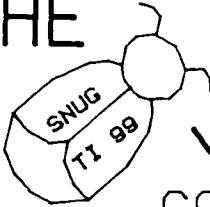


THE



SNUGLETTER

FROM THE

SOUTHERN NEVADA USERS' GROUP

Vol. 3 - No. 9

SEPTEMBER, 1985

NEXT MEETING

MONDAY, SEPTEMBER 9, 1985 - 6:30 PM

CHARLESTON PLAZA LIBRARY MEETING ROOM

PRESIDENT'S MESSAGE

September already...seems like summer just started and here it is back to school time. It seems appropriate then, that SNUG should offer classes in programming to paid up members.

If you would like to attend or teach a class in BASIC, EXTENDED BASIC, FORTH, ASSEMBLY LANG., LOGO, ETC. then please attend the Sept. meeting. We will be organizing classes in those areas where there is enough group interest.

Also on the agenda for Sept. will be a demo and review of several of the programs available to us from the SNUG Library. Bob Bieber, our librarian, has agreed to show us some of what we have available. On that subject, I understand that our library has started growing again! It's good to see some donations coming in once more after a long dry spell.

The officers of SNUG have been discussing starting a second meeting each month. These meetings would be on a weekend (Sat. or Sun.) so that we could get more members. Many of the former members who no longer attend have trouble with the Monday night schedule. We have also heard from some Test Site workers who just can't make it to meetings on any weekday night. We are checking into the use of several FREE meeting rooms for this purpose. If we do start the second meeting, you will be able to attend either or both meetings in a given month if you desire. The agenda for the second meeting will be substantially the same as for the first. If you have any ideas or suggestions on this topic, feel free to express them at the Sept. meeting.

FROM THE MAILBOX....

The first package of software from Navarone in their HYWAY promotion arrived this week. The program is called PAINT 'N' PRINT. According to some of the literature with it, you can "create works of art by using the full color palate of your computer and the 32 different brushes

available on PAINT 'N PRINT". It also allows you to magnify portions of your picture for detail painting and move sections of your painting anywhere on the screen. Pictures can be saved to disk or cassette or dumped to printer. Color printers are supported for full color reproductions. Also included with the program was the EXTENDED GRAPHICS PACKAGE.

This sounds like a good program, but we won't be able to demo/review it until the Oct. meeting since we only just got it and haven't had time to get familiar with it yet.

NEWS FLASH...dateline LA...From: Ron Albright (75166,2473) Subj: MILLERS THINGY. How would you like to power up YOUR console and SEE YOUR name on the screen??? Or ANYTHING you choose?? Like a menu that says: PRESS 1. Editor/Assembler 2. TI-WRITER 3. TI Extended Basic 4. Adventure. Or whatever combination YOU want of up to seven grow chips at YOUR COMMAND!! Nah, you wouldn't want that capability would you?! Well if so, read on! There is no specific name for this item. Call it a ROM GROM SIMULATOR! Or a RAM GRAM SIMULATOR! Or whatever you like! Basically what it consists of is this: 48K of internal RAM, GRAM expandable up to 88K with the use of Hitachi 8K CMOS (\$4.50 each) that YOU can plug in. cartridge port and leave it there. You plug the module you want to save into a slot up by the vent so it is not in the way! After "dumping" the module it can be removed and left out! So after you dump the module to the DISK or CASSETTE (YES I said CASSETTE!) you can store the module in the simulator in BATTERY BACKED RAM!,GRAM! utilities that will allow you to PLAY with the contents of any module you dump...Specifically a "CALL DIR" from X-BASIC! There will be more utilities added before production is ready! YES... I said before production is

ready. The middle of November 1985(!) is the expected shipping date! And price you ask??...well...OK, AS OF RIGHT NOW (08-AUG-85) THERE IS NO SPECIFIC PRICE! BUT, IT WILL BE BETWEEN \$150-\$200 GUARANTEED. CRAIG SPECIFICALLY WANTS IT AS CHEAP AS HE CAN MAKE THEM AND WILL DO HIS BEST TO DO SO! BUT, THE PRICE WILL BE UNDER \$200.00 FOR SURE! hardware WILL be compatible to the NEW computer! IF it ever comes out and if THEY make IT COMPATIBLE to existing modules!

The preceding article was excerpted from the LA 99ers newsletter "TOPICS".

Since the new computer was brought up in the article on "MILLER'S THINGY", I will fill you in on the new info I have seen on it recently. From the Aug. MICROpendium..."The outlook for a new TI-compatible computer remains bright. We have been following one manufacturer for months, and he is on the verge of announcing the machine."

"...there have been rumors lately that the new machine...will be displayed at this year's TI Faire in the Chicago area. The rumors are that it will be shipped to vendors in time for the Christmas season. Again, don't bet the farm on this information. We're just passing along what we hear from people who have been pretty reliable in the past."

From the Aug. "ROM", newsletter of the User's Group of Orange County comes word that a MYARC distributor scheduled for their Sept. 19th meeting "...HAS ALSO SAID THAT HE WILL >>HAVE<< AND >>DEMONSTRATE<< THEIR NEW COMPUTER!!! The distributor also said that they will be available from dealers at that time." The UGOC has said that members of other user's groups are welcome to attend this meeting!!!

If you have questions or comments about this or any other subject I have covered in this article, please feel free to call me at home.

- JOHN MARTIN -

BBS NEWS

Since last month when I suggested we take up a collection to buy a TIBBS tm BBS, we have recieved donations from the following members:

- | | |
|---------------|------------------|
| Joe Leavitt | Bob Bieber |
| Frank Buckley | John Martin |
| Bob Sherburne | Rudy Johnson |
| Lance Wilson | George Campbell. |

Due to the generosity of these members, we have collected a total of \$100 toward the purchase of the program. We also have pledges for about \$40 more, which should be enough to buy the program. I would like to keep the collection going though, because we also need to eventually buy a modem and EXTENDED BASIC for the BBS. I

have seen XB listed for less than \$50 recently and understand that there are modems that are reasonably priced also.

You may be wondering how we have been running the TI-COMM BBS without a SNUG owned XB or modem. We have been using my modem and Jim Matthews' spare XB cart. I don't mind using my modem for a while longer, but it has cut into my personal telecommunicating by making it necessary for me to shut down the SNUG BBS whenever I want to log on to another BBS.

If we can raise enough money to buy these items, the BBS will not be a burden on any SNUG members. If not, any extra monies collected beyond what it takes to buy the TIBBS will go into the general fund and we will continue like we are now.

I noticed in the Aug issue of MICROpendium that there is a new BBS offered as FREEWARE. It is called "TECHIE" BBS, and sounds very interesting. Unfortunatley, TECHIE as currently written does not support TE2 style downloads, but Monty Schmidt, the author, says he is working on it.

On the subject of FREEWARE, there is a Terminal Emulator available that has received good reviews from several sources. It is called FAST TERM, and is available from Paul Charlton 1110 Pinehurst Court, Charlottesville, VA 22901.

The program is said to operate in either TE2 or XMODEM format. In TE2 format, it runs much faster than TE2 itself! It requires 32K and disk system to operate. It can be loaded from BASIC, XBASIC, or E/A, with E/A being the preferred method. It offers a 12K buffer with printer spooling, a wide selection of operating speeds, and many other goodies that make it sound too good to be true!

This info on FAST TERM was condensed from a review by Paul Wells in the Delaware Valley User's Group newsletter "The Data Bus".

- JOHN MARTIN -

SOMETHING NEW IN CASSETTE LOADING

When trying to load a program from a cassette you usually get one of three messages:

1. DATA OK (That's the message you want)
2. NO DATA FOUND (The message you don't want)
3. ERROR IN DATA (Recognizes some of the data)

With message 2, the computer can't read anything, the volume or tone probably is far off, probably too low, but possibly too high.

With message 3 you're getting closer, so make only minor adjustments for the next try. When the volume is set too high it's possible to get 'NO DATA FOUND' and contrary to popular belief, sometimes the tone can be set so high as to get an 'ERROR IN DATA'.

>>> Now here comes the new trick <<<

Recently I had an occasion to use a cassette based system, so figured to use the opportunity to type in some

HCM programs and save to tape. I had been tied to a cassette system for 3 1/2 years before I finally broke down and expanded to disc, etc., so I was sure I'd encounter no difficulties later transferring them to disc. In a week spent typing I'd managed to type in 4 long programs and had no trouble recalling them with the recorder I saved them with, however at home with my own system I had no luck reading them and after about 4 hours of fruitless trying, finally gave up, tossed the tape aside and proceeded on to some of my other more pressing tasks.

Several weeks later, with a little free time, I dug it out again. I'm kind of stubborn and think that I'm pretty good at cassette reading, so was determined to read those cranky tapes. Recalling all my supposed cassette reading skills I plunged in. I've found that using the tape counter as a guide, I can keep check of my progress. After each attempt I would check the counter, a higher count meant a more accurate setting than the previous attempt. In this way I knew whether to adjust the setting higher or lower. Incidentally, it was in this manner that I discovered that by lowering the tone control I did get a better reading.

Thus with each attempt the counter reading increased and I knew I was on the right track. Finally it ran past all previous attempts and kept right on reading and I knew I had the optimum setting, so I sat back and waited for it to reach the end, but to my horror it didn't stop, it kept running past the end a few seconds more and then gave the old 'ERROR IN DATA'. I knew I had the optimum settings or it wouldn't have continued reading all the way to the end, so I tried again without any changes. As it once again began on its merrie way, I began to think about it. If it had read the entire program without an ERROR, why did I get the ERROR message after it was finished? Evidently the computer was checking for some kind of flag from the program saying 'I'M FINISHED-STOP HERE'. Assuming this, I decided to turn up the volume right at the end, but where was that??

Just then the program reached the end and again the tape continued on as before. I immediately rewound it a few numbers and hit 'PLAY' but before I could turn up the volume, the computer instantly shut off and gave me the prize message 'DATA OK'. Gleeefully I then tried listing it and there the program was, however several of the lines were slightly askew. When trying to edit them though, other lines began to mess-up. That's right the program was glitched. T'was useless. Once again back to the beginning, only this time I watched the counter closely for the finish. This time when it ran out I rewound it just to the very point it had run out and pressed 'PLAY' again.

Again 'DATA OK' and !! VOILA !! listing was PERFECTO and the program ran beautifully!! Using the same technique on the other impossible-to-read programs I was successful with them all on the very first try. Perhaps you too can recover some of your supposedly lost programs using this trick??

This article was in the August, 1985 issue of HOCUS from the Milwaukee UG.

SUPER LISTER

by: Bob Pass

As many of you have no doubt noticed in past issues of this newsletter, there have been many (all right, a lot!) errors in the program listings. This was due to some problems inherent in the nature of the TI-99/4A and the way files and programs are written on disk, the fact that I use TI-Writer to prepare the newsletter, and that TI-Writer cannot handle BASIC program files directly. Also, it was my desire to provide for you, dear readers, software that I had personally tested and found worthy of publication and, further more, in a format that made it easy for you to debug your own "typo" errors. I tried several methods of converting program files into TI-Writer files which met with varying degrees of success as most of you are aware. Not being satisfied with anything but the best for my readers and hating to eat crow month after month every time I published corrections, the search continued for the perfect method which would satisfy the needs stated above and the physical restrictions required by the newsletter.

Then Greg Sears showed me a copy of a program from the Australian newsletter "TISHUG". This program, in X-BASIC, allowed one to read a file from disk which is created by loading a BASIC program and then listing it to the disk using the command LIST "DSKx.FILENAME". The program then processed the listing and printed it in two columns, each column being 28 CHARACTERS WIDE! This meant that I could enter a program, run and debug it, and prepare a printed listing that was self editing. "Oh goody!" you say. "Where has it been for the last six months?" you ask. Well, the battle was half won. You see, the resulting listing used about 40% more newsletter space than a Plain-Jane listing. This would mean an increase in the cost of distributing the newsletter or I would have to refrain from publishing programs in the new format. Also, each instruction tended to blend in with the next; wouldn't it be nice if the instruction lines would be clearly defined?

Well, after much toil and tearing apart of the original program, I have developed:

SUPER LISTER

This program solves all of the problems addressed above and it has some features which I believe will make it a very handy utility for you to keep in your "tool box". Why? Read on. How many disks are you using to back up BASIC programs? How many of these and other programs still have documentation or even simple notes on how to run them? How many binders full of printout do you have now for program listings? This program can help you get things under control.

First of all, using SUPER LISTER, you can list your back up disks to paper in a format that is accurate and easier to read than conventional listings; each command line is separated from the next by a dotted line and the command lines are in 28 column format, exactly as they appear on screen. This will provide you with a secondary back up system or, if you don't mind a lot of typing if you lunch a disk, a primary back up of all your BASIC programs thus freeing precious disk space. Secondly, I have included a rudimentary "Word Processor" which allows you to add UNLIMITED documentation to your program listing without having to resort to clumsy REM statements imbedded in the program which may have to be weeded out later. And thirdly, I have developed optional formats for your listings. If you don't mind using 40% more paper than a regular listing, use the NORMAL format. This produces a listing in two columns of 28 normal sized characters and spaced at six lines per inch. The COMPRESSED option will result in four columns of 28 compressed print characters spaced at 8 lines per inch. Again, each instruction is separated from the next one for easier reading. Also, the columns are separated by vertical dotted lines. This format uses about 60% of the space required by a regular listing and only 35% of the space used by the NORMAL option. Additionally, you can specify columns of "even" or "ragged" length which is of importance to me in preparing the newsletter. With any of the format options, there are adequate margins all around to allow binding in any type of binder.

The program listing (accurate, of course, as I used SUPER LISTER to prepare a listing of itself!) follows this article. Unfortunately, this program must be in X-BASIC only. The reason for this is in line number 630. The 'LINPUT' command must be used and this is not available in console BASIC. (By the way, lines 620 to 720 are really the heart of the program as it is here that the BASIC statements are reconstructed from the disk file; the subroutine reads the ASCII file prepared when you listed your program to disk.) This is all that remains, though slightly modified, of the original program from "Down Under". Sadly, I don't know who figured out that routine. It is the key for the insight. If the original author should ever read this, Thank You.

PROGRAM DESCRIPTION

LINES 100-380: User Input Section.

LINES 100-220: Opening remarks.

LINES 230-320: Initialize variables and input array. Present first input screen: default disk file name, printer file name, and listing format; allow user to change defaults as required and go back to correct. Note: in line 240 change FIL\$ to the default you want for the file name you will use to list the source program to disk. Change PRTR\$ to the correct filename to open your printer port.

LINES 330-380: Open disk and printer files; note that printer file is a display variable 132 output field. Second input screen: select column style and check for leading commentary transferring to "Word Processor" if required.

LINES 390-560: Main Program Loop with option to repeat program run from start.

LINES 570-1390: Subroutine Section.

LINES 620-720: BASICLINE; Subroutine to read disk file in chunks upto 80 characters long and assemble a BASIC Program Line in ASCII character format. Passes assembled line back to PAGEBUILD subroutine.

LINES 760-810: PAGEBUILD; subroutine to check for an end of disk file condition or a "null" character string returned from BASICLINE subroutine, displays BASIC Program lines on screen, limits number of program lines read to what will fit on the page format specified, and passes program line to WRITECOL subroutine. PAGEBUILD calls BASICLINE and WRITECOL alternately until the page array is full or an end of file occurs. Then control passes back to main program.

LINES 859-870: WRITECOL; subroutine to chop program line into segments of 28 characters each and load into page array. Inserts a full column width dotted line at the end of each program line. Maintains pointer to next empty line in page array which is passed back to PAGEBUILD to control page size.

LINES 910-1020: PRINTPAGE; subroutine to print assembled page in correct format. The program line segments are stored in the single dimension array P\$. L indicates if the printout is condensed (L=296). X is a constant calculated in subroutine ADJUST and is used to read the correct array elements for columns 2, 3, and 4. Loop counter I is used to index the page array to find the elements for column one. Line 930 handles the complete printing task for the two column format. Line 940 sets the printer into compressed character mode and 8 print lines per inch. Line 950 sets up the horizontal tab stops on the printer to columns 6, 8, 37, 68, 70, 99, and 101. (Line 980 prints CHR\$(9) to cause the print head to tab to the next tab stop.) Line 1010 clears the printer to its defaults and executes a form feed. The codes in these lines are for an Epson printer; consult your printer manual for the correct codes on your machine and adjust the above lines as required. Lines 960-1000 print the page in four column format.

LINES 1060-1080: WIPER; subroutine to re-initialize the page array.

LINES 1120-1150: FIXNAME; subroutine to allow user to override default input/output file names.

LINES 1190-1280: COMMENT; subroutine to allow insertion of comments or documentation ahead of your listing. The ACCEPT AT statement in line 1220 has a validate clause that allows upper case, numeric, and the indicated punctuation. This can be modified to allow any character except the quotation mark. This "Word Processor" could be enhanced fairly easily; see page 73 of the latest HOME COMPUTER MAGAZINE (Vol. 5, #3). The comments are inserted directly into the page array as they are already in the correct format. Variable X is the pointer to the next empty element of the page array while L is the total available elements. The value in X must be passed back to the main program. Line 1200 displays the exit instruction and the number of 28 character lines currently available for comments before the page is filled. Lines 1210-1250 are the entry loop. Upto 18 lines are displayed on the screen at a time. When the 18'th line is entered, the entry field is scrolled up until only the 16'th line is left. Now another 18 lines can be entered. Line 1230 tests for the exit condition (first two characters of an input line ="00") and inserts a dotted line at end of comment section. Line 1240 displays the number of lines left before the page is full. If the page is full, the page format, printing, and array re-initialize routines are called in. The array pointer is reset and control is returned to the user to enter more comment lines. Thus, user commentary is unlimited.

LINES 1320-1390: ADJUST; subroutine to calculate the constant needed by the printing program to index the page array and assemble print lines. The value of the constant depends on the number of elements in the array, whether normal or condensed format was chosen, and whether the user wants even or uneven column lengths. The array pointer "X" is redefined as the constant and passed back to the calling programs where it will be used in the PRINTPAGE subroutine.

HOW TO USE SUPER LISTER

Using this program is very easy as it is self prompting. However, you must first prepare a display variable 80 disk file that contains your BASIC or X-BASIC program in ASCII format. This is very simple to do.

1. Load the program you want to list into the console.
2. Remove the program disk and load the disk with SUPER LISTER. I suggest you only keep SUPER LISTER on this disk as you will require space for one or more additional files on it. Also, it would be wise to protect the SUPER LISTER program using the Disk Manager modules in case you accidentally type in the wrong file name in the next step.
3. Now type in LIST "DSKx.PRGM/LIST" and press ENTER.
4. When the cursor returns to the screen, the disk will contain a display variable 80 ASCII text file of your

program in file name PRGM/LIST. (You can use any file name you wish in step 3 EXCEPT the program name for SUPER LISTER.)

5. Load and run the SUPER LISTER program. Remember it needs the X-BASIC module.

6. From this point on, the program is self-guiding and you should have no problems. If things don't work properly, check that you have entered SUPER LISTER correctly from the newsletter listing. Then, following the program description above, make sure you have made the changes required for your printer and that these changes are correct.

I have enjoyed creating this program and have found it to be a useful tool in writing the newsletter. I hope that you will see the potential benefits and add this freebie to your collection as is or perhaps enhanced even further. My thanks to the unknown Aussie programmer who started the ball rolling.

NOTE FROM THE EDITOR

I have included this quite extensive program and description for two reasons. First, the program is quite useful for what it does in listing and describing a program. The lines are separated from one another making it much easier to read and follow the listing for study or typing. The second reason for including it is that this program is a very good example of structured programming. It is one of the better examples which I have seen of the use of SUBprograms in TI X-BASIC. The subprograms are called as needed by their name without GOTO transfers. Once the function of the subprogram is understood, any call to that subprogram does not have to be restudied as it is already known - by its name and not by a line number reference. The subprogram can also be called from more than one location in the program or subprogram.

More information on the use of SUB, SUBEND and SUBEXIT can be found on pages 180-184 of the TI EXTENDED BASIC MANUAL.

The listing of SUPER LISTER starts on the next page. The listing has also been placed in the SNUG Library so that you do not have to enter the program if you do not wish to do so. I know from experience that errors usually creep in to these entries - I had to find a couple of typos when I first typed it in.

 At least one incorrect entry has been located in the TI bulletins which was published in the August SNUGLETter. The number given for the Kansas City, MO board, 816-444-4163 is no longer a BBS. So please DO NOT call and disturb the people who now have that phone number. As I said in that issue, I knew that there would be at least one error in the listings!

SUPER LISTER BY BOB PASS

FROM 99ER ONLINE OF THE
EDMONTON, ALBERTA USERS'
GROUP

YOU CAN PLACE UNLIMITED
COMMENTS AND/OR DOCUMENTA
TION HERE AT THE START OF
YOUR LISTING. THIS PRINTOUT
AND THESE COMMENTS WERE PRE-
PARED BY THE PROGRAM LISTING
BELOW. SEE THE SUPER LISTER
ARTICLE ELSEWHERE IN THIS
NEWSLETTER FOR FURTHER
DETAILS.

100 ! *****

110 ! ** PROGRAM LISTER **

120 ! ** FROM DISK FILE **

130 ! ** TO PRINTER IN **

140 ! ** MULTIPLE FORMATS **

150 ! ** BASED ON AN IDEA **

160 ! ** FROM TI-SHUG **

170 ! ** USERS' GROUP IN **

180 ! ** AUSTRALIA **

190 ! ** ENHANCED BY BOB **

200 ! ** PASS-MAY 08,1985 **

210 ! *****

220 !

230 OPTION BASE 1 :: DIM P\$(
320)

240 CALL CLEAR :: CALL SCREE
N(4):: FIL\$="DSK1.F" LIST"
:: PRTR\$="PIO" :: CALL WIPE
R(P\$()):: X=1 :: EFL=0

250 DISPLAY AT(2,7):"PROGRAM
LISTER:"

260 DISPLAY AT(6,1):"PROGFAM
IS LISTED TO DISK AS" : "F"
lename: " ;FIL\$: "Y or N? Y
"

270 ACCEPT AT(10,9)BEEP SIZE
(-1)VALIDATE("YN"):A\$:: IF
A\$="N" THEN CALL FIXNAME(FIL
\$):: GOT0 260

280 DISPLAY AT(14,1):"Correc
t Printer Device Name" : "is
" ;PRTR\$: "Y or N? Y"

290 ACCEPT AT(18,9)BEEP SIZE
(-1)VALIDATE("YN"):A\$:: IF
A\$="N" THEN CALL FIXNAME(PRT
R\$):: GOT0 280

300 DISPLAY AT(20,1):"Normal
or Condensed Format?" : "(N
or C) C"

310 ACCEPT AT(22,10)BEEP SIZ
E(-1)VALIDATE("NC"):F\$:: IF
F\$="N" THEN L=110 ELSE L=29
6

320 DISPLAY AT(24,1):"ALL IN
PUTS CORRECT, Y/N? Y"

330 ACCEPT AT(24,27)BEEP SIZ
E(-1)VALIDATE("YN"):A\$:: IF
A\$="N" THEN 240

340 OPEN #1:FIL\$:: OPEN #2:
PRTR\$,DISPLAY ,OUTPUT,VARIAB
LE 132

350 DISPLAY AT(12,1)ERASE AL
L:"Even Column Length or Rag
ged" : "(E or R)? E"

360 ACCEPT AT(14,11)BEEP SIZ
E(-1)VALIDATE("ER"):E\$:: CA
LL CLEAR

370 DISPLAY AT(12,1)ERASE AL
L:"Do you wish to include an
y comments at the start of
thelisting? (Y or N) N"

380 ACCEPT AT(14,19)BEEP SIZ
E(-1)VALIDATE("YN"):A\$:: IF
A\$="Y" THEN CALL C"MENT(P\$
(),X,L,E\$)ELSE CALL CLEAR

390 !

400 ! ** BEGIN FORMATTING **

410 ! ** PROGRAM LISTING **

420 ! ** INTO COLUMNS **

430 !

440 CALL PAGEBUILD(P\$(),EFL,
X,L)

450 CALL ADJUST(L,X,E\$)

460 CALL CLEAR :: DISPLAY AT
(3,1):"Assembling and out-pu
tting" : "print lines to dev
ice name" : " : PRTR\$: CALL
PRINTPAGE(P\$(),X,L)

470 X=1 :: CALL CLEAR :: IF
EFL=0 THEN CALL WIPER(P\$()):
GOTO 440

480 CLOSE #1 :: CLOSE #2 ::
DISPLAY AT(3,1):"Another lis

ting? (y or N) N" :: ACCEPT
AT(3,27)BEEP SIZE(-1)VALIDAT
E("YN"):A\$

490 IF A\$="Y" THEN 240

500 !

510 STOP

520 !

530 ! *****

540 ! ** END OF MAIN PRGM **

550 ! *****

560 !

570 !

580 ! *****

590 ! * SUBPROGRAM SECTION *

600 ! *****

610 !

620 SUB BASICLINE(N\$,E)

630 N\$="" :: IF NX\$="" THEN
LINP#1:NX\$

640 N\$=N\$&NX\$:: IF LEN(N\$)<
80 OR EDF(1)THEN NX\$="" :: E
=EDF(1):: SUBEXIT ELSE LINP
#1:NX\$

650 PX=POS(NX\$, " ",1):: IF P
X<2 OR PX>6 THEN 640

660 P=POS(NX\$, " ",1):: IF PX
<P THEN 640

670 NR=-1 :: FOR I=1 TO PX-1
:: C=ASC(SEG\$(Y\$,I,1)):: N
R=NR AND C>47 -& C<58 :: NE
XT I :: IF NOT(NR)THEN 640

680 IF SEG\$(N\$,LEN(N\$),1)="
" THEN 640

690 IF VAL(SEG\$(NX\$,1,PX-1))
<VAL(SEG\$(N\$,1,P-1))THEN 640

700 NQ,I=0
710 I=POS(N\$,CHR\$(34),I+1)::
IF I THEN NQ=NQ+1 :: GOT0 7
10 ELSE IF NQ<2*INT(NQ/2)TH
EN 640

720 SUBEND

730 !

740 ! *****

750 !

760 SUB PAGEBUILD(P\$(),EFL,X
,L)

770 FOR I=X TO L

780 IF EFL THEN SUBEXIT ELSE
CALL BASICLINE(NEW\$,EFL)::
PRINT NEW\$:""

790 IF NEW\$="" THEN 780 ELSE
CALL WRITCOL(P\$(),I,X,NEW\$
):: I=X

800 NEXT I

810 SUBEND

820 !

830 ! *****

840 !

850 SUB WRITCOL(P\$(),I,X,N\$
)

860 IF LEN(N\$)>28 THEN P\$(X)
=SEG\$(N\$,1,28):: N\$=SEG\$(N\$,
29,LEN(N\$)-28):: X=X+1 :: GO
TO 860 ELSE P\$(X)=N\$:: N\$=""
:: X=X+1 :: P\$(X)="" :: X=
X+1

870 SUBEND

880 !

890 ! *****

900 !

910 SUB PRINTPAGE(P\$(),X,L)

920 IF L=296 THEN 940

930 FOR I=1 TO X :: PRINT #2
:TAB(9):P\$(I);TAB(45):P\$(1+X
):: NEXT I :: GOT0 1010

940 PRINT #2:CHR\$(15);CHR\$(2
7);"0" :: REM ** Set for com
pressed printing **

950 PRINT #2:CHR\$(27);CHR\$(6
8);CHR\$(6);CHR\$(8);CHR\$(37);
CHR\$(39);CHR\$(68);CHR\$(70);C
HR\$(99);CHR\$(101);CHR\$(0)::
REM ** Sets horiz. tabs **

960 PRINT #2:TAB(8);RPT\$(" "-
,123):: F\$=""
I" :: S=LEN(F\$)

970 FOR I=1 TO X :: A=P\$(I)
:: B=P\$(I+X):: C=P\$(I+(2*X
)):: D=P\$(I+(3*X))&SEG\$(F\$,
LEN(P\$(I+(3*X))),S)

980 PRINT #2:CHR\$(9);"!" ;CHR
\$(9);A\$;CHR\$(9);"!" ;CHR\$(9);
B\$;CHR\$(9);"!" ;CHR\$(9);C\$;CH
R\$(9);"!" ;CHR\$(9);D\$

```

990 NEXT I :: REM **CHR$(9)
tabs the printer to next tab
stop **
-----
1000 PRINT #2: TAB(8); RPT$("-
",123)
-----
1010 PRINT #2: CHR$(18); CHR$(
27); "2"; CHR$(27); CHR$(68); CH
R$(0); CHR$(12) :: REM **Clear
Tab Stops And Form Feed **
-----
1020 SUBEND
-----
1030 !
-----
1040 ! *****
-----
1050 !
-----
1060 SUB WIPER(P$( ))
-----
1070 FOR I=1 TO 320 :: P$(I)
=" " :: NEXT I
-----
1080 SUBEND
-----
1090 !
-----
1100 ! *****
-----
1110 !
-----
1120 SUB FIXNAME(N$)
-----
1130 CALL HCHAR(22,1,32,96)
-----
1140 DISPLAY AT(22,1): "CORRE
CT NAME SHOULD BE....." :: A
CCEPT AT(24,1)BEEP:N$ :: CAL
L HCHAR(22,1,32,96)
-----
1150 SUBEND
-----
1160 !
-----
1170 ! *****
-----
1180 !
-----
1190 SUB COMMENT(P$( ),X,L,E$
)
-----
1200 CALL CLEAR :: DISPLAY A
T(1,1): "ENTER QQ TO QUIT.
LINES="; STR$(L-X+1): "~~~~~
~~~~~"
-----
1210 FOR I=5 TO 23
-----
1220 ACCEPT AT(1,1)BEEP SIZE
(28)VALIDATE(UALPHA,NUMERIC,
",:;! ?() *$%#@/=^"): P$(X)::
X=X+1
-----
1230 IF SEG$(P$(X-1),1,2)="Q
Q" THEN P$(X-1)="
-----" :: GOTO 12
70
-----
1240 DISPLAY AT(1,26)SIZE(3)
:STR$(L-X+1):: IF X=L THEN C
ALL ADJUST(L,X,E$):: CALL PR
INTPAGE(P$( ),X,L):: CALL WIP
ER(P$( )):: X=1 :: GOTO 1240
-----
1250 NEXT I
-----
1260 CALL HCHAR(4,1,32,640):
: DISPLAY AT(4,1): P$(X-1)::
GOTO 1210
-----
1270 CALL CLEAR
-----
1280 SUBEND
-----
1290 !
-----
1300 ! *****
-----
1310 !
-----
1320 SUB ADJUST(L,X,E$)
-----
1330 IF L=296 THEN 1370
-----
1340 IF INT(X/2)=X/2 THEN 13
50 ELSE X=X+1
-----
1350 IF X>L OR E$="E" THEN X
=X/2 ELSE X=55
-----
1360 SUBEXIT
-----
1370 IF INT(X/4)=X/4 THEN 13
80 ELSE X=X+1 :: GOTO 1370
-----
1380 IF X>L OR E$="E" THEN X
=X/4 ELSE X=74
-----
1390 SUBEND

```

=====
DISK DRIVES
=====

FROM THE APCUG CALL Newsletter - Feb '85 - by their editor Marshall

The 99/4A uses what I called the Shugart standard, or what is currently called IBM compatible. If you are looking toward purchasing a Disk Drive don't buy any that are Apple, Commodore, or Atari compatible, they won't work with the 99/4A. However, any disk drive listed as and is IBM compatible will work with your 99/4A system.

Listed below are some of the ones that you can use:

Producer	Single Sided		Double Sided	
	Full Ht.	Half Ht.	Full Ht.	Half Ht.
MPI	51		52	
Shugart	SA-400L		SA-405L	SA-4555-2*
TEAC		FD-55A*		FD-55B*
Tandon	TM100-1	TM55-1	TM100-2	TM55-2
Control Data Corp(CDC)			9409	9428
Qume				142
Panasonic/Matsushita				JA551-2N
Mitshubishi				4851

(* half power for two in one P-Box)

 * The SNUGLETter is published monthly by the Southern Nevada Users' Group *
 * [SNUG]. SNUG is a non-profit organization of individuals with an inter- *
 * in all aspects of Texas Instruments' 99/4 & 4A computer, including all *
 * related hardware and software by third party vendors. The GROUP meets *
 * 6:30 PM on the second Monday of the month - currently in the Clark County *
 * Library meeting room, 1726 E. Charleston Blvd. [Charleston Plaza Mall]. *
 * Visitors and guests are welcome to attend the meetings. Information on *
 * membership is available at the meeting. *
 * Articles may be copied from the SNUGLETter provided credit is given to *
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 * of the Southern Nevada Users' Group.] *

Southern Nevada Users' Group [SNUG]
 P.O. Box 26301
 Las Vegas, NV 89126-0301

TO:

 * SNUG OFFICERS 1985-1986: *
 * Pres.: John Martin - 647-1062 *
 * U.P.: Gordon Leonard - 384-2302 *
 * Sec.: Jim Mathews - 641-6202 *
 * Treas.: Frank Buckley - 871-0165 *
 * Librarian: Bob Bieber - 878-3167 *
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 * 382-1409 *
 * SNUG Bulletin Board - 648-1247 *

* Newsletter Editor: *
 * Rudy Johnson - 871-9583 *
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 * may also phone articles with a *
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 * *
 * *