

(continued from 6)

```

ION TABLE
MOV +,R1 GET Y MOTION
CI R1,>2000
JL #+4
MOV #R1,R1
SWPB R1 PUT IN MSB
BLWP @VSBW
INC R0 BUMP POINTER
MOV +,R1 GET X MOTION
CI R1,>2000
JL #+4
MOV #R1,R1
SWPB R1 PUT IN MSB

```

```

BLWP @VSBW
JMP #-88

```

```

PAGE
END

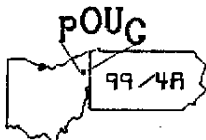
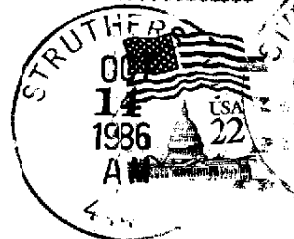
```

Assemble this routine and RUN it. You should get a silly stick wriggling down your screen from upper left to lower right. That's character 95. Too bad we don't have a routine to define characters, isn't it????

THINK ABOUT THAT ONE.

8

PENN-OHIO USERS GROUP
 71 ELM STREET
 STRUTHERS, OHIO 44471

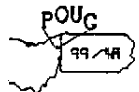


DALLAS TI HOME COMPUTER
 1221 MOSSWOOD
 IRVING, TX 75061

PENN OHIO 99/4A HOME COMPUTER
 USERS GROUP NEWSLETTER



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Volume 3

OCTOBER 1986

Number 10

NEXT MEETING

OCTOBER 13, 1986

PRESIDENT'S CORNER

The September Meeting was one that we can say was a Super One. With Judy there with all her goodies for sale and Tom giving us a demo of MultiPlan, the room was like a bee hive, there was sure a lot of buzzing, along with the buzzing a lot was had by the the people there.

I hope that we can have as good a turnout this month. There is a lot to be talked about. One of the topics will concern the arrival of a UPS package from CorComp, if by the 13th we know what we are doing it will be demod, if not we will just show it to you and try to make it work. What is it you say, CorComp 512K MEMORY PLUS card. Editor's note: "you see who I am sticking with."

There have been a lot of talk about DataBases, well yesterday I downloaded the latest version of PR Base. All of the reviews and Ron Baker gives it a super rating. If we twist Ron's arm we might get him to demo it for us. He is at present using on of the high price DataBase and he is planning to change over, because of the speed and it's very user friendly.

So plan on making the meeting there will be a lot to do and to talk about. So where in this newsletter there should be a review of the Seattle TI Convention. I hope the news will please you and prove that we are very much alive.

The following is a reprint of a reprint. It comes to us by way the Milwaukee User Group and the "Direction", the official magazine for the TI professional

ONE MORE TIME: Although TI stopped making its ever popular 99/4A home computer in 1983, the company still provides parts, service, accessories and technical advice thru its nation wide toll-free number 800-TICARES. If you wonder why I keep mentioning this little machine, it is because (continued on page 2)

CREDITS

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INVITATION

Please take this opportunity to challenge yourself. Write an article for the newsletter. Send your copy to Ed Luptak, 71 Elm Street, Struthers, OH 44471, or if you wish to send it via modem call 755-7691. You may write or type, but easiest for me would be a display variable 80 disk file (TI-Writer).

DUES

Dues are \$10 per year for individual, and \$15 per year for families. Dues are for each calendar year. Dues go to publication cost of the newsletter and library expences.

PRESIDENTS CORNER
(continued from page 1)

that market has risen like a Phoenix from the ashes. By all right, that computer and its supporters should have long since ceased and desisted. However, thousands upon thousands of its users are actively supporting numerous third-party vendors who've seized a unique opportunity when TI stopped production of the 99/4A.

There's a moral there.....
somewhere

<==Ed

WANTED TO BUY!

I need a RS232 interface card. Anyone wishing to part with thers, please let me (Ron Kendra) know. My phone number is 824-3786. Or you could see me at the next meeting.

Follow is a list of shorthand words that you might be able to use in your program.

1	TO	N	BREAK
2	STEP	O	UNBREAK
B	OPTION	P	TRACE
9	OPEN	Q	UNTRACE
0	THEN	R	INPJIT
A	ELSE	S	DATA
B	::	T	RESTORE
C	!	U	RANJOMIZE
D	IF	V	NEXT
E	GO	W	READ
F	GOTO	X	STOP
G	GOSUB	Y	DELETE
H	RETURN	Z	REM
I	DEF	>	PRINT
J	DIM	:	ON
K	END	+	CALL
L	FOR	-	AND
M	LET		

When you are entering a program, you press the CTRL key plus another key in the list. You will only see the cursor move on the screen. When you list the program, they will be fully printed. Try them out before you put them in a program to make sure

that they work.

We have a mini multiplan program in our club which was brought to us from our friends from Akron. All you need is a computer and a cassette. (Plus some time to learn how to use it.)

Ron Kendra

TRICKS OF THE TRADE

by Adam Dray

Hello, everybody! This month, we're going to talk about SQUARES. Can you say "square"? That's very good!

The following discussion concerns a program written in Console Basic. If you have XB, then the program WILL NOT RUN AS WRITTEN. With my guidance - and your patience - I will explain how to convert it to Extended Basic. In this way, I am hitting two birds with one stone, so to speak.

My SQUARES program is a colorful graphics demonstration. It uses fairly simple techniques to place squares of different color and size all over the screen. Here's how it works:

The first two lines clear the screen and set screen color to 16 (white). Lines 120 to 150 set each character set to a different color, skipping 1 (transparent) and 16 (white - the same as the screen). It also redefines the first character of each set as a solid block (16 F's). Line 160 prepares for random number generation, and line 170 initializes COLOR to equal 2 (this is because we want to skip color #1 when making our blocks).

Line 180 randomly generates the length of our square's side. The next two lines choose where our square will be placed (X and Y are column and row, respectively). They subtract the length of the side from the RND factor because otherwise, the square could print off the screen and cause an error.

In line 210, the color set (character set) is incremented by one, and the program equates COLOR to 2 if it equals 16 because a white square would not be visible on a white screen.

Lines 240 through 290 print the square onto the screen. The variable A is reset to zero in line 240. This variable will act as a counter - when A=SIDE, the computer will quit printing blocks and will return to 180 for another square. Line 250 uses the HCHAR subprogram to print a number of colored blocks equal to SIDE at row Y, column X. The blocks will be an ASCII code equal to COLOR*8+24. This is reasoned as follows: Each character set is eight characters long. Character set #1 contains characters 32 through 39, #2 contains characters 40 through 47, and so on. If we take the current color (variable COLOR), multiply it by 8, and add 24, it will give us the ASCII code that we defined in the beginning of the program. The Y value is incremented by one every time in line 270. If A does not equal SIDE, then the program will loop back to 250 and print another line.

XB Conversion:

To convert this program, one needs to know why it will not run in Extended Basic. XBasic allows only character sets 0 through 14. Console Basic has those, plus 15 and 16. This program utilizes set 15, which will cause errors in Extended. The process of converting any program with this problem can be difficult and time-consuming, especially if it is a longer program.

Start by changing line 120:

```
120 FOR A=1 TO 14
```

This will cause the following necessary changes:

```
140 CALL COLOR(A,A+1,16)
Later in lines 170 and 230,
```

COLOR should equal 1, not 2.

Next, the 16 in line 220 should be a 15.

If you run the program now, you'll find that the screen gets painted black. To avoid this, make these changes:

```
100 CALL CHAR(33,"00000000
0000000")
```

```
110 CALL HCHAR(1,1,33,768)
```

This redefines character 33 to a blank block and prints this blank in every screen position. The program should now work fine.

Lately, the West Penn 99'ers Club has had some really interesting programettes (little programs) in their newsletters. I picked up a color demonstration programette that finally led me to SQUARES. Be sure to see a copy of their newsletter next month!

BY THE WAY, XB programmers are blessed with a square root function that Regular Basic doesn't have. But don't worry, just use the exponent caret and the exponent 1/2 like this:

If you want the square root of 100 -

```
XB only A=SQR(100)
```

```
CB or XB A=100 (1/2)
```

Similarly, in either language, you can get any root(x) by using n (1/x). That is, 27 (1/3)=3 and 16 (1/4)=2.

*Ed. Note: This was Adams last article. I coul't get it to load with my CorComp after checking with him last week, I found it worked on his, I was able to get to load on my other computer. Now that it's in this issue I hope we will start getting some SEC. REPORTS so that if you can't make a meeting will know what went on.

BASIC VERSION

```

100 CALL SCREEN(16)
110 CALL CLEAR
120 FOR A=1 TO 15
130 CALL CHAR(A*8+24,"FFFFFF
FFFFFFF")
140 CALL COLOR(A,A,16)
150 NEXT A
160 RANDOMIZE
170 COLOR=2
180 SIDE=INT(RND*10)+1
190 X=INT(RND*(32-SIDE))+1
200 Y=INT(RND*(24-SIDE))+1
210 COLOR=COLOR+1
220 IF COLOR<16 THEN 240
230 COLOR=2
240 A=0
250 CALL HCHAR(Y,X,COLOR*8+2
4,SIDE)
260 A=A+1
270 Y=Y+1
280 IF A=SIDE THEN 180
290 GOTO 250

```

XBASIC VERSION

```

100 CALL CHAR(33,"0000000000
000000")
110 CALL HCHAR(1,1,33,768)
120 FOR A=1 TO 14
130 CALL CHAR(A*8+24,"FFFFFF
FFFFFFF")
140 CALL COLOR(A,A+,16)
150 NEXT A
160 RANDOMIZE
170 COLOR=1
180 SIDE=INT(RND*10)+1
190 X=INT(RND*(32-SIDE))+1
200 Y=INT(RND*(24-SIDE))+1
210 COLOR=COLOR+1
220 IF COLOR<15 THEN 240
230 COLOR=1
240 A=0
250 CALL HCHAR(Y,X,COLOR*8+2
4,SIDE)
260 A=A+1
270 Y=Y+1
280 IF A=SIDE THEN 180
290 GOTO 250

```

THE FIRST ANNUAL SEATTLE TI
CONVENTION SEA-TAC HOLIDAY
INN - SEPT. 26/27, 1986

A Review, by Tom Kennedy

Friday Night - Presidents dinner

A dinner held in honor of the presidents of the 14 participating User's Groups, and also introducing the V.I.P.'s in attendance. Guests included:

C.Sobbitt	ASGARD Software
J.Horn	CompuServe TI Forum
J.Lawrence	Bits and Chips
C.Miller	Miller's Graphic
L.Phillips	MYARC Inc.
C.Regena	Compute! Magazine
J.Smith	Disk Consulting Ltd
F.Wagenbach	T.A.P.E.
B.Weiderhold	Queen Anne Computer (Event Coordinator)

HIGHLIGHTS:

* Craig Miller Announced on Saturday) that M.G. will join with "Well Known Larger Firm" (whose name won't be announced until January) to produce a hardware attachment allowing the 99/4A to run MS-DOS and MS-DOS compatible software.

Craig says: "The unit will be such that you will not have to add anything"

Miller Graphics will also be releasing three new pieces of software before year's end, marketed toward the average user.

* Jim Horn announced the upcoming formation of the first Genev'e User's Group. The first board meeting will be held online with the TI Forum within two months. The purpose of the U.G. is to foster support and usage of the new computer, as well as provide a source of answers to the many expected questions to arise. NOTE: Membership to this U.G. is NOT limited to Genev'e owners

(As there aren't any yet!).

* C. Regena (aka Cheryl Whitelaw), formerly Program Editor for the "Good 'ol" 99er HCM, is a Best-Selling author of programming books for the TI and has been a columnist for COMPUTE! magazine.

A couple of years ago, we did a survey of club members. This was done to give us some idea of the equipment and interest of club members. Please fill in this survey as accurately as possible. Include any comments or suggestions that you wish. We hope to gain a better insight as to the directions that you, as club members, wish our users group to take.

PLEASE PRINT.

CHECK WHAT EQUIPMENT THAT YOU OWN.

<input type="checkbox"/> TI 99/4A CONSOLE	<input type="checkbox"/> F-BOX
<input type="checkbox"/> MEMORY EXPANSION	<input type="checkbox"/> RS 232 CARD
<input type="checkbox"/> DISK CONTROLLER AND DRIVE	NO. OF DRIVES: _____
	TYPE OF DRIVES: _____
<input type="checkbox"/> PRINTER BRAND: _____	
<input type="checkbox"/> MODEM : <input type="checkbox"/> 300 BAUD	<input type="checkbox"/> 1200 BAUD <input type="checkbox"/> SMART
<input type="checkbox"/> EXTENDED BASIC	<input type="checkbox"/> MINI MEMORY
<input type="checkbox"/> EDITOR/ASSEMBLER	<input type="checkbox"/> TI WRITER
<input type="checkbox"/> MULTIPLAN	

OTHERS: (no games please)

OTHER THEN BASIC AND EXTENDED BASIC, WHAR OTHER COMPUTER LANGUAGE CAPABILITIES DO YOU HAVE?

HOW MANY HOURS A WEEK DO YOU SPEND AT YOUR COMPUTER? _____

WHAT DO YOU USE YOUR COMPUTER FOR THE MOST?

ON THE BACK OF THIS SHEET, PLEASE ANSWER THE FOLLOWING QUESTIONS. PLEASE BE BRIEF BUT COMPLETE IN YOUR ANSWERS.

1. WHAT WOULD YOU LIKE TO SEE MORE OF AT CLUB MEETINGS?
2. WHAT ABOUT LESS OF?
3. WHAT DO YOU PERSONALLY WANT FROM POU??

THIS NEXT AND LAST QUESTION IS NOT A LOADED QUESTION. PLEASE REMEMBER AS YOU ANSWER IT THAT YOU ARE NOT AT THIS TIME MAKING ANY COMMITMENT.

4. IN ORDER THAT ANY CLUB IS TO SUVIVE AND GROW BOTH IN NUMBERS AND DIVERSITY, IT MUST HAVE THE CO-OPERATIION AND COMMITMENT OF IT'S MEMBERS. THIS DOES NOT MEAN THAT YOU SHOULD SPEND EVERY WAKING MINUTE ON ACTIVITIES FOR THE CLUB BUT BY VOLUNTEERING FOR ANY FUNCTION YOU ARE SAYING THAT YOU WILL DO YOUR BEST IN PERFORMING THAT FUNCTION. WITH THIS IN MIND, WHAT CAN YOU DO FOR POU??

THIS. 4. What can you do for PDUG? If you cannot make the meeting PLEASE MAIL

FOLD HERE

PENN-OHIO USER GROUP
71 ELM STREET
STRUTHERS, OHIO 44471

PENN-OHIO USERS GROUP
71 ELM STREET
STRUTHERS, OHIO 44471

FOLD HERE

```

170 IF (S=1)+(K<49)+(K>56)TH
EN 160
180 ON K-48 GOTO 190,250,611
,800,300,990,1120,1510
190 I=0
210 INPUT "SUBJECT? " :S0
210 GOSUB 1371
220 INPUT "TEST #? " :N
230 GOSUB 1441
240 GOTO 140
250 PRINT :;"(1)ADD NAMES?"
:"(2)ADD GRADES?"
260 CALL KEY(A,K,S)
270 IF (S=0)+(K<49)+(K>56)TH
EN 260
280 ON K-48 GOTO 290,310
290 GOSUB 1370
300 GOTO 140
310 INPUT "TEST #? " :0
320 IF T(L,0)=1 THEN 350
330 PRINT :;"TEST #? BTRV(0
1) "
:"ALREADY RECORDED"
340 GOTO 140
350 M=0
360 GOSUB 1440
370 GOTO 140
380 CALL CLEAR
390 PRINT "OUTPUT TO:" :"(1)SC
REEN?:" :"(2)PRINTER?"
400 CALL KEY(A,K,S)
410 IF (S=0)+(K<49)+(K>56)TH
EN 400
420 IF K=49 THEN 460
430 INPUT "PRINTER DESIGNATI
ON? " :P0
440 OPEN #2:P0
450 F0=2
460 PRINT "PRESS ANY KEY TO
TAUSE" :
470 PRINT #F0:0 :
480 FOR J=1 TO X
490 PRINT #F0:;"N0(J) " :T
0(J) :
500 FOR K=1 TO MN
510 PRINT #F0:;(J,K) :
520 NEXT K
530 CALL KEY(A,K,S)
540 IF S<0 THEN 530
550 NEXT J
560 PRINT #F0
570 IF F0=0 THEN 140
580 F0=0
590 CLOSE #2
600 GOTO 140
610 PRINT :;"(1)CASSETTE?"
:"(2)DISK?"
620 CALL KEY(A,K,S)
630 IF (S=0)+(K<49)+(K>56)TH
EN 620
640 ON K-48 GOTO 650,670
650 OPEN #2:"CSI",INPUT, :IX
ED
660 GOTO 690
670 INPUT "FILENAME? DSK" :F0
680 OPEN #2:"DSK" :F0,INPUT
690 INPUT #2:K,M,N,S0
700 FOR J=1 TO I
710 INPUT #2:K0
720 M0(J)=SEG$(K0,1),POS(K0),C
HR0(255),1)-1)
730 K0=SEG$(K0,POS(K0,CHR$(2
55),1))+1,255)
740 FOR K=1 TO MN
750 T(J,K)=ASC(SEG$(K0,K,))
-50
760 NEXT K
770 NEXT J
780 CLOSE #2
790 GOTO 140
800 PRINT :;"(1)CASSETTE?"
:"(2)DISK?"
810 CALL KEY(A,K,S)
820 IF (S=0)+(K<49)+(K>56)TH
EN 810
830 ON K-48 GOTO 840,860
840 OPEN #2:"CSI",OUTPUT, :IX
ED
850 GOTO 880
860 INPUT "FILENAME? DSK" :F0
870 OPEN #2:"DSK" :F0,OUTPUT
880 PRINT #2:K,M,N,S0
890 FOR J=1 TO X
900 K0=""
910 FOR K=1 TO MN
920 K0=K0CHR$(T(J,K)+50)
930 NEXT K
940 PRINT #2:N0(J) :CHR0(255)
:K0
950 K0=""
960 NEXT J
970 CLOSE #2
980 GOTO 140
990 CALL CLEAR
1000 INPUT "STUDENT'S NAME?
" :00
1010 FOR J=1 TO X
1020 IF M0(J)=00 THEN 1060
1030 NEXT J
1040 PRINT :;"NAME NOT FOIN
D" :
1050 GOTO 140
1060 INPUT "CORRECT WHICH TE
ST? (0 TO QUIT) " :C
1070 IF C=0 THEN 1110
1080 PRINT :;"N0(J) :""S TEST
#? " :STR$(T(J,C)) :
1090 INPUT "CORRECT TO? " :C
J,C)
1100 GOTO 1000
1110 GOTO 140
650 OPEN #2:"CSI",INPUT, :IX
ED
1130 PRINT "OUTPUT TO:" :"(1)S
CREEN?:" :"(2)PRINTER?"
1140 CALL KEY(A,K,S)
1150 IF (S=0)+(K<49)+(K>56)TH
EN 1140
1160 IF K=49 THEN 1200
1170 INPUT "PRINTER DESIGNAT
ION? " :P1
1180 OPEN #2:P1
1190 F0=1
1200 PRINT #F0:S0
1210 FOR J=1 TO I
1220 PRINT #F0:N0(J) :"" AVERA
GE " :
1230 FOR K=1 TO MN
1240 TT=TT+(T(J,K)
1250 NEXT K
1260 AV=TT/MN
1270 TAV=TAV+AV
1280 PRINT #F0:AV
1290 TT=1
1300 NEXT J
1310 PRINT #F0:"CLASS AVERAG
E " :TAV :
1320 TAV=0
1330 IF F0=0 THEN 1360
1340 F0=1
1350 CLOSE #2
1360 GOTO 140
1370 PRINT :;"STUDENT'S NAM
ES - " :
:"type END when finish
ed" :
1380 X=X+1
1390 M0="NAME #""STR0(X) "
1400 INPUT M0:N0(X)
1410 IF M0(X)<>"END" THEN 13
70
1420 X=X+1
1430 RETURN
1440 FOR J=1 TO X
1450 M0=N0(J) :""S GRADE" "
1460 INPUT M0:T(J,N)
1470 NEXT J
1480 IF M0=N THEN 240
1490 MN=N
1500 RETURN
1510 END

```

The reason that 30 is added to the value in line 920, before saving, and subtracted again in line 750 after loading, is because of a quirk in the computer that I don't recall seeing in print anywhere. Did you know that INPUT will read a string beginning with ASCII 8, 2, 4, 1, 10, 12, 14, 18,

20, 24, 27, 31, 32, or 44 as a null string (a blank), and will drop these characters at the end of a string? And ASCII 32 will be dropped at the beginning or end of a string. And ASCII 1 within a string, or ASCII 34 anywhere, will crash, while ASCII 44 within a string will lose the rest of the string. I should have known what ASCII 9, 12 (the space), 34 (quotes) and 44 (comma) would do, but why the others?

INPUT will accept anything, of course, but I wanted to keep this in BASIC for the teachers who are struggling along without the Basic module or disk drive.

Chick De Marti published in LA Piers TOPICS the surprising discovery that PRINT USING and DISPLAY USING can read the IMAGE format from a variable, array or string!

Which led me to some fooling around -

100 !PRINT USING DEM by Jim Peterson, based on a discovery by Chick De Marti

```

110 CALL CLEAR :
:RANDOMIZE
:
:CALL SCREEN(3) :
:FOR S=2
:TO 14 :
:CALL COLOR(4,S) :
:NEXT S
:
:20 N=INT(13*RND)+1 :
:C0=CHR$(80+N*2-(N=4)*1)
:
:130 FOR J=N TO 12 :
:AV=RPT0(" :J) :
:"RPT0(" :26-J*2) :
:0" :
:PRINT USING #0:C0,C0
:
:NEXT J
:
:140 FOR J=12 TO N STEP -1 :
:M0=RPT0(" :J) :
:"RPT0(" :26-J*2) :
:PRINT USING #0:C0,C0 :
:NEXT J
:
:20

```

Here is one last Tiger Cub challenge. What is the longest possible one-liner? And what is the longest possible one-liner that actually does something?

MEMORY FULL

Jim Peterson

TIPS FROM THE TIGERCUB

438

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Columbus, OH 43213

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For descriptions of these send a dollar for my catalog!

I have discovered a rare bug in the 28-Colum Converter, published in Tips #18, which will cause an I/O 25 ERROR if the very last line of the program being converted happens to have exactly 80 characters. You can fix it by adding a line - 215 IF EOF(1)=1 THEN 268

There is also a rare bug in the SIDWAYS subroutine on my Nuts & Bolts #2 disk, which prevents turning some

and 5 pages of documentation with an example of the use of each subprogram. All for just \$19.95 postpaid.

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For descriptions of these send a dollar for my catalog!

I have discovered a rare bug in the 28-Colum Converter, published in Tips #18, which will cause an I/O 25 ERROR if the very last line of the program being converted happens to have exactly 80 characters. You can fix it by adding a line - 215 IF EOF(1)=1 THEN 268

There is also a rare bug in the SIDWAYS subroutine on my Nuts & Bolts #2 disk, which prevents turning some

redefined character sets sideways. If you are one of those who DOUGHT that disk from me, you can fix it by changing the L=LEN(88) in line 21639 to L=64.

I was in too much of a hurry to go fishing when I put the last couple of Tips together. In the Sordian Knot in Tips #35, I left out some essential instructions. Please add - 131 DISPLAY AT(11,11) When you cross your track, 'r' prints 0 to go over, 0 to go under, C to go across.

To make that fit, you will have to change the DISPLAY AT in line 33 to (8,1), in line 148 to (15,1) and in line 158 to (21,1), also the ACCEPT AT in line 168 to (26,11). And this change will prevent a lockup when you reach a border - 288 B=0:1:1: IF ABS(D-82)=0 OR R*(D=1)=0 OR R*(D=3)=25 OR C*(D=4)=2 OR C*(D=2)=31 THEN 180:1: GOSUB 510:1: IF C<>2 THEN GOSUB 458

I wrote the dulcimer music in Tips #36 in Basic, but I forgot to test it in Basic. It actually runs much better in Extended Basic, but will run fairly well in Basic if you delete the delays in lines 288 and 318.

If you liked the ESCHER ART in Tips #17, these modifications will improve it considerably - 118 DISPLAY AT(12,1):"Press -": " Q for new pattern?" B to change background:" F to change foreground:" R to reverse colors": "Any key to start" 288 A=INT(6990+3): H=INT(4/A): R=24-19A: H=INT(2/B/A): C=28-19A: W=ABS(C/2-INT(H/2))-(R/2): DIM H(8,8): FOR I=1 TO A 338 IF K<66 THEN 346 348 BC=BC+1+(R=1):15: IF BC=F THEN 344 ELSE 347

346 IF K<78 THEN 368: F=F+1: F=16+15: IF F=F<6 THEN 346 347 FOR I=7 TO 14: CALL COLOURS,F,C: NEXT I: GOTO 318 358: #DELETED LINE # 368 IF KOASC("R") THEN 318: I=F: F=BC: BC=T: GOT 0 347 688 GOSUB 988: FOR I=1 TO A: DISPLAY AT(R-1+I,D,H+V,T): NEXT I: NEXT C 681 IF C<0 THEN AA=A: 683 US 888 685 GOSUB 1888: NEXT I 686 IF R=0 THEN 618 687 GOSUB 1888: FOR C=1 TO A: NC=STEP: A: GOSUB 910: FOR I=1 TO R: DISPLAY AT(R-1+I,C,H+V,T): NEXT I: 1. NEXT C 688 IF C<0 THEN AA=RX: 60 SUB 888 888 GOSUB 988: FOR I=1 TO AA: DISPLAY AT(R-1+I,C,ISE 68(H+V,T),1,CX): NEXT I: RETURN 1888 V=V+1: V=V+1:4: RETURN RETURN

I had a letter from a teacher who was using the PRK module to keep student grades, and wanted to know how to average them. It can be done, but is so impractical that I wrote this program. While I was at it, I speeded up the loading and saving to cassette greatly by converting the grades to an ASCII string and combining the student's name and all grades into one record.

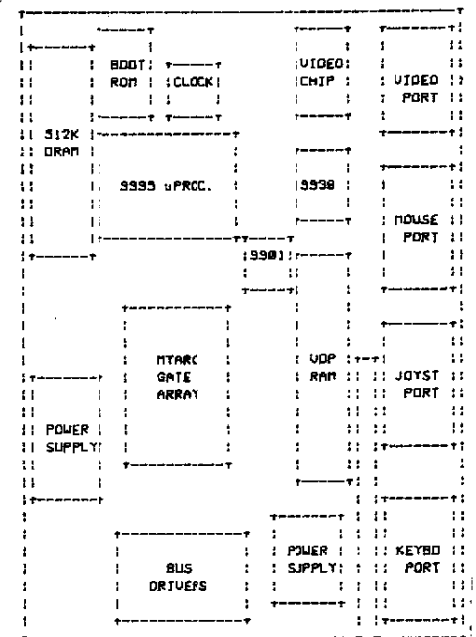
118 DIM N(50),T(58,28) 119 CALL CLEAR 120 PRINT "TEACHER'S HELPER" 130 REM -by Jim Peterson 140 PRINT "CREATE A FILE?" " (2)ADD TO FILE?" " (3)LOAD A FILE?" " (4)SAVE A FILE?" " (5)PRINT A FILE?" 150 PRINT " (6)CORRECT A FILE?" " (7)COMPUTE AVERAGES?" " (8)QUIT?" 164 CALL KEY(1,K,S)

She announced that although she still supports the TI any way she can, COMPLETE! magazine will be dropping support of the TI. Cheryl also said she planned to spend more time with her new baby in the future, but asked we not forget her!

* Lou Phillips covered the progress of the long-awaited Genev's computer from MYARC. A summary follows:

MYARC 9640 Genev's Computer

CPL Board Layout



Some of the commands available:

CHKDSK COMP(ARE) COPY DATE DEL DIR DISKCOMP DISKCOPY ERASE EX2BIN FORMAT MODE REM(ARK) REN(AZE) SYS TIME TYPE

Some of the functions available:

KEY(n)=A# (MACRO) SPEED LLIST LPRINT LTRACE MOD BLINK MOUSE ON MOUSE OFF MOUSE PRESS(x)

Other features:

- * CPU RAM 2K (Expandable to 1 MEG)
- * Built in mouse interface
- * Standard Joystick interface
- * WHILE -> WEND
- * TMS9995 CPU is 3 to 4 times faster than TMS9900
- * Same instruction set of TMS9900
- * "Pipe Line Processor"
- * Same graphic instruction set for TMS9538
- * 46 VDP Registers (8 soft, 38 hard)
- * 7n graphic modes
- * True "Bit Mapped Graphics"
- * Composite or Analog RGB Video Output.
- * 128K VDP RAM (8n times /4A)
- * Real-Time clock
- * Same sound chip as /4A
- * Fully compatible with all Disk Cont. Cards
- * Will support 1 MEG DRAM with zero wait states

Minimum Hardware Requirements: Genev's Keyboard/CPU Card

Optional hardware: RGB Monitor 512K Memory Expansion

* Due to ship to retailers in *
* November/December *

APPROXIMATE RETAIL PRICE: \$495

TMS9900 ASSEMBLY LANGUAGE TUTORIAL PART 4

THE BEAUTY OF BASIC CONTINUED

BY STEVE ROYCE
West New York 99 U.G.

Last month, I went on at great length about the value of creating your own subroutines for use in

your assembly programs. This month, I present two routines; one rather simple (CLEAR) and one not so simple (SPRITE). I won't go into any great explanation, but will let the routines do the work. type them in yourself as you will see how the structure works if you do the work.

```

DEF TEST
REF VSBW, VMBW, VWTR
TEST BL %CLEAR
LI R2, >0100
MOVB R1, @>B37A
BL %SPRITE
DATA 0, 95, 9, 1, 5, 5, 7, 33
LIM: 2
JMP *
TITL '* CLEAR SUBROUTINE V
2.0 9-4-84 SJR *'
PAGE
*
* SUB CLEAR COMMON WORKSPACE, USE
* S RO, R1, R11
*
CLEAR LI RO, 767 LOWER RIGHT S
LI R1, >2000 CREEN LOCATIO
BLANK CHAR (A
SCII 32)
BLWP %VSBW WRITE
DEC RO NEXT SCREEN L
OCATION
JLT %+4 GOTO RT IF RO
IS NEG
JMP %-8 BACK TO BLWP
RT
*
*
TITL '* SPRITE SUBROUTINE V
2.0 9-16-84 SJR *'
PAGE
* SUB SPRITE
* USES RO, R1, R2, R11
* REF VSBW, VMBW REQUIRED
* START WITH SPRITE 0 WHEN DEF
* INING PUT # OF SPRITES TO MO
* VE IN >B37A CLR @SPRITE-6
* UPON REDO OF PROGRAM
*
BSS 2 %*INITIALIZE FLAG
DATA >D000, >0000 Y, X, CHAR, C
OLDR INIT
DATA
SPRITE MCV SPRITE-6, RO MOV FROM B
SPRITE-6, RO
SPRITE-6, RO
SPRITE-6, RO
SS 2, ABOVE
CI RO, >0000 CHECK IF INIT

```

```

JNE %++4 IALIZED YET
IF YES, JMP
TO MAIN
*
* INITIALIZE TABLES
*
LI RO, >0300 SPRITE ATT LI
ST
LI R1, SPRITE-4 DATA TO LOAD
LI R2, 4 4 BYTES
BLWP %VMBW WRITE TO VDP
INCT RO BUMP POINTER
INCT RO BUMP POINTER
CI RO, >0380 AT END OF
TABLE?
JNE %-12
*
LI RO, >0780 MOTION TABLE
LI R1, SPRITE-2 ZERO DATA
LI R2, 2 2 BYTES
BLWP %VMBW VDP WRITE
INCT RO BUMP POINTER
CI RO, >0800 AT END OF
TABLE?
JNE %-10
*
LI RO, >0601 WRITE TO VDP
R6
BLWP %VWTR TO START PAT
LIST AT >0800
*
* SET FLAG
*
SETO @SPRITE-6
*
* MAIN SPRITE SUBROUTINE
LI R2, 4
MOV +, RO GET SPRITE #
CI RO, >2000
JL %+4
MOV *RO, RO
CI RO, %33
JNE %+4
RT
SLA RO, 2 MPY BY 4
AI RO, >0300 ADJUST TO S.A
MOV +, R1 GET DATA
CI R1, >2000
JL %+4
MOV *R1, R1
SWPB R1 PUT IN MSB
BLWP %VSBW VDP WRITE
INC RO BUMP POINTER
DEC R2 DECREASE COUN
TER
JNE %-20 BACK TO GET N
EXT DATA
*
AI RO, >047C ADJUST TO MOT
continued on page 8

```

DR. GUY-STEPHAN ROMANO
ANNION HELPLINE
SAN FRANCISCO, CA
753-5581

Dear Howie, Terrie,

PLEASE PROMULGATE

I have finished gathering this information that I know will be of some help to all those who have been cheated by Home Computer Journal and 99'er. The information was obtained both first hand and by several sources reporting their results so it is a composite.

It seems that at the same time HCJ was sending out their "postcard" offer to subscribers, they were also closing down and dissolving Emerald Valley Publishing. The new company, composed of all the very same people, is called Computer Technology Publishing. Call them to complain about what they did to TI owners and they'll tell you they are not liable for anything since Emerald Valley Publishing is no more. They will refuse to talk to anyone further.

The district attorney in Eugene, Oregon has received enough complaints that they have begun an investigation. They are interested in hearing from any and all complaints about HCJ. They have exerted pressure on HCJ so that a few people have actually gotten their money back on unfinished subscriptions. To strenghten the case against HCJ, however, they need to hear from "damaged parties" or they will be helpless. Anyone who was cheated by HCJ is strongly urged to contact:

DISTRICT ATTORNEY
CONSUMER RELATIONS
400 LAKE COUNTY COURTHOUSE
EUGENE OREGON
503-687-4261

If people will take a few minutes of their time to let them know about their personal complaints, maybe the scam can be ended permanently. Please pass this along to as many people as you can. IMPORTANT - all complaints should be levelled against Emerald Valley Publishing Co aka HCJ, etc etc.

As always thank you for your support for TI owners everywhere.

Original signed by

Guy S Romano