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MAY, 1985

THE HUGgers NEWSLETTER

VOLUME 3, NUMBER 2

THE OFFICER'S CORNER__

First off, I'd like to remind everyone that Craig Barritt, the local representative of Memorex will be a guest speaker at this Craig will give meeting. presentation on disk topics and then will have a question and answer session afterwards.

Also this month, the HUGbbs has been on line for a year. you haven't yet called it up, why don't you log on tonight! Also, we have printed a HUObbs wordsearch on Page 2. (Hint: all of the answers are here and there on the HUGbbs!)

At the April meeting, all of previous Officers were re-elected for another year. In this upcoming year as President, I like to see participation in group activities members. Ву getting involved, you can not only help a who member might have programming problem. but also contribute to this vast resource of information which is the basis of a users group.

See you at the May meeting. Have a Happy Mother's Day. J.Steven Sims

THE NEXT MONTHLY MEETING WILL BE

MAY 12, 1985

STARTING AT 2:00 PM AT CREATIVE LOGIC

SPECIAL GUEST SPEAKER

CRAIG BARRITT

AREA REPRESENTATIVE OF MEMOREX

Regional Meetings

Sou th

May 16th starting at 7:00 pm

Terre Haute

May 17th starting at 7:00 pm

HAPPY BIRTHDAY!

A Happy Birthday to these members who joined the Hoosier Users Group in May, 1984! Glen Watler, John Watler, Todd Triplett, Larry Compton, Larry Conner, Nelson Woodall, Alfredo Gedeon, and St. Barnabas School.

WELCOME!

The Hoosier Users Group welcomes these new members who joined the group in the past month: Benito Martinez, Michael Bunting, Steven Bundy, and Frank Escamilla, Jr.

WELCOME BACK!

We would also like to welcome back these renewing HUGgers: Ralph Johnston, Jr., Bryant Pedigo, Jack Witt, Mark Hackleman, George Lottes, Jane Farber, Kay Batta, Roger Frank, Larry Rockafellow, and John & Jeff White.

REGIONAL NEWS

TERRE HAUTE CHAPTER NEWS

The next Terre Haute meeting will be held on Friday, May 17 at 7:00 pm at Vic Kelson's house, 2401 College Ave, Terre Haute. We invite all HUGgers to come, or to invite a friend from this region. Please help support the users group.

SOUTH REGIONAL MEETING

The Southside Regional meeting is going to be changed to Thursday evenings. Our next meeting will be Thursday, May 16, beginning at 7:00 P.M. The meeting location is 4582 Moccasin Pl., Greenwood. You may obtain directions by calling 881-5918. Access to the HUG library will be during the meeting or at the end of the meeting. (Members may obtain access to the group library at other times by calling the number listed above for an appointment).

Our southside meetings are informal, generally including discussion sessions, demonstrations, problem solving and generally a sharing of information about the TI 99/4A Computer. Beginners and advanced programmers are welcome.

HUGbbs WORDSEARCH

In honor of the HUGbbs' first year in operation, we have compiled a wordsearch of 26 words relating to the HUGbbs! The answers will be printed in the next Newsletter!

 HUGBBSSINBJHXBIJWCECAPSKCAB ZYPMCCULITJKYIXCASYXYDDGKFE @IWFPRTBWSRORREOOHWKWPMCCVL OPMQNEYFT1UT1DFPREV1EWYJWCL OTOAUESRELLACTS LISGDETWXTGX DKIUFNCYPGBIMBXPWSYWTLELNRS BTLRFVTCNOTTFRVWLAEVANKIVLL YKJORAEMI GEMEGXERGJKGWTDKHI EUVTPRKLOGOFFMDBXEQKQNTLNON AZTAFLCSUFFMCUXUFMVMIMNSNTE XBULKDHUWDQSQSXSTOVROKPYOJF I BQUVXANBGOUBCVSHDPDDQMT I DE SZHMBFRUXZOMSROJAUNUUXZBTRE YZKEHBAVUI EQEQAASLRHLHHDPVD SGPLKTCHATTIPLAEIEXDEFYCOUS OFBALSTOORWQULIISCTHMKRTTJX PNNNFREDCJBLOIVFDACJURTXLLR SIYISRRHOTTWANDYADVFOANRUIR AWKMJHBYGWETJGLDYAMIXAENASQ BASRMNUZXSNUMBTTADJSNAFMFTF WPLEHOFIUFYLTUHEMORZHGWLEQG EYGTONENCUEROKZEAYL DSNTODZM MJNOFFESFKIRVANTOPIPLVKJAEC USREQSREDAEHMSDGIQANUUTIMEE

by Wim. H. Cagle V.P.

I just came back from a service school on an X-ray system that my company sells. This machine is used in hospitals to visualize body organs and bone structure. What makes this machine of interest to us, is the fact that this system is under control of a microprocessor. The CPU in use in this system is smaller that the one in our computer, but it is none the less a CPU with memory and data-busses and all the rest of the hardware that is currently in use in any other system.

• On power-up the CPU goes to a ROM (read-only-memory) and gets a program that starts a test to see that every assembly that will be used, is in good working condition. This is accomplished by writing a preselected code to each sub-assembly and reading back the "echo" response from these devices. If the response is there, and if it matches what the program said that it should, then the CPU goes to the next test. When all of the tests have been passed, the CPU turns over the system to the operator for setting the conditions for the first X-ray procedure.

When the procedure is selected from the key-board, the CPU reads the keys pressed and stores the operator input and it then checks to see that the input is indeed a legal input. On some systems, the operator can destroy a five thousand dollar X-ray tube by using to much power before the tube is warmed up and they can also ruin a tube by getting it to hot. This system protects the patient and the equipment from such operator error.

When the actual x-ray is in progress, the CPU watches the voltage impressed on the tube, the current through it, the amount of time it has been on, the current through the filament and a host of other things. In fact the only thing the operator has to do, is set the parameters, push and hold the go button and the CPU watches everything else. With this level of control over the operating system, the consistency of the pictures are very good.

For the technical people in our club, imagine a CPU system controling a machine that produces 100,000 volts and delivers 1000 milianps. Also imagine how much damage occurs when the tube arcs over inside. Some of the servo systems have multiple loops nested inside each other. The amount of care that the designers took to protect the patient is awesome. Every thing is set up so that it is "fail-safe". This means that any time the CPU can't move some value, it will shut down the entire thing and not allow another shot to be processed until the fault is rectified. It also has a trouble code reporting system. There are about sixteen pages of trouble codes in the back of operators manual. This is a great trouble shooting help, when the Tech. calls you and says that "I have an FEC error."

While this system is very expensive, we are selling a lot to hospitals that do the type of procedures where this level of operation is needed. In some of the X-ray procedures used today, it is necessary that each shot in a high-speed run is very consistant on a picture by picture basis and this equipment will do this type of procedure very nicely.

LIBRARY BITS

By Dennis Sherfy

Sam Moore Jr. has entertained kids and adults alike with three of his earlier music and graphics programs, PUPPY-TOWN, ORGAN, and W-BOOGIE (Western Boogie). Now, he has returned with three more programs on Library Disk Texas-1. They are MAINSCREEN, R-BOOGIE (Robot Boogie), and VENUS.

MAINSCREEN displays an image like a TI computer on the screen, then plays a musical composition. Like his other music programs, it will repeat over and over again until you stop the program. R-BOOSIE displays two dancing robots who keep time to the music. The graphics are simple but entertaining. VENUS displays a landscape like something in our American Southwest, then shows a variety of small space ships (sprites) flying by and the musical score is played.

Disk Basic-2 has an excellent computerized version of YAHTZEE, a game of chance for one to four players.

In order to run this program, you must first enter CALL FILES(1); NEW; then load and run the program.

You must know how to play Yahtzee before you can play this computer version of the game. The object of the game is to roll certain combinations of five dice, thereby scoring points. If you score more points than your opponent, you win. If you play alone, you try to improve your best score each game.

The Yahtzee score card consists of an upper and lower section. The upper section is for multiples of each number on a die. Four 1's earn you 4 points; three 5's earn 15 points, etc. If you average three of each number (three 1's, three 2's, etc) you earn a bonus of 35 points.

The lower section is for combinations similar to poker, such as three of a kind, four of a kind, a full house (two of one number plus three of an-other number). There is a large straight (five numbers in a row) and a small straight (four numbers in a row). A YAHTZEE, worth 50 points, is five of a kind. CHANCE is the total of your five dice.

The two sections are added together to produce your final score.

To begin, the computer rolls five dice for you. You may Keep any of the dice, and roll the others again. Once more, you may keep any of the dice, and roll the remaining dice for a third time. After your third roll, you must apply your dice to one of the catagories. If you have not been fortunate enough to develop a scoring cobination, you must apply your dice to any catagory, scoring a zero for that catagory. Then play passes to the next player. The game continues until each player has had thirteen times to roll the various combinations of dice. The program maintains an updated point total for each player throughout the game.

The game is listed as being for players from age 8 to adult. Most children will probably have to be about 12 before they can grasp the strategy of which catagories provide the best mathematical possibilities of producing high point totals. It's a nice addition to your program library.

MORE LIBRARY BITS

by S. Moon

Here are some comments on programs (1, 3, 4), that have been on the Xtended-07 disk for a while but were extensively revised in April, 1985. Most of these comments (plus some more) are in the REM's in the individual programs. Dennis Sherfy wrote about BX/RUN in the March Newsletter, but here it is again.

These programs are from a two-drive system and have drive two as the default drive. If you want to change this but can't figure out how, give me a call.

These four programs form a set which will create a file of comments for each file on a disk and then extract the first 25 characters of these comments to create a menu.

1) Program name - B/CATALOG

Hardware req. — Disk. (That is, this program will run under both BASIC's and is the only one of the four that will). Please note that I use the following naming scheme: B/???????? means the program will run under either Console or Extended BASIC; BC/ under Console only; BX/ under Extended only.

This is the old CATALOG program with a couple of added tricks: 1) You may enter a "Search pattern". Only those files starting with this pattern will be displayed. Since the TI takes so long to display, this frequently will speed things up. 2) You may display (or print) and maintain a Comments file. This file will accept a comment up to 112 characters long (140 in XB) and is given the same name as the name of the disk you are cataloging. These comments are not written to disk unless you have asked to revise them and you then exit this program with Quit. Programs BX/MENUMKR and BX/RUN (see below) can use these comments. TI-WRITER can mess with them after processing by program BX/CVTCMNT. (You may enter BACK during the listing or at most of the prompts to restart.)

2) Program name - BX/CVTCMNT
Hardware req. - X-BASIC, DISK, some kind of EDITOR (written with TI-WRITER in mind). This converts the Comments file record format to Display/Variable 80 and back again so it can be edited. This is useful if you are making many changes to the comments such as when deleting or renaming files.

In D/V80 format the filename is placed on a separate line before the comment line(s), preceded by ">>>". If you rename a file, you should change this name to match.

3) Program name - BX/MENUMKR (Formerly named BX/LOADER)

Hardware req. - X-BASIC DISK. Creates a Merge-format program named "BX/RUNMENU" that is a menu of the runnable programs on a disk. This is really only good for a disk which doesn't change too much as it takes a while to do. If your disk is volatile (sounds ominous), then you would advised to use program "BX/RUN" Instead. You have the option of either choosing those BASIC programs whose names start with "B/" or "BX/" or all files that are in PROGRAM or INT/UAR254 format. If you pick the latter, you will be queried as to which ones to include in your menu. You may choose to have the first 25 characters of the matching comment (if any) from the comments file created by program B/CATALOG displayed by the menu in place of the program name--a nice feature, I feel. This really program may be notable for its use of functions and mnemonic names for ASCII token codes in order to create the output program in Merge-format. All of these (not just the ones used in this program) are included after line 30000 with the pre-scan off so you can use them in some other program if you wish.

4) Program name - BX/RUN Hardware req. - X-BASIC DISK. Displays the programs on a disk that either: 1) Begin with "B/" or "BX/" or 2) Are in PROGRAM or INT/VAR254 format. You may then choose one to be run. >>>Press any Key while the program is reading the jump to the CHOICE directory to prompt.
(
You may also choose to have the matching comment used as in program BX/MENUMKR above, but this slows things down a bit so you're probably better off using BX/MENUMKR if you want to do this.

TI TERMINAL EMULATOR II ALTERNATIVES

by William M. Lucid

This article will cover two terminal emulator programs for the TI 99/4A system. I use the word system because these programs require: 1. RS232, 2. 32K memory expansion, 3. Disk system, and 4. Editor/Assembler module or CorComp, disk controller. Programs covered in this article are TE-1200, and PTERM-99.

The purpose of a terminal emulator is to enable transfer of data between computers, allowing sending and receiving systems to "talk" in a recognized method of handling data; even when sending computer is different than receiving computer. The terminal emulator program is used to set communcation parameters for using a MODEM with a RS232 interface. Some parameters encountered in terminal emulators are BAUD rate, RS232 (1-4), Parity, Stop bits, Echo, and Data bits. Another use of a terminal emulator program is to software interface radio amateur equipment. I have been able to use these programs to interface with KANTRONICS UTU for receiving RTTY as well as other modes of communications without having to layout additional money for KANTRONICS, HAMSOFT software for the TI 99 4/A.

TE-1200 by E. Earle Thompson was the first alternative for the TI TERMINAL EMULATOR II, that had capabilities of "auto-logging". Auto-logging allows you to use 32K memory expansion to "hold" incoming data. When the 12.5 k of ram buffer is full, program automatically dumps the 12.5 k bytes, (approximately 48 sectors) of data to a disk file that has been set-up pressing "Control" and "4" Keys when parameters were inputed. outputted file is a display, variable 128. Outputting of the file is done while ON-LINE, this increases your on-line charges, possibly long distance such as COMPUSERVE. and TE-1200 communications parameters can be re-entered anytime by pressing "control" and "1" Keys. Also to recall an Auto-logged file to use with a editor program such as TI-WRITER or EDITOR/ASSEMBLER the display, variable 128 file must be conveted to a display, variable 80 file. TE-1200 allows the user to select baud rates Of 110 upto 9600, baud rate dependent on modem baud rate, capability of RS232, and some other variables such as line noise, tolerance for error. The last item is important in cases where no "missing" data can be

tolerated, such as transmitting an assembly file. The faster the baud rate, the greater the risk of garbled or lost data when using non-deciated telephone lines. TE-1200 supports same file transfers as TI TERMINAL EMULATOR II, this feature allow you to use downloading feature of T.I.B.B.S. bulletin boards which require either TI TERMINAL EMULATOR II or TE-1200.

Another excellent terminal emulator program is P-TERM-99 by C. Richard Bryant. This program lives up to its claim of, "the ultimate terminal program. 300/1200 baud, 24K download buffer, 20K upload buffer, 256 color combinations and many more options." One of those other options is the ability to toggle your printer on and off by pressing "control" and "i" keys, with this feature you can simutaneously display and print at the same time or toggle printer off to only display data. Default values are for 300 baud, RS232 data. port 1, even parity, 1 stop bit, and 7 bits Default values can be selected at first prompt by pressing enter twice. PTERM-99 will load from Extended Basic, Editor/Assembler or Mini-Memory modules. This program allows for resetting communication parameters at any time by pressing "control" and "7" Keys. Pressing and "7" allows you to select "function" foreground and background colors of your perference, choices are presented on screen to aid in making selection. Outputting of the download buffer when full will occupy about 110 sectors. When the download buffer is within 1K of being full the screen will turn red, this feature works very well. When screen turns red you must dump the download buffer or the download buffer will be over written. Download buffer file output, if a disk file is in the display variable 80 format. Upload text files need to be in display variable 80 format. I have found this works best by removing control characters. T.I.B.B.S. bulletin boards will not "recognize" PTERM-99 the first time you attempt to log on. Another disadvantage is true TE II "File transfer protocal" is not a feature of this well planned, easy to use, and ecomonical program. PTERM-99 is a reliable, dependable, and proven program, well worth the \$17.50!

(TE-1200 is published by Softmail, PO Box 745, Rockwall, TX 75087. TE-1200 is listed in UNISOURCE catalog. UNISOURCE has a toll free telephone number 1-800-858-4580, there address is Box 64240, Lubbock, TX 79464 the last price update I received shows TE-1200 costing \$39.95. PTERM-99 is being sold by TEXAMENTS, 53 Center Street, Patchogue, NY 11772, program costs \$17.50 and includes shipping.)

AN INTRODUCTION TO FILE PROCESSING WITH TI-BASIC AND EXTENDED BASIC By R. K. Hallmark

Editor's Note: The following article was copied from the July, 1984 issue of "The Suncoast Beeper", Newsletter of the Suncoast 99er's of St. Petersburg, Florida.

Files, Records, and Fields:

File—A file is the way basic programs communicate data with external storage devices. Some typical external devices are:

DeviceFile NameCassette RecordersCS1 or CS2Disk DrivesDSK1 to 3Parallel PortPIOSerial PortsRS232/1 or 2

Record—A group of data items which are stored together in a file.

Field-A single data item in a record. Each variable in your program will occupy one field of a record.

A file consists of one or more records and these records consist of one or more fields. When the computer transmits data to one of the devices listed above it sends one record at a time.

File Attributes:

Files may be organized in a number of different ways depending upon the device being used and what the file is being used for. The organization and other charactheristics of a file are called its attributes. When data files are opened in BASIC (using an OPEN statement) you describe the file and its attributes to the computer. In the discussion below the order of the attributes and the terms used are the same as in your BASIC manual.

It is not always necessary to specify each of the attributes. In many cases the computer will select what is called a "default value" if you do not chose one. The default value that the computer will use depends upon both the device selected and the other attributes of the file.

- A. File #-May be any number from 1 to 255. (File #0 is the screen for output and the keyboard for input.)
- B. Device Name-See list above.
- C. File Organization—the file organization refers to way individual records within the file can be accessed.
 - 1. SEQUENTIAL-Data is read to or written from a file starting at the beginning and going through the file one record at a time, you cannot skip around. All files except disk files can only be sequential. Sequential is the default for file organization.
 - 2. RELATIVE-True random access files. The records can be written to or read from in any order. Disk files can be either relative or sequential.
- D. File Type-this refers to the format in which the data is stored.
 - 1. INTERNAL-The data is stored in the binary form in which it can be most easily used by the computer. Files stored on cassette or disk should be internal format.
 - 2. DISPLAY-The data is stored in ASCII format. This format is used for sending data to the parallel and serial interfaces. Display is the default for file type.

- E. Open Mode-Describes whether the file may be written to, read from, or both.
 - UPDATE-The file may be both written to or read from.
 This is the default for open mode.
 - 2. OUTPUT-The file may only be written to.
 - 3. INPUT-The file may only be read from.
 - APPEND-Allows you to add additional records to the end of the file.
- F. Record Type-Describes whether the file has FIXED or VARIABLE length records. All relative files have fixed length records.
 - 1. Cassette Files-These files may be specified as fixed or variable but the computer actually uses fixed length records which may be 192, 120, or 64 bytes long. The default for cassettes is VARIABLE with a maximum length of 64 bytes. The computer actually uses FIXED with 64 as the length.
 - 2. Disk Files-SEBUENTIAL disk files have the default length of 80 bytes and a maximum length of 254 bytes . RELATIVE disk files must be of fixed length and may be up to 255 bytes in length.
 - 3. The printer ports (R\$232 and PIO have the default record type of FIXED with a length of 80 characters. Other lengths may be used.

Sample Cassette Programs:

Data Imput:

- 100 OPEN #1:"CS1", SEQUENTIAL, INTERNAL,
- OUTPUT, FIXED 192
- 110 INPUT "NUMBER OF NAMES: ": NUMBER
- 120 FOR 1=1 TO NUMBER
- 130 INPUT "LAST NAME: ": LNAMES
- 140 INPUT "FIRST NAME: ": FINAMES
- 158 INPUT "ADDRESS: ":ADDRESS\$
- 160 INPUT "CITY: ":CITY\$
- 170 INPUT "STATE: ":STATES
- 180 INPUT "ZIP: "ZIP
- 190 PRINT #1: LNAMES, FNAMES, ADDRESSS,
- CITYS.STATES.ZIP
- 200 NEXT I
- 216 CLOSE #1
- 220 END

Data Output:

- 100 OPEN #1:"CS1", SEQUENTIAL, INTERNAL,
- INPUT, FIXED 192
- 110 INPUT "NUMBER OF NAMES :" :NUMBER
- 120 FOR I=1 TO NUMBER
- 130 INPUT #1:LNAMES, FNAMES, ADDRESSS.
- CITYS, STATES, ZIP
- 148 PRINT FNAMES: " " LNAMES
- 150 PRINT ADDRESS\$
- 160 PRINT CITY\$;",";STATE\$;" ";ZIP
- 170 FOR DELAY=1 TO 2000
- 180 NEXT DELAY
- 190 NEXT I
- 200 CLOSE #1
- 210 END

TIPS FROM THE TIBERCUS

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

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

Nuts & Bolts is a diskfull of 100 (that's right, 100!) IBasic utility supprograms in MERGE format, ready for you to merge into vour own orograes. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines. 9 wipes, 8 pauses, 6 music. 2 protection, etc., and now also a tutorial on using subprograms, all for just \$19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and IBasic at only 63.00 each!(plus \$1.50 per order for casette, packing and postage, or \$3.00 for diskette, PPM) Some users groups charge their members that such for public domain programs! I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

folks, I just can't afford to keep mailing out these Tips if you don't BUY something once in awhile! I am hearing from more and

sore groups who want to get on ay sailing list, but I as having to cut back. I am dropping those groups which don't give any indication that their sembers ever get to see the Tips, and I'll have to cut further. If you so send se an order, or even ask for my catalog, mention your users group so I'll know there is someone still alive out there!

If you know of any schools in your area, especially elementary schools, that have T1-97/4As in the classroom, won't you please give me their address? I'll send them a free catalog.

Danny Michael 141 improved his graphics screen dues to include rotate and double size! It is in assembly, very fast, and runs out of IBasic, E/A sodule or Mini Hesory, He has also written an assembly Meatlist program which lists an IBasic program to a printer in single line statements, indented. expanded, etc., very useful for debugging, setting up pre-scan, etc.

These are freeware, gay if you want and whatever you want. Just send an initialized disk for either one, or two disks (or SSDD or flippy) for both, in a returnable sailer with ENOUGH RETURN POSTAGE, to

Danny Michael; Rt 9 Box 460 Florence, AL 35630.

John Hamilton of the Central lowa Users Group will send you his 22-page boxlet of "99 Tigs" for the TI-99/4A, for just \$4.00. The address is

John Hamilton, 4228 E. Clinton, Des Hoines IA 50317.

1 have been experimenting with

TI-Writer, and this issue of the Tips is being printed in 4 columns, right justified directly from the printer. Here's how -

Use II-Writer, editor mode, in any line length you want. The first line should be .RM 27:FI:AD but don't use any other foreatter Don't indest codes. Use some other paragraphs. character as a temporary substitute for any ^, 0, & or # in the text. Don't iaclude Aug program listings, yet.

file Save the 15 DSK1.TEXT. Print an edit go into Then COPY. Select eode. foreatter DSK1.TEXT to be printed, but instead of your printer spec, type DSK1.TEXT2. Your will now be in file 29-column format and right sustified, and indented.

If the text is to include any program listings, run them through my 28-Column converter (see Tips #18), using the Editor option of that program.

60 back to TI-Writer editor and load DSK1.TEXT2. Herge in the program listings. Then PF to print file, but instead of a printer spec. type C DSK1.TEXT3. When it has printed to disk, LF the DSK1.TEXT3 and you will find that all control characters are gone.

Now for a bit of mitting. Delete the 3 blank lines at the beginning, and the 6 blank lines that have appeared after every 60th line. Center the title by erasing with the space bar and retyping - do MOT use FCTN 2! Also replace any temporary characters with the ^, 0, & or 2.

You will print 4 columns of 60 lines per page, so the total lines in your file must be a multiple of 240. Add enough blank

lines to the end of the file to reach that count.

Save that file back to disk as DSK1.TEXT3. Now go into XBasic, key in this program and RUM!

100 OPEN #1: DSK1.TEXT3", INP UT :: OPEN #2: "PIO", VARIABLE 255 :: PRINT #2:CHR\$(15);CN R\$(27);CHR\$(69):: DIN B\$(240

110 FOR A=1 TO 2 :: FOR B=1
TO 240 :: LIMPUT #1:B\$(B)::
MEXT B
120 FOR C=1 TO 60 :: PRINT #
2:TAB(10);B\$(C);TAB(41);B\$(C
+60);TAB(72);B\$(C+120);TAB(1
03);B\$(C+180):: NEXT C :: PR
INT #2:CHR\$(27);CHR\$(97);CHR
\$(6):: NEXT A :: CLOSE #1 ::
CLOSE #2 :: ENB

The A loop is for a 2-page printout of 480 lines, of course.

You can modify this routine to print in 2 or 3 columns, adjust the margins, change the type font or size, rewrite for your own printer, etc. And the column width can be anything you want, just change that .RM 27 in the first line of the text (don't forget that the left margin is set at 0, not 1).

If you want a 2-column page, you can dump the file back to disk instead, and then print it out of II-Writer editor. Use this routine, modified as you wish.

100 !Opens a file TEXT3 of 2 40 lines 35 char long and co nverts it into a file which can be printed out of TI-wri ter Editor as 2 pages in 2 c olumns

110 OPEN 81:"DSK1.TEXT3",INP UT :: OPEN 42:"DSK1.TEXT4",O UTPUT :: DIN 89(120) 120 FOR A-1 TG 2 :: FOR 8-1

120 FOR A=1 TO 2 :: FOR B=1 TO 120 :: LINPUT \$1:B\$(B):: NEXT B

130 FGR C=1 TO 60 :: PRINT # 2:" "%8\$(C) %RPT\$(" ",38LEN(84(C)))484(C+60):: NEXT C 11 FOR 9=1 TO 6 11 PRINT # 22" " 21 MENT D 11 NEXT A 11 CLOSE #1 11 CLOSE #2

It is best to run a program to set up your printer, and leave it turned on, before printing that file out of the Editor. It is not at all easy to labed control characters in the file, because they affect the line in all columns and also shift the lines out of alignment.

I understand that there a couple of kids who wait every month for their dad to key them in a bit of nonsense from the Tigercub.

100 !KEYIAP - by Jim Peterso

110 DISPLAY AT(6.11) ERASE AL L: KEYZAP" :: DISPLAY AT(12. 1): Lap the Iprite by typ ing the key in the correspon dingposition on the keyboard

120 DISPLAY AT(24,10): Press any key" ii CALL KEY(0,K,S) 11 IF S=0 THEN 120 130 RANDOMIZE

140 CALL CHAR(47, *817EA58199 A5423C*}

150 CALL CLEAR :: T=0 :: CAL L FLASH(T)

160 CALL KEY(3,K,ST):: 1F ST

=0 THEN 180

170 C=C+1 :: 1F C=101 THEN 1 90 ELSE CALL KEYBOARD(K.T) 180 CALL HOTION(#1,25#AN9-25 #RNO,25#RND-25#RND):: CALL C OINC(#1.02.16.4):: IF A=0 TH EN 160 ELSE CALL FLASH(T):: 60TO 160

190 CALL DELSPRITE(ALL):: DI SPLAY AT(12.9): "SAME OVER" : : DISPLAY AT(14,9): "SCORE":T :: DISPLAY AT(16.9): PLAY A SAIN?"

200 CALL KEY13,K,5111 IF 541 THEN 200

210 IF K=89 THEN C=0 :: 60TO 150 ELSE END 220 SUB KEYBOARD(K.T)

230 IF FLAGE I HEN 250 11 PL

UBEND

Control of the contro

240 KEYS="1234567890=QWERTYU IOP/ASDFEHJKL: "ACHR4(13)&"ZI CVBNM..."

250 IF (K=47)+(K=61)+(K=13)T HEN SUBEXIT ELSE X-POS(KEYS. CHR\$(K),1):: Y=ABS(X>11)-(X> 22)-(X)33)+1 :: R=Y\$6 :: C=((X+(Y)1)*(Y-1)*11)#3) 260 CALL SPRITE(#2,42,16,R#8 -7,C18-7):: CALL COINC(01,02 ,16, N) 11 IF N=0 THEN SUBEXIT 270 CALL FLASH(T):: SUBENO 290 SUB FLASH(T):: FOR W=1 T 0 10 :: CALL BCREEN(16):: CA LL SCREEN(B):: NEXT W :: CAL L SPRITE(#1,47,2,1,1):: T=T+ 1 :: DISPLAY AT(1,20):T :: S

And here's another -

100 ! DUICK & DIRTY DOODLER by Jie Peterson Use joystick #1. Press fire button to change color or pattern. Enter to clear the

screen. .0101010101010101.0000000000 0000Ff.808080808080808.01020 4081020408.8040201008040201. FF918191610181FF

120 CALL CLEAR :: FOR J=1 TO B :: READ CHS(J):: NEXT J 130 FOR CH=32 TO 136 STEP 8 :: FOR CN=CH TO CH+7 :: X=X+ 1 11 CALL CHAR(CN, CHS(X))11 NEXT CN 11 X=0 11 HEXT CH 11 CALL CHAR(32, "0") 140 CALL SCREEN(16):: FOR S=

2 TO 14 :: CALL COLOR(8,5+1, 1):: NEXT S :: R=12 :: C=16 :: CH=33

130 CALL HCHAR(R,C,CH):: CAL L FASTJOY(C.R.Q):: IF G=18 T HEN CH=CH+1+(CH=143)\$110 160 CALL KEY(0, K, 8):: 1F K=1 3 THEN CALL CLEAR :: 60TO 15 0 ELSE 150

170 SUB FASTJOY(C.R.D):: CAL L JOYST(1.X.Y):: CALL KEY(1. 0.5):: X=S6N(X):: Y=-S6N(Y): : C=C+X+(C=32)-(C=1):: R=R+Y +(R=24)-(R=1):: SUBENO

And a pretty one -

100 CALL CLEAR II CALL SCREE MIZITE FOR SEZ TO B IT CALL

COLOR(8,15,1):: NEXT 8 :: DI SPLAY AT(12,7): "KALEIDOSQUAR ES" ! by Jie Peterson 110 FOR CH=40 TO 134 STEP 8 :: FOR L=1 TO 4 :: RANDON12E

11 X8=8E64(*0018243C425A667 EB199ASBDC3DBE7FF", INT (16:RM D+1) #2-1,2)

120 Bs=8s&X\$:: Cs=15&C\$:: NEXT L :: CALL CHAR(CH, 3%&C%) :: B\$.C\$=NUL\$:: NEXT CH 130 FOR S=2 TO 14 11 X=INT(1 51RND+2}

140 Y=INT(15\$RNB+2):: IF (Y= X)+(Y=0) THEN 140 150 CALL COLOR(S,X,Y):: NEXT

160 AR.R.AVR. VR=1 11 AC.C.AH C.HC=4 :: TT=24 :: XX.XT=13 170 FOR L=1 TO 12 :: T=TT :: IT=II :: R=AR :: VR=AVR :: C=AC 11 HC=AHC

180 FOR J=1 TO XT 1: X=[NT(1 3#RMD+2)#8+24 :: CALL HCHAR(R.HC.X.T):: CALL HCHAR(25-R. HC, X, T):: CALL VCHAR(VR, C, X.

190 CALL YCHAR(VR.31-C,1,T): 1 T=T+2 ## HC=HC+1 ## VR=VR+

200 NEIT J :: AR=AR+1 1: AVR =AVR+1 :: AC=AC+1 :: AHC=AHC +1 :: TT=TT-2 :: XX=XX-1 :: -

210 IF INT(28RND)(>0 THEN 23

220 FOR S=INT(121RND+2)TD 14 11 CALL COLGR(8,1,1)11 NEXT

230 FOR J=1 TO INT(20#RND+1) :: S=INT(13#RND+2):: X=INT(1 51RM0+2):: Y=INT(151RM0+2):: CALL COLOR(8, I, Y):: NEXT J 240 CALL SCREEN(INT(15#RND+2));; QN INT(5#RMD+1)60TQ 130 .160,220,230,240

The challenge in Tips \$16 was - how can you store a hundred or more values of Size. positive AUA OF negative. integer non-integer, even in exponential notation. without dimensioning an array or opening a file, and then link to another program with a RUM statement and recover those values - not by reading them from the screen? I had just one reply! Was it too easy, too hard, or doesn't anyone care? Anyway -

20591 SUB CHARSAVE2(CH, N):: NS=STRS(M):: NS=RPTS("0",16-LEN(NO)) NAS 20592 IF POS(Ns,".",1)=0 THE N 20593 :: NS=6E5\$(NS,1,POS(NG, ". ", 1}-1)&"A"&SEGG(NG, POS (MS, ", ", 1)+1, LEN(NS)) 20593 IF POS(#0,"+",1)=0 THE N 20594 :: N#=BE6#(N#,1,POS! N\$,"+",1)-1)&"B"&8E64(N\$,PO8 (NG, "+", 1)+1, LEN(NG)) 20594 IF MO THEN MS=SEES (MS ,1,PQS(Ms,"-",1)-1)&"F"&SE6\$ (NS.POS(NS."-".1)+1.LEN(NS)) 20595 CALL CHAR(CH.NS):: SUB

And to recover the values -

20596 SUB READCHAR (CH, N): C ALL CHARPAT (CH. CHE) 20597 IF POS(CHs, "A",1)=0 TH EN 20598 :: CH\$=\$E5\$(CH\$,1.P OS (CHs. "A".1)-1)&". "&SE5#(CH \$,POS(CH6, "A", 1)+1,LEN(CH6)) 20598 IF POS(CH+, "B", 1)=0 TH EN 20599 :: CHS=8E66(CHS,1,P OS(CH4, "B", 1)-1)&"+"&SE5\$(CH *,PO\${CH*,"B",1}+1,LEX(CH*)) 20599 IF POS(CHS, "F", 1)<>0 T HEN CHS="-"LSEGS (CHS, POS (CHS ."F".1)+1.LEN(CH\$)) 20600 N=VAL(CHS):: SUBENO

Here's a jewel of a routine from Danny Michael, to avoid those lockups and other foul-ups that occur when you CALL INIT after you have aiready CALLed INIT -CALL PEEK(8198.A):: IF AC>17 O THEN CALL INIT

The best way to edit a program is to type MUH and the first line number, then Enter will take you through line by line with no danger of accidentally deleting a line. The edit functions will still work, and FCTH 4 gets you out of the NUM sode.

MEMORY FULL!

Jia Peterson

HOUSIER USERS GROUP DIRECTORY

HOOSIER USERS GROUP OFFICERS

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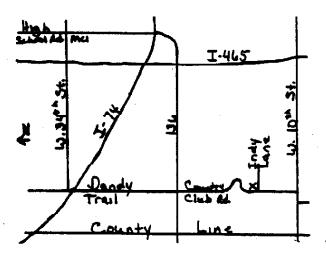
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