 232 characters in width.

Why MULTIPLAN, instead of a database program for preparing a columnar table or summary? Flexibility and overview. One can change the "field" width at will, add/insert columns or rows, move them, copy anything from or to anywhere, do simple additions or very involved mathematics, do recalculations instantly when new values were added to see right then what the results are, which is especially great for Income Tax Return preparations. One can sort columns alphabetically or numerically, insert something from a different "file" and many, many more things ... all right in front of You, which is the main feature that I like about MULTIPLAN: to see the end result of my work, much like with word processing, only better. The pointers below are for those who already use MULTIPLAN, but feel are not proficient enough with it yet, or those who have it but are holding back using it. Give it a try, its a new experience.

MULTIPLAN should be run on a 128k machine or with a hard drive, otherwise it will be too slow, since it is a big and powerful program. There is a limit to the amount of input it will take, as shown on the screen with "xx % FREE". Keep Your worksheets short therefore, although it is not uncommon for me to go right down to a few percent. I hope You know by now that You should turn off the recalc feature, usually right after it has loaded and is up on the screen. If You don't, MULTIPLAN will recalc all values after each entry of a new or different value. For a bigger job, this will rob You of a lot of time, just watching the recalc go through. Use the "Option" command "O" and follow with a hit on the space bar. It will move the cursor from "yes" to "no", then <enter>. If a recalc is desired, like before You run off a printout, just hit the exclamation mark <!>. If You forget, don't worry: MULTPLAN will always go through a recalc when Your document is saved.

If You are not using the editing feature yet or not much, You are missing a lot. It's easy and just a matter of getting into the habit of it. With the cursor on the cell (field) that needs editing, hit <E> on the command line, then use the following keys to edit: <CTRL><O> to move one word at a time to the left; <CTRL><P> to move to the right one word at a time; for rapid cursor moves, don't hit the <O> or <P>, hold down on them. Using <CTRL> and > or < (greater than or smaller than) will move the cursor one character to the left or right. <CTRL><Y> will delete the word or character under the cursor; <CTRL><X> will remove the character to the left of the cursor. To insert something, just type it in at the cursor position. Editing works for headings or labels, as they are called, titles, even long ones, and formulas. It's good for fine centering multiple column continuous headings: just add blank spaces in front of it. I often use it just to look at something that is longer than the width of a cell, like continuous text or long formulas. <BREAK> gets You back to the command line.

When blanking, formatting, locking or copying a cell or cells, use commas between cell i.d.'s if You want to do this to several cells which are all on different locations of your worksheet. Move the cursor to the first cell, comma it, then move the cursor on to the next cell, comma it, etc. ... or write

the cell locations with commas between them, without moving the cursor. Instead of R6:16C3 - for example - to designate rows 6 thru 16, which requires typing it, one can put the cursor on R6C3, hit the <:> and move the cursor to C16C3; the result will be R6C3:R16C3. It's Your preference, that determines how You do it; I personally am better at moving cursors than I am with typing.

Of course, You know about the <F1> key by now (?). <F1><down arrow> moves Your worksheet up one screen, <F1><right arrow> to the left one screen, etc. <F1> twice brings You "home" to the top left corner. <F3> is the tab key. <F2> doesn't do anything worthwhile to MULTIPLAN, that I know of.

Here are some helpers on sending printer control codes from MULTIPLAN. All this is done from the PRINTER, OPTIONS, SETUP entry. After hitting <P> for printing, hit <O> for options, where You specify the worksheet size You want to print, then hit the MULTIPLAN tab key, <F3>, for the SETUP entry. Setting printer control codes is a little tricky and took me a long time to get where I am now. More on that further down. For now, let me pass on to You what I know works for Radio Shack DMP printers Model 400 and 2100, that I have worked with. For these, use the following codes: <caret><square open bracket><caret><upper case S> - no spaces between them - for printing at 10 cpi (characters per inch); with <upper case R> it will print at 10cpi in correspondence quality; the same, but with <upper case W> prints at 12 cpi; with <upper case T> at 16.7 cpi. Add <caret><square open bracket><caret><bottom line dash> for printing in bold; it works with 10, 12 or 16.7 cpi. Sorry, my word processor will not let me type or print the caret, square bracket, bottom line dash, etc. ... at least I don't know how to get it to do it.

In case You haven't figured it out yet, on a Model 4, the caret comes up, using <CLEAR> and hitting <+>; square brackets come up, using <CLEAR>, then the > or < (greater than or less than) keys; a bottom dash comes up, using <CLEAR><ENTER>. Printing at 8 (!) lines per inch from MULTIPLAN requires <caret><open square bracket><caret><lower cases>. Printing at 16.7 cpi in bold and on 8 lpi can all be done from one SETUP entry, AND it can be saved for the next time around, so no more "oopses", because You didn't set the printer dip switches, etc. before You printed something. I rarely set printer dips anymore or use a basic program to set the printer, instead do it all with codes from the program itself, even for PROFILE reports, which I will cover some other day.

For an Okidata Microline 92 printer use the following: 12cpi: <caret><backslash>; 16.7cpi: <caret><closed square bracket>; default 10cpi: <caret><X>; for correspondence quality: add <caret><open square bracket><caret><q>; for double width: add <caret><bottom line dash>; for 8 lines per inch: add <caret><square open bracket><caret><x>. A backslash is <CLEAR></>.

There are many other printer control codes that can be sent from the MULTIPLAN PRINTER SETUP, but they generally have little use for MULTIPLAN reports and printouts. Now, for those who want to know how I arrived at these codes, like - for example - if You use an altogether different printer and do not know its MULTIPLAN set up codes yet, You must first find out what the printers decimal codes are. Look through Your printer handbook. To apply them to MULTIPLAN, look up the ASCII tables for Your computer and find the decimal value for the control code that Your printer requires. THEN, add 64 to that decimal value and look up the ASCII characters for it.

For example, most printer control codes begin with CHR$(27), which is ASCII <ESC>, i.e. the escape code that tells the printer when something non-printable is coming up. 27 is the decimal value. Adding 64 gives a decimal value of 91, which is ASCII <open square bracket>.

When used with MULTIPLAN, the <open square bracket> is its way of sending CHR$(27) to Your printer. HOWEVER, each of Your ASCII entries into MULTIPLAN OPTION SETUP, must be preceded with decimal 94, which is ASCII <caret>. It will not work without it!

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ENVELOPE ADDRESSING TIP WITH SUPERSCRIPSIT by Albert C. "Chad" Skaggs

The "SuperSCRIPSIT ENVELOPE ADDRESSING TIP" at page 2 of Vol. 1, No. 4, is interesting, and certainly is one way to do the job. Here's another way which frees you from typing in the address if you have your correspondent's address on a permanent file like the one I describe here. If I have a new address (such as yours), I can stick it temporarily into my system, or I can put it there permanently and return to it when I want it. (I use an unadorned Model 4 with two single-side drives, SuperSCRIPSIT 1.1, and LS-DOS 6.3.)

To do this, I have made a permanent file, called ADDRESS, on a disk of its own, in which I keep what amounts to my address and telephone book. I don't know how many addresses I have, but the file shows 63k length when I call up the directory. When I printed out a hard copy on my Tandy DWP 220, it ran 34 pages (8 1/2x11), printing the addresses in a column down the page. Most entries take four or five lines. The first three will be the routine mailing address: one line for the name, the next for the street and the third for the city and ZIP code. Lines after that hold telephone numbers, and any note I want to make about this address.

I build the file this way: With left margin set at 0.3 and right margin 'way off to the right somewhere, I type in first of all my own name and address. That's in three lines, for printing the return address on the envelope. Then I hit ENTER eight times, which rolls up eight more lines. I find that just right for placing the recipient's address.

Then I change left margin to 4.8, which locates the address just to the right of the center of the envelope. (You of course can adjust these settings to suit you.) Then I type CONTROL?, which will stop the printer when the printer encounters it. Then I hit ENTER to start a new line, and on that line put -A- to indicate that the addresses with last names beginning with A follow. (That makes it easy to find the place to enter more addresses.)

After that, I simply type in the addresses in the form I want them to print. That means hitting ENTER at the end of each line, of course. I am careful to keep the name, street address and city/state/ZIP on the first three lines, to make printing easier. Once the A's are typed, I put in the B's and so on through the alphabet.

This done, I have a file in which I can find any address quickly by using SuperSCRIPSIT's global search command.

Then I define user keys, as described in the SuperSCRIPSIT manual, to order the printing. I happen to use the numeral 3 to order printing of the return address, and numeral 4 to order printing of the recipient's address.

Here's the sequence for user key 3:

CONTROLX,g,g,g,g,g,g,g,g,g,g,g,g,b,p,ENTER, n

I use either caps or lower case--the system doesn't seem to care. The CONTROLx begins defining blocks, the first three G's each define a line (the machine thinks its a paragraph) of my address, and the other eight G's roll up the envelope the right distance for the recipient's address. The B calls for block action, the P orders the block printed, the ENTER completes the print command after the print menu appears, and the N answers in the negative when the printer encounters the CONTROL?, stops, and asks if I want to continue.

At this point the return address is printed, the envelope has been rolled up to the correct position for the recipient's address, the print wheel is parked in its normal position at the left, and the screen shows the address file with the cursor at the first address.

Next I use the global search command to find the address of the recipient. If you plan to mail the letter to Mary Doe, I find it best to enter just that in the search menu. If you enter simply "Mary," the search stops at every Mary. If you enter "Doe," it may stop at the correct address, but at the beginning of the word "Doe" instead of the beginning of "Mary." That complicates printing.

When the system has found the address, it stops, asking whether I want it to find another or cancel the search. I want to cancel and print this one. I set up a user key (I use numeral 4) to tell it what to do.

My user key 4 looks like this:

C,CONTROLX,g,g,g,b,p,en,UP,

Here the C orders the search canceled, CONTROLX begins defining a block, each G defines one line of the address (see why I keep the addresses three lines each?), the B orders block action, the P calls for printing, the ENTER executes the printing command from the print menu, and the UP resulted when I programmed SHIFT/UP ARROW to return the cursor to the top of the address file.

After the search has found the address in the file, I hit CONTROL4, and user key 4 carries out the printing command and returns the cursor to the top of the address file, ready to tackle another envelope. The printer rolls the envelope out and is ready for another.

Setting up the system takes some time. Once it is done, I find it easy to use. Of course I keep a backup disk, and print out a hard copy or two for reference.

Once my letters are written, I remove the disk containing them and install in drive 1 the disk with the ADDRESS file, and open the ADDRESS file with the cursor on the first letter of my name. I put a blank envelope in the printer with its left edge a space or two to the left of the point where the printer is parked, and its top edge about one line above this point. Then I hit CONTROL3, and user key 3 prints my return name and address and rolls the envelope up to receive the mailing address. Then I search for the mailing address, and CONTROL4 prints it and gets the system ready for the next envelope. Makes writing home to Mama almost fun.

A VISIT WITH DAVID GOBEN: MODELA/III BOOTING, UNKILL, PIRACY, etc.

Greetings! I've been pretty busy trying to keep my promises made last month. Hopefully I've managed to succeed, at least in the most part.

BOOTING MODELA/III ON A MODEL 4P

Those of you who frequent the Model III work-alike capability of the Model 4P know that you must first load the MODELA/III ROM image file before you can work in the Model III mode. If you do this from TRSDOS 1.3 or LDOS, this is no problem since the boot ROM internally accessible by the the computer is capable of recognizing these disk formats, and so are able to search through the disks and find the MODELA/III ROM image file on them if the disks contain a copy of it. This is not the case with such operating systems as NEWDOS80 and DOSPLUS. I have also received numerous reports from MULTIDOS users that they are having problems with it.

The MULTIDOS problem is the easiest to solve, and so we will start with it. First boot up the Model III ROM image from the TRS/LS-DOS disk or the special TRSDOS 1.3-format booting disk by inserting the disk into drive 0 and hold down the P key (press also the F3 key if you are doing this from a TRS/LS-DOS 6 disk), and then press the RESET switch. After the ROM image file has loaded and you are prompted to load your application disk, insert a MULTIDOS system disk into drive 0 and press ENTER. When you get to the DOS prompt, place an LDOS, TRSDOS 6 or LS-DOS 6 disk which contains MODELA/III into drive 1 and enter the command COPY MODELA/III:1 :0. When this is completed, check your directory to insure that the MODELA/III file has less than 5 extents. More than this will cause loading problems. This process may seem obvious, but oddly enough, if you try to copy the file from a disk in drive 0 to a MULTIDOS disk in drive 1, for some reason the boot ROM will not always recognize it. The method I laid out here works every time.

DOSPLUS is the next easiest. I did this using DOSPLUS 3.5, but other versions should work just as well. BOOT up DOSPLUS using the same procedure previously outlined for MULTIDOS. Copy the

MODELA/III file from a TRS/LS-DOS 6 disk, LDOS disk, or using the CONVERT command to copy it from a TRSDOS 1.3-format disk. What we have to do is modify the boot sector so that the Boot ROM will recognize it as LDOS-compatible. What the Boot ROM does is load sector 1 of track 0 and find the directory track by inspecting the third byte in the sector. Unfortunately DOSPLUS maintains this information on sector zero and NOT on sector 1. What we will do is modify sector 1 so that it will also store this crucial information on that sector as well. To do that, type program listing 1 into disk BASIC and run it. That's all there is to it. After this, you can do a cold-boot on the disk and everything will be done automatically for you.

NEWDOS80 is by all means a great DOS, but the format it uses is terribly incompatible with other disk formats. Because of this, the boot ROM cannot make heads or tails of its disk information. In fact, it seemed so impossible to make the boot ROM recognize it that for a very long time I told people who had asked me for help that it just couldn't be done. But the lure of such an impossible task has always held an appeal to me, and so for a long time I often played with the idea off and on, until I discovered a process by which it COULD be done. Listing 2 is that result. What you need in addition to it is a backup copy of your NEWDOS80 disk booted up in drive 0 (using the same process outlined for MULTIDOS), a blank disk to create the new DOS disk on, and a TRSDOS 1.3-format disk with a copy of MODELA/III on it. Type listing 2 into a word processor such as Scripsit. Save it in ASCII format as NDBOOT/JCL. Next, from the DOS prompt enter DO NDBOOT. Follow the instructions given to you. Notice that some commands in the listing appear to be merged together. These are not typos. This is because the use of ENTER is not always needed by all commands, and so to maintain the proper keyboard flow I simply entered one command right after another. When the NDBOOT process is done you can do a cold boot with the new disk and it will load MODELA/III automatically when it is needed.

Unlike MULTIDOS and DOSPLUS, backing up this new format of NEWDOS80 will NOT copy all the modified data intact. Thus if you wish to make backup copies of the system disk, you must modify each one, but not as extensively as the first. What this involves is using SUPERZAP to change relative byte 2 of track 0, sector 1 from the hexidecimal byte value 94 to 14 on the new disk. You can automate this backup procedure by using your word processor to save listing 3 onto your system disk, naming it BACKUP/JCL (save it in ASCII format as well). To use it, simply enter DO BACKUP and follow the instructions given to you by the prompts.

Now you can boot up MULTILDOS, DOSPLUS and NEWDOS80 without having to resort to a two-disk boot-up procedure. Isn't is great? One note: this format of NEWDOS80 is incompatible with the NEWDOS filter I presented in vol 1.4. To copy files over to LDOS or TRS/LS-DOS 6 from it, you will have to copy the files to a data disk or an unconverted system disk first. As a last ditch kluge, you can use SUPERZAP to temporaritly change the third byte of track 0, sector 1 from 14 to 24. Be SURE to change it back when done.

RECOVERING KILLED FILES

If you've ever accidentally killed an important program or data file, you realize suddenly the warning given by many that you should ALWAYS make backups of your files was NOT just a bunch of hot wind. In response to this, DOSPLUS has a program called RESTORE/CMD that allows you to recover such a killed file. MULTIDOS has the same feature with its RESTOR LIBrary command (the missing 'E' is not a typo). TRSDOS 6 and LS-DOS 6 have UNKILL/CMD, which is (or at least was) available with the TRSDOS 6.2 UTILITIES package from Radio Shack (26-0315). Another program for the Model 4 is Raymond C. Boggs' RESTORE/CMD program, which was featured in the October 1985 issue of 80 MICRO (see "Files from the Crypt", p. 58). You can type that listing in, or purchase the October 1985 LOAD 80 disk which contains it. It is also on one of 80 MICRO's specialty disks -- MODEL 4 UTILITY PAK. You can call 1-800-258-5473 to order them, or write to 80 MICRO Disk Series, 80 Elm Street, Peterborough, NH 03458. The Monthly disk for October 1985 sells for $17.95. The Utility disk sells for $26.50. Both of these prices already include postage and handling. LDOS users can obtain UNKILL/CMD for their DOS in the

UTILITY-I disk (stock # L-32-070) from MISOSYS for $29.95 plus $2.50 S&H. (MISOSYS, PO Box 239, Sterling, VA 22170-0239. Phone 1-800-647-6797.)

Last month I told you that I would provide you with a program that will recover killed files. Although I said I would try to adapt it to also work for LS-DOS 6, my workload prevented me from spending the time. Perhaps one of you would care to try. The program in listing 4 is called UNKILL/BAS. It operates under the Model I version of NEWDOS80 1.0, the I and III versions of NEWDOS80 2.0, the I and III versions of LDOS 5.1, and also LDOS 5.3. To use it, go into BASIC, type it in and SAVE it. Then IMMEDIATELY after you accidentally killed a file, go into BASIC and RUN it. It gives you an option to recover a file, clear the directory, or quit. Recovering a file requires that you include the file's full filespec, including password if it had one (password checking is not disabled on your DOS). If it exists on a drive other that drive 0, then you must include the drive number. UNKILL/BAS will scan the target drive's directory for the specified file. It will give you error reports if it does not find the file, or finds it but it is already 'alive'. If it finds it and it is indeed dead, then it will reconstruct it. Clearing the directory allows the 'purist' to clear out all killed files from the directory sectors. When a file is killed, the disk granules that it was allocated are released, it's encoded signature (HASH code) is removed from the directory's HASH Index Table, and bit 4 of the file entry's first byte is reset, indicating that the file is killed. This is kind of technical, but it isn't important, except perhaps to those who are interested. What is important is that on these DOSes that all the file entry information is retained within the directory intact. UNKILL/BAS will search for this information and use it to rebuild the allocation information for the file. The Clear Directory feature cleans up the directory sectors so that all these dead entries are removed. To most people in general, this is an unimportant feature, but to others it is worth its weight in gold, especially to those who don't want to help a software thief from easily gleaning their files.

There are better ways to recover files, and I'm sure that in certain situation, though I believe them to be rare, the recovery can be imperfect. But this is better than nothing. If you've written something better, why not make it available?

THE TRS-80 MARKET

Last month I reported that I had received a lot of disks from 80 MICRO, all of them submitted during the great public domain disk swap that 80 Micro had once sponsored. One thing that struck me right off was the amount of software that people sent in that was NOT public domain, but were in fact commercial programs. A lot of programs featured in 80 MICRO were even included. What is shocking is the amount of this.

The simple fact is, to keep the TRS-80 market viable we must support those who support our computers. If you always rob the milkman, how long will the milkman stick around? THEN where do you get your milk? Get my drift? Sorry for the lamenting, but the commercial stuff on these disks really got to me.

PD UPDATE

But on a lighter note, let's talk about what IS PD on these disks. Thee are some great communications, educational, game, utility, and business programs. For example, there is a great, and often hilarious bowling game program, sophisticated disk 'zapper' programs, several adventure games (one graphic), disk catalog programs, arcades (one in French), a Model 4 64K/128K memory test, word processors (to include a spelling checker), data-base, and financial programs. I found a great program for converting ASCII files to VISICALC format, a turtle graphics interpreter, an impressive video banner program, a great metric conversion program, a business decision program that is really something, and many more. What impressed me was the quality of many of them. Many of the subjects may have been beat into the ground by finding such programs about anywhere, such as check balancing programs. But these have an original flair that is unequaled by some commercial products. The communications programs range from XMODEM, TMODEM, KERMIT, FASTERM, to XT4. There's plenty of adventures for you daring souls, nifty games of strategy, and of course the arcade-style. A lot of this stuff comes from

Canada, our northern neighbor, which harbors a vast store of brilliant minds and computerists. Hopefully soon these pages will feature articles and programs from some of these individuals. England, France, and especially Australia are our more distant earthly neighbors who harbor others of note (I have a few Russian and Japanese friends, but do not know enough about their own computer fetishes or involvements). Hopefully as subscriptions trickle in from these quarters, we may be able to share their brilliance as well.

Now that I've whetted your appetite for this bundle of goodies I have clutched within my paws; how can YOU obtain them? That will be made clearer next month when I have managed to centralize them, organizing them in groups on disks by application. Then I will announce what disks are available, what they contain, and give ordering information. Basically what It will be is that you will send a disk in a mailer, complete with return postage and address label, plus a small charge of $3 US for copying.

So far I have got 2 disks ready. I mentioned them in a previous column. These are my UTILITY4 package, on which I will also include another superior Model 4 zapper written by a couple of our Canadian neighbors. The other is MODSCRIP. It is a POWERFUL scripsit modification program that rivals SuperScripsit, and will run on the Model I, III, and 4 (in 4-mode). It requires the Model I version of Disk Scripsit, which is fortunate for the III people, since they receive a I-version with their Model III disk. Model 4 users will have to obtain the I/III package to get the proper version of Scripsit. Anyway, to obtain either of these disks, you must send the following things: a blank disk formatted for your DOS, information telling me what format it is, a return address label, return postage, and $3 US. Enclose these in a disk mailer (home-made will do fine). Send them to David Goben, 67 Highland Road, Mansfield Center, CT 06250-1504, USA. If you want both, double everything except the mailer.

If you have an offering of PD stuff that you would like to share, write to me at the above address. Even if you would like to provide the copying services yourself, please send a copy to me for review. Those that I receive I will review for all to see in Computer News 80. What I'm looking for are quality programs, ESPECIALLY those submitted by the original author. Perhaps when I begin reviewing the disks mentioned earlier, I can include reviews of some of yours as well. By the way, what I mean by quality is not to say that they must be commercial grade (although there are more than enough PD programs that are), but that are what most people would simply call good, neat, great, or nifty. I guess USEFUL is what I'm trying to say. Shareware programs, which ask for registration fees from active users, are also welcomed, but again, preferably these should come from the original authors or their authorized representatives.

NEXT MONTH

In my next column I will include some nifty little samplings, such as how to read Model I single density disks under LS-DOS 6 without using the REPAIR utility, and, since I didn't have room this month, a program to encode and decode passwords. I'll also give a detailed review of my public domain MODSCRIP disk and the Model 4 Disk Utility disk. Until then, happy computing.

--David Goben

One of our readers tells us that the difference between a used car salesman and a computer salesman is --the car salesman knows when he's lying to you!

Our local computer surgeon suggests that if you can pick up any repair manual for your equipment, you should do so while they are still available. That way if the manufacturer, in this case Tandy, ever does drop their repair service, any good electronics repairman could with the repair manual to guide him and your description of the problem be able to fix it. Sounds like a good idea, Gary.

PROGRAM LISTING NUMBER ONE -David Goben

```
5 CLS:PRINT"Modify Model III DOSPLUS 3.5 to Boot up MODELA/III
6 PRINT"Written by David Goben -- All rights reserved
7 PRINT"To be distributed freely: NOT to be SOLD!
8 PRINT
9 HX$="0123456789ABCDEF"
10 OPEN"R",1,"MODELA/III":FIELD 1,1 AS A$
20 A=PEEK(VARPTR(A$)+1)+256*PEEK(VARPTR(A$)+2):IF A>32767 THEN
A=A-65536
30 FC=A-32:POKE FC+14,0:POKE FC+15,0
40 GET 1,2:FOR X=0 TO 7:GOSUB 65:POKE A+X,DT:NEXT
50 FOR X=&HF2 TO &HFF:GOSUB 65:POKE A+X,DT:NEXT X:POKE A+&H75,6
60 PUT 1,2:POKE FC-2,1:CLOSE 1:PRINT"DONE!":END
6          5                    R          E          A          D
A$:DT=16*(INSTR(HX$,LEFT$(A$,1))-1)+INSTR(HX$,RIGHT$(A$,1))-1:RETURN
70 '
75 DATA 00,FE,14,3E,C3,CD,F9,43
76 DATA 45,52,52,4F,52,21,00,32,49,40,21,DD,43,C9
99 '************************************************
100 'INSTRUCTIONS FOR USE
101 '
102 'First load the ROM image and boot up DOSPLUS 3.5.
103 'Next copy MODELA/III from a TRSDOS 6 disk or from
104 '  the TRSDOS 1.3 boot disk.
105 'Use MAP to insure that it has less than 5 extents
106 '  (1 is perfect).
107 'Next run this program. It will modify the boot
108 'sector to allow the BOOT ROM to find MODELA/III.
109 '************************************************
```

PROGRAM LISTING NUMBER TWO - David Goben

```
CLS
/./1INSERT TRSDOS 1.3 FORMAT BOOT-UP DISK INTO DRIVE 1
PDRIVE 0,1=0,TI=AM,GPL=6,A
COPY MODELA/III:1,:0
PDRIVE 0,1=0,DDSL=36,TSR=3,A
CLS
/./1INSERT BLANK DISK INTO DRIVE 1
COPY 0,1,,CBF,/SYS,FMT,NDMW
BASIC
10 CLEAR 1000:DEFINT A-Z:CLS:?"NEW DISK INITIALIZTION"
40 FOR X=1 TO 21:A$="SYS"+MID$(STR$(X),2)+"/SYS:1"
50 ?:?"REMOVING DATA FROM "A$:OPEN"O",1,A$:CLOSE 1:NEXT X
60 ?:?"CREATING MODELA/III FILLER":A$="MODELA/III:1"
70 OPEN"R",1,A$:FIELD 1,255 AS A$,1 AS B$:LSET B$=" "
80 LSET A$=CHR$(1)+CHR$(254)+STRING$(2,0)+"MODELA/III FILLER"
90 FOR X=1 TO 4:PUT 1,X:NEXT X:CLOSE 1
100 ?:?"APPENDING MODELA/III TO FILLER SECTORS"
110 CMD"APPEND MODELA/III:0 TO MODELA/III:1"
120 CMD"ATTRIB MODELA/III:1,INV"
130 ?: ?"REMOVING MODELA/III FROM DRIVE 0"
140 KILL "MODELA/III:0"
150 CLS:FOR X=1 TO 21:A$="SYS"+MID$(STR$(X),2)+"/SYS:"
160 ?"REBUILDING "A$"1"
```

con't next page.

```
170 CMD"COPY "+A$+"0 "+A$+"1"
180 NEXT X:CLS:CMD"S
RUN
COPY BASIC/CMD:0,:1
ATTRIB BASIC/CMD:1,INV
/./3NOW MODIFYING DISK TO ALLOW BOOT ROM AND NEWDOS OPERATIONS
SUPERZAP
DD
1,1
MOD0214
Y
K364
MOD1721
Y
K369
MOD76012D
Y
EXITPDRIVE 1,1,DDSL=17,TSR=0
PDRIVE 1,0,TSR=0
PDRIVE 0,1=0,A
CLS
/./3THE BOOTABLE NEWDOS/80 DISK IS NOW COMPLETE!
/./3PLACE THE DISK IN DRIVE 0, PRESS THE RESET BUTTON, AND
/./3HOLD DOWN THE 'L' KEY TO VERIFY MODELA/III LOADABILITY.
```

PROGRAM LISTING NUMBER THREE -David Goben

```
/./3BACKUP FOR ROM BOOTABLE NEWDOS/80 DISKS

/./1PLACE A BLANK DISK INTO DRIVE 1
PDRIVE 0,1=0,TC=42,A
COPY 0,1,,FMT,NDMW
SUPERZAP
DD
1,1
MOD0214
Y
EXIT
/./3BACKUP COMPLETE
```

PROGRAM LISTING NUMBER FOUR -David Goben

```
CLS:PRINT"************************************************************"
2 PRINT"*      FILE RECOVERY/DIRECTORY CLEAR PROGRAM      *"
3 PRINT"*     VERSION 4.4 COPYRIGHT (C) 83-88 DAVID GOBEN    *"
4 PRINT"************************************************************"
5 CLEAR 300:ON ERROR GOTO 73:DEFINT A-Z:DEFSNG W:DEFSTR F:DIM
F(7),DC(16),A,DC,DF,DR,EX,F,F1,F2,F3,F4,F5,F6,FH,FP,FR,FZ,H,H1,P!,PW,V,W,X
,XC,XD,XG,XN,XP,XS,XT,Y,Z:PRINT:GOSUB 83
6 '
7 '*** SEE IF USER WANTS RECOVERY OR CLEAR OR QUIT
8 H=0:F="":INPUT"Recover a file, Clear the Directory, or QUIT (R/C/Q)";F:IF
F=""THEN 8 ELSE F=LEFT$(F,1):IF F>"Z"THEN F=CHR$(ASC(F)-32)
9 IF F="Q"THEN END ELSE IF F="R"THEN 11 ELSE IF F<>"C"THEN 8
10 F="":INPUT"Drive to Clear (0-7)";F:IF F=""OR LEN(F)>1 THEN 10 ELSE IF
```

con't next page

```
F<"0" OR F>"7" THEN 10 ELSE F3=F:GOTO 26
11 '
12 '*** PICK UP AND CHECK FILESPEC
13 F1="":PRINT"Key in COMPLETE filespec for file to recover":LINE
INPUT"=======> ";F1:F6=F1:IF F1=""THEN 13 ELSE FOR X=1 TO
LEN(F1):F2=MID$(F1,X,1):IF F2>"Z"THEN F2=CHR$(ASC(F2)-32)
14 MID$(F1,X,1)=F2:NEXT X:IF LEFT$(F1,1)<"A"OR LEFT$(F1,1)>"Z"THEN 13
ELSE EX=INSTR(F1,"/"):DR=INSTR(F1,":"):F3="0":PW=INSTR(F1,"."):IF DR<>0
THEN F3=MID$(F1,DR+1):F1=LEFT$(F1,DR-1):IF LEN(F3)<>1 THEN 13 ELSE IF
F3<"0"OR F3>"7"THEN 13
15 IF PW<>0 THEN F1=LEFT$(F1,PW-1)
16 IF EX=0 THEN F2=""ELSE F2=MID$(F1,EX+1):IF LEN(F2)>3 OR
LEFT$(F2,1)<"A"OR LEFT$(F2,1)>"Z"THEN 13 ELSE F1=LEFT$(F1,EX-1)
17 IF LEN(F1)>8 THEN 13
18 '
19 '*** GENERATE HASH CODE FOR HIT SECTOR
20 PRINT".";:F4=F1:IF LEN(F1)<8 THEN F4=F1+STRING$(8-LEN(F1),32)
21 F5=F2:IF LEN(F2)<3 THEN F5=F2+STRING$(3-LEN(F2),32)
22 F=F4+F5:H1=0:FOR X=1 TO 11:H=ASC(MID$(F,X,1)):H=((H OR H1)-(H AND
H1))*2:IF INT(H/256)=1 THEN H=H-255
23 H1=H:NEXT X:IF H=0 THEN H=1
24 '
25 '*** SET UP DISK BUFFER
26 PRINT"..";:OPEN"R",1,"DIR/SYS"+FP+":"+F3:DD=LOF(1)
27 FIELD 1,32 AS F(0),32 AS F(1),32 AS F(2),32 AS F(3),32 AS F(4),32 AS
F(5),32 AS F(6),32 AS
F(7):W=PEEK(VARPTR(F(0))+1)+256*PEEK(VARPTR(F(0))+2):W=W+(W>32767)*655
36:DCB=W-DF:ON ERROR GOTO 74:GOSUB 77
28 '
29 '*** FIND FILESPEC IN DIRECTORY
30 X=2:IF F2=""THEN F5=F1+":"+F3 ELSE F5=F1+"/"+F2+":"+F3
31 PRINT".";:Z=0:GET#1,X+1:IF H THEN 34
32 IF(ASC(LEFT$(F(Z),1))AND 16)=0 THEN LSET F(Z)=STRING$(32,0)
33 Z=Z+1:IF Z<8 THEN 32 ELSE X=X+1:PUT#1,X:IF X<DD THEN 31 ELSE
PRINT:PRINT"Directory Cleared!":GOSUB 80:GOTO 72
34 IF MID$(F(Z),6,11)=F THEN 38 ELSE Z=Z+1:IF Z<8 THEN 34 ELSE X=X+1:IF
X<DD THEN 31
35 GOSUB 80:PRINT"Filespec "F5" not found!":GOTO 72
36 '
37 '*** FILE FOUND. RECOVER FPDE (AND FXDE'S)
38 IF(ASC(LEFT$(F(Z),1))AND 16)>0 THEN PRINT"File is ALREADY
active!!!":GOSUB 80:GOTO 72 ELSE PRINT"Found "F5" in
directory...";:FR=CHR$(16):FH=""
39 FZ=F(Z):MID$(FZ,1,1)=CHR$(ASC(MID$(FZ,1,1))OR ASC(FR)):LSET F(Z)=FZ
40 FH=FH+CHR$(Z*32+X-2) 'DEC CODE FOR HIT TABLE
41 PRINT".";:PUT#1,X+1
42 '
43 '*** PICK UP EXTENTS AND DEC CODE
44 PRINT".";:X=23
45 XN=ASC(MID$(F(Z),X,1)):IF XN=255 THEN 57 ELSE IF XN=254 THEN 49
46 X=X+2:GOTO 45 'SCAN NEXT EXTENT
47 '
48 '*** HANDLE AND RECOVER FXDE'S
49 Z=ASC(MID$(F(Z),X+1,1))
50 X=(Z AND 7)+2 'GET SECTOR IN DIRECTORY
51 Z=(Z AND 224)/32 'GET ENTRY NUMBER
52 GET#1,X+1
```

con't next page

```
53 FR=CHR$(144) 'SET TO FXDE
54 GOTO 39
55 '
56 '*** RECOVER POSITIONS IN HIT SECTOR
57 PRINT".";:GET#1,2
58 FOR X=1 TO LEN(FH) 'COUNT OF FPDE & FXDE'S
59 POKE W+ASC(MID$(FH,X,1)),H 'PUT HASH CODE FOR FILE
60 NEXT X:PUT#1,2
61 '
62 '*** RECOVER SECTORS OF FILE
63 GOSUB 80:OPEN"R",2,F6:FIELD 2,128 AS A1$,128 AS A2$
64 OPEN"O",1,F6:CLOSE 1:OPEN"O",1,F6
65 PRINT:PRINT"Recovering"LOF(2)"sectors..."
66 FOR X=1 TO LOF(2):GET 2,X:PRINT X;
67 PRINT#1,A1$;:PRINT#1,A2$;:NEXT X:PRINT
68 CB=PEEK(VARPTR(A1$)+1)+256*PEEK(VARPTR(A1$)+2)-32
69 IF CB>32767 THEN CB=CB-65536
70 POKE DCB+8,PEEK(CB+8):POKE DCB+12,PEEK(CB+12):POKE
DCB+13,PEEK(CB+13)
71 CLOSE 2,1:PRINT"Successfully recovered "F5"."
72 PRINT@960,"";:INPUT"Press ENTER to continue";:GOTO 1
73 PRINT:PRINT"ERROR"ERR"IN LINE"ERL:RESUME 72
74 RESUME NEXT
75 '
76 '*** SUBROUTINE FOR SETTING SECTOR WRITES FOR SYS FORMAT
77 POKE PT,VS:RETURN
78 '
79 '*** RESET WRITE FORMAT TO NORMAL
80 POKE PT,VR:POKE DCB-2,0:CLOSE 1:RETURN
81 '
82 'FIND OUT WHICH OPERATING SYSTEM WORKING UNDER
83 A$="0123456789ABCDEF":T=PEEK(&H4647):A=T/16:B=T-A*16
84 A$=MID$(A$,A+1,1)+MID$(A$,B+1,1)
85 DF=32:Y=INSTR("//06/02/4C/C5/CB/E5",A$)/3
86 IF Y=0 THEN PRINT"OPERATING SYSTEM NOT SUPPORTED!":END
87 ON Y GOSUB 89,90,91,92,93,94
88 VR=PEEK(PT):VS=VR+1:RETURN
89 PT=&H4765:FP=".LDOSOKVS":RETURN 'LDOS 5.1 MODEL I
90 PT=&H4765:FP=".LDOSOKVS":RETURN 'LDOS 5.1 MODEL III
91 PT=&H4764:FP=".SYSTEM":RETURN  'LDOS 5.3 MODEL III
92 PT=&H4641:FP="":RETURN      'NEWDOS80 V2 MODEL I
93 PT=&H45EC:FP="":RETURN      'NEWDOS80 V2 MODEL III
94 PT=&H4624:FP="":RETURN      'NEWDOS80 V1 MODEL I
```

PROGRAM LISTING NUMBER FIVE - Jack Harvey

MODEL 4D PDRIVE SPECS - FOR NEWDOS/80

```
PDRIVE,Ø
0*   TI=D,TD=G,TC=40,SPT=36,TSR=3,GPL=2,DDSL=17,DDGA=2
1*  TI=D,TD=G,TC=40,SPT=36,TSR=3,GPL=2,DDSL=17,DDGA=2
2*  TI=A,TD=E,TC=40,SPT=18,TSR=3,GPL=2,DDSL=17,DDGA=2
3*  TI=AM,TD=E,TC=40,SPT=18,TSR=3,GPL=6,DDSL=17,DDGA=2
4    TI=AM,TD=E,TC=40,SPT=18,TSR=3,GPL=6,DDSL=17,DDGA=2
5    TI=A,TD=A,TC=40,SPT=10,TSR=3,GPL=2,DDSL=17,DDGA=2
6    TI=AK,TD=E,TC=35,SPT=18,TSR=3,GPL=2,DDSL=17,DDGA=2
7    TI=A,TD=C,TC=80,SPT=20,TSR=2,GPL=2,DDSL=17,DDGA=2
8    TI=D,TD=C,TC=80,SPT=20,TSR=3,GPL=2,DDSL=17,DDGA=2
9    TI=A,TD=G,TC=80,SPT=36,TSR=2,GPL=8,DDSL=17,DDGA=2

NEWDOS/80 READY
```

PROGRAM LISTING NUMBER SIX - Jack Harvey

CONVERSION DISK PDRIVE - MODEL 4D - NEWDOS/80

```
PDRIVE,Ø
0*  TI=D,TD=G,TC=40,SPT=36,TSR=3,GPL=2,DDSL=17,DDGA=2
1*  TI=A,TD=E,TC=40,SPT=18,TSR=3,GPL=2,DDSL=17,DDGA=2
2    TI=A,TD=E,TC=40,SPT=18,TSR=3,GPL=2,DDSL=17,DDGA=2
3    TI=AM,TD=E,TC=40,SPT=18,TSR=3,GPL=6,DDSL=17,DDGA=2
4    TI=AM,TD=E,TC=40,SPT=18,TSR=3,GPL=6,DDSL=17,DDGA=2
5    TI=A,TD=A,TC=40,SPT=10,TSR=3,GPL=2,DDSL=17,DDGA=2
6    TI=AK,TD=E,TC=35,SPT=18,TSR=3,GPL=2,DDSL=17,DDGA=2
7    TI=A,TD=C,TC=80,SPT=20,TSR=2,GPL=2,DDSL=17,DDGA=2
8    TI=D,TD=C,TC=80,SPT=20,TSR=3,GPL=2,DDSL=17,DDGA=2
9    TI=A,TD=G,TC=80,SPT=36,TSR=2,GPL=8,DDSL=17,DDGA=2

NEWDOS/80 READY
```

WATCH YOUR ZERO's & "O's"

This is a ZERO....00000000000.....(oval as in GOOSE EGG!)
This is an OH, OH....OOOOOOOO.....(round as in OH-OH!)

OPEN FORUM

Q: I enjoyed reading Frank Gottschalks article on "MODEL 4 MEMORY". It was a little lengthy - sorry, Frank - but tells of the kind of experience we all run into. Before I go through something like it with my plan to install an 8mhz (!) speed-up kit, I would like for someone who has done it to share his/her experience with me. Sometime back I purchased an 8mhz speed-up kit from SEA TRONICS in Holland, a location, that I can not readily call on the phone for help. The kit consists of a printed circuit board with a fast Z-80 (Z-80H ?) and other things on it and lots of instructions, that are hard to figure out for someone who doesn't work with computer innards a lot. Above all, it doesn't answer the question whether it will work with a hard drive. It requires cutting into the Model 4's circuitry, removing pins and capacitors, installing resistors, etc. Being quite handy, I am not afraid of doing that. I did my own 128k upgrade, also installed the needed 120ns memory chips already. I am afraid, however, of not being able to get the timing circuit back in order. This needs to be done, but I don't understand it and therefore like to get to know someone, who has done it before and can share his or her experience with me and other interested readers.
Klaus Meinssen
124 Fairway Avenue
Verona, N.J. 07044

Q: I would like to know if anyone knows if a program that Tandy used to catalog called Mechanical Engineering Solverpack for the TK Solver Model 4. Cat #26-1633 is still available from any source, or a program like it that is compatible for use with the TK Solver program that I have.
G. R. -Casper, WY

Q: How can I make my 100K byte mini disk drive 200K or more. I know the 3-1/2" disks can hold up to 750K.
T. H. -Phoenix AZ

A: This is not necessarily true. Not all 3-1/2" drives are alike. Just like 5-1/4" drives, there are single-density drives and single-sided drives. The original 3-1/2" drives were single-sided, single density and had only a 40 track fount, instead of the newer 80 track, double sided, quad-density drives. Thus a single track on one of these disks holds as much as 4 of yours.
-D.G.

Q: Tell me how to write with Scripsit Pro in two columns on a single page.
H. G. Martinsville GA

A: Page 135 of your Scripsit Pro manual tells you how to print two columns.
-D.G.

SuperSCRIPSIT has the instructions on page 47 to 50 of the SuperSCRIPSIT Figures Book, the training manual which came with the cassette in it, (the spiral bound reference manual does not cover it except for top of form command) for column printing on the same page where you offset the margins on page two which becomes the second column on a page one, using the top of form command to reverse the paper feed in the printer to bring it back to line one at the top of the paper, it then prints the second column on the same page. Your original margin should be set to the width of the column that you want print.

You can also use your block action to print the next page using column 40 or so for the print start on the right hand side of the sheet. You must manually roll the paper back to the first line at the top of the page. And yes for you leSCRIPT fans we know that the latest version of leSCRIPT supports two column per page printing with out all the fuss. But that's another story and another hundred bucks if you already have an investment in one word processor that cost a hundred bucks plus.
-Ed

Q: I read David Gobens DATE/63/FIX -02/08/88- Patch to LS-DOS 6.3 very close. I attempted the patch called DATE63/FIX, as listed. The patch had taken, but it didn't do what it was supposed to do. The date on the booting date remain the same, no matter how many times I took it out of the machine and ran other programs. The next day I could not enter any date.
A. T. -LOMPOC, CA

A: It wasn't intended to change the disk date, but simply to make date entry easier. The patch works exactly as I documented it.
-D. G

Q: I have a TRS-80 Model 4 with a Epson FX-80 printer which works just fine. I also have a Silver Reed EX400 (daisy wheel) printer which I cannot get to unction properly (it always compresses the printing) with the Model4 for some reason. It works fine with my Commodore 64+ interface (i.e. no compression problem). I have sought help through the usual channels but still cannot figure out why the EX400 compresses. Can you or a reader help?

A: It may be because of the control codes being sent to the printer from the Model 4. Have you tried sending the codes or "normal" printing to see if that clears it up? -D. G.

Q: Can you provide some information on the use of the Video SVC? (Model 4 / 128K / LS-DOS 6.3) As I've done for my Model 3, I'd like to write a memory resident /CMD file to allow some specific ASCII characters to be sent to the video by assigning certain key combinations to each character (e.g. Shift plus A send a [bracket], this will allow sending these characters from within application programs. Thanks!
A. P. -Pittsburg CA

A: See my references to the "Model 4/4P/4D technical reference manual" and "The Programer's Guide to LDOS/TRSDOS Version 6" in Vol 1. No. 3, they are the best sources for I/O information.
-D. G.

Q: How can I get my printer to print special character codes, while in a program that does not have special character print codes written into it that I want to use, and the key board does not show.
-We have recieved several letters with this type of question.

A: There are as many ways to send special character codes to your printer, both from within an application program and from outside an application program, as there are printers, and application programs. The easiest way is to set these special codes within the application program, by using the "user determined print control keys" found in most application programs. The following is submitted by Jane A. Layman and may have use in appending to other documents created by other application programs, or appended to other application programs themselves. This will print special characters if your printer has the symbol capabilities. -Ed

ASCII CHARACTERS WITH SUPERSCRIPSIT
by Jane A. Layman

I developed a technique for incorporating printable ASCII characters into SuperSCRIPTSIT documents even when that character cannot be generated from the keyboard while in SuperSCRIPSIT. These are the ASCII characters requiring use of the <CLEAR> key to generate. As SuperSCRIPSIT users know, SuperSCRIPSIT reserves the <CLEAR> key to generate the printer code symbol.

The steps involved in incorporating printable ASCII characters into a SuperSCRIPSIT document are as follows.

1. Use any utility/editor that will let you generate these characters and save them in a ASCII file. TED, which comes with LS-DOS 6.3 does nicely. Create a file that contains the ASCII characters in which you are interested, e.g, brackets, braces, underline, etc. and save it to disk. [For Reasons I do not understand, the DOS BUILD COMMAND will not work.]
2. Open a SuperSCRIPSIT document in which you wish to place some or all of these characters. You can type in some text or not as you wish.
3. Quit the current SuperSCRIPSIT document and select the ASCII conversion utility from the SuperSCRIPSIT menu. When you are asked for the name of your SuperSCRIPSIT document, type in the name of the document you just quit. At the ASCII document prompt, type in the name of the ASCII file you created.

What SuperSCRIPSIT will do is APPEND the ASCII document to the SuperSCRIPSIT one and put you back in the SuperSCRIPSIT document. Your ASCII characters are at the end of your document and can be moved via SuperSCRIPSIT block commands to any place you desire and as many times as you desire.

The delete command will remove any characters you don't want. A string of underlined characters is especially handy when typing tables.

Depending on what SuperSCRIPSIT finds in your Character/ASCII file, it may become confused and decline to append it to an existing SuperSCRIPSIT document, e.g., if the string of underlined characters is longer than than the SuperSCRIPSIT document tab line. Pressing <BREAK> removes any error message flashing on the screen and returns you to the SuperSCRIPSIT main menu. At that juncture, v. 1.02 of Model 4 SuperSCRIPSIT has never failed to load my existing document.

While this strategy may seem a bit cumbersome at first, it's advantages become apparent when you want to change the pitch of a document and don't want go back and reprogram user print codes or substitute different print codes with-in the document to accommodate the new pitch. Also, the meaning of user print codes in archived SuperSCRIPSIT documents no longer gets lost when you change print code key assignments in the SYSTEM/CTL file. And, when converting your SuperSCRIPSIT document to ASCII, the printable ASCII characters you imported appear as themselves. Finally, for those occasions when you want justified print out when more than one user print code appears on a single line, e.g., the [bracketed] word, or this word in {braces}, you can do so with this strategy.
-Jane A. Layman
20165 Davidson Road
Waukesha, WI 53186

With 20 possible print command lines using the SYSTEM print control commands in SuperSCRIPSIT, it has plenty of control room for the average user. We have ours set to do the following. Change from 10-12-17 pitch on the dot matrix printer, and the ASCII Character Codes for , ©, ®, ™, Ø, [,], {, }, ½, ¼, ¢, ~,
all are printed on the daisy wheel and the dot matrix printer with no changes to the set up system utility. With two command lines left over. It seems to us that unless you are writing in a special foreign language or a highly technical paper, that the 20 user commands would be more than enough for the average user. However Jane's suggestion does have merit, if your application demanded it. Especially since the conversion from SuperSCRIPSIT text to an ASCII file will not carry the special print codes forward and you will have to redo the document when you return it from the ASCII file that you saved.

Check your printer's manual ASCII Character Code table, to verify what characters are available on your printer. And if that throws you off, send us a copy of your manuals table and we will attempt to give you a hand. -Ed

Q: I am interested in doing some machine language programming, but suffer from the "lackaknowlege syndrome". Would you please discuss what is machine language, what is an assembler and/or editor, and how they interact. Also, I would not know where or when to purchase such a program or recognize one if it slapped me in the face.

Without giving up an arm and a leg for such a program, can you make some suggestions on where to go for a "Good" machine language program, with documentation.
M. B.- Nevada City, CA

Radio Shack has (or had) an excellent package called "Assembly Language Tutor". It is your best source. Z80 manuals are getting harder to find, except perhaps in Japan where Z80 based computers are the rage. -D.G.

Assembly Language Tutor (Model III) Cat. #26-2018 is in Tandys 1986 software catalog for $69.95, (Model I) Cat. #26-2017 for $39.95, but disappeared from their catalog for 1987 and 1988. So now's your chance ~ all you machine language buffs to get into the act, and let us know where someone would begin today. Or if you are now an expert, maybe you would be willing to part with your 26-2017 or 2018? -Ed

Q: I have a Model 4 TRS-80 computer with Epson MX-80 printer. When I got the upgrade of SuperSCRIPSIT I lost the condensed mode of the letters. I wonder why this is? My old version still works good with all the various type styles. I know of no benefits that the new version brought to me.

Another question: I have a Pakratt 232 and have not found the proper software to use on my Model 4 to operate on RTTY properly. My system disk has programs to operate but not to move data from device

to device. Any help would be appreciated.
A.B.H -Arab, AL

A: Try using the printer driver from your previous version of Model 4 SuperSCRIPSIT, as the printer drivers between versions are compatible. -D.G.

Q: I tried entering David Gobens DATE63/FIX (page 8 Vol 1 No.2 of CN80) using LSIDOS rather than SYSTEM. I got told that the F10,4A=ØØ ØØ ØØ ØØ does not match up. I did get SYSJCL/FIX to enter properly saying it had patched 6 lines. Why only 6 lines.

I do not like word processors since they typically refuse to allow me to control whether the cursor blinks or not, or it is too expensive. I get told all sorts of rationalizations as to why this word processor or that word processor doesn't allow for such cursor control, so I quit asking.
R. B. L. - Yakima, WA

A: For DATE63/FIX be sure that you don't have "ohs" in place of zeros. All current versions of LS-DOS have Ø at these locations.

Why the only 6 lines in SYSJCL/FIX is because the other 6 "Find" lines do not count as patches.

Blinking Cursor, my MODSCRIP program which will be reviewed in Vol 1 No. 6, may be your answer. It also gives you the option to have a blinking or solid cursor, plus dozens of fantastic editing and printing commands. -D. G.

Q: We have had several letters from teachers who were asking about methods of keeping student grades, as well as those who were looking for a program that would print their spreadsheets sideways. We think that the following letter will answer several of those types of questions from our readers.

A: Mr. Slater with Computer News 80 invited me to write to you in regards to "LONG & LOUD" which we are using with a 128K Model 4 and LS-DOS 6.3. My wife is a 10th-grade English teacher, and we got "LONG & LOUD" primarily for its ability to print spread-sheets sideways. With VisiCalc, she is able to maintain grade-books for each of her classes with running averages and weighted scores. As long as it is kept current, VisiCalc-- and LONG & LOUD -- do a good job for us.

The manual that came with my "LONG & LOUD" was for its predecessor, "TWIST & SHOUT". But included with it were sheets that "TWIST & SHOUT" is now "LONG & LOUD", which has several improvements and does some things in different ways. The sheets also contained instructions on how "LONG & LOUD" should be installed with TRSDOS.

Version 2.11 corrects the bugs that were in version 2.00, for instance, I was using a DMP-120 printer at the time, but when I installed "LONG & LOUD" to recognize the DMP-120, I got garbage. So, on Spectre's advice, I had to specify another printer, which made printing a little less efficient, but it worked. In addition, "Long & Loud" dropped the last character off each line in a sideways spreadsheet, and wouldn't toggle the printer from graphics mode back to normal printing after the job had been completed; all I could do was reset the printer. After several letters -- and phone calls -- to Spectre Technologies (I communicated with a gentleman named Dave, who was very concerned and handled the matter intelligently), I ultimately received a free update to version 2.11 with apologies from the company; it works almost perfectly.

Version 2.11 has its own instruction sheet and has different software for installing "LONG & LOUD".
H. A. B. -Jacksonville, FL

"LONG & LOUD" is a program published by
David Grenewetzki
Spectre Technologies, Inc
22458 Ventura Blvd. Suite E
Woodland, California 91364
$34.95 for Model4 under TRSDOS, LDOS or LS-DOS plus $4.00 S & H.
1-800-628-2828 (Ext. 918) or 818-716-1655

"VisiCalc" is now "VisiCalc Enhanced" for the Model 4 Cat. #26-1520 - $99.95 in the Tandy 1988 catalog.

LETTERS FROM READERS

Thanks for running my query about formatting NEWDOS80 ver. 2 to run on my new Model 4D.

Mr. Terry of Mobile, AL called and gave me the solution, which I would like to pass on to anyone who is having the same problem. I am enclosing a screen print of the P drive setup for the 4D, but it is really very simple (once you know how). <see program listing number five. -Ed>

On the Model 4D, copy Newdos from a single-side to a double-side disk (it will run okay on the 4D), then boot it up, making sure that it is not write protected, and type in "PDRIVE,Ø". THE SCREEN SHOULD Show "TI=A,TD=E,TC=40,SPT=18, TSR=3,GPL=2,DD SL=17,DDGA=2".

Type in "TI=D,TD=G,SPT=36,A". All other parameters remain the same, so you don't have to type them in. Hit "ENTER" and the machine will show you the changes in Pdrive. The "A" tells it to write the new specs to the disk. You now have to re-boot to make it recognize a double-sided disk in drive 1.

To finish the job, take the disk from drive 1 and install it in drive Ø and type "PDRIVE, Ø,Ø,TI=D,TD=G,SPT=36,A" hit "ENTER" and re-boot. You now have a disk with both drives set up to read double-sided disks.

I had a lot of Newdos files to put on double-sides, so I set up a "Conversion" disk with the Pdrive set for single side in drive 1 and double side in drive Ø. <see program listing number six. -Ed> When I want to copy I put the single in drive 1 and the double in drive Ø and type in "Copy,1,Ø" and away it goes.
-Jack Harvey, Hampton GA

As a recent subscriber to your publication I cannot begin to express my appreciation. I am one of those diehard TRS-80 Model IV fans. As long as my machine can be fixed, I will never change.

I just wanted to pass this along to you in case you wish to pass it along to your readers. Recently I converted my 6 digit account version of Computronic's Versaledger II financial program, over to native Mode IV mode. (serial #030987-12).

This particular version was written in Basic and came with the Dosplus 3.4 operating system. Although I am not much of a programmer, I was able to convert the entire program to Model IV basic under TRSDOS. I would be glad to share what I have done with anyone who currently owns Versaledger II. Please send a backup copy of your Versaledger II program diskette along with $2.00 US to cover postage and handling to:

Mr. Jeff Salomon
205 Fourth Ave.
Haddon Heights, NJ 80035

Upon receiving your diskette, I will reformat it under TRSDOS and then copy the converted programs to your diskette. Be aware that there are still a few bugs in this converted basic program, as I said, I am not that good a programmer. In fact, since basic's memory availability is lower in 6.2 than it was in DOSPLUS 3.4, I have run into some "Out of Memory" problems while using the converted version. By using basic's "erase" statement you may be able to solve this problem, but I really don't know. In any case the majority of the work is done.
-Jeff Salomon

(Editors Note: You will please note that Mr. Salomon's offer is to assist those legitimate owners of Versaledger II from Dosplus 3.4 to TRSDOS and is not an offer to provide the program to non-registered owners. This is the proper way to assist current owners of programs and is greatly appreciated, not only by those who do own Versaledger, but by those of us who take on a warm glow in the knowledge that there are users out there that are willing to take the time and effort to help their fellow users when they can.)

I received my first issue [Volume 1 No. 4] and in reply to page [19] am sending installation instructions on replacing single sided [180K] drives with double sided [360K] drives.

We have installed double sided drives in all

of our Model IV & 4P computers. The TEAC FD-55B drives [ours came from Aerocomp, in Dallas, Tx] give the best performance by far. As the Model IV's have so many different drive cable configurations, we have found that it is best to make cable assemblies on the spot.

The following procedure now takes 15 minutes although the first installation took over an hour.

1.>Disassemble computer.

2.>Materials Required:

2 ea. 34 pin card edge connectors
RS pt # 26-1565

1 ea. 34 pin female plug RS pt # 26-1524

1 ea. 36 pin cable [peel off 2 strands]
RS pt # 278-774

2 ea. TEAC FD-55B 360K double sided drives.

3.>Make up cable with #34 pin positions facing to right.

4.> Program drives as follows:

Drive Ø set to DØ, U! remove RG
Drive 1 set to D1, U! remove RG

5.>Remove terminal resistor #E3317 from each drive, it is black, by card edge connector.

5.>Reassemble computer.

J.H.B. Assoc. -Houston, TX

(Editors Note: Refer to the two articles in the beginning of this issue. We had no need to remove any terminal resistors.)

Thanks a lot for your quick response in sending me the Computer News 80. I am a new owner of an old TRS-80 Model One with three disk drives. I have been a ham radio operator for quite some time and spend a lot of time as a volunteer radio operator for the Navy-Marine Corps military affiliate radio system (MARS). I really want to have my Model 1 to be able to operate Radio Teletype (RTTY) so I can use it on the MARS circuits.

I have been told that I need an RS 232 interface which I have been unable to locate. I have a copy of a RTTY program that is used for MARS but have been unable to duplicate or ever run the disk. Someone said that maybe I need a double density modification for the disk drives for it to run, is this modification still around.

The last question I have is about using the "Backup" program. I just bought a TRSDOS REV 2.3 disk. I put in a blank disk, format it, then when I try to make a copy using the "Backup" program it gives me an error on the screen that says "BACKUP REJECTED, DISKETTES CONTAIN DIFFERENT PACK ID'S". When I got this machine I did not receive any manuals with it so maybe I'm making an operator error. I got a copy of the TRSDOS commands from another person but can't figure out where I am going wrong.
D. R. J. -Middleburg, FL

(Editors Note) I am sure that some of your fellow ham radio operators can help you out as we have several subscribers who have told us that they either are using (RTTY) or would like to install it too. Lets hear from someone who know his way around in the radio computer connection, and we will soon put you in touch with D.R.J and others.

We are not sure, but if you call Tandy National Parts (817) 870-5600 and order a manual for your version of TRSDOS for the Model 1, they tell us that they keep manuals available for five years after they are taken out of the catalog. Incidentally, last month we reported that you had to call Tandy National Mail Order to place an order for parts, after calling National Parts for the correct number. But it seems now that National parts will take the order using a credit card number. We had to place an

order for some card holders for our DWP410, and the parts arrived within one week. It took the local RS store 3½ weeks to get the same part for us. -Ed

---

In answer to J. H. -Hampton GA's question on configuring his NEWDOS-80 to run on both sides, I present the following. I don't know if NEWDOS-80 V2 will run in Model 4 mode so this applies only to Model 3 mode.

1.> Place a virgin disk in Drive 1 and NEWDOS/80-V2 in Drive Ø in Model III mode Boot it.

2.> Enter the command:

PDRIVE:Ø,1,TI=A,TD=G,TC=40,SPT=36,TSR=Ø,GPL=6,
DDSL=17,DDGA=2,A

Make sure that there is no space between PDRIVE and :Ø - Ø stands for system drive whose control information is being changed; 1 stands for the physical drive of the list of 10 drives represented in the control information; TI is for the disk interface (for your Model 3, it is A, it might be different for Model 4D in 3 mode);TD is drive spec. and is G for 5-inch DS/DD; TC is the number of tracks (cylinders); SPT means sectors per tract which is twice that for single sided or 36; TRS is track stepping rate (Ø is 5 msec (normal for Mod 3); GPL is granules per lump and for NEWDOS/80 V2 MOD 3 is 6; DDSL is disk directory starting lump and 17 is OK; DDGA is disk directory granule allocation and 2 is OK (if you want more than 62 files on a data disk use something higher than 2); and finally A allows the control information to be updated immediately so that a reset (Re-Boot) is not required.

Once the PDRIVE has been set, issue this command:

COPY :0 to :1,,FMT,NDMW,CBF

Watch out for those spaces and commas!

The current date may be placed between the first two commas if you desire but don't leave out a comma if the date is not placed in the command.

FMT means Format; NDMW means No Disk Mount Waits; CBF means Copy by File. In addition ",CFWO", check file with operator may be used to select which files are copied.

Don't forget to change back your original PDRIVE specs. on the source disk. The easy way to do that is PDRIVE :Ø,1=,A

Good luck.
M. S. -Sacramento, CA

(Editors Note) This letter as with all replies to reader questions was forwarded to J. H. -Hampton, GA as soon as it was received and a post card was sent to M.S. in -Sacramento CA at the same time to inform them of who their letter was being forwarded to. And because we feel that the information might be useful to others have published M.S's letter as well. -Ed.

I'd like to see some articles about LeScript, which is a lot more trouble-free than SuperSCRIPSIT. But there is a problem that I'd like to share with readers of CN80, hoping that a solution is in the offing. Also, I would like to share some experiences.

Although I'm using LS-DOS 6.3, my version of LeScript, 1.68 can't properly show 1988 and beyond in it's directory; 1988 is read as 1980. I wrote Anitek about this, and it responded that only its new version, 1.8, does and they do not plan to offer a patch for earlier versions. The problem with acquiring 1.8 is that it is a much more sophisticated version, with an on-line spelling checker with windows. It has to have a minimum of 128K of memory to be usable and needs an additional memory board or hard disk to run efficiently. Also version 1.8, being a major update, still has bugs; there is some crashing and garbling. I know this because Anitek sent me a copy by mistake.

So that brings me back to 1.68: Are any of your readers working on a patch that will allow the LeScript-generated directory to show 1988 and beyond correctly?

I would also like to share with your readers what I included on your questionnaire when

I took out a subscription to CN80; I have an Alpha Products clock-and-calendar card that simply plugs into the rear of my Model 4. When LS-DOS boots up, it reads the date and time and goes straight into whatever program the system disk is AUTOed to bring up. The card, which runs off a watch battery, is one of the best investments I ever made for my Model 4, besides bringing memory to 128 K and adding drives 2 and 3. I strongly recommend the card; it especially makes sense with advent of LS-DOS 6.3, which posts the time as well as the date of filing. Alpha supplies a patch so the system disk will look for the card boot-up. It also has a file, run through BASIC, to set the time. Alpha's documentation isn't very good; it doesn't tell you that you must select the 24-hour time optio vs. 12-hour, for the Model 4 and that many programs on its distribution disk aren't meant for the Model 4 or for LS-DOS 6.3. The card can be made to work in Model III mode, although I haven't bothered. Even though I have a lot of Model III material, most of it is educational.

I also have a MicroStuffer printer buffer from Supra Corporation. Although the Model 4 in Model 4 mode allows memory to be reserved for printer spooling, I usually need the memory, especially for VisiCalc. I've been reluctant to add a memory board, since I have a service contract and I'm not convinced all the bugs are out of these boards.

Has it occurred to you that most of the products I've cited are non-Radio Shack? A lot of people think that the Model 4 is a captive to Radio Shack programs and peripherals. It's been only since the advent of the MS-DOS line that Radio Shack has been willing to recognize that non-Radio Shack products exist. See the list of addresses below.

Take LeScript for example. With LeScript it is very easy to use characters not found on the keyboard. I also like the uses it makes of the function keys, some of which are all but undocumented. In addition, about anywhere the LeScript manual calls for use of the <clear> key in tandem with another key, <control> can be used instead. Pressing <control> with <F2> for example, lets type come out underlined as you go. With LeScript, underlined type actually is underlined on the screen. Also, paragraphs can be indented with <F3> rather than with specified <control><K>, thus emulating typewriter finger positioning, and you can go into insert mode with <F2> as well as with <control><I>. Anitek says it hasn't documented some of these function-key uses because they may change from version to version.

My wife and I look forward to using our Model 4 for years to come.
H. A. B. -Jacksonville, FL

Anitek Software Products
PO Box 361136
Melbourne, Florida 32936

Alpha Products
242 West Ave.
Darien, Connecticut 06820

Supra Corporation
1133 Commercial Way
Albany, Oregon 97321

(Editors Note) In keeping with what one reader wrote "I would like to see software and hardware reviews by users, not by reviewers.". We welcome readers letters letting us know what they are using and what they like and don't like about programs and hardware. It surely will help others make the decisions when they come to buy more programs and upgrades for their equipment.

In regards to the {Questionnaire} mentioned; our subscription order blank that was mailed with sample orders and phone orders contained a form for letting us know what computers and systems set-ups our readers have, so that we could better relate to their needs. If you were one of the great people that just sent us an order from our ad in 80 Micro or from just hearing about us, you may not have received our questionnaire, if you didn't just drop us a note telling us what computer you are using, what programs you are currently using, and what printers and other system equipment you have. Or drop us a note and we will mail the questionnaire blank to you.

It really helps, because when some of you write to us you sometimes forget to give us all the details about what you are using.

This way we can look up your record and assume you are referring to the printer that you told us you were using, etc.

One thing that many readers who write fail to mention when referring to what one word processor program will do over an other is what type of printer they are using. It does make a great difference between the results you can get using a daisy-wheel vs. a dot matrix printer or a laser printer. And there are over 1,000 and 1 printers being marketed today. A small daisy wheel printer will not have the number of characters on its wheel that a large commercial daisy wheel printer has, and thus will not be able to utilize a given word processing program to the degree that someone else could produce using another printer. This is all thoughts for future articles on printers and what they will do. For example a dot matrix printer can do a lot of fancy printing that daisy wheel printers were not designed for, but unless you get a very expensive dot matrix the quality of print is not good enough to become commercially acceptable, especially in copying for printing press reproduction. But they are a lot of fun for a great many other things that do not require commercial reproduction. Dot matrix printers are the only way to go for rough draft and large data printing. -Ed.

(Editorial comments are normally on the front page, but were bumped to the back page due to the last minute news of 80 Micro not publishing any more. -Ed)

EDITORIAL COMMENTS

We are getting more and more letters from readers and many who are sending articles and programs. Don't give up on hearing from us either in this publication or directly. We are still swamped with mail, but don't let that stop you from writing to us. We soon hope to be on top of things and to be over the hump in getting everything organized for the publishing of CN80.

Our publishing three state-wide construction related weekly publications and this monthly is quite a challenge, but we hope to be a meaningful help to all the TRS-80 users for a long time to come.

One comment I would like to mention again and that is we are totally subscriber supported, yes we have some advertising for which we are grateful, but that doesn't pay all the cost of the publication. Even though we are trying to find suppliers of hardware, program developers, and distributors, most of the suppliers have given up on the TRS-80 market. And of course there will be no new software developed for this market, unless it is done by those who are loyal users of the TRS-80 machines for the mutual benefit of all the TRS-80 users. That is why we ask that you support those who are willing to continue to support you and your chosen equipment.

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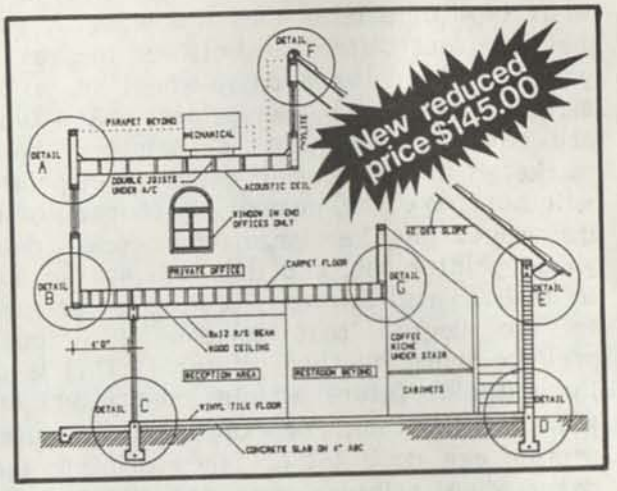

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Can we talk? CP/M vs TRSDOS

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When the time comes to move up to another computer it will almost certainly use MS-DOS. That's when CP/M users get a pleasant surprise. Since MS-DOS was a derivative of CP/M it operates in almost the same manner. Even better, most of the same software packages are available in 16-bit form and they operate in virtually the same way that they did under CP/M.

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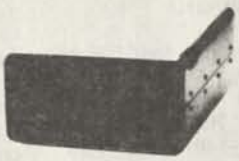

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EDITORIAL COMMENTS

Looking back now over the past 6 months of our publication, many things have happened which only reinforces our desire to continue to serve those TRS-80 Users, who want the kind of simple, written in plain English, beginner, as well as the advanced user, information and problem solving that we hope to provide.

It was in late April and Early May of 1983 that the mail box held Tandy's announcement of the Model 4 computer. So this month the Model 4 is only five years old, and has grown into a senior citizen with only two offspring, called Model 4P, and Model 4D. There does not seem to be any more offspring forthcoming, and the Granddaddy of them all Mod I, is still around and going strong.

We were looking at a Tandy/Radio Shack ad ca. Jan. 1980 that read "TRS-80 is More Than a Microcomputer. TRS-80 is Radio Shacks's growing family of cost-effective computers, peripherals and software-supported by service before, during and after the sale. In scarcely two years, over 100,000 TRS-80x have gone to work for businesses, educators, professionals, and folks desiring to combine their own ingenuity with a personal computing system.

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The $499 TRS-80 4K starter system pictured can be expanded to a 40K RAM, 4 disk system with printer - or anywhere in between- to handle your needs.

New TRS-80 Model II Systems start at $3450 - offering features of small computers by IBM and others at 33% to 66% savings. Radio Shack has what it takes to be your computer company, today and in the future. We're making the commitment now - in facilities, research, and product development - to make sure TRS-80 remains your best small-computer value!"

And so goes the advertising pitch at that time. Now Tandy is still in there pitching in the computer game. It must come as a surprise to them that the bush league team won't quit, or at least sit quietly on the bench. There are still some home-runs in those Z80 players yet!

In another vain we would like to make a point about our publication. Until and unless the subscriber base grows much, much larger than it is -and it is growing faster than we had ever hoped- we will not have one single person who is a full time staff member, all the people who have been involved in getting this publication off the ground have full time regular jobs, and have been concerned enough to contribute to the creation of CN80, giving up their free time to write articles, answer letters, and see that the subscription orders are filled. We do hope that we will soon have a full time staff member, especially a full time technically experienced staff member, who can field your questions and letters faster than we are able to do now, but with your support and willingness to help solve the problems that others are having we will win the game.

This does not mean that we do not intend to answer every single question and letter, it is just going to take time.

Now that the nice weather is here and outside activities, yard chores, or just fun weekends are here with it, I am sure that you are not going to be as interested in spending as much of your time in front of a computer, but we don't intend to let you down hot weather or cold, nice or foul!

We look forward to and need your contributions, too.

Also, due to the late arrival of some of the disk diagnostic program information, the promised review of disk diagnostic programs will be in our next issue, along with a review of the GRAFYX Solution board, ProDraw software, and Draw Manual. If you have any comments and/or experience with the board and program drop us a line so we can incorporate your experience in our review. The best reviews are written by users, and not reviewers!

CHIPS AND WHO LEFT THE GATE OPEN

We told you in our last issue that we ordered the upgrade chips to bring our remaining Model 4 units up to 128 K of memory. These were purchased for $25.00 per set, plus $9.00 for the PAL chips required when upgrading the NON-Gate Array computers.

Being somewhat dumb on these matters and really confused by the sales order taker who wants to know if we need the Pal chip or not. We need to know if we have GATE ARRAY OR NON-GATE ARRAY COMPUTERS to upgrade.

[NON-GATE array computers require the PAL chip, all the GATE ARRAY machines do not require the PAL chip]

The question is, how do we tell without opening the computer and even then, if we did open the computer a non hacker couldn't tell anyway.

We called Tandy Hardware support in Fort Worth. After some checking -because the fellow we got said the Model 4 was before his time, but that there was someone there that knew the answer- he soon came back with the instructions, "If the serial number has an A after it is a gate array, if there is no A after the serial number then it is a non-gate array.". He could not tell me if we required the pal chip for the non-gate or gate array, and suggested we call the local service manager, which we did.

The local Tandy service and repair center manager was very helpful, and we can not tell you who he is or in what city the repair station is in, because past experience has taught us that there are some good service people and then there are just --? But this service center manager is the only one within 900 miles of us who has been kind enough to answer our questions in the past. He did remind us that the information is from Tandy engineering and really isn't supposed to be given out to the public. I just wish that our equipment was sent to his shop instead of the one that is assigned to our area. Oh well, our local computer surgeon can do most operations anyway, that is, when he has the time away from his regular work.

The Tandy service manager informed us that he did not think that you needed the PAL chip on any machine that already had 64K of memory. It was only needed for the machines that had 32K going to 64K. Wrong! Nice guy and all but he didn't know what the story was, either.

Since the Model 4D is the latest product out the A after the serial number won't be there, they are gate array computers to start with.

So the Model 4 is the only one where the A after the serial number counts. The OLDER Model 4's without the A after the serial number are NON-gate array machines. Ok so far.

The next information came from the order taker at Aerocomp. He said "If the printer cable comes out from under the floppies, ie. the right side of the computer when you are seated in front of the screen, then it is a NON-GATE array. If you are seated in front in of the computer and the printer cable comes out from under the screen, on the left side, it is a GATE-ARRAY.". Fine this checked out.

We have also read that if the RS-232 port comes out the bottom it is a non-gate array, and if the RS-232 port comes out the back it is a gate array. The answer to that is yes and no. Some do and some don't.

Gary Rambo, our computer surgeon, tells us that when you have the machine open to the mother board, that the non-gate array will have a jumper block, that looks like a chip in it where the PAL chip goes and the gate array machines do not even have a chip socket in that location.

Why all this, well you need to know all this if you plan to order chips to upgrade your computer memory to 128K RAM, and you also need to know which type of machine you have if you are going to order a add-on board like the GRAFYX Solution Board. The reason being that the add-on socket on your computer board is positioned differently on a non-gate array mother board, and a gate array mother board, and the new add-on board will not physically fit in the computer unless it is matched to the non-gate array or gate array board that is in the computer.

The pal chip was $9.00 as I mentioned and my phone calls added up to much more than that, I am sure. But I really wanted to get this gate open or closed once and for all. I even ordered the wrong board from GRAFYX Solution because I originally got confused about the computer that I wanted to use the board on. I then had to send the board back with apologies and ask them to ship us the other version, which they did without any flack. (Our review of the GRAFYX Solution board should be ready in time for our next issue).

When I ordered the chips for three machines, so that all our Model 4's in the office would be matched. This was before I made all the phone calls to get it straight. I said to the order taker, I am not sure how many are Non-gate array and how many are gate array computers, and I don't think I should hold you up while I try to figure it out. So just send me three sets of memory chips with the PAL chips. If I don't need the PAL chips I will just have them left over. In this case we did have all three PAL's left over.

Now that we know what gate is open and what gate is closed, I got three PAL chips in the corral. Two are going to Gary for the work of installing them, and one is going to a subscriber in Holland who tells us that they are not available over there.

Let's go on to discuss why you need to upgrade to 128K, and why you do not need to.

There has been a lot written about the need to have your computer upgraded to 128K of memory. And some of you have felt the intimidation of your fellow computer friends who let you know if you only had a 64K machine, you really were not quite up to snuff. Don't worry about it. There is no reason to upgrade your computer if you have programs that keep you in business and these programs do not require 128K to operate.

Now we know that we are going to hear from everyone who thinks that we don't know all the benefits that come from having 128K, such as being able to write longer memory based programs, using memdisk, and being able to run the programs like Scripsit Pro, which requires 128K. Or be able to create longer and bigger speadsheets with VisiCalc. The point is that there are many of you out there who have programs such as disk Scripsit, pfs:file and others that just have no need for an expanded memory. You should not feel that you have to expand the memory, just because you don't really know if you should or not.

One of the biggest disappointments was when we first expanded our first computer and found out that the expanded memory really didn't do anything for us except add a dummy disk drive to the system via memdisk. And for us, at that time, memdisk had very little application. In those days it cost a lot more than the Tandy charge of $79.00 to upgrade your computer, or the $34.00 to buy the chips (with PAL); $24.00 without our old PAL. If your business or home application is doing a great job for you and you don't plan on changing in the future, then don't worry about the need to upgrade to larger memory, just happily keep on computing. Our personal feeling is still that if you have all the memory you need to use the programs that you are now

operating, it is more important to go to double sided disk drives or to a hard drive for extra data storage capacity, before being concerned about the machine memory.

BUT—If you want to be able to get the full benefit of all that the Model 4, 4P and 4D's will give you, then you should up grade to 128K. You may not even need it now but in the future you may want to get that program that will only work on 128K. Programmers in BASIC and others have their reasons for needing large memory, which we will not go into at this time.

There are two ways to upgrade your system, first is to take it Radio Shack and have them up grade it or you can buy the chips and do it yourself. Caution - If you are not experienced in working with electronic equipment - don't attempt to do the installation yourself. Get someone who is experienced in electronics. Just the simple opening of the can with the mother board in it will be a little touchy if you are not experienced in handling electronic components. Even for the experienced the project didn't turn out to be that simple.

Remember Gary Rambo, our local computer surgeon, was operating on our three computers, one Model 4 gate array, and two Model 4D's gate array. What we observed was that some of the screws on the mother board had glue covering them, and the instructions that came with the chips, which were rather complete, did not cover the installation for the Model 4D's.

What Gary figured out is that there is no jumper wire on the back of the mother board out of site to be concerned with and the following are his instructions for installing the chips in a Model 4D.

[When adding the additional 64K RAM on the TRS-80 Model 4D with gate array board revision C the following is done:
1. Remove top with CRT
2. Remove shield covering CPU
3. Install RAM as the first 64K
4. Move JP-13 shunt from top two pins to the bottom two pins. JP-13 is located between U-33 and below C-39.
5. Reassemble

(There is no jumper wire to be removed, there is a slide shunt to be moved.)]

Rick at Aerocomp says that because there are so many versions of the Model 4D mother boards that we could have just plugged in the memory chips and checked to see if it worked, in the majority of cases they will work without any further malfunctions. Otherwise follow the instructions for installation of the RAM chips that come with the chips (from Aerocomp), they are quite complete with the one exception concerning the 4D's.

Their instructions for upgrading the TRS-80 Model 4 from 16K to 64K RAM (item #2 is to remove capacitors at C66, 88, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94 and 96 by clipping the legs with a small pair of diagonal cutters.

According to the Radio Shack service manual only 88, 72, 76, 80, 84, 88, 92 and 96 capacitors need to be removed.

When installing the chips in the newer Model 4 Gate Array, (that's the one with the A after the serial number and originally had two single sided disk drives) there is some soldering of a jumper wire to be done.

When installing the chips in the older Model 4 Non-gate array, there was no soldering of wires, just the removal of a shunt block.

All in all it is a very simple operation, but does take some time even for the person used to working with electronic components, and who has upgraded several computers in the past, and it is not recommended for the non-hacker to attempt the first time, with out some experienced hands nearby for guidance.

NEWS ITEMS

J & M Systems Ltd. has a new address other than the one we reported. It is: 15100-A Central SE., Albuquerque, NM 87123, phone 505-292-4182

On our follow up phone calls to J & M they seemed almost reluctant to discuss their products for the Model 4. However, they did

send us three sheets of paper, with prices for their Memory Minder disk diagnostic program ($89 for their double sided Model III/IV disks), not much to make a review of. They also sent a note on their disk controller board for the Model III, phone for prices.

Tandy moves out and up, with their new Tandy 5000, starting a $4,999 and $6,499 with 40Mb hard drive. This unit features a 20Mhz. 80386 processor, 82385 memory cache controller with 32Kb of static ram.

Another new product in the works that Tandy has announced is the TANDY THOR ™ - CD. Tandy has developed the technology to read - write Compact Disks. Up to now once a CD was written to it could not be changed and only read. Tandy says that about 500 Megabytes can be stored on the disk, and should be in production in 18 to 24 months, and sell for under $500. With "500Mb... You could store the names and phone numbers of every person in the United State on just one THOR-CD!".

(We look forward to connecting one to our Mod 4, maybe we could have all the names of our subscribers on one side and the latest pop tunes on the other.)

PFS-Report Cat. #26-1517 and in the RS 1988 for $39.95 has been discontinued according to the National Mail Order Service. (As we reported many of the software products for the Model 4 will be dropped by Tandy as soon as current supplies are exhausted, even though they are listed in the current catalog).

Mr. Ray Crank of Webster Groves, MO sent us a collection of great cassette based programs and other out of date programs and manuals for our archives, along with a complete set of Wayne Green's Encyclopedias, plus many other items. We wish to publicly thank Ray for his thoughtfulness. We know that having a reference library on tap will be a great aid in problem solving for TRS-80 users in the future.

We also acquired a complete set of DeskMate Cat. #26-1608 and an never opened TRSDos Version 6 Disk Operating System and Basic Interpreter manual with our purchase of our last Model 4D, this is a duplicate of items that we already have, so if there is any one interested (at half-price) let us know.

PD REVIEWS by David Goben

I want to share with you some of the programs that are available in the world of Public Domain and Shareware software.

This month I have two disks to review. I have authored one disk, and have also written one of the programs on the other.

——> MODSCRIP <——

If you like using Disk Scripsit, you'll LOVE MODSCRIP. It packs Scripsit with so much power that you may not at first believe it. In many respects, it is more powerful than SuperSCRIPSIT.

Modscrip is designed for Disk Scripsit Version 1.0 for the Model I. It will operate with full support on the Model I, Model III and Model 4 (including the 4P and 4D, and IN the Model 4 mode) after Modscrip is run. Also, all Scripsit files that were created by the original programs -- Model I, Model III, and Model 4 versions -- are upward compatible with the new format given by Modscrip. It also contains some special feature options: you can select an optional Line Feed after Carriage Return for the Printer (as is needed on some non-Radio Shack printers), select if you wish the cursor to blink or not, an optional Simplified Keyboard, where the first letter of the command is defined as the control command.

Modscrip provides you with some of the most useful, powerful, and capable modifications EVER offered by anyone. Modscrip allows you to perform virtually all of the editing and printing capabilities that you have ever wished or dreamed that Scripsit would do, to include superscripting, subscripting, boldface, underlining, double underlining, selecting different printer densities, output your printer's ENTIRE

printable and CONTROL character set, slash zeros, and pause the printer. A major and unique printer feature of Modscrip is its ability to print only a specific page or pages in a multi-page document. This is done by using the Special Commands P,P or P,S,P. When you are prompted for the next page, the Command Line will display "Press ENTER to print Page Num. X", where X is the page number 1-65535. Press ENTER to print the page, or press BREAK to skip printing of that particular page. Additionally, all printing fonts allowed by your printer are selectable, special control codes are recognized, as well as Printer Pause. And all of the above is even supported in Justified Text in all non-Proportional Space modes. Lastly, both parallel and serial printer support is provided for all of these capabilities, and non-standard printers can easiy be accomodated.

The extent of Modscrip's power is not confined to the printer output alone, but in its text editing capabilities as well. You can now Delete, Unmark, Exchange and FIND marked Blocks of text within your file without having to position your cursor to any particular point within your text. You can even Tab between the beginning characters of individual words in a forward or reverse direction, set the cursor onto a specific line within the document, scroll the video screen page 13 lines at a time up or down (21 for the Model 4 version), and delete a line up to and including a comma. Several different Hyphenation blocks can now be hyphenated without having to Unmark each block before defining another. Even further, you can perform whole-text hyphenation WITHOUT defining a hyphenation block around the text at all. The CONTROL key is now redefined to the CLEAR key for easier access, the SHIFT-CLEAR combination is now required to perform the old CLEAR function. The Tab key has been redefined to the CONTROL-T key. On the Model I and III the cursor can be 'Homed' to the upper-left corner of the video via CONTROL-H (this command calls up a 15-screen HELP menu on the Model 4), The current Date will be displayed by simply entering ?D on the Special Command Line, command line messages are displayed in lower case, computer interrupts are enabled, exit from Scripsit directly to DOS is provided, the Command Line has been moved up to the TOP of the Video, the Tab line is enhanced, High Memory is now recognized, a Ghost Cursor is provided within the Tab Line, showing you EXACTLY where you are on the text line, NEW and OLD file prompts are displayed during disk file saves, and lower case FORMAT LINE Commands are accepted. Another enhancement is its ability to AUTOMATICALLY load a text file when entering Scripsit. Also, you can now COUNT the number of WORDS in your text file. If you accidentally re-boot or exit, you can recover your lost text in an instant.

On the Model I and III, the Cap-Lock function is moved to a more convenient SHIFT-ENTER sequence. On the Model 4, the CAPS key is used. On all versions, a Cap-Lock indicator has been added. Now when the program is in the Cap-Lock mode, the letter 'C' is displayed at all times in the upper-right corner of the screen, telling you that the capitl mode is active. On the Model 4, a directory listing of a disk can be called up within Scripsit by using the Special Command Qx, where 'x' is the drive number. Other enhanced features provided for the Model 4 version is the user's ability to 'preview' the printed data right on the video screen, use 9 user-defined keys to print repetitious information, a MOVE BLOCK command that will move a block from a location, deleting it from that position, and inserting its data at a specified location, the ability to display additional special characters, and the ability to have 9 user-defined keys for repeated text data.

Best of all, Modscrip DOES NOT take away one byte of Text area from SCRIPSIT! In fact, on the Model 4 version an additional 4.5K is added to the text buffer! All this is done without any bothersome 'outside' disk modules as some packages, such as FLEXTEXT do. Finally, any spelling or grammar checker that will work with your regular Scripsit files will work with those created with the MODSCRIP modified version without any special considerations or modifications.

----> UTILITY4 <----

The UTILITY4 disk actually contains 5 programs for use on the Model 4: UTILITY4, TSK, MOVE, RAMTEST and FIXIII. These /CMD files all have associated /DOC files which document each of the programs.

I authored the UTILITY4 program, and it is a disk zap program packed with a lot of features. It will read any Model I/III/4 disk (except CP/M). Although it may have trouble on protected disks (where non-standard sector and track names are used) in the most part it will operate wonderfully. It allows you to zap disks directory, or files, or memory. It also allows you to copy sectors or data on sectors, encode passwords or HASH codes, and zero disk sectors. The documentation is very detailed, and is full of examples.

TSK was written by Bryan McKay and Bruce Travers, of Scarborough, Ontario, Canada. It is another full-featured disk zapper, including many features not included with my own program. It will also encode and decode passwords, allow you to remove all passwords, change disk attributes, change file attributes, configure system parameters, and even clear a file.

MOVE was written by George Deluca of Burlington, Ontario, Canada. It is a short utility that allows you to copy a file from one disk to another, and delete it from the source disk, in one move.

RAMTEST and FIXIII were both written by James E. Howard. RAMTEST is a quick RAM test utility. It will check the memory of a model 4 computer from 2800H in the systm RAM through the top of the alternate RAM if it is installed. The format from Dos Ready is: "RAMTEST n" where n = a relative number of times to test each location in RAM. Use 1 for a quick test. The default is 256 (which can also be obtained by typing a 0). This test was devised to check out 128k updates to the computer after installation, but can be used anytime.

FIXIII is a program to help convert Model III compressed BASIC programs to a format suitable for converting into Model 4 BASIC. The program operates in the Model III mode and reads in only compressed (tokenized) programs and generates only ASCII files. The program eliminates most extra spaces in program lines but adds essential spaces (i.e. around keywords). It also converts the exponential token to the caret symbol. Tab()'s are left alone while Print@ statements that contain numbers are converted. The effect is to utilized the top left 64 columns of the screen.

If you would like to obtain either the MODSCRIP disk or the UTILITY4 disk, send a disk mailer (home-made is fine) with a blank, formatted disk, return postage, a return address label, and $3 for copying and handling. Also include a note specifying which disk you want. I can accept all double-density disk formats, such as NEWDOS80, TRSDOS 1.3, LDOS, LS-DOS 6, DOSPLUS and MULTIDOS. If you want both, include 2 disks and $6. Send these to me at the following address. Happy computing!

David Goben
67 Highland Road
Mansfield Center, CT 06250

(Editors Note) If you are the original author of a public domain or shareware program, or the authorized distributor of a PD or shareware program and want it reviewed by CN80, send it along with a hard copy of your documentation and your description of what the program does to this publication at PO Box 680, Casper, WY 82602. Also include instructions concerning the distribution of your program.

We will soon be making the programs published in CN80 available on Disk along with other PD programs that are made available to us for distribution. More details concerning our disk series will be available in our next issue. -Ed.

HINTS, TIPS, AND VISITS WITH YOUR FELLOW READERS

EPSON SCREEN-DUMP PROGRAMS

Volume 1, No. 3, Page 16 had a request from J.P of Marbelton, Georgia for a Model III to Epson Screen-Dump program.

A program I wrote for this purpose was published in 80 Micro for November, 1985 page 16. I enclose a copy of the published program.

I later found that it wouldn't work with the LX-80 printer, and I also enclose a copy of the LX-SCREEN-DUMP program.

I found the problem with Mod III SCREEN-DUMPS to be an obstinate refusal to output carriage returns without line feeds from software control. The MX SCREEN-DUMP set the line feed to zero, but this didn't work with the LX printer and the LX program uses the reset to get around the problem. I hope one of these will work for J.P.
Robert Keegan, Fayetteville, AR

Thanks for sharing your programs with us and with J. P. Your letter was forwarded to J. P. on March 27th the day it was received. See program listing Number two and three for Robert's programs. Mr. Keegan is an attorney, specializing in Patents and Trademarks.

CORRECTION
Two typographical errors mar the "Envelope Addressing Tip" article in Computer News 80, Volume 1, Number 5, pages 9 and 10. In paragraphs four and 10 (both page 9), where the article mentions "CONTROL?" as the order to stop the printer, it should instead say "CLEAR?," as users of SuperSCRIPSIT no doubt know. The errors are mine, and I apologize for them.
-Albert C. (Chad) Skaggs

CORRECTION AND HINT
On page 11 there is an error in the resistor values given. The number is correct, but they should be in ohms. The pf stands for pico farads and refers to capacitors. No real big deal for someone with electronics knowledge as they would catch it, but it could be embarrassing for someone who asks to have it done as it could result in confusion.

As an aside for your other readers information: The enhanced Basic provided with LSDOS 6.3 does not function the same as the 6.2 Basic. I have had problems with some programs I enhanced for a client when we upgraded to 6.3. A quick solution is to copy Basic from your 6.2 disk onto the 6.3 disk. I borrowed from MSDOS and called the 6.3 version BASICA/CMD and the 6.2 version remained BASIC/CMD, I have had no problems and saved myself major rewrites to the software system they have been using for much time now. Results - a satisfied client and less headaches. Now if I can only find out why the differences and if Logical Systems is working on a fix.
L.G.N. Sr.-Webster, MA

LIMITED BACKUPS
Regarding the matter of limited backups of old Tandy programs. I should like to answer the question by letting those concerned know that the backup counter of Mod 4 programs like pfs:file is byte C6 in the third sector (sector 2) of the first track (track zero). A value of 01 in that byte means one more backup, FF means no more backups. With a Zap program one can simply change the FF back to f.i 08, and restore the program to life again. In the Mod III programs, like Scripsit and Visicalc, it is in the boot sector, byte 22.
P.J.P.-Amsterdam, Holland

THE DISK MAZE
There are as many disk brands on the market as there are fish in the sea and we don't have the vaguest idea which brand or manufacturer is the best. Almost every supplier has a generic brand that he sells under his own label or with no label at all.

Reliability of the disks are based on the users experience with any one brand and everyone seems to have his own preference.

We recently purchased 100 single sided and 200 double sided 5-1/4 double density floppy disks from a supplier for 24 cents each, sans-sleeves and user labels. Naturally there was no manufacturer's label affixed, and in this case not even the suppliers label. We could have saved time by giving them an order for 200 double sided disks because when they arrived they were identical. In

checking with the supplier, we were told "Yes - they are the same disks, all double sided.".

These economy disk are a less rigid in their jacket construction than we were used to and require a little more care in inserting in the disk drive.

Over the years, like everyone else, we have purchased many different brands of disks, a lot of them because they were on sale at the local discount department stores, finally settling on the one we felt most comfortable with. Personally we like a more rigid disk jacket for daily use (in and out of the drive all day). The lower priced disks, which usually have a more flexible jacket, are just fine for storage of backed-up data.

The experts at 3M Hot Line [800-328-9438, or call collect 612-736-9524 if you live in Minnesota] tell us that their disks are guaranteed for the lifetime of the disk, which they claim is 200 years, and not the lifetime of the owner. That's fine with us but who can wait around for 200 years, or for the 30 million passes to see if there really is a disk failure coming up. So we will have to take their word for it.

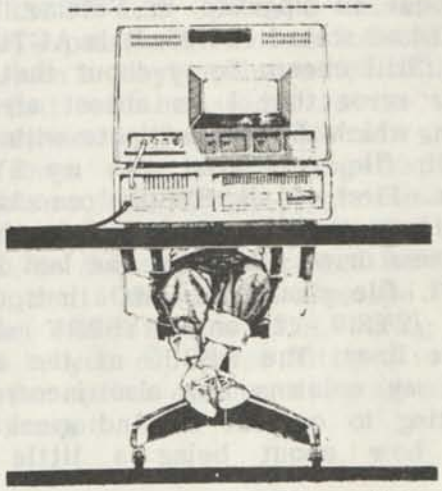
What it amounts to is this; with most disk suppliers, if you get a bad sector on the first format after taking the disk out of the box, then it is a bad disk and they will replace it. Of course no guarantee for lost data. That's always (according to the manufacturer, of course) the fault of a faulty computer, or faulty operator, a magnetic field somewhere in the vicinity, or strawberry jam, or a nice splash of coffee or cola. And then there are those programs that refuse to behave and eat all the data in sight.

Our own experts tell us that the sheen of the disk is one way to tell the better quality disks. Each manufacturer burnishes his disk to a low abrasion level or sheen. Hold two disks next to each other and the one that has the highest shine, or polished appearance is the better disk to use. The disk with the dull finish will cause more abrasion on the drive head. There are other disks that are Teflon coated and could have a dull finish. Also, the shine test would more than likely be disputed by the dull finish manufacturer.

In our never ending search for the truth it becomes apparent that if you use only one disk daily for all your work and for a life-time, or at the end of five years or so, you could tell us how that brand of disk held up.

We do intend to stay on truth's trail and report any findings. We certainly hope that in the process we don't have to experience - EVER - a total disk failure just so that we could report which disks failed the most often.

We have received many requests from readers about how often and how to clean the disk drive heads. We have as yet not found a real definitive source. 3M says that your drive head should be cleaned about every 40 hours of use, or once a month under normal environmental conditions. They also said that their cleaning kit is non-abrasive and would not scratch the drive head. We are waiting for a written response from the drive manufacturer to get his opinion, when we receive that we will publish it too. As far as the "how", just follow the instructions in the disk cleaning kit that you purchase. It might be wise to purchase only disk cleaning kits put out by one of the known major disk manufacturers. Private label kits might save a couple bucks but you will never know who made the kit and I am sure that most distributors of the kits would not be much help if some damage did result over the long period of time that it would take for the damage to show up. A few dollars spent for a major brand cleaning kit might just be worth the investment.



I told you, HE IS..working on your problem.....

A VISIT WITH DAVID GOBEN

PASSWORDS, NON-MODIFYING MODEL I DISK READS, TRSDOS 1.3 AND THE XLR8ER, AND MORE PATCHES, 80 MICRO

Hi there. First off, in the past I have said that Roy Soltoff was the principle author of LS-DOS. Boy, if you want to read about people chastising me, try reading some of my mail. Well, from my point of view, he IS. After all, my stand has always been that the original author of something is ALWAYS the principle author, especially as long as the code has not been drastically changed. So here is the proclamation that I will make, and hopefully my mail will subside a bit. Roy Soltoff is the principle designer of LDOS 6.0 (also known as TRSDOS 6.0). William Schroeder and LSI are the authors of TRSDOS 6.1, 6.2, and LS-DOS 6.3 (I certainly did not intend to slight them of this credit, but the simple fact is, LSI only built upon the foundation that Roy had set. Further, I do not wish to slight Mr. Schroeder futher in this light, in that he is certainly a GREAT programmer in his own right). So all of those people who told me to get stuffed for even THINKING that Roy had ANYTHING to do with the development of TRSDOS 6 AT ALL... Well, may I direct your attention to page 12 of the April 1986 issue of 80 MICRO. There, Roy states "As the primary author of TRSDOS 6.x, I steadfastly believe...". Is that an admission of guilt, or what? Besides, I just got off the phone with him, discussing this very thing. Case closed.

I might point out that one error I made which no one mentioned (except Roy) was that I had misquoted the price of the LDOS 5.3 Model III upgrade in Volume 1.4 of CN80. I had stated $24.95. It is ACTUALLY $34.95. Still cheap. Sorry about that, Roy. Another error that I am almost afraid to mention, which did not originate with me, is the JCL file associated with my SYSDRV program. First of all, SYSDRV can be used by itself, in the form SYSDRV :d, where :d is the new drive. Secondly, the last line of the JCL file should be TWO lines, where COPY /SYS:0 :2 and SYSDRV :2 are separate lines. The DEBUG at the end of one of my columns was also incorrect in attempting to correct it. And speaking of errors, how about being a little more forgiving? If you note an error, don't send a 6-page letter outlining it to me; just make a note of it to us. We'll be sure to make mention of it. Errors are never intended. He who is without sin should throw the first stone.

Onward. During the course of the past couple of years, many of my regular (and many new) correspondents have asked me how they can read their Model I single-density disks on their Model 4 and not resort the the REPAIR utility. Normally this is not a problem, unless you fit into the category of also having (and still using) a Model I. Most people simply copy the data files to another disk on their Model I, and REPAIR that disk. But that is not the fastest method. A simpler way is to fool TRS/LS-DOS 6 to think that the disk IS already repaired. The following three lines can be used on TRSDOS 6.x and LS-DOS 6.x to allow Drive :1 to simulate a Model I system drive:

```
SYSTEM (DRIVE=1,WP=Y)
MEMORY (ADD=X'18F4',WORD=X'00AF')
MEMORY (ADD=X'0483',BYTE=17)
```

You can save this in a JCL file, such as MODELI/JCL, for easier activation down the road. The first line sets drive :1 up as write-protected disk. The second line modifies the DOS code so that when the directory sector on the Model I disk is read, that it will accept it as a SYSTEM sector. The last byte insures that the directory track is set at 17. Be SURE to change the third line if you know that the directory track is OTHER than 17 (I am simply assuming TRSDOS 2.3-compatible, 35-track disks). Secondly, copy what files you choose ONLY to a disk that has been previously logged onto your system. Since I have disabled the SYSTEM sector checking routine, ANY sector will be accepted on any disk, SYSTEM-protected or not. Thus the best advice is to simply copy the files from the Model I disk to the current system disk. This is the usual procedure, and 99% of its users will have no problems, but somehow there is always that 1% that tries to make anything easy into something hard. Finally, be sure to REBOOT the system after you have copied the files to remove the memory patch! Obviously, many people have simply patched their Model I DOSes to

accept the Model III/4 system sector-types so that a Model I user can continue to use a REPAIRed disk, but there are so many DOSes, and I do not care to research each one just to provide patches for just a few individuals. However, if you do have such a patch for your Model I DOS, send it to me and I'll give it out, and mention you as the generous soul.

You know, if more people were like Arthur Davenport of Melbourne, Florida, my creative efforts here would be a breeze. As I was touching up the password encoder/decoder program that is being presented this month, he comes along and sends me a nice little program that does the same thing. What I liked about his program was not only his wonderful programming style (were it that more would write like that), but also his presentation of the data. Where my program only gave you the FIRST password decoded, his would continue on and display more as they were found, until you pressed the BREAK key. He also had a nice menu selection display. There was enough in it that I liked that I decided to use his principle presentation, and enhance it with the features that I had developed in my program. What I did was set up a scrolling window for decoded word output at the bottom of the screen, I added more report feedback, added an ON-SCREEN decoding update (so you can actually WATCH a password being developed), cleaned up screen wrap-around, fixed up the BREAK interrupt to ALWAYS work and be cleaner on the display output, converted any lower-case data to upper-case during processing, and modified it so that the program will run on a Model I, a Model III and a Model 4 (in 4-mode).

The menu of the program allows you to encode and decode all Model I/III/4 DOS passwords. What this boils down to is that all DOS systems (except TRSDOS 1.3 for the Model III) use the same hashing formula. TRSDOS 1.3, which is different from everything else from the git-go, uses a totally different method. This TRSDOS 1.3 format option is made available.

I would like to mention that Arthur seems to be quite adept with the TRSDOS 1.3 system, and I certainly hope that he will no longer be a stranger to Computer News 80, but I sincerely hope that he will contribute information and assistance in future issues as well. Arthur sent me a rather long but fascinating letter along with his disk and program listing, and I would like to take a moment and share a little of what Arthur has been doing with his life, as sort of a personal profile of a CN80 reader. Arthur, in 1975, built his own 8080-based computer, basing it on an 8008-based MARK 8 from Radio Electronics. He redesigned the input to use later-version IC's and to get more input channels. He also home-built a Digital Group compatible computer. Both of these were tape-based, which was the 'boone' back in those days, before disk-drive were feasible, or even purchasable. When he got a disk-based Model III, it must have been like driving a Porche for the first time (something that I've done only once). He was unsatisfied with the DEBUG monitor, and so wrote his own (this is MY kind of guy). To top this profiie off, Arthur worked for RCA on the Eastern Test Range at Patrick Air Force Base for 27 1/2 years, where he worked on microprocessor systems.

Program Listing Number 1 is a BASIC program that can be typed in and RUN from Model I, Model III, or Model 4 Disk BASIC. It will create a program called PASSFIND/CMD. To use it, from the DOS Ready prompt, enter PASSFIND. It will display a menu of 5 choices. Option 1 will generate passwords from encoded 2-byte 'hash' values. This process can take some time, which is one reason that I included on-screen feedback during generation, so that you would not think that the computers has frozen up at times. Normally at least one password will be generated within 30 seconds. Option 2 allows this same feature for TRSDOS 1.3. Option 3 allows you to encode a password, such as PASSWORD. It will return a 2-byte value which is the same code that will be stored as the encoded password in a directory file entry. If you don't know what I'm talking about, then skip this section, as this program is actually for those who are 'hackers'. Option 4 allows you to do the same thing, but for TRSDOS 1.3. Option 5 allows you to escape from the program and return to DOS. During options 1 and 2, you can press BREAK to escape from the option at any time, or during an input prompt.

Here's an example, Encoding PASSWORD under option 3 gives you a value of E042. PASSWORD under option 4 for TRSDOS 1.3 will result in D38F (I see a lot of lights appearing above the heads of some of you out there who have been previously confused by this). Decoding E042 under option 1 will give you quite a number of passwords (as is usual for any encode password, as several password produce the same hash code, just as some of you have found out that a key for one lock sometimes also works on another). The first 4 are WXP, FKB0, WIR0, and EX51. Decoding D38F for TRSDOS 1.3 under option 2 results in the first four being RO30, QS31, P9G1 and F936. Were you to have the patience to wait long enough, eventually the original PASSWORD would be presented. But my idea is that you would be waiting a LONG time for our program to get up into 8-character passwords. Why not use one that is 3 or 4 characters long instead?

MODEL I LDOS FROM 1988-2000

I have received a lot of mail from Model I LDOS owners who are complaining that they cannot use dates beyond December 31, 1987. Some have even stated that their is a conspiracy on the part of LSI and MISOSYS to make the Model I obsolete. Well, the fact is, the Model I IS obsolete, but that has never stopped me from using mine. However, MISOSYS has come out with some patches. These patches allow the system date to work up through the year 1999, but dates are disabled on disks. It may not be exactly what you are looking for, but you can get the patches in one of 4 ways.

1) Purchase the DISK NOTES 2.2 from MISOSYS for $10 plus $2 S&H for US, CAN, and MEX ($3 elsewhere), which contains them. This is supplied on Double-Density medium. 2) Purchase Volume 2.2 of THE MISOSYS QUARTERLY, which runs at the same price. 3) You can download them from the LDOS section of the COMPUSERVE Forum, or 4) obtain them off of one of many bulletin boards.

Perhaps someone, like what Michael Jacobs Consulting did for TRSDOS 6.2, will make some patches available, which will allow date stamps to remain on your disks. Anyone want to try?

PATCHES, PATCHES, PATCHES

Those of you using LDOS 5.3 and want just the short filename listing during a DIR can patch your system with:

```
PATCH SYS6/SYS.SYSTEM (D08,92=00
00:F08,92=FF FF)
```

Hereafter, if you want the long, detailed listing, you will have to use the A=Y parameter.

Another patch to LDOS 5.3 is to allow an AFLAG$ location. Model 4 hackers will recognize AFLAG$ as storing the cylinder number that TRS/LS-DOS 6 uses to begin its search for unallocated granules. Using this, you can set it to 17 or whatever, to begin storage of system files, thus placing them close to the directory. Afterward you would probably wish to reset it to a value of 1. This patch was originally developed by Martin Pollard of St. Clair Shores, MI, and is now an OFFICIAL part of LDOS 5.3, as reported by MISOSYS, the owner of the DOS. If these two patches don't "take" on your system it is probably because it has already been incorporated into your MASTER disk, as this patch came out in the later part of 1987. The patches are:

```
P A T C H  S Y S 0 / S Y S . S Y S T E M
(D05,C1=01:F05,C1=00)
PATCH STS8/SYS.SYSTEM (D00,F5=F5 3A
67 47 6F F1:F00,F5=2E 01 00 00 00 00)
```

Thereafter, the location of AFLAG$ is at X'4767', and is called the Allocation Flag.

This next tid-bit is not actually a patch, but an undocumented feature of LS-DOS 6.3's BASIC. That is, LSI has revealed that the single character "!" is an abreviation for SYSTEM. Thus you can press the exclamation mark (SHIFT-1) and press ENTER to go back to DOS. It will also work with a following string. Repeat, this is an undocumented feature.

If you have Radio Shack's Assembly Language Development System (ALDS), you may have been both happy and disappointed with their ALBUG program. Happy because it makes debugging a WHOLE lot easier, in the most part due to its built-in mini-disassembler, but disappointed because you could not examine code below X'3000',

which is a bother if you are writing a program that operates in the X'2600' - X'2FFF' area. To get by this and allow ALBUG to display ANY address, apply the following patches to the Model 4 version:

PATCH ALBUG (D04,06=00:F04,06=30)
PATCH ALBUG (D04,0F=FF,F04,0F=DF)

A tip of the hat goes to Glenn A. Dobbs.

For you TRS/LS-DOS Model 4 BASIC programmers, if you've ever accidentally saved a BASIC program with the "P" option (Protected), you can recover your file into its unprotected by doing the following: Go into BASIC, load the protected file, and them enter the command SYSTEM"MEMORY (ADD=X'72CB',BYTE=0)". This will unprotect it. Thanks to Brent Brian of Stantonsburg, NC.

Paul Jaeger has a patch to LS-DOS 6.3 to shorten the tones of the @SOUND routine, which he feels (along with about everyone else) that they are too long.:

PATCH SYS0/SYS.LSIDOS (D10,83=00 00 00 00 00 00:F10,83=CB 24 CB 25 CB 21)

(ZOUNDS! I used the right password.)

TRSDOS 1.3 and the XLR8ER BOARD
In issue 1.4 of CN80, page 6, Michael Jacobs mentioned that LS-DOS 6.3 does not run reliably with the XLR8er Board from the folks at H.I.Tech, Inc. This is not true. The fact is, it runs beautifully. There IS a problem with TRSDOS 1.3, however. Michael probably spotted his mis-type after CN80 1.4 had already gone to press. For reasons that border on stupid, the author(s) commissioned by Tandy (notice that Tandy is NOT to blame here) used undocumented Z80 machine codes in the writing of the DOS. Zilog, producers of the Z80 chip, report that on some chips, that these instructions can be UNRELIABLE, for the simple fact that Zilog does not test them in their quality control department (another reason for them being undocumented). For this reason many Model III and 4 owners have been able to boot most other Model III or 4 DOSes, but cannot boot TRSDOS 1.3 without problems cropping up. Tandy in turn has to go through the expense of taking the computer to shop so that a technician can go through the headache of tracking the booting problem down. A Tandy techie friend told me recently that whenever he receives the "TRSDOS 1.3 won't operate properly" problem report, he simply tries to boot up LDOS or TRSDOS 6. If they work, he simply replaces the Z80 chip, does a verify test, and then returns the machine to the customer.

Gary Lee Phillips addressed this problem in Issue II.1 of THE MISOSYS QUARTERLY, and provided the patches to correct this. The reason that the special instructions will not work on the XLR8er Board is that the HD64180 chip, which is a special multi-banking chip that contains the Z80 instructions as a sub-set, DO NOT support the undocumented Z80 instructions. Computer fall down and go boom. The patches to correct this replace these special instructions in TRSDOS 1.3 with "authorized" instructions. The patches, in TRSDOS 1.3 format are, and PLEASE note that NO spaces should appear between the parenthesis (), even though I include one after each comma for the sake of word-wrap on these narrow columns:

PATCH *2 (ADD=4EBF, FIND=FD2EFFE1, CHG=FD21FF42)
PATCH *2 (ADD=4EC3, FIND=F1F1FD2642, CHG=E1F1F10000)
PATCH *7 (ADD=5284, FIND=DD2662DD2E24, CHG=000000000000)
PATCH *7 (ADD=528A, FIND=DD7E00, CHG=003EFF)

Gary makes a side-note stating that this patch also eliminates the limited BACKUP feature of TRSDOS 1.3 (Oh, how terrible. Boo-hoo). A point of interest concerning Gary's article is that it also shows LDOS 5.3 users who have the XLR8er Board mounted on a Model 4P how to create a special MODELB/III file that will initialize the system to take full advantage of the board's special CPU features and speed.

So goes another column. Hopefully what I am providing here is to your liking. My mail tends to reflect that it is, especially to those out there who are hackers, or simply interested in the patches given. A final note to you that not only write to me: PLEASE enclose a self-addressed stamped

envelope if you desire a reply.

Happy computing.

--David Goben
67 Highland Road
Mansfield Center, CT 06250

(Editors Note:) If you desire to send your patches to share, questions for the columnist in CN80, or submit articles please send them directly to this publication. {Self-addressed stamped envelopes are not required} Your mail will be acknowledged and forwarded to the proper author, and the reply sent directly to you or as in most cases published. It is the only way we can be sure that we are sharing the problems we answer for you with those who might have the same problem.

However if you do choose to write directly to anyone who is published in CN80, we would request that you include return postage to cover their replies. Now that the U S Post Office is operating under the "four for a dollar" system it can become expensive for reply mail, not counting the time it takes to construct a reply. -Ed.

PROGRAM CORRECTIONS:
Vol 1 No. 4 page 17
NEWDOS/CMD & NEWDOS/BAS Program
Line 310 should read D6, instead of just 6, in the third entry from the end of the line.

Vol 1 No. 5 Program listing #1 on page 14 and program listing #4 on page 16 had two lines that the printer over justified, line 65 on page 14, and line 27 on page 16 should have the spaces removed to make one continuous entry line.

THANK YOU
The quick reply received from Mr. B. with regard to Spectre Technologies' 'LONG & LOUD' program I was having a problem with is at least the best response I have ever had on any attempt to obtain any help from either a company or an individual. I was astounded to receive such a fast respone to just the mere mention of a problem in my previous letter to you. This will let you know that positive correspondence is circulating about TRSDOS support, we who have these wonderful machines just may even become more closely-knit than before.

Mr. B. told me that there had been new releases of the subject program, and it did have TRSDOS printed instructions. This is something I thought was possible, but never got an answer to my letter when writing Spectre Tech. about it. I don't think kicking a dog is the proper thing to do, so I will wait a few more days to see if I hear from them, then write another letter to let them know that their attitude has chased away additional business. Other programs I have in mind possibly will give a little support. I certainly did not get any from Spectre.

Once again, many thank for getting Mr. B. and me together. This is a much-appreciated service.

Best regards,
M.H.O.-Temple, TX

ANSWER TO A CONCERNED READER

Occasionaly I still use Model 1 (one Model 4 at home and one at work) with 64K and Holmes internal Memory, Extron Floppy, I would be interested in articles on C. I have the Alcor Version. I have no intention of going to LOSDOS 6.3, I am affraid that if I replace any parts, it will reject the modified machine.
W. T. C. -Westwood, MA

Don't worry about it, we have four modified machines, one LS-Dos 6.3 (the same one has been used on all four) and as our last two issues have pointed out, we have been upgrading and modifing. LS-DOS 6.3 doesn't know the difference between one machine and the other. Until someone can show us different, their so called protection plan that is supposed to tell one machine from another doesn't exist. Ask Tandy, they supplied the last two LS-DOS disks with the Model 4D's we purchased, and as far as we are concerned they are the responsible supplier. -Ed

PROGRAM LISTING NUMBER ONE- David Goben
This program will run on Model I, III, & IV

```
20 CLS:PRINT"BUILDING 'PASSFIND/CMD'":RESTORE
30 OPEN"O",1,"PASSFIND/CMD":L=80:HX$="0123456789ABCDEF"
40 CS=0:L=L+10
50 READ A$:IF A$="END"THEN CLOSE:END
60 IF LEFT$(A$,1)="-"THEN 70
65 A=INSTR(HX$,LEFT$(A$,1))*16+INSTR(HX$, RIGHT$(A$,I))-17
66 PRINT#1,CHR$(A);:CS=CS+A:GOTO 50
70 IF VAL(MID$(A$,2))=CS THEN 40 ELSE PRINT"CHECKSUM ERROR IN LINE"L:END
80 ''' DATA AREA '''
90 DATA 05,09,00,00,00,50,41,53,53,46,49,05,09,00,FF,6F,20,20,20,20,-976
100 DATA 20,20,01,FE,FF,6F,21,00,00,7E,46,2F,77,BE,70,20,49,21,00,00,-1520
110 DATA 44,3E,64,EF,23,7C,B5,28,09,21,73,75,CD,DA,72,C3,AD,73,AF,32,-2368
120 DATA 47,73,21,B8,FF,22,C9,70,3E,50,32,1B,72,32,1F,72,3D,32,38,72,-1814
130 DATA 21,80,FF,22,27,72,21,30,FF,22,0C,72,3E,08,32,00,72,3E,65,EF,-1735
140 DATA FD,7E,0E,E6,FE,FD,77,0E,D3,84,31,FF,6F,21,DC,73,CD,DA,72,CD,-3131
150 DATA 45,73,28,04,FD,CB,0A,86,CD,E2,72,FE,31,38,F9,FE,35,CA,AD,73,-2778
160 DATA 30,F2,F5,32,47,75,21,45,75,CD,DA,72,F1,FE,31,CA,90,70,FE,32,-2835
170 DATA CA,99,70,FE,33,CA,50,72,C3,A7,72,21,42,71,22,28,71,C3,9F,70,-2509
180 DATA 21,71,71,22,28,71,21,02,75,CD,DA,72,21,C5,73,06,04,CD,23,73,-1845
190 DATA 78,B7,CA,9B,72,CD,EC,70,DA,9B,72,ED,53,C3,73,7A,B3,CA,9B,72,-3216
200 DATA CD,68,73,E5,22,18,72,01,C8,FF,09,22,45,71,36,41,06,08,23,36,-1728
210 DATA 20,10,FB,CD,8F,73,21,4B,75,CD,DA,72,E1,CD,8F,73,AF,32,FD,71,-2803
220 DATA C3,27,71,21,C4,73,CD,F8,70,5F,CD,F8,70,57,C9,CD,05,71,01,FE,-2782
230 DATA FB,70,07,07,07,07,57,CD,05,71,82,C9,23,7E,CD,0B,71,C9,CD,34,-2080
240 DATA 73,FE,30,38,0C,FE,47,30,08,FE,3A,38,09,FE,41,30,03,C3,9B,72,-2077
250 DATA D6,07,D6,30,B7,C9,CD,42,71,ED,5B,C3,73,7C,92,20,02,7D,93,CC,-2669
260 DATA E5,71,CD,A7,71,DA,AD,73,CD,B0,72,18,E5,06,08,21,00,00,11,07,-2152
270 DATA 00,19,EB,21,FF,FF,CD,33,73,D5,57,5C,7D,E6,07,0F,0F,0F,AD,6F,-2257
280 DATA 26,00,29,29,29,29,AC,AA,57,7D,29,AC,AB,5F,EB,D1,1B,10,DF,C9,-2146
290 DATA 21,FF,FF,ED,5B,45,71,06,08,7B,C6,07,5F,30,01,14,CD,33,73,D5,-2143
300 DATA 57,5C,7D,E6,07,0F,0F,0F,AD,6F,26,00,ED,52,29,29,AC,AA,57,7D,-1863
310 DATA 29,AC,AB,5F,EB,D1,1B,10,DF,7C,B5,C0,2C,C9,06,08,2A,45,71,AF,-2344
320 DATA 32,D5,73,7E,CD,BA,71,D0,23,10,F8,37,C9,FE,39,28,0B,FE,5A,28,-2517
330 DATA 0B,FE,20,28,1A,3C,77,C9,3E,41,77,C9,3A,D5,73,B7,20,08,3C,32,-1909
340 DATA D5,73,3E,41,18,02,3E,30,77,37,C9,3E,30,77,B7,C9,ED,5B,45,71,-2089
350 DATA 21,08,00,19,36,03,E5,EB,CD,16,73,E1,36,20,01,FE,F7,71,3E,2C,-1961
360 DATA CD,4B,73,3E,00,3C,FE,07,20,01,AF,32,FD,71,C0,CD,68,73,11,C0,-2227
370 DATA 3F,ED,52,30,05,3E,0D,C3,4B,73,11,00,00,21,40,00,19,01,40,00,-1099
380 DATA ED,B0,E5,D5,11,00,40,A7,ED,52,D1,E1,20,EF,62,6B,CD,8F,73,13,-2814
390 DATA 36,20,0E,3F,ED,B0,C9,FE,0D,28,30,E5,C5,7E,FE,20,C2,9B,72,23,-2468
400 DATA 10,F7,C1,E1,7E,18,20,21,42,71,22,8B,72,21,22,75,CD,DA,72,06,-2089
410 DATA 08,21,CA,73,22,45,71,CD,23,73,2A,45,71,7E,CD,34,73,38,CC,48,-1983
420 DATA 3E,08,90,47,79,C2,82,72,FE,0D,C2,8A,72,06,08,18,02,85,6F,3E,-1903
430 DATA 20,77,23,10,FC,CD,42,71,22,D3,73,21,D3,73,CD,F2,72,21,EB,74,-2502
440 DATA 18,03,21,DA,74,CD,DA,72,CD,E2,72,C3,53,70,21,71,71,22,8B,72,-2412
450 DATA C3,56,72,CD,45,73,28,08,FD,CB,0A,46,C8,C3,53,70,F5,3A,40,38,-2381
460 DATA E6,04,20,02,F1,C9,3A,40,38,E6,04,20,F9,06,FF,10,FE,C3,53,70,-2324
470 DATA 3E,0D,CD,4B,73,7E,FE,03,C8,23,C3,D7,72,D5,CD,45,73,28,05,3E,-2321
480 DATA 01,EF,18,03,CD,49,00,D1,C9,CD,01,D4,F3,72,F6,72,23,7E,CD,FE,-2710
490 DATA 72,7E,C3,02,73,0F,0F,0F,0F,E6,0F,C6,30,FE,39,CA,10,73,DA,10,-1981
500 DATA 73,C6,07,D5,CD,4B,73,D1,C9,7E,23,FE,03,C8,CD,4B,73,FE,0D,20,-2650
510 DATA F4,C9,CD,45,73,28,05,3E,09,EF,18,03,CD,40,00,C3,B0,72,1A,FE,-2250
520 DATA 41,D8,FE,5B,38,07,FE,61,D8,FE,7B,3F,D8,E6,5F,C9,C5,06,01,05,-2647
530 DATA C1,C9,CD,45,73,CA,33,00,C5,4F,3E,02,EF,C1,C9,CD,45,73,20,04,-2434
```

con't next page.

```
540 DATA 2A,20,40,C9,C5,06,04,3E,0F,18,ED,CD,45,73,28,F0,CD,61,73,44,-2038
550 DATA 11,50,00,62,6C,04,18,01,19,10,FD,11,00,F8,19,C9,CD,45,73,20,-1538
560 DATA 04,22,20,40,C9,C5,06,03,18,D5,CD,45,73,28,F2,E5,D5,11,00,F8,-2156
570 DATA AF,ED,52,11,50,00,3C,ED,52,30,FB,19,3D,67,CD,8A,73,D1,E1,C9,-2551
580 DATA CD,45,73,CA,2D,40,FD,7E,0E,F6,01,FD,77,0E,D3,84,21,00,00,3E,-2164
590 DATA 16,EF,00,00,01,03,D2,73,03,01,03,D5,73,00,01,FE,DC,73,1C,1F,-1574
600 DATA 2A,2A,2A,20,20,50,20,41,20,53,20,53,20,46,20,49,20,4E,20,44,-1014
610 DATA 20,20,43,20,4F,20,4D,20,4D,20,41,20,4E,20,44,20,20,4D,20,45,-1009
620 DATA 20,4E,20,55,20,20,2A,2A,2A,0D,2E,2E,2E,2E,2E,2E,41,72,74,68,-1105
630 DATA 75,72,20,42,2E,20,44,61,76,65,6E,70,6F,72,74,20,77,69,74,68,-1830
640 DATA 20,44,61,76,69,64,20,47,6F,62,65,6E,2E,2E,2E,2E,2E,2E,2E,0D,-1378
650 DATA 31,20,20,20,46,69,6E,64,20,45,71,75,69,76,61,6C,65,6E,74,20,-1648
660 DATA 50,61,73,73,77,6F,72,64,73,0D,32,20,20,20,46,69,6E,64,20,45,-1611
670 DATA 71,75,69,76,61,6C,65,6E,74,20,50,61,73,73,77,6F,72,64,73,20,-2015
680 DATA 66,6F,72,20,54,52,53,44,4F,53,20,31,2E,33,0D,33,20,20,20,43,-1243
690 DATA 6F,6D,70,75,74,65,20,48,61,73,68,20,43,6F,64,65,0D,34,20,20,-1626
700 DATA 20,43,6F,6D,70,75,74,65,20,48,61,73,68,20,43,6F,64,65,20,66,-1730
710 DATA 6F,72,20,54,52,53,44,4F,53,20,31,2E,33,0D,35,20,20,20,45,78,-1265
720 DATA 69,74,20,50,72,6F,67,72,61,6D,01,DB,D8,74,0D,03,0D,49,4C,4C,-1787
730 DATA 45,47,41,4C,20,65,6E,74,72,79,21,21,21,0D,2E,2E,2E,50,72,65,-1420
740 DATA 73,73,20,61,6E,79,20,4B,65,79,20,2E,2E,2E,0D,03,49,6E,70,75,-1517
750 DATA 74,20,48,61,73,68,20,43,6F,64,65,20,28,34,20,43,68,61,72,61,-1582
760 DATA 63,74,65,72,73,29,0D,03,49,6E,70,75,74,20,50,61,73,73,77,6F,-1799
770 DATA 72,64,20,28,38,20,43,68,61,72,61,63,74,65,72,73,20,4D,61,78,-1724
780 DATA 29,0D,03,0D,3C,30,3E,20,03,20,3C,2D,2D,43,6F,6D,70,75,74,69,-1194
790 DATA 6E,67,2E,2E,2E,20,28,50,72,65,73,73,20,42,52,45,41,4B,20,74,-1485
800 DATA 6F,20,61,62,6F,72,74,29,03,20,43,61,6E,6E,6F,74,20,6F,70,65,-1722
810 DATA 72,61,74,65,20,6F,6E,20,4D,6F,64,65,6C,20,34,20,77,69,74,68,-1770
820 DATA 20,68,69,67,68,20,6D,65,6D,6F,72,79,20,6D,6F,64,75,6C,65,73,-1938
830 DATA 20,70,72,65,73,65,6E,74,2E,0D,03,02,02,FF,6F,-1233
840 DATA END
```

WATCH YOUR ZERO's & "O's"

This is a ZERO....00000000000.....(oval as in GOOSE EGG!)
This is an OH, OH....OOOOOOOO.....(round as in OH-OH!)

BACK ISSUES ARE AVAILABLE $ 2.00 each.

PROGRAM LISTING NUMBER TWO -Robert Keegan
A Model III Screen to RX dump program.

```
990 'MX SCREEN DUMP FOR MIXED GRAPHICS-TEXT V.3 ** RRKEEGAN COPR. '85
991 SC=15360:LPRINTCHR$(27)"A"CHR$(4):A1$=STRING$(3,240):A0$=STRING$(3,0)
:I7=128:FORI=0TO15:I6=I*64:GOSUB995:FORJ=0TO4STEP2:XX=2[J:I1=XX+XX:LPRINTCH
R$(27)"K"CHR$(128)CHR$(1);:FORK=0TO63:P=PEEK(I6+K+SC):IFP<I7THENP=I7
992 IF((P-I7)ANDXX)THENLPRINTA1$;ELSELPRINTA0$;
993 IF((P-I7)ANDI1)THENLPRINTA1$;ELSELPRINTA0$;
994 NEXTK:LPRINT:NEXTJ:NEXTI:LPRINTCHR$(27)"@":LPRINT CHR$(13)CHR$(13)
CHR$13:RETURN
995 FORK=0TO63:P=PEEK(I6+K+SC):IFP>126ORP<32THENP=32
996 LPRINTCHR$(P);:NEXTK:LPRINTCHR$(27)"J"CHR$(0);:RETURN
```

PROGRAM LISTING NUMBER THREE -Robert Keegan
Modification for program listing number 2 - LX Screen Dump Mod III

```
990 'LX SCREEN DUMP FOR MIXED GRAPHICS-TEXT V.3 **RRKEEGAN COPR. '85
991 SC=15360:LPRINTCHR$(27)"A"CHR$(6):A1$=STRING$(3,252):A0$=STRING$(3,0)
:I7=128:FORI=0TO15:I6=I*64:GOSUB995:FORJ=0TO4STEP2:XX=2[J:I1=XX+XX:LPRINTC
HR$(27)"K"CHR$(128)CHR$(1);:FORK=0TO63:P=PEEK(I6+K+SC):IFP<I7THENP=I7
992 IF((P-I7)ANDXX)THENLPRINTA1$;ELSELPRINTA0$;
993 IF((P-I7)ANDI1)THENLPRINTA1$;ELSELPRINTA0$;
994 NEXTK:LPRINT:NEXTJ:NEXTI:LPRINTCHR$(27)"@":LPRINT CHR$(13)CHR$(13)
CHR$(13):RETURN
995 FORK=0TO63:P=PEEK(I6+K+SC):IFP>126ORP<32THENP=32
996 LPRINTCHR$(P);:NEXTK:LPRINTCHR$(8)CHR$(27)"@"CHR$(27)"A"CHR$(6)
;:RETURN
```

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OPEN FORUM AND READERS LETTERS

I think it would be great if you could publish a tutorial column for machine language.

I have tried assembly language several times and all has ended in failure.

Popular Computing, Vol 4, 6, & 7
80 Micro #47,48,49
A.L.T. 26-2017 & 2018
A.L.D.S. 26-2012
Programing the Z-80, R. Zaks.

I hope you could start from scratch and go slow with lots of examples. I believe my problem was the lack of background.
F. G. W. -Palmdale, CA

How about it, anyone want to start with page one and go from there, we will gladly publish it. -Ed.

As a new subscriber I must write and tell you that you are off to a great start. My only objection is that the publication should be three or four times larger, as I devour it in short order when it arrives. I am writing with a few offerings which may be of interest.

A. PFS:file (ref: Vol 1, #1). I apparently do not have the latest version of the pfs:File manual in order to follow your directions for minimum pfs:File system disks; however, I did obtain the following procedure from our local Radio Shack Computer Center which works quite well.

1.> Convert the PFS:FILE disk to LS:DOS 6.3

2.> Place the PFS:FILE disk in drive Ø and enter the following:

AUTO PFS
SYSTEM (SYSRES=1) <ENTER>
SYSTEM (SYSRES=2) <ENTER>
SYSTEM (SYSRES=3) <ENTER>
SYSTEM (SYSRES=1Ø) <ENTER>
SYSTEM (DRIVE=Ø,STEP=Ø) <ENTER>
SYSTEM (DRIVE=1,STEP=Ø) <ENTER>
SYSTEM (DRIVE=2,STEP=Ø) <ENTER>
SYSTEM (DRIVE=3,STEP=Ø) <ENTER>
SYSGEN <ENTER>

3.> Place a formatted Data Disk in drive 1 and enter the following:

BACKUP SYS12.SYS:0 :1 (S) <ENTER>

After booting the system with pfs:file, the pfs:file disk can be removed from drive Ø and replaced with the data disk. Every data disk so used must have the SYS12/SYS file in resident.

B. I am always amused at the scores of letters written by frustrated SuperSCRIPSIT users. Gripes and patches for this software have the most frequent reader items in recent times. You might encourage folks to do the only sensible thing - scrap this program and buy either LeScript or Allwrite. I've used the latter for two years now and find it powerful, fantastic, and it never glitches.

C. Keep Mr. Goben's articles coming. I hope that the other good contributors from the 80 Micro days will also soon join your bandwagon.

I use LSDOS 6.3 almost exclusively; however, there are some nice features found in DOSPLUS IV that are missing in LSDOS. One that I particularly like is the DATE CAL command that displays a calender in addition to the date. Is there a way to incorporate this feature into LSDOS?

Also, is there a patch to Tape 100/CMD so that tapes generated by a Model 102 laptop can be read by a Model 4D?
R. R. O. -Erie, PA

Its surprising how attached we get to our programs, they become almost like children that we will protect to the death when they are threatened, but complain about them exhaustively when they don't behave the way we think they are supposed to. -Ed.

I teach word processing on the Wang OIS and also have taught Word Perfect on IBM compatibles. I sincerely feel SuperSCRIPSIT is a super value - function vs. dollar!!
It is slow on my Model 4 P because it has to read the disk all the time but dependable and versatile. I use it with a DWP410 printer so I really get camera-ready copy.
P. M. - Longmont, CO

We enjoyed your introductory Computer News 80 and are relieved to read that our TRS-80 is not completely deserted. As a former Micro 80 subscriber we found after searching the Print Market considerably, we were almost convinced updating to a MS-DOS system, feelings were that support or our Model 4 was N.A. We have been using the TRS-80 for three years and finally have it to a working level for our Auto Repair Service, having at most designed & tailored Profile 4 Plus to suit our needs, to this point.

We would in the future like write-ups on Visicalc, SuperSCRIPSIT if feasible.
B.B. & S -Peabody MA

(Editors Note) As we grow, coverage of data base programs and many other things are in the planning stage.

This is mostly a note to say thank you for producing CN80.

I especially appreciated the info on pfs:FILE in the first issue. I had transferred it to LSDOS 6.3, but did not yet have it running. This is a program that is far more useful than the 80 Micro review indicated.

I am please to see that Mod 4 by Jack Klein is being republished by CN80, it is a handy reference.

I have purchased "Lair of the Dragon" by David Goben, and while I haven't had much time yet to work with it, I would recommend it to anyone with any gaming interest. Thank you.
C. N. D. -Star Lake NY

I suggest being cautious about version 1.80 of LeScript. I upgraded as soon as it was

announced, and the original copy was unusable. It was totally unreliable, would lock up my computer often, and the spelling checker didn't work at all. When I contacted them, they quickly sent me another disk on which they had fixed "all the problems we know about". This was better, but still caused (much less frequent) lockups and loss of data. The spelling checker also worked most of time. I recently called them, and they offered to send a third disk, implying that more bugs have been found. So far, their efforts to support the program have been excellent, but they did say that to get any more fixes, I'd have to use their standard problem report process. Hope the next disk does the job. I'll let you know as soon as I've tried it. For now, I'm using version 1.70 which, like all the previous ones has been very reliable.
D. S. -Scottsbluff, NE

I have a Model 4-P, 128K on which I run Tandy's Accounts Payable System, (Cat. No. 26-1542), version 02.02.00 using LS-DOS 6.3 with the MEMDOS installed as described in Don Coffin's article in the January 87, Micro 80.

If a credit transaction is entered for a vendor (to cover a return, or whatever) the General Ledger Distribution is thrown out of balance because the credit is not added into the credit column for the Accounts payable account.

I have contacted Tandy, who admit that it is a bug, but offers no help. Has anybody out there solved this problem?
C. P. -Fort Lauderdale, FL

Do you know of a screen dump program that will allow me to dump a high-resolution picture created with Radio Shack's BASICG to an Epson LX-86 dot matrix printer?

I am using a TRS-80 Model 4 with TRSDOS Computer Graphics disk 6.01. BASICG of course, it has several screen dumps for Radio Shack dot matrix printers-- but they dump garbage on the Epson LX-80.

I have Micro-Labs' GBASIC that has a screen dump for an Epson printer, but the programming language is different. I could transfer all of the programs that I have written in BASICG to GBASIC, but I do not have the time to do that. Any help will be appreciated.
M. P. -Eureka, KS

First another plug for Lazy Writer. It doesn't do columns, but otherwise it performs whatever is needed in word-processors. Most commands are toggled. Everything is memory resident, which makes it fast. Printing can be performed with menu commands (toggled) or soft commands. Fonts and print types commands can be inserted into text. Underling exists. You name it. And the learning time is zilch. Call David Welch at Alphabit Communications, Dearbon, MI. What prompts me to write is the fact that your journal is filled with all kinds of problems with the Scripsit and its progeny. Lazy writer doesn't inspire requests for this help. And as I mentioned before, the combination of Lazy Writer and the Model 100 is unbeatable for uploading text to the model 4/4P.

The second item is the KSM files. It took me a long time to figure out that using the same dumb device one can create as many KSM files as needed. Thus, all you have to do to bring up the KSM file of choice is write a small JCL program for each one. Don't forget to reset the *KI etc. of the old before invoking the new.

For loading up all their application files on an 800K disk, for transfer to the Alpha board, I suggest Misosys's DiskDISK. This program allows you to package your applications on to virtual disks.Thus you don't have to pile all your programs on the 800K drive and copy them to ram. Instead, invoke DiskDISK and copy only those applications you need. This is neat, and keeps your files in order. It also uncomplicates the RAM, particularly since Profile 4 Plus jams up with certain programs.

Lastly, there is a program called Proaid 4+ by Clay Watts in Florida, (68 C North Loop Cedar Hill, TX 75104) which supplies Forms and a lookup program for Profile, which

SMALL COMPUTER never produced, because they got too involved with MSDOS.

Incidentally, there is a glitch in Profile 4 Plus, which stops the printer from printing out more than 100 lines. This resulted from a Tandy patch, and is corrected by a patch from Small Computer.
C. H. MD -Island Heights, NJ

Q: I just recently got a copy of Newdos/80 for my TRS-80 Model 1, level 2 machine. I used the format 5 copy format; COPY Ø1/ Ø6/Ø1/8Ø FMT. I check the system options and the copy was the same as the source disk. I also used the PDRIVE,1 command to have the copy disk to have the same PDRIVE info as the source disk. I can't get the new copy disk to boot up the computer when reset. What else can I check? Any ideas?

P. S. I need the manual for TRSDOS for my Model I, where can I buy a copy?
D. R. J. -Middleburg, FL

A: The use of COPY Ø1 Ø6/Ø1/8Ø FMT causes NEWDOS/80 to create a DATA disk. Use the format COPY Ø1 and answer the prompts as required. This will create a systems Disk.

As for the TRSDOS manual, Radio Shack national parts should carry one. -D. G.

(Editors Note) If you recall last month we had a rather long question letter from D. R. J. of Middleburg, FL concerning the ham radio program RTTY. We haven't heard from any of you radio ham operators out there yet, how about a little help for a fellow ham operation!

However one good subscriber who had been helped before to solve a NEWDOS problem, spotted D.R.J's question, and took the time to let us know that he thought he could help solve the problem, and we put him in touch with D. R. J. -Many Thanks go to H. T. of Mobile, AL, for his taking the time to make the phone calls. -Ed.

Q: Has anybody ever tried changing the drives in a Model 4 or 4P to the later high capacity jobs. Since I have both a Mod 4 and 4P, I would be interested in somebody else's experience.
B. M. -Missoula, MT.

Q: I use my Microlabs board quite a bit and I would like to see reviews and tips. For instance, Bizgraph or Draw. I'd like a little better idea of how T-Cad works. Is it on a par or better than Draw? I'm into a PLD program and use some stats programs.

By the way, do you know where I can get a copy of LOGO (Mod III or 4) for my kids?
D. S. Knoxville, TN

A: Our next issue will carry a full review of the Microlabs board, which is presently in the works by the reviewer. -Ed.

Q: If I only want to print out a "forced" second page of a letter (using CTRL-N), the entire page scrolls before I get the prompt, "Do you wish to continue printing?" The printer should just print the page without all this nonsense. Is there a patch that will update Profile 4+ past 1987, I feel like I'm in a time warp every time I use it.

I have had some problems with SuperSCRIPSIT, but for the most part, it gets the job done. I also use Profile 4+ for my mailing list. It's much too slow when it comes to sorting, but again, it gets the job done and the letter quality of my DWP-210 is impressive.

Thank you for the newsletter. I found it quite interesting, since all the articles were in plain English and no one seemed impressed with their computer knowledge. I even got excited about your Classified section.

Yes, the Model 4 does have some staying power, in spite of its many short comings. I would never have my correspondence club or prining business without it.

I have also experienced the "swelling and shrinking" of my screen. R. S. fixed it when it was still under warrantee, but it has since started up again. I am not an electrician and, since it does not sound like a serious problem, I am not going to spend

any more money trying to patch it up.

I trust I will finally begin to get the answers I have been groping for these past three years.
G. M. -Hammond, IN

A: Your updating the Profile 4+ should be solved by using some of the approaches we covered in Vol 1 No. 1 and 2, using the LS-DOS 6.3 date conversion or with Michael Jacobs, up date program.

When you use the CTRL n command in SuperSCRIPSIT to force a page, you can only place the "forced page" at the beginning of a paragraph. If you do it will scroll the paper one full page forward, just as you describe. If you want to force a page in the middle of a paragraph, try this: go to end of the line above the line you want as the first line on the next page and use F1 and insert a paragraph symbol, this works great and I use it for letters all the time, until I forget and try to do it without, then I get a wasted page of fan fold, or the frustration of the printer spinning to remind me that I forgot again. -Ed.

Q: To the Open Forum,
Re: Superscripsit and other Mysteries!

As a long time user of Radio Shack Model III's and then up to Model 4D's and 4P I have encountered my share of frustrations. Some of the problems I have learned to ignore and some I have solved, but none can be more perplexing than the problems I have encountered with SuperSCRIPSIT, (Yes, all versions!) I am a Computer user and I don't have the time or the patients to tinker with programs. I ask only that they do what they are supposed to do, and do it consistently.

Maybe someone out there has a solution to my problems with SS. I have found that when typing long documents that exceed 20K on the disk the program is very likely to screw up and insert "junk" in the document. By the time I get a program 50K in length I have found that storage room ("K's" required for the program grows much faster than in a smaller document. Another problem with a big document isn't a matter of "if" it screws up, but "when" it screws up. Both my wife and I have large documents that require a lot of "editing". I have never, with any version of Scripsit, typed a large document just once and then went back and moved things around and made multiple inserts and deletions, without having problems. My wife's problems with this program are far worse than mine because of the nature of her hobby, Genealogy. She has several hundred long genealogy charts on SuperSCRIPSIT and they make extensive use of TAB LINES and TABS.

As a new material is researched the documents must be edited extensively. It is most always during the editing process that the program will "bomb". Sometimes going back to LS-DOS and sometimes it just "hangs up" and won't let you do anything and the document is lost. Is this program being fixed by Tandy? When will a "fix" from them be available? What are my alternatives? What about Scripsit Pro, does it treat tabs the same as SuperSCRIPSIT? I have looked into other word processors, but converting my wife's documents, with hundreds of tabs per document, would be damn near as bad to re-build as to retype.

I would also like information on a hard disk system. Because of the size of our data base and the number of large files I would require a 40 meg hard drive, but 70 meg would be better to allow for expansion. I must also have a reliable method of backing that much information up. Possibly a tape drive. Since I run two 4D's side by side I would want both of them to access the hard drive in either LS-DOS or CP/M. I don't have a clue where to to start asking. Certainly in northern British Columbia I can't find anyone with the knowledge required. I don't even know if what I want is possible. Model 4's have been discontinued for some time in Canada and the dealers are of little help.

One last problem. I purchased the Profile III+ Upgrade to Profile 4 Plus. The program is excellent, but the documentation that came with the Profile programs is terrible. Is there anyone who writes a common sense, plain English explanation of how to use Profile 4 Plus?

I realize this is a long letter, but this is a big problem. I do hope that there is some relief in the offing. Many's the day I have been tempted to fire computers and all out the window. That might solve the problem but is would not be a solution.
S.W.O. -Prince George, B.C. Canada

A: We published this rather long but very interesting letter because it covered so many of the problems that others have been writing about.

First off, your problems with SuperSCRIPSIT are very much the same as we have had with our own publication, and the problem seems to stem from long documents with a lot of tabs and a lot of editing, see our Vol 1 No 1 and 2, which covers much of these problems. Our best results were from not using the latest edition (ver 1.2) that was supposed to cure many of the problems that were in (ver 1.1) and return to the 1.1 version updated with LS-DOS 6.3 date conversions. Our weekly publications are very much like your wife's data, with a lot of single word, and single line editing, deletes and re-entries, around a number of TAB lines. The advantage of SS's "what you see is what you get" in this type of work is what keeps us using the program. For other word processing applications we do use other programs that are not disk based, but are memory based when building documents.

Is Tandy working on the problem? We doubt it. We sent the complete set of our disks, data and hard copies of the problem we were having last year to RS support center in Fort Worth, and with their withdrawal of Model 4's from the market place, I doubt that they are going to spend any more time on the TRS-80 version.

Some of the suggestions that come to mind, rather than repeat them all are; purge your MOVE/CTL file often from drive zero, as this has a tendency to grow, as you delete, move and copy a lot. And as you know if you convert to ASCII and then convert back again to a new document file you loose all your tab setting and have to redo them, try that only if you have frozen paragraphs that you can't un-freeze, sometimes it works and sometimes it doesn't.

Some people who are using SS for other types of applications have very few problems, but those who use it with a lot of tabs, a lot of small item editing, or single line and short paragraph moves, seem to be reporting the same problems. And of course if you do this type of form reconstruction work you have to be able to see the text on the screen as it would be printed out and still be able to edit the text at the same time.

David Goben has been working on this problem also, for a year, and can not seem to come up with the answer either. But we, like you want the program to do what it is supposed to do, and we are determined to keep on trying.

We would like to hear from users of Scripsit Pro, we understand that the program operates under a different internal directory system than the SS, but retains much of the same style and commands as SS.

To your question on hard drives, the size of the drive is relative to the users file needs, some find a 5 meg will fill their needs, and others will need a much larger drive.

At one time there was a unit called a Multiplexer that would connect one hard drive to two computers and work like an automatic switch between the two, this was marketed by Micro Smart, formerly Software Support, and checking with them by phone they no longer have multiplexers and the cartridge hard drives for the TRS-80 computers.

We use a five meg Konan cartridge hard drive, which uses cartridges by SyQuest Technologies, for the reason that you mention, having the hard drive available to operate on two different DOS systems, so we do not have to download the data, and reformat to switch to the other other DOS system. (We just found out that the drive is no longer supported by either MicroSmart or by Konan.) The option here is to partition the hard drive to use LS-DOS for half the drive and CP/M on the the other half, this may increase the size of the drive that you would need. And a quick check with Konan Corp. tells us that those drives and cartridges are no longer available.

Your best bet is to contact Aerocomp for any hard drives, they will at least work with you on your needs and selection. And hopefully be around to provide service in the future.

As far as we know the backup to floppy disks are just as reliable as the tape backup systems, it just takes longer, as some tape back up systems back the drive up at the same time as you enter the data. And of course disk dirves are a lot less expensive hardware.

One suggestion we like, but sometimes fail to heed is to make two backups of everything at the end of each day, rotating the set each day, ie. make one on Monday, and make one on Tuesday, then on Wednesday use Mondays disks to make your back up, and so on. That way you don't run the risk of losing more than one days work if something goes wrong during the backup. Nice thought isn't it -what could go wrong- and lose only a day! (Eight hours of solid production). Well I guess if you are going to live in the modern world an play with its toys you have to take the risks, but lets not dwell on that thought, I would rather delude myself and think that everything is going to work perfectly every time. Is that too much to ask from our modern technology. (I've been using the same toaster every morning for the past 20 years!)

We will let fly your query on Profile III Plus, at our readers, I am sure there are some more qualified users of the program than we are, who could answer some of your questions about a better manual. If we knew more about how you were using it, some home grown instructions could be forth coming.

We use our Model 4's anywhere from 40 to sometimes 60 hours a week, and most of that time is spent creating documents with SuperSCRIPSIT, it is the best for some things and the worst for others.

Q: I really enjoyed reading your latest issue, Vol 1. #5. Each issue seems to be getting bigger and better all the time!!! On page 3 of the latest issue you asked for stories on installing internal hard drives. We here at Chicago Syslink Network have gone one better. We've been able to set-up a system using 2 Model 4's and one Model 4P all hooked up to an external 20 Meg. hard drive and all running at the same time, accessing the same files. We're also using NEWDOS/2.5 as our main operating system. This may sound like too far fetched, but it is true. Having run a BBS now for almost 7 years, we outgrew the capacity for floppies, even 80 track double density/double sided. We had up to four running on one machine. In the early part of 1987, we saw an ad in 80 Micro for something called the 'Megaplexer' and 'Megadisk' from Micro Smart Inc. in Ashland, MA. If you have an old issue of 80 Micro, take a look on page 41 of the June 87 issue. We bought the 4 port version and the 20 meg. hard drive. We paid $200 for the megaplexer and $500 for the hard drive. After hooking up all the cables and following the instructions, we were able to have all THREE computers reading & writing to the same hard drive using NEWDOS80/2.5

For the past year or so, everything went fine. Then last weekend, right after backup, we had a hard drive failure. Thank God for backups!!! We were able to replace the hard drive with a new Seagate ST238 30 megabyte, but were only able to use 20 megabytes due to the disk controller. At least we got a good deal on the new drive, $280. The problem we're facing is that the company, MicroSmart, no longer sells - nor supports this hardware. They won't even supply schematics so we can fix it ourselves in case it goes. Has anyone else out there purchased this type of hardware before or knows where we can find the person who built and designed the 'Megaplexer'??? We don't want to move to MS/DOS or another BBS software package because we haven't found anything this good in the IBM/MS-DOS world. We also heard that there's a company, HYPERSOFT, we think, that will simulate a model 4 world on an IBM/Clone. Is this true? Anyway, having used NEWDOS80 exclusively for the last 8 years, we're more than willing to swap/share information. If you have a modem, call us directly at 312/622-4442, 300/1200/2400 baud or feel free to call the voice number 312/622-5969 evenings before 9PM central time or even write us attn:
George Matyaszek
Chicago Syslink Network - 1718 North Long Ave., Chicago, IL 60639-4321

A: Sure wish we could come to your rescue George, but we just found out that MicroSmart would not talk to us about the hard drives we purchased from them, one in 86, and one in 87. Hypersoft is the company you are thinking of, see their ad in our Vol 1 No 4, or call Mike Gingell, at 919-847-4779, the program is called PC-Four but it only emulates the Model 4 Mode and it supports a hard drive on the PC. It does not emulate Model III programs but Mike tells us he is working on one that will.-Ed.

Q: Can anyone tell me how to do a global search for any of the various end-of-paragraph signs that may turn up in Scripsit Pro?
A. H. R. Geneva, NY

Q: We have been looking for 5-1/2 x 11 or longer, without perfs, plain white fan fold paper, similar to that used by newspapers or press services and we have been unable to find a source. Would anyone know where this paper might be available?
P.R .-Duquette, MN

Q: Can you provide some information on the use of the Video SVC? As I've done for my Model 3, I'd like to write a memory resident /CMD file to allow some specifie ASCII characters to be sent to the Video by assigning certain key combinations to each character (E.G. Shift plus A, send [left bracket. This will allow sending these characters from with application programs.
A. P. -Pittsburg, CA

A: We have been publishing quite a bit on this subject see Klaus Meinssen's article on ASCII charaters in Multiplan in Vol 1 No 5 page 6, and Jane A. Layman's article on page 20 of the same issue. We are waiting to hear from others too. From our records we assume that you are now wanting to do the same thing on your Model 4, 128K LS-DOS 6.3, as you did on your Model III that you mention in your question.

I have been using a III since they first came out. I started with a Model I. It was matches with an Epson MX-80. I have added a 4P with custom double sided drives matched with an Okadata 82. I use SuperSCRIPSIT, Super Visicalc and Profile Plus. They handle everthing I need presently. I am looking for more educational business, and game programs. My next machine purchase will operate an architecturral CAD package with high speed plotter. B.J. S. Architect - Columbus, OH

I got into the SHell Ver 1.5, 1.6 & 1.8 disk managers for the Model 4, via Public Domain, Registered with the developer and since got his ver 2.0 (non-PD) up grade.

It can manage disks far easier than any disk manager I've aquired in MS-DOS (PC-Tools, Xtree, etc.) No model 4 owner should be with out it. Another program great is T&K, (a TRS-DOS survival kit) easier to use than Super Utility 4 and almost as complete. I am in a "hackers" group for the Model 4, some of the guys can do anything, I'll even do my MS-DOS and and I learn from them.

I have a model III, 4P with 75 disks each -PD. If I can help anyone, I'd be glad to compile a list and make them available. I got heavy into the PD libraries before they closed up.
B. M. - Marne, MI

Thanks B. M. we need all the help we can get, and would like to have your list of PD's. -Ed.

We are very glad to see someone still cares about TRS-80 computers. We have a lot of TRS-80 owners in the area who need help. We try to support them as much as possible and will let them knoww about your magazine/newsletter.
B. B. Westfield, IL

Thanks for the help and the recommendations. -Ed.

I would like to have a file system that does not keep going out to the disk drive for every record, and also a simple name or letter sort in basic.
D. Z. - Maumee, OH

Does any of you PD collectors have a suggestion, for D. Z.? -Ed.

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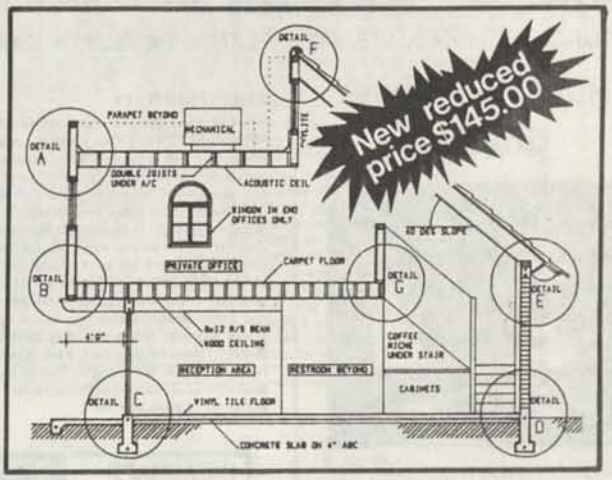

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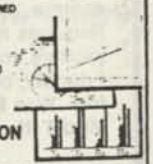

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Can we talk? CP/M vs TRSDOS

By moving to CP/M on your Model 4 you achieve two things. First you open the door to a wealth of existing software. More 8-bit software runs under CP/M than any other operating system. This includes virtually all of the "big name" programs which have set the standards by which all others are measured. Programs like **WordStar, dBASE II, and Turbo Pascal** are available for CP/M, but not TRSDOS. Public domain software, almost unknown under TRSDOS, fills hundreds of megabytes of disk space. Valuable public domain programs like the **Small C Compiler** are just a toll-free phone call away. Most importantly, hundreds of applications programs are available from a multitude of vendors. Many include the source code. Wouldn't you like to be able to choose from scores of Accounts Receivable or General Ledger programs, instead of the meager selection you now have?

What about the future?

When the time comes to move up to another computer it will almost certainly use MS-DOS. That's when CP/M users get a pleasant surprise. Since MS-DOS was a derivative of CP/M it operates in almost the same manner. Even better, most of the same software packages are available in 16-bit form and they operate in virtually the same way that they did under CP/M.

Is it easy to use?

Montezuma Micro's CP/M has been carefully crafted to present a maximum of features while taking a minimum of memory. It supports all of the standard features of the Model 4/4P/4D computers, as well as most of the optional ones. Our CP/M has been consistently been awarded the highest ratings in industry magazines. It is version 2.2, the most popular and reliable of all the versions of CP/M produced. Our CP/M has been made as easy to use as possible. All customer-selected features are chosen from simple menus in our CONFIG utility. This includes the ability to configure a disk drive to run like that of scores of other CP/M computers for maximum ease of software portability. Using the unique DBLCROSS program in our Monte's Toolkit utility package you can move files back and forth between CP/M, TRSDOS (1.3 and 6.x), and MS-DOS.

Why use Montezuma CP/M?

We have already told you why our CP/M is the best for the Radio Shack Model 4-computer. The only question left to answer is "Why buy CP/M at all?" Radio Shack has abandoned TRSDOS — all of their new machines use MS-DOS. Most of the software producers have followed, leaving no new software development and saddling the TRSDOS user with whatever software "leftovers" he can find. Which DOS do you want to head into the future with: the one originally written for the Model I or the one that served as the basis for MS-DOS? Make the right choice right now for just **$169.**

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Our owners are protected against instant obsolescence by our lifetime upgrade policy. At any time you can return your original CP/M disk to be upgraded to the latest version free of charge, except for a small shipping and handling fee. Periodically we publish NEW STUFF, a newsletter for registered users of Montezuma Micro CP/M. This publication carries news about new products, tips for getting more out of CP/M, and other valuable information for our users. It is sent free of charge to registered owners.

Can I use a hard disk drive?

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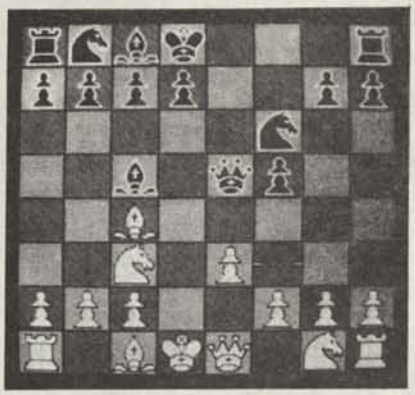

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Please specify your exact system configuration when ordering or requesting information. Payment may be by check, Visa, Mastercard, or COD. Domestic shipping is free on pre-paid orders. Texas residents add 7% sales tax.

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EDITORIAL COMMENTS

In the first issue of 80 Microcomputing, published by Wayne Green, (Jan. 1980) he writes, "All my magazines have one thing in common - they are written almost entirely by readers - you. If you buy something which should be written about, write about it."

"If you get some software which is great, write about it. If it is awful, say so. Try to think of 80 Microcomputing as more of an enormous and informal club newsletter than a pontificating magazine."

In the second issue (Feb. 1980) there is a block display ad that reads, "IF YOU CAN READ YOU CAN WRITE!" and goes on to say, "80 is mainly written by people like you, not an elite group of intellectuals. A lot of readers think that it is difficult to write, but it is remarkably easy if you sit down and try."

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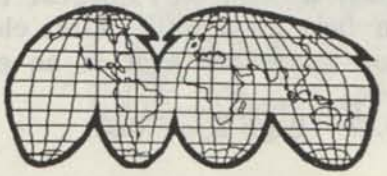
Without realizing it, or having the pleasure of being in on the beginning of the TRS-80 in 1980, we find that the concept that Wayne Green put forth in the early days of 80 Microcomputing were the same concepts that we came to independently and which we wanted to put forth in the beginning of Computer News 80.

Perhaps it was just that we recognized the need of so many TRS-80 users, ourselves included, that needed the kind of help that was simple, down to earth and written in a simple english style that everyone could understand. We believe that those concepts are just as valid today as in 1980. We want to have this publication written by our readers for our readers as we have said over and over from the very first issue. So let's hear from you. Even a letter of the problems that you have been having is a start. We won't fault you for not finding the answer in the operating manual, or in the program documents. Sometimes all it takes is someone to point out where the answer can be found in the manuals. Or just some clarification of what the manual is saying will get you over a hurdle, that others who are more experienced might find minor, or frivolous. We certainly won't embarrass you for not having as much skill, education, or talent as the so called "experts" think everyone should have.

Some of the best help that others can give is really just -short cuts- that can save us a lot of valuable time lost in research, trial and error, and problem solving all on our own.

Let us hear from you, too.

We are now fortunate enough to have a full set of 80 Microcomputing starting with the very first issue and going thru to the last



issue of 80 Micro in June of 1988. We do have a few extra copies of some dates. If you collectors are interested let us know which ones you need.

Clarification of our published PROGRAM POLICY

Unless otherwise indicated, any program submitted to and published in Computer News 80, SHALL BE AND ARE PLACED IN PUBLIC DOMAIN. Articles, columns, and other printed material is copyrighted by Computer News 80, and permission is required to reprint or copy any of that content. Every precaution has been taken to assure that programs submitted and published are public domain programs, no responsibility is assumed by the publishers for programs submitted by others.

Like everyone else who uses Bulk US mail we have been having our problems. When an issue is mailed some subscribers get it within the week, others get it four weeks later - or not at all. The following is a list of the issues and when they were mailed.

Volume and Issue	For Month of	Mailed
VOL 1 No. 1	January 1988	1/15/88
VOL 1 No. 2	February	1/27/88
VOL 1 No. 3	March	2/22/88
VOL 1 No. 4	April	3/21/88
VOL 1 No. 5	May	4/25/88
VOL 1 No. 6	June	5/31/88
VOL 1 No. 7	July (mailed by)	6/27/88

You will note that our Vol 1 is 1988 and the issue number corresponds to the month that the issue was published for. To save on the confusion we will start putting the month and the year on the July issue. If you did not receive your paid for subscription issue please let us know and we will send a replacement. Back issues are available at $2.00 each.

If your issue is one of the ones that seems to take four weeks for Uncle Sam to deliver, then we can only suggest that you convert to first class mail. First class mail subscription issues are sent in an envelope with first class postage on the same day that the bulk mail subscriptions are sent.

If you want to convert the balance of your subscription to first class, compute the number of remaining issues that you have coming and multiply by 85 cents. i.e. (five issues till 88/12 times 85¢, remit $4.25, we do not make a profit on cost of mailing issues). Note: the last five digit entries on your mailing label is your "last issue date" i.e. 89/05 means that you will receive the May 1989 issue under your current paid subscription.

Gift Subscriptions

We have had a lot of thoughtful people, buying gift subscriptions for their brothers, children, and other members of the family. We have also had a number of people who have sent CN-80 to their computer friends. What nicer way could there be to say thank you to a friend that has helped out in a computer crunch, or as a gift for someone who seems to have just about everything and is difficult to buy a gift for.

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HINTS, TIPS, AND VISITS WITH YOUR FELLOW READERS

DMP130A RADIO SHACK/SEIKOSHA SP-1200AI PRINTER REVIEWED

Catalog #26-1280A .....$359.95 in the 1988 Tandy® Computer Catalog & Software Reference Guide.

Recently the Tandy DMP130A printer has been on sale, off and on, for $299.95 in most of the Radio Shack stores. The original manufacturer of this printer is Seikosha, and the Seikosha SP-1200AI printer is available from several mail order firms for $179.00, a savings of $120, over the sale price Tandy is getting.

The Seikosha printer is manufactured by the same people who make the Seiko watch, and it is identical with the RS DMP130 except for the location of the push buttons on the front of the case. The dip switches are still inconveniently placed in the rear of the printer under the paper feed area. Which means that if you are using fan fold paper you really have to do a balancing act to change the dip switches without removing the paper. This is not that much of a problem because there are only two main changes to the dip switch settings that you might want to use during the time when your computer is on and you are running programs. Because the Seikosha printer has a slash Ø and non-slash 0 dip switch, you might want to use the slash Ø when printing a program listing, but disengage it when printing letters and addresses with zeros. The other dip switch change is to "jump the fold" in fan fold paper. You can not leave the "jump the fold" switch on while using some word processing programs, because it will interfere with the end of page signals sent from the program.

The specifications are about the same on both machines. Prints: 10, 12, 17 cpi (Seikosha has 20 and proportional). Speed: 60 to 120 cps (draft), 22 to 30 cps (near letter quality).

Both are IBM compatible, with the Seikosha using FX-80 emulation. So for SuperSCRIPSIT, you need the FX-80 SuperSCRIPST print driver program, which is available form several sources. Discount Data has it listed for $24.00. So far we have not had any problems printing any of our regular programs directly from our Model 4 to the Seikosha printer.

The ribbons for the DMP130, and the Seikosha SP-1200AI are the same, in fact the tractor and the interior parts are identical, we even switched the removable cover and paper guides around, just to see.

The big difference with the Seikosha printer is that with Tandy's DMP130 you set the pitch from your computer, and set the margins from the switches on the front of the printer. With the Seikosha you set the margins with your computer program and set the type pitch with the switches on the front of the printer.

This actually makes more sense because you generally need to change the cpi pitch much more often than the margin settings. When you are in a program and see that 10 or 12 pitch is too wide for your report, using the DMP130 you had to exit the work that you were in and reset the DMP130 from DOS ready with a 17 pitch command or command program, while with the Seikosha, you stay right where you are in the application program and just reset the printer cpi with its push switches on the front of the printer.

The Seikosha SP-1200AI has more features than the Tandy DMP130A, and you save at least $120.00 off the sale price, more at full catalog price.

If you decide to purchase a Seikosha printer be sure that you order the SP-1200AI, as the "AI" stands for Epson/IBM Compatible. Their SP-1200"AS" is noted as an Epson, Serial Interface. Midwest Micro-Peripherals 1-800-423-8215 is one source for the Seikosha line, along with several other hardware distributors. Call for current prices, which are not expected to be any higher than $179.00.

A READERS LETTER OF SUGGESTIONS FOR MUST HAVE PROGRAMS

Dear Computer News 80:

I am enclosing $8.00 for issues numbers 1-4

As I don't yet have your first four numbers, I may be asking for things you have already covered, but:

Software is becoming scarce for the model 4. Let's make some suggestions to one another as to "must buys" before they disappear forever (and maybe keep the companies serving us just a little longer). My list includes:

Copycat 4.1: the ultimate backup program for the model 3/4. It is fast and efficient for normal backup chores, will make backups of your precious copy protected programs (which may be irreplaceable) and will even backup flawed disks (helpful when learning repair techniques).

Super Utility: you can learn to do so much with this program (including much of what those smug MS-DOS users do with Norton Utilities) that the limits seem to be the amount of time you are willing to invest in learning all of its features. I have saved so many files and fixed so many disks with so little effort! Magic! The book "Using Super Utility 3.x, Super Utility 4/4P, and PowerTool" by Wiener and Camp helps.

Visicalc- or -Multiplan: You will find how useful a spreadsheet is only after you have invested some time into getting a feel for it. I dismissed Visicalc as worthless to me at first, but now I use it to keep my gas mileage, do my bills and income tax, print order forms for mail purchases, planning layout and materials for building projects and all kinds of calculations that would be a lot of effort for just a calculator. Coach Duncan keeps his baseball statistics, and I keep my entire gradebook (I'm a teacher) on Visicalc. Multiplan has oodles of features, but is dismally slow (even with manual recalc) on large spreadsheets.

A word processor: I use my computer for this more than everything else combined. I can't tell you which is best, but have been very happy with all the easy-to-use features of SuperScripsit. You have to be very careful with backups, or SuperScripsit will get you. SuperScripsit has an undeserved reputation for being hard to learn because it comes bundled with materials written to confuse. If I hadn't a lot tied up in SuperScripsit, though, I think I might try LeScript or Allwrite.

J&M Memory Minder: to find out what is wrong with your drives and, if you have the courage, to do some adjustments. If you don't want to adjust your own drives (a real pain if you don't have a steady hand and lots of patience), you might not want this for just one computer. We have over forty model 4s in our school, so it helps us make quick and accurate decisions about repair needs. My "gifted" classes really enjoy adjusting drives using Memory Minder's diagnostic screens.

An answer to "SuperScripsit and other mysteries" (S.W.O. from CN80 1.6 p. 21):

SuperScripsit doesn't delete your changes to your documents when you make them, it just writes a little note to itself near the beginning of the document file. This section can become very convoluted and cluttered as your file grows; even a fairly short document can occupy a surprisingly long file after a while. I suspect that this is why you sometimes get that garbled nonsense in documents that you have worked on for a long time; SS simply gets "confused" and loses track of where in the file it should be looking. It finds inappropriate data and attempts to incorporate it into your document.

The best solution I have found is to use the block-action copy command to copy the entire document to a new file. This forces SS to read your document serially, keeping only current material, and write a clean version to the new file. This simplifies things so SS no longer gets confused, and compresses your document even more efficiently than SS's compress utility. If you aren't following all this, try these steps:

1. Move to the beginning of your document (<SHIFT> <up arrow> will get you there fast).

2. Hold <CTRL> and strike <T> to call up the tabline options.

3. Strike <S> and then <1> to save the tabline at the beginning of your document.

4. Hold <CTRL> and strike <S> to mark the beginning of your block. You needn't mark the end of the block, as we want to copy the entire document.

5. Hold <CTRL> and strike <B> to call up the block action menu

6. Strike <C> to copy.

7. Hold <CTRL> and strike <Q> to quit.

8. Open a new file (use option O from the menu).

9. When in the new, blank, file hold <CTRL> and strike <T>

10. Strike <R> then <1> to recall the beginning tabline from your old document.

11. Hold <CTRL> and strike <R> to recall your document into the new, clean file.

You can omit instructions 2, 3, 9, and 10 if you always start a document with the system tabline.

A problem you will probably run into: there isn't enough room on drive 0 to hold your document as one big copy block. You could do the copy in smaller bites, transferring each in turn to the new document, but it will save you a whole lot of effort if you create a minimal SS disk for drive 0 by purging just about everything you can that SS doesn't need. I just save this kind of work until I can get on a computer with a hard drive.

I can hear all the Allwrite and LeScript users making snide remarks about why anyone would use SS at all, but really, this doesn't take much time and you only use this technique with long documents or ones that you have edited extensively. It works well when you want to append documents, too, and you don't lose your margins and tab settings.

Let me know if you would like more hints and tips on SS. I'm not much of a expert, but I've been using SS long enough that there are very few problems I can't recover from, as long as I have my trusty Copycat and Super Utility at hand.

Due to, among other things, an attitude problem at Logical Systems, I sent my LS-DOS 6.3 back and am still using TRS-DOS 6.21. I'm very happy with it if only I could get hold of the the rumored date change patch. Help!

I have a lot more to say, but am astounded to see how long winded this simple letter has become.

Find this article on the disk in Superscripsit form as COMPNEWS and COMPNEWS/CPS (compressed using the above technique). You may want to compare file lengths. The same document is in ASCII format as COMPNEWS/ASC

Gary W. Ankney
HCR 64 Box 39
Harrisonville, PA 17228

(Editors Note) Great ideas and good suggestions, Mr. Ankney, we hope we can get more like these from our readers. We followed your suggestion and did compare your directory file and this is how it reads.

COMPNEWS	10.5K	DIRECT TEXT
COMPNEWS/CPS	9.0K	COMPRESSED
COMPNEWS/ASC	7.5K	ASCII

The latest we have from Bill Schroeder from LSI follows:

The current version of LS-DOS 6.3 is Level-L+ with file dates of July 1, 1987. There have been no patches since that version. If you have patched Level-K or if you have Level-L without the plus sign (+) you should install the following patches. If they don't take and fail to install then you already have them in your program.

SPOOLER/FIX - 11/01/87 - For Level L SYS8/SYS.LSIDOS PATCH #017

PATCH SYS8/SYS.LSIDOS (D21,E4=40;F21, E4=60)

PATCH BOOT.SYS.LSIDOS (D02,1F=2B;F02, 1F=20)

PATCH #010 FOLLOWS-

PATCH BOOT.SYS.LSIDOS (DO6,2C=40;F06, 2C=60)
Check to see that you have this patch installed in your Level L as it was in Level J and not placed in Level L. Note: there are no spaces between the end of one line and the beginning of the next in the patch line surrounded by ( ) marks.

You can still get your disk updated for $5.00 or patch it yourself. But beginning June 1st you need to send the disk and your $5.00 to Misosys as they have taken over LS-DOS 6.3 sales and support. We hope that this change will improve the "attitude" problem. But look for a new version to be coming out after the take over of sales and support. We are sure that a program written by someone else could not remain untouched by the new programmer after his taking possession. That's just in the nature of programmers. Sometimes the old saying "If it ain't broke, don't fix it" really rings true, especially when you see new enhanced versions of programs coming out with more bugs than the original. i.e. SuperSCRIPSIT ver 1.2, and LeScript's latest version. But we all have the urge to upgrade, patch-up, everything as the patches come up, just in case we might have a need in the future for the enhancements. That's the nature of the user. Between the natural inclinations of the programmer and the user it sometimes looks like the dog chasing his own tail. -Ed.

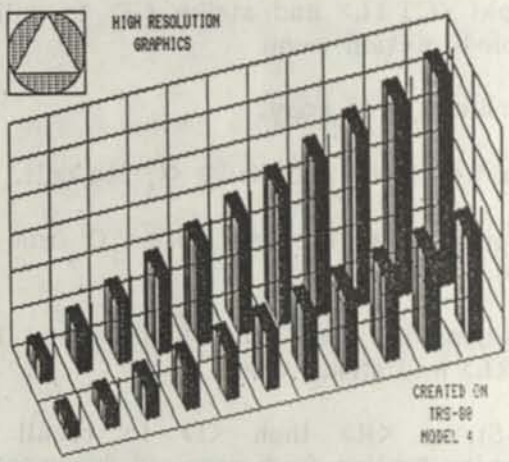
HIGH RESOLUTION GRAPHICS
PART ONE: THE GRAFYX SOLUTION
by Gary Rambo

Dear Mom,

You said that you would like to have higher definition on the screen of your Model 4 computer, because you thought that it would be nice if all the pictures looked like they were painted by an artist and the text looked like it was typeset.

Well, to get started with high resolution graphics you will need to purchase one of the high resolution graphics kits. There are only two sources which I know of at this time. One source is Radio Shack and the other source is Micro-Labs. These high resolution graphic kits consist of hardware, software, and the all important manual.

The Model 4 (and also the Model 3) can be upgraded to have high resolution graphics. The fact is that with these upgrades, the graphics will exceed the standard graphics on the IBM type computers! The resolution on your computer will be 25 times better than it is now!



Installing the hardware is the first thing that you need to do. After the hardware is installed you will be able to use the software to do some fantastic things on the computer. You will be able to draw lines, circles, ellipses, arcs, squares, and just about any thing you can imagine. The circles then will look almost smooth instead of the bricks you now have laid out in a round pattern. You will even be able to make 3-D style pictures with your computer.

I will tell you a little later on about the details of installing the boards, but now I want to tell you what you will and will not get with high resolution graphics after it is installed in your computer.

The graphics can be 25 times better than what you have now, but only when you address the high resolution screen. You will not add colors and it will not improve the appearance of the text.

Micro Labs' high resolution graphics kits for the Model 4, called "THE GRAFYX SOLUTION" are available in two versions, one for the non-gate array computers and one for the gate array computers. All Model 4D and the Model 4's that have the serial number ending in the letter "A" are gate array computers. The rest of the computers are the old non-gate machines just like your computer, Mom. This is very important to know when you order because the hardware is not interchangeable!!!

The Grafyx Solution kits by Micro-Labs consist of a 4 by 7 inch high resolution graphics board (the hardware), a floppy disk (the software), and user's reference manual.

THE INSTALLATION

First we need to install the high resolution graphics board. Now stop and read all the instructions in the manual before you tear your computer apart, to make sure that you understand the instructions and that you are positive that you ordered the correct kit for you computer. Then ask yourself if you feel comfortable about installing the board after reading the instructions. If not, and if the instructions scare you, then you may need help with the installation.

The manual has 6 pages of installation instructions and 2 pages of installation diagrams. I found the installation instructions, along with the diagrams, to be very clear and easy to follow. One thing to be careful of because the instructions cover both the gate array and the non-gate array versions of the Model 4; be sure that you are following the correct part of the instructions for your computer.

You will need the following tools to do the installation: a #1 Phillips screwdriver and a flat blade screwdriver. That is all you need, for there is no soldering to do.

Now, make a back-up of the Grafyx software, if you have not already made one. You will be using a program on the "Grafyx Solution Software" floppy disk to test the installation of the high resolution graphics board before you reassembly your computer. The master Grafyx disk has the Model 3 programs on one side and the Model 4 programs on the other side. You want the TRSDOS 6.2 label on the Grafyx Solution master disk up when you insert it into the disk drive as you make the back-up copy for your Model 4.

Ok, unplug your computer and all the cables connected to it. It is best to wait about one half of an hour after turning the computer off to let the voltage in the Cathode Ray Tube (CRT or picture tube) bleed off. Remove all of the screws that hold the top of the computer in place. Carefully remove the top of the computer making sure that you do not bump that neck of the CRT (tube) and set it off to your left. You need to be careful when setting the top off to the left because the wires connected between the top and bottom halves of the computer are not very long.

Looking at the back of the bottom half of the computer you will see a vertical shield that covers the main board of your computer. Remove this shield and you are almost ready to install the high resolution graphics board.

Now, check again to make sure that you have the correct high resolution graphics board for your computer. The instructions, along with the diagrams, tell you the differences between the gate array and the non-gate array computers. The pin socket on Grafyx boards are positioned differently for a gate array and non-gate array computer, one is vertical and the other is horizontal. The gate array Grafyx board will not physically fit in a non-gate array computer and the non-gate will not fit the gate array computer.

Next, you will need to remove what is called a shunt or jumper. The shunt looks like a small piece of plastic. You just pull the shunt straight away from the main board on the computer. The shunt will slide off the two pins which it connected.

Locate and remove one screw on the main board of your computer which will leave a threaded screw hole used to mount the Grafyx board.

Well, now it is time to actually install the high resolution graphics board! Carefully align the 34 pin socket on the graphics board with the 34 pin connector on the main board of the computer. Push on the graphics board until the connector bottoms out. Tighten one screw on the high resolution graphics board. This screw threads into the hole that was left when you removed the screw earlier.

The next connection uses what is called a micro-clip. This is a small spring loaded hook that clips onto one pin of an integrated circuit almost in the same way that the spring loaded bobber hooks onto a fishing line. Fasten the micro-clip to the correct pin of the correct integrated circuit, shown on the diagram. Check and recheck to make sure you have this right!!

This is where the diagrams in the manual will really help.

NOTE: The integrated circuits usually have a notch on one end to show you the top. You count the pins by starting with the top left, that will be pin number one. Now count straight down the left side (1,2,etc.) and then starting at the bottom right count straight up the right side (9,10,etc.) until you locate the pin for the micro-clip connection.

This is a good time to test your computer and the high resolution graphics board before you put the computer back together. Reconnect any internal wires you disconnected during disassembly of your computer. Plug your computer into the outlet. DO NOT TOUCH ANYTHING INSIDE THE COMPUTER AT THIS TIME FOR THERE IS HIGH VOLTAGE PRESENT!! You can now turn the power on to the computer. Turn your computer off immediately if anything sounds or looks wrong when you turn the power on and recheck your installation. The manual has a check list if something would seem wrong when you turn the power on.

Assuming everything seems ok when you turn the power on, you are ready to run some tests. First, boot up your TRSDOS 6.2 and see if everything works the same as before the installation. Next place your backup working copy of The Grafyx Solution floppy disk in drive 1 (TRSDOS 6.2 label up) and run the test for the high resolution graphics board as described in the manual. The manual tells you what to check if the test fails.

Remove the floppy disks from both drives and turn the power off after the test. Unplug your computer. This would be a good time to get that soft drink and let the voltage in the CRT (tube) bleed off for about one half of an hour.

Now it is time to reassemble your computer. This is where I have one complaint about the Micro-Labs high resolution graphics kit. You will find that the shield for the main board on your computer does not want to fit back in place. This problem is covered in the manual. The manual tells you that you must bend the shield and bow it so that it will clear the high resolution graphics board you just installed. The shield can be bent to fit, but I would like a better way to reinstall the shield! After the shield for the main computer board is installed, reassemble your computer by reversing the disassembly procedure. You still need to be careful not to bump the neck (back) of the CRT (tube) when replacing the top of your computer.

The installation is just as easy as it sounds. The installation has no complex procedures or special tools required. The whole operation of installing the high resolution graphics board will take you only about an hour. The manual is well written and descriptive of the installation procedure.

You are now ready to enter the world of high resolution graphics. I find high resolution graphics to be an exciting addition to any computer. I am looking forward to hearing all about your experiences with high resolution graphics!!

Well, that is all I have to say today, but next time I will go into some details on how the software works and what you can create with your new high resolution graphics.

I will also tell you more about how the Grafyx and the Radio Shack high resolution boards differ in their use of software programs. Then you can decide which one you want to install in your computer.

Happy Pixels,
Gary Rambo

Gary Rambo, if you remember is our local computer surgeon, and he has worked on the many computers that we have, and the Models III & 4's of others and his own over the years. Coupled with an engineering background, he is a rich storehouse of information concerning the TRS-80 and its hardware history. He is employed full time as a field technician for a local oil field company. Gary is well qualified to answer your technical questions concerning your hardware. He may be reached by writing to this publication, and we are proud to have someone of his experience and background associated with CN80 -Ed.

TALES FROM THE FILE CABINET
by Tim Sewell

With out a doubt, the question I am asked the most is "I got this program that has an ARC for an extension. I can't figure out how to run it. Can you help?"

Actually, I'm not very surprised about the frequency of this question. File Compression is still relatively new to the TRS-80 community.

"File Compression?"

Ah! I may be getting a bit ahead of myself there so let me back up a bit...

File Compression is simply taking a file on your disk and rearranging the data by various means so that a new file is created that uses up much less disk space then the original file. There are several methods of "compression" that are used and volumes have been written about them already so I'm not going to go into detail here. Just trust me that they do the job and it works!

File compression has gone through several guises and evolutions over the last few years. Under CP/M you could SQUEEZE files and then put them into LIBRARIES (something that could later be done on the TRS-80), but it wasn't until a company called System Enhancements came up with a program that would compress files AND put them into one transportable file that File Compression would really come of age.

ARC520 was written for and runs on IBM and compatible computers (Uh! Oh!...I said the "I" word in a TRS-80 magazine!).

"Big Deal" you say?

It sure is. ARC520 prompted David Huelsmann to port the code to ARC520 over to the TRS-80 Model 4 and with SEA's permission, he was able to write a program that is 100% compatible with the files that are created by the IBM version. He even went as far as to write a program that allows you to EXTRACT files from an ARC file created on an IBM.

ARC4/CMD version 01.02.00 and XARC4/CMD are these programs. They will be needed to extract files from a file with an ARC extension.

Now that you know a bit about file compression and the origins of ARC4, let's go into how to use the program....

ARC4 comes with full documentation that explains how to use the program along with a more in depth history of file compression. When you invoke the program by typing ARC4 <enter> you will see a help screen that will just about tell you all you really need to know about how to run the program....

```
ARC4/CMD Version 01.02.00 06/20/87 (C)
COPYRIGHT 1985,1986 by System
Enhancement Associates
ALL RIGHTS RESERVED
TRS/LS-DOS 6.x adaptations (C)
COPYRIGHT 1986,1987 by David Huelsmann
ALL RIGHTS RESERVED
Distributed with permission of SEA

Usage: ARC4 [aumdexplvt][bn][g{password}]
archive [file(s)] [>*pr][>file]

Where:
a,u = Add (update) file(s) to archive
m = Move file(s) to archive
d = Delete file(s) in archive
e,x = Extract file(s) from archive
p = Print file(s) in archive to CRT
l,v = List table of contents (verbose) to
CRT
t = Test archive integrity
b = Backup copy of archive retained
n = New line mode: Remove LF after CR

Refer to program documentation for
complete instructions and limitations on
copying and distribution of this program.
```

Now this may look like a bit much, so let's break it down a little bit at a time and see what happens...

ARC4 A FILES:1 FILE1/DAT FILE2/DAT FILE3/DAT FILE4/DAT <enter>

This command string tells ARC4 to put FILE1/DAT, FILE2/DAT, FILE3/DAT, and FILE4/DAT into a file called FILES and place it on Drive #1. This can be simplified a bit by using what are called WILDCARDS, in this case the "$" is used as a Wildcard:

ARC4 A FILES:1 FILE$/DAT <enter>

This command string places ALL files on ALL your drives that begin with FILE into an ARChive titled FILES on drive 1. Unless you specify a drive, the whole system will be searched and ARChived.

ARC4 A FILES:1 $/$:2 <enter>

This command string will add ALL of the files on drive 2 into the FILES ARChive. Be very careful when using Wildcards this way. If you don't specify a drive, the ENTIRE system will be ARChived.

ARC4 M FILES:1 etc..... <enter>

Notice that I have used an "M" instead of an "A" in the command string. The "M" command MOVES the files into the ARChive. That is, the source files will be added to the ARChive and then REMOVED from the disk.

ARC4 D FILES:1 FILE1/DAT <enter>

This command string tells ARC4 to Delete the file FILE1/DAT from the ARChive. Wildcards can also be used with this function.

ARC4 E FILES:1 FILE1/DAT:2 FILE2/DAT:2 <enter>

This command string allows you to Extract files from the ARChive and restore them to their original form. Be sure to note which drive you want the files to go to or they will all be sent to drive 0 as the default drive. Wildcards can also be used with this function so if you typed:

ARC4 E FILES:1 $/$:2 <enter>

ALL of the files in that ARChive would be extracted to drive 2.

ARC4 P FILES:1 FILE1/DAT *PR <enter>

This command string will list FILE1/DAT in the ARChive to your screen WITHOUT extracting it from the ARChive. The optional *PR command will print the file on your printer

ARC4 L FILES:1 <enter>

This command will give you a listing of all the files contained in the ARChive.

ARC4 T FILES:1 <enter>

This command will "test" the ARChive to make sure everything is where it is supposed to be. This comes in handy after file transmissions that have had problems.

ARC4 AB FILES:1 $/$:2 <enter>

ARC4 actually creates an invisible file on your disk and then copies it over to the file you will eventually see. This is done so that if you are adding files to an existing ARChive, the original file is not damaged if something goes wrong. This command string allows you to retain the originally created ARChive as a visible file.

ARC4 EN FILES:1 $/$:2 <enter>

This command string allows the removal of carriage Returns and Line Feeds from NON-TRS-80 created ASCII files. MS-DOS adds these to ASCII files which can play havoc with the TRS-80 video display. This command removes them to avoid any problems.

There is also a file encryption/decryption feature, but I do not recommend using it unless you have read the included documentation file.

You can see that this is a very powerful program. The more you can compress a file, the less storage space or transmission time it takes. There is a Model 1/3 version available (ARC13/CMD) and files created with ARC13, ARC4, and ARC520 can all be read by each other.

Sounds fool proof right? Well not quite....

Even though a file created with ARC4 or ARC13 can be read and extracted by the MS-DOS version of ARC, not all files created with ARC520 can be extracted by ARC4 or ARC13. You see, the MS-DOS version of ARC has one extra type of file compression that the TRS-80 versions don't have.

So, in comes David's other utility, XARC4/CMD. XARC4 is designed for EXTRACTING files from ARChives. It will NOT create ARChives. XARC4 will extract files from MS-DOS (created with ARC520), CP/M, and ATARI created ARChives as

well as the TRS-80 kind.

XARC4 O:2 FILE:1 <enter>

This command will extract ALL of the files in the ARChive. There is no provision for extracting individual files.

XARC4 L FILE:1 <enter>

This command will list the table of contents to the screen the same as ARC4.

Please note that XARC4 will not work on ALL MS-DOS files with the extension of ARC. There is a fairly new ARChiving program for the MS-DOS world called PKARC.COM. This program has become quite popular but unfortunately creates ARChives that are incompatible with ARC4 and ARC13 due to different methods of file compression.

Every once in a while you will come across a file with ACH or ACC as the extension. These are created with an older Archiving utility by Chuck Harper called ARCHIVE4. Files created with this program are NOT compatible with ARC4.

I have found that I keep both ARC4 and XARC4 on my utility disk. I do not use ARC4 for the extraction of files from an ARChive. I only use it to create ARChive files. I use XARC4 for ALL file extraction. This saves the hassle of occasionally coming across a MS-DOS ARChive that ARC4 can't handle. Many others do the same and I highly recommend it.

As you can see, ARC4 and XARC4 are probably two of the most important programs you can own. They are NOT in the Public Domain but are SHAREWARE user supported software. They are available on most BBS systems as well as GEnie. They are also available through The File Cabinet's Public Domain Diskette Library.

Next month, we will go through some of the new programs that The File Cabinet has collected. Until then....Happy BBSing!

Tim Sewell
The File Cabinet
Box 4295
San Fernando, CA 91342

(Editor's Note) Tales From The File Cabinet is a column that will keep you informed about the latest Public Domain and Shareware software as it becomes available for the TRS-80 Model 3 and 4.

Tim Sewell has been collecting software for the TRS-80 Model 3 and 4 ever since he purchased his first Model 4P back in 1984. Over the years he has collected what is considered by many to be one of if not the largest collection of TRS-80 software in the country.

He is not a programmer. His passion is collecting, cataloging, using, and reviewing all types of software both Public Domain and Commercial. He may not be able to tell you WHY the program works, but he will be able to tell you IF the program works and HOW it works.

He has recently collected and cataloged his TRS-80 Model 4 Public Domain Software collection and is offering it under the concept of "Downloading Through The Mail" as THE FILE CABINET. A HIGH RESOLUTION catalog will be completed soon that will contain over 1000 READMAC files as well as High Resolution software for the TRS-80 Models 3 and 4. A Model 1/3 catalog is planned to be finished around September.

Tim is the TRS-80 Sysop of GEnie (General Electric's Network Information Exchange) and can be reached under the name of TIMSEWELL. He is also a member of the Valley TRS-80 Hackers Group (VTHG), The Valley TRS-80 Users Group (VTUG), and occasionally shows up at the San Gabriel Valley Tandy Users Group (SAGATUG).

You can find his articles in both Computer News 80 and TRS-Times and occasionally adds his two cents to TRS-LINK (a disk only magazine).

Tim can be reached via The File Cabinet, P.O. Box 4295, San Fernando, Ca. 91342.

Please include a Self Addressed Stamped Envelope for a reply.
-Ed.

I/O Comments by Klaus Meinssen

In Volume 1, No. 4 I wrote about a Model 4 keystroke filter that I set up and use constantly. For those of you who missed it, it enables the user to call up or invoke just about anything, like BACKUP, DIR, FREE, LIST, loading ALLWRITE or DOTWRITER or any of your BASIC files, your/JCL files etc. Anything you do frequently from LS-DOS, you can do quickly by just holding down <CLEAR> and hitting a pre-programmed key <A> to <Z>. It's fast, especially, for two finger typists, who often don't do something, because it takes them too long to type. Those who use their Model 4 only for word processing and very little DOS work, will probably have little need for a keystroke filter. This is meant for folks who do DOS work frequently. I offered floppy backup's of what I set up for my own use and some of you took advantage of it. today, I am going to give you step by step instructions on how to set up a keystroke filter that is customized for your particular needs. you will be limited to calling up something that you would normally call up from LS-DOS Ready, which is really a lot. You will also be limited to LS-DOS 6.3 or TRSDOS 6.2, if you are still using it. It does not work with TRSDOS 1.3; I don't know if it works with LDOS. Finally, check your directories and make sure you have a file called "KSM/FLT", which you should have. It won't work without it.

A keystroke filter is set up, or "BUILD", like a /JCL file. I suggest that you first write down what LS-DOS commands you want to incorporate into your filter, i.e. one command line for each letter of the alphabet. It can have as few as 1 or 2 commands or as many as 26. The reason I suggest that you write them down first is that you will want to select a keystroke letter for an LS-DOS command that makes sense. For example, you'd want to use <CLEAR><D> for "DIR", or <CLEAR><S> for "SCRIPSIT". You don't have to use every letter or use A first, followed by B etc. Any letter will do. While you are at this, consider too, if you want the command to be executed immediately or if you want to add commands to it. For example: you can have "DIR" executed and all directories will come up, or you can have "DIR :" only and add the drive number, then <ENTER>. Or, <CLEAR><Z> could be used for "DIR :0" (zero) and <CLEAR><O> for "DIR :1" (one). Another example would be <CLEAR><B> which can be set up as "BACKUP :". you would then add your desired parameters. Or <CLEAR><B> could be "BACKUP :0 :1" or "BACKUP :0 :1 (SYS,INV)", if that's what you want it to be. Any LS-DOS command you normally type in, especially long or frequently used ones, are ideal for use with a /KSM filter. Don't go overboard, though. Calling up MULTIPLAN is done with just "MP", so no need to set up a keystroke filter for just two characters. Instead, consider using <CLEAR><M> for "DIR /MP".

For the more experienced or daring ones, I am going to expand on this just a little. If it's too confusing for now, just skip this paragraph. More complicated DOS executions, or several different ones in sequence, can be done by calling up a /JCL file, like <CLEAR><E> for "DO EXECUTE" (assuming "EXECUTE/JCL" would be your assigned file name). Another method for executing several DOS commands in sequence is by typing them all on one line, each separated by a ";". For example "BACKUP MyFILE/KSM:0 :1;DIR /KSM;REMOVE MyFILE/KSM:0;". Note the ";" after the last command. I find it more flexible, although a trifle slower, to use /JCL files for multiple commands. The reason is, that I have "SYSGEN"ed my keystroke filter, meaning it will be installed right at boot-up. If I need to change the /KSM file, I will need to re-"SYSGEN" my diskette. Normally, this is no big task, but - since I'm running on a harddrive - there are many other things that are "SYSGEN"ed as well and that makes it too involved for me. So, by using /JCL files for multiple command operations, they can be readily changed with a word processing editor and the re-"SYSGEN"ing is eliminated. It has another advantage: I pre-assign /JCL filenames, just the names, to my keystroke filter, for later use. For example, so far I have not found any use for the letter "Q", but I assigned the filename "KEYSQ/JCL" anyway. So, when I press <CLEAR><Q>, it will find the file, but nothing will happen, at least not until I edit "KEYSQ/JCL" to make it do something. As I said, if this is too complicated for now, ignore it for a while and come back to it after you've gotten the hang of it. By the way, even though I am running on a harddrive, all

work was confirmed for a standard two drive Model 4.

To get started: when in LS-DOS, type "BUILD FILENAME/KSM" and <ENTER>. The filename I use is "KEYS/KSM"; you can use "QUICK/KSM", "QUICKEY/KSM " or "MIKE/KSM"; whatever. As soon as you enter, the following will come up on your screen: A=>. The cursor will be to the right of the ">". Type your DOS command behind it, and follow with a ";", then <ENTER> and "B=>" will come up on the next line. If you don't want to use "A=>", simply <ENTER>. Repeat as described for "A=>" until all letters have been used up at which point the program will automatically come to end and write your created file to disk. Note: the ";" signifies immediate execution. If you don't want immediate execution, don't add the ";". As stated above, this would be the case, if you want to insert (a) drive number(s), or whatever, and begin execution yourself by hitting <ENTER>. If you don't want to go all the way to "Z=>" but instead stop at a different letter, simply hit <BREAK> and the /KSM file will be written to disk. This works the same as when building a /JCL file. <CONTROL><SHIFT><AT SIGN> will also write the file to disk; <BREAK> is simpler.

If you made a mistake and want to correct it, you can - of course - remove the file and start again. A better way, especially with more involved /KSM files, is to simply continue and correct the mistake afterwards, using a word processing editor. This method is very useful, if - after you have used your filter for a while - you feel it needs some improvement or refinement. Even if you did not make a mistake, you may still want to look at your handywork first. Use either the word processing or another editor or type "LIST FILENAME/KSM" and <ENTER>.

Once the keystroke filter file is the way you want it, you are ready to make it work. you do this by installing the filter with the following "SET" and "FILTER" commands:

SET *IN KSM/FLT FILENAME/KSM [;] <ENTER>

FILTER *KI *IN <ENTER>

"IN" stands for your "INitial". Use any two letter combination.

Now, go ahead, try it! If it doesn't work, start again at the top, or you may already have a filter installed that interferes. If that's the case, you'll have to refer to your users manual to learn what to do. It would go beyond the scope of this article to include all possible situations.

You should consider writing these "SET" and "FILTER" lines as a /JCL file and install them at boot up, either manually or using "AUTO". My /JCL filename for this is "SETKEYS/JCL". I use it rarely, however, because I utilized 23 of the 26 letters in the alphabet, use most of them and often, and have pretty well gotten my keystroke filter the way I want it, so I "SYSGEN"ed it. If you are familiar with "SYSGEN", go do it. Chances are, you'll want to get some experience with your filter first and refine it to take full advantage of its abilities. After that, "SYSGEN"ing would be the way to go. Incidentally, I also wrote a /JCL file, "RSETKEYS/JCL", in case I want to remove my filter, which I must do when running a graphics program.

Once you are "off and running" with your new filter, I suggest that you consider creating a menu when you used a lot of letters. You will forget what you created. Build a /JCL file that does not execute anything, but can be called on the screen with "LIST" and shows you what each letter of your filter does. The filename for my menu is "KEYSMENU/JCL" and I put it on the screen using <CLEAR><K>, which executes "LIST KEYSMENU/JCL". A reminder: when building this /JCL menu, you need a "." (dot) on the far left of each line.

One small note for ALLWRITE users: instead of using the "CLEAR" key during editing, which is now the keystroke key, use "F1". It works the same. And a note for you experienced users: please, remember that this was not written for "hackers", but for those who want to work with their computers to make life easier.

Klaus Meinssen
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Klaus Meinssen is a full time executive concerned with production, engineering, and administration for a New Jersey firm and may be reached by mail at the address above, please enclose a self address envelope for your replies. We are very glad to have a person of Klaus' experience writing for us and a member of our senior advisory committee. Again you are requested to send your correspondence to this publication, unless you absolutely feel that you must contact the author. Many questions can be answered by other authors and this helps to share the burden among many of your fellow users. Thanks to Klaus for his fine articles now and in the past, and for those coming in the future. -Ed.

A VISIT WITH DAVID GOBEN

Quick calendar program, README/TXT file displayer, Converting Disk SCRIPSIT files to true ASCII, Temporary 6.2 DATE Fix, Etc.

Hi there. A lot of you folks have really been keeping my mailbox full. I want to thank all of you for the input. And thank you for sending a self-addressed stamped envelope. All three presented programs this month are a result of reader requests. Hope you enjoy them.

Donald Ady brought to my attention a command under NEWDOS80 that I had completely forgotten about, and that is BDU (Bypass Directory Update). In volume 1.5 of CN80, I showed you how to make a version of NEWDOS80 that would boot up MODELA/III on the disk. I also said that due to the backup procedure of the DOS, that you should use the JCL file listed in listing 3 on page 15. Mr. Ady reminded me that the BDU command will prevent the boot sectors from being updated after a copy, which was the source of the problem. I tried it out, and he was certainly right. Below is a new version of BACKUP/JCL for use with these ROM-bootable NEWDOS80 disks:

```
/./3BACKUP FOR BOOTABLE NEWDOS80

/./1PLACE A BLANK DISK INTO DRIVE 1
PDRIVE 0,1=0,A
COPY 0,1,,BDU,FMT,NDMW
```

Thanks goes to Donald W. Ady.

QUICK CALENDAR

One reader wished that TRS/LS-DOS 6 had a CAL(endar) function like DOSPLUS IV. Well, I don't know how DOSPLUS prints their's out, but I thought the idea was interesting enough that I sat down and wrote a program called CAL/CMD that will do just that. Program Listing 1 is a BASIC program that you should RUN from Model 4 BASIC. It will in turn create the CAL/CMD program. CAL/CMD is used from the DOS level. To use it, simply enter CAL. For example, if the current system date was July 21, 1988, if you entered CAL from the DOS Ready prompt, you would immediately see the following displayed:

```
-----------------------------------------------
Sun  Mon  Tue  Wed  Thur  Fri  Sat
-----------------------------------------------
                          1    2
 3    4    5    6    7    8    9
10   11   12   13   14   15   16
17   18   19   20  <21>  22   23
24   25   26   27   28   29   30
31
-----------------------------------------------
```

Notice that the month, year, and day of week are accurately displayed. Also notice that the current date (21 in this case) is also bracketed. After I wrote it, I thought that it would be something that I would use only once in a blue moon, but it seems that a day doesn't go by that I don't use it at least once.

README TEXT FILE DISPLAYER

As I was preparing some of my public domain disks for distribution, I hit upon the idea of including a program that would display a README/TXT file. The criteria I set up was that it would do so by the user simply entering README from the DOS Ready prompt. Secondly, it had to work from Model I, III, and 4 DOSes. As I was writing it, I received 2 requests from readers for such a program.

Program Listing 2 is a program that can be RUN from Disk BASIC on the Model I, III, or 4. It will create a program called README/CMD. To use it, you must have an ASCII text file called README/TXT co-resident on disk. When the screen is full of text from the file, the display will stop and you will be prompted to press any key

to continue. README/CMD is place into public domain, so you can use it on your own distribution disks, even on those that you sell, as long as the user is not charged for the README/CMD program.

SCRIPSIT TO TRUE ASCII

Some will argue that Scripsit already HAS a save to ASCII command, which is true enough. But what can we truly define as an actual ASCII file? What about those text files that you are converting to SuperSCRIPSIT or Scripsit Pro format, but contain blocks, indents, and other special codes? To properly format everything, you first have to go through the long and drawn out process of deleting all of these spaced indents, blocks and special codes. What a pain. Program listing 3 solves this problem. I call it SCR2ASC/BAS. It will ask you for a source file, which will be the Scripsit file, and a destination file, which will be the ASCII file that you want to create. It will take the Scripsit file and create a pure ASCII file that you can then convert to SuperSCRIPSIT format using the ASCII conversion utility, or RECALL from within a Scripsit Pro document. The purpose of my program is to make this conversion process much easier and less laborious, by removing leading spaces, blocks and special codes from the text.

TEMPORARY 6.2 DATE FIX

A lot of people have asked me for a date fix for TRSDOS 6.2. OK, I'll give you one (after a fashion, that is). What patches I'm providing only allow you to keep the system date accurate. Though it will read EXISTING disk dates accurately, it will WRITE dates onto disks less 7 years, for dates after 1987. It will work through December 31, 1989. These patches are in answer to those who don't really care about how the FILE DATES are stored on the disk. With these patches, 1988 dates will be stored as 1980 on a disk file, and 1989 will be stored as 1981. What my patches allow you to do is enter a SYSTEM date of up to December 31, 1989. Notice that you can enter these lines one at at time for each of your system disks, or else place them into a JCL file to execute on each of your DOS disks in Drive :0 (just keep the JCL file in Drive :1). Repeat, these patches are for TRSDOS 6.2.x.

```
.ALLOW 'SYSTEM' DATES ON TRSDOS 6.2
FOR UP TO 12/31/89
PATCH SYS0/SYS.LSIDOS
(D0D,59=0A:F0D,59=08)
PATCH SYS0/SYS.LSIDOS (D0D,B8=D6
50:F0D,B8=E6 07)
PATCH SYS0/SYS.LSIDOS (D0E,24=D6
50:F0D,24=E6 07)
PATCH SYS7/SYS.LSIDOS
(D05,5A=0A:F05,5A=08)
```

UNDOCUMENTED SYSTEM ROUTINES

TRSDOS 6.2 and LS-DOS 6.3 have a couple of undocumented SuperVisory Calls (SVC) that are fully supported, but not reported in the Technical Reference Manual. These are @RDGAT (86, 56H) and @WTGAT (95, 5FH). Both of these require that the C register contain the logical drive number, and that the 256 bytes at address X'2300' is the disk buffer for either reading the GAT (@RDGAT) or writing it (@WTGAT). The GAT is the Granule Allocation Table, which is the first sector of a disk's directory. This information is actually for the more technically minded, who know how to use the GAT. It is a dangerous territory to wander for the unknowledgeable, but is a boon for those who fully understand the directory structure of the DOS. A great advantage of these functions is that you do not have to set the D and E registers for the specific cylinder and sector on the disk. Further, by simply setting the C register to the drive number and doing a @RDGAT, on return the D register will be set to the actual directory cylinder on requested disk. Handy.

SPEEDING UP NEWDOS80 2.0 ENTRY

Most NEWDOS80 users know that you can set SYSTEM parameters AY and AZ to N so that the date and time prompts will not be given, or that setting AY to Y and AZ to N will cause you to be prompted only during an INITIAL boot-up. This is my preferred setup, since I use dating a lot. What I hate about it is that you can only use the '/' and the ':' when entering the date and time. I always thought it would be nice if you could use the period key on the numeric keypad as a separator, like you can on TRS/LS-DOS 6 and LDOS 5.3. This also calls for less finger gymnastics. Following, in SUPERZAP's ZAP format, are the changes necessary:

Allow using '.' in place of '/' during initial date entry.
SYS0/SYS, 12, 26 change 3E 2F CD
to 3E 2E CD

Allow using '.' in place of ':' during initial time entry.
SYS0/SYS, 12, 39 change 3E 3A CD
to 3E 2E CD

Another thing I prefer is using 'relative' time. That is, starting the clock at 00:00:00. This is a problem during boot-up since, unlike LDOS, if your are prompted for the date, you will also be prompted for the time. You can patch the system to prompt for ONLY the date with the following patch:

SYS0/SYS, 12, 3D change ED 21 66
to ED C9 66

Happy computing,

David Goben
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Willimantic, CT 06226

(Editors note) Please send your programs, ideas and requests for problem solutions, directly to the "Open Forum" of this publication. Your questions will be answered and it will give us a better opportunity to share the solutions with others having the same problem.

Authors who receive letters concerning CN 80 from you are requested to forward copies of your letters to us, along with their answers. This is just adds additional costs for the authors.

Sending your letters to the "Open Forum" will not delay your getting an answer either. Remember this is a free service to the subscribers of Computer News 80. -Ed.

WITH AN EYE FOR THE FUTURE A READER PLANS FOR HIS CHILDREN

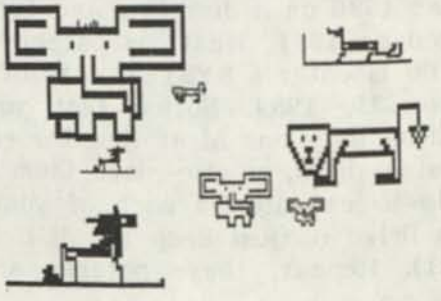
Dear Staff:

I was introduced to your publication through a fellow TRS-80 computer owner, and feel we need to support those who support our machines. I also use several different HP models, MS-DOS, Apple II, and MacIntosh computers, but for home use the old MODEL 4 still works like a champ. The 4 is upgraded to 128K with a Micro-Labs hi-res board (installed at home in about 45 minutes, no problems with hardware or instructions) and has two external DS 40 track drives. My kids, aged 8 and 10, use a really old MODEL I purchased in 1979 for games. Both kids enjoy the hi-res with Prodraw and have spent hours creating pictures. It is amazing how easily they learn to use software and how intimidated are the adults!

As far as I'm concerned, the manuals covering DOS and Basic for the MODEL 3 are the best I've ever seen. My kids will learn programming on my 4 in the 3 mode before I introduce them to other machines because of that reason. If the Model 3 level II basic is learned, CP/M, MS-DOS or even MacIntosh machines can be programmed in basic with only minimal re-education.

At a future date I plan to send some programs I have written. Some are simple programs to allow children to practice math or spelling skills. Another is called Fantasy Football which involves a lot of file handling.
-J. A. F. Unadilla, NY

We are looking forward to seeing the programs and sharing them with our readers 8 to 80. -Ed.



Done by Mariah Fisher, 8 years old!

DON ADY'S ELIXIR UTILITY REVIEWED

by Henry H. Herrdegen

The ELIXIR utility program package is written for use in BASIC ON Model I, III and 4 (in the three mode). It is supplied on one non system diskette, for TRSDOS 1.3, 2.3 or NEWDOS 80 V2 for $41.50 (including the $2.00 P&H), by the author, Donald W. Ady, 56 Oak Ridge Ave., Summit, NJ 07901. Inquires: SASE or (201) 277-3365. A system disk copy can be made if you submit your own system disk with a prepaid order.

The diskette contains 31 files, including a file with 55 machine language subroutines, doing all kinds of tricks, mainly with graphics screens, which can be included in your own programs via USR calls. Two DOS or Machine specific, ZAPPERND for NEWDOS, ASCWRITE for Model I. Eight "Demo" programs, DISK10/DEM, DRAWING/DEM, ELIXIR/DSP-(merged to DISPLAY/DVR), FLASHER/DEM, HEXSCROL/DEM, MENU/DEM, REDRAW & SOUND/DEM, incorporating some of these USR routines let you play with them and/or show what they can do.

The manual supplied has 46 pages of text, the last one being an ordering instruction, with the various options. according to its index, there are "Application-" and "Programmer Oriented-" Files, a distinction with a very blurred borderline. nevertheless, I will stick to it in my discussion.

The "Applications" programs, EDITOR, ZDRAW & PIANO, let you create pictures, text screens or combinations of them. (PIANO is a musical keyboard, which I could not test on my Model III. "Keyboard Exercises" for these are included in Section 2 of the manual, as are instructions screens in the programs. Unfortunately, most of them can not be easily printed in hardcopy, on account of an (any Key to continue) command, and no <P>rint provision. A screen dump(down arrow/shift/asterisk) works on some, where 'shift' is not included in 'any key', and you hit the down arrow and the * exactly at the same time.

If you want printouts of the various menus and instructions, should they not be included in the manual, you best learn first to use the ZAPPERPROGRAM, ZAP the individual screens to some of the available "Pages", and print them with the EDITOR programs '<P>rint Page(s)' choice.

The keying instructions are sometimes a bit cryptic, and funny things can happen if you push the wrong key. But don't give up, nothing serious happens, just start over. The graphic possibilities of these programs warrant a bit of trying and learning.

The rest of the programs contain some very interesting and useful utilities. By now, you might have realized that this diskette is primarily meant for people writing their own programs in BASIC, or at least want to program their own graphic screens and save them in some sort. Although, Ady makes a distinction in his manual between non programmers and programmers, this seems to be just a matter of degree. You certainly should have some BASIC programming knowledge in order to utilize these programs. No knowledge of machine language is required though, The Operation Manual received with your Computer should be sufficient.

More of the "Application" programs, VERIFY, COUNTER, RENUM, ZAPPER, BANNER, DIRECTRY, DISPLAY/..., permit you to look into, analyze, compare and do a few other things to your BASIC programs.

VERIFY compares two diskette directories and the files and notes the number of different bytes or file length. A present from heaven for me, being in the habit of saving my programs on two disks, then modifing one, forgetting to update the other! No more comparing long printouts, just to find no differences anyway.

COUNTER counts (what else?) disk sectors occupied (any kind of file), total characters, text characters, blanks, other bytes, words and average word length. This is educational (for a "programmer") to compare a program written with or without spaces and/or in ASCII.

RENUM is one of the 'MERGE' (Line Ø only) oneliners, doing an odd renumbering, adding or subtracting a value, specified by you, from the program line numbers. But it does not change the target line numbers inside the statements. Correcting these after a

renumbering, can be a tremendous task, which I rather leave to the fantastic NEWDOS80 renumber utility. The later on mentioned LINBYLIN has the same problem.

ASCWRITE is used to save a file in ASCII on the Model I, where <Save"FILENAME", A> does not work. It is handled here as an adjunct to RENUM, But should work with other programs. (Not having a Mod I, I can't prove it either way).

ZDAPPER, (append for NEWDOS), also one of the oneliners, contrary to the word usage in NEWDOS, does not apply changes to a program, but captures screens from a program into 18 "pages", usable for other programs. Don't be confused by the manuals mention of a countdown 'A' to '@', it really counts "down" from 'Q' to '*'.

BANNER (and TBANNER) turned out to be Z80 routines, similar to the ELIXIR/USR collection, and the manual gives no hint of this, or on how to "Apply" them! SELECTOR can not even read BANNER without increase in the CLEAR string space number, and then balks at writing it to a file, by only writing the first 3 lines. This will have to wait for the authors clarification, LOGO, Also Z80, is used for some display programs.

DIRECTRY: First fix a bug in Line 57; it should read INPUT and not PRINT! As it is it will not hardcopy the directories. This done, in cahoots with CREATE/DIR, it lets you monkey around with the BASIC disk directories. You can make a list of up to 999 disks, saved on file UPDATE, find any file (on disk #nn), add or delete directories and print the list. You can edit the filename in the individual directories. The BASIC directory format does not permit to add any significant remarks to the filenames, but you can append them to the directories, or create a complete new one with remarks, as the ones in ELIXIR/DSP.

DISPLAY/.../DVR and /PRT give you a great variety of handling graphic files, combining, cloning, automating, etc. /DVR merged with ELIXIR/DSP will show you 14 screens, with explanations, samples and listings for the disk. Print it with the above mentioned ZAPPER method, and fatten up the manual a bit.

Some of the "Programmer Oriented Files" SELECTOR, ELIXIR/USR, LINBYLIN, ZEROMEM/CMD, FINDUSR and especially HEXDRIVER, are a bit more involved in programming than the previous discussed ones, and stray a bit into the realm of Z80 Machine Language programming. USRTEST will not run properly after merging with ELIXIR/USR, as it has no means to return to line 3 after merging, but you can't tell it to "RUN 3" and then play with it.

SELECTOR lets you review the 55 USR files and select specific ones for your program. It also lets you renumber an ASCII file, and check the length of Statements in one. Be careful about the (not always stated) need for ASCII saves. If you get garbage anywhere instead of a sensible print, suspect the need for ASCII, and a file not saved in ASCII.

ELIXIR/USR is the collection of the 55 Z(@ routines. LINBYLIN is like RENUM, but changes every line selectively. Lacking the update capability (see RENUM), it could be useful to move a few lines, possible to make room for added code. But beware of renumbering a long program. With TRSDOS's limited check facilities, you will miss some goto's, gosub's or then's for sure, and then wonder why your program will not run!

ZEROMEM/CMD, the only program on this diskette executed from DOS, clears (unclutters) the RAM by filling it with OO's.

FINDUSR, an other MERGE oneliner, finds out which USR routines are used in the program.

HEXDRIVR could be called a sort of DEBUG facility, but is more versatile than the TRSDOS utility. It can convert decimal numbers to hex, treats the number as an address and shows the memory content at it. It finds hex or ASCII characters in the memory and prints the hex dump with the found value at the LH top. This dump can be <S>crolled not only screen by screen as in the TRSDOS DEBUG, but also left or right, byte by byte, and vertically line by line. Hex contents can be changed in the top line. This is a very good tool to become familiar with the file structure. It further lets you find the address of a line number,

random disk I/O, verify or zero memory and translate HEX to ASCII (not ASCII to Hex, as shown on the menu).

According to the manual, VERIFY and CREATE/DIR will not run on a Model I with TRSDOS 2.3, and some of the commands in EDITOR, ZDRAW or DIRECTRY, connected with the BASIC 'DIR' COMMAND, can not be used.

One word of caution: by playing with various programs one after the other, you may suddenly run out of memory. Contrary to what you may believe, <NEW> does not always clear the whole memory from some of these programs. <RESET> is the best way out, or you could do a ZEROMEM.

The last 24 pages of the manual are technical descriptions of the USR routines and some other, mainly Z80 programmer oriented, remarks and explanations, some of it is also valuable to a strictly BASIC programmer. That leaves only a 21 page USER oriented manual, a bit less then desirable for a diskette with as great a variety of programs as this one.

On any utility disk out there will be some programs you don't want, or can not use. Same here. But I wish I had this diskette when I started to get my feet wet in BASIC programming, way back when I bought my Model III.
-Henry H. Herrdegen

Henry Herrdegen is a retired Ford Motor Company Engineer and resides in Windsor, Ontario, Canada. He can be reached thru this publication. Henry, has used the Model III with NEWDOS for many years, and we count on his knowledge and experience as a senior member on our advisory committee.
-Ed.

MORE ON CLEANING DISK DRIVES FROM THE MANUFACTURER

The following is taken from the TEAC FD-55, Mini Flexible Disk Drive Maintenance Manual preventative Maintenance Section:

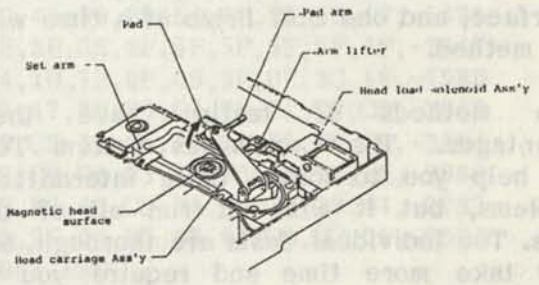
4-3-1. Cleaning of Magnetic Head by Cleaning Disk

When you use the FDD in a dusty environment, it is recommended to clean the magnetic head surface periodically with a commercially available cleaning disk.

For typical usage under typical environmental conditions, cleaning once a month is recommended.

For as single sided FDD, be sure to install a single sided cleaning disk. The cleaning surface of the disk should be in contact with the head surface. When the FDD is placed horizontally, the magnetic head is located down and it faces the back side of the disk. ***If a double sided cleaning disk is installed in a single sided FDD, it may damage the head pad.*** For a double sided FDD, a double sided cleaning disk should be used. Side Ø (the lower side) and side 1 (the upper side) heads are cleaned simultaneously. Cleaning disks should run 10 to 30 seconds, approx.

Direct Cleaning (Single sided FDD only) with a cotton swab, Absolute alcohol (Ethanol) only should be used. (Direct Cleaning can only be effective when the computer case is removed and you have access to the drives from the inside of the computer.) It is not recommended that you clean a double-sided disk drive with this direct cleaning method because the heads are so close that you are liable to cause damage to the drive heads and other parts. Use a double-sided disk cleaning kit only. It is highly recommended that you use only disk cleaning kits for either single or double-sided drives. Note the approx. cleaning time is different for each type of cleaning disk used. Excessively long cleaning time is not effective but has the possibility to accelerate the head wear.



(Fig.412) Direct cleaning of the magnetic head (Single sided only)

SYSTEM DIAGNOSTIC BY HOWE SOFTWARE Reviewed by Gary Rambo

Imagine this, you are trying to run your favorite program. You are sure that you are doing everything correct, and everything seems to be going wrong. One solution to this crisis is to own a system diagnostic program.

One such diagnostic program is written by HOWE SOFTWARE and is simply called the "SYSTEM DIAGNOSTIC PROGRAM" and is available in versions for the Model 1, 3, and 4. Version 3.1 for the Model 4 which I used for this review, comes with one floppy disk and a combination reference-instruction manual, and will let you test your computer and printer.

The test for the computer includes RAM, Video Display, Keyboard, Disk Drives, and RS-232-C Interface.

The program is menu driven and easy to follow. The manual is well written and includes technical information on the tests in the program.

There are two methods of testing used. The first method is called the Individual Tests. In this method, you run through each test, one at a time, while you monitor the results of the test. The results of each test can be sent to the printer, but some of the test results are determined by visual inspection. The Individual Tests method is the only way that some of the tests can be run. The second method of testing is called the Continuous System Test. This method of testing will run a continuous loop of tests and send all failures during testing to the printer. This continuous loop will help to locate those intermittent problems. You can only test the RAM, Video Display, RS-232-C Interface, and one Disk Drive at a time with this method.

Both methods of testing have their advantages. The Continuous System Test will help you to locate those intermittent problems, but it will not run all of the tests. The Individual Tests are thorough, but they take more time and require you to monitor the results.

The program has some minor annoyances. One thing was that before each one of the disk drive tests it requires you to specify the type of drive to be tested. There are a total of six questions about your drives. The Continuous System Test locked up on me once. I found that you have to be very quick at pressing the "ENTER" key on your computer or you will miss the individual test your are trying to run. This happened to me on two of the RS-232 tests. The diagonal printer test started feeding pages out of my printer, if I did not stop the test at its completion. The program was written under TRSDOS 6.1.2 and not all test will work properly if up graded.

I found the tests for the RAM and the tests for the Line Printer to be some of the most complete I have seen in a over all system test for the TRS-80 computers.

The Video Display tests, the Disk Drive tests, and the RS-232 tests are average. They will all let you know if there is a problem with computer. The one thing you can not test your disk drives for is the alignment of the heads, which is really important.

The Keyboad test is the best I have seen on any diagnostic program for the TRS-80 computers. You will also have the benefit of finding out how well you know the keyboard when you run this test.

There are some tests I would have liked to see included in this diagnostic program for the Model 4. The program could include some tests for hard drives, but hard drive tests usually seem to be forgotten on TRS-80 diagnostic programs. I would have like tests for both the ROM and the cassette port on the Model 4. The manual states that these are not used in the Model 4 mode of operation, which is correct, so these tests were not included.

Overall, I like the SYSTEM DIAGNOSTIC PROGRAM by HOWE SOFTWARE. I can recommend it if you follow the manual. This program will help you locate problems better than most complete system diagnostic programs currently available. The manual has some good information in it that will help you understand your computer a little better.

I hope you are lucky enough not to need a program like this, but than again knowing all is well with your computer gives you peace of mind! - Gary Rambo

PROGRAM LISTING NUMBER ONE -David Goben

```
20 CLS:PRINT"BUILDING 'CAL/CMD'":RESTORE
30 OPEN"O",1,"CAL/CMD":L=80
40 CS=0:L=L+10
50 READ A$:IF A$="END"THEN CLOSE:END
60 IF LEFT$(A$,1)<>"-"THEN A=VAL("&H"+A$):PRINT#1,CHR$(A);:CS=CS+ A:GOTO 50
70 IF VAL(MID$(A$,2))=CS THEN 40 ELSE PRINT"CHECKSUM ERROR IN LINE"L:END
80 ''' DATA AREA '''
90 DATA 05,09,00,00,00,43,41,4C,20,20,20,05,09,00,00,30,20,20,20,20,-508
100 DATA 20,20,01,FE,00,30,20,1D,20,1F,20,1F,20,20,1F,20,1F,20,FD,21,-1030
110 DATA 33,00,21,01,30,FD,CB,04,7E,28,01,34,06,09,CD,FA,30,10,FB,21,-1630
120 DATA DC,04,FD,5E,02,16,00,1B,19,19,19,06,03,CD,02,31,CD,0A,31,20,-1258
130 DATA 20,31,39,00,3C,32,E9,30,FD,6E,00,CD,D2,30,CD,0A,31,0D,53,75,-1832
140 DATA 6E,20,4D,6F,6E,20,54,75,65,20,57,65,64,20,54,68,75,20,46,72,-1647
150 DATA 69,20,53,61,74,0D,00,01,2D,1B,CD,F3,30,10,FB,CD,FE,30,FD,7E,-2168
160 DATA 04,1F,E6,07,47,FD,7E,01,3D,28,06,10,FB,06,07,18,F7,3E,08,90,-1595
170 DATA 08,18,06,CD,F7,30,CD,F7,30,10,F8,21,FF,2F,FD,5E,02,16,00,19,-2033
180 DATA 7E,32,A8,30,08,08,3E,00,3C,32,A1,30,6F,FE,20,28,53,FD,BE,01,-1753
190 DATA F5,0E,3C,CC,F3,30,C4,FA,30,CD,CE,30,F1,0E,3E,CC,F3,30,C4,FA,-3025
200 DATA 30,08,3D,20,D8,CD,FE,30,3E,07,18,D1,AF,32,E9,30,11,0A,00,62,-1805
210 DATA AF,3C,ED,52,30,FB,19,3D,CD,E2,30,7D,C6,30,FE,30,20,05,3E,00,-2190
220 DATA B7,3E,30,32,E9,30,28,08,4F,3E,02,EF,C9,CD,FA,30,0E,20,01,1C,-1833
230 DATA FC,30,18,F5,0E,0D,18,F1,4E,23,CD,F3,30,10,F9,C9,E1,7E,23,B7,-2505
240 DATA 28,05,CD,F2,30,18,F6,E9,02,02,0C,30,-1107,END
```

PROGRAM LISTING NUMBER TWO - David Goben

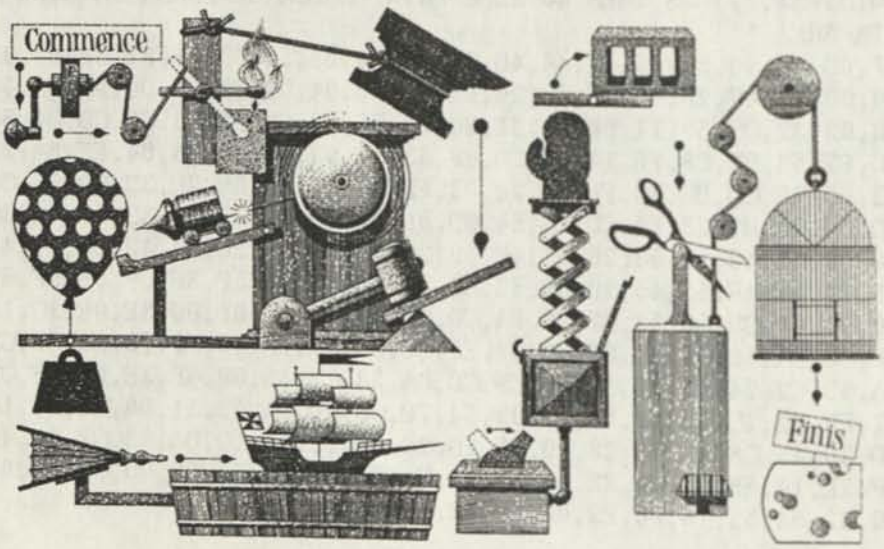
```
10 'DATA POKE FORMAT CREATED ON DATAPOKE/BAS
20 CLS:PRINT"BUILDING 'README/CMD'":RESTORE
30 OPEN"O",1,"README/CMD":L=100:HX$="012 3456789ABCDEF"
40 CS=0:L=L+10
50 READ A$:IF A$="END"THEN CLOSE:END
60 IF LEFT$(A$,1)="-"THEN 90
70 A=INSTR(HX$,LEFT$(A$,1))*16+INSTR(HX$, RIGHT$(A$,1))-17
80 PRINT#1,CHR$(A);:CS=CS+A:GOTO 50
90 IF VAL(MID$(A$,2))=CS THEN 40 ELSE PRINT"CHECKSUM ERROR IN LINE"L:END
100 ''' DATA AREA '''
110 DATA 01,0D,00,53,52,45,41,44,4D,45,2F,54,58,54,03,01,82,32,53,21,-1130
120 DATA 00,00,7E,47,2F,77,BE,70,20,05,3A,70,04,D6,C3,32,DD,53,3E,16,-1723
130 DATA 20,03,32,CC,53,11,00,53,21,00,52,06,00,CD,E2,53,C0,CD,C4,53,-1783
140 DATA CD,F7,53,B7,C8,FE,1A,C8,CD,68,53,18,F3,FE,8D,28,04,FE,8A,20,-2920
150 DATA 02,E6,7F,CD,EC,53,FE,0D,28,03,FE,0A,C0,3E,0E,3D,32,7D,53,C0,-2236
160 DATA CD,D0,53,B7,20,FA,CD,2A,54,0D,5F,5F,5F,5F,5F,5F,3C,3C,3C,3C,-2115
170 DATA 20,50,52,45,53,53,20,41,4E,59,20,4B,45,59,20,54,4F,20,43,4F,-1331
180 DATA 4E,54,49,4E,55,45,20,01,82,B2,53,3E,3E,3E,5F,5F,5F,5F,5F,5F,-1647
190 DATA 20,0E,00,CD,D0,53,B7,28,FA,CD,2A,54,1D,1E,0F,00,3E,0E,3C,18,-1580
200 DATA AE,CD,DA,53,C2,2B,00,3E,08,EF,C9,C5,47,3E,00,B7,78,C1,C9,CD,-2659
210 DATA DA,53,C2,24,44,3E,3B,EF,C9,CD,DA,53,C2,33,00,4F,3E,02,EF,C9,-2494
220 DATA 21,FF,52,2C,22,F8,53,CC,03,54,7E,C9,CD,DA,53,11,00,53,28,1A,-2069
230 DATA CD,36,44,C8,FE,1C,28,10,FE,1D,28,0C,F6,40,CD,DA,53,C2,09,44,-2287
240 DATA 4F,3E,1A,EF,F1,C9,3E,43,EF,18,E4,E1,7E,23,B7,28,05,CD,EC,01,-2524
250 DATA 06,32,54,53,18,F6,E9,02,02,32,53,-863,END
```

PROGRAM LISTING NUMBER THREE - David Goben

```
10 'DISK SCRIPSIT TO ASCII FILE CONVERSION PROGRAM -- DAVID GOBEN
20 CLS:PRINT"SCRIPSIT FILE TO ASCII FILE CONVERTER":PRINT
30 PRINT"   This program makes converting a Scripsit file, complete with"
40 PRINT"blocks, comments, and format information, easier to convert into"
50 PRINT"an ASCII file. It will also remove all spaces after paragraph"
60 PRINT"and line endings.":PRINT
70 LINE INPUT"Name of Scripsit file to convert? ";SF$:IF SF$=""THEN 70
80 LINE INPUT"Name of new ASCII file? ";AF$:IF AF$=""THEN 80
90 PRINT:OPEN"I",1,SF$:CLOSE 1
100 OPEN"R",1,SF$:FIELD 1,1 AS A$:P=PEEK(VARPTR(A$)+1)+256*PEEK(VAR PTR(A$)+2)
110 IF P>32767 THEN P=P-65536!
120 OPEN"O",2,AF$:GET 1:GOSUB 210:IF A$=">"THEN 180 ELSE 140
130 GOSUB 210:IF E THEN PRINT#2,A$;:CLOSE 1,2:PRINT:PRINT"TASK COMPLETED.":END
140 IF A<>13 THEN 160 ELSE PRINT#2,A$;:PRINT
150 GOSUB 210:IF A$=" "THEN 170 ELSE IF A$=">"THEN 180 ELSE 140
160 PRINT#2,A$;:PRINT A$;:GOTO 130
170 GOSUB 190:IF A$=" "THEN 170 ELSE 140
180 GOSUB 190:IF A<>13 THEN 180 ELSE 150
190 A=PEEK(X+P)AND 127:A$=CHR$(A):IF A=0 THEN E=1:RETURN
200 X=X+1:IF X=256 THEN X=0:GET 1:RETURN ELSE RETURN
210 GOSUB 190:IF E THEN RETURN
220 IF A=14 OR A=12 THEN A=13 ELSE IF A=11 THEN 210 ELSE IF A=23 THEN BL=1
230 IF BL=0 THEN A$=CHR$(A):RETURN
240 GOSUB 190:IF A=23 THEN BL=BL+1 ELSE IF A=27 THEN BL=BL-1
250 IF BL THEN 240 ELSE GOSUB 190:IF A=13 THEN 210 ELSE 220
```

WATCH YOUR ZERO's & "O's"

This is a ZERO....00000000000.....(oval as in GOOSE EGG!)
This is an OH, OH....O O O O O.....(round as in OH-OH!)



THE ROBOTICS PROGRAM FOR THIS IMPROVED MOUSETRAP
IS BEING DESIGNED BY THE CREW ON PAGE 3 .....

OPEN FORUM AND READERS LETTERS

Dear Computer News 80,

I have a problem and a challenge for you.

Enclosed is a program from my Public Domain Disk catalog called ND2TRS62/CMD. I understand that the program is also found on the TAS Public Domain Disk #13. As I only have the TAS disks up to #12, I can not confirm this.

The program allows you to copy files from a NEWDOS/80 disk on to a TRSDOS 6.2 format disk. What is also unique about this program is that it is supposed to support Double Sided Disks. That is where my problem comes in.

I have obtained about 400 disks in Double Sided 80 track Newdos/80 format. But, not just any format mind you. The man I obtained them from loved to play with the PDRIVE configuration and they were done on a Model 1 to boot.

So, what I have is a bunch of disks in Model 1 Newdos/80, Double Density, Double Sided 80 track format.

Under regular Model 3 Newdos/80 2.0, I can read and write to the disks with the following PDRIVE configuration:

TI=AK,TD=G,TC=80,SPT=36,TSR=0,GPL=8,D
DSL=39,DDGA=6

ND2TRS62 is supposed to be able to read DS/80 track disks. It will read the disk ok, but when it copies the files, you get the file names with parts of different files copied over to the Trsdos disk. I would like you all to take a crack at the source code and see if you can get the program to properly read my disks with the above PDRIVE configuration.

Since I am not a programmer, I really don't know what to look for or turn to so I am asking you all for assistance.

Any help is appreciated.

Tim Sewell

Editors Note: Tim can be reached through the File Cabinet. Any one wanting to take a crack at solving Tim's problem can write to him directly for a copy of the program, or you can write to CN80 and we will send you a copy of the program. -Ed.

At the company where I work we have an electronic mil system handling virtually all the interoffice memos for several thousand employees. One just prepares their memo on a word processor and sends it out via any communications software package. (I use Omniterm.) Trouble is, the mail system requires a carriage return at the enc of every line and this is troublesome to do with a word like Scripsit.

I wrote an assembly language program which will read the text file and rewrite it with carriage returns after a user-specified line length. Of course it pays attention so as not to split words or shorten lines which already have a carriage return in them. In addition, it will optionally remove carriage returns from a file.

I think this must be a common requirement of E-mail systems so I will provide this handy little routine to anyone who sends me a formatted disk in a self-addressed, postage paid disk-mailer together with $4.00 for handling. Source code (in ASCII format will be included).

Lynn W. Gallup, 5832 Grove St., Edina, MN 55436

Q: On my Tandy Mod 4P, I am running what I believe to be the latest operating system which is LS-DOS 6.3. For a long time, I have been a bit bothered by the large size of the minimum file on either of my two floppy drives. As you know, that minimum is 1.5KB. Since most of my files are much smaller, I am wasting quite a lot of disk space. Could you tell me if there is any method by which I could rescue that minimum size to say 512 Bytes. I believe that the IBM family and its clones, run their floppies with that minimum file size so I can't believe that a minimum size of 512 Bytes is an unreasonable choice. I would be prepared to buy a utility for this purpose,

although of course it there is some public-domain program which gets the desired result I would like to know about it. W. B. K.-Maurertown VA.

A: All our programs set up a min. file opening statement that is from 1.3 to 1.5K with not data stored. Maybe some of our readers know of a method, beyond storing several sub-titled groups of data under one file name. -Ed.

In reply to D. Z. of Maumee's inquiry to a simple file system in Basic for a Model 4, I would recommend he get the DCONTROL/BAS program from S.A.F. Industries. It is not public domain, but the cost is very little and is a computer resident program which once loaded does not go to the disk drive to operate.
M. A. -Portal ND

In reply to B. M. - Missoula, MT - 80 Micro's January 1986 issue had an excellent procedure for upgrading the model 4P to higher density drives among other additions. One error, corrected in a later issue, is that the Metal Oxide Varistors (MOV) had to be connected AFTER THE FUSE, since the failure mode of a MOV is too short. Instead of installing the 40 track DS drive, I installed an 80 track drive for drive 1. (I now have 6 model 4P's and three have been converted with no problems.)
K. M. S. - Stanwood WA

Editors Note: For those of you who may not have a copy of the Jan. 86 issue referred to and want the information referred to - drop us a note - we will see that you get it. -Ed.

Ref: Vol 1 No. 6, page 19, M.P.

We offer a program called BASICE for $25 which adds the Micro-Labs hi-res screen print and screen complement commands to the Radio Shack version of graphics Basic: BASICG. Both Model 3 and 4 mode versions are supplied. This allows the hi-res screen to be printed without leaving BASICG on any of the following printers: Epson, Star, Micronics, Radio Shack LPVII, LPVIII, DMP-series, IDS 445G, 460G, 560G; Okidata Microline 82A, 83A with Okigraph, 84,92,93,192,193; Centronics 739; C. Itoh Prowriter I (8510A); and NEC PC-8023.

The above capability is included in our own version of graphics Basic, GBASIC 3.0 which is $49.95. We recommend using our own GBASIC, unless one already has many programs already in BASICG and doesn't want to change the syntax of the graphics commands.
Ted Carter, MICRO-LABS INC. 7309 Campbell Rd. Dallas, TX 75248, (214)702-8654

Editors Note: We are very glad to some suppliers taking note of our questions and sending us answers, we wish more would do the same and soon we believe that they will. Thanks Ted, for your input.-ED

I would appreciate finding a copy of the 80 Microcomputing March 83, and the 83 Anniversary extra issue. I also, have the following spares (for trade?) Microfiles for Model 1, 26-1565, Single Density disk & manual, Model III Business Graphics Analysis Pak V1.0 low resolution, disks and manual without binder. Series I Editor Assembler program disk for Model 1, and Scripsit Dictionary disk for Model 1.
M. C. -Essex England.

If you would wish to correspond to M. C. please send your letters to this publication and they will be forwarded. -Ed.

Q: I was trying to use Multi-Plan's area definition and print two separate areas using the union function. For example: AREA1 (columns 1-4), AREA2 (columns 5-8), AREA3 (columns 9-12). IF I printed, AREA1, AREA3, All columns from 1 through 12 inclusive are printed. AREA2 is not excluded. Do you know how to do this in Mult-Plan? Also, it seems if Multi-Plan is much slower than VisiCalc. Do you know if it is possible to speed it up? Using the manual recalculation option does help, but it is still a lot slower that VisiCalc.
S. W. - Nassau Bay, TX

A: We don't have the answer for you but we bet that a lot of Multi-Plan users out there can provide us with the answers.

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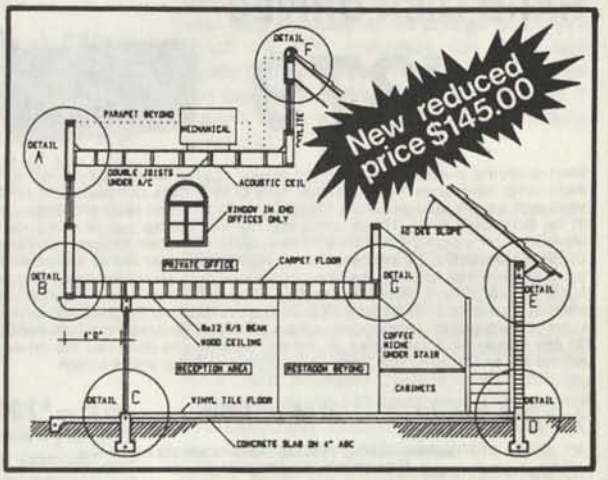

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Can we talk? CP/M vs TRSDOS

By moving to CP/M on your Model 4 you achieve two things. First you open the door to a wealth of existing software. More 8-bit software runs under CP/M than any other operating system. This includes virtually all of the "big name" programs which have set the standards by which all others are measured. Programs like **WordStar, dBASE II, and Turbo Pascal** are available for CP/M, but not TRSDOS. Public domain software, almost unknown under TRSDOS, fills hundreds of megabytes of disk space. Valuable public domain programs like the **Small C Compiler** are just a toll-free phone call away. Most importantly, hundreds of applications programs are available from a multitude of vendors. Many include the source code. Wouldn't you like to be able to choose from scores of Accounts Receivable or General Ledger programs, instead of the meager selection you now have?

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We don't forget you after the sale. If you have a problem you will find our phones are answered by people, not answering machines or hold buttons. Our philosophy is very simple — we want you to be happy and satisfied with your purchase. If you have a problem then we have a problem, and we'll do whatever we can to resolve it.

Cost to update?

Our owners are protected against instant obsolescence by our lifetime upgrade policy. At any time you can return your original CP/M disk to be upgraded to the latest version free of charge, except for a small shipping and handling fee. Periodically we publish NEW STUFF, a newsletter for registered users of Montezuma Micro CP/M. This publication carries news about new products, tips for getting more out of CP/M, and other valuable information for our users. It is sent free of charge to registered owners.

Can I use a hard disk drive?

CP/M hard disk drivers are available for Radio Shack, Aerocomp, and most other popular brands of hard disk drives. These drivers allow the hard drive to be partitioned into one to four logical drives of varying sizes. These drives may all be used by CP/M, or may be divided between CP/M and TRSDOS. A head-parking utility is included on the driver disk to minimize the risk of damage when the hard disk drive is not in use. Also included at no charge is a utility which will copy, compress, list, print, and delete files with ease. There isn't much you can say about a driver. It either works or it doesn't. Ours works supremely and it only costs **$30.**

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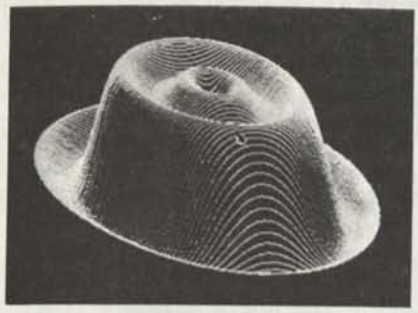

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EDITORIAL COMMENTS

This months editorial will be made deliberately short, because we have so many good things to pass on to our readers this month that we don't want to take up any more space than necessary with editorial comments.

We do want to say thanks to all that have taken up the invitation to write, and to say that we want to hear from the rest of you too. It is your letters and comments that provides us with the guidance to know what you are interested in most and it is with the letters that you send us that you can spread your knowledge and experience to the other users.

Please advise us when sending letters for publication, if you want your full name and address published, or not. If you do not tell us to print your full address, as policy we will only print your initials and city and state as a reference point. This is done to protect your privacy. If you place your name, address, city and state at the bottom of your letter which you have sent to us on a disk in ASCII for publication, unless you tell us to, we will not assume that you want us to publish your name and address in full.

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80 MICRO MAGAZINE COPIES

Concerning the 80 Micro magazine copies, if you will send us your extra copies we will see that they get to those who are trying to complete their collection. And those of you who wish to receive copies, send us your list and if we have them we will mail them to you. We will ask that you reimburse us for the postage and packaging. Send no money with your requests as we may not have the issue you are looking for, but we will keep your request on file and mail it as soon as we can, if we can find one. We will then invoice you at that time. Your cost should be about $3.00 average per copy for postage and handling. As we have not paid anything for the extra copies we do not feel that we should charge for the magazines, but we do need to recover the cost of providing this service.

We are rapidly enlarging our archives of TRS-80 material. We hope to use this archive library material to provide reference material to all our readers. So if you have out of print books, programs, manuals, etc., that you no longer want, please send them to us. The address for UPS packages is Computer News 80, 1220 Jamaica Drive, Casper, WY 82609.

ELECTRIC WEBSTER REVIEW

For years we have been using SuperSCRIPSIT DICTIONARY, and as a program we had few complaints. There have been some upgrade patches that we received from Tandy for the dictionary since we first purchased it, which we installed as they came in. But we did not experience any problems with it.

This past week we finally found the time to install Cornucopia Software's Electric Webster Speller with the correction feature and hyphenation to our SuperSCRIPSIT program disks. Installation was very simple and only took a few minutes for the program disks to be made. This is one case where the program doc's did not leave anything out and walked us thru the procedures without a hitch. For this we are very appreciative, so many doc's assume that you know everything that the author does and leaves out the simple instructions, or assumes that you understand all the terms that the author uses. What a help it was not to have to look up the authors terms and then test them out to make sure that your understanding of the definitions of the terms used are the same as his. The original disks that you receive from the author even have a "test" program that you run the very first thing, before you make your backups, to see that the original disk has not been damaged in shipment. How many times have you seen that on a disk that you bought?

Electric Webster, using it with SuperSCRIPSIT, uses the same word replacement method that already resides in the SuperSCRIPSIT program, so you don't have to learn a whole new set of commands. At the main SS menu you simply type "P" from the menu for PROOF, and the program takes over and searches for all the words that are misspelled, it does not scroll through the document file text as SS does.

While it is finding the words that it thinks you have misspelled, or mistyped (typographical errors - for you highbrows) it gives you the choices to mark the text where the word is at so that it will pick the word out in the text during the word change process, or to leave as is, or you can choose to have it open it's own onboard dictionary and places your misspelled word right in the middle of the correctly spelled words so that you can pick out the right spelling. You can scroll up and down thru the dictionary looking for other or similar words if you like. There are over 50,000 words to look at, if you wanted to see them all. This does not include plural endings or words that you have added to the dictionary.

All you do when using the word-look-up option is select the right word and make a note of the correct spelling. The program does not automatically correct your spelling or change the word in the original document. Most words are mistyped to start with and require no look up time. But what a time saver it is to be able to look up a word on the computer, and have it appear on the screen in a matter of milliseconds, rather than having to thumb thru a dictionary book page by page just to get to the location of the word that you are looking for.

After running down the words that are misspelled, the program puts you back into the SuperSCRIPSIT mode with your text on the screen in its original format, except it is set up to run you through the word change just as the original SuperSCRIPTSIT Dictionary program did. You then have the choice to change, skip, or add the word to the dictionary as usual.

The "Electric Webster Speller is available for SuperSCRIPSIT PRO, but the author tells us that that program for use with SS-pro does not carry any guarantee of working all the time. However, he said that of all the units he has sold for the SS-pro, none have ever come back, nor has he had a complaint. The reason it is not guaranteed to work all the time with SuperSCRIPSIT PRO is very complex, and you should talk to the author, Phil Mansfield at Cornucopia Software, if buying for that program. All the other ELECTRIC WEBSTER programs for TRS-80 Scripsit, SuperSCRIPTSIT, LeScript, and Allwrite are available and guaranteed to work without error.

For prices and ordering information see the advertisement in the TRS-80 Product Source section.

If we were to give this speller a rating it would be four kicks in the pants to us for letting it sit on the shelf for three months

before getting around to installing it. If the other versions work as well on LeScript and Allwrite as the SuperSCRIPSIT version does then they would be well worth the purchase price, especially since they are on sale from 35 to 67% off their original prices.

FAST FORM LETTER CHANGE USING YOUR DICTIONARY/SPELLER

While we are on the subject of word checking programs, here is a tip we ran across that really works.

Suppose you have a form letter that you want to send to Mrs. Jones, Mr. Smith and several others. And suppose that you don't really want to set up a merge file. Then just type your original letter and every place you want to change a word, name, amount or what ever just put an X or something that automatically would make the word show up as a misspelled word. Like MrX. Robertx Jonesx, for numbers use xjax or any other combination of letters. Dictionary programs do not recognize numbers. Copy your master letter to a new document file name. Then run the document thru your word speller and at each place it marks for a change because of a misspelled word, just insert the word, name or whatever and print it. Then go back to your master letter, copy it to a new document and run the dictionary program again, changing the words with the X endings to whatever you need for your next letter.

This will save each form letter intact as a record of what you sent to whom. If you don't want to save the individual form letter use the purge command to remove all the individual letters, and save your master letter or remove it as the case may be.

Of course setting up a merge file, and a letter file to receive the merge file, which does take more time, is recommended if you have a lot of repetitive form letters to send and don't want to save an original copy of each letter sent. It also allows you to walk away or take a coffee break while the printer is running. Still using the dictionary short cut method seems like a good idea when running just a few form letters. Or if you might need to run another copy, some time in the future, of the final version-letter that was sent.

BOOK REVIEW

Z-80 MACHINE LANGUAGE TECHNIQUES FOR THE TRS-80 by Donald W. Ady

Reviewed by Christopher Fara (Microdex)

Computer users often ask -- why should I bother with machine language? There is really only one sensible answer to that question -- you'll never find out unless you try. It's a little bit like dating. It may take some doing to arrange that first date, but often a delightful and long-lasting relationship develops. Ady's book is a personal account of a rewarding involvement with machine language, and his enthusiasm may well encourage many people to take the plunge. The text is conversational and lively, a pleasant rarity among computer books which all too often are full of useless buzzwords. The author starts by presenting all the required fundamentals of machine language programming, and then quickly proceeds to practical applications.

The book deals with machine language almost exclusively in the context of BASIC programming. The discussion of stand-alone programs (i.e. programs which can be executed directly from DOS) is short and partly misleading. But for many computer users the interfacing with BASIC is the main, and often the only reason to try machine language. While almost any job can be done in BASIC alone, some procedures are many times faster, shorter and, believe it or not, easier in machine code. Much of the improvement results from the fact that a BASIC interpreter does a lot of double-checking and verifying before performing any desired operation, and warns the programmer with civilized error messages in case there is a problem. On the other hand, a machine language program executes every command instantly. Therein, however, next to the beauty dwells the beast: absolutely nothing in machine language is verified by the computer. If the command produces garbage, garbage it will be and you'll never know it, except that in most cases your program will suddenly crash without any explanation. In this respect Ady's book is also outstanding. It describes extensively many potential problems and ways to avoid them.

The connection between a BASIC program and machine language routines can be made in many different ways. Ady presents one which is quite unique and for many purposes more efficient than some other methods. After a machine language routine is written, it can be saved on a disk in a form which to the BASIC interpreter looks like an ordinary program line. When needed, any number of such "lines" can be simply MERGEd into any BASIC program, and the machine code "imbedded" in those lines can then be executed directly from within that BASIC program. Although the procedure for creating such mergeable files is somewhat cumbersome and imposes some restrictions on programs used in this manner, the convenience of merging is remarkable and well worth the effort of the initial setup.

The programming techniques are illustrated by numerous examples which in many cases can be applied directly in programming practice. Since the book has been written with the Models 1 and 3 in mind, some applications will require revisions to run in Model 4 mode. The differences involve primarily the use of various "pre-cooked" routines built into those computers or supplied on their DOS system disks, and especially the interfacing with screen, keyboard, printer and disk. A brief outline of those differences is provided in the last chapter, but in order to take the full advantage of Model 4 mode, the user will need to consult additional literature. Of particular interest to many users may be the chapters dealing with TRS-80 block (not hi-res) graphics and fast animation, and showing how to print such graphics on non-Radio Shack printers. But my favorite is the chapter on "Miscellaneous Short Cuts and Tricks". Most people who deal with machine language gradually discover various ways to either shorten and speed up the code, or to make it simpler and more "elegant". Ady's long list contains a great variety of such tricks, and even experienced programmers will find many useful ideas in this chapter.

This brings up a question whether this book is a machine language "primer" or an advanced text. While Ady suggests that it teaches machine language for all levels of programmers, from novices to experts, I feel that it falls somewhere in the middle. For people who never used machine language before, the main initial problem is usually to develop sufficient hands-on confidence that the strange abbreviations and symbols will actually produce the expected results. A novice can find in Ady's book nearly all there is to know about machine language, but the progress from the compact introductory information to the practical applications might be just a little too fast-paced for all but the most courageous readers. A few more simple, stand-alone examples, gradually introducing more complex commands, would help to ease the beginner into the subject. For the expert, the "imbedding" of machine language in interpreted BASIC, or the question of "relocatable" code may be not as relevant as some of the tricks of the trade shown throughout the book. Both levels would benefit from more emphasis on program structure. Indeed, some techniques recommended by Ady, such as "discarding return" to "simplify" code will work all right, but are not a very good habit to learn, and in the long run can actually make programming more difficult. This is especially true if the reader should ever move on to the machine language of other processors such as Intel-8086 (used by IBM and clones) which are more complex and not as forgiving as our trusty Z-80 processor.

Summary: Ady's book provides a complete description of machine language programming for the TRS-80 family of computers. It demonstrates many useful techniques and applications with a particular emphasis on Model 1 and 3 video, graphics and keyboard routines. It is a worthwhile addition to the library of any computer user who is seriously interested in improving the performance of BASIC programs through the use of machine language routines.
-Chris Fara

About the reviewer: Christopher Fara is a programmer with Microdex Corporation, and a co-author of xT.CAD and other programs published by his company. He has been involved with machine language programming on TRS-80 and IBM computers since 1983, when an "expert" told him that some particular thing "could not be done". Ignoring the advice, Chris quickly discovered that there was nothing that could not be done in machine language and has had much fun with it ever since.

Don Ady's Book "Z-80 Machine Language Techniques for The TRS-80" (236 pages) is available from Computer News 80 in an 8-1/2 x 11 format in a three ring binder. To order send $22.95 plus $4.00 for shipping and handling. US orders only, for Canada and other countries add $5.50 for S & H.

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CN-80 will have other reprints of books of merit for the TRS-80 user in the future. We hope that this service is a useful aid to all our readers, as well as to the authors who have no other place to distribute their product. We welcome your suggestions for future publications, and if you have written a book, manual, or whatever, that is now sitting on the shelf gathering dust, dust it off and send it in. It may be just what our readers are looking for. -Ed.

TALES FROM THE FILE CABINET
By Timothy Sewell

Wouldn't you know it...just as last month's article about ARC4 and XARC4 went to print, I received the news that David Huelsmann was working on all new versions of his wonderful utilities.

His first installment is XARC4 version 02.00.00. This version now includes the ability to handle MS-DOS type PKARC "Squashed" files. Other new features include scroll protection for the top two lines of a verbose listing, Better handling of Lempel-Zev file compression, date/time stamp that is compatible with LS-DOS 6.3 for extracted files, elapsed time for extraction upon program exit, and enhanced error reporting.

I have always regarded XARC4 to be one of the most important utilities I use. Version 2 increases it's versatility and establishes it as THE most important utility that I use.

David is hard at work on a new version of ARC4. He's keeping his ideas quiet for now so all we can do is wait and marvel at his work.

Mel Patrick has just released the latest version of his FastTerm Communications program and it contains a few new enhancements.

Version 13 of this excellent program supports modem speeds from 300 baud to 9600 baud and is currently the only TRS-80 Communication program to use the YMODEM method of file transfer as well as the standard XMODEM. FastTerm has a built in area code directory and can be programmed to keep track of long distance charges so you can keep a handle on your phone bill. A new multi-dialing feature as well as enhanced VT-100 support makes this program one of the best you can find.

Speaking of Mel Patrick, did you know that he has written several wonderful programs for the Model 4? They used to be distributed by a company out of Canada called SOTA who has since returned all distribution rights back to Mel. He has assembled a small catalog which can be obtained by writing directly to him.

Write to:

Mel Patrick Model 4 Catalog
13699 70A Avenue
Surrey, B.C.:Canada, V3W 2J8

Be sure to tell him that Tim sent you.

New goodies just keep on pouring out of Canada. Karl Mohr has recently submitted 4 great new programs to The File Cabinet's Public Domain Library.

WORDPUZ4/BAS is a program that solves "Jumbled" word puzzles. Those of you who are fans of this popular word game will find this program a necessity.

TICTAC4/CMD is the popular game that we all love to play. This new release is faster and much harder to beat than his previous version and the graphics are first rate.

HORNER/CMD is a golf handicap program that uses the HORNER handicap method and keeps track of your games.

MORTGAGE/BAS is a very accurate mortgage calculation program. Of course the calculation rates are Canadian but the program works well just the same.

New High Resolution software has become

few and far between as of lately. The only new package I have come across is an interesting program called TRSSTORM/BAS. TRSSTORM is an elaborate hurricane tracking program that will keep you up to date with the progress of a tropical storm. Several paths of previous storms are included for demonstration purposes. Versions for BASICG and GBASIC are available.

I would like to thank David Goben for correcting the problem with ND2TRS62. It now reads and copies from all Newdos/80 disk formats including Double Sided Model 1 formats. Thanks Dave!

These programs and hundreds of others can be found in The File Cabinet's Model 4 Public Domain Library as well as GEnie and some local Bulletin Board Systems (See The File Cabinet's ad elsewhere in this issue).

The File Cabinet welcomes all submissions to the Library. Model 3 and Model 4 programs as well as High Resolution programs are wanted and will be exchanged on a disk for disk basis. Original software is especially wanted. If you submit programs downloaded from a BBS please check The File Cabinet's current catalog to avoid duplications.

That's all for this month. Next month I'll be back with more new finds and submissions. Until then...Make Mine TRS-80!
-Tim Sewell

Tim Sewell can be reached via The File Cabinet, P.O. Box 4295, San Fernando, CA 91342 Please include a SASE for a reply.
-Ed.

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HINTS, TIPS, AND VISITS WITH YOUR FELLOW READERS

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Dear Sirs:

I've meant to write, and send along some programs for some time, but hadn't gotten around to it until I saw the question from W.B.K. of Maurertown, VA. On this disk is a shareware program, XEQ/CMD (EXECUTE/CMD) by Ray Boggs, which can do what he wants for /CMD files. It stores short /CMD files in a library which takes up only one directory entry, and compresses the files into the minimum space needed, with only the last gran being partly used. A directory of the stored programs is available, and the programs can be run from within the library file. Many different library files can be created, each containing related programs. I THINK there may be other programs which can conserve space for any type of file, but I don't know for sure. Hopefully other readers can help. (If there is a PD utility, Tim Sewell should know of it.)

To obtain a new copy of EXECUTE/CMD type XEQ (X) EXECUTE to extract it from XEQ. EXECUTE/CMD can then be used to create a NEW, separate, executable library file with whatever name you choose to give it. The programs ending in "B" (ACCESSB/CMD, MAPB/CMD, UNPURGEB/CMD) can't be appended to an EXECUTE library file. They do the same thing their "non-B" counterparts do, but can be run from within BASIC (eg. SYSTEM "RUN ACCESSB"). To get instructions, type "Help" at TRSDOS ready, and enter "XEQ " for category. (You need to have HELP/CMD on your system disk and XEQ/HLP on line.) Then enter each subject you want information on.

I've also included several BASIC utilities I wrote to manipulate PROFILE 4+ data files. Because of their length, I assumed you wouldn't want to print listings in CN-80, and since anyone who needs them will already have Model 4 BASIC, I did not save them in ASCII format. Although they are explained in the P4UTIL/DOC file, a brief description follows. SUBFIL/BAS generates files which are subsets of another PROFILE (tm) file, and also cleans up files by

deleting all blank records. (In other words, it performs an archiving function.) REPLACE/BAS lets you fill a field or fields of your choice with a "literal" for all records in a file, or for specific records chosen with a PROFILE Index. XFER/BAS lets you move the data from specified fields in one file to the fields of your choice in another file. RM/BAS is a menu program which runs the others. Also, the programs are pretty much self-documenting, with on-screen instructions.

FILSPLIT/BAS is a quick and dirty program to cut a long file into two approximately equal halves. It's handy for a file that's too long for your word processor, for example.

And now for a few comments "for what they're worth" about the last two issues.

First, I have installed a set of Teac DSDD (FD-55B) in my 4P, from Aerocomp, and can recommend them highly. The only "catch" is that the drive mounting bracket must be slightly modified, and the drives came without instructions. It would have helped if they had included a note about this. Chicken that I was, I called them to be sure that was the right thing to do. Their tech hadn't worked on a 4P for three years, but, after a little thought, remembered that the bracket did need new holes. The problem is that the faceplate on the Teac drive is thicker than on the RS drive, so if the existing holes in the bracket are used, the drive sits too far forward in the bracket. With the drive against the front panel of the computer, the mounting bracket is too far back to line up with its mounting holes in the computer. Also, before removing the RS drives, note carefully which holes they use. (There are two sets of four.) The OTHER set is aligned properly from side to side for the Teac drives. So all that is needed is to drill a new hole of the same diameter 5mm directly behind each of the four unused ones. The drives can then be mounted with the handles down and LED's up. Two other little things. Booting with no disk in drive 0 or with a disk but the drive open both bring up the same "Close the floppy door and try again" message. The system no longer recognizes that the drive is empty. Also, disks now need to go into the drive with the label AWAY from the screen, or the computer can't tell there is a disk present, and tells you to "Close the floppy door and try again", even with the door closed. I'd be embarrassed to tell you how long it took me to figure that one out.

I don't quite understand what M.H.O. was saying about Spectre Technologies. At first he seems to praise them for their response, and then he says he didn't get any support. For what it's worth, my experience with them has been great. I ordered LONG & LOUD and REMBRANDT when they first appeared, and found a few bugs in my first copy which I reported by phone. I usually got their answering machine, but they always called back within a day, and were grateful for the report. Further, they fixed each bug promptly and sent me the new version free of charge. I didn't even have to send back my original disk. My original versions were for Epson printers, but when a DMP-2100 became available to me, I requested and offered to pay for printer drivers for that. They were also furnished free, with no need to return my disk. I'm sorry that M.H.O.'s experience was not good, but Spectre's support for me was the best I've ever seen.

Although I'm a ham, I don't operate RTTY, and can't help D.J.R. myself, but I'd suggest he contact Marc I. Leavey, M.D., WA3AJR; 6 Jenny Lane; Baltimore, MD 21208 (CompuServe 75036,2501; Delphi MARCWA3AJR). He edits the "RTTY Loop" column in 73 Amateur Radio, and may be able to help.

Concerning your editorial in the July issue, one of the first symptoms of the change in 80 Micro was their departure from Wayne Green's concept of a reader-written magazine a couple of years ago. They stopped accepting reviews from the general readership and began using only certain "approved" reviewers. That gave them a known quantity they could rely on, but it also excluded a lot of talent, and decreased readers' involvement with the magazine.

I'm glad to see the hardware related articles, especially Gary Rambo's. It would be helpful if they could also include the 4P.

Don Singer
3726 Skyline Dr.
Scottsbluff, NE 69361

(Editors Note) The disk with your programs

was forwarded to W. B. K. of Maurertown, VA. Spectre Technologies has assured us that the problem M.H.O related has been taken care of. We passed his letter on to them at the time he wrote, and talked to David Genewetzki, President of Spectre Technologies personally at that time. So far we have not heard of any future reports of problems with their service. Your suggestion on the RTTY is sure to perk up the ears of several ham operators out there. Thanks for your letter and all the tips. Forthcoming articles are planned to include the 4P as well as all the TRS-80 units from the 4D back thru Model I (Please see the program listing section for more on the programs mentioned in Mr. Singers letter) -Ed.

A FEW CORRECTIONS FOR VOL 1 NO 7

Page 6:

Patch #010 for LS-DOS 6.3 should be;
PATCH BOOT/SYS.LSIDOS (DO6,2C=40;F06, 2C=60)
It was printed as PATCH BOOT.SYS LSIDOS as the file name.

Page 13:

I/O Comments
Set Commands: should read
SET *IN KSM/FLT FILE NAME/KSM [(;)]

Not [;] as printed, the error is ours and not the authors.

Page 23:

Lynn Gallup has an electronic mail system at the company where he works and not an electronic mil system. And requires a carriage return at the end of every line, not an enc. And we should have said a word processor like Scripsit, instead of a word like Scripsit.

Sorry Lynn, I hope that we got the rest of your letter right. And I think that our readers wouldn't have had any trouble spotting and mentally correcting the errors.

A SISTER PUBLICATION THAT COMMANDS RESPECT

We have had the priviledge to receive copies of TRSTimes, published by Lance Wolstrup of Canoga Park, California.

TRSTimes was started about the same time as CN80 with the publishers recognizing the need for some type of coverage for the TRS-80 computers to continue after the demise of 80 Micro.

TRSTimes is a bi-monthly newsletter with its aim more to the programmer, but has lots of good tips, and other items. It is closely allied with the Valley TRS-80 Hackers' Group, and has some good programs and CP/M articles.

TRSTimes is available for $15 US and Canada, All other countries $20.00 US,
(all 6 issues for 1988 will be sent).
To Order Write to:

TRSTimes
20311 Sherman Way #221
Canoga Park, CA 91036

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READER SUPPLIES FINANCIAL PROGRAM

Gentlemen

Just received the June issue (Vol 1, # 6). Great stuff! Keep up the good work. Got a couple of things on my mind.

First, regarding W. B. K.'s requirement for gran allocation in less that the usual 1.5k - While not Public Domain, MISOSYS, Inc. has a real good utility called diskDISK that will allocate down to 0.25K grans, and should do the job for him. It sells for $39.95 plus shipping. I've been using this little gem in conjunction with a 5 meg hard drive for just about a year, and have not had any trouble with it. I use it for about the same reason W. B. K. stated. The hard drive allocates grans in 4k chunks, and it just seemed wasteful when the utility was maybe 500 bytes long. Suggest W. B. K. contact MISOSYS, Inc. at PO Box 239, Sterling, VA 22170-0239, or (703) 450-4181.

Next. There is one program (RATIOS/BAS) and its documentation

(RATIOS/DOC) on the enclosed disk. The program is in compressed BASIC and is intended to be run on the Model 4 with LS-DOS. The documentation is in pure ASCII. Permission herewith to publish if you think it may be of interest to your readers - or include both in your next disk. I realize that the application is long. If you're interested in this kind of thing, it could probably be split into three segments, each of which a reasonable size to publish. At any rate, please let me know if you think I should submit additional applications of a similar (business/financial) nature.

Again, thanks for filling a great need for the forgotten TRS-80 owners. Please keep up the good work.

R. H. (Dick) Hollenbeck
10440 Crete Drive
EL Paso, Texas 79927-1720

Text Reprint of RATIOS/DOC as supplied:

A Basic Utility for
Financial Statement Analysis
by: R H (Dick) Hollenbeck

A good deal of time and effort is expended in preparing or analyzing the periodic financial statements issued by businesses. A company's ability to prosper is of interest to many individuals. The controller is interested in presenting the business in as accurate a financial light as possible. A bank loan officer is interested in determining whether a business will be able to repay the loan it requested. Investors are interested in determining if putting their money into a firm presents a reasonable risk while at the same time providing a reasonable return. And, many others are also interested for various reasons.

One of the more standard analysis procedures makes use of various ratios computed from data provided in the statements. RATIOS/BAS was written to provide a convenient means of calculating 24 of the most common ratios. There are other, more complex and sometimes subjective, calculations that a highly sophisticated user might employ. But, generally, if proper use is made of the ones presented here, a valid decision can be reached.

The algorithms I used in RATIOS/BAS can be found in any good accounting text - I used "Intermediate Accounting" by Kieso and Weygandt, Third Edition, John Wiley & Sons, New York, 1980. In the interest of simplicity, some short cuts were taken; eg: Averages are simple averages, calculated on the basis of dividing the sum of the beginning and ending amount by two. Daily changes are not contemplated, nor are they in my opinion, necessary. I would recommend that the purists among you take a couple of minutes and review the formulas found in lines 1610 - 0860. Note that the oft appearing value "-999" is a trailer value used to determine if all data needed for a particular calculation, is present.

I was motivated to write RATIOS/BAS by an article that appeared in the June 1984 edition of 80 Micro by Gary Leslie (Monitoring Financial Health). Previously like many others, I used pencil and paper to perform these calculations, and then had one of the typists put them into proper, finished-copy format, a tedious and time consuming procedure at best. RATIOS/BAS asks for data input, and then automatically performs the calculations and provides formatted output, either to the video display only, or at the operator's option, will also provide hard copy. While I borrowed Mr. Leslie's idea, all code in RATIOS/BAS is original.

THE CODE:

There is nothing unique about RATIOS/BAS' code. Essentially it consists of five modules - an administrative section (lines 100 - 310), an input module (lines 1000 - 1600), a formulas and calculations module (lines 1610 - 1860), an output module (lines 1870 - 2600), and a main driver (lines 500 and 2610 - 2740).

As presented here, the code occupies slightly more than 13 k. By eliminating all the REMarks (lines 100 - 310, 1000, 1610, 1870, and 2610), the program will just fit into a 12 k file (11724 bytes). The original code was written in expanded format and later compressed using David Gobin's PACK4 utility (absolutely the best I've seen).

Should you wish to personalize RATIOS/BAS, replace the asterisks (*) in line 2630 with your name (12 characters, max.).

You may need to change the coding for U$ and SU$ that is found in line 2720. These are printer control codes for begin and stop underline.

USING RATIOS/BAS:

To load and run the program, enter RUN "RATIOS/BAS" from BASIC Ready. The screen will clear and an overview of the program will appear. After you've read the information, press <ENTER> and the first input screen will appear.

Appropriately answer all prompts as they appear. (An <ENTER> will produce a zero.) If you make a mistake entering data, you will be given an opportunity to correct it before going on to the next input screen. There are a total of four input screens - miscellaneous, data from the Income Statement, data from the Sources and Applications Statement, and data from the Balance Sheet.

After all data has been entered, you will be asked if you want hard copy. If you do, simply adjust your line printer and place it on-line prior to pressing <ENTER>. If you wish to view the results on the screen only - don't turn on your line printer before pressing <ENTER>.

After output has been completed, you will be asked if you want to run the program again. Just follow the prompts and you won't get into trouble. The program exits to DOS (not BASIC), but you can make the appropriate changes in line 2710 if you are not happy with this exit scheme.

Note, that some companies will not have all the data needed to complete all 24 calculations - for whatever reason. Perhaps they did not pay any dividends, thereby rendering the payout ratio meaningless. In such cases, the notation "N/A" (denoting not applicable) will appear as output for that particular ratio. This explanation is hard-coded so that it appears in the print out regardless of whether any "N/A's" appear there.

INPUT TEST NUMBERS:

Here are some numbers you can use to see if RATIOS/BAS is working properly: ..

1. MISCELLANEOUS DATA SCREEN:
   Company Name : ANYTHING YOU LIKE
   Date of Statement : 12/31/1987
   Market Price of Common Stock : 60.00
   Avg. Daily Cash Requirement : 1525000.00 (don't use commas)

2. INCOME STATEMENT SCREEN:
   Net Sales : 1600000.00
   Cost of Goods Sold : 1000000.00
   Total Revenues : 1675000.00
   Depreciation Expense : 150000.00
   Operating Profit (before tax): 250000.00
   Interest Expense : 50000.00
   Total Taxes : 100000.00
   Beginning Inventory : 250000.00
   Ending Inventory : 310000.00
   Net Earnings : 150000.00

3. SOURCES and APPLICATIONS SCREEN:
   Dividends Paid : 67500.00
   Other Non-Cash Adjustments : -0-

4. BALANCE SHEET SCREEN:
   Total Cash (O/H & in Banks) : 40000.00
   Marketable Securities : 100000.00
   Net Trade Receivables : 350000.00
   Total Current Assets : 800000.00
   Net Plant, Prop. & Equip. : 1100000.00
   Net Other Assets : 350000.00
   Total Current Liabilities : 575000.00
   Long Term Debt : 725000.00
   Number C/Sh Outstanding : 30000
   Total S/H Equity : 950000.00

OUTPUT RESULTS:

If you used the above listed sample numbers you should obtain the following output:

1. LIQUIDITY RATIOS:
   Current Ratio : 1.39 (times)
   Acid Test : 0.85 (times)
   Defensive Interval : 130.07 (days)

2. PROFITABILITY RATIOS:
   Profit Margin - Sales : 9.4%
   Net Profit Margin : 14.9%
   Return on Assets : 6.7%
   Return on Equity : 15.8%

Payout Ratio : 45.0%
Price-Earnings Ratio : 12.00 (times)
Earnings/Share : $5.00

3. ACTIVITY:
Receivables Turnover : 75.56 (days)
Inventory Turnover : 102.20 (days)
Asset Turnover : 0.71 (times)
Equity Turnover : 1.68 (times)

4. COVERAGE:
Debt/Total Assets : 57.8%
Times Interest Earned : 6.00 (times)
Cash Flow : $300000.00
Cash Flow/Share : $10.00
Book Value/Share : $31.67

5. MISCELLANEOUS:
Earning Power (duPont) : 10.6%
Tax Rate : 40.0%
Retention Rate : 55.0%
Reinvestment Rate : 8.%
Capital Structure : $1675000.00

CLOSING THOUGHTS:

I have attended the Sledge Hammer School of Basic Programming (as many of you have already concluded), and make no representations regarding the elegance of this program's code. However, it does do the job.

I'd be happy to hear from you regarding improvements to RATIOS/BAS, and, maybe not quite so happy (but happy none-the-less) to hear about any troubles you may have with this program. But, regardless, I'll try to answer all input provided you send an s.a.s.e. with your comments.
-Dick Hollenbeck

(Editors Note) We thank Dick for his program and his input, we too would like to hear from our readers - if you are interested in more from Mr. Hollenbeck, and more on the business application programs that are available for the TRS-80 user. If you are interested in copies of this program please let us know. We will include this program on the next disk of our Disk-Series.
-Ed

MORE READER INPUT ON MINIMUM FILE SIZE

Dear Staff,
Enjoyed reading Volume 1 Number 7, and have some answers:

W.B.K. - Maurertown VA

There are two programs that I know of which will allow the storage of smaller files. DISKdisk (model III) and LS-DISKdisk (model IV) and PaDS (model III) and PRO-PaDS (model IV) from MISOSYS, P.O Box 239, Sterling, VA 22170-0239. The PaDS and PRO-PADS are currently out of print, but you might find an old copy some where for sale.

The programs are of very different architecture, and I will give you a very brief description of each. Both have been written up in 80 MICRO, but I couldn't find the issue.

The DISKdisk package ($39.95) was developed for the 80 trk DS,DD and HARD disk drives, to allow more directory space. As you all know by now, a large capacity drive often runs out of directory entries before running out of actual storage space. DISKdisk simulates a disk on a disk. During the formatting of the DISKdisk, the user specifies the size of the disk. There are 4 types available. Type 1 allocates .25K grans (1 record); Type 2 allocates .50K grans (2 records); Type 5 duplicates a 5" drive, and Type 8 duplicates an 8" drive. After you have selected the format, you are asked if the disk is SD or DD, 1 or 2 sided, how many tracks you want, the name and which Physical Disk drive the Logical Disk is to be placed on. (sounds a lot more complicated than it is. A couple of tries, and you'll have it.) I usually set the Logical disk size equal to a 40 trk SS/DD, or an 80 trk DS/DD drive, for ease of manipulation. Once the drive is set up, all DOS commands EXCEPT FORMAT will see the logical drive as a physical drive. FORMAT WON'T work (DDFORM replaces FORMAT). If you have a bunch of small files, a Type 1 or Type 2 disk is handy. Note that if the DISKdisk is to be a SYSTEM disk, YOU CANNOT USE TYPE 1 OR 2. If type 5 or 8 is used, they can be made SYSTEM disks. I highly RECOMMEND this package to anyone, but on the MUST HAVE list if you have LARGE capacity drives.

The PaDS package (discontinued) was available separately then with the Mark III or Mark IV Collections. This was a Partitioned Data Set program, and allocates only the space needed for a program. IE, if a program is 167 bytes long, that is all that is allocated. A program can be directly executed from the file if the extension is /CMD. I have built what I call my X/CMD file containing many of the utilities I use most often. It is not recommended for large programs. I think that I read that above 30+K you can have a file handling problem. If the file is not a /CMD type, you must copy from the PaDS to another file to manipulate. When you build the PaDS file, you specify the number of directory entries you want, up to 256. The file automatically grows and programs are entered. This is a little more difficult to manage than DISKdisk, but a superb piece of SOFTWARE.

OPEN FORUM

Another program which provides the user with excellent 1 stroke commands is DOSTAMER by George Fisher - available from Discount DATA - I think. This SHELL program resides between the user and the DOS providing file tagging and copying, viewing, printing, almost any DOS command. If the command isn't available directly, the X option passes a command directly to DOS. Most of the information is provided in a 6-8 line display at the bottom of the screen. A description file is available so that descriptions of your programs can be added - viewed - deleted. It is only for the Model IV. ($49.95 and well worth it!) I would note that I have had problems with DOSTAMER when referencing DISKdisk disks less than 20 tracks. Instructions are provided to link DOSTAMER to the SYSTEM as SYS13/SYS and called via "*". In addition to the screen display, access to 10 additional screens per disk is available. These screens can provide information, or more complicated commands can be built and directly executed. This is a very flexible system! Get it while it is still available!

I hope that this isn't too long, and that it helps!

-K. S. Stanwood, WA

INSIDE TRSDOS 1.3

by David Goben

In this article we are going to take a microscopic look at Radio Shack's TRSDOS 1.3 Disk Operating System, and explore exactly how it is set up. TRSDOS stands for Tandy/Radio Shack Disk Operating System. Pronounced (according to Tandy) as Triss-dos, as in HISS and BOSS).

This article is designed primarily for the programmers that work at a much deeper level than the normal application user. With information for those who are interested in working on a disk not only at the sector level, but right down to the byte and bit levels. Also explained is the disk format of TRSDOS 1.3, its system overlay format, and how it deals with files.

WHY TRSDOS?

I admit it. The first time I booted up TRSDOS 1.3, I almost laughed. (Well, actually I DID laugh.) After using LDOS and NEWDOS80 on my Model I, I felt like I had just stepped into the stone age. But so much for first impressions. As a favor to friends who used this DOS simply because they did not need a more powerful system, and were having some trouble with programs they were trying to run on it, I began exploring Tandy's Model III DOS in order to solve those posers. Funny, but the more that I explored the DOS, the more capable I decided it was. The fact is, it is MUCH more powerful than what you might think!

Sure, everyone has their favorite DOS. It all boils down to what you are comfortable with. If you are used to doing something a certain way, then you are naturally partial to it. Well, let's set all of that aside for a time, and pretend that TRSDOS 1.3 is the new kid on the block.

TRSDOS 1.3 is a slow DOS, to be sure. In comparison to the other Model III DOS systems, such as LDOS, DOSPLUS, NEWDOS80 and MULTIDOS, it is also lacking in a lot of features. But 4 of its greatest strengths are, 1) It is readily available. Most Model III programs are distributed on a TRSDOS 1.3 system disk, or at the very least on a TRSDOS 1.3-formatted data disk. 2) It is for all practical purposes, bug-free. It has had only a few patches to correct known, real-world

bugs. All other patches have been to enhance the system for other user-desired functions, or bypass special self-protection features. Unlike the stone-faced, tight-lipped image that many people attribute to Tandy, for which Radio Shack is a division of, they have in fact released many of these 'cheat' patches in their publications an on bulletin boards. 3) It has a little known 'F' (FILE) command in DEBUG that is worth its weight in gold. 4) It is EASY to use. It lacks complex parameters syntax and provides built-in help from the DOS level. TRSDOS 1.3 is WELL worth investigating.

If you want to spiff-up your TRSDOS 1.3 system, then this article will provide you with the means to do so. We're talking about a lot of patches here. I have dug through back issues of 80 MICRO, TRS-80 MICROCOMPUTER NEWS, The MISOSYS Quarterly, and other lesser-known publications (as well as come up with a couple of my own) to present in one article some of the most popular and most desired patches ever assembled.

MACHINE LANGUAGE COMPATIBILITY

Machine language programmers trying to program for various DOS compatibility without a lot of testing have complained about an exercise in frustration. If you use only documented systems calls, especially those that are noted in the TRSDOS manual, allowing the resident DOS to do all the system input/output work for you, then this is reduced to almost no compatibility problems.

Two of the major Model III DOS incompatibilites can be reduced to nothing quite easily. The first is probably the FCB; the File Control Block (some systems, such as TRSDOS call this the Device Control Block; DCB). TRSDOS 1.3 uses 50 bytes, whereas all other systems use 32. Thus to overcome problems, ALWAYS be sure to set aside 50 bytes for the FCB. The other is the Line Display routine. Most other DOSes use address 4467H, which originated with the Model I DOSes. TRSDOS 1.3 does not support this. It uses instead the routine in the Model III ROM at address 021BH. Thus, for Model III multi-DOS compatibility, you should resort to using ONLY a call to 021BH, and avoid using 4467H like the black death. For your interest, if you use DEBUG to examine the transfer address at 4467H on most other Model III DOS systems, you will note that there is simply a jump down to 021BH.

In fairness, I should point out that the FCB's are not wholly compatible if you do MORE with the FCB other that point the DE register to it an perform a system call. However, if you do feel the need to peek and poke bytes into the FCB, use ONLY the documented addresses described in the TRSDOS manual under the heading "DCB while $OPEN". The documented address offsets are true for all other Model III (and I and 4) systems.

DISK FORMAT

The designers of TRSDOS 1.3 chose to use sector naming starting with 1 and going up through 18. All other systems start at zero, and go up to 17. This still allows for 18 sectors, but the naming scheme is enough to throw you off. Also at odds, the SYSTEM files on TRSDOS 1.3 have their file sectors written with a deleted DAM (Data Address Mark), rather than a normal DAM. All other files, such as user files AND the directory, are written using normal DAMs. Conversely, all other DOS systems do pretty much the opposite, in that ALL files are written with a normal DAM, and only the directory is written using a deleted DAM. For your information, a deleted DAM is often called 'system protected', in that on other DOS systems, doing a read of such a sector results in an error code 6 -- "Attempted to read System Data Record". This is not actually an error, but is often interpreted by most programs as such; this being a way of protecting the user for inadvertently modifying the directory.

SYSTEM FILES

TRSDOS 1.3 has 16 system files, numbered zero through 14, plus the BOOT sector. Table 1 lists these files, showing you the system name, as used when you use the PATCH facility (except, of course, for BOOT, which is ACTUALLY the first sector of system file *0, though not reflected as such in the table), their RELATIVE starting sector from the BEGINNING of the disk (offset from zero), their starting track, starting sector name, sector count, plus loading address information; starting

address, ending address, and transfer address (where each file begins executing).

You may notice that system files BOOT, *0, *5 and *7, respectively, occupy the first 40 sectors of the disk. System files *10, *12, *13, *1, *2, *3 and *4, respectively, occupy the 36 sectors immediately before the directory. System files *6, *8, *9, *11 and *14 occupy the 66 respective sectors immediately following the directory. By the way, the directory track is ALWAYS 17, and these programs MUST be placed on the disk in this EXACT order so that the DOS will even operate. The XFERSYS program takes advantage of this in that is assumes that no other files occupy these specific sectors.

BOOT is simply, and is commonly called the Boot Sector. This is the sector loaded by the ROM into the 4300H to 43FFH address range and then executed. The information on this sector in turn loads the TRSDOS system. Unlike other DOS systems which maintain the disk track count and DOS version number in the GAT (Granule Allocation Table) of the directory, TRSDOS 1.3 stores it in the Boot Sector. Offset address FEH holds the DOS version, in this case the value 13H (for 1.3), and offset FFH holds 28H, indicating 40 tracks (notice the offset from 1 rather than zero). Another difference from other DOS Boot Sectors is that the FIRST byte is FEH, and the second byte is the directry track number, as opposed to byte zero being 00H, byte 1 being FEH, and byte 2 being the directory track number as it is on other systems. Thus if you are doing direct disk I/O, you can spot a TRSDOS 1.3 system in one of 2 ways 1) if TRACK zero, sector 1 is System Protected, or 2) if byte zero is FEH, then you have a TRSDOS 1.3 disk. A final feature of the Boot Sector is the "Limited Backup" Byte, which is at relative location 22H. If the byte is FFH, it can have unlimited backups. If it is zero, then no backups are possible. If it is any other value, then that is the count of the number of backups left. During each backup, this value is decremented by one. Once it reaches zero, then you cannot back it up anymore. The solution? Zap the byte to make it FFH.

*0 is the system resident code. it is the only system file (the BOOT sector I won't bother counting) that is not an overlay. Once it is loaded, it stays resident until the system is either shut down or rebooted. It contains all the DOS 'primitive' functions, such as sector I/O. *1 interrogates DOS commands. This is always resident when the TRSDOS Ready prompt is present. *2 handles opening and initializing disk files. *3 handles CLOSE and KILL. *4 displays DOS ERROR messages. *5 is the DEBUG overlay. *6, *9, and *11 execute most of the various library commands. *7 handles FORMAT and BACKUP. *8 handles HELP. *10 displays Disk BASIC error messages. *12 and *13 are Disk BASIC support overlays. *14 handles directory functions.

DIRECTORY STRUCTURE

The GAT (Granule Allocation Table): This is located at sector 1 of track 17. Similarity between TRSDOS 1.3 and other DOS systems exists only from relative bytes 60H to BFH (the Lock-Out table, mentioned later) and relative bytes CEH through FFH. CEH and CFH hold the hashed master password for the disk (notice, however, that TRSDOS 1.3 uses a DIFFERENT password hashing method). D0H through D7H contains the disk name, 'padded' on the right by spaces. Bytes D8H through DFH contain the disk date, in MM/DD/YY format. Bytes E0H through FFH contain the "AUTO" command, terminated with a carriage return (0DH). If there is no AUTO command, then offset byte E0H contains a carriage return.

The rest of the GAT structure varies from other DOS systems in a technical way, although their way of operating on the data is similar. This is primarily due to 2 things, 1) granules are only 3 sectors long, providing for 6 granules to an 18-sector track, and 2) the unused bits in the granule allocation scheme are NOT set, which is the usual method of effectively locking them out of the file allocation system by any other DOS.

Outside of these differences, the actual granule allocation schemes are similar, in that granule "names" begin with zero, and increment up toward 7. Since TRSDOS uses only 6 granules (granules zero through 5) of 3 sectors apiece, only the first 6 bits of each allocation byte are used. These correspond with bits zero through 5. Bits 6 and 7, which are never used, are left zero

(other systems will leave them set, for lock-out purposes). Each consecutive byte from 00H to 5FH represents a TRACK. Since TRSDOS 1.3 has only 40 tracks, only bytes zero through 27H are used (you can use up to 4FH on 80-track versions, the patches for which are included with this article). From 60H through BFH is the lock-out table. A track is locked out from system use if a byte is set to FFH. Thus if track 5 was locked out, the GAT would show byte 65H (60H + 05H) as being non-zero. If the byte is zero, then the corresponding track (drop 60H from the byte location to figure the track number) is available to the system.

The HIT (Hash Index Table): This is located at sector 2 of track 17. Although TRSDOS 1.3 uses the same hashing algorithm as other DOSes, the HIT mapping scheme varies tremendously. Whereas other DOS systems use a simpler mapping method to figure file placement in the directory entry sectors (which follows the HIT on directory sectors 3 through 18), TRSDOS 1.3 uses a much different method. Each hash code for each File Directory Entry (FDE) is placed in consecutive order of appearance in the directory entry sectors. Thus the hash code byte for first file in the directory is placed at byte location zero. The second is place at 1, and so forth. This is a simple approach, and is also easy to figure. Unfortunately, it varies with the methods used by the Model I and other Model III DOS systems (which chose to retain compatibility with the Model I DOSes). However, once this method is understood, it is fairly easy to allow for. The purpose of a HIT is to make searching for a file easier for the DOS. Each filename and its extension is 'hashed' down into a single byte value. This value is then placed into the table. When DOS is looking for a particular file, it will scan through the HIT sector. If it finds a hash code that corresponds to the hash code it computed out for the desired file, it will check the corresponding sector to check to see if the filenames also matches (this is due to the fact that hash codes for different files can sometimes have the same hash code). If there is not a match, then the HIT search continues. This process greatly decreases the file access time, as otherwise a consecutive entry by entry search would have to be conducted, which would take a LOT longer.

Unlike other DOSes, in TRSDOS 1.3, the last 32 bytes of the HIT Sector are used to map the SYSTEM files. This is an advantage. Unlike other DOS systems, the system entries for TRSDOS 1.3 do not take up valuable file slots. Instead they are mapped to consecutive 2-byte locations starting at relative byte E0H in the HIT. These 2-byte values correspond to system files zero, 1, 2, and so on, in ascending order. The last two bytes of the table, located at FEH and FFH, which would otherwise be reserved for system file *15 (which does not exist) both contain the value FFH.

Interpreting these 2-byte values is simple. The second byte represents the starting track number where the file begins. This is straight-forward enough. The first byte actually contains TWO values, 1) Bits 7 though 5 correspond to the starting granule number ON the track, and 2) bits 4 through zero correspond to the granule count for the file. How can you use these figures? Easy. To get the granule count, you would simply AND the value 1FH to the byte, to get the true granule count for the file. To get the relative starting granule on the track, you would first AND the value E0H to the byte, and then move bits 7-5 down to the 3-zero bit positions by executing RLCA three times (refer to an assembly book on the RLCA instruction), assuming that the value is in the 'A' register. If you multiplied this value by 3, and then added 1, you would have the actual sector name that the file would begin on. I noticed that relative byte E6H in this table contains a value of 83H (This corresponds to system file *3). The '3' value should ACTUALLY be a '1'. This is an actual bug in the system, but is not a critical one, for it will not interfere with the DOS operation at all.

FILE ENTRIES

The file entry tables, sectors 3 through 18 of the directory, hold a maximum of 5 File Directory Entries in each sector, or allowing a maximum of 80 file entries. Each entry takes up 48 bytes. This differs from other DOSes in that on them, each entry only takes up 32 bytes, thus allowing for 8 entries on a sector. With TRSDOS 1.3, 5 entries will occupy relative bytes zero through EFH. Bytes F0H through FFH are

not used, but simply contain a "(c) 1980 Tandy " message. Anything could occupy these last 16 bytes of each sector, and would not interfere with the system.

One reason that the file entries are longer is that granules are only allocated 3 sectors, as opposed to 6 for most other double-density DOSes. This smaller allocation allows greater conservation of disk space, but at the same time requires more directory accesses when extending the file. After all, everything is give and take.

Suppose a file, such as BASIC/CMD, occupied the very first file slot. This would correspond to relative bytes zero through 3FH on sector 3, the first sector of the file directory entry tables. This also means that the hash code created for the filename, "BASIC CMD", would occupy relative byte zero of the HIT table (this is a value of F0H, for your interest). The first byte of the file's directory entry, if zero, tells us that the file has been killed (normally TRSDOS 1.3 will zero out all 48 bytes during file deletion, but I will soon provide you with a patch so that it will zero out only the FIRST byte). Actually, bit 4 tells the system if the file slot is in use or not, but in the case of TRSDOS, the whole byte is reset during a kill operation. Bit 6 indicates a SYSTEM file. For TRSDOS 1.3, this includes BASIC/CMD, CONVERT/CMD, and XFERSYS/CMD. Bit 3 indicates if the file is invisible or not. Bits zero to 2 contains the user protection levels zero through 7 (refer to the ATTRIB command for details. Notice that 4, between WRITE and READ, and 7, which is after EXEC, are not mentioned. These correspond to UPDATE and NO ACCESS on other DOSes). Relative byte 1 contains the MONTH of creation, and relative byte 2 contains the YEAR of creation. Byte 3 contains the end of file offset byte. Byte 4 is the logical record length. Bytes 5 through 12 contain the filename, padded on the right by spaces. Bytes 13 through 15 contain the extension, padded by spaces. Bytes 16 and 17 contain the UPDATE password hash code. Bytes 18 and 19 contain the ACCESS password hash code. Bytes 20 and 21 contains the sector length of the file. You may notice that this differs greatly from the 'map' provided in the TRSDOS manual, but those listed are for a FCB (DCB), NOT a directory-resident entry.

The rest of the FDE, from relative bytes 22 onward, is the disk mapping of the file, in 2-byte format. If the first byte is FFH, then the mapping is ended. If the byte is FEH, then the next byte contains the Directory Entry Code (DEC) for an FXDE (File EXTENDED directory Entry), which is ANOTHER file slot ALSO assigned to the file, which allows the file to contain more sectors than would be allowed for on only a single FDE. If the value is less than FEH, then this value represents the actual TRACK number that the current extent's data begins on. For example, if the value was 05H, then the file data would begin on TRACK 5. The second byte is like the granule mapping bytes outlined earlier for the system files, EXCEPT that here, the granule count is one LESS than shown. Thus, after you AND the value 1FH to the byte, you would add 1 to it to get a TRUE granule count. These two-byte values fill out the remainder of the file entry, though after an initial FFH or FEH value, what follows does not matter.

THE PATCHES

Patch List 1 are those patches that Radio Shack has issued for TRSDOS 1.3. Notice the comments noted before each. The last 'dated' patch that I know of is for the July 1, 1981 version. However, I have the Avlon Hill game "Computer Diplomacy", which Radio Shack distributes, which has a version date of February 20, 1984. I don't know what kind of patches were issued for it, or if Avlon Hill only applied this to their masters for some form of dating index.

Patch List 2 are the 'optional' patches officially distributed by Radio Shack. These you can apply at your own discretion.

Patch List 3 are those patches that fix actual bugs issued by sources outside of Radio Shack. If the patches do not 'take', then chances are they have already been applied.

Patch List 4, the BIG list, are all the others, which make for a fairly nice system. I have notice that a lot of different people have claimed credit for originally developing these patches, even though some of the ones they also claim were issued by Tandy. Who knows? So, for the sake of ambiguity, I will not even take credit for the patches that I had developed. I WILL

say that several of the larger patches originated (as far as I am aware) with Andy Levinson, but I cannot actually say how many are all his original work, as numerous of his patches I have found in other, earlier patches as far back as 1982, on up through March of 1984.

FIXING THE DO 'BOMB'

The final fix is not actually a patch, but an extension that you should add to any machine language program that YOU write that filters the keyboard. This fix, listed in Program Listing One, prevents problems if you have high memory programs that install themselves, and the user chooses to execute a DO file. If this is not used and a DO file is executed, then the system could BOMB. On entry to this routine, the HL register should be set to the new address value. This fix was originally developed by Jim Kyle of The Software Factory. I have adapted it to operate on the Model I and III, and to perform ALL related functions. This is an extremely important fix! Finally, to avoid confusion, this should be ADDED to your programs, as it is NOT a stand-alone program.

- David Goben

MORE ON README PROGRAM Vol 1 No. 7 Page 21 - Program Number Two

If you have had a chance to use Mr. Goben's program "README" and found that it did not work -- don't dispare -- it works just fine. The only thing missing in David's explanation of the program is that the ASCII Text file that must accompany the README program on the same disk, must have carriage returns at the end of each line. His program counts the number of carriage lines to tell when the screen is full for the screen auto stop, press Enter to continue. In the case of SuperSCRIPSIT you would need a paragraph sign installed at the end of each line of type, rather than write a sentence two or three lines long with the wrap-around on the screen and a period at the end of the line. To have the README program work; write your text in any word processor putting carriage return (paragraph codes) at the end of each line on the screen, then save your text in ASCII. -Ed.

OPEN FORUM AND READERS LETTERS

READER - TEACHER AND T/MAKER!

Dear Editor:

I am using T/MAKER integrated software to write to you. I understand that you use Scripsit, Superscripsit, Allwrite and other word processors that save files in ASCII format.T/MAKER uses ASCII automatically so I read and I hope you're able to read this using Scripsit or Superscripsit.

The reason I'm writing about T/MAKER is because T/MAKER has dropped CP/M and TRSDOS from its support group. I recently bought this integrated software because I needed something more powerful than DESKMATE for writing my lesson plans and progress sheets. I needed spreadsheets with more memory than DESKMATE has and I think T/MAKER has more memory.

I wonder if there are any TRSDOS T/MAKER users who would like T/MAKER to be included in Computer News 80 along with Scripsit and other word processors. I'm currently learning how to use this integrated program, and while I may not know all the answers, I love to mess with a problem till I find answers for it. T/MAKER is so flexible that if you're not use to creating your own templates and forms, it can be a little hard and challenging, at first. I know it was at first. I was used to software that already had forms and records build in, like DESKMATE, and other software. However, once I got the hang of how to make up my own forms and records, I created a kindergarten progress chart with up to forty blank entries for subject and symbols for mastery and non mastery of the subject in question. With this as a template I could copy and save it under as many file names as I want (Language, Math, etc.). This progress chart does not add grades because numerical grades aren't used in Kinder. It is possible to create a database that can add numerical grades --- and not even have to use the spreadsheet.

Please let me know how you and other readers feel about T/MAKER.

-E. M. W. EL Paso, TX

(Editors Note) We think that we will hear from our readers and they will take you up on your offer to mess with their problems. You are right T/MAKER is probably the most powerful integrated package for TRS-80 machines. And it is available in TRS-DOS, CP/M and MS-DOS versions. And yes, we want T/MAKER to be included in CN80 right along with all the other word processors and other programs that we cover.

In checking with the producers of T/MAKER we learned from Sonja Roizen that they have not dropped the support of T/MAKER for the TRS-80, but they have dropped the coverage of T/MAKER TRS-DOS versions from their newsletter T/Mug. Back issues of T/Mug are $12 for current '84 to '88 (6 issues) or $10 for '82, and '83 (five issues).

T/MAKER TRS-DOS Version is still available and has been reduced to $199.00 with the T/MASTER (the MS version) selling for $ 295.00. Both versions receive full support by calling Peter or Sonja Roizen at 408-866-0127, or their support group at 408-370-6888.

For more information contact:
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Q: I have a Model I 48K with 64 ROM added and operate DOSPLUS 3.3, I also have NewDOS 80 V.2, TRSDOS 2.3,2.1, DBLDOS 4.23, and LDOS Ver 5.0.3, I do not have good documentation for these and so have been unable to use them extensively. Any articles or books I can get on them would be helpful, exception I do not like TRSDOS and use it only when I have to. Also where can I send my expansion interface to have my RS 232 prot installed? Does any one know how much it would cost?
-C. W. Monticello, NY

A: First you might find some of the TRSDOS manuals in stock at Tandy, call national parts (817) 870-5600. Then some of our readers may have manuals for the other DOS's that they are willing to part with, or sell. Reference copies might be available from The File Cabinet, or other archival libraries. -Ed.

Q: It would be interesting to find others, like myself, who would be interested in developing a project to work with the TRS-80 in an "evolving" sense. What I mean is to build an "evolved" Model 4 using off-the-shelf components. The new Zilog 280 CPU would make an interesting 16 bit machine and we could hopefully use color monitors. The project could develop slowly and the end result should be a pretty fantastic machine. Then we could "evolve" further with utilization of the following generation (it there were to be one..) Zilog CPU. If you know of others who might be interested in such a project, please let me know.

Another question —I need an instruction manual for the Profile 4 program as I can not find my own. Perhaps one of your readers might offer assistance in this regard.

Finally, do any of your readers have any experience using the TRS-80 Model 4 "board" that is available for insertion into the Tandy LapTop Model 1400, a MS-DOS machine. It would be more than nice to have a portable Model 4 as I write and am constantly spending time in libraries. I would appreciate communicating with any person who is currently using (or has previously used) the set-up that I mention.
-H. L. J. Sanford, NC

A: Your letter speaks for itself, any replies we have will be forwarded immediately. -Ed.

Q: I inherited a Tandy Model 4P with a DWP-220. I had no experience working a computer at all, but lots of experience building electronic stuff from kits or from scratch. Radio Shack in it eagerness to make money has left me (us!) out in the cold. I've tried several major mail-order places looking for books to help me learn assembly language, no luck. I'm desperately looking for: #26-2111 Model III Disk System Owner's Manual, #26-2112 model III/IV Owner's Manual, and #26-2110 Model 4 Technical reference Manual, and a tractor feed for my DWP-220. The RS store clerk didn't know what a 4P was!
-C. L. W. Rockford, MI

A: Again check Tandy National parts direct they should have most of the manuals you mention, we will let you know what our readers have. -Ed.

Program Listing One- David Goben

```
;set new keyboard driver. USAGE. Load HL
;with address, then CALL SETKEY
;
SETKEY   LD    (4016H),HL  ;set new driver
         CALL  CHKTRS      ;check TRSDOS 1.3
         RET   NZ          ;not, so ignore
         LD    (42B1H),HL  ;for DO recovery
         RET
;- - - - - - - - - - - - - - - - - - - - -
;set new HIMEM value. USAGE: Load HL with
;new HIMEM address, then CALL SETMEM
;
SETMEM   CALL  CHKTRS3     ;check for M3
         JR    Z,SETMEM3   ;is
         LD    (4049H),HL  ;else set M1 mem
         RET               ;done
SETMEM3  LD    (4411H),HL  ;set M3 mem
         CALL  CHKTRS+4    ;TRSDOS 1.3?
         RET   NZ          ;not, so done
         LD    (4415H),HL  ;set DO recovery
         RET

;TEST for Model III
CHKTRS3  LD    A,(125H)
         CP    'I'         ;Model III?
         RET               ;Z = yes
;TEST for Model III and TRSDOS 1.3
CHKTRS   CALL CHKTRS3      ;Model III?
         RET   NZ          ;no
         LD    A,(4400H)   ;TRSDOS 1.3?
         CP    0F5H
         RET               ;NZ = no
```

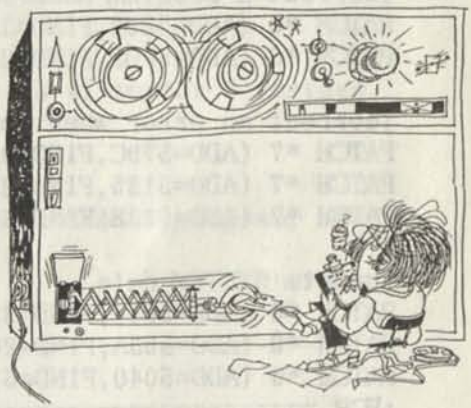

TABLE ONE: TRSDOS 1.3 SYSTEM FILE LAYOUT

SYS FILE	DISK OFFSET	START TRACK	START SECTOR	SECTOR COUNT	START ADDR	END ADDR	XFER ADDR
BOOT	0	0	1	1	4300H	43FFH	4300H
*0	1	0	2	14	400CH	5219H	4E00H
*1	288	16	1	5	4E00H	51F1H	4E00H
*2	94	16	7	4	4E00H	5138H	4E00H
*3	300	16	13	3	4E00H	500BH	4E00H
*4	303	16	16	3	4E00H	507EH	4E00H
*5	15	0	16	8	4E00H	5562H	52B9H
*6	324	18	1	17	5200H	623FH	5200H
*7	24	1	7	16	4E00H	5D71H	57A1H
*8	24	19	1	18	4E00H	5F84H	4E00H
*9	360	20	1	15	5200H	60BDH	5200H
*10	270	15	1	4	4E00H	51D1H	4E00H
*11	375	20	16	10	5200H	5F26H	5200H
*12	276	15	7	4	4E00H	51ADH	4E00H
*13	282	15	13	4	4E00H	51D1H	4E00H
*14	387	21	10	2	4E00H	4FACH	4E00H

PATCH LIST One -- FOR TRSDOS 1.3

```
;If you have TRSDOS 1.3 dated May 1, apply the following patches convert it
;into a May 2 disk (DO NOT type comments on lines starting with ';'):
;-----------------------------
;Fix a bug in XFERSYS that could prevent some files from being transferred
;  correctly.
PATCH XFERSYS/CMD (ADD=548E,FIND=3500FD21,CHG=FD360001)

;Fix bug in BASIC that caused the system to lock up if you pressed the
;   up-arrow repeatedly while you were at the top of a BASIC program.
PATCH BASIC/CMD (ADD=58F8,FIND=F1,CHG=00)

;update SYSTEM date
PATCH *0 (ADD=503B,FIND=467269,CHG=536174)
PATCH *0 (ADD=5044,FIND=31,CHG=32)
;EOP==========================


;If you have TRSDOS 1.3 dated May 2 (or from above), apply the following
;   patches to convert it to a July 1 disk:
;-----------------------------
;correct a problem when loading large files
PATCH *6 (ADD=5850,FIND=3A62,CHG=BF5F)
PATCH *6 (ADD=5FBE,FIND=20697320616374,CHG=0D116544C31C44)

;correct an error when you format a disk on drive zero
PATCH *7 (ADD=579C,FIND=0955,CHG=3851)
PATCH *7 (ADD=5135,FIND=207468652064,CHG=3F20033A7D4E)
PATCH *7 (ADD=513B,FIND=69736B657474,CHG=FE81CA0D55C9)
;
;update SYSTEM date
PATCH *0 (ADD=5044,FIND=32,CHG=31)
PATCH *0 (ADD=503A,FIND=20536174204D,CHG=57656420204A)
PATCH *0 (ADD=5040,FIND=6179,CHG=756C)
;EOP ==========================


;this patch fixes TRSDOS 1.3 fixes a problem in the 4419H directory
;display call to function correctly:
;-----------------------------
PATCH *10 (ADD=4E2E,FIND=CD3E4B,CHG=CD8A50)
PATCH *10 (ADD=508A,FIND=4469736B,CHG=4FC33E4B)
;EOP ==========================

;-------------------------------------------------------------
```

Patch list continued on next page.

****

NEXT MONTH: We will have part two of the HI-RES article by Gary Rambo. We have also had to shorten the length of our OPEN FORUM to make room for all the good articles we have been receiving. BUT --a big section of OPEN FORUM is in the works for next month (and thats a promise!) with lots of questions, and we hope with lots of answers. Your letters and questions have not gone unnoticed and research does take time. We greatly appreciate all those who have written with answers to our fellow readers questions.

PATCH LIST TWO -- FOR TRSDOS 1.3

```
;OPTIONAL RADIO SHACK PATCHES

;------------------------------
;allow DEBUG to inspect and/or change addresses below 5200H
PATCH *5 (ADD=4EDF,FIND=38E6,CHG=0000)
PATCH *5 (ADD=4F04,FIND=D0,CHG=C9)
PATCH *5 (ADD=506E,FIND=38E3,CHG=0000)
;EOP -------------------------

;-------------------------------------------------------------------------
```

PATCH LIST THREE -- FOR TRSDOS 1.3

```
;PATCHES TO FIX PROBLEMS IN DOS ORIGINATING OUTSIDE RADIO SHACK

;------------------------------
;remove execution of undocumented Z80 code that causes problems on some
;   model III's
PATCH *2 (ADD=4EBF,FIND=FD2EFFE1,CHG=FD21FF42)
PATCH *2 (ADD=4EC3,FIND=F1F1FD2642,CHG=E1F1F10000)
PATCH *7 (ADD=5284,FIND=DD2662DD2E24,CHG=000000000000)
PATCH *7 (ADD=528A,FIND=DD7E00,CHG=003EFF)

;fix 4419H dir-read function to start directory search at sector 3 instead
; of sector 2, as it should.
PATCH *10 (ADD=4E47,FIND=02,CHG=03)

;fix BASIC's "Can's Continue" error produced when you BREAK a program, scroll
;   around, and type in CONT.
PATCH BASIC/CMD (ADD=58C4,FIND=D5,CHG=00)

;-------------------------------------------------------------------------
```

PATCH LIST FOUR -- FOR TRSDOS 1.3

```
;OPTIONAL PATCHES FROM OUTSIDE RADIO SHACK

;patch TRSDOS to only delete FIRST BYTE of directory entry, rather than
;   all 48 bytes during a KILL (need for easiler file recovery)
PATCH *3 (ADD=4FB7,FIND=EDB0,CHG=0000)

;this patch allows you to open a file of a different LRL than what is set
;in the directory
PATCH *2 (ADD=502D,FIND=3E03835F1A,CHG=1313131A77)
PATCH *2 (ADD=5032,FIND=7723131A,CHG=233A0E50)
PATCH *2 (ADD=503F,FIND=10,CHG=11)

;bypass BASIC/CMD protection feature
PATCH *5 (ADD=52EB,FIND=CB,CHG=36)
PATCH *5 (ADD=52ED,FIND=BE,CHG=00)

;display error messages instead of error codes
PATCH *4 (ADD=4E28,FIND=20,CHG=18)

;list DIR list screen page at a time
```

Patch List Four Con't.

```
PATCH *6 (ADD=6111,FIND=0D0000,CHG=202003)
PATCH *6 (ADD=616D,FIND=CD8861B7C8FE40,CHG=3A803FD620C8CD)
PATCH *6 (ADD=6174,FIND=2806C547AF78C1,CHG=CF60CDC901AFC9)

;remove initial boot-up screen
PATCH *0 (ADD=5039,FIND=20,CHG=0D)
PATCH *0 (ADD=508A,FIND=28,CHG=0D)
PATCH *0 (ADD=516C,FIND=D0,CHG=0D)

;display name of AUTO file, rather than "AUTO FUNCTION ENGAGED"
PATCH *0 (ADD=4EA9,FIND=CA,CHG=C3)

;remove BASIC opening banner
PATCH BASIC/CMD (ADD=62EF,FIND=CD,CHG=C9)

;change LIST to default to ASCII format, rather than HEX
PATCH *11 (ADD=593E,FIND=28,CHG=20)
PATCH *11 (ADD=5949,FIND=EDB0,CHG=0000)
PATCH *11 (ADD=595C,FIND=28,CHG=20)
PATCH *11 (ADD=5B89,FIND=4153434949,CHG=4845582020)
PATCH *11 (ADD=5AC5,FIND=20,CHG=28)
PATCH *11 (ADD=5B3C,FIND=3030303030,CHG=4153434949)
;apply the next patch if you want to ALSO use SHIFT-@ instead of @ to
;   do a LIST pause
PATCH *11 (ADD=5265,FIND=40,CHG=60)

;remove password protection from files
PATCH *2 (ADD=4ED4,FIND=20,CHG=18)

;provide a better formatting test for new disks
PATCH *7 (ADD=5BEE,FIND=E5,CHG=5B)

;remove MASTER PASSWORD prompt from PURGE
PATCH *11 (ADD=5648,FIND=66,CHG=99)
PATCH *11 (ADD=564D,FIND=21A25B,CHG=C36E56)
PATCH *11 (ADD=5693,FIND=28,CHG=18)

;modify BACKUP to bypass password prompt, improve format, and to force a
;   default DATADISK if you press ENTER for the disk name
PATCH *7 (ADD=5013,FIND=534F55524345,CHG=FE08C0E1211D)
PATCH *7 (ADD=5019,FIND=204469736B20,CHG=50C383564441)
PATCH *7 (ADD=501F,FIND=4D6173746572,CHG=54414449534B)
PATCH *7 (ADD=55A8,FIND=28,CHG=18)
PATCH *7 (ADD=5657,FIND=21,CHG=C9)
PATCH *7 (ADD=5673,FIND=FE0828EF,CHG=CD135000)

;alter the stepping rate from 6 milliseconds to 10. To change it to 20
;   milseconds, change the CHG values of 0E to 0F, 1E to 1F, & 5E TO 5F.
PATCH *0 (ADD=42EE,FIND=0C,CHG=0E)
PATCH *0 (ADD=4516,FIND=0C,CHG=0E)
PATCH *0 (ADD=4544,FIND=1C,CHG=1E)
PATCH *0 (ADD=4FE1,FIND=0C,CHG=0E)
PATCH *0 (ADD=580E,FIND=0C,CHG=0E)
PATCH *0 (ADD=5841,FIND=0C,CHG=0E)
PATCH *0 (ADD=5B3C,FIND=58,CHG=5E)
```

```
;remove row of dots at DOS ready prompt, allow entry of DOS commands in
;   lower case, ignore DOS command beginning with a period (good for /BLD
;   comments), and repeats last DOS command if you only press ENTER.
PATCH *0 (ADD=4CD1,FIND=204E53,CHG=4E530D)
PATCH *1 (ADD=4E32,FIND=212542112642,CHG=180B773E1BCD)
PATCH *1 (ADD=4E38,FIND=013F003600EDB0,CHG=3300CD1B02186F)
PATCH *1 (ADD=4E75,FIND=063E3E,CHG=C37E4E)
PATCH *1 (ADD=4E9D,FIND=E5C52A,CHG=C3BB4E)
PATCH *1 (ADD=4EA0,FIND=2040E548060009,CHG=1A28917EFE6138)
PATCH *1 (ADD=4EA7,FIND=014000B7ED4222,CHG=03D620772310F5)
PATCH *1 (ADD=4EAE,FIND=20403E1BCD3300,CHG=D1E17E12FE2ECA)
PATCH *1 (ADD=4EB5,FIND=E1222040C1E1,CHG=4A4EFE0D288F)
PATCH *1 (ADD=4E9B,FIND=28ADC3BB4E,CHG=11D44CE5D5)

;make the use of the colon (:) before a drive number optional during a
;   directory command, such as DIR.
PATCH *6 (ADD=59EC,FIND=7EFE3A2015,CHG=2BCD781D38)
PATCH *6 (ADD=59F1,FIND=237ED630DA,CHG=06FE3A2010)
PATCH *6 (ADD=59F6,FIND=3452FE04D2,CHG=237ED630DA)

;allow FREE :d command to also display free granules. Notice that the colon
;   (:) is still required even if the above patch has been applied.
PATCH *6 (ADD=5483,FIND=26,CHG=3C)
PATCH *6 (ADD=5526,FIND=4D617374657220,CHG=FE28D8F1C3FC5B)
PATCH *6 (ADD=5D52,FIND=FE28D0,CHG=CD2655)

;::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
;USE ONLY IF YOU WANT TO MODIFY TRSDOS 1.3 FOR 80-TRACK DRIVES !!!!!!!!
;::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

;patch TRSDOS 1.3 for 80 track, rather than 40
PATCH *0 (ADD=4926,FIND=28,CHG=50)
PATCH *0 (ADD=499B,FIND=28,CHG=50)
PATCH *0 (ADD=4B29,FIND=29,CHG=51)
PATCH *2 (ADD=4F61,FIND=28,CHG=50)
PATCH *6 (ADD=5C06,FIND=28,CHG=50)
PATCH *6 (ADD=5D53,FIND=28,CHG=50)
PATCH *7 (ADD=5203,FIND=28,CHG=50)
PATCH *7 (ADD=53FF,FIND=28,CHG=50)
PATCH *7 (ADD=5504,FIND=28,CHG=50)
PATCH *7 (ADD=5C4F,FIND=28,CHG=50)
PATCH *7 (ADD=5CD4,FIND=28,CHG=50)
PATCH *7 (ADD=0000,FIND=00,CHG=00)

;-------------------------------------------------------------------------
```

END OF PATCH LISTINGS

Reminder to watch your Zero's 00 and OH's O O.

By the way, we have been asked why we don't have a masthead. The reason for now, is that we have not solidified our staff or the contributing authors yet.In the meantime, your Publishers, Editors, and general janitors are: Stan Slater and Ron Gatlin. If you wondered about last months logo on page one, it was to let represent the fact that we now have subscribers all over the world now. England, Canada, Australia, New Zeland, France, Holland, Germany, Puerto Rico and many others, which means potential authors from around the world!

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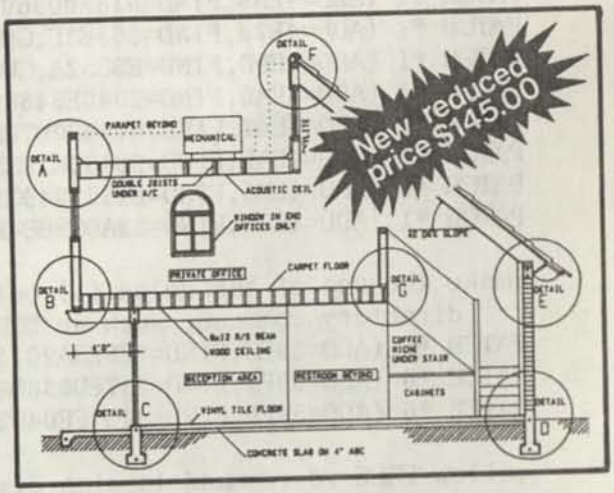

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Do you have data from your TRS-80 that you'd like to convert over to MS-DOS and have access to? Like word processing files, spreadsheet, database, PFS or DeskMate files, etc.? Without retyping, of course. How about BASIC programs you've written, or had written, that you'd like to keep using? No problem.

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Can we talk? CP/M vs TRSDOS

By moving to CP/M on your Model 4 you achieve two things. First you open the door to a wealth of existing software. More 8-bit software runs under CP/M than any other operating system. This includes virtually all of the "big name" programs which have set the standards by which all others are measured. Programs like **WordStar, dBASE II, and Turbo Pascal** are available for CP/M, but not TRSDOS. Public domain software, almost unknown under TRSDOS, fills hundreds of megabytes of disk space. Valuable public domain programs like the **Small C Compiler** are just a toll-free phone call away. Most importantly, hundreds of applications programs are available from a multitude of vendors. Many include the source code. Wouldn't you like to be able to choose from scores of Accounts Receivable or General Ledger programs, instead of the meager selection you now have?

What about the future?

When the time comes to move up to another computer it will almost certainly use MS-DOS. That's when CP/M users get a pleasant surprise. Since MS-DOS was a derivative of CP/M it operates in almost the same manner. Even better, most of the same software packages are available in 16-bit form and they operate in virtually the same way that they did under CP/M.

Is it easy to use?

Montezuma Micro's CP/M has been carefully crafted to present a maximum of features while taking a minimum of memory. It supports all of the standard features of the Model 4/4P/4D computers, as well as most of the optional ones. Our CP/M has been consistently been awarded the highest ratings in industry magazines. It is version 2.2, the most popular and reliable of all the versions of CP/M produced. Our CP/M has been made as easy to use as possible. All customer-selected features are chosen from simple menus in our CONFIG utility. This includes the ability to configure a disk drive to run like that of scores of other CP/M computers for maximum ease of software portability. Using the unique DBLCROSS program in our Monte's Toolkit utility package you can move files back and forth between CP/M, TRSDOS (1.3 and 6.x), and MS-DOS.

Why use Montezuma CP/M?

We have already told you why our CP/M is the best for the Radio Shack Model 4 computer. The only question left to answer is "Why buy CP/M at all?" Radio Shack has abandoned TRSDOS — all of their new machines use MS-DOS. Most of the software producers have followed, leaving no new software development and saddling the TRSDOS user with whatever software "leftovers" he can find. Which DOS do you want to head into the future with: the one originally written for the Model I or the one that served as the basis for MS-DOS? Make the right choice right now for just $169.

If I need support?

We don't forget you after the sale. If you have a problem you will find our phones are answered by people, not answering machines or hold buttons. Our philosophy is very simple — we want you to be happy and satisfied with your purchase. If you have a problem then we have a problem, and we'll do whatever we can to resolve it.

Cost to update?

Our owners are protected against instant obsolescence by our lifetime upgrade policy. At any time you can return your original CP/M disk to be upgraded to the latest version free of charge, except for a small shipping and handling fee. Periodically we publish NEW STUFF, a newsletter for registered users of Montezuma Micro CP/M. This publication carries news about new products, tips for getting more out of CP/M, and other valuable information for our users. It is sent free of charge to registered owners.

Can I use a hard disk drive?

CP/M hard disk drivers are available for Radio Shack, Aerocomp, and most other popular brands of hard disk drives. These drivers allow the hard drive to be partitioned into one to four logical drives of varying sizes. These drives may all be used by CP/M, or may be divided between CP/M and TRSDOS. A head-parking utility is included on the driver disk to minimize the risk of damage when the hard disk drive is not in use. Also included at no charge is a utility which will copy, compress, list, print, and delete files with ease. There isn't much you can say about a driver. It either works or it doesn't. Ours works supremely and it only costs $30.

Hard disk backup?

Unlike the high-priced, underpowered backup utilities available for backup of TRSDOS hard drives, our CP/M **HARDBACK** utility makes the backup of a hard disk to floppies quick and painless. Only **HARDBACK** gives you the choice of backing up the entire drive or only those files which it knows have been changed since the last backup. Daily backup is no longer a chore, since only new data must be copied. With **HARDBACK** you can quickly restore an entire drive, or only a single file if necessary. Only **HARDBACK** will perform a complete check of the hard disk drive and lock out tracks which have become flawed to prevent the use of those tracks for later data storage. Add this supreme program to your hard disk for just $49. Isn't your time and data worth it?

Specs?

Size of Transient Program Area (TPA): 56,070 bytes in a 64k system. 55,046 bytes in a 63k system (with optional hard disk driver). **CP/M IOBYTE:** Fully implemented. **Device Drivers:** Disk (35, 40, 77, & 80 track, single/double density single/double sided, 3, 5, or 8 inch. (More than 85 disk formats supported) **Maximum Disk Capacity:** 40T SS=220k, 40T DS=440k, 80T DS=880k **RS-232:** All word lengths, parity, & baud rates. **Parallel Printer:** With or without linefeed and/or formfeed. **Video:** 24 by 80 with reverse video. **Keyboard:** Full ASCII with 9 function keys. **RAM Disk:** 64k, automatic on 128k systems. **Hard Disk:** Optional drivers available at extra cost for most popular models. Standard CP/M programs included: **ASM, DDT, DUMP, ED, LOAD, MOVCPM, PIP, STAT, SUBMIT, SYSGEN, and XSUB.**

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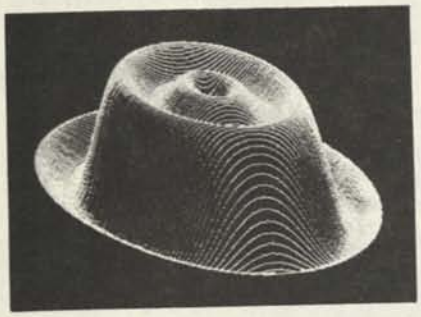

Superior Hardware. The Grafyx Solution provides 153,600 pixel elements which are arranged in a 640 × 240 or on the Model III a 512 × 192 matrix. Hundreds of new business, personal, engineering, and educational applications are now possible. The hi-res display can be shown on top of the standard display containing text, special characters, and block graphics. This simplifies program debugging, text labeling, and upgrading current programs to use graphics. The Grafyx Solution fits completely within any tape or disk based Model 4, 4D, 4P, or III. Installation is easy with the plug-in, clip-on Grafyx Solution board.

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Superior Software. The board comes with over 40 programs and files which make it easier to use, serve as practical applications, demonstrate its capabilities, and serve as programming examples. The software works with TRSDOS 1.3, 6.1.2, 6.2, 6.3; Dosplus 3.4, 3.5, 4; LDOS; and Newdos80. The Grafyx Solution is also supported by 30 optional applications programs: Draw, Bizgraph, xT.CAD, 3D-Plot, Slideshow, Mathplot, Surface Plot, Chess, etc.

The Grafyx Solution package is shipped complete for $129.95 (reduced from $299.95). The manual only is $10. Payment may be by check, Visa/MC, or COD. Domestic shipping is free on pre-paid orders. Texas residents add 7% tax.

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The File Cabinet

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*** ANNOUNCING ***

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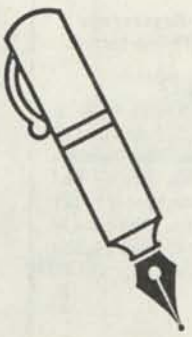

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Classified Computer News 80 Classified

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(502) 875-4452 home

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Lee Gieseke, 319 W. Daniels Rd. Palatine, IL 60067 312/358-0788

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MOD4 by Jack The TRSDOS operating manual written in plain english is now available. Reprints in an 8-1/2x11 format and in three ring binder for $17.95 plus $4.00 S & H. Wyoming Residents add 4% sales tax, Canada add an additional $6.00. Send order with payment to Computer News 80.

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1. **WANTED TO BUY** Maxi Manager II Data Base Manager program for the TRS-80 Model 3/4 (in 3 mode). Manufacturer out of business.

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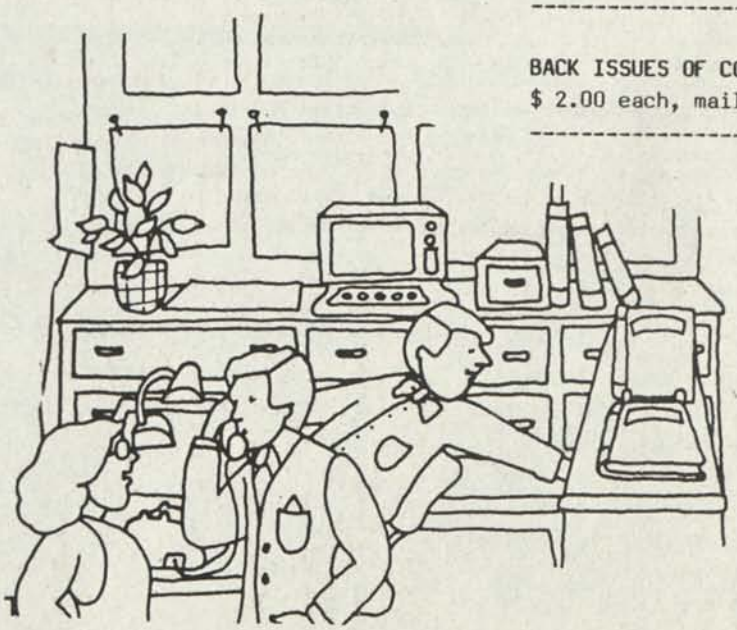

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EDITORIAL COMMENTS

So much has taken place since our last issue that it is hard to know where to begin.

Our 80 Micro swap has really kept us busy. With our readers sending us their extra issues, plus those caches that we have been able to locate and get by paying for the postage, we have been able to fill most of your request for issues. It seems that the issues prior to 1984 are the hardest to locate, but we do have several more copies due to arrive, so we should be able to fill the balance of the requests soon. If you have not sent in your request for the copies you need, better do so now.

Now that the summer is almost over, and school is beginning, we should all be starting on settling in for a long winter of Happy Computing.

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Thru the kindness of many of our readers that have sent us their extra copies of manuals, programs, etc., we have been able to pass along many of the items to those of you are missing them.

We are keeping one copy of all that we receive for our archives. It is our intention to maintain the archive material as a reference library, and make the material available to all our readers. It will also be used to help us in answering your questions and helping solve problems.

We are deeply indebted to those who took the time and went to the expense to send us material. For those of you who still have material that you would wish to send our street and UPS address is: 1220 Jamaica Drive, Casper, Wyoming 82609.

United Parcel Service has a hard time with the delivery location if you use the Post Office Box number, and in most cases will not except your shipment.

If you choose to mail by parcel post the address should be: PO Box 680, Casper, WY 82602 as usual for all correspondence.

We have been able to purchase some material for the Model I, III & IV's from people who are giving up their software, and from some stores. We should have a list of what we have available for redistribution by our next issue.

We have also been busy answering your questions, and trying to solve those problems that we could answer immediately.

It takes a lot of time to research many of the questions that you have asked and because there is no one who could be an expert on all the programs and equipment available for the TRS-80 equipment. We have contacted those who we feel could answer some of the questions, and we greatly appreciate all those who have taken the time to send in answers to questions we have published, but of course it takes time.

We also need your help, or should I say your fellow users also need your help.

In the OPEN FORUM this month we have published many of the questions that we have received, many with answers and many without. We hope that those who can, will send us their answers, comments, and suggestions that we can pass on to those who need answers.

If you have written asking a question that you don't see yet, it is because we haven't had the time to get them all recorded or your question is the same as several others have asked.

We also hope that if you have solved your problem before we could get back to you, that you will write and tell us so we can drop the search. More importantly so we all can learn from your question and answer.

We certainly have had the chance to learn a lot since we started this publication, it has been a lot of work, but it has also been a lot of fun too. It certainly is a pleasure to broaden our group of computer friends worldwide and to have the chance to learn together.

Now that Tandy has dropped more and more support of the TRS-80, even though the Model 4D is still listed in their general catalog, they seem to be interested in supporting only their current models. And most of the store people either don't know or give out "guess work and usually wrong information".

Their frequent comment is "I don't know anything about TRS-80 machines", this honesty we appreciate. But when they give a novice user who wants to upgrade their DOS to 6.2.1 and have dating beyond 1987, an answer like; "what you have to get is a 6.2.1 disk and a Cat #26-2119 Technical reference manual," it is quite a different story.

We can't fault Tandy too much, because they did support the product --when it was their current computer-- but now, their efforts are in supporting only their current products. So I guess it is up to us users to support ourselves.

Tandy and Radio Shack people are now quick to tell us "the best thing to do is to throw that computer away because it is out of date." They just don't understand, our love for these units, or the amount of expense in time and money that we have invested in this equipment, and still not have them performing to their full potential.

As one of our readers put it --"They will have to pull my Model 4 from my dying hands."

Well the automobile (computer) manufacturer doesn't sell the gas (software) to make his product run, and neither will he teach you how to drive a car. Our guess that most of the computer manufacturers, and software publishers would like to be in the same position as the automotive market, and many other products that are marketed the same way. If you want to learn to drive you get mom, pop, a bother, a sister, or a friend to teach you or you can get driver education in school (if you are school age), or you can take driving lessons at a private commercial firm. In any event, neither the car manufacturer nor the gas manufacturer will teach you how to drive. There's no money in that!

In the good old days, Radio Shack used to sell lots of audio, equipment etc. which you could get at an economical price for a whole unit or for the pieces to build one. But you couldn't buy a record to play on it! What's different in their current direction of marketing, nothing!

And where does that leave us? As usual it's up to the user to learn how to get the full use out of his very powerful equipment, and

to bring it up to its full potential. Z 80 machines may not win the Indy 500, but they sure are work horses that will plow a lot of fields for a long, long time.
-Ed.

HYPERCROSS BY HYPERSOFT REVIEWED

Recently we received a series of disks that were formatted in MS-DOS format, but had Model IV and III programs and information on them.

Just prior to this we received an large mailing list from 80 Micro which was placed on disks by backing up a hard drive to MS-DOS formatted disks. Not owning any MS-Dos equipment (shame on us, huh) we took those disks to a professional consultant who could download the information to his hard drive, and then convert the data from a MS-DOS formatted disk to a TRS-DOS formatted disk so we could print the mailing labels. In the process there were no carriage returns at the end of the lines to print the labels and he had to write a program to put the carriage returns back in their proper place. By the time he was thru we got a bill for $188.00 and two disks with names on them that we could print with our Model 4.

So when we received the disks with the public domain programs on it, which incidentally came from 80 Micro too, we shuddered, and started thinking about how to set up the null modem cabling from one of our Model 4's to a borrowed MS-DOS based machine. Or spending a day on the phone with a friend who had a modem and an MS-DOS machine who could send the data over the phone to our units. All this to get the data off the MS-DOS formatted disks and on to our TRS-DOS formatted disks. Several good computer friends offered to do this, but we did not want to impose upon their time either. So what to do?

Then we called Mike Gingell the author and publisher of the Hypersoft series. We had heard of his products many times, but really had never had a need for them in the past and was only vaguely aware of what they would do. Our thoughts seemed to dwell on the fact that they could take data off a TRSDOS formatted disk and move it up to the MS-DOS.

We shortly found that they work both ways, from MS-DOS to TRSDOS, or from TRSDOS to MS-DOS, and besides that the program we needed was only $49.95. Great, rush us one -- now!

The package arrived and even though we did not understand all the things that it will do, we placed the program on our system per instructions. Which only took a few minutes to install.

Then with the nerve of a Mississippi riverboat pilot, we gingerly place our first valued PD program disk (MS-DOS format) in Drive one. Following the instructions in the pop up menu which required that we push the right choice button and enter twice, before reaching the final (and we assumed the fatal push) entry button.

That final push on a new program does take guts, but we did it. Then we sat back to see the smoke roll. It didn't, good old Model 4 just puffed, grunted with that sound that sounds like a slow running bathwater drain. Gurgle, hur-umph, gurgle, hur-umph-- TRANSFER COMPLETE - DO YOU WANT TO DO ANOTHER ONE?

Want to do another one! Sure do! I've only got 115 more programs to go. At that rate these programs are going to cost me only 43 cents apiece, and I will have HYPERCROSS to use in the future to transfer data from the office MS-DOS computer to the home TRS-DOS computer forever. That is if we ever get any MS machines in the office.

This review of a product that is so simple to use, and which is really very technical in operation, may not seem like a the standard review to you, but I wouldn't even attempt to qualify it on a technical level. All I can say is that the program is really a winner and the support that Mike Gingell provides to the user can't be beat. As far as support goes; all the support we needed to accomplish our task was the support that we requested when we asked "did we order the right program". I am sure that in the future when we find a need to use the Zap and reformat alien disks utilities, or one of the many other features that are built into the program we will need his support. We feel strongly when we do need his support that he will be there.

He also has programs that will transfer data from CP/M, CoCo, as well as MS-DOS to a TRSDOS format.

One suggestion that we can make is to phone first to make sure that you are ordering the right program package for your application.

If you are wondering what we are going to do with all the PD programs, we plan on sharing them with you, of course!

It will be some time before we have all of them cataloged and available. We will let you know in future issues how the project is going. -Ed.

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A COMMENT SENT TO US BY A FELLOW READER.

I just received my first issue today via first class mail. Thank you. Since I am an employee of the U. S. Postal Service I can understand your frustration relative to delays in bulk mailing of magazines. I am very relieved to see the "Address Correction" caption that is included with the mailing because I know you will either get the new address or a reason why the magazine cannot be delivered from the USPS. Since your bulk rate permit is paying for this service you deserve to receive it and I would not accept anything less.
- L. L. F. Stockton, CA

NEWS ITEMS

DISK INTERFACING GUIDE
for TRS-80 Model I
by William Braden Jr.

We have received about a hundred of these books from Code Works, the original publisher. They are currently out of print and the drives that they cover are also obsolete, but it does have a lot of good useful information in it for the Model I user.

Contents:

Chapter 1 Disk Basics
Chapter 2 Shugart SA400 Drives
Chapter 3 W D FD1771B-01 West.Dig. Drives
Chapter 4 Expansion Interface
Chapter 5 Disk Progamming

Appendix A FD1771B-01 Commands for the TRS-80
Appendix B Disk Format for the TRS-80

Appendix C Disk I/O Program

This text describes the operation of the Shugart SA400 Mini-floppy disk drive in the RS TRS-80 Model I Microcomputer system. It is divided into five chapters. The first chapter , Disk Basics, describes the general operation of minifloppy disks. Chapter 2, describes the operation of the disk drive itself in terms of interface signals and functions. The next chapter is concerned with operation of the Western Digital FD1771B-01 Floppy Disk formatter/Controller chip used in the TRS-80 Model I Expansion interface. Chapter 4 shows how the expansion interface decodes disk addressing and commands. The last chapter shows how

Radio Shack software communicates to the disk and how one may do machine language (assembly language) and limited Basic-level programing of disk systems. Appendices provide related material, such as controller commands and disk format. (Taken directly from the first paragraph of Chapter One)

55 pages of very interesting reading for the Model I owner, as well as others who would like some insight into how the disk drive and controllers interact.

If you would like to have one send $ 1.85 for postage and handling, to Computer News 80, PO Box 680 Casper, Wy 82602 --the book is free.

1989 TANDY COMPUTER CATALOG

Ed Juge Director of Market Planning in his August News letter tells us that the new 52 page Computer Catalog with hardware, software, printers, etc. for 1989 should now be on the shelf in the RS stores.

There is a 32 page Educational Products Guide as well.

The big news is that the store Express Software ordering system has been turned into a Direct Mail order service with a toll free 800 number. Orders will be accepted on most popular credit cards and your selection is shipped direct, freight prepaid. (You mean, we don't have to wonder if the store clerk ever placed our order?) And there is an Express order Software Buyers' Guide. "With 850 software programs from leading software publishers, many of which are priced 10 to 30% or more below the suggested retail price!" Sorry we do not have the 800 number at the this printing, nor have we had a look at the catalog. The first thing that comes to mind is -- are there any programs for TRS-80 in it? Oh well, at least the MS-DOS compatible users won't find any programs in the store stocks either. As mentioned earlier the Model 4D is still cataloged, so why isn't there any software from Tandy besides the DOS 6.2.1 and Deskmate Mod 4 version left?

It has been related to us (unconfirmed at this point) that Tandy will no longer process orders for the LSI LS-DOS 6.3 program, now that it has been turned over to Misosys by Logical Systems Inc. Look for a 6.4 version to be out soon. Misosys's upgrade of the 6.3 version.

TALES FROM THE FILE CABINET
by Timothy Sewell

Summertime is usually a slow period for new Public Domain Software. It seems that most people would rather be out playing in the great open air as opposed to staying glued to their computer hacking out a program (Honestly, I can't see why), and this season is no exception. But there are a few new goodies out there and I'm gonna tell you about them.

Last issue I reported that David Huelsmann had just released Version 02.00.00 of his popular XARC4/CMD program. Well it turns out that there was a minor bug in this version that would not allow the program to overwrite existing files when prompted to do so. This has been fixed and Version 02.00.01 is now making it's rounds of the BBS circuits and is currently the most downloaded file in the GEnie Tandy Roundtable. Dave is still hard at work on the new version of ARC4/CMD and I will keep you up to date as news breaks.

With the start of school not too far off, some of you teachers may be interested in a new release called SDMS. SDMS stands for School Data Management System and it is written by Stephen P. Sutherland. SDMS is a series of programs that will keep a grading period's scores in one file, allow you to adjust the scores, calculate average grades, print results in various orders, create a student roster, create grading scales, archive a grading period's scores for later retrieval, alphabetize a list of words, create word search puzzles, create and maintain seating charts, and much much more. It is truly a versatile program and it is released as SHAREWARE. For a small donation you will receive a 71 page manual and upgrade information.

The BBS community is all a buzz over the release of Mel Patrick's FASTPLUS II Bulletin Board System. There are so many enhancements over the previous version that

FASTPLUS just HAD to be re-named and re-numbered. The major enhancements of FASTPLUS II include the use of 1K Xmodem (YMODEM) transfer protocol, line feed stripping for ASCII uploads, storage of bulletins on disk so you can use ASCII graphic characters, file rebuilding routines, optional help menus, message editing using BASIC editing commands, time out warnings, and SEVERAL other enhancements too numerous to mention here (a lot of them don't make sense unless you're a FASTPLUS sysop anyway). This is truly the finest Bulletin Board program that has been written for the Model 4. It is distributed as SHAREWARE and upon registration, you will receive the full manual as well as the complete FASTPLUS II system including enhancements not available in the SHAREWARE release. If you've ever considered running a BBS, this is the program to look for.

Speaking of Mel, he and Mike Orr have whipped up a nice little utility called SCRUBBER which is used with a Head Cleaning Diskette. SCRUBBER will step your disk drive head from track 0 to track 40 three times to insure a solid cleaning of your drive heads. SCRUBBER will also keep track of the date you last cleaned each drive so you don't over do it.

Alan E. Varga has released his C.U.I Database System into the Public Domain for everybody to enjoy. CUI is a full function database system that will allow you to enter, maintain, sort, and print data from within the database. The program can maintain up to 200 records with a 25 character key search and can pack a database to fill in gaps left by deleted records. This is just a bit of what the program can do. I am still exploring this program and will have more to report on it next month. Even though Alan is not requesting a donation for this program, you may wish to consider one for all the work that has gone into CUI.

Sometimes the simplest programs can be the most impressive. There are several Biorhythm programs available and most do a pretty good job of displaying and printing your charts. But, none are as impressive as BIOPRINT/BAS written by Marcel Groleau of Canada. Marcel has written what I consider to be the most complete Biorhytem charting program around. I never really understood the theory behind the biorhythm but the short documentation file included with the program has answered all of my questions about "What does all this stuff mean?" and I am very grateful for it. The program is designed for use with the Radio Shack DMP series of printers and prints out a very clear graph of your cycles as well as alerting you to critical days and changes. The graph also reports what day you were born on and wishes you a Happy Birthday if you plot out your birth month. This program is a lot of fun and I really recommend it.

If you are interested in taking a crack at weather prediction have I got a program for you. WEATHER4 version 4.4 is an MS-DOS program that has been ported over to Model 4 by Carl Berger and is quite impressive. The program assists you in Forecasting the weather as well as computing Wind Chill, Temperature-Humidity Indexes, Heat Indexes, and Dew Point calculations. Released as SHAREWARE, this program will provide hours of entertainment for you amateur meteorologists.

Joe Kyle-DiPietropaolo has upgraded his DTE Dumb Terminal Emulator to version 02.00.00. DTE20 now supports true Compuserve Quick B Protocol for file transfer. DTE20 is a simple yet powerful program that is worth your time if you use CIS.

GOMOKU version 2.02 is a very well done version of this ancient chinese game. Written by Dan Yertzell, GOMOKU is similar to Tic-Tac-Toe only it's played on a 19 by 19 grid. The object is to place five pieces in a row either horizontally, vertically, or diagonally. It's not as easy as it sounds because the computer plays quite well and is tough to beat. If you like games of strategy, this is one worth looking for.

A few people have written to me asking why I don't cover Model 1 or Model 3 software in my column. The truth is that there is not a lot of NEW Model 1/3 software being written. What little has been written has been put on the back burner until I finish my READMAC catalog and can devote my time to the assembly of a Model 1/3 catalog. Be assured that when I tackle this mind boggling project (I have close to 600 disks to sift through, many of them

Double sided 80 track) that I will be reporting on what I find in this column. On top of all this, I will be moving to larger living quarters which may put me behind about a week as I get set up once again. My mailing address will remain the same so don't worry about the Post Office losing things.

I have put together a survey sheet that is sent out with all catalog requests. Even if you are not interested in ordering THE FILE CABINET'S catalog, I am still interested in hearing about what type of systems are being used in the TRS-80 community. If you would like to take part in this survey, please send a Self Addressed Stamped Envelope to: THE FILE CABINET'S SURVEY, P.O. Box 4295, San Fernando, Ca. 91342. A survey form will be mailed right out to you and the results will be included in a future article.

I recently had a 3.5" drive installed in one of my Model 4's and it works like a charm. I have been using double sided 80 Track drives for ARChiving and am currently in the process of ARChiving my disk library on to 3.5" disks for safe keeping. If you have a lot of files to store I really suggest this method as the way to go.

PLEASE HELP! I am trying to obtain an ORIGINAL copy of 80-NorthWest magazine Volume 1 number 1 (The magazine later evolved into 80-US, BASIC Computing, and eventually CodeWorks magazine). I would like to complete my collection and just need this one issue. I am also looking for the entire first year of FAMILY COMPUTING Magazine (Volume 1 number 1 through 12). Any help in locating these magazines would be very appreciated.

The READMAC catalog is coming along a bit slower than anticipated. Just as I thought I was seeing the light at the end of the tunnel, Karl Mohr of Canada sends me a box with 70 diskettes of new READMAC's to sort through (Thanks Karl). The catalog will be shipped soon to all those who requested it.

I would like to invite all you ORCHESTRA-90 programmers to send in your music files for inclusion in the ORC-90 catalog planned for later this year. I will exchange music files and utilities on a disk for disk basis (I have close to 40 disks full) so I would really like to hear from you.

That about wraps it up for this month. The programs mentioned can be found on most BBS systems as well as GEnie and are also available from THE FILE CABINET'S disk library (see ad elsewhere in this issue). Keep those letters and kind words coming and be sure to enclose a SASE for a reply.

Until then.... MAKE MINE TRS-80!
-Tim Sewell

LOW VISION EDITOR PROGRAM REVIEW

by Henry H. Herrdegen

Low Vision Editors (LVE & LVE23) were written and are supported by Don Ady, 56 Oak Ridge Ave., Summit, NJ 07901 (201) 277-3365

Receiving Don Ady's programs for review, the 'L'ow 'V'ision 'E'ditor programs, LVE, LVE1, LVE2, LVE3 and LVE23 , were the first ones examined, since I thought them the most valuable ones. There were a few points to be cleared up, and so the "ELIXIR" got reviewed first. Don has now issued a new release, dated July 1988, and here are my comments:

The programs are what the name implies, editor and word-processing programs for vision impaired people, having problems reading normal screen characters, and are written for 48K models 1, 3 and 4 (in 3 mode) in Level II BASIC with embedded m/c language subroutines.

LVE, 1, 2 & 3, using various sizes of pixel graphic letters, are on one, non system diskette. LVE23, using the expanded, double width font (32 character/line, hardware standard, CHR$(23), is on another (also non system) diskette, together with a couple other, related programs. They are available from Mr. Donald W. Ady, for $20 each or $25 for both. Money back, less 5 dollars, if you are not happy.

Regrettable, Don has not written a comprehensive operating manual, but supplies printouts of some of the 'instruction' files. There are around 30 various doc's, help and list files on each disk, very thorough, sometimes a bit lengthy, as well as an exercise program, leading you thru the different features of the programs. The 11 pages of printouts I received, plus printouts you can get from the other files, can make a reasonable, if fragmented manual.

To be useful for v.i.p.'s, a proper manual would probably have to be printed in very large type, and could not be produced economically by Don. So, perusing the help menus in the large screen print might be the best, albeit while in the middle of writing some text cumbersome, solution.

To printout the various files you can use the <S>tandard format for all but the 4 files printed in the manual: STARTUP, KEYLIST, CUECARD and PRACTICE. Don has rewritten them for 32 column, expanded font printing. Select <O>ption, <32>columns, <4>left margin, <0>top margin, <10>bottom margin, <20>tab spaces, <N>o double space, <Y>es for printer codes. For my DMP200, and probably for most Tandy printers, the decimal code entry is: <27><*>, <14><*>, <*> — and it starts printing. Don gives another example for a RX-80 printer in the PRACTICE file. You will have to find the valid codes for your printer in its manual.

I use <0> and <10> for the vertical margins, to set the paper about 1" above the first print line, rather than the <5>/<5>, which requires the paper bail rollers to be retracted for the first few lines (on my printer at least). For a CUECARD printout set the bottom margin to <6> and lower the paper to 1/2" top margin, as Don has set the pagefeed after 59 lines of the first page! Refrain from using <CLR> in LVE23 if you have made a mistake in the middle of the option inputs, use it only on the last two to get back to the menu, otherwise you wind up with standard small letters on the screen!

The four graphic letter programs are similar, differing in the size of the fonts, and/or line spacing, and consequently in the number of characters and lines on the screen, which the following short table summarizes:

pgm:	height x width:	
LVE	7X4 pix's,	7/8 x 1/2 inch
LVE1	7x3	7/8 x 3/8
LVE2	7x4	7/8 x 1/2
LVE3	12x5	1.5 x 5/8

pgm:	#lines	Char's/line	Char's/Screen
LVE	4	12	48
LVE1	5	16	80
LVE2	5	12	60
LVE3	3	12	27

(inch sizes are approximate on the Model III screen)

The programs allow you to type a text or write a BASIC program, edit and save it in LVE or BASIC format, view only or load for processing disk stored files, and print in various configurations, single or double spaced, different line length's and margins, etc.

Scrolling is obviously of great importance with so few letters/words on the screen at one time, and Don gives you plenty of choices: vertical, screen by screen, horizontal, back and forth, the whole screen full or only one line shown, one letter, word or line at a time, manually by tapping a key or automatic, with controllable intervals, continuous with variable speed, as well as the ability to jump to any spot in the document by searching for a word, letter combination or sign. This scroll feature is very versatile, if sometimes confusing due to the multitude of key commands, and the fact that the same sub command key works different under varying main commands. Beware of randomly pushing key's! Learn it thoroughly, or weird things can happen!

Contrary to normal practice of moving the cursor around the screen, here you move the text to a cursor fixed in the lower left corner for insertion or deletion, either by scrolling or with the search commands. (Watch out for the "search and DESTROY"!). This strange sounding practice is really the only practical one with the few words visible at any one time, and is quite handy once you got used to it.

Several other uses could be found, beside the low vision help. If your printer can handle the graphic dumps, you can print large letter signs or messages, Kids may learn reading with the slow or step by step moving letters, and so on.

The LVE23 does not use graphic created letters, but the built in hardware facility of the expanded, CHR$(23) controlled, double width characters. Thus, a lot more text can go on one screen, albeit not with larger letters, only wider ones. These are much easier to read than the standard ones, and this will be a big help for the many people having difficulty reading normal computer screen text.

Generally, the LVE23 works the same as the graphic programs, with a few exceptions. Therefore, the documentation is the same as for the former, contained also in disk files on the LVE23 diskette, with a short specific doc, outlining the differences. Learn to use a LVE first, and when you are familiar with most of its multitude of commands, the differences are not hard to get used to. I tried it the other way around, considering the 23 probably having the greatest usefulness, and got hopelessly bogged down, flipping printouts, trying to find out why this key did not work as the LVE doc said it should.

The LVE23 diskette includes a program, called WINDOW, which is to be installed into a BASIC buffer or other memory location and then permits you to enlarge a normal screen from any loaded program to two double size ones for easy reading, and to flip back to normal letter size.

Be careful with a full 15 line screen (16th is the chevron with the blinking cursor), you may lose the top line, depending at which cycle you catch the blink, and add some ready chevrons with a solid cursor on the bottom.

Take care also when printing the doc with LVE23: it is stored in 64 columns with the chapter dividing dotted lines and titles in 32! Printing with <S> will give you a double spaced, 64 column text, with the titles and dotted lines somewhat out of place. Rather print it with <O>, 32 columns and expanded, as mentioned under LVE.

Also included is FLOAT, a program that prints a file record in normal letters on top of the screen, and scrolls the text horizontally in the familiar large graphic (at least on my III screen a bit jittery) letters at the bottom. Again, direction and speed are key controlled, and a moving cursor in the top display indicates the position of the enlarged bottom line.

The doc for this program again is written in 64 column format, but no 32 titles or divisions, so you can print it with LVE23 default settings on <O>, except for the double space, and choose the bottom margin to suit your lines/page preference.

I have put some emphasis on hardcopy printouts in this review, since I like to see things on paper, and wasted a lot of time and paper before I found the right combination for each, starting out by believing in <S>tandard printing, and not trying to read the various instructions on screen. You can always get a half way decent printout by using the DOS LIST (PRT) feature, but it gives you no pagination and will now print some in 32 column width. If I have helped you to avoid my several times full round file, then I have done part of my job.

In closing, let me say that if you know of v.i.p.'s in your area, please make them aware of these really helpful programs.

I apologize to Don and anybody else who took offense to my calling BANNER and TBANNER Z80 routines in my July, pg 17 ELIXIR review, as in fact they are USR rou-tines, written in Z80 machine language. What I meant to convey was that they are not basic BASIC programs which you could run by themselves, but you will get the famous "Direct Statement in File" message when you try to RUN or MERGE them. LOGO, which I also called Z80, is a graphic data file used in some of the diskettes programs to cre-ate the ELIXIR logo, but again, not accessible by itself.
-Henry H. Herrdegen

Henry H.Herrdegen is a retired Ford Motor Company Engineer and resides in Windsor, Ontario, Canada. He can be reached thru this publication. Henry, has used the Model

III and TRSDOS 1.3 for many years and we count on his knowledge and experience as a senior member on our advisory committee. -Ed.

TRSDOS 1.3 PATCH UTILITY PROGRAM
for Model III or Model 4 (in the III Mode)
by Henry H. Herrdegen

The 15 update bulletins with about 50 patch lines Tandy has issued since I bought my machine in 1983, prompted me to write a program to ease the pain of putting most of these patches on to about two dozen system disks in use. Then came Andy Levinson with over twenty good patches, and now David Goben's. Am I glad I wrote that program! If you want an easy way to bring all your existing disks up to the latest patch, and an easy way to add further patches, I am happy to make this program and my collected patch files available thru this publication.

The "PATCHSC" (Patch-Scripsit) program is designed to patch any number of TRSDOS 1.3 diskettes on a Model III or 4 with 2 drives. It uses individually or in a row selectable patch line groups, previously typed and stored in ASCII files. Those groups may contain any number of patch lines, either multiple lines for one patch, or grouped together for related functions or concerning identical files. (or none of the above.)

Since typing multiple patch lines directly into a TRSDOS "DO" file is difficult, as there is no editing facility for any typo's, the use of a Word Processor which uses, or can convert to ASCII files, such as Super Scripsit, is almost a must.

The advantage of this program lies in the fact, that these groups are on permanent file on the patch disk, and can be called on to update any diskette with a selected group or groups, without having to assemble the individual patch lines for every diskette, as other programs demand. For instance, assembling the groups by TRSDOS files permits you to skip the "BASIC/CMD" patches for a diskette without BASIC. And the "GROUP" function permits you to select "Patch X to Y" and sit back and watch your friendly computer do its thing. As it takes about a minute to patch 10 lines of average length, it can get tiresome to sit and wait just to type in the next group name.

The diskette holds the patch programs including all 21 patch groups I have added so far (over 200 patch lines, including all Super Scripsit and PROFILE III+ patches!), BASIC/CMD and the necessary Scripsit files, two BASIC programs necessary for PROFILE, and a few utilities and files, mentioned later on. I left only one printer driver on it for space reasons. Delete my DMP400/CTL and copy your driver to it.

The patch diskette resides in drive 0. Insert the diskette to be patched into drive 1 and press <RESET>. The 'Auto' command will load and run PATCHCLR, clearing the register line, and then run PATCHSC, showing you the menu, a register line "Patches made:" (0 at this time), and the first 5 line block of the patch file listing. Pressing the <SPACE BAR> will scroll only this listing and repeat after the last block. Selecting <S>(ingle) or <G>(roup) will prompt you to either enter the patch file name (I use 'PATCHxx') or to enter the start and end No's of a group of patch files. Press <ENTER>, and the program goes to TRSDOS, executes the patches in the specified, or the first group, and returns to the BASIC program, registering the No of the just made patch group, and either stops if <S> was selected, or pauses for a moment to let you read that number, and goes on to TRSDOS to make the next patches.

Only if the File to be patched is not on the disk, will it stop in DOS. If the particular patch has already been made, it will continue with a (probably familiar) "String not found" message, trying the next line.

Finished with that disk, insert the next one in drive 1, press <RESET> and make your selection again. If you don't use <RESET> or type <RUN PATCHCLR>, the numbers of the previously made patches will just stay in the register line, and new ones will get lost after two lines are full.

Also on the diskette is an ASCII list, PATCHES, with all the TRSDOS patches, sorted by file and address, 174 of them! And a little utility, ZEROKILL, which leaves no garbage behind if you kill a file. Delete patch files you do not need and write your own new ones.

This short description should whet your appetite and make you think of putting all those nice patches on your disks, you never found the impetus to type in individually. Besides, the files include all mandatory Tandy patches, some of which you may not even have. To keep track of the status on each diskette, I have added a little line in the shortened TRSDOS banner, showing the (updated) patch group number. A description of the individual patches, instructions how to write the number update patch or modify this update line, and how to write the PATCHxx/BLD files, will be included with the disk.
-Henry H. Herrdegen

PATCH LIST =174 PATCHES
for TRSDOS 1.3

*0 4CD1 204E53-4E530D
*0 4E11 21F443-CD6B4F
*0 4F60 6B4F-2542
*0 4F6B 4155544F2046-3E013219403E
*0 4F71 756E6374696F-00321C403E5F
*0 4F77 6E20456E676167-32234021F443C9
*0 5036 312E3320576564-30312E30332E30
*0 503A 20536174204D-57656420204A
*0 503B 467269-536174
*0 503D 20204A-332020
*0 5040 6179-756C
*0 5040 756C20-417072
*0 5044 31-32
*0 5044 312C-3230
*0 5044 32-31
*0 504A 31-33
*0 508B 632928702920..-484848205041..
*0 5093 38302054414E..-485343232036..
*0 5097 2039-3130
*0 5098 31-32
*0 5098 32-33
*0 5098 33-34
*0 5098 34-35
*0 5098 35-36
*0 5098 36-37
*0 5098 36-37
*0 5098 37-38

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*0 5098 38-39
*0 516C D0-0D
*1 4E32 212542112642-180B773E1BCD
*1 4E38 013F003600EDB0-3300CD1B02186F
*1 4E75 063E3E-C37E4E
*1 4E9B 28ADC3BB4E-11D44CE5D5
*1 4E9D E5C52A-C3BB4E
*1 4EA0 2040E548060009-1A28917EFE6138
*1 4EA7 014000B7ED4222-03D620772310F5
*1 4EAE 20403E1ECD3300-D1E17E12FE2ECA
*1 4EB5 E1222040C1E1-4A4EFE0D288F
*1 5097 2039-3131
*1 5098 30-31
*1 50A9 4F7065726174-0D7EFE343004
*1 50AF 696F6E204162-FE3030023E30
*1 50B5 6F727465640D-327142C31944
*1 51C9 524F55544520-434154202020
*1 51CF A842-AA50
*10 4E2E CD3E4B-CD8A50
*10 4E47 03-03
*10 508A 4469736B-4FC33E4B
*11 5648 66-99
*11 564D 21A25B-C36E56
*11 5693 28-18
*11 593E 28-20
*11 5949 EDB0-0000
*11 595C 28-20
*11 5AC5 20-28
*11 5B3C 3030303030-4153434949
*11 5B89 4153434949-4845582020
*2 4ED4 20-18
*2 4F56 2F-21
*2 4F58 2D-1F
*2 4F6B 1A-0C
*2 4F70 C5D5E521004311-CD8A4FCDF75028
*2 4F77 004D010001EDB0-283A38513C2007
*2 4F7E E1D1C1CDF75028-0C3A1344B930CD
*2 4F85 123A38513C2007-3E1BC38A4EC5D5
*2 4F8C 0C3A1344B930BF-E521004D110043
*2 4F93 3E1BC38A4E453A-0100012001EBED
*2 4F9A 754E77C5D5E521-B0E1D1C1C90045
*2 4FA1 004D1100430100-3A754E77B7CD8A
*2 4FA8 01EDB0E1D1C1CD-4FCDC24AFE0F28
*2 4FAF C24A-C8B7
*2 502D 3E03835F1A-1313131A77
*2 5032 7723131A-233A0A50
*2 503F 10-11
*3 4FB7 EDB0-0000
*4 4E26 CB701805CD76-218A4ECD1B02
*4 4E28 20-18
*4 4E2C 4E1836-000000
*4 4E8A 2A202A204552..-0A2020457272..
*4 4E92 522030302024..-202D2D2D2D3E..
*4 4F3E 746F-0E08
*5 4EDF 38E6-0000
*5 4F04 D0-C9

con't next page

```
*5  506E 38E3-0000
*5  52EB CB-36
*5  52ED BE-00
*6  5483 26-3C
*6  5526 4D617374657220-FE28D8F13CFC5B
*6  5850 3A62-BF5F
*6  5D52 FE28D0-CD2655
*6  5FBE 20697320616374-0D116544C31C44
*6  60D1 F8-F7
*6  60D6 3A-21
*6  60D9 B7200EC5060121-7EB72003CD2B00
*6  60E0 0000CD400038-3A40381F380D
*6  60E6 F6C1E1C9CDEF-1F1F30EF7EB7
*6  60EC 60E1C93A4038-213040E3E520
*6  60F2 FE0120F9AFC9-CBE1AFC9000E
*6  6111 0D0000-202003
*6  616D CD8861B7C8FE40-3A403FD620C8CD
*6  6174 2806C547AF78C1-7C61CDC901AFC9
*6  6174 7C61-CF60
*7  5013 534F55524345-FE08C0E1211D
*7  5019 204469736B20-50C383562020
*7  501F 4D6173746572-202020202020
*7  5135 207468652064-3F20033A7D4E
*7  513B 69736B657474-FE81CA0D55C9
*7  55A8 28-18
*7  5657 21-C9
*7  5673 FE0828EF-CD135000
*7  579C 0955-3851
*7  5BEE E5-5B
*8  4F6E 05524F5554-0343415406
*8  4F73 4506534554-534554434F
*8  4F78 434F4D065359..-4D0653594E54..
*8  4F80 415804544150..-045441504504..
*8  4F88 54494D45025750-4D450257500000
*8  4F9B 6C69-696C
*8  5655 72-66
*8  57AA 41534349495D2C-4845585D2C5B53
*8  57B1 5B534C4F575D2C-4C4F575D2C5B50
*8  57B8 5B5052545D295D-52545D295D2020
*8  57EE 4153434949203D-484558203D2048
*8  57F5 20417363696920-6578206C697374
*8  57FC 546578742C-696E672C20
*8  5BBE 051D524F55-0607434154
*8  5BC3 5445205B28-205B235D25
*8  5BC8 534F55524345-4469736B2043
*8  5BCE 3D78782C4445-6174616C6F67
*8  5BD4 5354494E3D79..-202D2053686F..
*8  5BDC 5D1D4162696C..-20466F726D61..
*8  5BE4 7920746F2072..-446972656374..
*8  5BEC 746520492F4F..-792344697670..
*8  5BF4 657669636573..-7973206E616D..
*8  5BFC 3C43523E203D..-206F6620616C..
*8  5C04 657365742049..-76697369626C..
*8  5C0C 204472697665..-66696C657328..
*8  5C14 20746F204F72..-202020202020..
*8  5C1C 696E616C2944..-202020202020..
```

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```
*8  5C24 3D2064697370..-202020202020..
*8  5C2C 792020505220..-202020202020..
*8  5C34 7072696E7465..-20202020..215B
*8  5C3C 204B42203D20..-235D20697320..
*8  5C44 79626F617264..-697665206E75..
*8  5C4C 49203D205253..-65722D283020..
*8  5C54 333220496E70..-726F75676820..
*8  5C5C 2C20524F203D..-134465666175..
*8  5C64 532D32333220-7320746F2064
*8  5C6A 4F7574707574-726976652030
*9  5DCE 40-20
*9  5DD5 20-40
BSC 53CC 8754-4A1E
BSC 5487 E17EFE26C24A-2323E5DDE1ED
BSC 548D 1ED7C24A1EE5-5BA440013300
BSC 5493 219B54CD3F56-0901FF00EDB0
BSC 5499 E1C935013D3C-EBC9DD7503DD
BSC 549F 26751734263C-7404DD360500
BSC 54A5 36753C267516-DDCB01EEDD34
BSC 54AB 1A050C071C12-0A2003DD350B
BSC 54B1 1D011011-24C3535F
BSC 5523 C21361E1F177-E1C170C21361
BSC 58C4 D5-00
BSC 58F8 F1-00
BSC 5BFE 2AA440-CD8754
BSC 5C07 FF-FE
BSC 5C0D CD535F7723-CD9B540000
BSC 62ED 29-8F
BSC 6486 E5FDE121AF-ED538E64C3
BSC 648B C922E95CCD-1264118E64
BSC 6490 976221D5C5-CD97621832
BSC 6495 22E95CFDE5-22A24021F0
BSC 649A E1C31264-63C3BS5B
BSC 64D6 21F063C3B35B-21FFFFC39564
XFERSYS 548A 3500FD21-FD360001
END OF PATCH LIST
```

For a comparison of the patch lines (see our last issue, Vol 1 No. 8) for example on page 20 there is the patch line for TRSDOS 1.3 to correct a problem when loading large files. The patch reads:

P A T C H * 6
(ADD=5850,FIND=3A62,CHG=BF5F)

In the above list contained in Herrdegen's easy installation program it is as follows:

*6 5850 3A62-BF5F

To install patches it requires considerable time and typing skills.

A typing error can install an incorrect patch in a program that will create all kinds of hidden problems, which when this happens and is detected, you discard your disk and start all over. When the error in patching goes undetected, it will and without question show up in your data as garbage.

For those of us who are timid about patching things, it is a great boon to us to let the experts provide something that we can plug-in push the button and know that it will do the job, fast and correctly.

While we are on the subject of patches, for those of you who are just beginning, we hope to publish in our next issue a full discussion of what Patches are and Why they are used.

We have received a great deal of mail, requesting patches for all kinds of programs and systems. This program and list of patches comes at an most opportune time for our TRSDOS 1.3 System users, along with the patches for PROFILE III+ and SuperSCRIPSIT (not reprinted here) but contained in the disk package. -Ed.

To obtain a copy of the:

TRSDOS 1.3 PATCH UTILITY PROGRAM
send $10.00 to Computer News 80, PO Box 680, Casper, WY 82602 - Payment includes the disk, formatted in 1.3, the program, shipping costs, and a Royalty fee paid to the Author. Registration will be maintained by CN80 and any updates will be issued to registered users, support will be supplied by the author, via questions mailed to CN80.

CN80 DISK SERIES DISK NUMBER TWO

Disk Number two of our disk series will contain all the programs published from July and August and September. And will include the Financial Program by R. H. Hollenbeck, which he has asked that readers send their request for the program to CN80, rather than to him. We are pleased to act as his distributor and place the program on our disk series. It was his intention that we do this when we published the information about his program in the August issue. Some people have been writing directly to Mr. Hollenbeck for the program and he has been gracious enough to answer their request, however in the future he will be unable to do so.

Also on disk number 2 will be the shopper coupon program from this issue, along with a file splitting program, written by Jack Endriss that is in our PD program file and a really nice little BASIC program that will list out to the printer, from DOS level, any Model 4 Basic (1.0.0, 1.1.0, 1.1.1) program file. It does not matter which form the file is in. The program will convert a tokenized file while it lists it. It will not list a Protected file, however. The author of this program is unknown to us at this time. [We would appreciate it if anyone knows who the author is to let us know.]

Also on this disk is a file collection of the most popular and universally useful patches for LS-DOS to customize the LS-DOS 6.3 by Jim Gaffney.

As those of you who have purchased our Disk Number One (the first six months of programs published) there is a bonus SHELL program included, and this program can be used in the application of Jim Gaffney's Patch program.

The cost of Disk Number Two of our series is the same as with Disk Number One.
$ 5.00 which includes the postage, and the disk in either TRSDOS 1.3 format, or LS-DOS 6.3 format, PLEASE specify which format you want.

We do not intend to get into a full blown Public Domain Program distribution operation such as Tim Sewell has with his File Cabinet, or Montezuma does with their CP/M Public Domain programs, they are still the best sources for many many of the public domain programs available, but as a service to our readers, we will act as distributors of any program that our readers wish to supply, along with the programs that we publish as an aid to your computing enjoyment.

We hope you will let us know if you feel that this service is one that will benefit all our readers and authors alike. We look forward to your suggestions.

SYBEX BOOKS

We have been trying to track down many out of print books, and some of the best of them for the Model I, III, IV's were written by Rodnay Zaks, author and founder of SYBEX books. Some of the books that we were looking for such as "Programming the Z80" Ref. 0-069-5 $21.95 and "Z80 Applications" by James W. Coffron Ref. 0-094-6 $18.95; "Mastering CP/M Handbook" Ref. 0048-2 $17.95 are still available.

Such books as "The Foolproof Guide to Scripsit" by Jeff Berner are long out of print and long gone. (We have a copy).

If you would like to check them out or order their latest free catalog, call (800-227-2346) ask for the order desk, or customer service. All book orders add $2.00 for S&H.

Write to SYBEX, 2021 Challenger Drive, #100, Alameda, California 94501

COUPON TRACKING PROGRAM

Gentlemen:

I have received the second issue of Computer News 80, July '88, and found it to be even better than the first one I received in June. Keep up the good work!

Now that I know that you are looking for programs to be placed into Public Domain and are willing to accept them from persons without technical training and program writing expertise, I hereby offer a Store Coupon Tracker program written in "PAB" (Pure Amateur Basic). If such a program holds any interest for you, it is yours without strings.

The program is stored on disk in ASCII ("COUPON/ASC") and in BASIC ("COUPON/BAS"). It was written on a Model 4 using LS-DOS 6.3 and BASIC .01.01.02. An 80 column printer is used in the output. The printer control codes in the program are for an Epson FX-80.

What it does:

1 - Creates any number of user designated categories and lists all coupons assigned to that category. Categories may be laid out to match the coupon caddy or whatever is used to physically store the coupons.

2 - Coupons are assigned a number that is the same as the data line number where they are listed. When program is loaded, used coupons may be removed from the program by typing in their assigned number and pressing <ENTER>.

This erases the data line where coupon data was stored. The program will generate new numbers for new coupons, re-using numbers previously cancelled and adding enough new numbers to make a list of ten numbers in each category to be used on new coupons. This may be easily changed if more are required. To change any item in the data line, use the regular editing features of the TRS-80 by typing EDIT xxxx <ENTER> where xxxx = coupon number.

3 - There must be seven fields in the data line not to exceed a given length. The last data line in each category must be a "-1". The program gives a fast check on items entered for proper entry format and prints a list of possible errors so they may be edited out before run time.

4 - Prints out a list of coupons under the category to which they have been assigned. Each coupon lists ID number, brand name of item, item, cents off or value of coupon, requirements to validate coupon, expiration date and number of duplicate coupons. The number of duplicate coupons is the last item in the data line. If more than one, enter the number of duplicates. In any case, the quantity field must be created by entering a comma after the date field. The expiration date is enter as xxxxxx. The slashes between month, day and year are inserted at print time. If the coupon is due to expire within the current month, it is "starred" in right hand column. If it has already expired, the word "Expired" is printed in place of expiration date or "NONE" if coupon so states.

After all changes, deletions and entries, BE SURE TO RE-SAVE THE PROGRAM UNDER WHATEVER NAME YOU CHOOSE. It even pays to save it after every few entries of new data. It can save a lot of extra typing.

In practice, you must decide which category you want to place the coupon and then assign it the next consecutive number from

a list of available numbers in each category. Write the number on the coupon.

After the coupon has been entered into the program via the proper data line, file it in the coupon caddy. If stored in order under each category, there is no need to paw through a batch of coupons at purge time, just look for the number under the proper category.

When the grocery list is made and you have coupons to be used, a check mark is placed next to the coupon number on the printed list After the shopping trip, an indication that the coupon was actually used may be made by whatever means you choose and then removed from the program as described above. You do not need to save the coupon number, the program will automatically restore it to use when coupon is purged from program. Mail-in offers are added as simple print statements that include the line number where they are printed along with a brief description. They, too, may be cancelled by entering the line number alone.

Because the number of coupons in each category can vary so widely, no attempt was made to skip over perforations in the standard fan fold paper print-out. It has not been a problem for me but could be overcome by changing the "LINES" parameter in the FORMS FILTER as given in the TRS-80 Model 4 Manual. If done, the name of the category could appear on one sheet and the coupons under the category on the next, or a split in the coupon listings themselves can occur.

I have not seen a program dealing with this subject before, although I'm sure there must be some. It sure beats the heck out of "letting your fingers do the walking thru the coupon caddy".

Respectfully submitted,
-C. R. M. Liverpool, New York

(Editors Note) As is our policy when we do not have the room in our publication to print basic programs that are too long in length and as this coupon program runs about 6 pages in length, we will make the program available on disk for anyone who would like it. (This program will be available on our Disk Series "Disk Number 2")

The program prints out a nice list of items as illustrated, which could be used as a shopping list as well as a coupon record if you choose to. -Ed.

```
        COUPON LIST FOR 07/12/88        ** =  EXPIRES THIS MONTH
-------------------------------------------------------------------------------
1000 BEVERAGES
-------------------------------------------------------------------------------
1003 COUNTRY TIME....LEMONADE.............30  ANY SIZE.........NONE...
1004 MAXIM..........INSTANT COFFEE.......FREE SEE CPN.........09/30/88
1007 OCEAN SPRAY.....CRANBERRY JUICE.....30  LO-CAL BTLE.....12/31/88 (2)
1009 CAMPBELL.......V8 JUICE.............25  3 BOX PK........12/31/88 (6)
1010 PEPSI..........DIET COLA.............50  2 LITER.........09/05/88
1012 LIPTON.........TEA MIX...............25  ANY SIZE.........NONE... (2)
1013 MAXIM..........INSTANT COFFEE.........50  ANY JAR.........NONE...
1014 MAXIM..........INSTANT COFFEE.........50  ANY JAR.........09/30/88
1019 LIPTON.........TEA PRODUCTS...........30  ANY.............10/31/88
1020 LIPTON.........ICE TEA MIX............25  1 JAR...........NONE...

1100 BREADS & CRACKERS
-------------------------------------------------------------------------------
1101 KEEBLER.........CLUB CRACKERS.........30  1 BOX...........08/31/88
1102 ROMAN...........LITE BREAD.............15  ANY LOAF........07/31/88      **
1109 EGGO............WAFFLES..............15  1 PKGE..........11/30/88
1110 DOWNYFLAKE......WAFFLES..............15  ANY SIZE.........NONE...
1116 EGGO............WAFFLES..............15  1 PKGE..........07/31/88      **
1119 PEPPERIDGE FARM.CROUTONS/BUNS.........20  BOX/PKGE........NONE...

                    -n FOODS
                    --------
NO COUPONS                  ...25  1 CAN...........07/31/88      **
3100 SOUP & SOUP MIAL       ...15  1 CAN...........07/31/88      **
-------------------------------------------------------------------------------
3101 LIPTON.........RECIPE SOUP MIX.......50  2 VAR... ........NONE...
3103 CUP-O-NOODLES...ANY FLAVOR...........15  1 OR 2 PAK..
3105 CAMPBELL.......IESTY SOUP/SAUCE......15  1 CAN.....
3107 LIPTON LITE....CUP-A-SOUP............20  1 PKGE..........

3200 TOMATO SAUCE & PASTE
-------------------------------------------------------------------------------
3201 PREGO..........SPAGHETTI SAUCE.......50  ANY JAR.........07/31/88 (3)  **
3202 PREGO..........SPAGHETTI SAUCE.......25  ANY SIZE.........NONE...


TOTAL COUPONS =  151
TOTAL VALUE =  42.40

MAIL-IN COUPONS
---------------

(4002) EGG BEATERS - 3/ 40 CENT COUPONS - MAIL 3 UPC SEALS - EXP. 2/28/89
(4003) WRITE IN UPC #'S FROM 2 CANS OF PAM - CIRCLE REGISTER TAPE PRICE
  EXP  12/31/88 -FREE CHICKEN PARTS
(4004) MIRACLE WHIP $1.00 FRUIT OFFER - 3 PROOFS OF PURCHASE OF SALAD DRESSING
 EXP. 8/31/88
(4005) 7 SEAS REFUND - 2 SEVEN SEAS UPC SYMBOLS AND RECEIPT EXP 2/29/89
(4006) FOOD SAVER -BUTTERBALL UPC SEALS - EXP 09/30/88
```

Any more "PAB" authors out there, let's hear from you.

If you want to tell us about your program and distribute it yourself — that's OK too. Here is your opportunity to tell the world of your program ideas.

A little boy saw his grandmother typing a letter. "Grandma what's that?" "That's a typewriter, dear." "What's it used for?" asked the little boy. "It's used to write letters, dear," replied grandma. "It can't do that," said the little boy -- "it doesn't have any ENTER key!"

OPEN FORUM

WE NEED YOUR HELP! Many of the question listed below are without answers. It takes a lot of research to come up with the answer that can solve the problems readers tell us about. That is if we haven't experienced the problem before or are not familiar with the application.

We know that many of our readers have the background and experience to answer these questions. So many have sent in their help and suggestions, which we pass along to the person asking the question that we feel that our readers can help their fellow users, and us. By publishing this list of unanswered questions. There is no one person who can be the expert on all DOS's and application programs.

Most of the request we get have the statement "maybe you or one of your readers know." We will also collect and publish the answers and suggestions that we receive so that if you see a question submitted by someone else and wonder what the answer is, you will be able to learn what the answer is right along with the rest of us. -Ed.

Q: I would like to get a spreadsheet program. Do you know if any are available for the Model III?
-D. N. La Verne, CA

Q: I would like to contact people who would be using the Model III network program in a teaching situation.
-D. H. Chicago, IL

Q: Any reader know of an ASCII converter for Scripsit Pro to convert Scripsit Pro files to ASCII.
-R. D. Rolla, MO

Q: I hope that one of your readers can help me. I'm using Profile on the Model III to inventory and cross reference my electronic parts. I now need to change one of the field names. Not the data in the field, just the field name. For instance it now says "TI" and I would like to change it to BIN #. It's easy enough to change on the print out but I would like to change it on the screen.

Any help your readers could give would be appreciated. If any company and/or person is still marketing additions to Profile, I would like to hear from them. I have Profile III Plus, but find that the set-up is just too complicated for my simple needs.
-W. S. Arden, NC

Q: I'm trying to convert Model III THE WORD (that's the Bible) to Model IV. Has anyone accomplished this? I also want it to work with SuperSCRIPSIT. That is I need an ASCII Utility. Help!

-Durwood Boyles, PO Box 274, Brent AL 35034

Q: I would like to communicate with your other readers regarding the NICE program. This software package was written by XYZT Computer Dimensions, Inc. in New York, NY. I have written them but my letters come back "Return to Sender". Would you happen to know their whereabouts?
-J. J. S. Phoenix, AZ

Q: Many thanks for your coverage of the TRS-80 computers. Lots of us still need plenty of help. Please ad my vote for coverage of T/Maker. I think it would be an exceptional program to learn and use.

I have had some problems with software for my Model 4P that perhaps you could address.

When accessing Compuserve by long distance with the TRS-DOS COMM program, whenever the program would X-OFF to perform a dump - to - disk, characters from the remote computer would be lost. Is this normal?

With Visicalc for the Model 4, whenever searching for files , the computer will lock up when trying to search past the last file in the list. Can this be corrected?

Has anybody suggested a way to use the Model 100 to read Model 4 tapes. If these could be read as data files by the Model 100, then a modem transfer to a Model 4P

could be made. Any comments on this?

Could you describe in detail how to implement the public domain X-MODEM program (written for the Model 3) on a Model 4P, in either 3 or 4 mode.
-R. G. C. Waverly, OH

Q: In Vol. 1 No. 6 of Open Forum, a letter from B. M. Marne, MI, Mentions T&K "easier to use than Super Utility 4." Where can I get T&K?
-G. M. Ashville, NC

Q: I use NEWDOS 80 version 2 as my main DOS, although I do have TRS-DOS 1.3 and LDOS 5.3. My communications-terminal program, for connecting with Compuserve, is Vidtex on TRS-DOS 1.3. That is their latest version. My problem is that whatever I download is on 1.3. That is an old out dated program and very limited compared to Newdos 80. There are other communications programs that I can download but then they would be on 1.3. This is a Catch 22 situation. Therefore, my request is to find a good terminal program, preferably on NEWDOS version 2. I will be glad to pay for any cost of handling if you or one of your readers could send me a disk with such a program on it.

Also, I have new, unused programs of the following if you or anyone would like to trade with me.

1. VisiCalc for Model 3, Cat# 26-1569 on disk.
2. Scripsit for Model 1/3 Cat# 16-1505 on cassette.
3. Scripsit for Model 3, Cat# 26-1590 with cassette training tapes.
4. General Ledger I for Model 1, Cat # 26-1552 on disk.
5. Budget Management for Model 1/3, Cat # 26-1603 on cassette.

R. M. K. Somers Point, NJ

Q: Although I wrote a couple of weeks ago concerning a couple of problems, I have upgraded all my 1.3 files to LS-DOS 6.3, using the Model 4-D. In that last letter I said that I thought that TRS-DOS 1.3 was easier to use.... Not so at all. After you get used to some new things, Like E for edit and D for delete, it is not only easier to use, but the speed increase is fantastic, especially on a one key "save" or "load" command. I recommend both the Model 4-D and LS-DOS 6.3 to anyone. Computer News 80 got me into these items, Thank you very much.

But I do have a small problem: In that great manual "MOD-4 by Jack", for which I am grateful to you, on pages 196-197 there is a program for one key entry of any command or word that works with 6.2 or LS-DOS very well. I use it for a "run" command that saves much time, and for a word I use over and over in my basic programs.

It works very well except that the statement "SET :JK KSM/FLT USING MACROS/KSM" and the statement "FILTER *K1 *JK" do not remain on the disk for the next session boot-up. It is necessary to re-type those statements back in, the "BUILD MACROS/KSM" stays there. If the computer is re-booted, the "SET....."ETC & "FILTER...."ETC are gone. Changing from one LS-DOS disk to another without booting causes no problems.

I tried to write to the disk the two statements as a program in Basic, and save it with a do command, but it doesn't work.

The same is true of the CLICK/FLT program on page 199 of Jack's book.

Is there a way to "keep" these statements on file permanently, or if not, how could a command be written that would automatically follow boot-up and date load to put it on the disk without having to type them in?

Thank you very much for a wonderful publication, it is invaluable around here, although I don't understand all that's in it, I'm just trying to learn.
-J. P. B. Arroyo Grande, CA

Q: I have an Alpha Board, 1 meg. which works fine, but for optimum results should be used with the Disk/Disk program of Misosys. However, the Ram disk does not work when the hard disk is operative. I get load file format errors. Can any one tell me what to do about this?
-C. H. MD Island Heights, NJ

Q: I had purchased the "Formation" 26-1527 program from Radio Shack, which came sealed in a cellophane wrapper, which precludes the reading of any specifics of equipment required to be able to use the program. You can imagine my consternation upon finding out the program requires a DWII, or a DWP410, or a DMP2100 for the printer. I run a TRS-80 Model IV, 128k, with a DMP200 for my printer.

I have since written TANDY and Software Concepts, (the software developers) and 80 Micro, (before they were MS-DOS) with absolutely no help or suggestions, other than Software Concepts telling me to use a "Generic Printer Driver"????????

Therefore, do you or anyone else out there know of a way to use this program with my DMP200? The program is for Model III or IV, TRSDOS 1.3 & TRSDOS 6.1.

The next thing I would like to get my hunt & peck fingers on is a BASIC program for a TRSDOS 1.3 MEMDISK.
-C. K. Ft. White FL

Q: I have been described as a computer illiterate. I've own a Model 4P for six months, and seem to be able to use LeSCRIPT, VisiCalc, and am getting a handle on Radio Shack Business Graphics Analysis Pac.

My interest is the stock market. Using VC I tabulate long columns of closing market prices. It's desirable to chart these prices. Bus. Graphics Analysis Pac. does this, provided I convert the VC prices to DIF form and load the Bus. Gra. Ana. Pac program. This take considerable extra time which I would like to avoid.

Is there a Graphics program that would allow me to chart my columns of prices directly from the VC spread sheet, using my 4P? If not, do you know of a spread sheet for any PC that would and what PC I would need? RS Bus. Gra. Ana. Pac allows 100 entries for the horizontal axis, a desirable number for any line graph.

I am using Model 4 VisiCalc which doesn't have a single character erase that I'm aware of. Is there a single character erase for Model 4 VisiCalc using a patch or another version?
-W. W. M. Sherman Oaks, CA

Q: I have both Model 4's and Model 4P's that I wish to increase the CPU speed from 4 to 6 MHZ. A firm called Alpha Technology of Satellite Beach, Florida used to make such a thing along with RAM expansion units but investigations on my part indicate that they are out of business. I am wondering if there are any other suppliers of Z-80 speed up chips. Maybe someone out there can help.
-J. H. B. Houston, TX

Q: I have a Model 4P, I also have own an IBM compatible, 10 meg. hard disk and one 5.25" disk. The printer I use is Panasonic KX-P1091i. I am trying to obtain a driver for the printer for my Mod 4P.

I use the Mod 4P on the road (with SuperScripsit) and have a cross over program to put the SuperScripsit files into the IBM Compatible WordPerfect format and then into my Ventura Publisher, a great combination.
-R. K. B. Milwaukie, OR

Q: I have a copy of a basic compiler but not the manual. When I run the program it prints.

TRS-80 Model III Compiler Basic (RSBASIC Ver. 2.4) (C) 1981 by Ryan-McFarland Corp. Licensed to Tandy Corp.

I tried the local Radio Shack and when they checked they were told the manual was no longer available. Can you find out where I can get a copy of the manual?
-D. N. T. Morgantown, WV

Q: A question on PATCHES: is the the new code substituted for that on the disk or is it appended and the substitution made on each use? I do have the three volume "Source" but find it unusable without knowing the machine addresses at which any particular code runs?
-N. B. S. Weston, MA

Q: I have a problem regarding Model III

SuperSCRIPSIT, Version 1.3.0 (using LDOS 5.3.0), with a DMP 105 printer. I am unable to get the Bold Face command to work using the DMP105/CTL file - instead, I get; the character, two hourglasses, character, two hourglasses, character two hourglasses, character. (The hourglasses represent backspace commands, I suspect.) I get the same treatment with the DMP120, DMP200, DMP400, DMP420 or DMP500/CTL files. Tandy Software Support tells me that Bold Face with the DMP105 is not supported.

On the other hand, if I use the DMP110, DMP130, DMP430, DMP2100, or DMP2200/CTL files, I DO get Bold Face, but I get an hourglass as the first character on the paper - presumably a reset code not recognized by the printer.

Do you or any of your experts or readers know how I can (1.) fix one of the other files that do work with Bold Face to remove the first hourglass, or (2.) fix the DMP105 file to handle Bold Face correctly?

Any suggestions you might have would be very much appreciated (other than roll the paper forward or back with one of the drivers supporting Bold Face - I've already thought of that).
-P. H. L. Bedford, TX

Q: Do you know where I can obtain a terminal program for my Model 4 allowing it to emulate VT100?
-R. A. B. Huber Heights, OH

Q: I too have ordered and received Long & Loud and Rembrandt from Spectre Technologies. I found the packages work very well except the Rembrandt print driver for the Okidata 92 printer isn't written correctly. I called Dave at Spectre and he was very helpful and even sent me a different disk with the Okidata driver, but I still couldn't print anything. I dumped the output print file to a disk file so that I could look at it in HEX. I found that the printer was doing just what the print driver was telling it to do. I sent Dave this incriminating evidence. Dave sent me a letter saying he would send my money back but I would rather have something that works, seems like a minor change. Dave stated that he didn't have the staff to make any changes. Is there any one out there that would help fix the Okidata Driver? I also found that if you print over three pages of data using loud the third page gets messed up. To get around this I've split my long files into several short ones.

By the way I'm running this on a 4P 128K stock computer.
-K. L. C. Fort Wayne, IN

Q: I applied the patch to Profile 4 Plus as listed on page 21 of Vol 1 No 4 and it now works like a charm! Thank you ever so much. My system stopped at around 146 records printed before I applied the patch you listed. Quite frustrating to say the least.

In Vol 1 No 3 Page 6, I note someone refers to Profile 4 Plus, version 01.00.08. I had received bulletins 1635-01, 02 & 03 but that's all. Mine shows version 01.00.03.

Is there anyway you could publish all the patches to bring Profile 4 Plus up to the latest version?

Besides Profile, I use Scripsit Pro (which is my favorite) and with Multiplan I feel I'm set for any job. By the way, are there any patches for Scripsit Pro? I have received nothing on this program from anyone. It's a little expensive but I sure like it.
-R. A. C. San Diego, CA

Q: In the last issue, you went into great detail on how to upgrade the Model 4 to 128K and mentioned some advantages such as being able to write longer programs, using Memdisk, etc..

After I upgraded to 128k, in order to avoid "out of memory" messages while running some long Basic programs with arrays which I had written, I learned in "80 Micro" that Basic will only address 64K.

If this is true, what techniques are used to get around this? How about a neophyte-directed article on using the extra memory (Memdisk? Chaining? Bank Switching?) Please keep it simple as some of us are pretty simple out there!
-E. R. N. Mansfield, GA

Q: I was interested in the comments by a reader on p. 8, Vol 1 No 6, about the re-setting of the counter for pfs:file. Six weeks ago I sent my master disks off in the mail for renewal as I had used the 5 backups. They have not yet appeared! So...I may have to try and reset the counter myself. The instructions in the note seem clear except I do not understand the "f.i" in the ".....FF back to f.i. 08" I would appreciate some clarification.

Incidentally, I have used the GRAFYX Solution board, BIXZGRAPH, and PRO-DRAW for two years or more on two 4P's and one Model 4. The major problem I have found is that with LS-DOS 6.3 that the maximum length of a file that BIZGRAPH can read is about 70 rows in length. This is frequently too small for many applications. The GBASIC that comes with the board is easy to use and the graphics are excellent. Draw allows you to go in and add details to graphs. All-in-all I have found them excellent products.
J. T. A. Boulder, CO

Q: Anybody out there know anything about "DESK HELP" from Atmospheres Inc.? I have called them several times and left messages on their answering machine, but no one ever returns my calls.
D. E. Sr. Grand Junction, CO

Q: I have some PD programs on NEWDOS which I would be willing to share. The only problem is that I know how to move files from TRSDOS to NEWDOS, but I don't know how to move them the other way. I tried the method described in the NEWDOS manual, to no avail.
J. H. Hampton, GA

Q: If I only want to print out a "forced" second page of a letter (using SuperSCRIPSIT's CTRL-N) the entire page scrolls before I get the prompt, "Do you wish to continue printing? The printer should just print the page without all this nonsense. Is their a patch that will eliminate this headache?

Secondly is their a patch that will up date Profile 4+ past 1987? I feel like I'm in a time warp every time I use it.
-Glen Morris, Hammond IN

Q: I have NEWDOS80 v.2, TRSDOS 2.3; 2.1, DBLDOS 4.23, LDOS v. 5.0.3 for my Model I, but I don't have good documentation for them and so I have not been able to use them extensively. Any articles or books I can get on them would be helpful. Exception I do not like TRSDOS and use it only when I have to.

Also, where can I send my expansion interface to have a RS-232 port installed and how much?
-C.W. Monticello, NY

Q: Like yourself, I am also 55 years old, and I recently retired from my vocations as a Hospital Administrator. Most of my working career was with the US Air Force mostly working with computers. I find micros the only way to go.

I need an instruction manual for the Profile 4 program as I cannot find one. Perhaps one of your readers might offer assistance in this regard?

Do you or any of your readers have any experience using the TRS-80 Model 4 "board" that is available for insertion in the Tandy Laptop Model 1400, which is a MS-DOS machine. It would be more than nice to have a portable Model 4 as I write and am constantly spending time in libraries. I would appreciate communicating with any person who is currently using (or has previously used) the set-up that I mention.
H. L. J. Sanford, NC

Q: I own a Model 4P and frequently use TRSDOS 1.3. Is there a way to backup a data disk without having a System Disk in Drive 0?
-D. McC. Hamburg NY

Q: I just recently got a copy of newdos 180 for my TRS-80 Model I, level two. I used the format 5 copy format; COPY Ø 1Ø61/Ø1/80 FMT. I checked the system options and the copy was the same as the source disk. I also used the PDRIVE,1 command to have the copy disk to have the same

PDRIVE info as the source disk. I can't get the new copy disk to boot up the computer when it is reset. What else can I check? Any ideas?

I also need the manual for TRS-DOS for my Model I, where can I buy a copy?
-D. R. J. Middleburg, FL

Q: Thanks for helping me with my Model I problem. I received a very informative phone call from Mr. Terry and a letter from Mr. Henry Herridegen, our neighbor from the North. I just got a TRSDOS training course for the Model 4 and a BASIC course on tape for the Model III. Does anyone have a TRSDOS training course and a BASIC course for the Model I who would like to trade, or is there a way I can convert what I have to work on my Model I? For the BASIC course on tape, I believe the baud rate on the one I have is too high for the Model I.
-D. R. J. Middleburg, FL

Q: I read with interest the articles on new disk drives in Vol 1 No 5. I presently own a Model 4 with two single sided 40 track drives. Rather than replacing these drives, I would like to know if it is possible to add two of the 3-1/2 inch double-sided 40 track as external drives #2 and #3 (via the expansion bus). In other words, can the existing single-sided 40 track and the double-sided 80 track drives operate together? If so, is any special configuration or DOS set up required (I use both LS-DOS 6.3 and TRS-DOS 1.3).
-R. V. Mississauga, Ont. Canada

A: Yes, you can use external drives or internal drives added to your computer as drive :2 and :3, without any special changes in your DOS system, or programs.

If you add external you do not have to change your drives to half-high drives to get four in place. But if you did, with the new TEAC drives drawing less power than the original single-sided drives, you would not need to install a larger, or a second power supply.

The simplest is the external drive-power supply combinations from Aerocomp, complete with cable to plug into the I/O expansion bus on the outside of your computer. We suggest Aerocomp, because we know that there is not support coming from other suppliers after you purchase. With Aerocomp, you get support at the time of purchase, and after. Some suppliers don't even know what a TRS-80 computer is anymore. Even many Radio Shack store people don't know what a TRS-80 computer is!

We just ordered an external dual drive with one 5-1/4 double sided 40 track, with one 3-1/2 inch 1.44 drive, to use on a Model 4 with its two double-sided drives. We have several Model 4's, some with single-sided drives in them. And we can use this unit on any of the computers that we have. It will give us more flexibility in using drives for disk copy, while not going to the expense of adding another hard drive, it will have one super storage unit with 1.44 meg. on the 3-1/4 disks.

Future issues will relate our experience and the relative cost effectiveness of the disk storage with this configuration.

The Model 4 supports 4 drives, AS IS, so all you need do is to; buy an external dual drive set up of your choice, plug-it-in and run-with-it!

The additional cost over installing the same configuration internally in your computer is about $70.00, but remember for this you get a separate supporting power supply, and miss all the fun of having to tear into your computer to have extra disk capacity, which for a lot of us is a blessing! -Ed.

Q: I would like to see articles on how to convert some Model III machine language programs to run in the Model 4 mode.

I have only one Model III program, DOTPLOT-80. I like it because it is a very versatile plotting program that can be called from BASIC. The current versions of DATAGRAPH can not be called from a user's BASIC program, they work with Multiplan or VisiCalc. REMBRANDT is a screen dump program which produces a graph about half the size of an 8-1/2 x 11" piece of paper. Discount Data's graphics Programs require a high-resolution graphics board. I am not interested in screen

graphics. I am interested in a high-res graphics program for my printer (DMP-105) that lets me create an XY plot from my BASIC program. Thanks for any help you can provide.
-E. K. Greenfield, WI 53220

Q: I have had a high pitched whistle in both drives for quite some time. It varies in intensity but no matter how carefully I load the disks it's always there when the disks spin.
-H. F. Sun City AZ

Q: I am interested in drawing electrical schematics and storing them on disk.
Can you suggest any program for this?
Any help will be appreciated, I own a Model 4P and I am very proud of it! Except for the lack of available memory, I think it is a very good and powerful machine.

I am looking into getting a graphics board for it.
-A. G. F. Iron Ridge, MI

Q: I have two questions. 1.) In Volume 1 No 6 on page 2 reference was made to the PAL chip for 128K upgrade. Where can I order just the PAL Chip? 2.) What Editor Assembler do you recommend for the Model 4. with LS-DOS 6.3?
-B. D. L. Raleigh, NC

A: 1.) We purchased ours from Aerocomp at $9.00 each plus shipping.

2.) The best was RS Series one Cat. #26-2011 by Microsoft, no longer available from RS. A few can be found in some stores yet. Or the editor supplied with NEWDOS80, if you can find a friend that has a copy, Apparat is out of business.

Misosys has one called EDAS, and we will be reviewing that shortly in coming publications, but as yet we have no reports, good or bad on it from the people who have done the majority of basic assembly programming. -Ed.

Q: Having just received the sample copy of your publication, which I ordered I was happy for both, the speed of your response and the content of what I read. I find that your information is relevant to my hardware and software needs. having in the past suffered abandonment by other highly thought of Magazines, and having left them as a subscriber as a consequence, I am very optimistic that CN-80 will fill my needs for information and news.

Also, I am very interested in assembly language programming, having started on an old Motorola 6800 with a HEX read-out and instruction set (very boring), and played with the Mod. I, Lev II. I had no trouble with their use but the SVC calling system on my 4P really throws me. I would like your recommendation, or opinion, on a good editor-assembler program that isn't to complex, and yet adequate, for my machine. I read in this issue (#6) that you plan tutorials on this programming language and I am looking forward to them.
-J. S. L. Delray Beech, Fl

Q: I use LSDOS 6.3 almost exclusively; however, there are some nice features found in DOSPLUS IVa that are missing in LSDOS. One that I particularly like is the DATE CAL command that displays a calender in addition to the date. Is there a way to incorporate this feature in to LSDOS?

Also is there a patch to Tape100/CMD so that tapes generated by a Model 102 laptop can be read by a Model 4D?
-R. R. O. Erie, PA

Q: I purchased a used Megadisk (20 meg) late last year. [which is a Micro-Smart hard drive, the same as one that we have had for about 3 yrs. Micro Smart has indicated that they no longer will talk to anyone about TRS-80, Konan Drives, which we bought from them and is only 2 years old -CN80] It works fine except with Profile 4+, if you or your readers have a patch to make Profile 4+ respect high memory, I would appreciate it very much if I could get it. I called Micro Smart, and they said no one there would even remember what the patch was. I would also like to use ProWam with Profile 4+, but it gets clobbered by the EFC9 module also.
-J. C. Midland, TX

A: We understand from Frank Gottschalk, that Alpha Technology in Florida supplied a patch to him, which may or may not assist you. We would certainly like to hear from the other Profile 4+ users if RS Customer Service Bulletin No. 1635-07 and 1635-08 are all the patches put out by RS, or if someone has developed their own patches for Profile 4+. -Ed.

Q: Maybe you can help me with something. My computer is a Model 4, 128 K. I have upgraded it to use double sided disks. My word processor is Allwrite. There are a lot of DOC files that seem to be written with Scripsit or something. They also seem to waste a lot of space, like written in 64 column format, too many blank lines on top and bottom of text. And some are about 15 to 20 pages in length. If I could load them into my Allwrite, I could edit them out to work great. Now the problem, some of these DOC's are longer than 30K and when I try to load them, I get a 'DISK FULL'. what I would like to do is be able to split these programs. But I don't know how. Do you have any suggestions. I would really appreciate your assistance.
-A. T. Lompoc, CA

A: We are sending you a PD disk with a file splitting program on it. As Allwrite stores its data in ASCII, you should have no trouble bringing the DOC text in to it, for editing. As almost all DOC files are stored in ASCII, so that anyone can read them, you should be able to edit them with Allwrite.
If you have a SuperScripsit program (we know lots of grief) but it does have one nice option, and that is the built-in ASCII conversion program. We use it all the time to edit doc files, and because it is disk resident, we can handle some very large doc files, really up to the disk capacity of double-sided disks if necessary. However this file split program should give you the assistance that you need for memory based text.

Suggestions and or other methods from our readers to solve this type of problem are always welcome, too. -Ed.

Q: I need a terminal emulation program for a Model 4 (Model I would be nice too, but that's asking a lot.) The mainframe I need to communicate with can only handle 2400 baud if I'm behaving like a VT100. Can anyone help me find such software?
-D. H. Akron, OH

Q: I am inquiring about SuperScripsit (Ver. 01.01.00) My Question? Is/are there any upgrades, patches, better versions than this available. Being new to TRS-80 and computing, I am unaware of further improvements in the word processor. What's best?
-H. G&P. Georgetown, KY

A: The answer to that one is a rough one because different word processors are excellent for different applications. And because so many feel that the word processor that they use personally is the best that there is. It is impossible to recommend a single word processor that will do all things for all people. There is a later version of SuperScripsit than 1.1, which is 1.2, and it has so many new bugs, that you are better off to use the one you have.
The next step up could be Scripsit Pro, expensive but reported to be better. A step sideways could be Allwrite, with its Dotwriter, font package, and banner maker. A step backwards could be to Scripsit, plain and simple. Or you could go to LeScript, which is a step we haven't figured out yet.

Right now if a poll was taken we would have equal amounts of people using SuperScripsit, Scripsit Pro, Allwrite, with fewer people using LeScript and Lazywriter. Each has its strong supporters. What's best?

Its like art, it is in the eye of the beholder, and the beholder's pocketbook. -Ed.

READERS COMMENT

I hate your publication! It has, again, taken up several hours of my time on the day I receive it requiring me to read the thing from cover to cover. Of all the magazines that I have received over the years (several named) etc. I have never read one so completely. Keep up the good work.
-R. A. Y. Sacramento, CA

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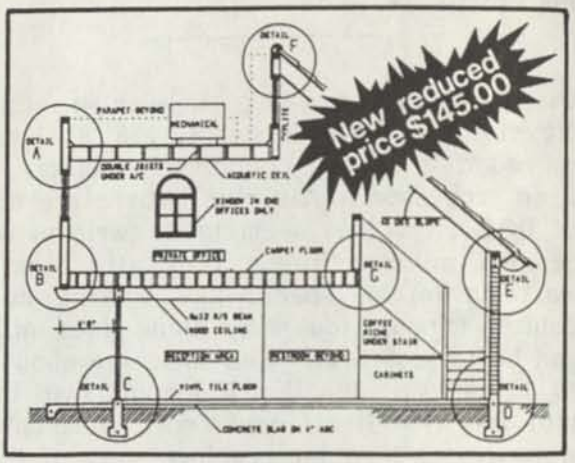

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Can we talk? CP/M vs TRSDOS

By moving to CP/M on your Model 4 you achieve two things. First you open the door to a wealth of existing software. More 8-bit software runs under CP/M than any other operating system. This includes virtually all of the "big name" programs which have set the standards by which all others are measured. Programs like **WordStar, dBASE II, and Turbo Pascal** are available for CP/M, but not TRSDOS. Public domain software, almost unknown under TRSDOS, fills hundreds of megabytes of disk space. Valuable public domain programs like the **Small C Compiler** are just a toll-free phone call away. Most importantly, hundreds of applications programs are available from a multitude of vendors. Many include the source code. Wouldn't you like to be able to choose from scores of Accounts Receivable or General Ledger programs, instead of the meager selection you now have?

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When the time comes to move up to another computer it will almost certainly use MS-DOS. That's when CP/M users get a pleasant surprise. Since MS-DOS was a derivative of CP/M it operates in almost the same manner. Even better, most of the same software packages are available in 16-bit form and they operate in virtually the same way that they did under CP/M.

Is it easy to use?

Montezuma Micro's CP/M has been carefully crafted to present a maximum of features while taking a minimum of memory. It supports all of the standard features of the Model 4/4P/4D computers, as well as most of the optional ones. Our CP/M has been consistently been awarded the highest ratings in industry magazines. It is version 2.2, the most popular and reliable of all the versions of CP/M produced. Our CP/M has been made as easy to use as possible. All customer-selected features are chosen from simple menus in our CONFIG utility. This includes the ability to configure a disk drive to run like that of scores of other CP/M computers for maximum ease of software portability. Using the unique DBLCROSS program in our Monte's Toolkit utility package you can move files back and forth between CP/M, TRSDOS (1.3 and 6.x), and MS-DOS.

Why use Montezuma CP/M?

We have already told you why our CP/M is the best for the Radio Shack Model 4 computer. The only question left to answer is "Why buy CP/M at all?" Radio Shack has abandoned TRSDOS — all of their new machines use MS-DOS. Most of the software producers have followed, leaving no new software development and saddling the TRSDOS user with whatever software "leftovers" he can find. Which DOS do you want to head into the future with: the one originally written for the Model I or the one that served as the basis for MS-DOS? Make the right choice right now for just $169.

If I need support?

We don't forget you after the sale. If you have a problem you will find our phones are answered by people, not answering machines or hold buttons. Our philosophy is very simple — we want you to be happy and satisfied with your purchase. If you have a problem then we have a problem, and we'll do whatever we can to resolve it.

Cost to update?

Our owners are protected against instant obsolescence by our lifetime upgrade policy. At any time you can return your original CP/M disk to be upgraded to the latest version free of charge, except for a small shipping and handling fee. Periodically we publish NEW STUFF, a newsletter for registered users of Montezuma Micro CP/M. This publication carries news about new products, tips for getting more out of CP/M, and other valuable information for our users. It is sent free of charge to registered owners.

Can I use a hard disk drive?

CP/M hard disk drivers are available for Radio Shack, Aerocomp, and most other popular brands of hard disk drives. These drivers allow the hard drive to be partitioned into one to four logical drives of varying sizes. These drives may all be used by CP/M, or may be divided between CP/M and TRSDOS. A head-parking utility is included on the driver disk to minimize the risk of damage when the hard disk drive is not in use. Also included at no charge is a utility which will copy, compress, list, print, and delete files with ease. There isn't much you can say about a driver. It either works or it doesn't. Ours works supremely and it only costs $30.

Hard disk backup?

Unlike the high-priced, underpowered backup utilities available for backup of TRSDOS hard drives, our CP/M **HARDBACK** utility makes the backup of a hard disk to floppies quick and painless. Only **HARDBACK** gives you the choice of backing up the entire drive or only those files which it knows have been changed since the last backup. Daily backup is no longer a chore, since only new data must be copied. With **HARDBACK** you can quickly restore an entire drive, or only a single file if necessary. Only **HARDBACK** will perform a complete check of the hard disk drive and lock out tracks which have become flawed to prevent the use of those tracks for later data storage. Add this supreme program to your hard disk for just $49. Isn't your time and data worth it?

Specs?

Size of Transient Program Area (TPA): 56,070 bytes in a 64k system. 55,046 bytes in a 63k system (with optional hard disk driver). **CP/M IOBYTE:** Fully implemented. **Device Drivers:** Disk (35, 40, 77, & 80 track, single/double density single/double sided, 3, 5, or 8 inch. (More than 85 disk formats supported) **Maximum Disk Capacity:** 40T SS=220k, 40T DS=440k, 80T DS=880k **RS-232:** All word lengths, parity, & baud rates. **Parallel Printer:** With or without linefeed and/or formfeed. **Video:** 24 by 80 with reverse video. **Keyboard:** Full ASCII with 9 function keys. **RAM Disk:** 64k, automatic on 128k systems. **Hard Disk:** Optional drivers available at extra cost for most popular models. Standard CP/M programs included: **ASM, DDT, DUMP, ED, LOAD, MOVCPM, PIP, STAT, SUBMIT, SYSGEN, and XSUB.**

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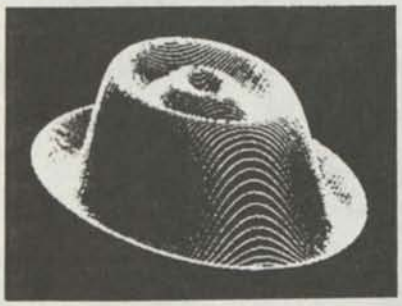

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