CLUB NEWS BY GARY TAYLOR

THERE WILL NOT BE A MEETING ON THE THIRD SUNDAY IN JULY. INSTEAD WE WILL BE SPONSORING A CLUB PICNIC ON SATURDAY JULY 29, 1989 FROM 12:00 NOON TIL 11:00 PM. SO MARK YOUR CALENDAR ACCORDINGLY. THE PICNIC WILL BE HELD IN THE PAVILLION AT DORMONT PARK. I HAVE INCLUDED A MAP IN THIS NEWSLETTER SO YOU CAN FIND IT. FOR THOSE OF YOU WHO MAY BE FAMILIAR WITH THE AREA, IT IS ON BANKSVILLE ROAD RIGHT BEHIND THE LARGE DORMONT POOL. PARKING IS FREE. YOU CAN PARK IN THE SWIMMING POOL PARKING LOT IF YOU WISH. THERE IS PARKING AVAILABLE ON MEMORIAL DRIVE AND ON ANNAPOLIS STREET AT THE EAST END OF THE PARK. THE PAVILLION IS UNDER ROOF WITH BOTH RUNNING WATER AND ELECTRICITY AVAILABLE. IT CONTAINS 10 OR 11 PICNIC TABLES AND INCLUDES A COUPLE OF SERVING TABLES AS WELL. THE CLUB WILL BE SUPPLYING HAMBURGERS(COOKED), BUNS, POP, POTATO CHIPS, AND CONDIMENTS. I KNOW, I KNOW, I SAID HOTDOGS AT THE LAST MEETING BUT THE EXECUTIVE COMMITTEE DECIDED AT THE LAST EXECUTIVE MEETING THAT WE WILL SUPPLY HAMBURGERS INSTEAD. WE WILL ALSO HAVE THE USUAL PAPER PLATES, CUPS AND ICE. THERE WILL BE AT LEAST TWO GRILLS AVAILABLE FOR COOKING THE HAMBURGERS. YOU WILL HAVE TO SUPPLY ANYTHING ELSE THAT YOU OR YOUR FAMILY MAY WANT TO EAT. WE DO HAVE A PROMISE OF AT LEAST ONE WATERMELON.

THERE ARE SEVERAL ACTIVITIES PLANNED AND AVAILABLE AT THE PARK. THERE IS THE USUAL ASSORTMENT OF PLAYGROUND EQUIPMENT; SWINGS, SLIDES, AND A MERRY-GO-ROUND. YOU MAY GO SWIMMING IN THE DORMONT POOL. THERE IS A $2 FEE CHARGED BY THE BORO FOR THIS ACTIVITY. DON'T FORGET YOUR SWIMMING SUIT! BATHHOUSES ARE AVAILABLE TOO. THERE ARE BASKETBALL COURTS AND TENNIS COURTS AVAILABLE NEARBY THAT CAN BE USED AT NO CHARGE. THERE IS ALSO A BASEBALL FIELD AVAILABLE AND PLENTY OF SPACE FOR FRISBEE TOSSING. LYNNE WALLIS WILL BE ORGANIZING SEVERAL GAMES FOR CHILDREN AND ADULTS. WE WILL ALSO HAVE SEVERAL DOOR PRIZES DURING THE DAY. WE COULD HAVE A FEW SATURDAY NIGHT BINGO GAMES IF THERE IS ANY INTEREST.

THE PICNIC WILL BE HELD IN CONJUNCTION WITH A LIBRARY SWAP. WE WILL HAVE AT LEAST TWO SYSTEMS SET UP AND A COMPLETE COPY OF OUR CLUBS LIBRARY. SUSAN SAID THAT SHE PLANS TO HAVE OVER 200 NEW DISKS ADDED TO OUR LIBRARY IN TIME FOR THE SWAP. THAT WAS NOT A TYPO!, TWO HUNDRED NEW DISKS! WE WILL HAVE SIGN UP SHEETS FOR EACH MACHINE. THE SIGNUP SHEET WILL BE DIVIDED INTO 1/2 HOUR INCREMENTS. YOU CAN SIGN UP MORE THAN ONCE. THIS IS JUST TO PREVENT SOMEONE FROM MONOPOLIZING THE MACHINE ALL DAY. THERE WILL BE ONE TIME CHARGE OF $5. WE WILL ALSO HAVE BLANK DISKS AVAILABLE AT THE NORMAL PRICE IF YOU CARE TO PURCHASE THEM FROM THE CLUB. IF YOU HAVE SOMETHING YOU WANT TO SHARE WITH THE CLUB OR WITH A FRIEND FOR THAT MATTER, THEN BRING IT ALONG.

THERE WILL BE A MEETING IN AUGUST AT THE REGULAR PLACE AND TIME BUT THERE WILL NOT BE A NEWSLETTER IN AUGUST TO REMIND YOU. WE WILL BE PUBLISHING A LARGER ISSUE OF THE PUG PERIPHERAL IN SEPTEMBER AS WE DID LAST YEAR. THIS GIVES OUR NEWSLETTER EDITOR A BREAK IN THE SUMMERTIME THAT IS WELL DESERVED. THE AUGUST MEETING WILL NOT BE AS

FORMAL AS MOST OF OUR MEETING AND WILL BE GEARED TOWARDS INDIVIDUAL SOLUTIONS TO PROBLEMS AND COMPUTER GAMING. BRING YOUR FAVORITE COMPUTER GAME TO THE MEETING AND DEMONSTRATE IT FOR US.

I WILL BE BRINGING "RETURN TO PIRATE'S ISLAND" AND A DISK ON WHICH I HAVE SAVED A GAME THAT HAS ALL THE TREASURES BUT ONE. WILL SOMEONE BE ABLE TO HELP ME FIND IT?

THE LATEST STATUS ON THE ZENO BOARD? I SAW THE FILMS CONTAINING THE LAYOUT OF THE BOARD THE DAY THAT ERIC RECEIVED THEM. HE WAS QUITE PLEASED WITH THE RESULTS AND WAS TO HAVE SUBMITTED THE FILM TO A COUPLE OF BOARD MANUFACTURERS FOR PRICE QUOTATIONS THIS MONTH. HE EXPECTS TO HAVE 10 PROTOTYPES MADE AND EVERYTHING CHECKED OUT BY THE END OF JULY. STAY TUNED.

ONE OF THE DISKS THAT WAS PICKED UP AT THE LIMA FAIR WAS XDP, EXTENDED DISPLAY PACKAGE. UNFORTUNATELY, WE ONLY GOT THE DEMO DISK THAT CONTAINED SOME OF THE DOC FILES. THERE ARE THREE MORE DISKS IN THE PACKAGE. SUSAN WILL BE REQUESTING THE THREE DISKS THIS MONTH FROM THE LIMA GROUP AND WE SHOULD HAVE THEM IN THE LIBRARY IN TIME FOR THE SWAP. THANKS TO CLIFF PEMPER FOR POINTING OUT THIS OVERSITE TO US.

THERE IS A NEW VERSION 5.6 OF CHECKBOOK MANAGER, SYSTEM III, AVAILABLE. THIS IS A GREAT HOME FINIANCIAL PACKAGE. IT CONTAINS MANY PROGRAMS TO HELP YOU WITH YOUR HOME FINANCES. IT INCLUDES PROGRAMS FOR SETTING UP A BUDGET AND MAINTAINING YOUR CHECKBOOK, ANNUITY CALCULATIONS, LOAN CALCULATIONS, AMORTIZATION SCHEDULES, ETC. DOCS ARE ON THE DISK AND CAN BE DISPLAYED OR PRINTED. IT COMES ON FOUR DISKETTES IN THE SSSD VERSION AND SHOULD BE AVAILABLE AT THE PICNIC.

TI Artist...For the Beginner Vol. 3
By Evelyn and Don McCalla
Pittsburgh User's Group

Now that we've dealt with funerals, weddings, and scads of sick kids, it's time to get back to business. Sorry for the wait.

Color Clear (CTRL B) Clears Color ONLY-leaving the drawn lines in Black. If you have filled an area in with a color pattern, it too will be black. Any colored areas will also be black. To clear the screen totally, the function is used with Clear Image (CTRL A).

Store; is used to store your pictures from screen to disk. (L) is for Load Picture from disk; (S) is to Save Picture. Both will prompt you at the bottom of the screen for File Names. The (I) is to give you an Index of Pictures on a disk. It will not recognize Instances or Fonts. Just input which drive the Picture disk is in and the list is printed on screen.

Zoom (Z); acts like a telephoto lens. After pressing (Z), from any function, a small black rectangle appears on the picture. The size of this box is NOT variable. Position this over an area you want to see closer. Press the Fire button and the area in the box is enlarged to fill the screen. You can now use all the creative functions but they will be limited to the Zoom area. In this mode it makes corrections easier since the Pixels are larger and can be modified individually. Press (Z) again to exit the function.

Mirror (M); is almost a misnomer. When used, it creates 4 identical images on screen. It "Mirrors" your drawing line above or below your original, and then mirrors both of these on the other side of the screen. like there was an imaginary line down the center of the screen, dividing it in half, horizontally and vertically. This function is very interesting when making Circles, Boxes, Rays, etc. Mirror can be used in addition to other Functions; Circles, Draw, and Zoom for example. When finished, press (M) again to exit this function.

Hard Copy (C); use this to print out your creation. Our printer is an NX 1000 which is Epson compatible (option 3). After entering your Printer Type, enter your device name (ours is the default). Then you are prompted for Density, Magnification Factor, and Line Spacing. It may be advisable at first to use the Defaults. Magnification will enlarge the picture and not change the image. Density controls only Width, and...you may have a stretched-out or squeezed-in looking image. Line Spacing controls height, so changing the default will cause an image to appear stretched vertically, and thinner. If you are not anticipating these changes, the print-out may be surprising. They are fun to try out if well stocked with paper.

Now we move to the two rows of boxes at the bottom of the menu screen.

The first box has a cursor in it. When "ON" (or yellow), it allows you to create on the screen. Please disregard color at this point because the color program has some unpredictable results. Lets assume we are using the default cursor to draw with. With the cursor box on, this allows you to draw onto the blue drawing screen. The remainder of the boxes across the row alter what the line looks like. A small thin line; a

thicker line; two and three lines together; etc. To access these you must return to the menu screen and place the cursor over the stylus style desired and press the Fire button. All of these stylus styles work similar to a calligraphy pen; for example, the vertical bar (fifth box to the right of the cursor box) will create a Bar when drawing left or right, but it creates a diagonal line when drawing up and down. The two slanted options look like this also except at the corners. The diagonals are patterned to simulate the underside of a 3-D object. Try playing with the other menu items while changing stylus styles.

Getting back to the cursor box again. When it is On and Drawing on the blue screen, you get a neat design, but invert the screen and nothing happens except if you draw over what you have just created. Then you have "erased" part of your design. Now turn the cursor "OFF". It seems that you cannot draw on the blue screen, only over an existing line; it then "erases" it. It does not "color" it blue. Press "I" for invert and start drawing on the black screen. Everything can be seen. Now change it back to the blue screen. All the lines drawn are now there. It's a bit confusing; like double negatives, however, with a bit of practice you can create some finely patterned pictures and correct any errors neatly.

Lets progress to the colors along the bottom of the screen. To color something; place the cursor over the desired color and press "Fire." The cursor changes to that color; you can then draw or fill to apply color. Be advised that the color splashes because the color pixels are different and may bleed into unexpected areas. Also, if using blue, you may "lose" your cursor; just invert to locate it again.
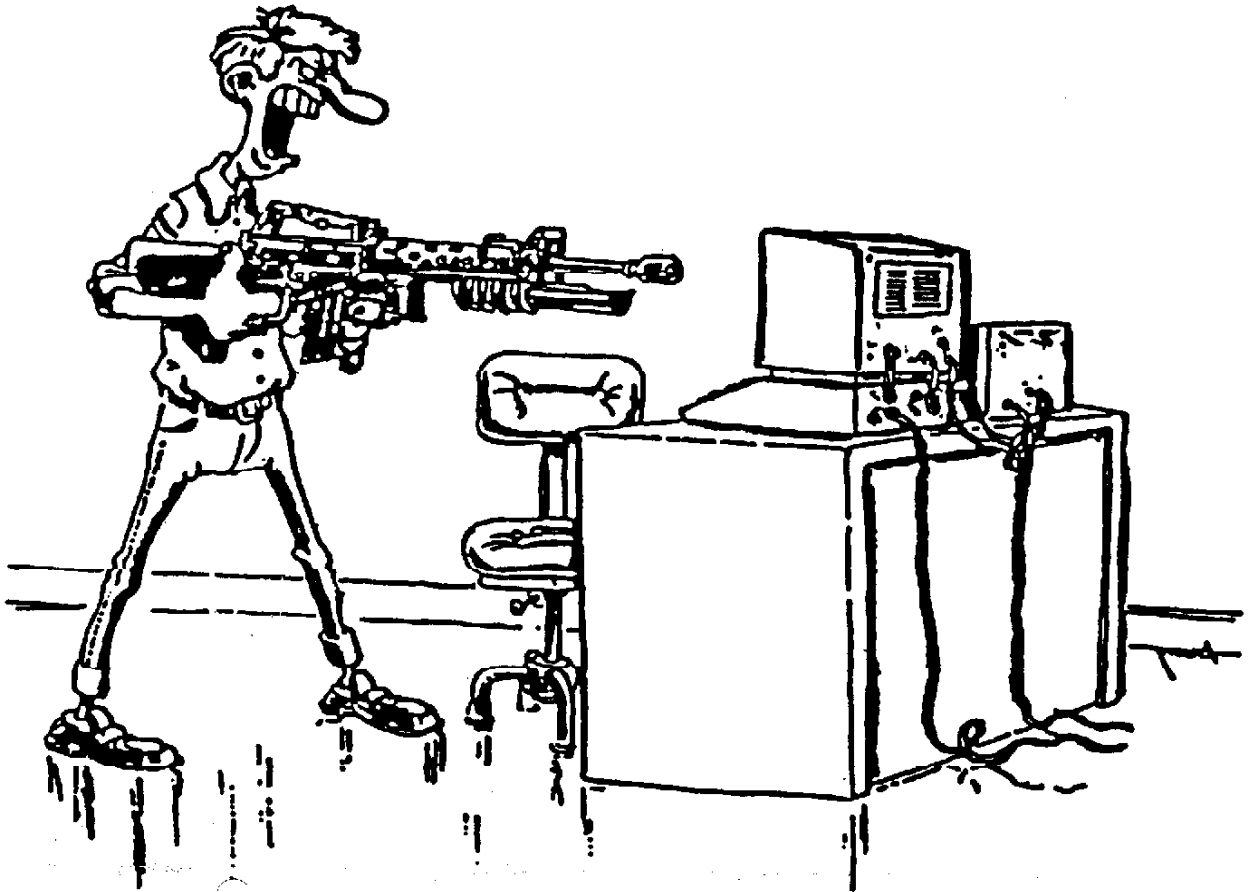
To use a Color Cursor, place the cursor over the rectangle in the box. The cursor will carry a small color square on it to remind you what color you're using. This rectangular brush will only change the color portion of your creation. It reduces the splash and bleedover since it follows the color bit-map mode. The box marked "P" holds 10 patterns that can be accessed when filling. Just be careful that the space to be filled is completely closed. The patterns and colors can "escape" thru a single-pixel size hole.

The Foreground-Background Icon (the square with F/B) is chosen before choosing color with the color cursor. Foreground will change the black portion of the picture to the color chosen, and paint the background ALSO to the color chosen. The background color chosen will be seen in a small square up and to the left of the rectangular open bar (Color Cursor); the bar will be the Foreground color. If the foreground color is left black, the black portion of your picture will remain intact, being filled in by the background color chosen. You can scroll thru the foreground color choices while in your picture by pressing (FCTN-,).

One last thing in the painting area-the last color bar on the right is an ERASER bar; if the foreground is left black, it will erase color from your picture. If changed to any color, it will erase everything in the area used.

Here's a few miscellaneous functions we haven't really mentioned That can be found on the title screen: Input Device-allows the user to write a DSR (device service routine) to use a mouse or other device with this program. point in time, and I don't have a mouse anyway.

EXECUTE PROGRAM

(continued from page 3)

Conversions-allows the user to Both Load and Save GRAPHX, DRAW 'N PLOT, and DRAW-A-BIT(I II) type pictures in each of the other formats (Including TI Artist, of course).

We're both sure that there are many other combinations and uses for the commands allowed in the TI Artist program, and we welcome any comments, suggestions, and uses for this "Inventive" program. Just drop us a line via the PUG PO Box listed on the Newsletter. that's all we have to say, so "Happy Painting!"

FROM THE LIBRARIAN. . .

This month I will only give you a short note from the library department, so I can get back to work on the things you all want - new and better programs!

This month is our club picnic, and the library will be there, although I will not. So far this month I have added over one hundred (yes, 100!) disks to the library. Let me just say that summertime does give one more time to play. And with all the rain, who can go swimming?????

The library will be available at the picnic, but not for sale. The deal is that Gary will have a computer or two set up, and for a measly $5.00 you can copy all the disks you can get done. Come early and stay late, bring blank disks, or bring money to get them from Frank. There will be a sign up sheet near the computers to let those who wish to copy disks reserve a time slot in half hour blocks.

A printed list of the disks will be available at the picnic, as well as updated catalog disks. Library catalogs are one dollar or one blank disk per disk. The club officers are working real hard to get you the best and most complete programs we can. Please let us know what you want, and share with us what you have.

One of the dollar disks that Gary had last month makes reference to a companion disk, and we are working on getting the rest of that set. It is the Extended Basic Display disk, and there are four disks in the set. As soon as we have them, you will too.

Well, that's all. Have a great picnicy time, and DON'T ERASE THE LIBRARY WHEN IT'S YOUR TURN TO COPY!!! I'll think of you all from my Girl Scout trip!

See you at the next meeting . . .

TI KEY/CHARACTER CODES

KEY	ASC	HEX	NAME
	0	>00	EOL marker
FCTN 7	1	>01	AID
FCTN 4	2	>02	CLEAR
FCTN 1	3	>03	DELete
FCTN 2	4	>04	INSert
FCTN =	5	>05	QUIT
FCTN 8	6	>06	REDO
FCTN 3	7	>07	ERASE
FCTN S	8	>08	Left Arrow
FCTN D	9	>09	Right Arrow
FCTN X	10	>0A	Down Arrow
FCTN E	11	>0B	Up Arrow
FCTN 6	12	>0C	PROC'D
ENTER	13	>0D	ENTER
FCTN 5	14	>0E	BEGIN
FCTN 9	15	>0F	BACK
	16	>10	
	17	>11	
	18	>12	
	19	>13	
	20	>14	
	21	>15	
	22	>16	
	23	>17	
	24	>18	
	25	>19	
	26	>1A	
	27	>1B	ESC
	28	>1C	
	29	>1D	
	30	>1E	Cursor
	31	>1F	Edge
Space	32	>20	Space
!	33	>21	
"	34	>22	
#	35	>23	
$	36	>24	
%	37	>25	
&	38	>26	
'	39	>27	
(	40	>28	
)	41	>29	
*	42	>2A	
+	43	>2B	
,	44	>2C	
-	45	>2D	
.	46	>2E	
/	47	>2F	
0	48	>30	
1	49	>31	
2	50	>32	
3	51	>33	
4	52	>34	
5	53	>35	
6	54	>36	
7	55	>37	
8	56	>38	
9	57	>39	
:	58	>3A	
;	59	>3B	
<	60	>3C	
=	61	>3D	
>	62	>3E	
?	63	>3F	

KEY	ASC	HEX	NAME
@	64	>40	
A	65	>41	
B	66	>42	
C	67	>43	
D	68	>44	
E	69	>45	
F	70	>46	
G	71	>47	
H	72	>48	
I	73	>49	
J	74	>4A	
K	75	>4B	
L	76	>4C	
M	77	>4D	
N	78	>4E	
O	79	>4F	
P	80	>50	
Q	81	>51	
R	82	>52	
S	83	>53	
T	84	>54	
U	85	>55	
V	86	>56	
W	87	>57	
X	88	>58	
Y	89	>59	
Z	90	>5A	
[	91	>5B	
\	92	>5C	
]	93	>5D	
^	94	>5E	
_	95	>5F	
`	96	>60	
a	97	>61	
b	98	>62	
c	99	>63	
d	100	>64	
e	101	>65	
f	102	>66	
g	103	>67	
h	104	>68	
i	105	>69	
j	106	>6A	
k	107	>6B	
l	108	>6C	
m	109	>6D	
n	110	>6E	
o	111	>6F	
p	112	>70	
q	113	>71	
r	114	>72	
s	115	>73	
t	116	>74	
u	117	>75	
v	118	>76	
w	119	>77	
x	120	>78	
y	121	>79	
z	122	>7A	
{	123	>7B	
|	124	>7C	
}	125	>7D	
~	126	>7E	
FCTN V	127	>7F	del

KEY	ASC	HEX	NAME
CTRL ,	128	>80	null
CTRL A	129	>81	ELSE
CTRL B	130	>82	::
CTRL C	131	>83	!
CTRL D	132	>84	IF
CTRL E	133	>85	GO
CTRL F	134	>86	GOTO
CTRL G	135	>87	GOSUB
CTRL H	136	>88	RETURN
CTRL I	137	>89	DEF
CTRL J	138	>8A	DIM
CTRL K	139	>8B	END
CTRL L	140	>8C	FOR
CTRL M	141	>8D	LET
CTRL N	142	>8E	BREAK
CTRL O	143	>8F	UNBREAK
CTRL P	144	>90	TRACE
CTRL Q	145	>91	UNTRACE
CTRL R	146	>92	INPUT
CTRL S	147	>93	DATA
CTRL T	148	>94	RESTORE
CTRL U	149	>95	RANDOMIZE
CTRL V	150	>96	NEXT
CTRL W	151	>97	READ
CTRL X	152	>98	STOP
CTRL Y	153	>99	DELETE
CTRL Z	154	>9A	REM
CTRL .	155	>9B	ON
CTRL ;	156	>9C	PRINT
CTRL =	157	>9D	CALL
CTRL 8	158	>9E	OPTION
CTRL 9	159	>9F	OPEN
	160	>A0	CLOSE
	161	>A1	SUB
	162	>A2	DISPLAY
	163	>A3	IMAGE
	164	>A4	ACCEPT
	165	>A5	ERROR
	166	>A6	WARNING
	167	>A7	SUBEXIT
	168	>A8	SUBEND
	169	>A9	RUN
	170	>AA	LINPUT
	171	>AB	
	172	>AC	
	173	>AD	
	174	>AE	
	175	>AF	
CTRL 0	176	>B0	THEN
CTRL 1	177	>B1	TO
CTRL 2	178	>B2	STEP
CTRL 3	179	>B3	,
CTRL 4	180	>B4	;
CTRL 5	181	>B5	:
CTRL 6	182	>B6	)
CTRL 7	183	>B7	(
FCTN .	184	>B8	&
FCTN .	185	>B9	
FCTN /	186	>BA	OR
CTRL /	187	>BB	AND
	188	>BC	XOR
FCTN ;	189	>BD	NOT
FCTN B	190	>BE	=
FCTN H	191	>BF	<

KEY	ASC	HEX	NAME
FCTN J	192	>C0	>
FCTN K	193	>C1	+
FCTN L	194	>C2	-
FCTN M	195	>C3	*
FCTN N	196	>C4	/
FCTN Q	197	>C5	^
FCTN Y	198	>C6	
	199	>C7	flag quoted
	200	>C8	flag unquoted
	201	>C9	flag line on
	202	>CA	EOF
	203	>CB	ABS
	204	>CC	ATN
	205	>CD	COS
	206	>CE	EXP
	207	>CF	INT
	208	>D0	LOG
	209	>D1	SGN
	210	>D2	SIN
	211	>D3	SQR
	212	>D4	TAN
	213	>D5	LEN
	214	>D6	CHR$
	215	>D7	RND
	216	>D8	SEG$
	217	>D9	POS
	218	>DA	VAL
	219	>DB	STR$
	220	>DC	ASC
	221	>DD	PI
	222	>DE	REC
	223	>DF	MAX
	224	>E0	MIN
	225	>E1	RPT$
	226	>E2	
	227	>E3	
	228	>E4	
	229	>E5	
	230	>E6	
	231	>E7	
	232	>E8	NUMERIC
	233	>E9	DIGIT
	234	>EA	UALPHA
	235	>EB	SIZE
	236	>EC	ALL
	237	>ED	USING
	238	>EE	BEEP
	239	>EF	ERASE
	240	>F0	AT
	241	>F1	BASE
	242	>F2	
	243	>F3	VARIABLE
	244	>F4	RELATIVE
	245	>F5	INTERNAL
	246	>F6	SEQUENTIAL
	247	>F7	OUTPUT
	248	>F8	UPDATE
	249	>F9	APPEND
	250	>FA	FIXED
	251	>FB	PERMANENT
	252	>FC	TAB
	253	>FD	#
	254	>FE	VALIDATE
	255	>FF	EOF marker

COURTESY OF: Jim Swedlow   Author of "SIDE&PRINT" & "XB&TOOLS"

HIGH RES GRAPHICS AND THE 99/4A

PART 2

By Anne Dhein

The Comparison Chart

Section Two: Getting Down to Details

Let's talk about drawing tools. In these packages the cursor is your "pencil" as well as your "eraser". The pencil can be moved around either by using the keyboard's arrow keys or by using a remote controlled "joystick". Some software requires joystick control. Then the fire button is usually used to turn the drawing tool on or off. To make truly curved lines with just the keyboard is practically impossible - you need the better control that a joystick has. On the other hand, it's harder to draw straight lines with a joystick; the keyboard does a better job there. Luckily, drawing programs can create lines, boxes and circles automatically.

Anywhere a joystick is required, a trackball can be used instead. The phenolic ball offers 360 degree movement for such fine control of the pencil that you can easily write your name in script. (I won't promise how it will look!) However, it is almost impossible to draw a straight line with a trackball. This is where the automatic line function in drawing programs becomes invaluable. If you are using a joystick or trackball be sure the alpha lock is in the UP position.

Cursor Speed Control - In many of the programs the speed of the cursor can be controlled. This is handy because if you are drawing large areas freehand, you can go much faster. When you want to work on painstaking detail then use a slower cursor for more accuracy.

Brush Styles - Instead of leaving a fine line like the single-pixel pencil, a brush applies "paint" for wider or fancier lines. Draw A Bit lets you paint in wide or narrow swatches of color. TI Artist includes angle brushes and brushes that make parallel lines like you would get from painting with a fork. Paint 'N Print, which has 32 brush styles includes circles, squares, and even triangles in a number of sizes.

Automatic Draw Functions - As mentioned earlier, all paint programs listed here will draw lines for you automatically. Select the beginning and end of your line, press a button, and presto - you have a perfectly straight line right where you wanted it. Some programs will also draw circles, ovals, rectangles and rays. A ray is like a line except that you can keep moving the cursor (pencil) around the drawing board, and wherever you choose to press the button, you can have a perfect line between the current cursor position and your original starting point.

Some programs will also draw ellipses and rectangles. For chart purposes, an ellipse includes circles and ovals, and rectangles include squares. Draw A Bit and the Graphics Package draw 90 degree arcs - four arcs make a circle. The various programs handle this function in different manners, but the principal is the same; select the center position and the size, and the figure is drawn automatically.

Filling, Shading, and Adding Depth - In all but two of the programs, closed shapes can be "filled", or "painted", with a specified color or pattern. The Paint 'N Print cartridge limits the filling to a rectangle only. But with the companion disk, any closed shape may be filled with any texture or solid color.

A manual fill requires the cursor to be moved around the shape as it is being filled, in order to get every little part of it. A semi-automatic fill does most of the shape in one pass; the occasional spots missed must be done manually. A fully automatic fill checks to see that every little corner has been filled - even in convex shapes. Sometimes this is called a "smart" fill.

Some programs provide patterns for shading and depth. Super Sketch has one texture pattern. TI Artist has 10 and Joy Paint has 24 from which to choose. Joy Paint also has an airbrush which works like a can of spray paint. It give a misty, sprayed effect in whatever pattern you are using. Because you can control the amount of "paint" that goes on the drawing, it makes an excellent tool for adding shadows and depth. Almost the same effect can be achieved with Paint 'N Print by using one of the larger brush sizes and switching to the texture mode. Bitmac has a feature called "Life" which can be used for getting a shaded effect.

Joy Paint and Paint 'N Print both have routines on their companion disks for creating new texture patterns. Once you have saved these patterns on disk, they can be used over and over.

Reflections - The chief application of this function is to draw symmetrical figures rapidly and easily. The screen is divided into sections and whatever is drawn in one section will be reflected in all the others. In TI Artist this is called the MIRROR function, and the screen is divided into four parts. Other functions such as circle, frame, line, and zoom can be used while the mirror function is in effect. Paint 'N Print calls this function KALEIDESCOPE and gives you a choice of 2 to 8 reflections. Functions such as square, circle or fill may be used but result in only one image.

Picture Manipulation

Move, Copy, Flip, Rotate, Invert, Magnify and Reduce - When you have your picture underway, and more of an idea of what you want, you will appreciate features that let you alter the look of the drawing. Some programs let you copy one part of a picture to another part, move sections of picture around the screen, rotate, invert, or flip them; magnify or reduce parts. Invert means to turn all the "on" pixels off, and all the "off" pixels on - thus swapping black for white and white for black. Flipping a picture gives you a mirror image, either left to right (horizontal) or up side down (vertical) depending on which way you flip.

The only programs that have functions to enlarge or reduce drawings are Bitmac and Joy Paint, which can each

double or halve the size of the selected image. For reducing
a Joy Paint image, the companion disk, Joy Paint's Pal must be
loaded. It can also be used for reducing parts of TI Artist
or Graphx pictures. These pictures can then be resaved in the
original format or switched to Joy Paint's file structure.

TI Artist drawings can also have parts saved to disk in
an enlarged format by saving the screen when the zoom mode is
in effect. This will give you a new picture that is four
times the size of the original. For both reducing and
enlarging, Joy Paint does the smoothest job.

Text Handling and Special Fonts - The more recent
programs all have provisions for text to be used right along
with the graphics. The nicest of these are Joy Paint and
Bitmac, each with what almost amounts to a mini word processer
built right in to the drawing board. With TI Artist, variable
sized letters can be easily typed on the screen from the
keyboard in 81 different heights and widths, but some of the
letters are rather blocky looking. Four of the programs
additionally contain special provisions for fancy lettering to
be added to the drawings. Paint 'N Print contains a font
editor which makes it easy to change the resident lettering.
TI Artist provides an alpha numeric load function in the
enhancement section of the program. Pre-designed fonts that
are stored on the disk may be loaded into the program for an
endless variety of lettering. Graphx stores fonts on the
clipboard, and again there is an endless variety to choose
from among the support disks. The letters to be used are laid
out in the clipboard and then transported to the picture where
you want them. Joy Paint 99 works much the same way;
alphabets are stored in a regular picture file, and the Cut
and Paste option is used to add them to your drawing.

Zoom Mode - Four of the programs have the ability to
magnify a small part of the picture you are working on so that
it temporarily fills the screen. This allows you to work on
small details with a high degree of accuracy. Joy Paint calls
this mode "fatpixel", Paint 'N Print calls it "magnify". TI
Artist and Graphx call it "zoom". Joy Paint also displays a
normal sized version of the graphics in the upper right corner
of the screen so that you can see what your changes are going
to look like as you make them. TI Artist lets you use other
drawing functions while in the zoom mode - even to making a
zoomed hard copy or saving to disk. While in the zoom mode
Graphx provides a marker to show where color boundaries begin
and end. If you happen to be using the grey checker board
pattern used for marking color boundaries in Graphx, it will
still be present in your zoomed in copy.

Paint N Print has a high degree of magnification. Each
pixel is shown as a square eight times its original size.
Each square is outlined in a fine black line and each block of
64 are outlined in a bold black line. The bold line marks the
color boundary for each character block.

When the zoom function is chosen Joy Paint, TI Artist and
Graphx all let the user choose which part of the screen will
be zoomed by showing a box with which to enclose the desired
area. In the Paint 'N Print environment, the place where the
cursor is sitting when zoom is chosen becomes the central
point of the screen, with the screen then acting as your
'window' to a small but highly magnified part of the drawing.
All of the drawing is accessible by scrolling it by this
point, but the cursor never moves.

F-TIDBIT #3 : IMPROVING THE 40-COLUMN EDITOR

In F-TIDBIT #1 I outlined how to install your preferred
char- set on the Forth disk and in TIDBIT #2 I provided
information about how to achieve inverse video. Now we can
put both of these features together for improving the
40-column editor. The procedure which follows not only
corrects TI's omission of auto-repeating keys but also
changes the character under the cursor to inverse video
unless it is a blank space. This merely requires that:

1) there is a character set loaded into the PBT at >D00,
2) the charset is converted to inverse video,
3) a few minor changes to screen 38, and
4) the addition of screen 41 (which is unused otherwise)

As to the first item, if you have installed your
favorite charset on screen 19 (F-TIDBIT #1), all you need to
do is a HEX 13 BLOCK 100 + D00 300 VMBW. This places a copy
of your charset into the upper end of the PDT. To convert
this set to inverse video use INVERT from F-TIDBIT #2 (HEX :
INVERT 1000 D00 DO FF I VXOR LOOP ;). Then install the
following on screen 41 which is blank on the system disk:

```
0 ( BLINK  DELAY FOR 40-COL EDITOR )
1   0 CLOAD DELAY
2  BASE->R HEX
3
4  : BLINK ( --- )
5       CURPOS  DUP VSBR OVER OVER
6       DUP 21 < IF DROP 1E SWAP VSBW
7               ELSE 80 + VSBW
8               THEN
9       80 0 DO LOOP ( blink rate )
10       SWAP VSBW ;
11
12  : DELAY ( --- )
13       800 0 DO LOOP ; ( repeat rate )
14
15  R->BASE
```

Now modify screen 38 as shown below:

```
0 ( SCREEN EDITOR 12JUL82 LCT) BASE->R HEX 29 CLOAD DELAY
1  : VED BOX SWAP CLS LISTL !CUR .CUR BEGIN ?KEY DUP IF CASE
   (lines 2 through 9 remain unchanged)
10  7F OF -TAB ENDOF DUP 1F > OVER 7F < AND
11  IF DUP EMIT DUP !BLK ELSE 7 EMIT ENDIF ENDCASE
12  BLINK DELAY ELSE DROP BLINK ENDIF AGAIN ; FORTH
    DEFINITIONS
    (lines 13 through 15 remain unchanged)
```

Before you make this improved editor part of your autoboot,
you may want to try one more minor change. On line 3 of
screen 34 modify the word BOX to read : BOX 8F7 8F1 DO CC I
VSBW LOOP ; which makes the vertical sides of the box-shaped
cursor 2 pixels wide and a bit easier to spot. This will
provide you with a very satisfactory 40-column editor.

EOF/Lutz Winkler

THE KIDDIE CORNER
by Sue Harper
Pittsburgh User's Group

For kids of all ages, a series of articles on how to get started making your own programs.

Today we are going to take a quick look at the music that the TI can make. The computer understands the command CALL SOUND to make sound, and asks for three numbers. Here is a sample CALL SOUND statement:

10 CALL SOUND(1000,440,15)

Each of the numbers is important, and each number does a different thing. The first number tells the computer how long to make the sound last. This first number is measured in milliseconds, so 1000 equals one second. As you can see, using a small first number will get only a short peep. Type in the command above, and RUN this short program. Then change the first number to 5, or 7, or 250, or any other number. Compare how long the note lasts. The first number can be any number from 1 to 4275.

Now, let's look at the second number. In our example, the number used is 440. This number is the measure of cycles per second or Hertz (Hz). 440 happens to equal middle 'A' on a keyboard. If you have an instrument at home, see how close the computer and your instrument are in tuning. They should be the same! You TI can sound notes from 110 (A below low C) up to 44000 Hz, which is above the human ability to hear.

Play around with the second tone, and see what notes sound pleasing to you. A note for those who are really into sound - the TI is continuous as opposed to descrete in the music area, and thus you can type in and will recieve a different sound for 440, 441, 442, and so on. Keep this in mind if programming the computer to play a song. Numbers close together are usually hard for the human ear to tell the difference, but unless you are 'into' dissonence, try to use the correct number.

The third number in the command tells the computer how loud to play the note. This number can range from 0 to 30. One confusing part of this is that 0 is the loudest, and 30 is the softest! Sounds a little backwards to me!!!!

Another way of changing the volume is the control knob on your monitor, but the command mode will let you put expression in you compositions.

Here is a program that will play the C scale:

```
10 CALL CLEAR
20 CALL SOUND(500,262,15)
30 CALL SOUND(500,294,15)
40 CALL SOUND(500,330,15)
50 CALL SOUND(500,349,15)
60 CALL SOUND(500,392,15)
70 CALL SOUND(500,440,15)
80 CALL SOUND(500,494,15)
90 CALL SOUND(500,523,15)
```

Type in this program and sing along. Do, re, me, fa, sol, la, ti, do!

Here is another program with some commands that may confuse you, but the result is that you can use the TI to compose a song. Just use 1 for Do or C, 2 for Re or D, and so on. Have fun! See you next month. . .

```
10 CALL CLEAR
20 PRINT"INSTRUCTIONS:";"USE
THE CHART BELOW TO KNOW WHI
CH NUMBER EQUALS EACH ";"
NOTE."
30 PRINT "SORRY, THERE ARE N
O SHARPS";"OR FLATS IN THIS
PROGRAM."
40 PRINT " 1 = C";" 2 =
D";" 3 = E";" 4 = F"
;" 5 = G";" 6 = A" 50 PRINT " 7 = B";" 8 =
C"
60 CALL KEY(0,K,S)
70 IF S=0 THEN 60
80 IF K=49 THEN 170
90 IF K=50 THEN 190
100 IF K=51 THEN 210
110 IF K=52 THEN 230
120 IF K=53 THEN 250
130 IF K=54 THEN 270
140 IF K=55 THEN 290
150 IF K=56 THEN 310
160 GOTO 60
170 CALL SOUND(250,262,15)
180 GOTO 60
190 CALL SOUND(250,294,15)
200 GOTO 60
210 CALL SOUND(250,330,15)
220 GOTO 60
230 CALL SOUND(250,349,15)
240 GOTO 60
250 CALL SOUND(250,392,15)
260 GOTO 60
270 CALL SOUND(250,440,15)
280 GOTO 60 290 CALL SOUND(250,494,15)
300 GOTO 60
310 CALL SOUND(250,523,15)
320 GOTO 60
```

This program can only be stopped by using the FCTN key and the number 4 key. Hope you make beautiful music!

SOFTWARE NEWS

PROGRAM REVIEW
by Sue Harper
Pittsburgh User's Group

As we told you in last month's newsletter, Jim Peterson of Tigercub Software has been an active supporter of the TI both before and after THE ABANDONMENT! He recently sent us a disk of his copyrighted software, and we will be reviewing the programs for you here. Remember, please support those who support us. Jim has done alot for us, and these programs show it!

This month let me tell you about a program called KINDERMATH. It is listed as program TC-31,copyrighted 1984 by Tigercub Software. The program can be used in Basic or in Extended Basic.

When run, this program first asks for the lowest number it should use, and then the highest number it should use. The third prompt asks for the highest sum. Once you get the idea of this program, those three questions make sense, or maybe I'm just slow. I typed in '5' for the lowest number, '9' for the highest number, and '14' for the sum. For highest sum what the program wants is what is the highest sum you want questions for? Obviously, if my highest number is '9', my highest sum COULD be 18. If you want, you can set it lower.

Next the program gives the instructor directions. It is assumed that the child will work unsupervised, but that an adult will tell the child what to do. Simply, a question within the parameters set will appear on the screen, and the child must type in the correct answer and press enter. A correct answer will be rewarded with a smiley face and one note for each smile shown, and the program allows seven questions in a set before the musical 'reward' of an entire song. An incorrect answer is greeted with a frown face, and quickly decending notes. The child must then try again, and upon giving the correct answer, the frown is replaced with a smile.

As I said, there are seven questions in a set, a good number to keep small children from getting too frustrated. The reward system is well thought out and executed. Entering a letter is not possible, and 'X' is used instead of the delete function. Fctn 'S' also does not work.

The graphics are nice, with a border around the screen that changes with each question. The program never ends, giving a new set of questions after every song. The program also will never give the correct answer, and allow an infinite

number of incorrect choices. Having a supervisor nearby to combat complete frustration here is a good idea.

This is a good drill program for young children with more emphasis on reward than the Homework Helper reviewed last month. This program would be useful for young children who need work with addition.

TI-SORT
A REVIEW
By Lynn Gardner
Pittsburgh User's Group

TI-SORT is a new program from Inscebot, Inc., the publisher of TI-BASE. Users of TI-BASE who work with large databases will find this program a fantastic time-saver. A database of almost 600 records, which previously took 1-1/2 hours to sort, now sorts in 12 minutes. A small one sorts instantaneously.

This program is very user friendly. Upon loading, a menu appears giving a choice of sorting a TI-BASE database, fixed records, delimited records, or a basic file. These can be sorted by multiple fields in ascending or descending order. Disks can also be cataloged while using this program. Upon choosing the type of file you want sorted, you are asked for the input, temporary scratch, and output devices. You are then shown the fields your file contains and asked to select the order in which you would like them sorted. The data is then read, sorted, temporarily saved, and then written to disk, all in an unbelievably short time. Help files are available at any time by pressing Fctn. 7.

Not having any files to try this program on except TI-BASE, I have had no experience with it in other areas. However, as a TI-BASE user, I would highly recommend it, especially for large databases that take a long time to sort. TI-SORT should eliminate the need for keeping databases filed several times in different sorted orders, and for editing each one. This program is a welcome addition to TI-BASE.

Anyone interested can order this program from Inscebot, Inc., Box 291610, Port Orange, Fl. 32029. The cost is $14.95 plus $2.50 postage.

Having trouble with your new Star NX-1000 printer? It appears that the later versions of the NX-1000 are not compatible with the TI99/4a due to a problem in an EPROM chip located in the printer. Although the self test works fine and the printer appears to operate with other computers nothing is printed from the TI99/4a. The problem seems to be in just certain versions of the printers' EPROM. One version that I have found to be bad is version 1.5 while my NX-1000 has a version 1.31 and works fine. The version number is printed when the self test is preformed and is also written on the EPROM itself which is located next to the dip switches under the cover. From what I have been able to determine Star is providing FREE of charge an updated EPROM to correct this problem. Locally repair for Star printers may be obtained from the National Repair Center located on Winchester road. Their phone number is (901) 366-6207. Many other repair centers are available nationwide. Otherwise you must call Star Technical Support at 1-900- 860-9104. The charge for calling this number is $2 for the first minute and $1 for each additional minute. In my opinion this is quite steep, especially for a problem Star is responsible for. However, in calling their 800 number (800-537-8270) I was told that the 800 number is for authorized service centers only. Their old technical number is disconnected and in calling their general information number (714-768- 7203) I was told that I must call the 900 number if I want service!

AUDREY BUCHER
5244 Orchard Hill Dr.
Pittsburgh, PA 15236

June 27, 1989
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Dear Sir,

    I am writing to express my extreme displeasure at the use of a 900 number for your technical support services. The use of the 800 number was very nice for your customers, however if you felt that you could no longer supply that option, why not let us call at your regular number?
    My printer failed about three weeks ago. I called the toll free number and was told I needed to call the 900 number. I called the 714 number only to find it had been disconnected. I called the 900 number and spoke with a technician for 12 minutes trying to convince him that I had problems other than the EPROM being reprogrammed for my TI994A. I had used my printer for almost a year with that EPROM and had no problems. I was told I should remove the EPROM and send it back for reprogramming and was assured it would only take a few days. Before I did that, I decided to take my printer to a local computer store and have them try it on another computer. It still did not work. I then came home and called the 900 number again. This call was for 3 minutes and the technician agreed that I did have other problems and instructed me to take it to an authorized service center. When I received my phone bill, I saw that these two phone calls cost me $17, $13 and $4 respectively. The same calls would have cost me $3.01 and $.76 respectively had I been able to call the 714 number. In fact, if I had called after 5PM Eastern time, the total would have only been $2.89 for both calls. I feel this is grossly unfair to your customers.

Excerpt of my letter to Star. All you Star owners, how about writing a letter?

ANNOUNCING THE WORLD'S FAIR OF TI SHOWS
TI INTERNATIONAL EXPO 89

When: Saturday, September 16, 1989
Where: Howard Johnson Inn 5821 Richmond Highway, Alexandria, Virginia
    703-329-1400
    Route 1 South and I-95 on the Capital Beltway - Exit 18
Sponsored by: Mid-Atlantic Ninety-Niners (Nasners)
Show Time: 9:00 am - 5:00 pm Exibition Floor
Pre-Show Reception: 6:00 pm Friday
Post-Show Reception: 6:00 pm Saturday
Banquet: 7:00 pm Saturday
Cost: $3.00 - Advance sale admission tickets to all show events
    $4.00 - Purchased at door
    $15.00 - Buffet dinner - Advance sales
    $7.00 - Buffet dinner - Children to age 11
Show Rates for Hotel: $55.00 + tax per night. Regular Price $85.40
    Contact hotel directly for show rates. Mention TI International
    Expo 89.
Avoid a sellout! Reserve your hotel room early. Room availability is limited.
Food: Howard Johnson Restaurant and other local establishments a short
    walk or ride away.
Show Highlights:
    Major TI/Geneve hardware and software vendor booths
    Noncommercial booths sell user owned TI/Geneve hardware
    Hardware Workshops   Hardware Repair Workshops
    Software Workshops   Product Demonstrations
    Panel Discussions   Speakers
    Door Prizes

Celebrate the 10th Anniversary fo the TI Home Computer at EXPO 89

Many large and small TI/Geneve vendors have been invited to attend EXPO 89, the largest Faire in the Southern United States, to sell the latest in TI hardware and software.

New product releases are expected by several vendors during EXPO 89. Get them here first.

Many famous personalities in the TI/Geneve community have been invited to share their wealth of knowledge with YOU at EXPO 89! Meet the people you have always heard about.

Many of the National TI/Geneve Telecommunications networks will be in attendance to demonstrate their systems at EXPO 89.

Many U.S. an Canada User Groups will be represented at EXPO 89.

June 18, 1989 Meeting Minutes
Pittsburgh Users Group

Meeting started at 6:15 by Gary Taylor. Minutes of last meeting were read by Frank Zic (Herb was off), they were approved and seconded. While the minutes were being read, Gary nearly tied himself in knots doing his magic trick. Frank Shoemaker gave the Treasurer's report. Audrey gave her Editor's report and gave a caution about calling any 900 phone number, the charges can really add up. Susan gave her Librarian's report and passed around a very large copy of the club's utility listing. Nice job Sue. Mike had no comments but Gary did thank him for presiding at last months meeting. Gene said the BBS board had 2000 calls. There are 85 listed callers. He said to call often so as not to miss any messages due to his having to update the system because of power failures. Don McCalla is now an assistant Sysop.

Under old business Mickey said she will soon be turning in her request for discounted prices on Great Lakes softwear. Dean King donated a console for club use. Gary said the calling of 1000 listed TI users in the area goes on by the Boy Scout group in their attempt to pickup about 13 set-ups for reassignment. Gary said the picnic date had to be changed to July 29 because of shelter availability. Much activity is planned and unlimited disk copying of our library will be possible for a $5 sign-up fee, sign up at the picnic for your turn. Pop, hot dogs and other goodies for all. Please try to attend. More details in the July newsletter.

!!!!! No meeting in July !!!!!
!!!!!   !!!!!

New business. Chris Bobbit said on the FIDO network that very good progress has been made on redoing PRESS. No date given but perhaps late this year. A copy of Mickey Schmitt's newly completed Adventure Reference Guide was on display. Nice job Mickey. Also mentioned was the soon to be released adventure game by Lynn Gardner. Nice going Lynn. Say, this club is fortunate in having so many talented women. An Infocom 80 loader is available for the Geneve. A WILL writter program is also on hand. A cute fun disk called Nasty was demoed and raffled. Mike Seally demoed Jiffy card and I got into my specialty-games by demoing TITRIS. It has been added to the library. May the good 4's be with you. Respectfully submitted, Frank M. Zic (Acting Sec.).

WELCOME
The PUG would like to convey our continued welcome to Nick Natto, Mickey Schmitt and Gene Kelly, who have recently renewed their memberships.

THE FOLLOWING ARTICLE WAS TAKEN FROM THE NOVEMBER 1988 ISSUE OF THE WNY99ER INTERFACE NEWSLETTER:

MACFLIX : A TECHIE TIP : The key to getting a perfectly proportional picture is to have the density of pixels the same both horizontally and vertically. A ratio of 1:1 is what you'd like, but not all printers offer it! In the vertical direction, (9-pin) printers have a density of 72 dots per inch. (So what you would like ideally is 72 per inch horizontally!) In Medium Resolution, MacFlix selects the graphics mode of #4, which is 80 dots per inch horizontally. That is pretty good, but we can do better than that! Graphics mode #5 offers 72 dots per inch horizontally (exactly what we want!). In order to get MacFlix to choose #5 instead, you will need to go into a sector editor (Disk Utilities is one of the better ones) and search for the hex string "1B2A04". After you have found it, you'll want to change that "04" to a "05". Save that sector back out and you're set! Now when you select Medium Resolution the MacPaint pictures will go across the full 8 inches of the page, like they were supposed to! Why J. P. Hoddie didn't do this in the first place is beyond me! Remember, only the newer printers have this capability!

RJC-11/88

The following step by step instructions were used by Mickey Schmitt to make the above correction to the MACFLIX DISK:

1. MAKE A BACKUP OF YOUR MACFLIX DISK AND PUT YOUR ORIGINAL IN A SAFE PLACE
2. LOAD IN DISK + AID
3. PRESS THE ENTER KEY
4. REMOVE YOUR DISK + AID DISK
5. INSERT YOUR BACKUP COPY OF MACFLIX
6. CHOOSE "S" - TO SEARCH FOR A STRING
7. STARTING ADDRESS - 0000
8. ENDING ADDRESS   - 0167
9. CHOOSE "H" - TO SEARCH FOR A HEX STRING
10. TYPE IN "1B2A04"
11. PRESS THE ENTER KEY
12. WHEN THE SCREEN STOPS - PRESS "A" - TO ALTER YOUR DISK
13. USE THE ARROW KEY TILL THE CURSOR IS OVER THE "4" IN "1B2A04"
14. TYPE IN "5" OVER THE "4"
15. PRESS THE ENTER KEY
16. PRESS "FUNCTION W" - TO WRITE THE CHANGE TO YOUR DISK
17. PRESS "Q" - TO QUIT
18. YOUR MACFLIX DISK IS NOW CORRECTED AND READY TO RUN

Submitted to the PUG Peripheral by Mickey Schmitt - 6/18/89

REMEMBER
NO NEWSLETTER
IN AUGUST

THE PUG MEETS
ON THE 3RD SUNDAY OF THE MONTH
AT COMMUNITY COLLEGE OF ALLEGHENY COUNTY
OFF ROUTE 885 NEAR CENTURY III MALL

CLASSES BEGIN AT 3 PM
GENERAL MEETING BEGINS PROMPTLY AT 6PM

JULY 1989	
S M T W T F S	
	1
	8
	15
	22
PICNIC	29
NO MEETING!	

AUG 1989	
S M T W T F S	
	6
13	
20	MEETING
27	

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SCHEDULE
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