TI-D-BITS

APRIL

1988

PHILADELPHIA AREA USERS GROUP TI-99/4A

!GENEVE!

WARNING

MYARC

HORIZON

RAVE

DISK-ONLY

INSCEBOT

ASGARD

TEXAMENTS

GENIAL

TI'ERS AND GEVEVE'ERS MUST PULL TOGETHER FOR A LONG AND SUCCESSFUL FUTURE SUPPORT OUR PROGRAMMERS AND 3RD PARTY SUPPLIERS.

THE PHILADELPHIA AREA TI-99/4A USERS' GROUP (APR. '88)

The Philadelphia Area TI-99/4A Users' Group meets twice a month. On the first Saturday of any given month, we meet at the Bucks County Youth Development Center, (YDC, which is next to Neshaminy Mall), Administration Building, beginning at 10:00 am. On the third Saturday of each month, we meet at LaSalle University, 20th Olney, in room H-329 located in the Science Building. Membership to The Philadelphia Area TI-99/4A Users' Group is available to all. We invite anyone that is interested in the TI-99/4A to visit us. Stop in and see what is available to you for your TI and how membership can benefit you!

Current executive board consists of:

PRESIDENT	**Don Arsenault**	**215-368-0446**
VICE PRESIDENT	**Allan Silversteen.**	**215-885-7910**
SECRETARY	**Mark Mannop**	**609-365-1776**
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	Ted Cheney	
	Tim Coyne	
	Carlo Angelico	
EQUIPMENT	**Rice Hall**	

REMEMBER to be considerate when calling any of the above people. Limit your calls to the **early** evening hours. (6pm to 9pm)

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Classified ads are printed in blocks. A block consists of 3 lines, 55 characters wide, or any increment of 3 lines. Classified advertising is accepted from members at NO CHARGE for a one block ad, per issue. Additional ads from members may be placed at cost of $1.00 per block. Non-members may place classified ads at a cost of $2.00 per block. All advertisements MUST be paid for in advance.

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Full page $15.00

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The editor of TI-d-Bits or the executive board of The Philadelphia area TI-99/4a Users' Group reserve the right to reject any material submitted for publication for any reasons.

The Philadelphia Area TI-99/4A Users' Group's program library is available to all active members at **NO CHARGE** for copying to your disk. A charge of $2.00 per disk is made for club supplied disks for members. Non members may obtain copies of the library for a fee of $5.00 per disk. A catalog of the library's contents is given to all new members upon request and updates will appear in this publication from time to time. To obtain material from the library, contact the librarian for the best procedure to obtain your requests.

President's Column

By Don Arsenault

I want to start out by thanking all of our members who helped out at our table at the PACS Computer Festival, and also to the members who attended and took advantage of the library services.

About 50 new disks of programs have been added to the library since last month and more are being added daily. Among these are the newest terminal emulator program for the 4A and 9640, TELCO, and PICASSO, which is a new graphics program from Australia. We are now in the process of re-cataloging and categorizing the library, and an updated listing will be available shortly. Remember that the entire library, with all the latest additions, is always available at the YDC meetings for you to get copies, either on your own diskettes or on club supplied diskettes.

It has recently been brought to my attention that the printer which shows up at many of our meetings does not belong to the club. Rather, it has been generously loaned for use by Rice Hall, our equipment manager. I personally feel that the club should have it's own printer for use at our functions, and I would like to hear from you regarding your feelings on this subject. If anyone has an old printer that they would be willing to donate to the club, we would be very grateful. The printer does not have to be working, as we have enough hardware expertise in our ranks to be able to repair it.

In the same vein, the RS232 card that drives the printer at our meetings does not belong to the club either. This has also been loaned to us by Rice Hall. So, the same thing goes for the RS232 card as for the printer, namely, if you have, or know of anyone who has an extra card, it will be gratefully accepted. If we do not get these as a donation we should be willing to buy the items. So if you have or know someone who has these items for sale at a reasonable (preferably cheap!) price, let us know.

The TICOFF at Roselle Park High School on March 26th was a very good TI show. There were not as many TI vendors as previous years, but the major vendors such as Asgard, Genial, Myarc, Rave 99, etc., were represented. Barry Traver gave a seminar on communications to a standing room only crowd and Lou Phillips gave a demonstration of the 9640 in the school auditorium which was very well attended.

Some new and interesting programs were available at the show, Calendar Maker-99 from Asgard software makes calendars with legends and graphics on the individual days, and it also allows a large picture from the Picasso program to be put at the top along with a message of your choosing at the bottom of the page. We will be demonstrating this program at a future meeting, as soon as we get proficient with it. Another super program there was PC-Transfer from Genial Software. This program allows you to read and write ASCII file from a PC, and also allows you to initialize a disk in IBM PC format. (The formatting of a PC disk did not work on my 9640 system, the whole system locked up when this was chosen.) This column is being written on my Sperry PC at work, and I transported it home and converted it to TI format with PC Transfer and then formatted it with MYWORD on the 9640. Now I can spend my lunch hour writing columns for this newsletter instead of going to the cafeteria.

Some other interesting programs at TICOFF were Graphics expander, which allows you to expand, invert, and rotate fonts and graphics so you can make vertical banners and use some smaller fonts in banners by expanding them to a size that is usable in banners. Picasso, which is a graphics program from Australia, was available as well as TI Artist Slide Show. There were also new fonts and graphics disks available for TI-Artist and CS6D .

Another thing that I hope to do with the PC-Transfer program is to port the output of the 2-column print program, which we use for the newsletter, into a file which is then converted to PC ASCII format. This file should then be able to be printed out on a laser printer at work, resulting in the newsletter being in near letter quality. More on this later, I'm hoping that this will be successful.

Well I guess that I've rambled along enough, so that's all till next month.

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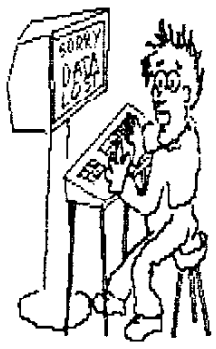

THE PRINTERS APPRENTICE

(Converting Fonts)

By Rick Felzien West Jax 99'ers

March 1988

The Printer's Apprentice has many fine fonts and they are mostly near letter quality, but I personally wanted to do some decorative lettering without having to load in the TI-Artist program just for that purpose. So here is how to convert a font from Artist to TPA.

The first thing to do is load up the TI-Artist Enhancements program and then type all the letters of the font to the screen, leaving a little space between. For this practice session, let's use the script font or font 19 on the fontdisks I placed in the library. As I said, type the letters to the screen and then go to the main Artist program and save the screen as a picture.

Now we can load up the TPA disk and select Picture Editor from the main menu. Load in your picture saved from Artist and don't forget the "_P" suffix. When you enter the picture editor you will get a blank screen with a flashing cross cursor. Press CTRL(8) to get the Load/Save option menu which looks like this:

Filename Dir Load Save eXit

Select F)ilename and type in "DSKn.filename" and <ENTER>, then select L)oad and <ENTER>. This will load the file and place the letters on the screen. Now use CTRL(=), which puts you in Klipper mode, which is similar to the clipboard mode in Graphx. Here you are prompted for a filename which should be the name that you want to give to your font. You will be asked "Create a new fontfile?(Y/N), at which point you would respond with a "Y". After the disk file is created you are placed back in the picture editor and are ready to start saving your letters to the fontfile.

First place the cursor at the upper left corner of your letter, the first being "A", and press FCTN(5) to place the marker at the cursor position and then move the cursor to a clear area of the screen and press <ENTER>. You will then see a prompt near the cursor for Char. Here you would enter the letter you are saving (in this case "A"), then hit <ENTER> again. You will now be prompted W or X, which means Write the letter or eXit without doing anything. Use W and the character will be saved to the fontfile. Do this for all the characters that you want to save to the fontfile and then exit the Picture Editor and load in the Character Editor.

When you enter the Character Editor you will see the following menu:

Edit Disk Print Convert Setup Help eXit

First select S)etup and enter S for single height letters, then select D)isk, which will present this menu:

Filename Dir eXit

Enter F)ilename, and then enter the filename that you saved the font with, and then eXit to the main menu. You can now enter E)dit, which will place the cursor in the character editing area of the screen, which you will notice has a column of numbers at the left edge. These are the row numbers which aid in determining the height of the font, etc. You will also notice an active column counter in the upper center of the screen which keeps track of the cursor position column. Now you can begin editing your font. There are several things that you must do to set up the sizing of the characters of your font.

First use CTRL(9) to get to the menu on the right of the screen, which looks like this:

ASCII CHAR ASCII CODE CHAR WIDTH

Read Write Exit

At the first prompt enter "A", and then just hit <ENTER> for Code and Width for now. Enter "R" for read and the character will be displayed next to the column counter. There may be some garbage to the right of the character, as the clipper saves a 24x24 pixel area and may have saved a part of the next letter, but do not worry, this can be corrected.

Now press CTRL(R) to copy the character to the editing area and then check to see if the top of the character is on row 1 and the left edge is in column 1. If not, delete rows and columns until it is in the proper place. You will now notice that the bottom of the letter is in row 13, so this means the font will be 13 rows high. Now if there is garbage at the right of your character, move the cursor to the left column of the garbage area and delete columns until it is gone.

Now move the cursor to the rightmost pixels of the character, and in this case you will see that it is 14 on the column counter, and use CTRL(9) again and leave the "A" at the first prompt, and at the second leave the character code. At the third prompt enter the width, which in this case is 14. Now, at the last prompt, enter "W" for write and it will write the changes and the value for the width, etc. for that character to the font file.

Now load in the lower case "a" and copy it to the character editor section with CTRL(R), and make sure the

lowest row of pixels is at row 13, like the capitol "A" was. Now check where the top row of pixels is, in this case it should be 7, which is the LC Capline, or height to which the lower case characters rise. Since the font height is 13, the Baseline, or line on which the letters sit, is 14. Now you can edit this letter and save it as you did the last one.

Now we must set up font height, so use CTRL(=) to enter font height control menu. Enter 13 for font height, 14 for baseline, and 7 for LC capline. When you hit <ENTER> at the last prompt, you will return to the editing area. When you save the next letter, then height information will be written to the disk.

After you have edited all of the characters of your fontfile, select Print from the main menu, and select W)riteindex. This writes a listing of the width and height values to the file. If this is not done after each editing operation, the spacing may not be right when you use the font for printing. If your saved file didn't contain characters such as colon, semi-colon, etc., you can create them and save them to the file while doing the editing process, and by all means, create a space character for each font, sized according to the character sizes.

After you have created and saved your fontfile, you will naturally want to print it out to see how it looks, so now you can exit the Character Editor and load in the TPA Formatter.

Once you have loaded in the Formatter, select V)ars from the main menu, and then enter (in my case "6" for printer type, yours may be different). Enter defaults for the selections, except for space char., which would be approx. 10, and 460 for the right margin.

Now enter the Jotter and Edit and enter all the letters in your font, and SaveF to the disk. At the main menu you will now see at the bottom of the screen, the following:

Printer PIO.CR Txtfile DSK1.TEXT

Fntfile DSK1.TYPER

If you have 2 drives you will want to change to the following: (the printer default is OK for most printers, if not change it to match your printer specs). Hit "B" for buffer, and change to DSK2.SCRIPT for Fntfile. Then hit "6" for Go, and the formatter will print your fontfile to the printer.

If you want to create an Over/Under strike (high resolution) file from your fontfile, you can do so by entering the Character Editor, and selecting C)onvert from the main menu, and then you will be prompted for a filename for this file. (Mike McCann uses "UU" before the names to be able to distinguish the Over/Under strike fonts.) I reccommend that you do the same to avoid confusion. After naming the file the program will automatically create an Over/Under strike font from the Single/Strike font that you created before.

I hope that this article not only helped you to create a new font for the TPA program, but helped also to let you become a little familiar with this powerful publishing program.

Next month I hope to go into actually planning a page, creating the files, and formatting the files, and then using the Scheduler to print a nice artisitc page of text and graphics.

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VIDEOFLEX
By Dave Miller
Seattle, Washington
From KC 99'er Connection
April, 1988

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You've probably read magazine artirles about recording the output of your computer on your video recorder. It is **NOW POSSIBLE** to not only record your computer output, but **COMBINE** both appliances into a powerful presentation **GRAPHICS ENVIRONMENT.**

Whether your need is simply to make professional looking home video movies or broadcast quality productions..the solution to your creative problems has arrived..."**VIDEOFLEX**".

It is a card designed to work with the GENEVE 9640 by MYARC, Inc., computer, and allows incredibly powerful **GRAPHICS** or **ANIMATION** to be combined with incoming video from another VCR, your television, a second computer, or any source of composite video. The **HIGH RESOLUTION GRAPHICS** routines are **SUPERIMPOSED** or **OVERLAYED** on top of the incoming signal.

To give you an **EXAMPLE:** Television broadcasts are filled with graphics or titles **SUPERIMPOSED OVER ACTION. VIDEOFLEX** allows you to do similar effects at home or in a studio environment. A complete specification list is attached. Once your VCR and Computer (9640) are connected, you bring a totally new graphics world to both devices. The power of **PROFESSIONAL PRESENTATION GRAPHICS**

is now **AFFORDABLE** for **SCHOOLS, INDUSTRIAL TRAINING, HOME VIDEO MOVIES,** and **SMALL VIDEO PRODUCTION COMPANIES.** Studies by Sony and other major video manufacturers have shown that video learning significantly reduces the time required to teach skills because actual events can be shown in **HIGH SPEED.** The event can be repeated as often as necessary for better retention.

VIDEOFLEX offers another tool for creating graphic images. The **ANALOG SIGNAL** coming from your television or VCR can be converted by a digitize function to store images on your computer, one frame at a time. The resolution of such images depends on the amount of memory available for storage. It REQUIRES 2 MEGABYTES OF MEMORY PER FRAME TO STORE A BROADCAST QUALITY IMAGE in FULL COLOR, while a BLACK AND WHITE digitized image in low resulution can be stored within 48K or less. We are currently researching what the public wants in this area, and hardware requirements needed to work with the V9938 VIDEO DISPLAY PROCESSOR IN THE GENEVE 9640. Input from you will decide the final direction this effort will take. Powerful VIDEOFLEX software is being incorporated into the product to accomodate the digitize process which is partially used by the chip itself. It will require additional circuitry to maintain a high quality image that is properly synchronized to the computer system and VIDEOFLEX CARD.

Once the digitized images are within memory, VIDEOFLEX can manipulate them through PAINTBOX FUNCTIONS for ANIMATION EFFECTS or NEW GRAPHIC SCENES. An interesting effect is combining real image frames of video with computer designed screens to deliver a surreal effect to the viewer. By now it should be obvious to you that the creative possibilities are endless.

Following is a partial list of VIDEOFLEX functions that will be accessed through the use of pull-down windows and a Geneve 9640 Mouse.

CHARACTER GENERATOR:

-Load Font (Foreground and screen color select)
-Type (complete justification options)
-Display available fonts (Half Screen Window Bottom)
-Save Page (Numerical Sequence)
-Page Auto Sequence (speed control)
-Vertical Scroll Page or Linked Pages
(Half or Full screen)
-Horizontal Scroll Page or Pages(Single Line Only)
-Input Graphics or Clip-Art(Directory)
-Flash(Use CNTRL-F and arrow keys to highlight area to be used)
-Fade (Entire Screen or Individual Lines)
-Shrink (Entire Page Only)
-Flip (Selective Area by Screen)
-Test Patterns

Note Full integration on screen (static and movable characters must exist on screen simultaneously)

SPECIAL EFFECTS GENERATOR

-Black Screen
-Fade (Screen image disappears slowly allowing external composite video to show through. Toggle function so process can be reversed..external video slowly replaced by graphics image.)
-Wipes including keyhole effect (In Wipes solid color moves across screen which must be transparent. In Keyhole wipe circle must be transparent with solid color fill doing the motion.)
-Dissolve (Characters or graphics slowly fade out while new image fades in at the same time)
-Special Kaleidiscope and Motion Graphics for integration with live picture or used to frame external image.
-Screen Disintegration (Characters or image breaks into pieces, then flies away)
-Magnify/Shrink
-Rainbow colors or marquee effect inside hollow letters (motion)
-3D Effect
-Shadow Image
-Picture Frame
-Live Inserts utilizing mouse or keys to manipulate image movement.
-Select Page from Character Generator
-Image Flip
-Image Rotate

GRAPHICS INTERFACE:

-Drawing Function
-Mydraw Input
-Generic Graphics Input
-MYWORD Connection - combine with graphics images
-Digitize Function
-RS232 Input Graphics Tablet
-Mouse Input Graphics Tablet
-Clipart Storage C1 Series files
-Instance Storage S1 Series files
All pictures mustusenames for files
-Sound Input from Geneve 9640 audio generator
-Animation Function (sequenced frames)

HARDWARE SPECIFICATIONS

-High Resolution RGB converted to broadcast quality NTSC Composite Video
-256 Colors per screen in 512x212 resolution
-16 Colors per screen in 512x424 resolution
-BNC or RCA connectors for input and output
-Video intensity for overlay fully controlled by pots
-Compatible with external digitizer for CAD
-Full engineering specs available upon request

-Ready for installation in rack-mount switcher system
-Designed by VIDEO PROFESSIONALS

EXPANSION INTO THE 994A/GENEVE 9640/PC COMPATIBLE/ VIDEOFLEX WORLD..AT IT'S FINEST!!

Thanks for the inquiry,
Barb Wiederhold
Queen Anne Computer Shoppe
Specializing in the TI994, Myarc, Inc. GENEVE 9640

Miller Communications V.X.S. VideoFlex Xpansion System, designed by Phil Jordan
6102 Roosevelt Way N. E.,
Seattle, Washington, 98115
Ph: (206)522-6558, (206)622-9400
BBS: (206)361-0895 at 300/1200 Baud 24hrs per day.

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****
GRAND RAM
EXPANSION CARD
****

By now many TI users have either heard from their user groups or gotten information in the mail regarding the new "Grand Ram," a product from DataBioTics. Information provided by the Los Angeles based company together with files found on the General Electric Information Network offer an interesting picture of the new product.

Grand Ram is a peripheral expansion box card for the TI99/4A which is advertised as having "nearly limitless growth potential." First, it is a ramdisk. It is capable of emulating a single double-sided, double-density drive, or two double-sided, single-density drives, or four single-sided, single-density drives, which enables you to use it for file management or to enhance disk copy operations. As a ramdisk, it has pluggable memory chips, which may be expanded as the buyer is able. And, it is battery backed.

Second, the ram may be used as a print spooler - more commonly known as a print buffer.

Next, there is also an optional real-time clock.

There is also an I/O (input/output) expansion port, which DataBioTics indicates will interface with future products. Technical specifications released August 14 of 1987 say that one expansion port is a cartridge emulator port, for support of a future add-on board which will emulate 99% of the cartridges in existence. The other port is a device expansion port, to implement multiple channel music boards, digitizing equipment, home control, and so on. (Should these devices not materialize, they are available from other sources, and DataBioTics includes with the technical specs the information needed for the appropriate hardware projects.)

Promotional material for the Grand Ram indicates that it is accessible from any language. This was a problem with some other products (not from DataBioTics) such as the Foundation 80 Column Card, which was advertised as being accesible from BASIC, and then wound up being useless for anything but the Z80A card.

The Grand Ram comes with source code, disk manager and terminal emulator software. The cost to build your own is as low as $100.00 ($99.95) for the 64K version, up to $195.98 for the 512K kit. If you order it assembled, the 512K is only $229.95.

More information on the Grand Ram is available from DataBioTics, at 1-800-255-2985.

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****
MADDENING GAME
****

Try this little five line game. Chances are, it will try you. Use a joystick. Reprinted from the Chicago TImes, written by one of their members, but not named.

```
110 DEF F=(RND-.5)20 :: CALL
 CLEAR :: CALL SPRITE(#1,48,
5,192,1,#2,42,7,96,128,R,R)
: J=7
120 CALL JOYST(1,X,Y):: GOSU
B 140 :: U=U+X :: V=V+Y :: C
ALL MOTION(#1,-V,U):: GOSUB
140 :: S=S+1 :: DISPLAY AT(2
4,2):S :: I=I+1 :: CALL DIST
ANCE(#1,#2,D):: CALL SOUND(-
10,SQR(D)+110,4):: GOSUB 140
125 J=J+1 :: CALL SCREEN(J):
: IF J=12 THEN J=7
130 GOSUB 140 :: IF I=10 THE
N I=0 :: CALL MOTION(#2,R,R)
:: GOTO 120 ELSE GOTO 120
140 CALL CONIC(ALL,C):: IF C
THEN STOP ELSE RETURN
```

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BARGAINS FROM COMPUTER SHOPPER
By Don Arsenault

This column will point out some of the interesting and useful items available from the advertisers in Computer Shopper magazine. The writer takes no responsibility for availability of any of the items nor is it an endorsement of any of the suppliers offering the products. I have dealt with several of these suppliers and have always had very good service.

These items are from the April, 1988 issue.

Pg. 51
CMD
479 E. Third St. Dept. A5
Williamsport, PA 17701
1-800-233-8950
Tandon half height DSDD disk drives - $59.00

Pg. 68-69
LYCO COMPUTER, INC.
P. O. Box 5088
Jersey Shore, PA 17740
1-800-233-8760
Star NX1000 Rainbow 7-color printer - $225.95
Thomson 412@ Analog RGB monitor - $225.95
SMARTEAM 1200 Baud modem - $89.95

Pg. 84
MIDWEST MICRO-PERIPHERALS
6910 U.S. Route 36 East
Fletcher, OH 45326
1-800-423-8215
Star LV1210 Printer - $139.00
The Star LV1210 printer is the Star GEMINI 10X printer with a different ROM chip which gives it Near Letter Quality capabilities. Uses inexpensive spool ribbons.

Pg. 90
MEGATRONICS, INC.
P. O. Box 3660
Logan, UT 84321
1-800-232-6342
AVATEX 1200 baud modem - $85.00

Pg. 118
GUENTHER COMPUTER PRODUCTS, INC.
312 Locust St.
Santa Cruz, CA 95060
1-408-458-9404
1200 Baud modem - $79.00
2400 Baud modem - $169.00

Pg. 130-132
JR TECHNOLOGIES, INC.
21011 Itasca St., #F
Chatsworth, CA 91311
1-818-709-6400
10 MB hard drive H/H - $115.00
20 MB hard drive H/H - $195.00
Qume 142 DSDD floppy drive H/H - $65.00

(These drives work fine in the TI unless you are using a MYARC disk controller card with the 80 track EPROM.)
Mitsubishi #4853 DSDD H/H floppy drive - $85.00
Mitsubishi #MF351 400K 3-1/2" H/H floppy - $29.00
NEC #1035 720K 3-1/2" H/H floppy - $89.00

Pg. 155
MEI/MICRO CENTER
1100 Steelwood Road
Columbus, OH 43212
1-800-634-3478
5-1/4" bulk diskettes - $.25 aech - lots of 200

Pg. 161
MJL PRODUCTS, INC.
8755 N.W. 57th Street
Tamarac, FL 33351
1-305-726-5544
Mitsubishi H/H DSDD drives - $79.00
Mitsubishi H/H DSDD drives - $109.00
Mitsubishi 3-1/2" H/H 1MB drives - $89.00
Mitsubishi 3-1/2" H/H 2MB drives - $129.00

Pg. 167
NATIONAL COMPUTER RIBBONS CORP.
9566 Deereco Road
Timonium, MD 21093
1-800-292-6272
Computer ribbons - black
EPSON FX/MX/RX 70/80/85 _ $2.50
STAR NL/NP/NX-10 - $3.50
STAR GEMINI 10X - $1.25
OKIDATA 80,82,92,93 - $1.25
Colors - add $1.00 per ribbon

Pg. 172
MIDWEST MICRO-PERIPHERALS
see address above
PACKARD BELL 2400 Baud modem - less than $169.00
PACKARD BELL 1200 Baud modem - less than $89.00
(these modems are 100% Hayes compatible, and they work super.)

Pg. 227

MENDELSON ELECTRONICS, INC.
340 East First Street
Dayton, OH 45402
1-800-422-3525
TEAC FD-35-FN-13 3-1/2" H/H drive _ $89.00

Pg. 315
LOLIR MAIN COMPUTER
2741 Beltline Rd. #111
Carrolton, TX 75006
1-214-416-5155
190 W disk drive power supply - $39.95
TI 99/4A Keyboards - $3.50
TI 99/4A RF modulators - $3.50
TI 99/4A power transformers - $3.95
TI 99/4A cassette cable - $1.50

Pg. 405
NICKEL CITY ELECTRONICS
P.O. Box 1025
Buffalo, NY 14225
1-716-684-7350
NX1000 and NX1000 Rainbow printers "best prices"
100% Hayes compatible modem 1200 baud - $79.95
100% Hayes compatible modem 2400 baud $139.95

Pg. 487
ADVANCED COMPUTER PRODUCTS, INC.
P.O. Box 17329
Irvine, CA 92713
1-800-366-3227
LAPINE 3-1/2" 20MB hard drive - $149.00
(does not include 5-1/4" mounting hardware)
You mount it and save!
This is probably the "sleeper bargain" in the whole issue.

Pg. 500
USA FLEX
135 N. Brandon Drive
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That's it - Til next time !

X(1)X(1)X(1)X(1)X(1)X(1)X(1)X

==========
NEW LIBRARY ADDITIONS
==========

Recent additions to the library follows:

C99V4 - Latest updates to C compiler.
COLIST - Multi-column lister from the Funnelweb folks.
GPLMOD - Modified GPL routine for 9640
MCOPY/UTIL - MCOPY utility - saves drive wear.
MELMAS/ - Melody Master program and docs. 5 disks.
MILMUSIC - Military service songs
MUSIC01-MUSIC11 - Additional music disks
PILOT &P-MANUAL - PILOT 99 and docs
PROOFREAD - Spellchecker program
ROULETTE - Excellent roulette program
SEGRATION - Game of segregation - 20 levels
SIDEPRINT - Latest Sideprint prog with docs
SP/SHUTTLE - Good demo prog of space flight
TECHIE/V4 - TECHIE BBS program Ver. 4
TI-KEYS - Routines to make key-press macros
TIBBS/1-TIBBS/3 TIBBS BBS program Ver 5 (3 disks)
TI-LINE-1&TI-LINE-2 - TI-LINE BBS prog and docs
UDC - Useable Disk Cataloger
TELCOV1/3 & TELCODOCS Latest ver of TELCO
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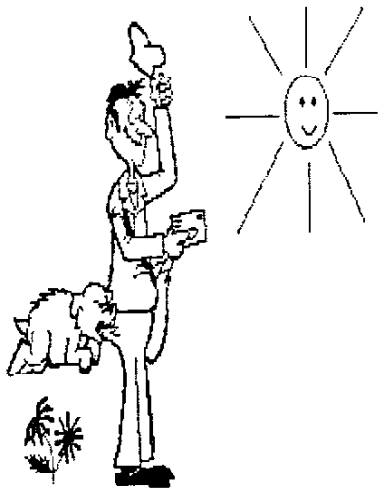
SOPACIFIC - Music from South Pacific w/ vocals
9640PRBASE - Mods for PRBASE for Geneve
TERRWARE - Wheel of Fortune & 2 other games

X(1)X(1)X(1)X(1)X(1)X(1)X(1)X(1)X



PUTTING IT ALL TOGETHER #2

by Jim Peterson

The hardest part of learning to program is not in learning what the various commands do - it is in learning how to put them all together to do what you want them to do!

Key in this simple routine and run it, to see what it does. Then read the explanations of each line and see how they do what they do!

Your computer won't take that 6th line in line 110? Just type 5 full lines and enter, bring it back by typing 110 and FCTN X, use FCTN D to scoot the cursor to the end of the line, and type some more.

```
1 !       2-LINE GAME
        by Jim Peterson
- use SD keys to paint the
white line on the highway
100 CALL CLEAR :: A$=RPT$(CH
R$(143),6):: CALL COLOR(14,2
,2,2,16,16):: CALL SCREEN(4)
:: T=11 :: C=14 :: CALL HCHA
R(22,C+2,42):: RANDOMIZE
110 T=T+INT(3*RND-1)+(T=21)-
(T=1):: PRINT TAB(T);A$ :: C
ALL KEY(3,K,S):: C=C+(K=83)-
(K=68):: CALL HCHAR(22,C+2,4
2):: IF C<T OR C>T+5 THEN ST
OP ELSE 110
```

This is not a finished program, but an example of the ways that efficient programming can accomplish a great deal in very little memory. The screen is cleared and A$, which will be the highway, is defined as ASCII 143 repeated 6 times. A single CALL COLOR is used to color set 14 (the highway) black on black and set 2 (the painter) white on white. T sets the first line of the highway to begin at TAB 11 and C places the painter 3 spaces to the right, in the middle of the highway. CALL HCHAR places the painter on row 22 and column C+2 because an HCHAR column is 2 spaces to the left of a TAB or PRINT column. RANDOMIZE makes a different highway for each game.

INT(3*RND) gives a random value of 0, 1 or 2; subtracting 1 from this gives -1, 0 or 1, so the tab position for the next line of the high- way shifts one space left or right or, if 0, remains the same. +(T=21)-(T=1) uses relational values. If tab is already at 21, adding one would cause the 6-line road to print one line lower and at the left of the screen. So, if T=21 then (T=21) has a true relational value of -1; +(-1) = -1, so 1 is subtracted to keep the tab from going beyond 21. If the tab is already at 1, (T=1) has a true value of -1; -(-1) = +1, so 1 is added to keep tab from reaching 0. If T is not 21 and T is not 1, both have a false value of 0 and no change is made.

A line of the highway is printed, and CALL KEY looks for a keyboard input; the mode 3 accepts any input as upper case even if the alpha lock is up.

C=C+(K=83)-(K=68) is another example of the use of relational values for compact programming. K is the ASCII value of the key that was pressed; 68=D and 83=S. If S was pressed then C=C+(-1)-(0) and C=-1-0 and the painter moves one space left. If D was pressed, C=C+(0)-(-1) and C=C+0+1 and the painter moves right; if no key was pressed (K will equal -1) or any other key was pressed, C=C+(0)-(0).

So, the new position of the painter is printed by HCHAR; if it is less than the current tab position or more than 5 spaces to the right of tab, he is off the road and crashes; otherwise execution goes back to calculate the next random tab position and start over.

And all that in two lines of programming!

Now, what two values could you change to make the game more challenging? Try changing the 6 to a 5 in A$=RPT$(CHR$(143),6) and the 5 to a 4 in C>T+5. How could you offer the option of an easy or difficult game? How could you restart after a crash? Improve the graphics?

TIPS FROM THE TIGERCUB

#43

TIGERCUB SOFTWARE
156 Collingwood Ave.
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```
*****************************
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If you have as much trouble as I do, trying to get the strip labels lined up in the printer, you'll like this one -

```
100 DISPLAY AT(4,7)ERASE ALL
:"TIGERCUB LABELER": : : :"
This label maker will allow"
:"you to specify different":
"printer codes for each line
"
110 DISPLAY AT(11,1):"of a 5
-line label.": : :" You may
stop the program":"while lab
els are printing":"by pressi
ng any key, turn"
120 DISPLAY AT(17,1):"off th
e printer to adjust":"the la
bels, turn it back on,":"and
 press any key to con-":"tin
ue printing."
130 DISPLAY AT(23,1):"Printe
r designation?":"PIO" :: ACC
EPT AT(24,1)SIZE(-28)BEEP:PR
$ :: OPEN #1:PR$ :: P$,E$,DS
$,CEN$="Y" :: DW$,I$,SS$,U$=
"N" :: P=1
140 CALL CHAR(95,"FF")
150 FOR J=1 TO 5 :: CALL KEY
(3,K,S)
160 DISPLAY AT(2,1)ERASE ALL
:"Line #";J;"  PRINT? "&P$
:: CALL QUERY(2,20,P$):: IF
P$="N" THEN L$(J)="" :: GOTO
 340
170 IF J>1 THEN DISPLAY AT(4
,1):"Change codes? N" :: CAL
L QUERY(4,15,Q$):: IF Q$="N"
 THEN 300
180 DISPLAY AT(4,1):"Print p
itch? ";P:" (1)pica":" (2)el
ite":" (3)condensed" :: ACCE
PT AT(4,15)SIZE(-1)VALIDATE(
"123"):P
190 CI=(P-1)*-10+(P-2)*-12+(
P=3)*-17 :: L$(J)=CHR$(27)&"
B"&CHR$(P):: DISPLAY AT(5,1)
:"":"":""
200 DISPLAY AT(6,1):"Double
width? "&DW$ :: CALL QUERY(6
,15,DW$):: IF DW$="Y" THEN C
I=CI/2 :: L$(J)=L$(J)&CHR$(1
4)ELSE L$(J)=L$(J)&CHR$(20)
210 DISPLAY AT(8,1):"Italics
? "&I$ :: CALL QUERY(8,10,I$
):: IF I$="Y" THEN L$(J)=L$(
J)&CHR$(27)&"4" ELSE L$(J)=L
```

```
$(J)&CHR$(27)&"5"
220 DISPLAY AT(10,1):"Supers
cript? "&SS$ :: CALL QUERY(1
0,14,SS$):: IF SS$="Y" THEN
L$(J)=L$(J)&CHR$(27)&CHR$(83
)&CHR$(0)ELSE L$(J)=L$(J)&CH
R$(27)&CHR$(84)
230 IF SS$="Y" THEN 250
240 DISPLAY AT(12,1):"Double
-strike? "&DS$ :: CALL QUERY
(12,16,DS$):: IF DS$="Y" THE
N L$(J)=L$(J)&CHR$(27)&"G" E
LSE L$(J)=L$(J)&CHR$(27)&"H"
250 IF P<>1 OR SS$="Y" THEN
270 :: DISPLAY AT(14,1):"Emp
hasized? "&E$ :: CALL QUERY(
14,13,E$)
260 IF E$="Y" THEN L$(J)=L$(
J)&CHR$(27)&"E" ELSE L$(J)=L
$(J)&CHR$(27)&"F"
270 DISPLAY AT(16,1):"Underl
ine? "&U$ :: CALL QUERY(16,1
2,U$)
280 IF U$="N" THEN L$(J)=L$(
J)&CHR$(27)&CHR$(45)&CHR$(0)
290 DISPLAY AT(18,1):"Center
 text? Y" :: CALL QUERY(18,1
4,CEN$)
300 DISPLAY AT(18,1):"Type l
ine";J;". Enter each":"scree
n line, enter again":"when d
one." :: DISPLAY AT(22,1):RP
T$("_",INT(CI*3.5)):: R=21 :
: CALL KEY(5,K,S)
310 ACCEPT AT(R,1):M$ :: IF
M$="" THEN 320 :: A$=A$&M$ :
: R=R+1 :: GOTO 310
320 IF LEN(A$)>INT(CI*3.5)TH
EN DISPLAY AT(16,1):"LINE TO
O LONG!" :: CALL SOUND(300,1
10,0,-4,0):: A$="" :: R=21 :
: GOTO 310
330 L=LEN(A$):: IF U$="Y" TH
EN A$=CHR$(27)&CHR$(45)&CHR$
(1)&A$&CHR$(27)&CHR$(45)&CHR
$(0)
340 IF CEN$="Y" THEN A$=RPT$
(" ",(INT(CI*3.5)-L)/2)&A$
350 L$(J)=L$(J)&A$ :: A$=""
360 NEXT J
370 DISPLAY AT(12,1)ERASE AL
L:"Print how many?" :: ACCEP
T AT(12,17):N
380 FOR J=1 TO N :: FOR K=1
TO 6 :: PRINT #1:L$(K):: NEX
T K
390 CALL KEY(0,K,S):: IF S=0
 THEN 410 ELSE CLOSE #1
400 CALL KEY(0,K1,S1):: IF S
1<1 THEN 400 ELSE OPEN #1:PR
$
410 NEXT J
420 DISPLAY AT(12,8)ERASE AL
L:"Another?" :: CALL QUERY(1
2,17,Q$):: IF Q$="N" THEN ST
OP ELSE 150
430 SUB QUERY(R,C,Q$):: ACCE
PT AT(R,C)SIZE(-1)VALIDATE("
YN")BEEP:Q$ :: SUBEND
```

More peculiarities of the TI computer -

```
90 CALL CLEAR :: PRINT TAB(7
);"SPRITE PUZZLE #1":"
  from Tigercub"
100 PRINT "A non-existent sp
rite can be":"created by CAL
L MOTION.": :"It apparently
starts in"
110 PRINT "dot-row 1, dot-co
lumn 1, and":"has color 1, b
ut its pattern":"is not that
 of any ASCII!"
120 !by Jim Peterson
130 FOR CH=0 TO 255 :: PRINT
 CHR$(CH);:: NEXT CH
135 PRINT "CALL MOTION(#1,5,
5):: CALL COLOR(#1,16):: CAL
L MAGNIFY(4)"
140 CALL MOTION(#1,5,5):: CA
LL COLOR(#1,16):: CALL MAGNI
FY(4)
150 GOTO 150
```

And another -

```
100 DISPLAY AT(3,5)ERASE ALL
:"SPRITE PUZZLE #2": :"
 from Tigercub"
110 DISPLAY AT(7,1):"Non-exi
stent sprites can be":"creat
ed by CALL COLOR.": :"Their
existence can be con-"
120 DISPLAY AT(11,1):"firmed
 by CALL COINC, but":"CALL P
OSITION reports that":"they
have no position!"
130 CALL COLOR(#1,16):: CALL
 COLOR(#2,16)
140 CALL COINC(#1,#2,1,X)::
DISPLAY AT(15,1):"COINC #1,#
2=";X :: CALL POSITION(#1,X,
Y)
150 CALL POSITION(#1,X,Y)::
DISPLAY AT(17,1):"POSITION #
1=";X;Y
160 CALL POSITION(#2,X,Y)::
DISPLAY AT(19,1):"POSITION #
2=";X;Y
170 IF FLAG=1 THEN 140 :: FL
AG=1
180 DISPLAY AT(21,1):"PRESS
ANY KEY"
190 CALL KEY(0,K,S):: IF S=0
 THEN DISPLAY AT(21,1):"pres
s any key" :: GOTO 180
200 DISPLAY AT(21,1):"Until
they're set in motion!"
210 CALL MOTION(#1,5,5):: CA
LL MOTION(#2,-5,-5):: GOTO 1
50
```

If you have the Terminal Emulator II, Speech Synthesizer, and a pre-schooler in the house, this will help him to grasp the idea of spelling as well as letter recognition and keyboard familiarization-

```
100 REM  PRE SPELLER BY JIM
PETERSON
110 REM  TI BASIC WITH TERMI
NAL EMULATOR II AND SPEECH S
YNTHESIZER
120 CALL CLEAR
130 DIM M$(100),S$(100)
140 OPEN #1:"SPEECH",OUTPUT
150 PRINT "        PRE-SPELL
ER"::::::
160 PRINT "TYPE WORDS TO PRA
CTICE"::"TYPE 'END' WHEN FIN
ISHED"
170 X=X+1
180 INPUT M$(X)
190 IF M$(X)="END" THEN 380
200 PRINT #1:M$(X)
210 PRINT "PRONUNCIATION OK?
 (Y/N)"
220 CALL KEY(3,K,S)
230 IF S<1 THEN 220
240 IF K=78 THEN 280
250 IF K<>89 THEN 220
260 S$(X)=M$(X)
270 GOTO 170
280 PRINT "TRY SPELLING PHON
```

```
ETICALLY"
290 INPUT S$(X)
300 PRINT #1:S$(X)
310 PRINT "PRONUNCIATION OK?
 (Y/N)"
320 CALL KEY(3,K,S)
330 IF S<1 THEN 320
340 IF K=89 THEN 170
350 IF K<>78 THEN 320
360 PRINT "TRY AGAIN"
370 GOTO 290
380 CALL CLEAR
390 FOR J=1 TO X-1
400 PRINT #1:"CAN YOU SPELL
THIS?"
410 FOR A=1 TO LEN(M$(J))
420 CALL HCHAR(12,8+A,ASC(SE
G$(M$(J),A,1)))
430 NEXT A
440 FOR B=1 TO LEN(M$(J))
450 CALL KEY(3,K,S)
460 IF (S<1)+(K=32)THEN 450
470 IF K=ASC(SEG$(M$(J),B,1)
)THEN 500
480 GOSUB 640
490 GOTO 450
500 C$=C$&CHR$(K)
510 CALL HCHAR(14,8+B,K)
520 NEXT B
530 IF C$<>M$(J)THEN 640
540 PRINT #1:S$(J)
550 FOR D=1 TO 500
560 NEXT D
570 PRINT #1:"VERY GOOD
580 FOR D=1 TO 500
590 NEXT D
600 C$=""
610 CALL HCHAR(12,1,32,100)
620 NEXT J
630 GOTO 390
640 PRINT #1:"NO THAT IS NOT
 RIGHT"
650 PRINT #1:"TRY AGAIN"
660 RETURN
```

And, a simple little game that is a bit different than any I've seen -

```
100 !FORMATION by Jim Peters
on - use the S and D keys
110 CALL CLEAR :: CALL CHAR(
100,"381010FEFE383810103838F
EFE1010383B");: CALL SCREEN(
5):: CALL MAGNIFY(2):: RANDO
MIZE
120 V,W,P=0 :: FOR J=1 TO 7
:: CALL SPRITE(#J,100,7,1,25
0*RND+1,10,4):: FOR D=1 TO 1
00 :: NEXT D :: NEXT J :: CA
LL SPRITE(#11,101,16,160,128
)
130 CALL KEY(3,K,S):: W=W+1
:: IF W=150 THEN 170 ELSE IF
 W=300 THEN 180 ELSE IF K=68
 THEN V=V+2+(V>125)*2 ELSE I
F K=83 THEN V=V-2-(V<-125)*2
140 IF P=0 THEN CALL MOTION(
#11,0,V)ELSE IF P=1 THEN CAL
L MOTION(#11,0,V,#12,0,V)ELS
E CALL MOTION(#11,0,V,#12,0,
V,#13,0,V)
150 CALL COINC(ALL,A):: IF A
=0 THEN 130
160 CALL SOUND(1000,-4,0)::
H=MAX(H,W):: DISPLAY AT(23,1
):"SCORE";W:"HIGH SCORE";H ::
 CALL DELSPRITE(ALL):: GOTO
 120
170 P=1 :: CALL POSITION(#11
,R,C):: CALL SPRITE(#12,101,
16,160,C-40-(C<40)*256):: GO
TO 140
180 P=2 :: CALL POSITION(#11
,R,C):: CALL SPRITE(#13,101,
16,160,C+40+(C>216)*256):: G
OTO 140
```

If you can't figure out where all the money goes, this may be an eye-opener -

```
100 DISPLAY ERASE ALL AT(3,5
):"THE COST OF CREDIT" ! by
Jim Peterson
110 S,T,X=0 :: DISPLAY AT(8,
1):"AMOUNT OF PURCHASE?" ::
ACCEPT AT(8,21):A :: B,T=A :
: DISPLAY AT(10,1):"CREDIT C
ARD INTEREST RATE?" :: ACCEP
T AT(11,1):R
120 DISPLAY AT(13,1):"SAVING
S ACCOUNT INT. RATE?" :: ACC
EPT AT(14,1):SR
130 X=X+1 :: I=B*R/100/12 ::
 B=B+I :: T=T+I :: P=B/10 ::
 B=B-P :: S=S+P+S*SR/100/12
:: IF S<A THEN 130
140 D$="$"&STR$(INT((T-A+S-A
+.5)*100)/100)
150 DISPLAY AT(17,1):"If you
 had saved the amount":"of y
our minimum 10% of the":"bal
ance credit card payment":"e
ach month for";X;"months,"
160 DISPLAY AT(21,1):"and us
ed it to pay cash, you":"wou
ld have saved ";D$ :: GOTO 1
10
```

And this is one of the handiest routines I've seen in a long time -

```
10 !TURNS ALL NUMERALS AND P
UNCTUATION WHITE! BY HARRY W
ILHELM IN TWIN TIers UG NEWS
LETTER
20 !TURN IT OFF BY CALL LOAD
(-31804,0)::TURN IT ON BY CA
LL LOAD(-31804,63)
100 CALL INIT
110 CALL LOAD(16128,2,224,38
,0,2,0,8,17,2,1,63,36,2,2,0,
3,4,32,32,36,2,224,131,192,3
,128)
120 CALL LOAD(16164,240,240,
240)
130 CALL LOAD(-31804,63)
```

Memory full

Jim Peterson

<*><*><*><*><*><*><*><*><*>