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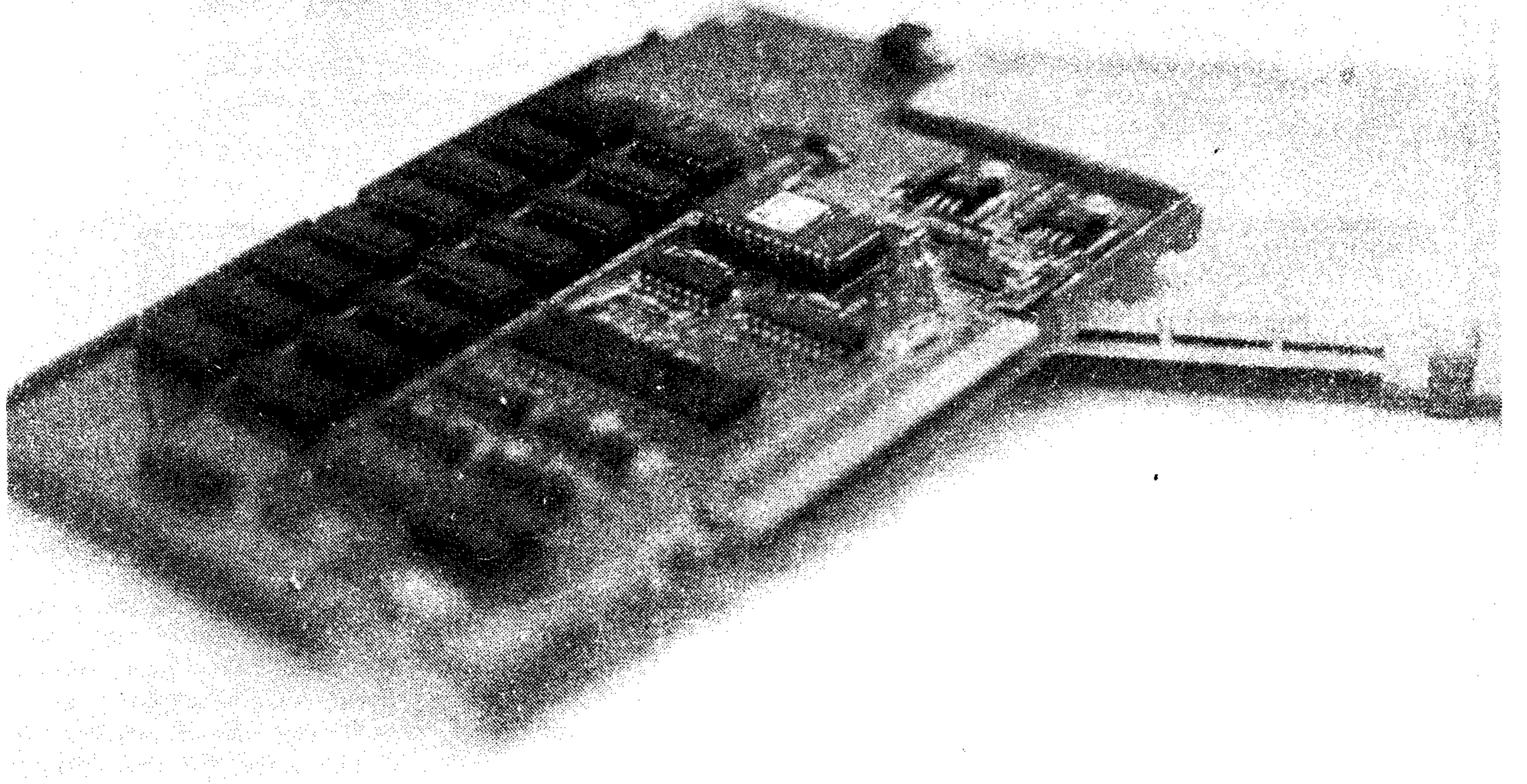
Covering The TI99/4A Home Computer And Compatibles

Volume 2 Number 8

September 1985

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Inside:

GRAM Kracker due in November
Multiplan printer control
What is SUPER SPACE?

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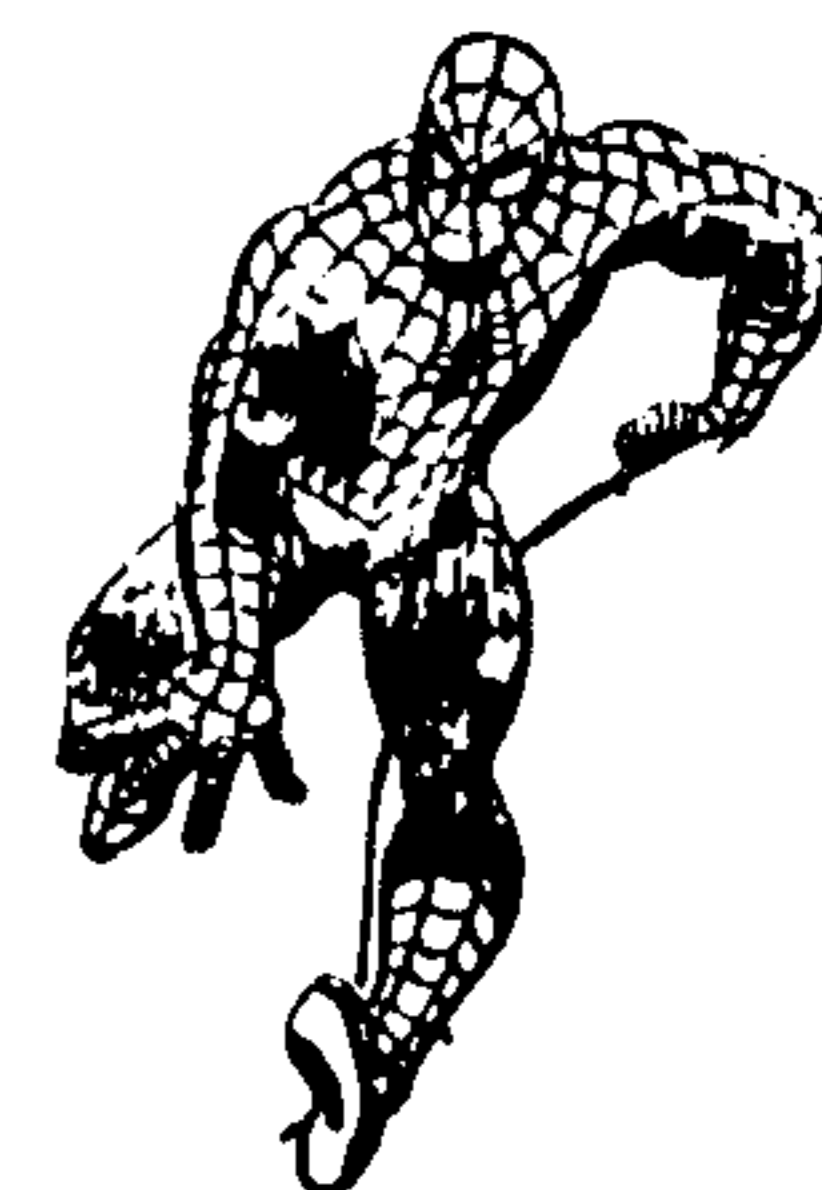
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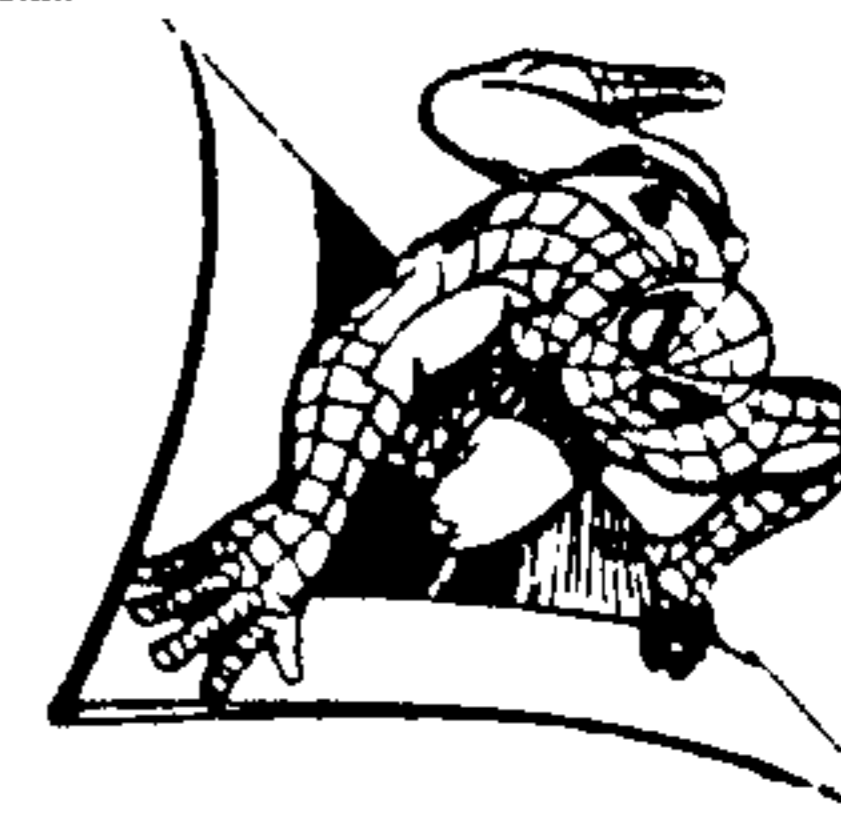
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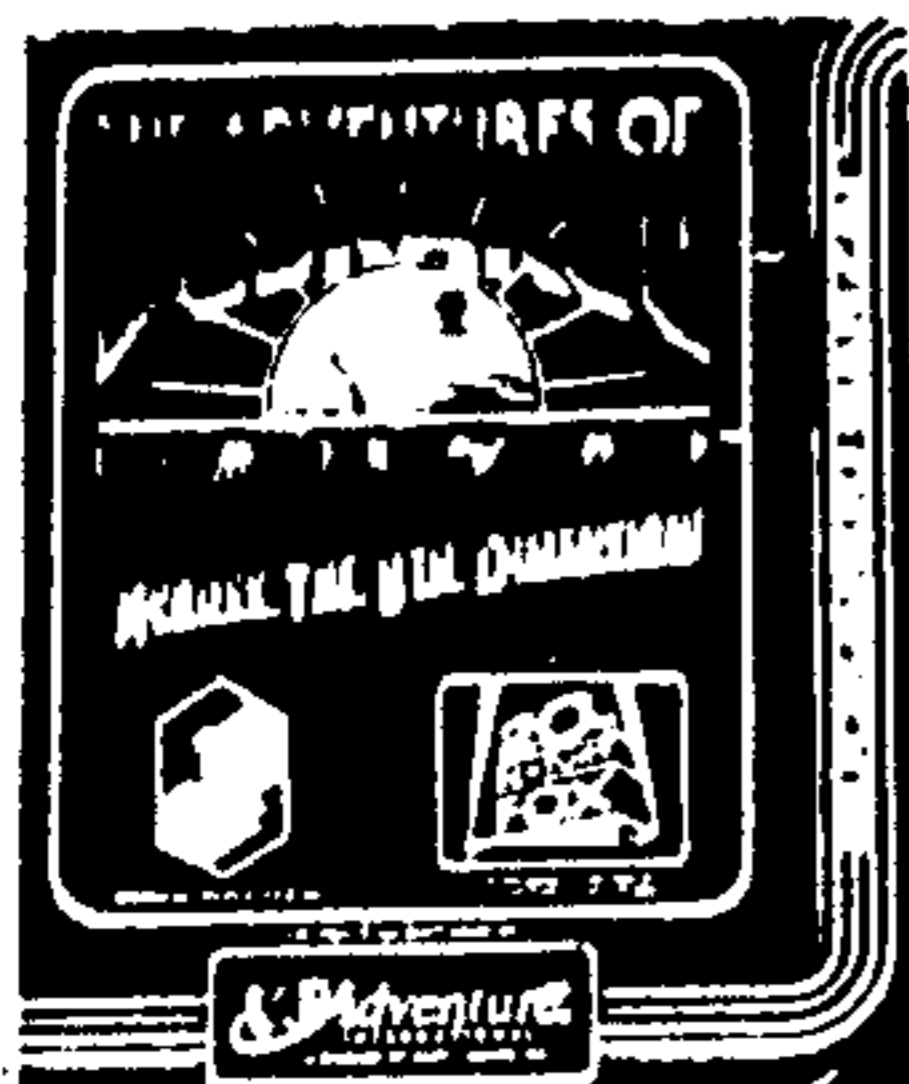
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Contents

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John Koloen Publisher
Laura Burns Editor

Coming Next Month

—Update on developments regarding a new computer

—A first look at Foundation's 80-column card (we hope)

—Graphics design contest winners

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Table of Contents

GRAM Kracker to debut

Millers Graphics program allows users to save a module-based program to disk or cassette, modify it and transfer the modifications to the cartridge Page 12

Obtaining SUPER SPACE

For those who don't want to "roll their own" Page 12

BITMAC controversy

Vaughn Software and DataBioTics embroiled Page 22

The music of Stephen Foster

And the graphics, for that matter Page 24

Computing your savings

Use your TI to keep track of those coupons and refunds, and you can build a tidy nest egg Page 30

DataBioTics announces advisory panel

New and forthcoming programs also told Page 34

Reviews

Midnite Mason Page 36

Myarc 32/128K Card Page 38

GRAPHX Companion Page 39

Newsbytes

Third time around for the Chicago TI-Faire, a disk TRAVeller and a lowered price for DBM Page 41

User Notes

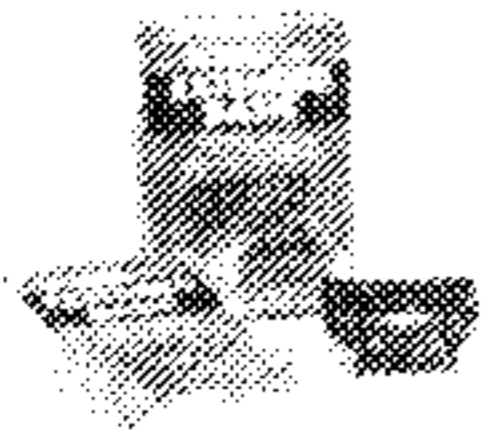
Scrolling down in XBASIC, getting condensed print on the Gemini and taking control of the printer through Microsoft Multiplan Page 42

Classified Page 46

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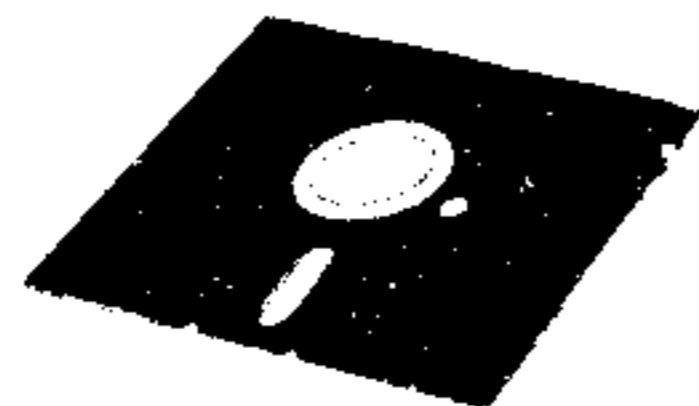
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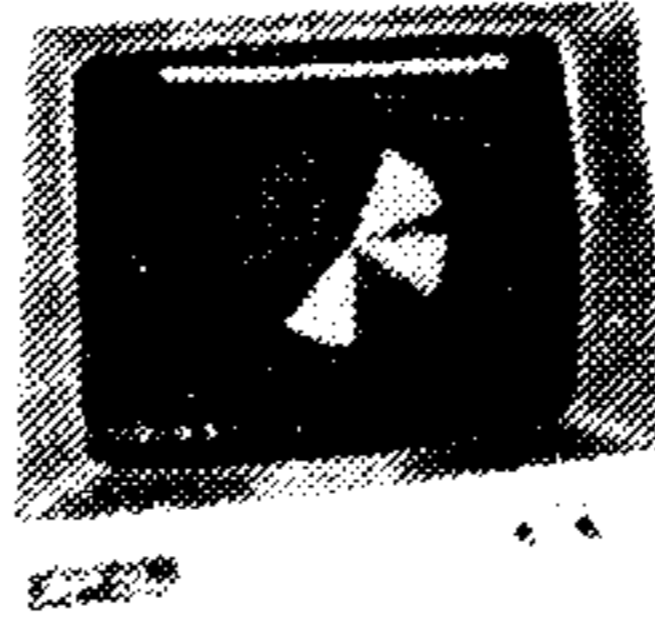
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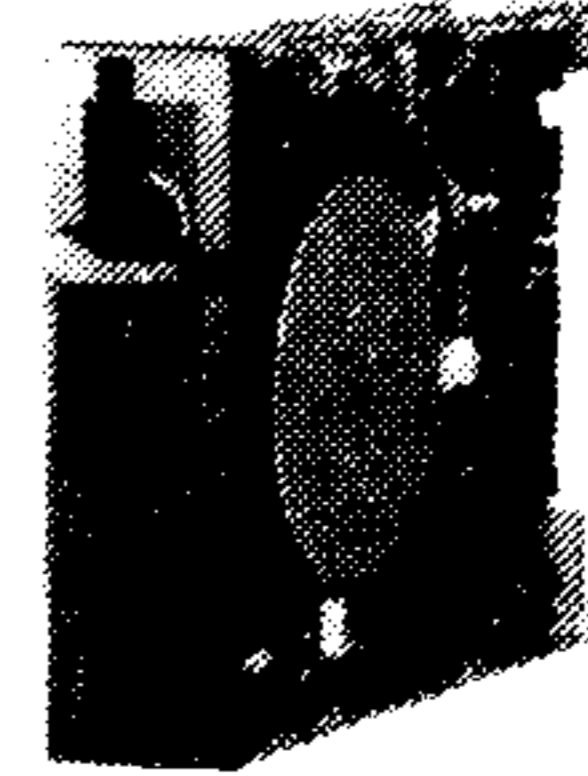
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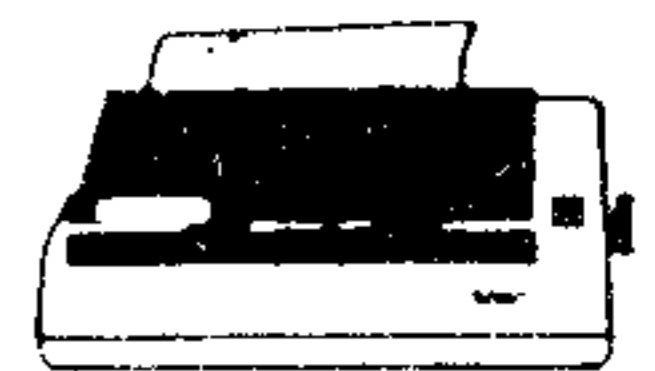
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Comments

Freeware page revisited

You'll find the Freeware pages included in this month's edition. Hope you didn't miss it last month. Judging by the number of additions the wait is probably worth it. Remember, it won't appear again until the November issue.

Speaking of programs, we plan to carry a review of the 4A/TALK next month, but I feel compelled to say that it is one of the finest terminal emulators I've seen. It is extremely easy to use, flexible and includes a number of very useful features—such as an reference screen to remind the user of how each function is initiated and an online disk catalog function.

WHO'S NO. 1?

There was an item that appeared in a number of newspapers last month having to do with the most popular computers in the United States. Is the most popular computer the IBM-PC? The Apple II series? The Atari?

"No," to all three. The most popular computer, in terms of how many are in the hands of purchasers, is the Commodore 64, followed by the TI99/4A. Well behind the TI are the PC, Apple, Atari and Radio Shack computers.

NO MORE CONTROVERSIES?

I have found that it is probably best not to get involved in controversies. We have been the object of considerable negative comment as a result of a column I wrote several months ago about the Freeware concept. Our Feedback column includes a couple of well-reasoned responses. Such items I love to print. Unfortunately, most of the comments have not been so civil. I've been characterized as being in league with the profiteers for not giving a wholehearted endorsement to Freeware. Others have been even less kind. To one and all I say, let's put this behind us. What is really im-

portant is that we think about the consequences of what we do. Then, by all means, proceed full-steam ahead. I can see both sides of the argument and don't wish to carry the banner for either.

GRAPHICS CONTEST

I am taken aback by the apparent lack of interest in our graphics design contest. We have received a few entries, all of which are quite good, but I expected a lot more than have so far appeared in our postal box. I am not sure what conclusions to draw from this. Is the \$50 first prize not large enough? If you've got a graphics design program and you haven't entered the contest, I'd be interested in learning why. Seems like an opportunity to make a few bucks while improving one's skills.

I'd also like to know what kinds of programs you'd like most to see published in MICROpendium. We hope to be running longer programs in the future, but we want to make sure that what we print is what you want. Right now, we're looking at some utility programs, but there's no reason why we couldn't publish other kinds. Also, what do you prefer: assembly, XBASIC, BASIC, Forth? A few comments in this regard would be appreciated.

WHAT DO I WANT FOR CHRISTMAS?

Here are some products I can't wait to get my hands on.

1. Foundation Computing's 80-column card. (I don't know about you, but I ordered mine last February and paid for it last June.)
2. CorComp's Triple Tech card.
3. Miller Graphics' GRAM Kracker.
4. Myarc Inc.'s improved version of Extended BASIC.

—JK

Reviewed in MICROpendium

1984

February: B-1 Nuclear Bomber, Tandon TM-100 Disk Drive, Void, Beanstalk Adventure, Microsurgeon, On Gaming, Database 500

March: Star Trek, Escape From Balthazar, Garkon's Getaway, Sky Diver, Mail-Call, Prowriter 8510 Printer

April: Monthly Budget\$ Master, Budget Master, Home Budget, Thief, Donkey Kong, Khe Sanh

May: Companion Word Processor, Q*Bert, Mad-Dog I & II, Programs for the TI Home Computer

June: Creative Expressions Accounts Receivable/Accounts Payable, CDC 9409 Disk Drive, Starship Concord, Lost Treasure of the Aztec, ASW Tactics II

July: Theon Raiders, Introduction to Assembly Language for the TI Home Computer, Game of Wit, Pole Position

August: TE-1200, Tower, Galactic Battle, Galaxy

September: Wycove Forth, 99/4 Auto Spell-Check, QUICK-COPYer, Wizard's Dominion, Anchor Automation Mk XII Modem

October: Killer Caterpillar, ZORK I, Defender

November: 9900 Disk Controller Card/Manager, Super Bugger, Transtar 120S printer, Floppy-Copy, Data Base-X

December: Gravity Master, Data Base Manager System, Learning 99/4A Assembly Language Programming

1985

January: Super Sketch, Foundation Computing 128K Card, PTERM-99, TI-Runner

February: Super Extended BASIC, Beginning Assembly Language For the TI, ZORK II

March: Morning Star Software CP/M Card, WDS/100 Winchester Disk Drive, Sketch Mate, BMC Color Monitor

April: 9900 Micro Expansion System, Disk + Aid, Gemini 10X-15X

May: Character Sets and Graphics Design, Draw 'N Plot

June: GRAPHX, DATA BASE I

July: Acorn 99, Advanced Diagnostics

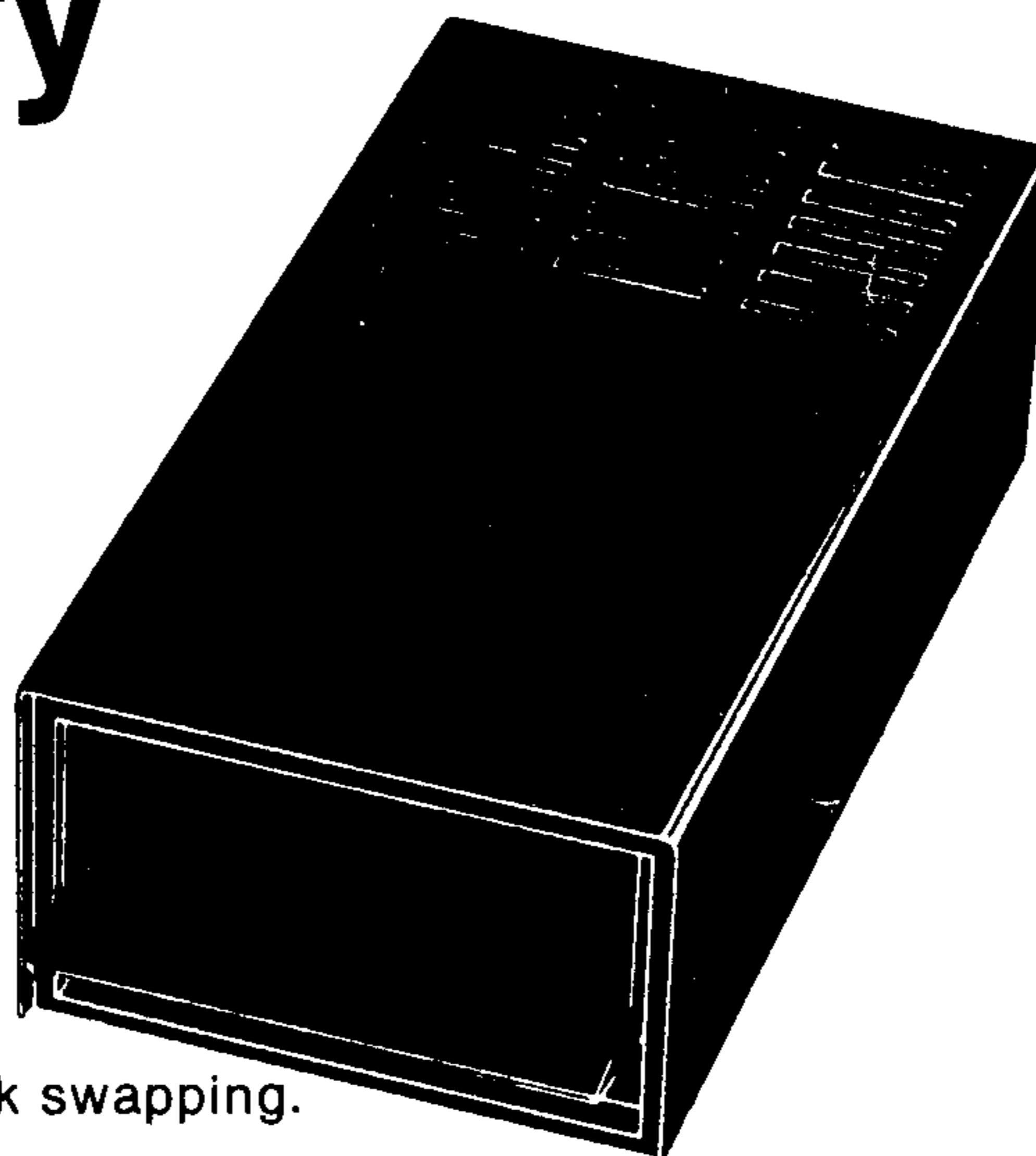
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Feedback

Feels 'stung'

I read with great sadness your comments concerning Freeware in the July 1985 Comments section. As a Freeware author I could not help but feel "stung" by the comments you made. I would like to take this opportunity to share my experiences as a Freeware author with you.

I have a program called SPRITE BUILDER that I originally wrote (over several months) and sold commercially through a company called CMS. In late December last year CMS folded and rights to the program returned to me. I had been planning to make some major modifications to the program for some time. I spent the next two months adding some assembly language routines to make what I thought was an already good program even better. When I was finished, I found myself caught in a bind. Here was what I felt was a really good program, and I had no way to distribute it. A good friend of mine had been distributing his programs under the Freeware concept. The idea sounded great to me. I didn't have to find someone to sell my program, and the TI community didn't have to buy it in order to be able to get and use it. My goal was not to get rich. (I knew beforehand what kind of return to expect. Only about 18 percent of the requestors ever make any kind of contribution, and that is fine. Under the Freeware concept any return is accepted, nothing is demanded.) Rather, it was to share something in which I had invested a large amount of time, and in which I had a great deal of pride.

I belong to a small but very active users group. I published an announcement about the program in our newsletter and had no takers in the groups we exchange with. I had sent a few copies out to friends I had made in other groups and they all said the program was good. One even put a message on CompuServe and it did generate about 10 requests.

About that time I got your January

issue and noticed that you were mentioning Freeware as a service to your readers. I sent you a copy of the program and asked for your permission to be added to the Freeware list. Since April, my program has been mentioned in your publication. Since then I have filled 138 requests for the program, all of which specifically mentioned your publication as the source. I feel like I have provided a service both to you and the TI community. Every one of those 138 people read of the program through your publication. Without you they would never have heard of it. For everyone that received it and liked it, the thought had to be in their heads that they would never have gotten the program had it not been for your publication.

I have a confession to make. SPRITE BUILDER was not an original idea. In fact, TI gave away the source to a BASIC Character Definition program with every computer they sold. Just look on page III-26 of the User's Reference Guide. I simply took what I thought was a good but unfinished idea and spiffed it up. Even though it could be called a clone, with all the added features and assembly language speed, I don't consider it to be.

I neither have or have ever had any intention of trying to damage the TI market by offering my program as Freeware. Rather, I had thought that I was providing good software in a risk free environment to the TI community. When our computer comes out of its box for the first time, all it is capable of doing is allowing the owner to program. It's hard to believe that anyone would consider using the machine to do what it was designed for as destroying a market.

To sum up, I encourage you to share my views with others. At least give me the chance to defend myself before those that have enjoyed my program. I respect your right to publish what you see fit, even though I might fully understand why. I still think that yours is one of the best sources of information available anywhere for our

fantastic little computer. Please remove the SPRITE BUILDER listing from the Freeware section.

John Taylor
Florence, Alabama

On Freeware

The Freeware section is a very interesting feature of your magazine, and as a Systems Programmer who deals with software packages for IBM 4300 computers I have found that the free (or almost so) software provided by user groups are included in later revisions of a product as enhancements, which is something micro software developers don't provide. As the old adage about computer development goes: "If you can buy it, it is obsolete," and if you think this is false, ask an IBM sales rep what goodies have been announced but delivery date is four months away.

Robert O. Davis
Buffalo, New York

Answers 'those'

In the July Comments you mention negative thoughts on Freeware, and ask for opinions. I hate to answer criticism from persons addressed only as Those ("there are those.."). If someone has something to say, let them say it with their name attached for all to see. Next is the issue of copying others ideas. Do these people think that it is impossible for more than one person to have the same idea at the same time? (Just to make a point... my next project after NEATLIST was to be a text to program converter. Just as I started working on it, Quality 99 Software came out with one. When I heard about it, I quit working on mine. I guess if I had finished it I would have been accused of stealing their idea.) I'm not saying that there are no "clones" in the Freeware system. I'm sure some programs have been imitated, but so are most other great ideas. That's why we have cars other than Fords, and personal computers other than Altairs put together from a

(Please turn to Page 12)

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A second benchmark program appeared in the November 1984 issue of the MICROpendium (page 22). This program took:

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Feedback

(Continued from Page 10)

kit and programmed with switches.

My first "free" program was a screen dump program in assembly language. It was not the first screen dump program for the TI, but was written after a friend voiced complaints about a "commercial" screen dump program in BASIC that took over a half hour to print the screen. So according to "Those," I guess I stole someone else's idea and wrote a program that dumps a screen in about 40 seconds at a tab spacing you specify and prints in six different modes. And (gasp) I gave it away. Not just to my friends, but to anyone who wanted it. If this offended the people who were and are selling 30 minute screen dumps for over \$20, then I'm sorry. But my program still is, and will be available FREE! At the time I wrote the screen dump, I had not even heard of Freeware.

Next, your comments refer to the "original programmer's time and effort." This seems to imply that Freeware authors spend no time or effort in developing their software. That's not the case. My pride and joy, NEATLIST, took over five months of my evenings and weekends to develop, and for the past year I've spent at least two hours a day copying disks and answering my mail. And I'm still willing to give the program to anyone who wants it. I'm very proud of NEATLIST, and can truly say that it is an original program for the TI. As far as I know, it is the only program of its kind available. My reasons for going the Freeware route with NEATLIST were many. First was my desire to communicate with other users of the TI computer. As my mailman and Ma Bell can attest, that goal was reached. Next was my desire to provide a high quality, well documented, user friendly program that people could really use. As far as I'm concerned, that goal was reached too. Last was the money. I never set a goal in dollars, and it's good that I didn't. My thanks goes to MICROpendium for helping me reach those goals. Why does the Freeware

system bother "Those"? I think it's because people are tired of paying \$30 and up for programs that are poorly written, and are hard to use. With Freeware, you're sure to get what you pay for, since you have a chance to try before you buy. I'm not saying all Freeware programs are great. Some literally stink. But just because a program author doesn't choose to market his program in the traditional manner doesn't make him any less a programmer. By the same token, writing a program and selling it "commercially" doesn't make one a great programmer.

I guess that the major complaint of "Those" is that a lot of Freeware programs are copies of their overpriced software. I'm sure that some are, but most of the Freeware that I've seen have been top quality, either original, or so much better than any other program of its type that it couldn't be counted as a copy.

"Those" are going to have to start producing better products at more reasonable prices if they expect to sell software in the TI marketplace. A good example to follow is the EXPLORER program written by D.C. Warren, and sold by Millers Graphics. It is absolutely the BEST program that I have had the opportunity to use, and the 105 page manual alone is worth the \$25 price. I don't think Freeware will put an end to innovation in the TI market. New products are being released for our computer almost weekly, and things such as Myarc's new 128K memory card and Extended Basic II open up new and exciting possibilities for the programmer. What Freeware might do is assure that new programs are of the utmost quality and available at attractive prices. The true innovators won't stop writing programs... they're too hooked!

Danny Michael
Florence, Alabama

Hookup problem

I have made several calls to TI-CARES and have had a lot of help. But I cannot seem to explain my problem, which is hooking up my External Disk

Drive Model PHP 1850 (with horizontal door). The special cable they sent me will connect to the controller card in my TI99/4A PEB and the other end to the adapter board. Now, here is the problem. The External Drive Cable will not line up to the adapter board. If I reverse the adapter board inserting the External Cable then the Special Cable will not line up. Slot on adapter board is between 23-25.

Specifications:

Adapter Card No. 040362

Special Cable No. 2N Molex 6874-C
PHP 1850 Cable, only name Berg
without any number, color black

Please advise me what I have to do to connect the external drive, or what is the name of the part missing.

Richard J. Frenz
Locust Valley, New York

You have the proper special cable and adapter board. Assuming the shorter, special cable is correctly connected to the disk controller and the adapter board is correctly inserted into the other end of the special cable, the problem would have to lie in the longer cable that connects to the external drive. It seems that your external drive cable includes a polarity notch, which ours don't. Although both ends of the adapter board are slotted, only the notch on the side that connects into the disk controller cable is necessary. Our external drive cables include three connectors for edge cards (one at either end and another one about one-third way down). The adapter board fits easily into one end (no polarity notch) while the other end fits into the edge connector of an external disk drive. The other connection is for a second external drive. I recommend you obtain another external drive cable without a polarity notch that accommodates 34-position edge connectors. You may also consider carefully cutting out the polarity notch in your external drive cable, though I do not recommend it—Ed.

(Please turn to Page 12)



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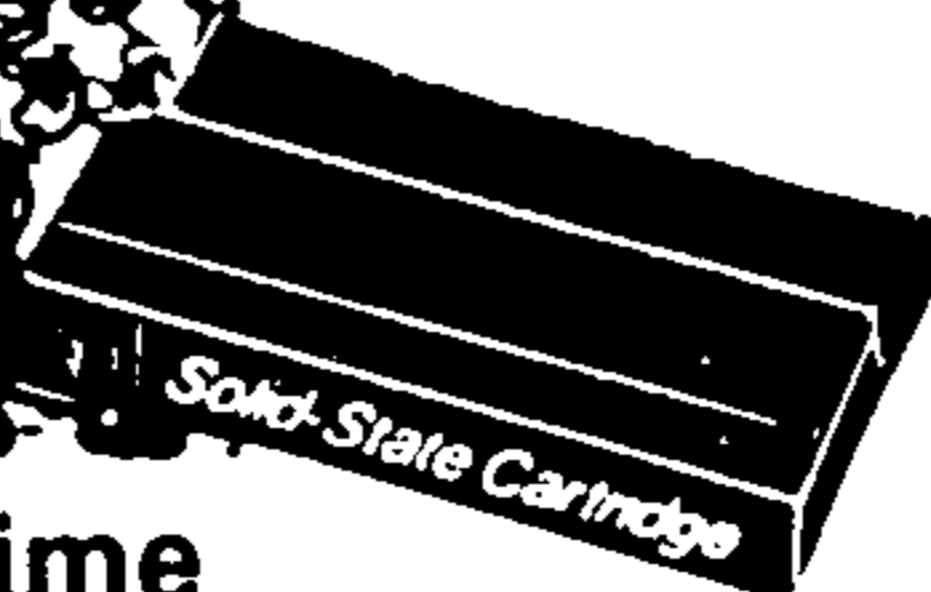
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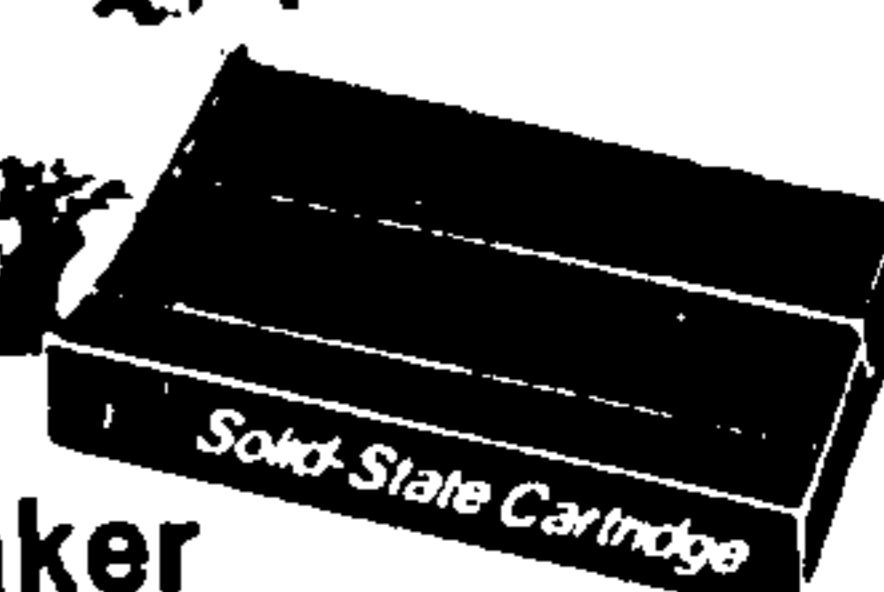
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Feedback

(Continued from Page 10)

Miller responds

Thank you for the very nice review of Advanced Diagnostics in the July '85 issue. We are glad to know that so many people are pleased with the performance and quality of this program. Steve Mildon, the author, was also very happy to see this review.

It appears that I did not document one feature of Advanced Diagnostics very well since a couple of other people have requested a Quick Reference Card also. Advanced Diagnostics has a built-in Quick Reference Card so you never have to worry about losing it. You can press FCTN 7—AID on any screen and Advanced Diagnostics will window in a HELP section. This section is paged through with the CTRL E and CTRL X keys and it contains a complete alphabetical listing of the full command name, the abbreviation and the syntax for each command. It also lists the valid head step times for the two disk controllers and all of the Function and Control Key assignments. On the Command Screen it displays the commands first and it windows in just above the command line so you can see what you have typed in and are looking for help on. On the Edit Sector or Read Track screens the HELP windows in with the Function keys displayed first since there isn't a command line on these screens. When you are done paging through the HELP just press any key other than the page keys and this section will disappear and you will be able to continue right where you were before.

Craig Miller

The Feedback column is for readers. It is a forum to communicate with other readers. The editor will condense excessively lengthy submissions where necessary. We ask that writers restrict themselves to one subject for the sake of simplicity. Our only requirement is that items be of interest to persons who use the TI99/4A home computer. Mail Feedback items to: MICROpendium, P.O. Box 1343, Round Rock, TX 78680.

GRAM Kracker to debut

A forthcoming product from Millers Graphics, the GRAM Kracker, will make it possible for users to save any module-based program to disk or cassette, make modifications, reload it into the unit and make the modifications to the cartridge, according to the manufacturer.

Craig Miller of Millers Graphics says the base unit will include 48K RAM and GRAM, expandable to 80K RAM and GRAM.

"When it is fully expanded, you can also make modifications to TI-BASIC and the operating system in the console," he says. "This means you can change character sets, for instance to where you have a slashed zero and true ascenders and descenders all the time. With a flip of the switch, you can go back to the old one."

Miller says the GRAM Kracker will also make it possible for TI99/4A users to program in GPL code.

A console and cassette is required "for the bare system," he says. He says the loader built into the unit will load a 56K module in 30 seconds. The system will allow users to make permanent changes to screen and text color, he says.

The GRAM Kracker looks like a long cartridge that extends to the on-off switch (on the beige consoles). It is about the same height as Navarone's Widget. The GRAM Kracker is plugged into the cartridge port and a cartridge is then plugged into a slot. After dumping, the cartridge may be removed.

The cartridge program may be stored in the battery-backed GRAM.

In terms of its operation, users may load TI-Writer into the GRAM Kracker, including the editor and formatter files. Then, when used, the user selects the TI-Writer function he wants from the TI-Writer menu and the function is loaded instantly.

A manual and a floppy disk containing changes to Extended BASIC will be included with the system, which he expects to ship beginning Nov. 15. He says he estimates the price at between \$150 and \$200.

For further information, contact Millers Graphics at 1475 W. Cypress Ave., San Dimas, CA 91773.

SUPER SPACE to contain SUPER CART features

Model Masters of California plans to release SUPER SPACE in October, according to Edgar Dohmann, designer of the product, and he is offering a Freeware program to work with it or SUPER CARtridge.

Dohman describes SUPER SPACE as essentially the same thing as SUPER CARtridge (see the June and July issues of MICROpendium) but "built on a specially designed cartridge board so no modifications are necessary."

He says that he developed SUPER SPACE because "there are a lot of

people who would like the features of SUPER CARtridge without having to butcher up some existing cartridges."

He says SUPER SPACE will have the Editor/Assembler GROM, 8K of CMOS RAM and an optional battery.

Tentative prices are \$29.95 for the SUPER SPACE kit without battery; \$32.95 for the kit with battery; and \$39.95 for an assembled SUPER SPACE with battery.

He notes that the kits will include all parts, the cartridge board and a cartridge case along with assembly in-

(Please turn to Page 22)

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"WE GET LETTERS"

Dear Sir:

First of all I wish to congratulate you people on a job well done. Your Newsletter Vol1#1. was great. I especially liked "Program Hints." I am sure there are a lot like me who could use these tips.—Anton J. Forier, Glen Cove, NY

Subject: HELP!

First I want to thank you for your promptness in filling my recent order! I have ordered things from other computer groups and yours is by far the fastest response time! A few don't appear to maintain stock—but just order as they receive the orders and the money!!

My 'problem' is this: I have the 99/4A and XBASIC, a cassette player/recorder and cable....and I am pleased with what I have—BUT—I keep thinking that it would be so much quicker and easier if I had disk.

Can you supply me with a list of EXACTLY what I need to add disk drive and a printer? I know that I can get the prices of the equipment from your flyers and so on—but I am not sure just what I need.

I have included a Self Addressed Stamped Envelope for your reply.—Louise J. Fortune, Newport Beach, California

I'd just like to say that so far, I am extremely pleased with the selection and service 99/4A National Assistance Group has to offer. Your prices are great too! I especially like the fact that I can call you, and have an order shipped C.O.D. It saves me a lot of time. When T.I. decided to stop manufacturing the 99/4A, my heart sank. I felt that the amount of hardware and software offered would soon taper off to nothing. You've given me new hope. I'm still glad I own a T.I. 99/4A. I feel it's one of the best low cost home computers around. Thanks again.—Michael A. Bauer

Gentlemen:

Enclosed you will find a personal check in the amount of \$20.00. I wish to pay for a 1 year gift subscription for each of the persons named below, anonymously. Both persons are owners of the Texas Instrument 99/4A Personal Computer.

I have been a member since March of 1985 and I find your organization and literature of great help to me in my use of the 99/4A. I look forward to my membership with you and I want these friends to be able to take advantage of the same.

Thank you for your attention to this request.—Robert L. Borg, Minneapolis, Minnesota

Please enroll me as a member of 99/4A National Assistance group; enclosed is a check or money order for \$10.00 for a 1 year membership. Please send me my complete membership package including discount software and accessories list, monthly updates on new products and software available to me and my family. I also will receive my membership number for any technical assistance I may need.

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99/4A NATIONAL ASSISTANCE GROUP

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Taking control of CTRL U

By WILLIAM J. BULLOCK

As a new user of the TI-Writer word-processing program, I was disappointed that I could not easily make use of the many format and special character commands available on my Panasonic KX-P1091 printer. In particular, I wanted to be able to use italic, emphasized, condensed, elongated, continuously underlined, superscript and subscript print. Additionally, I needed to be able to change the type pitch from the standard pica to elite or proportional at will. According to the TI-Writer manual, I could use broken underlining and doublestrike print easily, but that was it.

I read in the manual about the possibility of using the transliteration command to access additional printer capabilities, but I was not at all sure how to make effective use of the command. Then I read Ron Castleton's article in the February 1985 issue of MICROpendium. I put his suggestions to use immediately. However, I found that it was difficult to remember which keys I had transliterated to what printer command. The keys had been selected for ease in recognizing the in-text symbols they create, rather than for ease in remembering the printer commands assigned to them. I decided to rework Ron's Transliteration Command Set to make use of a mnemonic aid for actually typing the commands into the text.

Before starting work on the project, I made the following three guidelines:

1. I would use only the ASCII codes not already assigned to a keyboard character.

2. I would devise a consistent system of relating a keystroke that started a printer command to the keystroke that stopped it.

3. To the extent possible, I would select keystrokes that were easy to associate with the printer command they activated.

The first guideline was decided upon because I had found myself wanting to

KEYSTROKES		PRINTER COMMANDS	IN-TEXT SYMBOLS		TRANSLITERATIONS	
start	stop		start	stop	start	stop
CONTROL U PLUS						
SHIFT Z	SHIFT X	emphasiZed print	'A	'8	.TL 26:27,69	.TL 24:27,70
" I	" K	Italic print	.9	.b	.TL 9:27,52	.TL 11:27,53
" R	" F	continuous undeRline	'2	.6	.TL 18:27,45,49	.TL 6:27,45,48
" C	" V	Condensed print	.3	'6	.TL 3:15	.TL 22:18
" E	" D	Elongated print	.5	.4	.TL 5:27,87,49	.TL .4:27,87,48
" W	" S	tWostroke print (doublestrike)	'7	'3	.TL 23:27,71	.TL 19:27,72
" H	" N	Highscript print (superscript)	.8	.e	.TL 8:27,83,48	.TL 14:27,84
" B	" N	suBscript print	.2	.e	.TL 2:27,83,49	same as above
" Q	" A	near-letter-Quality print mode	'1	.1	.TL 17:27,110	see pica below
SHIFT A		picA pitch*	.1		.TL 1:27,80	
" T		eliTe pitch	'4		.TL20:27,77	
" P		Proportional pitch			.TL 16:27,111	
SHIFT Y		emploY paper-end detection*	'9		.TL 25:27,57	
" O		Omit paper-end detec- tion	.f		.TL 15:27,56	
" U		sound bUzzer	'5		.TL 21:7	
SHIFT 6		set 1/6" line spacing*	_(line)		.TL 30:27,50	
" G		set one-eiGhtth inch line spacing	.7		.TL 7:27,48	
" 2		set 7/72" line spacing	.0		.TL 0:27,49	
FCTN Z		initialiZe USA characters*	'c		.TL 28:27,82,0	
" U		select deUtsch (German) characters	'f		.TL 31:27,82,2	
" R		select fRancais (French) characters	'b		.TL 27:27,82,1	
" T		select iTaliano (Italian) characters	'd		.TL 29:27,82,6	

*Default setting

TABLE 1

use a keyboard character that I had previously transliterated into a printer command. I also felt it inconsistent that some printer commands had to be preceded by the CTRL U command and others did not. By activating all printer commands from the computer's "special character" mode (i.e., the CTRL U command) consistency was achieved and all existing keyboard characters were left intact. Incidentally, an additional advantage of this procedure became apparent later, when I needed to access a printer command that I had not previously set up. I simply transliterated one of the unused keyboard characters (e.g., the backslash or the tilde) into the printer command I needed just for that one document.

Explanation of the second and third guidelines amounts to an explanation

of the actual process I followed in setting up my Transliteration File, so let's get down to specifics.

When I use the keyboard to enter a document, I consider that three kinds of characters are available to me. First, of course, are the characters printed on the tops of the keys. These are generated by simply pressing the key or by pressing SHIFT while pressing the key. Nothing new about that. Second, are the characters available by pressing the FCTN key plus a key with a character printed on its front. Nothing new about that either. The new concept comes from regarding the CTRL key as the doorway to yet a third set of characters, namely those that access specific printer commands. So you want to print in italic type, or condensed type? Or you want to underline a passage with one continuous line?

(Please turn to Page 18)



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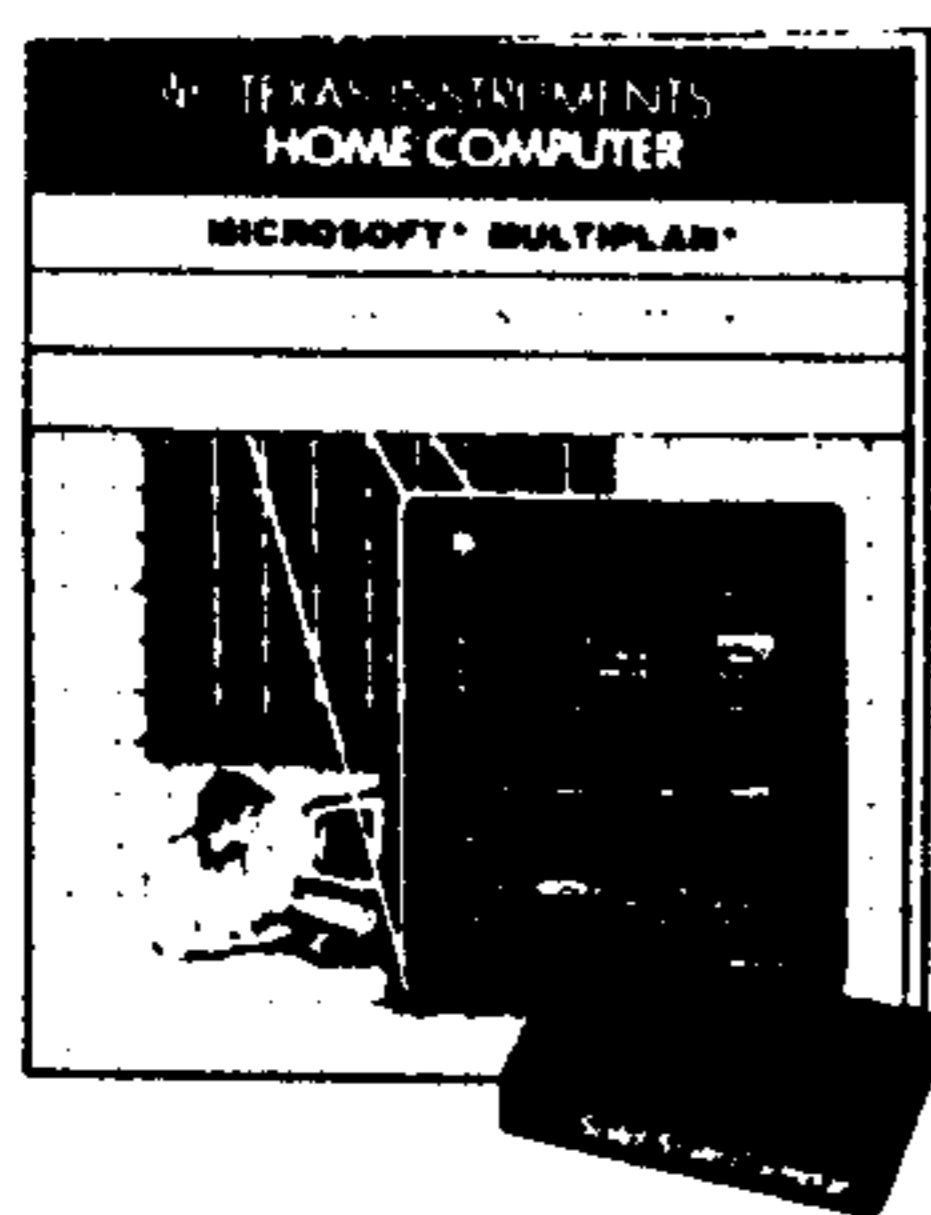
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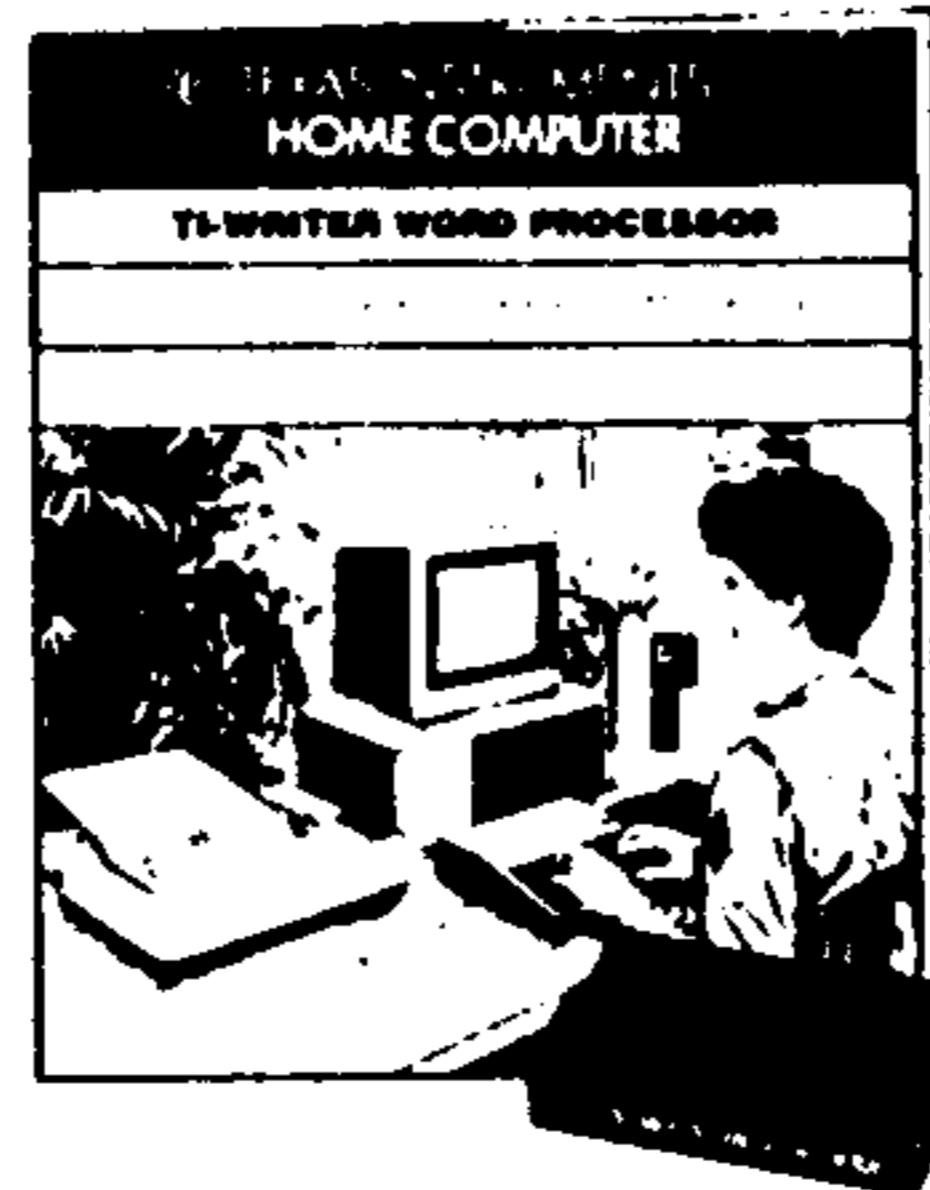
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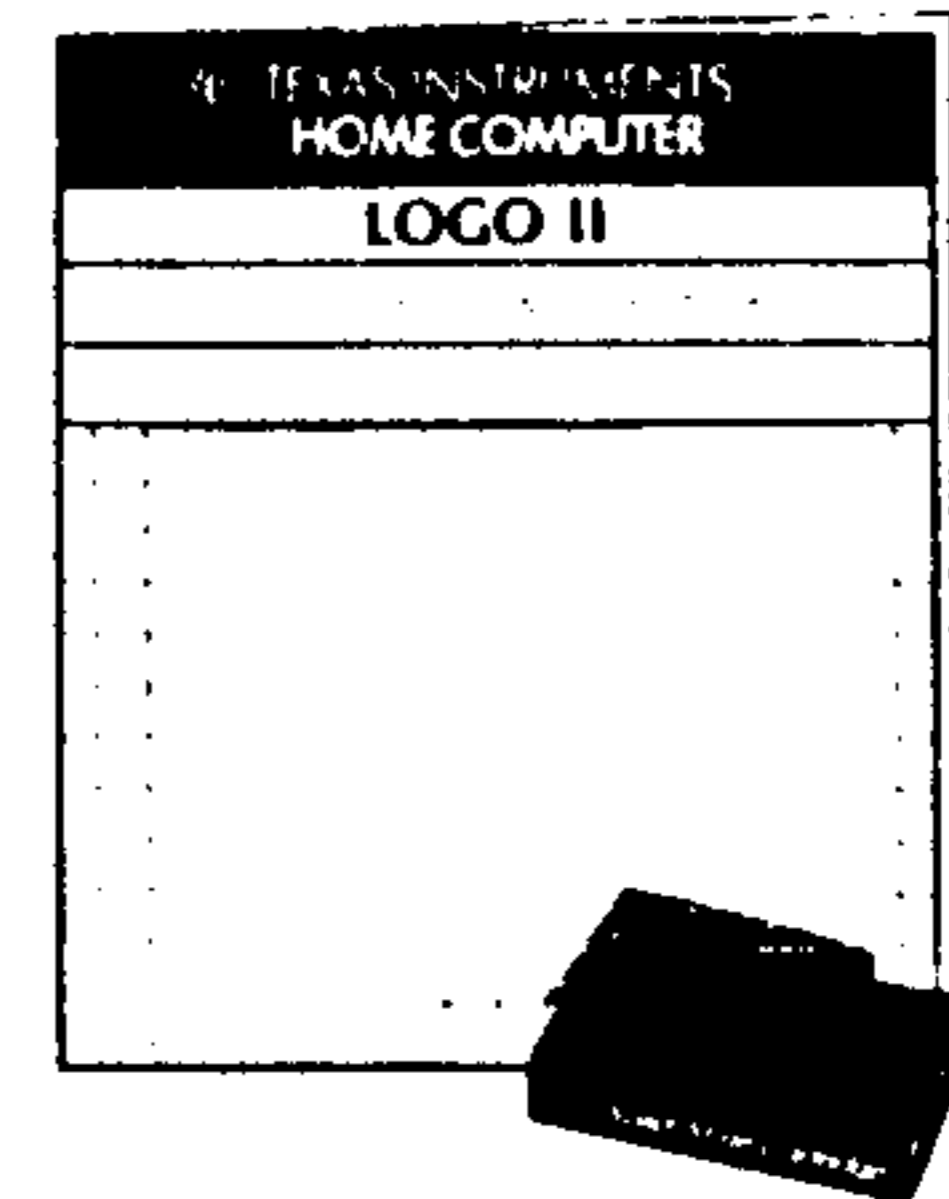
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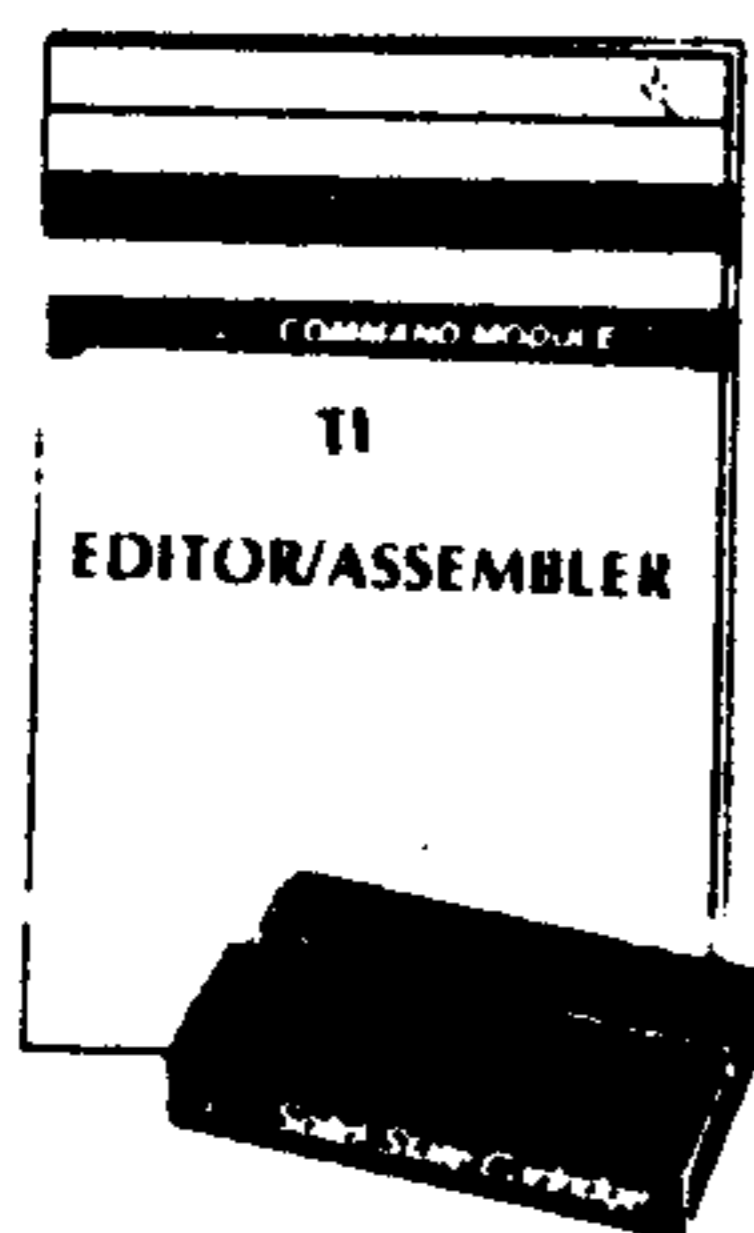
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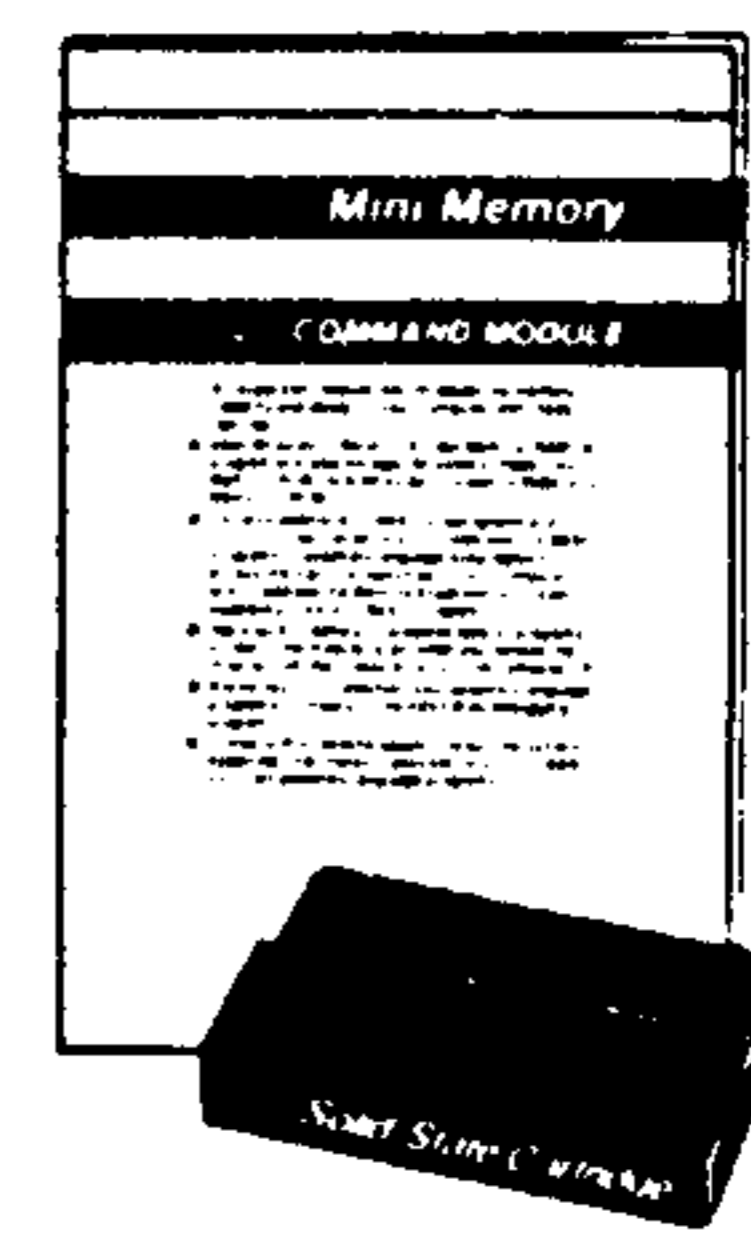
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ENTER 'SPECIAL CHARACTERS'—

(Continued from Page 14)

Then press the CTRL key (CTRL U to be precise) and open up a whole new world of printer commands.

By way of background, TI-Writer uses CTRL U as the means of entering the so-called "special character" mode (see page 98 of the TI-Writer manual). From this mode (which is signaled on the screen by a cursor that appears as an underline rather than the usual vertical block) you may enter characters that are not available on the keyboard (specifically, those with ASCII codes 0-31, the so-called control codes). Once in this mode (i.e., once having pressed CTRL U) you may press any of the following keys, thereby entering one of the control characters: SHIFT A through Z, SHIFT 2, SHIFT 6, FCTN R, FCTN T, FCTN U and FCTN Z, a total of 32 keys (see page 146 of the TI-Writer manual).

These and only these keys were the ones I decided to use for the printer commands. First, though, it was necessary to eliminate three of them that had already been assigned a function in TI-Writer, namesly SHIFT J, SHIFT L and SHIFT M, which were preassigned to function as the line feed, from feed and carriage return, respectively. This left 29 available characters, and I vowed I would assign every one of them, in some reasonably logical manner, to a printer command.

I had to cheat a little again in assigning the four FCTN keys to the foreign character sets I use most often. By using the native word for each of the languages (e.g., "deUtsch" for German) I was able to find a letter in each word that matched one of the four FCTN keys available ("Z", "U", "R" and "T"). True, use of FCTN Z to initialize the standard USA character set is stretching the point a bit, but that was the only key left.

Remember, you don't need to memorize the keystrokes in the column "stop" for these are diagonally down to the right of their respective "start" key (or immediately to the right if the "start" key is on the bottom row).

IN-TEXT SYMBOLS	PRINTER COMMANDS
.0	set 7/72" line spacing
.1	set picA pitch or stop near-letter-Quality mode
.2	start suBscript print
.3	start Condensed print
.4	stop Elongated print
.5	start Elongated print
.6	stop continuous undeRline
.7	set one-eiGht inch line spacing
.8	start Highscript (superscript) print
.9	start Italic print
.b	stop Italic print
.e	stop Highscript (superscript) or sUBscript print
.f	Omit paper-end detection
'0	set Proportional pitch
'1	start near-letter-Quality mode
'2	start continuous undeRline
'3	stop tWostroke (doublestrike) print
'4	set eliTe pitch
'5	Sound bUzzer
'6	stop Condensed print
'7	start tWostroke (doublestrike) print
'8	stop emphasiZed print
'9	emploY paper-end detection
'A	start emphasiZed print
'b	select fRancais (French) character set
'c	initialiZe USA character set
'd	select iTaliano (Italian) character set
'f	select deUtsch (German) character set
_(line)	Set 1/6" line spacing

TABLE 2

And remember too that all of these keystrokes must be preceded by pressing CTRL U to get into the special character (control character) mode in TI-Writer.

The greatest difficulty with the assignment of these particular keys to their respective printer commands is that the in-text symbols that TI-Writer prints on the screen for them have no particularly logical relationship to the commands they generate. In particular, except for the near-letter-Quality command, the in-text symbols for the "start" and "stop" commands for a given printer command are not directly related to one another. In Ron Castleton's system the relationship is more obvious. For example, the in-text symbol ".3" would indicate the start of a certain command and the similar in-text symbol keystroke used to enter the commands is not particularly logical (e.g., SHIFT C is used

(Please turn to Page 20)

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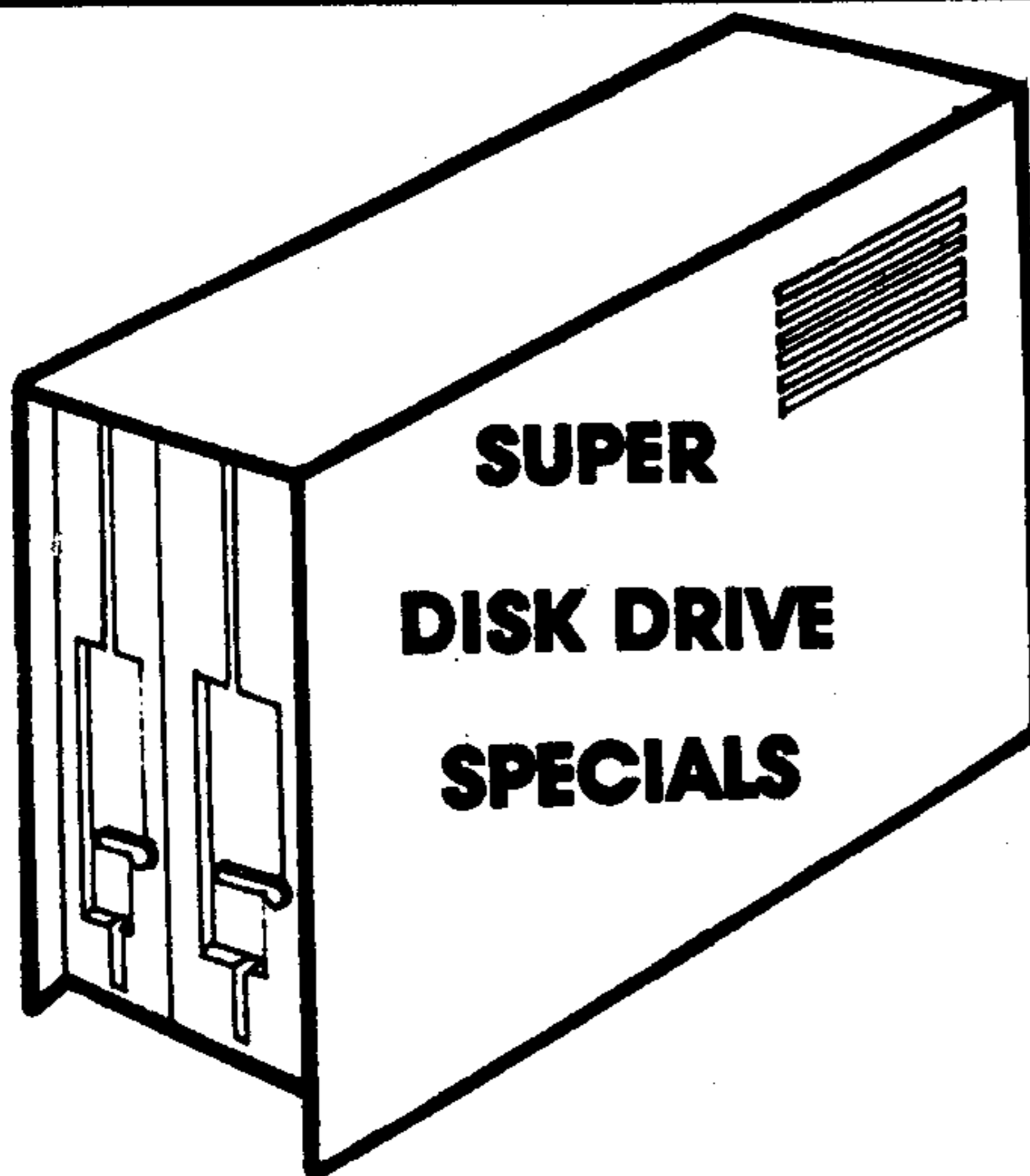
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STEPS FOR SETTING UP TRANSLITERATION FILE—

(Continued from Page 18)

to start elite print and SHIFT S to stop elite print). In setting up my system I chose to make the keystroke to enter the command the "easy thing to remember" rather than the in-text symbol that denotes the command. Table 2 lists in a logical order the in-text symbols and the commands they denote. When proofing a document, one may simply refer to this Table to check the meaning of any symbol that is in question. (The symbols are listed in Table 1 as well). Of course, these symbols appear only in the screen display of the text, not in the printed copy.

So there's the system. Now how do you implement it? First follow these steps to set up your Transliteration File:

1. Study your printer manual. Select the commands you want to set up in a Transliteration File (e.g., emphasized print, condensed print, etc.). Then

determine the ASCII codes that must be sent to your printer to enter those commands. For example, I must send ASCII codes 27,45,49, in that order to begin continuous underlining on my Panasonic printer (see Table 1).

2. Place the appropriate code number(s) after the colon in the appropriate location in Table 1. For example, if your printer must receive ASCII code "7" to stop printing in elongated type, then place a "7" after the "4:" in the stop column on the elongated print line of Table 1, replacing the "27,87,48" that now follows the "4:".

3. Next, create a Transliteration File by entering the editor of TI-Writer and typing each transliteration given in Table 1 (as you may have amended it). Type each .TL command on a separate line that ends with a carriage return symbol.

4. Give this file a name that you will

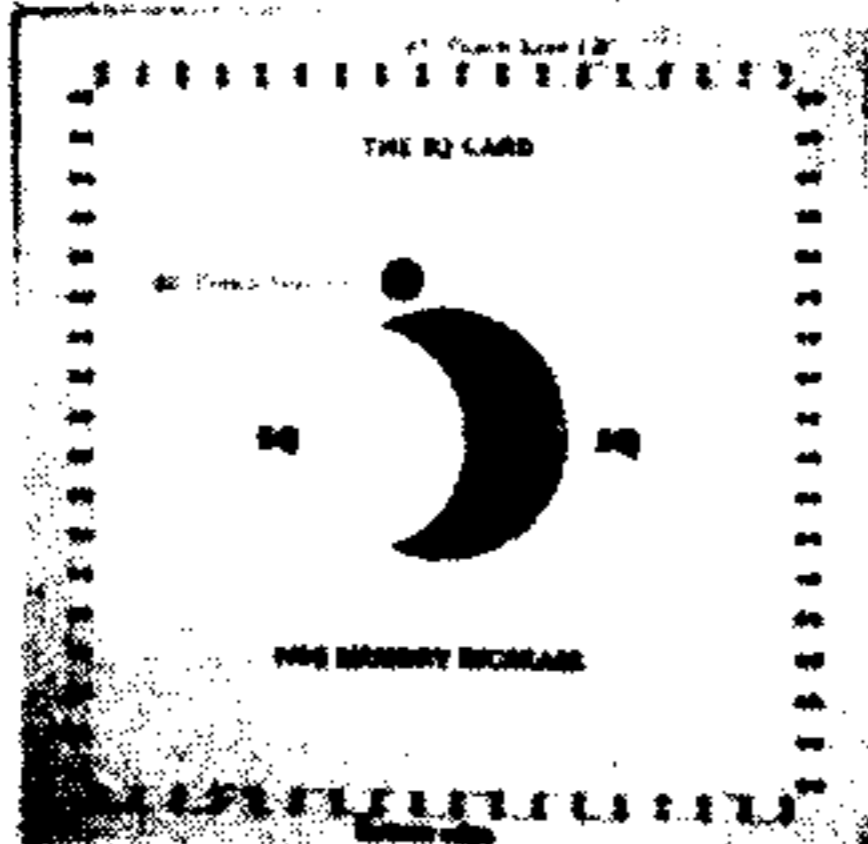
remember (e.g., DSK1.TRANS_CODES) and save it to disk.

Now you're ready to use what you've created. Every time you wish to print a document using any of the printer commands from the Transliteration File you've created, simply include the following line at the beginning of your document when creating it in the TI-Writer editor: .IF DSK1.TRANS_CODES (or whatever name you've given to the file). Follow this with a carriage return. As you type the document, or later if you wish, enter the keystrokes listed in Table 1 as you need them. Remember to (1) press CTRL U to enter the special character mode, (2) press the SHIFT or FCTN key needed to implement the command you desire (e.g., SHIFT I for Italics), (3) press CTRL U again to exit the special character mode and (4) con-

(Please turn to Page 40)

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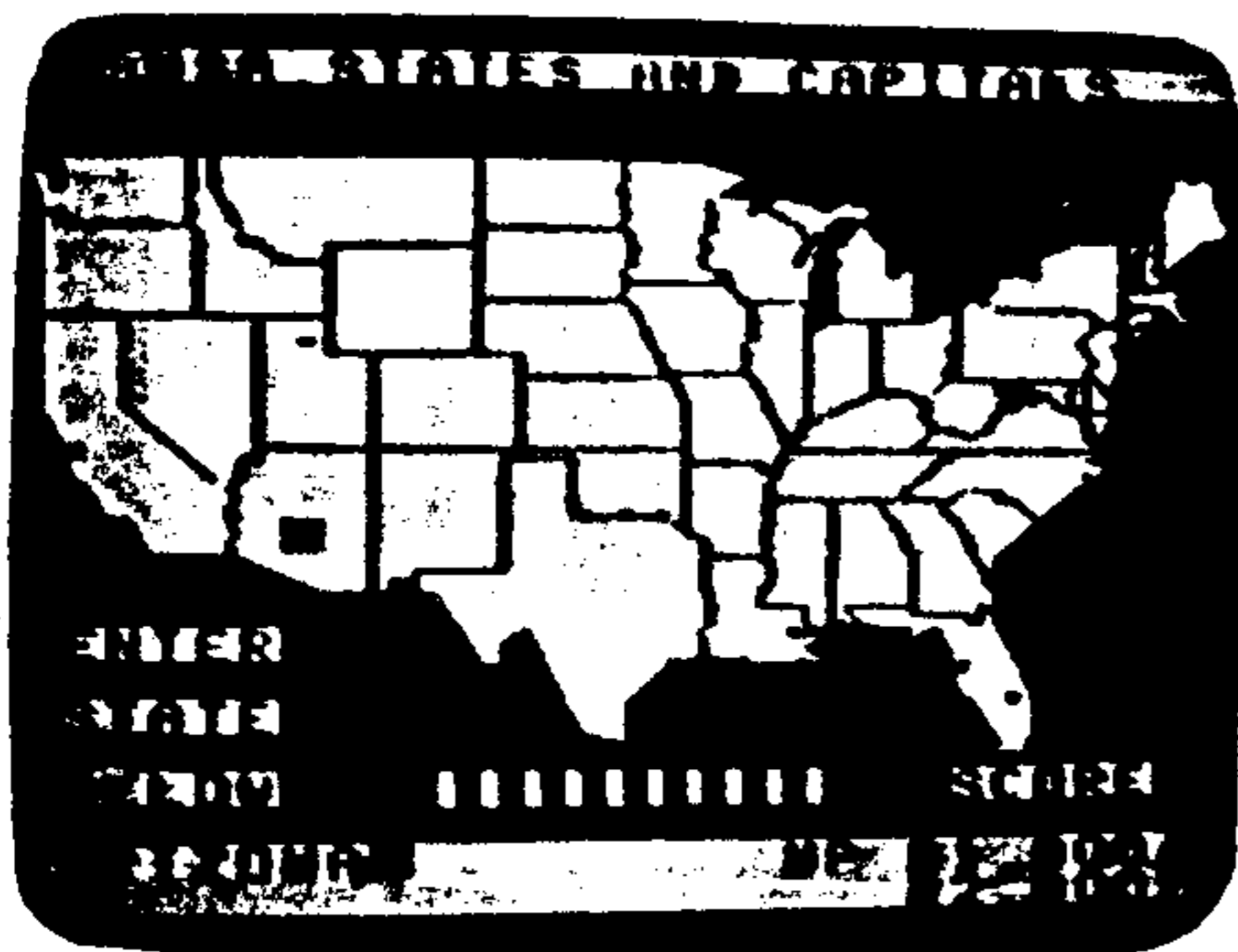
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Controversy slows sales for BITMAC program

Controversy over marketing rights to the BITMAC graphics program may have led to an overall loss of sales of that program.

The controversy has reportedly led to the refusal of Triton, a distributor for TI-related products, to carry BITMAC as marketed either by Vaughn Software of Arvada, Colorado, or by DataBioTics of California.

A point in controversy is that DataBioTics did not advertise the program in the Triton spring catalog. David Vaughn of Vaughn Software, the company which developed the program, says that Mike Evanbar of DataBioTics advised him that printed inserts advertising BITMAC had been prepared for the spring Triton catalog, but the product was not advertised.

Bill Moseid, in charge of product development for DataBioTics, says that the inserts were delivered; however, "Triton has its own set of rules. They insist on a program sample. They have to be able to look at it and run it."

He says that there was not a version of the program meeting DataBioTics' standards until it was too late for the Triton catalog. Vaughn says his marketing contract with DataBioTics is void because of a provision that the contract will be void if the publisher (DataBioTics) ceases through no fault of the developer (Vaughn Software) to make the program available to buyers for more than 30 consecutive days.

DataBioTics officials say they want to sell their current inventory of the program and "get out." Moseid says the issue has been blown out of proportion.

DataBioTics officials note that selling the inventory has been difficult because of the controversy, and because Vaughn Software has been marketing BITMAC at \$29.95 and DataBioTics' price is \$39.95.

Vaughn says he had agreed to allow DataBioTics to sell off their inventory of BITMAC, but that this was before he knew that they had published software and manuals with a DataBioTics copyright notice on them.

Moseid says copyright of the program is Vaughn Software's and that this is "not the issue. The issue has been the license to produce and market it." He says that the copyright notice by DataBioTics means that "its con-

(Please turn to Page 34)

SUPER SPACE

(Continued from Page 12)

structions. He warns that only users who are capable of assembling kits that require soldering delicate integrated circuits should order SUPER SPACE in kit form.

Programs available for SUPER SPACE or SUPER CARtridge include Dohmann's SUPERBUG II, available (see the Freeware section) for \$3-5, which includes a version that will load into the >6000 memory space, and a disk of software from David R. Romer, 213 Earl St., Walbridge OH 43464 available for \$6.

Dohmann notes that the instructions on how to set up a program with a GROM header from menu selection from a SUPER CARtridge will work the same with SUPER SPACE.

For further information on SUPER SPACE, contact Model Masters, 22411 Mountain Laurel Way, Diamond Bar, CA 91765 or (714) 861-8146.

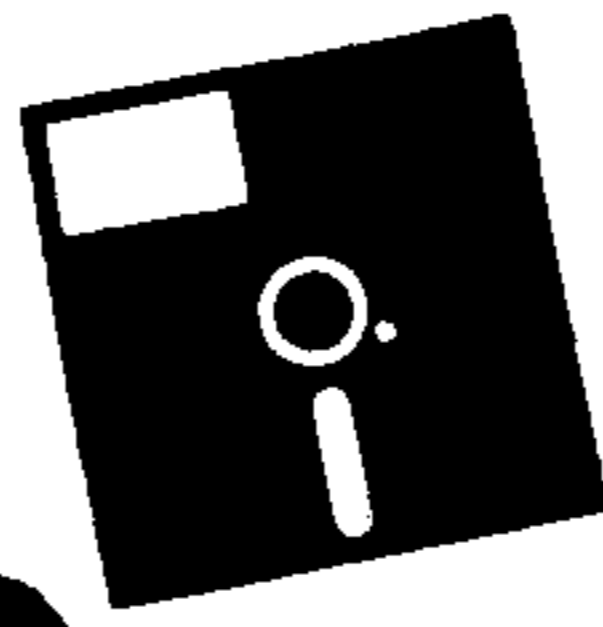
Dohmann says SUPERBUG II corrects deficiencies in the SUPERBUG program which TI released in 1984 as a public domain program. He says patches to the most serious deficiency, the fact that the dump or disassembly to disk did not work, have been published, but that his program corrects other deficiencies. His program fixes the dump and disassembly to disk problem similarly to the method by Tom Knight.

SUPERBUG II also offers several enhancements, he says.

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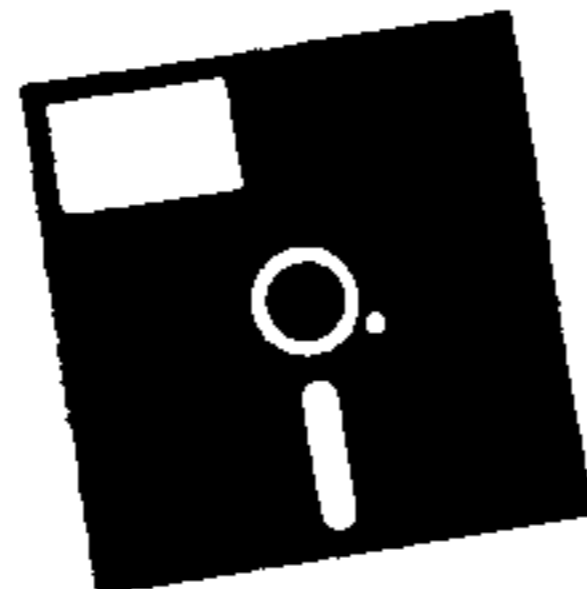
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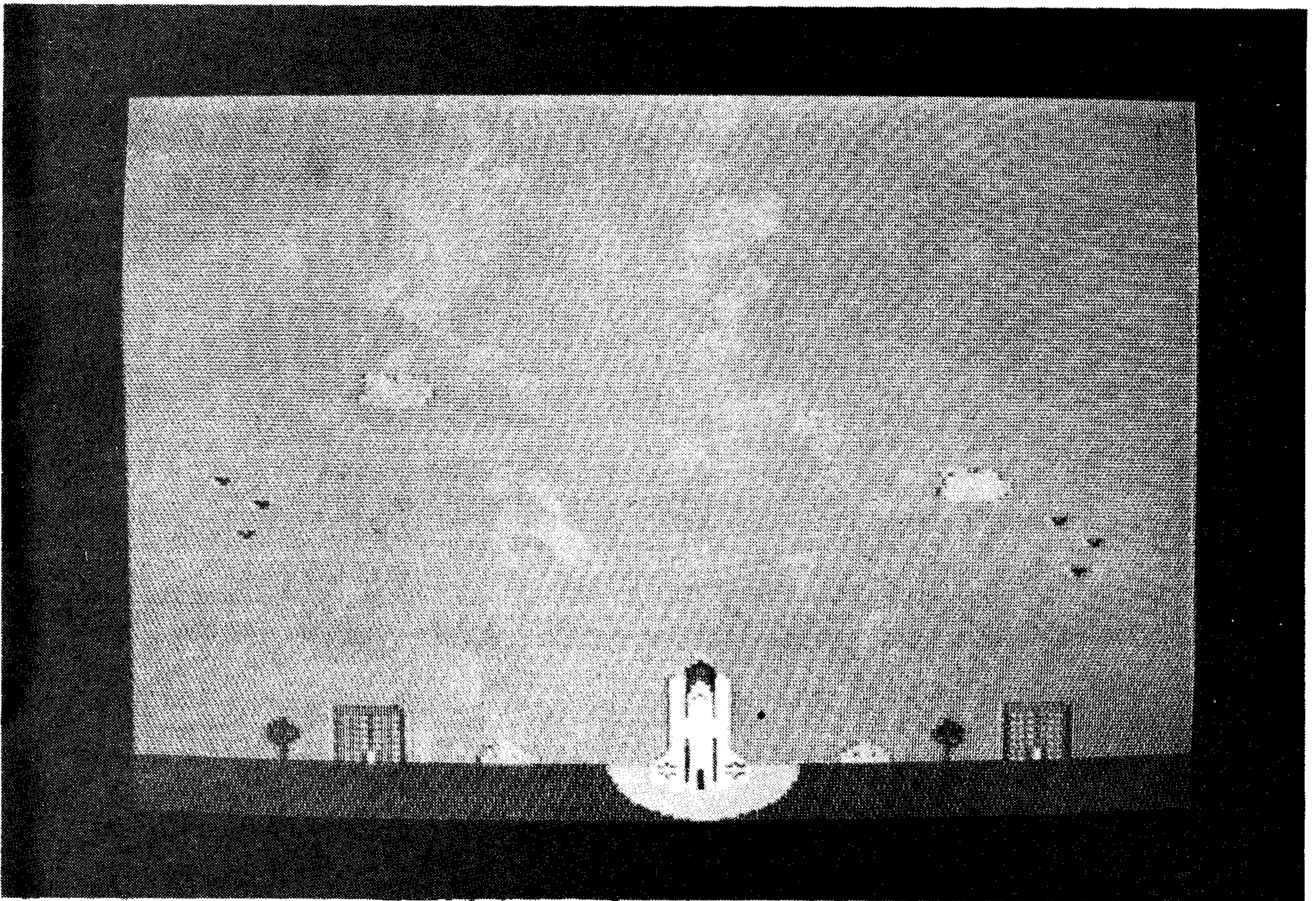
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A screen from a music and graphics program which plays tribute to the space shuttle. Jonathan Zittrain, a sysop for CompuServe's TI Forum, says that Stephen Foster of

Houston spearheaded the collaboration to create the program and "unified programmers around the country."

The music of

STEPHEN FOSTER

By LAURA BURNS

Stephen Foster is a name synonymous with music.

Most people associate the name with songs either comic (such as "Camptown Races") or sentimental ("Old Folks at Home," "Jeannie with the Light Brown Hair").

Stephen Collins Foster, the 19th-Century American composer, has a great-great-nephew, J. Stephen Foster of Houston, Texas, who is known for, among other things, his music programs for the TI99/4A.

"I never did use it for anything serious," Foster says of his computer.

Foster also has created animation and graphics programs.

"We saw some of Sam Moore Jr.'s programs," he comments. "He kind of inspired a lot of us."

Foster has been named an honorary sysop (systems operator) for HUGTIBBS, the bulletin board of the Houston Users Group, as well as an honorary lifetime member of the group, which has an estimated 200 members. In addition, a portion of the TI Forum on CompuServe has been named Foster's Back Fence in his honor.

A number of programs by Foster are

available in the TI Forum's data libraries and he was the founder and is the former the official sysop of HUGTIBBS.

Foster cannot go online with CompuServe or serve as sysop because he has Alzheimer's disease.

Ron Albright, a San Antonio physician who is a CompuServe sysop, describes Alzheimer's disease as an incurable disease which causes a progressive debilitation of the brain. Its victim loses the higher functions of the brain, primarily memory and cognitive function.

(Please turn to Page 26)

Disk Data Base

Today there are more programs available for the TI-99/4A than ever before. There are so many that yesterday's best disk cataloging programs just can't keep up. How many user's groups and individuals around the world can boast libraries in the thousands? The numbers are staggering, and until DISK DATA BASE, there was no way of easily keeping track of such an enormous amount of data. DISK DATA BASE is the only program you will ever need for organizing your disk library. Whether you have 100 or 10,000 files in your collection (DDB will store a catalog of up to 12,000 files on a single DSDD disk!), DISK DATA BASE is your tool for organization. DISK DATA BASE has more features than any of its ancient competitors. With DDB you can now sort and print out your catalog by either diskname or filename,, print it out unsorted, or selectively print out all entries that contain a string you enter (for instance, you can have it print out all your files named "LOAD"). You can also break up your catalog into blocks of 250 entries for easy management - no longer will you have to print out parts of a catalog you don't need. You can even convert data files from Master Disk File to DDB's data format, so your investment in time is saved! DISK DATA BASE features assembly language routines for speedy sorts and snappy screens, a helpful on-line dictionary of terms for when you are confused, numerous prompts in English, and more ease-of-use than you can shake a stick at. Even if you only have a small collection, DDB is the program for you. Not only will it let you be organized from the start, DDB will also let you expand database files to fill new disk capacity. So if you upgrade your disk drives or controller, DDB will let you easily enlarge your database disk so it can handle a larger catalog. A more flexible program for maintaining your program collection doesn't exist! DISK DATA BASE requires Extended BASIC, a 32K memory expansion unit, and a disk drive and controller. A printer and second drive are recommended, but not required. DISK DATA BASE is an excellent value at \$15 - not only does it include 3 disks and a eight page manual, it also comes unprotected so you can legally back up your investment. No data monster is too large to be tamed by DDB, so isn't it time you tamed yours?

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THE AMAZING GRAPHX

This unbelievable program, which comes to us from down under in Australia, is truly one of the most powerful, user friendly graphics programs ever written for the TI-99/4A Computer. This program received A's and A+'s in the June issue of MICROpendium. The program has many features offered only in professional graphics systems costing thousands of dollars. Now you can get this powerful program for less than the suggested retail price, WITHOUT having to deal with money conversion and the international mail system. From now until January 1, 1986, you can get this incredible program for the unbelievable price of \$37.50 plus \$1.50 shipping. Thru a special agreement with the manufacturer, we can take delivery on orders within 3 days from Australia!!! This means that if your version is temporarily out of stock, we can still get the program to you within 10 working days of your order. Please call for some of the lowest quantity ordering discounts available. Specify XB, EA, MM when ordering.

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TURBO DATAMAN has been upgraded to now give you power and speed that is unequalled in any database program available today. The manufacturer has rewritten many of the features in TMS9900 machine code to give it speed and power that is startling. DATAMAN features complete design of your own data entry screens utilizing graphics and text, with full data value checking. DATAMAN has a feature not found in any other database. DATAMAN will perform math calculations you specify on fields of data as you enter them. This is a very powerful feature for databases used to keep or tally scores or money balances. The program also features an editor for custom designing your own printouts. You can enter up to 28 characters per field with up to 30 fields per record. You can also build SECONDARY screens that are accessed from the main screen to give you almost unlimited control over your database. The record search portion has been redone to give you record finding capabilities that are limited in speed only by the disk drives you have connected to your computer. DATAMAN is still available for those that do not have 32K memory. TURBO DATAMAN is the newest version that can be used with 32K memory. Please specify the version you need when ordering. You get all this speed and power for, not the \$60.00 charged for other database systems, but only \$30.00 plus \$1.50 shipping. Thru special agreement with the manufacturer we can get the program in a very short time to fill your orders promptly.

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EASY BILL PAYING is the most unique home budget utility ever written for the TI-99/4A home computer. This program makes paying your bills enjoyable, instead of a frustrating experience. EASY BILL PAYING features a unique way of tracking all uncashed checks, cashed checks and tagged payments, for individual processing from month to month. As you sit down to pay bills and balance your checkbook, this program does it all. It also features a program which utilizes your data files to help you create a budget for paying the infrequent bills like insurance and property taxes. Also featured is a bar graph program that will plot your budget from month to month utilizing, again, your data. This unbelievable program and full documentation is being offered under the D.I.P. program. The registration fee for this program is just \$20.00 plus \$1.50 shipping. YOU HAVE TO SEE IT TO BELIEVE IT.

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FOSTER—

(Continued from Page 24)

"It is a very frustrating disease which strikes people in middle life, ages 40 to 60," Albright says.

He says that Foster, who is 44, has had the disease for "three or four years."

Alzheimer's disease, Albright says, "does not tend to spontaneously go away or spontaneously get better. People who have it tend to deteriorate. Nobody knows the cause. It may be some sort of slow virus."

The clinical course of the disease, Albright says, is "totally variable. It can proceed sometimes slowly and sometimes rapidly."

Foster, Albright says, "used to be a design engineer. He assisted in designing buildings for oil refineries and was respected in that career. He's an interesting guy. His other great passion is model trains."

Foster says his great-grandfather was a foreman on the Santa Fe Railroad. Foster's model train collection is in "30 or 40 boxes" and includes "close to 300 locomotives and thousands of railroad cars."

"One of the best examples of how Stephen has contributed," Albright says, "is, right after the great crash of October 1983 I got a bizarre letter out of the blue from a guy named Stephen Foster from Houston. What Stephen had done, Stephen had begun collecting music programs and had run across one in his trading that I had written the year before. The REM statement had my name and address."

The letter, which Albright says was "bordering on a form letter, but obviously written by Stephen," was directed toward persons writing public domain music software.

"When there was no unified way to get out to TI users he united people in a common cause, programming music for the TI and exchanging programs," Albright says. "He really set up a network of friends around the country. For me, the original guise of trading programs has faded away, and Stephen is a good person to have for a friend. I

(Please turn to Page 28)

Texas Instruments TI-99/4A COMPUTERS, COMPONENTS AND SOFTWARE

TEX+COMP™

America's Number One TI computer retailer

Presents**The Oscar™
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Never Before Available
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In 1983, the DataBar Corporation developed an extensive TI Software library which they planned to distribute in bar code form in a monthly magazine which the subscribers could then load into their computer with the "Oscar," a compact bar code reader.

Due to changes in market conditions, DataBar has discontinued its home computer division and Tex-Comp has bought out their entire stock of TI-99/4A Software.

Tex-Comp now makes this extensive library of over 28 assorted programs with complete printed instructions and documentation available on cassette or disk (PLEASE SPECIFY) at only \$12.95. These professionally prepared programs include education, entertainment, personal enrichment, first aid, finance and law.

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Alphabet House—Build your own house with your alphabet skills.

Running Planner—How rapidly should you increase the distances you run?

Word Habits—Keep reading and writing habits up with current demands.

Amulet—Search the cavernous building to find the precious Amulet.

Caterpillar Climb—Solve addition problems to move your caterpillar over the wall.

Financial Quiz—Check the pulse of your pocketbook.

IRR—Internal Rate of Return

Math Challenge 1—Pit your mathematical skills against the computer or a friend.

Star Count—Use logic skills to spring open a box of shining stars.

Health Assessment—How are your current health practices affecting your life expectancy?

The Law and You—A look at how laws affect your daily activities.

Speedreading—Train your eyes to take in more words per second.

Program In Basic—Eases the chore of learning to program.

Code Master—Discover the secret code.

Room to Move—Unscramble the letters with wise moves.

NPV—Net Profit Value

Payback Period—Payback Period

Balloon Darts—Build your skills with fractions as you aim and fire your dart.

States 'N Capitals—Can you name more capital cities than your opponent?

First Aid—Burns—How should you react in an emergency burn situation?

Triangle Solutions—This makes math friendly for your practical applications.

Sentence Tutor—Practice breaking down sentences into their essential elements.

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SPECIFY DISK OR CASSETTE VERSION

CONTRIBUTIONS BY FOSTER—

(Continued from Page 26)

am sure you could find hundreds of examples around the country and even in Canada.”

Foster recalls that he had a form letter for persons interested in trading, and that Albright had programmed a Bach work. Foster says he got a hefty response of about one in 10 to his form letters.

“I’ve changed my phone number,” he says. “I was getting 20 or 30 calls a day. I couldn’t handle the telephone calls. I’ve gotten some from England, Australia and New Zealand wanting to know about different programs. So maybe that is a contribution. Mostly I encouraged guys to trade programs. There used to be so many guys who would write a program and act like ‘This is my program and nobody’s going to get it.’”

Barry Traver of Philadelphia, Pennsylvania, describes Foster as having a

“heart of gold.”

Traver notes, “He is fundamentally a very honest person in trading. I’d like to give him more than he gives me but it never ends up that way. Stephen doesn’t break even in his trading.”

Albright says, “He is the sole reason I joined CompuServe. I never had heard of it. I owe him a great deal—most people do—for unifying us when we were a little down. He took the leadership of a diverse group of people and unified us.”

Jonathan Zittrain, CompuServe sysop from Pittsburgh, says that Foster “added a kind of flavor” to the TI Forum, and describes him as a “down-to-earth, frank, completely honest and straightforward person,” as well as a “most talented Extended BASIC programmer.”

Albright notes that Foster formerly spent from eight to 10 hours per day as sysop for HUGTIBBS.

Foster notes that the HUGTIBBS inspired a number of other TI bulletin boards in the Houston area.

“A deputy sheriff came out and looked at it and bought one,” he notes. “Then, the Johnson Space Center User Group couldn’t let the Houston User Group get out in front of them, so they started one. A couple of teen-aged kids have TI bulletin boards in Houston too.”

A major program by Foster that several persons remarked on was a tribute to the space shuttle, which he did in collaboration with Curt Purdy, Bill Knecht and others. The music and graphics program lasts for about 15 minutes.

Foster explains that he can no longer program because he gets rows and columns mixed up and cannot spend time on CompuServe because of forgetting

(Please turn to Page 40)

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Attention: 99/4A Owners, Dealers, User Groups, etc.

The 99/4A National Assistance Group is proud to announce a new

3rd generation disk repair program

developed in our research labs

IN REVIEW: DISK REPAIR

Most of us bought a 99/4A because it was an economical home computer. Actually we didn't know what we would do with it, but we didn't want to be left out—then it happened! We found that this little piece of hardware was capable of more than we expected; but it needed help. After many sleepless nights, we bought an Expansion system, a printer and a modem. Now we had everything...(?)

As your collection of floppies grows, so does the possibility of it damaging them. The original solution to a crashed disk was to reinitialize it and lose all the programs and data. Then came the disk fixer type programs which could repair many disk problems. We thought all our disk prayers were answered. We soon realized that this type of program had many limitations, but it was all we had—until now.

A third generation fixer program called DISK REPAIR has been introduced. An exceptional Assembly series for the more discriminating TI user. You may edit your disk in Hex (traditional) or in Text mode (ASCII). This means that you may correct errors by simply typing from the keyboard without first converting to HEX!

The entire sector is displayed on one screen and arrow keys are used to edit your corrections. In case you don't read Hex, the ASCII interpretation is available at the touch of a key. Any available sector may be loaded or saved on from 1 to 4 drives including double sided/double density. DISK REPAIR may run from Extended BASIC, Editor/Assembler, or Mini-Memory. 32K RAM memory is required and a printer is optional.

Few people understand the TI disk operating system (DOS). The instructions explain the TI disk format and information about Sectors 0, 1 and 2. Understanding TI DOS, you can recover a program which has been accidentally deleted! So take heart, there are ways to solve problems which, until now, seemed hopeless!

It should be mentioned that though DISK repair is the easiest disk fixing type program, you must take the time to study and understand the TI DOS. This can open avenues to your drive system of which you may not even be aware. Additional information on the TI DOS may be found in the Editor/Assembler manual.

In answer to your next question: DISK REPAIR is available through the 994/A National Assistance Group for only \$19.95.

Dealer and User Group Inquiries Invited

For more information call 24 hours (305) 583-0467—see other ad in this issue

Computing your savings

By ANNEGRET WINSOR

In a little more than a year I deposited over \$200 into my special savings account from cash-refunds I have received. The savings I realized by using cents-off-coupons at the checkout came to over \$300.

From this money I purchased the TI color monitor so I won't tie up the family TV set anymore whenever I use my computer.

And all it takes, is one Sunday per month. This is the time I reserve for my refunding activities. I go through my refund forms, which I have filed in envelopes by expiration month. I put the required qualifiers and the refund form in an envelope. Depending on the number of refunds, this takes one to two hours. After assembling all the refunds I plan on mailing, I use my computer and Microsoft Multiplan to address the envelopes, store the information, and keep track of the refund offers I have mailed, what I received in return, and what is still outstanding.

To collect all this data manually, I would have to have an index card for each of the offers, fill in the information and file it. This would take too much time. Thanks to my computer, one Sunday a month is all the time I need.

Procedures

After loading Multiplan turn off the automatic RECALC feature by pressing O, spacing to (NO), and pressing ENTER, to save time.

When you first set up the worksheets change the default settings as follows. Press F(ormat), D(efault), C(ells). The screen then shows: "FORMAT DEFAULT CELLS align:" press G(en), "code:" press F(ix), " of decimals:" press 2. Leave the width of the columns at eight characters. The first spread sheet is set up as follows:

Col.1, width d, Name/Address of Offer
Col.2, width d, Date mailed
Col.3, width 12, Qualifiers mailed
Col.4, width d, To get Coupon
Col.5, width d, To get Cash

1	2	3	4	5	6	7	8
REFUNDS	MAILED	WHAT	TO GET	CASH	OTHER	DUE IN	DUE IN
ADDRESS	ON		COUPON		ITEMS	COUPON	CASH
6 Wilson H	5087	pop (1)	1.00			6.85	11.50
7 P. O. Bo							
8 Maple Pl							
9							
10 Free Bro	5087	2 upc peter			free bro		
11 P. O. Bo		1 upc bread					
12 St. Paul							
13							
14 executiv	5087	three pop	1.00				
15 Stuart H							
16 P. O. Bo							
17 Kansas C							
18							
19 Louis Ri	5087	4 upc	2.35	0.50			
20 P. O. Bo							
21 Kankakee							
22							
23 Hanwich	5087	four labels	1.00				
24 P. O. Bo							
25 St. Paul							
26							
27 Hunt's B	5090	seal, crt	1.50				
28 P. O. Bo							
29 St. Paul							
30							
31 Red Hot	5090	nine pop's		10.00			
32 P. O. Bo							
33 Pico Riv							
34							
35 Heinz 64	5090	crt	1.00				
36 P. O. Bo							
37 Boston,							

Col.6, width d, To get Merchandise
Col.7, width d, Total Coupons expected

Col.8, width d, Total Cash expected

In Col.1 use as many lines as necessary for the complete address, since you will use this block to address the envelope.

In Col.2 use a four-digit julian date.

In Col.3 list all the qualifiers you had to mail for that particular refund.

In Cols.4 and 5 list the amount of the coupon/cash-refund you are expecting.

In Col.6 list the merchandise or free merchandise-coupon you should receive.

In Cols.7 and 8 use the SUM-Feature to total the amounts from Cols.4 and 5.

To be able to see which refund offer, and which column you are working with or looking at, split the screen by pressing W(indow), S(split), T(itle), number of rows 4, and number of columns 1.

When you have entered all the infor-

mation save the worksheet by pressing T(ransfer), S(ave) filename: refout (for REFunds OUTstanding.)

After saving this worksheet you are ready to address the envelopes. Close the window by pressing W(indow), C(lose), and Enter. Then increase the width of column 1 to 32 characters, this should be sufficient space for even the longest address line, put the envelope or self stick labels in the printer and select P(rint), O(option), and use the arrow keys to position the cursor on the first line of the address to be printed, press the : (colon) and use the arrow keys again to position the cursor on the last line to be printed. The second line on the screen asks for the setup. Set it up. (In my case this is PIO, because I have a parallel printer.) Press ENTER. Then press M(argin) to set the margins: left 35, top 8, and press ENTER twice to start the printer.

After receiving a refund you can print the information from columns one through six onto a sheet of paper and input it to a second worksheet. Here use only one line per refund-offer:

Col.1. Manufacturer
Col.2. Name of Offer
Col.3. P.O. Box No.
Col.4. City
Col.5. State
Col.6. ZIP Code
Col.7. Date mailed
Col.8. To get Coupon
Col.9. To get Cash
Col.10. To get Merchandise or free merchandise-coupon
Col.11. Date received
Col.12. Received Coupon
Col.13. Received cash
Col.14. Received Merchandise or free merchandise-coupon
Col.15. Total Coupons/Cash received.

By using only one line you are able to sort the file in any order you want, to see if you have already requested a certain refund. You can sort the refunds in alphabetical or
(Please turn to Page 31)

KEEPING TRACK OF REFUNDS—

(Continued from Page 30)

chronological order, or you can sort them by P.O. Box Number.

Save this worksheet under the name "mylist." After it is full, file it under "refin198X" for the year it covers.

In case you do not receive the requested coupon or cash-refund in the usual eight to twelve weeks, use TI-Writer with the Mail-List Option to let the manufacturer know that there is a problem.

My standard form letter reads:

1
2
3
4

Subject: Non-Receipt of Refund
Dear Sirs:

On *5* I participated in your *6* Refund Offer and mailed to the address on the bottom of this letter the required Proofs of Purchase to receive a *7*-Refund of *8*.

My records do not show that I have received this refund. Would you please check your records and see if this is correct.

Sincerely
Annegret Winsor

9
10
11
12

Set up a Value-File with the information for the various outstanding refunds from the first worksheet (refout) using the (P)rint (F)ile command to establish a file TI-Writer can read.

Procedures

Press P(rint), O(ption), and use the arrow keys to position the cursor on the first address line you want in the Value-File, press :(colon) and use the arrow keys to move the cursor to the last address line you want in the Value-File. Press ENTER. Press F(ile) and enter the file name under which you want to store this Value-file. Make sure you use all capital letters in this file name. TI-Writer can not read file

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MANUFAC	NAME OF OFFER	P.O. BOX NO.	CITY	STATE	ZIP	SENT COUPON	CASH	MOSE	REC.ON COUPON	CASH	MOSE/ COUPON	CASH	MOSE/ COUPON	CASH	BUSEIN	REC'D
4	JOHNSONFREE GLADE SPINFRESH OFFE	8967	MADISON	WI	53708	4329		FREE PROD	5005		SPINFRESH					
5	MURPHREE FREE TRIAL OFFER	14959	BALTIMORE	MD	21268	4245		SAMPLE	5015		sample					
6	DIXIE \$2.00 REFUND OFFER	8742	UNIONVILLE	CT	6087	4329	2.00		5015	2.00						
7	BORDEN LUNCHEON MEAT OFFER	WB 031	EL PASO	TX	79977	4329	1.00		5019	1.00						
8	KIMBERLSTATUE OF LIBERTY CALENDAR	90440	ST. PAUL	MN	55190	4329	1.50	CALENDAR	5019	1.50	CALENDAR					
9	PRESTO SMART SHOPPER DSC REFUND	947	EL PASO	TX	79977	4363	1.00		5037	1.00						
10	MOBIL CHEFTY MEAT/POULTRY OFFER	7204	CLINTON	IA	52736	4362	5.00		5038	5.00						
11	CAMPBELLHOMESTYLE SOUP OFFER	4783	MONTECELLO	MN	55362	4362	1.00		5039	1.00						
12	KRAFT GRAB-A-SNACK OFFER	725	LUBBOCK	TX	79491	5016		SNACK SETS	5059		2 SNACK SE					
13	CADBURYFREE MILK OFFER STRATNAR	7318	BRIDGEPORT	CT	6650	4329		FREE MILK	5063		FREE MILK					
14	BEST FORWARD FREE PANCAKE MIX OFF	5270	HICKSVILLE	NY	11816	4029	1.50									
15	AM.HOMECHIEF BOYARDEE SPORTS BAG	1421	DELRAN	NJ	8075	4213		SPORTS BAG								
16	CONAIR REBATE	4147	YOUNG AMERICA	MN	55399	5076	5.00									
17	CONAIR BONUS REBATE	917	YOUNG AMERICA	MN	55399	5076	5.00									

names that contain lower-case letters.

Quit Multiplan and load TI-Writer, load your Value-File, and edit it to look as follows:

*
1 Crown Zellerbach Corp.
2 Attn: Consumer Relations
3 One Bush Street
4 San Francisco, CA 94104
5 June 29, 1984
6 Nice'n Soft
7 Coupon
8 \$1.00
9 Nice'n Soft Refund Offer
10 P.O. Box 9795
11
12 St. Paul, MN 55197
*

Lines 1 through 4 contain the mailing address of the company that offered the refund;

Line 5 contains the date you mailed your request out;

Line 6 contains the name of the offer;

Line 7 has the information whether it was a cash or a coupon refund;


Line 8 contains the amount of the re-

fund;

Lines 9 through 12 contain the address of the clearing house to which you mailed the request.

While printing the letters with the Text Formatter and the Mail Merge Option TI-Writer calls the necessary data from this Value-File to insert in the appropriate space. In most cases you should receive the outstanding refund within a few weeks after your inquiry.

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See disk versions for requirements i.e. TEII		
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System Recommended		
PHM 3151	Bigfoot (MBX Expansion)	9.95
System Recommended		
PHM 3152	Meteor Belt (MBX Expansion)	9.95
System Recommended		
PHM 3153	Super Fly (MBX Expansion)	9.95
System Recommended		

HOME ENTERTAINMENT

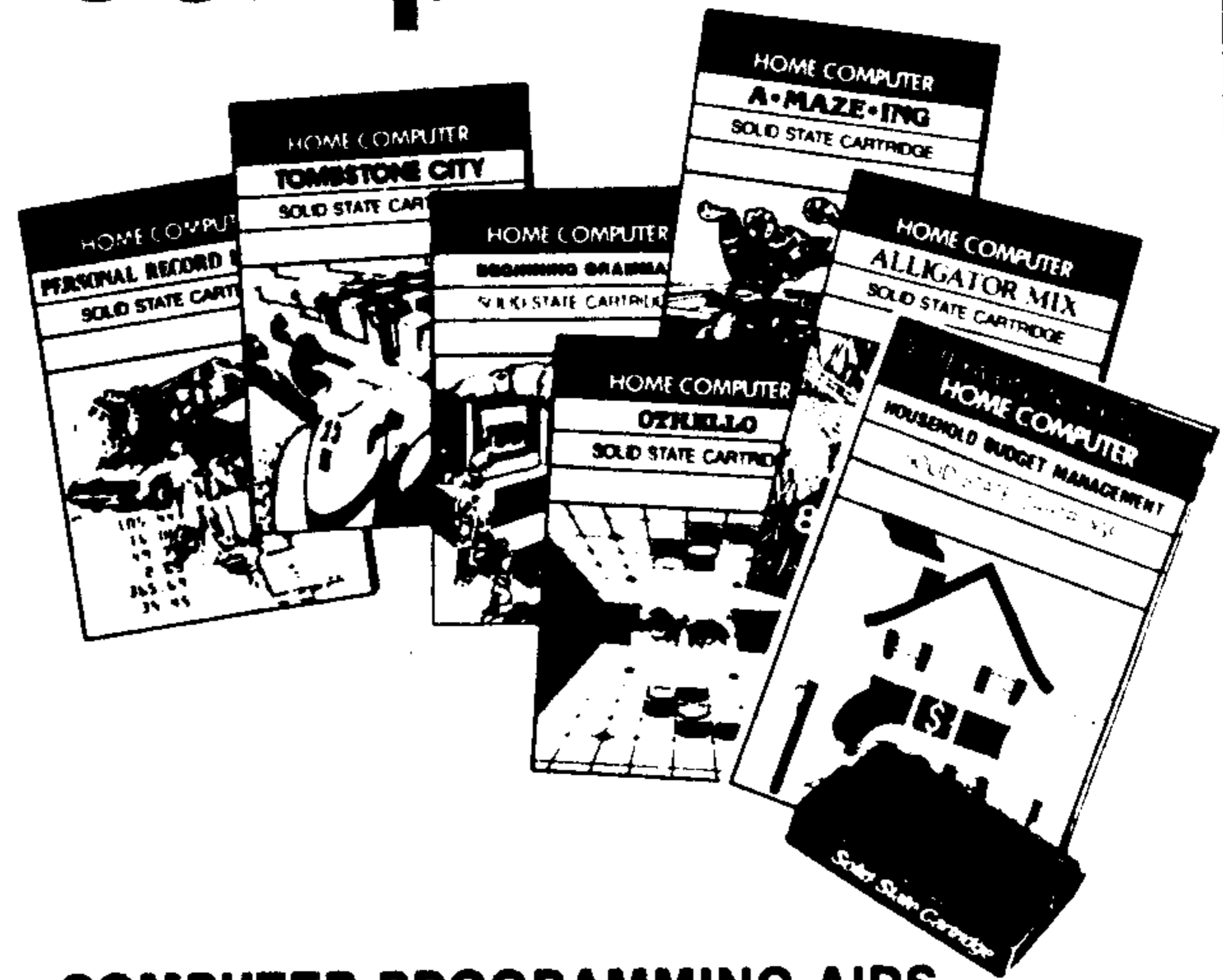
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CASSETTE PROGRAMS

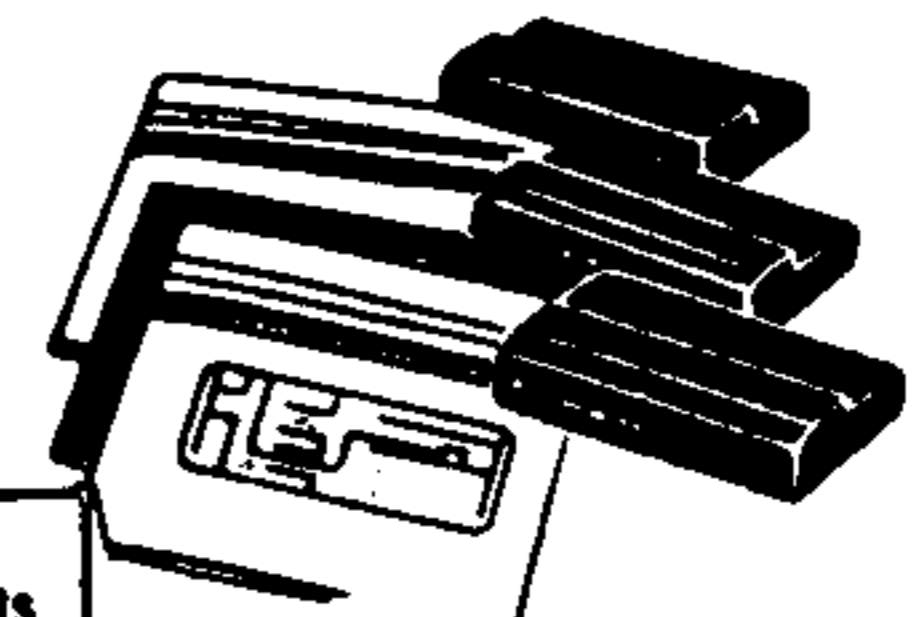
PHT 8006	Math Routine Library	8.95
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DataBioTics announces advisory panel

DataBioTics of California has announced that it is setting up a national advisory panel as a "contact point between the factory and the user group."

According to Bill Moseid of DataBioTics, user groups have been offered the opportunity to have a representative on the panel who will sign a nondisclosure agreement. This will give the user groups an opportunity to have someone in their groups see a product and report on it to them. In addition, a user group can order two copies of each product at a 20 percent discount, one for the user group library and one for the representative.

DataBioTics has released Mini-

Writer II and III, described by the company as "word processors in a cartridge."

According to Moseid, Mini-Writer III has a special interface in the back of the module so you can "just plug it into the printer," and the program can "talk" through the peripheral port to a disk drive or peripheral.

Both M-W II and III offer full-screen editing, 12K text buffer, disk and cassette compatibility, left/right justification, word wrap and variable line length.

Mini-Writer II is priced at \$49.95 and Mini-Writer III at \$99.95.

Disk Master I, described as having

"all the functions of the CorComp Disk Manager plus a lot more" is scheduled for release at the end of September. The program can perform such functions as recovering an inadvertently deleted file or formatting any quantity of disks, according to the company. The program is said to offer full-screen editing, the ability to change text and screen color at any time and the ability to execute four commands at the same time. It works with the TI, CorComp or Myarc disk controller, according to Moseid, and is priced at \$19.95.

PILOT, a computer language often used by teachers, is expected to be released in October or November. PILOT contains only eight commands and enables those who are unfamiliar with computer programming to prepare computer-aided instructional materials. The program also works as a compiler, compiling the PILOT into 9900 machine code. The price is \$24.95.

For further information, contact DataBioTics, P.O. Box 1194, Palos Verdes Estates, CA 90274.

Texnet becomes Source SIG

TEXNET, which operates on The Source, is now a Special Interest Group (SIG). This new status means that TEXNET users will be paying reduced rates, according to Patricia Lobenstein, marketing development manager for Source Telecomputing Corp.

The new rates went into effect Sept.

1. Also debuting with the new rates is 2400 baud capability. However, few users are expected to take advantage of this faster transmission speed because of the high cost of 2400 baud modems.

Following are the new per-minute rates:

(Please turn to Page 40)

BITMAC CONTROVERSY—

(Continued from Page 22)

tents are copyrighted as far as anyone else copying them" and that the company plans to change the notice to credit Vaughn with the copyright.

He says the DataBioTics version of BITMAC differs "mainly in packaging and the quality of the documentation."

Moseid says two months were spent rewriting Vaughn's original manual. Evanbar says the revision included rearrangement of chapters, rephrasing contents and editing. Vaughn says the manual as published by DataBioTics is essentially his.

"They ran my disk file through a spelling fix there and inserted a picture of a keyboard," he says.

"We don't contend we have

copyright on the manual," Evanbar says. As to ownership of the program, he says, "David Vaughn's name is plastered all over the screen."

DataBioTics officials say that Vaughn received the source code for the protection and fast loader for inclusion in BITMAC under the DataBioTics licensure agreement. They say this is proprietary and trade secret information. Evanbar says it was "written by people under contract to us." Moseid says they sent Vaughn more than 800 pages of Apple Macintosh internal documentation on how to do an interface with a mouse and with a joystick, hardware and six disks of proprietary software.

Vaughn, however, says the first time

DataBioTics ever saw the copy protection scheme and loader was "when we delivered it to them." He says he received disks and documents from DataBioTics, but that these did not contain proprietary information.

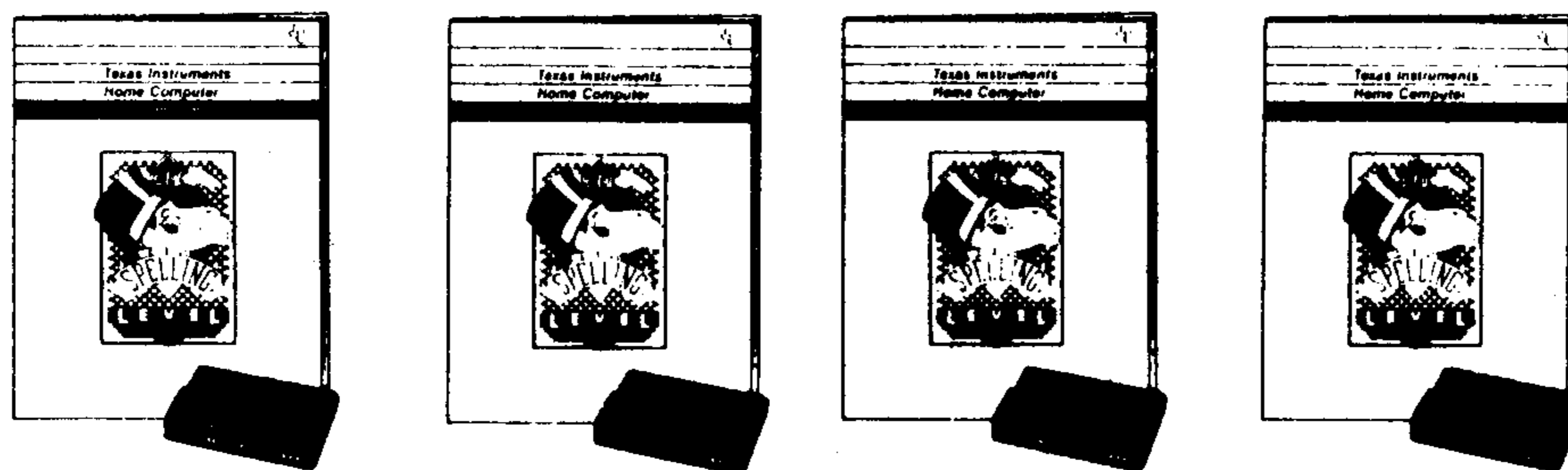
Evanbar says DataBioTics is paying royalties to Vaughn, but "I don't believe he's cashed the checks yet." Vaughn says he has received one check for \$91 which "we have not cashed and we will not cash" because the check represents royalties for copies distributed in violation of Vaughn Software's copyright. He says that while the check represents royalties for 31 copies, a copy with serial number 118 of the program was distributed by DataBioTics to *Computer Shopper* magazine.

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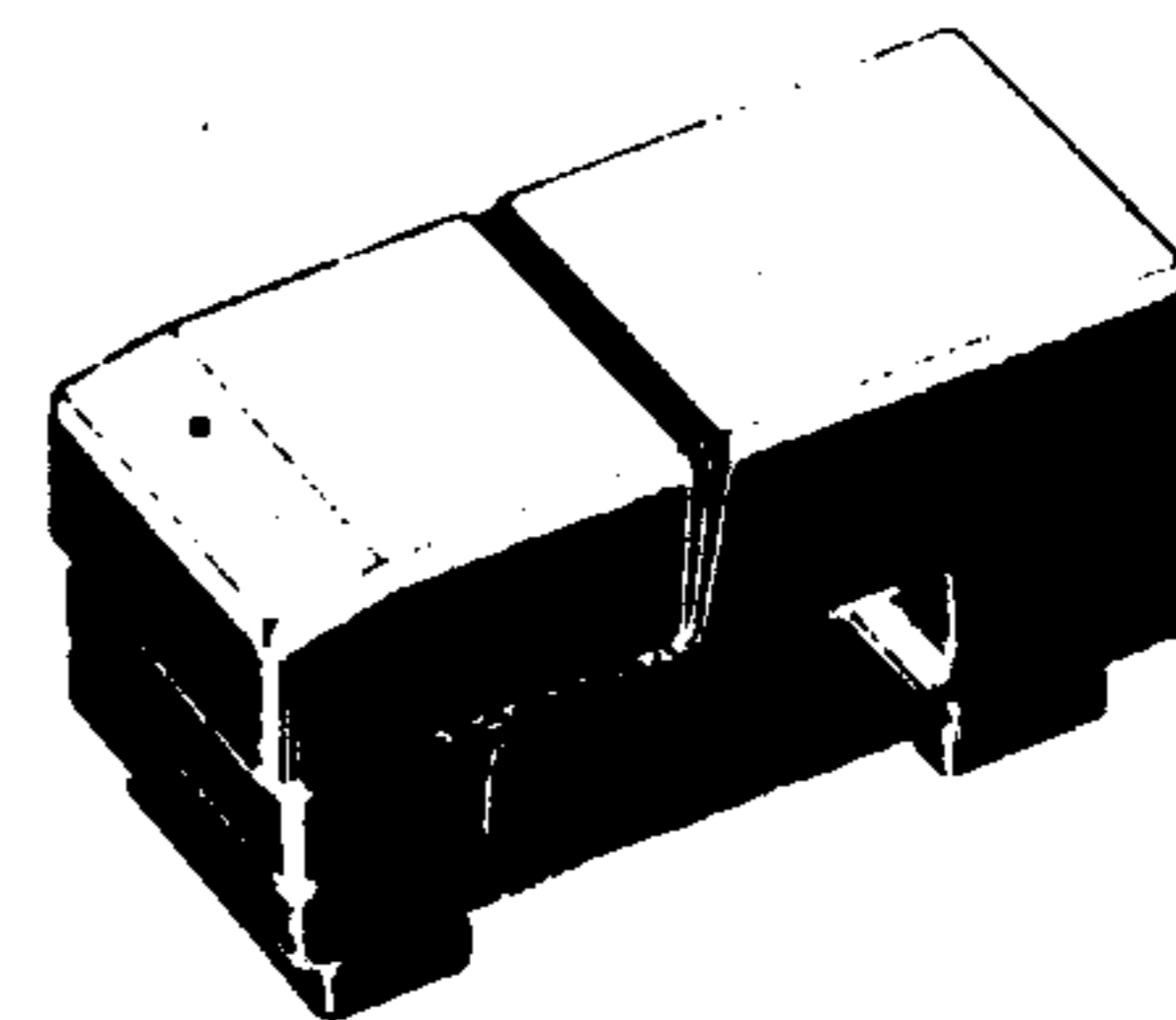
This 4-module and 4-volume instruction book series retailed at \$219.80 when introduced in 1982. TEX-COMP has them all and is selling this entire set at the unheard of price of

\$19.95

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Midnite Mason

Climbing up to the top

By JOHN KOLOEN

Midnite Mason should have been a successful game in terms of its sales. It is arguably one of the most professionally done climbing games for the TI, featuring a toe-tapping "sound-track," excellent graphics and sound effects and outstanding response, whether using the keyboard or joystick for input. Unfortunately, Software Specialties Inc. didn't hit the market with much of an impact and thus is in the process of liquidating its remaining cartridges of *Midnite Mason*, and that's a shame. For the most part, only users with a fully configured system will have an opportunity to play this outstanding game. But at \$10 this has to be one of the best bargains around in game software.

Performance: The object of *Midnite Mason* is to collect tools that were left scattered throughout a building that is under construction without being caught by a quartet of ghosts. As the midnite mason, you start at the right bottom corner of the screen while the ghosts descend from the top. Vertical movement of the ghosts and the mason is accomplished by climbing stairs while horizontal movement is negotiated over brick floors. The mason's principal weapon is the ability to chop holes in the floors, through which the ghosts will fall. The mason may also brick over holes in the floors.

The game provides three masons, or lives, and six different levels. The object at each level is to collect seven tools left behind by the mason. However, if a ghost touches a mason, it's curtains. Three masons and you're out.

To make things more interesting, the mason must collect all seven tools in 90 seconds or less. After 90 seconds, the mason evaporates and the level is started with the next mason. If no mason is left, the game ends. The player may obtain additional

Review

Report Card

Performance	A
Ease of Use	A
Documentation	A
Value	A
Final Grade	A

Cost: \$10 (diskette), \$5 (cartridge)
Manufacturer: Software Specialties Inc., P.O. Box 3304, Evergreen, CO 80439

Requirements: (cartridge) console, monitor or television (joysticks optional); (diskette) disk system, expansion memory and Extended BASIC

masons for each 5,000 points scored, which is no mean feat.

As noted above, the graphics are excellent, with the masons represented by a human-shaped figure. The ghosts are each a different color. Ladders are blue and scattered throughout the building. Locations of ladders and floors change at each level. The bricks in the floors

look like bricks.

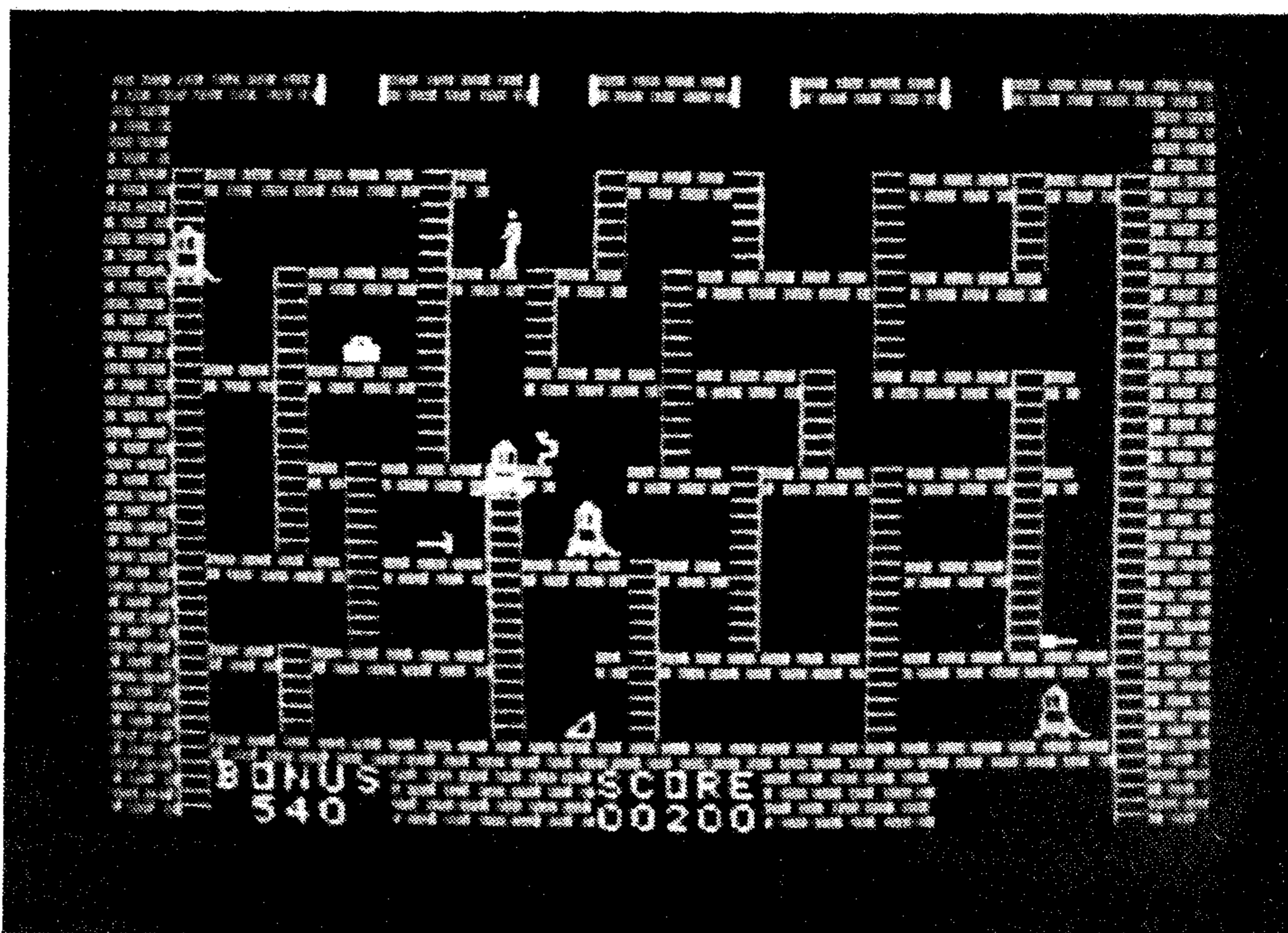
The sound effects include an appropriate sound for chopping through a floor and a different sound when laying bricks to repair a whole. All the while, there is a jazzy tune being played in the background that grows louder when the game ends. It's a familiar tune, but I can't quite put a handle on it. I think I've heard it on a circus caliope at sometime.

The game also includes a pause key, which is convenient. The high score is recorded for as long as game remains loaded in the computer.

Documentation: The documentation consists of a single page of typeset copy. It tells you how to start the game, how to control the mason, how to play and gives a few tips on strategy.

Ease of Use: Nothing could be easier. I used the cartridge-based version and all I had to do was pick up the joystick. The title screen instructs you to press the REDO key to get started. I did not read the instructions until I began to write this review. It wasn't necessary.

Value: It would be difficult to get a
 (Please turn to Page 40)



Myarc 32/128K Card

Placing your files in RAM

By WARREN AGEE

Among the many Peripheral Expansion Box cards manufactured for the TI, one card stands out in the TI community as being truly unique, and that is Myarc's 32/128K card. Although Foundation's card has been available for quite some time, this one is surprisingly different.

Performance: The Myarc card comes in two different versions; one equipped just with 32K to replace your present 32K card. This can later be upgraded to the 128K version. The second version comes equipped with 128K, which consists of the standard 32K plus three additional banks of 32K each. The 128K version is also equipped with a RAM disk and a print spooler.

To utilize either the RAM disk or the print spooler, memory has to be partitioned first after every power-up. This can be done from either BASIC or X BASIC with the command CALL PART(x,y). A total of 96K is available. This must be divided up between the RAM disk and spooler with the above command. The values of x and y must be whole numbers whose sum is 96. To reserve all 96K for the RAM disk, you type in CALL PART(96,0).

Once the user partitions the memory for the RAM disk, he may also give this a "volume name." Don't be confused by this term; it is just another name for a diskname. Naming the RAM disk is done with the command CALL VOL("vol-name"). To obtain a directory of the RAM, use CALL RD-DIR. The directory literally zooms up the screen and appears in the same format as the Disk Manager directory. Now that the RAM is set up, the user may perform any disk processing tasks on the RAM disk as if it were a normal disk drive. This includes running programs (BASIC, X BASIC and assembly), as well as file I/O.

The RAM disk may be addressed in one of two ways. The first is by using

Review

Report Card

Performance A-
Ease of Use A+
Documentation C
Value A-
Final Grade A

Cost:\$250

Manufacturer: Myarc, Inc., 241
 Madisonville Rd., Basking Ridge, NJ
 07920

Requirements: Console, monitor or
 TV, TI Peripheral Expansion Box, disk
 system recommended, printer is op-
 tional

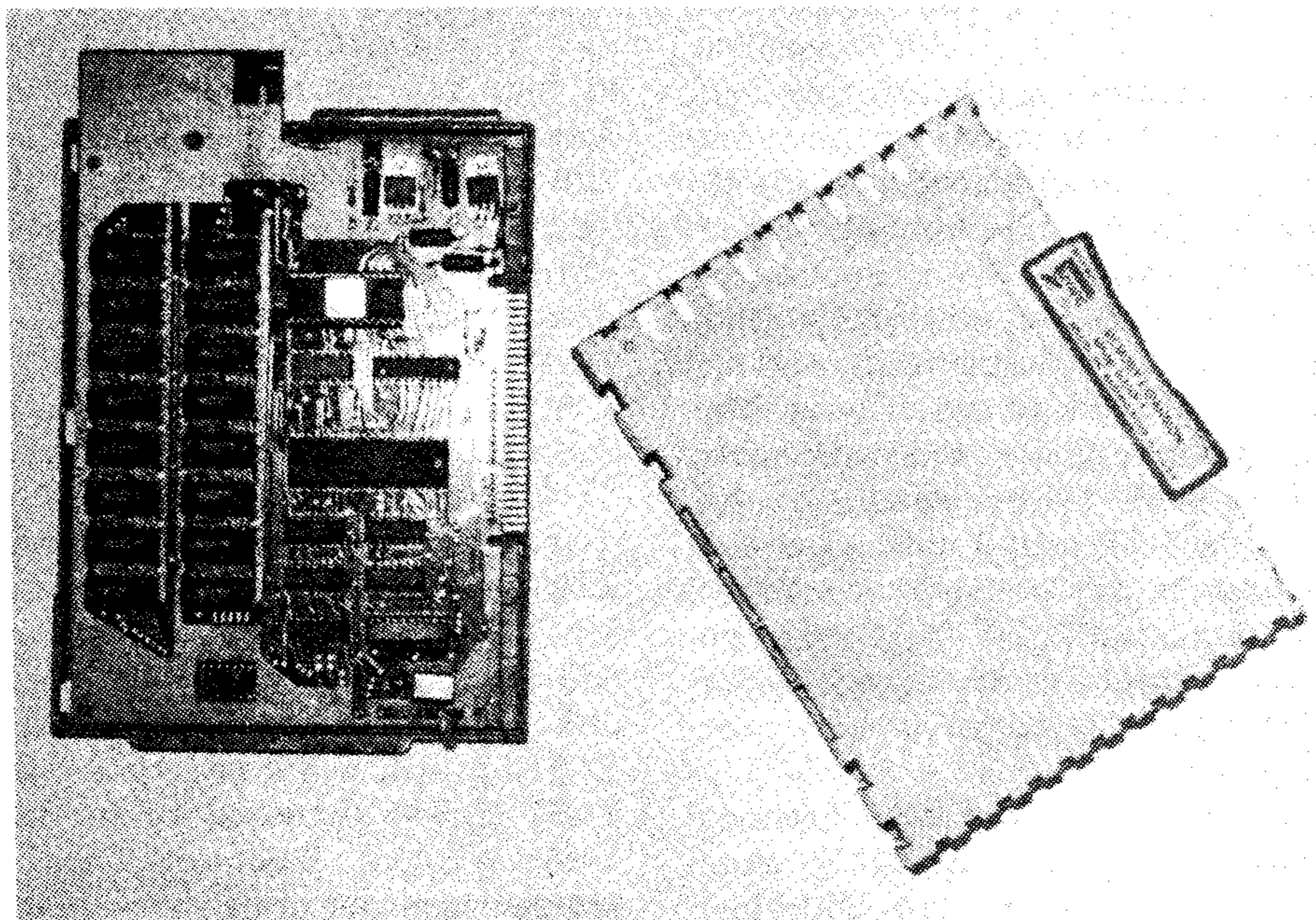
the prefix RD instead of DSK1 in the filename.

The second, and more powerful way, is to configure the RAM disk to emulate disk drive 1, 2, 3, 4 or 5. The command CALL EMDK(X) accomplishes this, where x represents the drive to emulate. Of course, emulating a drive you already have (like DSK1) effectively disables that disk drive since you cannot reconfigure disk drives, on-

ly the RAM disk. The most obvious use of this technique, for example, is to load all the TI-Writer files into the RAM disk for retrieval. This is done by first partitioning the RAM, giving it a volume name, then executing a CALL EMDK(2) to make the RAM disk accessible to Disk Manager. Now, with Disk Manager, copy the entire TI-Writer disk to drive 2, the RAM disk. Practically all of the time is spent reading the files off the disk and a fraction of a second is spent copying them to the RAM disk.

(Another way to access TI-Writer for those with two drives is through the Utility function, after partitioning memory and entering EMDK(1). Simply load the TI-Writer program disk into DSK2 and enter DSK2.EDITA1 under the Utility function. The TI-Writer program will load and you will be able to read the RAM directory using the S(how) D(irectory) command of the TI-Writer editor. Not entering emulate disk (EMDK) prior to loading the program will stop you from accessing the RAM disk directory.—ED.)

Once TI-Writer is in RAM, go back
 (Please turn to Page 38)



MYARC 32/128K CARD—

(Continued from Page 37)

into BASIC and enter CALL EMDK(1). Now simply enter TI-Writer and hit "1" for Editor; in the bat of an eyelash, your editor loads and is ready to run.

Since I am an avid FORTH programmer, I was excited to think that all my FORTH routines and programs can now reside in RAM. All you FORTHers will be happy to hear that TI FORTH is totally compatible with the RAM disk. Since using Disk Manager to dump the FORTH screens into RAM is not always convenient, the following new word will do the trick. It is just a modified version of FORTH-COPY:

```
: RD-COPY 90 0 DO I DUP . 90 + I  
SWAP SCOPY LOOP ;
```

Now you have a perfect copy of FORTH source screens residing in RAM for virtually instant retrieval.

The RAM disk has a number of other applications, including processing data base files and downloading files from bulletin boards. For example, using XMODEM transfers with FAST TERM on CompuServe's TI Forum, the RAM disk cuts down the access time by 1 second/record on the average. Obviously, the savings will be insignificant with small files, but the larger the file, the greater the savings.

(The RAM disk is also compatible with Microsoft Multiplan. However, the SPPIO command for the print spooler did not appear to have any effect when on the Multiplan print routine.—ED.)

There are several programs which I have found to be incompatible with the Myarc card in a variety of ways. The first group consists of most third-party copy utilities. These programs do work with the 128K card installed, but you will not be able to dump the contents of a disk into RAM. This list is by no means exhaustive: Sectorcopy, Quick Copier II, Floppycopy, Turbocopy and Copy Cat.

Fortunately, at least two copiers do indeed work with the RAM disk: Masscopy V3.23 and Nibbler.

Although Masscopy, by Stephen Lawless, has an option for accessing 128K, this will only work with Foundation's 128K card. No matter, for emulating DSK2 and copying to the RAM disk works beautifully with both of the above programs.

Unfortunately, another problem arises with Masscopy; it will not format the object disk at all. Even when the RAM disk is disabled, Masscopy refuses to do any formatting. So, by using the RAM disk with Nibbler, Masscopy, Disk Manager II, or DM1000, you have in effect a single-pass copier.

Finally, the most disturbing incompatibility occurs with TI-Artist. Even though Myarc states that this card is 100 percent compatible with all software, TI-Artist will not even boot in completely.

The print spooler feature of the Myarc 32/128K card is much easier to understand and utilize. Firstly, one must partition the RAM for use as a print spooler. CALL PART(0,96) reserves 96K of ram for the spooler. Now it is just a matter of naming your print devicename PS/2 or PS/2 (instead of RS232) or SPPIO (instead of PIO). With TI-Writer, a few seconds is spent dumping the text into the spooler, and control is returned back to you. You can now write another document, quit and play a game, or turn off the computer and leave! As long as power is supplied to the card, you can do anything you want! To abort the spooling, go into BASIC or XBASIC and execute CALL ABSP.

At the time of this writing, Myarc is investigating two bugs apparently in the firmware of the 128K card. Firstly, the card will not recognize a CorComp RS232 interface when spooling. Secondly, The card will not tolerate null strings being sent to the RAM disk. This will make even the simplest BASIC program lock up. Also, using FAST TERM to download the text buffer to RAM will not work since the program uses null strings.

Documentation: This is the only area in which Myarc's card rates poorly. Early versions of the manual contained gross inaccuracies. These were supposed to be remedied in an update of the manual, but I still had problems operating the print spooler at first.

The first error I found was in an attempt to correct the manual; a sticker was affixed to the page covering the print spooler which indicated that the command to start spooling through the PIO port is CALL PIO. This is wrong. No such command exists. Yet one would assume that this is a correction since the sticker is apparently covering up erroneous information. (A copy of the documentation received by MICROpendium in August shows the correction as CALL SPPIO—Ed.)

The second instance is not really an error, but it caused me confusion. Enclosed with the manual is a one-page addendum which pretty much corrects all the errors in the manual. However, there is no indication as to what information in the manual is in error, and what is not. What is one to believe—the sticker affixed to the manual or the addendum? The confusion mounted when I tried to use the print spooler with my CorComp RS232 card. I tried following the addendum with no luck. I tried following the sticker with no luck. As far as I was concerned, neither was correct! As I soon found out, I was the one out of luck!

Value: All in all, Myarc's 32/128K card is a fine piece of equipment that greatly enhances the performance of the TI-99/4A. Speed and convenience are its hallmarks. Even with the obscure but serious bug with the null strings, I have used the RAM disk for everything from Forth programming to downloading XMODEM files with absolutely no trouble. Once Myarc corrects the problems above, I heartily recommend this piece of hardware to all users.

GRAPHX Companion

Clipboard for would-be artists

By RON ALBRIGHT

A common business practice in software development for other computers is to develop programs to "coat-tail" the successful software of their own or other companies in order to capitalize on a previously installed consumer base. Perhaps the classic examples are spelling checker programs to enhance the usefulness of a word processor program. Another example is the sale of preformed templates to increase spreadsheet productivity. The phenomenal success of *PRINT SHOP* (Broderbund), a graphics-print program, led the original manufacturer to follow it up with *Graphics Library* and *Graphics Library II* to expand the choice of designs to be used with that program. As the 99/4A community continues to mature and move to the mainstream of software production, the follow-on system of product development has begun to appear among our software developers. First, Dragonslayer's *99/4A Auto Spell-Check* for *TI-Writer* and, now, *GRAPHX Companion* from ASGARD Software.

Of all the recent bevy of graphics programs for the 99/4A, *GRAPHX* (GRAPHX, P.O. Box C568, Clarence St., Sydney, NSW Australia, 2000 (reviewed in the July, 1985 *MICROpendium*) stands out in the minds of many as the leader in this class of software. Perhaps the feature that sets this software above the others is the use of "clipboard" art. With this feature, one can design new character fonts, pieces of larger art to be used by the program much like a type-set for posters, letterheads, and even animated sequences. The *GRAPHX* system comes with a starter disk that includes four character fonts and two animated sequences, quite enough to get one started in producing print art and posters. But, unless you are moderately artistic, your graphics

Review

Report Card

Performance A
 Ease of Use.....A
 Documentation A-
 Value.....A+
 Final Grade.....A

Cost: \$7 (includes postage)
Manufacturer: ASGARD Software
 P.O. 10306, Rockville, Maryland,
 20850.

Requirements: Console, monitor or television, expansion memory, Extended BASIC or Editor Assembler or Mini Memory, Disk Disk Drive, GRAPHX system disk.

would be limited to these sets until you had the time or patience to create your own.

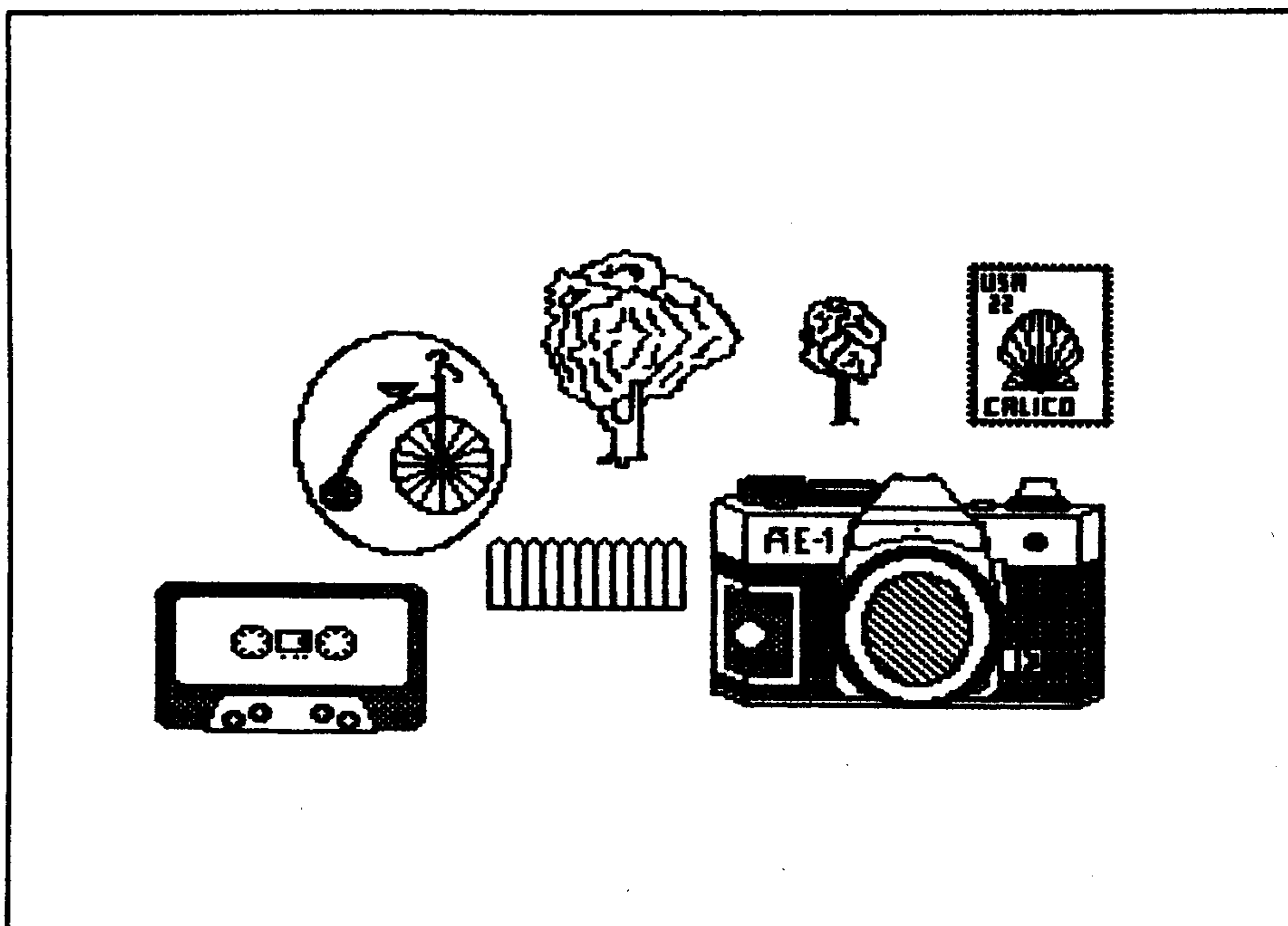
ASGARD Software has now made it easy for the non-artists among us (which includes yours truly) to be more

productive with *GRAPHX* and have made the purchase of *GRAPHX* even more of a smart buy.

With the *GRAPHX Companion* disks (I say "disks" because the package comes on a floppy with both sides used), you get 10 different character fonts. Some of the more useful ones are the CFONT10, which is a very small character size (similar in size to the 64-column font used with *TI-Forth*, thus, a useful size to label inconspicuously, your designs. Another is an "inverse" font with white letters appearing against a block black background. The others are well-done and also useful for larger printing.

Further, you get four demonstrations of the computer animation made possible with *GRAPHX's* clipart facility. Additionally, you receive some really nice full-screen graphics done by the author. Three have a "space" motif (a cut-away and labeled schematic of the sun's layers is one) and all are great to look at and get an idea how you can go about drawing your own.

(Please turn to Page 40)



FOSTER—

(Continued from Page 28)

how long he has been online, running up bills. When he announced his leaving, an outflow of letters of appreciation appeared from members of the TI Forum.

For the last part of his stay on the TI Forum, his wife, Laura Foster, typed in his messages.

Albright describes Laura Foster as "a rock. She's a remarkable, together lady. Alzheimer's patients are very difficult to deal with, more so even than a diabetic or a heart patient—with those, you can leave them alone, but when someone has Alzheimer's you have to keep an eye on them all the time, because they can get so confused. The Fosters have held up well under situations that would bust apart the best of families."

"He's a tremendous guy," Traver says. "He's like your next-door neighbor, yet he is an internationally known figure. Back when TI announced it was going to stop making the 99/4A, Stephen was one of those who kept us hanging in there with TI."

MIDNITE MASON—

(Continued from Page 36)

better game for the \$10 Software Specialties is asking for the disk-based version. I know, TI really slashed the prices of its cartridge-based software (Microsurgeon was selling for \$5 at one time), but even so this game is hard to beat at this price. It is easy to play and kept my attention for quite some time. The kids liked it, too.

CTRL U—

(Continued from Page 20)

tinue typing your copy. When you've finished creating your document, save it on the same disk that holds the Transliteration File, then print it in the usual manner using the TI-Writer formatter. The formatter will read the

Transliteration File making it possible for it to send to the printer the commands you have previously typed into your document.

By setting up a Transliteration File of control characters that are consistently available and that are mnemonically based for ease of use, you can enhance the look of your documents by including a variety of commands that make your printer perform. You are really only limited by the features available on your printer. So go to it, take command of the TI-Writer CTRL U command feature.

G-COMPANION—

(Continued from Page 39)

All the above are useful and potentially productive features of *GRAPHX Companion*. However, the feature I like the best are the clipart sections. Of the 40 or so sketches (I didn't count, but that's a good guess) you will find some real beauties. There is clipart of the TI Peripheral Expansion Box and the 99/4A console that are, without a doubt, the very best sketches of this TI equipment I have ever seen. They can be dumped to a full-page printout and make great displays, newsletter covers, etc. Others that stand out in my mind are a large Canon AE-1 camera, a cassette tape, a "DOS" disk, a gorgeous antique car, stamp, tricycle, a set of clipart (11 in number) to create a pastoral scene (trees, fences, flowers), a set of textures to be used to shade your drawings, and a set of miscellaneous shapes as building blocks for your own drawings.

I am, quite obviously, unable to describe in adequate detail how professionally these designs were done but they are impressive. They all print out on your printer beautifully and have myriad potential uses.

Ease of Use: If you have *GRAPHX*, you will have no difficulty using these files. They are flawlessly loaded with *GRAPHX* and I encountered no problems whatever only having used *GRAPHX* a few times before.

Documentation: The documentation is entirely adequate. The four pages of

printed material describes the file names, what is in each set of files, actual printouts of the graphics in each file, and even makes suggestions on how they might be used. Also in the documentation is the company's replacement policy for disks (free for 90 days from purchase) which is quite liberal.

Value: I sincerely believe this graphics package is the best buy I have seen in software in some time. Getting a two-disk set of artwork which, even with *GRAPHX*, is time-consuming and tedious to construct, is a steal at \$7, including postage. You will not find a similar buy anywhere in our market.

GRAPHX Companion has changed my whole approach to computer graphics design. Being one that requires inspiration to attack something with gusto, *GRAPHX Companion* has given me that. I now am using *GRAPHX* (and Companion) almost daily, cranking out personal graphics and clipart. Once you see what can be done with *GRAPHX* by using its Companion, you will surprise yourself at the art you can create and use.

TEXNET—

(Continued from Page 34)

	Prime	Non-Prime
300 baud	.18	.10
1200 baud	.23	.13
2400 baud	.25	.15

According to Lobenstein, The Source will be distributing a TEXNET manual to TEXNET subscribers at no charge. TEXNET subscribers have the prefix "TI" preceding their identification numbers. Current Source subscribers who do not have a TI prefix, or those who would like to subscribe, may do so by contacting The Source at (800) 336-3330.

The new rates are applied only while actually using TEXNET. Use of other Source services, such as SMAIL and PARTI, is charged at the standard Source rate per minute, which follows:

	300	1200	2400
U.S. Prime	.36	.43	.46

(Please turn to Page 43)

Newsbytes

TI-Faire slated Nov. 2

The Chicago-Area TI99/4A User's Group's third annual TI-Computer Faire is scheduled for 10 a.m.-5 p.m. Nov. 2 in the Ironwood Room at Triton College, 2000 North Fifth Ave., River Grove, Illinois.

The Faire committee has plans for guest speakers, game contests, seminars on TI-related topics, drawings and door prizes, as well as hardware and software displays by vendors, according to Sandra Bartels, group secretary.

Bartels noted that more than 1,500 persons from the United States and Canada attended last year's Faire.

Admission is \$1 to members of TI users groups with proof of membership, \$2 general admission.

Bartels said a table is planned at which visiting users groups can promote their organization and recruit members, as long as they sell no hardware.

For further information, write the Chicago-Area TI99/4A Users Group, P.O. Box 578341, Chicago, IL 60657 or call the group's 24-hour BBS, (312) 966-2342.

TRAVeLer debuts

The TI-99/4A TRAVeLer is a new magazine-on-disk, published bimonthly, with 700 sectors each issue (SS/SD "flippy" or DS/SD), including articles and ready-to-run programs by such TI notables as Jonathan Zittrain, Tom Freeman, Mack McCormick, and Tom Weithofer. The cost is \$30 for a six-issue subscription, with the first issue scheduled to appear September 1985. To subscribe, write to Barry Traver, Editor, Genial Computerware, 835 Green Valley Dr., Philadelphia, PA 19128 (phone: (215)483-1379).

Price for DBM cut

Chuck Humphrey, president of Navarone Industries, announces that Navarone is lowering its suggested

retail price of the Data Base Manager by almost 30 percent to \$49.95.

The price change is effective Sept. 15.

For further information, contact Navarone Industries, 19968 El Ray Lane, Sonora CA 95370 or (209) 533-8349.

Wrong number

The wrong number was listed in the August issue for Jim Lewis' "Techie" bulletin board in Champaign, Illinois. The correct number is (217) 359-3431.

BBS systems released

A Dial-A-Match® bulletin board and custom bulletin board software are now available from Texaments.

The bulletin board systems are copyrighted and licensed jointly by Texaments and Steve Lamberti Productions.

Dial-A-Match is said to be similar to the Dial-Your-Match systems operating on Commodore and Apple computer systems. The software is said by the manufacturers to be "a source for people to contact each other without regard to their sexual preferences."

Some of the features the board is said to support are full screen mode operation, 300/1200 baud operation, public and private message bases, a questionnaire system for logical matching and browsing, access level protection system, on line file area, character-by-character carrier detection, full duplex chat mode and full featured split-screen editors.

The software package requires a TI99/4A, 32K memory expansion, RS232 interface one of three drive configurations (two DS/DD, three DS/SD or three SS/SD), parallel printer, Hayes Smartmodem and Extended BASIC.

Base price for a complete system is \$119.95. Modifications can be made to the software if desired, according to the manufacturer.

Incorporated in all the custom

bulletin boards offered, according to the manufacturers, are full screen mode operation, 300/1200 baud operation, access level activated protection system, character-by-character carrier detection system, full duplex chat mode and full-featured split screen editors.

Optional features may include Terminal Emulator II protocol file transfers, on-line file areas, single or multiple message bases, on-line poll and graphics.

The minimum system configuration for a custom bulletin board is a TI99/4A, 32K memory expansion, RS232 interface, one disk drive, Hayes Smartmodem and Extended BASIC.

For further information, contact Texaments, 53 Center St., Patchogue, NY 11772.

99'ers Workshop set

The first North Eastern 99'ers Workshop is scheduled for 10 a.m.—4:30 p.m. Sept. 29 at Le Foyer Club in Pawtucket, Rhode Island.

Frank Ross, workshop chairman said the workshop is open to TI club members who show a current membership card free of charge, and to nonmembers for \$1.

Demonstrations and tutorials are planned on computer aided design, assembly language, printers, TI-Writer, BASIC, Multiplan, Disk Doctor, speech, graphics, advanced diagnostics and files.

Also scheduled are video demonstrations, "sell and swap," technical advice, a kids' corner, program library exchange and refreshments. Exhibits by dealers are planned.

For further information, contact Ross at 76 Herschel St., Providence, RI 02909 or (401) 331-6342.

Newsbytes is a column of general information for TI99/4A users. It includes product announcements and other items of interest. The publisher does not necessarily endorse products listed in this column. Vendors and others are encouraged to submit items for consideration. Items submitted will be verified by the staff before inclusion and edited to fit the Newsbytes format.

User Notes

Scroll down

David Enterline, of New Waterford, Ohio, offers a scrolling routine that can be called from any Extended BASIC program. (Expansion memory is required.) A sample test program is included to demonstrate how to call the routine using CALL LINK (see line 230). The routine follows:

```

100 ! *****
110 ! * SCROLL DOWN *
120 ! *****
125 ! -----
130 CALL INIT
140 CALL LOAD(8196,63,248)
150 CALL LOAD(16376,83,67,82
,76,68,78,48,0)
160 CALL LOAD(12288,2,224,13
1,224,4,192,2,1,37,20,2,2,2,
224,4,32,32,44)
170 CALL LOAD(12306,2,1,36,2
44,2,2,3,0,4,32,32,36,4,91)
180 FOR C=9460 TO 9492 :: CA
LL LOAD(C,128):: NEXT C
190 ! -----

```

Here is a brief test program demonstrating the scrolling action. It can be modified by changing the FOR TO parameters in lines 220 and 230:

```

200 CALL CLEAR
210 PRINT "*-TEST-*"
220 FOR UP=1 TO 20 :: PRINT
:: NEXT UP
230 FOR DOWN=1 TO 20 :: CALL
LINK("SCRLDN"):: NEXT DOWN
240 GOTO 220

```

MP printer control

Have you ever wanted to gain control of your printer through Microsoft Multiplan? You know, send printer controls using spreadsheets created with Multiplan? Well, according to Curtis Ringold of the Mid-South Users Group, it is possible, though it takes a little time. The following information is a condensed version by Walt Maes of Ringold's solution, which appeared in The Suncoast Beeper, the newsletter of the Suncoast 99ers.

Requirements are Multiplan and a program that allows single sector disk access. We'll do this in steps to minimize the confusion. It is recommended that the following be done using a newly initialized disk to make it easier.

Step 1: Get into Multiplan.

Step 2: In Row 1, Column 1, using Alpha, enter ABC.

Step 3: Press T for transfer. Press O for option, select Symbolic and press enter.

Step 4: Press T then Save. Enter a filename and press enter. The ABC sheet has now been saved.

Step 5: Leave Multiplan and load your single-sector disk access program. Assuming that you used a newly initialized disk, use the program's editor to go to sector 022.

Step 5: Depending on the capabilities of your sector access program, you may see the characters ABC or, if it doesn't display ASCII, you will see hex codes for ABC. The hex numbers representing ABC should appear as 41, 42 and 43. Replace these numbers with the following: 0F, 1B, 47.

Step 6: Save these changes to disk.

Step 7: Reenter Multiplan. Press T, then select Symbolic and enter. Press T, then load the file you saved. Examine R1C1. Instead of ABC, you should see a control character and the letter G.

Step 8: Press T, then Option and move the cursor to Normal. Press enter.

Step 9: Resave this file under a new name. This cell may now be called up and placed anywhere in a spreadsheet to send a control to the printer, in this case a Gemini. The control here created is for condensed, double-strike.

Step 10: To insert this printer control into a spreadsheet, type X for External and C for Copy. Enter the name of the second file you created containing the control character. Press Control A. Type in R1C1. Press CTRL A. Type in the cell location you want the control character to appear in the spreadsheet. Press CTRL A. At the prompt for link-

ed files select No and press enter. The command should now appear in the worksheet at the cell location you entered. It is now ready to take control when the spreadsheet is sent to the printer.

There is no reason why you should stop with one printer control. You can enter a series of printer control commands and insert them wherever you like in your spreadsheet. You may do this by entering a series of single-cell references into a single file that would be called up based on cell location of the command or you may file them individually. Regardless of how you go, you now have the ability to take full control over your printer while using Multiplan, a very useful ability indeed.

ACCEPTed

From Joseph L. Nuvolini Jr. of Colorado Springs, Colorado: "In reference to Page 43 'Acceptable,' your August issue. The following ACCEPT AT statement will handle a string of up to 255 characters:"

```

ACCEPT AT(1,1)VALIDATE(NUMERIC,UALPHA,"all other characters you want accepted")BEEP:L$(0*0)
DISPLAY AT(10,1):L$(0)

```

More than 80

Todd Staszak, president of the 99/4A Users of Canada, P.O. Box 1252, Lambeth, Ontario, N0L 1S0, Canada writes: "In the June 1985 issue of your magazine, there was a letter from a person who wanted program listings in condensed print on their Gemini printer. The problem, however, is that the TI RS232 cuts the lines off at 80 characters."

"The only solution I can think of is to first list the program to a disk, with LIST "DSK1.filename" and then run a program, such as the one included (see below). My printer, in compressed print, prints 142 characters per line, so you may have to change the length in line 190. You may also have to change

(Please turn to Page 43)

User Notes

(Continued from Page 42)

the control codes in lines 200 and 310. Line 200 starts compressed characters, and line 310 stops them."

```

100 CALL CHAR(124,"FF00FF",1
26,"3C429DA1A19D42C3")
110 DISPLAY AT(1,6)ERASE ALL
:"CONDENSED LISTER"
120 DISPLAY AT(2,6):"!!!!!!
!!!!!!"
130 DISPLAY AT(4,4):"~1985 B
Y TODD STASZAK"
140 DISPLAY AT(11,1):"PRINTE
R FILENAME:"
150 DISPLAY AT(11,1):"PIO"
160 ACCEPT AT(11,1)BEEP SIZE
(-28):P$
170 DISPLAY AT(13,1):"DISK F
ILENAME: LIST"
180 ACCEPT AT(13,16)BEEP SIZ
E(-10):D$
190 OPEN #1:P$,VARIABLE 142
200 PRINT #1:CHR$(15);"
                                PROGRA
M LISTING BY CONDENSED LISTE
R, (C)1985 BY TODD STASZAK"
210 OPEN #2:"DSK1."&D$,INPUT
,DISPLAY ,VARIABLE 80
220 LINPUT #2:A$
230 IF LEN(A$)<80 THEN 280
240 LINPUT #2:B$
250 A$=A$&B$
260 IF LEN(B$)<80 THEN 280
270 GOTO 240
280 PRINT #1:A$
290 IF EOF(2)THEN 310
300 GOTO 220
310 CLOSE #1
320 CLOSE #2

```

Centering text

The following routine comes from the TI99/4A Home Computer Users Group of Perth, Australia. The routine can be used in a BASIC or Extended BASIC program to center inputted text on the screen. The centering is done by line 170. Although this sample allows the centering of only one line of up to 28 characters, it can be modified to center more than one line. Here's the program:

```

100 REM *****
110 REM *   CENTRE   *
120 REM *****
130 REM
140 CALL CLEAR
150 INPUT "MESSAGE: ":MESSAG
E$
160 CALL CLEAR
170 PRINT TAB((28-LEN(MESSAG
E$))/2);MESSAGE$
180 GOTO 150
190 END

```

Running text

This program comes from the Mid-Atlantic Ninety Nine'ERs (MANNERS). According to Maurice Swinnen, the program was picked up from a European computer club. This program was written by a Dutch programmer, Swinnen wrote in the MANNERS Newsletter.

The program generates large character sprites as a banner, with the words formed in lines 120 and 130. The number of repetitions in the FOR-NEXT loops must equal the number of characters in each word, spaces included. Line 140 changes the colors of the sprites.

Below these large letters, starting at line 200, a message is created that crawls across the bottom of the screen. Lines 200-220 are used to concatenate message into a lengthy chain. There is no limit as to how many message lines may be strung together. Line 300 creates the crawl effect. The CALL SOUND is incidental and may be dispensed with if desired. Here is the program:

```

100 CALL CLEAR
110 CALL SCREEN(2):: CALL MA
GNIFY(2)
120 T$="MANNERS" :: FOR X=1
TO 7 :: CALL SPRITE(#X,ASC(S
EG$(T$,X,1)),2,20+4*X,50+16*
X):: NEXT X
130 T$="99-ER CLUB" :: FOR X
=1 TO 10 :: CALL SPRITE(#X+B
,ASC(SEG$(T$,X,1)),2,80+4*X,
15+16*X):: NEXT X
140 FOR COUNT=1 TO 2 :: FOR
X=3 TO 16 :: FOR Y=1 TO 20 :

```

```

: CALL COLOR(#Y,X):: NEXT Y
:: NEXT X :: NEXT COUNT
150 REM
160 REM
170 REM
180 REM
190 REM
200 RUN$="NOW HEAR THIS:...T
HIS ROUTINE WILL LET YOU CRE
ATE AN AMUSING SCREEN THAT W
ILL...."
210 RUN$=RUN$&"CAPTURE THE A
TTENTION OF ANYONE WHO SEES
IT. THANKS TO THE...."
220 RUN$=RUN$&"MANNERS 99-ER
CLUB FOR UNCOVERING IT.....
ENJOY!....."
230 GOSUB 290
240 END
250 REM
260 REM
270 REM
280 REM
290 FOR SET=1 TO 9 :: CALL C
OLOR(SET,16,6):: NEXT SET
300 RUN$=RPT$(" ",28)&RUN$ :
: FOR LT=1 TO LEN(RUN$)+1 ::
DISPLAY AT(20,1):SEG$(RUN$,
LT,28):: CALL SOUND(150,1000
,22,-5,7):: NEXT LT
310 RETURN

```

TEXNET

(Continued from Page 40)

Non-Prime	.14	.18	.20
Foreign Prime	.36	.43	.46
Non-Prime	.14	.18	.20
Alaska Prime	.48	.55	.58
Non-Prime	.34	.38	.40
Hawaii Prime	.36	.43	.46
Non-Prime	.22	.26	.28
Canada Prime	.36	.43	.46
Non-Prime	.18	.22	.24

For areas without daylight savings time prime time hours are from 6 a.m. to 5 p.m. from the last Sunday in April to the last Sunday in October. Holiday rates (non-prime) are in effect New Year's Day, July Fourth, Labor Day, Thanksgiving Day and Christmas Day.

Freeware (or nearly so)

Freeware policies

This page is a regular feature of MICROpendium that is published every other month. MICROpendium makes no claims as to the validity of any Freeware offer, nor is there any guarantee that any software will be suitable for any purpose.

FREWARE REQUIREMENTS

- disks sent for freeware must be initialized;
- unless otherwise stated, you must include a stamped, self-addressed return mailer to receive the Freeware;
- be patient, those offering Freeware are not doing it for a profit;
- report any problems you have to MICROpendium.

Software updates

MICROpendium is offering file updates for TI-Writer and Microsoft Multiplan. Also offered at no charge is Super Bugger and an Extended BASIC loader for TI-Forth.

The TI-Writer enhancements offer new printer defaults and true lowercase letters. Multiplan enhancements include an auto-repeating cursor that speeds up program operation. The Forth loader allows TI-Forth to be used with Extended BASIC rather than the Editor/Assembler. Super Bugger is an improved version of TI-Debugger.

TI-Writer and Multiplan updates all fit on a single-sided disk. Super Bugger will fit on a single-sided disk. All three will fit on a double-sided diskette. The Forth loader requires a single-sided diskette. Order the Forth loader separately from the updates and SBUG. Send the appropriate number of diskettes to Freeware, c/o MICROpendium, P.O. Box 1343, Round Rock, TX 78680.

TI-Forth is also available. The cost is \$20 and includes the 232-page manual, the system disk with screens, a demo disk, postage and packaging. Purchasers are asked to include two initialized single-sided diskettes. MICROpendium will supply a third disk containing the source code for TI-Forth at no extra charge.

To order, send check or money order and two diskettes to Forth, c/o MICROpendium, P.O. Box 1343, Round Rock, TX 78680.

Free access library

Amnion Helpline is offering TI users its Free Access Library of public domain software. The library consists of 104 diskettes filled with programs for the TI99/4A.

The library is operated as a non-profit entity by Dr. Guy-Stefan Romano, director of Amnion Helpline. The helpline is a free information service for TI users who have questions about products and other aspects of home computing.

The library provides "volumes" of programs. There are 37 diskettes, or volumes, of games; 10 diskettes of graphics-oriented programs; 16 music-oriented diskettes; 14 diskettes of learning materials in many categories; eight diskettes of financial and business programs; seven diskettes of technical, scientific and statistical programs; six diskettes of personal and home use programs; and 6.5 diskettes with miscellaneous programs ranging from baseball statistics to programming utilities. There are also a limited number of Pascal and Forth programs available.

Volumes are \$5 each. The cost includes the single-sided diskette, mailer and postage. Users may send their own diskettes and return postage and mailer and obtain volumes for \$2.50 each. Romano asks that users send no money until writing for information, as there are programs for which no copy fee is charged.

Volumes on double-sided diskettes are \$8, \$4 if the purchaser sends a diskette, mailer and postage.

All programs may be copied and redistributed freely as long as no charge is made for them.

The library also will supply particular programs to fit specific purposes to any user who sends an initialized diskette with return mailer and postage. Enclose a note describing the type of program desired. Amnion will return the diskette with programs that fit the description.

Users are encouraged to donate programs to the library. There is no payment. Include a note stating that the program submitted is to be placed in the public domain.

Order forms for software volumes are available from the library. For more information, contact Amnion Helpline at (415) 753-5581 from 9 a.m. to 4 p.m. (Pacific time) or write to 116 Carl St., San Francisco, CA 94117.

Weather forecaster

Gary Cox offers two programs. The first is called "Weather Forecaster," and Cox says it will forecast the weather for any place in the U.S. "with what I think of as a fair degree of accuracy." The second is a game called "Lawnmower" in which the user tries to mow the yard while his irritable neighbor tries to kill him and a dog tries to bite him. "Weather Forecaster" requires Extended BASIC, 32K and a disk system. "Lawnmower" requires Extended BASIC; speech synthesizer is optional. Cox says he asks \$5 for the two programs "if the users think they are worth it. However, regardless of whether or not I receive any money I encourage people to copy and distribute my programs."

Those interested may send an initialized disk, mailer and return postage to Gary Cox, 3174 Melbourne, Memphis, TN 31827.

TRIVIA 99er

A game program, TRIVIA 99er, is being offered as Freeware. The game runs in XBASIC and can be played by 1-4 players or teams, and was written by Robert L. Wessler.

Wessler writes: "Extra disk labels are available for the asking, and user groups may request several dozen for their members. A self-addressed stamped envelope should accompany the request for labels."

To receive the program, send an initialized disk, packaging and return postage, or \$5 for the disk, disk mailer and postage, to Robert L. Wessler, 4300 Frazier, Fort Worth, TX 76115.

Two music disks

Bill Knecht of the Houston Users Group is offering two disks of music programs. All songs include graphics, some animated.

The first disk includes a musical load program and a collection of popular and folk tunes, including the U.S. and Canadian national anthems.

The second disk includes a unique load program and a collection of hymns, including a Christmas medley.

The programs are written in XBASIC and require memory expansion and two disks. For a copy of these, you may send two SSSD disks and a prepaid mailer, OR a check for \$6 for both, to Bill Knecht, 815 Yorkshire, Pasadena, TX 77503.

Two programs

Two disks of public domain software are available from David R. Romer, 213 Earl St., Walbridge, OH 43465. Send \$6 per disk to cover costs of the disk, postage and handling.

Homebrew Module Software includes four stand-alone programs as well as a loader system to provide title screen menu access to "Load and Run" E/A programs. The programs—Single Sector Copy, Debug, Disassembler and TK-Writer loader—are load into the 8K module RAM and are accessed from the title screen menu. They need not be reloaded because the module is battery backed. Source programs and documentation are included.

TI-SORT is a machine language utility that loads under the TI-Writer and TK-Writer utility option or Option 5 of E/A. Data files created with the TI-Writer or E/A editor can be sorted rapidly in RAM with this utility. The program uses standard TI menu format and sorts DIS/VAR 80 files. Files of up to 300 records may be sorted, using either the quicksort or shellsort algorithm and saved to disk. Files may also be printed. Single or bi-level ascending sorts are supported. Documentation and a demonstration file are included.

Free utilities

Danny Michael, of Route 9, Box 460, Florence, AL 35620, has a freeware screen dump and a program called Neatlist.

The screen dump, now in version 3, is written in assembly language and is unprotected. It requires XBASIC or will work out of console BASIC using E/A or MMM. It works with Epson/Gemini-type printers. The program includes instructions and fully commented source code. It will print the screen in a choice of 6 modes.

Neatlist is an assembly language utility for XBASIC programmers. Neatlist produces an orderly listing of programs that can be a time-saver in debugging and modifying programs. The program allows the user to set margins for program listings as well as starting and ending line numbers. Listings include easy to read program lines and a list of variables used in the main and sub-programs. If you like it, he says, you may pay him for the program, but not more than \$10. If you don't like it, "you keep it anyway," he says. He asks that you give copies of the program to others. Send one disk for each program. Or send \$5 for each program and he will supply the disk, mailer and postage.

Free craps game

Ramssoft Enterprises, 1501 E. Chapman Ave., Suite 338, Fullerton, CA 92631, is offering its Computer Craps game as Freeware. The game formerly sold for \$14.95. The game requires XBASIC and expansion memory. Instructions are included as a file that can be read by TI-Writer.

On cassette

Robert D. Temple, 602 E. Franklin St., Kenton, OH 43326-2015, is offering several small programs in console BASIC. The programs are used in state lottery games to pick either 3, 4 or 6 numbers completely at random using the RANDOMIZE and RND command. Another program picks every possible combination of numbers in Lotta-type games. Send a cassette for the programs.

Free routines

Silver Wolf Software, P.O. Box 4242, Santa Rosa, CA 95402, is offering a collection of assembly language routines written for the NORCAL TI99/4A User Group. The utilities include a routine to

(Please turn to Page 45)

Freeware (or nearly so)

(Continued from Page 44)

save and recall an entire screen of text, a routine that creates lowercase letters with true descenders and a complete chart of ASCII characters, alongside their code values. The routines require XBASIC, disk system and memory expansion. Send a disk with return mailer and postage.

Forth configuration

This configuration is enhanced from Tom Freeman's XBASIC version of TI-Forth. Among its features are: improved random number generator; generalizing of all words that reference screens to operate according to the DISK_SIZE, DISK_LO and disk format; and modification to FORTH-COPY to EMPTY-BUFFERS before copying begins.

Additions include booting to allow for treating two SS/SD diskettes as if a 180-screen diskette were being used; sound and graphics applications included as extra screens with user menu for access; and inclusion of extension words suggested by Leo Brodie in *Thinking Forth*.

Send mailer, two SS/SD diskettes and return postage to Rene LeBlanc, 8719 E. San Lucas Dr., Scottsdale, AZ 85258.

Texnet freeware

Texnet, the Texas Instruments electronic network operating on The Source, offers some 340 downloadable programs at no charge to Source subscribers. For more information, write Texnet at Soft Mail Inc., P.O. Box 745, Rockwall, TX 75087.

Illustrated Multiplication

Runs in console BASIC. Lets children work through multiplication problems with the computer checking each step. Won't teach multiplication but will help kids develop confidence in their skills. Send blank cassette and SASE or \$7 to Larry P. Morgan, 9 Fountain Lake Dr., Greenfield, IN 46140.

Wycove Forth program offered

This program allows the user to get into the heart of the TI's bit-map mode. Not as good as GRAPHX or TI-Artist, but it's free. Features to be added in the future versions, such as printer dump and saving to disk. Make note of what disk format is desired (author has CorComp controller). Any questions regarding Forth may be sent along. Send \$1 and disk to Barry Comer, 2 Cleveland Crescent, Dartmouth, Nova Scotia, Canada, B3A-2L6.

Dragon Storm offered

Written in Extended BASIC, the object is to rescue a princess from an evil dragon. Requires joystick. Score based on obtaining a variety of items and success in rescuing the princess. For disk copy, mail disk and return mailer to: L.E. Benson, P.O. Box 283, Eden, NC 27288. For cassette copy, send cassette and return mailer to Howard Unan, 3913 Sybil Rd., Randallstown, MD 21133. Include \$1 with each order for documentation. Author asks for \$10 if pleased with program.

For radio operators

Two programs offered: Quad and Gamma Match. Quad prompts for single input (frequency of choice) and then provides all details to make a Quad antenna for user's part of the band.

Gamma Match requires several value inputs and then goes through a number of steps to work toward a correct Gamma setting for antenna and coaxial specifications.

Send diskette and \$1 or \$5 for the programs to: Tony Robinson, P.O. Box 76799, Vancouver, British Columbia, Canada, V5R 5S7. Author asks for \$1-\$5 if pleased with program. Asks that it be distributed to other radio operators.

Program proofreader

Proofreader is an XBASIC program that checks the entry of BASIC program statements for correctness. The program takes each character entered into a statement and manipulates its ASCII value to produce a unique sum for that statement. This "checksum" is then compared to a known value for the correct statement. If a match occurs, the entry is considered to be correct. The checksum produced by Proofreader is a two-digit alphanumeric code. Proofreader does not check for syntax or logic errors.

The program requires a memory expansion. Send diskette and return mailer and postage to Daniel F. Norling, 3120 Fourth St., No. 17, Santa Monica, CA 90405.

Superbug II released

Superbug II is an improved version of the Superbugger program released to the public domain by Texas Instruments. SBUGII includes a 40-page manual and corrections to bugs present in Superbugger. Enhancements include an O command to allow changing the list device; a J command to allow toggling of screen colors; and the addition of numerous commands from TI Debugger; enhancements to the disassemble and memory dump to output device commands.

Send a diskette, return postage and mailer and \$3-\$5 to Edgar L. Dohmann, Route 5 Box 84, Alvin, TX 77511.

Disk envelope designer

Catalog Comments Disk Envelope Designer is now being offered as Freeware. The program formerly was sold for \$29.95. Requires XBASIC, memory expansion, disk system, printer and printer interface.

Program allows users to make a paper envelope for each disk. Printed on each envelope is the name of the disk and the name of each program or file it contains. The size and type of each file or program is also printed. Comment lines may also be used to provide additional information about files and programs. Comments are stored on a disk and printed when the envelope function is run. May not work with all printers. Recommended are Epson, TI, C. Itoh and Gemini. Others may also be compatible. Full documentation is included on disk.

Send disk and return mailer, or \$5, to Trio Software, P.O. Box 115F, Liscomb, Iowa 50148. A maximum \$10 contribution is asked if pleased with program. Redistribution to others is encouraged.

TI-Disk CAT

This program is 100 percent assembly language. Will catalog disks and more than 2,000 files. Outputs a double-column, alphabetized listing providing all critical information. Sorts in less than 45 seconds and loads in less than 7 seconds. Requires E/A, XB, MMM or TI-Writer, expansion memory, disk system and printer system. Send disk and return mailer to Mack McCormick, 215A Yorktown Dr., Ft. Lee, VA 23801.

Filereader for XBASIC

Filereader is used to read most types of files—D/V, D/F, I/V and I/F—and will display those files on the screen, dump them to a printer or create a D/V 80 files to be read by TI-Writer. It requires XBASIC and a disk system. Send a disk and return mailer, or \$5, to: Martin A. Smoley, 6149 Bryson Dr., Mentor, OH 44060. The author asks \$2 from users who are pleased with the program. He asks that it be redistributed free of charge.

Trivia and graphics demo

Trivia and Graphics Demo are being offered by Danny Cox. Trivia allows up to four players and requires a disk system, Extended BASIC and a memory expansion. Users may create their own multiple choice questions. Scores and prompts are displayed continually.

Graphics Demo requires Extended BASIC and a disk system. The program features six graphics screens ranging from a snowman to a tiger.

Send a disk and return mailer for each program to Danny Cox, 1861 The Elms Ave., Memphis, TN 38127. Those who are pleased with the programs may contribute \$5, according to the author. Users are encouraged to copy and distribute the programs.

Free bulletin board

The Techie Bulletin Board is being offered as Freeware. The program requires four single-sided disks and includes documentation. Features include a message base, Sysop chat, check for mail, listing of users, expert mode and user verification of status. Planned improvements include true Terminal Emulator II file transfers, two and three-way conferencing, and 1200 baud compatibility. (See August MICROpendium for more information.)

Techie requires a disk system, Extended BASIC, expansion memory RS232 card and 300 baud modem. Send four single-sided disks with return mailer to: Monty Schmidt, 525 Wingra St., Madison, WI 53714.

XBASIC disk cataloger

Loads from XBASIC and includes on-disk documentation. Send diskette, return mailer and postage to Ron Rutledge, 1020 Third St., Waukegan, IA 50263.

Anyone wishing to have a Freeware announcement included on this page may do so by submitting a copy and brief description of the program, and a note indicating that it is in the public domain, to MICROpendium. The notice will appear every other month, subject to approval of the publisher. Freeware announcements will continue to be published until withdrawn by the person submitting it or the publisher.

User Notes wanted

Readers are encouraged to submit tips and ideas to User Notes, a column designed to help readers put their home computers to better use. The information provided here comes from many sources, including TI home computer user group newsletters. MICROpendium will pay \$10 for any item sent in by readers that appears in this column. Mail tips to: MICROpendium, P.O. Box 1343, Round Rock, TX 78680.

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Print to Epson or Prowriter compatible printers, lines of text using any of the specially created character sets, TEN in all, or create your own character set to print. The sets are made up of characters four lines high and three character blocks across. Package includes many other features. Requires XB, 32K, DISK and printer. Select Epson or Prowriter version if ordering at \$17.95 or send for more information. Also available are game, educational and business software and an ASSEMBLY LANGUAGE SCREEN IMAGE DUMP program that prints screen images to Epson or Prowriter compatible printers in just 45 seconds for \$15.00. Send for catalog to BRIGHT MICRO COMPUTERS, 2781 RESOR ROAD, FAIRFIELD, OHIO 45014. v2n8

TIPS FROM TIGERCUB

For TI99/4A, full disk of 50 programs, routines, files from the well-known Tigercub Tips newsletters -1-14. \$15 postpaid. Tigercub Software, 156 Collingwood, Whitehall, OH 43213. v2n8

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OKIDATA 92, 93 PRINTER OWNERS:

Design your own DLG characters directly on the TI99/4A screen. Easy and flexible program lets you save, load, print, examine or modify individual characters or complete sets (ASCII 32-127). Use with TI-Writer or any other program. Includes complete instructions plus additional printer utilities. Requires Extended BASIC, Okidata 92 or 93, disk system. Satisfaction guaranteed. Send SASE for more information, or order for \$15.00 (disk only) from Lee Wilkerson, 26 Valley

Rd., Rt. 2, Fort Mill, SC 29715. v2,n8

FINALLY AN AFFORDABLE BBS SYSTEM

The TI General Bulletin Board System (T.I.G.B.B.S.). Uses TE-II speech and color protocols. Comes with a free editor program to help you manage your BBS files. Runs in X-BASIC and 48K. For FREE information send SASE. Dealer inquiries invited. Send \$55 to WILSON ENTERPRISES, 301 East Glenn Drive, Phoenix, AZ 85020. v2n9

WORD PROCESSING UTILITY

Frustrated with not knowing where to place a hyphen when using TI-Writer? Wish you could have made a minor change or two before printing? HYPHENATOR is an editing utility which reads documents created in word-wrap mode and shows you where you might hyphenate. It automatically accounts for characters entered in special character mode as well as "&" and "@". You may also make minor spelling revisions, e.g. to change "recieve" to "receive." Features full cursor control on the edit screen, print margins up to 160 characters, "oops" control to restart current paragraph, full color control. HYPHENATOR creates a new document without altering your original. Requires E/A or M/M, disk drive, 32K memory expansion. For program and documentation on disk send check or money order for \$10.00 (source code \$5.00 extra) to the author: Wayne

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Stith, 715 Timken Drive, Richmond, VA 23229. v2n8

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By CALIFORNIA PROGRAMS: This program complements the ROCKETMAN CHECKBOOK Program. It will store all tax deductible items to disk. Enjoy setting up monthly files for as many categories as you want. When tax time comes up you won't have to search in the shoebox for receipts. Programmers will enjoy this unprotected, random access file generator. COST \$9.95. REQUIRES Extended BASIC, one disk and 32K memory expansion. Write or phone: CALIFORNIA PROGRAMS, 4104 San Pablo Dam Rd., El Sobrante, CA 94803, 415-222-1626. California residents add 6.5% sales tax. v2n8

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PERSONAL AUDITOR

Personal Auditor is NOT just another checkbook or budget management program. It IS a fast, flexible, uniquely designed application for determining exactly where your money goes and how much of it is spent in any category. Versions are available in 32K disk or 16K cassette that provide the user with the ability to ADD, EDIT, LIST, SEARCH, PRINT and SELECT records/sub-files. Disk version holds 300 records per file, cassette 100. Full report generation capabilities are provided in both versions.

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PRK DataBasics Box 2642 Grand Junction, CO 81502 v2,n8

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TI99/4A Arcade game software. Five XBASIC games on cassette only \$12.50, diskette \$17.50. Send stamp for catalog. Best Software, P.O. Box 22446, Baltimore, Maryland 21203. v2n11

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