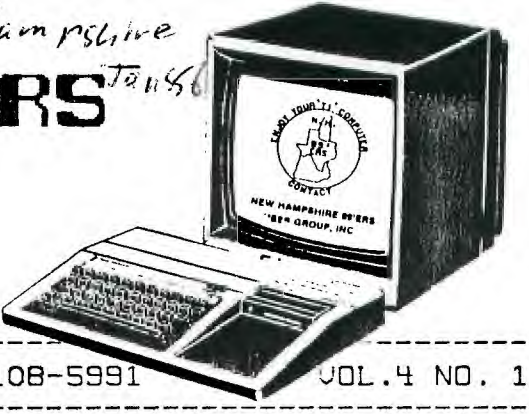
New Hampshire Jan 86

NEW HAMPSHIRE 99ERS JANUARY 1986 NEWSLETTER



NH99UG NEWSLETTER - PO BOX 5991 - MANCHESTER, NH 03108-5991 VOL.4 NO. 1

<<<FROM THE PREZ>>>

Curtis Alan Provance

My sincerest apologies for last month's snafu. I feel so bad about it that I will take a cut in pay as your President. Seriously, we have moved to the first Monday of the month - no matter what date we print!

We continue to receive new members each month. Unfortunately, we also lose a few in the process. Fortunately, I think we come out ahead each month. I am concerned, however, that we are not fulfilling the needs of some TI owners. Please! If we aren't meeting your needs, it is only because we don't know what they are! Your surveys of several months ago indicated a strong interest in Assembly, so that is what I am giving you. Don't forget, though, anyone can submit an article on anything of interest.

A special thanks to Jim Jagielski for his donation. Jim gave the club a machine code program which will count the number of words in a document. On the surface, that may seem like something you won't ever use, but perhaps you have kids that must write '1000 words or more' reports, or whatever. Many publications will not accept manuscripts larger than a certain size: Readers' Digest for example. The program was tested with a six page document and worked very well.

Those of you interested in how Disk Manager 1000 works, I have a copy of the source code. If you would like a copy, call me at 424-7624 before the next meeting. There will be copies made at the meeting! This source code is educational in that it shows how to access the additional subroutines in the disk DSR routine.

What would you think of a contest? Frankly, I'm tired of the old club logo. We have several programs with which to design something better. Would you like to have an answer column? Other clubs have a 'wish' section where members ask for something and (hopefully) someone else provides the answer. I wish you all could see the other newsletters our club receives. Not only would you get a lot more information, you would also have a better idea of what our club provides.

Please help your officers make **your** club better. Something as simple as a phone call can make all the difference.

<<<LAST MINUTEs>>>

The meeting of Jan.6 opened with the good news that once again the treasury is in the black, and again new members have been added to our roster! (Apologies to those who misunderstood our meeting date of Jan.7, 1985!)

A discussion of JHB's Data Base Manager was the first item on the agenda. The feeling that software should be user friendly was a consensus of the group, and as a test, Curtis had a "volunteer" from the group try to set up a data base. Richard Scott, the lucky electee succeeded in doing so in few attempts. He felt that as long as one doesn't make any mistakes, the system is okay, but even the author admits that error handling is not his forte. Curtis called attention to the program updates in the December newsletter. Curtis has been in contact with the author, and will continue to notify him of bugs and glitches found by users. Stay tuned to this newsletter for updates and modifications!

Next, Curtis demo'd the Myarc 128K card. This card has 96K which can be used as a RAM disk or a print spooler. One very desirable capability of the RAM disk is its use with Multiplan, which frequently accesses the disk. By transferring program files to the memory, one saves a great deal of time normally used by the disk drive mechanics. Curtis did point out that the card can not be used as a print spooler with the Corcomp interface card.

Next was a demo of the Tripletech card by Corcomp, courtesey of Mike Mannion. Curtis showed us that while printing a six page document, control was returned to the computer after only twenty or so lines had been printed. Additional features not demonstrated are the time clock and the speech synthesizer port (which allows removal of the speech board from the right side of the console to the inside of the PE Box.)

Last but not least was the demonstration of Jim Jagielski's Word Count program for TI Writer files, which counted Curtis's six page document in what seemed like seconds. 408 words in this document, by the way. I wanted to time how long it took to count the words in these minutes, but was unable to reach the button on my watch before the program was done counting! The program is available in the club library, via Jim's gracious donation.

File closed--
Ellen Rule, Secretary

RANDOM RAMBLINGS

First , I would like to thank the managerial staff at BONANZA FAMILY RESTAURANTS. They couldn't have been any kinder. Thanks guys, you saved my hide!

Many thanks for the cards and letters received over the holiday season in support and appreciation of our efforts... we're glad we could help! You can help us too! As a member of the NH99UG you can contribute to the direction of our organization and better fulfill any personal needs you may have in connection with your computer by actively participating. It can be as easy as SPREADING THE WORD... as much as we have tried, not every NH TI owner is aware of our UG's existence. Help us SPREAD THE WORD! The last page of this issue contains two NH99UG "intro" cards, one with Curtis' number, the other blank. Insert your name in the blank space and post it where you work, shop, or go to school. Help get those TI's out of the closet! In January, thanks to R. Bailey and R. Scott, F. Peavey of Cape Elizabeth, ME joined our group; thanks to J. Scaltreto, J. Benotti of Temple signed-up; thanks to E. Hardy, P. Cote of Bow is now a member; as a result of my ad which also appeared in the LA TOPICS, E. Kramer of Ringwood, NJ has joined; and because of a bulletin left on COCOBEAN (BBS 1-603-485-8682) N. Gilbert of Manchester has joined our ranks. WELCOME!

More ways of participating include writing articles, submitting tips, tidbits, etc. Ex: Brian Doane tipped me off to a super deal on the Centronics GLP-3 which is currently on sale at OnLine Computer Plus for $80.00! That's right... eighty dollars! It can be interfaced to the TI and we will have pinouts at the February 3rd meeting (we also hope to have a model to show). Unfortunately, the Manchester OnLine has just been consolidated to the Salem location (on Route 28 at the Salem Village Plaza in Salem, NH by the Methuen line). I have included a review (reprinted from inCider 9/85) of the GLP in this issue. The model they are selling is the GLP-3 which has BOTH serial and parallel ports. I spoke with Tony Schuman at OnLine (1-603-898-2390) on the 23rd. He had 14 in stock at that time. They are new and are warrantied for 90 days. Brian also tells use that he can get GLP ribbons for around $3 apiece (I understand they also fit the Commodore 803). By the way, we'll have Epson MX-80 ribbons @ $5 ea and Okidata 80/82/83/92/93 (Gemini/Star Micronics) ribbons @ $2.50 each for sale at the next meeting.

Those who made it to the last meeting were able to purchase packs of Easy-Perf at really good prices. OBIS, the supplier, has the best prices on paper that I have seen in this area. They sell an "intro" pack for $3.25; 1,000 sheets for $11.30; and 2,500 sheets for $21.60. OBIS Co. is located in the NH LUNG ASSOCIATION building at 456 Beech Street (corner of Merrimack) in Manchester (603-668-4245). Park in the lot and check out their Computer Supplies and Furniture. They do feature free local delivery, if, however, you don't live close, but can make it to the next meeting call me (Helene 472-3369) and I'll get it to BONANZA.

A non-computing friend of mine was recently in Laconia and called to tell me that he saw 4A hardware and software at the SYSTEMS HOUSE on Main Street. I knew nothing of them. Perhaps one of our members can investigate?

We get many calls from buyers and sellers of used TI's. Following is a price list of the most requested NEW, WARRANTIED TI computer(wares):

Console	$ 58
P-Box	?
CC32K Xpansion Card	100
CCRS232 Card	80
CC DS/DD Controller	150
Internal Drive (400L)	35
P-Box System /w 32K, Controller, RS232, Drive	540
CC 9900 System /w 32K, Controller, RS232	300
/w Drive	380
External Drive	130
Extended Basic	50
Speech Synthesizer	50
LogoII	20
Editor/Assembler	20
Multiplan	40
Navarone Widget	25
TI-Writer	20
MBX Unit	40
Most TI PH(I,D,orM) Software	$2.50 - $15
Modulator	5
Transformer	2

Remember, members can place free classified ads each month in this newsletter. Non-members must donate funds for the space (it's MUCH cheaper than the newspapers!). REMINDER TO ALL MEMBERS who are placing ads: if uou want your ad repeated... PLEASE TELL US by the 20th of each month.

Wanda at 1st Child Photo is attempting to find a program which will allow her to maintain statistical data (frequencies) on the Megabucks numbers. Anyone know of one? Give her a call at 603/623-2441.

CORRECTION: From December's "OLD and RUN in XBASIC" article. You must insert a line in DEBUGA which reads...

AORG >2500

Insert after the comments. If you don't, DEBUG will load

at the wrong address.

Addendum: Exeltec XB Saga. Finally after two months of phone calls and letters, Dee Johnson, Office Mgr at Exeltec, wrote:

> "Apparently our previous correspondence has gotten lost. We are sending you a new unit of Extended Basic. Please send your old module to us by return mail."

The module was received on 1/21, but, because of mid-terms, it couldn't be tested... stay tuned!

<<<BULLETIN BOARD>>>

If you plan to be in LA at the beginning of March don't miss the 99' FEST-WEST '86, the First Annual LA 99/4A Expo. For more information send a S.A.S.E. to T.A. Masters - 148 S. Maple Drive - Beverly Hills, CA 90212.

NJ will host the T.I.C.O.F.F. (TI Computer Owners Fun Festival) on March 15, 1986 at Roselle High School - Roselle, NJ. Includes Flea Market + guest speakers (Lou Phillips of Myarc, John Brown of 3-D World Fame, Chris Flaherty (Ti-Artist) +, +). The new MYARC computer will be shown at the fair. Contact Steve Citron @ 981 Townley Ave - Union, NJ 07083 (201/686-5616).

ASGARD SOFTWARE (POB 10306 - Rockville, MD 20850). Their latest flyer features GRAPHX COMPANION II ($7) which includes new fonts, clipart, and pictures; RECIPE WRITER ($12), a utility for the home-maker and chef (requires XB, 32K, and DD)...this just might get your wife interested in computers!; QUICK DIALER ($10) an automatic telephone dialing program designed for use with popular terminal emulator programs such as FAST-TERM; and the ASGARD LIGHT PEN see Chris Agrafiotis' review in this issue.

FOUNDATION COMPUTING (POB 455 - Mill Valley, CA 94942). Foundation has gone out of business. According to Micropendium, the company will continue to offer maintenance and repairs for persons wishing support. For products under warranty, the customer will pay only the shipping and for the products not under warranty, the customer will be charged $35 plus shipping.

<<<WRAP-UP>>>

It seems that the older I get, the windier I get! Bear with me (but let the FORCE be with the PATS!!!!!)! The next meeting is scheduled for 7:30 pm MONDAY, FEBRUARY 3rd at BONANZA in Bedford. In the event of inclement weather it will be cancelled. If in doubt, please call me (472-3369)!

P.S.#1 Curtis mentioned in his column that he wished that "all could see the other newsletters our club receives"... well, ANY MEMBER CAN! If you can't make it to the meetings, we'll ship you a packet of at least 12 of them. We "package" them monthly and loan them out for a month. Just send $1.50 and we'll mail you a packet with a postage paid return envelop. We keep records, so you won't get the same packet twice.

P.S.#2 Talk about SPREADING THE WORD... I just finished reading Dick Bailey's latest article in Micropendium (2,12). Super!

Helene

MAILING LABELS

Ellen Rule
NH 99'ers Users' Group

This program was written to perform one simple function: to make any number of address labels, all with same address, on pinfeed 3 1/2" by 7/8" labels. The program runs in BASIC or Extended BASIC. The address is actually part of the program listing (lines 170-200); ambitious users may want to add an input section so that they can print out labels with different addresses without modifying the listing each time. The printer output (line 150) should be changed to match your printer's specifications. I have four address lines in my address, due to a Rural Route number as well as a street address. If you have only three address lines, change the last address line to PRINT #1:" " otherwise you will not have the proper number of carraige returns to keep your labels aligned. The program will allow you to print from 1 to 100 labels. I suggest you try just 2 or 3 in order to make sure your labels are lined up in the printer correctly, then run the program again for a greater number of labels.

```
100 REM  ADDRESS LABEL PRINTER
110 REM BY ELLEN RULE
120 CALL CLEAR
130 INPUT "HOW MANY LABELS?":L
140 IF (L<1)+(L>100)THEN 120
150 OPEN #1:"P1O"
160 FOR X=1 TO L
170 PRINT #1:"YOUR NAME"
180 PRINT #1:"ADDRESS LINE 1"
190 PRINT #1:"ADDRESS LINE 2"
200 PRINT #1:"ADDRESS LINE 3"
210 PRINT #1:" ";" "
220 NEXT X
230 CLOSE #1
240 END
```

TI-WRITER TIPS

Curtis Alan Provance
NH 99'ers User Group

To ensure that your quotes and question marks get the space they deserve, you should add the required space character '^' after each. Wait! Don't waste your time typing the required space each time. When the document is complete, return to the first line and use the 'REPLACE STRING' command to do the dirty work - /!/!^/ and /?/?^/. Press 'ALL' for both.

You can use the 'INCLUDE FILE' command (.IF) to load different files based on a variable list. For example, you could custom generate those nauseating Christmas letters we all get, with personal paragraphs in each. Start with a master and insert spots for custom paragraphs as follows:

```
.ML DSK1.XMASLIST
(format commands for the style you want)
Dear $1$
It's been another busy year, blah, blah, blah
.IF DSK1.$2$
The kids are doing fine. The four year old won
this year's Nobel prize in Physics, etc.
.IF DSK1.$3$
```

So on and so forth. You can type in as many 'INCLUDE FILE' commands as you want. Save this and purge the editor. The first file you should make is a 'NULL' file for those times when no file is appropriate. With the editor purged, save the blank screen under the name 'DSK1.NULL'. Now generate the customized portions of your letter. Assume your letter has the following format: 1) job 2) kids 3) vacation 4) self 5) future plans. Type up the personal questions that you might ask. For example, you could have numerous job related questions/statements:

How has your job been going lately?

Sorry to hear about your problems on the job. We hope that the new year will be brighter.

Happy to hear the good news about your job! Please keep us informed of your progess.

We hope your job has been going well for you.

You can save these under different names such as DSK1.HOW, DSK1.SORRY, DSK1.HAPPY, and DSK1.HOPE

Type up generic comments about kids (or lack thereof), vacations, or whatever. Save these and then purge the editor. It's time for the XMASLIST to be made! Remember the format above. The first variable is the name, followed by job, etc. Your list might look something like this:

```
1 Randy and Mary
2 SORRY
3 NULL
4 SOUNDSGOOD
5 NIGHTCLASS
6 GOODLUCK
*
1 Guy and Christy
2 HAPPY
3 HOWISSHE
4 SOUNDSGOOD
5 DIET
6 GOODLUCK
*
```

In this example, Randy and Mary don't have kids, hence the NULL file. Randy works for Chrysler (when not on strike) and is unhappy. He's taking night classes with the hopes of getting a better job. Guy just got a new job, has a daughter, and is on a diet.

This seems like a lot of work, and it is! However, once the foundation is laid, future letters require only the master and a revision of the XMASLIST.

Another useful application of this technique is if you want to print contracts where the clauses vary from customer to customer. You can type up each clause and save them on a disk, then enter the customer list with the clauses they need. For example, assume that an insurance contract contains no more than 5 clauses. The customer list could be:

```
1 FIRE
2 FLOOD
3 QUAKE
4 NULL
5 NULL
*
1 FIRE
2 QUAKE
3 STRIKE
4 TORNADO
5 NULL
*
etc.
```

Warning! Your variable list must start in the first column of the editor! If you have set an indentation, remove it before you type up the variable list or it won't work properly. Finally, you must end the list with an asterisk as in the examples.

Good luck and don't worry, you have a whole year to write that Christmas letter!

FOR SALE

Full Blown TI SYSTEM featuring all TI components (includes software, 2nd drive, modem, and monochrome monitor). Best Offer. Call Chris Ferris @ 603/497-3230 evenings.

CorComp PDM-99

CORCOMP PERIPHERAL DIAGNOSTIC MODULE
Review by Chris C. Agrafiotis

Diagnostic programs to test the various hardware associated with the TI 99/4A seem to be proliferating in the marketplace. This is another indication to me that the TI is far from dead and that there are people out there trying their best to provide us with more and more tools with which to keep our TI's up and running. This is an unusual phenomenon that owners of other machines cannot boast about. With most other machines a problem with peripherals usually means a call to the vendor, a service call and charge or a trip downtown with the computer in a box.

I have been very lucky in that I have had very few problems with my system. Fo this reason I have not gotten around to purchasing a diagnostic program. I strongly hold to the old addage....."If it ain't broke, don't fix it!" On the other hand it sure helps to have a program which can help you isolate a problem with the equipment rather than stumbling around, not knowing which piece is malfuntioning and in need of service.

This brings me to the review at hand; that of the CORCOMP PERIPHERAL DIAGNOSTIC MODULE (PDM). The PDM was designed to test the Disc Controller, the 32K Memory Expansion and the RS232 Card. It is supposed to be compatible with all CORCOMP and TI card. I can vouch for this because I have both CORCOMP and TI cards and they all checked out OK. I must assume that it also works for the Foundation 128K card because it checked mine out in fine order. The PDM comes in cartridge form so you can use it easily and even remove all those cards not being tested so as to insure no interaction between cards.

When testing your DISK CONTROLLER card the following menu appears:

1. SINGLE SIDED SINGLE DENSITY
2. DOUBLE SIDED SINGLE DENSITY
3. SINGLE SIDED DOUBLE DENSITY
4. DOUBLE SIDED DOUBLE DENSITY
5. SELECT DRIVE TO TEST
6. DISPLAY HEAD STEP TIMES
7. DISPLAY MOTOR DRIVE SPEED

The first four items format the selected diskette in the indicated configuration and provide a completely initialized diskette when complete. The name TESTER is placed on the diskette. The test is set up to format a total of 40 tracks. Once the format is complete a total of 32 randomly located sectors are written to it. The values 0 through 255 are then written to the 256 byte locations in each sector. If no problems are found the following message will be shown: DISC TEST COMPLETE - PRESS ENTER TO CONTINUE. If problems are found one of the following error messages will be displayed

1. NO DISC CONTROLLER PRESENT
2. NO DISKETTE OR NO DRIVE
3. DISKETTE IS WRITE PROTECTED
4. SECTOR NOT FOUND OR SEEK ERROR
5. DAT LOST ON READ OR WRITE
6. CIRCULAR REDUNDENCY CODE ERROR
7. TESTING DISC CONTROLLER/DRIVE MESSAGE REMAINS AND DISK DRIVE LIGHT GOES OUT

(Each one of these error messages has associated problems identified with it and they are listed in the instructions)

When the option -SELECT DRIVE TO TEST- is chosen the following message will appear on the screen and show the drive currently selected:

SELECT DRIVE # TO TEST (1-4) 1

You then select the drive you want to test.

Selecting the option -DISPLAY HEAD STEP TIMES- will read the dip switch settings on the CORCOMP Disk Controller. With the TI Controller the default will be 20. All times are displayed on the screen as milliseconds.

Selecting the option -DISPLAY DRIVE MOTOR SPEED- displays the acceptable speeds of the drive and the actual measured speed in RPM. The typical speed is 300 RPM and in many cases drive problems can be directly related to improper motor speed.

The 32K MEMORY EXPANSION TEST is just as easy to use. It provides a MEMORY BIT CHECK and a MEMORY RETENTION CHECK. The first test writes and then reads data to all 32,768 locations in the memory and reflects the number of errors if any. The second test will again write data out to all 32,768 locations but this time a timer count-down starting at twenty and going to zero occurs. After the count-down the memory will be read to verify that there is no memory refresh problems and that the memory has no problem in retaining data. If a problem is found the value written and the value read wil be displayed.

The RS232/PIO option checks the following:

1. RS232/1 TO PRINTER
2. RS232/2 TO PRINTER
3. RS232/1 LOOP TO RS232/2
4. PIO TO PRINTER

This test will print a series of characters on the screen and on the printer if there are no problems. IF problems are found the system "hangs" during the test and you simply press FUNCTION 4 then FUNCTION 6 to return to the menu for another try. (You are even provided with a "loop back plug" with which to conduct your tests without a printer being connected)

In conclusion I must say that the PDM-99 produced by CORCOMP does exactly what it says it will do. It is not a very fancy program; no pretty graphics or bells and whistles but a very functional diagnostic tool to isolate problems. Now if only someone could come up with a fancy program to tell me what to do to correct the problems uncovered by these diagnostic programs I'll be happy.

ASGARD LIGHT PEN
Review by Chris C. Agrafiotis

Gadgets, gadgets, gadgets! If there is one thing that distinguishes the TI 99/4A owner from other computer freaks more than anything else is his or her love for gadgets. In this respect we are probably very fortunate compared to, say, the owner of an IBM PC. Gadgets for our machine are in abundance and very inexpensive to purchase by comparison. The guy with an IBM is limited to the number of gadgets available to him and the price of such an item, if available, is usually in the hundreds of dollars.

This is not to say that all of the gadgets that are out there for the TI are useful or in anyway worth owning but at least someone is thinking about us as a potential market and keeps trying to come up with tools that will enhance our little TI toy. That's what is important. Even if a purchase of one of these gadgets is a total waste of money (which it never is because there is always some intrinsic value to be had) I feel that it is money well spent. Hopefully the next gadget invented will be one that really is worth having. We need people out there spporting us with software and gadgets if we are to survive as a group.

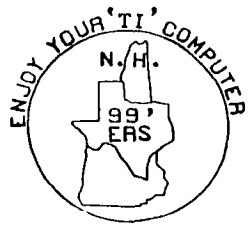
With this little introductory sermon I wuld like to introduce you to the ASGARD LIGHT PEN. This is a little gadget that I ordered from ASGARD SOFTWARE, POB 10306, Rockville, MD 20850 for about $14.00. Needless to say I knew at the time that I ordered it that it could not be a true light pen. Obviously no one could possibly market such a device with the associated software for such a price. But my curiosity was peeked and I am a sucker for gadgets so I sent in my money and anxiously awaited my new toy. It came three weeks later and I must say I got my money's worth.

The first thing I did was to read the instructions included with the pen. Much to my surprise the first thing that was told to me was that ASGARD admits it is not a true light pen but that they could not think of any other name for it and that if I felt they had misrepresented the item I could return it for a full refund within ten days! Well if it isn't a true light pen then just what is it? As the instructions clearly point out the ASGARD light pen is a photo receptor; a simple device that sends a signal to the computer through the joystick port when it detects bright, white light. Actually it operates similarly to a joystick except that it takes no action on the part of the user. You just hold it up to the video screen and, if it detects a strong enough light source it "fires", activating the computer to do smething else. In fact you can hold it up to a bright lamp or any other light source to activate it. This is a disadvantage because if you happen to have a lamp or any other bright light on in the room it can effect your program progress.

The light pen attaches to the joystick port to become operational. It is a sturdy little gadget made of hard plastic with the photoreceptor imbeded in one end and the cord coming out of the other end. Included with the pen comes a sample disk of programs illustrating its use through BASIC and EXTENDED BASIC. A loader program is provided for loading and running all programs through extended basic. The programs provided are very simplistic, nothing to write home about, but they adequately demonstrate how the pen works. For example there is a TIC TAC TOE game where a white square (much like the cursor) flashes from space to space. When you hold the pen up to the space where you want to put your X or yor O it detects the white square as it passes and replaces it with your letter. Another programs is a simple math tutorial where you choose the right answer by hold the pen up to the white square under the correct response. Actually it's kind of cute. The final two programs consist of a music program where you can insert notes via the pen and then play them and finally a tricky little program where you can construct a face by choosing various eyes, ears, noses, etc. by pointing the pen at a "menu" of parts. You can then make the face move (slightly) again using the pen.

The instructions give you a short program which show you how the pen works thus allowing you to integrate it into your own programs. This is where the value comes in. It would be interesting to see if someone who is really into programming can come up with a software program to really take advantage of this gadget. For those who care, here is the program:

```
10 CALL CLEAR
20 CALL SCREEN(2)
30 FOR I = 2 TO 14
40 CALL COLOR(I,16,2)
50 NEXT I
60 CALL HCHAR(1,1,40,334)
65 REM -> START TESTING HERE
70 CALL JOYST(2,X,Y)
80 IF Y = 0 THEN 70
90 PRINT "light detected"
100 FOR PAUSE=1 TO 500
110 NEXT PAUSE
120 GOTO 10
```



NEW HAMPSHIRE 99'ERS
USER GROUP, INC.

This is not the kind of a gadget that you can't live without but if you've got children it can be fun. I just wish that when people come up with these gadgets they come up with useful software to accompany them. All in all I still think that I got my money's worth and I, for one, will continue to support those out there who are trying to support me. Let's face it....they are not going to get rich on me or you. but without our support they will disappear and then what will we do? Think about it.

TIPS FROM THE TIGERCUB

#28

TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

NUTS & BOLTS DISK No. 2 is now ready, and I think it's better than the first one. It contains 100 utility subprograms in merge format, including many new character fonts and screen display routines as well as 2-dimensional array sorts, variable line numbers in GOSUB, GOTO and RESTORE, on-screen editing and much, much more. The price is $19.95 postpaid, or you can order both Nuts & Bolts disks for $37 ppd.

And I have put together 18 different collection disks each containing 5 or 6 of my catalog programs for just $12 postpaid. The programs on each disk are all of the same category, and I have filled up the rest of the disk with public domain programs of the same category, as a bonus.
I want to make it very plain that I am NOT - repeat, NOT - selling public domain programs! My own programs on these disks are offered at a great discount and the public domain programs are just thrown in for free! Together with this issue of the Tips I am mailing to each user's group a copy of my catalog #6 with an added page describing these new offerings, and a rebate offer to user's groups.

My catalog will be sent to individuals for $1, which is deductable from your first order. If you already have my catalog #6, the added page will be sent to you free on request.

My full disk collections will now be available to bona-fide retailers at standard wholesale prices. Inquiries on your letterhead are invited.

And so, on to old business. Yes, I know that RESequencing a program does not resequence references to line numbers in REMs. I just forgot! In line 270 of the Menu Loader in Tips #27, the reference should be to lines 280 and 290, of course.
While programming the file reader in that menu loader, I ran into a peculiarity of the TI-99/4A that surprised most of the expert programmers whom I called for help. When you "read blind" you must read everything as a string, because attempting to read a string as numeric will crash the program. This is no problem with DISPLAY files - but when I tried it with INTERNAL files, I got the strangest garbage! My solution (not quite foolproof) was to identify a record as numeric if it was 8 bytes long and contained an ASCII out of printable range, and then RESTORE the file, read back to that point and re-read it as numeric. Not very efficient!
The following routine will save a numeric input in an internal file, read it back out as a string, show you the way it was saved, and then attempt to translate it back to numeric. It works for positive and negative integers or non-integers of not less than -99, but not for less than that.

```
100 INPUT X :: OPEN #1:"DSK1
.TEST",INTERNAL,OUTPUT :: PR
INT #1:X :: CLOSE #1
110 OPEN #1:"DSK1.TEST",INTE
RNAL,INPUT :: INPUT #1:A$ ::
 PRINT A$ :: CLOSE #1
120 FOR J=1 TO 8 :: PRINT AS
C(SEG$(A$,J,1));:: NEXT J
130 FOR J=1 TO 8 :: A(J)=ASC
(SEG$(A$,J,1)):: NEXT J
140 X=A(1)-63 :: IF X<73 THE
N 150
142 X=192-A(1):: N$="-" :: F
OR J=2 TO X+1 :: N$=N$&STR$(
256-A(J)):: NEXT J :: GOTO 1
60
150 FOR J=2 TO X+1 :: N$=N$&
STR$(A(J)):: NEXT J
160 IF A(J)<>0 THEN N$=N$&".
"&STR$(A(J))
170 J=J+1 :: IF A(J)<>0 THEN
 N$=N$&STR$(A(J)):: GOTO 170
180 N=VAL(N$):: N$="" :: PRI
NT N :: GOTO 100
```

So, here is another Tigercub Challenge! Can you fix it? Let's HEAR from you this time!

Another problem that I ran into was in recovering from an I/O error. When ON ERROR is used to prevent crashing on such an error, the file is "ajar" - you can't close it and you can't open it. My solution was to simply RUN the program again - and this will show you how the pre-scan speeds that up. Since then, I have learned of three other ways. The method described in the Sydney (Australia) newsletter is a bit complicated, but Irwin Hott gave me a simple solution - just increment the file number! Works fine if you don't increment it into the number of another open file on the disk. Chuck Grimes gave me an even better way - open and close anything else, even "PIO"! Example -

```
100 ON ERROR 110 :: OPEN #1:
"DSK1.TEST",OUTPUT :: PRINT
"CONTINUE PROGRAM" :: END
110 OPEN #1:"PIO" :: CLOSE #
1 :: PRINT "I/O ERROR":"CHEC
K DISK AND DRIVE";"THEN PRES
S ANY KEY" :: ON ERROR STOP
120 CALL KEY(0,K,S):: IF S=0
 THEN 120 ELSE 100
```

There is a reason for that ON ERROR STOP, and it's why I don't use ON ERROR if I can avoid it. When an error occurs, the program goes to the line number specified by the last open ON ERROR statement, takes whatever action is directed by that line, and RETURNs as directed. If the error was not one that you expected to happpen, the results can be very confusing!
For that reason, when you set out to modify a program, the first thing you should do is delete, temporarily, all the ON ERROR statements. The next thing you should do, if the program has a routine to turn off the pre-scan, is to disable that. Otherwise, you will be driven crazy by invalid SYNTAX ERROR messages and other strange happenings.
The third thing you should do is to make a list of all the lines that a GOTO or GOSUB goes to, so you don't delete or change them. And here is a program to do just that for you -

```
100 !GO-SEARCH by Jim Peters
on searches a MERGE format f
ile, finds all line numbers
containing a jump, sorts int
o "to" line number sequence,
110 !prints "to" line number
, statement (GO, GOTO or GOS
UB) and "from" line number
120 DIM C(200):: A=1 :: GO$(
1)="GO" :: GO$(2)="GOTO" ::
GO$(3)="GOSUB"
130 INPUT "FILENAME? DSK1.":
F$
140 OPEN #1:"DSK1."&F$,INPUT
 ,VARIABLE 163 :: OPEN #2:"P
IO"
150 LINPUT #1:A$
160 IF POS(A$,CHR$(133),1)=0
 AND POS(A$,CHR$(134),1)=0 A
ND POS(A$,CHR$(135),1)=0 THE
N 210
170 LN=ASC(SEG$(A$,1,1))*256
+ASC(SEG$(A$,2,1)):: T=133 :
: P=1
180 G$=CHR$(T):: X=POS(A$,G$
```

```
,P):: IF X=0 THEN 200 :: LREF=ASC(SEG$(A$,X+2,1))*256+ASC(SEG$(A$,X+3,1))!:: PRINT #2:LN;GO$(T-132);LREF :: P=X+1 :: GOTO 180
190 C$=STR$(LREF)&","&STR$(LN)&STR$(T-132):: C(A)=VAL(C$):: A=A+1 :: P=X+1 :: GOTO 180
200 IF G$=CHR$(135)THEN 210 :: T=T+1 :: P=1 :: GOTO 180
210 IF EOF(1)THEN CLOSE #1 :: GOTO 220 :: ELSE 150
220 A=A-1 :: CALL LONGSHELLN(A,C())
230 FOR J=1 TO A :: A$=STR$(C(J)):: X=POS(A$,".",1):: Y=VAL(SEG$(A$,LEN(A$),1)):: A$=SEG$(A$,1,LEN(A$)-1)
240 PRINT #2:SEG$(A$,1,X-1);TAB(7);GO$(Y);" FROM ";TAB(21);SEG$(A$,X+1,LEN(A$)):: NEXT J
250 SUB LONGSHELLN(N,NN())
260 D=N
270 D=INT(D/3)+1 :: FOR I=1 TO N-D :: IF NN(I)<=NN(I+D)THEN 300 :: T=NN(I+D):: J=I
280 NN(J+D)=NN(J):: J=J-D :: IF J<1 THEN 290 :: IF T<NN(J)THEN 280
290 NN(J+D)=T
300 NEXT I
310 IF D>1 THEN 270
320 SUBEND
```

According to the User's Reference Guide that came with your computer, if you open a file without specifying INPUT, OUTPUT, UPDATE or APPEND, the computer will assume the UPDATE mode as the default and "UPDATE files may be both read and written. The usual processing is to read a record, change it in some way, and then write the altered record back out on the file." This is a very dangerous bit of misinformation! It is true only if you are using RELATIVE files with the REC clause. In any other case, the first record you write to the file will become the record FOLLOWING the last record you read, and it will also become the LAST record in the file - any records beyond that point will be lost!

The moral of the story - get in the habit of NEVER opening a file without specifying the mode. The only way to update a sequential file is to read it ALL into an array, update it, and then write it back to the file.

I reviewed hundreds of programs, in my PD library of about 2600, in order to select some of the best to fill up the collection disks. Often they needed only a few minor changes to greatly improve them.

One frequent flaw was in interpreting the status of CALL KEY. The User's Reference Guide says that a status variable of -1 means that "the same key was pressed during the performance of CALL KEY as was pressed during the previous performance." This is misleading. It actually means that the same key is STILL BEING pressed. Try this -

```
100 DISPLAY AT(12,1)ERASE ALL:"TYPE YOUR NAME" :: R=12 :: C=3
110 CALL KEY(0,K,S):: IF S=0 THEN 110 :: DISPLAY AT(R,C):CHR$(K):: C=C+1 :: GOTO 110
```

Difficult to type without unwanted repetition of letters? Now try changing the S=0 to S<1 !

IF S<1 (if S is less than 1) means that if no key is pressed (S=0) or if the same key is still being held down (S=-1) then CALL KEY again.

Another frequent flaw is

```
INPUT "WANT TO PLAY AGAIN? ":Q$ :: IF Q$<>"Y" THEN END
```

- or, more professionally programmed, IF SEG$(Q$,1,1)<>"Y" THEN....,

which will accept either "Y" or "YES" as a reply. The problem is still that this question is often asked at the end of a joystick game, for which the Alpha Lock will be unlocked - and a response of a lower case "y" then terminates the program! One solution is to precede the INPUT with a dummy CALL KEY(3,K,S), which will cause any subsequent upper case CALL KEY, INPUT, LINPUT or ACCEPT AT response to be read as lower case until you turn it off with CALL KEY(5,K,S).

Here's one that does nothing except look pretty.

```
100 DISPLAY AT(3,8)ERASE ALL:"COLORSQUARES" :: DISPLAY AT(8,1):"Select option 1, 2 or 3" ! by Jim Peterson, Tigercub Software
110 CALL KEY(0,K,ST):: IF ST=0 OR K<49 OR K>51 THEN 110 :: ON K-48 GOTO 150,120,130
120 FOR CH=38 TO 142 STEP 8 :: CALL CHAR(CH,RPT$("A55A",4)):: NEXT CH :: GOTO 150
130 FOR CH=38 TO 142 STEP 8 :: FOR L=1 TO 4 :: RANDOMIZE :: X$=SEG$("0018243C425A667E8199A5BDC3DBE7FF",INT(16*RND+1)*2-1,2)
140 B$=B$&X$ :: C$=X$&C$ :: NEXT L :: CALL CHAR(CH,B$&C$):: B$,C$=NUL$ :: NEXT CH
150 CALL CLEAR :: RANDOMIZE :: FOR SET=0-(K>49)TO 14 :: CALL COLOR(SET,SET+2+(K>49),SET+2):: NEXT SET
160 Y=INT(4*RND+3):: R=INT(12*RND+1):: R2=25-R-Y :: C=INT(7*RND+7):: C2=32-C-Y :: IF K=49 THEN X=INT(14*RND+1)*8+22 ELSE X=INT(13*RND+1)*8+38
170 FOR T=R TO R+Y :: CALL HCHAR(T,C,X,Y):: CALL HCHAR(T,C2,X,Y):: NEXT T
180 FOR T=R2 TO R2+Y :: CALL HCHAR(T,C,X,Y):: CALL HCHAR(T,C2,X,Y):: NEXT T :: GOTO 160
```

The asterisk on the Gemini printer looks rather like a bug squashed side- ways, and it was confusing some folks in the condensed print of my newsletter, so I improved it with this -

```
150 PRINT #2:CHR$(27);CHR$(42);CHR$(1);CHR$(42);CHR$(8);CHR$(8);CHR$(34);CHR$(8);CHR$(0);CHR$(62);CHR$(0);CHR$(8);CHR$(34);CHR$(8);
```

And at the same time I improved the slashed zero -

```
140 PRINT #2:CHR$(27);CHR$(42);CHR$(1);CHR$(48);CHR$(0);CHR$(64);CHR$(30);CHR$(96);CHR$(17);CHR$(72);CHR$(5);CHR$(66);CHR$(61);CHR$(0);
```

```
90 !THIS WON'T WORK, WILL IT ?
100 DISPLAY AT(9999,9999)ERASE ALL:SEG$("CAN'T DO THAT!",1,3)&SEG$("CAN'T DO THAT!",6,8)
```

If the Tigercub Math Puzzle in Tips #27 was a bit too tough, these changes will add a couple of easier levels.

```
105 DISPLAY AT(6,1):"Level 1, 2, 3 or 4?" :: ACCEPT AT(6,21)VALIDATE("1234"):L$ :: L=VAL(L$)
106 IF L<3 THEN M$="Insert +, -, or * (multiply)" ELSE M$="Insert +, -, * (multiply) or / (divide)"
110 DISPLAY AT(5,1):M$;" between the digits":" to equal the total": :"Type 0 to give up"
120 ! **DELETED LINE **
130 DISPLAY AT(12,1):" " :: T,X=INT(9*RND+1):: M$=STR$(X):: Z$=M$&" "
140 FOR J=1 TO 4 :: Y(J)=INT(9*RND+1):: @=3+ABS(L>2):: Z=INT(@*RND+1):: ON Z GOSUB 240,250,260,270 :: Z$=Z$&STR$(Y(J))&" " :: NEXT J
150 IF L/2<>INT(L/2)AND T<>INT(T)THEN 130 :: Z$=Z$&"="&STR$(T)
```

MEMORY FULL

Jim Peterson

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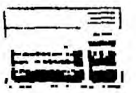

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inCider's Ratings

★★★★ Superlative
★★★ Above average
★★ Good
★ Not recommended
Stay away

Centronics GLP

Centronics Data Computer
1 Wall Street
Hudson, NH 03051

Dot-matrix printer
$299
★★

The under-$500 price category is an attractive draw if you're searching for a dot-matrix printer. The GLP (for Great Little Printer) is the latest offering from Centronics, and it will probably give adequate service for light users. With so many choices, however, the GLP doesn't look like it has what it takes to rival the quality and reputation of Epson.

Certainly at least part of the printer's name is correct. This printer is *little*—a scant 12 by 7 by 2½ inches. It's light, too, weighing less than 7 pounds. And the GLP is portable—an important consideration if you have an Apple //c that goes where you go. The GLP solves another problem: It has a serial RS-232C interface just waiting for your //c, and, not surprisingly, it also sports a Centronics-type parallel port. Of the few printers on the market featuring both interfaces, this is one of the least expensive. If you have an Apple //e and a //c, having both interfaces can be a true blessing.

The GLP runs standard Epson-style printer-control codes—a wise design choice, since there isn't a decent software package that doesn't work with an Epson-style printer.

A Stay-at-Home Printer

The GLP makes a reasonable home printer. This unit isn't up to workhorse hard-copy production, but it's suitable for program listings, letters, and graphics. (The GLP does a nice job of graphics using the familiar Epson control sequences, and it should work with most graphics programs that employ these commands.) It isn't an office-duty printer, and it doesn't seem intended as such. You'll need an Epson, Okidata, or similar machine if you plan to keep your printer busy.

A traditional 9-pin print head layout yields satisfactory print in draft mode. The enhanced mode produces dot-matrix type quite close in quality to that of the Epson MX-80.

The GLP provides all the usual print sizes and modes: pica (10 point), condensed, and enlarged, along with emphasis, double-strike, subscript, superscript, and underlining. While every mode isn't available in all sizes, there are enough combinations to suit most needs. There is no provision, however, for the more readable 12-point print size, however.

Printing speed clocks in at 50 characters per second, slow by dot-matrix standards. Emphasized- or enhanced-correspondence mode slows the print speed down accordingly. Don't look for quiet operation—this little printer is big on noise.

The easy-to-use manual describes each printer escape sequence, and includes short BASIC programs demonstrating the print features. The result of each escape function (bold, superscript, enhanced, double-density graphics mode, various line spacings, tabs, line feeds, and the like) is also shown in the manual.

This light-weight printer is constructed of plastic, making the unit a bit sensitive to hard use and a potential source of difficulties. For instance, the outer case on my test printer slightly overlaps the on-off rocker switch and prevents it from moving. Agile fingers and a thin, strong instrument helped—but didn't fix—the problem.

Feeding Time

I also found it difficult to get the paper feed to work smoothly without snagging the paper. Without a paper guide, you must align each sheet, unless you buy the $23 add-on pinfeed tractor for continuous-form paper. And according to Centronics, the optional paper-roll holder shown in the manual isn't available yet.

Installing the ribbon presents some difficulties. Because of the way you must loop it through the printer, about a foot of wasted ribbon gets in your way. In addition, the GLP's ribbons are specific to this model. Ribbon availability could be a problem if this printer doesn't become popular.

Perhaps there is a need for another low-cost, dot-matrix printer, but I suspect the market is already saturated. The GLP now joins this group of dot-matrix home printers, where it may get lost in the shuffle of similar machines.■

Roger Hart
Merrimack, NH

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