

OCTOBER 1988

VOLUME 4 #8

## THE NEW FEATURES OF FUNNELWEB v4.12 by Charles Good

Once again an updated version of FUNNELWEB has been released. It is designated v4.12 and dated August 12, 1988. The new release is upwardly compatible with v4.10 and v4.11. The SYSCON file of these earlier versions can be used to rapidly configure v4.12, and already configured user lists (files DS and UL) from v4.10 and v4.11 can be directly used unmodified with the new v4.12.

The latest version has significant convenience changes added to the DM1000 that is part of the v4.12 package. Disk catalogs obtained from this DM1000 FILE UTILITIES and DISK UTILITIES are the same. You can print a directory to the list device from both catalogs, and you can Copy/Move/Delete/etc from both catalogs. Actually this feature was added to DM1000 in FWB's v4.11, but I didn't notice the change until after my article about FWB v4.11 appeared in the Sept. 88 issue of our newsletter. New to the DM1000 of FWB is the lack of an "N" in the CMD column next to each file. "N" previously designated "None" meaning no operation was performed on that particular file in the displayed directory. Now a blank space serves this purpose just as well with less screen clutter. You can type "N" anywhere in the CMD column, if you wish, and the result is a new meaning of the command None. The CMD column is cleared of ALL pending operations when "N" is pressed. All the C's D's etc that you have typed are replaced by blank spaces and you can start over again. One other new feature in FWB v4.12's DM1000 is found when you configure the list device with FCTN/3. You are asked whether you want Myarc disk controller sensing or not. Turning off Myarc disk controller sensing, if you don't have such a controller, speeds up disk access somewhat with other brands of disk controllers.

For you assembly programmers, Line Hunter has been improved in FWB 4.12. You can now get a disk directory at the "Line/Label" prompt by pressing AID. If you press the space bar instead of entering a label name or line number, you are given the opportunity to use wild cards as part of a label search to aid in tracking where labels are used. You can also specify which occurrence (first, second, etc) of a specific label (with wildcard) you want displayed.

I think it is great that the McGovern's get small improvements to FWB out to the TI community almost as soon as they are developed. That, of course, is the reason for the rather rapid succession of FWB v4.1x releases. As before, user groups (not individuals) can obtain a copy of FWB v4.12 by sending a disk and paid return mailer to the Lima User Group, P.O. Box 647, Venedocia OH 43894. **\*\*DONE\*\***

## EXAMINING THE REPLACEMENT ALPHA-NUMERIC KEYBOARD SOLD BY RADIO SHACK by Michael Martinko Lima Ohio User Group

As I sit typing this article, I am using the replacement keyboard (cat. No 227-1023) sold by Radio Shack. The first and most obvious difference is the color of the keys. As my TI is the old black and silver console the change from the black to tan keys is obvious, but not ugly. Most hobbyists could hardly care what color the keys were. This is actually my third keyboard. The original keyboard had a malfunctioning key on the top row and was not repairable, requiring replacement of the entire board. Now four years later I started having trouble with the alpha-lock key registering for capital letters. Tuner spray and sandpaper failed to work. Having Radio Shack's board handy I decided to give it a try.

Installing the new keyboard I noticed how much slimmer the replacement board is. Everything lined up just fine, but there is plenty of room below the keyboard to install a circuit board and chips. I might perhaps hide a supercartridge or some other hardware there!

Using this keyboard is a delightful experience. It is significantly more touch sensitive, meaning the keys respond without having to press down as far as I had been used to. And it is quiet! I never thought the other keyboard was noisy till I started using this one. It is actually reminiscent of an IBM keyboard, although there are still a lot of differences. Had I known the difference beforehand I would not have waited for the old keyboard to malfunction before replacing it. For anyone who does a lot of word processing how can you beat a replacement keyboard for only about \$4.00? This is the least expensive and easiest upgrade for the TI I have ever seen.

**EDITOR'S NOTE:** Sometimes keyboard problems are do to a loose connection between the keyboard and the motherboard. Disassemble the console, unplug the keyboard from the motherboard, and clean the contacts on the motherboard and at the end of the flexible keyboard cable. Plug the keyboard securely back onto the motherboard and reassemble the console. If all this doesn't work, then go ahead and replace the keyboard. As of early September 1988, replacement keyboards are still available at most Lima area Radio Shack stores.

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## A review of CorComp's word processor WRITEREASE

by Charles Good

Lima Ohio User Group

When Texas Instruments placed the TI-Writer editor and assembler code in the public domain, TI-Writer instantly became the word processor of choice for those with disk systems. Although another full featured disk based word processor called COMPANION received an excellent review in Micropendium I haven't seen COMPANION offered for sale or mentioned in the newsletters for some time. After all, TI-Writer is FREE, and is probably as good as COMPANION. And we now have the fairware packages BA Writer and FUNNELWEB which are improved versions of TI-Writer.

So, why has CorComp come out with its own disk based word processing package for the 99/4A, WRITEREASE v2, priced at between \$40 (Tex-Comp) and \$45 (Triton). What does WRITEREASE have that the free or almost free TI-Writer doesn't have that would justify spending this kind of money? The answer is an easily accessible and fast 30000 word spell checking dictionary. It is probably the best spell checking package there is for those of us with 99/4A disk systems.

WRITEREASE can be used with a minimum one SSSD drive system, but you need double sided drives or equivalent capacity on a ramdisk to take full advantage of all features. The software comes on two disks. One contains the dictionary and is not protected. The dictionary can easily be installed on Horizon or other ramdisk, or used directly off of the disk. The program disk is heavily protected and can only be booted from DSKI. Because of the disk protection, which involves uninitialized tracks and sectors with a length greater than 256 bytes, you can't put the WRITEREASE program on a ramdisk. I was unable to back up my program disk with any of the several track copiers at my disposal. CorComp does not offer cheap backup copies and only guarantees the original for 120 days. Do I have to spend another \$40+ to replace my one and only program disk if it is damaged after 120 days?

**THE WRITEREASE PROGRAM:** It is similar in its capabilities to the TI-Writer editor. In fact, files created with TI-Writer can be loaded into WRITEREASE for modification and spell checking. All the TIW editing functions are present including CTRL/U special character mode which can be used to send ASCII codes 0-32 to the printer. Syntax of the WRITEREASE commands differs from that of TIW, but is very easy to remember. Most commands require simultaneously pressing CTRL and some other key. Pressing FCTN/H at any time brings up help screens listing all commands, in case you forget how to do something.

Don't get the idea that WRITEREASE is an exact clone of the TIW editor. WRITEREASE has some interesting additional

capabilities. There is no left/right windowing. Instead, the screen display moves smoothly left and right one column at a time when the cursor reaches the left or right screen edge. More importantly, the right margin can be set out as far as column 256. You can, for example, set the right margin at 132 and use condensed print to fill 8.5 inch wide paper. If you have a 15 inch printer you can use wide paper and all 256 columns with condensed print. Right margin settings of column 80 or less are saved as D/V80 files and are thus compatible with TI-Writer. Right margins beyond column 80 save as files that are not TIW compatible. For example, 132 columns saves as a D/V132 file.

Another WRITEREASE feature, not found in the TI-WRITER editor, is the ability to boot on powerup your choice of defaults. Defaults include screen colors, dictionary drive number, word wrap on or off, as well as margins, indentation after a carriage return, and tab settings. You can customize a file of default settings which is automatically read each time WRITEREASE boots. You can change these defaults individually, and you can also load into WRITEREASE any of four other default setting files. The powerup and four alternate default setting files reside on the WRITEREASE program disk and can be altered by the user. These files are not protected.

WRITEREASE also differs from the TIW editor in not displaying line numbers. Instead you get a display in the upper right corner of the screen of the cursor's column and row position. Rows correspond to TIW line numbers. If you load in a file, the number of lines in the file is shown, continuously incrementing as the file is loaded. A tab line is continuously displayed at the top of the screen unless the tab line display is manually turned off. All of the features described in this paragraph are, I believe, an improvement over the TIW editor.

There is no formatter in the WRITEREASE package. This means that such things as right justification, transliteration, and include file are not possible using WRITEREASE alone. You can, however, use WRITEREASE create a document complete with formatter dot commands, save the file to disk, and then print the file through the TI-Writer formatter. You can also use PLUS! transliteration codes (CTRL/U SHIFT/x CTRL/U) from within WRITEREASE and then print the resulting file out correctly with the TIW formatter.

You can load a D/V80 WRITEREASE file into the TIW editor and use the command PF to print this file out normally. You can also load a file created with the TIW editor into WRITEREASE for modification and printout. Before printing this TIW file from WRITEREASE you should delete the last line with its funny looking symbols. Otherwise these funny symbols will be printed by your printer.

**THE WRITEREASE SPELL CHECKER:** This is where WRITEREASE really stands out, and the only reason, in my opinion, to purchase WRITEREASE. You can only access the WRITEREASE spell checking dictionary from within the WRITEREASE word processor. You can't use it directly from TIW, which is a shame. There are 30000 words on a 360 sector 90K disk. In order to cram this many words into 360 sectors special coding was used. Groups of letters are represented by a single code so that a 6 letter word occupies less than six bytes on the disk. If you examine the dictionary disk with a sector editor in ASCII, you won't recognize any of the words. The Dragon Slayer dictionary, the only other spell checker dictionary available on disk to 99/4A users, has only 20000 words and occupies about 460 sectors.

To check the spelling of a single word, position the cursor under any letter of the word and press CTRL/C(heck). The screen displays a list of similarly spelled words and if your word is in the dictionary it is shown in this list underlined. If your word is not in the dictionary you are so informed and given the option to add your word to the user dictionary or return to the document. The displayed list of similarly spelled words can be an aid in determining correct spelling.

To check an entire document, or portion of a document, place the cursor under any letter of the first word to be checked and press CTRL/A(11). Checking begins word by word ignoring numbers, single letters, control codes, all punctuation, and capitalization. GOOD, Good, and good all look the same to the dictionary. The word currently being checked is displayed on the screen and checking continues word by word until an unrecognized word is found. You are then given the option of adding the unrecognized word to the user dictionary or returning to the document for correcting. If you add the word to the user dictionary spell checking then automatically continues beginning with the next word. If you return to the document you can immediately correct the spelling, or press CTRL/C to display a list of words with a spelling similar to that of the unrecognized word to aid you in its correct spelling.

Spell checking progresses very rapidly, even if you are reading the regular and user dictionaries right off of a disk. Things really zip along if the dictionaries are on a raedisk. Both regular and user dictionaries are scanned automatically. No user intervention is required to switch to the user dictionary if the word is not found in the regular dictionary. Once you have entered your commonly used user words into the user dictionary, spell checking of an entire document occurs very rapidly and most unrecognized words are in fact misspelled.

Two peculiarities of the WRITEREASE dictionaries should be noted. You cannot enter a two letter word into the user dictionary. If a two letter word is not recognized when

checking a document, when you reply "Y" to the prompt to add the word to the user dictionary spell checking will continue normally. However, the next time the two letter word is encountered it will again not be recognized. Because the WRITEREASE dictionaries don't recognize punctuation, they have trouble with contractions such as "havn't". The screen will say that it doesn't recognize the word "havn". The thing to do is add "havn" to the user dictionary. Then the next time that "havn't" is found in the document the dictionary will recognize "havn" and ignore the apostrophe and the single letter "t" that follows it.

Compared to the Dragon Slayer spell checker, WRITEREASE is much faster and much easier to use. With Dragon Slayer the user has to manually load in Part 1 of the regular dictionary, then Part 2 of the regular dictionary, then each of the user dictionaries when spell checking a document. Then you have to load your document and reformat it. All this manipulation takes alot of time, and with Dragon Slayer you can't check the spelling of single words during the creation of a document.

The ability to create a user dictionary is a very important aspect of the versatility of the WRITEREASE spell checker. This ability, found in the currently marketed v2.0 of WRITEREASE, requires that the user have greater than SSSD disk capacity. You need double sided (DSSD) or double density or similar capacity on a raedisk. Both the regular and user dictionaries MUST be accessed from the same drive number. The regular dictionary takes up 358 sectors, leaving no room for any more files on a SSSD disk. Thus, users with only SSSD drives can't make a user dictionary. When checking a document, when a word is unrecognized you are prompted with the message "User dictionary not found. Create Retry Exit". If you press C, spell checking continues but no user dictionary is created. Pressing E returns you to the document for spelling corrections. It sure would be nice for SSSD only users if the user and regular dictionaries could be placed on separate disks.

User dictionary users beware! Unlike the very compact main dictionary, user dictionaries take up lots and lots of disk space. Each different combination of the first two letters of a user dictionary word will add one sector to the length of ###UDICT, the user dictionary file. As the dictionary is created, many ###UDICT sectors will contain only one dictionary word. If you exceed the capacity of your media (raedisk or floppy) to store more ###UDICT words, spell checking will halt with a computer lockup. Spell checking this article created a ###UDICT file of 664 sectors that totally filled my Horizon and then locked up the computer before I got to the end of the article.

**GENERAL COMMENTS:** Although the WRITEREASE program has several nice features not found in the TIW editor, these features are not worth \$40+. Ti-Writer is free and, because

of the TIW formatter, such more versatile than WRITEREASE. Also, WRITEREASE can only be booted from floppy in drive 1. I much prefer to create my documents with FUNNELWEB's version of TIW which I boot instantly from a ramdisk. The reason I purchased WRITEREASE was to use its spell checker. For disk based 99/4A systems it is the best spell checker available. From now on I will type in newsletter articles using the TIW editor and a custom PLUS! template, load these documents into WRITEREASE for spell checking, resave the corrected document from WRITEREASE, and print the newsletter hardcopy via the TIW formatter. Readers will probably notice far fewer typos and spelling errors in the newsletter from now on.

Nowhere in descriptions of WRITEREASE found in the TexComp, Triton and Tenex catalogs, and nowhere in the WRITEREASE documentation is it stated that you need more than 5555 capacity to create a user dictionary. The Spring/Summer 88 Triton catalog, for example, states "Improved! ...with expandable spell checker." Version 1.0 of WRITEREASE did not have this capability. I can imagine some very disappointed 5555 only v1.0 owners paying to upgrade to version 2.0 to gain this ability. It seems to me that system requirements should be made crystal clear to potential software purchasers prior to purchase. CorComp, and the above mentioned dealer catalogs fail to do this. This serious marketing error should be corrected.

Although CorComp holds the copyright to WRITEREASE, the program's author is Galen A. Read. In the summer of 1987 Mr. Read, doing business under the name Innovative Programming, took about \$10000 from potential purchasers of a hardware product called the Grand Ram and disappeared with the money. Potential purchasers have seen neither their Grand Rams nor their money. I gave CorComp a phone call to ask about Mr. Read's status with CorComp. I was told that he was contracted to write WRITEREASE and is not an employee of the company. The CorComp accountant declined to reveal if the company was paying royalties to Mr Read from each copy of WRITEREASE sold. Potential purchasers should be aware that part of the money they pay for WRITEREASE may go as a royalty payment to Galen Read, and Mr. Read (not CorComp) is considered a crook by many in the TI community.

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#### **NEXT MONTH'S FEATURE ARTICLE**

The feature article in the November issue of Bits Bytes & Pixels will be a review of the RAVE model 99/105 keyboard for the 99/4A computer console.

**\*\*DONE\*\***

#### **SOME COMMENTS ABOUT DISK PROTECTION: HOW TO PROTECT THE RIGHTS OF BOTH SOFTWARE AUTHORS AND USERS opinions of Charles Good**

After I laid out over \$40 to purchase WRITEREASE, I discovered that this disk software is heavily protected and not copyable using any of the commonly available track copiers. I am thus unable to make any backup copies of WRITEREASE, even though the law allows me to do so. I am now stuck with my one and only program disk which is only guaranteed for 120 days. I have to hope that my kids don't get hold of the disk and finger it. I am reminded of the cartoon in which the child has a computer disk in one hand and a magnet in the other. The kid says to his father, "I thought you said this was magnetic media." I have to hope that I don't turn off the power to my external drive with the disk still in the drive, as this sometimes messes up the disk.

Much of the software I buy I expect to use on a regular basis, and as such I like to put on my ramdisks. In particular, one would think that a word processor would get regular use. WRITEREASE is advertised (TexComp 1988 catalog p. 28) as "designed especially with owners of the CorComp MEMORY PLUS products in mind. With the MEMORY PLUS RAMDISK capability the complete WRITEREASE and its SPELL CHECKER can be loaded into the ramdisk for lightening speed access!" This is NOT TRUE! Only the spell checking dictionary can be put on a ramdisk. Because WRITEREASE is protected, the program itself can only be loaded from floppy in drive one.

Because of these reasons, I hate disk protection. Unlike modules, disks are fragile and can be destroyed. If I had known that WRITEREASE was uncopyable and (contrary to advertising) could not be completely booted from ramdisk I would not have purchased the product. If I can avoid it, I will not again purchase protected disk software.

I understand and respect the problems authors of copyrighted software have with piracy, and I understand the reasons why such authors want to try and limit copying of their product. I am not a pirate. I don't hand out copies of my commercial software to all my TI friends and I don't put copies of commercial software I purchase in my user group's library. I do feel, however, that there are good reasons to use my legal right to backup my disk software. Ultra protection, such as used with WRITEREASE may actually discourage people from purchasing the software, resulting in decreased rather than increased income to the software copyright holder.

Here is my suggestion to commercial software authors who wish to prevent unauthorized distribution of their product. This suggestion will allow legitimate owners of to freely backup their software and to install this software on ramdisks or hard disks. Sell the software on completely

unprotected disks. Hide a secret serial number somewhere on the disk buried within the code of the software in a location known only to the software author (eg. 5th byte of 3rd sector of LOAD program). Each serial number can be referenced in a master list to the original purchaser. Every time the disk is copied, the secret serial number goes with the copy. If copies are passed around, eventually through the grape vine a copy will get back to the software author. Software authors should make the existence of this secret number known to all purchasers, and perhaps offer a reward to anyone who provides the software author with an unauthorized copy.

Such a secret number would be very difficult to locate. You couldn't find it by just looking around with a sector editor. It would look like part of the program code. It would take a very smart disassembler to separate the serial number out from the rest of the program code.

The threat of such a secret number would, I think, discourage legitimate purchasers from giving away copies of their software. Great Lakes Software already uses this system. When you purchase disk software from them at a computer show you can actually see this protection system being installed. They don't just hand you a disk. They first ask your name and address and then take the disk, put it into a drive, and do something on a keyboard before handing you your disk. Presumably they are adding the identifying code number that their literature states is on each original disk.

Both software owners, and software authors have legitimate rights to protect their investments. I believe that my suggestion would protect the rights of both sides while at the same time making the software easier to use and thus more likely to be purchased.

\*\*\*DONE\*\*

**MULTI-USER GROUP CONFERENCE**

Plan now to demonstrate your software and hardware at the next TOTALLY FREE Lima Multi-User Group Conference at the Ohio State Univ. Lima Campus Saturday May 20, 1989. Demonstrations will receive NATIONAL DISTRIBUTION via a free video tape that will made available to user groups. For more information, call Lima UG president Dave Szippel at 419-228-7109.

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**CENTERING**  
by Harry Allston  
Lima Ohio User Group

Sometimes it is the little things in life that are the most disturbing. How to center items on a mail label or on the screen. This isn't the greatest of programs but it is the answer to "CENTERING"!!!!

```

110 ! *****
    !063
120 ! *
    !119
130 ! * TUTORIAL ON CENTER *
    !073
140 ! * ING. SCREEN & HARD *
    !168
150 ! * COPY. by: *
    !245
160 ! * Harry Allston *
    !218
170 ! * Lima OH User Group *
    !093
180 ! * 209-638-7523 *
    !094
190 ! *****
    !063
200 CALL CLEAR !209
210 A$="HARRY" !117
220 B$="ALLSTON" !015
230 C$="10300 KINGS RIVER RO
AD" !128
240 D$="SPACE #57" !017
250 E$="REEDLEY" !255
260 F$="CALIFORNIA" !209
270 G$="209-638-7523" !099
280 H$="DO YOU WANT A PRINT
OUT?Y" !210
290 DISPLAY AT(4,14-LEN(A$)/
2):A$ !032
300 DISPLAY AT(6,14-LEN(B$)/
2):B$ !036
310 DISPLAY AT(8,14-LEN(C$)/
2):C$ !040
320 DISPLAY AT(10,14-LEN(D$)
/2):D$ !084
330 DISPLAY AT(12,14-LEN(E$)
/2):E$ !088
340 DISPLAY AT(14,14-LEN(F$)
/2):F$ !092
350 DISPLAY AT(16,14-LEN(G$)
/2):G$ !096
360 DISPLAY AT(22,14-LEN(H$)
/2):H$ !095

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NEXT PAGE

```

370 ACCEPT AT(22,26)SIZE(-1)
VALIDATE("YN")BEEP:ANS$ :: I
F ANS$="N" THEN 470 !220
380 OPEN #1:"PIO" :: PRINT #
1:CHR$(27);"E" !254
390 PRINT #1:TAB(40-LEN(A$)/
2);A$ !032
400 PRINT #1:TAB(40-LEN(B$)/
2);B$ !034
410 PRINT #1:TAB(40-LEN(C$)/
2);C$ !036
420 PRINT #1:TAB(40-LEN(D$)/
2);D$ !038
430 PRINT #1:TAB(40-LEN(E$)/
2);E$ !040
440 PRINT #1:TAB(40-LEN(F$)/
2);F$ !042
450 PRINT #1:TAB(40-LEN(G$)/
2);G$ !044
460 CLOSE #1 !151
470 STOP !152
    
```

\*\*\*DONE\*\*\*

**LIGHTNING PROTECTION**

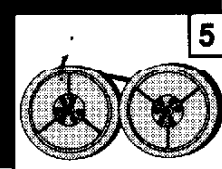
Ann Landers has had several letters recently about people who were injured or killed while using the phone during an electrical storm. A member of our user group recently had most of his TI computer equipment wiped out from a lightning hit. The lightning hit the power lines, and even though his equipment was turned off at the time, it was damaged. Surge protectors do help, if used with a three wire grounded outlet. However, no hardware device guarantees protection of electronic equipment against lightning. The best thing to do to protect against lightning is to shut down your computer and **UNPLUG THE ENTIRE SYSTEM** from the wall outlet when you first hear thunder rumbling. If you continue to use your computer you risk damaging disks due to unclosed files if there is even a short power interruption. Worse still, you might fry your equipment or even electrocute yourself if lightning strikes power lines. Remember, at the first sign of thunder and/or lightning **SHUT DOWN AND UNPLUG.**

\*\*\*DONE\*\*\*

\*\*\*T I J U K E B O X\*\*\* by Harold C Hoyt Jr. 7/10/88.

Jim Meekeel of the NorthCoast 99'ers at the LIMA US Conference had a \$2 disk of 8 music selections which I couldn't resist purchasing, since one of my favorite pieces, Chopin Nocturne in E-flat interpreted (programmed) by Sam Moore Jr. was included. Sam has written many public domain music

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**Okidata 80/82/83/92/93  
& Compatibles**

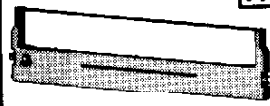
\$4.74 in packs of 6

PRINT MEDIA - RIBBON	
Width.....	1/2 in.
Length.....	36 ft.
Caliper.....	3.9 ±0.3 in.
Thread Count.....	284 ±10/in <sup>2</sup>
Oleic Acid.....	35 ±4
Eyelets.....	Stainless Steel

**79¢** each

In Packs of 6  
Shipping: \$1.50 per pack of 6

Also fits: Star Micr. Gemini 10/10X/15/15X & Delta 10/10X/15X & SG10



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**Star Micronics NL10/  
NX10 & Compatibles**


\$14.82 in packs of 6

PRINT MEDIA - RIBBON	
Width.....	1/2 in.
Length.....	51 ft.
Caliper.....	3.9 ±0.3 in.
Thread Count.....	284 ±10/in <sup>2</sup>
Oleic Acid.....	35 ±4

**\$2.47** each

In Packs of 6  
Shipping: \$1.50 per pack of 6

Also fits: Star Micronics NX10c, Star Gemini II



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**Star Micronics NX 1000**

\$17.22 in packs of 6

PRINT MEDIA - RIBBON	
Width.....	5/16 in.
Length.....	24 ft.
Caliper.....	3.9 ±0.3 in.
Thread Count.....	284 ±10/in <sup>2</sup>
Oleic Acid.....	35 ±4

**\$2.87** each

In Packs of 6  
Shipping: \$1.50 per pack of 6


1-800-634-3478

These printer ribbon prices seem very reasonable. My local K-Mart store has Gemini/SG10 ribbons for \$2.95 each. Here they cost \$0.79. The dealer is:

MEI/MICRO CENTER  
110 Steelwood Rd.  
Columbus OH 43212

Please note that in addition to the stated \$1.50 shipping per sixpack there is an additional "Order Processing, Packaging Handling" fee of \$3.00 per order. Ohio residents must add 5.5% sales tax. Visa and Master Card are accepted.

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(EDITOR'S NOTE: The following article was received by the Lima User Group directly from the author, who is a member of the St. Louis Missouri 99ers. The article and accompanying programs show how one XBASIC program can run and pass data to another XBASIC program. I have never seen this done before. These programs are useful in controlling a "slide show" disk or, as here, a disk full of music programs.)

pieces, apparently for the sheer pleasure of doing so. His creations are always quite involved and often they are artistic masterpieces in their own right. In my opinion, they have a lot more going for them than Andy Warhol nailing a Campbell soup can to a board.

The disk that I modified came with an autoLOAD that RUNS the first program. The EXIT from the first program RUNS the second program etc. To make such a disk, you simply collect enough programs to fill a disk and edit each one so that the EXITS from each program call the next program.

I decided to write an EXECUTIVE program that could be used with any disk-full of XBasic programs. A full fledged executive program would completely control the computer, deciding what programs would be run and after each RUN, EXECUTE the next one. A true executive would be able to snatch control from any program, no matter what it's status. My program is a less ambitious effort, requiring the slave programs EXIT back to the executive. A further option was exercised in including code in the slave programs to keep track of how many times they had been played. A loop counter could be included in the executive program, but this would mean that the slave program would have to be reloaded after each playing, wasting time and causing unnecessary disk drive operations. A COMMON area must be established to store the status of the executive program independent of what program is being played. We could have the executive open a file to store common information, but this seems cumbersome, considering the modest needs of the executive.

The May 1988 MICROpendium had an article reminding us that information can be stored in Basic and XBasic CALL CHAR definitions in the range of characters 127 to 143 and survive everything except redefinition or leaving Basic or XBasic.

Consider the 3 programs below. The first replaces the LOAD program on the disk. The second is MERGED into 7 of the 8 slave programs on the disk. The third program is a dummy LINKer, used in one special case. Program LINK05, the EC Nocturne, was so carefully written that the inclusion of even a few extra lines of program altered it's performance. LINK05 had it's exit altered to RUN "DSK.BEETHOVEN.LINK05", which is the third program segment.

```

1 !SAVE DSK1.LOAD !051
100 !M Hoyt 7/06/88 File 'LO
AB' Executive prog for music
disk !101
105 !Names of music X BASIC p
rograms are LINK01, LINK02,
etc. !171
110 CALL CHARSET :: CALL SCR
EEN(8):: CALL CLEAR :: CALL
CHARPAT(143,X$)!212
120 IF X$<>"0000000000000000"
" THEN 130 :: CALL CHAR(143,
"1234567811111111"):: CALL C
HARPAT(143,X$)!208
130 2$="MUSIC 1 MUSIC 2
MUSIC 3 MUSIC 4 MUSIC 5
MUSIC 6 MUSIC 7 MUSIC
8 * !255
    
```

```

140 DISPLAY AT(5,2):" PRO
6 PROG NUMBER:" NAME
NO. REPEATS" :: FOR R=8
TO 15 !140
150 DISPLAY AT(R,6):SEG$(2$,
100R-79,10):SEG$(X$,R-7,1):T
AB(20):SEG$(X$,R+1,1):: NEXT
R !198
160 DISPLAY AT(18,6):"ACCEPT
DEFAULT?":TAB(6):"MUSIC...R
EPEATS.":TAB(6):X$ !197
170 FOR R=0 TO 200 :: CALL K
EY(0,K,S):: IF K=-1 THEN 180
ELSE 190 !224
180 NEXT R :: GOTO 200 !129
    
```

The LOAD program completely controls the sequence and number of times the slave programs are run. All of the information is stored in one character definition, char 143. Line 1 allows easy saving of a program under development. Just type 1,<fctn>down arrow,<enter>,<fctn>redo <enter> and several <fctn><del> and <enter> to SAVE. In line 110 we CALL CHARPAT(143,X\$). When the program is run from most environments X\$ will be "00000000000000". The program will then enter the default value for CHAR(143) "1234567811111111". Program labels should be stored in line 130. Fill each label to 10 characters each. The default program sequence and repeats are displayed with a note "ACCEPT DEFAULTS?". If no key is pressed within a delay period, the programs are run in sequence. In line 200 the number in the first position in X\$ is checked. If the number in the ninth position is not 0 then that program is run. Each program is checked in turn. The last time the LOAD program is run from the slaves, X\$ will have all zeros in positions 9 through 16 and the program resets CHAR(143) in line 310 and stops. RUN again and the default will play each piece once.

Program 2, REPEATS\$, is to be merged into each slave program. Check each slave program before MERGING to see that a line 1 is present and lines 20000-20060 will not be overwritten. Delete line 2 of REPEATS\$ before MERGING. Replace the slave program exit with a GOTO 20000. At the beginning of line 20020, change XX=1 to XX=the number of the slave program. Each time the program tries to exit, the replay counter digit will be extracted from X\$, turned into a number, decremented and returned to it's place in X\$ and then X\$ is placed in the CHAR 143 definition. If the replay digit is still >0 the program is replayed without reloading. If the program uses a CHAR 143 redefinition in it's graphics, use a CALL CHARPAT(143,X\$) early in the program and add 20005 CALL CHAR(143 X\$). One poorly structured program didn't reset it's variables and stopped after looping once with an error message. This was fixed by adding one more variable to the slave program's initialization list.

Tom Monti (Caveman) and his fascination with LISP probably planted the string manipulation seed used here in my mind. Thanks a lot, Tom.

```

190 ACCEPT AT(20,6)SIZE(-16)
VALIDATE("0123456789")BEEP:X
$ :: CALL CHAR(143,X$):: ON
ERROR 160 :: GOTO 110 !004
200 FOR R=1 TO 8 :: XX=VAL(S
EG$(X$,R,1)):: X=VAL(SEG$(X$,
R+8,1)):: IF X=0 OR XX=0 TH
EN 300 !226
210 ON XX GOTO 220,230,240,2
50,260,270,280,290 !250
220 RUN "DSK.BEETHOVEN.LINK0
1" !241
230 RUN "DSK.BEETHOVEN.LINK0
2" !242
240 RUN "DSK.BEETHOVEN.LINK0
3" !243
    
```

```

250 RUN "DSK.BEETHOVEN.LINK0
4" !244
260 RUN "DSK.BEETHOVEN.LINK0
5" !245
270 RUN "DSK.BEETHOVEN.LINK0
6" !246
280 RUN "DSK.BEETHOVEN.LINK0
7" !247
290 RUN "DSK.BEETHOVEN.LINK0
8" !248
300 NEXT R !232
310 CALL CHAR(143,"123456781
1111111")!013
320 END !139
    
```

----- NEXT PAGE

Bits, Bytes & Pixels

```

2 !SAVE DSK1.REPEATS,NERGE !237
20000 !@P+ Repeats !050
20010 CALL CHARPAT(143,X$)!1
10
20020 XX=1 :: XX=POS(SEG$(X$,1,8),STR$(XX),1):: IF XX=0
THEN 20050 !158
20030 ON ERROR 20060 :: X=VAL(SEG$(X$,XX+8,1)):: X=X-1 :
: IF X<0 THEN X=0 !166
20040 X$=SEG$(X$,1,XX+7)&STR$(X)&SEG$(X$,XX+9,8-XX):: CALL CHAR(143,X$):: IF X THEN
1 !201
20050 RUN "DSK.BEETHOVEN.LOAD" !128
20060 END !139

1 !SAVE DSK1.LINK05 !208
2 !DUMMY RETURN FROM LINK05
RETURNS TO EXECUTIVE !254
20000 !@P+ Repeats !050
20010 CALL CHARPAT(143,X$)!1
10
20020 XX=5 :: XX=POS(SEG$(X$,1,8),STR$(XX),1):: IF XX=0
THEN 20050 !162
20030 ON ERROR 20060 :: X=VAL(SEG$(X$,XX+8,1)):: X=X-1 :
: IF X<0 THEN X=0 !166
20040 X$=SEG$(X$,1,XX+7)&STR$(X)&SEG$(X$,XX+9,8-XX):: CALL CHAR(143,X$):: IF X THEN
RUN "DSK.BEETHOVEN.LINK05" !244
20050 RUN "DSK.BEETHOVEN.LOAD" !128
20060 END !139
    
```

\*\*\*DONE\*\*\*

```

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*
* ADDRESS- P.O. Box 647
*          Venedocia Ohio
*          45894
*
* Published monthly except
* July and August
*
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THE CHICAGO TI-FAIRE/CONVENTION  
NOVEMBER 12, 1988

One of the best and largest TI-Faires is the Chicago Faire. This year it is to be held at the Holiday Inn at 3505 Algonquin Rd., Rolling Meadows IL on Saturday Nov. 12. This is near O'Hare airport and near the intersections of state routes 53 and 62. Free transportation to and from the airport is available to registered guests. Very special room rates are available. You can have a room for the family rate of \$55 no matter how many stay in the room. Rooms sleep four, and probably extra roll away beds or cribs can be ordered. This is a VERY CHEAP ROOM RATE, particularly for the Chicago area. I (Charles Good) was raised in Chicago. Believe me, I know. I suspect that several all adult "families" who all just happen to be a member of the same user group will take advantage of this special rate. Call the Holiday Inn at 312-259-5000 for a reservation, but be sure to request the special rate and tell the Inn that you will be there for the TI-Faire. Scheduled events include the following:

- CHILDREN'S NIGHT OUT with hotel staff, Friday PM. Pay at event.
- SOCIAL MIXER, Friday 8PM-Midnight. Admission \$4
- FAIRE HOURS, Saturday 9AM-6PM. Admission \$4 (age 12 and under free)
- DINNER Saturday 7PM-9:30PM. \$10
- MILWAUKEE TI-FAIRE, Sunday Nov 13, 9AM-5PM at Quality Inn, 3311 S. Howell Ave., Milwaukee WI (across from Mitchell Field Airport)

You should probably have advance tickets to the mixer and dinner if you wish to attend. These two events may sell out. If you purchase FAIRE tickets in advance (no user group membership discount this year) you won't have to stand in line Saturday morning. Send a check for advance tickets to:  
 Marcy Brun, Faire Manager  
 Chicago TI User's Group  
 P.O. Box 578341  
 Chicago IL 60657

As is usual with such events, bring plenty of money. Lots and lots of software and hardware will be available for sale, often at significant discounts. Lots of dealers will be there selling stuff.

\*\*\*DONE\*\*\*