

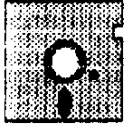
# KAWARTHA

## 99ers

P.O. BOX 373  
PETERBOROUGH  
ONT. CANADA  
K9L 1M1

VOL. 5

NO. 1



## EDITOR'S EDICTS

BI PHIL TOWNSEND

### ELECTION RESULTS

-----  
Congratulations to those who have been elected to guide our small but enthusiastic group for the next twelve months. A personal thanks for the kind words sent my way about our newsletter, however I knew I was being "railroaded" into the position of Newsletter Editor all along! I will be holding the individuals to their promises of writing articles and reviews starting with Glen Daniels who is currently playing with TEII. How about a short write up and a demonstration of what you have learned about the speech capabilities of this software?

### PUBLIC PROFILE

-----  
March 28th is the scheduled date for our display at the Lansdowne Place Shopping Mall. See Mike McVeigh's article later in this issue for times and the equipment to be brought. This is the only time during the year that the public get a first hand view of our group and what the TI can do, so let's have a full turn-out and an enjoyable day!

### 9640 ARRIVES!

-----  
Finally, the Myarc 9640 (TI compatible) Family Computer is finding its way to the public! Many of the February and March newsletters have first hand

reports of the new machine, all of them favourable so far. If you intend to purchase one you will need the TI PE box to house the card. I understand that Jane LaFlamme of the Ottawa TI group is hoping to distribute them in Canada. For more info on the 9640 borrow the newsletters for the month at the next meeting. The S.M.A.U.G. newsletter is one in particular to look for.

### OTHER ARRIVALS

-----  
Welcome and congratulations to the following for joining the KAWARTHA 99'ers family go to Gary Bennett, our newest member and to the San Fernando Valley U.G. with whom we are now exchanging newsletters. We now hear from twenty different groups throughout North America and are currently waiting to hear from several others that we have mailed to in the last month. There is certainly no shortage of information concerning our favourite computer!

### AND FINALLY

-----  
On behalf of the membership I would like to thank Mike McVeigh for his leadership of the past year and for his continued participation as he assumes the newly made position of Publicity Coordinator.

That's it for now, see you on the 28th,

Phil

**KAWARTHA 99ers USER GROUP**

**FOR USERS OF THE TEXAS INSTRUMENT 99/4A HOME COMPUTER  
P.O. BOX 373  
PETERBOROUGH, ONT.  
CANADA  
K9L 1M1**

\*\*\*\*\*

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\*\*\*\*\*

Meetings are held on the first Wednesday of every month at the Queen Alexandra Community Centre. Meetings begin at 7:00 p.m.

Membership fees are collected on an annual basis of \$18.00 per annum or a portion thereof at the rate of \$1.50 per month. Memberships are on an individual basis and run annually from the first Wednesday in March.

The opinions expressed in this newsletter are those of the authors and not necessarily of the KAWARTHA 99ers USER GROUP.

Advertisements and contributing articles for this newsletter may be given to the newsletter editor or mailed to the group's P.O. box.

The KAWARTHA 99ers would like to thank those groups who exchange information and newsletters regarding the TEXAS INSTRUMENT HOME COMPUTER with us. We endeavour to recognize original authors and sources of articles of information which we reprint or make available to our membership.

The KAWARTHA 99ers USER GROUP are a non-profit group who welcome any individuals who have an interest in the TEXAS INSTRUMENT HOME COMPUTER.

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**WANT ADS**

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## VIEWS AND REVIEWS

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### MIKE'S MEMOS

It's been a successful and rewarding year for the club. There are new TI products and new interests in the 99/4A. But even more important is the new spirit of the club this year. Everyone contributes. And with the renewed interest, membership is up. As past president, I'd like to thank all club members for a successful and rewarding year. Special thanks to Phil Townsend for his hard work and dedication. His leadership is truly inspirational. I look forward to continued friendship and fun this year.

Thanks for a great year. Congratulations to the new Executive, and to our first woman president!

The treasurer's report reflects a favourable financial picture for the coming year. All the memberships are in bringing our new balance, after expenses, to \$270.30 as of March 4, 1987.

Our network of newsletters expanded greatly this year. They contain a wealth of information, and are available at the club library. We hope to expand contact with other clubs this year, as well as improve our own newsletter with added contributions. (Right guys & gals?)

We may have the opportunity to meet our senior friends again this year. An offer has been extended for computer instruction classes, similar to those held last year. The details are being worked out. The last session was educational for us as well. It was also rewarding. They made one of the finest pot luck suppers I've ever eaten.

The upcoming Ottawa TI fair should be a highlight this year, along with other regional generic shows. The date is May 16th. Anyone interested in selling unused TI stock should bring it along. We're trying to get there early before the good sales are gone. Jim Foster is working on the travel and accomodation arrangements. Several members are planning to leave for Ottawa in the early evening of Friday May 15th. Bob Boone is forwarding advance registration forms for accomodation at the at the Talisman Motor Hotel. The host club has arranged good accomodation at a great price. More details will be available at the next club meeting April 1, 1987...no foolin! Those interested so far: Phil, Glen, Mike D, Jan, Lindsay, Steve, Karen & Jim. Jan will be taking her own car.

Our own display and information booth is confirmed for March 28th, at Lansdowne Place. (Further info in newsletter). I know it will be as much fun this year as it was last year. See you there.

Mike McVeigh

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BITS & PIECES

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LANSDOWNE PLACE DISPLAY & INFO BOOTH MARCH 28, 1987

NAME:	HARDWARE:
John Baal	1 B&W monitor & cables
Lindsay Brown	1 Jet Pack tm
Glen Daniels	colour TV & console & box
Mike Dunn	1 box
Jim Foster	1 system (box), axiom & printer
Janet McIntyre	2 joysticks, printer & axiom
Mike McVeigh	1 Jet Pack tm & printer
Phil Townsend	1 B&W & 2 colour monitors, expansion box & 2 drives, & track ball
Steve Wright	2 systems (MBX), 1 TV, axiom & printer

////////////////////////////////////

NAME:	SOFTWARE:
Jim Foster	Graphics, TI Artist, Demo Cart, Software Library Ex Basic
Glen Daniels	Ex Basic
Mike Dunn	Ex Basic
Janet McIntyre	Paint & Print
Mike McVeigh	Miniwriter, Ex Basic, Biorythm (print)
Phil Townsend	Micro Mechanic, Miniwriter, Solitaire, Ex Basic
Steve Wright	MBX software

////////////////////////////////////

NAME:	TIMES:
Lindsay Brown	10:00 - 3:00
Glen Daniels	9:00 - 12:00
Mike Dunn	9:00 - 12:00
Jim Foster	ALL DAY
Bob Mathews	4:00 - 5:00
Mike McVeigh	ALL DAY
Don Roberts	1:00 - 5:00
Judy Taylor	1:00 - 5:00
Phil Townsend	ALL DAY
Karen Wilson	1:00 - 5:00
Steve Wright	ALL DAY

John Baal	WHENEVER AVAILABLE
Gary Bennett	" "
Jim Lloyd	" "
Janet McIntyre	" "

FROM THE REGINA USER GROUP . . .

The latest word from Texaments on the availability of the Myarc 9640 computer is that the machine would be available in two weeks as of Feb 24th. According to Steven Lamberti of Texaments the machine will be introductory priced at \$415.00 (plus \$10.00 shipping to Canada) for prepaid orders. The computer's price will jump to \$469.95 after it is officially released. All these prices are in U.S. funds. The computer will come bundled with this software:

- Myarc DOS (similar to MS-DOS 2.1)
- Myarc Advanced Basic (upward compatible with TI Extended Basic and Myarc Extended Basic; supports all modes of the V9938 video processor, windows, mouse commands, text and bit mapped graphics, plus special drawing commands.
- Revised TI-Writer that supports 80 Column operation and new commands.
- A cartridge to disk program that allows 99 4/A cartridges to be saved to disk and used with the 9640 computer.

- Pecan Systems UCSD Pascal Runtime package (to allow currently compiled programs written in Pascal to run on the 9640).

The 9640 has a total of 640K of total on board memory; 512K for conventional computer processing, 128K dedicated to video display processing.

The unique feature of the conventional memory is that you can configure parts of the memory for a RAMdisk and print spooling function.

There are many other features contained in the Myarc 9640 computer but they are too numerous to mention here. Texaments are a distributor of the Myarc 9640 Computer (Texaments, 53 Center Street, Patchogue, New York 11772 U.S.A.)

Myarc (241 Madisonville Road, Basking Ridge, NJ 07920 U.S.A.) has announced the availability of a new Eprom for the Foundation 128K memory card that will allow the card to run the new Myarc Extended Basic II software. You can get the Eprom for \$10 in U.S. funds with purchase of the new XB.

New Software; Font Writer by Peter Hoddie (Asgard Software, P.O. Box 10306, Rockville, MD 20850 U.S.A. for \$24.95 u.s.). In extended basic it is a set of programs that lets you create or edit fonts from TI-Artist or CSGD, (2) a text formatter which allows use of TI Writer files and imbedding of graphics in text, and (3) allows you to keep all these fonts, graphics, and such, well organized.

McCann Software's Printer's Apprentice (McCann Software, P.O. Box 34160, Omaha, Nebraska 68134 U.S.A. \$22.50 u.s.). It is written in forth and handles only its own fonts. You cannot import fonts from CSGD files. It has a scheduler function which lets you have great versatility of where place the graphics in your document.

Asgard software also released Total Filer by Warren Agee. (Asgard \$24.95 u.s.) It is a free form database written in speedy C99. Total Filer gives you a screen-you put what you want on it. Then give it a title, assign some keywords, and then save it to disk. Then you can search all your records by keywords at any time.

High Gravity, by Tom Hibel (Asgard, \$14.95) is both a game and a learning tool as you try to learn the concept of gravity as you try to shoot cargo to a ship stranded in a cluster of planets, each with a variable gravitational field.

Timeline, a Canadian information network now appears to be offline. The network was run out of Montreal and was to be moving to Toronto offices but has not been online for months. Timeline, had a large TI user base across Canada and was the perfect way for TI users to communicate nationwide. Timeline was just starting to get a foothold in Canada.

Digit Systems has come out with an RGB conversion kit for the 99/4A. (Digit Systems, 4345 Hortensia Street, San Diego, CA U.S.A.). To hook up your TI to a RGB Monitor you will require a RGB monitor first. Plus a RGB Console Conversion Kit, \$35 u.s. and a Video Decoder Interface, \$65-\$70 depending on the type you require. The RGB Conversion Kit is an internal hardware modification to the console and requires some soldering. Write Digit for more info and if you already have a RGB monitor, state the make and model.

Myarc's new hard disk controller can control hard disks with capacities of up to 240 megabytes. Myarc is offering a 20 meg hard disk with a 60ms seek time packaged with the controller card for \$750 u.s. The hard controller alone is \$265 u.s., plus \$45 u.s., for cables.

Not-Polyoptic's Spad XIII flight simulator will be available soon. You control a World War I pursuit plane whose mission is to shoot down German planes and balloons and bomb a German airfield. The program apparently does a good job duplicating the environment of flying a light plane.

Textaments announces that Character Sets and Graphic Design User Disk #4 is now available. The two disk package includes 16 new fonts, 11 of which include lower case, and 61 small graphics. Among the font types are Artdeco, Cameo, Starlet and Squish. The small graphics include 51 different monograms for creating letterheads and stationery. CSGD #4 is available for \$10.95 in u.s. funds.

CorComp is releasing it's new word processing program, Writer-Ease inmid-February according to Jackirae Sagouspe, president of CorComp. The program features a 30,000-word dictionary and spell checker. A single word or an entire document may be checked against the dictionary without the user leaving the edit mode. The user may also see a list of possible words which his misspelled word might be intended to be. List price for the two disk package is \$49.95 in u.s. funds, (CorComp, 2211 Winston Rd., Unit 6, Anaheim, CA 92806 U.S.A.).

On another note, In a month or two, back issues of The Globe and Mail will be available in a new form-on compact disk. The experiment, among the first of its kind in North America publishing, will put all 1985 issues of The Globe and Mail onto a database for use on compact disks. A single disk can store a years's issue of the newspaper. InfoGlobe, The Globe and Mails online division of the paper reached an agreement with Reteaco Inc., of Toronto last December to put all 1985 issues of The Globe onto a database for compact disks. Licensees must buy a manual or user certificate for each person using the program.

-----  
POWER SUPPLY DIAGRAM COMES FROM THE  
WINNIPEG USER GROUP. . .

## NEWSLETTER GLEANINGS

by

Jim Lambert

from THE BOSTON COMPUTER SOCIETY  
TI-99/4A USER GROUP NEWSLETTER (August  
1986):

### "c" COLUMN

by Donald L. Mahler

This month we will play with the graphic functions of c.99, which are loaded from the library disk by "#include dsk2.grf1rf". When we "load and run", one of the files entered must be "dsk2.grf1". Please note that from here on, we are using V2.0 of c.99. Most correctly written c.code written for an earlier version can be compiled with the new compiler, but it is less forgiving; for example, all declarations MUST be made before assignments. We CANNOT write:

```
int a; a=0;
char set[];
```

This is not correct practice, but earlier compilers accepted it. ... On the other hand, s.codes compiled with an earlier version of CANNOT be run with new CSUP.

```
/* test of graphic functions */
#include dsk2.grf1rf
#include dsk2.conv;c
#define S 10
main()
{char* r;char* s;char* t;
/* s is 'value stored at s' */
int u,v,x,y,z,q;
char str[8];x=y=z=u=v=q=0;
s="3C00BDA5A58D003C";
r="00245A24245A2400";
t="2466C31818C36624";
grf1(); clear();
screen(S);
chrdef(136,s);chrdef(140,r);
chrdef(152,t);
/* these set 136,140,152 to charact
```

\*/

```
sprite(1,136,7,150,150);
sprite(2,152,11,100,100);
sprite(3,140,16,125,125);
sprite(4,136,8,75,75);
sprite(5,152,9,50,100);
```

```
sprite(6,140,12,150,75);
spmag(2); /* sets sprite mag */
spmotn(1,5,5);
spmotn(2,-5,-5);
spmotn(3,3,-5);
spmotn(4,5,10);
spmotn(5,-5,10);
spmotn(6,0,15);
spact(7); /* starts motion */
while (q<S)
{inton(); /* interrupts to keep
sprites moving */
x=spdist(1,2); /* sq of fist 1-2 */
if (x<150)
q=q+1;
y=spdist(2,3);
if (y<150);
q=q+1;
z=spdist(3,4);
if (z<150);
q=q+1;
u=spdist(4,5);
if (u<150)
q=q+1;
v=spdist(5,6);
if (v<150);
q=q+1;}
itod(q,str,8); /* int to char */
puts(" total hits=");
puts(str);putchar('\n');
puts(" that's the end!!");
spdall();}
```

```
inton()
{
#asm
LIMI 2
LIMI 0
#endasm
}
```

This program creates sprites, sets them in motion, and keeps track of "near misses". When there have been 10, program ends. This is c.code and must be compiled, with grf1rf and conv;c available on library disk. When "load and run", remember to load grf1 and csup.

A similar function, spnc() seems to have a bug in it; I could not get a program with it to work. I wrote Clint Pulley, but have not yet received an answer. Next month we shall try something else.

(ED. NOTE: I tried this program myself. Unless I made a mistake in keying the program in or unless there's a bug in it, it executes so quickly that

nothing much seems to happen except a very brief (and I mean brief) display of sprites and the end message. However, I found that by defining S as 5000, I could see sprites in motion for about 9-10 seconds. - J.L.)

from SOUTHWEST NINETY-NINERS  
NEWSLETTER (August 1986):

### MULTIPLAN PRINTER COMMAND FILE

MULTIPLAN PRINTER COMMAND FILE is new freeware. This file will allow you to place printer commands into any BLANK cell on your Multiplan spreadsheet. You can turn off and on different commands at any point as long as you have a BLANK cell to copy into. This means the title can be printed in enlarged characters, certain information can be emphasized, italicized, or whatever you want to do, as long as your printer has the ability to do it.

Due to the way that Multiplan works, it is necessary to have the exact printer commands for each printer. The current versions of this program cover the Gemini 10X, Epson, Prowriter, Panasonic KY-P1091, GE TYP-1000, and Seikosha (Gorilla Banana). If you have a different printer, please send a copy of your printer's special commands, and I will be glad to set up a file for you.

The instructions are simple. When you want to use a printer command in your TIMP spreadsheet, make sure you have a BLANK cell to copy into. Press X for external copy, type PRINT, tab and type the name of the command you want to use from the table provided in the documentation for your printer. Then tab AGAIN and press N. You do NOT WANT THIS FILE TO BE LINKed! Once this is done, you are ready to print or add any information you wish. IF you wish to change the printer commands simply BLANK them out and external copy, following the instructions above again.

To get your copy of the MULTIPLAN PRINTER COMMAND FILE send a formatted disk to Jack C. Mathis, 5941 E. 26th, Tucson, AZ 85711.

TRANSFERRING TI MULTIPLAN FILES TO

## ANOTHER (NON 99/4A) COMPUTER

by Gary Matthews from APCUG CALL,  
Atlanta, Georgia, April 1986

Multiplan spreadsheets can be saved  
to disk in three basic ways:

1) The standard way, which is how  
you save it to disk and then bring it  
back in for normal usage.

2) As a PRINT file which is an  
ASCII text format which looks like your  
usual spreadsheet, but has no formulas  
associated with it.

3) As a SYMBOLIC format which is an  
ASCII representation of the spreadsheet  
that does have the formulas and cell  
formatting intact.

The purpose of the Symbolic format  
is to allow the spreadsheet to be  
converted to universal form that is  
usable by the Multiplan no matter what  
machine is running it. Restated, that  
means a Multiplan spreadsheet that was  
created with a TI 99/4A could be used by  
an Apple running Multiplan, or an IBM,  
or in this case by Digital Equipment  
Corporation's Rainbow computer.

First the spreadsheet is created  
(on a TI). Then the spreadsheet is  
saved to disk in 'symbolic' format.  
Next that 'symbolic' file is transferred  
to another machine using some  
communications program (Fast Term for  
example) that allows the transferring of  
ASCII files. The other machine is using  
a communications program that will  
capture and put to disk the ASCII file  
it receives. Now the other machine can  
run Multiplan and load the file it  
received in 'symbolic' format. All the  
formulas are intact. The spreadsheet is  
a duplicate of the one originally on the  
TI.

All this is great except for one  
thing. It doesn't work. The TI  
Multiplan 'symbolic' format which is  
supposed to be ASCII isn't. Doing a  
directory of a 'symbolic' file shows it  
to be INTERNAL/128. If it were ASCII,  
it would be DISPLAY/128.

Guy Stefano Romano, who mans the  
Aminion Helpline 415-753-1455, owns both

a TI 99/4A as well as a Rainbow  
computer. He found he could not  
transfer his TI Multiplan files to his  
Rainbow. The standard way to do this  
with 'symbolic' files did not work. He  
discovered the reason was because of the  
information covered five sentences ago,  
and he found a way to fix it.

NOTE: This is easier to do if the  
file is copied to an empty disk so your  
file will be the only one on it. Using  
a sector editor program (like DISKO),  
find the 2nd to the last byte of the  
first line of the file. In HEX, you  
will see it is an 02. Change it to 00.  
That will cause the file type to be  
converted from INT/128 to DIS/128. Now  
the 'symbolic' file format will BE a  
true ASCII file and it can be  
successfully transferred to another type  
of computer and loaded into Multiplan.

Thanks to Guy for sharing this  
information.

```
*****  
"I DIDN'T KNOW THAT!"  
*****
```

by BJ Mathis

I recently ran across a short  
program in Topics - LA 99ers newsletter  
by Chick De Marti:

```
100 CALL CLEAR :: PRINT "HERE I  
60": :  
110 GOSUB 200 DELAY_ROUTINE  
:: PRINT "I'M BACK"  
120 END  
200 FOR D = 1 TO 400 :: NEXT D  
210 RETURN
```

In experimenting with the above  
program Jack and I found that you can  
put comments after both GOSUB and GOTO.  
The only stipulation is that the  
comments must be continuous. That is  
why the comment above has underline  
marks ("\_") in it. This type of comment  
or REM statement would be super for  
keeping track of exactly what the  
program is going to do when you tell it  
to GOSUB or GOTO. Try, it really does  
work!

from TOPICS - LA 99ers (no date)  
reprinted in NORTHERN NJ NINETY NINER

## USERS GROUP (August 1986):

ASC and SEG\$

You may have seen this routine  
before.

```
800 INPUT "ANOTHER TRY?":A$
```

```
810 IF ASC(SEG$(A$,1))=89 THEN IT  
is used to compare the 1st character of  
a string....instead use:
```

```
810 IF ASC(A$)=89 THEN 100
```

(ASC only compares one character!)

More on POS

Options are

```
<C>change <P>print  
<Q>quit
```

Instead of:

```
500 ACCEPT AT(20,10,SIZE(-1))
```

```
VALIDATE("CPQ"):A$ ::
```

```
IF A$="C" THEN 2000 ELSE
```

```
IF A$="P" THEN 3000 ELSE
```

```
IF A$="Q" THEN 4000
```

--- USE ---

```
DN POS("CPQ",A$,1) GOTO  
1000,2000,3000
```

Defining DEFINE

```
DEF F$=SEG$(Q$,1,N) AND LET  
F$=SEG$(Q$,1,N) appear to do the same  
thing...but there IS a difference! The  
LET command must be read every time a Q$  
is encountered. DEF, read once at the  
beginning of a program, is good whenever  
Q$ is invoked.
```

Example

```
100 DEF F$=SEG$(Q$,1,N) :: LET  
L$=SEG$(Q$,N+1,LEN(Q$))  
110 N=6  
120 Q$="FIRST LAST"  
130 PRINT F$  
140 PRINT L$  
150 END
```

Now change the line to read:

```
100 DEF F$=SEG$(Q$,1,N) :: DEF  
L$=SEG$(Q$,N+1,LEN(Q$))
```

and RUN the program...



TIPS FROM THE TIGERCUB

#38

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TIGERCUB SOFTWARE  
156 Collingwood Ave.  
Columbus, OH 43213

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Over 138 original programs in Basic and Extended Basic, available on cassette or disk, only \$3.99 each plus \$1.59 per order for PPM. Entertainment, education, programmer's utilities. Descriptive catalog \$1.99, deductible from your first order.

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Tips from the Tigercub Vol. 2, another diskfull, complete contents of Nos. 15 through 24, over 68 files and programs, also just \$15 postpaid.

\*\*\*\*\*  
\* Tips from the Tigercub \*  
\* Vol. 3 is now ready. \*  
\* Another 62 programs, \*  
\* routines, tips, tricks. \*  
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\* \*  
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Tigercub Full Disk Collections, just \$12 postpaid! Each of these contains either 5 or 6 of my regular \$3 catalog programs, and the remaining disk space has been filled with some of the best public domain programs of the same category. I am NOT selling public domain programs - my own programs on these disks are greatly discounted from their usual price, and the public domain is a FREE bonus!

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For descriptions of these send a dollar for my catalog!

I have discovered a rare bug in the 28-Column Converter, published in Tips #18, which will cause an I/O 25 ERROR if the very last line of the program being converted happens to have exactly 88 characters. You can fix it by adding a line -  
215 IF EOF(1)=1 THEN 268

There is also a rare bug in the SIDWAYS 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=LEN(B9) in line 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 instructions. Please add -  
131 DISPLAY AT(11,1): "When you cross your track,": "press S to go over, U to go": "under, C to go across."

To make that fit, you will have to change the DISPLAY AT in line 138 to (8,1), in line 148 to (15,1) and in line 158 to (28,1), also the ACCEPT At in 168 to (28,11). And this change will prevent a lockup when you reach a border -

```
288 D=D-1 :: IF ABS(D-D2)=2
OR R+(D=1)=8 OR R-(D=3)=25 O
R C+(D=4)=2 OR C-(D=2)=31 TH
EN 188 :: 60SUB 518 :: IF D<
>D2 THEN 60SUB 458
```

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 Basic, but will run fairly well in Basic if you delete the delays in lines 288 and 388.

If you liked the ESCHER ART in Tips #37, these modifications will improve it considerably -

```
118 DISPLAY AT(12,1): "Press
-": " G for new pattern": "
B to change background": " F
to change foreground": " R to
reverse colors": " : "Any ke
y to start"
288 A=INT(6#RND+3):: H=INT(2
4/A):: RX=24-H#A :: HC=INT(2
8/A):: CX=28-H#A :: W=ABS(H
C/2=INT(HC/2))-(RX>8):: DIM
M(8,8):: FOR P=1 TO A
338 IF K<>66 THEN 346
348 BC=BC+1+(BC=16)#15 :: IF
BC=F THEN 348 ELSE 347
```

```
346 IF K<>78 THEN 368 :: F=F
+1+(F=16)#15 :: IF F=BC THEN
346
```

```
347 FOR S=7 TO 14 :: CALL CO
LOR(S,F,BC):: NEXT S :: 60TO
318
```

```
358 : **DELETED LINE **
368 IF K<>ASC("R")THEN 318 :
: T=F :: F=BC :: BC=T :: 60T
O 347
```

```
688 60SUB 988 :: FOR T=1 TO
A :: DISPLAY AT(R-1+T,C):M#(
V,T):: NEXT T :: NEXT C
```

```
681 IF CX>8 THEN AA=A :: 60S
UB 888
```

```
685 60SUB 1888 :: NEXT R
```

```
686 IF RX=8 THEN 618
```

```
687 60SUB 1888 :: FOR C=1 TO
```

```
A#HC STEP A :: 60SUB 988 ::
```

```
FOR T=1 TO RX :: DISPLAY AT
```

```
(R-1+T,C):M#(V,T):: NEXT T :
```

```
NEXT C
```

```
688 IF CX>8 THEN AA=RX :: 60
```

```
SUB 888
```

```
888 60SUB 988 :: FOR T=1 TO
```

```
AA :: DISPLAY AT(R-1+T,C):SE
```

```
G#(M#(V,T),1,CX):: NEXT T :
```

```
RETURN
```

```
988 V=V+1+(V=4)#4 :: RETURN
```

```
1888 V=V+W :: V=V+(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 impractical that I wrote this program. While I was at it, I speeded up the loading and saving to cassette greatly by converting the grades to an ASCII string and combining the student's name and all grades into one record.

```
188 DIM N$(58),T(58,28)
118 CALL CLEAR
128 PRINT " TEACHER'S
HELPER": ; ;
138 REM - by Jim Peterson
148 PRINT "(1)CREATE A FILE?
": "(2)ADD TO FILE?": "(3)LOAD
A FILE?": "(4)SAVE A FILE?":
"(5)PRINT A FILE?"
158 PRINT "(6)CORRECT A FILE
?": "(7)COMPUTE AVERAGES?": "(
8)QUIT?"
168 CALL KEY(8,K,S)
```

```

170 IF (S=0)+(K<49)+(K>50)TH
EN 160
180 ON K-40 GOTO 190,250,610
,800,380,990,1120,1510
190 X=0
200 INPUT "SUBJECT? ":S$
210 GOSUB 1370
220 INPUT "TEST #? ":N
230 GOSUB 1440
240 GOTO 140
250 PRINT :;:"(1)ADD NAMES?"
:;(2)ADD GRADES?"
260 CALL KEY(I,K,S)
270 IF (S=0)+(K<49)+(K>50)TH
EN 260
280 ON K-40 GOTO 290,310
290 GOSUB 1370
300 GOTO 140
310 INPUT "TEST #? ":Q
320 IF T(I,Q)=0 THEN 350
330 PRINT :;:"TEST #";STR0(Q
);" ALREADY RECORDED"
340 GOTO 140
350 M=0
360 GOSUB 1440
370 GOTO 140
380 CALL CLEAR
390 PRINT "OUTPUT TO:"(1)SC
REEN?:"(2)PRINTER?"
400 CALL KEY(I,K,S)
410 IF (S=0)+(K<49)+(K>50)TH
EN 400
420 IF K=49 THEN 460
430 INPUT "PRINTER DESIGNATI
ON? ":P$
440 OPEN #2:P$
450 F0=2
460 PRINT "PRESS ANY KEY TO
PAUSE":;
470 PRINT #F0:S$;
480 FOR J=1 TO X
490 PRINT #F0:"";N$(J)&" ";T
AB(I);
500 FOR K=1 TO HN
510 PRINT #F0:T(J,K);
520 NEXT K
530 CALL KEY(I,K,S)
540 IF S<>0 THEN 530
550 NEXT J
560 PRINT #F0
570 IF F0=0 THEN 140
580 F0=0
590 CLOSE #2
600 GOTO 140
610 PRINT :;:"(1)CASSETTE?":
(2)DISK?"
620 CALL KEY(I,K,S)
630 IF (S=0)+(K<49)+(K>50)TH
EN 620
640 ON K-40 GOTO 650,670

```

```

650 OPEN #2:"CS1",INPUT ,FIX
ED
660 GOTO 690
670 INPUT "FILENAME? DSK":F$
680 OPEN #2:"DSK"&F$,INPUT
690 INPUT #2:I,HN,S$
700 FOR J=1 TO X
710 INPUT #2:K$
720 N$(J)=SEG$(K$,1,POS(K$,C
HR$(255),1)-1)
730 K$=SEG$(K$,POS(K$,CHR$(2
55),1)+1,255)
740 FOR K=1 TO HN
750 T(J,K)=ASC(SEG$(K$,K,1)
-50)
760 NEXT K
770 NEXT J
780 CLOSE #2
790 GOTO 140
800 PRINT :;:"(1)CASSETTE?":
(2)DISK?"
810 CALL KEY(I,K,S)
820 IF (S=0)+(K<49)+(K>50)TH
EN 810
830 ON K-40 GOTO 840,860
840 OPEN #2:"CS1",OUTPUT,FIX
ED
850 GOTO 880
860 INPUT "FILENAME? DSK":F$
870 OPEN #2:"DSK"&F$,OUTPUT
880 PRINT #2:I;HN;S$
890 FOR J=1 TO X
900 K$=""
910 FOR K=1 TO HN
920 K$=K$&CHR$(T(J,K)+50)
930 NEXT K
940 PRINT #2:N$(J)&CHR$(255)
&K$
950 K$=""
960 NEXT J
970 CLOSE #2
980 GOTO 140
990 CALL CLEAR
1000 INPUT "STUDENT'S NAME?"
:I0$
1010 FOR J=1 TO X
1020 IF N$(J)=00 THEN 1060
1030 NEXT J
1040 PRINT :;:"NAME NOT FOUN
D":;
1050 GOTO 140
1060 INPUT "CORRECT WHICH TE
ST? (0 TO QUIT) ":IC
1070 IF C=0 THEN 1110
1080 PRINT :;:N$(J);"S TEST
#";STR$(T(J,C));;
1090 INPUT "CORRECT TO? ":T(
J,C)
1100 GOTO 1060
1110 GOTO 140

```

```

1120 CALL CLEAR
1130 PRINT "OUTPUT TO:"(1)S
CREEN?:"(2)PRINTER?"
1140 CALL KEY(I,K,S)
1150 IF (S=0)+(K<49)+(K>50)T
HEN 1140
1160 IF K=49 THEN 1200
1170 INPUT "PRINTER DESIGNAT
ION? ":P$
1180 OPEN #2:P$
1190 F0=2
1200 PRINT #F0:S$
1210 FOR J=1 TO X
1220 PRINT #F0:N$(J);" AVERA
GE ";
1230 FOR K=1 TO HN
1240 TT=TT+(T(J,K)
1250 NEXT K
1260 AV=TT/HN
1270 TAV=TAV+AV
1280 PRINT #F0:AV
1290 TT=0
1300 NEXT J
1310 PRINT #F0:"CLASS AVERAG
E ";TAV/X
1320 TAV=0
1330 IF F0=0 THEN 1360
1340 F0=0
1350 CLOSE #2
1360 GOTO 140
1370 PRINT :;:"STUDENT'S NAM
ES - ":type END when finish
ed":;
1380 X=X+1
1390 M$="NAME #";STR$(X)&" "
1400 INPUT M$:N$(X)
1410 IF N$(X)<>"END" THEN 13
80
1420 X=X-1
1430 RETURN
1440 FOR J=1 TO X
1450 N$=N$(J)&"S GRADE? "
1460 INPUT M$:T(J,M)
1470 NEXT J
1480 IF N(HN) THEN 240
1490 HN=HN
1500 RETURN
1510 END

```

The reason that 50 is added to the value in line 920, before saving, and subtracted again in line 730 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 8, 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 8 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 8, 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.

Chick De Marti published 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 S=2
TO 14 :; CALL COLOR(S,S,S);;
NEXT S
120 N=INT(13*RND+1);; C$=CHR
$(0+N+32-(N-4)*11)
130 FOR J=N TO 12 :; A$=RPT$(
" ",J)&"&"&RPT0(" ",26-J*2)
&"&" :; PRINT USING A$:C$,C$
:; NEXT J
140 FOR J=12 TO N STEP -1 :;
A$=RPT0(" ",J)&"&"&RPT0("
",26-J*2)&"&" :; PRINT USING
A$:C$,C$ :; 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

Jim Peterson

Thanks to LA 99ers another little gem! It's making its rounds, thought you might be interested. Ed.

TABLES - LA 99ers

- DISK TO TAPE AND TAPE TO DISK CONVERSION PROGRAM
- TOM FREEMAN
- 515 ALMA REAL DR.
- PACIFIC PALISADES, CA 90272
- FOR USE WITH PROGRAMS MEANT TO BE LOADED BY THE RUN PROGRAM FILE OPTION (R5) OF E/A. IT MAY BE USED FOR OTHER NON STANDARD FILES, BUT IN THAT CASE THE TWO INSTANCES OF BL EXCHANGE SHOULD BE DELETED, AND THE 4TH WORD OF EACH PAB SHOULD BE REPLACED BY >X100.
- WHERE >XK IS THE HEX EQUIVALENT OF THE NUMBER OF SECTORS TAKEN UP BY THE PROGRAM (PER DISK CATALOG).
- MINUS 1, IF THE ORIGINAL FILE IS ON TAPE AND THIS NUMBER IS NOT KNOWN, USE >21, THEN CHECK THE DISK FILE WITH A SECTOR EDITOR TO SEE WHERE 00'S BEGIN.
- THE PROGRAM CAN THEN BE RUN WITH THE PROPER NUMBER.
- NOTE, BECAUSE OF THE REF'S TO GPLLNK AND DSRLNK, THE PROGRAM WILL ONLY WORK WITH E/A. IT IS CALLED FROM BASIC - LISTING FOLLOWS.
- DEF DISTAP, TAPDIS
- REF DSRLNK, GPLLNK, VHEV, VNR
- STATUS EQU >837C
- FAC EQU >83AA
- PAB EQU >0F60
- PNTR EQU >8358
- WS EQU >8300
- ADIG >3000

- THE FOLLOWING IS THE DISK FILE
- AND HAS BEEN PREPARED FROM IASIC
- PABDSK DATA >0800, >1000, 0, >2000
- BYTE 0
- LENGTH BYTE
- FILE NAME
- BSS 15

- THE FOLLOWING IS THE CASSETTE FILE
- NOTE, IF USING CSI FOR INPUT IN "RUN PROGRAM FILE" IN E/A
- USE CSI, X AS DEVICE NAME, NOT CS1
- PABCS DATA >0800, >1000, 0, >2000, >8003
- LAST WORD IS SCR OFFSET & LEN BYTE
- CSI
- TEXT "CSI"
- SAVE BYTE >08
- LOAD BYTE >05
- SAVRTN DATA 0
- LI 0, PAB
- LI 1, PABDSK
- LI 2, 25
- BL/P SVHBU
- LI 6, PAB-9
- MOV 6, PNTR
- BL/P DSRLNK
- DATA 8

- LOAD PAB FOR DISK FILE
- RT
- LI 0, >1002
- LI 2, 2
- BL/P SVHBR
- RT
- LI 0, PAB
- LI 1, PABCS
- LI 2, 13
- BL/P SVHBU
- LI 1, PAB-13

- MOVE FILE TO YDP AT >1000
- 2ND WORD CONTAINS # BYTES IN FILE
- AND BELONGS TO 4TH WORD OF PAB(R1)
- SET UP CASSETTE PAB TO SAVE
- 1ST CHAR AFTER PAB MUST BE AT PNTR

```

MOV 1, PNTR
LI 1, >0800
MOV 1, >8338
LI 0, PAB-10
LI 1, FAC
LI 2, 3
MOV 2, PNTR-2
BL/P SVHBR
CLR >8330, STATUS
BL/P GPLLNK
DATA >3B
RT

```

```

DISTAP MOV 11, SAVRTN
LUP1 VS
MOV 0, PABDSK
MOV 0, SAVE, PABCS
BL DSISK
LI 1, PABCS-8
BL EXCHANGE
BL STAPE
JMP RETURN

```

```

TAPDIS MOV 11, SAVRTN
LUP1 VS
MOV 0, LOAD, PABDSK
MOV 0, SAVE, PABDSK
BL STAPE
LI 1, PABDSK-8
BL EXCHANGE
BL DSISK
RETURN CLR 0, STATUS
MOV 0, SAVRTN, 11
RT
END

```

```

RETURN FROM THIS PROGRAM
-----
this is the basic program that runs the above file.
if it is assembled under the name DISKTAPE/0
-----
100 DNAME=>080-1-9
110 CALL INIT
120 CALL LOAD("DSKI, DISKTAPE/0")
130 INPUT "DISKFILE TO SAVE/LOAD"
140 L$=LEN(WRITE)
150 CALL LOAD(DNAME, L$)
160 FOR X=1 TO 10
170 CALL LOAD(DNAME+X, ASC(SEG(NAMES, X, 1)))
180 NEXT X
190 PRINT "PRESS D. DISK TO TAPE" OR "T. TAPE TO DISK"
200 CALL KEY(0,K,S)
210 IF S=0 THEN 200
220 IF K=88 THEN 200
230 IF K=84 THEN 200
240 CALL LINK("TAPDIS")
250 GOTO 270
260 CALL LINK("DISTAP")
270 PRINT "DO ANOTHER? Y/N"
280 CALL KEY(0,K,S)
290 IF S=0 THEN 280
300 IF K=89 THEN 130
310 IF K=78 THEN 280
320 STOP

```


# TUB MAN

BY DAVID KOPPERMAN

THE ADVENTURES OF **TUB MAN**

**ATTACHING A PERIPHERAL**  
A DRAMA IN  
11 PANELS

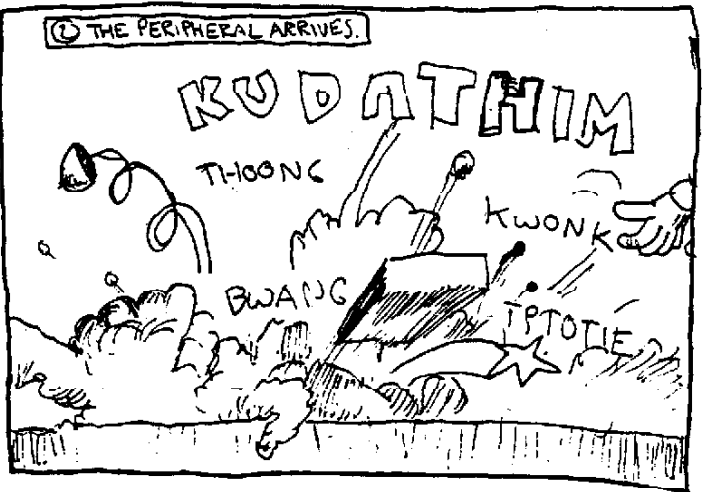
STARRING **EDMUND K. BYTE** IN **TECHNORACE 3-D** TRACK DOLBY



① THE PERIPHERAL ARRIVES.

## KU DATHIM

THOONG  
KWONK  
BWANG  
IPTOTIE



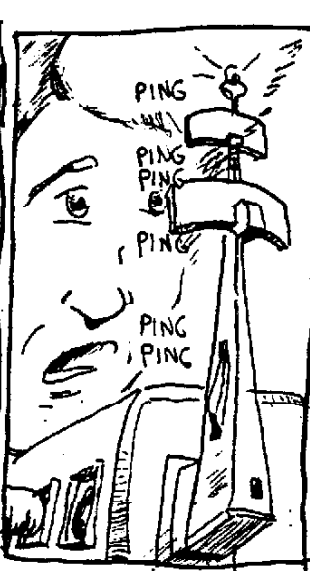
② THE OPERATOR



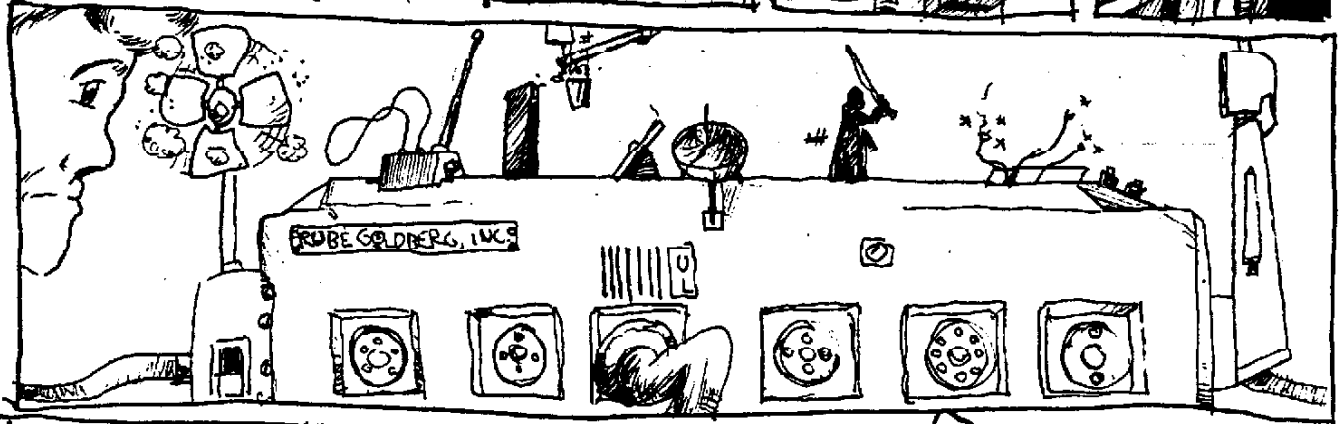
③ THE CABLE



PING  
PING  
PING  
PING  
PING  
PING

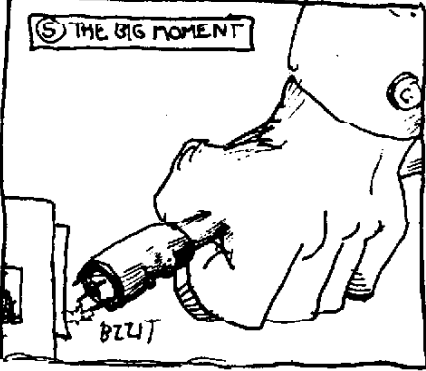


## CREAK



④ THE BIG MOMENT

BZZT



P-CHAK  
BZZAP  
BZZAP



I REALLY OUGHTA STOP READING THOSE TECHNICAL MANUALS BEFORE I GO TO SLEEP.

