ISSUE #10 OCTOBER 1988

FOR THE RECORD

by Ed Bittner
Recording Secretary

        The September meeting of the West Penn 99'ers was opened on
a late note (C , I think). It was only then that I realized that I had
been on vacation for three months, and that unwillingly, but
competently, Frank Zic had filled in with the secretary's duties.
((Maybe later in the meeting, I could sucker him into running for the
job ... I wondered......)). The meeting did indeed open on a late note
(B sharp, I think) and I'm beginning to repeat to repeat myself.
        Scott, at 7:20 opened the meeting at 7:20 , asking for the
library report, treasurers report, and the secretary's report. At
7:21, Scott then discussed the Carlisle Faire, some information on
several 19 in. RGB monitors for a good price, and a console he picked
up for a better price (a much better price than it was worth).
        Under new business, John Willforth took over. John mentioned
a supplier for TI Base, TI Artist and companions 1-9, CSGD Users 1-7,
Rapid Copy and a host of other support programs.
        Demonstrations of Handyman-Helper, Paul Brock;
3D-Tic_Tac_Toe, Eric Shoaf; Breakout and Battleship, J. Willforth; and
Funnelweb 4.2, G. Taylor were all well received. The raffle prizes
were Shamus and Picnic Paranoia(2).
        The important business at the each September meeting is the
initial slate of candidates for the November election. This slate,
nominated from the floor, will be opened again in October for
additions and corrections prior to the November election.

Pres.	: M. Schmidt	V.Pres.	: M. Sealy
	: J. Ekl		: S. Coleman
Rec. Sec	: E. Bittner	Treasurer	: J. Trayers
Cores. Sec.:	G. Taylor	Librarian	: R. Ekl
	: G. Kelly		: W. Meyers

Respectfully submitted,
Scoops Bittner

EDITORS NOTE: Don't get cold feet about coming to
             a meeting. We will not make you stand
             in front of everyone, or even in the
             corner. (Unless you're very BAD!)

CORRECTIONS...

JUNE '88 issue, page 5, U2 output pin marked 14, should be 11 (CLOCK circuit).
(thanks to Rod Cook)
SEPTEMBER '88 issue, "BALL PARK-A TINYGRAM", line 4. The "27" in sequence-
"2,1,27,44,2" should be "37" and the number "332" in the sequence "4,32,332,36,
200" should be "32". See the entire, CORRECT program below.
(thanks again to Rod Cook)

```
1 CALL INIT
2 !***********************   * BALL PARK-A TINYGRAM *    *   BY MIKE STANFILL
   *    *    DALLAS TI UG    *   ***********************
3 CALL LOAD(16376,83,32,32,32,32,32,36,246,"",8194,37,114,63,248)
4 CALL LOAD(9460,4,91,2,0,16,0,2,1,37,44,2,2,0,70,4,32,32,36,200,0,131,204)
5 CALL LOAD(9482,216,32,37,42,131,206,248,32,37,42,131,253,4,199,3,0,0,2,3,0,0,0
)
6 CALL LOAD(9504,152,7,131,206,22,1,16,231,4,91,1,0,3,140,26,144,36,3,134,13,144
,18)
7 CALL LOAD(9526,3,142,15,144,18,3,141,17,144,18,3,131,21,144,18,3,141,17,144,54
,3,141)
8 CALL LOAD(9548,23,144,54,3,140,26,144,36,3,134,13,144,18,3,142,15,144,18,3,141
,17,144)
9 CALL LOAD(9570,18,3,131,21,144,18,3,141,17,141,54,3,159,191,223,0,68,73)
90 ! USE CALL LINK("S") TO START THIS ROUTINE AS A COMMAND OR A STATEMENT.
```

CASSETTE VERSION of "EZ-KEYS PLUS" ?

Harry Wilhelm is asking us if we would use and support a cassette version of
EZ-KEYS. The machine would require 32K, xbasic, and cassette. If enough show
interest, perhaps those of you with cassette and 32K will enjoy some of the
products enjoyed by those with disk. If you are interested either let me know
or write Harry directly at: 254 Luce Road, Groton, NY 13073 (607) 533-7221.

FOR SALE
AXIOM Interrface (parallel printer) complete with documentation, $35. Call:
Robert at (412) 539-3477

SMITH-CORONA TP-1 PIO DAISYWHEEL printer (w/manual, extra print wheel)$135.00
TI LOGO II (w/2 sets of docs and disks)   8.50
EDITO/ASSEMBLER   5.00
TI WRITER   7.50
MULTIPLAN   7.50
VARIOUS OTHER ITEMS...CALL (814) 238-0396 ANYTIME EST.

WANTED
1200 BAUD HAYES COMPATIBLE (reasonable) call (412) 539-3477 ask for Robert.

MONOPOLY anyone!
Steve Karasek 855 Diversey Dr. St. Louis, MO 63126 (314) 961-2052, has a very
good extended basic MONOPOLY game for your TI. You or your friends can play the
game against the computer. By the time you see this, Steve will have his newest
version complete. Requirements are disk, xbasic (32K not required). Ten people
may play the game and the computer does all the work This is FREEWARE!

REFRESHMENTS will be FREE the last three months of this year! Oh Yeh! Where? At the
regular meetings of the WEST PENN 99'ERS, that's where. We would reall like to see
you at the meetings, and we'll do "WHAT EVER IT TAKES!"
OCTOBER MEETING, OCT. 18 at 7:00 PM at the First Presbyterian Church of the Covenant.
at the corner of Oak and 4th streets, in downtown Irwin, PA. Call if you need the
directions. John Willforth, (412) 527-6656

LOGIX
By Rich Renth

This program was written in response to a request for a "Mastermind" type program. The object is to put the correct colors in the proper order. Instructions are in the program. This is a challenging game for all ages. Enjoy!!

```
110 CALL CLEAR
120 CALL SCREEN(8)
130 PRINT "<C>olor or <B>lack & white"
140 INPUT "ENTER YOUR LETTER CHOICE )":ANS
150 IF ANS="C" THEN 170
160 CALL SCREEN(16)
170 CALL CLEAR
180 PRINT TAB(10);"L O G I X": :"the object of the game
   is toguess the proper or
   der and color of the four p
   egs that"
190 PRINT "the computer will
   hide underthe question mark.
   s at the   top. the fou
   r pegs are all a different c
   olor, picked"
200 PRINT "from the six colo
   rs.  the   computer will hel
   p you each time you ente
   r your four   color guesses
   , by telling"
210 PRINT "you just how many
   colors areright and how man
   y of them  are in the ri
   ght row.  you can have up t
   o ten attempts"
220 PRINT "to guess the prop
   er order   and color of the
   hidden pegs": : :" PRESS
    ANY KEY TO START GAME"
230 CALL KEY(0,K,S)
240 IF S<1 THEN 230
250 DATA 00000000FF,00000000
   FF10101,00000000F010101,0000
   00001F10101,10101010F,10
   1010101F
260 DATA 10101010FF10101,101
   010101010101,10101010FF,1010
   1010F10101,10101010F010
   101,FF810DA5A5BDB1FF
270 DATA 9,11,3,14,16,6
280 DATA 0078444478304844,00
   44442810101010,003C40405C444
   43B,0044444428281010,004
   4444454545428,00782424382424
   78
290 FOR X=35 TO 46
300 READ A$
310 CALL CHAR(X,A$)
320 NEXT X
330 IF ANS="B" THEN 370
340 FOR X=96 TO 136 STEP 8
350 CALL CHAR(X,"FFFFFFFFFFFF
   FFFF")
360 NEXT X
370 FOR X=9 TO 14
380 READ Y
390 CALL COLOR(X,Y,1)
400 NEXT X
410 IF ANS="C" THEN 470
420 FOR X=96 TO 136 STEP 8
430 READ A$
440 CALL COLOR(X/8-3,2,1)
450 CALL CHAR(X,A$)
460 NEXT X
470 RANDOMIZE
480 FOR X=1 TO 4
490 A(X)=INT(RND*6+1)
500 FOR Y=1 TO X-1
510 IF A(X)=A(Y)THEN 490
520 NEXT Y
530 NEXT X
540 CALL CLEAR
550 PRINT TAB(11);"%&$%$%$%$Z
   RIGHT"
560 PRINT CHR$(96);"R ED";TA
   B(11);"% % % % %"
570 PRINT CHR$(136);"B LUE";
   TAB(11);"(%+%+%+%" COL  ROW"
580 PRINT CHR$(128);"W HITE"
   ;TAB(11);"%&$%$%$%Z"
590 PRINT CHR$(112);"G REEN"
   ;TAB(11);"% % % % %"
600 PRINT CHR$(120);"V IOLET
   ";TAB(11);",%)%)%)%-"
610 PRINT CHR$(104);"Y ELLOW
   ";TAB(11);"% % % % %"
620 PRINT TAB(11);",%)%)%)%-
   "
630 PRINT TAB(11);"% % % % %
   "
640 PRINT TAB(11);",%)%)%)%-
   "
650 PRINT TAB(11);"% % % % %
   "
660 PRINT TAB(11);",%)%)%)%-
   "
670 PRINT TAB(11);"% % % % %
   "
680 PRINT TAB(11);",%)%)%)%-
   "
690 PRINT TAB(11);"% % % % %
   "
700 PRINT TAB(11);",%)%)%)%-
   "
710 PRINT TAB(11);"% % % % %
   "
720 PRINT TAB(11);",%)%)%)%-
   "
730 PRINT TAB(11);"% % % % %
   "
740 PRINT TAB(11);",%)%)%)%-
   "
750 PRINT TAB(11);"% % % % %
   "
760 PRINT TAB(11);",%)%)%)%-
   "
770 PRINT " COLOR?";TAB(11);
   "% % % % %"
780 PRINT TAB(11);"(%+%+%+%"
   "
790 IF ANS="C" THEN 810
800 CALL VCHAR(2,3,32,6)
810 FOR C=14 TO 20 STEP 2
820 FOR R=5 TO 23 STEP 2
830 CALL HCHAR(R,C,46)
840 NEXT R
850 NEXT C
860 FOR C=14 TO 20 STEP 2
870 CALL HCHAR(2,C,43)
880 NEXT C
890 R=23
900 W=0
910 B=0
920 FOR C=14 TO 20 STEP 2
930 GOSUB 1080
940 CALL HCHAR(R,C,K*8+88)
950 IF A(C/2-6)<>K THEN 970
960 B=B+1
970 FOR X=1 TO 4
980 IF A(X)<>K THEN 1000
990 W=W+1
1000 NEXT X
1010 NEXT C
1020 CALL HCHAR(R,24,W+48)
1030 CALL HCHAR(R,29,B+48)
1040 R=R-2
1050 IF B=4 THEN 1340
1060 IF R<5 THEN 1340
1070 GOTO 900
1080 CALL HCHAR(R,C,88)
1090 CALL HCHAR(23,10,95)
1100 CALL KEY(0,K,S)
1110 CALL HCHAR(R,C,32)
1120 CALL HCHAR(23,10,32)
1130 IF S<1 THEN 1080
1140 CALL HCHAR(23,10,K)
1150 IF (K=82)+(K=89)+(K=71)
   +(K=86)+(K=87)+(K=66)THEN 11
   90
1160 CALL SOUND(-50,220,0)
1170 CALL SOUND(250,110,0)
1180 GOTO 1080
1190 CALL SOUND(-50,880,0)
1200 CALL SOUND(-50,988,4)
1210 IF K<>82 THEN 1230
1220 K=1
1230 IF K<>89 THEN 1250
1240 K=2
1250 IF K<>71 THEN 1270
1260 K=3
1270 IF K<>86 THEN 1290
1280 K=4
1290 IF K<>87 THEN 1310
1300 K=5
1310 IF K<>66 THEN 1330
1320 K=6
1330 RETURN
1340 FOR X=1 TO 4
1350 CALL HCHAR(2,X*2+12,A(X
   )*8+88)
1360 NEXT X
1370 L=11
1380 M$=" WELL YOU "
1390 GOSUB 1700
1400 IF B<4 THEN 1480
1410 M$=" MADE IT"
1420 GOSUB 1700
1430 M$=" IN ONLY"
1440 GOSUB 1700
1450 M$=" "&STR$(ABS((R+1)/2
   -12))&" TRIES"
1460 GOSUB 1700
1470 GOTO 1540
1480 M$="RIGHT MAKE"
1490 GOSUB 1700
1500 M$=" IT NEXT"
1510 GOSUB 1700
1520 M$="  TIME"
1530 GOSUB 1700
1540 L=L+2
1550 M$="  PLAY"
1560 GOSUB 1700
1570 M$="  AGAIN"
1580 GOSUB 1700
1590 M$="  Y/N?"
1600 L=L+1
1610 CALL KEY(0,K,S)
1620 CALL HCHAR(20,5,32)
1630 CALL HCHAR(20,7,32)
1640 GOSUB 1700
1650 L=20
1660 IF S<1 THEN 1610
1670 IF K=89 THEN 470
1680 IF K<>78 THEN 1610
1690 END
1700 FOR X=1 TO LEN(M$)
1710 C=ASC(SEG$(M$,X,1))
1720 CALL HCHAR(L,X+2,C)
1730 NEXT X
1740 L=L+1
1750 RETURN
```

* Where you see "⌃⌃" ignore. Be sure to start the next char. ie: Don't put spaces in place of this wierd character.

DISK DRIVES (#2)
by John F. Willforth

Last month I rambled on about the function of disk drive in the scheme of things. This month I would like to show a tool to exercise and test most single and double sided 5 1/4" disk drives as well as later show modifications to enable it to support 3 1/2" drives. This unit is designed to support SA 455 (Shugart), TI, IBM, COMPACQ, Etc.. All clubs should at least have one to test and repair their drives.

This unit can check the selection of units, check the motor circuit, check all sensors, and write, read, step in or out, as well as select the head (side). The use of this tool is increased with an oscilloscope. With next months article, I'll include a power supply schematic.
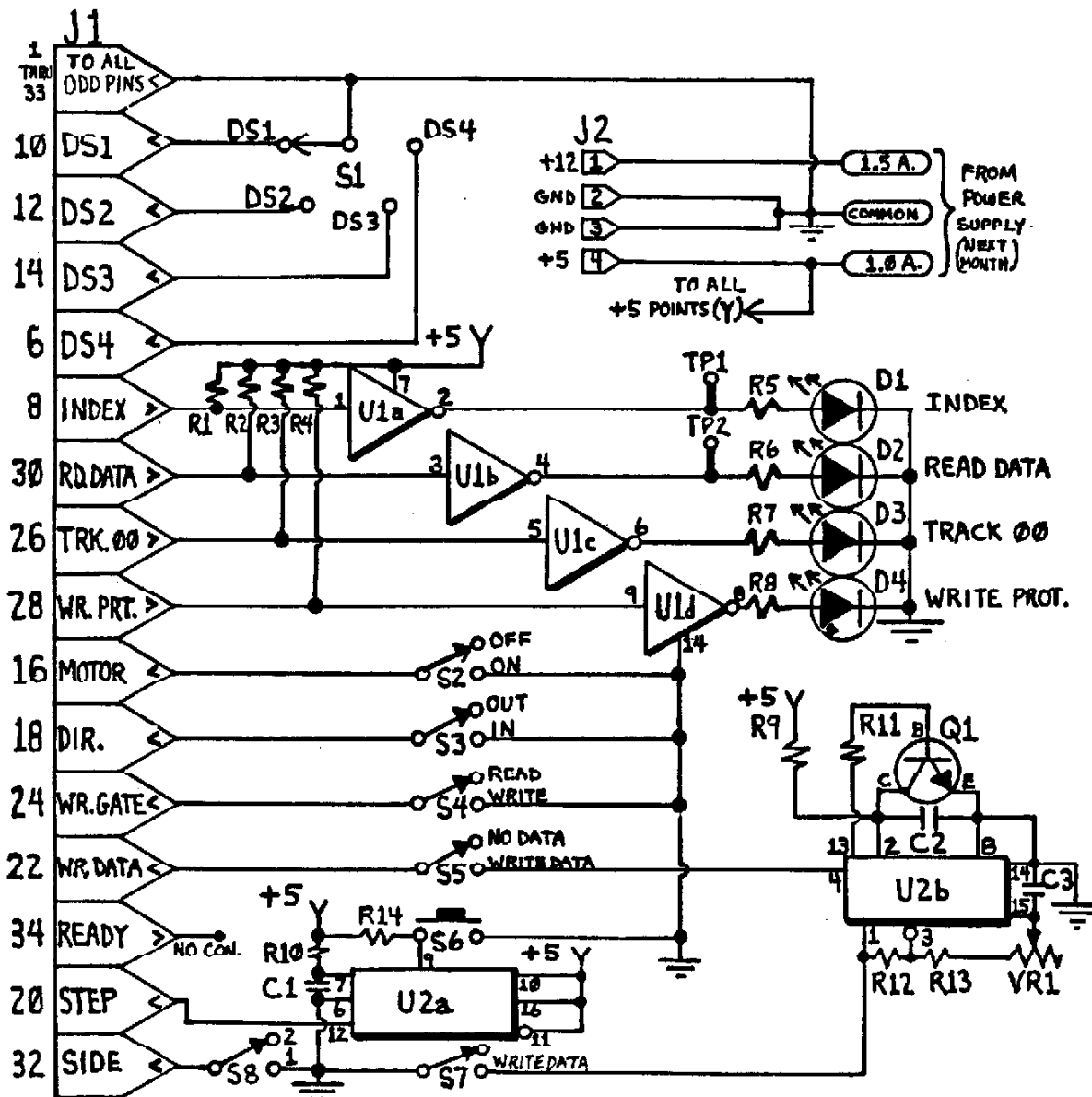
Myarc HFDC Review

-By Steve Mickelson

One of the main reasons TI users abandon their 4A for some other brand has been the limited size of space available to store data files. The problem has been addressed through double and quad density floppy controller cards, as well as RAM disks with battery backed memory, up to one full megabyte in size. The price, however ($590. US for an assembled one meg. Horizon RAMdisk), has made many TIers balk at such prices, and tough it out with a limited system. Enter the Myarc Hard and Floppy Disk Controller, HFDC, Card, and we see a whole new world of data storage.

The Myarc HFDC card, (available for $325. US, from Disk Only Software, plus shipping), is a mult-function card which will permit either the TI-99/4A or Geneve computers to interface and control up to three hard drives, four floppy drives, and one tape streamer. The streamer can be used to back-up the hard drive(s). Hardware requirement for the HFDC are 99/4A console or Myarc 9640 card, monitor, TI Peripheral Expansion Box,(or equivalent), Myarc or TI 32K expansion memory,(not needed for Geneve), one or more floppy disk drives and cables, and hard disk drive,(including cabinet and power supply).

The HFDC can support up to three hard drives, each having a capacity of 134 megabytes. The drive must be ST506/412 compatible. Run Length Limited, (RLL), drives cannot be used with the HDFC card.

The Floppy controller will support of up to four drives, either 3-1/2" or 5-1/4" single/double sided; single, double or quad density, with 9,16, or 18 sectors per track. The head step can be set to 16, 8 or 2 msec. The memory capacity of each drive can be either 360K or 720K, with 40 or 80 tracks. All settings for each of the four drives can be set by means of DIP switches on the board, thus allowing the mixing of various types of drives in your system. Provision has been made, also for 80-track, 36 sector, 1.44 Meg. capacity drives,(for possible future option for expansion).

DIP switches on the HFDC, also allow the user to change the CRU address of the card on the computer's I/O bus. This will permit the card to reside in the expansion system, along side another card sitting at the CRU address 1100, allowing for up to four additional floppy drives, four controlled by the other controller card, and four more by the HFDC. The CRU location can be any of sixteen from CRU of 1000, 1100, 1200, and so on, to 1F00.

The card comes in a standard plastic clamshell, along with a TI- style three-ring binder, containing a well written user's manual. My compliments to Walt Howe, for a job well-done. In addition to the documentation are two cables, one 34-pin edge connector and another 20-pin cable with edge connector on one end and a slotted pin connector on the other. This will enable the user to connect the HFDC to any standard hard drive, (e.g. Seagate ST-251).

The software consists of Myarc Disk Manager V, for use with both the TI and 9640. Included, are upgrades for the Geneve software to permit the 9640 to access and use hard drives. The 9640 software, namely MDOS, V1.06; GPL, V1.01, and MY-Word, V1.20, will enable access to the hard drive(s), but at present, not floppies. This necessitates keeping your old floppy controlle card, and setting the CRU address of the HFDC at 1000, at least until an update of the MDOS operating system is complete. This review will be restricted to use of the controller with a 99/4a, as this is the most complete application of the HFDC card.

The manual is well-written, with a very useful trouble-shooting section,(especially useful to this greenhorn to the world of hard drives). It guided me through several problems I had initially, with formatting the hard drive. Formatting the drives, unlike other computer systems, does not have a low and high level of formatting; rather a single format command results in the software and firmware going through a format and verification process, similar to that found with standard 99/4A floppy disk manager software. It appears both low and high level formats are performened at the same time. However, with a large capacity drive of more than 30 MEG's, be prepared to have a coffee or two while that first initialization takes place.

There are sections, in the manual, covering selection of drives, setting of the DIP switches to configure the card, command sets supported by the card and software, connecting the cables. Also, included is an addenda sheet for the manual.

For the software writers, a chapter covers Basic and Assembly language support for the card, with full memory map, CRU definition, internal disk data structures, and software interface specs.

One useful feature is DSK1 and DSK emulation, which enables the HFDC to have programs normally restricted to residing on DSK1, (FUNEL Writer), or a specific DSK,(e.g. DSK.TIMP for multiplan), located on the hard drive with the same name. Thus when the software, as in the case of Multiplan, looks for the disk called "TIMP", it finds it on the hard drive under the root directory TIMP, containing all the pertinent files, which are loaded, as if from a floppy of the same name. For such specific disk directory access, the HFDC looks in the hard drive first to if the specific disk is emulated on the hard drive. If not found, then the HFDC will look through the various floppies for the disk specified by the software.

The card comes with an optional extended warranty, which may be purchased by the user, for up to four years, at about $25.US per year. This entitles the user to any updates of the software, released during the warranty period. I would highly recommend this option for a card which is relied upon, so heavily.

The complaints I have with the Myarc HFDC package are, mainly, with the Myarc Disk Manager V software; namely setting the date. On power-up and default interlace settings. When the system is powered-up, in order to properly date-stamp each file the date and time must be keyed-in. If,however, you are using the HFDC with a Geneve, then the HFDC will "read" the Geneve clock. A nice touch, for TI users, with Triple Tech or MBP real-time cards, would be to read the clock on those cards, if they are installed. As far as the interlace is concerned, a novice user is left "in the lurch" as far as to what values to select, when intializing a floppy disk. The Corcomp disk manager has default interlace settings of 7 and 10, respectively, for single-density and double-density drives. What interlace is chosen can have a bearing on whether or not you have read/write errors to the disk that you have formatted. Also, 16-sector tracks, another undocumented option, can result in a disk which cannot be read on the drives of your friends with TI or Corcomp disk controllers. I am sure future updates of MDM V will address these problems.

My opinion of the Myarc HFDC rates this unit as the "best buy" for the money, for an upgrade in our TI community. The fact that the controller has been designed for the 99/4A as well as the Geneve, shows that Myarc has not abandoned our community. The fact that the HFDC can support up to 402 megabytes of hard drive memory, indicates not only some forethought as to the dropping prices/megabyte of hard drives, but gives a clue to exactly which niche in the computer market, Myarc would be aiming at, if it ever marketed the much-rumored stand-alone 9640. Such a rumor may soon become a reality, as the commercial software for the 9640 is released,(namely GEME, MY-Pro Word, and MY-Pro Art). If, like me, you have accumulated hundreds of disks, over the years, and waste time looking through lists and labels, to gather a series of related articles for a newsletter; such waste is virtually eliminated through an orderly set-up of the "directory path" of the hard drive. The speed of access and memory capacity of current drives; user-friendly Myarc Disk Manager V; and competive price when compared to RAM disks, should put it on the top of the TI user's shopping list. Also, in most cases, the hard drive(s) will be located externally, with respect to the P/Box, it would be nice if the cables provided to connect the HFDC to the drives were a couple of feet longer, to give more flexibilty as to the choices of where to locate the hard drives.

TREASURER'S REPORT FOR SEPTEMBER 88		
FROM JAN TRAYERS		
9/20	CASH ON HAND	$ 40.00
9/20	LIBRARY SALES	18.00
"	MICROPENDIUMS	63.25
	BUMPER STICKERS	3.50
	DISK SALES	54.00
	RAFFLE (30-15)	15.00
	DUES	20.00
	TOTAL	$213.75
10/4	DEPOSIT	- 173.75
	CASH ON HAND	40.00
9/06	BANK BALANCE	$1103.08
9/20	POSTAGE	- 65.00
9/20	MICROPENDIUM 2 MO. + EXTRA POSTAGE	1038.08 70.00 968.08
10/4	DEPOSIT	+ 173.75
	BALANCE	1141.83
	TOTAL CASH BALANCE	$1181.83

```
********************************
*       BATCH   PROCESSING      *
*       WITH THE TI-99/4A       *
*            and                *
*       SUPERBASIC REVIEW       *
*            by                 *  COMPUTER BRIDGE   SEPTEMBER 1988
*       Harold C. Hoyt Jr.      *
********************************
```

SUPERBASIC is a very good program that is in danger of going unnoticed because of lack of publicity. The Author's documentation doesn't include extensive examples of use. A whole book could be written on this utility. If a really good tutorial were written about Superbasic, the program might become as popular as Funnelweb.

I recently posed a problem to Superbasic's Author, Steve Karasek, lamenting on the amount of work required to use CHECKSUM, the very useful typing checker written by Tom Freeman of the Los Angeles UG, to produce a CHECKed listing. First you have to save the input program in MERGE format. Then you run CHECKSUM using the SAVEd program as input and create another temporary MERGE file as output. Then you type NEW to clear memory, then type MERGE,DSK1.OUTFILNAM to get the checksummed program back in memory. Then you have to LIST the program to disk, using still another filename. This last file is the only useful output, so you go back and DELETE all of the interim files. When our newsletter editor gets an XBasic program without CHECKSUM, she passes it on to a programmer to get a CHECKSUM LISTed program.

CHECKSUM is worthwhile, saves a lot of typing errors, especially on stuff that has no visual cues as to what is supposed to be typed, such as CALL LOAD format programs, which are just a lot of meaningless numbers. The companion program CHEC is very easy to use by the person reading the newsletter. The use of CHECKSUMs is hopefully becoming standard.

The computer should save work, not make more. A more general answer to this specific example of a problem is that the computer should do BATCH programming! You say that the TI doesn't do BATCH? Oh yes it does, if you have Superbasic!

Lets back up and talk about Superbasic. Superbasic is a non-copy protected disk resident program that has 5 key files. Superbasic will not run properly without an electric key which comes with the program. The key is placed in the joystick port. This allows Steve to retain control of the program, while the user can make back-up copies as needed. The user may only copy files needed in a particular application. I've left off the RECOVER file on the BATCH disk as not needed. The key files on the Superbasic disk are:

file	size sectors	type	comment
LOAD	5	XB prog	AUTOload, can be edited
LOADER	7	Memory Image prog	Fast ASSY LOADer
RECOVER	4	Memory Image prog	Bonus, recovers lost prog
SOFTKEYS	3	D/V 80 file	defines ctrl keys
SUPERBASIC	22	Memory Image prog	
SBDOC	97	D/V 80 file	

With all but RECOVER and SBDOC on a disk, 37 sectors are used. What a lot of nice things can be done with that tight program! The autoload takes about 20 seconds, thanks to the Fast loader that directly bypasses slow VDP memory and directly moves Superbasic from disk to memory. The program resides in otherwise unused memory until one leaves XBasic or does a CALL INIT. Superbasic coexists with XBasic programs and other assembly routines that don't use the same space.

SUMMARY OF FEATURES:

SOFTKEYS	32 user programmable keys (ctrl A-Z plus 6 others) Each key can be assigned a string of 29 char max, including a code for ENTER. key strings are stored in the DV 80 file SOFTKEYS. Any single key can be reprogrammed using a CALL LINK("INSKEY"... which is thoughtfully set up in the default softkey for ctrl-X.
DEL	DELETEs a range of lines all at once.
RENUM	My favorite. Allows you to change the line numbers of a group of lines. After editing a program, lines will be in disorder. All global SUBROUTINES should begin at orderly points 1000,2000,3000 etc., and have line numbers spaced an even 10 apart, with none missing and no extra lines stuck in between.
JOIN	Very useful for changing Basic programs to XBasic by replacing lines with multiple statement lines separated by ::
DIR	ctrl 1-6 will do a directory of drives 1-6 to screen.
ENTER	Takes a DV 80 program listing, tokenizes it, and puts the result into program memory. The listing is treated as if it were typed in from the keyboard, including commands without line numbers.
EDIT	Allows you to EDIT a DV 80 file without leaving XBasic. file is moved as a program with line numbers and ! at the beginning of each line. Type WRITE to move the EDITed file/program to the source DV 80 file. (Without line numbers and ! Type QUIT to exit EDIT mode.
TYPE	Copies any DV 80 file to screen.
COPY	Copies any DV 80 file from DISK to any legal peripheral.
APPEND	same as copy, but APPENDs rather than replaces existing file.
RENAME	Rename a file without having to load a disk manager.
LOCK	and UNLOCK protect (unprotect) file.
QOFF	and QON disable (enable) quit key.

All very useful, but how do we do batch? In the EDIT mode each line of a DV 80 file is moved into program memory as if it were typed in from the keyboard. If we add an operator note to the Superbasic load program and remove the NEW command so that the note is left on the screen, we can ask the operator desiring BATCH operation to hit ctrl-B. If we set the ctrl-B default in the file SOFTKEYS to EDIT "DSK1.BATCH"\ Where \ is the token for ENTER, the file BATCH, if it exists, will be brought into program memory.
Examine the file 'BATCH' below:

```
!FETCH PROGRAM
OLD DSK1.CHECKIN
!SAVE IN MERGE FORMAT
!TO BE USED BY CHECKSUM PROG
SAVE DSK1.CKSMINPUT,MERGE
!RUN CHECKSUM PROG, MODIFIE
!FOR FIXED INPUT/OUTPUT WITHOUT
!PROMPTS
RUN"DSK1.CHECKSUM"
!DO A 'NEW', MERGE CHECKSUM OUTPUT
!INTO EMPTY MEMORY
!CHECKSUMMED PROG NOW IN MEMORY
NEW
MERGE DSK1.CKSMOUTPUT
!PURGE UNNEEDED FILES FROM DISK
DELETE"DSK1.CKSMINPUT"
DELETE"DSK1.CKSMOUTPUT"
!OPERATOR INSTRUCTION: 'LIST' DOES
!NOT WORK RELIABLY IN BATCH
!PRESS (CTRL)L TO LIST TO DISK AS
!LIST "DSK1.CHECKOUT"
```

Aspire to INSpire!

Lines in 'BATCH' starting with ! are REMarks, providing notes for the operator and are ignored by the computer.
Comment line 1 gives the file name.
line 2 describes the action to follow. !FETCH PROGRAM, is followed by OLD DSK1.CHECKIN. This requires that the program needing a CHECKSUM be on disk as XBasic program CHECKIN. The CHECKSUM program itself, requires that it's input be in MERGE format, so we create a temporary program file CKSMINPUT in merge format. Then we run the program CHECKSUM that has been altered slightly so that it's input and output file names are hardwired in. (Not requiring operator intervention.) When a program is being RUN, ENTER is prevented from supplying input until the program is finished. When CHECKSUM is finished, a MERGE program file CKSMOUTPUT has been created. This file must be brought into memory without MERGing with the CHECKSUM program itself, so we do a NEW to erase CHECKSUM, followed by a MERGE, DSK1.CKSMOUTPUT. We now do a DELETE of the two temporary files no longer needed so as to free up disk space. We provide a final operator instruction. LIST instructions don't run reliably using ENTER, so we have thoughtfully changed the default softkey value for ctrl-L to be LIST "DSK1.CHECKOUT". Operator may hit ctrl-L to complete the task with CHECKSUMed program in program memory and the CHECKSUMed listing on disk.

I like Superbasic very much. More DOCs would add a lot to the average person's ability to use it. Superbasic is available for $25 from

STEVE KARASEK
855 Diversey Lane
St. Louis, Mo. 63126   314 961-2052

TI 99/4A DRAWING PACKAGES - COMPARISON CHART

- 9 -

OLIVER'S TWIST A NEW ADVENTURE GAME BY MICKEY SCHMITT AND LYNN GARDNER AND DISTRIBUTED BY
ASGARD SOFTWARE P.O. BOX 10306 ROCKVILLE, MD 20850 FOR $9.95 + $.75 S/H DISK OR CASS.
REQUIRES THE ADVENTURE CARTRIDGE BY TI. WE APPRECIATE HAVING MICKEY AND LYNN IN OUR CLUB
& THEIR EXPERTISE AVAILABLE IN THE AREA OF ADVENTURE. BY THE WAY MICKEY HAS A CATALOGUE OF
ADVENTURES AND DESCRIPTIONS AND POSSIBLE SOURCES.

P-GRAM CARD BY JOHN GUION AND ROBERT JONES AND PRODUCED AS EITHER A KIT OR READY TO RUN CARD
AVAILABLE FROM HORIZON COMPUTER , BUD MILLS SERVICES, 166 DARTMOUTH DRIVE, TOLEDO, OH
43614, 419 385-5946. THIS CARD IS A GROM EMULATION DEVICE, AND REQUIRES A PEB, 32K MEMORY
EXPANSION, AND DISK DRIVE(S). A GRAM KRACKER TYPE DEVICE FOR INSTALLATION IN PEB, AND CAN
BE ORDERED WITH OPTIONAL CLOCK. P-GRAM KIT $150. +$20. FOR OPTIONAL CLOCK. $180. FOR THE
ASSEMBLED AND TESTED (WARRENTED 6 MON.), $200. W/CLOCK. SHIPPING IS INC.FOR US AND CANADA.

AN MBX CONNECTION BY BARRY BOONE, THAT WILL ALLOW MBX OWNERS TO ACTUALLY WRITE PROGRAMS TO
RUN ON THE SYSTEM WILL SOON BE AVAILABLE, ACCORDING TO MICROPENDIUM. USERS WILL BE ABLE
TO WRITE EXTENDED BASIC PROGRAMS FOR THE DEVICE. THE PRODUCT WILL NOT BE DISTRIBUTED AS
FREEWARE, SINCE MOST PROGRAMMERS SEEM TO FEEL THAT THE THE EMPHASIS IS ON "FREE". I WILL
BUY THIS PRODUCT WHEN IT IS AVAILABLE (J. WILLFORTH). I CANT IMAGINE SUCH A LONG DELAY
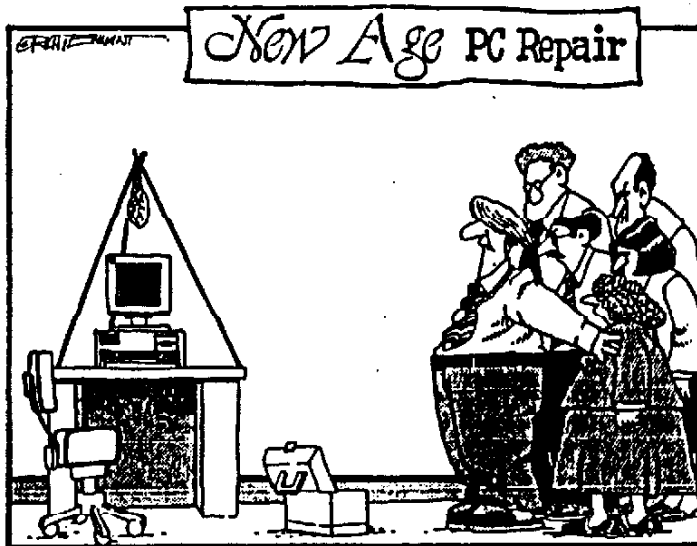FOR SUCH A PRODUCT.

TELCO DIRECTLY FROM THE AUTHOR, CHARLES EARL IS OFFERING YOU THE LATEST AND BEST OF TELCO
FOR ONLY $20. WITH THE IMMEDIATE BENIFITS THAT GO WITH REGISTERING YOUR AUTHORIZED USE
OF A USER-SUPPORTED PRODUCT. FEATURES: XMODEM, YMODEM, COMPUSERVE B/QUICK B AND ASCII
FILE TRANSFERS, MACROS, SUPER AUTODIALER, PC PURSUIT DIALER, A GREAT REVIEW BUFFER,
CONFERENCE MODE, MULTIPLE TERMINAL EMULATIONS, AND MORE! WRITE: CHARLES EARL, 34 MCLEOD
STREET, OTTAWA, ONTARIO CANADA K2P 0Z5 SUPPORTS TI 99/4A AND GENEVE.

MYARC CUSTOMER SERVICE IS NOW LOCATED AT: MYARC, INC., 2624 RANIER DRIVE N.E., BIRMINGHAM,
AL 35125 205 854-5843. THIS NUMBER WILL EITHER BE ANSWERED BY JACK RILEY OR A SECRETARY.
RETURN AUTHORIZATIONS MUST STILL GO THROUGH THE NEW JERSEY OFFICE 201 805-0006.

FASTER THE SECOND TIME AROUND ACCORDING TO BARRY ENSLEY OF THE KANSAS CITY 99ERS. THE FIRST
TIME YOU RUN AN EXTENDED BASIC PROGRAM, THAT IS LENGTHLY, YOU WILL NOTICE THAT THERE IS A
CONSIDERABLE DELAY UNTIL THE PROGRAM BEGINS TO DO WHAT IT IS SUPPOSED TO DO. EACH TIME YOU
RUN THE PROGRAM YOU WILL SEE THE SAME DELAY, UNLESS YOU DO A CALL LOAD(-31962,160,4). THE
LOAD SHUTS OFF THE PRE-SCAN. TRY IT!

MACFLIX, BY PETER HODDIE, ALLOWS TI AND GENEVE OWNERS TO ACCESS GRAPHICS CREATED FOR THE
MACINTOSH'S MACPAINT. MACFLIX ALLOWS USERS TO LOAD, VIEW, PRINT, AND SAVE MACPAINT GRAPH-
ICS. MACFLIX WILL SAVE A MACPAINT IMAGE IN TI-ARTIST FORMAT, WHICH CAN THEN BE MANIPULATED
WITH MOST TI GRAPHICS PROGRAMS. MACFLIX SUPPORTS EPSON AND PROWRITER COMPATIBLE PRINTERS.
ASSEMBLY LANGUAGE PROGRAM REQUIRES EITHER XBASIC, E/A, SUPER CART, OR GENEVE. $15.+ $1. SH
GENIAL COMPUTERWARE, P.O. BOX 183, GRAFTON, MA 01519 800-456-9272

TURBO PASCAL FOR THE TI IS NOW BEING SHIPPED BY L.L. CONNER ENTERPRISES, 1521 FERRY STREET,
LAFAYETTE, IN 47904 317 742-8146. PRICE $59.95 + $3. S/H. REQUIRES EITHER XBASIC OR E/A
AND 32K MEMORY EXPANSION AND DISK, OR GENEVE.

New Age PC Repair

"Quiet everyone—let the crystal do its work."

Let us discuss two short topics this time, chain and
segmentation.
We only have 32K of RAM to work with on the T.I. From
what I have read a program can occupy all 32K or the program
and data can share memory. If we have data then the data can
occupy a max of 20K and the rest for program which would be
12K. You might think that this is restrictive but that isn't
so. We can make best use of out memory by writing the
program using 'Segment'. It is very easy. Write your
program in the normal way and when you write your procedures
and functions add one word at the beginning "segment".
Example;

```
    Segment Procedure Show;
      Var ____;
    Begin
      Statements;
    End;
```

That one word Segment will cause the program to have
each procedure saved separately as object code on the disk.
The only procedures and functions that are put into memory
are the ones that are needed. If the memory should become
filled the procedures or functions not being used will be
"tossed out" to make room ro the incomming procedure. If a
removed procedure is needed it will be recalled from disk.
What this amounts to is an unlimited memory size.
When Segmentation and Include File options are put
together you can make programs larger than the Editor and
larger than the memory. That was how the Compiler and Filer
were made and that is how they use memory.
The "Chain" process can have one program call another
program. This has a place if you do not care if you lose
data when the second program is called. Using Segment lets
you keep data intact when different segments are called.
I had a tough time with Chain because it is now well
documented. So let me give you a specific example of a Chain
program;

```
    Program Go;
      Uses {$U Commandio.Code} Commandio;

    Begin
      Chain('#4:Modrs232');

      Chain('#4:Rollbook');

    End.
```

Simple huh?! Well the stinker is that second line, that
is the one that is poorly documented. The line has to be
written as above. (The {$U___} is a "Uses" compiler option.)
Commandio.Code is a program which has to be on the same
disk as the Compiler when the program is compiled.

After the program "Go" compiled put it on a disk with the "Modrs232.Code" program and I have a program called "Rollbook.Code" which is also on the same disk. That disk is put in the #4 drive and eX(icuted by calling "#4:Go". The first thing that will happen is the "Modrs232" program will exicute and then the "Rollbook" program will exicute.

We can take it one step further. If we go to the C(hange option in the Filer and ghange the "Go.Code" file name to "System.Startup" the program will exicute automatically after booting and then call one program after another.

Let's review what we can do 1)make programs larger than the Editor, 2)make programs larger than memory, 3)have one program call another and 4)have one program exicute from a boot that can call others each of which could be larger than memory! This is the power of Pascal and it is all done with an easy to learn high level language.

Our attendance last month was about 30 members. That isn't bad but we are now past the majority of vacations, and because my memory is getting very bad, I need to see you often just to remember what you look like, let alone remember your name. Those of you who were at the September meeting, know that my eyesight is starting to fail, so if I might just ask you additionally to set near or at the front at the meeting, that would be appreciated by an old man.
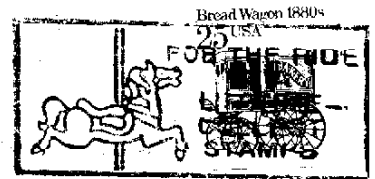
Thank You,
John F. Willforth

WEST PENN 99'ERS

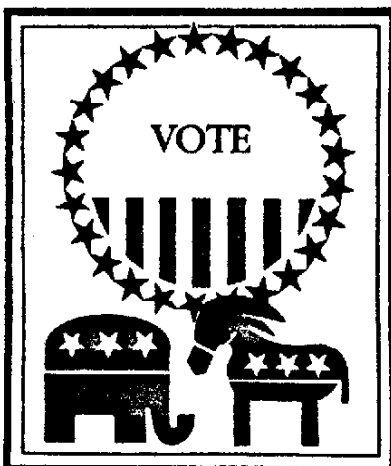% John F. Willforth
R.D. # 1   BOX 73A
JEANNETTE. PA 15644

OCTOBER 1988 ISSUE

NEXT MEETING OCT. 18th at
7:00 PM

TO:

DTIHCG
P.O. BOX 29863
DALLAS, TX 75229

VOTE

Would you believe that 80 million American citizens--the equivalent of the total population of all states west of the Mississippi River--failed to vote in the last presidential election? It may seem incredible, but it's true.