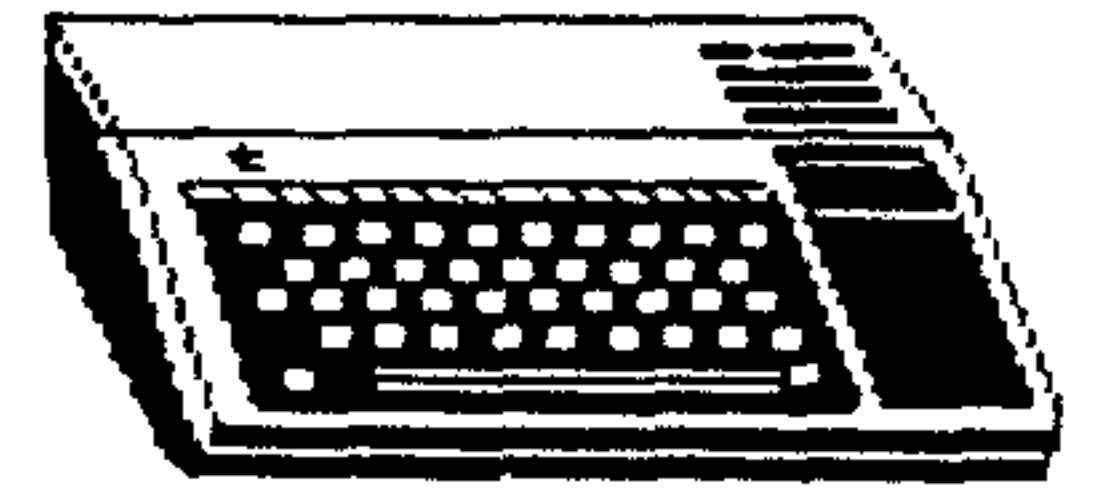


CENTRAL OHIO



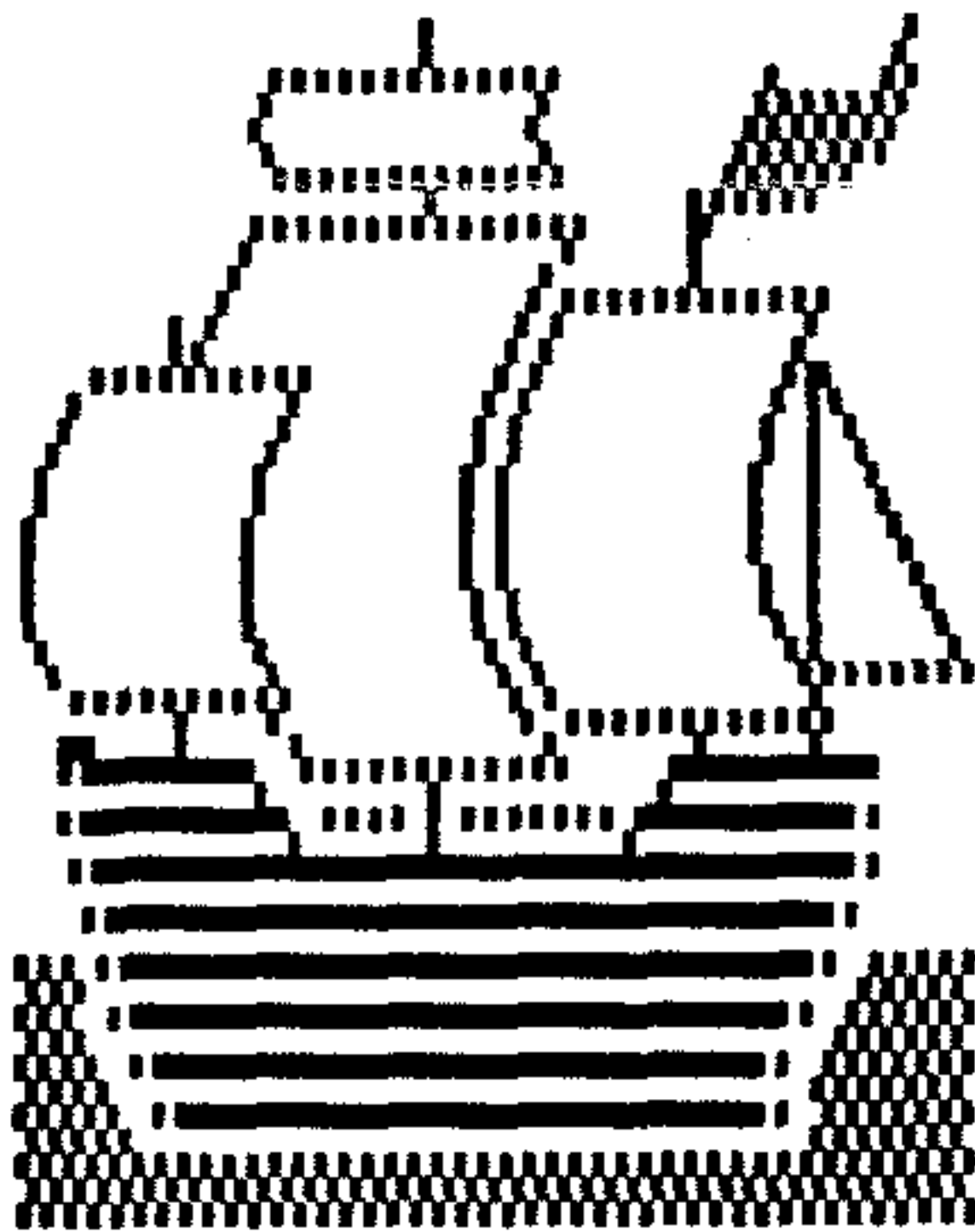
Spirit of 99

NINETY-NINERS INC.

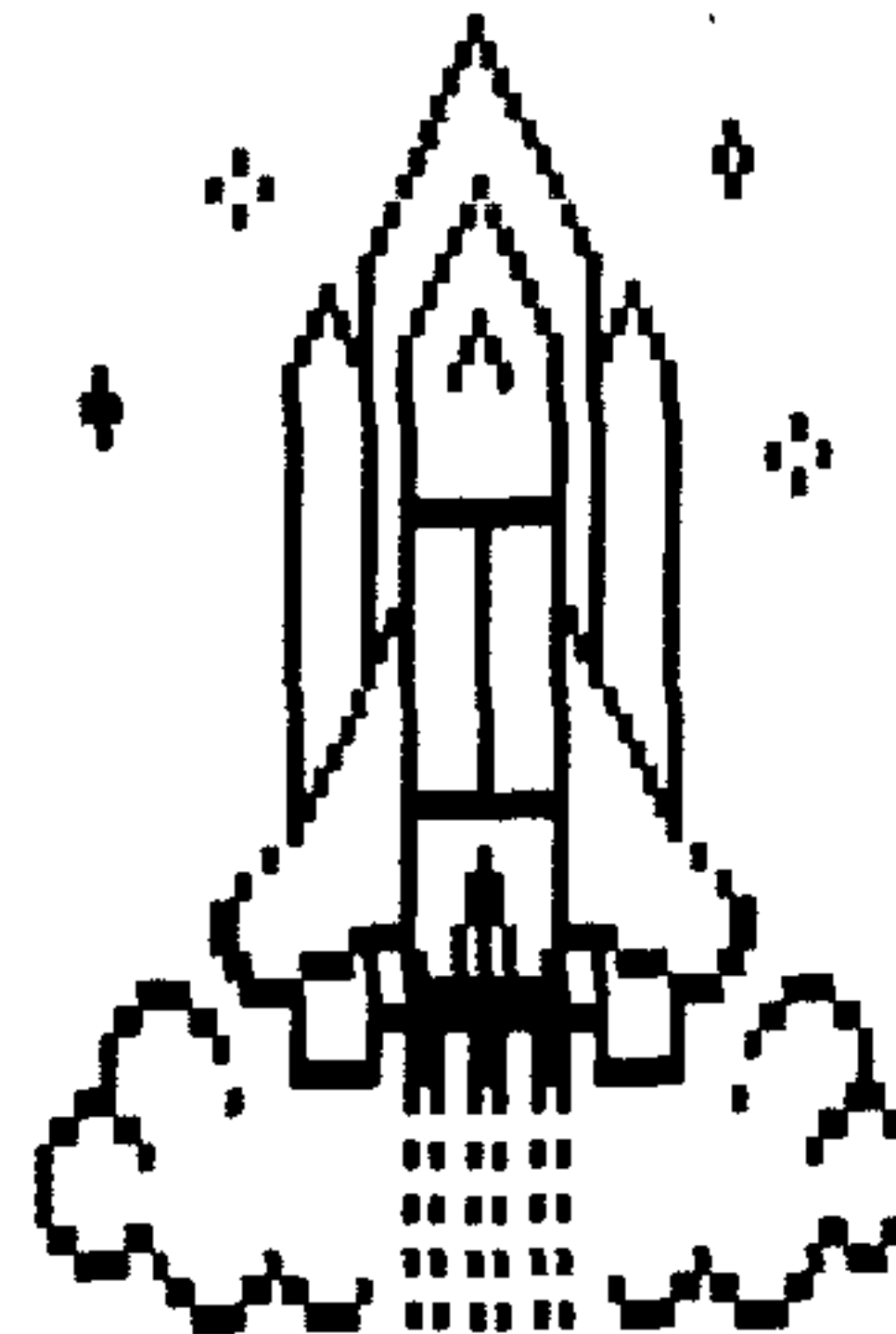
THE OFFICIAL NEWSLETTER OF THE CENTRAL OHIO NINETY-NINERS INC.

PUBLISHED MONTHLY IN COLUMBUS OHIO

1492



1992



500 YEARS LATER

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 -urday of each month
 at C h e m i c a l
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 Columbus, OH. Meet-
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CLEARING HOUSE

What: a means of sharing text files between clubs and to cut down on newsletter costs.

Who: Any T.I. users group (or individual) may participate.

Cost: \$30 the first year; \$15 each succeeding year.

Mail check to CONNI membership registrar (see page 3).

Free trial: For those who want to see what the service offers, call:

Spirit of '99 BBS

(614)263-3412 24 hrs.

8NI 300-1200-2400 baud.

(direct access or through Starlink or PC-Pursuit).

LIST OF LIBRARIES

- 1 SPIRIT OF 99 (CONNI)
- 3 TIGERCUB ARTICLES
- 5 TIMES NEWSLETTER
- 7 PROGRAMBITEN (SWEDEN)
- 9 MISC. ARTICLES
- 11 UGDC/SWEDLOW
- 13 BC99'ERS
- 8 BULLETIN

- 2 TIPS FROM THE TIGERCUB
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- 6 LIMA UG NEWSLETTER
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- 10 BRISBANE AUS. ARTICLES
- 12 EARL RAGUSE
- 14 CINCINNATI-DAYTON
- H HINTS

The business meeting was conducted by president John Parkins. Treasurer Everett Wade gave the treasurer's report and informed us that we are facing a financial crisis. During a lengthy discussion, several solutions to the problem were proposed.

A motion was passed to print the July issue of the newsletter by xerox. A motion to drop the bulk mailing permit was tabled, pending a check as to when it expires. A motion was passed to publish a notice to other user groups that we will stop sending them newsletters, except to those who will be separately notified. A motion was passed to discontinue offering reduced newsletter and disk-of-the-month subscriptions to out of town members. A motion was passed to have a regular meeting, rather than a picnic, in July in order to further discuss and resolve the problems.

There was also much discussion of possible ways of increasing attendance at meetings, and of attracting new members. It was suggested that demos of PC programs should be allowed, but no decision was reached.

Respectfully submitted,
Jim Peterson Co-Secretary

Wednesday, June 24, 1992.

President John Parkins opened the meeting at approximately eight p.m. The business portion was mainly a discussion of proposed changes in the club's practices. We are dropping the D.O.M.+Newsletter offers. (Those who have already subscribed are covered, but no new subscriptions will be accepted.) The newsletter will be photocopied, rather than printed. After July, we will cease the newsletter exchange to all but a few clubs. Those to which we continue the exchange will be individually notified. We regret the necessity for these measures; the rationale is purely economic.

Bud Wright used his Geneve to present his long-awaited demonstration of RAWLOOK version 1.0. It consists of digitized pictures captured by a digital camera and shown on a Geneve using a special assembly-language program written by Bud. He also demonstrated GIF files that he created using a video camera plugged into a digital board on another computer. This board is known as the Computer Eyes digitizer. The resultant pictures are then ported over to the Geneve as GIF pictures.

After a varied discussion concerning _SNF (MIDI99) files and the use of a program converting music for the T.I. to _SNF format, CD-rom and other computer-related topics, the group departed at approximately 9:45 p.m.

Respectfully submitted,
Dick Beery, Co-Secretary

WE'RE VERY SORRY, BUT --

In a few months, the Central Ohio Ninety-Miners will celebrate its tenth year of existence. During those ten years, we have seen many changes in the TI world and the computer world in general, and have managed to survive them.

At one time, we had a large membership. In order to publish and mail a newsletter to these members as cheaply as possible, we obtained a bulk mailing permit from the post office; we are perhaps the only TI user group that did so. This permit allows us to mail our newsletter at a low rate per piece, but requires that we make a bulk mailing of at least 200 pieces in order to use this rate.

Therefore we had to print at least 200 newsletters each month, and a printer gave us a reduced rate for this quantity.

As our membership decreased far below 200, we made up this minimum bulk mailing requirement by being extremely generous in mailing newsletters to any user group that asked to be placed on our mailing list, even when they did not send their newsletter in return or did

not publish a newsletter.

When our membership decreased still more, and the number of user groups also shrank, we met our minimum mailing requirement by offering membership to users outside of our commuting area at far less than was paid by our local members.

Due to the generosity of Chuck Grimes, who has spent countless hours in notching floppies and copying disks, we also offered these out-of-town members a disk-of-the-month at an extremely reasonable price.

Our membership has continued to shrink, and we now face a financial crisis. If we continue printing at the present rate, we do not have the funds to even provide a newsletter to our local and out-of-town members to the end of their current membership. We have already started using condensed print, in order to provide the same amount of material in fewer pages, but that has not reduced our costs enough.

Our newsletter has always been one of the best in the TI world, and is one of the very best of those remaining. We do not want to lose it, but we must take drastic steps to keep it going.

We must therefore print only enough newsletters for our membership, and a limited number for exchange. We will not be able to mail enough copies to meet the bulk mailing minimum, so we will have to mail at regular rates. Therefore, there will be no reason to offer reduced rates to out-of-town members, and we cannot afford to do so. They are welcome to join us at our local rate. Half of our local members never attend a meeting, but find it worthwhile to keep up their membership to receive the newsletter.

Current out-of-town members will of course continue to receive the newsletter and disk to the end of their current subscription.

We intend to continue exchanging newsletters with selected user groups whose newsletters are publishing original material, and we will be notifying them. We regret that we cannot continue mailing to all the other groups, but it is just not possible. Those groups can obtain our newsletter by joining us as regular members, or by joining the Clearing House BBS and downloading it.

ARTIST CARDSHOP

Review by Deanna Sheridan

NORTHCOAST 99ERS

Reprinted from Cleveland U.G.

6/92

Over the years, you purchased CS6D, Fontwriter, Print Wizard, Page Pro, Jiffy Card, and took advantage of TIPS, so why would you need another card-making program? Just look how each of these incorporated new features and become more sophisticated than the previous. I think that Paul Coleman has finally found the ULTIMATE card-making program for the TI.

As you look at each of the above, you will find that they were difficult to set up, or took only certain size graphics; graphics could only be set in certain areas, only certain built-in fonts could be used, etc. Or else there was no way to save the card, or print multiple copies, or else the printing so excruciatingly slow. Artist Cardshop will make your creative juices flow without frustration if you like to create and print your greeting and note cards.

It consists of three separate programs (in the manner of TI-Artist) which include CARD BUILDER, CARD PRINTER and BORDER MAKER. There is a professionally printed 26-page manual and samples of cards and borders included on the disk.

Both the inside and outside of the card uses two TI-Artist fonts. 1 large (any size) and 1 small (1 char high). Up to 4 TI-Artist instances can be used on a page, and the back of the card will print any TI-Artist instance up to 27 columns wide. Thus, you can use the back for an additional message or your own personal logo.

Each page of the card consist of 40 lines on which to place material (text, or graphics or text and graphics). This can be laid in any combination of the following:

1. Graphic only
2. Text only
3. Graphic (left) with text (right)
4. Text (left) with graphics (right)
5. Graphic, then text, then graphics

If the instance is small enough, the graphic only option allows you to lay multiple copies of the picture across the page. Cards can be saved and loaded for later modification. Up to 99 cards can be printed at one time and they can be printed in single or double density. I accidentally discovered that if you have a color printer and set the printer for a certain color before entering CARD MAKER, it will print in that color for you. I have tried this with Page Pro and a couple of other programs,

and it doesn't work because evidently the program sends a "reset" command to the printer before printing. Card Maker does not, so if you write a short XB program to say, print in Blue, before entering the print program of Card Maker, you will be able to print your card in blue ink. This is probably the next best thing to having a color card program.

Once you have chosen the graphic or graphics and fonts you will want to use, enter the Card Builder program. You are first requested for the fonts. I guess the only complaint I might have is that you MUST load both fonts even if you don't plan to use both. It seems it would save some computer memory for the graphics if one didn't have to load a font one wasn't going to use. This must be done for both the inside and outside of the card. Then you are prompted to load your graphic or graphics. As you place them, you chose the line on which you wish to place your data, and the computer tells you how many of the 40 lines are needed, so that you will know where to start the next step. On the example enclosed on the front side, I used the text only option to place the first two lines. The graphic only option printed my instance, and again the text only was used for the last two lines.

On the inside of the card I used the text-graphic to place the text next to the graphic and the text only to finish up the last three lines. For the instance on the back page I simply used my initials as my personal logo. But, remember large instance could have been used with an additional Father's Day message.

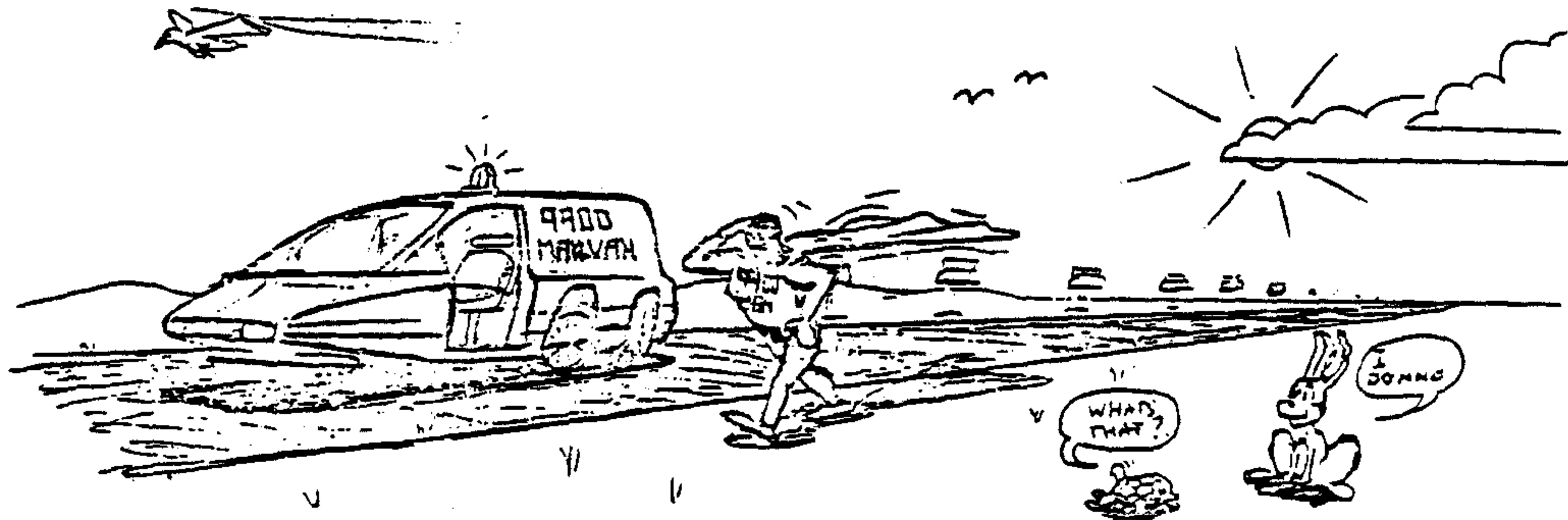
When you have all the data placed on the card it is time to save it to a file. You then call in the Card Printer program. All the fonts and instances are loaded before any printing commences. You are then prompted for a border. Twenty-five borders have been included and you can use borders on both the inside and outside if desired. Here is where you are prompted for the instance you might want to use on the back side. And then you can print in single or double density.

Last but not least, if you need more borders, you can use your imagination and make your own. The template for the border is created in TI-Artist. If you are familiar with the grey boxes you could bring in from Graphx to use as a guide in Artist, You will see the area available to make a border pattern. The design must be saved in Instance format and has to be EXACTLY 9 rows by 12 columns. If it is not you will get an error message when returning to Border Maker. If you have saved your border correctly, Border Maker will take your file and make a border with the name you designate.

I paid \$25 for the program at Lima, and it can be ordered through Comrodine, 1949 Evergreen avenue: Fullerton, CA 92635

as being in HEXADECIMAL. Lets recall some of the information in our past lessons on the Memory Map. On the Instrument Panel each of the readouts has a keypad next to it so that 9900 MAN can enter the new number. There are two clip boards that hold 2 Post Cards. This is so that 9900 MAN can write new Post Cards. You see, he writes most of the Post Cards himself. He then puts them in their proper Mail Box. In lesson number two we found out that when you first power up the Console the CPU (also named 9900 MAN), performs a LEVEL ZERO INTERRUPT which is a RESET. The term SET means to make data at an address a 1. The term RESET means to make data at an address a 0. So, this LEVEL ZERO INTERRUPT forces 9900 MAN to race along ALL RAM Mail Boxes and place Post Cards with all ZERO's on them inside. After all RAM memory is RESET 9900 MAN always looks for his first instructions at address >0000, >0001, >0002, and

Hello. This lesson is about the most important part of our machines. The master CPU. I hope you have retained a little bit of the Memory Map in your mind. This lesson will recall some of that material. If you have any questions, or want to enlighten me on any points, please write. If you include a self addressed stamped envelope I will try to write back in a prompt manner. Write to:
 BOB WEBB
 P.O. Box 3023
 ARCADIA CA 91007



The sleek, ELECTRON MAIL VAN, depicted above is the vehicle that our Hero, 9900 MAN, drives. You will note that it is not unlike Mail Vans found all over the United States. It has the open slide door so that 9900 MAN can reach into the Mail Boxes with little effort. However this beauty travels at near the speed of light. Our Country Road is private. So, he is the only one that tears along this route. He loves his vehicle and always keeps a full tank of electrons. He comes from a proud family of microprocessors and takes great pride in that heritage. He has younger Cousins now that have much faster Clock speeds and larger Data Busses but none the less holds his head high. He has proven his worth to about 3 Million consumers. 9900 MAN has a Rigid set of rules he lives by. The first rule is that he must follow his Master Clock at all times. Everyone in this world of his must do the same. On the Instrument Panel in the VAN is a Master Clock Pulse Indicator. Every time the Master Clock Ticks that Indicator Light flashes and 9900 MAN tromps on the throttle to reach his next destination address. Besides the Master Clock Indicator he has 3 other Major Readouts these readouts in reality are known as the 3 Hardware Registers. 9900 MAN pays strict attention to these 3 Readouts. Here are the names of the readouts:
 PROGRAM COUNTER REGISTER
 WORKSPACE POINTER REGISTER
 STATUS REGISTER
 Each Readout is 16 Bits long, or 2 Bytes, or a word. We all know that 9900 MAN reads only BINARY but we will think of these

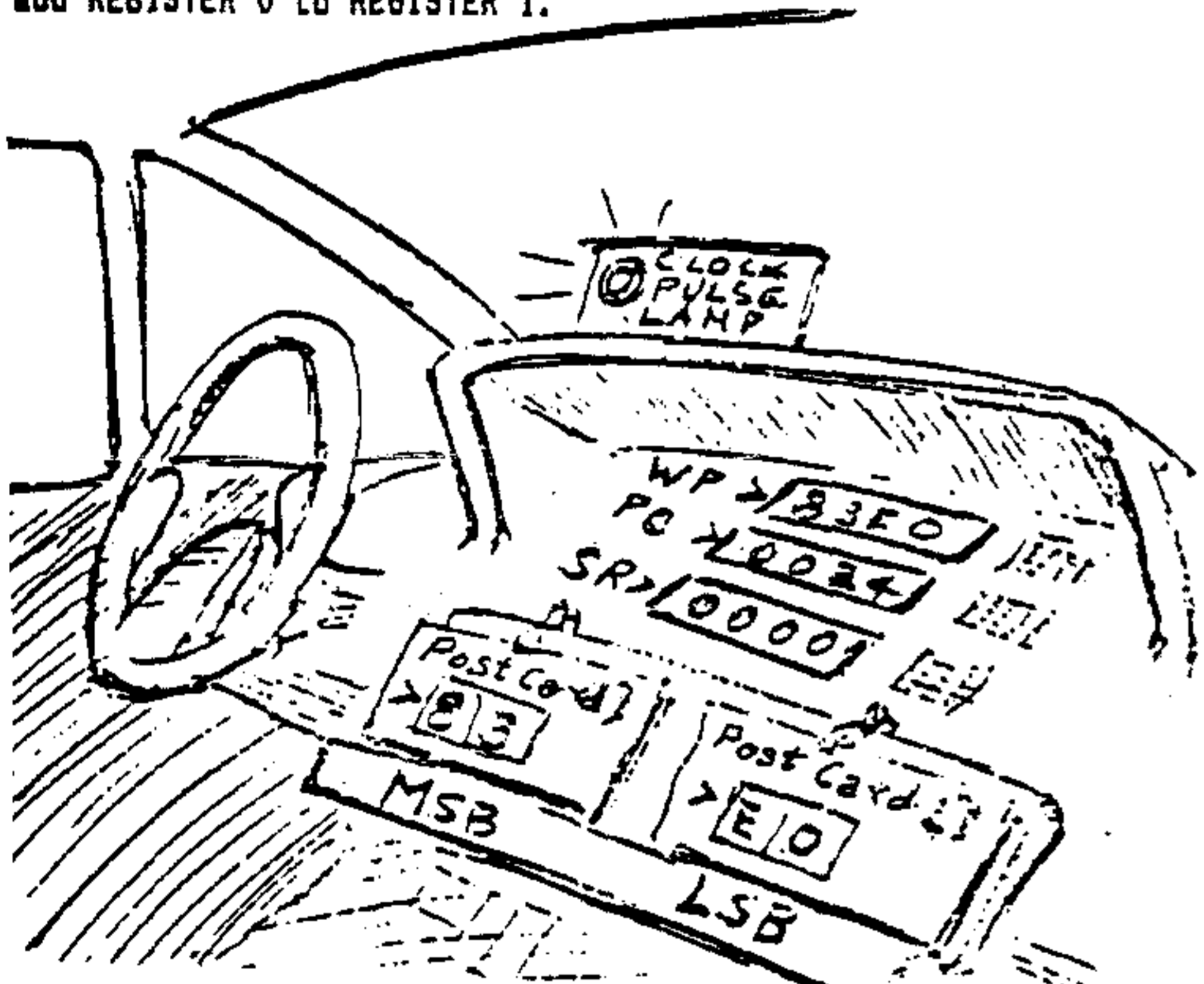
>0003. The first two addresses contain the Most Significant Byte and the Least Significant Byte. 9900 MAN is a 16 Bit CPU so he always takes a full WORD of data each time he performs a fetch. The first WORD of data at addresses >0000 and >0001 is, >83E0. 9900 MAN knows that the first word of data he collects is an address. This address is the first address of his Scratch Pad area. He always needs to have a place in memory set aside so that he can make notes for himself and perform math. This area is known as the WORKSPACE REGISTER AREA. It is 16 WORD's in length which means it starts at address >83E0 and continues to >83FF. This is how it would look:

| | |
|---------------------|-------------|
| >83E0 MSB 1ST WORD. | REGISTER >0 |
| >83E1 LSB_____ | |
| >83E2 MSB 2ND WORD | REGISTER >1 |
| >83E3 LSB_____ | |
| >83E4 MSB 3RD WORD. | REGISTER >2 |
| >83E5 LSB_____ | |
| >83E6 MSB 4TH WORD. | REGISTER >3 |
| >83E7 LSB_____ | |
| >83E8 MSB 5TH WORD. | REGISTER >4 |
| >83E9 LSB_____ | |
| >83EA MSB 6TH WORD. | REGISTER >5 |
| >83EB LSB_____ | |
| >83EC MSB 7TH WORD. | REGISTER >6 |
| >83ED LSB_____ | |

NEXT PAGE

>B3EE MSB 8TH WORD. REGISTER >7
 >B3EF LSB
 >B3F0 MSB 9TH WORD. REGISTER >8
 >B3F1 LSB
 >B3F2 MSB 10TH WORD. REGISTER >9
 >B3F3 LSB
 >B3F4 MSB 11TH WORD. REGISTER >A
 >B3F5 LSB
 >B3F6 MSB 12TH WORD. REGISTER >B
 >B3F7 LSB
 >B3F8 MSB 13TH WORD. REGISTER >C
 >B3F9 LSB
 >B3FA MSB 14TH WORD. REGISTER >D
 >B3FB LSB
 >B3FC MSB 15TH WORD. REGISTER >E
 >B3FD LSB
 >B3FE MSB 16TH WORD. REGISTER >F
 >B3FF LSB

Bob, why did you say REGISTER after each WORD of data? This is a way of naming each WORD of data stored here. When you write an Assembly Language program, you will want to tell the CPU to add REGISTER 0 to REGISTER 1.



This WORKSPACE REGISTER AREA is where you will spend a lot of time. All programs use this area. All Math and Logic functions are done here. So, after the reset is performed 9900 MAN picks up >B3E0 at the first 2 addresses and puts that number into his Instrument panel WORKSPACE POINTER readout. You can see in the illustration that >B3E0 is now always on display in the WP readout.

This is to remind 9900 MAN where his WORKSPACE is. He can now zip right there without any trouble. The next built in function is for him to fetch the next 2 bytes of data from addresses >0002 and >0003. That number in most Consoles is, >0024. 9900 MAN knows this to be the address of his first instruction. That instruction at >0024 and >0025 (one WORD), is the so called ENTRY POINT in the ROM BOOTSTRAP program. He fetches the number >0024 from address >0002 and >0003 and enters it into his PROGRAM COUNTER readout. Once this number is entered 9900 MAN sits and waits for his first CLOCK PULSE. When the lamp flashes he trots on the gas pedal (ELECTRON PEDAL?) and runs down the

old country road to the address indicated in the PC. He reads the first number painted on the permanent sign and to him it is an instruction. 9900 MAN understands many instructions. These are listed in the EDITOR ASSEMBLY Manual. The instruction is a number of course. 9900 MAN reads the number and knows what it means. As an example lets say that the number tells 9900 MAN to LOAD IMMEDIATE the Hexadecimal number >0017 into WORKSPACE REGISTER >3. 9900 MAN writes the number >0017 down onto 2 Post Cards. He then sits and waits for the CLOCK PULSE Lamp to flash. When it does he blasts down to addresses >B3E6 and >B3E7 and places those 2 Post Cards inside them. The MSB Post Card going to the Mail Box at >B3E6 and the LSB going into >B3E7. When he has finished this task he looks down at the PROGRAM COUNTER Indicator. The PC has automatically incremented itself by 4 addresses. He Turns the ELECTRON MAIL VAN around and faces the other way down the Old Country Road. Once again he sits and waits for the Clock Pulse Lamp to flash. ZAP it goes and he is on his way to address >0028. He has just completed his first use of the WORKSPACE AREA. The number >0017 is now stored in REGISTER >3. You should now be asking me why the PC was incremented by 4 addresses. The Instruction was one WORD in length. That accounts for the first 2 addresses. The second 2 addresses was the number >0017. It must be stored next to the instruction. When you write an Assembly Language Program you use the EDITOR program. This is merely a stripped down version of TI-WRITER. You write this program as a kind of "Letter of Instructions". When you are satisfied that there are no errors in your "Letter" you save it to DISK. Then you start the Assembler Program and it asks for the name of your "Letter", or SOURCE PROGRAM on the DISK. Once you give it the name it starts up the DISK DRIVE and reads your SOURCE PROGRAM. The Assembler takes each line of your program and converts it into MACHINE CODE. That MACHINE CODE is then saved to DISK. The MACHINE CODE file is saved under a name you gave it. This file is known as the OBJECT FILE. This is the raw BINARY program that 9900 MAN can read. Here is the ASSEMBLY LANGUAGE line: LI R3,>17
LI=LOAD IMMEDIATE into REGISTER >3 the HEXADECIMAL number >0017
The Assembler adds the >00 MSB.
Here we sit. 9900 MAN has stopped at the permanent sign at address >0028. Lets continue our example and say address >0028, >0029, >002A and >002B contain the equivalent of: LI R4,>04. This is the same instruction as before. Only this time we are going to LOAD IMMEDIATE >0004 into REGISTER >4. 9900 MAN writes the number onto 2 Post Cards. Once again, the MSB on the left and the LSB on the right Card. After completing the task the CLOCK PULSE Lamp flashes and 9900 MAN flattens the gas pedal. He must have great neck and stomach muscles. The acceleration forces time after time must take a toll on him. He screeches to a halt at WORKSPACE REGISTER >4. (Addresses >B3E6 and >B3E7). Quickly placing the 2 Post Cards into the Mail Boxes he looks down at the PC Indicator. It has been incremented by 4 again. The new address is >002C. The Lamp flashes and he charges to the address indicated in the PC. The instruction he finds on the next set of signs might be the ADD function. Lets say it goes like this: A R4,R3
The letter "A" means ADD. So, the instruction is telling 9900

NEXT PAGE

MAN to ADD the contents of REGISTER >3 to the contents of REGISTER >4. In this operation the number >0017 will be added to the number >0004 located in REGISTER >4. The number >0004 will be replaced with the SUM of the 2 numbers. >0004 will be lost forever unless we save it in another REGISTER or RAM memory space. In this case we do not care if we lose the number and we allow the SUM to replace EN. The number >0017 in REGISTER >3 will be untouched. 9900 MAN merely reads the number there and makes a note of it on his Post

Cards. The SUM would be >001B. The result of this operation would leave the Number >0017 in R3 and >001B in R4. In this lesson you've learned a great deal about the 9900 CPU. In next month's lesson we will continue discussing the CPU and delve into the format of ASSEMBLY LANGUAGE. I hope you have gotten something from these lessons. Respectfully yours, BOB WEBB

END

ABOUT THE DOM - - -

ABOUT THE D.O.M. ...

Since there was no May D.O.M. I will skip directly to the June 1992 issue. We have not heard from any of you with questions or concerns. Does this mean you are loading and using the programs and files on these disks with ease and enjoyment? Hope so. Let us know either way, D.K.?

First, don't forget that all files are archived using archiver 3.03 or 3.036.

DEFRA6^ unpacks to 275 sectors. The docs are 70 of those sectors. You will need E/A-3 to load it, so use the Editor-Assembler cartridge (Load and Run), or Funnelweb, loader with the same name. It works on floppies, not hard drives. Will take a disk and move the files around so that no program or file is fragmented. They'll run better and faster. Same idea as Mike Dodd's M-Copy program (on a D.O.M. long ago) except that with M-Copy you copy the disk and with DEFRA6 you work on the disk itself. (Scary--I'd make a copy and work on that!) Both place all your files on the disk in alphabetical order.

DIGIT^ is a simpler digitizer than the one by Barry Boone. This is by Mike Ward. Uses the cassette port. Unpacks to 70 sectors. Sounds like fun!

GILLIGAN^ is the theme song from

Gilligan's Island for use with Barry Boone's F/X sound digitizer. You MUST HAVE that program to run this.

GOSPEL^ and MEXICO^ are three songs each from Jim Peterson. Both REQUIRE that you have access to Midimaster99 by Michael Maksimik (Chicago US) and a compatible keyboard or other midi-compatible sound reproducer. I have enjoyed all six songs and hope you have, or acquire, the capability for enjoying them, too.

Side one ends with MORE70'S^ from Harold Timmons. Loads with Ex. Basic. It is my favorite (so far) of Harold's many music disks. (It's a replacement for the bad copy you got on the April D.O.M. Are our faces RED?! Sorry!

Side two begins with CODER^, an encryption program. The CRYPTOEXP (doc) file is 35 sectors and seems excellent. You can share the key with a friend and send coded messages back and forth. The whole set unpacks to 44 sectors. Runs in Extended Basic.

GRAM-EMUL^ is a set of instructions for the hardware-handy to build a device similar to the GRAMCRACKER. If you have the latter or P-Gram from Bud Mills, you probably don't need to do this. The author was a TI'er, switched to Amiga for several years, and has come back to the Geneve. (You can run his device on the 4A, though). The program is 29

sectors and the Reader is 10 sectors (unpacked).

LATINI^ is Latin-American music from Harold Timmons. Runs out of Extended Basic and unpacks to 208 sectors. Does NOT run out of MIDI--runs directly out of your T.I. computer. Good stuff!

MICRO^ is a collection of eight programs, each with docs, typed in from Micropendium. Unpacks to 352 sectors. Thanks to Harley Ryan for the painstaking typing.

MIDI_SNF^ is once again, you guessed it, for Midimaster99, etc. Six really nice selections--a couple for Easter, one for Christmas, and more. Since _SNF files are in DV80 you can learn to edit them to your heart's content--customize them to your own musical tastes and inclinations.

The final file on side 2 is the READ--THIS, which explains all. I like to print out this file in Elite Condensed, thereby getting it (via cut and paste) all on one sheet of paper.

Hope you are enjoying this series and that, more importantly, it helps! Keep in touch. See you next month.

INCOME TAX HELPER
modified by
Bob DeVilbiss

Shortly after I purchased my TI PEB and printer I received this program. Who gave it to me? I have no idea, but I find this program very useful when time comes to file my income tax returns. I have no idea who the author is, so I cannot give due credit.

My knowledge of programming remains a lot to be desired, but I was able to modify certain categories to fit my personal use.

The program is divided into two sections. The first section relates to all income that is received and the second section covers all expense items

When the program is printed, subtotals and totals are provided for all categories.

I find if I enter my income and expense items each month I am able to keep up with the paper work.

The program is written in BASIC and the input is entered in DATA statements. Instructions on how to enter the data are included in the program and they can either be viewed on the screen or sent to a printer.

The following is a list of the symbols and descriptions in case you want to modify the program:

| SYMBOL | DESCRIPTION |
|---------|-----------------------------------|
| M | Maximum number of categories. |
| NO | Maximum number of data reads |
| M1 | Number of income categories |
| C1\$() | Master category code array |
| D1\$() | Master category description array |

| T\$ | Income/Deduction code |
|-----|-----------------------------|
| C4 | Transaction category code |
| D | Transaction amount |
| S\$ | Transaction description |
| T1 | Subtotal Income - Deduction |
| T2 | Total Income/Deductions |

```

100 CALL CLEAR
110 OPEN #1:"PID"
120 PRINT "INCOME TAX RECORDING PROGRAM"
130 PRINT
140 PRINT "DATA STATEMENTS START WITH"
150 PRINT "LINE NUMBER 1990"
,::
160 PRINT
170 PRINT "DO YOU WANT TO SEE THE"
180 PRINT "INSTRUCTIONS? (Y OR N)"
190 INPUT A$
200 CALL CLEAR
210 IF A$="N" THEN 840
220 PRINT
230 PRINT "THIS PROGRAM INITIALIZES"
240 PRINT "THE VARIOUS INCOME/DEDUCTION"
250 PRINT "CATEGORIES. OUTPUT IS"
260 PRINT "PRODUCED IN SEPARATE"
270 PRINT "SECTIONS FOR INCOME AND"
280 PRINT "DEDUCTIONS. SUBTOTALS AND"
290 PRINT "TOTALS ARE PRODUCED FOR ALL"
300 PRINT "CATEGORIES."
310 PRINT
320 PRINT "ALL DATA IS ENTERED USING"
330 PRINT "--DATA-STATEMENTS."
"
340 PRINT "EXAMPLE:"
350 PRINT "DATA 1,W,13.45,EMPLOYER 1. (INCOME,WAGES,AMOUNT,SOURCE)"
360 PRINT
370 PRINT "PRESS ENTER TO CONTINUE"
380 INPUT B$
390 PRINT "INCOME ITEMS ARE:

```

```

"
400 PRINT " W,WAGES"
410 PRINT " P,PENSION"
420 PRINT " TR,TAX RETURN"
430 PRINT " I,INTEREST"
440 PRINT " D,DIVIDENDS"
450 PRINT " R,RENT/ROYALTY"
"
460 PRINT " O,OTHER"
470 PRINT
480 PRINT "DEDUCTION ITEMS ARE:"
490 PRINT " C,CONTRIBUTIONS"
500 PRINT " I,INTEREST"
510 PRINT " T,TAXES PAID"
520 PRINT " MD,MEDICAL/DENTAL"
530 PRINT " CT,CASUALTY THEFT"
540 PRINT " M,MISC EXPENSE"
"
550 PRINT " O,OTHER EXPENSES"
560 PRINT
570 INPUT "DATA STARTS WITH LINE 1990 PRESS ENTER":A$
590 PRINT "DO YOU WANT A PRINTOUT OF"
600 PRINT "THESE INSTRUCTIONS? (Y OR N)"
610 INPUT A$
620 IF A$="N" THEN 840
630 PRINT #1:"THIS PROGRAM INITIALIZES THE VARIOUS INCOME/DEDUCTION CATEGORIES"
640 PRINT #1:"OUTPUT IS PRODUCED IN SEPARATE SECTIONS"
650 PRINT #1:"FOR INCOME AND DEDUCTIONS. SUBTOTALS AND"
660 PRINT #1:"TOTALS ARE PRODUCED FOR ALL CATEGORIES."
670 PRINT #1:
680 PRINT #1:"ALL DATA IS ENTERED USING -DATA-STATEMENTS ."
690 PRINT #1:"EXAMPLE:"
700 PRINT #1:"DATA 1,W,13.45 ,EMPLOYER 1"
710 PRINT #1:
720 PRINT #1:"INCOME ITEMS ARE:"
730 PRINT #1:" W,WAGES B,BUSINESS F,FARM I,INTEREST D,DIVIDENDS R,RENT/ROYALTY,OTHER"
740 PRINT #1:
750 PRINT #1:"DEDUCTION ITEMS ARE:"
760 PRINT #1:" C,CONTRIBUTIONS I,INTEREST T,TAXES PAID"

```

```

770 PRINT #1:" MD,MEDICAL/DENTAL CT,CASUALTY THEFT M,MISC EXPENSE"
780 PRINT #1:" O,OTHER EXPENSE"
790 PRINT #1:
800 PRINT #1:"DATA ENTRIES START AT LINE #1990 . DATA STATEMENT (DATA END) MUST FOLLOW"
810 PRINT #1:"LAST DATA ENTRY."
820 PRINT #1: : : :
830 INPUT G$
840 CALL CLEAR
850 REM INCOME TAX RECORDING PROGRAM
860 PRINT "INCOME TAX RECORDING PROGRAM "
870 REM **DATA INITIALIZATION**
880 M=15
890 NO=10000
900 M1=8
910 DIM C1$(15)
920 DIM D1$(15)
930 C1$(1)="W"
940 D1$(1)="WAGES (1040 LINE 7)"
950 C1$(2)="I"
960 D1$(2)="INTEREST INCOME (LINE 8) & (SCHEDULE B)"
970 C1$(3)="D"
980 D1$(3)="DIVIDEND INCOME (LINE 10) & (SCHEDULE B)"
990 C1$(4)="TR"
1000 D1$(4)="TAX REFUND (LINE 11)"
1010 C1$(5)="P"
1020 D1$(5)="PENSION BENEFITS (LINE 16a)"
1030 C1$(6)="R"
1040 D1$(6)="RENT/ROYALTY INCOME (LINE 17) & SCHEDULE E"
"
1050 C1$(7)="S"
1060 D1$(7)="SOCIAL SECURITY BENEFITS"
1070 C1$(9)="C"
1080 D1$(9)="CONTRIBUTIONS (SCHEDULE A)"
1090 C1$(10)="I"
1100 D1$(10)="INTEREST EXPENSES (SCHEDULE A)"
1110 C1$(11)="T"
1120 D1$(11)="TAXES PAID (SCHEDULE A)"
1130 C1$(12)="MD"
1140 D1$(12)="MEDICAL/DENTAL (SCHEDULE A)"

```

NEXT PAGE

Speech (Part 3)

SPEECH - THE CALL SPGET STATEMENT

(Reprinted from the Amarillo 99/4A Users Group newsletter, Feb 1983) author unknown

The field of the CALL SAY statement is formatted with a series of "word" and "direct" string expressions, each separated by a comma. Further, the string expressions must be in a specific position in the field of the CALL SAY statement. Word strings must occupy the odd positions and direct strings must occupy the even positions. To illustrate, here is an example of the use of word strings:

```
10 A$="HELLO" )
20 B$="HOW" ) word strings
30 C$="ARE YOU" )
40 CALL SAY(A$, "", B$, "C$)
```

Note the placement of the word strings in the odd positions of the CALL SAY field.

Direct strings are defined by the CALL SPGET statement. When the CALL SPGET is used, the speech code for the word is read from the ROM in the Speech Synthesizer and stored in active memory as a string variable with the name as specified in the statement. For example:

```
10 A$="HELLO"
20 CALL SPGET("HOW",B$) )direct
30 CALL SPGET("YOU",C$) )string
40 CALL SAY(A$,B$,"ARE",C$)
```

The speech code for "HOW" and "YOU" are stored in active memory and called B\$ and C\$ respectively.

The two previous examples show that the field of the CALL SAY statement must alternate between word-strings and direct-strings. The format is:

```
CALL SAY(Word string[,Direct string,Word string...])
```

The CALL SPGET statement actually calls the code pattern for a word resident in the Speech Synthesizer and assigns it to a string variable. You can then apply this string variable in a variety of ways including using it with a CALL SAY in the same program, storing the speech data on a storage device, or viewing the actual speech data. If the word or phrase specified in the CALL SPGET is not found in the Speech Synthesizer resident vocabulary, the code pattern for UNOH is stored in the string variable.

If the word called does exist, the speech data is stored in the string variable and is preceded by three bytes (ASCII characters) of control information following. The maximum number of bytes of speech data is 252 and the total length of a direct string cannot exceed 255 bytes.

The usefulness of the CALL SPGET statement is that speech data can be put in the form of a string variable that can be added to other speech data, shortened, and/or stored on cassette or disk.

Following is a program to store speech data on cassette tape:

```
10 OPEN #1:"CS1",INTERNAL,OUTPUT,FIXED
192
20 CALL SPGET("RED",B1$)
30 CALL SPGET("GREEN",B2$)
40 PRINT #1:B1$
50 PRINT #1:B2$
60 CLOSE #1
70 END
```

and following is a program to run the speech data from tape:

```
100 OPEN #1:"CS1",INTERNAL,INPUT,FIXED
192
110 INPUT #1:B1$
120 INPUT #1:B2$
130 CALL SCREEN(7)
140 CALL SAY("THIS IS",B1$)
150 FOR I=1 TO 500 :: NEXT I
160 CALL SCREEN(13)
170 CALL SAY("THIS IS",B2$)
180 GOTO 180
```

Following is a program to display speech data on the screen:

```
100 REM HEX DUMP OF SPEECH DATA
110 CALL CLEAR
120 INPUT "TYPE WORD: ":WORD$
130 CALL SAY(WORD$)
140 CALL SPGET(WORD$,R$)
150 HEX$="0123456789ABCDEF"
160 L=LEN(R$)
170 PRINT "LENGTH=";"BYTES":
180 FOR I= 1 TO L
190 DEC=ASC(SEG$(R$,I,1))
200 HIGH=INT(DEC/16)
210 LOW=DEC-16*HIGH
220 HIGH=HIGH+1
230 LOW=LOW+1
240 PRINT SEG$(HEX$,HIGH,1);
250 PRINT SEG$(HEX$,LOW,1);
260 IF I/10=INT(I/10) THEN 280
270 PRINT
280 NEXT I
290 PRINT : :
300 GOTO 120
```

Finally, in appendix M of the XBASIC manual is a description of how to add some suffixes onto speech words. This is a good description of how SPGET is used and how the speech data can be tailored and combined with other speech data.

The majority of the information presented in this discussion on speech was derived from the SPEECH EDITOR CM MANUAL. >>>>>>END<<<<<<<

DUES ANNOUNCEMENT

Dues are usually paid at or before the March meeting, and are \$30 per year for full members. This includes full use of the disk and cassette library, voting privileges and the newsletter. You may also pay your dues in two installments if desired: \$15 in March and \$15 in September. Those who join during other months of the year pay a lesser, pro-rated amount:
MAR-30.00 APR-27.50 MAY-25.00 JUN-22.50 JUL-20.00 AUG-17.50 SEP-15.00 OCT-12.50 NOV-10.00 DEC-7.50 JAN-5.00 FEB-2.50
Make checks to C.O.N.N.I., INC.

CONTACT

HARLEY RYAN, 4178 Chandler Dr; Whitehall, OH 43213
Phone 614-231-1497

Reprinted from
BC 99'ERS NEWS
March 1992

P. O. Box 99/4a

Item 1: From Ron Warfield (to Anyone); Ron has observed a problem which relates to Myarc's Hard and Floppy Disk Controller. The problem appears to exist only if the card is used alone (no second controller) and seems to have some connection to Multiplan and/or it's related files.

Specifically; If you are working with Multiplan and attempt to re-save a file using the same filename (overwrite the original file with the updated one), the result will be the loss of everything else on the disk. This does not appear to occur as long as a different filename (new - not pre-existing) is used. Further; even after the disk has been "blown", the last file which was written always seems to survive. In other words; this sort of disaster may not be so obvious at first.

Those who have yet to encounter the problem might like to take note now, rather than find out for themselves, and it is requested that anyone who has found a solution (or even a lead), contact Ron with the details in British Columbia. Mail to:

B.C. 99er User's Group
10th Ave.
New Westminster, Canada V3L 2B2216

Item 2: From Jim Atrill (to Anyone); I recently conducted an experiment involving "Networking" the 9640 to two TI systems. This was done with direct cabling and allowed certain operations to obtain speeds of 19200 bps. However, terminal to terminal transfers did not fare so well and became unreliable at speeds exceeding 4800 bps. A lack of adequate data flow control appearing to be the problem.

Further experimentation showed that flow control, while related, was not at the root of the problem. Rather; the 9640 appears to prevent the RS232 DSR from attaining hardware control during transfers and the RTS, and RX/TX Clock signals are absent. LOAD/SAVE operations (to/from RS232) do not appear to be possible at any speed, and yes; All operations which failed on the Geneve were successful between two TI systems using the same (not equivalent) equipment.

It is believed that a "Networking" capability would open up a whole new world of programing opportunities to the 9640 community in particular, but could be of even greater benefit to the TI-99/4a user. Such a system might, for example, combine the TI's more reliable I/O functions with the speed and memory of the Geneve. Alternatively; a 32K, 80 Column equipped TI might be used to remotely run programs which are similar in nature to Word Perfect or Oracle, and co-processing capabilities could be added to the software. And so;

Is there anyone out there who would be in a position to assist in identifying the DSR problem and/or would anyone be interested in pursuing this as a co-operative project?

END

SECOND OPAnews Spring 1992

Welcome to the second issue of OPAnews, a company newsletter, designed to keep the users of our products and services informed on what new things are happening at OPA and what products have been added to our growing product line. We hope you will find this annual newsletter very useful over the months to come. We also would welcome any comments or suggestions you may have on improving this new free service to our valued customers and dealers.

Being the second issue of OPAnews, we will be updating the product listing and adding our new products. After reading this issue you should be fully informed on what OPA does did and will do in the months to come.

THE LAST YEAR

OPA has been very busy over the last year with the development of new products that will released in 1992. This has been the big stumbling block and why you, the customer have not seen much from OPA in 1991. OPA is also in the process of trying to grow in other areas, including staff. The addition of John Van Weelie in September of 1991 has greatly aided in more timely processing of correspondence and orders.

One project that OPA has spent many hundred hours of labour and many hundreds of dollars in materials on was the

NEXT PAGE

accelerator for the TI. This project has much more research and development required to bring this project to production. This intensive expense of labour and money in materials has taken a big toll on part of our business. So OPA has stepped out of any further work on the accelerator at this point allowing OPA to concentrate on the main products of our business and the projects that we have put aside during 1991 which should have been completed.

Any inquiries concerning the TI Accelerator should be directed to Bud Mills of Bud Mills Services, 166 Dartmouth Dr., Toledo, OH 43614 or (419)385-5946.

PHOENIX 2001 SERIES

The PHOENIX 2001 software started in 1988 as a line of superior programs designed to have enough power and usefulness to help the TI live past the year 2001. Reaching this goal means understanding how quickly programs can become outdated, therefore we study our software, listing what customers want added, and when possible mailing out free updates. When you buy a program from us, you are getting a subscription to these updates. This does not mean our programs need to be updated a lot. Many have not changed since they were first released because we do spend the time and effort on in-house beta-testing. The result is a program you know can be trusted. When we update, it's because of new features, not because we left major bugs behind.

TASS 2001

TRI-ARTIST-SLIDE-SHOW, enables you to produce a professional full color or B/W slide show of TI-ARTIST, GRAPHX, DRAW-A-BIT II, and DRAW-N-PLOT files. Functions allow for a different "per picture delay" per drive and start, forward, pause, reverse, and stop operations; also capable of left, right, up, down flips, conversion into any of the above file formats plus TRUE-RLE, and printing to color printers. The best feature; TASS can load in a full-color picture without destroying the current screen display; this feature produces a real slide show.

A-300: \$15.00 Canadian / \$10.00 U.S.

DISKDEX 2001

DISKDEX makes up master catalogs of your disks, and allows you to print, update, delete, sort, and display any of your files/disks. DISKDEX has the feature of storing file comments that DISK UTILITIES by John Birdwell uses, allowing better catalogs. Even though it stores more information than other programs it runs faster, using every gram of TI power. You can search in any combination of prefixes, suffixes, and wildcards in any field combination. As it has easy-to-learn menus, you probably won't need the comprehensive manual. These and other great features are contained in a cohesive 100% Assembly program fitting well within your 32K. It's amazing!

B-110: \$20.00 Canadian / \$15.00 U.S.

RECALLIT 2001

RECALLIT, was originally a simple Name and Address lister, but is fast becoming a powerful database. Using the RAMBO PROGRAM SPACE from 8K to 512K it can store up to 4000 records, each with 10 defined fields. Searching for strings can be done in any field combination. A variety of printouts from labels to two-columns are supported. Re-indexing by any field is possible. Like other 2001 software it has easy-to-learn menus, all contained in a 100% Assembly program. An amazing thing about RECALLIT combined with RAMBO is the ZERO-TIME sorter, you will never have to wait.

D-190: \$10.00 Canadian / \$8.00 U.S.

END

At the last meeting, our editor asked me about ways to convert listed programs to 28-column width, and to convert listed programs to runnable programs. A couple of days later, I had a phone call from a user asking about the same thing. And, I have received a few newsletters with reprints of an article describing a method of listing to the printer in 28-column format.

Why list in 28-column format? Because that is the way a program appears on the screen. It is much, much easier to key in a program accurately when it is published in 28-column format, because you can edit your work by checking the position of characters in relation to the line above - especially when the program contains long stretches of blanks, or long hex codes.

About that method currently being reprinted - it doesn't work. At least, it doesn't work properly with Extended Basic programs. The idea is that you open the printer and send it ASCII codes 27 81 28, which sets the right margin at 28. You can get the same result by OPEN #1:"P10",VARIABLE 28.

The problem is that Extended Basic program lines can be keyed in up to 140 characters long, and can be forced considerably longer. When you LIST a program to disk, it is saved in DV/80 format. Any line longer than 80 characters is broken into separate 80 character records. When you break those records into 28-character segments, you have program lines stopping in the middle and then continuing on the next line. They can still be keyed in correctly, if you realize what has happened, but the listing will not be in screen format, which is the whole purpose of using 28 columns.

Besides, you probably don't want to output to the printer. You want to output to disk, so you can incorporate the listing into a text article, as I am about to do.

So, what to do? If you have the Triton Super Extended Basic module, it is as easy as pie. Just -
LIST "DSK1.LISTING":28:1-32766. It will do a perfect job but the listing will be in DV/28 format, which will not load into Funnelweb. So I will now write a

little program, save it, list it with my Super Extended Basic, and then load my little program to convert the DV/28 file into a DV/80 file which I will insert right here -

```
100 DISPLAY AT(10,1)ERASE ALL
L:"Input file? DSK":":": "Output file? DSK" :: ACCEPT AT(10,16):LN$ :: ACCEPT AT(12,17):OUT$
110 OPEN #1:"DSK"&LN$,VARIABLE 28,INPUT :: OPEN #2:"DSK"&OUT$,OUTPUT
120 LINPUT #1:M$ :: PRINT #2:M$ :: IF EOF(1)<>1 THEN 120 ELSE CLOSE #1 :: CLOSE #2
```

But you don't have the Triton module? Well, several years ago I wrote a 28 column converter which will do the job perfectly. It will also optionally replace and transliterate those characters that get messed up when you print a program listing through the formatter. It will even recognize unprintable blank characters which have been keyed in with the CTRL key and print their key letter underlined. That program was published in Tips From The Tigercub #18 with an upgrade in #21. It is available on my TI-PD disk #1015 and I will put it on the Spirit of 99 BBS again.

That program does require that the listing have standard line number spacing, numbered by tens from 100. If you are starting with a listing which is not in that format, this one will do the job but not as easily, because you have to first insert a carriage return at the end of each program line. To do that, load the listing into the Funnelweb Editor, press CTRL O to get the hollow cursor and CTRL U to get the underline cursor, go to the end of each program line with the arrow keys and press N.

```
100 DISPLAY AT(3,6)ERASE ALL
:"PROGRAM RELISTER":":": "Will reformat a LISTed XBasic program from any linelength to any other length."
110 DISPLAY AT(8,1): "Each program line (not file line) must end in a carriage return."
120 DISPLAY AT(12,1): "Input
```

```
filename?": "DSK" :: ACCEPT AT(13,4):IF$ :: DISPLAY AT(15,1): "Output filename?": "DSK" :: ACCEPT AT(16,4):OF$
130 DISPLAY AT(18,1): "Present line length?": "ACCEPT AT(18,22)SIZE(2)VALIDATE(DIGIT):A
140 DISPLAY AT(20,1): "Reformat to what length?": "ACCEPT AT(20,26)SIZE(2)VALIDATE(DIGIT):X :: IF X=A THEN 130
150 OPEN #1:"DSK"&IF$,INPUT :: OPEN #2:"DSK"&OF$,OUTPUT :: IF X<A THEN 230
160 IF EOF(1)THEN 270 :: LINPUT #1:M$ :: L=LEN(M$):: IF POS(M$,CHR$(13),1)=0 THEN 180
170 IF P+L<X+1 THEN PRINT #2:M$ :: P=0 :: GOTO 160 ELSE PRINT #2:SEG$(M$,1,X-P)&CHR$(13):SEG$(M$,X-P+1,255):: P=0 :: GOTO 160
180 IF L<A THEN M$=M$&RPT$(" ",A-L):: L=A
190 IF P=0 THEN PRINT #2:M$ :: P=L :: GOTO 160
200 IF P+L<X THEN PRINT #2:M$ :: P=P+L :: GOTO 160
210 IF P+L=X THEN PRINT #2:M$&CHR$(13):: P=0 :: GOTO 160
220 PRINT #2:SEG$(M$,1,X-P)&CHR$(13):SEG$(M$,X-P+1,255):: P=LEN(SEG$(M$,X-P+1,255)) :: GOTO 160
230 IF EOF(1)THEN 270 :: LINPUT #1:M$
240 L=LEN(M$):: IF L+P>X THEN PRINT #2:SEG$(M$,1,X-P)&CHR$(13):: M$=SEG$(M$,X-P+1,255):: P=0 :: GOTO 240
250 IF M$=CHR$(13)THEN 230
260 IF POS(M$,CHR$(13),1)<>0 THEN PRINT #2:M$ :: P=0 :: GOTO 230 ELSE PRINT #2:M$:: P=LEN(M$):: GOTO 230
270 CLOSE #1 :: CLOSE #2
```

That one is also on TI-PD 1015.

Now, about converting listings to programs, without having to key them in - well, let's save that for next month.

END

P-GRAM and P-GRAM+ GROM Emulator and Real Time Clock

What is a P-GRAM and what is a P-GRAM+?

The P-GRAM is a card for the Peripheral Expansion System that adds 72K of Battery-backed memory to the TI-99/4A (40K GRAM, 16K bank switched RAM and 16K bank switched DSR RAM). This memory is added in place of the ROM memory used for module software. The P-GRAM allows you to save modules to disk and then load them into the P-GRAM's memory to be used. Once a module has been saved to disk and loaded into the P-GRAM, it won't be needed again. The computer cannot tell the difference between a module loaded into the P-GRAM and one inserted into the computer. Since the P-GRAM's memory is maintained by battery, the contents of the P-GRAM will remain even if the computer is turned off. The P-GRAM+ adds 120K of GRAM to the P-GRAM to enable the VOLUME MODULE LIBRARY and ADDS three pages of TI Title Screens.

The real-time clock option may be purchased at an extra cost and provides the computer with time, date and day-of-the-week information. The optional clock is compatible with software written for EITHER the MBP clock card or CorComps Triple Tech and 9900 Stand Alone clocks, thus providing compatibility with a wide range of existing clock-based software.

What can the P-GRAM do for me?

The P-GRAM may be used to emulate almost any module (including Extended Basic, Editor/Assembler, Multiplan, TI-Writer and hundreds of others). This not only provides a backup of each module you currently own, but puts an end to frustrating problems caused by "flaky" modules and worn module ports.

The software required to save and load modules is part of the P-GRAM's operating system and is loaded when the card is installed. A few keystrokes are all that are needed to call up a menu-driven program that allows you to use any P-GRAM feature.

The files created when saving modules to disk for use with the P-GRAM are compatible with files saved by the Gram Kracker and Cart Saver programs. Thus, modified modules used with other devices can be used on the P-GRAM.

The P-GRAM+ has three additional pages of GRAM (five 8K banks per page) that allows you to store many GROM based modules in addition to the 72K P-GRAM capacity. You can also use J.P. Hoddie's "GRAM PACKER" to convert many of your favorite programs into GPL format and "stack" them into the P-GRAM+ for "instant access" from the TI Title screen. John Johnson's BOOT ver 12 will run from the P-GRAM+ as well as from any other device.

Since the P-GRAM uses RAM and GRAM memory to store modules, it can also be used to modify them using an advanced memory editor that is part of the P-GRAM's operating system. This allows bugs to be fixed (such as printer and RAMdisk incompatibilities) and new features can be added or software can be customized to fit your specific needs. You no longer have to be satisfied with whatever was programmed into the original module. The P-GRAM allows you to change and improve things that you never could before.

The P-GRAM can be used just like a "Super Cart" module (an Editor/Assembler module with 8K of RAM). This allows the user to run the growing number of programs requiring this type of module. However, The P-GRAM's memory is not limited to running modules. The memory can be used for an application requiring RAM or GRAM memory. A full 56K of memory is available for use in the module memory space.

The built-in memory editor allows you to inspect or modify any memory accessible by the computer. Although the memory editor is designed primarily for making changes to modules, it can be used to access memory in any part of the system. The memory editor allows you to view, alter, move, fill, print, search or dump to disk any memory you wish and also provides control over the CPU interface. The memory editor is simple to use, even for people who have no experience with such programs. Each function is documented and easily accessed using function keys.

The optional real-time clock allows your computer to easily access time and date information for use by a variety of programs. Since the P-GRAM's clock is compatible with both the MBP and CorComp clock devices you can use any existing programs requiring a clock device as well as create new ones. The P-GRAM clock is easy to access through any programming language and has built-in software to set the clock.

NEXT PAGE

Do I have to be an "Expert" to use the P-GRAM?

The P-GRAM is designed to be easy for anyone to use, regardless of prior computing experience. All software is menu-driven and user-friendly. Since the P-GRAM is completely software-controlled and uses no switches, the user only needs to follow the simple prompts to use any P-GRAM feature. The detailed operating manual describes step-by-step procedures for installing and using the P-GRAM and explains how to use every function of the P-GRAM card.

Of course, the P-GRAM is not limited by it's ease of use. The operating manual includes an extensive technical data section with complete information on accessing the P-GRAM's features through Basic or Assembly languages and includes sample source listings. The method of operation and control of the card is discussed in detail along with helpful advice for writing custom utilities. Additionally, complete source code for the operating system and it's loader (including the memory editor) are provided on disk with the P-GRAM.

How can I get a P-GRAM?

The P-GRAM is available with or without the real-time clock and may be purchased in kit form or fully assembled. The kit comes complete with circuit board, all parts and an illustrated instruction guide. Assembled cards are fully tested and include a 6-month warranty. Kits and completed cards may be ordered from:

Bud Mills Services, 166 Dartmouth Dr, Toledo, OH 43614

Complete P-GRAM (72K) kit = \$150.00 Complete P-GRAM+ 192K kit = \$200.00
ADD \$30.00 for fully assembled and/or ADD \$20.00 for the CLOCK option.

U.S. and Canada shipping is included and credit card orders may be called in to Bud Mills Services at (419) 385-5946. (There is a 10% surcharge for cc orders).

The P-GRAM requires a TI-99/4A, Peripheral Expansion System (P-Box), 32K, Disk Drive and Editor/Assembler (used for loading the operating system).

IMPORTANT: The P-GRAM does not currently function with QI consoles. If you have a tan-colored console, look into the I/O port on the right side of the computer. If the connector is surrounded by silver "fingers", the console is a QI unit and will not function properly with the P-GRAM. If the connector is surrounded by gold "fingers", it is not a QI unit and is compatible. All Black and Silver consoles are compatible with the P-GRAM.

END

POTPOURRI
by Bill Sheridan
reprinted from
K-TOWN 99'er
May, 1992

(switch #1 on, all others off). That is all there is to it. Don't need to reload the ramdisk. Just be sure that the Horizon MENU program and LOAD program have the right address (example - DSK5.LOAD - DSK5.SPELLIT) to the files you have stored on your ramdisk.

In one of my past POTPOURRI articles I mentioned that I couldn't get SPELL-IT! or TELCO to work with my Horizon Ramdisk. I also remember reading in one of the newsletters we receive, that someone else was having the same problem. Well, thanks to Bob Bibson, our local guru, the fix is simple. Pull the ramdisk out of the PE box (wait two minutes after power down) and look for a switch on the ramdisk. Set the CRU address to >1000

I checked the time using SPELL-IT! on the ramdisk and on two DSSD disk. Using a text I had that had 472 unique words, the ramdisk took 3 min. and 7 sec. to complete the program without changing any of the words. The two DSSD disk took about 5 min. and 19 sec. to do the same.

END

**MEETING DATES
FOR
1992**

C.O.N.N.I. BOARD MEMBERS

3RD SATURDAY
18 JUL 1992
15 AUG 1992
19 SEP 1992
17 OCT 1992 *
21 NOV 1992 *
19 DEC 1992

* Meeting will be held at the Janis Center due to OSU football games.

4TH WEDNESDAY
22 JUL 1992
26 AUG 1992
23 SEP 1992
28 OCT 1992
24 NOV 1992
22 DEC 1992

| | |
|------------------------------------|--------------|
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| Treas - Everett Wade | 614/262-6346 |
| Sec/Sat - Jim Peterson | 614/235-3545 |
| Sec/Wed - Dick Beery | 614/459-3597 |
| Membership - Harley Ryan | 614/231-1497 |
| Librarian - Chuck Grimes | 614/268-8821 |
| Disk - Dick Beery | 614/459-3597 |
| Cassette - Everett Wade | 614/262-6346 |
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