



NOVEMBER 1988 / VOLUME 4 #9

A REVIEW OF THE ARAE 99/105 KEYBOARD

by Charles Good

Lima Ohio User Group

In an article I wrote last year about expanding 99/4A systems cheaply, I stated, "Because of cost, I can't recommend the fancy (RAVE) keyboard..." Well, guess what? I bought one anyway! If you already have two double sided drives, a good printer, lots of Horizon Ramdisk capacity, and are still looking for additional ways to expand your 99/4A system then the RAVE keyboard deserves serious consideration. In terms of cost/benefit the question of whether the additional features of the RAVE keyboard justify the price of \$199.95 (Why not be honest, RAVE, and make the cost an even \$200?) only you can decide.

INSTALLATION: You have to remove the existing keyboard from your console and install a circuit board in its place. Very detailed directions and illustrations for this procedure are in the RAVE docs. The process does not require any soldering, and took me about 25 minutes. Basically all you do is unscrew the console covering, unplug the internal components including the original keyboard, plug the circuit board into the motherboard in place of the keyboard, and screw everything back together again. You plug the keyboard into a connector on the circuit board. The keyboard attaches to the console with a very sturdy coiled cord that can extend about 5 feet. It can easily be unplugged if necessary.

The general appearance of the console after the RAVE circuit board is attached is rather ugly. The circuit board is recessed about 1 inch below the top of the console and has lots of chips and a few wires exposed to view. You can, if you wish, spend \$12 and purchase from RAVE an optional plastic cover that mounts flush with the top of the console. This seems rather expensive to me for just a piece of plastic. I have read in the newsletters of some users who have made their own home made covers. I choose not to use a cover. In my system the console is out of sight, so the ugly doesn't show. Also, I suspect that without a cover cooling is improved. Air can get in to the power supply from the side now in addition to the normal "in the bottom and out the top" convection cooling air. I realize that this means dust can get into the console, but I don't think dust by itself is much of a problem to electronics.

Although the RAVE keyboard replaces the console keyboard, you still need access to the console and can't get away with hiding the console in some difficult to get at out of the way place. You have to get at the module port, and you have to use the console's on/off switch for correct system powerup

and powerdown. For example, my GRAM KRACKER, sometimes loses part of its memory if I turn off the PE box without first turning off the console, which means I can't get away with using a switched plug box to turn on and off my entire system all at once with just one on/off switch. This GK memory loss can occur even after I first move the GK's NORMAL/GK OFF switch to the GK OFF position, which I always do. Use of the RAVE keyboard will significantly increase the footprint (required flat surface area) of your system, and potential purchasers should keep this in mind before purchase.

RAVE keyboard owners can purchase an optional wiring harness that allows the keyboard's HELP button to act as a reset and load interrupt switch. Installation of this option requires some soldering. It is not necessary to solder or desolder chips, so the work probably isn't very delicate. Since I already have a reset switch in my system, I did not choose this RAVE keyboard option.

THE KEYBOARD:

The current version of the RAVE keyboard has 105 keys and is quite different from the original 101 key RAVE keyboard that was reviewed in the December 86 issue of Micropendium. Almost all operational details of the new keyboard are different from those described in the Micropendium review, so prospective purchasers will get a much better description of the current product by reading this review rather than referring back to the review published in Micropendium. The current model 99/105 keyboard is probably better than the original, and the cost is higher.

What can you do on the 99/4A with 105 keys? Except for the load-interrupt/reset option mentioned above, and the rather unimportant ENHANCE key (described below), there is nothing you can do with RAVE's 105 keys that can't be done with the 99/4A's 48 keys. The RAVE keyboard does make things easier to do, in some cases much easier. Whether this extra ease is worth \$200 only the reader can decide.

Keyboard feel is softer than that of the keys usually found on black and silver consoles. The feel resembles that of the keys on the newer gray consoles or the exact replacement 99/4A keyboards now available at Radio Shack (See a review of these exact replacement keyboards in the October 88 BB&P.) There is a numeric keypad on the right side which includes a decimal, all digits, *, -, and + but does not include an = key or a separate RETURN key. The following keys are enlarged on the RAVE keyboard for easy touch typing: ESCAPE, CONTROL, SHIFT, BACK SPACE (left arrow), ENHANCE, down arrow, RETURN (same as ENTER on the original keyboard), DELETE, and ZERO (on the numeric keypad).

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There are 24 numbered function keys that do with one keypress the same thing as FCTN/(top keyrow) and CTRL/(top keyrow) on the original keyboard. This still leaves extra function keys for more stuff such as F21 used for ~~BTBINNING~~ OF LINE (same as CTRL/V on original keyboard) in TI-Writer. Some of these function keys have additional labels that seem to describe word processing functions. However, these additional labels on the numbered function keys do not correspond to any 99/4A software that I know of, and I find these function key labels potentially confusing. For example the F4 key (same as FCTN/4 on the original keyboard) is labeled "PRINT". In TI-Writer this key rolls the display down one screen. In Multiplan this key moves the cursor back one character. Neither of these actions is a "PRINT". Users should ignore all the function key labels.

There are also specific labeled keys that perform the named function in both TI-Writer and Multiplan, and sometimes in BASIC. Unlike the weird labels on the numbered function keys, when you press these dedicated labeled keys the action you get is exactly what the labeled name suggests. The dedicated keys often duplicate some of the numbered function keys. This means that of the 105 keys on the keyboard, more than one key will often do exactly the same thing. Labeled keys include SCRL/BREAK (scrolls right in TI-Writer as does F5 ... Breaks a program in BASIC as does F4), TAB (same as F7 in TI-Writer ... same as F12 or CTRL/2 in Multiplan), HOME, BACK SPACE, INS (insert, same as F2), DELETE (same as F1), HELP (same as F7), and ESCAPE (command/escape in TI-Writer, same as F9). I really like these plainly labeled dedicated keys.

The four separate cursor movement keys are a real blessing any time full screen cursor movement is allowed, such as in T.I. Writer.

The ALPHA LOCK does not affect joystick operation in either position. In the locked (down) position the quote is automatically selected when the "/" key is pressed. This is very useful when typing in or writing BASIC programs. One aspect of the ALPHA LOCK key I don't like is that when the ALPHA LOCK key is locked down to select all upper case letters and you press SHIFT, you get a small case letter. I find this confusing. I am used to the old keyboard and to typewriters where SHIFT gives you a capital letter irrespective of the position of the ALPHA LOCK. There are no little lights on the ALPHA LOCK, or on any other special key, to tell you that the special key is activated. It is easy to forget that ALPHA LOCK is activated (down).

CONTROL and FCTN keys are provided and can be used in exactly the same way as the original keyboard, but this is seldom needed because of the numbered function keys. The FCTN key is a small key labeled "ALT" (alternate) on the keyboard, rather than "FCTN", and its use is almost never needed. Regular keys, which sometimes need to be SHIFTed,

are provided for quote, question mark, back slash, underline, etc. I like this.

FACT TCRM users sometimes have to press three keys at the same time on the original keyboard (FCTN/SHIFT/P, T, or X). On the RAVE keyboard, these are reduced to two keypresses (CONTROL/F2, F3, or F4).

The current keyboard has two modes of operation, not the rather confusing four modes described in the 1985 Micropendium review of the older model RAVE keyboard. The latest TENEX catalog shows a picture of the new keyboard, but states "four distinct modes of operation." I suspect TENEX bases this statement on the now outdated Micropendium review. The two modes are "MULTIPLAN/CLONE" mode 1 (SHIFT LOCK key up), and "TI-WRITER" mode 2 (SHIFT LOCK key down). The quoted names are from the docs. I have no idea what "CLONE" means. I prefer to call mode 1 "MULTIPLAN/EVERYTHING ELSE" because this is the mode the docs say should be used with any software that has a prompt strip. This includes either BASIC.

The TI 99/4A console can recognize two key codes that cannot be created with the original keyboard. The RAVE keyboard can generate these "missing keys" with its ENHANCE key. One code is ENHANCE and the other is ENHANCE/SHIFT. Only ENHANCE is recognized in BASIC, and can be detected by a -1 in the "return variable" of CALL KEY. The docs state that, "you may be confident that these keys are truly unused key codes that have never been used in a program up to now." So what good are the ENHANCE key codes if only those with a RAVE keyboard can use them? Not much. The only use I can think of for these key codes is security. You could, for example, require the use of an ENHANCE key code in your personal checkbook program so that only users of a RAVE keyboard can read and alter your check records. Jim Peterson (Tiger Cub Software) has several methods to hide code in an XBASIC program so that the code is not obvious when LISTing the program.

COMPATIBILITY:

The Rave 99/105 keyboard is compatible with all software I have tried EXCEPT Gram Kracker Extended Basic (also known as GK UTILITY I). This "adds features to regular extended basic" software allows you to move the cursor up and down rows when editing a program line or in an INPUT statement from within a program with FCTN/SHIFT/E or X. You can also move instantly to the beginning or end of a program or INPUT line with FCTN/SHIFT/S or E with GK extended basic. These keystrokes don't do this with the RAVE keyboard. I have discovered that when using the RAVE keyboard with GK extended basic CONTROL/F1 will move the cursor to the end of a program or INPUT line, and CONTROL/F4 moves the cursor down one row. I have not discovered the secret of moving the cursor up one row, or instantly to the beginning of the line. While not many T.I. users use GK extended basic, there are

many who have purchased the SUPER EXTENDED BASIC (version 120) module from TRITON or TEX COMP. I understand that this module is an expanded version of 6K extended basic. This probably means that SUPER EXTENDED BASIC module users will have similar problems with the RAVE keyboard.

FINAL COMMENTS:

I recommend to the manufacturer three changes to the 99/105 keyboard. First I would get rid of the meaningless labels on the numbered function keys. This requires a little paint on the existing keys, or different plastic keytops. Second, the incompatibility problem described above should be corrected. Finally, I would like to have a keyboard buffer, a small amount of RAM that remembers the previous 10 or so keycodes. This would allow you to avoid the occasional dropped letter that occurs at word wrap in the TI-Writer/FUNNELWEB editor. Since the RAVE keyboard already includes a separate circuit board, it seems to me that it wouldn't be too difficult to design such a keyboard buffer for the circuit board.

I have gotten quite used to the RAVE keyboard. It indeed is easier to use and much nicer than the original keyboard, and I am glad to have it. From strictly a cost/benefit basis, the \$200 cost of the RAVE probably doesn't justify the features gained. However, to many users such as myself, the 99/4A is a hobby. Such users sometimes crave the very best for their computer systems irrespective of cost. If you are such a user then the RAVE keyboard may be for you. For the 99/4A it definitely is the very best!

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PIRATING

an editorial by Andy Frueh
Lima Ohio User Group

Mr. Jim Peterson of Tigercub Software couldn't be more against it. At the end of most of his "Tips from the Tigercub" is an anti-pirating statement. But, is the pirating situation that critical?

In the TI world, yes it is. Many popular TI software programs are of a limited supply. The demand keeps growing regardless. Many TI users resort to pirates. Pirates violate copyright laws by illegal copying of software and reselling (ed. note: or giving away) these copies.

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On the other hand, newer programs are easier to find and most are copy-proof. These people care about TI. All you pirates out there are ripping off these people. This has been said one but I'm saying it again. If you pirate software that's in fairly large supply or very inexpensive, the people distributing it will quickly disappear!

To all you non-pirates its very hard to resist the low prices pirates offer, but try! However, if a company gets out of hand (large prices for mediocre material) either boycott or pirate.

Its a series of balances. If the company gets to be ridiculous, they will have large pirate problems. If pirates get ridiculous, the companies quit producing TI merchandise. This issue is double sided! I'd like to see other TI users' opinions on this issue! If you want to write, my address is 638 Maplewood Dr. Lima OH 45805.

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SUPERBASIC

BB&P EDITOR'S NOTES: The following article was received by the Lima User Group directly from the author, who is a member of the St. Louis MO 99ers, and will appear in the October 1988 issue of their newsletter. The article describes a special use of SUPERBASIC, a little known "adds features to ordinary extended basic" software package. SUPERBASIC is different! It includes user defined hot keys and allows you to write XBASIC programs using TI Writer and then load and run these programs. You can also load a D/V80 TI Writer file into SUPERBASIC, edit the file, and save it back to disk as D/V80 without ever leaving the SUPERBASIC environment. These useful features are not found in other "adds features to extended basic" packages. The only unsolvable problem that I, or the author, have discovered is that SUPERBASIC's disk directory routine will not recognize Horizon Ramdisks that are set at a CRU address greater than 1000. I have solved the problem of how to get SUPERBASIC to boot from other than DSK1. See below.

SUPERBASIC is not mutually compatible with FUNNELWEB. You can't load SUPERBASIC and have it automatically load FUNNELWEB and have them both work properly, as can be done with TI-KEYS and FUNNELWEB. You can, however, boot FUNNELWEB and then load SUPERBASIC from the FWD XBASIC user list. SUPERBASIC is the only software I know of for the 99/4A that uses a physical "dongle" or "key" to prevent unauthorized copying and distribution. The "key" must be physically plugged into the joystick port for SUPERBASIC to work properly, and purchasers only get one "key". This means that you can't use SUPERBASIC with a joystick. The software itself loads into extended basic from an unprotected disk, and can thus be put on a ramdisk and on disks with your own user files.

CHANGING THE BOOT DRIVE NUMBER OF SUPERBASIC: The software normally only boots from DSK1, but I have discovered how to change SUPERBASIC so that it will boot from the drive number of your choice. This is particularly useful if you want to boot SUPERBASIC off of a ramdisk. First, using XBASIC change all references to "DSK1" in the LOAD program to the drive number of your choice. Then use a sector editor (Birdwell's DSKU, or FUNNELWEB's DISK PATCH) to alter the third sector of SUPERBASIC's "LOADER" program. Look for the string 4453B4B31 in ASCII and change the "1" to your preferred drive number. This change is made in byte 114 of sector 3 on my disk. Then move the cursor beyond this point in the same sector to the next "7" you see in ASCII (byte 140 on my disk) and change this to an "8". That's all there is to it.

SUPERBASIC is NOT Fairware. You can't try it out without the physical "key", and you can only get this by purchasing the package. The Lima User group does have a copy of SUPERBASIC that is available on loan to its members

(including out of town members). We also have a copy of the modified SUPERBASIC files, with BATCH file, described in this article. SUPERBASIC is available from the author Steven Karasek for \$25. Steve can be reached at:
855 Diversey Lane
St. Louis MO 66126
Phone 314-961-2052

Charles Good

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*****
| BATCH PROCESSING |
| WITH THE TI-99/4A |
| and |
| SUPERBASIC REVIEW |
| by |
| Harold C. Hoyt Jr. |
| Aug. 0, 1988 |
*****
    
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SUPERBASIC is a very good program that is in danger of going unnoticed because of lack of publicity. The Author's documentation doesn't include extensive examples of use. A whole book could be written on this utility. If a really good tutorial were written about Superbasic, the program might become as popular as Funnelweb.

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

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

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

Lets back up and talk about Superbasic. Superbasic is a non-copy protected disk resident program that has 5 key

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files. An electric key is provided that is placed in the joystick port. This allows the user to make back-up copies as needed and also to only copy files needed in a particular application. I've left off the RECOVER file on the BATCH disk as not needed. The key files on the Superbasic disk are:

File name.	Size in sectors.	File type and comments.
LOAD	5	XB prog -AUTOload, can be edited
LOADER	7	Prog Image -Fast ASSY LOADER
RECOVER	4	Prog Image -Bonus, recovers lost prog
SOFTKEYS	3	D/V 80 file-defines ctrl keys
SUPERBASIC	22	Prog Image
SBDOC	97	D/V 80 file

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

Summary of features:

SOFTKEYS--32 user programmable keys (ctrl A-Z plus 6 others) Each key can be assigned a string of 29 char max, including a code for ENTER. key strings are stored in DV 80 file SOFTKEYS. Any single key can be reprogrammed using a CALL LINK("INSKEY"... which is thoughtfully set up in the default softkey for ctrl-X.

DEL--DELETes a range of lines all at once.

RENUM-- My favorite. Allows you to change the line numbers of a group of lines. After editing a program, lines will be in a disorder. All global SUBROUTINES should begin at logical points 1000,2000,3000 etc., and have line numbers spaced an even 10 apart, with none missing and no extra lines stuck in between.

DIR--ctrl I-6 will do a directory of drives I-6 to screen.

ENTER-- Takes a DV 80 program listing, tokenizes it, and puts the result into program memory. The listing is treated as if it were typed in from the keyboard, including commands without line numbers.

EDIT-- Allows you to EDIT a DV 80 file without leaving XBasic. file. is moved as a program with line numbers and ! at the beginning of each line. Type WRITE to move the EDITED file/program to the source DV 80 file. (Without line numbers and ! Type QUIT to exit EDIT mode.

TYPE--Copies any DV 80 file to screen.

COPY--Copies any DV 80 file from DISK to any legal peripheral.

APPEND--same as copy, but APPENDs rather than replaces existing file.

RENAME--Rename a file without having to load a disk manager.

LOCK--and **UNLOCK** protect (unprotect) file.
GOFF--and **GOON** disable (enable) quit key.

All very useful, but how do we do hatch? In the EDIT mode each line of a DV 80 file is moved into program memory as if it were typed in from the keyboard. If we leave an operator note in the XBasic load program and remove the NEW command so that the note is left on the screen, we can have the operator desiring BATCH operation to hit ctrl-B. If we set the ctrl-B default in the file SOFTKEYS to EDIT "DSK1.BATCH" the file BATCH, if it exists, will be brought into program memory. Examine the file 'BATCH' below: (BB&P Ed. Note: The file below was created with the TI-Writer editor and saved as a D/V80 file named BATCH for direct loading into and execution from SUPERBASIC.)

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

Lines in 'BATCH' starting with ! are REMarks, providing notes for the operator and not operated on. Comment line 1 gives the file name, line 2 describes the action to follow. !FETCH PROGRAM followed by OLD DSK1.CHECKIN. This requires that the program requiring CHECKSUMs be on disk as XBasic program CHECKIN. The CHECKSUM program requires that it's input be in MERGE format, so we create a temporary program file CKSMINPUT in merge format. Then we run the program CHECKSUM that has been altered slightly so that it's input and output file names are hardwired in. When a program is being RUN, ENTER is prevented from supplying input until the program is finished. When CHECKSUM is finished, a MERGE program file CKSMOUTPUT has been created. This file must be brought into memory without MERGing with the CHECKSUM program itself, so we do a NEW to erase CHECKSUM, followed by a MERGE, DSK1.CKSMOUTPUT. We now do a DELETE of the two temporary files no longer needed so as to free up disk space.

We provide a final operator instruction. LIST instructions don't run reliably using enter, so we have thoughtfully changed the default softkey value for ctrl-L to be LIST "DSK1.CHECKOUT". Operator may hit ctrl-L to complete the task with CHECKSUMed program in program memory and the CHECKSUMed listing on disk

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TI99/4A vs APPLE IIe

by Andy Fruuh
Lima Ohio User Group

Ask any Apple owner which is better and he'll think you are crazy. "Apple of course!" he'll say. True Apple can have more memory but for the price of a basic IIe unit a TI can have a console, a pair of joysticks, two cassette drives, an expansion unit with 128K, a disk controller and a SSSD drive!

TI is the better bargain! You can see this in the ease of use with graphics. The IIe only allows 4 lines of text at the bottom of the graphic mode while the 4A allows as much text as you want. Also, you can't define characters on the IIe. If you want to have a phrase in a picture with the IIe, you have to "draw" it there!

TI sound is also easier. Instead of IIe POKEs to get 3 notes, you can use TI's CALL SOUND to get three notes and one noise.

Memory storage is also easier on the TI. You can have 2 disk drives on the the IIe and I have never seen cassette drives (although apple has them). Apple does have better hard disks (ed. note: Myarc now sells a hard/floppy controller for the 4A) but a TI can have 2 cassette drives, hard disk, and I've seen 4 DSDD drives!

Speech is clearer on the IIe, but I've never heard it speak in different voices or with any "feeling". Many TI cartridge games have these neat features.

Back to money. I can get over 40 good games in one year free for the \$15 I pay in User Group dues, while you can get ONE average IIe game for \$15-\$18. And some people think TI can't compete! Its third parties that keeps the 4A a strong very versatile machine! TI pride is really a strong force. May the force continue to be with us.

MISCELLANY: A boyfriend and girlfriend were having an argument one day. Hearing enough, the young woman shouted, "Alex, if you were my husband, I'd put poison in your coffee." The man returned that with "Oh Yeah? If I was your husband I'd drink it!"

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A REVIEW OF L. L. CONNER ENTERPRISE

by Andy Fruuh
Lima Ohio User Group

L.L. Conner Enterprise is THE ULTIMATE in TI equipment distributors! They have a great selection of software and hardware. prices are usually very competitive. My family purchased 2 games and we got both the next evening! After we bought a "basic" expansion set (32K, SSSD drive), we still needed the TI disk controller. We received it with manual, 2 cables, and the Disk Manager cartridge the next night as well! they don't promise overnight delivery but they seem to be one of the quickest companies around!

Most TI distributors consider delivery in 1 week fast. Ha! L.L. Conner works very hard for us TI people and that's something we should all appreciate! They're a four star company in my book! If you are interested in this great distributor, the address is:

L.L. Conner Enterprise
1521 Ferry Street
LaFayette IN 47904
317-742-8146 or 317-423-4879

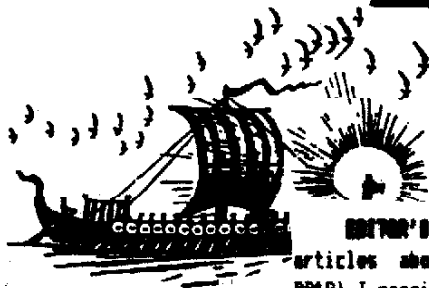
MISCELLANY: Clare Boothe Luce, the American writer and diplomat, liked to upstage people. According to one story the tables were turned when she stood aside a door to let Dorothy Parker through first. "age before beauty," Clare said. Parker strode on saying, "Pearls before swine."

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THE 1989 LIMA MULTI-USER GROUP CONFERENCE

With all the excitement about the upcoming Chicago Faire, don't forget to plan for the Lima Conference all day Saturday May 20, 1989. If you know of some software or hardware that is noteworthy, call us and schedule a demonstration. A video tape of all demonstrations will be made available free to any user group or TI dealer. User groups and dealers may reserve at no charge as many tables as they need in the exhibit room for sales of new and used equipment, library swaps, etc. There will be no admission charge. EVERYTHING IS FREE! For information, to reserve tables, or to schedule a demonstration, call Dave Szipp (Lima US president) at 419-228-7109.

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EDITOR'S NOTE: Soon after I finished writing my review articles about **WRITEREASE** (published in the October 88 **BB&P**) I received the Fall 88 **TRITON** catalog and saw the description of Asgard's as yet unreleased word processor with 120000 word spell checking dictionary. Since Asgard is entering the word processing market, I thought they might be interested in my **WRITEREASE** articles, so I sent them the articles. I received the following reply from Chris Dobbitt, Asgard's general manager. It looks like Asgard's new word processor will be absolutely fantastic!

Sept. 28, 1988

Dear Charles,

Thank you for your reviews. I will pass them on to Charles Earl (the author of Press) as a matter of interest.

However, we have no worries about the viability of Press. It is a program that is vastly superior to any other word processor for the 88/4A or Myaro Geneve. Comparing it to TI-Writer (or derivatives like Writerease) is like comparing apples and oranges (or rather, jet planes and bicycles). I won't get too specific (we'll see how many features are in the program by the release date), but Press will provide the following major enhancements over other TI Word processors:

- o The program is entirely "what-you-see-is-what-you-get". All printer supported typefaces (bold, double width, italics, etc.) are displayed on the screen as they will appear on paper. All formatting (right justification, centering, indenting) is also displayed on the screen as you type. The user does not have to learn a command language like the TI-Writer formatter to obtain excellent looking results, even though formatting codes are available to the user if desired..
- o The size of the document is limited only to the available disk space. The portion of the document that is being worked on is the only part in memory. Hence, documents of up to megabytes in size (with a hard drive) can be easily created and maintained.
- o The program is block oriented. To move a paragraph, spell-check a section, copy lines, etc. all you have to do is move the cursor to the starting line, mark it, move it to the ending line, mark it, and then initiate the appropriate command. Line numbers are not required.
- o The program supports newspaper-style columns on the screen. Simply tell it the paper width, and then the number and size of each column and start typing. When you get to the end of one column it automatically takes you to the top of the next. Some graphics capabilities are also included as well as line-drawing functions.
- o The program has macro capability allowing you to combine commands and text to automate repetitive editing.

Dozens of other new features (from a list of 5 pages) not found in other word processors for the 4A are also planned. The fact that we are primarily competing with a free word processor (TI-Writer) has been foremost in our minds throughout the development process. We have decided the best way to compete is to offer features unavailable in TI-Writer, and improve on any features available in it and its derivatives.

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A TECHNICAL NOTE ON ORIGINAL T. I. DRIVES

by Michael Martynko
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My disk system presently is composed of corcomp's disk drive controller, and TI's original SS/DD disk drive. Over the past year I have been noticing more and more disk errors, particularly in initializing new disks in a double density format. In fact they had become so predominant that I could no longer initialize in DD. In observing the problem there appeared a pattern to the madness, i.e., the bad sectors were in multiples of 18. Mr. Randy Belisle of Belisle Interactive Systems here in Lima has proven to be a great source of computer technical information. He suggested that the TI drives are probably divided into 18 sectors, and that the drives are running slow, hence not leaving enough room for the last sector on each rotation. He also suggested that many drives are belt driven and that over the years the belt may stretch, slowing the operating speed of the drives.

The procedure for examining the drive was simple. After removing the drive from the expansion box and unplugging the connecting wires, the metal housing is removed by straightening the metal tab that protrudes into the drive and sliding off the cover. Please note that if you have previously replaced the shunt that was originally installed with dip switches to determine which drive number your drive will respond to, it will be necessary to first remove the dip switches before the cover can be removed. You will find a series of dots on a white disk on one side of the drive. Using a flourscent light on these dots will show if the drive is slow, fast, or within tolerable range. Merely plug the wires into the drive, proceed to initialize a disk, and shine the light on the drive. Mine was running slow. Noticing that the belt was smooth on the inside and textured on the out I simple reversed the belt. Testing the drive proved my suspicions. The drive functioned perfectly. The cost was \$00.00. I will however order a new belt from TI, not knowing how long this one will last! But at least I have bought enough time, maybe years, before I will need it. Thank you Randy for your advise. I hope others who are having similar problems will find help in this article.

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