PUNN User Group
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THE **PUNN** NEWSLETTER

Wordplay

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FROM "HARDCOPY"
FOREST LANE USERS GROUP
GARLAND, TX

We have news on a new book being published for the '99!! It is titled:

CRACKING THE 99/4A

This special advertises a PRE-PUBLICATION discount of 20% off the cover price for the book "CRACKING THE 99/4A" by Brian Frothro and illustrated by Wiley Atkins. An intermediate level book with a good explanation of the inner-workings of the TI. Orders for the discount must be post dated no later than NOVEMBER 7th, 1985. After this date, the cover price applies. Delivery is said to be in time for Christmas.

BOOK.....$10.35
DISKETTE.....$ 5.55
BOTH.....$13.55

AVAILABLE FROM:

MIDNIGHT EXPRESS PUBLISHING CO.
DEPT. DA-10
BOX 26941
AUSTIN, TX 78755

MYARC PRODUCTS SHOWN, DESCRIBED TO DVUG

Myarc's new TI-99/4A-compatible computer, still unnamed and working out the last mechanical holdups, should be demonstrated by company president Lou Phillips at Illinois' TI Faire in November.

Actual release date is still pending. Myarc's product will come with 256K, upgradable to 512K. An IBM compatability card will be a future offering. So said Myarc administrative vice president Norm Freedman, addressing the Delaware Valley Users Group meeting in September.

Myarc's Extended Basic II, 128K Operating System, cartridge was brought to the DVUG meeting, but a demonstration disk sent by mail had not arrived. After offering to show it at the next convenient DVUG meeting, speaker Freedman outlined structural contrasts with TI's Extended Basic (see page 5).

Use of all-assembly language routines replaces TI's Graphic Programming Language. (TI still is very much involved in production of the 9918A chip, we were assured.) Detailed programming capacity and execution speed become significantly greater with the extra memory.

This was demonstrated with the Myarc RAM Disk card as approximately six dozen DVUG members watched on four monitors, chained by a series of $2.50 Y-cables. (Attendance was limited due to Hurricane Gloria's imminent arrival.)

The initial 32K is extra programmable RAM, similar to TI's 32K card. The next 96K memory, via upgrade or built-in, depending on one's purchase, may be used at owner discretion. (Cont'd. on page 4)

TIPS FROM THE TIGERCUB

#27

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TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

Distributed by Tigercub Software to TI-99/4A Users Groups for promotional purposes and in exchange for their newsletters. May be reprinted by non-profit users groups, with credit to Tigercub Software.

The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are available as a full disk of 50 programs, routines and files for just $15.00 postpaid.

>>>>>>NOW AVAILABLE<<<<<<<<<

Tips from the Tigercub VOLUME 2 The entire contents of Tips Nos. 15 through 24, with 64 routines and files, also $15.00 postpaid.

Or both for $27 postpaid.

>>>>ALSO NOW AVAILABLE<<<<<<

New Catalog #6, for $1 which is deductable from your first order. Describes 140 original programs for only $3 each (plus $1.50 per order for cassette or disk, package and postage).

If you have my previous catalog, the following are now available in Extended Basic versions - Fast Addition Practice, Submarine Hunt, Rithmatik, Wawaland (also now available in Basic with Speech), Long Division Cryptograms, Miss Spell, Scrambulation, Bargraffer, Squinch, Dry Gulch, Name That Tune, Scrum, Midnight Trail, Nimbo, Kindertimes, Optical Illusion, Bazoo, Synonymy, Speeder Reader, Changeroo, Glunk, Fraction Math, Three Buckets Puzzle, Roman Numbers, Match A Patch, Kinderminus, I & E Spelling, Casting Out Nines, Haunted Graveyard, Spalling Teecher, Homonymy, Antonymy, Old -Timer Puzzle, Ten Thousand Sights, Mechanical Aptitude Test, Junior Speeder Reader, and Bars and Balls.

Due to reduced prices for disks and mailers, the PPM charge is now $1.50 for either disk or casette - BUT PLEASE BE SURE TO SPECIFY WHICH!

And my best seller - NUTS & BOLTS, a full disk of 100 (yes, I said 100) utility subprograms in MERGE format, ready for you to merge into your own programs. 13 type fonts, 14 text display routines, 9 wipes, 8 pauses, 3 programming aids, 9 data saving and reading routines, 5 graphics routines, 4 time and date, 6 music, 12 sorts and shuffles, 2 printer aids, 4 key and joystick, 4 math, 2 protection and 7 miscellaneous, plus a tutorial on subprograms. With documentation, example of using each subprogram. All for only $19.95 postpaid.

I have been receiving several requests to publicize freeware which is sometimes good but sometimes of doubtful usefulness, quality, originality or even legality! And "Freeware! Send $10 and initialized disk" is not freeware, it's somebody trying to get a free ad! So - no more freeware mentions! I am also not going to mention commercial products - after all, I'm publishing this at my own expense to promote my own software! However, I do owe a mention to Larry Hughes of Quality 99 Software, because in Tips #22 I recommended that disks with fractured files should not be copied with a quick copier. Larry informed that his trademarked QUICK-COPYer is the only program of its kind on the market that does un-fracture files. He sent along a copy to prove it, and it does just that. A very useful feature!

Now, here is the new, and final, version of the Tigercub Menu Loader.

```
100 !by A. Kludge/M. Gordon/
T. Boisseau/J. Peterson/etc.
Version #5, 9/85
110 CALL PEEK(8198,A):: IF A
<>170 THEN CALL INIT
120 OPTION BASE 1 :: DIM PG$
(127),V(127,3):: CALL LOAD(-
31806,16):: ON ERROR 130 ::
GOTO 160
130 DISPLAY AT(12,9)ERASE AL
L:"I/O ERROR" :: RUN 100
140 @,@@,A,A$,B,C,D$,FLAG,I,
J,K,KD,KK,M,M$,N$,NN,P,P$,PG
$(),PP,PP$,Q$,S,ST,T$(),TT,V
T,V(,),W$,X,X$,Y,K2,S2
150 CALL LINK :: CALL PEEK :
: CALL KEY :: CALL SCREEN ::
 CALL COLOR :: CALL CLEAR ::
 CALL VCHAR :: CALL SOUND ::
 !@P-
160 CALL CLEAR :: CALL LOAD(
8196,63,248):: CALL LOAD(163
76,67,85,82,83,79,82,48,8)
170 CALL LOAD(12288,129,195,
126,165,129,153,102,60)
180 CALL LOAD(12296,2,0,3,24
0,2,1,48,0,2,2,0,8,4,32,32,3
6,4,91):: CALL LINK("CURSOR"
)
190 CALL CLEAR :: FOR S=1 TO
 14 :: CALL COLOR(S,7,16)::
NEXT S :: CALL COLOR(0,2,16)
200 T$(1)="d/f" :: T$(2)="d/
v" :: T$(3)="i/f" :: T$(4)="
i/v" :: T$(5)="pro" :: ON WA
RNING NEXT
210 IMAGE ###
220 IMAGE ###  Quit
230 IMAGE ###  Delete
240 IMAGE ###  Print
250 IMAGE ###  Rescan
260 CALL SCREEN(5):: CALL VC
HAR(1,31,1,96):: DISPLAY AT(
1,4):"TIGERCUB MENU LOADER"
270 ! IF YOU HAVE MORE THAN
ONE DISK DRIVE, DELETE THE !
 IN LINE 200 AND THE FIRST S
TATEMENT IN 210
280 ! DISPLAY AT(12,6):"DISK
? (1-3):" :: ACCEPT AT(12,19
)SIZE(-1)VALIDATE("123"):D$
:: D$="DSK"&D$&"."
290 D$="DSK1." :: OPEN #1:D$
,INPUT ,RELATIVE,INTERNAL ::
 INPUT #1:N$,A,J,K :: DISPLA
Y AT(1,2)SIZE(27):SEG$(D$,1,
4)&" - Diskname= "&N$;
300 DISPLAY AT(2,2):"Availab
le=";K;"Used=";J-K:" Prog Fi
lename Size  Type":"---- ---
------- ---- -------" :: I,V
T=0 :: TT=J-K
310 FOR X=1 TO 127 :: IF X/2
0<>INT(X/20)THEN 340
320 DISPLAY AT(24,1):"Choice
? Enter for more 0" :: ACCEP
T AT(24,24)VALIDATE(DIGIT)SI
ZE(-3):K :: IF K=0 THEN 330
:: IF K>0 AND K<NN+1 THEN 60
0 ELSE 320
330 X=1
340 I=I+1 :: IF I>127 THEN K
=X :: GOTO 510
350 INPUT #1:P$,A,J,B :: NN=
NN+1
360 IF LEN(P$)=0 THEN 430
370 DISPLAY AT(X+4,1):USING
210:NN :: DISPLAY AT(X+4,5):
P$ :: PG$(NN)=P$ :: DISPLAY
AT(X+4,16):USING 210:J :: DI
SPLAY AT(X+4,20):T$(ABS(A))
380 V(NN,1)=A :: V(NN,2)=ABS
(B):: V(NN,3)=J
390 X$="  "&STR$(B):: DISPLA
Y AT(X+4,24):SEG$(X$,LEN(X$)
-2,3):: VT=VT+J
400 IF A>0 THEN 410 :: DISPL
AY AT(X+4,28):"Y"
410 CALL KEY(0,KK,ST):: IF S
T=0 THEN 420 :: FLAG=1 :: GO
TO 430
420 NEXT X
430 DISPLAY AT(X+4,1):USING
220:NN :: DISPLAY AT(X+5,1):
USING 230:NN+1
440 IF VT=TT OR FLAG=1 THEN
460 :: DISPLAY AT(2,25)SIZE(
4):VT
450 FOR @=1 TO 10 :: DISPLAY
 AT(2,25)SIZE(1):CHR$(30)::
DISPLAY AT(2,25)SIZE(1):" "
:: CALL SOUND(-99,110,0,-4,0
):: NEXT @
460 IF FLAG=1 THEN 470 :: DI
SPLAY AT(X+4,13):USING 240:N
N+2 :: DISPLAY AT(X+5,13):US
```

```
ING 250:NN+3
470 DISPLAY AT(X+6,1):"    C
hoice?" :: ACCEPT AT(X+6,16)
SIZE(-3)VALIDATE(DIGIT):K
480 IF FLAG=1 THEN 500
490 IF K=NN+2 THEN 840 ELSE
IF k=NN+3 THEN CLOSE #1 :: N
N=0 :: GOTO 190
500 IF K<>NN AND K<>NN+1 THE
N 590
510 IF K=NN THEN CALL CLEAR
:: CLOSE #1 :: END
520 DISPLAY AT(X+5,12)SIZE(1
2):" #?" :: ACCEPT AT(X+5,15
)SIZE(2)VALIDATE(DIGIT):KD :
: IF KD<1 OR KD>NN THEN 520
530 IF V(KD,1)>0 THEN 550
540 FOR J=1 TO 10 :: DISPLAY
 AT(11,1):" ":"  PROTECTED -
 CANNOT DELETE":" " :: DISPL
AY AT(12,1):" " :: NEXT J ::
 GOTO 570
550 DISPLAY AT(X+6,1)SIZE(27
)BEEP:" Verify - Delete ";PG
$(KD);"?" :: DISPLAY AT(X+6,
28)SIZE(1):"Y" :: ACCEPT AT(
X+6,28)SIZE(-1)VALIDATE("YN"
):Q$ :: IF Q$<>"Y" THEN 570
560 DELETE D$&PG$(KD)
570 CLOSE #1
580 CALL VCHAR(1,3,32,672)::
 NN=0 :: X=0 :: FLAG=0 :: GO
TO 260
590 IF K<1 OR K>127 OR LEN(P
G$(K))=0 THEN 430
600 IF ABS(V(K,1))=5 OR ABS(
V(K,1))=4 AND V(K,2)=254 THE
N 640
610 DISPLAY AT(12,1)ERASE AL
L:"Print to ? S": :"(P)printe
r?":"(S)creen?" :: ACCEPT AT
(12,12)SIZE(-1)VALIDATE("PS"
):Q$ :: IF Q$="S" THEN PP=0
:: GOTO 630
620 DISPLAY AT(12,1)ERASE AL
L:"PRINTER? PIO" :: ACCEPT A
T(12,10)SIZE(-10):P$ :: OPEN
 #3:P$ :: PP=3
630 CALL CLEAR :: CALL SCREE
N(16):: ON ABS(V(K,1))GOTO 6
80,690,750,760
640 CLOSE #1 :: IF SEG$(PG$(
K),LEN(PG$(K)),1)="*" THEN D
ISPLAY AT(12,1)ERASE ALL:"RE
TURN TO BASIC AND LOAD BY":"
TYPING OLD ";D$&PG$(K):: STO
P
650 CALL PEEK(-31952,A,B)::
CALL PEEK(A*256+B-65534,A,B)
:: C=A*256+B-65534 :: A$=D$&
PG$(K):: CALL LOAD(C,LEN(A$)
)
660 FOR I=1 TO LEN(A$):: CAL
L LOAD(C+I,ASC(SEG$(A$,I,1))
):: NEXT I :: CALL LOAD(C+I,
0)
670 CALL VCHAR(1,3,32,672)::
 CALL SCREEN(8):: FOR S=0 TO
 14 :: CALL COLOR(S,2,1):: N
EXT S :: DISPLAY AT(12,2):"L
OADING ";A$ :: GOTO 900
680 OPEN #2:D$&PG$(K),INPUT
,FIXED :: GOTO 700
690 OPEN #2:D$&PG$(K),INPUT
700 LINPUT #2:M$ :: PRINT #P
P:M$ :: IF EOF(2)THEN 730
710 CALL KEY(0,K,S):: IF S=0
 THEN 700
720 CALL KEY(0,K2,S2):: IF S
2<1 THEN 720 ELSE 700
730 CLOSE #1 :: CLOSE #2 ::
PRINT "  >>>press any key<<
<" :: IF Q$="P" THEN CLOSE #
3
740 CALL KEY(0,K,ST):: IF ST
<1 THEN 740 ELSE 580
750 OPEN #2:D$&PG$(K),INPUT
,INTERNAL,FIXED :: J=0 :: GO
TO 770
760 OPEN #2:D$&PG$(K),INPUT
,INTERNAL :: J=0
770 IF EOF(2)=1 THEN 730 ::
J=J+1 :: INPUT #2:M$ :: IF L
EN(M$)=8 THEN 790
780 PRINT #PP:M$ :: GOTO 820
790 FOR Y=1 TO 8 :: @@=ASC(S
EG$(M$,Y,1)):: IF @@<32 OR @
@>127 THEN 810
800 NEXT Y :: GOTO 780
810 RESTORE #2 :: FOR X=1 TO
 J-1 :: INPUT #2:M$ :: NEXT
X :: INPUT #2:M :: PRINT #PP
:M
820 CALL KEY(0,K,S):: IF S=0
 THEN 770
830 CALL KEY(0,K2,S2):: IF S
2<1 THEN 830 ELSE 770
840 DISPLAY AT(24,1):"PRINTE
R NAME? PIO" :: ACCEPT AT(24
,15)SIZE(-14):PP$ :: OPEN #2
:PP$ :: PRINT #2:SEG$(D$,1,4
)&" - Diskname= "&N$
850 PRINT #2:RPT$("*",28):"A
vailable=";358-VT;"Used=";VT
:RPT$("^",28)
860 PRINT #2:"FILENAME  SIZE
   TYPE":RPT$("_",28)
870 FOR P=1 TO NN-1 :: PRINT
 #2:PG$(P);TAB(15);V(P,3);TA
B(20);T$(ABS(V(P,1)));TAB(25
);V(P,2):: NEXT P :: CLOSE #
2
880 DISPLAY AT(12,3)ERASE AL
L:"(P) to print again":" (R
) to rescan":" (Q) to quit"
890 ACCEPT AT(15,4)VALIDATE(
"PQR")SIZE(-1)BEEP:Q$ :: IF
Q$="P" THEN 840 :: CLOSE #1
:: NN=0 :: IF Q$="R" THEN 19
0 ELSE END
900 RUN "DSKX.1234567890"
```

This version turns off the Quit key, restarts itself rather than crashing on an I/O error, and has pre-scan for faster start-up. It displays disk name, sectors available and sectors presumably used - it also totals up actual sectors used and sounds a warning if any sectors are not accounted for.

It lists up to 127 programs and files by number, filename, number of sectors, program or file type, file record length, and write-protection. It will stop for menu selection on any keypress or at the end of each screen, continuing on Enter. It will load and run any program that can run from Extended Basic, displaying its filename while loading. If the filename ends in an asterisk, it will warn you to return to Basic. It will delete any unprotected program or file, after first requiring verification by filename, or will inform you if the file is protected. It will read any readable file, including internal numeric, and list it to screen or printer. It will dump a catalog of the disk to your printer, and it will offer the option of quitting or rescanning the disk or another disk. And it's free, I don't even want a freeware donation - but I would appreciate if you would take a look at my catalog and see if, somewhere among those 140 programs, there might be something you would be willing to pay $3 for? The Menu Loader is included as a bonus on every disk I sell!

```
100 CALL CLEAR :: RANDOMIZE
:: DISPLAY AT(3,4):"TI6ERCUB
 MATH PUZZLE"
110 DISPLAY AT(6,1):"Insert
+, -, * (multiply) OR / (div
ide) between the  digits
to equal the total": :"Type
Q to give up"
120 DISPLAY AT(12,1):"Level
1 or 2?" :: ACCEPT AT(12,15)
VALIDATE("12"):L$
130 T,X=INT(9*RND+1):: M$=ST
R$(X):: Z$=M$&" "
140 FOR J=1 TO 4 :: Y(J)=INT
(9*RND+1):: Z=INT(4*RND+1)::
 ON Z GOSUB 240,250,260,270
:: Z$=Z$&STR$(Y(J))&" " :: N
EXT J
150 IF L$="1" AND T<>INT(T)T
HEN 130 :: Z$=Z$&"="&STR$(T)
160 DISPLAY AT(12,1):Z$ :: D
ISPLAY AT(18,1):" " :: DISPL
AY AT(20,1):" " :: DISPLAY A
T(22,1):" "
170 P=2 :: FOR J=1 TO 4 :: A
CCEPT AT(12,P)VALIDATE("Q+-*
/")SIZE(1):S$
180 IF S$="Q" THEN 200 ELSE
IF S$="+" THEN X=X+Y(J)ELSE
IF S$="-" THEN X=X-Y(J)ELSE
IF S$="*" THEN X=X*Y(J)ELSE
X=X/Y(J)
190 P=P+2 :: NEXT J :: IF X=
T THEN 230 :: DISPLAY AT(18,
1):"WRONG!"
200 DISPLAY AT(20,1):"ANSWER
 IS ";M$
210 DISPLAY AT(22,1):"PRESS
ANY KEY"
220 CALL KEY(0,K,ST):: IF ST
<1 THEN 220 :: GOTO 130
230 DISPLAY AT(18,1):"RIGHT!
" :: GOTO 210
240 M$=M$&"+"&STR$(Y(J)):: T
=T+Y(J):: RETURN
250 M$=M$&"-"&STR$(Y(J)):: T
=T-Y(J):: RETURN
260 M$=M$&"*"&STR$(Y(J)):: T
=T*Y(J):: RETURN
270 M$=M$&"/"&STR$(Y(J)):: T
=T/Y(J):: RETURN
```

Enjoy!

Jim Peterson

CAVEAT EMPTOR: N. A. G.

Guy-Stefan Romano of the AMNION HELP-LINE (page 6), who has been giving personal assistance to TI-99/4A users since 1981, advised us that he's received over 150 calls from around the country which he described as complaints about the National Assistance Group, referenced on page 6 of this DATA BUS issue.

Romano notes that their product items which you may purchase after procuring a "membership" have included public domain software under other names, such as the Apesoft demo disk NAG lists as "Super Colossal Graphics" and, according to Romano, our own Steve Lawless' MassCopy as a sale item called "Super Disk". (Prices for commercial products are generally above the major catalog sources, too, he says; where's the membership benefit?)

Romano makes other allegations, which generally amount to questioning the bona fides of the NAG.

The DATA BUS contacted Ed York, President of the Cin-Day User Group, who has run the notices about NAG's CPM card in their UG newsletter which were the basis for our comments (on p.6, and in July at p.9). He states that he was given that data by NAG's Dr. Richard Kurtz, over the phone. York has no written specs.

The NAG had sent Cin-Day two membership applications. In the three months since they were mailed back with the $10 checks, only one newsletter has been received, and no other follow-up. While other publications, to be unnamed, have matched such slowness of response, mailing ~ or lack of it ~ regarding product orders with that delay may cause certain legitimate concern.

The DATA BUS has had no contact with the NAG, and the Delaware Valley Users Group has formed no opinion about it.

As with all groups with whom individuals are personally unfamiliar, contacts with local Users Groups may give you the information you need to evaluate such an operation. All product information that appears in this newsletter is provided for information purposes only. The Delaware Valley Users Group does not make commercial endorsements. Unsigned articles are written by the DATA BUS Editor.

MYARC PRODUCTS ...

(Cont'd. from Page One)

Any amount of the extra memory above the initial 32K can be allocated to the printer buffer, or "spooler", while the rest is available as additional program workspace. One use shown formatted the RAM Disk into an emulated DSK1., rapidly running TI-Writer and Multiplan files that had previously been loaded into the RAM Disk memory, and simultaneously letting one dozen pages print from the buffer left from another program.

Speedier operating execution was attributed to the solid state elements in the memory expansion card, as well as to the added memory. Freedman used the new 512K card for a demo, but noted that the principle was the same for a 128K card.

With suggestions from a few DVUG members who'd recently obtained Myarc's new Disk Controller Card, Freedman then used several routines from the disk-based "Disk Manager III". Included were CALL DIRectory functions loaded from TI Basic without affecting programs in RAM, and a few assembly language functions, such as CALL LR (like "Call Load"), and CALL LLR (like "Call Link").

These presentations came after an engrossing account of Myarc's involvement with 99/4A products over the past three years. The New Jersey-based firm developed its interfacing Personality Card to run Winchester hard disks in 1983, for TI's international business market and small cost-conscious U.S. concerns. The Mini-Peripheral Expansion System was released in 1984 to meet upgrade needs, as TI's P-Box supply appeared exhausted.

Accordingly, Myarc's products were designed for compatibility with the MPES when an unexpected source of additional TI P-Boxes was found. Myarc then issued its components in separate card format, even redesigning the disk controller to read non-standard (i.e., CorComp) format which had developed popularity in the TI marketplace. Additional P-Box availability, and earlier 99/4A users seeking new capabilities, led to the current trends.

C.R. Distributing,(404)928-8791, provides local retail outlets, or order directly from Triton,(800)227-6900, if you wish a quick source of Myarc products.

HBMPRINT

By John Phillips
99'ERS ASSOCIATION NL 8/85

I thought I would pospone another assembly language article and replace it with a new, exciting, *FREE* product from *BUEHRER-HAHN SOFTWARE*. This product is called HBMPRINT, and it does exactly what you think it does: it prints the results of your calculations from the Household Budget Management cartridge (PHM3007).

Ever since HBM was released by TI, there have been complaints about it not being able to print the results. I personally have wished time-after-time that a utility would be developed, so I could make a hardcopy of my expenses. It would be great for tax purposes. Nothing had ever been written to perform such a task. Well, faithful HBM users, the miracle has happened. Written by Bob Lawson, HBMPRINT is now available. This nifty little utility is written using TI-FORTH, and is a treasure! The best part of all is that it is *FREE*! That's right . . . absolutely free.

This software is in the domain of FREEWARE: software produced by dedicated individuals, who ask very little in return. Mr. Lawson has kindly agreed to allow this software to be copied freely and distributed to anyone desireing a copy. I am making a personal request: Anyone receiving a copy of this program, and using it please send a contribution of up to $10.00 to Mr. Lawson, at the address listed at the end of this article. This software is worth much more that the asking price, I assure you.

To describe the program is relatively simple. One needs a full TI expansion system with a printer and an Editor/Assembler cartridge. The program is loaded via option 3 (LOAD RUN) and is self-starting. A title screen is displayed and then your output device is requested. Once the output is secured, the software is nice enough to ask if you have a one or two-drive system. If you have only one, the software prompts you for the disk swapping. From this point, your HBM file is loaded into memory.

As with HBM, the header information is displayed showing the household name, year and last activity date. A very nice touch. There is a prompt asking you if this is the correct data. If not, you get another chance to try a different disk. Once the header is verified, the software prompts you to adjust the top-of-paper. From there, it proceeds to the print option menu, which contains many entries. You may print your data in a variety of formats (all chosen from the menu). For example, one category by month, all categories by month, all categories for year-to-date, all categories for the entire year, etc. There are also some options to load different data from this menu.

A very nice feature of the program is the ability to divert the output of any device you want. For instance, if you are unhappy with the formats given, you may divert the output to the disk (DIS/VAR 80 format). Then you can edit the data, using the TI-WRITER or E/A text editors. In my opinion, this is a very important feature.

All-in-all, this is a much needed, long overdue utility to help the users of HBM. I want to personally commend Mr. Lawson on his efforts to fill this gap. As mentioned before, if you are planning to use this software, please send Mr. Lawson whatever you feel the software is worth. You may send your contribution to:

BOB LAWSON
16223 MILL POINT DRIVE
HOUSTON, TX 77059

If you cannot locate a copy of the software, please contact Mr. Lawson at the address listed above. Be sure to include a contribution which will cover his time, disk cost, and mailing costs.

Q U I C K R E F E R E N C E S H E E T

COLOR CODES

COLOR	VALUE
TRANSPARENT	1
BLACK	2
MED. GREEN	3
LT. GREEN	4
DARK BLUE	5
LT. BLUE	6
DARK RED	7
CYAN	8
MED. RED	9
LT. RED	10
DK. YELLOW	11
LT. YELLOW	12
DK. GREEN	13
MAGENTA	14
GRAY	15
WHITE	16

PATTERN IDENTIFIER CONVERSION TABLE

0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	0	0	0	8
1	0	0	1	9
1	0	1	0	A
1	0	1	1	B
1	1	0	0	C
1	1	0	1	D
1	1	1	0	E
1	1	1	1	F

ERROR CODES

FIRST	COMMAND OR STATEMENT
0	OPEN
1	CLOSE
2	INPUT
3	PRINT
4	RESTORE
5	OLD
6	SAVE
7	DELETE
9	EOF (End Of File)

SECOND	TYPE OF ERROR
0	DRIVE NOT FOUND
1	DEVICE or FILE WRITE PROTECTED
2	BAD OPEN ATTRIBUTE
3	ILLEGAL OPERATION
4	OUT OF SPACE
5	ATTEMPT TO READ PAST END OF FILE
6	DEVICE ERROR or HARDWARE ERROR
7	FILE ERROR - File or disk does not exist

ASCII CODES

CODE	CHAR	CODE	CHAR	CODE	CHAR
30		62	>	94	^
31		63	?	95	(underscore)
32	(space)	64	@	96	`
33	!	65	A	97	a
34	"	66	B	98	b
35	#	67	C	99	c
36	$	68	D	100	d
37	%	69	E	101	e
38	&	70	F	102	f
39	'	71	G	103	g
40	(	72	H	104	h
41	)	73	I	105	i
42	*	74	J	106	j
43	+	75	K	107	k
44	,	76	L	108	l
45	-	77	M	109	m
46	.	78	N	110	n
47	/	79	O	111	o
48	0	80	P	112	p
49	1	81	Q	113	q
50	2	82	R	114	r
51	3	83	S	115	s
52	4	84	T	116	t
53	5	85	U	117	u
54	6	86	V	118	v
55	7	87	W	119	w
56	8	88	X	120	x
57	9	89	Y	121	y
58	:	90	Z	122	z
59	;	91	[	123	{
60	<	92	\	124	|
61	=	93	]	125	}
				126	~
				127	DEL (delete)

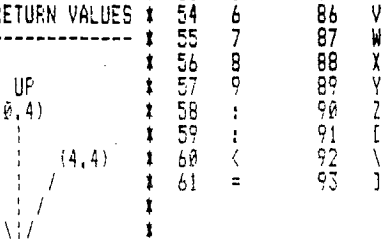
CHARACTER SETS

SET	ASCII CODES
0	30-31
1	32-39
2	40-47
3	48-55
4	56-63
5	64-71
6	72-79
7	80-87
8	88-95
9	96-103
10	104-111
11	112-119
12	120-127
13	128-135
14	136-143
15	144-151\BASIC
16	152-159/ONLY

CALL KEY VALUE OF KEYSTROKES

CODE	KEYSTROKE
1	FCTN 7
2	FCTN 4
3	FCTN 1
4	FCTN 2
5	FCTN =
6	FCTN 8
7	FCTN 3
8	FCTN S
9	FCTN D
10	FCTN X
11	FCTN E
12	FCTN 6
13	ENTER
14	FCTN 5
15	FCTN 9

JOYSTICK RETURN VALUES



CONTROL CODES

ASC	PRESS	A	COMMENTS
1	CTRL	A	START OF HEADING
2	CTRL	B	START OF TEXT
3	CTRL	C	END OF TEXT
4	CTRL	D	END OF TRANS.
5	CTRL	E	INQUIRY
6	CTRL	F	ACKNOWLEDGE
7	CTRL	G	BELL
8	CTRL	H	BACKSPACE
9	CTRL	I	HORIZONTAL TAB
10	CTRL	J	LINE FEED
11	CTRL	K	VERTICAL TAB
12	CTRL	L	FORM FEED
13	CTRL	M	CARRIAGE RETURN
14	CTRL	N	SHIFT OUT
15	CTRL	O	SHIFT IN
16	CTRL	P	DATA LINK ESCAPE
17	CTRL	Q	DEVICE CONTROL 1
18	CTRL	R	" 2
19	CTRL	S	" 3
20	CTRL	T	" 4
21	CTRL	U	NEG. ACKNOWLEDGE
22	CTRL	V	SYNCHRONOUS IDLE
23	CTRL	W	END TRANS. BLOCK
24	CTRL	X	CANCEL
25	CTRL	Y	END OF MEDIUM
26	CTRL	Z	SUBSTITUTE
27	CTRL	.	ESCAPE
28	CTRL	:	FILE SEPARATOR
29	CTRL	=	GROUP SEPARATOR
30	CTRL	9	RECORD SEPARATOR
31	CTRL	9	UNIT SEPARATOR
127	SHIFT	V	DELETE CHARATER

EXTENDED BASIC STATEMENTS

ACCEPT	DISTANCE	KEY	ON WARNING	SCREEN
CALL	END	LET	OPEN	SCLNK
CHARPAT	ERR	LINK	OPTION BASE	SFSET
CHARSET	FOR	LINPUT	PATTERN	SPRITE
CLEAR	GCHAR	LOAD	PEEK	STOP
CLOSE	GOSUB	LOCATE	POSITION	SUB
COINC	GOTO	MAGNIFY	PRINT	
COLOR	HCHAR	MOTION	RANDOMIZE	
DATA	IF THEN	NEXT	READ	
DEF	IMAGE	ON BREAK	REM	
DELSPRITE	INIT	ON ERROR	RESTORE	
DIM	INPUT	ON GOSUB	RETURN	
DISPLAY	JOYST	ON GOTO	SAY	

CALL LOADS

ADDRESS	PARAMETERS	DESCRIPTION
-32768	POKE 0-255	RATE of FLASH of CURSOR
-31788	POKE 192	DISABLE SPRITE action
-31804	PEEK X,Y	Return to Title Screen
	POKE X,Y	
-31806	POKE 16	DISABLE QUIT KEY (FCTN =)
	POKE 32	DISABLES SOUND
	POKE 64	DISABLES AUTO SPRITE MOTION
-31860	POKE 4	Goes to Console BASIC after "NEW" is typed
-31860	POKE 0	Runs DSK1.LOAD
-31878	POKE 0,-28	Highest # SPRITE in motion
-31931	POKE 0/128	Unprotects/Protects program
-31962	POKE 32	Returns to TITLE SCREEN
-31962	POKE 255	Runs DSK1.LOAD
-31952	PEEK A,B,C,D	Recovers program with LOAD
-28672	PEEK A	96=Speech Syn. 0=No Speech
-31988	POKE 63,255	Disables Disks,NEW free mem

BASIC TOKEN

CODE	BASIC TOKEN	CODE	BASIC TOKEN
128		147	DATA
129	ELSE	148	RESTORE
130	::	149	RANDOMIZE
131	!	150	NEXT
132	IF	151	READ
133	GO	152	STOP
134	GOTO	153	DELETE
135	GOSUB	154	REM
136	RETURN	155	ON
137	DEF	156	PRINT
138	DIM	157	CALL
139	END	158	OPTION
140	FOR	159	OPEN
141	LET	160	CLOSE
142	BREAK	161	SUB
143	UNBREAK	162	DISPLAY
144	TRACE	163	IMAGE
145	UNTRACE	164	ACCEPT
146	INPUT	165	ERROR

BASIC FILE PROCESSING

OPEN #file-number:file-name[,file-organization]
[,file-type][,open-mode][,record-type][,file-life]
- #file-number: 1 to 255 (0 for console I/O)
- file-name: "DSK1.name"; "CS1"; "RS232"; "PIO"
- file-organization: RELATIVE; SEQUENTIAL (default)
- file-type: DISPLAY (default); INTERNAL (faster)
- open-mode: INPUT(read only); OUTPUT(write only); UPDATE(read&write, default); APPEND(only write to end of file)
- record-type: FIXED(default for RELATIVE); VARIABLE (default for SEQUENTIAL); (each way be followed by numeric-expression for length (VARIABLE 80))
- file-life: PERMANENT(default)

CLOSE #file-number[:DELETE]

INPUT #file-number[,REC num-exp][,variable-list]
(use only with INPUT or UPDATE in OPEN)
(REC used only with RELATIVE,FIXED)

EOF(num-exp) 0 -- Not end of file
+1 -- Logical end of file
-1 -- Physical end of file

PRINT #file-number[,REC num-exp][:print-list]
(use only with OUTPUT, UPDATE or APPEND)

RESTORE #file-number[,REC num-exp] --(reset file)

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ALL GENERAL MEETINGS ARE HELD ON THE FIRST TUESDAY OF EACH MONTH, AT THE PGE BLDG, 3700S. E. 17TH, PORTLAND, OR

!! NEXT MEETING DATE !!

NOVEMBER 5, 1985