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=====

A Delaware Valley Users Group membership includes monthly newsletter, library and software privileges, plus other special benefits. Annual membership rates are: Family or Individual \$15; Students \$5; Newsletter only (beyond 75 miles) - \$10
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1/4 page = \$ 5/issue, or \$ 45/12 issues
1/2 page = \$ 8/issue, or \$ 75/12 issues
Full page = \$15/issue, or \$125/12 issues
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DELAWARE VALLEY USERS GROUP MEETINGS
Plenary meetings: Delaware's Christiana Mall on Rte. 7, at I-95 Exit 4-S, in the Community Room. Enter between J.C.Penney and Liberty Travel inside the Mall.

DELMARVA CHAPTER: Dover Blue Hen Mall on Northbound U.S.13, Rm.#203 upstairs, in center of Mall. Elevator available.

SO.JERSEY CHAPTER: Deptford Municipal Building, Cooper Ave. and Delsea Drive, (Rtes. 534 & 47), in Gloucester County. Enter and park in rear of the building.

All meetings are open to the public.



THE 2 PER CENT DIFFERENCE

December's DATA BUS was printed in a slightly distorted manner, due to a 2% reduction (copied at 98%). That affected pages in condensed type mode especially. November's issue used the condensed type but did not pose a problem, lacking that reduction. Our usual boldface printing, plus a new ribbon, emphasized a blurred effect. Contact the Editor if you need a new copy or help in reading those items.

Further, the photo-offset processor tends to pull margins to the right. That creates difficulties for readers who use a looseleaf binder for storage.

The DATA BUS Editor apologizes for the unintended inconvenience. We were in a rush to include Christmas sales items, and neglected an important follow-up.
~~~~~

GEMINI PROPORTIONAL PRINTING

Contrary to the December issue, pg. 10, Jack Thorpe, prior DATA BUS editor, advises that the Gemini 10/10X CAN have a proportional type character mode using PRINT #1:CHR\$(27);CHR\$(90);CHR\$(n);

The (n) value, from 1-6 at the user discretion, determines closeness of the pixel printing within that style.  
~~~~~

CORRECTION TO NAVARONE TELEPHONE

Navarone's new telephone listing, caused by a company merger and relocation, had an incorrect Area Code. Their new Texas number is 214-437-1118, NOT Area 213.
~~~~~

CSGD, TI ARTIST PRINTERS CLARIFIED

Character Sets & Graphic Designs is a series of programs supporting Epson, Gemini, C.Itoh Prowriter/NEC compatibles - TI Artist Version 2.0 will support the Axiom, IBM and Okidata models also (p.3, December DATA BUS). TI ARTIST COMPANION #1, derived from CS&GD, will work on all models. 32K,XB, Disk needed at minimum.

# DVUG DOINGS AND UNDOINGS

## CANDIDATES FOR DVUG OFFICERS FOR 1986:

The following members have been put into nomination for various DVUG offices for 1986. Other names may be entered at the January 23 Christiana meeting.

**LYNN AQUARD** - current DVUG Secretary and coordinator for our involvement in two Univ. of Del. computer fairs. Got first TI in Spring '82; one of founding DVUG families. Personnel payroll clerk job exposes her to other computers at work. Husband Bill was Sgt.-at-Arms in 1985; he's a programmer, she's contented user.

**TOM AUGUST** - current V.P. and Chr., TIBBS Committee. Bought 99/4 (not 4A) in 1980 to play Video Chess; wife Linda uses the 99/4A for word processing. An electronic technician at DuPont and DVUG's resident Jerry-rigger, has "parts for about 4" TI systems in various configurations which he keeps rearranging.

**JAMES DAVIS** - Current Program Chr., whose work at DuPont brought familiarity with 9900 chip technology. DVUG member 2 yrs. with interest in speech synthesizer, use of robotics and artificial intelligence.

**TIM EVERS** - DuPont engineer served DVUG as Treasurer in 1984. First TI bought in Summer '82 with no illusions: "wanted to play games". Active on BBS's, author of several file transfer programs including Copy-All, forerunner to Mass Copy. Likes A/L, utilities, games programming.

**JAMES FOLZ** - Relatively new member (Aug. 84) in DVUG, whose wife Pamela is active word processor user, and whose children are being introduced to LOGO. Another Du Pont employee influenced by fellow DVUG workers, Jim has expanded via CorComp.

**TOM KLEIN** - An Acme Head Cashier in real life, DVUG 1985 Treasurer. Bought TI in Fall '82 during Price Wars; upgraded in 1985 with CorComp. Exploring LOGO for his children. Also prefers Editor for word processing files, and shoots Video Tape records for us on occasion.

A few months after buying my first TI 99/4A in October, 1982, for the bargain price of \$349.95 (\$249.95 after rebate), in a burst of remaining sanity, I bought an alarm clock for my computer area. Not to wake me up, of course; to remind me to go to bed. But, having so much fun, I seldom set the alarm. The addiction has continued ever since.

Like most instruments of addiction, a computer is neutral but offers a method to indulge one's personal obsessions. It can affect personal relations, physical and financial health, and turn efforts at problem-solving into diabolic as well as uplifting technology.

My son recently got a bumper sticker which reads "The one who dies with the most toys - WINS!". He's not the only kid on the block, or in my household, who plays with transformers. Computers can be the ones doing the manipulating. Who's the Master, anyway?

Do you recall the early insistence at collecting every cartridge issued, going to every retailer out there, moving up the chain of hardware acquisitions? If you're not affluent enough to be able to blow a bundle at a time, the accumulated nibbles and bytes can be overwhelming enough.

Going on line with modems, even - or worse! - with only 300 Baud, lets you talk to, and spend your (family) money, the world round. An early expectation was to use the computer for home finance activity. (Boy, is THAT true!) "If it ain't broke, don't fix it!" Old-fashion one-handed word processors were quicker, more reliable, and never wound up with as much red ink when they wrote using graphite instead of a dot matrix; wonder why?

As newsletter editor, I know stories of money spent, time diverted, divorces, ex-editors pleading to be kept on a mail list to get their "fix" of computer news updates, and retreats into fortresses of static-resistant blinking-light hideaway areas. For some, dreams become nightmare fodder. We will address this unfortunate side of computer life in coming issues; DVUG friends share joy and sorrows both.

## MARKETING HASSLES

Bob Boone  
25 Ottawa St.,  
Ann Arbor, Ontario  
CANADA K7S 1N7

Several items of concern regarding marketing of products produced by private authors have surfaced recently. One such debate envelops the graphic BIT-MAC program, which creator Dave Vaughn, of Vaughn Software, had initially arranged with DataBioTics of California to distribute.

A subsequent dispute about the distributor ability to meet publication notices for further marketing, plus a question about propriety of DataBioTics' use of a copyright claimed by the author, led to a loss of wider exposure and thus, sales, at a time when a number of graphics programs for the TI blossomed at once. Vaughn began taking personal ads in User Group newsletters (e.g., July's DATA BUS, p.5) to overcome his losses, which he is pursuing in court.

Vaughn Software programs - Bitmac at \$29.95, free-ware companion Printpack I, and Zapcode, a rapid mail list program (cost unknown) - now are sold by: IEC, 4150 Fox St. Unit #A5, Denver, CO 80216, (303) 458-5600.

Circumstances surrounding business software legal claims might be of interest to those who don't follow "the big boys" of computers regularly; an article of intelligible phrasing for the lay reader appears in the MANNERS (Mid-Atlantic Ninety Nine'ers) November newsletter, available from DVUG's library to members.

Not everyone has desire or ready ability to settle matters in U.S. courts. On this page is a letter from Ottawa, Canada, bringing the attention of TI users to a dispute over marketing rights, ethics and technique used by Tex-Comp in distributing Bruce Caron's superb Disk Manager 1000. No response was provided Boone by Tex-Comp's Jerry Price.

Caron sold his TI in the Fall (moving on to a Mac) and also sold his source code to the Ottawa U.G. Any one wishing to send freeware payments can make checks out to the Treasurer of the Ottawa group, at Station D, as indicated on the letter. Version 2.3 of DM1000 was distributed at the Chicago TI Faire. Caron visits Ottawa's UG now and then; he and Boone (and likewise, Nova Scotia's Terry Atkinson) are currently on duty with the Canadian Armed Forces.

MICROpendium's December issue has mixed commentary of approval/disapproval on Free/Fairware by different authors of the stuff. DVUG's Steve Lawless received slow response first, but considerably better reaction later. Bill Knecht and Danny Michaels have been quite pleased. On the other hand, Robt. Wessler wants his Trivia 99'er removed from circulation. Jim Hollender suggests that but one copy sold of SXB at a recent UG (DVUG?) meeting meant everyone was pirating. We think he overestimated appeal of a language vs. a program.

Marketing Director  
TEX-COMP  
P.O. Box 33084  
Granada Hills, Ca.  
U.S.A. 91344

Dear Sir,

I am writing on behalf of the Ottawa TI-99/4A User Group to express our extreme displeasure at your actions with regard to our "Freeware" package; DM/1000!

In particular, we wonder why you felt you had the right to use it as a promotional item for your "Explorer" package and worse: alter the LOAD file to promote yourselves as distributors of our software and remove our FREEMWARE notice!

Discovering that you were offering DM-1000 source code for sale at \$7.50 per copy was the last straw!

We purchased the source code from Bruce in May of this year and began distributing it (and the object code) as freeware in June. It is legally ours. We feel, at the very least, you were negligent in not contacting us before taking the steps outlined above.

A copy of this letter is also being sent to all known publications dealing with the TI-99/4A, with a covering letter indicating our User Group's point of view in this matter.

We haven't the desire or the resources to go to court over this matter but we can and will create a furor in the international TI world if steps aren't taken to rectify the above wrongs. Donations for DM-1000 have averaged \$10-\$15 per respondent and as Terrie Masters of Beverly Hills California says: "we're not likely to see any return from those you've given away as a freebie". Please be good enough to publish a retraction of your offer of a "free copy of Disk Manager 1000" and publish our User Group's address as the sole source and beneficiary for DM-1000. An apology wouldn't hurt too!

Sincerely,

[signed]

Bob Boone,  
Past President  
Ottawa TI-99/4A U.G.  
Box 2144 Station D  
Ottawa, Ontario  
CANADA K1P 5M3



BEGINNER'S DATA BASE PROGRAM  
- IN BASIC. FOR TAPE USE

The following program appeared in December's PUNN (Portland, OR) newsletter. A simple data base for keeping tabs on a child's classmates or other purposes, it will run in BASIC for CASSETTE.

NOTE: A question which rejects all but capital "Y" (lines 430, 860) will throw the user into the wrong area of the program if lower case "y" is used instead. There should be an AlphaLock note.

Can you change the size of this file (see Line 300)? Do you know what the "Code" input will help you do (Line 420, 840)? It's part of the challenge in working with a new program - learn both the joy and problems it offers. It's yours now!

```

100 REM NAME & ADDRESS FILE
110 REM BY PATTI ALLEN 5/85
120 DIM N$(25),A$(25),P$(25),C$(25)
130 CALL CLEAR
140 PRINT "PRESS";;"1 TO LOAD DATA":;"2 TO ADD DATA":;"3 TO EDIT DATA":
150 PRINT "4 TO PRINT LIST":;"5 TO SAVE LIST":;"6 TO END PROGRAM":;"7 TO LIST BY CODE"
160 CALL KEY(0,K,S)
170 IF (K(49)+(K(55)))THEN 160
180 CALL CLEAR
190 ON K-48 GOTO 200,280,530,940,1100,1200,1440
200 PRINT "LOADING DATA"
210 OPEN #1:"CS1",INPUT,INTERNAL,FIXED 128
220 INPUT #1:N
230 FOR I=1 TO N
240 INPUT #1:N$(I),A$(I),P$(I),C$(I)
250 NEXT I
260 CLOSE #1
270 GOTO 130
280 PRINT "ADDING DATA"
290 IF N<25 THEN 330
300 PRINT "SORRY THIS PROGRA

```

```

M IS FOR:"ONLY 25 NAMES":P
RESS ANY KEY"
310 CALL KEY(0,K,S)
320 IF S=1 THEN 130 ELSE 310
330 PRINT "ENTER 'E' TO EXIT"
"
340 INPUT "LAST NAME: ":LN$
350 IF LN$="E" THEN 130
360 INPUT "FIRST NAME: ":FN$
370 INPUT "STREET ADDRESS: ":SA$
380 INPUT "CITY: ":CI$
390 INPUT "STREET: ":ST$
400 INPUT "ZIP CODE: ":Z$
410 INPUT "PHONE: ":P1$
420 INPUT "CODE: ":C1$
430 INPUT "IS THIS INFORMATION CORRECT? Y/N":AN$
440 IF AN$="Y" THEN 460
450 GOTO 340
460 N=N+1
470 N$(N)=LN$&" "&FN$
480 A$(N)=SA$&" "&CI$&" "&ST$&" "&Z$
490 P$(N)=P1$
500 C$(N)=C1$
510 SORT=2
520 GOTO 290
530 PRINT "EDITING DATA";:
540 PRINT "PRESS":;"1 TO DELETE A NAME":;"2 TO CHANGE INFORMATION":;"3 TO RETURN TO MENU"
550 CALL KEY(0,K,S)
560 IF (K(49)+(K(51)))THEN 550
570 IF K=51 THEN 130
580 INPUT "WHAT NAME DO YOU WANT TO EDIT? ENTER LAST NAME: ":LN$
590 INPUT "ENTER FIRST NAME: ":FN$
600 EDN$=LN$&" "&FN$
610 FOR T=1 TO N
620 IF EDN$=N$(T)THEN 660
630 NEXT T
640 INPUT "NAME NOT FOUND. PRESS 1 TO TRY AGAIN, 2 TO RETURN TO MENU":AN$
650 IF AN$="1" THEN 580 ELSE 130
660 IF K=50 THEN 760
670 FOR I=T TO N-1
680 N$(I)=N$(I+1)
690 A$(I)=A$(I+1)
700 P$(I)=P$(I+1)
710 C$(I)=C$(I+1)

```

```

720 NEXT I
730 N=N-1
740 CALL CLEAR
750 GOTO 530
760 PRINT "ENTER NEW INFORMATION"
770 INPUT "LAST NAME: ":LN$
780 INPUT "FIRST NAME: ":FN$
790 INPUT "STREET ADDRESS: ":SA$
800 INPUT "CITY: ":CI$
810 INPUT "STATE: ":ST$
820 INPUT "ZIP CODE: ":Z$
830 INPUT "PHONE: ":P1$
840 INPUT "CODE: ":C1$
850 INPUT "IS THIS INFORMATION CORRECT? Y/N":AN$
860 IF AN$="Y" THEN 880
870 GOTO 760
880 N$(T)=LN$&" "&FN$
890 A$(T)=SA$&" "&CI$&" "&ST$&" "&Z$
900 P$(T)=P1$
910 C$(T)=C1$
920 SORT=2
930 GOTO 540
940 PRINT "PRINT LIST"
950 IF SORT=1 THEN 970
960 GOSUB 1240
970 PRINT "PRESS ANY KEY TO PAUSE, ":"PRESS ANY KEY TO RESUME."
980 FOR I=1 TO N
990 PRINT N$(I):A$(I):P$(I):C$(I)
1000 FOR T=1 TO 100
1010 NEXT T
1020 CALL KEY(0,K,S)
1030 IF S=0 THEN 1060
1040 CALL KEY(0,K,S)
1050 IF S<1 THEN 1040
1060 NEXT I
1070 PRINT "END OF LIST,PRESS ANY KEY TO RETURN TO MENU."
"
1080 CALL KEY(0,K,S)
1090 IF S=1 THEN 130 ELSE 1080
1100 PRINT "SAVING DATA"
1110 IF SORT=1 THEN 1130
1120 GOSUB 1240
1130 OPEN #2:"CS1",OUTPUT,INTERNAL,FIXED 128
1140 PRINT #2:N
1150 FOR I=1 TO N
1160 PRINT #2:N$(I),A$(I),P$

```

```

(I),C$(I)
1170 NEXT I
1180 CLOSE #2
1190 GOTO 130
1200 PRINT "ANY DATA NOT SAVED WILL BE LOST."
1210 INPUT "PRESS 1 TO END PROGRAM, ANY OTHER KEY TO RETURN TO MENU":X$
1220 IF X$(0)="1" THEN 130
1230 END
1240 FL=0
1250 FOR I=1 TO (N-1)
1260 IF N$(I)<N$(I+1)THEN 1400
1270 H$=N$(I)
1280 H1$=A$(I)
1290 H2$=P$(I)
1300 H3$=C$(I)
1310 N$(I)=N$(I+1)
1320 A$(I)=A$(I+1)
1330 P$(I)=P$(I+1)
1340 C$(I)=C$(I+1)
1350 N$(I+1)=H$
1360 A$(I+1)=H1$
1370 P$(I+1)=H2$
1380 C$(I+1)=H3$
1390 FL=1
1400 NEXT I
1410 IF FL=1 THEN 1240
1420 SORT=1
1430 RETURN
1440 PRINT "LIST BY CODE"
1450 INPUT "WHAT CATEGORY DO YOU WANT PRINTED? INPUT CODE: ":CODE$
1460 PRINT "PRESS ANY KEY TO PAUSE; ANY KEY TO RESUME."
1470 FOR I=1 TO N
1480 IF C$(I)=CODE$ THEN 1540
1490 NEXT I
1500 PRINT "END OF LIST. PRESS ANY KEY TO RETURN TO MENU"
1510 CALL KEY(0,K,S)
1520 IF S=0 THEN 1510
1530 GOTO 130
1540 PRINT N$(I):A$(I):P$(I):C$(I)
1550 FOR T=1 TO 100
1560 NEXT T
1570 CALL KEY(0,K,S)
1580 IF S=0 THEN 1490
1590 CALL KEY(0,K,S)
1600 IF S<1 THEN 1590
1610 GOTO 1490

```



DVUG's DATA BUS Editor has limited ability to provide full space for a fair listing of new products, except in very selective areas. Although DVUG does not make official product endorsement, those of us who read it (available during any Christiana Meeting) feel that all users should subscribe to MICROpendium, P.O. Box 1343, Round Rock, TX 78680. \$18.50 is the 1st Class rate for 12 monthly issues - 56 pages each - on OUR computer, only!

CAVEAT EMPTOR words again from News Net 99er (Texas)'s LeRoy Thompson, who must be one of the most frustrated users but who surely writes helpful reviews!

DISK DATA BASE from Asgard Software of Rockville, MD, noted in our Oct. DATA BUS, didn't work with a Myarc Controller but did run on his CorComp. Sort of. Not the sort that LeRoy wanted, however, and had been promised by their documentation and ads; by diskname, filename, unsorted and selectively, etc. It didn't provide an alphabetized complete list, which was the standard commodity desired.

In voting thumbs down, he also took a poke at Asgard's failure to return or to comment on an overpayment, discovered when another product arrived in the mail with a lower price listed than he sent.

Another RAMDisk has been developed this season by a group of Ohioans, with 8K CMOS chips comprising a 104K card for the P-Box. Well-documented, it provides for numerous enhancements and Assembly Language user-defined routines; at \$165, it's battery-backed, fully transportable between P-Boxes without loss of memory. It reportedly avoids the Myarc RAMDisk's addresses, providing ADDITIONAL RAMDisk opportunities at the same time.

For info, contact David Romer, P.O. Box 554, Walbridge, OH 43465, (419) 666-6911, about this HORIZONS RAMDisk.

Craig Miller of MILLERS GRAPHICS is reportedly about to complete PRINT SHOP 99, a version for TI fans of the Apple's favorite graphic utility. This will run completely in Assembly Language. Craig is busier than ever these days.

Other Millers Graphics projects:

THE ORPHAN CHRONICLES, \$9.95, from Ron Albright, describes lead-in as well as follow-up to TI's October, 1983, halt in production of the 99/4A. Fascinating descriptions of the people and resources in our TI world. Add \$2 s/h costs for an excellent and fun reference book.

A disk-to-disk disassembler, noted as especially helpful for adventure game disks, \$19.95 (plus the \$2).

A GPL Assembler, GPL Disassembler, and GPL Programmer's Guide for the GRAM KRACKER to access and manipulate the TI Graphics Programming Language built into your 99/4A (price not known yet).

TIGERCUB Jim Peterson was his usual rapid and reliable self, and DID rebate 10% of DVUG orders placed before Jan. 1, 1986. DVUG thanks the members who helped yourself, and us. And thank YOU, Jim.

Over 100 copies of Catalog #6 from Tigercub Software were distributed, both at Deptford and Christiana meetings, and by mail to the Delmarva Chapter, which already had met before the catalog was made available in December. That effort pinpoints the difficulty which Tigercub and others have of trying to circulate information to groups such as ours.

A reminder: those Tigercub catalog programs may NOT be reproduced, unlike his Tips which he mails to The Data Bus. Sales of his original programs are what makes publication of his Tips possible!

IF CASE YOU WERE LOOKING ...

MICROpendium provides these address notes: Mack McCormick can be reached at HHC, 1st INF DIV(FWD), APO NY 09137 when you wish to write during his Army duty in Germany.

Don Scofield, an original founder of CorComp who left that company about a year ago, announces that his new firm, Cleland Controls Corporation, will make repairs on CorComp cards for a flat \$35 fee each. They're at 2212 Dupont, Suite G, Irvine, CA 92715.

## ADDING HARD COPY TO PROGRAMS by George F. Steffan

...I was asked several questions about converting programs which had output only to the screen so that they would output to a printer. I also had just done such a conversion for the group library. The next day, I received a copy of the newsletter of the Wichita (Kansas) 99er's Users Group [which] contained a program by Paul Yorke of Florida (no credit for original publisher given) which converted a program to use SPEECH on the TE II. I saw that this program could provide the solution to problems of this conversion.

My first thought was just to change SPEECH to RS 232 but some people would need to use PIO or different Baud rates, so I decided to allow input of the desired output device. Also, I eliminated restrictions on names for the original and new programs. I added provisions for either adding the new output device to

screen display or using the output device instead of screen display.

You should use the RESEQUENCE or RES command on your program before running this program because some lines must be inserted between lines of the original program. The inserted lines are numbered 5 higher than the line from which they are derived. Therefore, resequencing is not necessary if the gap between lines is always more than 5.

If your copy of the original program is exactly the same as the old copy saved with the MERGE command, you may then speed up final recovery of the program by using "OLD and OLD PROGRAM NAME", then "MERGE and NEW FILE NAME".

This program adds "#1:" to any PRINT statements in the source program. Therefore, DO NOT USE IT on a program which already has opened a file for output and contains "PRINT #" statements.

```
100 REM ADDPRINT - SEPT. '85
110 DATA 0,95,159,253,200,1,
49,181,199,999,179,247,0,999
120 DATA 156,253,200,1,49,18
1,999,160,253,200,1,49,0,999
,255,255,999
130 REM BY GEORGE F. STEFFAN
, LA 99ER COMPUTER GROUP, P
O BOX 3547, GARDENA CA 90247
140 REM BASED ON AN IDEA BY
PAUL YORKE : 1200 STARFISH L
ANE : STUART, FL 23494
150 REM DISK SYSTEM REQUIRED
160 REM OP$ = "95 OPEN #1:"
IN TOKENIZED STORAGE
170 REM EN$ = ",OUTPUT" IN C
ONDENSED DISK CODE (TOKENS)
180 REM E$=END OF PROGRAM
190 REM P$="PRINT #1:"
200 CALL CLEAR
210 PRINT " THIS PROGRAM WIL
L CONVERT ANY NON-MODULE DE
PENDENT PROGRAM TO PRINT
TO A NAMED OUTPUT DEVICE."
220 PRINT : " IT DOES THIS BY
ADDING AN OPEN STATEMENT A
ND REWRITING"
230 PRINT " ALL PRINT STATEM
ENTS ADDING OUTPUT REQUIREME
NTS."
240 PRINT : " PROGRAM MUST HA
VE ONLY ONE STATEMENT PER LI
NE."
250 PRINT " THE ORIGINAL PRO
GRAM MUST BE SAVED IN MERGE
FORMAT."
```

```
260 PRINT :: INPUT " PRESS E
NTER TO CONTINUE":T$
270 PRINT : " YOU MUST RESEQU
ENCE YOUR PROGRAM BEFORE S
AVING IT IN MERGE FORMAT.":;
:
280 GOSUB 530 :: OP$=T$
290 GOSUB 530 :: EN$=T$
300 GOSUB 530 :: P$=T$
310 GOSUB 530 :: C$=T$
320 GOSUB 530 :: E$=T$
330 PRINT :: INPUT "PROGRAM
TO BE CONVERTED? " :IF$
340 PRINT :: INPUT "NAME OF
MODIFIED PROGRAM? " :OF$
350 IF OF$=IF$ THEN PRINT "N
AMES MUST BE DIFFERENT!" ::
GOTO 330
360 PRINT :: LINPUT "NAME OF
OUTPUT DEVICE? " :OD$
370 PRINT : "A - ADD OUTPUT T
O DEVICE":; "C - CHANGE FROM
SCREEN TO OUTPUT DEVICE":
; "SELECTION"
380 ACCEPT AT(23,12)SIZE(-1)
VALIDATE("AC")BEEP:T$ :: S=-
5X(T$="A")
390 OPEN #1:IF$,DISPLAY ,VAR
IABLE 163,INPUT
400 OPEN #2:OF$,DISPLAY ,VAR
IABLE 163,OUTPUT
410 PRINT #2:OP$&CHR$(LEN(OD
$))&OD$&EN$ :: P=1
420 IF EOF(1)THEN GOTO 460 E
LSE LINPUT #1:T$ :: IF T$=E$
THEN GOTO 460
```

```
430 GOSUB 570 :: IF C=156 TH
EN L2=L2+S :: GOSUB 560 :: P
RINT #2:LN$&P$&SEG$(T$,4,160
)
440 IF C=139 OR C=152 THEN G
OSUB 560 :: GOSUB 510 :: L2=
L2+5 :: GOSUB 560 :: PRINT #
2:LN$&SEG$(T$,3,161)
450 GOTO 420
460 L2=L2+10 :: GOSUB 560 ::
GOSUB 510
470 PRINT #2:E$ :: CLOSE #1
:: CLOSE #2
480 PRINT :: "TO GET YOUR PR
OGRAM YOU MUSTDO THE FOLLOWI
NG:":; "NEW":; "MERGE " :IF$
; "MERGE " :OF$
490 PRINT : "THE CHANGED PRO
GRAM WILL THEN BE IN MEMOR
Y AND YOU SHOULD SAVE BEFO
RE RUNNING IT."
500 STOP
510 IF P THEN PRINT #2:LN$&C
$ :: P=0
520 RETURN
530 T$="" ! CLEAR STRING
540 READ C :: IF C(256) THEN
T$=T$&CHR$(C) :: GOTO 540
550 RETURN
560 LN$=CHR$(L1-(L2)255)&CHR
$(L2+256*(L2)255) :: RETURN
570 L1=ASC(T$) :: L2=ASC(SEG$
(T$,2,1)) :: C=ASC(SEG$(T$,3,
1)) :: RETURN
```

## TIPS FROM THE TIGERCUB

#29

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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.

Tips from The Tigercub, a full disk containing the complete contents of this newsletter Nos. 1 through 14, 50 original programs and files, just \$15 postpaid.

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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KALEIDOSCOPIES AND DISPLAYS

For descriptions of these send a dollar for my catalog!

The offer made last month is still good until 1 January - a 10% rebate directly to the user group if one of their members mentions the user group when ordering from me. So far, I've had only 10 responses - and I suspect that 8 or 9 of those didn't even know about the offer!

I goofed again. In the I/O ERROR routine in Tips #28, the ON ERROR STOP will do no good in the place where I put it. It should be placed after the file is opened in line 100 so that it will become the current error trap if the file is opened correctly.

\*And the CALL KEY example in Tips #28 will look better if R=14. A couple of very knowledgeable programmers have written to tell me that I was wrong, and the manual is right, about CALL KEY status -1. They say that -1 simply means that the same key is being pressed as was pressed during the last keyscan, and that it could have been released and repressed in the interim. This may be, but try this routine and see if you can release and repress a key without getting a status code 0 (no key pressed) and status code 1 (different key pressed) before another status code -1.

```
100 CALL KEY(0,K,S):: PRINT K,S :: GOTO 100
```

George Steffen has responded to the challenge in the last

Tips, by publishing in the LA 99ers Topics a remarkably compact routine to translate the internal format string representation of numeric data back into numbers. The following lines will update the Menu Loader accordingly.

```
100 !by A. Kludge/M. Gordon/  
T. Boisseau/J. Peterson/6. S  
teffen/etc.Version 08, 11/85  
140 E,@E,A,@,B,C,D@,E,F,FLA  
6,I,J,K,KD,KK,M,M@,M@,NM,P,  
P@,P@(),PP,PP@,Q@,S,ST,T@(),  
TI,VI,V(),W@,X,X@,Y,K2,S2  
810 F=1 :: E=ASC(SEG$(M@,1,  
)): M=ASC(SEG$(M@,2,1)):: I  
F E=@ AND M=@ THEN GOTO 817  
ELSE IF E>128 AND M>128 THEN  
F=-1 :: E=255-E :: M=256-M  
815 FOR I=1 TO 6 :: M=M+(ASC  
(SEG$(M@,I+2,1)))/100^I :: M  
EXT I :: M=M*F#100^(E-64)  
817 PRINT @P:M  
870 FOR P=1 TO MN-1 :: PRINT  
@2:P@():TAB(15);V(P,3);TA  
B(20);T@ (ABS(V(P,1)));TAB(25  
);V(P,2);TAB(31);CHR$(89+ABS  
(V(P,1)<0)):: NEXT P :: CLOS  
E @2
```

The change in the last line is my own, because it was pointed out to me that the catalog output to the printer did not indicate protected files.

That last line is a good example of the power of relational expressions to accomplish compact programming. The variable V(P,1) picks up its value from the variable A which is read from the disk directory in line 350. This is a number from 1 to 5, indicating the type of file, and if the file is write-protected the number is negative. A true expression has a relational value of -1. If the file is protected, V(P,1)<0 is true, and its value is -1, converted by ABS to +1 and multiplied by 89 to give ASCII 89, converted by CHR\$ to "Y". If not protected, V(P,1) is a positive number, V(P,1)<0 is false and has a relational value of 0; 89 times 0 is still 0, and CHR\$(0) prints nothing.

George also mentioned in a letter that my remarks on the UPDATE mode applied only to VARIABLE files; that RESTORE without a number, to return the record pointer to the beginning of a file, works only with VARIABLE files; that RESTORE with a number works only with

RELATIVE files; and that therefore the only way to RESTORE a SEQUENTIAL FIXED file is to close it and reopen it.

On trying this out, I find that you can write to a FIXED SEQUENTIAL file and still be able to read the following records - but you can't simply "read a record, change it in some way, and then write the altered record back out on the file", as the Reference Guide indicates, because you will change the record FOLLOWING the one you read! It is possible to UPDATE a FIXED SEQUENTIAL file without reading it all into an array and writing it back out, but you must read sequentially to the record you want, close the file, reopen the file, read back to the record just before the one you want to update, then write in the updated record.

I have received several other suggestions regarding the Menu Loader, too many to describe here. You can all modify it to your own tastes and needs. Remember to turn off the pre-scan and ON ERROR while you're working on it, then add any new variable names or CALLs to the pre-scan. And remember, that last line MUST be the LAST line of the program! You can resequence it higher, and change the GOTO accordingly, but don't put anything after it!

I did change my version to slash the zero, since this will carry over into a program that is loaded. If you do this, be sure to add a CALL CHAR to the list in line 150!

```
190 CALL CLEAR :: FOR S=1 TO  
14 :: CALL COLOR(S,7,16)::  
NEXT S :: CALL COLOR(0,2,16)  
:: CALL CHAR(48,"003A444C546  
444B")
```

When you just want to load a program, waiting for it to be read from the disk directory can be a drag. And, you may have trouble recognizing the filename. So, here is the Tigercub Quickloader which I have placed on all my Collection Disks.

First you will need Catwriter, another program that writes a program. This



one will read the disk directory, ignore everything other than programs, ask you for a complete program name for each filename, and write all that into a MERGE format program called CATMERGE.

```
100 !CATWRITER by Jim Peters
on
110 OPEN #1:"DSK1.",INPUT ,R
ELATIVE,INTERNAL :: INPUT #1
:M#,A,J,K :: OPEN #2:"DSK1.C
ATMERGE",VARIABLE 163 :: LM=
1000 :: FM=1000
120 X=X+1 :: INPUT #1:P#,A,J
,B :: IF LEN(P#)=0 THEN 160
:: IF ABS(A)=5 OR ABS(A)=4 A
ND B=254 THEN 130 ELSE X=X-1
:: GOTO 120
130 DISPLAY AT(12,1)ERASE AL
L:P#;" PROGRAM NAME?" ::
ACCEPT AT(14,1)SIZE(25):F#
140 PRINT #2:CHR$(INT(FM/256
))&CHR$(FM-256*INT(FM/256))&
CHR$(147)&CHR$(200)&CHR$(LEN
(F#))&F#&CHR$(0) :: FM=FM+1
150 M#=#&CHR$(200)&CHR$(LEN
(P#))&P#&CHR$(179) :: IF X<11
THEN 120
160 IF M#="" THEN 180
170 PRINT #2:CHR$(INT(LM/256
))&CHR$(LM-256*INT(LM/256))&
CHR$(147)&SEGS(M#,1,LEN(M#)-
1)&CHR$(0) :: LM=LM+1 :: M#=""
:: X=X :: IF LEN(P#)<>0 TH
EN 120
180 PRINT #2:CHR$(INT(LM/256
))&CHR$(LM-256*INT(LM/256))&
CHR$(147)&CHR$(200)&CHR$(3)&
"END"&CHR$(0)
190 PRINT #2:CHR$(255)&CHR$(
255) :: CLOSE #1 :: CLOSE #2
```

Next, key in the Quickloader. Do not change the line numbers, do not RESequence, because CATMERGE will be merged into the middle of it and that last line must be the last. Then, enter MERGE DSK1.CATMERGE and then SAVE DSK1.LOAD .

```
100 CALL CLEAR :: DIM M$(48)
:: CALL CHAR(94,"3C4299A1A19
9423C") :: CALL SCREEN(2) :: F
OR SET=1 TO 14 :: CALL COLOR
(SET,15,1) :: NEXT SET :: DIS
PLAY AT(1,4):"TIGERCUB QUICK
LOADER"
110 X=X+1 :: READ M$(X) :: IF
M$(X)<>"END" THEN 110
115 CALL PEEK(8198,A) :: IF A
<>170 THEN CALL INIT
120 R=3 :: FOR J=1 TO X-1 ::
READ X# :: DISPLAY AT(R,1):
STR$(J);TAB(4);X# :: R=R+1
:: IF R<23 THEN 150
130 DISPLAY AT(24,1):"CHOICE
? DR 0 TO CONTINUE 9" :: ACC
EPT AT(24,26)VALIDATE(DIGIT)
SIZE(1-2):M
140 IF M<>0 THEN 155 :: R=3
```

```
150 NEXT J :: DISPLAY AT(24,
1):"CHOICE?" :: ACCEPT AT(24
,9)VALIDATE(DIGIT):M
160 IF SEGS(M$(M),LEN(M$(M)
,1))="" THEN DISPLAY AT(12,1
)ERASE ALL:"Return to BASIC"
:: "Type OLD DSK1."&M$(M) ::
STOP
170 CALL CHARSET :: CALL CLE
AR :: CALL SCREEN(8) :: CALL
PEEK(-31952,A,B) :: CALL PEEK
(A+256+B-65534,A,B) :: C=A+25
6+B-65534 :: A#="DSK1."&M$(M
) :: CALL LOAD(C,LEN(A#))
180 FOR J=1 TO LEN(A#) :: CAL
L LOAD(C+J,ASC(SEGS(A#,J,1)
)) :: NEXT J :: CALL LOAD(C+J,
0) :: GOTO 30000
30000 RUN "DSK1.1234567890"
```

If you don't want to give your Basic-only programs a filename ending in an asterisk, you can leave out that warning routine, or you can modify it to warn of E/A or MiniMemory programs. If Catwriter has picked up any unloadable program-format files, etc., just delete them from the DATA lines.

The first issue of the GENIAL TRAVELER has arrived, and it is SUPERB! This is a magazine-on-a-disk, a SS/SD floppy loaded with 700 sectors of some of the finest articles and programs you'll ever see! And the programs are ready to run, you don't have to key anything in. The subscription price, until the end of 1985 at least, is \$30 for 6 issues, which computes out to \$5 per disk - many of you are paying your own user group that much for a one-sided disk of public domain! If the subscribers will only have the guts to refuse to let their friends copy this for free, this venture will surely survive and contribute greatly to the advancement of the TI. The address is - GENIAL COMPUTERWARE, 835 Green Valley Drive, Philadelphia PA 19128.

Gene Burchfield asked if I had a program to print banners vertically. I had never heard of such a thing, so I wrote one.

```
100 DISPLAY AT(12,1)ERASE AL
L:"TIGERCUB STREAMER PRINTER
" by Jim Peterson
110 DATA 0000,0001,0010,0011
,0100,0101,0110,0111,1000,10
01,1010,1011,1100,1101,1110,
```

```
1111
120 RESTORE 110 :: DIM B$(16
) :: FOR J=1 TO 16 :: READ B#
(J) :: NEXT J :: P$(0)=" " ::
P$(1)=CHR$(230)
130 INPUT "TEXT TO BE PRINTE
D?":T :: PRINT :: INPUT "P
RINTER DESIGNATION?":PD# ::
OPEN #1:PD#
140 PRINT :: INPUT "SIZE? (1
-10)":Z :: IF Z<1 OR Z>10 T
HEN 140
150 FOR J=1 TO LEN(T#) :: A=A
SC(1SEGS(T#,J,1)) :: IF A=32 T
HEN GOTO 200
160 CALL CHARPAT(A,M#) :: FOR
M=1 TO 15 STEP 2 :: K#=#SEGS
(M#,M,2) :: FOR L=1 TO 2 :: L
#=#SEGS(K#,L,1) :: B=POS("0123
456789ABCDEF",L#,1)
170 M#=#B#(B) :: FOR M=1 TO 4
:: M=VAL(1SEGS(M#,M,1)) :: M#=#
M#&RPT$(P$(M),Z) :: NEXT M
180 NEXT L :: FOR Q=1 TO Z/2
+.5 :: PRINT #1:TAB((81-Z#Q)
/2+.5);M# :: NEXT Q :: M#=""
:: NEXT M :: FOR R=1 TO Z/2
+.5 :: PRINT #1:"" :: NEXT R
190 NEXT J :: STOP
200 FOR T=1 TO Z#4 :: PRINT
#1:"" :: NEXT T :: GOTO 190
210 CALL KEY(0,K,S) :: IF S#0
THEN 210 ELSE RETURN
```

If your printer doesn't have the special characters of the Gemini, substitute 88 instead of 230 in line 120, to print X's, or whatever else you want. If you do have the special characters, try some others, such as 239, for this and other graphics printing programs. This routine will print a handy reference chart of them.

```
100 IMAGE 000 0 000 0 00
0 0 000 0 000 0 000 0
110 P#=#RPT$(CHR$(251)&CHR$(2
53),21) :: X=0
120 OPEN #1:"PIO" :: PRINT #
1:CHR$(27);"E"
130 PRINT #1:P#;" ASCII COD
ES FOR GEMINI SPECIAL CHARAC
TERS":P#
140 FOR J=160 TO 175 :: K=J-
X
150 PRINT #1,USING 100:K,CHR
$(J),K+16,CHR$(J+16),K+32,CH
R$(J+32),K+48,CHR$(J+48),K+6
4,CHR$(J+64),K+80,CHR$(J+80)
:: NEXT J
160 IF FLAG=1 THEN STOP ELSE
FLAG=1 :: PRINT #1:"":P#
:"TI-WRITER CODES FOR GEMINI
SPECIAL CHARACTERS":P# :: X
=128 :: GOTO 140
```

```
Another one that just looks
pretty -
100 !KALEIDOSPRITES by Jim P
eterson
110 CALL CLEAR :: FOR CH=100
TO 128 STEP 4 :: FOR L=1 TO
```

```
4 :: RANDOMIZE :: X#=#SEGS("
0018243C425A667EB199A5BDC3DB
E7FF",INT(116#RND+1)*2-1,2)
120 B#=#B#&X# :: C#=#B#&C# ::
NEXT L :: CALL CHAR(CH,RPT$(
B#&C#,4)) :: B#,C#="" :: NEXT
CH :: Z=2 :: CALL SCREEN(5)
130 CALL MAGNIFY(Z) :: K=1 ::
FOR J=1 TO 7 :: S=96+4#J ::
R=16#J :: C=100#RND+20
140 IF J>5 AND Z=4 THEN T=5
:: GOTO 160
150 T=INT(15#RND+2) :: IF T=5
THEN 150
160 CALL SPRITE(0K,S,T,R,C,0
K+1,S,T,177-R,C,0K+2,S,T,R,2
41-C,0K+3,S,T,177-R,241-C) ::
K=K+4 :: NEXT J
170 Z=INT(2#RND+1)*2 :: GOTO
130
```

100 !DISK MATCHER by Jim Peterson

```
110 DISPLAY AT(8,9)ERASE ALL
:"DISK MATCHER": : : " To c
ompare a backup disk": "with
a master and list any": "file
s found on one but not"
120 DISPLAY AT(15,1): "on the
other": : : " Press
any key"
130 CALL KEY(0,K,S) :: IF S#0
THEN 130
140 DISPLAY AT(12,1)ERASE AL
L:"INSERT MASTER - PRESS ENT
ER" :: CALL KEY(0,K,S) :: IF
S#0 THEN 140
150 OPEN #1:"DSK1.",INPUT ,R
ELATIVE,INTERNAL :: INPUT #1
:D#,A,J,K :: DIM F1$(127)
160 X=X+1 :: INPUT #1:F1$(X)
,A,J,B :: IF LEN(F1$(X))<>0
THEN 160 ELSE CLOSE #1
170 DISPLAY AT(12,1)ERASE AL
L:"INSERT BACKUP DISK": "PR
ESS ENTER" :: CALL KEY(0,K,S
) :: IF S#0 THEN 170
180 OPEN #1:"DSK1.",INPUT ,R
ELATIVE,INTERNAL :: INPUT #1
:D2#,A,J,K :: DIM F2$(127)
190 Y=Y+1 :: INPUT #1:F2$(Y)
,A,J,B :: IF LEN(F2$(Y))<>0
THEN 190 ELSE CLOSE #1
200 DIM F(127) :: FOR J=1 TO
X :: FOR L=1 TO Y :: IF F2$(
L)=F1$(J) THEN F(L)=1 :: GOTO
220
210 NEXT L :: PRINT F1$(J);"
NOT ON BACKUP"
220 NEXT J
230 FOR M=1 TO Y :: IF F(M)=
0 THEN PRINT F2$(M);" NOT ON
MASTER"
240 NEXT M :: END
A very useful tip from Jim
Swedlow, in the Orange
County ROM newsletter -
INPUT respects any trailing
print separator on a
preceding PRINT command. Try
it -
100 PRINT TAB(20); :: INPUT B
$
MEMORY FULL IN LINE 400
Jim Peterson
```

