Vol. 6 No. 4 APRIL 1988



also THE MYARC GENEVE 9640

Robert Peters
President, OH-MI-TI
225 S. Wheeling
Oregon, OH 43616
(419) 693-7934

Meeting; 8 Apr '88 Fri
Oregon #2 Fire Station
Time 7:00 Pm.

(419) 385-7484
TICOMM BBS
>>> 24-HRS <<<

SYSOPS
> TURNER - MILLS <

Don Turner
President, New Horizons
1690 Idlewood Street
Toledo, OH 43615
(419) 537-1454

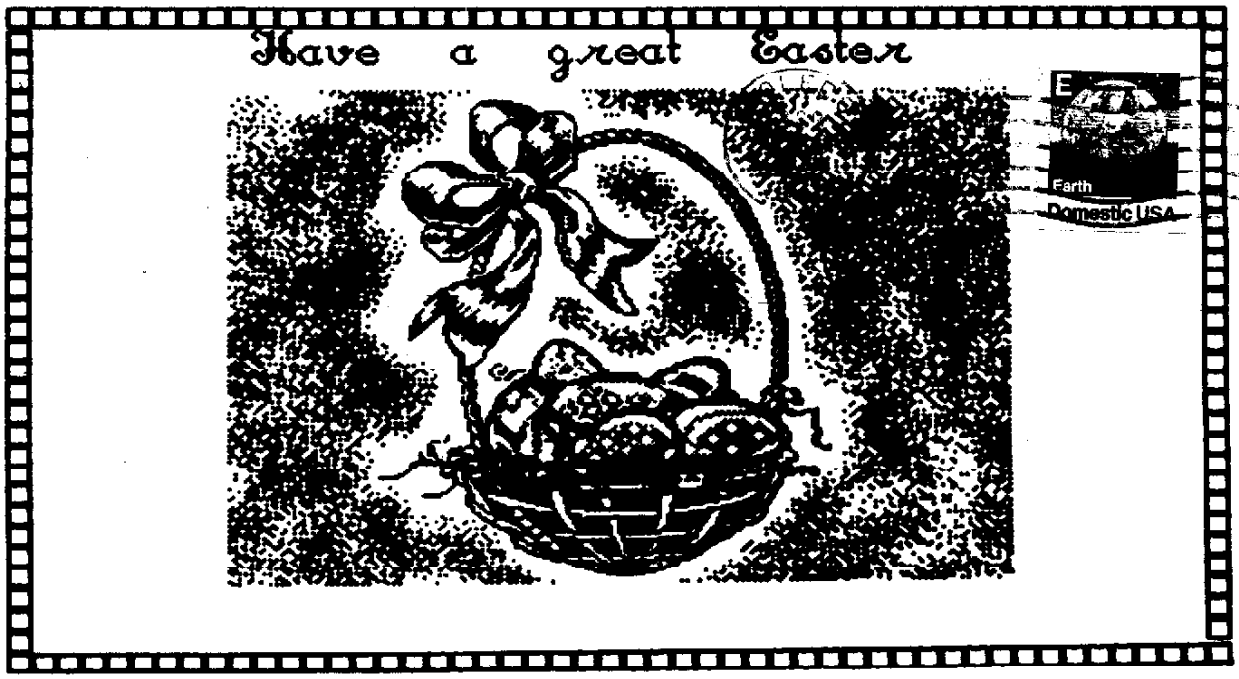
Meeting; 9 Apr '88 Sat
Unity Church Secor Road
Time; 12:30 Pm.

THE NEWSLETTER STAFF

Roger & Judy Feinauer Earl Hoffsis Pat Hunsinger

LOCAL CONTRIBUTIONS BY:

Jo Symington Bill Sager Earl Hoffsis Robert Peters




from

N.W. OHIO 99'ERS USER GROUP
% First Church Unity
3535 Executive Parkway
Toledo, OH 43606
Attn. Earl W. Hoffsis

Dallas TI Home Computer Gp
c/o Louis Guion
PO Box 29863
Dallas, TX 75299

# NEW HORIZONS NEWS

By Don Turner
New Horizons

Greetings to all the members of **NEW HORIZONS**. I would like to see April off with all of the members at this months meeting. Be sure to attend or you could miss something that would benifit you. There will be prizes and some interesting ideas at this meeting. We will be meeting at **UNITY CHURCH on Executive Pkwy at 12:30 on April 9th.**

**MICROPENDIUM** is available each month at the club sales desk. These are in limited quantities so be sure to get yours while they last. **MICROPENDIUM** has some of latest news and software concerning the **TI-99/4A** and the **GENEVE 9640.** Also it has reviews on software/hardware and much much more. This month will have some of the most exciting demos so far this year! I want to thank Dave Romer and Paul Martin for their splendid demos they did last month.

Diskname HORIZON65 Total Sectors 358 Free Sectors 56

| Filename | Type | Size | P | Comment |
|---|---|---|---|---|
| CALENDR1 | PGM | 33 | No | File 1 for calender program |
| CALENDR2 | PGM | 7 | No | File 2 for calender program |
| ELEC DREAM | PGM | 18 | No | Musical program "ELECTRIC DREAMS" |
| LOAD | PGM | 8 | No | Extended Basic loader program |
| LOADCALNDR | PGM | 3 | No | Extended Basic loader/Calender pgm |
| PUPPYTOWN2 | PGM | 28 | No | Revised Puppytown program |
| RISINGSUN2 | I/V | 59 | No | Ext Basic musical program/graphics |
| SHOOSH | PGM | 38 | No | Downhill skiing program |
| TEX-RANGER | I/V | 56 | No | Ext Basic graphic cowboy game |
| TINYTIPS1 | PGM1 | 42 | No | Ext basic tips for programmers |
| YLOAD | D/F | 10 | No | Support loader program A/Language |


President's Corner
By
Bob Peters

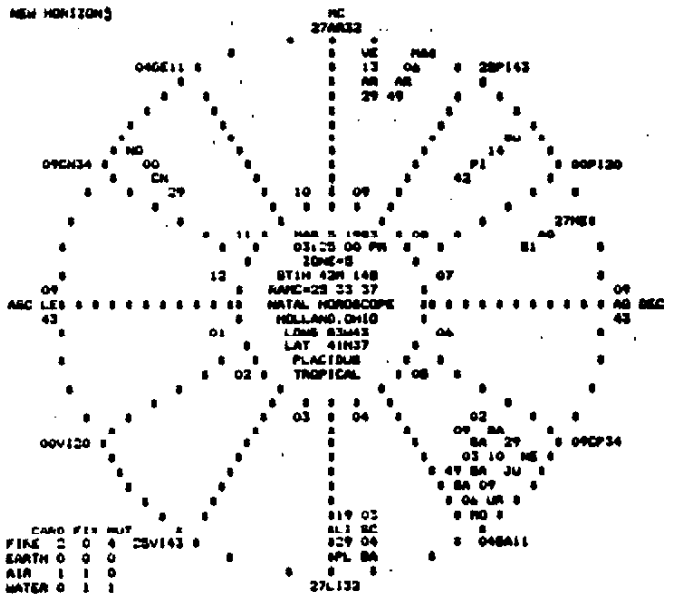
For those of you who weren't at last months meeting we had demos on Telco, Fast Term 2.4 and Neatlist. I will review Telco In another article. I will make available Version 1.3 of Telco to those of you got a copy at last months meeting free of charge.

Dave Burkett will do the demos this month. They will be Disk Cataloger and Label Maker, and a Character and Sprite development program. These will be for sale at the meeting. There will be Blank discs for sale at the meeting.

At the directors meeting we discussed the fact that we need input on what you you want to see demoed and that we need volunteers to do demos. I will not be able to any for awhile do to the imminent arrival of another baby.

The next meeting is at Oregon #2 Firestation on April 8, 1988 at 7 P.M. Hope to see you there unless I am at the hospital with my wife.

"SEWIN"
MY FAVORITE CSGD GRAPHIC




| PLANETS | ABREV | GEO | R | DECL. | ELEM. | +/- | TRIP | HOUSES | DIGNI | ABREV | ZODIAC SIGNS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SUN/EAR | SU | 14P142 | | -06 02 | WATER | NEG | MUT | SUC 8 | | AR | ARIES |
| MOON | MO | 06SA49 | | -19 24 | FIRE | POS | MUT | SUC 8 | | TA | TAURUS |
| MERCURY | ME | 27AQ51 | | -14 12 | AIR | POS | FIX | ANG 7 | | GE | GEMINI |
| VENUS | VE | 13AR29 | | +04 44 | FIRE | POS | CARD | CAD 9 | DETRI | CN | CANCER |
| MARS | MA | 06SA49 | | +02 13 | FIRE | POS | CARD | CAD 9 | RULER | LE | LEO |
| JUPITER | JU | 10SA09 | | -21 06 | FIRE | POS | MUT | SUC 8 | RULER | VI | VIRGO |
| SATURN | SA | 04SC03 | | -10 22 | WATER | NEG | FIX | ANG 4 | | LI | LIBRA |
| URANUS | UR | 09SA03 | | -21 42 | FIRE | POS | MUT | SUC 8 | | SC | SCORPIO |
| NEPTUNE | NE | 29SA02 | | -22 12 | FIRE | POS | MUT | SUC 8 | | SA | SAGITARIUS |
| PLUTO | PL | 29LI19 | | +08 08 | AIR | POS | CARD | ANG 4 | | CP | CAPRICORN |
| N. NODE | NO | 00CN29 | | +23 26 | | | | | | AQ | AQUARIUS |
| ASCEND | AS | 09LE43 | | +17 49 | 0 PART OF FORTUNE 01TAR0 | | | | | 0 | PI PISCES |
| MIDHEAV | MC | 27AR32 | | +10 36 | 0 EQUAT ASC. (EP) 23CP42 | | | | | 0 | NEPTUNE |
| VERTEX | VT | 26SA42 | | -23 24 | 0 SU/MO ANGLE =226A07 | | | | | 0 | INDUSTRIES (C) |

The horoscope of the NEW HORIZONS COMPUTER CLUB has LEO, the sign of the Sun, rising and is very appropriate for our logo. The ruling planet of LEO, the Sun, is in the behind the scenes and investigative sign of PISCES and is located in the 8th house.

The members of the club are indicated by Mercury in AQUARIUS, the sign of electronics and inovative ideas, located in the 7th house. Mercury's trine to Pluto, in the 4th indicates the overcoming of adversities caused by TI's decision to bow out of the home computer market, if not enhanced by it, due to the members being more responsive and cooperative in keeping the ideas flowing.

With 4 planets in SAGITARIUS and two planets in ARIES, all trining to the Ascendant, our club can be whatever its members wish it to be.

Most of the work of the club and its members is accomplished in the late afternoon or early evening hours as noted by the majority of the planets below the horizon.

The main strength of the chart reading is indicated by the 4 planets, Moon, Uranus, Jupiter, and Neptune, all located in the creative 5th house. Many inovative and excellent programs will be forthcoming from all areas on all subjects.

The above item is a reprint from New Horizons March '83 newsletter. Notice how close we have come, so far, to the forecast.

Earl Hoffsis

## Member of the Month

by Jo Symington
NEW HORIZONS
Bill Tiep

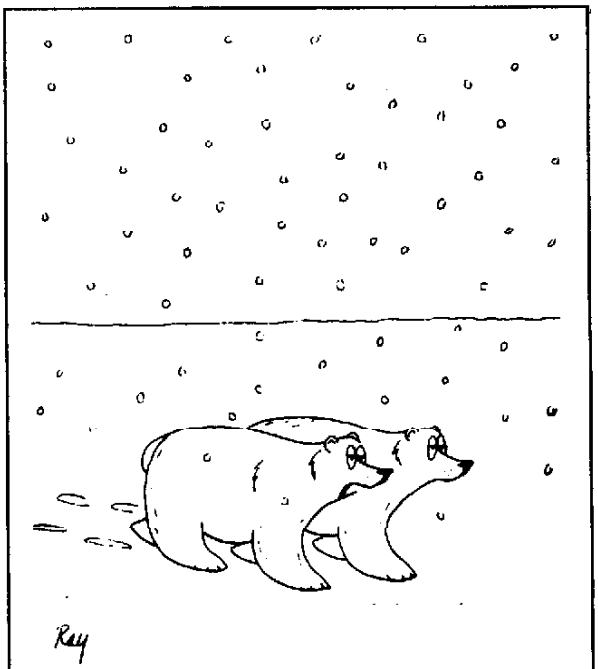
Bill has been a member of New Horizons since the club was organized. He was the news letter Editor along with the late Phil Dennis for 2 years.

Bill and his wife Robin have two daughters, Jinnifer, age 11 and Susan, 14. Jinnifer plays the piano and is quite good at it.

Bill works for First federal where he is an analyst programmer. he takes care of the General Ledger System - that encompasses the Income and Expenses of the Bank.

Bill enjoys cooking, in fact he says he's a better cook than his wife. Bill enjoys comming to the meeting and looks forward to seeing everybody.

Jo




*"Well, there's an Eskimo family about ten miles from here, but they're a pretty antisocial bunch."*

## Using "PRINT USING" with your printer

By Richard Roberts
TI3552

One of the more obscure statements available with TI Extended BASIC is one called PRINT USING. Even more obscure is the fact that this statement can be used to format variables and constants that will be dumped to your printer. The Extended BASIC manual, on page 150, shows several examples of how PRINT USING can be used to format data for screen display, but nary a word of how to do the same with open files. It can be done, and is much more powerful than you may realize.

Any discussion of PRINT USING will require an understanding of the IMAGE statement, so if you are not familiar with it, you better brush up on it first. The PRINT USING statement uses IMAGE in one of two ways, either with a string expression, or a line number reference. I prefer the latter, as it allows for more flexibility, but since these different methods are explained in the manual, I will limit this to a few simple examples that are not shown in the manual.

```
100 TCOST=19.55
110 IMAGE ##.##
120 OPEN #1:"PIO"
130 PRINT #1,USING 110:TCOST
```

Running this sample program will effectively show how the PRINT USING statement will work with an open file. Of course, there are many other variations of IMAGE that can be used, so experiment with them and watch how it performs when line 130 dumps it to the printer. Shown below are a few more examples for use with an open file.

```
110 IMAGE "##.##     ##.##"
130 PRINT #1,USING 110:COST1,COST2
```

This IMAGE statement will allow you to print two (or more) variables at a pre-determined spot on the same line. The length of the string expression in the IMAGE statement can be as long as you wish, up to the limit of an Extended BASIC line.

```
110 IMAGE "##########     ##.##"
130 PRINT #1,USING 110:"TOTAL COST",
TCOST
```

This version shows how you can format the printed line for string data as well as numerical data. A string variable could be used in place of the string constant, as below.

```
105 A$="TOTAL COST"
110 IMAGE "##########     ##.##"
130 PRINT #1,USING 110:A$,TCOST
```

It is also possible to place the IMAGE statement inside the PRINT USING statement, as shown below. First, delete line 110.

```
130 PRINT #1,USING "##.##":TCOST
      or
130 PRINT #1,USING "########## ##.##
"
:A$,TCOST
```

A few other points to remember include the fact that IMAGE and PRINT USING can be used to round off calculated variables. A single string expression such as " ######.##" will round off and decimal align numbers as small as number at any designated location. This function could save many hours of algorithm development for accomplishing the same thing. So, in the long run, the PRINT USING statement is one that any programmer should be very familiar with, and use as much as possible.

RICHARD ROBERTS IS PRESIDENT OF THE DALLAS TI99/4A USERS GROUP.

SOFTMAIL WELCOMES TUTORIALS OR OTHER ITEMS OF INTEREST THAT USERS MAY WISH TO SHARE WITH OTHERS. THROUGH EFFORTS SUCH AS RICHARDS WE MAY WELL ALL BE ABLE TO ENJOY AND BENEFIT FROM OUR ORPHAN AS LONG AS THOSE POOR SOULS LEFT HANGING WITH BANANA 9000 JUNIOR! MAYBE EVEN LONGER!

Thanks to

No. NJ 99'ers User Group

May 1985 Newsletter

```
100 !##############################################################################
110 !
120 !   Program UPDATED BY WILLIAM M. LUCID, Original by MBP for use with
130 !   the MBP Analog to Digital board for the TI Expansion System.
140 !   This is a documentation program, suitability, use of this program
150 !   is at USER'S OWN RISK.
160 !   ONLINE information about MBP is available from Jerry McClusky TIBBS(tm)
170 !   bbs  300/1200 baud in Wichita, KS  316-681-3167.
180 !
190 !      Vcc (+5 vdc)
200 !        ¦-----------¦
210 !        ¦           ¦
220 ! LM335 ¦           ¦
230 !      .-.          ) 10,000 ohm variable resistor
240 !      ¦ ¦          (
250 !      ¦ ¦ Adj    \ )   Output   10mV/ Kelvin
260 !      ¦ ¦---------)(..................... A/D Channel 0 (Pin 6)
270 !      ¦ ¦         ' )                    degree
280 !      ¦ ¦          (
290 !      '-'          )
300 !        ¦          ¦
310 !        ¦          ¦
320 !        ¦..........¦..................... A/D Ground (Pin 16)
330 !           Ground
340 !
350 ! Program for use with analog to digital board for P-Box.
360 ! Device used to sense temperature is described in National Semiconductors
370 ! Linear Databook. One low cost devices, resistor and powered by a five volt
380 ! supply. LM 335 are NATIONAL'S semiconductors. Calibration may be needed.
390 ! Each sensor is capable of being calibrated individually.
400 !
410 !##############################################################################
420 CALL CLEAR :: CALL SCREEN(8):: CALL INIT :: DEF SET=X+6*INT(X/10):: DEF TIME
=X-6*INT(X/16):: DEF F=.4578313254 :: DIM WK$(7),MO$(12)
430 FOR DW=1 TO 7 :: READ WK$(DW):: NEXT DW
440 FOR DM=1 TO 12 :: READ MO$(DM):: NEXT DM
450 DATA Sun,Mon,Tues,Wednes,Thurs,Fri,Satur
460 DATA January,February,March,April,May,June,July
470 DATA August,September,October,November,December
480 CALL PEEK(-31158,X1,X2,D,X4,X5):: X=D :: D$=STR$(TIME):: X=X5 :: X5=TIME ::
L1$="Today is "&WK$(X1)&"day" :: L1=INT((32-LEN(L1$))/2):: L2$=MO$(X5)&" "&D$&",
 1985"
490 L2=INT((32-LEN(L2$))/2)
500 Z=TC*F :: CALL PEEK(-31164,X1,X2,X3,X4,X5):: X=X1 :: SEC$=STR$(TIME):: IF X1
<10 THEN SEC$="0"&SEC$
510 X=X3 :: MIN$=STR$(TIME):: IF X3<10 THEN MIN$="0"&MIN$
520 X=X5 :: HR=TIME :: M$=" am" :: IF HR>11 THEN M$=" pm"
530 IF HR=0 THEN HR=12
540 IF HR>12 THEN HR=HR-12
550 HR$=STR$(HR):: T1$=HR$&":"&MIN$&":"&SEC$&M$
560 DISPLAY AT(6,L1):L1$ :: DISPLAY AT(8,L2):L2$: : :TAB(10);"The Time Is": : :T
AB(11);T1$
570 CALL PEEK(-31088,TC):: CALL PEEK(-31072,TC)
580 DISPLAY AT(17,7):"Room Temperature" :: DISPLAY AT(19,10):USING "#####.# F.":Z
590 IF X1+X3+X5=213 THEN 480 ELSE 500
```

COLISTER

A TINYGRAM

by Ed Machonis

Another 28 colum lister? Why not? This one happens to be my favorite and not just because I wrote it. I like it because it does the job the way I want it done, but then I wrote it that way.

At the time I wrote COLISTER, I had no access to any program that could do what I wanted done, which was to be able to list a program to disk or printer in 28 column format, the way it appears on the screen.

A 28 colum listing makes it easier for the reader to type in the program with less chance for error. It also makes it simpler to check for errors should any creep in. One only has to check the end of each line as it appears on the screen against the printed listing to see if any characters were omitted or added. (Home Computer magazine never did learn this lesson.)

But the biggest reason is that it not only saves the work of typing in a program in 28 colum format, but it eliminates the chance for typing errors. By letting the computer do the work, nothing can go wrong. (If you believe this, I have a fantastic deal on a Bridge I'd like to tell you about!)

Why not just LIST to Printer or Disk? It's not that simple. The computer will list the program in 80 colum format. Why not set the printer's right margin at 28? It will work up to a point. The point being a program line of more than 80 characters. The computer will send a carriage return after the 80th character and start printing the rest of the code on a new line. Listing to disk will also give you an 80 column listing.

Since I originally wrote this program several years ago, two programs that do the same work have been brought to my attention. One is 28 Column Converter by Jim Peterson, published in Tigercub Tips #18, and the other is COLIST, a Fairware program by the McGoverns. Both are very nice programs and you may well find them more useful to you than the one presented here. (I had originally named my program COLIST but have since renamed it COLISTER to avoid confusion.)

COLISTER has a couple of features not available in the other programs. First, it will print a blank line between program lines. I feel this makes it easier to "read" the program, especially the spaghetti code I am prone to. It facilitates picking out a line number in the middle of the program when following those GOTOs and orELSEs.

Second, it TABs the output 6 spaces. This centers the listing when merged into 40 column text in TI-Writer's Editor, and provides a margin so hard copies can be loose leaf bound.

COLISTER does not require that a program's line numbers be resequenced in order to list it. A lot of my program lines are numbered from 1 to 10. Default resequencing (100,10) would sometimes destroy their Tinygram status. (COLISTER is a good example. One Tinygram "trick" is to use single digit line numbers to gain a few extra character spaces for your code.)

COLISTER will print to either disk or printer. Listings printed to disk can the be merged with text in TI-Writer's Editor. Do not print the listing through the Formatter unless you have modified your Formatter file to ignore the special format command characters that are also often found in programs.

This Tinygram uses only 4 sectors of disk space, which can be reduced to 3 sectors by deleting Line 1. It earns its keep on my SSSD utility disk. (Small is Beautiful)

Using COLISTER is very simple. First, load into memory the program you want to list. Next make a DV 80 listing by typing LIST "DSKn.FILENAME". Don't use the same filename as the program or the listing can overwrite the program.

Then load and RUN COLISTER. At the first prompt, enter the DSK number and the filename used above. For the second prompt, enter the print device name. This can be either PIO, RS232, or DSKn.FILENAME2. Again, use a different filename if reading from and writing to the same drive.

If you don't want the blank line between program lines, just change the FOR statement in Line 8 to read: FOR I=0 TO L-1. The TAB setting in this line can also be changed or eliminated, as desired. If for some reason you want a listing with a different width, say 40 columns for those "other" owners, just change the value of C in Line 5. (The reason it's in Line 5, and being constantly updated, is because that's where the room was. Another Tinygram "trick".)

If you prepare program listings for newsletters, I think you'll find this program useful. The algorithm used to detect a new line number is relatively unsophisticated. It hasn't failed me yet, but I'm sure that someone, someday will write code that will trip it up. For that reason it is well to always look over the output to be sure that lines have not been split or joined when they should not have been.

```
1 !  *** COLISTER ***
 A Tinygram by Ed Machonis
   QB-99ers, Bayside, NY

2 PRINT :"1st LIST your prog
ram to diskThen RUN COLISTER"

3 PRINT :;;"INPUT FILENAME?
ex:DSKn.LIST" :: INPUT F$ ::
 INPUT "OUTPUT FILENAME? ex:
 PIO or DSKn.LIST28 :";P$

4 OPEN #1:F$,INPUT :: OPEN #
3:P$,OUTPUT :: ON ERROR 10

5 C=28 :: LINPUT #1:A$ :: IF
 LEN(A$)<80 THEN 8

6 LINPUT #1:B$ :: IF VAL(SEG
$(A$,1,POS(A$," ",2)))<VAL(S
EG$(B$,1,POS(B$," ",2)))THEN
 F=1 :: GOTO 8

7 A$=A$&B$ :: IF LEN(B$)>=80
 THEN 6

8 A=LEN(A$):: L=A/C+.99 :: F
OR I=0 TO L :: PRINT #3:TAB(
6);SEG$(A$,1+I*C,C):: NEXT I
 :: IF EOF(1)AND F=0 THEN CL
OSE #1 :: CLOSE #3 :: END

9 IF F=1 THEN F=0 :: A$="" :
: GOTO 7 ELSE 5

10 ON ERROR 10 :: RETURN 7
```

## EDITOR

by Roger Feinauer
OH-MI-TI & NEW HORIZONS

First of all there was a meeting between OH-MI-TI and NEW HORIZONS to discuss how we can be more cooperative. One of the first subjects was the newsletter. At this meeting it was decided that the subject matter should get back to basics. This was agreed upon by both clubs. And that we should strive to get more menbers to write articles for or newsletter. We felt that there was more users of software then programers. And that it would be nice to read articles from persons experiences with some software that they use. If any of you out there have been thinking of writing an article but thought, "I can't do this". Well think again you can. Let us know about what you are doing with your computer.

The new deadline that shall be written in granite on both clubs archways that all articles shall be in the hands of the newsletter staff no latter then 14 calender days before the OH-MI-TI's meeting. As their meeting is first this makes good sense. It is also prefered that the article be either up-loaded to or BBS see number on front page or mailed to use on disk if you have no modem. Although hand written articles are welcome if you have no printer. In all cases please include your phone number if there are any questions thankyou.

The clubs have gained another member to the newsletter staff. Pat Hunsinger will be incharge of picking up the newsletters for OH-MI-TI from the printer and mail them out to the members of that club. Welcome aboard Pat and I know we all thank you.

We talked a little of what could be done about making more members aware of whats availible in the clubs, lending library, and also the newsletter library from other clubs. but this should be discussed at the meetings with most of the members present.

DEMO'S this month at NEW HORIZONS

Christ Dewey MBX system

## TELCO

A REVIEW
BY
Bob Peters

As a died in the wool user of 4A/TALK, I thought I had the easiest term program with the best features to use. I had used Mass Transfer on occasion but was not happy with it as my machine locked up on occasions like right in the middle of a transfer. Fast Term had to many key strokes to remember.

I was offered a copy of Telco 1.0. The guy that offered it to me bragged that it was as good as ProComm for the IBM. Well you know he was right.

Telco requires a disk system and memory expansion and will work on the 4A and 9640 running in GPL. The program loads with Extended Basic, E/A, TI-WRITER, Mini Memory or a SuperCart.

This program is loaded into memory and all of the functions are loaded as you need them. The program windows over the current screen that you are using so that you know what you are doing at all times.

It includes an autodialer that handles 99 phone numbers with all of the default settings for baud rate, parity,data and stop bits and terminal width included in the phone listing. The dialer will automatically dial 15 numbers determined by the user.

continued next page

You can create your own macros and call them up at any time. It has terminal support for ANSI, D410 and ADM3A. It will support ASCII or XMODEM transfers, including support for line by line transfers.

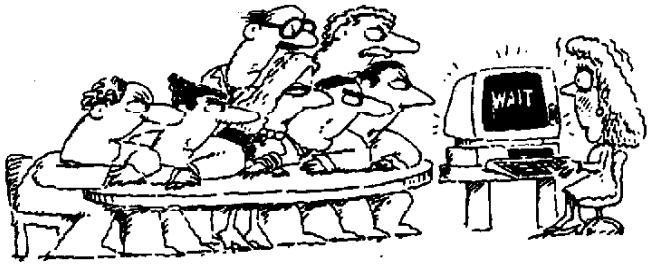
The documentation is on the disk and is 19 pages long. Use the formatter to do the printing. The docs are well written and easy to follow. A rarity for most programs.

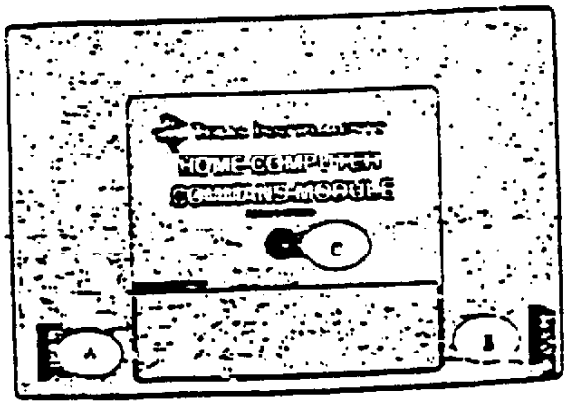
The program was written by:

Charles Earl
34 McLeod Street
Ottawa, Ontario
Canada K2P 0Z5

Charles is asking $20 (Canadian) for the program and it is worth every penny of it.

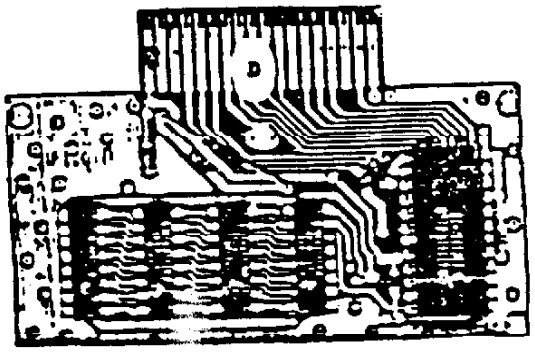
In my opinion this program sets the standards Terminal programs in the 4A world. This program is rated straight A by MICROpendium and deserves it.




# How to Clean Modules

From PUNN - Portland, Oregon.



Dirty contacts can screw-up any electrical device and the 4A is not an exception. The only place you are fairly likely to run into this problem is in using command modules. Both the module contacts and the port itself can become dirty but cleaning the port itself is a big job as you have to disassemble the console the good news is that cleaning the cartridge will almost always suffice and can be done quickly without any special tools or cleaners. All you need is a regular screwdriver, some sort of rag, a standard pencil eraser, and in some cases a medium phillips screwdriver.

Remove the screw from "C" if there is one. Then pry the clips in slots "A" and "B" outward to pop open the cartridge. If there is a clip in "C" pry it back after "A" and "B" are loose. If it should bend off, don't worry, it won't affect the performance of your module.

The module board can now be removed. Do this carefully and note how the spring-loaded "door" is assembled if there is one so that you can put it back together if it pops out. Once you have the board removed take your rag (a kleenex will work but a cloth is better) and rub off any residue from the contacts "D". Remember to do the contacts on each if the particular module has them. Once the worst is removed take any soft pencil eraser and rub the contact gently to remove any remaing contaminant. When you have finished reassemble the cartridge and you are back in business. Some symtoms of a dirty contact are the console locking-up, strange errors and display on your screen and a syntax error. Don't jump to clean a cartridge on your first error though, it could be a number of other things. But if you find that you have a continuing problem cleaning the contacts is quick and may correct what was wrong.

TIPS FROM THE TIGERCUB

#20



TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213



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 cassette, packing and postage, or $3.00 for diskette, PPH) Some users groups charge their members that much for public domain programs! I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

Come on now, folks, don't you support your local schools? And don't you support those who support you? There are thousands of schools which have TI-99/4A computers in the classroom, usually without disk drive and without Extended Basic. They could use some educational programs in Basic on cassette. They could probably use some of the public domain software in your library. Maybe they could use some of the educational programs I sell for just $3 (and I authorize schools to copy them for use within the school). There is probably such a school in your area - is your group supporting it? In the last Tips, I asked the members of 101 users groups to give me the addresses of schools that had TIs, so I could send them a free catalog. How many addresses did I get? Zero to the power of zero times zero!

More on the pestiferous asterisk bug in TI-Writer. Dr. Guy-Stefan Rosano has confirmed and explained it. If you are printing out of the Formatter mode and your text contains an asterisk followed by two or more numeric digits - the asterisk and two digits will disappear! For instance, A*256 becomes A6, and I've noticed that A6 in programs published in several newsletters recently.

The TI-Writer program misinterprets the asterisk and two digits as an instruction to input data from a "value file" (see Alternate Input on p. 111 of the manual).

The solution to this bug is to type two asterisks followed by two dummy digits, then the actual digits. For instance, instead of A*256 type A**25256. Trouble is, the bug usually shows up in a program which has been LISTed to disk and then MERGEd into TI-Writer, and is usually not noticed. The solution? Run the program through my 28-Column Converter (see Tips #18!).

Dr. Rosano informs me that there is an even worse bug in the Transliterate command coding, erratic and sometimes destructive. It is triggered by certain sequences of characters, but these have not been documented.

Dr. Rosano says that he does not use transliteration.

I would suggest that you also avoid the use of the & and @. The & will only underline a single word, unless you tie words together with the ^ sign. If you tie words together, the Fill and Adjust will leave gaping blanks in your lines and if you tie too many together the line will extend beyond the right margin! Also, the underlining is a broken line. It is better to use the escape codes CTRL U, FCTN R, CTRL U, SHIFT -,CTRL U, SHIFT A, CTRL U, which will give a solid underline until you turn it off with CTRL U, FCTN R, CTRL U, SHIFT -, CTRL U, SHIFT 8, CTRL U.

The @ is handy to emphasize a single word, but if you want to double-strike a whole sentence or paragraph it is better to use the escape code CTRL U, FCTN R, CTRL U, SHIFT 6, and turn it off again with CTRL U, FCTN R, CTRL U, SHIFT H.

The period bug is another killer - the Formatter thinks that any line which begins with a period is a formatter command, and deletes the whole line: if your text contains a decimal value such as .11 and the wraparound puts it at the beginning of a line, the line disappears! There are two ways around this - put a 0 in front of all your decimals, as 0.11, or transliterate all your periods.

In all, the TI-Writer formatter is a temperamental and unpredictable piece of software, prone to unwanted line feeds and unexpected paper-wasting form feeds. I like to use it to right-justify text back to the disk, but from then on I prefer to print it out of the editor mode, or out of my own program.

Designing downloadable characters for the Gemini printer (see page 115 of the manual) is a bit tricky because it is hard to visualize how the expanded pattern will appear in print. The following program will enable you to experiment with designs, dump them directly to the printer for viewing, then save them as a file. When you later dump this file into printer RAM for use, you must activate the download characters with the escape code - CHR$(27);CHR$(38);CHR$(1).

```
100 CALL CLEAR :: CALL SCREE
N(4):: CALL CHAR(128,"FF8181
8181818181FF",129,RPT$("F",16)
):: CALL COLOR(13,2,16)
110 FOR R=9 TO 15 :: CALL HC
HAR(R,11,128,9):: NEXT R
120 X=1 :: FOR R=9 TO 15 ::
DISPLAY AT(R,7)SIZE(2):STR$(
X):: X=X*2 :: NEXT R :: FOR
C=9 TO 17 :: DISPLAY AT(8,C)
SIZE(1):STR$(C-8):: NEXT C
130 DISPLAY AT(2,9):"TIGERCU
B'S" :: DISPLAY AT(4,1):"GEM
INI CHARACTER DOWNLOADER" :p
rogramed by Jim Peterson fo
r the Public Domain
140 DISPLAY AT(17,1):" Move
cursor with W,E,A,S,D,";":"1,2
 and C keys. Toggle on":"and
 off with 0 key. Press":"Ent
er when finished.":: :"Pres
```

```
$ any key"
150 CALL KEY(0,K,ST):: IF ST
=0 THEN 150 :: CALL HCHAR(17
,1,32,224)
160 R=9 :: C=11 :: CH=128
170 CALL HCHAR(R,C,32):: CAL
L HCHAR(R,C,CH):: FOR D=1 TO
 10 :: NEXT D :: CALL KEY(3,
K,ST):: IF ST=0 THEN 170
180 ON POS("WWEKDCIZS"&CHR$(
13),CHR$(K),1)+1 GOTO 170,31
0,230,220,210,200,190,260,25
0,240,330
190 K=K+1
200 C=C+1 :: GOTO 270
210 C=C+1
220 K=R-1 :: GOTO 270
230 K=R-1
240 C=C-1 :: GOTO 270
250 C=C-1
260 K=K+1
270 R=R-(R(9)+(R)15):: C=C-(
C(11)+(C)19):: IF CH=128 THE
N 300 :: CALL GCHAR(R,C-1,GX
):: CALL GCHAR(R,C+1,GZ):: I
F (GZ<>129)+(GZ<>129)THEN 30
0
280 DISPLAY AT(22,1):"You ca
n't have two in a row":"hori
zontally!" :: FOR D=1 TO 50
:: NEXT D :: DISPLAY AT(22,1
):" ":" "
290 CH=CH-1
300 CALL HCHAR(R,C,CH):: GOT
O 170
310 CH=CH+1+(CH=129)*2 :: IF
 CH=128 THEN 320 :: CALL GCH
AR(R,C-1,GX):: CALL GCHAR(R,
C+1,GZ):: IF (GX<>129)+(GZ<>
129)THEN 320 ELSE 280
320 CALL HCHAR(R,C,CH):: GOT
O 170
330 FOR C=11 TO 19 :: I=1 ::
 FOR H=9 TO 15 :: CALL GCHAR
(R,C,G)
340 IF G=129 THEN A=A+I
350 I=I*2 :: NEXT R
360 FOR J=1 TO LEN(STR$(A)):
: CALL VCHAR(15+J,C,ASC(SEG$
(STR$(A),J,1))):: NEXT J ::
A$=A$&CHR$(A):: A=0 :: NEXT
C :: A=0
370 DISPLAY AT(20,1):"Print?
 Y/N Y" :: ACCEPT AT(20,12)V
ALIDATE("YN")SIZE(-1):Q$ ::
IF Q$="N" THEN 470
380 IF F=1 THEN 390 :: F=1 :
: DISPLAY AT(20,1):"Printer
name?" :: ACCEPT AT(20,15):P
$ :: OPEN #1:P$
390 DISPLAY AT(20,1):"ASCII
to redefine?" :: ACCEPT AT(2
0,20)VALIDATE(DIGIT)SIZE(3):
CH
400 DISPLAY AT(20,1):"Descen
der (0 or 1)? 0" :: ACCEPT A
T(20,21)VALIDATE("01")SIZE(-
1):D$ :: D=VAL(D$)
410 A$=CHR$(27)&CHR$(42)&CHR
$(1)&CHR$(CH)&CHR$(D)&A$
420 PRINT #1:A$ :: PRINT #1:
CHR$(27);CHR$(36);CHR$(1);
430 PRINT #1:KPT$(CHR$(CH),7
2):: PRINT #1:CHR$(14);KPT$(
CHR$(CH),36)
440 DISPLAY AT(20,1):"Save (
Y/N)? Y" :: ACCEPT AT(20,13)
VALIDATE("YN")SIZE(-1):Q$ ::
 IF Q$="N" THEN 470
450 IF F3=1 THEN 460 :: F3=1
 :: DISPLAY AT(20,1):"Filena
me? DSK." :: ACCEPT AT(20,14)
:F$ :: OPEN #2:"DSK."&F$
460 PRINT #2:A$
470 A$="" :: DISPLAY AT(20,1
):"Another (Y/N)? Y" :: ACCE
PT AT(20,16)VALIDATE("YN")SI
ZE(-1):Q$ :: IF Q$="Y" THEN
100
480 CLOSE #1 :: CLOSE #2 ::
END
```

Micropendium ran a contest to improve on a brief ingenious organ program. The winner was Michael Christians, who wrote a superb program. You'll have to buy the January issue of the magazine to get it (you should be subscribing, anyhow!). I didn't enter the contest, of course, and my version is not nearly as good, but have fun -

```
90 CALL CLEAR
95 PRINT TAB(5):"MICROPENDIU
M ORGAN":::::::"Play
 Bass with left hand":"on
 left side of keyboard,":"
melody on the right":::
100 REM - MICROPENDIUM ORGAN
 modified by Jim Peterson
110 OPTION BASE 0
120 DIM NOTE(20)
130 FOR A=0 TO 20
140 READ NOTE(A)
150 NEXT A
160 DATA 40000,220,247,262,2
94,330,349,392,440,494,523,5
87,659,698,784,880,988,1047,
1175,1319,1397
170 CALL KEY(1,K1,S)
180 CALL KEY(2,K2,S)
190 CALL SOUND(-1000,NOTE(K2
+1),0,NOTE(K2+1)*1.01,5,NOTE
(K1+1)*3.75-ABS(K1+1=0)*1100
00,30,-4,0+ABS(K1+1=0)*30)
200 GOTO 170
```

A sprite routine that doesn't do anything but look pretty. I call it Patches.

```
50 CALL CLEAR :: CALL SCREEN
(5)
100 A$=RPT$("AA55",16):: B$=
RPT$("F",64):: CALL MAGNIFY(
4):: RANDOMIZE
110 FOR CH=40 TO 136 STEP 8
:: CALL CHAR(CH,A$,CH+4,B$):
: NEXT CH
120 C=2 :: S=40 :: K=1 :: FO
R T=1 TO 24 STEP 2 :: COL=15
-INT(RND*5) :: CALL SPRITE(#T,S
,C,R,COL,#T+1,S+4,C+1,R,COL)
:: S=S+8 :: C=C+1 :: R=R+15
:: NEXT T
140 FOR T=1 TO 50 :: CALL CO
LOR(#INT(24*RND+1),INT(11*RN
D+1)):: NEXT T :: GOTO 120
```

This is one that I fancied up, based on a sprite routine written by a youngster named Andrew Sorenson, published in the Sydney Newsdigest free Australia.

```
100 ! WILL O' WISP
      by Jim Peterson
       based on
       Andrew Sorensen's
       sprite routine
110 CALL CLEAR :: CALL SCREE
N(2):: CH=48
120 FOR CH=48 TO 63 :: FOR L
=1 TO 4 :: RANDOMIZE :: I=IN
T(16*RND+1)*2-1 :: I$=SEG$("
0018243C423A6A7EB199A5BDC3DB
E7FF",I,2):: B$=B$&I$ :: C$=
I$&C$ :: NEXT L :: CALL CHAR
(CH,B$&C$):: B$,C$="" :: NEX
T CH
130 FOR N=1 TO 28 :: CALL SP
RITE(#N,CH,INT(148*RND+3),8*N
+20,120,5,0):: NEXT N :: IF
CH=64 THEN CH=48 :: T=T+1+(T
=2)*2 :: CALL MAGNIFY(T)
140 I=(INT(3*RND)-1)*4 :: Y=
(INT(3*RND)-1)*4
150 IF INT(10*RND+10)<>10 TH
EN 170
160 CH=CH+1 :: GOTO 130
170 FOR N=1 TO 28 :: CALL MO
TION(#N,-Y*20,I*20):: NEXT N
 :: GOTO 140
```

Here are a few more enhancements to my Memu Loader, published in Tips #15. Delete line 150 and add

```
101 OPTION BASE 1 :: DIM P$(
127):: ON WARNING NEXT :: G
OTO 110
105 B,A,A$,B,C,D$,F,I,J,K
,KD,KK,N$,NN,P$,PS$(),Q$,S,S
T,T$(),TT,VT,X
CALL INIT :: CALL LOAD :: CA
LL LINK :: CALL PEEK :: CALL
 KEY :: CALL SCREEN :: CALL
COLOR :: CALL CLEAR :: CALL
VCHAR :: CALL SOUND :: !HP-
```

The pre-scan will speed up run time by a worthwhile amount. The warning default will prevent a screen scroll on an erroneous Enter.

When you're finished printing strip labels, cut off the strip BEHIND the platen and roll it FORWARD! You'll waste a few labels that way, but if you try to roll backwards and get a gummy label stuck in the works, you've got trouble!

MEMORY FULL

Jim Peterson

the Tigercub