

# TI - D - BITS

PHILADELPHIA AREA USERS GROUP NEWSLETTER  
COVERING THE TI99/4A  
AND MYARC 9640 COMPUTERS

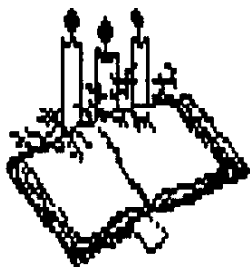
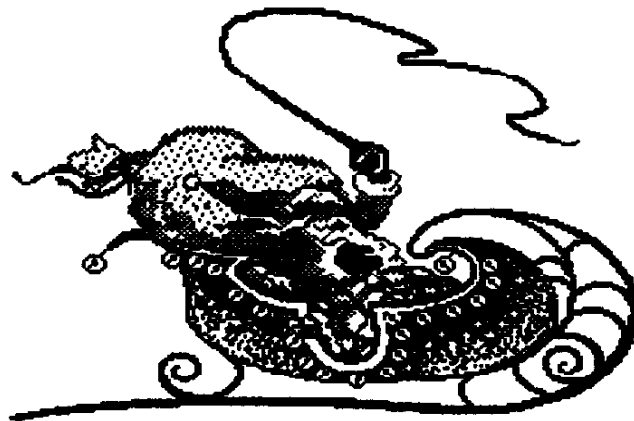
## DECEMBER 1990

Volume 10 Number 10



### SEASONS

### GREETINGS



Merry  
Christmas

HAPPY  
CHANUKAH



The Philadelphia Area TI-99/4A Users' Group meets twice a month. On the first Saturday of any given month, we meet at the Bucks County Youth Development Center, (YDC, which is next to Neshaminy Mall), Administration Building, beginning at 10:00 am. On the third Saturday of each month, we meet at LaSalle University, 20th Olney, in room H-329 located in the Science Building. Membership to The Philadelphia Area TI-99/4A Users' Group is available to all. We invite anyone that is interested in the TI-99/4A to visit us. Stop in and see what is available to you for your TI and how membership can benefit you!

Current executive board consists of:

PRESIDENT..... Allan Silversteen. 215-885-7910  
 VICE PRESIDENT..... Eric Bray..... 215-848-5515  
 SECRETARY..... Mark Wannop..... 609-365-1776  
 TREASURER..... Don Arsenaault..... 215-368-0446

Committees consists of:

TI-d-BITS .... Ralph Field..... 215-362-2534  
 Don Arsenaault..... 215-368-0446  
 OPEN  
 Rice Hall  
 LIBRARY ..... Ted Chemey..... 215-752-1458  
 Rich Mascara 215-441-4060  
 MEMBERSHIP ... OPEN  
 ASSISTANT TREASURER. Frank Passini  
 EDUCATION .... Barry Traver  
 Frank Passini  
 Ted Chemey  
 Tim Coyne  
 Carlo Angelico  
 EQUIPMENT .... Rice Hall  
 PROGRAM ..... Dr. Eric Bray

REMEMBER to be considerate when calling any of the above people. Limit your calls to the early evening hours. (6pm to 9pm)

The opinions expressed herein are those of the individual authors are not necessarily those of the Philadelphia Area TI-99/4A Users' Group or its officers. Nor is the Philadelphia Area TI-99/4A Users' Group or any of its officers responsible for any damage, inconvenience, or loss which may result as a consequence of the use of any written material herein.

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Classified ads are printed in blocks. A block consists of 3 lines, 55 characters wide, or any increment of 3 lines. Classified advertising is accepted from members at NO CHARGE for a one block ad, per issue. Additional ads from members may be placed at cost of \$1.00 per block. Non-members may place classified ads at a cost of \$2.00 per block. All advertisements MUST be paid for in advance.

Commercial advertising is accepted for publication at the following rates:

Quarter page ..... \$ 5.00  
 Half page ..... \$ 8.00  
 Full page ..... \$15.00

Commercial advertisements will be placed in the next available issue. All advertisements MUST be paid for in advance.

The editor of TI-d-Bits or the executive board of The Philadelphia area TI-99/4a Users' Group reserve the right to reject any material submitted for publication for any reasons.

The Philadelphia Area TI-99/4A Users' Group's program library is available to all active members at NO CHARGE for copying to your disk. A charge of \$2.00 per disk is made for club supplied disks for members. Non members may obtain copies of the library for a fee of \$5.00 per disk. A catalog of the library's contents is given to all new members upon request and updates will appear in this publication from time to time. To obtain material from the library, contact the librarian for the best procedure to obtain your requests.

NEW AGE/99By Jack Sughrue

Declining membership in the TI World is definitely a real problem which has some interesting and real solutions.

The old guard is getting tired and its members no longer want to (or are too tired to) be presidents and newsletter editors and workshop demonstrators and librarians and bulletin board downloaders and whatever. They can't be blamed for this. Nobody can continue to operate well forever, particularly in what seems an unappreciative atmosphere.

Almost every newsletter I read has the same common problems: basically, too few doing too much for too long. This is true in LA and in Boston and in Canada and England and Australia. Large changes are taking place within groups, in many cases with very bad vibes coming across strongly in the newsletter pleadings. Over and over we see such things as "This club is dying ." and "If the members who never contribute don't start doing something soon..." followed by serious threats.

Realistically, a group without a newsletter is a corpse that hasn't yet been identified as such. There are exceptions, of course, but a club without a newsletter is a body without a brain. So, first things first, keep a newsletter going. This is also the biggest (or only) contact with the outside world through exchanges.

Next, a regular monthly meeting NEAR ROUND is essential. Without a place to gather (even if it comes to homes, as a last resort) there can be no club. A club implies a community, a spirit of friendship and commonality, a gathering. Business and pleasure must be mingled here and can only be done by meetings.

Those are the two big things. Even if your group has only three members, but you put out a newsletter and meet regularly, you can still have a viable, worthwhile user group. Outmeg 99ers of Connecticut and the Lima Users Group of Ohio are two fine examples of Terrific Tinies. But, believe me, there are many, many more, and they are more common than the large, flourishing groups.

There are some other things to

consider, too, of course.

Is it worth complaining constantly in print an at meetings that too many are not doing their fair share. Most of the people who sit on their hands and don't take leadership roles are not capable and know it. Not everybody is a leader. Not everybody is outgoing and comfortable performing in public. There are lots of insecure (though maybe talented) people who just cannot put themselves on the line. It has nothing to do with laziness or meanness or unwillingness or lack of responsibility. Some of these people come to every meeting; all continue to pay their dues.

And, in truth, everybody in the group has, when allowed and encouraged by the leadership, probably contributed in some continuous, if not significant ways.

My own group - M.U.N.C.H. of Worcester, Mass. - is typical, I think, of most. We went from over 200 members to about 15 (5 or 6 of whom were active) to about 40 (a dozen of whom are active in one way or another).

There are officers, of course. Our Treasure (Jim Cox) was one of the founders and has continued to man that post and perform lots of others (including membership and newsletter editor at the present). Without him there'd be no club. Every club has a Jim Cox, someone with incredible dedication and common sense. All the rest of us have done different things: officers, editors, workshop demonstrators. Some have brought in friends; some have written programs; some have cataloged our libraries; some have helped with sales and fundraising and faires. All have paid their dues; most come to meetings, take part in raffles, appear interested in demos and workshops. All enjoy the company of fellow Tiers, which has to be the most important aspect of a group.

A lot of us lead some incredibly busy lives. One member flies all over the country and never knows when he'll be able to make a meeting. When he comes, though, he brings enthusiasm and knowledge which he so generously shares. Our chief BBSer who provides the club with many of the library and Disk of the Month goodies misses most

meetings because of courses he's taking toward a degree. His sharing doesn't stop, though, as the boards, phones, and mail demonstrate. Then there are illnesses or family matters or all the other obstructions of life in this complex age. But we're still linked by newsletter, library, and common desire to keep a good thing going and growing.

So our M.U.N.C.H group is a success, as are lots of other groups who don't realize they are.

If you still have an operating group; if you still put out a newsletter, share materials, meet regularly, enjoy some of the friends you've made through TI - then you have a successful group. The workload may not be equitable, but no situation in life ever is.

For what it's worth, here are a few suggestions to get members reinvolved, revitalized: At the next club meeting find out the following:

1) What kinds of newsletter does the club want (type-in programs, latest hard/software, reviews, club news, graphics, whatever).

2) If everyone would be willing to contribute something to a raffle (blank disks, tapes, cables, non TI stuff even).

3) If all members would dig through old disks and tapes and locate at least THREE programs they like (or liked back in the old days) to add to a giant club D.O.M. (games, utilities, kids programs, LOGO stuff, tutorial text files, whatever).

4) And maybe demo at least ONE????

5) Hold a NOVICE NIGHT! This would be to introduce beginners, older kids, and definitely long-time Tiers to the fun of writing in BASIC (or XB). I know there are thousands of TI users who became comfortable with their machines and have used them successfully for years and are now ready to learn to program or would make a refresher. All the old newsletters contain GREAT little tutorials, type-in programs, etc. Just what the doctor orders for a new boost in attitude. Maybe this would be a continuing thing with EVERYBODY who wants to getting involved in research, xeroxing, demoing, tutoring, whatever. But mostly sharing and helping. There are more of us

amateurs out there (probably 1000 to 1) than wizards.

In order to get reformed we need to remember the three Rs: Review, Rethink, Rekindle!

\*\*\*\*\*

\* IMPACT/99 \*  
By Jack Sugarue

GENIAL COMPUTERWARE (Box 183, Grafton, MA 01519) is emerging as a TI software developer to challenge long-time leader in this field, ASGARD SOFTWARE (Box 10306, Rockville, MD 20850. Both companies free catalogs make a 99er's mouth water.

Genial's 15 programs (by authors Peter Huddle, Paul Charlton, Warren Agee, Mike Dodd, John Johnson, and Wayne Stith) are primarily utility: MACFLIX (\$15) lets you view print, and save graphics created on the Macintosh; PICTURE TRANSFER (\$30) permits viewing different graphic files, creating slide shows, combining multiple images, and converting among formats (GIF, RLE, MYART, GRAPHX, TI-ARTIST) for the Geneve; TRIAD (\$20) combines the features of a terminal emulator, 40-column text editor, and disk manager in one program; HYPERCOPY (\$20) is called by Genial "the final word in disk copiers" and can copy an SSSD in less than 35 seconds, provide a skewing technique for factor disk reads, format, provide multiple copying facilities, and more; GRAPHICS EXPANDER (\$10) not only converts between TI-ARTIST and CSGD formats but can stretch, shrink, mirror, and rotate graphics all in fast assembly; GRAMPACKER (\$10) customizes GRAM emulating devices in significant and very useful ways; XBASHER (\$10) is faster and better than Jack Sugarue's SMALLIFYING program contained within his PLUS! disk and can compress up to 1/3 of an XB program; XB.BUG (\$15) debugs, modifies searches, displays as it provides a fine XB tool for the programmer; REMINDE ME (\$15) functions as a fun and fast schedule planner with all kinds of built-ins; BROWSE (\$10) aids in the management of text files by permitting viewing, printing, combining, and browsing; PC TRANSFER (\$25) fast and efficient way of moving data between your TI (and/or Geneve)

and an MS-DOS machine make this an extremely valuable tool for those users who work with IBM; GENIAL FONT PACKS (\$10 each) provide a collection of 19 different fonts for use with TI-ARTIST along with some additional graphics program; and FIRSTBASE (\$49.95) a full-featured database program expected to be the only real competition to the powerful TI-BASE (\$24.95 - Inscobot, P.O. BOX 291610, Ft. Orange, FL 32029), will have a variety of exceptionally fine database features for the TI or Geneve.

Asgard's catalog of 57 software packages contains a larger variety of materials for the TI/Geneve user: games, graphics, utilities, production tools. In addition to Hoddie, Agee, and Charlton, the author/artists who create Asgard software include Ken Hilliland, Donn Granros, Harry Wilhelm, Tom Wynne, Chris Bobbitt, Ed Johnson, Robert Coffey, Tom Bentley, John Behnke, Jim Reiss, Mickey Schmitt, Paul Scheidemantle, Howard Oman, Tom Wible, Travis Watford, and Charles Earl.

Games: BALLOON WARS (\$4.95) an arcade strategy game with 20 screens of dangerous manned balloon flying; COLUMN ATTACK! (\$9.95) an 11-level fast arcade game demands perfect laser control to derate the insaneslugelins; DOOM GAMES I & II (\$7.95 each) include a pile of bizarre epics for the TUNNELS OF DOOM addicts; THE GAME PACK (\$5.95) provides two distinct arcade games on one disk (Haunted Mine II and Missile Wars); HIGH GRAVITY (\$9.95) is an addictive space simulation game that must be played to be appreciated (and my personal favorite); VOLCANO FORTRESS (\$7.95) is a collection of five additional TOD great games; LEGENDS (\$22.95) is considered by MICROpendium, Computer Shopper and many newsletters to be the best graphics adventure game EVER for the TI; LEGENDS II: THE SEQUEL (\$17.95) features so many new, exciting things it is already considered by many to ven be better than its predecessor; OLD DARK CAVES: THE LOWER CAVERNS (\$17.95) by the same auther not only continues with the extraordinary graphics of the LEGENDS series but contains a 50-level dungeon; LIVER'S TWIST (\$9.95) will satisfy

the craving of Adventure Module owners with this very unusual adventure.

Graphics programs from Asgard that are \$7.95 each include two sets of ARTIST BORDERS, five of ARTIST FONTS, and nine of ARTIST INSTANCES. The variety of these TI-ARTIST collections is incredible. There is also ARTIST ENLARGER (\$9.95) which can enlarge, squeeze, stretch, or reduce single in multiple passes any pictures or fonts; FONTWRITER II (\$22.95) provides a companion/environment for TI-ARTIST that will let you successfully use graphics with any version of TI-WRITER; GRAPHX COMPANION SERIES (\$24.95) contains all four packages of this popular series of hundreds of pictures, clipart, borders, fills, and more; DISK OF DINOSAURS (\$12.95) is a delightful and unique graphic package of dinosaurs and animation; GRAPHX SLIDESHOW (\$9.95) allows viewing of GRAPHX or RLE pix in extraordinary ways; MY-ART COLORING BOOK (\$9.95) for the Geneve is a companion to the MY-ART program.

Although Asgard has always been famous for such productivity tools as RECIPE WRITER (and the ELECTRONIC GOURMET companions), SCHEDULE MANAGER, STAMP MANAGER, and the freewheeling C-database TOTALFILER, the company has released a new pile of unique additions. TYPEWRITER (Disk \$19.95, Module \$24.95, Module with built in printer port \$39.95) is just what it says it is - a full-featured electronic typewriter that is incredibly easy to use; CALENDAR MAKER 99 (\$19.95) and CALENDAR MAKER UTILITIES (\$12.95) will satisfy even the most jaded calendar user with user-friendly graphic/text picture perfect calendars from any month or any year from 1600 to 2400; CASSETTE LABELER (\$9.95) simply and quickly prints detailed casset box inserts for your computer or audio cassettes; FORM MAKER 99 (\$24.95) not only creates very complicated business forms but almost any kind of ANYTHING that can be designed for home, school, business, PTO, the kids, or anything else.

Asgard's Utilities include BATCH-IT! (\$19.95) which permits all kinds of sophisticated programming techniques with a minimal amount of

effort; EZ-KEYS PLUS (\$14.95) considered the ultimate XB programmer's environment has just as many uses for non programmers; BEYOND VIDEO CHESS (\$9.95) lets you -AT LAST! save and load chess games to disk, print screen or listing of moves, control the pieces with a joystick, use the board for two players, and more; MUSIC SYNTHESIZER (\$9.95) lets a novice create music by dropping the notes onto a screen page; PR-EDITOR (\$19.95), a multi-featured, superb text editor, is a programmer's ultimate tool, no matter what language you write in; RAM\*BOOT (\$9.95) automatically boots setups for Myarc's 28 and 512K cards; TOD EDITOR (\$19.95) is the only utility for creating or changing TOD games; QUICK-RUN (\$9.95) may be destined for the most-used XB utility for the TI once people begin to use it as its the fastest way to operate XB programs in existence.

It is well worth every TI owner's time and quarters to send off for these tempting, descriptive catalogs from Asgard and Genial.

\*\*\*\*\*

USING MULTIPLAN  
By D.L.Mahler  
Boston Newsletter

There are many ways Multiplan can be used to maintain records needed for income tax preparation. One of the most obvious is to keep running records of deductible expenses. As an example, set up the following headings:

ITEM{r1c1}DATE{r1c2}AMMOUNT{r1c3}  
TAX{r1c4}CONTRIB{r1c5}MEDICAL{r1c6}  
MISC{r1c7}

Draw in lines in r2c1 (-----) and use COPY RIGHT 6 to put the lines in the other columns. Enter the first item in r3c1,r3,2,r3,3 (e.g. RE TAX, 01/02 ,1000). Make sure you use ALPHA, not VAL for the date, or MP will try to do division. Do not use the \$ sign; we will take care of that later! Remember, CTRL1 will always bring you to top left corner and FCTN1 to bottom right corner. When a menu is shown. CTRL A brings you to

next item on that menu, and CTRL C wipes that menu. ENTER will execute the command showing on screen. Slide over to r3c3, call up COPY FROM, use arrows to get to r3c4, and press ENTER; voila!

Now call up WINDOWS SPLIT TITLE (1 col vert) and (2 rows horizontal); press ENTER. The headings will now always be on screen.

Call up FORMAT CELLS "r33:22c3:7" C \$ ; you will see ##### replace the 1000 because \$1000.00 needs more width than 1000. So call up FORMAT WIDTH while the ### box is highlighted and change width from "d" to 10; "\$1000.00" should appear. Use the same procedure in other columns as needed.

Use NAME command to name c4r3:20 "TAX", c5r3:20 "CONT", c6r3:20 "MED", c7r3:20 "MISC". (You can always INSERT more rows as you need them!). Page down to row 22, call up VAL, and in r22c4 enter "SUM(TAX)", in r22c5 "SUM(CONT)", in r22c6 "SUM(MED)", and in r22c7 "SUM(MISC)". (Do not type in quote marks.) Now hit F8 (recalculate); starting to look like something, isn't it? Now enter your additional items, in each case using COPY FROM to copy from c3 to appropriate column. Note that you do not actually have to type in the desired cell; as you page over MP names the active cell, so just press ENTER when you arrive there. When you finish the current batch of entries, hit F8 and all the calculations are done. Don't forget to TRANSFER SAVE your data on disk under some name as TXDED90.

To obtain hard copy on your printer, call up PRINT, set margins and field size (e.g., c1:7r1:22 or higher if you have added rows). Use of Jack Mathias's TIMP-PRINT will allow you to use compressed print, italics, double-strike, etc. in various areas of your print-out.

I was going to go on to show how to keep track of taxable income from municipal bond funds, but think we will leave that for next time if there is interest.

TIPS FROM THE TIGERCUB

#35

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TIGERCUB SOFTWARE  
156 Collingwood Ave.  
Columbus, OH 43213

Distributed by Tigercub Software to TI-99/4A Users Groups for promotional purposes and in exchange for their newsletters. May be reprinted by non-profit users groups, with credit to Tigercub Software.

Over 130 original programs in Basic and Extended Basic, available on cassette or disk, only \$3.00 each plus \$1.50 per order for PPM. Entertainment, education, programmer's utilities. Descriptive catalog \$1.00, deductible from your first order.

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Tips from the Tigercub Vol. 2, another diskfull, complete contents of Nos. 15 through 24, over 60 files and programs, also just \$15 postpaid. Or, both for \$27 postpaid.

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Tigercub Full Disk Collections, just \$12 postpaid! Each of these contains either 5 or 6 of my regular \$3 catalog programs, and the remaining disk space has been filled with some of the best public domain programs of the same category. I am NOT selling public domain programs - my own programs on these disks are greatly discounted from their usual price, and the public domain is a FREE bonus!

- TIGERCUB'S BEST
- PROGRAMMING TUTOR
- PROGRAMMER'S UTILITIES
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- BRAIN TEASERS
- BRAIN BUSTERS!
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- ACTION GAMES
- REFLEX AND CONCENTRATION
- TWO-PLAYER GAMES
- KID'S GAMES
- MORE GAMES
- WORD GAMES
- ELEMENTARY MATH
- MIDDLE/HIGH SCHOOL MATH
- VOCABULARY AND READING
- MUSICAL EDUCATION
- KALEIDOSCOPIES AND DISPLAYS

For descriptions of these send a dollar for my catalog!

The April Micropendium had a rather slow routine to count the number of words in a D/V text file. I think the following will be much faster. It ignores any lines beginning with a period (TI-Writer formatter commands), otherwise counts each cluster of characters followed by a space, plus the last cluster on the line.

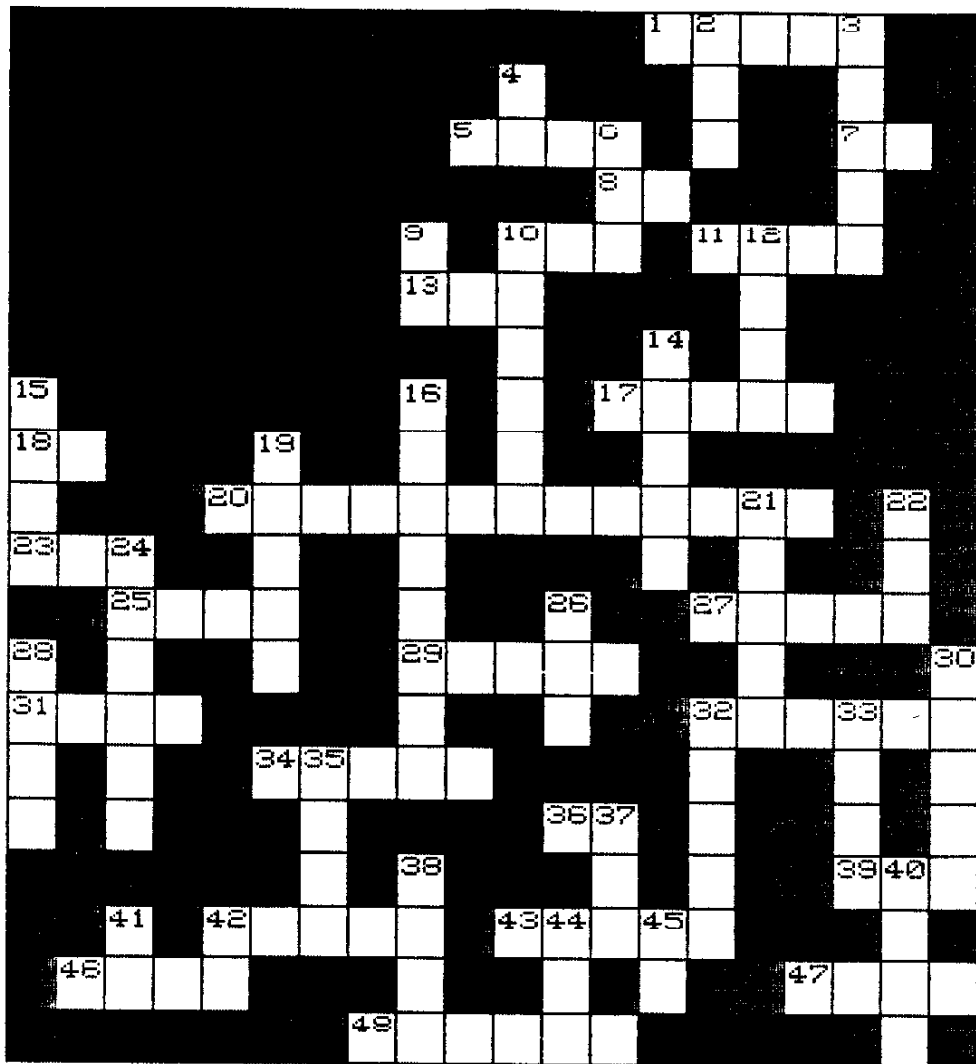
10 !WORDCOUNT by Jim Peterson

```
100 DISPLAY AT(12,1)ERASE ALL:
L:"INPUT FILENAME? DSK" :: ACCEPT AT(12,20):F$ :: OPEN #1:"DSK"&F$,INPUT
110 A=1 :: LINPUT #1:M$ :: IF ASC(M$)=46 THEN 130
120 X=POS(M$," ",A):: IF X=0 THEN 130 :: IF X=A THEN A=X+1 :: GOTO 120 ELSE F=1 :: C=C+1 :: A=X+1 :: GOTO 120
130 C=C+F :: F=0 :: IF EOF(1)<>1 THEN 110 :: CLOSE #1 :: DISPLAY AT(12,1)ERASE ALL:"APPROXIMATELY "&STR$(C)&" WORDS"
```

Have you tried those black write-protect tabs, made of a material similar to electrical tape? They do not become dog-eared from bumping against the drive slot, and do not leave the disk sticky when you remove them.

```
100 !TIGERCUB GRAPHPRINT by Jim Peterson
110 !Will output to printer a line graph of 31 items of data, as for instance the temperature for each day of a month
120 !Values must be positive integers within a range of 75 from minimum to maximum
130 M$=RPT$(" ",65):: DIM T$(31),D$(75):: MN=10000
140 DISPLAY AT(12,1)ERASE ALL:L:"Input data - maximum 31": "items. Enter to finish"
150 FOR X=1 TO 31 :: DISPLAY AT(14,1):X;TAB(4);CHR$(1):: ACCEPT AT(14,4)VALIDATE(DIGIT)SIZE(-5)BEEP:T$(X):: IF T$(X)=CHR$(1)THEN X=X-1 :: GOTO 170
160 T=VAL(T$(X)):: MX=MAX(MX,T):: MN=MIN(MN,T):: NEXT X
170 RN=MX-MN :: IF RN>75 THEN PRINT "EXCEEDS MAXIMUM RANGE OF 75" :: STOP
180 IF MX>75 THEN AD=MX-75
190 OPEN #1:"PIO",VARIABLE 132 :: PRINT #1:CHR$(15);CHR$(27);CHR$(51);CHR$(12):: PRINT #1:RPT$(" ",132)
```

A CROSSWORD PUZZLE FOR YOU



ACROSS

DOWN

- |                                    |   |
|------------------------------------|---|
| 1. TYPE OF WATER LILY              | 2. POSSESS                                  |
| 3. GUN'S RECOIL                    | 3. SLY DISPARAGING                          |
| 5. PRONOUN                         | 4. WHAT WE ALL HAVE                         |
| 6. STEINBERG CHARACTER             | 6. WORD WITH SKELETON OR SKATE              |
| 10. SNEAKY                         | 9. CITY BELONGING TO NO STATE               |
| 11. A LA----                       | 10. UNEXPECTED                              |
| 13. HEART OF COMPUTER              | 12. MUSICAL COMPOSITION                     |
| 17. RODENT                         | 14. ELECTRONIC DRAWING PAD                  |
| 18. NOT OFF                        | 15. SYSTEM OF SYMBOLS                       |
| 10. COMPUTER NOTED (2 WORDS)       | 16. MONTH                                   |
| 13. RECEDE; ABATE                  | 19. MADE OF FLAX                            |
| 15. FEMININE SUFFIX                | 21. BANISH                                  |
| 17. PRINTS A PROGRAM               | 22. CLEAR SCREEN                            |
| 19. FUNDAMENTAL: COMPUTER LANG.    | 24. GRANDE OR DE JANEIRO                    |
| 21. EIGHT BITS                     | 28. WOODWIND INSTRUMENT                     |
| 32. DISK DIVISION                  | 30. WHAT A PRINTER CAN DO                   |
| 34. OAK NUT                        | 32. SPREAD                                  |
| 16. LETTERS IN A LIGATURE          | 33. TRIAL                                   |
| 19. EXPLOSIVE                      | 35. BAR USED TO RAISE PITCH OF STRING INST. |
| 42. COPY                           | 37. MORAY                                   |
| 43. SMALLEST AMOUNT                | 38. ----DECIMAL                             |
| 46. COMMAND TO REVERSE LAST ACTION | 40. THE BIG APPLE                           |
| 47. YEARS                          | 41. OPPOSITE OF OUT                         |
| 48. EQUALITY                       | 42. PREFIX FOR HOST OR EXIST                |
|                                    | 44. SUPERLATIVE SUFFIX                      |
|                                    | 45. COMPASS DIRECTION                       |

(PUZZLE SOLUTION ON PAGE 8)



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```
100 DISPLAY AT(12,1)ERASE ALL:
L:"INPUT FILENAME? DSK" :: ACCEPT AT(12,20):F$ :: OPEN #1:"DSK"&F$,INPUT
110 A=1 :: LINPUT #1:M$ :: IF ASC(M$)=46 THEN 130
120 X=POS(M$," ",A):: IF X=0 THEN 130 :: IF X=A THEN A=X+1 :: GOTO 120 ELSE F=1 :: C=C+1 :: A=X+1 :: GOTO 120
130 C=C+F :: F=0 :: IF EOF(1)<>1 THEN 110 :: CLOSE #1 :: DISPLAY AT(12,1)ERASE ALL:"APPROXIMATELY "&STR$(C)&" WORDS"
```

Have you tried those black write-protect tabs, made of a material similar to electrical tape? They do not become dog-eared from bumping against the drive slot, and do not leave the disk sticky when you remove them.

```
100 !TIGERCUB GRAPHPRINT by Jim Peterson
110 !Will output to printer a line graph of 31 items of data, as for instance the temperature for each day of a month
120 !Values must be positive integers within a range of 75 from minimum to maximum
130 M$=RPT$(" ",65):: DIM T$(31),D$(75):: MN=10000
140 DISPLAY AT(12,1)ERASE ALL:
L:"Input data - maximum 31":
"items. Enter to finish"
150 FOR X=1 TO 31 :: DISPLAY AT(14,1):X;TAB(4);CHR$(1):: ACCEPT AT(14,4)VALIDATE(DIGIT)SIZE(-5)BEEP:T$(X):: IF T$(X)=CHR$(1)THEN X=X-1 :: GO TO 170
160 T=VAL(T$(X)):: MX=MAX(MX,T):: MN=MIN(MN,T):: NEXT X
170 RN=MX-MN :: IF RN>75 THEN PRINT "EXCEEDS MAXIMUM RANGE OF 75" :: STOP
180 IF MX>75 THEN AD=MX-75
190 OPEN #1:"PIO",VARIABLE 132 :: PRINT #1:CHR$(15);CHR$(27);CHR$(51);CHR$(12):: PRINT #1:RPT$(" ",132)
```

```

200 DISPLAY AT(12,1)ERASE AL
L:"Wait, please..." : ".....
.this takes time"
210 LM=LEN(STR$(MX)):: FOR J
=1 TO 75 :: J$=STR$(76+AD-J)
220 IF J>66+AD THEN J$=J$&"
"
230 IF J/2=INT(J/2)THEN D$(J
)=RPT$(" ",LM)&SEG$(M$,1,132
-LM)ELSE D$(J)-J$&SEG$(M$,1,
132-LM)
240 NEXT J :: PRINT #1:RPT$(
" ".LM)&SEG$(M$,1,132-LM)
250 J=1 :: T=VAL(T$(J))-AD :
: T=76-T :: D$(T)=SEG$(D$(T)
,1,J*4+4)&CHR$(239)&SEG$(D$(
T),J*4+6,255):: J=J+1
260 T2=T :: T=VAL(T$(J))-AD
:: T=76-T :: FOR N=T2 TO T S
TEP (T2>T)+ABS(T>=T2):: D$(N
)=SEG$(D$(N),1,J*4+2)&CHR$(2
53+(T<T2))&SEG$(D$(N),J*4+4,
255):: NEXT N
270 J=J+1 :: D$(T)=SEG$(D$(T
),1,J*4)&CHR$(239)&SEG$(D$(T
),J*4+2,255):: IF J<=X THEN
260
280 FOR J=1 TO 75 :: PRINT #
1:D$(J):: NEXT J :: PRINT #1
290 T=8 :: FOR J=1 TO 31 ::
PRINT #1:TAB(T);STR$(J):: T
=T+4 :: NEXT J

```

When you are analyzing an Extended Basic program, or modifying it, it is often easier to work with single-statement lines. This program will break all multi-statement lines into single-statement lines, except when they are followed by IF or ELSE. When you are finished modifying, a Compactor or Smash program can be used to compact it again.

```

100 !DECOMPACTER by Jim Peter
son
110 DISPLAY AT(3,5)ERASE ALL
:"TIGERCUB DECOMPACTER": "
Program must first be -: "
RES 100,100": "SAVE DSK(fil
ename),MERGE"
120 DISPLAY AT(12,1):"INPUT
FILENAME?":"DSK" :: ACCEPT A
T(13,4):IF$
130 DISPLAY AT(12,1)ERASE AL

```

```

L:"OUTPUT FILENAME?":"DSK" :
: ACCEPT AT(13,4):OF$
140 OPEN #1:"DSK"&IF$,INPUT
,VARIABLE 163 :: OPEN #2:"DS
K"&OF$,OUTPUT,VARIABLE 163 :
: LN=100
150 LINPUT #1:M$ :: P=POS(M$
,CHR$(130),3):: IF P=0 THEN
PRINT #2:M$ :: GOTO 270
160 A$=SEG$(M$,1,P-1):: IF P
OS(A$,CHR$(129),1)<>0 OR POS
(A$,CHR$(132),1)<>0 THEN PRI
NT #2:M$ :: GOTO 270
170 PRINT #2:A$&CHR$(0)
180 AN=LN+1 :: GOSUB 280
190 M$=SEG$(M$,P+1,255)
200 P=POS(M$,CHR$(130),1)
210 IF P=0 THEN PRINT #2:LN$
&M$ :: GOTO 270
220 A$=SEG$(M$,1,P-1)
230 IF POS(A$,CHR$(129),1)<>
0 OR POS(A$,CHR$(132),1)<>0
THEN PRINT #2:LN$&M$ :: GOTO
270
240 PRINT #2:LN$&A$&CHR$(0)
250 AN=AN+1 :: GOSUB 280
260 GOTO 190
270 LN=LN+100 :: IF EOF(1)<>
1 THEN 150 ELSE CLOSE #1 ::
CLOSE #2 :: END
280 LN$=CHR$(INT(AN/256))&CH
R$(AN-256*INT(AN/256)):: RET
URN

```

I still think of the TI as a HOME computer, and I still think that the home computer is an invaluable educational tool - but I guess not many folks agree with me. I had thought of writing full disks of a progressive series of lessons on one subject, but my present two full disks of math education have sold a combined total of 7 copies in 7 months, so that would obviously be a waste of time.

I had written this next program for that purpose and I guess it's no use wasting it, so -

```

100 CALL CLEAR :: CALL TITLE
(5,"TAKE AWAY")!by Jim Peter
son
110 DISPLAY AT(3,10):"COPYRI

```

```

GHT":TAB(10);"TIGERCUB SOFTW
ARE":TAB(10);"FOR FREE":TAB(
12);" DISTRIBUTION":TAB(11);
"SALE PROHIBITED"
120 CALL PEEK(-28672,A@):: I
F A@=0 THEN 150
130 DATA FINE,NO,GOOD,UHOH,R
IGHT,TRY AGAIN,YES,THAT IS N
OT RIGHT
140 FOR J=1 TO 4 :: READ RIG
HT$(J),WRONG$(J):: NEXT J
150 FOR D=1 TO 1000 :: NEXT
D :: CALL DELSPRITE(ALL)
160 CALL CLEAR :: CALL CHAR(
95,"FFFF"):: CALL MAGNIFY(2)
:: RANDOMIZE :: CALL SCREEN(
14):: FOR SET=5 TO 8 :: CALL
COLOR(SET,16,1):: NEXT SET
170 CALL CHAR(120,"E70042001
8007E0000E700420099423CE7004
20099423C00E7004218003C4200"
)
180 CALL CHAR(124,"0E0004010
00708007000208000E01000")
190 DISPLAY AT(3,10):"TAKE A
WAY" :: CALL CHAMELEON
200 CALL COLOR(14,2,2):: CAL
L HCHAR(4,4,143,2):: CALL HC
HAR(5,4,143,2):: CALL SPRITE
(#25,120,11,25,25)
210 T=T+1 :: N=1-(T>5)-(T>15
):: G=10-(T>5)*80-(T>15)*810
:: H=0-(T>5)*10-(T>15)*90
220 X=INT(G*RND+H):: Y=INT(G
*RND+H):: IF Y>X THEN TT=X :
: X=Y :: Y=TT
230 IF X=X2 OR Y=Y2 THEN 220
:: X2=X :: Y2=Y :: Z=X-Y
240 GOSUB 250 :: GOTO 210
250 GOSUB 260 :: GOSUB 280 :
: GOSUB 310 :: FOR D=1 TO 20
0 :: NEXT D :: CALL DELSPRIT
E(ALL):: DISPLAY AT(18,1)::
CALL CHAMELEON :: CALL SPRIT
E(#25,120,11,25,25):: RETURN
260 FOR J=1 TO LEN(STR$(X)):
: : A(J)=VAL(SEG$(STR$(X),J
,1)):: NEXT J :: FOR J=1 TO
LEN(STR$(Y)):: B(J)=VAL(SEG$(
STR$(Y),J,1)):: NEXT J
270 FOR J=1 TO LEN(STR$(Z)):
: C(J)=VAL(SEG$(STR$(Z),J,1
)):: NEXT J :: W=LEN(STR$(Z)
)-LEN(STR$(X)):: RETURN
280 R=96 :: CC=96 :: FOR J=1
TO N :: CALL SPRITE(#J,49+A
(J),11,R,CC):: CC=CC+16 :: N

```

```

EXT J
290 R=116 :: CC=96 :: FOR J=
1 TO N :: CALL SPRITE(#4+J,4
8+B(J),11,R,CC):: CC=CC+16 :
: NEXT J
300 CALL HCHAR(18,12,95,N*3)
:: CC=CC-16 :: RETURN
310 R=140 :: FOR J=LEN(STR$(
Z))TO 1 STEP -1 :: IF LEN(ST
R$(X))=1 THEN M=CC :: GOTO 3
30
320 FOR M=CC TO CC+8 :: CALL
LOCATE(#J-W,96,M.#J+4-W.116
,M):: NEXT M
330 IF A(J-W)>=B(J-W)THEN 36
0 :: CALL SPRITE(#28,49,16,9
6,M-9)
340 IF F3=1 THEN 360 :: F1=1
:: A(J-W-1)=A(J-W-1)-1 :: I
F A(J-W-1)<0 THEN A(J W 1)-9
:: F2=1 :: A(J-W-2)=A(J-W-2
)-1
350 CALL SPRITE(#22,48+A(J-W
-1),16,80,M-24):: IF F2=1 TH
EN CALL SPRITE(#21,48+A(J-W-
2),16,80,M-40)
360 CALL SPRITE(#27,45,16,11
6,M-12)
370 CALL SPRITE(#20,63,11,R,
M)
380 CALL KEY(3,K,ST):: IF ST
<1 OR K<48 OR K>57 THEN CALL
PATTERN(#20,32):: CALL PATT
ERN(#20,63):: GOTO 380
390 CALL DELSPRITE(#20,#28):
: CALL SPRITE(#12+J,K.11,R,M
)
400 IF K-48<>C(J)THEN GOSUB
450 :: CALL DELSPRITE(#12+J)
:: F3-1 :: GOTO 330
410 CALL DELSPRITE(#27):: IF
F1=1 THEN 420 ELSE IF F2=1
THEN 430 ELSE 440
420 F1=0 :: CALL DELSPRITE(#
J-W-1):: FOR P=80 TO 96 :: C
ALL LOCATE(#22,P,M-24):: NEX
T P :: CALL SPRITE(#J-W-1,48
+A(J-W-1),16,96,M-24):: CALL
DELSPRITE(#22):: GOTO 440
430 F2=0 :: CALL DELSPRITE(#
J-1-W):: FOR P=80 TO 96 :: C
ALL LOCATE(#21,P,M-24):: NEX
T P :: CALL SPRITE(#J-1-W,48
+A(J-1-W),16,96,M-24):: CALL
DELSPRITE(#21)
440 CC=CC-16 :: NEXT J :: GO
SUB 480 :: F3=0 :: RETURN
    
```

```

450 DATA 123,124,125,123,124
,125,123,120
460 IF A@=0 THEN 470 :: CALL
SAY(WRONG$(INT(RND*4+1)))
470 RESTORE 450 :: FOR JJ=1
TO 8 :: READ P :: CALL PATTE
RN(#25,F):: XX=2^250 :: NEXT
JJ :: RETURN
480 DATA 121,122,121,122,121
,122
490 IF A@=0 THEN 500 :: CALL
SAY(RIGHT$(INT(4*RND+1)))
500 RESTORE 480 :: FOR JJ=1
TO 6 :: READ P :: CALL PATTE
RN(#25,P):: XX=2^250 :: NEXT
JJ :: RETURN
510 SUB CHAMELEON
520 M$="1800665AC342DB667E18
8100995AC3A5E78142BD24DB6600
81429924007ESAC3A50C241800FF
DB5AFF7EFF0099188100660018"
530 RANDOMIZE :: CALL CHAR(1
28,SEG$(M$,INT(43*RND+1)*2-1
,16)):: X=INT(14*RND+3)
540 Y=INT(14*RND+3):: IF Y=X
THEN 540 :: CALL COLOR(13,X
,Y)
550 CALL HCHAR(1,2,128,30)::
CALL HCHAR(24,2,128,30):: C
ALL VCHAR(1,31,128,96):: SUB
END
560 SUB TITLE(S,T$)
570 CALL SCREEN(S):: L=LEN(T
$):: CALL MAGNIFY(2)
580 FOR J=1 TO L :: CALL SPR
ITE(#J,ASC(SEG$(T$,J,1)),J+1
-(J+1=S)+(J+1=S+13)+(J>14)*1
3,J*(170/L),10+J*(200/L))::
NEXT J
590 SUBEND
    
```

When you give your printer instructions, it remembers them until you turn it off. That is why you may find that your letter to Aunt Sally is being printed in double width underlined italics. The solution is found in another gobbiede-gook paragraph in the Gemini manual - "when (ESC "@) is sent to the printer, the conditions of the printer are initialized." In plain English. OPEN #1:"PIO" :: PRINT #1:C

HR\$(27);"@" in your program or CTRL U, FCTN R, CTRL U, SHIFT 2 at the beginning of your TI-Writer text will cancel out any special orders the printer is still remembering and return it to its default conditions.

Here's a bright idea by Scott King in the AVTI UG newsletter. When you load a program in order to modify it, put a reminder of its filename in the first line, such as 1 ! SAVE DSK1.NAME . Then, when you are ready to save it, just list line 1, FCTN 8, use the space bar to erase the 1 !, and Enter.

MEMORY FULL!  
Jim Peterson

```

X          ALIVE
A          E S X  ONDO
X          LEAT ZNOIO I
X          L E T  H  E
N          S E  O E  Y  M  E
I          E  H  ACCOMN  O  O
M          O  E  O  SECTION  E  E  I  E
P          L  O  I  S  I  C  L  N  S  O
L          I  S  T  I  S  M  N  E  L  I  S
L          X  V  E  N  E  E  E
C          A  T  I  O  N  A  L  I  T  I  S
          A  E  A  L  E  D  M  O  U  S  E
          D  N  U
          C  P  U
          D  S  I  Y  M  O  D  E
          E  T
          M  I  C  R  O
          N  M  I
          L  O  T  U  S
    
```