

## -TMPORTAN:


#### Abstract

the rollowing letter was sent TO HOWIE ROSENBERG, WHO IN TURN UFLDADED IT TO COMFUSERVE FOR FUBLIC NOTICE.  $I$ have just uploaded a copy of a letter sent by Guy stephen Romano to me and Terrie Masters for distribution to the $T I$ communit.y. It indicates that in addition to the mail fraud and money back campaign organized and run so weis by Jeff Guide, that there may be other legal recourse. For anyone interested in giving Mr. Kaplan his due, or just in justice in general please read, pass along, and take action. 


## PLEASE PROMLLGATE

Dear Howie and Terrie,
I have finished gathering this information that $I$ know will be of sorie help to all those who have been Gheated by Home Computer Journal and ' 9 'er. The information was obtained both first hand and by several sources reporting their results, sait is a composite.

It seems that at the same time HCJ was sending out their "posteard" affer to subseribers, they were also rlosing down and dissolving Emerald Valley Publishing. The new company, Gomposed af all the very same people, is $\operatorname{salled}$ Computer Terhmalagy Fublishing. Call them to Eomplain about what they did to TI awrers and they'Il tell you they
are not liable far anything since Emerald Valley Fublishing is mo more. They will refuse to talk to anyone further.

The district attorney in Eugene, Oregon has. $r$ eeived enough Eomplaints that they have begun an investigation. They are interested in hearing from any and all Eomplaints about HCJ. They have exerted pressure on HCJ so that a few people have actualiy gotien their money bable on unfinished subsariptions. To strengthen the Ease against HCJ, however, they need to hear from "damaged parties" or they will be helpless. Anyone who was cheatied by HCJ is strongly urged ta contast:

## DISTEICT ATTDFNEY CONSUMER: FELATIONS $\ddagger 00$ LAKE COUNTY COUFTHOUSE EUGENE, DREGON (503) 687-4261

If people will take a few mimutes of their time to let them know about their Eomplaints, maybe the scam can be ended permanently. Please pass this along to as many people as you can. IMFOFTANT - all complaints should be leveled against Emerald Valley Fublishing Co. akay ets.

As always thank you for your suppart for TI owners everywhere.

Original signed by Guy 5. Fomano
(reprinted from TIC TAC U.6., Vol. 3 - No. 8)






以トゥ
 ＜i－m L L ロTUE


凹＂







| HMM15 5 |  | $\square \square+7$ |
| :---: | :---: | :---: |
|  | f：r | 1 －ro | ti．rave．

## WANTED

ARTICLES，PROGRAMMING TIPS，PROGRAM OR COMPUTER BODK REVIEWS，COMPUTER RELATED CARTOONS AND OTHER DATA FOR YOUR NEWSLETTER．PLEASE，SUBMIT YOUR CONTRIBUTIONS TO THE EDITOR IN TI－WRIITER／BA－WRITER（DV－8O），ON DISK （If Possible）BY THE 25th OF EACH MONTH．YOUR DISK WILL BE RETURNED．I ALSO WELCOME LEGIBLE COPY FROM THOSE WITHOUT EXPANDED SYSTEMS．I WILL KEY IT IN，BUT YOUR COPY MUST BE RECEIVED BY THE 22nd OF THE MONTH．BRING YOUR DISK OR COFY TO ANY MEETING，IF IMM NOT THERE JUST GIVE IT TO DNE OF THE OFFICERS AND I WILL GET IT．YOUR NEWSLETTER NEEDS YOUR SUFPORT！

## Setter from the President

It＂s hard ta boIjeve that wevme aImeady into octobsr！Funny how time fliss when you＊Me having fan！

As I am writing this．I just had a EaII from our Librarian，Eob Haun． HE called me from the Coronary Care unit of Lakswood Gen．Hospital，where he was waitimg transportation by ambulance to Univarsity Hospital in SEattle，where he is to undergo tests to see what the problem is with bis ticker．Ey the time you read this．youmay kmow the autaome．AII our prayミrs ame with you and youm difs．Bob．

Your Iibrary orders will be filled by one of our backup librarians until Eab is back on his feet and running full spasd．
$I$ am anxiously awaiting this aoming weskend ciast weekend by the time you get the mewsietter），for the Western Hashimgtom sdition af the T．I． Fair！

The featured speakers rC．Regena of Computemagaxines Lou phillips
 this event very interesting．
$I$ bope all our club msmbers get a ahance to attend to sea fhat these people are doing to support the so galled＂Orphan＂．All af these people， and the many others who arestill tryimg to make a Ijuing with aum favorite computer，need all the support we aan give themg as they are really tum川ing s口me outstanding Equipment and software．

Those people who say they meed a＂bigger＂aomputer than the T．I．90／4A may be only trying to convince themselvesthat they meed to spend all of their hardーsammed money for something that ism＂t realiy nesessary．

T．I．Writer has a buffer apaaity of z pages．Your friend may Iaugh and say hishas a capacity almost s timss that．When he tells you this．ask him when the jast time was that he wrate
 ョaット คage！

In reality， 4 2／3 pagss is usually plenty for most oorrespondence：and if it ismtt just make up a format file that ties more than ame file together at a tims，and print yur document as long as you want．

If you are using ：DSDD disk drives．then you know that 7 iok is a Gonsiderable amount af disk space to bave available for programs to Ioad at the touch of a fer keys．

True，NE arE I imited in s口me areas．We don＊thane to pay Exionbitant
 don＊t talk and maks music that sounds as gaod（alright，so we dontthave Stsmea，but they can＂t write their masic aseasy as we da either．）．

I think if we had the software and some of the hardivare enhancements that we have now，availableback when T．I．puIled out，they might never have puIled out of the market in the first place．

On weII，somuch for wishful thinkilng for mow．

in my Last news letter; i managed to give every one lots of noise ABOUT 'DOING THEIR SHAFE'. I WON'T REALLY BACK OFF OF MY COMMENTS, BUT I DID HEAR AN OFINION EXFRESSED THIS WEEK THAT HAS A LOT OF MEFIT! THE gist was that if everyone was going to catch h--- all the time, then THE CLUB WASN' T TOO ENJOYABLE! I THINK IT IS A VERY VALUABLE COMMENT AND WORTH CONSIDERATION. IN DEFENSE, I'LL SAY THAT WE NEED TO BE AWARE OF OUR RESFONSIBILITIES TO EACH OTHER TO MAKE THE CLUE WORK. SO... I fromise... No more lectures... Livless we go to sleep again!

I'VE FICKED UF SEVEFAL COMMENTS ABOUT THE CLUB OFFICEFS BEING 'UNAFFROACHABLE' FROM TIME TO TIME AND IF I'M EVEF GUILTY, KICK ME HARD. THE ONLY FEEASON WE HAVE officers is to organize things the way YOU WANT THEM.

THAT BRINGS UP ANOTHER SOEE SUBJECT. WHAT WOULD YOU LIEE? WHAT difection would you like the club to go in its meetings and demos.? are you interested in classes? if so at what level? do you want to learn FROGRAMMING? ARE YOU INTERESTED IN LEARNING HOW TO EFFECTIVELY USE CERTAIN FROGRAMS? THESE THings are what we need to rnow to helf you get WHAT YOU WANT FFIOM YOUR CLUB. I'LL ACT AS A CONTACT FOINT IF YOU WISH, TELL ME WHAT YOU WISH AND I'LL GET THE WOFD TO THE FIGHT FEOFLE. I kNOW I'M SOMETIMES BASHFUL ABOUT TELLING DTHEF FEOFLE ABOUT WHAT I'D LIKE... I"M AFRAID THEY'LL DISCOVEF HOW DUME I FEALLY AM!

HOW MANY OF YOU WOULD LIKE A SHORT COURSE IN TI/BA WRITER? IF SOME of you are intefested, i'll try to cover some of the things ivve used AND SOME OF THE ITEMS WANDA FOUNDED INTO MY THICK SKULL IN HER EXCELLANT CLASS. I THOUGHT I WOULD COVER BASIC FUNCTIONS AND ENOUGH TO LET YOU USE IT WITH FEASONABLE COMFOFT. I'M FLANNING ON HAVING CLASSES INSTEAD OF DEMOS FDR SEVERAL MEETINGS.

FEMINDER: ALL OF YOU THAT FAID YOUR DUES ON TIME, YOU CAN DRDEE: ANY FROGRAMS AT $1 / 2$ FRICE THROUGH NOVEMEER. THAT IDEA HAS KEFT ME BUSY Filling drders, but I like it.

REMINDER: DONT FORGET THE TI FAIR IN SEATTLE. IT SHOULD BE VEFY interesting. wish i could make it, but i figure that you all will keef ME FOSTED.

REMINDEF: YOU CAN GET IN SOME/ALL OF YOUF: CLUE TIME BY GIVING A TRAINING SESSION OR DEMO, WEITING AN AETICLE OR ALL SORTS OF THINGS TO benefit the club as a group. it's easief to get ahead of the schedule THAN TO CATCH UF.

BOB HAUN, 584-3938

Typing in a program with lots of CALL CHAR statements in it？Use this program to eliminate the reed to type in CALL CHAFs，parentheses， commas，or quotation marks． Creates program lines in MEFGGE format file． Required：Extended BASIC， disk drive．

100 REM CHAF／CUDEE BY B．A．T RAVER， 552 SEVILLE ST．，PHIL A．．PA 19128
110 REM FOR FURTHER INFORMAT ION，SEND S．A．S．E．
120 CALL CLEAR ：：PRINT＂CHA R／CIDER＂
130 PRINT ：＂DIRECTIONS：ENT
ER DATA AS INDICATED FUR EA
CH LINE OF YOUR PROGRAMWHIC：
H INCLUDES A CALL CHAR STATE
MENT．＂
140 PRINT ：＂UNLESS YOU INDIC
ATE GTHER－＂：＂WISE，LINE NUME
ERING STAETS AT 100 AND
INCREMENTS BY 10 AUTUMATICAL
LY．＂
15O PEINT ：＂ALSO，UNLESS YOU
INDICATE ITHERWISE，CHAFA
CTER NUMBERSARE INCFEMENTED
BY 1 AUTO－MATICALLY．＂：：
$160 \mathrm{DEF} \mathrm{L}=(\mathrm{L})=\mathrm{CHR}(\mathrm{INT}(\mathrm{L} / 256$
））\＆CHF（L－256＊INT（L／256））
170 DEF A199（M\＄）$=$ CHR $\$(199) 8$
CHRま（LEN（M末））SM\＄
180 DEF $A 200 \$(M \$)=C H R \$(200)$ \＆
CHF：（LEN（MO））\＆M
$190 \mathrm{~L}=100$
200 DPEN \＃1：＂DSK1．CHAFACTERS ＂，VAFIABLE 163
210 GOSUB 320
220 GOSIIB 310
2 SO PRINT ：＂ANOTHEF（Y／N）？＂
；
240 CALL KEY（0，k，S）：：IF $5=0$ THEN 240

240 ELSE PRINT CHR $(\mathbb{K}):$ ：
260 IF $K=69$ THEN $L=L+10: C$
末＝STR末（VAL（Co $)+1$ ）：GOT0 210
270 PRINT \＃1：CHR $\$(255) \& C H R \$($ 255）
280 CLOSE \＃1
$2 G 0$ PEINT ：＂NDW ENTER THE FD
LLOWING TO GEE YOUE PFGGRAM
－WHICH YOU CAN SAVE ANDMODI
FY LATEE：＂：：＂NEW＂：＂MEFS
E DSK‥CHARACTERS＂

300 END
310 PFINT \＃1：L末（L）太CHF末（157）


HF（\＄（1E2）\＆CHE\＄（O）：RETUFN
3 SO FEM RCCEPT INPUT
3SO PEINT＂LINE：＂；L
S40 ACCEPT AT（23，7）SIZE（－4）： L
350 PRINT ：＂CALL CHAR＂
360 PRINT＂CHAF NUMEEF：＂： $\mathrm{C}=$
370 ACCEPT AT 23,14$) S I Z E(-3)$
：C
SBO PRINT＂CHAR STRING：＂
390 ACCEPT AT（23，14）：D\＆：E ETURN
400 STGP

CONDENSED CODE：by Keith
koch

RERD CAREFILLY：ENTER the following frogram and save with MERGE．Next MERGE program tack to TI，then ruri ，then listem Tricky huh？

1 IPEN \＃1：＂DSK1．A＂，DISPLAY， GUTPUIT，VARIAELE 163
2 FOP I＝0 TO 254
$3 L=I N T(1 / 256)$
$4 \mathrm{~N}=\mathrm{I}-256 \mathrm{~L}$
5 PFINT \＃1：CHR $(L) \& C H F(N) \&$
CHFक（I）\＆CHEक（O）
$\Leftrightarrow$ NEXT I
7 PRINT \＃1：CHR末（25E）\＆CHR $(2$ 5）
E CLOSE \＃1
－STOP

THIS PROGRAM HAS VERY INTEFESTING FESULLS：


180 DISPLAY AT（E，1）：＂Gption $s$ Are：＂
1＇70 DISPLAY $\operatorname{AT}(8,1): " 0)$ Exi t Progran＂
200 DISPLAY AT（9，1）：＂1）Def ault Conditions＂
210 DISPLAY AT $(10,1): " 2) 3$
LINES／INCH＂
220 DISPLAY $A T(11,1): " 3) A S$
CII Italic Set＂
2SO DISPLAY AT（12，1）：＂4）PI
CA Print Mode 10 CPI＂
240 DISPLAY AT（13，1）：＂5）EL
ITE Print Mode $12 \mathrm{CPI}{ }^{\prime \prime}$
250 DISPLAY AT（14，1）：＂6）Co ndensed Print 17 CPI＂
260 DISPLAY AT（15，1）：＂7）En
larged Print Mode＂
270 DISPLAY AT（1E，1）：＂日）Do uble Strike Mode＂
2GO DISPLAY AT（17，1）：＂ 7 Em phasized Double Strike＂
290 DISPLAY AT（19，1）：＂Which Iption Now？＂
JOO CALL KEY（O，ANS，ST）：：IF
$5 T=0$ THEN 300
310 IF ANSく4G or ANS 57 THEN 300
320 ON ANS－47 GUSIIB 360,380 ， $400,420,440,460,480,500,520$ , 540
SO DISPLAY AT（22，1）：＂DONE．
．．＂FOR DELAY＝1 TR 100：：NEXT DELAY
उ4O DISPLAY AT（22，1）：＂
＂
350 GUTO 300
360 GUTO 560
370 RETUFN
SBO PFINT \＃1：ESC丰：＂g＂
370 FETUEN
400 FFINT \＃1：ESC ：＂0＂$^{40}$
410 EETUPN
420 PEINT \＃1：ESC．：＂4＂
430 RETUEN
440 PRINT \＃1：ESC末：＂B＂：＂1＂
450 RETUFN
460 PFINT \＃1：ESC丰：＂B＂：＂2＂
470 EETUFN
4BO PRINT \＃1：ESC末；CHFS（15）
4 GO RETIEN
500 PRINT \＃1：ESC $\ddagger$（E7）：CHR末（1 ）
510 RETURN
5O PRINT \＃1：ESC象；＂G＂
530 EETIURN
E40 PRINT \＃1：ESC\＆；＂E＂；ESC母：＂
G＂
550 RETLIEN
5 GO CLOSE \＃1
579 END
HAPPY COMPITING，Fon Prewitt

CDMFUTEFEFFE SALE
A T I $39 / 4 A$ COMFUTER WITH EXTENDED EASIC CARTEIDGE AND MANY SOFTWARE MODULES AND CASSETTE TAFE FROGRAMS. ASKING $\$ 100.00$ OR BEST OFFER. CALL DON HUNDVEN AT 4742259 FOR MDRE INFORMATION.

I HAVE BEEN DEVELOFING FROGRAMS TO EE USED BY THE BLIND AND I WOULD EE INTERESTED TO KNOW IF ANYONE ELSE HAS SOME FROGRAMS THAT COULD be used by the blind. most all progeams can be programed with sfeech UNLESS

THE FROGR:AM REQUIRES THE VISUAL UIEWING DF THE SCREEN. SOME DF THE PROGRAMS THAT I HAVE DEVELDFED OR REFFRGGAMED AFE AS FDLLOWS;

1. TALKing calculator.
2. TALKING TELEPHONE BOOKF.
3. TALKING WDRD PROCESSDR.
4. TALKING OUTLINER.
5. TALKING CHECKBODK.
E. TALKing NAME that note.
6. TALKING MUSIC WEITE.
7. TALKING SPEECH GENERATOF:
8. TALKING SFEECH HELP.
9. TALKING SPEECH WORD.
10. TALKING JELLY EEANS.

THESE FROGRAMS FDR THE TI $39 / 4 A$ COMPUTER FEQUIRE THE TERMINAL EmLlator II command module and the sfeech synthesizere. all these FROGRAMS ARE ON TI BASIC AND CAN BE USE WITH EITHEF CASSETTE RECDRDER OF: DISK. IF ANYONE HAS DEVELDFED A FROGRAM FOE: THE BLIND I WOULD LIKE to buy or triade frograms. flease contact me at the following addeess;

DON HUNDVEN - 7349 SOUTH WILKESON - TACDMA, WA 98408 - PHONE (206) 474-2259

FDF: SALE
SUPER SKETCH, Used far about Two hours, $\$ 25.00$--- SIXTEEN HOME COMPUTER MAGAZINE FROGRAM TAFES, $\$ 2.00$ eam or $\$ 1.50$ each if you buy all 16 tapes -- One GDLDEN VOYAGE ADVENTURE CASSETTE for $\$ 5.00$. See Art Daniels at the meetings or Eall me at 564-3434 for more information.

FOR SALE: AXIOM GP-100 TI PRINTER WITH DIFECT CONNECT

FSESZ INTEFFACE TO CONSOLE SIDEPORT- $\$ 75.00$, TI-WRITEF MANIIAL-\$10.00, PAFALLEL

PFINTEF CABLE-कE.OO, FOUN
PFEWITT,474-7310

MEETINSS AFE THE $1 S t$ arA Bra THLASDAYS South End Pool Building -- 402 E. S6th Street -- Tacoma, WA

Listed below are a few facts and comon sense items regarding disks and disk drives. Some you may have thought of yourself, some you may have learned the hard way, and some may be brand new to you.
A. If you don't have a disk in your disk drive, don't Elose the disk door or latch. This can cause the read heads (if double-sided drive) to possibly chip, which in turn could cause your favorite disk to be eaten cor scratched or destroyed). The same is true of single-sided drives. The felt pad that rests against the drive head can seratich the head leading to possible diskette damage. When not in use, leave the drive door open. However, if you are transporting the system, be sure to insert an old diskette or the original cardboard insert shipped with the disk drive and close the door. This will reduce the likelyhood of damage to the heads.
B. Ee careful when inserting the diskette into the drive. Be certain the disk is fully inserted. Attempting to close the door with the disk partially inserted can mash the disk, Gausing loss of data or errors in reading. Diskettes with the hub rings san help center the disk properly as the door is closed. Neverforce the door closed. Something is wrong Cyou never had to force it before, did you?). Not only san forsing the door slosed damage the diskette, it can also break the disk drive.
C. The quality of diskette is determined by many factors, but one of the most important is the size of the metel oxide chips on the diskette boating. The finer these chips, the greater sensitivity, the lower the "noise" level, and the smoother the surface (less head wear). Other important factors to Eonsider are the binder material (the stuff that holds the metal oxide coating to the diskettey, the quality of the lining material in the jacket, and the evenness of the lubrisating goating (again, less head wear). High quality diskette does not neressarily mean high price. There are many mail order outlets selling quality diskettes for $50 \%$ or $501 e s s$ than name brand prices. However, avoid "cheap" diskettes. I won't mention any brand names, but if you don't know anything about diskettes, ask others what they have used and whish types have proved to be high quality but still good buys.
D. Df course, you know that diskettes and magnets don't mix, but have you considered the many souries of magnetis fields that exist around your eomputer areaf Some of the gverlaoked sources of maghetie fields include the telephone, calculators, the TV or monitor, even the vacuum sleaner (all high surrent motors have a
strong magnetis field). Don't forget all the magnets (obvious and not so obvious) including those rute little magnetir memo holders, your "stick on" CB antenna, scissors, or any steel toals, screwdrivers, pliers, ets. GYou'll be surprised how many of your hand tools have become magnetized.)
E. If you have been getting garbage or messed up data from time to time for no obvious reason, the culprit could be your monitor (or TV). Some units generate enough FF ( (radio frequeney) interference to disrupt the disk drive logic or the data on the diskette. Does your monitor sit on top of your FEB? (Mine used too, but I moved it for a different reason-the FEB power supply tranformer was messing up the Eolor on my monitor.) Want to theck for sources of RF interference? You probably have the test gear in your home-a small portable AM radio! Tune the radio to an empty part of the band ino station broadiasting' and run the radio around the computer and monitor. Listen for static and moise. Any place there is loud statik or noise is a high source of FEF. Take note of these areas. CWhile you are exploring, plase your little hand-held calculatar next to the radio and perform some math routines. You'll "hear" the calculator thinking! These signals are too weak to harm your disks, so you don't need to worry.)
F. Another source of garbage is misaligned disk drive heads. Trouble reading the data on a diskette used in more than one disk drive is a symptom of alignment problems. The data is read ok in one, but when moved to another drive, problems ocrur. You'll have to do additional checking to determine which drive has the problem. If you have a diskette that has a commertial program on it (any "store bought" program) use it to see which drive is not reading correctly. In all likelyhood, that will be the drive with the alignment problem.

Most of what has been said can apply to rassette tapes. In either Ease, use good judgement and bommon sense and you'll have very few data problems.

[^0]TIPS FROM THE TIGERCUB
\＃38

## Copyright 1986

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 groupsy with credit to Tigercub Software．

Over 130 original programs in Basic and Extended Basic， available on casette or disk，only $\$ 3.00$ each plus $\$ 1.50$ per order for PPM． Entertainment，education， programmer＇s utilities． Descriptive catalog \＄1．00． deductable 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，com－ plete contents of Nos． 15 through 24，over 60 files and programs，also just $\$ 15$ postpaid．
 ＊
＊Tips from the Tigercub＊
＊Vol． 3 is now ready．＊
＊Another 62 programs，＊
＊routines，tips，tricks．＊
＊from Nos． 25 thru 32．＊
＊Also $\$ 15$ postpaid．Any＊
＊two Tips disks $\$ 27$ or＊
＊all 3 for $\$ 35$ postpaid．＊
＊ ＊
＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊
Nuts \＆Bolts（No．1），a full disk of 100 Extended Basic utility subprograms in merge format，ready to merge into your own programs．Plus the Tigercub Menuloader，a tuto－ rial on using subprograms， and 5 pages of documentation with an example of the use
of each subprogram．All for just $\$ 19.95$ postpaid．
Nuts \＆Bolts No．2，another full disk of 108 utility subprograms in merge format， all new and fully compatible with the last，and with 10 pages of documentation and examples．Also $\$ 19.95$ postpaid，or both Nuts Bolts disks for $\$ 37$ postpaid．
Tigercub Full Disk Collec－ tions；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，PROGRAM－ TUTOR，PROGRAMMER＇S UTILI－ TIES，BRAIN GAMES，BRAIN TEASERS，BRAIN BUSTERS！， MANELVERING GAMES，ACTION REFLEX AND CONCENTRATION， TWO－PLAYER GAMES，KID＇S GAMES，MORE GAMES，WORD GAMES，ELEMENTARY MATH，MID－ DLE／HIGH SCHOOL MATH，VOCAB－ ULARY AND READING；MUSICAL EDUCATION，KALEIDOSCOPES AND DISPLAYS

For descriptions of these send a dollar for my Eatalog！

I have discovered a rare bug in the 28 －Column Conver－ ter，published in Tips \＃18， which will cause an I／0 25 ERROR if the very last line of the program being conver－ ted happens to have exactly 80 characters．You can fix it by adding a line－ 215 IF EOF $(1)=1$ THEN 260

There is also a rare bug in the SIDEWAYS subroutine on my Nuts \＆Bolts \＃2 disk， which prevents turning some redefined character sets sideways．If you are one of those who BOUGHT that disk from me，you can fix it by
changing the $L=L E N\left(B B^{\circ}\right)$ in I ine 21639 to $L=64$ ．

I was in too much of a hurry to go fishing when I put the last couple of Tips together．In the Gordian Knot in Tips \＃35，I left out some essential instruc－ tions．Please add－
131 DISPLAY AT（11，1）：＂When you cross your track，＂：＂pres $s 0$ to go over，$U$ to go＂：＂un der，C to go across．＂

To make that fit，you will have to change the DISPLAY AT in line 130 to $(8,1)$ ，in line 140 to $(15,1)$ and in line 150 to $(20,1)$ ，also the ACCEPT At in 160 to（ 20,11 ）． And this change will prevent a lockup when you reach a border－
$200 \mathrm{D}=\mathrm{D}-1$ ：$:$ IF $\mathrm{ABS}(\mathrm{D}-\mathrm{D} 2)=2$ $0 R R+(D=1)=0$ OR $R-(D=3)=250$ $R C+(D=4)=2 \quad O R \quad C-(D=2)=31 \mathrm{TH}$ EN 180：：GOSUB 510：：IF D人 $>D 2$ THEN GOSUB 450

I wrote the dulcimer music in Tips \＃36 in Basic，but I forgot to test it in Basic． It actually runs much better in Extended Basii，but will run fairly well in Basic if you delete the delays in lines 280 and 300.

If you liked the ESCHER ART in Tips \＃37，these modi－ fications will improve it considerably－
110 DISPLAY AT（12，1）：＂Press －＂：：＂Q for new pattern＂：＂ $B$ to change background＂：＂$F$ to ihange foreground＂：＂$R$ to
reverse colors＂：：＂Any ke $y$ to start＂
280 A＝INT（ $6 * R N D+3$ ）：：$H=I N T(2$ 4／A）：：RX＝24－H＊A ：：HC＝INT（2
日／A）：：CX＝2日－HC＊A ：：W＝ABS（H $C / 2=I N T(H C / 2))-(R X>0): \quad D I M$ M（8，B）：：FOR $P=1$ TO A
330 IF Kく＞66 THEN 346
$340 \mathrm{BC}=\mathrm{BC}+1+(\mathrm{BC}=16) * 15:$ IF $B C=F$ THEN 340 ELSE 347
346 IF $K<>70$ THEN $360: 5=F$ $1+(F=16) * 15$ ： ：IF $F=B C$ THEN 346
347 FOR S＝7 TO 14 ： CALL CO LOR（S，F，BC）：：NEXT $5:$ ：GDTO 310

350 ！＊＊DELETED LINE＊＊
360 IF Kく＞ASC（＂R＂）THEN 310 ： ：$T=F:: F=B C:: B C=T:: G O T$ 0347
600 GOSUB 900 ：：FOR T＝1 TO A ：：DISPLAY AT（R－1＋T，C）：M\＄ V，T）：：NEXT T ：：NEXT C 601 IF CX＞0 THEN AA＝A ：：GDS UB 800
605 GOSUB 1000 ：：NEXT R
606 IF RX＝0 THEN 610
607 GOSUB 1000 ：：FOR C＝1 TO A＊HC STEP A ：：GOSUB 900 ：： FOR $T=1$ TO RX ：：DISPLAY AT $(R-1+T, C): M \$(V, T):: ~ N E X T ~ T: ~$ ：NEXT C
608 IF CX＞O THEN AA＝RX ：：G0 SUB 800
800 GOSUB 900 ：：FOR $T=1$ TO AA ：：DISPLAY AT $(R-1+T, C): S E$ G\＄（M\＄（V，T）：1，CX）；：NEXT T ： ：RETURN
$900 \mathrm{~V}=\mathrm{V}+1+(\mathrm{V}=4)$＊4 ：：RETURN $1000 \mathrm{~V}=\mathrm{V}+\mathrm{W}:: \mathrm{V}=\mathrm{V}+(\mathrm{V}>4)$＊ 4 ：： RETURN

I had a letter from a teacher who was using the PRK module to keep student grades，and wanted to know how to average them．It can be done，but is so imprac－ tical that I wrote this pro－ gram．While $I$ was at it，I speeded up the loading and saving to cassette greatly by converting the grades to an ASCII string and combin－ the student＇s name and all grades into one record．

100 DIM N $\$(50), T(50,20)$
110 CALL CLEAR
120 PRINT＂TEACHER＇S
HELPER＂：：：：
130 REM－by Jim Peterson 140 PRINT＂（1）CREATE A FILE？ ＂：＂（2）ADD TO FILE？＂：＂（3）LOAD A FILE？＂：＂（4）SAVE A FILE？＂： ＂（5）PRINT A FILE？＂
150 PRINT＂（6）CORRECT A FILE ？＂：＂（7）COMPUTE AVERAGES？＂：＂（ 8）QUIT？＂
160 CALL $\operatorname{KEY}(0, K, S)$
170 IF $(S=0)+(K<49)+(K>56)$ TH EN 160
180 ON K－48 GOTO 190，250，610 ，800，380，990，1120，1510
$1.70 \mathrm{X}=0$
200 INPUT＂SUBJECT？＂：S\＄
210 GUSUB 1370
220 INPUT＂TEST \＃？＂：N

230 GISUB 1440
240 GOTD 140
250 PRINT ：；：＂（1）ADD NAMES？＂
：＂（2）ADD GRADES？＂
260 CALL KEY $(0, K, S)$
270 IF $(S=0)+(K\langle 49)+(K\rangle 50)$ TH
EN 260
280 ON K－48 GOTO 290,310
290 GUSUB 1370
300 GOTO 140
310 INPUT＂TEST \＃？＂：Q
320 IF $T(1, Q)=0$ THEN 350
330 PRINT ：；：＂TEST \＃＂；STR\＄（Q
）；＂ALREADY RECORDED＂
340 GOTO 140
$350 \mathrm{~N}=\mathrm{Q}$
360 GISUB 1440
370 GOTO 140
380 CALL CLEAR
390 PRINT＂OUTPUT TO＂：＂（1）SC
REEN？＂：＂（2）PRINTER？＂
400 CALL $\operatorname{KEY}(0, K, S)$
410 IF $(5=0)+(K<49)+(K>50) T H$
EN 400
420 IF K＝49 THEN 460
430 INPUT＂PRINTER DESIGNATI
ON？＂：P\＄
440 OPEN \＃2：P\＄
$450 \mathrm{Fe}=2$
460 PRINT＂PRESS ANY KEY TO
PAUSE＂：：
470 PRINT \＃F＠：S\＄：：
480 FDR J＝1 TO X
490 PRINT \＃Fe：＂＂：N（J）\＆＂＂；T
AB（10）；
500 FOR $K=1$ TO HN
510 PRINT \＃Fe：T（J，K）；
520 NEXT K
530 CALL $\operatorname{KEY}(0, K, S)$
540 IF S 〈＞0 THEN 530
550 NEXT J
560 PRINT \＃Fe
570 IF $F(G=0$ THEN 140
580 Fe＝0
590 CLOSE \＃2
600 GOTO 140
610 PRINT ：；：＂（1）CASETTE？＂：＂
（2）DISK？＂
620 CALL $\operatorname{KEY}(0, K, S)$
630 IF $(S=0)+(K<49)+(K>50) T H$
EN 620
640 ON K－48 GOTO 650，670
650 OPEN \＃2：＂CS1＂，INPUT ，FIX
ED
660 GOTD 690
670 INPUT＂FILENAME？DSK＂：F末
680 OPEN \＃2：＂DSK＂\＆F\＄，INPUT
690 INPUT \＃2： $\mathrm{X}, \mathrm{HN}, \mathrm{S} \ddagger$
700 FOR $\mathrm{J}=1$ TO X
710 INPUT \＃2：K\＄
$720 \mathrm{~N} \$(\mathrm{~J})=$ SEG $\$(\mathrm{~K} \boldsymbol{q}, 1, \mathrm{POS}(\mathrm{K} \$, \mathrm{C}$
HR $\$$（255），1）－1）
$730 \mathrm{~K} \$=$ SEG $\$$（K．$\$$ ，POS CK $\$$ ，LHR $\$(2$
55），1）＋1，255）
740 FOR $K=1$ TO HN
$750 \mathrm{~T}(\mathrm{~J}, \mathrm{~K})=\operatorname{ASC}(\operatorname{SEG} \$(\mathrm{~K} \$, \mathrm{~K}, \mathrm{I}))$
－50
760 NEXT K
770 NEXT J
780 CLOSE \＃2
790 GOTO 140
800 PRINT ：；：＂（1）CASETTE？＂：＂ （2）DISK？＂
810 CALL $\operatorname{KEY}(0, K, 5)$
820 IF $(\mathrm{S}=0)+(\mathrm{K}\langle 49)+(\mathrm{K}>50)$ TH EN 810
B30 ON K－4B GOTO 840，860 840 OPEN \＃2：＂CSI＂，OUTPUT，FIX ED
850 GaTO 880
860 INPUT＂FILENAME？DSK＂：F\＄
870 OPEN \＃2：＂DSK＂\＆F\＄，OUTPUT
880 PRINT \＃2：X：HN：S\＄
890 FOR J＝1 TO X
$900 \mathrm{~K}={ }^{\mathrm{K}}=$
910 FOR $K=1$ TO HN
$920 \mathrm{~K}=\mathrm{K} \$ \& \mathrm{CHR} \$(\mathrm{~T}(\mathrm{~J}, \mathrm{~K})+50)$
930 NEXT K
940 PRINT \＃2： $\mathrm{N} \$$（J）\＆CHR $\$(255)$
\＆K
$950 \mathrm{~K}=\mathrm{F}=\mathrm{"}$
960 NEXT J
970 CLOSE \＃2
980 GOTO 140
990 CALL CLEAR
1000 INPUT＂STUDENT＇S NAME？ ＂：Q
1010 FOR J＝1 TO X
1020 IF $\mathrm{N} \$(\mathrm{~J})=\mathrm{Q} \$$ THEN 1060 1030 NEXT J
1040 PRINT ：：：＂NAME NDT FOUN
D＂：：
1050 GOTO 140
1060 INPUT＂CORRECT WHICH TE
ST？（0 TO OUIT ）＂：C
1070 IF $\mathrm{C}=0$ THEN 1110
1080 PRINT ：；：N $\$(J) ; " ' S$ TEST \＃＂；STR末（T（J，C））：：
1090 INPUT＂CORRECT TO？＂：T J，C）
1100 EOTO 1060
1110 GOTO 140
1120 CALL CLEAR
1130 PRINT＂OUTPUT TO＂：＂（1）S
CREEN？＂：＂（2）PRINTER？＂
1140 CALL KEY $(0, K, S)$
1150 IF $(S=0)+(K\langle 49)+(K\rangle 50) T$
HEN 1140
1160 IF $K=49$ THEN 1200
1170 INPUT＂PRINTER DESIGNAT
ION？＂：P\＆
1180 OPEN \＃2：P\＄
$1190 \mathrm{FG}=2$
1200 PRINT \＃F（2：S

1210 FOR $J=1$ TO X
1220 PRINT \#Fe:N\$(J);" AVERA GE ";
1230 FOR K=1 TO HN
$1240 \mathrm{TT}=\mathrm{TT}+\mathrm{T}(\mathrm{J}, \mathrm{K})$
1250 NEXT K
$1260 \mathrm{AV}=\mathrm{TT} / \mathrm{HN}$
1270 TAV $=T A V+A V$
1280 PRINT \#Fe:AV
1290 TT=0
1300 NEXT J
1310 PRINT \#Fe: "CLASS AVERAG
E ";TAV/X
$1320 \mathrm{TAV}=0$
1330 IF F $=0$ THEN 1360
$1340 \mathrm{FG}=0$
1350 CLISE \#2
1360 GOTO 140
1370 PRINT : ;:"STUDENT'S NAM
ES - ":"type END when finish
ed": :
$1380 x=x+1$
1390 M $\$=$ "NAME \#"\&STR $(X) \& "$ "
1400 INPUT M $\$$ : $\mathrm{N} \$(X)$
1410 IF N $\$(\mathrm{X})\rangle$ "END" THEN 13
80
$1420 \quad x=x-1$
1430 RETURN
1440 FOR $J=1$ TO X
1450 M $\$=\mathrm{N} \$(\mathrm{~J})$ \&"'S GRADE? "
1460 INPUT M $\$: T(\mathrm{~J}, \mathrm{~N})$
1470 NEXT J
1480 IF NKHN THEN 240
$1490 \mathrm{HN}=\mathrm{N}$
1500 RETURN
1510 END

The reason that 50 is added to the value in line 920, before saving, and subtracted again in line 750 after loading, is because of a quirk of the computer that I don't recall seeing in print anywhere. Did you know that INPUT will read a string beginning with ASCII $0,2,4,7,10,12,14,18$, $20,26,27,31,32$, or 44 as a null string (a blank), and will drop these characters at the end of a string? And ASCII 32 will be dropped at the beginning or end of a string. And ASCII 0 within a string, or ASCII 34 anywhere, will crash, while ASCII 44 within a string will lose the rest of the string. I should have known what ASCII 0, 32 (the space), 34 (quotes) and 44 (comma) would do, but why the others?

LINPUT will accept anything, of course, but I wanted to keep this in BASIC for the teachers who are struggling along without the XBasic module or disk drive.
in LA 99ers TOPICS the surprising discovery that PRINT USING and DISPLAY USINg can read the IMAGE format from a variable, array or string!

Which led me to some fooling around -
100 !PRINT USING DEMO by Jim Peterson, based on a discov ery by Chick De Marti
110 CALL CLEAR :: RANDOMIZE :: CALL SCREEN(5):: FOR $\mathrm{S}=2$ TO 14 :: CALL COLOR (S,S,S):: NEXT S
$120 \mathrm{~N}=\mathrm{INT}(13 * \mathrm{RND}+1):$ : $\mathrm{C} \$=\mathrm{CHR}$ $\$(8 * N+32-(N=4) * 11)$
130 FOR J=N TO 12 :: A $\$=R P T \$$ (" ",J)\&"\#"\&RPT\$(" ",26-J: 2 )
\&"\#" :: PRINT USING A\$:C $=$, $\mathbf{C}$ :: NEXT J
140 FOR J=12 TO N STEP -1 : : A $=$ RPT $\$("$ ", J)\&"\#"\&RPT\$(" " ,26-J*2)\&"\#" : : PRINT USING A\$:C末,C\$ :: NEXT J :: GOTO 1 20

Here is one last Tigercub challenge. What is the longest possible one-liner? And what is the longest possible one-liner that actually does something?

MEMORY FULL.
Chick De Marti published


zpt86 $\forall M$ "ewanel





DLIE GFEE DUE
$\$ 15.00 \ldots . . . I^{2}$ INDIVIDUAL
$\$ 20.00 \ldots . . . . . . F_{\text {FAMILY }}$

See Dur Treasurer RON PEEWITT


[^0]:    DISSㄴAIMEF
    THE ARTICLES CONTAINED IN THIS NEHSLETTER DO NOT NECESSARILY REPRESENT THE OPINION OF THE GROUP, EDITOR, OR ANY PERSON OTHER THAN THE AUTHORS. THE TACOMA GSERS USERS GROUP CANNOT ASSUME LIABILITY FOR ERRORS OR OMISSIONS IN ARTICLES, PROGRAMS OR ADUERTISEMENTS.

    PERMISSION 15 GRANTED TO COPY ARTICLES, PROUIDED THAT THE SOURCE OR SOURCES EE DISCLOSED AND PROPER CREDIT GIUEN TO THE AUTHORS.

