PRESIDENTS CORNER

NEW PRODUCT FEVER –
GRAM KRACKER / NEW MYARC COMPUTER

I received my GRAM KRACKER before Christmas by UPS Blue Label shipping, Monday the 23rd in fact. It works as promised and promises to do more. The Gram Kracker has now successfully downloaded all my cartridges to disk. I borrowed a PLATO cartridge, but that wouldn't work. I'm told that an assembly routine will allow me to get around even that. The manual that came with the Gram Kracker was a preliminary incomplete one, with the completed manual to be sent soon when it is finished. Incomplete though it is; it contains more than enough to get me going. This is not a 'Review', I'll do that after I've spent more time with it. My purpose in writing this is to say Miller's Graphics is definitely shipping the Gram Kracker and it looks good. Besides a forth coming review, at the next meeting there will be a demonstration.

Everywhere you turn these days in the 99/4A community, you find some comment or rumor concerning the new 'Myarc' computer. Here is the latest information that I received from Boyd Cone of Information Associates.

The production of the new computer is going full steam. Twenty 'component' machines are presently being produced. As it stands now, production models will be produced before the 1st quarter ends. The difference between a 'component' machine and a production model is: A component machine has the separate boards built, and then attached; while the production model has the parts manufactured as one integrated module and installed into the computer. TI has a plant in Norcross, GA which will be developing the production components. Before the machine can be sold, a 'production' model must undergo FCC testing. If testing is done by the FCC, that can take six to nine months. A private company (approved by the FCC) has been engaged to do the testing. The testing will take approximately six weeks. The operating system for the new machine is being worked on by the same people who wrote Myarc's Disk Manager.

If the current schedules hold, it is optimistically possible to have the machine selling by the end of 1st quarter.

I thought people would be interested in news of this new equipment.

Gary Matthews

EDITORS NOTES

Another month, another year, time seems to go by so quickly. Its two years since Texas Instruments decided to dump the 99/4A, and the number of 99/4A clubs is still expanding, many clubs even report increases in membership.

Equipment, although no new computer is being sold, is still plentiful. There are 128K cards, CP/M cards, 512K cards, clock cards, printer buffers, disk controllers for up to four drives; double-sided, double-density, and thanks to Myarcs personality card 5 and 10 Meg hard drives.

Two manufacturers CorComp and Myarc have taken over where TI gave up. From my point of view I'd rather have them then TI. I know, I know, I've heard a lot of bad stories, this doesn't match that, this person or that had bad experiences, some of the products malfunctioned when they first came out, and some still don't work with some components. But, and its a big but, old errors have been corrected, equipment replaced and most of the equipment coming out now appears to be doing what the manufacturer states it will do.

The buyer still has to beware what he or she buys, and by the way that is one of the reasons that the Users Groups were formed. There seems to be plenty of pre-loved (used) equipment out there at good prices. There are still a lot of modules available even though some are getting harder and harder to find. The fairware, shareware, freeware call it what ever you will continues to grow and the programs get better and better. Some of the programs put the mush that TI was selling up to shame. Some help and improve the old TI programs some just replace them.

In an overall view of whats happening right now, I think that 99/4A owners are better off now then when TI was controlling the market place. There is just more equipment, more programs out there then ever before, and what is out there is better then ever. Did TI ever let it be known that you could mount a 32K expansion and an RS232 **inside** the 99/4A. Well its being done. This 99/4A computer is still one of the best buys going, new or used, TI "original" components or third party components you're going to pay a lot more for another brand computer just to equal what the 99/4A can do.

FREEWARE AND PUBLIC DOMAIN AVAILABLE

Following is a list of known software available that is either Freeware or Public Domain.
To obtain the programs that the club already has available, the policy is as follows:

- Ready made diskettes (flippies) of these programs are at the meetings for $3 apiece (members) $4 (non-members). $1 only, if you bring a disk to swap for each disk of programs.
- Members and non-members can send a disk mailer with return address, postage, and sufficient disks to the club address for these programs. The club is not responsible for people sending insufficient return postage or an insufficient number of disks to hold the programs. For people who go to this trouble; there is no charge of any kind.
- The Atlanta 99/4A Computer Users Group charges these fees because we cannot afford to do it for free. The club does not do this to make a profit. We fully expect and sincerely hope those who receive these programs will send the small price the authors ask for their work.
- When you write to the addresses listed for the author and their programs, send them a return postage disk mailer and enough diskettes to hold their programs; PLEASE REMEMBER... the price they ask is not meant to include their sending you disks and mailers.
- You get the most recent version when getting the program from the author instead of a club.

The club has these programs. (They fit on 1 SS disk unless stated otherwise)

TK-WRITER/TK-LOADER, DISKO, MASSCOPY, COMM 99, GOTHIC PRINT - All fit on 1 SS disk
HUGGER's EXT BASIC FORTH - Only works on a 'pure' TI system (no 3rd party cards)
ASSAULT the CITY, WEATHER FORCASTER & Add'l programs, COMPACTOR/UNCOMPACTOR - Fits on 1 SS disk
XB TI-WRITER LOADER (AUSTRALIA) has SD, TI-W. files, TINY PRINT, FILEREADER - Fits on 1 SS disk
SUPERDISK, TE3 with XMODEM, DISASSEMBLER by Marty Kroll - All fit on 1 SS disk
Jim Hubbard - 2 very good program demonstrations(1 per disk) to use on the 99/4A at meetings.

DISASSEMBLER -Fred Hawkins + many good prog.s
FORTH
SPRITE BUILDER - John Taylor, 2 SS disks.
CHECKBOOK & BUDGET PROG. - John Taylor
NEATLISTER - Danny Michael
MASTER CATALOG - Mack McCormack
TI-WRITER & MULTIPLAN Enhancements
MUSIC SAMPLER COLLECTION
FAST TERM - Paul Charlton
FRED GUYTON'S MAIL LIST & CHECKBOOK PROGRAMS
BILL KNECHT's BEST SONGS
TI-WRITER Rewritten Manual-Dick Altman

MUSIC COMPLIER - Chris Morgan
FORTH Source Code - 2 SS disks
JET PUBLIC DOMAIN - 2 SS disks, Educ. & Games
C COMPILER - Clint Pulley, 2 SS disks
SCREENDUMP - Danny Michael
SUPERBUG II - Edgar Dohmann
TI ADVANCED ASSEMBLY DEBUGGER
DISK MANAGER 1000 - Bruce Caron
TE FORTH
TAX FORMS (1984) Dick Scott, uses Multiplan
BILL KNECHT's BEST HYMNS
FORTH MANUAL on disk - 4 DS disks

LISTING OF FREEWARE PROGRAMS AND AUTHORS:

SPRITE BUILDER-$7.50 & JET PUBLIC DOMAIN
John Taylor 2170 Estaline Dr., Florence, AL
35630. Fancy Sprite creation & manipulation.
CHECKBOOK & BUDGET PROGRAM-$10 New program
by John Taylor,holds 120 transactions a month
fast XB access time.

ASSAULT THE CITY-$5 John Benke 5755 W. Grace,
Chicago,IL 60634. Uses Tunnels of Doom Module

MASSCOPY-$10 Steve Lawless 2514 Maple Ave.,
Wilmington,DE 19808. Can make 2 copies at once.

TRIVIA 99'ER-$5 Robert L Wessler 4300 Frazier,
Fortworth,TX 76115. XB game

THE DIRECTOR-$5 Ron Rutledge 1020 3rd St.,
Waukee,IA 50263. XB catalogs program disks

MASTER CATALOG-$10 Mack McCormack 215A Yorktown
Dr., Ft.Lee,VA 23801. Ass'bly,holds 2000 files

TK-WRITER-$7.50 & SUPER DISK DUPLICATOR-$10
Tom Knight 7266 Bunion Dr.,Jacksonville, FL
32222. Uses XB or E/A cartridge.

SCREEN DUMP-$10 & NEAT LIST-$10 Danny Michael
Rt.9 Box 460,Florence, AL 35630.

SUPERBUG II-$5 Edgar L. Dohmann Route 3 Box 84,
Alvin,TX 77511. Much Improved from TI version.

XBASIC FORTH-2 SS disks Rene LeBlanc 8719 E.
San Lucas Dr.,Scottsdale,AR 85258.

PRO 99ER BBS-Ask about # disks & price. Mark
Hoogendoorne 21 Long St. Burlington, MA 01803
Supports 1200 baud & true TE2 downloads.

DISK MANAGER-$? Todd Kaplan 5802 N. Wester #3S,
Chicago,IL 60659. Good DM2 on disk.

EASYSPRITE-$? Tom Freeman 515 Alma Real Drive,
Pacific Palisades,CA 90272. Create & save
sprites, has assembly routines.

PILOT 99-$10 Thomas Weithofer 1000 Harbury Dr.
Cincinnati, OH 45220. An entire but simple
language for the TI.

FAST TERM-$10 Paul Charlton 1110 Pinehurst,
Ct.,Charlottesville, VA 22901. True TE2 Xfers

C COMPILER-$20 Clint Pulley 38 Townsend Ave,
Burlington,Ontario,CANADA L7T 1Y6
SUPER COPY-$10 Clint Pulley- disk copier
9900 BREAKTHRU-$10 Clint Pulley- FORTH game
He cannot use US stamps, send $1 postage.

WEATHER FORCASTER-$5 Gary Cox 3174 Melbourne
,Memphis,TN 38127. XBasic

X-DISASM-$10 Fred Hawkins 1020 N. 6th St.,
Allentown,PA 18102. Powerful,payers get doc.

DIASSEMBLER-$10 Mart Kroll 218 Kaplan Ave.,
Pittsburg,PA 15227. Assembly & full featured.

DISK MANAGER 1000-$Donation Ottawa U.G.
P.O.Box 2144 Station 'D' Ottawa,ONT. K1P 5W3
Replaces and is better than the Disk Mng. 2

BEST SONGS & BEST HYMNS-$6 2 disks Bill Knecht
815 Yorkshire,Pasadena, TX 77503.

FILEREADER-$2 Martin A. Smoley 6149 Bryson Dr.
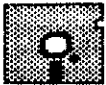Mentor,OH 44060. Reads & prints I/F etc. files

PRBASE-$10 William M. Warren 2373 Ironton St.,
Aurora,CO 80010. Database program.

TECHIE BBS-Takes 4 SS disks.No price listed.
Monty Schmidt 525 Wingra St.,Madison,WI 53714.
300 baud,plans 1200 & download capability
COMPACTOR-$10 Monty Schmidt
UNCOMPACTOR-$10 Monty Schmidt. Compacts
or uncompacts a D/F80 file - faster load times.

MUSIC COMPILER-$Donation Chris Morgan. 1901 Twin
Twin Branch Dr.,Marietta,GA 30062. Allows music
to play in backgrnd while programming/running.

ONE AUTHORS FREEWARE OPINION

Reprinted from the LA 99ERS newsletter TopIcs

(Ed's note) The following are excerpts of a letter from one "Freeware" programer to another programer who "was" thinking about placing his work into the "Freeware" channel.

About your question on Freeware. I have marketed two games - one freeware and the other by direct sale. I would like to see Freeware work but to be perfectly honest with you, I made 10 times as much with the non-freeware program. If you plan to distribute a program to make $$$, don't do it as Freeware unless you have no choice. The Freeware concept is a GREAT idea but unfortunately falls prey to the fact that most people will Not pay for a program that they already have. About 15 people sent me $5 for one of my games while with the other, I received over 50. The Freeware program was BETTER! It is sad to think that people will not even send $5 for a good program. I am now releasing programs either as Public Domain or through Asgard Software... It's not the $$$ but rather the fact that people who will send the $$$ don't mind the price. I myself fall victam to the same thing. I hesitate to send someone some $$$ and I put it off for another time which never seems to come...

The 10% theory you spoke of is an overstatement. You should expect more like 2%. It is hard to keep track of how many people have your programs but I know that over 400 have my freeware. I did this by noting how many times it was downloaded off of bulletin boards and by the money I received. $15/400+/- Not to well. I hope I'm wrong! I hate to talk

this way so that's all I'll say on the subject.

About your programs. I would recommend you try and market them. I specifically think the chess program is GREAT! It is a good strategy game and never have I had so much fun by only reading the instructions...

You could make some good money off this if that is what you want, but not by freeware. The market for freeware games is even smaller than the utilities. Try a company.
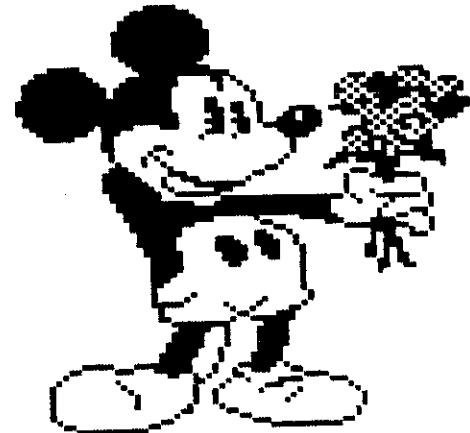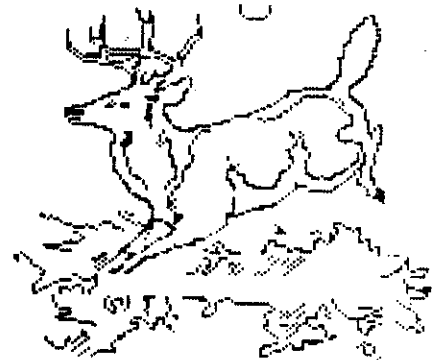
Sincerly

John Behnke

Ed's note; folks these thoughts are similar to those of many of the freeware authors. If you want to see the death of the golden goose, then all you have to do, is nothing. If on the otherhand you want to see more programs enter the Freeware channels then, If you use freeware programs, and like the program you are using make a resolution for the new year, and fulfill it, send some money to one author each week until you've paid him what you think his program is worth, or what he is asking. Then pay for the next program you are using, and the next and so on until you have paid for all the programs you are using. Keep the 99/4a and the freeware market alive.

Marshall

CORCOMP'S NEW PRODUCTS
from Northern NJ 99'er User's Group, Sept., 1985

Anaheim based CorComp has released two new products. One of them is a stand alone clock/calendar unit. The unit uses the console power when the console is on, and uses a battery to hold the time and date when the console is off. the unit also has a load interrupt switch installed. The unit is 1/3 the size of their Mini Expansion System and has a list price of $81.00.

CorComp's other new product is called the Triple Tech Card. It is a card that fits in the TI expansion box. The card features the same clock calendar (with .0002 percent accuracy), and also has a slot to plug in a speech synthesizer board. You would disassemble your synthesizer and place it in the provided slot, reducing the width of your computer. The card's most exciting feature is it's 64K parallel printer buffer. The buffer has a copy button for multiple copies, and a clear button to clear the buffer instantly. All these features come on one board and the board carries a suggested list price of $130.00.

REVIEW

CSGD I
CSGD II

SMILE

BY DAVE ROSE
2731 RESOR ROAD
FAIRFIELD, OHIO 45014

All of the members who attend our monthly meeting know that I have an old 7 bit printer that does not handle 8 bit graphics at all. So when I go out and purchase a Gemini compatible 8 bit graphics program and then go scrambling around borrowing printers you know that it has to be good.

I first heard about this program and saw some of the printouts in the CIN-DAY User Groups newsletter, I was so impressed that I sent away for the program the very next day. I had to wait less than a week before my package arrived, I have continued to be impressed by the speed used by Dave Rose in answering questions and filling orders. From the reports of others who have purchased from him everyone has had the same rapid service.

However rapid service is not everything. A good product is just as important, and this is one of the best. The best that is available for the 99/4A, and I'd put it up against just about any computers "Print Shop" program. The full name of the program is "Character Sets and Graphic Design", there are set I and II and two disks of User designed graphics and fonts, Dave sells sets I and II and collects and distributes the user designed sets at about the cost of disk, mailer, and postage. You can also obtain copies of the user disks by sending Dave the copies of the designs that you have created while using the program.

Set I comes with ten Character Fonts, three pictures, and ten graphic designs. Set II comes with eight more Fonts and 65 graphic designs. The pleasantest part about the Fonts and the graphics is that they can be used interchangably by the two programs. You can begin and end both banners and messages with pictures. You can create a border and print it out with any picture you wish inside. You can print your pictures in actual size, double size, inverted, or reversed. One note of caution some of the pictures can not stand to be reversed and inverted at the same time.

When I first got my package and a borrowed printer I loaded the program and was off and running, the program is so completely menu driven and user friendly that there is very few reasons to need the instructions. The few pages of "mini-instructions that Dave provides with the package is sufficient for most purposes. The main use I have for these instructions is to see the character fonts

and the graphics that I want to print out, and to answer a few questions. The only time I have had to read the instructions was when trying to create new designs. One note of interest, it seems that one of the easiest way to obtain designs for the program is to use your wives cross- stitch patterns, is this a sneaky way to get your wife interested in the computer or not.

Although the first program, I'm on my second updated version (third set of programs), ran a little slow, the new one runs extremely fast. My first use of the program was to produce the "Rose Ball" program booklet for my son's college frat. It may not have been a truly professional job, but very few would ever have known.

When I heard that CSGD II had been released I sent in my money for it, sight unseen, just on the basis of the results I had obtained with the first set. I was not disappointed, and apparently neither were the several people who were the recipients of the Merry Xmas banners that were at our Dec meeting. All of them were printed out using Set II.

I heartily recommend this set of programs to all owners of Gemini or Prowriter type printers, (there are versions for both printers) who want to print and use fancy fonts on letters correspondence, home made cards, with a professional touch, made banners for home or school or do just about any lettering and/or graphics job.

TINY/CAL

1986

JANUARY								FEBRUARY						
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REPRINT FROM MICROpendium
    October 1985 issue

Companies that produce calendars have one goal in mind: helping others keep track of days, weeks and months. It's a multi-million dollar business with a market that won't quit. Afterall, just about everyone has need for a calendar, every year.

Richard J. Bailey of Gonic, New Hampshire, is listinga number of programs as freeware. Among them are several that produce and print calendars for any year from 1776 to 2099. These calendars are printed in a variety of sizes using Epson-TI type printers, including Gemini. The program listed here is called **TINYCAL** and produces, what else, a tiny calendar.

TINYCAL

The program can probably be modified to operate using any dotmatrix printer that includes super/subscript characters. Although it is designed for RS232 operation, users may use parallel printers simply by changing the I/O characteristics in line 280. It is in line 280 that the super/subscriptcharactes are accessed. This line may be used as the basis for "miniaturizing" printer output for many programs, including disk catalog programs.

The program requires Extended Basic.

Ed's note: If your interested in more programs of this type the name and addres of the author is included in the program. You should write to him for his freeware offerings.

Also if you do not have a subscription to MICROpendium you are missing out on a lot of news, views, programs, and information. I've been a subscriber since they first started publishing, and I consider it to be a best buy for 99/4A users.

CONTACT: MICROpendium
        P.O. Box 1343
        Round Rock, Tx 78680

```
100 !********************
110 !*        TINY        *
120 !*EPSON/TI CALENDER*
130 !*        BY          *
140 !*RICHARD J. BAILEY*
150 !*68A CHURCH STREET*
160 !*GONIC, N)H) 03867*
170 !********************
180 DIM T(12),D(12),MO$(12):
: CALL CLEAR :: CALL SCREEN(
2):: FOR I=0 TO 14 :: CALL C
OLOR(I,16,2):: NEXT I
190 FOR I=1 TO 12 :: READ T(
I),D(I),MO$(I):: NEXT I
200 DATA 7,31,JANUARY,30,28,
FEBRUARY,8,31,MARCH,32,30,AP
RIL,9,31,MAY,32,30,JUNE
210 DATA 9,31,JULY,31,31,AUG
UST,6,30,SEPTEMBER,30,31,OCT
OBER,7,30,NOVEMBER,30,31,DEC
EMBER
220 DISPLAY AT(5,14):"TINY":
" EPSON/T.I. CALENDAR":
"":"":"**THIS PROGRAM WILL P
RINT A":" CALENDAR FOR ANY
YEAR FROM":" 1776 TO 2099."
230 DISPLAY AT(13,1):"**SET
TOP OF FORM AND ENTER":" TH
E YEAR AS A FOUR DIGIT":" N
UMBER (ex. 1985) OR":"
JUST ENTER TO EXIT PROGRAM"
240 DISPLAY AT(19,1)BEEP:"**
ENTER CALENDAR YEAR" :: ACCE
PT AT(19,24)SIZE(4)VALIDATE(
DIGIT):Y$
250 IF Y$="" THEN CALL CLEAR
 :: END ELSE Y=VAL(Y$):: IF
Y<1776 OR Y>2099 THEN 240
```

```
260 IF INT(Y/4)*4=Y AND NOT(
INT(Y/100)*100=Y AND INT(Y/4
00)*400<>Y)THEN D(2)=29
270 DI=Y-1906+INT((Y-1901)/4
):: D(0)=DI+1-(INT(DI/7)*7)
280 M2=0 :: OPEN #1:"PIO" ::
 PRINT #1:CHR$(27);"S";CHR$(
1);CHR$(15);CHR$(27);"3";CHR
$(14):TAB(19);Y
290 FOR I=1 TO 12 STEP 2 ::
PRINT #1:TAB(T(I));MO$(I);TA
B(T(I+1));MO$(I+1)
300 J,K=1 :: A,M1=D(I-1)+M2
:: B,M2=M1+D(I)
310 PRINT #1:CHR$(27);"3";CH
R$(8);"S   M   T   W   T   F   S
   S   M   T   W   T   F   S";CHR$(
27);"3";CHR$(14);"- - - -
- -"
320 IF J>D(I)THEN 330 :: IF
A>7 THEN A=A-7 :: GOTO 320 E
LSE PRINT #1:TAB(A*3-2);STR$
(J);:: IF A=7 THEN 330 ELSE
A=A+1 :: J=J+1 :: GOTO 320
330 IF K>D(I+1)THEN 340 :: I
F B>7 THEN B=B-7 :: GOTO 330
 ELSE PRINT #1:TAB(21+B*3);S
TR$(K);:: IF B=7 THEN 340 EL
SE B=B+1 :: K=K+1 :: GOTO 33
0
340 IF J>D(I)AND K>D(I+1)THE
N 350 ELSE PRINT #1:"" :: A=
A+1 :: B=B+1 :: J=J+1 :: K=K
+1 :: GOTO 320
350 PRINT #1:"" :: NEXT I ::
 PRINT #1:"":CHR$(27);"@" ::
 CLOSE #1 :: RESTORE :: GOTO
 190
```

BANNER

```
100 DIM A(471),BIN(6)
110 CALL CLEAR
120 PRINT "GETTING READY. PL
EASE WAIT."
130 FOR I=0 TO 464 STEP 8
140 FOR J=0 TO 7
150 IF (J<>0)*(J<>7)THEN 180
160 A(I+J)=0
170 GOTO 190
180 READ A(I+J)
190 NEXT J
200 NEXT I
210 A(80)=8
220 A(87)=8
230 A(367)=63
240 A(447)=63
250 FOR I=0 TO 6
260 BIN(I)=2^I
270 NEXT I
280 CALL CLEAR
290 PRINT TAB(11);"*BANNER*"
300 PRINT
310 PRINT "HOW MANY LETTERS
CAN YOUR"
320 INPUT "PRINTER PRINT ON
A LINE?":CL
330 IF (CL)=7)*(CL<=136)THEN
380
340 PRINT
350 PRINT "I DON'T THINK THA
T'S RIGHT."
360 PRINT "PLEASE CHECK YOUR
MANUAL."
370 GOTO 310
380 CALL CLEAR
390 PRINT "HOW TALL DO YOU W
ANT THE"
400 PRINT "LETTERS IN YOUR B
ANNER"
410 PRINT
420 PRINT "(1=SHORTEST; ";ST
R$(INT(CL/7));"=TALLEST)";
430 INPUT CC
440 IF (CC)=1)*(CC<=INT(CL/7
))THEN 470
450 PRINT
460 GOTO 420
470 CALL CLEAR
480 PRINT "WHAT CHARACTER SH
ALL I USE"
490 PRINT "TO COMPOSE THE LE
TTERS OF"
500 PRINT "YOUR BANNER"
510 PRINT
520 INPUT "(E.G., *, +, #)?"
:CH$
530 IF CH$="" THEN 470
540 CH$=SEG$(CH$,1,1)
550 CALL CLEAR
560 PRINT "PLEASE ENTER THE
MESSAGE YOU";
570 PRINT "WANT PRINTED ON Y
OUR BANNER.";
580 PRINT "DO NOT USE LOWERC
ASE"
590 PRINT "LETTERS OR COMMAS
."
600 PRINT
610 INPUT MESSAGE$
620 PRINT
630 PRINT "WHEN YOUR PRINTER
IS READY,"
640 PRINT "PLEASE PRESS ANY
KEY."
```

PROGRAMERS PAGE

TI WRITER
FROM OZARK 99ER NEWS

As most users of TI Writer know, you can change the color of the display on the screen by pressing CTRL 3. But what if you don't happen to like any of the five choices you are given? Well, never fear...because by making a few small changes in the proper place you can have five of your own combinations to choose from!

First, copy the file EDITA1 from the TI Writer disk onto a BLANK initialized disk. This will put the first sector of EDITA1 at sector 34 (>22) of the new disk. Then, load your "disk fixer" program. Read in sector 34 (>22) from the disk with the copy of EDITA1. Beginning at byte 244 (>00F4) you will see a series of five words each with the fore 87xx. The "xx" in each of the five words is the part you need to change because each corresponds to one of the color combinations. The default values are 87F4 (white/dark blue), 8713 (black/light green), 87F3 (white/light green), 8713 (black/light green), 87F3 (white/light green), 8717 (black/cyan), and 87F1 (white/black). The first digit of the "xx" is the foreground color and the second is the background. Using the hexidecimal color codes from the Editor/Assembler package, replace each of the five "xx's" with combinations of your choice. Then, save the modified sector back out to disk. Copy the new EDITA1 file back onto your TI Writer disk, and try the changes. Pressing CTRL 3 should cycle through your new color combinations.

%%

AUTOMATIC WORD WRAP
FROM PITTSBURGH USERS GROUP

Words split between two lines on the screen can be a nuisance. Especially when a long phrase is entered by the user. The following subroutine eliminates the "split" word on the screen. This is generally referred to as "Automatic Word Wrap". The subroutine may be used in TI Basic or Extended Basic.

Use the sample program, following the subroutine, to illustrate the subroutine.

```
>6970 REM *Subroutine For Au
 tomatic Word Wrap*
>6980 REM *Uses W$ From Main
 Program
>6990 REM *Uses the variable
 s L,Y1,B$(1-4)
>7000 Y1=28
>7010 L=LEN(W$)
>7020 I=1
>7030 B$(I)=W$
>7040 IF L>Y1 THEN 7070
>7050 PRINT B$(I)
>7060 RETURN
>7070 B$(I+1)=SEG$(B$(I),1,Y1
 )
>7080 B$(I+2)=SEG$(B$(I),Y1+1
 ,L-Y1)
>7090 IF SEG$(B$(I+1),Y1,1)=C
 HR$(32) THEN 7140
>7100 B$(I+2)=SEG$(B$(I+2),Y1
 ,1)&B$(I+2)
>7110 B$(I+1)=SEG$(B$(I+1),1,
 Y1-1)
>7120 Y1=Y1-1
>7130 GOTO 7070
>7140 PRINT B$(I+1)
>7150 I=I+2
>7160 L=LEN(B$(I))
>7170 Y1=28
>7180 IF L>0 THEN 7040
>7190 RETURN
```
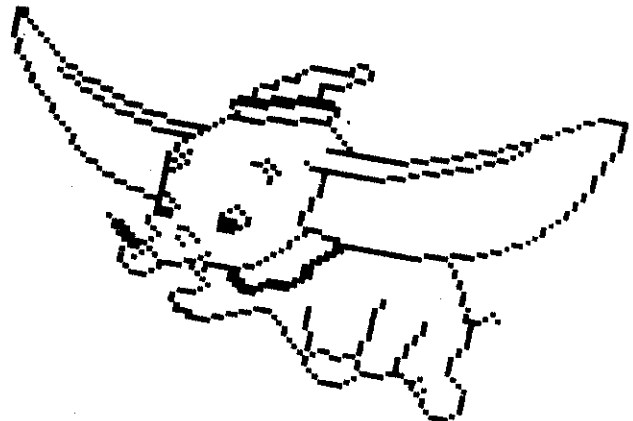-----------------------------------
```
>100 REM * SAMPLE MAIN PROGR
 AM *
>110 CALL CLEAR
>120 W$="THIS IS A TEST. This
 is a test. See what happens
 with a very long word such
 as 'hippopotamuses'."
>130 PRINT W$::::
>140 PRINT "NOW, SEE THE AUTO
 WORD WRAP":::
>150 GOSUB 7000
>160 END
```

%%%

```
>10 !*************************
>20 !*  INVERSE CHARACTERS  *
>30 !*  CHARLOTTE TI USERS  *
>40 !*************************
>100 !INVERSE CHARARTERS
>110 CALL SCREEN(2)
>120 FOR I=65 TO 90 :: CALL C
 HARPAT(I,A$):: CALL CHAR(I+3
 2,A$):: NEXT I
>130 CALL CLEAR
>140 FOR I=9 TO 12 :: CALL CO
 LOR(I,2,16):: NEXT I :: FOR
 I=5 TO 8 :: CALL COLOR(I,16,
 2):: NEXT I
>150 A$=" INVERSE PHRASE "
>160 B$=" inverse phrase "
>170 DISPLAY AT(11,7):A$ :: F
 OR I=1 TO 50 :: NEXT I :: DI
 SPLAY AT(11,7):B$ :: FOR I=1
 TO 50 :: NEXT I :: GOTO 170
```

%%

PROGRAMERS PAGES

MEMORY PEEKER

BY ED YORK
FROM THE CINDAY USERS GROUP

The program listed below was specifically written to allow the user to peek into each memory location, return the particular ASCII value stored at each location and display each ASCII value if that value can be displayed. Note: This program may divulge some rather strange and yet fascinating information! Note: This program requires both Extended Basic and Memory Expansion!

```
>100 !MEMORY PEEKER
>110 !WRITTEN BY:
>120 !ED YORK
>130 CALL CLEAR :: CALL INIT
  :: A=-32767 :: DISPLAY AT(1,
  6):"MEMORY ASCII CHR"
>140 FOR B=3 TO 22 :: CALL PE
  EK(A,C):: DISPLAY AT(B,6):A;
  "=" ::DISPLAY AT(B,15) SIZE(
  -3):USING "###":C :: GOSUB 1
  70
>150 DISPLAY AT(B,19):"=" ::
  DISPLAY AT(B,21):USING "###"
  :CHR$(C):: A=A+1 :: NEXT B
>160 DISPLAY AT(24,2):"PRESS
  ANY KEY TO CONTINUE." :: CAL
  L KEY(0,C,D):: IF D=0 THEN 1
  60 ELSE 140
>170 IF C<100 AND C>10 THEN D
  ISPLAY AT(B,15)SIZE(-1):"0"
  :: RETURN
>180 IF C<10 THEN DISPLAY AT
  (B,15)SIZE(-2):"00" :: RETUR
  N
>190 RETURN
```

%%%
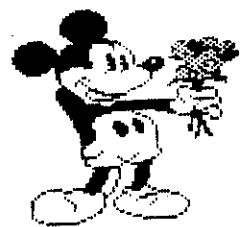
SPRITE·FEVER

BY BOB GAGLE

Here is a short program to give the simulated sine wave action to a sprite. Try it and see if you can improve upon it!

```
>100 REM SINE-WAVE SPRITE
>110 REM Written by:
>120 BOB GAGLE
>130 REM CIN-DAY USER GROUP
>140 CALL CLEAR
>150 CALL MAGNIFY(2)
>160 DIM A(30)
>170 FOR B=1 TO 30
>180 READ A(B)
>190 NEXT B
>200 DATA 0,-4,-8,-12,-16,-20
  ,-24,-28,-24,-20,-16,-12,-8,
  -4,0,0,4,8,12,16,20,24,28,24
  ,20,16,12,8,4,0
>210 CALL SPRITE(#1,42,5,89,1
  20)
>220 CALL JOYST(1,C,D)
>230 CALL KEY(1,F,G)
>240 IF F=18 THEN 250 ELSE 22
  0
>250 CALL POSITION(#1,H,I)
>260 FOR J=1 TO 30
>270 IF I>239 THEN I=1
>280 CALL LOCATE(#1,H+A(J),I+
  J)
>290 NEXT J
>300 GOTO 220
```
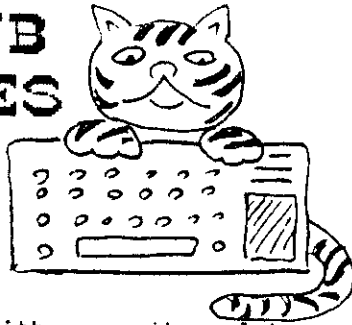
BANNER

```
650 CALL KEY(3,K,S)
660 IF S=0 THEN 650
670 REM --USE 580 OPEN #1:"R
  S232" FOR SERIAL PRINTER--
680 OPEN #1:"PIO"
690 FOR I=1 TO LEN(MESSAGE$)
700 PNTR=(ASC(SEG$(MESSAGE$,
  I,1))-32)*8
710 IF (PNTR>=0)*(PNTR<=464)
  THEN 730
720 PNTR=0
730 FOR J=PNTR TO PNTR+7
740 LN$=""
750 V=A(J)
760 FOR K=6 TO 0 STEP -1
770 IF V<BIN(K)THEN 810
780 V=V-BIN(K)
790 C$=CH$
800 GOTO 820
810 C$=" "
820 FOR L=1 TO CC
830 LN$=C$&LN$
840 NEXT L
850 NEXT K
860 FOR K=1 TO (CC+1)/2
870 PRINT #1:LN$
880 NEXT K
890 NEXT J
900 NEXT I
910 CLOSE #1
920 CALL CLEAR
930 PRINT "YOUR BANNER IS FI
  NISHED."
940 PRINT
950 PRINT "PRESS <P> TO PRIN
  T ANOTHER"
960 PRINT "BANNER OR <E> TO
  END."
970 CALL KEY(3,K,S)
980 IF K=ASC("P")THEN 380
990 IF K<>ASC("E")THEN 970
1000 END
1010 DATA 0,0,0,0,0,0,0,0,0,61
  ,61,0,0
1020 DATA 0,56,0,0,56,0,18,6
  3,18,18,63,18
1030 DATA 18,58,107,107,46,3
  6,51,54,12,24,51,35
1040 DATA 6,47,121,93,118,39
  ,0,0,52,56,0,0
1050 DATA 0,0,30,63,51,33,33
  ,51,63,30,0,0
1060 DATA 42,62,28,28,62,42,
  8,8,62,62,8,8
1070 DATA 0,0,13,14,0,0,8,8,
  8,8,8,8
1080 DATA 0,0,3,3,0,0,3,6,12
  ,24,48,32
1090 DATA 30,63,37,41,63,30,
  1,17,63,63,1,1
1100 DATA 17,51,39,45,57,17,
  34,35,41,61,55,34
1110 DATA 6,14,26,63,63,2,58
  ,59,41,41,47,38
1120 DATA 30,63,41,41,47,6,3
  2,35,39,44,56,48
1130 DATA 22,63,41,41,63,22,
  16,57,41,43,62,28
1140 DATA 0,0,54,54,0,0,0,0,
  109,110,0,0
```

```
1150 DATA 0,8,28,54,99,65,18
  ,18,18,18,18,18
1160 DATA 65,99,54,28,9,0,16
  ,48,37,45,56,16
1170 DATA 30,63,33,45,61,29,
  15,31,50,50,31,15
1180 DATA 63,63,41,41,63,22,
  30,63,33,33,51,18
1190 DATA 63,63,33,51,30,12,
  63,63,41,41,41,33
1200 DATA 63,63,40,40,40,32,
  30,63,33,37,39,39
1210 DATA 63,63,8,8,63,63,33
  ,33,63,63,33,33
1220 DATA 2,3,1,1,63,62,63,6
  3,12,30,51,33
1230 DATA 63,63,1,1,1,1,63,6
  3,24,12,24,63
1240 DATA 63,63,28,14,63,63,
  30,63,33,33,63,30
1250 DATA 63,63,36,36,60,24,
  30,63,33,34,63,29
1260 DATA 63,63,36,38,63,25,
  16,57,41,41,47,6
1270 DATA 32,32,63,63,32,32,
  63,63,1,1,63,63
1280 DATA 60,62,3,3,62,60,63
  ,63,6,12,6,63
1290 DATA 51,63,12,12,63,51,
  48,56,15,15,56,48
1300 DATA 35,39,45,57,49,33
```

TIGERCUB REALITIES

Our User's Group along with many other clubs receives Jim Peterson's TIPS FROM THE TIGERCUB which gets published in many newsletters around the country. This is now over TWO years of very helpful hints, programs, and short routines. These hints and programs have the distinction of being very usable yet understandable without going over people's heads. In essence Jim's routines are often simple in presentation but show complex ideas and techniques. Because of his sending his TIPS to clubs and having them reprinted so widely, many people have the idea that a significant portion of his business comes from various newsletters which print his TIPS. That is not the case. Jim recently sent a letter to the groups that publish his TIPS, explaining how much business he gets and from where. Jim says:

"I use different spellings of my address in different ads, so I know that in the last two months my catalog requests and direct orders have been 43 from the Computer Shopper ads, 37 from the Micropendium ads, and 20 as a result of newsletters, BBS publicity, word of mouth and everything else combined!"

Again quoting from Jim Peterson's letter showing what he spends each month:

"My advertising therefore consists of about $20 worth of small classified ads on the back page of Micropendium, another $20 worth of classified ads buried in the hundreds of pages of Computer Shopper, and a newsletter which I mail to about 120 user groups at a cost of about $45 plus many hours of work."

Let me resort to quoting Jim's letter one more time to help explain what prompted him to write his letter to the groups:

"I am not suggesting that you have any obligation to support my business. I know that many of you are only interested in business or financial programs which I do not offer.I know that most of the user groups have large libraries of public domain software - although some of you charge your members quite a bit for those programs. I also know that too many of you get all the software that you want by piracy. That is why most of my business is now coming from those who do not belong to user groups, who do not have access to all the public domain and freeware and piracy. I put some of my Basic programs on cassette in a local retail store, and sold more cassette programs in that one store than I did by mail order worldwide. It seems that it is time that I divert my efforts to finding those who still want what I have to offer."

When Jim Peterson sent his letter to us he also included an offer to send a rebate of 10% back to the groups that had people order programs from him by January 1st. That is a valid gesture to support user groups, I am just too late spreading the word for our group to take advantage of it.

I also have a couple of suggestions to offer to Jim beyond the point of agreeing with what he has already said.

There is so little published on a national newstand available basis for the TI, that it seems to me for it to be reasonable for Computer Shopper to print the TIPS FROM THE TIGERCUB. If Jim reduced his mailings from 120 to say a dozen he would save postage and I feel confident that his tips will still make the rounds to as many newsletters as before. And one last thought that occurred to me:

He could sell prepared cassettes to user groups. Put 4 or 5 popular programs on cassette then sell ten of those cassettes to a user group. Groups could then sell these cassettes at meetings. I am sure my group would buy some. Jim and the user groups would benefit from this. Since I believe the TIGERCUB programs are worth buying, I wanted to throw my 2 cents worth in.

Gary Matthews

EDITORS NOTES:
CONT FROM PG1

Some time ago I wrote about my experiences with TI-Writer and a system lock-up when I had not been saving my typing as I was going. By using RecoverEdit I was able to recover all but the first line of what I had been working on. Well several people have commented on it, seems that you cannot induce this problem artificially, that is type in something and then turn off the computer and try to RecoverEdit. I've tried and I could never recover my lost data. Well to date I've had three of these power glitches, while I've been working with TI-Writer, yes I do use it a lot, my score to date is two recoveries one set of screen fireworks, and no data. Don't know what to say, I guess if you lose the data you've been working on you can try to RecoverEdit if it works, your that much ahead of the game. If it doesn't take two asprin and please don't call me about it. Try another subject, after you calm down.

Marshall.

TIPS FROM THE TIGERCUB

#24

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156 Collingwood Ave.
Columbus, OH 43213

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The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just $15.00 postpaid!

Nuts & Bolts is a diskfull of 100 (that's right, 100!) XBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just $19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and XBasic at only $3.00 each!(plus $1.50 per order for casette, packing and postage, or $3.00 for diskette, PPM) I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.
```
      TIJ
   UDS!TDFIFA
     BJIF
      JDIF
       SURS
        STSA
         SFBF
          TRA
```

The above is a long division problem in the proper format, with each numeral replaced by a letter. Can you solve it?

My program TC-41 Long Division Cryptograms, will generate an infinite number of such puzzles for you, and help you to solve them - and it only costs $3.00. It took me a week to program, and I've sold 12 copies in 2 years! Doesn't anyone like to exercise their brains anymore?

TIGERCUB CHALLENGE

```
100 FOR J=1 TO 7 :: READ M$
:: PRINT M$ :: NEXT J
30000 DATA AAAAAAAAAAAAAAAAAA
AAAAAAAAAA,BBBBBBBBBBBBBB,BB
BBBBBBBBBBBB,CCCCCCCCCCCCCC,
          DDDDDDDDDDDDDD
30010 DATA "TESTING",,,,,,,,,
,,,,,,,,,,,,,,,,,,,"TEST
ING""
>RUN
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
BBBBBBBBBBBBBB,BBBBBBBBBBBBBB
CCCCCCCCCCCCCC
          DDDDDDDDDDDDDD
"TESTING"

,,,,,,,,,,,,,,,,,,,,,,,,,,,,
""TESTING""

$ READY $
```

Can you run this program and get these results? You won't even be able to key in that last DATA item! So, how was this programmed? No, there are no redefined characters!

Do you need something educational? Here is a little routine to give the plural endings for most words. I will leave it to you to develop further - and see if you can teach the computer the plurals of PANTS, TOOTH, MAN, FUNGUS, DATA and the other inconsistencies of the English language.

```
100 REM PLURAL ENDINGS
   by Jim Peterson
110 INPUT W$
120 Z$=SEG$(W$,LEN(W$),1)
130 Y$=SEG$(W$,LEN(W$)-1,2)
140 ON POS("EFHSIXYZ",Z$,1)+1
 GOTO 270,150,190,180,250,25
0,220,250
150 IF SEG$(W$,LEN(W$)-2,2)<
>"IF" THEN 270
160 PL$=SEG$(W$,1,LEN(W$)-2)
&"VES"
170 GOTO 280
180 IF (Y$="CH")+(Y$="SH")TH
EN 250 ELSE 270
190 IF (Y$<>"LF")&(Y$<>"RF")
&(Y$<>"AF")&(W$<>"HOOF")THEN
 270
200 PL$=SEG$(W$,1,LEN(W$)-1)
&"VES"
210 GOTO 280
220 IF (Y$="AY")+(Y$="EY")+(
Y$="OY")+(Y$="UY")THEN 270
230 PL$=SEG$(W$,1,LEN(W$)-1)
&"IES"
240 GOTO 280
250 PL$=W$&"ES"
260 GOTO 280
270 PL$=W$&"S"
280 PRINT PL$
290 GOTO 110
```

If you want to turn that into a quiz, change line 110 to READ W$, change line 280 to PRINT W$;" PLURAL?": :. Add lines -
```
281 INPUT Q$
282 IF Q$<>PL$ THEN 285
283 PRINT : :"RIGHT!": :
284 GOTO 110
285 PRINT : :"WRONG! PLURAL
OF ";W$;" IS ";PL$: :
300 DATA BOX,WATCH,WIFE,BOY
```
(And as much more as you want)

Just one more optional refinement to my Menu Loader. If you want to use a filename ending in an asterisk for those Basic programs which will not run in XBasic, this change will keep you from loading and crashing them.

```
420 CLOSE #1 :: IF SEG$(P6$(
K),LEN(P6$(K)),1)="*" THEN D
ISPLAY AT(12,1)ERASE ALL:"RE
```
TURN TO BASIC AND LOAD BY":" TYPING OLD DSK1."&P6$(K):: S TOP

The idea of a program that writes a program has stirred up a little interest, so here's another. This routine will aid you in formatting your screen text into neat 28-column lines, and will save the text in program lines of DATA statements. When you are ready to save, type @@@ and enter as the last line, then NEW and MERGE DSK1.LINEFILE

```
100 !LINEWRITER
 - by Jim Peterson
130 CALL CLEAR :: OPEN #1:"D
SK1.LINEFILE",VARIABLE 163 :
: LN=30000
140 FOR R=1 TO 24 :: DISPLAY
 AT(R,1)SIZE(1):" " :: ACCEP
T AT(R,0)SIZE(-28):A$ :: IF
A$="@@@" THEN 180 :: B$=B$&C
HR$(200)&CHR$(LEN(A$))&A$
150 X=X+1 :: IF X/4=INT(X/4)
THEN 160 ELSE B$=B$&CHR$(179
):: GOTO 170
160 GOSUB 210 :: LN=LN+10
170 NEXT R :: X=0 :: CALL CL
EAR.:: GOTO 140
180 IF B$="" THEN 200 :: IF
SEG$(B$,LEN(B$),1)=CHR$(179)
THEN B$=SEG$(B$,1,LEN(B$)-1)
190 GOSUB 210
200 PRINT #1:CHR$(255)&CHR$(
255):: CLOSE #1 :: END
210 PRINT #1:CHR$(INT(LN/256
))&CHR$(LN-256&INT(LN/256))&
CHR$(147)&B$&CHR$(0):: B$=NU
L$ :: RETURN
```

Here's something for "JET" and Danny and Gene and all the rest of my friends in Alabama - and in all the rest of Dixie. You've never seen fireworks quite like these before!

```
100 CALL CLEAR :: PRINT TAB(
5);"ALABAMA 4th of JULY": :
: : : : : : :"programmed by
Jim Peterson" :: FOR D=1 TO
200
110 NEXT D :: RANDOMIZE
120 DIM S$(12),A$(16),S(16),
```

```
SX$(15)
130 DATA 196,220,247,262,294
,330,349,392,440,494,523,587
,659
140 FOR J=4 TO 16 :: READ S(
J):: NEXT J :: FOR SET=2 TO
14 :: CALL COLOR(SET,1,1)::
NEXT SET :: CALL SCREEN(2)
150 DATA 00,18,24,3C,42,5A,6
6,7E,81,99,A5,BD,C3,DB,E7,FF
160 FOR J=1 TO 16 :: READ A$
(J):: NEXT J
170 FOR CH=40 TO 136 STEP 8
:: FOR L=1 TO 4 :: X=INT(16#
RND+1):: B$=B$&A$(X):: C$=A$
(X)&C$ :: NEXT L
180 SX$(CH/8-4)=B$&C$ :: CAL
L CHAR(CH,B$&C$):: GOSUB 350
:: B$=NUL$ :: C$=NUL$ :: NE
XT CH
190 FOR J=1 TO 12 :: FOR L=1
TO 6 :: X$=CHR$(INT(13#RND+
5)#8):: B$=B$&X$&X$ :: C$=X$
&X$&C$ :: NEXT L
200 S$(J)=B$&C$ :: B$=NUL$ :
: C$=NUL$ :: NEXT J :: CALL
MAGNIFY(2)
210 FOR J=1 TO 12 :: DISPLAY
AT(J,3):S$(J):: NEXT J :: X
=1 :: FOR J=13 TO 24 :: DISP
LAY AT(J,3):S$(J-X):: X=X+2
:: NEXT J :: CALL DELSPRITE(
ALL):: FOR D=1 TO 200 :: NEX
T D
220 DATA 1,11,7,1,9,7,2,7,4,
2,4,7,1,7,4,1,4,8,1,4,9,1,4,
10,2,11,7,2,7,11,2,11,7,2,9,
4
230 DATA 2,12,5,2,5,12,3,12,
7,1,11,7,3,12,5,1,11,7,1,12,
5,1,13,4,1,14,5,1,15,10
240 DATA 6,16,7,1,14,9,1,11,
7,6,14,4,1,11,7,1,9,4,6,11,6
,1,8,6,1,9,7,6,7,4
250 DATA 1,11,7,1,13,4,2,14,
9,2,16,11,3,15,4,1,14,9,2,12
,10,4,14,10,2,12,7,6,15,10,2
,12,8
260 DATA 6,15,6,1,11,6,1,13,
4,2,14,9,2,16,14,3,15,11,1,1
4,9,2,12,10,2,13,7,3,14,10,1
,12,10
270 DATA 2,11,7,2,9,4,3,14,9
,1,9,5,2,9,4,4,8,4,2,9,4,6,7
,4,2,9,4,6,8,4,2,12,5
280 DATA 2,11,7,2,9,4,3,14,7
,1,16,7,2,15,10,4,14,9,2,9,4
,6,7,4,2,9,4,6,8,4,2,12,10
290 DATA 2,11,7,2,9,4,3,16,1
1,1,14,9,2,13,4,2,14,7,2,14,
```

```
9,6,14,11
300 FOR N=1 TO 96 STEP 3 ::
READ T,A,B :: CALL COLOR(A-2
,A-2,1):: CALL COLOR(B-2,B-2
,1):: FOR TT=1 TO T :: CALL
SOUND(-999,S(A),0,S(B),5)::
NEXT TT
310 CALL COLOR(A-2,1,1):: CA
LL COLOR(B-2,1,1)
320 NEXT N :: RESTORE 220 ::
FOR N=1 TO 252 STEP 3 :: RE
AD T,A,B :: CALL COLOR(A-2,A
-2,1):: CALL COLOR(B-2,B-2,1
):: FOR TT=1 TO T :: CALL SO
UND(-999,S(A),0,S(B),5):: NE
XT TT
330 CALL COLOR(A-2,1,1):: CA
LL COLOR(B-2,1,1)
340 NEXT N :: FOR J=5 TO 30
:: CALL SOUND(-999,S(A),J,S(
B),J):: NEXT J :: RESTORE 22
0 :: FOR CH=40 TO 136 STEP 8
:: GOSUB 350 :: NEXT CH ::
GOTO 190
350 CALL MAGNIFY(1):: CALL S
PRITE(#CH/8-4,CH,13#RND+3,20
0,128,-30,RND#20-RND#20):: R
ETURN
```

The Home Computer Magazine, Vol. 4 No. 3, had a program called Elementary Addition and Subtraction, which generates random numbers between 1 and 5 for elementary math practice.

The first time I tried it, it asked me for the answer to 1 + 1. When I answered correctly, it produced another random problem - 1 + 1 again!

This is known as the idiotic computer syndrome, and it helps us to remember that our computers are still no smarter than their programmers!

Fortunately, this bit of idiocy is easy to cure. Try this -

```
100 RANDOMIZE
110 X=INT(5#RND+1)
120 IF X=X2 THEN 110
130 X2=X
140 PRINT X;
150 GOTO 110
```

Do you see how it works? The first time you

get a number, X2 will equal 0 because it has never been given a value. X will be selected as a number between 1 and 5. Let's suppose it is 2. Line 120 compares it with X2; 2 is not equal to 0, so the program continues to line 130, where X2 now picks up the value of 2, then on to print the value, and back to 110. Now, suppose that the random factor in line 110 picks 2 again. Line 120 finds that 2=2, X=X2, and sends the program back to 110 to pick a different number.

If you want to avoid a repeat until after two times, change line 120 to read 120 IF (X=X2)+(X=X3)THEN 110 and add a line 125 X3= X2 .

For a longer series without repeating, it might be better to use this method.

```
100 A$="ABCDEFGHIJ"
110 FOR J=1 TO 10
120 RANDOMIZE
130 Y=INT(RND#LEN(A$)+1)
140 X=ASC(SEG$(A$,Y,1))-64
150 A$=SEG$(A$,1,Y-1)&SEG$(A
$,Y+1,LEN(A$))
160 PRINT X
170 NEXT J
180 GOTO 100
```

That will give you a random series of 1 through 10 and then repeat with a different random series. Adjust the number of letters in the string A$, and the corresponding "TO" value in 110, for whatever you require.

Several newsletters recently have published articles on the "program that you never run" - because it consists entirely of REM statements!

For instance, you can keep a list of the members of your users group, using their membership number for the program line number,

followed by REM (or ! in XBasic) and their name and address. For a printed list, just LIST the program to the printer. To change someone's address, or to delete a deadbeat who doesn't pay his dues, just edit the program. You can also LIST the program to disk to create a DIS/VAR 80 file which you can then load into TI-Writer and use its editing features, FindString, etc.

The same method can give you a tickler file, or appointment calendar, which is just as good as some rather complex disk filing programs written for this purpose. Just use the month number (1-12) and date (always in two digits, 01-31) for the line number - 1008 !buy birthday present for wife!
1009 !wife's birthday!
1010 !apologize to wife for forgetting birthday

You can schedule several things in one program line -
1011 !get haircut/change oil in car/pinch secretary......
  - but it might be better to add an extra digit (0-9) to the line number and schedule separately -
10110 !get haircut
10111 !change oil

Then, if something doesn't get done, just use the REDO key to change the line number and reschedule it for another date. You can print out a list of the day's chores by simply LIST "PIO":7010-7019 (did you know you could do that?)

MEMORY FULL IN LINE 470

        - Jim Peterson

TIPS FROM THE TIGERCUB

#28

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TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

NUTS & BOLTS DISK No. 2 is now ready, and I think it's better than the first one. It contains 108 utility subprograms in merge format, including many new character fonts and screen display routines as well as 2-dimensional array sorts, variable line numbers in GOSUB, GOTO and RESTORE, on-screen editing and much, much more. The price is $19.95 postpaid, or you can order both Nuts & Bolts disks for $37 ppd.

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

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

free on request.

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

And so, on to old business. Yes, I know that RESequencing a program does not resequence references to line numbers in REMs. I just forgot! In line 270 of the Menu Loader in Tips #27, the reference should be to lines 280 and 290, of course.
While programming the file reader in that menu loader, I ran into a peculiarity of the TI-99/4A that surprised most of the expert programmers whom I called for help. When you 'read blind' you must read everything as a string, because attempting to read a string as numeric will crash the program. This is no problem with DISPLAY files - but when I tried it with INTERNAL files, I got the strangest garbage! My solution (not quite fool-proof) was to identify a record as numeric if it was 8 bytes long and contained an ASCII out of printable range, and then RESTORE the file, read back to that point and re-read it as numeric. Not very efficient!
The following routine will save a numeric input in an internal file, read it back out as a string, show you the way it was saved, and then attempt to translate it back to numeric. It works for positive and negative integers or non-integers of not less than -99, but not for less than that.
100 INPUT X :: OPEN #1:"DSK1.TEST",INTERNAL,OUTPUT :: PRINT #1:X :: CLOSE #1
110 OPEN #1:"DSK1.TEST",INTE

RNAL,INPUT :: INPUT #1:A$ :: PRINT A$ :: CLOSE #1
120 FOR J=1 TO 8 :: PRINT ASC(SEG$(A$,J,1));:: NEXT J
130 FOR J=1 TO 8 :: A(J)=ASC(SEG$(A$,J,1)):: NEXT J
140 X=A(1)-63 :: IF X<73 THEN 150
142 X=192-A(1):: N$="-" :: FOR J=2 TO X+1 :: N$=N$&STR$(256-A(J)):: NEXT J :: GOTO 160
150 FOR J=2 TO X+1 :: N$=N$&STR$(A(J)):: NEXT J
160 IF A(J)<>0 THEN N$=N$&"."&STR$(A(J))
170 J=J+1 :: IF A(J)<>0 THEN N$=N$&STR$(A(J)):: GOTO 170
180 N=VAL(N$):: N$="" :: PRINT N :: GOTO 100
So, here is another Tigercub Challenge! Can you fix it? Let's HEAR from you this time!

Another problem that I ran into was in recovering from an I/O error. When ON ERROR is used to prevent crashing on such an error, the file is "ajar" - you can't close it and you can't open it. My solution was to simply RUN the program again - and this will show you how the pre-scan speeds that up. Since then, I have learned of three other ways. The method described in the Sydney (Australia) newsletter is a bit complicated, but Irwin Hott gave me a simple solution - just increment the file number! Works fine if you don't increment it into the number of another open file on the disk. Chuck Grimes gave me an even better way - open and close anything else, even "PIO"! Example -
100 ON ERROR 110 :: OPEN #1:"DSK1.TEST",OUTPUT :: PRINT "CONTINUE PROGRAM" :: END
110 OPEN #1:"PIO" :: CLOSE #1 :: PRINT "I/O ERROR":"CHECK DISK AND DRIVE":"THEN PRESS ANY KEY" :: ON ERROR STOP
120 CALL KEY(0,K,S):: IF S=0 THEN 120 ELSE 100

There is a reason for that ON ERROR STOP, and it's why I don't use ON ERROR if I can avoid it. When an error occurs, the program goes to the line number specified by the last open ON ERROR statement, takes whatever action is directed by that line, and RETURNs as directed. If the error was not one that you expected to happpen, the results can be very confusing!
For that reason, when you set out to modify a program, the first thing you should do is delete, temporarily, all the ON ERROR statements. The next thing you should do, if the program has a routine to turn off the pre-scan, is to disable that. Otherwise, you will be driven crazy by invalid SYNTAX ERROR messages and other strange happenings.
The third thing you should do is to make a list of all the lines that a GOTO or GOSUB goes to, so you don't delete or change them. And here is a program to do just that for you -
100 !GO-SEARCH by Jim Peters on searches a MERGE format file, finds all line numbers containing a jump, sorts into "to" line number sequence,
110 !prints "to" line number, statement (GO, GOTO or GOSUB) and "from" line number
120 DIM C(200):: A=1 :: GO$(1)="GO" :: GO$(2)="GOTO" :: GO$(3)="GOSUB"
130 INPUT "FILENAME? DSK1.":F$
140 OPEN #1:"DSK1."&F$,INPUT ,VARIABLE 163 :: OPEN #2:"PIO"
150 LINPUT #1:A$
160 IF POS(A$,CHR$(133),1)=0 AND POS(A$,CHR$(134),1)=0 AND POS(A$,CHR$(135),1)=0 THEN 210
170 LN=ASC(SEG$(A$,1,1))*256+ASC(SEG$(A$,2,1)):: T=133 :: P=1
180 G$=CHR$(T):: X=POS(A$,G$

,P):: IF X=0 THEN 200 :: LRE
F=ASC(SEG$(A$,X+2,1))*256+AS
C(SEG$(A$,X+3,1))!:: PRINT #
2:LN;60$(T-132);LREF :: P=X+
1 :: GOTO 180
190 C$=STR$(LREF)&"."&STR$(L
N)&STR$(T-132):: C(A)=VAL(C$
):: A=A+1 :: P=X+1 :: GOTO 1
80
200 IF 6$=CHR$(135)THEN 210
:: T=T+1 :: P=1 :: GOTO 180
210 IF EOF(1)THEN CLOSE #1 :
: GOTO 220 :: ELSE 150
220 A=A-1 :: CALL LONGSHELLN
(A,C())
230 FOR J=1 TO A :: A$=STR$(
C(J)):: X=POS(A$,".",1):: Y=
VAL(SEG$(A$,LEN(A$),1)):: A$
=SEG$(A$,1,LEN(A$)-1)
240 PRINT #2:SEG$(A$,1,X-1);
TAB(7);60$(Y);" FROM ";TAB(2
1);SEG$(A$,X+1,LEN(A$)):: NE
XT J
250 SUB LONGSHELLN(N,NN())
260 D=N
270 D=INT(D/3)+1 :: FOR I=1
TO N-D :: IF NN(I)<=NN(I+D)T
HEN 300 :: T=NN(I+D):: J=I
280 NN(J+D)=NN(J):: J=J-D ::
 IF J<1 THEN 290 :: IF T<NN(
J)THEN 280
290 NN(J+D)=T
300 NEXT I
310 IF D>1 THEN 270
320 SUBEND

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

LAST record in the file -
any records beyond that
point will be lost!
The moral of the story - get
in the habit of NEVER
opening a file without
specifying the mode. The
only way to update a
sequential file is to read
it ALL into an array, update
it, and then write it back
to the file.

I reviewed hundreds of
programs, in my PD library
of about 2600, in order to
select some of the best to
fill up the collection
disks. Often they needed
only a few minor changes to
greatly improve them.
One frequent flaw was in
interpreting the status of
CALL KEY. The User's
Reference Guide says that a
status variable of -1 means
that "the same key was
pressed during the perform-
ance of CALL KEY as was
pressed during the previous
performance." This is mis-
leading. It actually means
that the same key is STILL
BEING pressed. Try this -
100 DISPLAY AT(12,1)ERASE AL
L:"TYPE YOUR NAME" :: R=12 :
: C=3
110 CALL KEY(0,K,S):: IF S=0
THEN 110 :: DISPLAY AT(R,C)
:CHR$(K):: C=C+1 :: GOTO 110

Difficult to type without
unwanted repetition of
letters? Now try changing
the S=0 to S<1 !
IF S<1 (if S is less than 1)
means that if no key is
pressed (S=0) or if the same
key is still being held down
(S=-1) then CALL KEY again.

Another frequent flaw is
INPUT "WANT TO PLAY AGAIN? "
:Q$ :: IF Q$<>"Y" THEN END
- or, more professionally
programmed, IF SEG$(Q$,1,1)<
>"Y" THEN....,
which will accept either "Y"
or "YES" as a reply. The
problem is still that this

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

Here's one that does nothing
except look pretty.
100 DISPLAY AT(3,8)ERASE ALL
:"COLORSQUARES" :: DISPLAY A
T(8,1):"Select option 1, 2 o
r 3" ! by Jim Peterson, Tige
rcub Software
110 CALL KEY(0,K,ST):: IF ST
=0 OR K<49 OR K>51 THEN 110
:: ON K-48 GOTO 150,120,130
120 FOR CH=38 TO 142 STEP 8
:: CALL CHAR(CH,RPT$("A55A",
4)):: NEXT CH :: GOTO 150
130 FOR CH=38 TO 142 STEP 8
:: FOR L=1 TO 4 :: RANDOMIZE
 :: X$=SEG$("0018243C425A667
E8199A5BDC3DBE7FF",INT(16*RN
D+1)*2-1,2)
140 B$=B$&X$ :: C$=X$&C$ ::
NEXT L :: CALL CHAR(CH,B$&C$
):: B$,C$=NUL$ :: NEXT CH
150 CALL CLEAR :: RANDOMIZE
:: FOR SET=0-(K=49)TO 14 ::
CALL COLOR(SET,SET+2+(K=49),
SET+2):: NEXT SET
160 Y=INT(4*RND+3):: R=INT(1
2*RND+1):: R2=25-R-Y :: C=IN
T(7*RND+7):: C2=32-C-Y :: IF
K=49 THEN X=INT(14*RND+1)*8
+22 ELSE X=INT(13*RND+1)*8+3
0
170 FOR T=R TO R+Y :: CALL H
CHAR(T,C,X,Y):: CALL HCHAR(T
,C2,X,Y):: NEXT T
180 FOR T=R2 TO R2+Y :: CALL
HCHAR(T,C,X,Y):: CALL HCHAR
(T,C2,X,Y):: NEXT T :: GOTO
160

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

newsletter, so I improved it
with this -
150 PRINT #2:CHR$(27):CHR$(4
2):CHR$(1):CHR$(42):CHR$(8);
CHR$(8):CHR$(34):CHR$(8):CHR
$(8):CHR$(62):CHR$(8):CHR$(8
):CHR$(34):CHR$(8);

And at the same time I
improved the slashed zero -
140 PRINT #2:CHR$(27):CHR$(4
2):CHR$(1):CHR$(48):CHR$(8);
CHR$(64):CHR$(38):CHR$(96):C
HR$(17):CHR$(72):CHR$(5):CHR
$(66):CHR$(61):CHR$(8);

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

If the Tigercub Math Puzzle
in Tips #27 was a bit too
tough, these changes will
add a couple of easier
levels.
105 DISPLAY AT(6,1):"Level 1
, 2, 3 4?" :: ACCEPT AT(6
,21)VAL DATE("1234"):L$ :: L
=VAL(L$)
106 IF L<3 THEN M$="Insert +
, -, or * (multiply)" ELSE M
$="Insert +, -, * (multiply)
or / (divide)"
110 DISPLAY AT(5,1):M$;" bet
ween the digits":" to equal
the total": :"Type 0 to give
up"
120 ! **DELETED LINE **
130 DISPLAY AT(12,1):" " ::
T,X=INT(9*RND+1):: M$=STR$(X
):: Z$=M$&" "
140 FOR J=1 TO 4 :: Y(J)=INT
(9*RND+1):: 0=3+ABS(L)2):: Z
=INT(0*RND+1):: ON Z GOSUB 2
40,250,260,270):: Z$=Z$&STR$
(Y(J))&" " :: NEXT J
150 IF L/2<>INT(L/2)AND T<>I
NT(T)THEN 130 :: Z$=Z$&"="&S
TR$(T)

MEMORY FULL

Jim Peterson

CALL NEWSLETER
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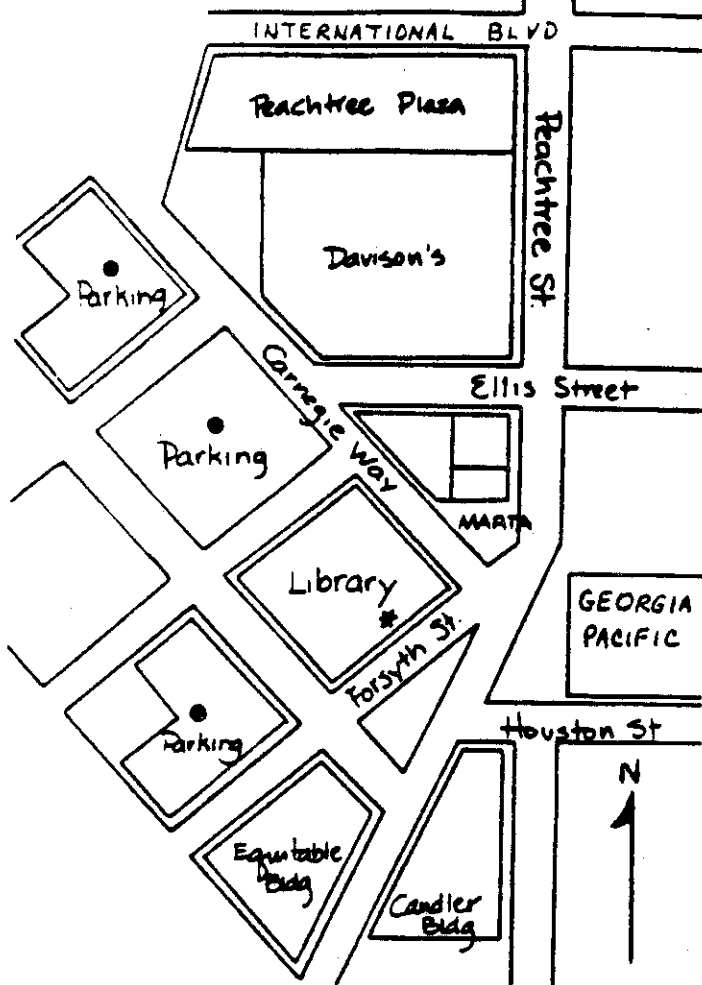
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