WEST PENN 99 ER'S
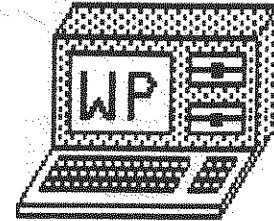
FOR THE RECORD

by Ed Bittner
Recording Secretary

Pressure always builds at the end of the month ! Checkbook pressure, water pressure, and newsletter editor pressure, (gas pressure). Its March 31, (2 to 4 inches of snow outside) but the warmth of the March meeting of the West Penn 99ers lingers. With little on the agenda, its hard to believe that we filled almost four hours full of stuff.

Scott started with the ammendment on the dissolution of club property which will be voted on next time (be there !). He also indicated that the club will no longer purchase data cases but will continue its diskette sales. With no library report, Scott announced classes in assembler (Gene Kelly) and TI Writer (S. Katzman).

John Willforth briefly discussed the Rave Keyboard with himself, (10 minutes, thats short for John), and offered an explanation of his alpha lock jumper which makes the joystick operation independent of the alpha lock key position. He also talked on a printer spooler buffer which allowed his printer to print while he and his TI did other things (talk ?). The particular system comes from J. Green, in kit form, with a 64K spooler and a Parallel to Serial and vice-versa capability. See John. Several pass-out sheets on relational operators, sprite design, and a members list were made available. John also brought some 30 cent, 15 minute cassette tapes and some Atari joystick replacement centers ($ 1.00). See John.

Other items of interest included a "Diskscriber Marker",($4-6), for writing directly on diskettes, micropendiums for sale, how to re-ink ribbons (WD-40 style) and some bodys' desire to outscore everybody ? The tape got real fuzzy here. Scott informed us of the usefullness he has found in "free" trade magazines, for example he found a $39.00 modem if you already have an RS232 interface. Scott demoed a record keeping program called Record Plus for $5,$10,$15,or $20 depending on what extras you wanted.

How can I say this nicely ! John Willforth prepared for the March meeting. He demonstated a nice sound effects program, a number base converter, an "April Fool" character dropout program (very nice delivery) and an exceptional Fairware program called STAR. The STAR program has about 50 CALL LINKs (assembly subroutines) which greatly enhance XBasic programming. If the April meeting goes half as well it will be well worth the trip.   Be There !

Pressuringly,

Scoops Bittner

PS. I will continue to bring the NEWSLETTER library. This library is a collection of newsletters from around the country, exclusively from TI users groups. These newsletters are available to you the club member to borrow, copy, and return at the next meeting. There is LOTS of good information in them. See me at the APRIL meeting. Its easy to borrow them.

MARCH TREASURER'S REPORT

CASH BALANCE			BANK BALANCE		
3/17	Cash on hand	$ 80.00	3/17	Balance	$ 776.99
	8 lib. disks	16.00		postage	- 63.17
	disk sales	273.10			-------
	2 data cases	14.00			713.82
	6 memberships	85.00		Clyde's	
	raffle	31.00		loader money	-35.00
	Clyde's checks	35.00			-------
	micropendium	+13.00			678.82
		-------	3/18	micropendium	- 9.00
		547.10			-------
	cost of screws	- 8.00			669.82
		-------		disk labels	-23.32
		539.10			-------
	raffle items	-10.00			646.50
		-------	3/27	DEPOSIT	+480.00
		529.10			-------
3/27	BANK DEPOSIT	-480.00		balance	$1126.50
		-------			
	cash on hand	49.10			

TOTAL ASSETS $1175.60

****

We also collected $24 in our "Goodie fund". Add that to the $12 left from last time (I bought some supplies) makes $36! To make things more fair and easier to handle. I decided to combine the Pop and Goodie fund -- that way all the refreshments should pay for themselves and our regular accounts will be just for "business".

As you can see, we are prospering in every way - thanks to the generosity and helpfulness of our members. Special thanks again to an extra helpful member - MICKEY - for designing a "Club Transactions Record" form for us to use. I don't know what I'd do without you Mickey -- you sure made the record keeping alot easier!

Till next time
Jan Trayers, Treasurer

```
100 ! CONVERT ANY NUMBER
    FROM/TO ANY BASE BETWEEN
    2 AND 36.
110 CALL CLEAR :: A$="012345
6789ABCDEFGHIJKLMNOPQRSTUVWX
YZ"
120 INPUT "NUMBER? ":B$ :: I
NPUT "FROM BASE? ":A :: INPU
T "TO BASE? ":B :: C=0 :: D=
LEN(B$)
130 FOR E=1 TO D :: C=C+(POS
(A$,SEG$(B$,E,1),1)-1)*A^(D-
E):: NEXT E :: B$=""
140 F=INT(C/B):: B$=SEG$(A$,
C-B*F+1,1)&B$ :: IF F=0 THEN
 160
150 C=F :: GOTO 140
160 PRINT "THE ANSWER IS ";B
$: :
170 DISPLAY AT(12,1):"ANOTHE
R CONVERSION ?"
180 ACCEPT AT(12,22)BEEP VAL
IDATE("YN"):ANS$
190 IF ANS$="Y" THEN 110 ELS
E STOP
200 GOTO 110
```

The above program is SHORTEST, MOSTEST anything I can think of for a program to convert number of one base to another base.

I regret that I can not find the name of the author, who does certainly deserve the credit. Remove all REM statements to see just how short it is!

JFW of WP99ERS
APRIL 1987

HIGH-SCORING GAMES

GAME	SCORE	COMMENTS	DATE	NAME
BURGERTIME	82600	PATTERN 21	9-04-85	MICKEY SCHMITT
BURGER BUILDER	1000000	PATTERN 99 NEVER RUNS OUT OF PEPPER		ELEANOR ZIC
CENTIPEDE	301930		1-08-87	MICKEY SCHMITT
DIG DUG	262460			FRANK ZIC
DIG DUG	216740			ELEANOR ZIC
HUSTLE	WON 52	LOST 27 TIED ONCE		ELEANOR ZIC
JUMPY	131900	PATTERN 21		ELEANOR ZIC
MICRO PINBALL	842000			MIKE SEALY
MIDNITE MASON	21860			FRANK ZIC
MIDNITE MASON	17790			ELEANOR ZIC
MOON PATROL	73150	LEVEL K CHAMPIONSHIP		MIKE SEALY
MUNCHMAN	17160	LEVEL 5	3-14-87	MICKEY SCHMITT
PARSEC	22500	LEVEL 2	3-10-87	MICKEY SCHMITT
TI INVADERS	5376	MERELY AGGRESSIVE	3-13-87	MICKEY SCHMITT

RECENTLY, I BROKE MY PREVIOUS "HIGH-SCORE" IN MY ALL-TIME FAVORITE ARCADE GAME, WHICH MANY OF YOU KNOW IS "CENTIPEDE". HOWEVER, I FOUND OUT THAT I AM NOT THE ONLY ONE OUT THERE WHO HAS A "FAVORITE" GAME OR A "HIGH-SCORE" TO BOAST ABOUT! WITH THIS THOUGHT IN MIND, I HAVE DECIDED TO START A NEW COLUMN, IN OUR WEST PENN NEWSLETTER. IF YOU CAN "BEAT" ANY OF THE SCORES THAT ARE LISTED IN THIS COLUMN - JUST LET ME KNOW AT ANY OF THE WEST PENN MEETINGS AND I'LL PUBLISH IT IN THE NEXT NEWSLETTER. ANY ARCADE GAME FOR THE TI IS ACCEPTABLE FOR THIS COLUMN, AND YOU MAY SUBMIT YOUR HIGH-SCORES AS OFTEN AS YOU WISH. LET'S GET AS MANY PEOPLE INVOLVED IN THIS ENDEAVOR AS POSSIBLE. REMEMBER, A LITTLE "FRIENDLY" COMPETITION, MAY JUST "SPARK" SOME UNDERLYING INTEREST AND ENTHUSIASM!

HARDWARE SIG FORMING NATIONALLY(INTERNATIONALLY).

Mr. TONY (BOB) WAGNOR of MINOT, N. Dakota, if really in hot pursuit of trying to achieve what no one has yet done and that is to form a COMPLETE national hardware S.I.G.. If you are interested, send a letter to Tony, stating what your interests and qualifications are, and what you want to see in the group. (SASE please). You may also call after 5:30 PM Central Time. 701 727-9081.
  addr; Tony Wagnor
         114-2 Sherwood Cir.
         Minot AFB,   ND
         SOFTWARE 58704
* Those with interest are also needed to support the hardware.

This time I wish to discuss the "dot" commands. These commands format the text in the text formatter. They are entered in the document, and for the sake of brevity, occupy a line of their own. The commands I want to discuss are for setting margins, right adjust, indenting the beginning of a paragraph and centering text headings. All dot commands and text formatting commands (even those discussed last time) do not show up in the final document when put through the text formatter.

All dot commands must start with a period and end with a carriage return symbol.

To set the left margin, at the head of your document type .LM 15 followed immediately by a carriage return. To set the right margin type .RM 70 followed by a carriage return. This sets the left margin at 15 and the right margin at 70. Then type .FI carriage return. The .FI (fill command) says to fill the line with as much text as possible between the margins. You must have the .FI command in to have the margin commands effective.

If you want to indent a paragraph, type .IN +5 and this will indent the start of a paragrpah five spaces. The indent command must follow the margin settings.

To center a line of text, type .CE (carriage return) before the line of text to be centered. If you want two lines of text centered type .CE 2 (carriage return).

In order to right adjust your margin type .AD (carriage return). In order to right adjust you must also have the .FI command on also.

Now I realize this might be a bit abstract so I have provided some copy that I used in my work in order to illustrate these commands. At the top of page 2 will see the dot commands at the top. On the screen the carriage return symbols show but they do not show on the printed copy. The centering command works only for the line designated while the margin, and adjust commands work until turned off. (To turn off the right adjust enter a .NF command on the area where you do not want the margin right adjusted.) To change margins just type the appropitate changes on a separate line of the text using the numbers for the margins that you want.

Page 3 shows the final copy after being put through the text formatter.

We had representatives at the recent "FAYEH" in New England, more specifical-ly BOSTON, MA. Scott took the motor HOME, (motor is lower case because it did not play as big a part in their getting there as they had hoped), and will have more to tell you at the meeting. I don't want to steal the thunder of the great PO-BA. He brought back many gifts for all of us, and if you would like to GET YOURS, please come to the APRIL MEETING

"TIPS FOR BEGINNERS"
-BY FRANK N. ZIC

HERE WE GO TOGETHER-NO.4 I HAVE HEARD SOME COMMENTS FROM CLUB MEMBERS WHO ARE HAVING TROUBLE LOADING AND PRINTING OUT THE VARIOUS CONTENTS ON TI-ARTIST AND THE COMPANION DISKS. I HAVE WRITTEN THE INSTRUCTIONS IN A STEP -BY-STEP MANNER TO HELP WITH THE HANDLING OF: INSTANCES,FONTS,SLIDES AND PICTURES. FIRST AUTO-LOAD TI-ARTIST IN EXTENDED BASIC. AFTER THE INSCEBOT PICTURE APPEARS, PRESS ENTER. NOW THE SCREEN WILL SHOW THE FOLLOWING MENU: (1)TI-ARTIST, (2)ENHANCEMENT, (3)INPUT DEVICE, (4)CONVERSIONS, (I)INDEX AND (E)EXIT.

(A) TO LOAD INSTANCES (_I) AND SLIDES (_S): CHOOSE NO.2(ENHANCEMENT), PRESS NO.2. THEN SELECT THE BLOCK MARKED (SLIDES), PRESS "S". NOW PRESS NO.6(LOAD AN INSTANCE). WHERE IT ASKS FOR LOAD FILENAME, PUT IN YOUR DRIVE NO. AND FILENAME(SHOWN FOR A TWO DRIVE SET-UP). PRESS ENTER. A FLASHING BOX WILL APPEAR. TO SEE WHAT IS IN THE BOX, PRESS "T" AND HOLD. SHOULD YOU WANT TO MOVE THE PICTURE TO A NEW LOCATION ON THE SCREEN, HOLD DOWN THE "FCTN" KEY ALONG WITH ANY OF THE FOUR DIRECTION KEYS(E,X,S OR D). THIS MOVEMENT IS VERY SLOW. TO RETAIN THE PICTURE IN CONSOLE MEMORY, PRESS ENTER. OTHER SELECTIONS MAY BE PLACED ON THE SCREEN IN A SIMILAR MANNER IF DESIRED. JUST PRESS THE SPACE BAR TO START ANOTHER SELECTION SEQUENCE. AFTER THE LAST PICTURE IS ON THE SCREEN, YOU MAY WISH TO MAKE A PRINT-OUT. TO ACCOMPLISH THIS PRESS THE SPACE BAR. NOW WITH THE SIX BLOCKS ON THE SCREEN HOLD DOWN THE "FCTN" KEY AND PRESS(=). THIS BRINGS YOU BACK TO THE MAIN SCREEN. SELECT NO.1 (TI-ARTIST). NOW SELECT THE BLOCK MARKED (HARD COPY),PRESS "C". SELECT THE NUMBER FOR YOUR PRINTER TYPE. PRESS ENTER. AT THIS POINT TURN ON YOUR PRINTER. ACCEPT THE DEVICE NAME SHOWN OR CHANGE FOR YOUR PARTICULAR PRINTER. PRESS ENTER. FOR OUR FIRST TIME THRU, PRESS ENTER FOR EACH DEFAULT. NOW NOTICE THAT THE PICTURE YOU WILL BE REPRODUCING IS SHOWN ON THE SCREEN. PRESS ENTER AND THE PRINTER WILL RESPOND TO GIVE YOU A HARD COPY OF ANY PICTURE OR PRINTING THAT IS ON THE SCREEN. YOU MAY WANT TO EXPERIMENT WITH THE OTHER SIZE SELECTIONS LATER. WORD OF CAUTION FOR LATER, SELECTING THE NO.3 PRINTER SIZE OPTIONS WILL UNFORTUNATELY PRINT OUT GARBAGE. DOES ANYONE HAVE A FIX FOR THIS PROBLEM?

(B) TO LOAD FONTS (_F). THESE ARE HANDLED IN THE SAME MANNER AS INSTANCES AND SLIDES EXCEPT FOR THE PART WHERE YOU SELECT THE BLOCK MARKED SLIDES (S); THIS TIME YOU SELECT THE BLOCK MARKED "ALPHA NUMERIC ENTRY", PRESS "A". NOW PRESS NO.1 (LOAD CHARACTER FONT). TYPE IN YOUR DRIVE NO. AND FILENAME. PRESS ENTER. AFTER THE DISK LOADS THE FONT, THE SCREEN FLASHES THE FONT AND GOES BACK TO THE (1)AND (2) SELECTIONS. NOW PRESS (2),(TYPE TEXT ON SCREEN). PRESS ENTER TO ACCEPT (N) DEFAULT. NOW TYPE IN ONLY THE FONT NAME(DO NOT TYPE IN DSKn). PRESS ENTER. THE FONT TO BE REPRODUCED WILL BE SHOWN ON SCREEN. TURN ON YOUR PRINTER. PRESS ENTER AND YOU ARE ON YOUR WAY.

(C) TO LOAD PICTURES (_P). HERE WE HAVE A DIFFERENT ROUTINE. FROM THE MAIN MENU CHOOSE NO.1 (TI-ARTIST). PRESS NO.1. FROM THE LARGE BLOCK SELECTION CHOOSE THE BLOCK MARKED (STORE). PRESS "S". NOW CHOOSE "L" (LOAD FILENAME). PRESS "L". ENTER DISK NO. AND FILENAME TO BE LOADED. PRESS ENTER. PRESS SPACE BAR. CHOOSE BLOCK (HARD COPY). PRESS "C". ONCE AGAIN SELECT PRINTER TYPE. PRESS ENTER. AT THIS POINT TURN ON YOUR PRINTER. ACCEPT THE DEVICE NAME SHOWN OR CHANGE FOR YOUR PARTICULAR PRINTER. PRESS ENTER. PRESS ENTER FOR EACH DEFAULT. THE PICTURE TO BE REPRODUCED WILL BE SHOWN ON THE SCREEN. PRESS ENTER AND YOU WILL HAVE YOUR PRINTED COPY.

(D) FURTHER NOTE THAT PRESSING "I" (INDEX) IN THE MAIN MENU WILL CATALOG YOUR DISK, BUT IT WILL LIST ONLY THOSE ITEMS LISTED UNDER ANY OF THESE THREE CATEGORIES; INSTANCE,FONT OR SLIDE. REMEMBER TOO, THAT YOU SHOULD NOT ENTER THE UNDERSCORE AND LETTER, i. e. _I, _F, _S AND _P, WHEN ENTERING THE FILENAME. UNTIL NEXT MONTH MAY THE GOOD 4'S BE WITH YOU.

```
1 !###########################
###########################
###########################
###########################
2 !   SHORTCUT METHOD
        OF ENTERING STATEMENTS
        IN EXTENDED BASIC

3 ' WRITTEN BY
    BOB TRAUTMANN
    224 McKINLEY AVE.
    PITTSBURGH, PA 15202
    PHONE (412) 761-9380
4 !###########################
###########################
###########################
5 CALL CLEAR :: DISPLAY AT(7
,6):"ONE MOMENT PLEASE"
6 DIM CODE$(45),DR(45),DC(45
),LC(45),CT(45)
7 CALL CHAR(96,"FF8080808080
8080FF0000000000000FF000000
000000FFFF01010101010101")
8 CALL CHAR(100,"80808080808
08080000003070F1F3F3F3FFFFFF
FFFFFFFFFCFFFFFFFFFFFFFFFF")
9 CALL CHAR(104,"0000C0E0F0F
BFCFC01010101010101017F7FFFF
FFFFFFFFEFEFFFFFFFFFFFFFFF")
10 CALL CHAR(108,"8181818181
818181FFFFFFFFFF7F7FFFFFFFF
FFFFFFEFE3F3F1F0F07030000")
11 CALL CHAR(112,"FFFFFFFFFF
FFFF3FFFFFFFFFFFFFFFFFCFCFCF8
F0E0C0000080808080808080FF")
12 CALL CHAR(116,"0000000000
0000FF010101010101FF000000
000000000FFFFFFFFFFFFFFFFFF")
13 CALL CHAR(34,"00000003070
F1F1F003FFFFFFFFFFFFFF",36,"8
080B7A2A2A2B2800000745474645
60000006E4464446400",42,"3F3
F7F7F7F7F7F")
14 CALL CHAR(45,"00FCFFFFFFF
FFFFF",60,"000000C0E0F0F0F8F8"
,64,"FCFCFEFEFEFEFEFE",91,"7
F7F7F7F7F7F3F3F",92,"1F1F0F0
703000000")
15 CALL CHAR(93,"FFFFFFFFFFF
F3F00",94,"FEFEFEFEFEFEFCFC"
,121,"FFFFFFFFFFFFC00",122,
"F8F8F0E0C0000000")
16 CALL CHAR(123,"FFFFFFFFFF
FFFFFF")
17 CALL CHAR(125,"707070")
18 CALL SPRITE(#4,34,1,9,65,
#5,35,1,9,73,#6,42,1,17,65,#
7,45,1,9,177,#8,60,1,9,185,#
9,64,1,17,185)
19 CALL SPRITE(#10,91,1,89,6
5,#11,92,1,97,65,#12,93,1,97
,73,#13,94,1,89,185,#14,121,
1,97,177)
20 CALL SPRITE(#15,122,1,97,
185)
21 FOR S=9 TO 11 :: CALL COL
OR(S,2,15):: NEXT S
22 RESTORE 26
23 FOR Y=0 TO 44 :: READ COD
E$(Y),DR(Y),DC(Y),LC(Y),CT(Y
)
24 IF CODE$(Y)="X+X+" THEN C
ODE$(Y)=","
25 NEXT Y
26 DATA ON,153,153,46,155,AN
D,137,169,47,187,THEN,129,15
7,176,TO,129,81,49,177,ST
E,29,89,50,178
27 DATA X+X+,129,97,51,179,:
,129,105,52,180,;,129,113,53
,181,),129,121,54,182,(,129,
129,55,183
```

SHORTCUT CODES										
.	ON	8	OPTION	G	GOSUB	Q	UNTRACE
/	AND	9	OPEN	H	RETURN	R	INPUT
0	THEN	;	PRINT	I	DEF	S	DATA
1	TO	=	CALL	J	DIM	T	RESTORE
2	STEP	A	ELSE	K	END	U	RANDOMIZE
3	,	B	::	L	FOR	V	NEXT
4	:	C	!	M	LET	W	READ
5	:	D	IF	N	BREAK	X	STOP
6	)	E	GO	O	UNBREAK	Y	DELETE
7	(	F	GOTO	P	TRACE	Z	REM

NOTE: The funny looking characters in line 59 and 60, must be entered ☻= CONTROL & "H", and ⊙= CONTROL & ",". (Blanks will appear on screen)

```
28 DATA OPTION,129,137,56,15
8,OPEN,129,145,57,159,X-X-,2
00,1,1,1,PRINT,145,161,59,15
6,X-X-,200,1,1,1
29 DATA CALL,129,161,61,157,
X-X-,200,1,1,1,X-X-,200,1,1,
1,X-X-,200,1,1,1,ELSE,145,89
,97,129
30 DATA ::,153,121,98,130,!,
153,105,99,131,IF,145,105,10
0,132,GO,137,105,101,133,GOT
0,145,113,102,134
31 DATA GOSUB,145,121,103,13
5,RETURN,145,129,104,136,DEF
,137,145,105,137,DIM,145,137
,106,138
32 DATA END,145,145,107,139,
FOR,145,153,108,140,LET,153,
137,109,141,BREAK,153,129,11
0,142,UNBREAK,137,153,111,14
3
33 DATA TRACE,137,161,112,14
4,UNTRACE,137,89,113,145,INP
UT,137,113,114,146,DATA,145,
97,115,147
34 DATA RESTORE,137,121,116,
148,RANDOMIZE,137,137,117,14
9,NEXT,153,113,118,150,READ,
137,97,119,151
35 DATA STOP,153,97,120,152,
DELETE,137,129,121,153,REM,1
53,89,122,154
36 DISPLAY AT(1,6):"'aabbbbb
bbbbbbbbaac" :: DISPLAY AT(2,
6):"def{{{{{{{{{{{ghi" :: D
ISPLAY AT(3,6):"dj{{{{{{{{{{
{{{ki"
37 FOR R=4 TO 11 :: DISPLAY
AT(R,6):"1{{{{{{{{{{{{{{1"
:: NEXT R
38 DISPLAY AT(12,6):"dm{{{{{
{{{{{{{{(ni" :: DISPLAY AT(1
3,6):"dop{{{{{{{{{{{{{qri" ::
DISPLAY AT(14,6):"sttbbbbbb
bbbbbbttu"
39 DISPLAY AT(16,8):"'aaaaaa
aaaaaac" :: DISPLAY AT(17,8)
:"d1234567890=vi"
40 DISPLAY AT(18,8):"dvQWERT
YUIOP/i" :: DISPLAY AT(19,8)
:"dvASDFGHJKL;&i" :: DISPLAY
AT(20,8):"dvZXCVBNM,.vvi"
41 DISPLAY AT(21,8):"$%v
vvi" :: DISPLAY AT(22,8)
:"sttttttttttttttu"
42 CALL SPRITE(#16,95,2,170,
170)
43 A$="...ATTENTION...YOU HA
VE ACCESSED THE COMPUTER'S H
IGH SECURITY INTERNAL COMPUT
ER..."
44 GOSUB 142
45 A$="...TO TURN ON THE POW
ER YOU MUST TYPE YOUR SECRET
   SECURITY PASSWORD AND PRESS
   ENTER..."
46 GOSUB 142
47 A$="...NOTICE...IF YOU CA
N'T REMEMBER YOUR SECURITY P
ASSWORD OR HAVE NOT BEEN ASS
IGNED ONE...THEN USE A FRIEN
D'S PASSWORD OR MAKE ONE UP!
"
48 GOSUB 142
49 A$="......TYPE PASSWORD N
OW....."
50 GOSUB 142
51 GOTO 49
52 CALL SPRITE(#17,125,9,177
,165)
53 FOR S=4 TO 15 :: CALL COL
OR(#S,8):: NEXT S
54 CALL CHAR(123,"0000000000
000000")
55 DISPLAY AT(2,6):"def
       ghi" :: DISPLAY AT(3,
6):"dj                ki"
56 FOR R=4 TO 11 :: DISPLAY
AT(R,6):"1                1"
:: NEXT R
57 DISPLAY AT(12,6):"dm
       ni" :: DISPLAY AT(1
3,6):"dop            qri"
58 CALL COLOR(12,11,5,13,9,6
,14,16,3):: A$="FOFOFOFOFOFO
FOFO" :: CALL CHAR(120,A$,12
8,A$,136,A$)
59 DISPLAY AT(4,7):"☻x⊙x☻x⊙x☻x⊙x
⊙x☻x⊙x☻x1" :: DISPLAY AT(6,8
):"PRESS ANY KEY   1" :: DISP
LAY AT(9,11):"TO START       1"
60 DISPLAY AT(11,7):"☻x⊙x☻x⊙x
⊙⊙x☻⊙x☻x⊙x1"
61 CALL KEY(0,K,ST):: IF ST=
0 THEN 61
62 DISPLAY AT(4,7):" HOME CO
MPUTER   1" :: DISPLAY AT(6,8
):"PRESS           1" :: DISP
LAY AT(8,8):"1 FOR RULES
1"
63 DISPLAY AT(9,8):"
       1" :: DISPLAY AT(10,8
):"2 FOR CODES     1" :: DISP
LAY AT(11,7):"
1"
64 DISPLAY AT(12,8):"3 FOR D
RILL       ni"
65 CALL KEY(0,K,S):: IF K=49
   THEN 66 :: IF K=50 THEN 118
   :: IF K=51 THEN 132 ELSE 65
66 DISPLAY AT(6,8):"RULES FO
R THE   1" :: DISPLAY AT(8,8)
:"SHORTCUT METHOD1" :: DISPL
AY AT(10,8):"OF TYPING IN
1"
67 DISPLAY AT(12,8):"PROGRAM
S IN XBni"
68 A$="...PRESS ANY KEY TO R
ETURN TO MASTER SELECTION LI
ST..."
69 GOSUB 153
70 A$="...THIS SHORTCUT METH
OD OF ENTERING PROGRAMS IN E
XTENDED BASIC WILL SAVE YOU
A LOT OF TIME..."
71 GOSUB 153
72 A$="...YOU CAN ENTER MANY
   OF THE MOST USED STATEMENTS
   OR COMMANDS BY PRESSING ONL
Y ONE KEY..."
73 GOSUB 153
74 A$="SOME OF THE STATEMENT
S ARE....PRINT....INPUT....R
ANDOMIZE....DATA....GOTO....
GOSUB....RESTORE....FOR....N
EXT....IF....THEN..+MORE.."
75 GOSUB 153
76 A$="...FOR EXAMPLE LETS'
SAY THAT YOU WANT TO TYPE IN
   A PROGRAM LINE LIKE THIS...
   .....>10 RANDOMIZE......."
77 GOSUB 153
78 GOSUB 163
79 DISPLAY AT(6,8):">10 RAND
OMIZE   1"
80 FOR F=1 TO 20 :: DISPLAY
AT(8,8):"   SHORTCUT   1" :
: DISPLAY AT(10,8):"V V V V
V V V1" :: DISPLAY AT(10,8
):" V V V V V V1"
81 DISPLAY AT(10,8):"
       1" :: NEXT F
82 A$="...YOU WOULD FIRST TY
PE THE LINE NUMBER IN THE NO
RMAL WAY..."
83 GOSUB 153
84 DISPLAY AT(12,8):">10
ni"
85 A$="NOW .... BEFORE YOU T
YPE ANYTHING ELSE .... YOU W
OULD TYPE THE WORD    REMAR
K___ OR THE EXCLAMATION POI
NT___!___"
```

```
86 GOSUB 153
87 DISPLAY AT(12,12):"!
    ni"
88 A$="...IF YOU TRY TO USE
THE SHORTCUT METHOD WITHOUT
USING  !    YOU WILL RECE
IVE AN ERROR MESSAGE... "
89 GOSUB 153
90 A$="...NOW HERE COMES THE
 SHORTCUT CODE...."
91 GOSUB 153
92 A$="...YOU SHOULD PRESS A
ND HOLD THE   CTRL   KEY AND
 AT THE SAME TIME PRESS THE
   U   KEY..."
93 GOSUB 153
94 FOR F=1 TO 30 :: CALL SPR
ITE(#1,119,9,161,74,#2,119,9
,161,81,#3,119,9,137,137)::
FOR D=1 TO 50 :: NEXT D :: C
ALL DELSPRITE(#1,#2,#3):: NE
XT F
95 A$="...THE CURSER WILL AD
VANCE BUT NOTHING WILL BE PR
INTED ON THE SCREEN..."
96 GOSUB 153
97 A$="...WHEN YOU ARE FINIS
HED WITH THE LINE ... DON'T
FORGET TO PRESS ENTER..."
98 GOSUB 153
99 GOSUB 163
100 DISPLAY AT(4,8):">10 RAN
DOMIZE  1" :: DISPLAY AT(6,8
):"   SHORTCUT    1" :: DISP
LAY AT(10,8):">10 !
1"
101 DISPLAY AT(12,8):">
     ni"
102 A$="...DON'T WORRY ... T
HE WORD    RANDOMIZE   HAS
BEEN ENTERED INTO THE COMPUT
ER'S MEMORY..."
103 GOSUB 153
104 A$="...YOU CAN CHECK THI
S IF YOU TYPE    LIST    OR
IF YOU TYPE THE LINE NUMBER
AND    FCTN E    OR    FC
TN  X   "
105 GOSUB 153
106 DISPLAY AT(12,9):"LIST
     ni"
107 A$="... AND PRESS ENTER
..."
108 GOSUB 153

109 GOSUB 163
110 DISPLAY AT(4,6):"1     SH
ORTCUT    1" :: DISPLAY AT(8
,8):">10 !            1" :: DI
SPLAY AT(10,8):"LIST
1"
111 DISPLAY AT(12,8):"10 ! R
ANDOMIZEni"
112 A$="PRESTO... THERE IS Y
OUR PROGRAM LINE... JUST AS
IF YOU HAD TYPED       R  A
N  D  O  M  I  Z  E"
113 GOSUB 153
114 A$="...BEFORE YOU CAN RU
N YOUR PROGRAM YOU MUST GO B
ACK AND EDIT THE LINE TO REM
OVE THE WORD   REMARK   OR T
HE EXCLAMATION POINT  !  "
115 GOSUB 153
116 DISPLAY AT(12,8):"10 RAN
DOMIZE  ni"
117 FOR D=1 TO 3000 :: NEXT
D :: GOSUB 163 :: GOTO 62
118 GOSUB 163
119 DISPLAY AT(4,8):"HOME CO
MPUTER  1"
120 DISPLAY AT(6,8):"CODES F
OR THE  1" :: DISPLAY AT(8,8
):"SHORTCUT METHOD1" :: DISP
LAY AT(10,8):"OF TYPING IN
1"
121 DISPLAY AT(12,8):"PROGRA
MS IN XBni"
122 FOR D=1 TO 2000 :: NEXT
D :: GOSUB 163
123 FOR Y=0 TO 44
124 IF CODE$(Y)="X-X-" THEN
130
125 DISPLAY AT(6,8):"CTRL AN
D ";CHR$(Y+46);"        1"
126 DISPLAY AT(8,8):"IS THE
SAME AS 1"
127 FOR Z=1 TO LEN(CODE$(Y))
 :: CALL HCHAR(10,Z+9,ASC(SEG
$(CODE$(Y),Z,1))):: NEXT Z
128 GOSUB 166
129 GOSUB 163
130 NEXT Y
131 GOTO 123
132 GOSUB 163
133 DISPLAY AT(4,8):"SHORTCU
T DRILL 1"
134 RANDOMIZE
135 Y=INT(RND*44)

136 IF CODE$(Y)="X-X-" THEN
134
137 FOR Z=1 TO LEN(CODE$(Y))
 :: CALL HCHAR(6,Z+9,ASC(SEG$
(CODE$(Y),Z,1)):: NEXT Z
138 DISPLAY AT(8,8):"CAN BE
ENTERED 1" :: DISPLAY AT(10,
8):"BY PRESSING    1" :: DIS
PLAY AT(12,8):"CTRL AND ????
ni"
139 GOSUB 180
140 DISPLAY AT(6,8):"
      1" :: GOTO 134
141 END
142 A$=RPT$(" ",28)&A$&" "
143 FOR L=1 TO LEN(A$)
144 DISPLAY AT(24,1):SEG$(A$
,L,28)
145 FOR D=1 TO 10 :: NEXT D
146 CALL KEY(0,K,S)
147 IF S<>0 THEN 150
148 NEXT L
149 RETURN
150 DISPLAY AT(24,1):RPT$("
",28)
151 IF K=13 THEN 52
152 CALL KEY(0,K,S):: IF K=1
3 THEN 52 ELSE GOTO 152
153 A$=RPT$(" ",28)&A$&" "
154 FOR L=1 TO LEN(A$)
155 DISPLAY AT(24,1):SEG$(A$
,L,28)
156 FOR D=1 TO 10 :: NEXT D
157 CALL KEY(0,K,S)
158 IF S<>0 THEN 161
159 NEXT L
160 RETURN
161 DISPLAY AT(24,1):RPT$("
",28)
162 GOTO 62
163 DISPLAY AT(4,8):"
       1" :: DISPLAY AT(6,8
):"              1" :: DISP
LAY AT(8,8):"
1"
164 DISPLAY AT(10,8):"
       1" :: DISPLAY AT(12
,8):"              ni"
165 RETURN
166 A$="...PRESS ENTER FOR A
 NEW CODE AND IT'S MEANING .
..OR ANY OTHER KEY TO RETURN
 TO MASTER SELECTION LIST...
"
167 A$=RPT$(" ",28)&A$&" "

168 FOR L=1 TO LEN(A$)
169 CALL DELSPRITE(#1,#2,#3)
170 DISPLAY AT(24,1):SEG$(A$
,L,28)
171 CALL SPRITE(#1,119,9,161
,74,#2,119,9,161,81,#3,119,9
,DR(Y),DC(Y))
172 CALL KEY(0,K,S)
173 IF S<>0 THEN 176
174 NEXT L
175 GOTO 166
176 DISPLAY AT(24,1):RPT$("
",28):: CALL DELSPRITE(#1,#2
,#3)
177 GOSUB 163
178 IF K=13 THEN RETURN
179 GOTO 62
180 A$="...PRESS THE LETTER
OR NUMBER KEY THAT COMPLETES
 THE ABOVE STATEMENT... OR P
RESS ENTER TO RETURN TO THE
MASTER SELECTION LIST..."
181 A$=RPT$(" ",28)&A$&" "
182 FOR L=1 TO LEN(A$):: DIS
PLAY AT(24,1):SEG$(A$,L,28)
183 FOR D=1 TO 10 :: NEXT D
184 CALL KEY(0,K,S):: IF S<>
0 THEN GOSUB 188
185 NEXT L
186 GOTO 180
187 RETURN
188 DISPLAY AT(24,1):RPT$("
",28):: IF K=Y+46 OR K=LC(Y)
OR K=CT(Y)THEN 192
189 IF K=13 THEN 62
190 FOR F=3 TO 1 STEP -1 ::
CALL SOUND(-30,F*110,0):: NE
XT F
191 A$="...THAT IS NOT RIGHT
...TRY AGAIN..." :: GOTO 181
192 DISPLAY AT(4,8):"YOU ARE
 RIGHT  1" :: DISPLAY AT(12,
17):" "&CHR$(Y+46)&"    ni"
193 FOR F=1 TO 6 :: CALL SO
UND(-1,F*200,0):: NEXT F
194 FOR Q=1 TO 15
195 CALL SPRITE(#1,119,9,161
,74,#2,119,9,161,81,#3,119,9
,DR(Y),DC(Y))
196 FOR D=1 TO 50 :: NEXT D
 :: CALL DELSPRITE(#1,#2,#3):
: NEXT Q
197 GOTO 132
198 RETURN
```

NOTES FROM OTHER NEWSLETTERS.........

LA 99ers, Chuck De Marti...From the GENiel TRAVelER, Barry Traver announces a
fix for a minor bug in ARCHIVER. The fix is to change line 635 to:

    635 KK=(Z-1)*(100*INT((KK-1)/50)+1)+2-Z

There was no specific description of the bug, except that it yielded some very
"interesting numbers".

Here's one that has stung Jan and I with DM1000, version 3.5 (at least). If you
format a disk double density with a CORCOMP controller, and pass the diskette
to someone with a MYARC disk controller, they will get an error message, saying
that the diskette is not initialized or "blank". The CORCOMP controller will
put 16 sectors per track in the header, even though it correctly formats the
diskette, and the disk is perfectly OK for the CORCOMP.

Mike Dodd of the LA 99ers, has a fix. With a disk editor, edit the first sector
of MGR1, at byte 216 (v. 3.5), you should see (in HEX) 10 00 02 D0 00 5A. Now
change the 10 to a 12 and write the sector back.   USE A BACKUP FOR THIS FIX !

Another fix for the same problem comes from Jack and BJ Mathis of the SW 99ers.
If you have the Source Code, find SCT CNT in MGRPART1, and change >1000 to
>1200.

On the next two pages, you will see two widely printed articles by two very good members of the WEST PENN 99ER'S, Amy and Fred Mackey. I'm including two this month due to "technical difficulties" last month that caused the first of their articles to go out to all the USERS GROUPS we send newsletters to, but not to you. I'm making a correction to this inequity in this manner.

Many of us, myself included, do not know much about telecommunications on a home type computer. We may not know all the many benifits of communicating with a computer, nor the manner in which to begin this very popular fascet of computering.

This is only the first installment for you to glean from it what you find new and useful, and I know that the authors have had the same questions that you had when they started. Let's take advantage of their experiences!

GETTING ON LINE:
AN INTRODUCTION TO TELECOMMUNICATIONS

by Fred and Amy Mackey

How do you get started in telecommunications? What kind of software and hardware do you need? What is telecommunications anyhow? The following is the first part of a continuing informational series on how to begin your journey into the world of telecommunications.

The whole purpose of telecommunications is to use your computer to locate and retrieve information stored on someone elses's computer. This electronic collection of information is called a database. The storing of this information and making it accessible to a computer is really just a variation of the library concept, but instead of information being stored in printed form on rows of shelves, the information is stored in electronic form on rows of disks. Telecommunications is a tremedous asset for anyone; it is a library at your fingertips.

The information available in this electronic library includes news, sports, stock market reports, programs, all of which are available on news an informational services, generally for a subscription fee. Information can also be accessed on bulletin board systems, of which there are thousands across the country, and usually a free service. A bulletin board, or better known as a BBS, is designed to bring together those with common interests, those owning specific computers who want to share programs and help each other solve problems, and in some cases bulletin boards have served as electronic matchmakers. The personal business possibilities of telecommunications also include making airline and hotel reservations, electronic banking, and bill paying. And you can do all this from your TI-99/4A!

The information being sent from one computer to another is carried over telephone lines in the form of modulated data. (The tones you get when you punch numbers on your pushbutton phone represent modulated data.) But telephones and computers are based on different signals. The modem serves as a translator between the two. At one end of the phone line the modem MOdulates the computer's digital signals into analog signals to be carried over the phone lines, only to be DEModulated back into digital signals at the other end.

Modems come in different shapes, sizes and prices. Some modems are directly connected to the telephone line through the telephone jacks. Other modems are the accoustic type where the telephone headset is coupled into the suctioned modem cups, one cup containing a speaker which generates audio tones, the other containing a microphone, which receives tones from other modems.

Telecommunications could not exist without software. This is the program which connects the computer to the outside world and gives it the intructions on what to do with the information it accesses.

In summary, to enter the world of telecommunications, in addition to your console and monitor, you will need a modem and a telecommunications software package.

NEXT MONTH: A Guide To Buying Modems and How to Hook Them Up.

GETTING ON LINE:
AN INTRODUCTION TO TELECOMMUNICATIONS
Part Two
A Guide to Buying Modems and How to Hook Them Up
By Fred and Amy Mackey

The world we live in today is an electronic universe where information and messages streak around the world, or just across town, at the speed of light. In this world you can search for a job, play games, meet friends, consult an encyclopedia, all without ever leaving your house. Entering this electronic universe is a possibility for anyone owning a personal computer. The only additional hardware and software you need for most machines is a printed circuit board called a "serial card", a modem, and a telecommunications software package. This month we will look at modems, on our journey into the world of telecommunications.

When buying a modem, there are five basic features you should look for, which are as follows:

1. <u>Direct Connect</u> which means it plugs directly into a modular telephone jack, eliminating all outside noise. The other option is an accoustic modem, the only advantage to it being that it can be used with any phone, whether or not a modular jack is available. (*Note - If your home does not have a modular jack, you can purchase an adapter to make the conversion for about $5.)

2. <u>300 Baud</u> - This is how fast the modem will send and receive data. A 1200 baud modem is 4 times quicker than a 300 baud modem, but it costs about twice as much. (*Note - Although you can receive information 4 times faster, Compuserve and most databases charge extra to send information at this speed.)

3. <u>Auto Originate</u> - This feature causes the modem to dial the number you have entered from the computer keyboard, as opposed to you dialing the phone yourself. (*Note - The real advantage to this is that the modem will also have the ability to keep trying the number if it is busy, which frees you up from dialing over and over.)

4. <u>Auto Answer</u> - This feature is necessary if you want to have the ablity to receive calls via your computer. (*Note- If you ever want to set up your own BBS, then this feature is a must.)

5. <u>Full Duplex</u> - This is the ability to send and receive signals at the same time. Simply put, the database computer is contantly asking your computer if it is ready, and your machine is constantly responding 'yes'. Without full duplex, there would be a line turnaround delay between each question and answer. (*Note - Full Duplex can be compared to having a conversation on a telephone, as opposed to Half Duplex which can be compared to having a converation on a CB Radio.)

Any modem can be used with any communicating computer. However, serial cards (and software packages) are designed for specific computers. To hook up the modem, you need to have a serial card. The job of the serial card, simply put is to take the internal language of your computer, which is spoken in 8 bit "words" and send the "words" out of he computer to the modem one bit at a time , instead of 8 at a time. ("Serial" for transmitting bits invdividually in a series, and "parallel" for transmitting bits in a parallel - 8 at a time.) So, the serial card takes the specific language of your computer, and makes it common language for any brand of modem to receive. (*Note - If you own a serial printer, as opposed to a parallel printer, you already have a serial card in your machine. With software, you might be able to unplug your printer and plug in a modem.)

There will be a "port" or plug on the serial card, and a port on the modem. Now, just because you bought a modem, that doesn't mean it comes with a cable to connect it to the serial card in your computer. The two are hooked together by plugging in a flat 25-wire "ribbon cable" to each port, which must be purchased seperately. Most modems and serial cards have female ports and require ribbon cable with male plugs on either end. But there is always exceptions to the rules, so make sure you buy a cable wth the right sex for your equipment. The plugs are called DB25 connectors. An alternative for the Apple II, IBM/PC or any other S-100 bus computer is a "modem-on-a-card", which is a serial card with a built in modem that lets you plug your phone directly into your computer. The price range is around $350-$400, and as of this writing is not avaiable for the TI computer.
NEXT MONTH: Software Packages and How To Use Them

FUTURE ARTICLES: Databases and Bulletin Board Systems
How to Start Your Own BBS

```
##############################################################################
#                                                                            #
#     GENERAL AREAS TO CHECK WHEN CASSETTE ERROR CODES AND MESSAGES OCCUR     #
#                                                                            #
##############################################################################
```

1. MAKE SURE THAT YOUR CASSETTE RECORDER IS CONNECTED TO YOUR COMPUTER CONSOLE CORRECTLY. THE CASSETTE RECORDER INTERFACE CABLE MUST BE CONNECTED TO THE 9-PIN PLUG AT THE REAR OF THE COMPUTER CONSOLE - DON'T CONFUSE THIS PLUG WITH THE 9-PIN JOYSTICK PORT ON THE SIDE OF THE CONSOLE - THEY ARE NOT INTERCHANGABLE! WHILE YOU ARE AT IT - MAKE SURE THAT THE COLOR-CODED WIRES WHICH PLUG INTO THE CASSETTE RECORDER ARE ATTACHED CORRECTLY AS WELL. THE CASSETTE RECORDER WILL NOT OPERATE PROPERLY IF THE COLOR-CODED WIRES ARE REVERSED! THEY MUST BE "BLACK" TO THE RECORDER'S REMOTE JACK - "WHITE" TO THE RECORDER'S EARHONE JACK - AND "RED" TO THE RECORDER'S MICROPHONE JACK.

2. IF YOU ARE USING D/C CURRENT - INSTEAD OF A/C CURRENT - MAKE SURE THAT YOUR BATTERIES ARE FRESH! WEAK BATTERIES WILL CAUSE YOUR DATA TO BE DISTORTED!

3. MAKE SURE THAT YOUR CASSETTE RECORDER'S VOLUME CONTROL AND TONE SETTINGS ARE ADJUSTED PROPERLY. GENERALLY SPEAKING - A VOLUME CONTROL OF "8" AND A TONE SETTING OF "9" ARE RECOMMENDED.

4. MAKE SURE THAT YOUR CASSETTE TAPE HEAD IS CLEAN. IF YOU CAN'T REMEMBER THE LAST TIME THAT YOU CLEANED IT - THEN IT'S BEEN TOO LONG!

5. MAKE SURE THAT YOU ARE USING A "HIGH-QUALITY" CASSETTE TAPE. A CASSETTE TAPE OF "POOR-QUALITY" YIELDS "POOR-PERFORMANCE" - HEADACHES - AND TOTAL FRUSTRATION!

6. MAKE SURE THAT YOUR CASSETTE TAPE IS NOT ANY LONGER THAN A C-60 CASSETTE. (WHICH IS 30 MINUTES PER SIDE). LONGER TAPES ARE THINNER AND PROVIDE LESS FIDELITY.

7. MAKE SURE THAT YOUR CASSETTE TAPE IS IN GOOD CONDITION - THAT THE TAPE HAS NOT BEEN DAMAGED OR ACCIDENTLY ERASED. IF IN DOUBT - TRY ANOTHER TAPE!

8. MAKE SURE THAT YOU HAVE PUT THE CASSETTE TAPE IN CORRECTLY - THAT IT IS THE CORRECT CASSETTE TAPE AND THAT IT HAS BEEN PLACED IN THE CASSETTE RECORDER WITH THE CORRECT SIDE FACING UP. ALSO, MAKE SURE THAT THE CASSETTE TAPE HAS BEEN POSITIONED AT THE BEGINNING OF THE DESIRED PROGRAM.

9. MAKE SURE THAT YOUR CASSETTE TAPE WAS RECORDED WITH YOUR CASSETTE RECORDER OR AN IDENTICAL MODEL. IF THE CASSETTE TAPE WAS ORIGINALLY RECORDED USING A "DIFFERENT" TYPE OF CASSETTE RECORDER - IT IS POSSIBLE THAT THE PROGRAM WILL NOT LOAD PROPERLY. WHEN THIS OCCURS - YOU HAVE NO CHOICE BUT TO... EITHER OBTAIN ANOTHER COPY OF THE PROGRAM - USING YOUR CASSETTE RECORDER TO "SAVE" THE PROGRAM - OR "LOAD" THE PROGRAM AGAIN - THIS TIME USING THE CASSETTE RECORDER THAT HAD ORIGINALLY "SAVED" THE PROGRAM.

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##############################################################################
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NEXT MONTH'S TOPIC WILL BE UNDERSTANDING - CREATING - AND USING - CASSETTE FILES. THIS TOPIC SHOULD PROVE TO BE QUITE INTERESTING - AS I WILL BE LEARNING QUITE ALOT OF "NEW" MATERIAL MYSELF - SINCE THIS IS AN AREA THAT I HAVE NOT HAD VERY MUCH EXPERIENCE WITH IN THE PAST.

IF YOU NEED ANY HELP UNDERSTANDING THE CASSETTE ERROR CODES AND MESSAGES OR ARE EXPERIENCING CASSETTE ERRORS - JUST GIVE ME A CALL (412-335-0163) AND I'LL TRY TO HELP.

I'm running out of space, because here I am on page 9, and I've got so much more to give you. Well since some of it can't really wait until next month, I will duplicate some of it and bring it to the next meeting. Please come to the April meeting. We have some really good software, a printer stand, and much more to give or raffle off, whatever the GREAT PO-BA decides.

NOT JUST ANOTHER PRETTY FACE.................... The information that you see below is for the T.I. community at large. About two months ago we had a very interesting demonstration of The RAVE 99 Keyboard by one of our members, Willis Richardson. I really had a renewed interest in getting one of the RAVE units, especially when my oldest daughter expressed to me how well she was taking to typing in school. The T.I. console I felt would not be the best keyboard for a novice to practice on at home. BUT, the same old thing that always seems to haunt the back of your mind when you are about to buy something NEW, " MAYBE IF I WAIT THERE WILL BE SOMETHING BETTER COME OUT", kept me from actually making the purchase. I hate to say it, but in this case it may be true. I have not yet put the interface into use, but the ad shown below certainly does indicate some additional features which may convince you to take the step. Note the price also.
*****THERE WILL BE ONE AT THE APRIL MEETING FOR YOU TO VIEW.*****

KBM 99
KEYBOARD INTERFACE
FOR THE TI994A

In simple language this device will allow you to use any IBM or compatible keyboard on your TI!

Features:
*Full size keyboard layout (not narrow like the TI)

*Separate Numeric/Cursor keypad
*Joystick operation even with Alpha Lock on!
*Many FCTN Key operations require only one key press
*Fifty pre-programmed commands and functions such as:

"OLD DSK1."   "SAVE DSK1."   "LIST"   "RUN(cr)"
"(proceed)"   "(back)"   "PRINT "   "INPUT"
"ACCEPT AT("   "DISPLAY AT("   "CALL CLEAR"   "CALL KEY("
"CALL PEEK("   "CALL SPRITE(#"   "SIZE(cr)"   "RUN "DSK1.""
"CALL LOAD("   "CALL INIT "   "TRACE"   "UNTRACE"
and many many more...

* Keyboard activated screen dump via the Prt Sc key. (Printer and Software required for Screen Dump)
* Easy hook up to old consoles.(Do it in 15 minutes or less)

The MLsystems model KBM/99 comes with everything you need (excluding keyboard which you can pick up for $30-$90).Any IBM PC/XT Compatable Keyboard will work.

The price is very reasonable $80.00

write:

MLsystems, P.O. BOX 268 VALLEY FALLS , RI, 02864

```
MLsystems MODEL KBM/99 QUICK REFERENCE GUIDE
----------- STANDARD FUNCTION KEYS -----------
   OLD DSK1. [ F1 ][ F2 ] SAVE DSK1.
    (ERASE) [ F3 ][ F4 ] LIST
    (BEGIN) [ F5 ][ F6 ] (PROCEED)
     (AID) [ F7 ][ F8 ] (REDO)
    (BACK) [ F9 ][ F10] RUN(cr)
----------- SHIFTED FUNCTION KEYS -----------
    PRINT [ F1 ][ F2 ] INPUT
   OPEN # [ F3 ][ F4 ] CLOSE #
   CHR$( [ F5 ][ F6 ] RETURN
   GOSUB [ F7 ][ F8 ] GOTO
  ACCEPT AT( [ F9 ][ F10] DISPLAY AT(
--------- CONTROLLED FUNCTION KEYS ---------
   CALL CHAR( [ F1 ][ F2 ] CALL CLEAR
   CALL COLOR( [ F3 ][ F4 ] CALL BCHAR(
   CALL HCHAR( [ F5 ][ F6 ] CALL KEY(
   CALL PEEK( [ F7 ][ F8 ] CALL SCREEN(
   CALL SOUND( [ F9 ][ F10] CALL VCHAR(
------------- ALT FUNCTION KEYS -------------
   CALL COINC( [ F1 ][ F2 ] CALL DELSPRITE(
  CALL DISTANCE(# [ F3 ][ F4 ] CALL LOCATE(#
  CALL MAGNIFY( [ F5 ][ F6 ] CALL MOTION(#
  CALL PATTERN(# [ F7 ][ F8 ] CALL POSITION(#
  CALL SPRITE(# [ F9 ][ F10] CALL SAY(
------------- EBC FUNCTION KEYS -------------
   RUN "DSK1. [ F1 ][ F2 ] MERGE "DSK1.
   CALL INIT [ F3 ][ F4 ] "PIO"
   CALL LOAD( [ F5 ][ F6 ] "RS232."
   SIZE(cr) [ F7 ][ F8 ] DSK1.
   TRACE [ F9 ][ F10] UNTRACE
----------- MISCELLANEOUS KEYS -----------
    [ESC] = NEW FUNCTION KEY
    [<-] = MOVE CURSOR LEFT
   [SHIFT][<-] = MOVE CURSOR RIGHT
   [SCR.LOCK/BREAK] = BREAK
  [SHIFT][CONTROL][PrtSc] = ACTIVATE LOAD INTERRUPT
------- ALT/NUMERIC KEYPAD OPERATIONS -------
    [ALT][ 1 ] = MISSING KEY #1
    [ALT][ 2 ] = MISSING KEY #2
    [ALT][ - ] = F1-F10 SLOWER
    [ALT][ + ] = F1-F10 FASTER
    [ALT][DEL] = RESET TO DEFAULTS
----------- T.I. WRITER KEYS -----------
    [TAB] = RIGHT TAB
   [SHIFT][TAB] = BACK TAB
    [HOME] = HOME
    [END] = PAGE DOWN
    [PgUp] = PAGE UP
    [PgDn] = PAGE DOWN
  (CURSOR KEYPAD)[ 5 ] = NEXT WINDOW
    [INS] = INSERT
    [DEL] = DELETE
```

The WEST PENN 99'ERS

% John F. Willforth
  R.D.#1   Box 73A
  Jeannette,   PA
             15644

APRIL 1987 ISSUE

PITTSBURGH, PA
PM
10 APR
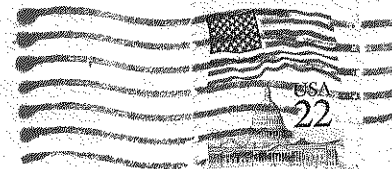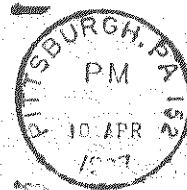
MICKEY SCHMITT
196 BROADWAY AVE.
LOWER BURRELL PA 15068