
MAY 1987 Vol. 6 No. 04

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NEXT MEETING
DARE: FBORSDAF, May 21, 1987
Tiks: 7:00 PK
Placs: Rirkland Public Library, 406 Rirkland dve, Rirkland

GGRYDS: * Old business

- G8NRER 9640 Demonstration
* Her softrare

JUNE MEETING
DAIE: Thursday, June 18, 1987
FIHR: 7:00 PH
PLaCE: Rirsland Public Library 406 Rirsland Are. Rirsland

* A chat rith Cynthia Becker
* Turbo PC/IF Denonstration
* Question and Ansper session

JULY MEETING
DATR: Thursday, July 23, 1987
PIMR: 7:00 P4
PLACB: Rirkland Public Library 406 Kireland Are, Kirkland
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Extended BASIC:
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SOME LOCAL BULLET IN BOARD NUMBERS

| TITLE | PHONE NUMBER |
| :--- | ---: |
| PUGET SOUND 99ERS BBS-SEATTLE | $784-4142$ |
| TIBBS NW-ED DURFEEE-BELLEVUE | $641-5884$ |
| QUEEN ANNE COMPUTER SHOPPE | $361-0895$ |
| NEW WORLD BBS | $365-6938$ |
| BAINBRIDGE ISLAND | $1-598-3228$ |
| TELETRAVEL | $742-9034$ |
| SHUTTLE | $885-$ INEO |
| TROTHGUARD-BURIEN | $824-6757$ |
| RADIO 1 | $878-0158$ |
| GEnie | $1-800-638-8369$ |

THE RRESTOENR BATS
Fy Chats wore
 computers! The 9640 is there now. She slan has a Turbo XT which is used in conjunetion with the Tr99/4A. This is an IBM clone with the TI keybrard. The 9 R 40 is too new to really be judged yet. Both hav their advantages.

Cynthia Becker is here from Brighton Massachusetts. She will stay another weer. and hopefully you can meet her at the next meeting. She is an assistant sysop on the Delphi network. This is a phone link for the TI'er that many should join. It has all the big names in TI conversing there.

There is a new version of TI Artist (2.1) out there for those who have purchased. You may want to upgrade.

CorComp has three new products out. One is a copier program that with the TI drives will oopy programs from TI format on one disk drive to IBM format on the other. The TI/IBM disk copier looks like a winner! A new ramdisk manager (3.0) has been made for easier menu driven file management. WriterEase is an integral 30,000 word dictionary that can be accessed from the edit mode. It also has the ability to have column widths of up to 255.

Stu Olson has a product that every avid TI'er should be using. It is call Mass Transfer. This modem program (V4.2) has about everything you would want in the way of communication. It is completely menu driven. It uses Xinodem transfer, and between TI's, supports Ymodem. Sth says that Ymodem between brands of computers has not held a standard format. See something on your screen you would like to save? Just a simple FCTN 9 and a DSK1 or PIO saves that screen. Auto logging, auto dialing from smart modems. It's hard to think of anything he left out. Have you tried a modem program on another computer? Some are so hard to use you wouldn't believe it. And that includes some functions of TEII. This program is payware. Please send him the money. I'm not ruling out the other great programs out there. They deserve the same treatment if you use them! And long live TI programmers! Stu wants $\$ 10.00$. Send to 6625 W . Coolidge St. Phoenix, Az. 85033.

## RANDOM BITS and PIECES

By CYNTHIA BECKER, Member of the Boston Computer Society, Brighton, Mass.
am writing this piece for $y^{\prime}$ all!
I got into Seattle on Tuesday, the 12 th of this month. and have been enjoying it so much, that I extended my visit
to Friday, the 22 nd! Of course, one BARB WIEDERAOLD had a lot to do with my decision! : )

I hope you people realize that you folks hav: gold-mine in this SUPER LADY!

So... where do I begin? Let's make this a potpouri of things, a pot-luck newsletter article...

About a year ago. I had an accident, and without going into details, was laid up with a pretty bad head injury. One person in my user group by the name of Walt Howe (he wrote CHAINLINK) came by the house on the way to our user group meeting, with a copy of Fast/Term and a 300 baud modem! This accident, by the way, occurred just a few days after our fair! At that fair, I had purchased an RS232 card, since everyone in my group kept asking me when $I$ was going to get involved with the bulletin board! Cute, huh?! So Walt was nice enough to bring me the above... Here I was with my head all wrapped up in a bandage with 2 black eyes, in the twilight zone and in a state of shock, and he hands me a modem and Fast-term and says: GET ON THE BOARDS! IT WILL BE GOOD THERAPY FOR YA!

So, I printed out the docs and tried to focus (next to impossible!) and logged on our bulletin board. That was the beginning of my telecommunications experience! The rest is HISTORY! Were it not for this kind deed, I never would have had the opportunity to meet so many INTERESTING people across the country! (that includes my new/found friend, BARB!!!!!) anyway, about a month later, I got a copy of Mass/Transfer, version 3.8 and was so impressed with the setup of it (menu-driven and all) that I had to give the author, Stu Olson, a call on his bulletin board. Well, the evening I called, he was home, and saw an out-of-state caller, and punched up CHAT! That was the beginning of a wonderful relationship! I had called to ask questions about the program since the auto/dial feature didn't seem to work! He said it was a BUG which had since been fixed in version 3.9 and was in the download section. He said HELP YOURSELF! I was one of the first persons to receieve a beta/test copy of version 4.0, 4.1 and 4.2! We have been trading ever since! Also, with the telecomminications service, PC/PURSUIT, I call his board just about every evening... A real asset to the TI Community, and I hope you folks take advantage of that fact, and send in your fairware contribution for one outstanding program... Now, on so another subject:

Being a member of one of the largest computer clubs, THE BOSTON COMPUTER SOCIETY TI-user group, I have had the opportunity to see both the negative and positive side of the ATTITUDES of the respective members, and have some
observations to pass along to you:

1. we tend to take a lot of things for granted. What I mean is this: we have such a TREMENDOUS DATA/BASE that we kind of EXPECT things for NOTHING or NEXT TO NOTHING! Do any of you realize just how expensive it could be for us where software is concerned? Have you ever gone into a computer store and priced out some of the software available for IBM and other PC'S? EXPENSIVE CITY!!! We have it MADE IN THE SHADE, people! The pitance that our fairware/shareware programmers ask for their software will NOT put us into the poorhouse! I am a CRUSADER where this is concerned! If we wish to continue to have the great software support we currently enjoy, then by all means. SEND THESE GUYS something for the program if you USE it! They deserve the $\$ \$ \$ \$$ !
2. On the matter of user/groups: I belong to the CHICAGO USER GROUP, THE HOUSTON USER GROUP, THE BCS TIUG, THE ERONT RANGE 99ERS USER GROUP, and a few others. One thing I have noticed is that some people seem to get their JOLLIES making other people miserable! Listen up, people! We are a vanishing breed! If we don't support one another, we'll go into oblivion! I would rather see dealers like Barbara supported by our business than these elephant corporations like TRITON and TENEX and TEX/COMP. People like Barb do MORE for the TI-COMMUNITY and I know for a fact that she has given this thing her life's blood, sweat and tears (literally!) so give her the support she deserves! Am I sticking it to ya? YOU BET I AM!!!!
3. You people have your fair coming up in September and don't let Barbara be the LITTLE RED HEN! Do you remember that story? The little red hen did ALL THE WORK of planting her field and harvesting her wheat, grinding her flour and baking her bread and when it came time to do the work, NOBODY wanted to help, but EVERYONE was there when the bread was baked! Get the point? The success of this fair depends on YOU and your COLLECTIVE support! This is how our fair in Boston came off a success! We had the help and cooperation of ALL the New England user groups! You people in Washington can and should do the same! It has the potential of SURPASSING the Chicago fair in size and scope! I for one, would like to see that!!!!
4. Now, on Seattle and 9640:: : : I love it!!! The area is BEAUTIFUL and the people are very nice!!!! As for the 9640 , well, if all things come together, this is going to be one HECK of an ASSET to people who are SERIOUS programmers and end users! I hould like to see all the DOUBTING THOMASES eat

Now, what do I think of the Queen Anne Computer Shoppe? IT IS INCREDIBLE! What else can I say?!!! Barb is one heck of a nice person who is willing to go out of her way to help anyone with any kind of problem with our ORFHAN!!! Since she is so willing then you guys help her out!

I could go on and on, and if I did, your newsletter would be FAT! So let it end here! BOTTOM LINE: I have enjoyed myself here in Seattle, and who knows? I just might settle here! CAN YOU TAKE THAT?!!!!

CYNTHIA.... the BBS traveller (and FREQUENT FLYER!) :)

## TI99 4 A NEWS

CLUB BIJLETIN BOARD THRIVING!
The Puget Sound 99 er BBS is one of the busiest boards around thanks to the support of local and out of town callers. The board runs 300 or 1200 baud with downloads and a very active message base. I warn you, if you are on one day and leave a message, it may be gone by the next! It works on a revolving message system where the old messages drop off as new ones are added. Because of the number of messages being posted, older ones are dropping off faster! We are overwhelmed with the activity on the BBS and hope it continues. That is what makes it great! We have been getting callers from all over, Cynthia Becker from Brighton Massechusettes, Bill Knecht from Pasadena Texas, Bill Rister from Houston Texas, Cy Leonard from Safety Harbor Florida, and Rick Graham from Murray Utah to name a few. Keep up the good work!

## GENEVE 9640 A REALITY!

The Queen Anne Computer Shoppe has received the first 9640 production model in the area! It included a full keyboard (IBM XT style), with software programs and a LARGE manual. The software includes: Myarc DOS (we received Version 0.0, Version 1.0 due out soon), MY-WORD enhanced TI-Writer word processor, Multiplan, Myarc BASIC level 2.1, and GPL interpreter (to run saved modules via GRAM Kracker or other methods). It also included a few BASIC demo programs and an assembly lines and boxes demo.

## TURBO XT PC ARRIVES

The Turbo XT has arrived! The computer came with the

T199/4A bridge box and some software. The bridge box allows you to use the TI console as a keyboard for the XT. You can press a key, and you switch to the TI and do something while the XT is doing something else. You quit the TI and you are using the XT. For example, while waiting for a disk to be copied on the XT, you can be playing Munchman on the TI99/4A. The XT also has the option on whether you use a regular XT style keyboard also (No more TI connection...).

## CORCOMP NEW PRODUCTS

We just received a newsletter from CorComp regarding new products. These products include:
"REVOLUTIONARY TI/IBM DISK COPIER" which is a module that plugs into your console to allow you to read and write on IBM format disks. This means you can copy files, ASCII for instance from the IBM to the TI, or vice versa, just by following prompts on the screen and typing a "C" beside the item you wish to copy. This will only copy files, it does not make the TI IBM compatible.
"VERSION 3.0 RAMDISK MANAGER" is an enhanced CorComp manager which allows better use of the CorComp memory plus by being able to do standard disk operations like copy, delete, rename, protect, etc.
"Writer EASE" is a new word processor which has: a 30,000 word dictionary that can be used through the edit mode, no formatter; you just use CTRL-P to print, has a maximum of 255 characters per line, search and replace. find string, text copy, delete, move, merge text files, display directory, and others. The commands are accessed by using CTRL and the letter corresponding to the function (CTRL-L load file, etc.). FCTN-H will access a help menu if you need it. This program requires disk and 32 k memory expansion.

We can give you a copy of the CorComp newsletter if youl need more information.

## EULL SCREEN $X-Y$ COLQR RLOTTER AVAILLABLE

Have you ever wanted to present your data in a "HIGH RESOLUTION" graphic form? I have been disappointed with the lack of programs to plot graphs on the TI-99/4A. I did find a program that was written for the MINI-MEMORY but I didn't have a MINI-MEMORY.

This program also had an undesirebie side effect since it destroyed the user's program when the graph was plotted.

I have altered this program to correct that fault and
to make it operate with either the E/A or Extended BASIC modules. Using this modified program. X-Y plots can be made with any user data sets. Either those calculated as part of an analysis routine, data tables, or other source of data (ie: investment data). Altholeg this program is designed to make Two-Dimensional plots, 3-dimensional plots can be represented using multiple offset curves.

The program requires 32 K MEMORY, a DISK SYSTEM, and either an E/A or Extended BASIC sartridge. Although the Extended BASIC version is faster, the size of Extended BASIC programs is somewhat limited because 12 K of memory is taken from the upper 24 K of the memory card for the BIT-MAP color and image tables.

The DEMO programs included with this program show the flexibility of the plotter routines with typical examples. Each example uses an analytical process, however table data would work just as well and could be processed faster.

The other features include a SCREEN DUMP for EPSON compatible printers, the ability to plot in several colors, and routines to SAVE or LOAD plots to disc.

I have placed this program into our TI Puget Sound 99ERS library. I have released this as FAIRWARE and you can also get copies by sending me a single sided disc plus $\$ 1.00$ for shipping or $\$ 4.00$ and $I$ will furnish the dise and shipper.

My address is :
Kenreth Crandall
2712 107th AVE. NE
Bellevue Wa 98004

## PASSING YALUES FROM ONE PROGRAM TO ANOTHER

By Tom Wynne
There are three ways, that $I$ know of, to transfer values between different programs. One, is slow and tedious, but it does not require any memory expansion or external devices, disk drive, etc. This method displays the information on the screen. When the second program is run, it reads the value off of the screen and uses it. The following program demonstrates this method. You can see the number displayed in the upper left corner of the screen, for regular programs you may want to hide this using CALL SCREEN (2) or change all the colors to transparent. This is so the person does not know what is happening. The second program reads the information off of the screen and displays the value. Make sure you type in both programs and save them before you run them!

| 100 | REM PROGRAM 1.1 |
| :---: | :---: |
|  |  |
| 0 | PRINT "ENTER NUMBER 1:" |
| 130 | ACCEPT NMBR |
| 140 | CALL CLEAR |
| 150 | CALL DISPNUM (NMBR) |
| 160 | RUN "DSK1. PROG12" |
| 1000 | SUB DISPNUM (N) |
| 1010 | A $=$ STR\$ ( N ) |
| 1020 | FOR I=1 TO LEN(A\$) |
| 1030 | CALL HCHAR(1, I, ASC (SEG\$(A\$, I, 1)) |
| 1040 | NEXT I |
| 1050 | SUBEND |

100 REM PROGRAM 1.2
110 CALL GETNUM(NMBR)
120 PRINT NMBR
130 END
1000 SUB GETNUM(N)
1010 A ${ }^{2}=" \cdot$
1020 FOR I=1 TO 12
1030 CALL GCHAR (1, I,CH)
$1040 \mathrm{~A} \$=\mathrm{A} \$ \& \mathrm{CHR} \$(\mathrm{CH})$
1050 NEXT I
$1030 \mathrm{~N}=$ VAL (A\$)
1040 SUBEND
The second method is to use external devices to save the information. The first program would write the information to disk for example and the second would read the information back to use it. Some problems are that this can be slow and dependent upon whether or not the disk is set up correctly, disk in the drive, etc. An advantage is that you can store more information than any other method. The following program writes two strings and two numbers to disk. You will notice that these routines are using random access files. You give the number of the data to write and the routine will put that data in the record of the number. If you write CALL STORESTR(300, A\$), A\$ will be written to record 300 in the file. Strings and numbers are stored in two separate files: DSK1.STRINGS and DSK1.NUMBERS respectively. The second program will read the two strings and numbers from the files and display the information.

100 REM PROGRAM 2.1
110 CALL CLEAR
120 CALL INIT
130 PRINT "ENTER STRING NUMBER 1:"
140 ACCEPT A\$

WMHNCE.

The third and last method is to store the information in a separate area of memory not used by Extended BASIC. The area not being used is the Assembly Language routine area in low memory expansion. The following progam usez CALL LOADs to put the information in low memory to be read by the CALL PEEK in the second program. WARNING! Because the program uses the low memory expansion, assembly language routines will not work and will crash if they are accessed. The passing of variables will write over anything that resides there. AGAIN, MAKE SURE YOU SAVE BOTH PROGRAMS BEEORE YOU RUN THEM!

```
100 REM PROGRAM 3.1
110 CALL CLEAR
120 CALL INIT
130 PRINT "ENTER STRING NUMBER 1:"
140 ACCEPT A$
150 CALL STORESTR(0,A$)
160 PRINT "ENTER STRING NOMBER 2:"
170 ACCEPT AS
180 CALL STORESTR(1,A*)
1.90 PRINT "ENTER NUMBER 1:"
200 ACCEPT NMBR
210 CALL STORENUM(O,NMBR)
220 PRINT "ENTER NUMBER 2:
230 ACCEET NMBR
240 CALL STORENUM(1,NMBR)
250 RUN"DSK1. PROG32"
1000 SUB STORESTR(N,A$)
1010 CALL LOAD (9000+N * 255,LEN(A$))
1020 FOR I=1 TO LEN(A$)
1030 CALL LOAD (9000+I+N * 255,ASC(SEG$(A$,I,1)))
1040 NEXT I
1050 SUBEND
1060 SUB STORENUM(N,NMBR)
1070 A$=STR$(NMBR)
1080 CALL LOAD(12288+N * 12,LEN(A$))
1090 FOR I=1 TO LEN(A$)
1100 CALL LOAD(12288+I+N * 12,ASC(SEG$(A$,I,1)))
1110 NEXT I
1120 CALL LOAD(12288+I+N * 12,32)
1130 SUBEND
100 REM PROGRAM 3.2
110 CALL CLEAR
130 PRINT "STRING NJMBER 1:"
140 CALL GETSTR(0,A$)
150 PRINT A$
19^ ORTMTN "STRTNO NTMMRR ?:"
```

|  |  |  |
| :---: | :---: | :---: |
|  |  |  |
| 19 | FGINT "NMMBER 1: | QUEEN ANNE |
| 200 | CALL GETNOM (0, NMBR) | COMPUTER SHOPPE |
| 210 | FRINT NMPD | soz cocjevelt hay nee. |
| 220 | PRINT "HUMEER | CEATEE, A ¢ 78115 |
| 230 | CALL GETNUM (1, NMBR) | PHONE: (206) $572-6538$ 38S:24HFS 361-0895 |
| 240 | PRINT NMBR | hours: monday tiris saturday 10:00-5:00 |
| 250 | END |  |
| 1000 SUB GETSTR (N, A\$) |  | AYARC GENEVE 9640 |
| $\begin{aligned} & 1010 \\ & 1020 \end{aligned}$ | A.s= <br> CALL PEEK $(9000+\mathrm{N} * 255, \mathrm{~L})$ | Sale price $\quad 3479.95$ |
| 1030 | FOR I= 1 TOL | Reqular price $\quad 5930.00$ |
| $1040 \mathrm{CALL} \mathrm{PEEK}(9000+\mathrm{I}+\mathrm{N} * 255, \mathrm{CH})$$1050 \mathrm{AS}=\mathrm{A} \$ 8 \mathrm{CHR}(\mathrm{CH})$ |  | \$100.00 deposit necessary |
|  |  |  |
| 1060 | NEXT I | trinitran kVishl sony tu/monitor 5527.95 |
| 1070 | SUBEND | RGb-Analog and Digital + Remote |
| 1080 | SUB GETNUM( $\mathrm{N}, \mathrm{NmBR}$ ) | iurbo XT PC (iritow) on display! |
| 10901100 | $A S=$ | magnavox composite manitor $\$ 195.00$ |
|  | CALL PEEK (12288+N * 12, L) | PANASONIC 1080i $\quad \$ 269.00$ |
| 1110 | FOR I= 1 TO L | DS/00 DISk drives (Call for Price) |
| 1120 | CALL PEEK (12288+I+N * 12, CH) | quad density bo track icall far price: |
| $\begin{aligned} & 1130 \\ & 1140 \end{aligned}$ | A\$=A\$\&CHR $\$$ (CH) NEXT | myarc hard disk controller with cables |
| 1150 | NMBR $=$ VAL ( $A \$$ ) | with 1/2 height 10 Meg drive $\$ 550.00$ |
| 1160 | SUBEND | with $1 / 2$ height 20 MEG drive $\$ 750.00$ (Fits inside PE tox drive siot) |
| 100 ! | ******************** |  |
| 110 ! | * ADDRESS/INVENTORY * |  |
| 120 | * BY AL HOWE * |  |
| 130 | * 11/29/86 |  |
| 140 | * ADDR/INV2 * |  |
| 150 | ********************* |  |
| 160 | DIM N (200): ${ }^{\text {( }}$ CALL COLOR (12,7 | CALL SCREEN (8) |
|  | $\mathrm{D}=1$ : $: ~ Y N \$=" Y$ " : $\mathrm{CALL} \mathrm{CHAR}(1$ | "080C0EFFEFOEOC08") |
|  | CALL CHAR (120, "0000EF0000FF000 | ") : |
|  | CALL CHAR (121, "00003F202027242 |  |
| 190 | CALL CHAR (122,"0000EC0404E424 | ") : |
|  | CALL CHAR (123,"242424242424242 |  |
| 200 | CALL CHAR (124, "24242720203F000 | ") : |
|  | CALL CHAR (125,"2424E40404F4000 |  |
| 210 | CALL CLEAR : $:$ CALL $\operatorname{HCHAR}(4,8$, | 0, 18): |
|  | CALL $\operatorname{HCHAR}(4,8,121)::$ CALL HCl | R $(4,26,122)$ |
| 220 | CALL $\operatorname{VCHAR}(5,8,123,8):$ C CALL | $\operatorname{HAR}(5,26,123,8):=$ |
|  | CALL $\operatorname{HCHAR}(13,8,124)$ |  |
| 230 | CALL $\operatorname{HCHAR}(13,26,125):$ CALL | $\operatorname{HAR}(13,9,120,17)$ |
| 240 | DISPLAY AT $(6,10):$ " 1 -ADDRESS"; |  |
|  | DISPLAY AT (8,10):"2-INVENTORY" |  |
| 250 D | DISPLAY AT (10,10) BEEF: "3-END" |  |

```
150 CALL STORESTR(0,A$)
160 PRINT "ENTER STRING NUMBER 2:"
170 ACCEPT A$
180 CALL STORESTR(1,A$)
190 PRINT "ENTER NUMBER 1:"
200 ACCEPT NMBR
210 CALL STORENUM(0,NMBR)
220 PRINT "ENTER NUMBER 2:"
230 ACCEPT NMBR
240 CALL STORENUM(1,NMBR)
250 RUN"DSK1. PROG22"
260 SUB STORESTR(N,A$)
270 OPEN #1:"DSK1.STRINGS",RELATIVE,INTERNAL
280 PRINT #1,REC N:A$
290 CLOSE #1
300 SUBEND
310 SUB STORENUM(N,NMBR)
320 OPEN #1:"DSK1.NUMBERS",RELATIVE,INTERNAL
330 PRINT #1,REC N:NMBR
340 CLOSE #1
350 SUBEND
100 REM PROGRAM 2.2
110 CALL CLEAR
120 PRINT "STRING NUMBER 1:"
140 CALL GETSTR(0,A$)
150 PRINT A$
160 PRINT "STRING NUMBER 2:"
170 CALL GETSTR(1,A$)
180 PRINT A$
190 PRINT "NUMBER 1:"
200 CALL GETNUM(0,NMBR)
210 PRINT NMBR
220 PRINT "NUMBER 2:"
230 CALL GETNUM(1,NMBR)
240 PRINT NMBR
250 END
260 SUB GETSTR(N,A$)
270 OPEN #1:"DSK1.STRINGS",RELATIVE,INTERNAL
280 INPUT #1,REC N:A$
290 CLOSE #1
300 SUBEND
310 SUB GETNUM(N,NMBR)
320 OPEN #1:"DSK1.NUMBERS",RELATIVE,INTERNAL
330 INPUT #1,REC N:NMBR
340 CLOSE #1
350 SUBEND
```



660 IF SEG\$(PR\$, (LEN (PR\$)-1),2)="LF" THEN

PR\$=SEG\$ (PR\$, 1, LEN (PR\$)-3)
670 OPEN \#1: PR\$: $: \operatorname{TB}=\operatorname{LEN}(\mathrm{B} \$(2))+\operatorname{LEN}(\mathrm{B} \Phi(1))$
680 PRINT \#1:CHR\$(14); TAB(9-(TB/2));B\$(2);
$B \$(1):$
690 CLOSE \#1 : : GOTO 650
700 DISPLAY AT $(4,2)$ ERASE ALL: "ENTER STRING TO BE SEARCHED"
710 ACCEPT AT $(5,2)$ BEEP:SH\$ : : EOR R=1 TO I :: GOTO 1920
720 NEXT R :: DISPLAY AT $(18,2):$ "END OF SEARCH": " KEY TO CONT.
730 CALL $\operatorname{KEY}(0, \mathrm{~K}, \mathrm{~S}):$ : IF S=0 THEN 730 ELSE 290
740 DISPLAY AT $(24,2):$ ENTER ITEM \#?"
750 ACCEPT AT $(24,16)$ VALIDATE (DIGIT)SIZE (3)BEEP: J : : IF $\mathrm{R}>$ I THEN 750
750 GOTO 580
770 FOR R=1 TO I
780 GOSUB 2040
790 DISPLAY AT (19,4)BEEP: "N-NEXT":" B-BACK":" E-EDIT":
" P-PRINT":" M-MENU"
$800 \operatorname{CALL} \operatorname{KEY}(0, K, S):$ IF S=0 THEN 800
810 IF $\mathrm{K}=78$ THEN 850 ELSE IF $\mathrm{K}=80$ THEN 950
820 IF K=69 THEN 1630 ELSE IF $\mathrm{K}=77$ THEN 290
830 IF $K=66$ AND $R>1$ THEN 840 ELTSE 800
840 R=R-1 : : GOTO 780
850 NEXT R : : GOTO 290
860 REM $* * * * * * *$ PRINTER $* * * * * * *$
870 IF SEG\$(PR\$, (LEN (PR\$)-1), 2) $=$ "LF" THEN PR\$ $=$ SEG $($ PR $\$, 1$,LEN (PR\$) -3$)$
880 D=0 : : OPEN \#1: PR $\$$
890 PRINT \#1: CHR\$ (27) : "4"; TAB(15); FN\$; CHR\$ (27);"5";
CHR (10) ; CHR ( 10 )
$900 \mathrm{Q}=1$ :: FOR R=1 TO I :: GOSUB 2040 ::
PRINT \#1: TAB(5); B\$(2);" "; B\$(1)
$910 \mathrm{D}=\mathrm{D}+1$ : : PRINT \#1: TAB (5); B ( 3 ): $\mathrm{TAB}(5)$;
B\$ (4);""' ${ }^{\prime}$ B\$(5)
920 PRINT \#1:TAB(5);" $(\mathrm{P})=" ; \mathrm{B}(6):$ :
930 IF $\mathrm{D}>=11$ THEN $\mathrm{D}=0$ :: PRINT \#1: CHR\$(12): : : :
940 NEXT R: CLOSE \#1:: CALL CLEAR: $\mathrm{D}=1:: \mathrm{Q}=0:: \mathrm{GOTO} 290$
950 IF PR\$="" THEN DISPLAY AT (19,12):"PRINTER NAME?" :: ACCEPT AT $(20,12)$ BEEP: PR $\$$
960 IF SEG\$ (PR\$, (LEN (PR\$)-1), 2)<>"LE" THEN PR\$=PR\$\&". LF"
970 OPEN \#1:PR\$ : $\mathrm{Q}=1:: \operatorname{GOSUB} 2040:: Q=0$
980 PRINT \#1: TAB(4); B\$(2);" "; B\$(1);CHR\$(10)
990 PRINT \#1: TAB(4); B\$ (3); CHR\$ (10)
1000 PRINT \#1: TAB(4); $\mathrm{B} \$(4) ; \mathrm{CHR} \$(10): \mathrm{TAB}(18) ; \mathrm{B} \$(5)$;
RPT\$ (CHR $(10), 6) 1010$ CLOSE \#1 : $:$ GOTO 850
1020 IF SEG\$ (PR\$, (LEN (PR\$)-1), 2) ="LE" THEN PR $\$=$ SEG $\$(P R \$, 1, L E N(P R \$)-39)$
1030 OPEN \#1:PR\$, VARIABLE 160:: PRINT \#1:CHR\$ (15)


| 50 | PRINT \#1: I $\$(1) ; \operatorname{TAB}(25) ;$ I $\$(2) ; \operatorname{TAB}(50) ;$ I $(3) ; \operatorname{TAB}(75) ;$ I末 (4) ; TAB (100) ; I\$(5);TAB(125); I\$(6) |
| :---: | :---: |
| 1060 |  |
| 1070 |  |
| 1080 |  |
| 1090 | $\mathrm{X}=\mathrm{POS}(\mathrm{T}$ \$, ", ", 1) |
| 1100 | IF $\mathrm{X}>0$ THEN J\$=SEG\$ (J\$, 1, X-1) \&SEG\$ (J\$, $\mathrm{X}+1, \mathrm{LEN}(\mathrm{J}$ ( $)$ ) |
| 1110 |  |
|  | SEG\$ (STR\$ (J-INT (J)) \& "00', 2, 2) |
| 1120 | $\mathrm{B}=\mathrm{B}+\mathrm{VAL}(. J \$)$ |
| 1130 | IE LEN(J\$) >6 THEN J\$=SEG\$(J\$,1,(LEN(J\$)-6))\&","\& SEG\$ (J\$, (LEN (J\$)-5) , 7) |
| 1140 | PRINT \# 1: B ( $(1)$; $\mathrm{TAB}(25) ; \mathrm{B}(2) ; \mathrm{TAB}(50) ; \mathrm{BS}(3) ; \mathrm{TAB}(75) ;$ |
|  | $\mathrm{B} \$(4) ; \mathrm{TAB}(100) ; \mathrm{B}$ ( 5 ) ; |
| 1150 | PRINT \#1:TAB(136-LEN(J\$)) : J\$ |
| 1160 |  |
| 1170 | J\$=STR\$(INT (B) ) \& " " \&SEG\$ (STR\$ (B-INT (B) ) \& 000", 2, 2) |
| 1180 |  |
|  | SEG\$ (J\$, (LEN (J\$)-5) , 7) |
| 1190 | J\$="\$"\&J\$ : : PRINT \#1: TAB(136-LEN(J\$)) ; J\$ |
| 1200 | Q=0 : : PRINT \#1:CHR\$ (18); CHR\$ (12): $\mathrm{CLOSE} \# 1$ : |
|  | GOTO 290 |
| 1210 | IE EN\$>"" THEN 1230 ELSE DISPLAY AT $(4,1)$ ERASE ALL: <br> "FILE NAME?" |
| 1220 | ACCEPT AT $(4,12)$ SIZE (-10) BEEP: EN\$ |
| 1230 | $\mathrm{I}=\mathrm{I}+1$ : : IF $\mathrm{I}>198$ THEN 330 |
| 1240 | DISPLAY AT(1, 1)ERASE ALL: "ITEM\#"; I |
| 1250 | DISPLAY AT (4,1): I\$ (1) |
| 1260 | DISPLAY AT (6, 1): I\$ (2): DISPLAY AT (8,1): I\$ (3) |
| 1270 | DISPLAY AT (10, 1): I\$ (4):: DISPLAY AT $(12,1):$ I $\$(5)$ |
| 1280 | DISPLAY AT (14,1): I\$ (6): : ACCEPT AT $(4,8) S I Z E(-24)$ |
|  | BEEP: B\$ (1) |
| 1290 | ACCEPT AT $(6,8) \mathrm{SIZE}(-20) \mathrm{BEEP}$ : $\mathrm{B}^{(2)}$ ( 3 : |
|  | ACCEPT AT $(8,8) S I Z E(-20) \mathrm{BEEP}: \operatorname{B\$ }(3)$ |
| 1300 | ACCEPT AT ( 10,8 ) SIZE (-20) BEEP: B\$ $(4)$ : : |
|  | ACCEPT AT ( 12,8 )SIZE (-20) BEEP: B\$ (5) |
| 1310 | ACCEPT AT ( 14,8 ) SIZE ( -20 ) BEEP: B ${ }^{(6)}$ ) : |
|  | R=I : : GOSUB 2110 |
| 1320 | DISPLAY AT (24,6):"1-NEXT NAME 2-MENU" |
| 1330 | CALL KEY $0, \mathrm{~K}, \mathrm{~S}):$ : IF $\mathrm{S}=0$ OR $\mathrm{K}<49$ OR K>50 THEN 1330 |
| 1340 | IF K>49 THEN 290 ELSE 1230 |
| 1350 | DISPLAY AT (4,7)ERASE ALL: ">>> SAVE EILE <<<" |
| 1360 | IF TW\$ $=$ " $"$ THEN TW\$ $=$ "N" |
| 1370 | IF $G=49$ THEN DISPLAY AT $(7,1):$ "CREATE FILE FOR": "TI WRITER? ";TW\$ |
| 1380 | DISPLAY AT ( 10,1 ): "EILE NAME? "; FN \$ |
| 1390 | DISPLAY AT (12,3):"DRIKE \#? ${ }^{\text {a }}$ D : $:$ |
|  | DISPLAY AT ( 14,3 ) BEEP: "DATA OK? "; YN\$ |
| 1400 | IE G=49 THEN ACCEPT AT (8.12)VALIDATE("YN")SIZE(-1) |

BEEP:TW\$
1410 IF TW\$="Y" THEN DISPLAY AT (10,12): ..... P\$='ACCEPT AT $(10,12)$ SIZE (10) BEEP: P\$ : : GOTO 14301420 ACCEPT AT $(10,12)$ SIZE $(-10)$ BEEP: FN $\$$
1430 ACCEPT AT (12.12) VALIDATE("123")SIZE (-1)BEEP:D :
DN\$="DSK"\&STR\$(D)\&".
1440 ACCEPT AT (14,12)VALIDATE ("YN")SIZE (-1)BEEP: YN\$
1450 IF $\mathrm{YN} \$=" \mathrm{~N} "$ OR $\mathrm{FN} \$="$ THEN 290
1460 IF G=50 OR TW\$="N" THEN 1510
1470 DN\$=DN\$\&P\$ :: OPEN \#1: DN\$, DISPLAY ,VARIABLE 80,OUTPUT
$1480 \mathrm{Q}=1$ : : FOR R=1 TO I :: GOSUB 2040 :: FOR A=1 TO 61490 P\$=STR\$(A)\&" "\&B\$(A):: PRINT \#1: P\$ :: NEXT A ::
PRINT \#1: "*"
1500 NEXT R : : CLOSE \#1 :: Q=0 :: GOTO 290
$1510 \mathrm{DN} \$=\mathrm{DN} \$ \& \mathrm{FN} \$$ : $:$ OPEN $\# 2: \mathrm{DN} \$$, INTERNAL : $\mathrm{FOR} \mathrm{R}=1$ TO I
1520 PRINT \#2: N\$(R):: NEXT R :: CLOSE \#2 :: GOTO 2901530 DISPLAY AT (4,7)ERASE ALL: ">>> LOAD FILE <<<": : :
"EILE NAME? "; EN.
$1540 \mathrm{C}=1$ : : DISPLAY AT (9,1):" DRIVE \#?";D: :" DATA OK? ";YN\$
1550 ACCEPT AT (7.12)SIZE (-10) BEEP: FN\$
1560 ACCEPT AT $(9,12) \operatorname{VALIDATE}(" 123 ") S I Z E(-1)$ BEEP: D
1570 ACCEPT AT (11, 12)VALIDATE("YN")SIZE (-1)BEEP: YN\$
1580 DISPLAY AT $(14,1): "$
1590 IF YN\$="N" THEN 290 ELSE DN\$="DSK"\&STR\$(D)\&"."\&FN\$
1300 OPEN \#C: DN $\$$, INTERNAL : : $I=1$
1610 INPUT \#C: N\$(I): IE EOF(C)THEN 1620 ELSE I=I+1 ::
GOTO 1610
1620 CLOSE \#C : : CALL CLEAR :: GOTO 230
1630 GOSUB 2130:: DISPLAY AT (19,2):"1-DELETE":" 2-CORRECTION"
:" 3-LIST"
1640 CALL $\operatorname{KEY}(0, \mathrm{~K}, \mathrm{~S})::$ IF S=0 THEN 1640
1650 IF K=49 THEN 1780
1660 IF K=51 THEN DISPLAY AT (19,1):" ":" ":" " :: GOTO 780
1670 IF K<>50 THEN 1640
1680 GOSUB 2130 :: $\mathrm{F}=4$ :: $\mathrm{E}=1$
1690 DISPLAY AT (16,4):"edit comp."
1700 DISPLAY AT $(23,1):$ USE ARROW KEYS TO LOCATE"
1710 CALL SPRITE (\#1, 126, 10, F*8-7,32)
1720 CALL $\operatorname{KEY}(0, \mathrm{~K}, \mathrm{~S}):$ : $\mathrm{IF} \mathrm{S}=0$ THEN 1720
1730 IF $K=10$ AND $\mathrm{F}<16$ THEN $\mathrm{F}=\mathrm{F}+2$ :: $\mathrm{E}=\mathrm{E}+1$ :: GOTO 1710
1740 IF $K=11$ AND $\mathrm{F}>4$ THEN $\mathrm{F}=\mathrm{F}-2$ : : $\mathrm{E}=\mathrm{E}-1$ :: GOTO 1710
1750 IF $K=13$ AND $F=16$ THEN GOSUB 2030 : : DISPLAY AT $(16,1)$
:" " : : GOTO 790
1760 IF K=13 THEN ACCEPT AT (F,4)SIZE (-26)BEEP: B\$ (E): :
GOSUB 2110
1770 GOTO 1720
1780 DISPLAY AT (8,4)ERASE ALL: "** PLEASE STAND BY **"
1790 FOR L=R TO I-1: $\mathrm{N} \$(\mathrm{~L})=\mathrm{N} \$(\mathrm{~L}+1):: \mathrm{NEXT} \mathrm{L}:: \mathrm{N} \$(\mathrm{I})=" \cdot$
1800 CALL CLEAR :: $\mathrm{I}=\mathrm{I}-1$ : : GOTO 850

| $\begin{aligned} & 1810 \\ & 1820 \end{aligned}$ | REM **** SORT FOUTINE ****** DISPLAY AT $(6,5)$ ERASE ALL: "SORTING/PLEASE STAND BY" |
| :---: | :---: |
| 1830 |  |
|  | DIBPLAY AT $24,11: L$ |
| 1841) | IF $N$ \$ $(L+1)>=N \$(L) T H E N 1890$ ELSE $S H$ S $=\mathrm{N}$ \$ $(L+1)$ |
| 1850 | FOR M=L TO 1 STEP -1 : $:$ DISPLAY AT $(23,14): M$ |
| 1850 | $N \$(M+1)=N \$(M)$ |
| 1870 |  |
| 1880 | NEXT M |
| 1330 | NEXT L : : CALL CLEAR : : GOTO 290 |
| 1300 | DISPLAY AT (4,2)ERASE ALL: "ENTER STRING TO BE SEARCHED" |
| 1310 | ACCEPT AT ( 5,2 ): SH. $:$ : FOR R=1 TO I |
| 1920 | $\mathrm{X}=\mathrm{POS}(\mathrm{N} \$(\mathrm{R}), \mathrm{SH}$ (,1): : IF $\mathrm{X}=0$ THEN 2000 |
| 1930 | GOSUB 2040 : $:$ DISPLAY AT (19,4): "CORRECT NAME? Y/N":YN\$ |
| 1940 | ACCEPT AT (19,21)VALIDATE ("YN")SIZE (-1) BEEP: YN\$ |
| 1950 | IF $Y N \$=$ " $Y$ " AND $N=0$ THEN 790 |
| 1960 | IF $\mathrm{YN} \$=$ " $Y$ " AND $\mathrm{N}=1$ THEN 600 |
| 1970 | DISPLAY AT ( 21,6 ) BEEP: "C-CONTINUE": TAB (6); "M-MENU" |
| 1380 | CALL KEY (0,K,S):: IF S=0 THEN 1980 |
| 1990 | IF $\mathrm{K}=67$ THEN 2000 ELSE IE $\mathrm{K}=77$ THEN 290 ELSE 1980 |
| 2000 | NEXT R : $:$ DISPLAY AT (18,2):" ":" ":" ": " ": " |
| 2010 | DISPLAY AT (18,2):"END OF SEARCH":" KEY TO CONT. |
| 2020 | CALL KEY $(0, \mathrm{~K}, \mathrm{~S}):$ : IF S=0 THEN 2020 ELSE 290 |
| 2030 | CALL DELSPRITE(\#1): |
| 2040 | Y, X=0 : : FOR $A=1$ TO $6:: X=\operatorname{POS}(N \$(R), " * " ; X+1)$ |
| 2050 | $\mathrm{B} \$(\mathrm{~A})=\mathrm{SEG}(\mathrm{N} \$(\mathrm{R}), \mathrm{Y}+1, \mathrm{X}-1-\mathrm{Y}):: \quad \mathrm{Y}=\mathrm{Y}+\mathrm{LEN}(\mathrm{B} \$(\mathrm{~A}))+1::$ NEXT A |
| 2060 | IF $\mathrm{Q}=1$ THEN RETURN |
| 2070 | DISPLAY AT (1,2)ERASE ALL: "ITEM\#"; |
| 2080 | DISPLAY AT (4, 4) : $\mathrm{BS}(1): \mathrm{S}$ DISPLAY AT $(6,4): \mathrm{B}$ ( 2 ) |
| 2090 | DISPLAY AT $(8,4): \mathrm{B} \$(3):$ : DISPLAY AT $(10,4): \mathrm{B} \$(4)$ |
| 2100 |  |
| 2110 | RETURN |
| 2120 | NEXT A : R RETURN |
| 2130 | FOR $\mathrm{F}=17$ TO 24 : $:$ DISPLAY AT (F, 1):" " : ${ }^{\text {a }}$ NEXT F |
|  | RETURN |
| 2140 |  |
| 2150 | TY\$ (2) ="DIS/VAR" : TY\$ (3) ="INT/FIX" |
| 2160 |  |
| 2170 | DISPLAY AT $(4,4)$ ERASE ALL: "** CHECK DISK **": : : TAB(6);"DISK \#?"; D |
| 2180 | ACCEPT AT ( 7,14 ) VALIDATE ( ${ }^{\text {c }} 12.3$ ")SIZE ( -1 ) BEEP: D : |
|  | DN\$="DSK"\&STR\$(D) \& " |
| 2130 | OPEN \#1: DN\$, INPUT , RELATIVE, INTERNAL |
| 2200 | $\mathrm{J}=0$ : : INPOT \# 1: A ${ }_{\text {S }}, \mathrm{J}, \mathrm{J}, \mathrm{K}$ |
| 2210 | DN $=" D I S K N A M E=" \& A \$:: A V \$=" A V A I L A B L E=" \& S T R \$(K) \&$ " USED $=" \& S T R \$(J-K)$ |
|  |  |


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