

WASHINGTON DC AREA  
TI HOME COMPUTER  
USERS GROUP

# NEWSLETTER

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BILL WHITMORE, PRESIDENT

RICHARD D. STURGELL, EDITOR

MONTGOMERY COUNTY TI USERS GROUP See page 11

HAGERSTOWN - WILLIAMSPORT TI USERS GROUP See page 13

BALTIMORE TI USERS GROUP See pages 12 and 29

WASHINGTON DC AREA TI HOME COMPUTER USERS GROUP  
See pages 2 + 11 and 29 for info and meetings.

TI COMES TO BALTIMORE AND THE DC AREA on Friday and Saturday **May 13** and **14** to show their latest in computers and software. Don't miss the meetings and **DOOR PRIZES** to be given at each of these meetings.

TI-pping Around: by Ed Kennedy

A number of club members have asked me the titles of magazines with information pertaining to the 99/4A. The first choice is easy. This is, of course, **99'er Home Computer Magazine** (99'er). Gary Kaplan's project started slowly more than a year ago and has grown steadily in that time to become the premier periodical for 99/4A enthusiasts.

The Number Two spot (in my opinion) is held by **Compute!** magazine. For the past four issues **Compute!** has published articles written by C. Regena. This person (whose gender has never been identified) formerly wrote for 99'er. Those articles were most imaginative and helpful in a world devoid of 99/4A compatible software. Regena proved to be a tremendously popular writer for 99'er. However, Regena disappeared from 99'er only to reappear on the pages of **Compute!**. The quality of articles has not changed. In addition, other authors are beginning to appear in this periodical. As with 99'er third party software vendors are beginning to multiply. This is very encouraging, especially for 99/4A owners like me who have suffered for years without a wide selection of independently-produced (non-TI) software.

Running a weak third is **Popular Computing**. While still catering to the interests of Apple, Atari, Commodore, and Radio Shack owners, **Popular Computing** has included 99/4A-compatible program listings in its April and May, 1983 issues for the first time. In addition, advertisements for software are beginning to appear. There is even an author who will provide program listing for the price of a \$0.37 stamp.

Bringing up the rear is the rest of the computer magazine field. Included in this illustrious grouping are magazines such as **Creative Computing** (CC) and **Byte**. CC does have the distinction of publishing an article in its May, 1983 issue rating the 99/4A. The significance of this article is that the 99/4A has been almost totally ignored by this powerful publication. The article's author even had flattering things to say! In the past CC seemingly failed to acknowledge even the existence of the 99/4A. Apparently this marketplace is reacting to the skyrocketing sales of our TI creation.

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MEETING MINUTES: 14 APRIL 1983  
WASHINGTON AREA TI 99/4 USERS GROUP

Fred Gray, Secretary

Hello from Suitland. The April meeting was held in Maryland to give those crabs among us a shorter drive. Some of us Virginians finked out and did not attend. Aha, you say: how could you write up minutes in absentia? Oho, I say: good friend Bill Farr taped the meeting for me. It's the least he could do, since I conned him into buying a 99/4A.

Quickies before I begin. Firstly, tears of apology to Ken Geremiah and Stan Veit and others whose names I misspelled last month. I writes 'em as ah hears 'em. Secondly, The 99/4A has finally made some of the major magazines; first Microcomputing, and lately Creative Computing (May issue). I commend the latter article as an example of true excellence in computer journalism.

Bill Whitmore opened the meeting with an announcement of group purchase for disk drives. If you haven't ordered, you are probably too late. It was a good deal. Also, there is an arrangement with one of the local dealers for the Olympia Electric Compact typewriter with RS232 interface, for \$698; see Larry Hughes at the next meeting. Disks are also available, single and double sided, at prices of \$19.50 and \$29.50 per box. Cheap. See what a good deal the user's group is?

Larry Hughes, program librarian, polled the audience for those who did/did not receive the green adapter plug. Those that got one and don't need it please bring it to the next meeting to give to those who didn't and do. He had good news and bad news. The bad news: the \$100 rebate ended 16 April. The good news: TI is lowering the price of the TI 99/4A \$100. Better news yet: starting June 1, TI is going to give a \$50 rebate. That makes the Home Computer \$99, June 1st. Tell your friends. Me, I'm gonna cry. My old 99/4 cost me 500 bucks. On second thought, I think I'll buy a 99/4A. Maybe two, and play Munchman in stereo.

More TI scuttle. Logo II is scheduled for release June 15, and the Hexbus adapter and wafertape drive for July 15. TI has cancelled their plans to produce the Minnesota Educational Computing Consortium Series (MECC); this was to have been eleven educational programs. TI has a new promotion: from now until December 31st, take their three hour introductory course for \$25, and they will give you a coupon. Then, if you buy a computer or six modules, they will give you a cartridge holder and dust cover for the computer free. The courses are held locally every Saturday morning and afternoon. To register: call 800-858-4069.

Now, since TI is going to market the 99/4A for \$99, where does that leave the 99/2, at the same price? They are going to try and market the 99/2 for business purposes, since it is about 12 times faster than the 4A for number crunching.

The announcement last month that the Extended Basic module price has been cut was in error. But the Editor-Assembler price has been reduced to \$49.95.

Jay Maltese has offered to process requests for Logo programs. If you wish to request same, see Jay. If you wish to donate one, see Larry Hughes.

Rev Keith Koch will repeat his fascinating presentation on the insides of the 99/4A at the Montgomery County User's Group meeting on 28 April. If it isn't May yet, you may be able to make it.

Larry ordered a program from the pages of 99er called Tax Preparer, from Practical Software. Do not order it, it does not work and the writer is refunding money from previous orders.

Larry's final item: Wayne Johnson has produced a book of best articles from our newsletter, Jan 82 through Mar 83. He has organized them into useful order, suggested price of \$5. Paul Schuer volunteered to duplicate and distribute the work.

Bill Whitmore announced a potential hazard with the Microsoft Multiplan. When you copy the master disk (and you always should copy the disk and use the copy) make sure that you name the disk exactly as the original. Else it won't work.

Jim Horn introduced featured speaker Stan Veit, Technical Editor of *Computers and Electronics* and longtime writer and reporter in the microcomputer industry. Snatches of his talk are excerpted next under.

"The lowering of the price of the 99/4A to \$99 will have a tremendous effect on the industry. At this point, the 99/4A is Number 3, behind the Timex/Sinclair 1000 and the VIC 20. TI will likely surge to Number 1 or 2. This should do some interesting things.

Stan showed a mockup of the 99/2 This is an excellent unit, far in advance of anything near the price. Except for the 99/4A. It has some very desirable features that the 99/4A does not have. The hexbus, for example. This is a four bit bus that mates to low cost peripherals, such as an RS232 unit for under \$100 list. TI will test market the 99/2 in May and June and we should know by late June if the 99/2 will fly or not. If you can get one, try it - you'll like it.

The hexbus-cheap peripherals combo is very important. With the 99/4A under \$100, the peripherals cost more than the computer itself, and full expansion will run over \$1000. Compare to the VIC-20, whose peripherals are priced in proportion to the computer. The peripherals are outstanding, especially the expansion box which is built like a battleship, but they are expensive in relation to the computer. (NOTE: italics are mine. Try pricing Apple or IBM peripherals sometime.) TI knows this dichotomy and plans to ease it through adapting the hexbus to the 99/4A and thus adapting the low cost 99/2 peripherals. For example, the printer is under \$200 with the wafer drive under \$150.

Stan then spoke about his magazine *Computers and Electronics*, formerly *Popular Electronics*, with a circulation of over 600,000. PE was largely responsible for the microcomputer revolution, started when they ran articles in 1974 on the Altair, an 8080-based microcomputer

kit that was the first. He made an invitation to all TI users to write up their experiences and knowledge about the 99/4A-99/2-CC40 and send to C&E. He is looking for articles on hardware, software, things you can tack onto the hexbus. Write, and become rich and famous.

In closing, Stan mentioned the growth of electronic publishing and networks, such as Compuserve. Stan's group on Compuserve, CEM-40, has a lot of software for use or downloading, and has an active information interchange. By asking CE questions through the network, they are inspired to go to the source, say TI, and get answers for you (and them). He then entertained questions.

QUESTION: Will TI come out with an S100 adapter for the 99/4A?  
ANSWER: Absolutely not! S100 is overkill and expensive. Better to work on using the hexbus.

QUESTION: When will CE put the 99/4A on the cover? ANSWER: Probably not. The cover usually shows something new. They are planning a comprehensive article on the 99/4A, however.

QUESTION: Do you see the price of 99/4A peripherals coming down?  
ANSWER: I can not see prices coming down. The expansion box is so overbuilt that price cuts are unlikely. Look for the hexbus hookup.

QUESTION: Do you see Microsoft offering more TI software? ANSWER: Not unless TI asks for it. Microsoft is focusing on the modern 16bit units -the 8088, 8086- and they are pushing UNIX, or XENIX, their version. (UNIX is an operating system developed by Bell Labs and popular for multiuser interactive systems.)

QUESTION: How much does CE pay for articles? ANSWER: We pay between \$100 and \$150 per page, depending on amount of editing required and quality of work. (This is twice what Creative Computing pays, for example.)

QUESTION: If the 99/4A is in 3d place, why is so little written about it? ANSWER: Good question. Why don't you guys write them? Let me tell you about the Woz principle. Steve Wozniak is one of the inventors of the Apple. The Woz principle was to open your bus, your software to everybody. The more information available about your computer, the more interest you will generate, and the more hardware and software will appear for it. This principle is the foundation of the Apple, the S100 bus, the IBM PC. There are vast numbers of people making things for these three. TI has tried very hard to lock everybody out, and have locked themselves into a corner.

Bill Whitmore introduced Nancy Dinan from TI, Fairfax Office, who discussed the new Professional Computer. She demonstrated some of its capabilities. I shall not expound here, or the newsletter will be the size of BYTE. If you are interested, TI will send you literature. After Nancy finished her demonstration, the meeting ended.

USING ONE KEY TO STOP PROGRAM EXECUTION, ANOTHER ONE TO START AGAIN. Maurice Swinnen.

The CALL KEY command, used in both TI-Basic and Extended Basic, is extremely useful in programming. It allows you more "user-friendliness", requiring the user to press only one, single key, as opposed to a key followed by ENTER.

One situation where it comes in handy is its ability to stop program execution momentarily, then continue when you are ready with some auxiliary operation. For example, those of us who use a typewriter-printer, which doesn't have a tractor feed mechanism and thus cannot use continuous lengths of zig-zag folded paper, are constantly confronted with the problem of finding ways to quickly insert a new sheet of paper when the first one is full. Most programs do not allow for suspension of execution, hence a terrible mixup at the printer usually results, the hammer hitting away at the platen, printing in empty space, until we manage to slip a new sheet of paper in place.

Here is handy routine to stop printing using the I (for Interrupt) and continue printing again by means of the C key. (for Continue) Of course, you can use any other key, provided you make the necessary changes as explained below. On the left you will see the routine written in TI-Basic, while on the right the equivalent and slightly simpler routine for Extended Basic is shown. For simplicity and ease of reading, each statement is left on its own line. You can, of course, reduce the amount of program space needed by combining statements on a line.

100 CALL CLEAR	100 CALL CLEAR
110 FOR A=1000 TO 10000	110 FOR A=1000 TO 10000
120 PRINT A	120 PRINT A
130 CALL KEY(O,K,S)	130 CALL KEY(O,K,S)
140 IF K=73 THEN 160	140 IF K=73 THEN GOSUB 500
150 NEXT A	150 NEXT A
160 GOTO 500	
500 CALL KEY(O,L,T)	500 CALL KEY(O,L,T)
510 IF L<>67 THEN 500	510 IF L<>67 THEN 500
520 GOTO 150	520 RETURN

This routine will print on the screen the numbers 1000 through 10000, until you press the I key. Then all action will stop. This happens because, after the CALL KEY command is used on line 130, line 140 determines that you have to press the key whose ASCII code is 73, the I key, to transfer execution to subroutine 500 (in the X-Basic routine) or simply to line 500. (in the TI-Basic example)

Line 500 uses CALL KEY again, but with other variables. Then line 510 requires you NOT to press the key whose ASCII code is 67, the C key, for program execution to remain suspended. If you do press key C, however, the program returns to line 150, NEXT A, and a number will appear on the screen. If you want to stop printing again, press the I key, and so on. It works like a toggle switch, press I to stop, C to continue. Using other ASCII codes lets you use other keys. Using ASCII code 32 allows you to use even the space bar.

A routine to do just that is shown below. The space bar will stop printing, the S key (for Start) will start it again. (see line 610, ASCII code 83)

100 CALL CLEAR	
110 FOR A=1000 TO 10000	
120 PRINT A	
130 GOSUB 500	600 CALL KEY(O,L,T)
140 NEXT A	610 IF L<>83 THEN 600
150 END	620 GOTO 520
500 CALL KEY(O,K,S)	
510 IF K=32 THEN 600	
520 RETURN	

And now for a real demonstration of the capabilities of this routine, using a real printer, consider the short program segment below.

```

100 CALL CLEAR
110 OPEN #1:"RS232"
120 FOR A=1 TO 100
130 PRINT #1:"THIS IS A TEST TO SEE IF WE CAN STOP PRINTING
    BY MEANS OF THE SPACE BAR AND START AGAIN WITH THE S KEY"
140 GOSUB 500
150 NEXT A
160 CLOSE #1
170 END

500 CALL KEY(O,K,S)
510 IF K=32 THEN 800
520 RETURN

800 CALL KEY(O,L,T)
810 IF L<>83 THEN 800
820 GOTO 520

```

It will print on your RS232 printer only one line as shown in line 130. But it will repeat that line one hundred times, unless you HOLD DOWN the space bar while the printer prints a line. The beauty of this procedure is, that the printer will complete that line and then stop, as it should be.

Starting the printer again requires you to press down the S key. You will also note that holding down the space bar a little too late in the print cycle will cause the printer to add (sneakily) another line, and then stop. That is because the computer had already instructed your printer what to print and had already skipped past SUB 500 and NEXT A, ready to give the next command to your printer. The latter, being a relatively slow, mechanical device, was still trying to execute the first command. Moral of the story? Catch the printer at the beginning of a line and hold down the space bar for the entire duration of that line. It will stop obediently at the end of the message.

You might have to alter slightly the OPEN statement on line 110, depending on how your printer is configured and a simple "RS232" might not suffice. Maybe an "RS232.BA=9600.DA=8" or some similar statement might be called for.

### TI Makes Bad News Good

If most people expect to lose \$50 million, it is bad. When Texas Instruments expects to do so, it can be good.

When TI said it would stop 99/4A production because of a transformer defect, investors pulled the plug, TI stock dropped 13 points in little more than a week.

Then TI chairman Mark Shepherd announced that TI would lose upward of \$50 million in pretax profit this quarter because of the sales losses and other costs associated with the defective transformer. Within a few days, TI stock was on the rebound, gaining back some three points.

Why the rebound? Perhaps because many financial types just don't seem to believe TI will in fact lose \$50 million.

"They're sandbagging," said Don Sinsibaugh, who follows the computer industry for Gintel and Co. His point: If TI loses less than \$50 million, the company can report a larger-than-expected profit later on.

Elliot Levine, a securities analyst with First Manhattan, said the consensus of most TI watchers had been that the company would lose maybe \$15 million in the first quarter. But \$15 million or \$50 million is all peanuts compared to the big profits investors expect out of TI's computer products in 1984 and 1985. That expectation, said Levine, is propelling TI's stock.

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Electronic Engineering Times

Monday, March 14, 1983

### Tandon Splits Stock 2-For-1

CHATSWORTH, Calif. — Tandon, maker of floppy disks and disk drives for the electronics industry, has announced a 2-for-1 stock split, effective April 12 for shareholders of record March 29.

The company, which had net profits of \$15.7 million, or 73 cents a share, in 1982, authorized the split at a stock price of approximately \$39.

Tandon, which has production facilities in Sunnyvale, Calif., has its headquarters here.

DEAR BIT

My cassette recorder did everything you said it would. Fortunately, I do not need to spend the "bucks" for a new recorder but I do have one small problem. My polarity on the cassette recorder does not match the TI-99/4A. HELP? I need the automatic feature for my cassette files program. Oh yes, insiders tell me you have egg-on-your-face. Don't you know a "nanosecond" is the proper terminology for one billionth of a second. Speaking of terminology, what does the word algorithm mean? Don't tell me that is a great new computer that will be my panacea and I should trade my TI in for it?

Sincerely Byte's

P. S. How long will it take to drive to Denver Colorado from Washington D.C. if I can drive one half of the remaining distance each day.

Dear Sincerely Byte's

This month we will try to solve your polarity problem. We have included detail drawings and general instructions to build what I call a "Polarity Connector". Bit, my face accepts the egg due for my boo boo. I did not give credit to Captain Grace Hopper of the United States Navy for her 11.8 inch NANOSECOND. As one reader wrote, quote "Shame on you.....the real source is one of the greatest computer experts of all time--Captain Grace Hopper USN. If you haven't heard of her, its only because you haven't heard of COBOL" unquote. (COmmon Business Oriented Language) My apology to the readers and Captain Hopper. I did go to the library and found\_\_\_ books and articles with her as an author. It was my misfortune not to have heard her speak. I guess her NANOSECOND is just too fast for my Microsecond. Anyway, maybe some day we both can hear her lecture.

Bit, an algorithm is not a fancy computer. It is a procedure (I like to call it a concept) that is important to our world of computers. More about that next month as we combine a discussion of the algorithm with a solution to the February 1983 pros challenge.

The construction of a polarity can be fun. We tested the instructions below on a person with no electrical experience and he successfully built a polarity connector that worked on his cassette recorder. So good luck and DO follow the warning note.

SINCERELY BYTE'S

P.S. I can not live that long to reach Denver.

Building a "Polarity Connector"

To convert the polarity of your cassette recorder you need to visit your local electronics store and purchase three components. I bought the items at a local Radio Shack (c) store. The components are:

1 package of Subminiature phone jacks(closed circuit type) CAT NO. 274-292, Cost is \$1.19 (package has two phone jacks)

1 package of Subminiature 1/16 (2.5mm) phone plugs (2), CAT NO. 274-290, Cost \$.99

1 roll of NO 24 gage speaker wire

In addition to the components, you will need a razor blade or knife, some electrical tape, electrical solder and a soldering iron (25 watts). (Liquid solder can be used in place of the soldering iron but results are less satisfactory)

If you do not own the above items, maybe your neighbor, TI member, Friend, wife etc. may have the material and tools you can beg, lease, or borrow. If all else fails Sincerely Byte's, send me a \$19.95 check and I will lease you my equipment. Of course you will receive a \$10.00 refund upon return of the property.

Steps	Action
1	Assemble your material and tools and arrange the components as contained in the drawing.
2	Cut two pices of wire approximately five (5) inches long and strip 3/16 of wire covering end of the wire.
3	Unscrew cylinder plastic cover from the prong(save cover).
4	Insert wire 1A into phone plug 1A.
5	Insert wire 2A into phone plug 2A.
6	Solder the connection of plug 1A.
7	Solder the connection of plug 1A.
8	Insert wire 1B into phone jack 1B.
9	Insert wire 2B into phone jack 2B.
10	Adjust length of two wires so they are even in length.
11	Solder wire connection of 2B.
12	Solder wire connection of 1B.
13	Thread plastic cylinder on phone plug.
14	Inspect all connection to insure that the solder form a good bond between the plug and jack and the wire and plug. Wire cannot cross but should be Parellell as shown in the drawings.
15	Tape bare wire and all connections so that they look like the drawing. Be sure the plug and jack opening are not obstructed by the tape so you can insert the items into the tape recorder.
16	Insert phone plug into remote control of the cassette recorder. Insert PHA2000 cable into phone jack of Polarity Connector.
17	Test Polarity by saving or loading a program on the cassette recorder.

If test was unsuccessfull inspect your work to insure you have good bonding of the wire and that you do not have bare wires touching. Insure the wires are connected in parallel.

NOTE; DO NOT USE THE POLARITY CONNECTOR FOR ANY OTHER PURPOSE AS IT IS NOT DESIGNED FOR ANY OTHER ELECTRICAL APPLICATION. DO NOT PLUG THE CONNECTOR INTO ANY OTHER ELECTRICAL DEVICE, APPLIANCE OR OTHER ELECTRICAL OUTLET. KEEP AWAY FROM SMALL CHILDREN. WE DO NOT A CHILD PLUGGING THE CONNECTOR INTO AN ELECTRICAL HOUSEHOLD 120 VOLTS OUTLET.~

## BEGINNERS AND INTERMEDIATE CHALLENGE

April answers

The largest program that can be stored on a cassette tape is 12K bytes in size.

Two feet is the closest you should place a cassette tape to a monitor TV set, an electric motor or any other source of magnetic fields.

The solution for a program that will give a random number between three and nine is as follows;

```
10 RANDOMIZE
20 FOR A=1 TO 10
30 N=INT((RND*5)+4)
40 PRINT N
50 NEXT A
```

Program submitted by Keith Wiese of Suitland, MD

## BELIEVE IT OR NOT

An invention by Jack Kilby made TI the worlds largest semiconductor company.

## BEGINNERS CHALLENGE

What are the infix arithmetic operators and what are they used for? Write a program that will flash your name five times on the screen.

## INTERMEDIATE CHALLENGE

Write a program that will tell me how many ways you can make change for a single dollar. Print the \_\_\_ ways you can make change for a dollar. What is the binary number for 1024?

## PROS CHALLENGE

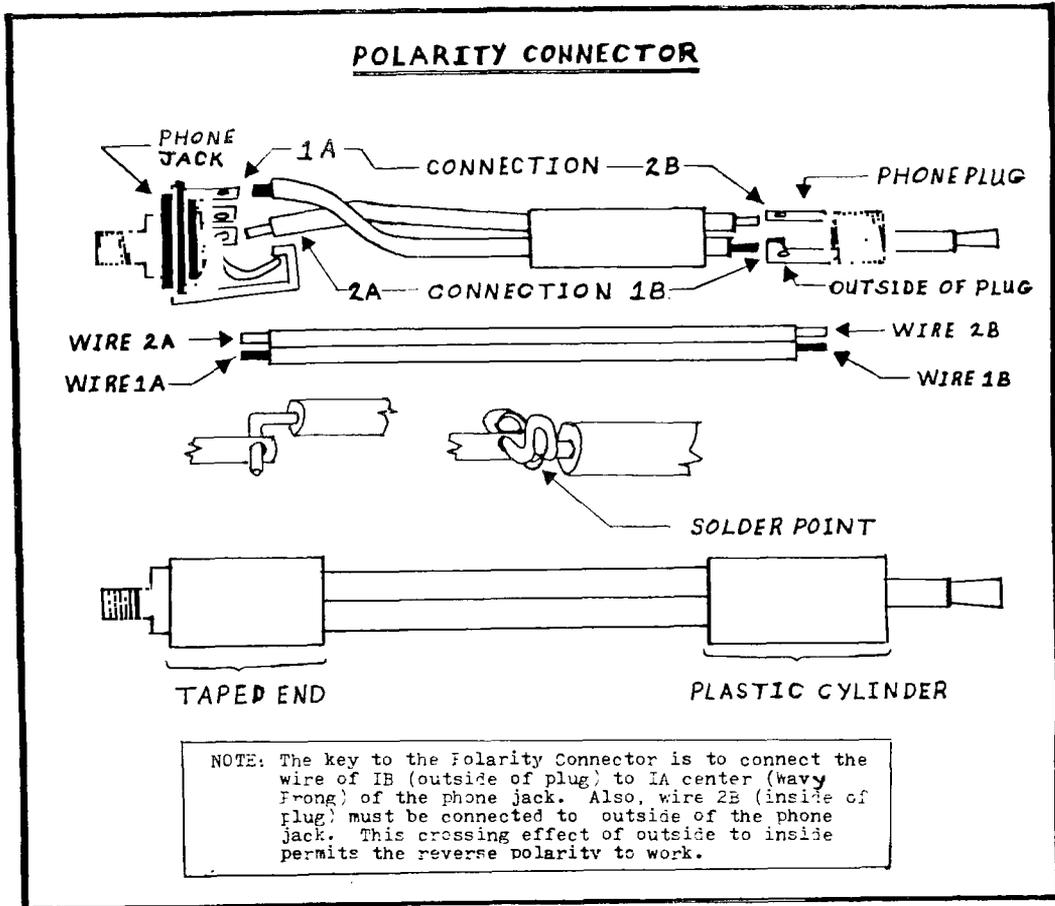
Write a program to identify how many triangles are in the figure

BIT will give a \$25 savingsbond to the first member (under age 17) to solve the Intermediate challenge for May ( help limited to hints only from adults or professional programmers please). Also, a \$100 savingsbond will be given for the best program to solve the May 83 program. Contest runs from May 83 to September 30, 1983. Entries must be postmarked by midnight September 30, 1983. Award will be based on program uniqueness, originality, graphics and sound. Judges decision will be final. All contestants must be members of the Washington DC Area TI Home Computer Users Group.

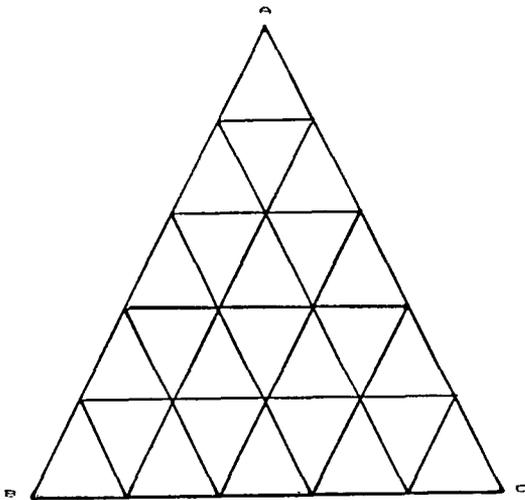
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Questions, answers, or comments may be sent to BIT and BTYPE,s at 4100 Canterbury Way Temple Hills, MD 20748. Material will not be returned unless requested and a self addressed envelope is provided with correct postage. Response to mail inquires is limited to our newsletter space allotment.

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PROB CHALLENGE



FOR SALE: USED COMMAND MODULE SOFTWARE

THE ATTACK	\$25
MULTIPLICATION I	25
CHISHOLM TRAIL	25
HANGMAN	13

Also for sale one brand new SPEECH SYNTHESIZER \$90 or trade for a used RS 232 peripheral box (old style).

CALL: Carl Savillo  
(703) 339-6428

WANT TO BUY: RS232 (old style), Jim Manz [8:00-4:30 (202) 382-8546], after 6:00 (703) 437-5105].

**MONTGOMERY COUNTY  
USERS GROUP**

A meeting of the Montgomery County Chapter took place on March 24th at the Sligo Intermediate School. Approximately 30 people attended which was not bad since word of the meeting was passed to previous attendees by telephone. Allen Minton announced that until further notice regular meetings will be held on the **FOURTH THURSDAY of EACH MONTH** in the library room of the Sligo Intermediate School. The room has a television monitor and is large enough to accomodate everyone. The program for this meeting included a demonstration by Doug Ryman on TI's game CAR WARS. Doug aptly demonstrated his gamemanship skill with this module as oohs! and aahs! were heard from the audience. Next came a demonstration by Pete Eddy of two new programs from Funware, Video Vegas and Henhouse. Henhouse appeared to be the more complex game of the two. Lastly came a discussion by Dave Hill of where to buy TI software and related products in the local area as well as through various mail order dealers. Larry Hughes delivered a library report and brought the group up to date with some late breaking developments on TI's price reduction. Larry also mentioned that he acquired a tax preparation program from a Virginia dealer who advertised in the 99'er and that he sent it back because it did not work. Since the April meeting will have passed by the time this newsletter arrives, the schedule for the May meeting will include a presentation by Allen Minton on making music with the TI 99/4 and a presentation by Dave Hill on the new CC-40. The meeting is scheduled for **May 26th at 7:30PM.**

TI-pping Around cont from page 1

There is an additional publication which does not exist, but is eagerly awaited by 99'er owners. This is the anticipated monthly magazine to be published by The International 99/4 Users Group (Bethany, OK). Charles LaFara's group has been indispensable in furthering information for the 99/4, and this publication should be a **WINNER!**

This article reprinted from The Cin-Day Users Group Newsletter.

**CHARLES LA FARA VISIT**

Charles LaFara will visit with the Baltimore and The DC Area Users Groups at their meetings on MAY 13 and 14, see page 29.

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**Programs For The TI Home Computer**  
by Steve Davis

Available from Jim Horn at the next DC Area Group meeting at a special Group Member price.

See page 17 for a review of this publication.

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## Seeq Announces Self-Programming Microcomputer

Based on the Texas Instruments TMS7000 family, Seeq's Model 72720 chip is self-programmable and uses a 2K x 8 E<sup>2</sup>ROM in place of TI's traditional ROM. The electrically erasable read-only memory is nonvolatile, and can be erased and rewritten without removal from the system. It permits reprogramming of the processor's program memory to meet changing situations. Modifications can be made over telephone lines. In some applications, the self-adaptive feature can be generated by changing needs in performing specific operations. Larry Jordan, Seeq's vice president of marketing, explained that, "With E<sup>2</sup>ROM technology, products can also be designed to modify themselves as tasks are performed or as the environment changes, with no concern over program loss that results from power failure." Seeq does plan to offer military versions of the self-adaptive micro in the future. Hardware approaches to artificial intelligence, like this micro, could find wide application in smart weapons design. TI and Seeq have a cross-licensing agreement on the E<sup>2</sup>ROM and the TMS7000 technologies. Both companies are expected to announce products based on these techniques by early 1984.

24 DEFENSE ELECTRONICS APRIL 1984

The CPU chip used in this unique computer is the TMS 7020, the same one used in the new hand-held computer, the CC-40. Maurice Swinnen.

## BALTIMORE TI USERS GROUP

TIBUG (T I Baltimore Users' Group) is a newly formed group of individuals interested in Texas Instruments Home Computers. Our first general membership meeting was held on March 22nd at the Ascension and Prince of Peace Church. Over seventy people attended this meeting and saw demonstrations on four 99/4A computers.

The purpose of our group is to bring together computer owners to exchange ideas, programs, and discoveries; to see demonstrations and hear guest speakers on computers, software and peripherals. Officers of the group have been selected for the remainder of 1983, they are: William Simmons (president) Lee Alban (vice-president) Dolores Scott (secretary) and Joe Cartera (treasurer). Election of officers will occur in January of each year.

All of our meetings are open to the public and everyone is invited to attend.

Our next meeting will be held at Perry Hall Senior High School on Ebenezer Road in Baltimore County. Representatives from Texas Instruments will demonstrate some computers, have door prizes and present a computer quadrasonic sound show.

Regular monthly meetings will be held at Pine Grove Elementary school at 2701 Summit Avenue on the first Tuesday of each month. The next one is scheduled for 7P.M. on Tuesday, June 7th.

TIBUG will also be represented at the Maryland Computer Show. This show will be held in the Baltimore Convention Center from May 19 thru 22.

Remember, if you are unable to come to our meetings and still wish to join the group, you may send yearly dues of \$15./person to: Membership Chairman TIBUG P.O.Box 3, Perry Hall, Md. 21128

**Texas Instruments Inc. (TI)** will unveil its new portable version of the "Silent 700" terminal at this week's TI-MIX users group meeting in New Orleans. The "Silent 707" is described as the first battery-powered, full-function teleprinter on the market with features such as 80- or 132-column printing, an integral modem and solid-state software cartridges. The terminal weighs six pounds and is about half the size of a standard briefcase. Suggested price for the 707 terminal is \$695, available in June. A desktop version, the "Silent 703," with an RS232C port, will cost about \$595.

REPRINTED FROM MIS WEEK

The regular monthly meeting was held April 15th at the Williamsport Memorial Library. Of the 26 people in attendance, four are registered professional engineers, there were four husband and wife teams, educators were represented by school board member, principals or spouses, Board of Education rep., as well as several teachers.

Tax deadline night took its toll causing at least one of our out-of-town visitors to no-show.

Business consisted of a promise to present a slate of officers at the May 20th regular meeting for group approval.

The following nominees were put forth at the April 16th committee meeting:

President- Sam Williams  
V. President- Ralph Donnelly  
Secretary- Edward and Charlene Bulpitt  
Treasurer- Cliff Metger

Phil Shew has consented to act as librarian during our organizational period.

Future meetings will be held at the Williamsport Memorial Library on the 3rd Friday of the Month (next meeting-May 20- will feature Cliff Metger's program for housing materials and costing).

The first "Beginner's Group" met April 8th. Shew's presentation must have been effective- one couple who came only to evaluate, went out the following morning and bought a 99/4a! Incidentally these meetings will be held the first Friday of each month (ie May 6 and June 10).

Meetings start at 7PM.

Directions: From Hagerstown area and I-70 take I-81 South to US RT.11, Williamsport exit. South on rt.11 through one traffic light. Watch for library on the left just prior to the second light. Meeting is held in lower level meeting room- take walk on right side of bldg.

**FOR SALE:**

DISK CONTROLLER BOX \$150.00  
THERMAL PRINTER \$200.00  
Contact Jim Hollender, 2820 S  
Abingdon St., Arlington, Va.  
22206. Telephone (703)  
820-4131.

PROGRAM NOTES  
by Ken Chandler

I am the proud owner of all 25 program tapes from our club's program library. I've only had them for a short while, but I've managed to run (or attempted to run) 93 out of the approximately 363 programs. These programs are extremely varied in their composition, covering educational, entertainment, utility and musical subjects. Some have graphics, some are text only. Many just play the music to a song. Instructions needed to run the programs vary from adequate to non-existent; and some programs have bugs and won't run at all.

Ever try to de-bug a program using just the video monitor and no printer? I guarantee you'll be cross-eyed in less than fifteen minutes. You never realize how much a program jumps around until you try to work through one using this method. I've discovered a new set of Murphy's Laws that pertain to computer programming, such as:

1. A "GOTO" statement never jumps execution to another line on the same screen.
2. A listing always stops scrolling just after the line you want disappears off the top of the screen.
3. The line you think has an error in it is always right.
4. A line with an error in it always contains at least 100 characters, with 16 sets of parentheses and 18 commas.
5. "Call Key" statements cause the computer to read all keys except the one you are pressing.

Well, enough of that! Anyway, I was thinking the other day that perhaps 300 people were all going through the tapes, having the same problems, maybe solving some of them and no one else was benefitting. What a waste! One of the reasons for our User's Groups is so that we can help each other. So that's the purpose of this column.

There are a few things you should know about the program library tapes. The programs are not always in the order printed in the program library listing. Occasionally, there are extra programs thrown in. You can usually find this out by looking at the "LISTING" of the program. Be sure to use the proper "Basic" when running the programs. Some "TI-Basic" programs will not run in Extended Basic. This is because you can't specify a character code above 143 in Extended Basic, while TI-Basic allows codes up to 159. Be sure to use a good quality tape deck to read in the programs. It must have a tape counter to be useful. "Good Quality" could be defined as having a tone control and retailing for \$50 or more. If the computer won't start and stop the tape deck, try reversing the polarity of the "Remote" plug or purchase the TI-Sette adapter from 99'er Magazine. If the program can't be read at first, try varying the volume control. "No Data Found" means you're too low or way too high. "Error In Data" means you're in the ballpark, so make small adjustments. I've been told that lowering the tone control sometimes helps if all else fails.

I've tried three different B14 tapes and can't read any of them. I'd like to know if anybody has had success with that one. Also, I couldn't read B21, but I duped a copy of it and I can read that one fine. Wierd!

Many of the programs require certain accessories or peripherals to run. Here's my list so far:

TAPE	PROG.	PRINTER	DSK	TEII	SP.ED.	SP.SYN.	32K	X-Basic	JOYST.
B1	JQR-COSTS	S			S	S			
B1	PINKPANTH	S							
B1	SPEECHDEMO				R	R			
B4	MATHDRILL			R		R			
B11	DIRECTORY				R	R			
B11	MASTR!!!EX				R	R			
B11	SIGNS	R							
B11	SPATIALREL				R	R			
B13	XLOAD		R				R	R	
B13	OVERLNFLOW	S							
B13	XPRINTTE2	R		R				R	
B13	COUNTGULLS			R		R			
B13	XSMAILPREP		R	R					
B13	XSOIN!DOF!!!			R		R			
B13	XTITLE	S					R	R	
B15	XFAMILYTREE		R					R	
B15	XGRAFTRAX		R					R	
B16	COOTIE				R	R			
B16	LOVEPOSTER	R							
B16	MATHSPEECH					R		R	
B25	S&SPEL2			R		R			
B15	XLOVEPOSTP	R							
B15	XNAVIGATOR								R
B15	XSPRITEDEF	S	S						
B15	XTOTCATLOG		R				R		
B15	XTYPESETTR	R							

R=Required  
S=Suggested

The following programs have problems:

- B15-XIMPRLLANR - Runs, but I can't seem to land safely. No line 1440 or 1480 referred to in program.
- B21-AIRSEABTL - Runs, but can't fire ship missile.
- B21-QUEST - "Memory Full" - Runs when you delete "REM'S".
- B15-XINPLANRES - "Interplanetary Rescue" from 99'er Magazine, Vol. 1, No. 4 - NO INSTRUCTIONS! Can anybody supply them?

B15-XWORLDMAP - "Bad value in 910" - Won't run.  
 B23-XCHECKERS - If you don't have 32K Expansion, delete Line 3000 and change Line 90 to "GOTO 3010".  
 B15-XSPACPATRL- If you want to use joysticks, you still have to "fire" with the space bar. To modify so you can fire from joysticks, make following changes:  
 470 CALL KEY(2,K,S)::IF K<>18 THEN 460::  
     CALL MOTION(#1,0,0)  
 640 CALL KEY(2,K,S)::IF K=18 THEN 670

I would welcome feedback from other club members on the program library. Let me know if you've found problems, solved problems, want to give advice or want to comment on programs you like. Also, how about some of you submitting reviews of other software/hardware that you've purchased? It sure would be helpful to the rest of us and I'm sure Dick Sturgell would welcome it for the newsletter. Comments can be sent to me at: 12 Greenleaf Terrace, Stafford, Virginia 22554 or call (202)382-8278 (Work).

Parting thought: You believe those Commodore ads? They say the VIC-20 is a "real Computer". The following is courtesy of COMPUTE! Magazine:

To read the joysticks:

TI - 100 CALL JOYST(1,X,Y)

VIC-20 - 100 POKE 37154,127:X=(NOTPEEK(37151) AND 60-((PEEK(37152) AND 128)=0):POKE 37154,255

I'd say you better be a real programmer to use it!

See you next month!!!

SOFTWARE REVIEW  
 by Stuart Oring

Wizard's Dominion, available from American Software on disk or cassette is an adventure game that will challenge you and give you many hours of entertainment for your money.

The game has excellent 3-D graphics and thousands of caves to explore. You pick a personality type (each one has different powers and strengths or weaknesses) and off you go, in search of gold and magic powers. There are evil ogres to fight and they become more difficult as the level increases. The goal is to find the wizard's magic chamber.

You can save the information as to your status and resume play at any time you choose. The two problems that I found are not earth shattering but solving them would have made the game a little smoother. It would be helpful if you could travel more quickly through the caves, particularly when there is a long passageway and also, it would help if you could retain your weapons and magic powers in the computer between caves instead of having to re-enter the information at the beginning of each trip.

Perhaps memory limitations on the cassette version prevent this since it is a fairly complex program. The strong point of the game is that you have many options and so you are a very active participant in this much better than average Dungeons and Dragons game.

"Programs for the TI Home Computer" by Steve Davis contains a variety of utility and entertainment programs. The Table of Contents includes:

- Word Games
- Card Games
- Adventure Games
- Quizzes
- Music Duration & Frequency Translator
- Record Keeping Programs
- Color Bar Graphs
- French Teaching Programs
- Plot Routines
- Deci-Hex and Hexi-Dec Converter
- Screen Speak
- Speech Helper
- Titles
- Tarot
- Talking Tarot

and much more!

It is a good book and if you have \$14.95 plus \$1 postage, you will enjoy it. The graphics are excellent and you will find programs for a variety of equipment. They can, of course, be modified.

**GROUP PURCHASE for April - May  
MICROPOOLER by CONSOLINK**

No more waiting for your printer -the Microspooler can load the output of your computer in a few seconds and then feed the printer for the next 10 to 15 minutes of printing. If another copy is required just press the print button and another copy is printed. If you need up to 99 copies the Microspooler can be preset to the desired number and they will be printed for you. All this time you can be using the computer for other duties.

- \* Units come with 16K of memory.
- \* User expandable to 32 or 64K
- \* Available as: Serial in - Serial out \$192.00
- \* Serial in - Parallel out \$168.00
- \* Parallel in - Serial out \$168.00
- \* Parallel in - Parallel out \$140.00
- \* Size only 6.3"High X 2.5" Wide X 8.3" Deep
- \* Send your order to: Wash. D.C. TI Users Group
- \* P.O.Box 267
- \* Leesburg, Va. 22075
- \* Deadline for orders May 15th

I was misinformed when I said at the March meeting that the price of Extended BASIC had been reduced, the list price is still \$99.95. I apologize for any inconvenience. Good news! The list price of the Editor/Assembler has been lowered to \$49.95 (really!).

On April 16, TI lowered the price of the 4A to \$149 with no rebate. HOWEVER, from June 1, 1983 to Jan. 1, 1984, TI will give a \$50 rebate, making your net cost only \$99!! Since \$99 was to have been the list price for the 99/2 computer, TI is re-thinking their marketing of the 99/2. They think that they will try to sell it for its speed for use in number-crunching applications for businesses. (Rev. Keith Koch says that overall it is 3 times faster than the 4A and for arithmetic operations up to 12 times faster!) TI will test market it in May or June in a few areas.

LOGO II is scheduled for June 15. The Hexbus Adapter and the Wafertape are scheduled for July 15.

TI has cancelled their plans to produce the MECC (Minnesota Educational Computing Consortium) software series. It was to have been 11 educational programs.

I have seen some PLATO programs and I was not very impressed with them. They are purely text-only, no color, no speech, no music, no sound, no graphics. They were designed 20 years ago for use on a printing terminal and have been transferred as is to the 99/4A, thus they do not take advantage of all the features of the computer and the CRT screen. For instance, to indicate a compound word, the student must type in the whole word correctly or the computer says wrong answer, even though the student picked the right word.

The Scott, Foresman modules allow the student to select the right word by positioning the cursor with the space bar. Also, PLATO requires a disk drive and each program costs \$50 list! making the entire PLATO series cost \$5,400!

TI has a new promotion from now until Dec. 31, 1983. If you take their 3 hour introductory course for \$25, they will give you a coupon. Then if you buy a 99/4A or 6 modules, they will give you their cartridge holder and a computer dust cover for free. Courses are held locally every Saturday morning and afternoon. For more information, call 800-858-4069.

Special offer! An Olympia Electronic Compact typewriter/printer with RS232 or parallel interface for \$698. These are new and the price is only for club members. Contact Suzanne Hayes, 429-1922 (say Larry Hughes sent you).

Optimum distances. Height of the home row of keys on the keyboard (ASDFGHJKL) should be between 28" and 31" from the floor. Viewing distance to the CRT should be between 17" and 20", but not over 27" for 10" and 13" diagonal screens. The center of the screen should be 10 to 20 degrees below the horizontal plane of the viewer's eyes. The keyboard should be at or below elbow height.

If you do not need your green safety fuse adapter, please bring it to a meeting and put it in the box in front. If you need an adapter, please take one out of the box.

A cassette tape and the notes to my talk entitled "Efficient Coding in TI BASIC" are available for the cost of reproduction, \$2. See me at a meeting.

Channel 26 started a 10 part weekly one-half hour series of computer literacy course called The Computer Programme, developed by the BBC. The first program was on April 23 at 4:30 PM.

## CC-40 - A BREAK THROUGH IN PERSONAL COMPUTING

CC-40, I am sure you have heard all of the fan fare and read the press releases from TI, however, what does it all mean? Is this really something different or just another attempt by a business to place their hands on ones hard earned cash? While I have only had my CC40 some five days a few things become obvious which are not so until one owns this computer. First, Texas Instruments has built a quality product that they have long had a reputation for with their early hand held calculators. The design and appearance has a certain integrity about it that if it were a piece of stereo equipment one would know from the start that he had just purchased a fine piece of machinery. After looking at the 160+ page Users' Guide the excitement begins to build as one realizes that all of the commands we know from TI Extended Basic (except for certain sprite commands) are present. There are also additional commands that relate to the 31 column LCD display. The speed at which the basic language executes is several times faster than that of 99/4 Extended Basic (the double bus does slow down the 99/4.) and yes it really does not loose ones program with the power turned off. A few of my associates have expressed fears over this point yet they never doubt the integrity of the battery in their LCD watches

Despite all of the wonderful machine and Basic language niceties the question most people will want answered is why do I need one? The answer that I usually give when people ask me why do you own a home computer and how do you use it is, "I own a home computer because it is my hobby and I enjoy it. As far as whether I need one the obvious answer is no. However 30 years ago people did not need air

conditioners or want to own colored television sets. I feel that owning a home computer adds a certain degree of quality to my life and that is why I own one." Well, enter phase two because the CC-40 does to home computers what batteries did for the adding machine. After five days I have already programmed the CC-40 to be a personal phone directory, a timer, a repository for financial formulas I use at work, and a game machine to pass by idle moments. The best part is I still have 2k of memory left. Other ideas I have for using this machine include writing programs for grocery shopping, keeping my checkbook (both checks written and a running account balance), personal addresses, business addresses, appointments (one program for work and one for home), gas mileage, a travel diary, and on and on the list grows. I am now waiting for the availability of either a HEX-BUS or Wafer Tape. Then, I will be all set for some serious programming. One of the first steps I took after purchasing my CC-40 was to sell my old calculator. Because of the LCD display, I feel a paper tape is no longer necessary. When one reaches the end of the 80 column line simply scroll back to the start, checking the entries as you go and press enter. Continue adding, subtracting, dividing or multiplying. If it sounds too easy, it is. In summary the only possible thing I have found wrong about the CC-40 is the price. With a suggested retail price of \$250 Texas Instruments must have made a mistake. If this portable computer appeals to you in the least you had better rush out to your nearest dealer as soon as possible before TI finds out what their CC-40 is really worth.

Say goodbye to paper !!!

Dave Hill

\*\*\*\*\*

S\*M\*A\*R\*T LIBRARY NEWS (301) 681-5065

TI99 SYSOP, Mike Lambert (703) 920-3955

\*\*\*\*\*

As you might have noticed the menus on S\*M\*A\*R\*T are slightly different from those published in the last newsletter. You will find such changes occasionally as S\*M\*A\*R\*T continues to provide better and more responsive service.

Let's talk about things you should be checking after you sign on each time. When you first sign on you are notified of any messages for you that you have not read yet. It looks like this:

You have the following waiting:

Msg#: 1789 \*TI99\* <-----  
Subj: REPLY TO MSG # 1784  
04/07/83 15:17:48 (Read 9 Times)  
From: THOM MIRANDA  
To: MIKE LAMBERT

Msg#: 1806 \*E-MAIL\* <-----  
Subj: REPLY TO MSG # 1804  
04/08/83 08:28:18  
From: LARRY HUGHES  
To: MIKE LAMBERT

These message(s) are marked for retrieval

>2/CMD: (N,E,M,B,G,O,R,T,S,Q,\*, or ?): E

In this example we have two messages; one message is waiting on the TI99 board (as noted next to the 'Msg#:', and the second is a private communication in the E/mail section.

To read the message in E/mail use the 'E' option from the Central Library Menu. (Note the change of the option to Post mail for others, it previously was 'leave mail for others'.) The following menu is the result:

S\*M\*A\*R\*T E/MAIL  
PRIVATE messages

<R>EAD YOUR MAIL <-----  
<S>CAN YOUR MAIL  
<P>OST MAIL FOR OTHERS  
<K>ILL YOUR MAIL  
<T>IME SINCE LOGON  
<E>XIT BACK TO PREVIOUS MENU  
<Q>UIT - LOGOFF SYSTEM

>2/CMD: R

\*\*\* Use the Read or Scan option to produce the following menu:

<T>o you  
 <F>rom you  
 <B>oth To and From you      <----->  
 <M>arked Mail  
 <A>bort Reading Mail

Which One? B

The best option to use is the 'Both To and From you'. This option will not only show you the mail for you but more importantly will show you the mail posted by you that still remains and it's status. If the (Rcvd) flag is shown next to the name of the addressee then the individual has received and read the message but has elected not to delete it yet. If the addressee has not deleted it, it may be because he has saved it on his system and wishes to review it to insure the content before deleting it the next time he signs on. If the message remains for a considerable time and contains special information, notify the addressee before you delete it. It is your responsibility to keep your mail under control, useless messages use valuable disk space.

If the (Rcvd) flag is not shown, the addressee has not read the message. It is important to be aware of this situation for a number of reasons. It is your only clue you would ever have if you had misspelled the addressee's name. When you post mail for someone the system accepts whatever you insert for the addressee, the system does not check the users log for a match. This way you could leave a message for a new user to be read by them when they sign on for the first time. The system does not check your case so you may use upper or lower case. If you are in doubt of the name the person uses when signed on the system simply check one of the message boards for a message from them. Use the exact spelling for your address when mailing. Only the user with the exact spelling will receive your message, this insures it's privacy. If you notice that your message does not have the (Rcvd) flag then you might want to confirm the addressee spelling, if the spelling is OK then the addressee probably hasn't signed on recently. Some people use one name to sign on and are referred to by another name in correspondence.

E/mail will be left for a maximum of 30 days. This is more than enough time to transfer the info to your system. Only leave the mail if it contains complex info that would be better to have a complete copy of and then make arrangements to save the file to your system. Messages on the public boards will also remain for about 30 days. Exceptions will be those items of interest that would not be outdated (some software reviews, technical info, etc.) and will remain while S\*M\*A\*R\*T Staff consider them of interest to new users. Items not deleted are at the discretion of the System Sysop. S\*M\*A\*R\*T Staff are not responsible for your message deletion; if your message is outdated, delete it. Saving those messages of interest is easily done by using the 'ctrl 2' option from the TE II. If you save this info to tape, remember that you will be writing FIXED 80 files. This file will take time to be written to tape so make sure you have the necessary time remaining on your logon. If the time required would be in excess of 3 minutes you might be disconnected. If you find yourself in a situation where you'd like to save a message and you are unable to do

so, contact TI99 SYSOP and I'll take care of it for you and see that you get the copy.

If you don't like the present way S\*M\*A\*R\*T is displaying for you or maybe you're wondering why it keeps displaying on the same line, a quick trip to the 'System' section from the Central Library Menu will fix it for you. This section is of great help for those of you who sign on from work using a terminal with different terminal characteristics than your TI99 at home. Below are the menu and the responses to change your terminal communications settings:

#### SYSTEM FUNCTION USER OPTIONS

```
<R>E-CONFIGURE - Change your terminal communications settings
<H>ELP-LEVELS - Adjust the length of menu texts
<T>IME - Display Elapsed Time since Log-On
<C>ENTRAL - Return to the Central Library Index
<E>XIT - Return to previous Library Section
<Q>UIT - Log-Out of the Library and Terminate Call
```

```
>2/CMD: R <-----
```

```
Terminal Width (10-132)? 40 <-----
```

```
<A>VIDTEX          <B>TRS-80 1/3
<C>APPLE II       <D>ATARI
<E>H19/H89/Z19    <F>IBM PC
<G>Televid 925    <H>LA34
<I>OSBORNE        <J>TI99
```

```
Enter letter of your terminal, <CR> if not listed: J <-----
```

```
Upper/Lower Case
Line Feeds Needed
00 Nulls after each <CR>
```

```
Do you wish to modify this? Y <-----
```

```
Can your terminal print lower case? Y <-----
```

```
Does your terminal need Line Feeds? Y <-----
```

```
How many Nulls (0-50)? 0 <-----
```

```
>2/CMD: (R,H,T,C,E,Q, or ?):
```

As you see, I used the 'Reconfigure' option once in the 'System' section. The first question is for your terminal width. If you are using the TE II and specified 40 columns then reply '40'. If you are using your printer in parallel to get a hard copy of the session you may want to set the width at a higher value to save paper. You are then asked to specify the type of terminal/computer you are using. Most of us are using TI99s but if you have access to some other terminal type (maybe at work), this is an easy way to quickly reconfigure to match your new type. The setting you make is 'permanent', meaning you will be remembered as whatever you specified so if you changed terminals again, you'd have to reconfigure again when changing terminal types.

Next are the present settings for you for case, linefeeds, and nulls. What is noted above (upper/lower case, linefeeds, and @@ nulls) is correct for the TI99/4A console. The question was answered yes so you'll see each setting is prompted for. If you are using a printer and the buffer is not big enough you might want to include nulls. As you can see you will be given the opportunity to modify the values if you wish. Upon completion of the reconfigure question/answer session you are still in the system section. We'll talk about 'Help levels' next issue.

I, as have others, occasionally noticed some unusual occurrences while logged on. Occasionally, unwanted characters have crept in, I've even lost communication. The most fragile part of networking is the telephone link. While this is not always the culprit, it does provide easy access for those little gremlins that want to interrupt you. Having an acustical modem, I experienced problems until I changed to another transmitter in the phone I was using, with that of another phone in the house. If you have any problems with your hardware or if it is marginal, S\*M\*A\*R\*T will be the place that it will show up. The reason is the software S\*M\*A\*R\*T uses. As you've noticed, S\*M\*A\*R\*T very seldom requires a <cr> to terminate commands. In fact, the only time a <cr> is required is to terminate a line that will have more than one character. This being the case, any unwanted character will be interpreted by S\*M\*A\*R\*T as a command when in command mode. This obviously can be frustrating. In the event of difficulty, check your hardware.

Unfortunately, the S\*M\*A\*R\*T computer is located in an area notorious for problems induced by bad weather. If you are experiencing problems during rough weather it's possible there's a thunder storm in Silver Spring. Those that have a telephone with the call waiting feature are also susceptible to losing their communication. Those of you that have an extension phone are OK as long as the kids or the dog aren't trying to call Australia.

Just as last issue was being released, S\*M\*A\*R\*T was changing their application for access procedure. Below is that procedure (S\*M\*A\*R\*T is constantly making updates of their procedures to give us better service, so use this as a guide only).

You are authorized 20 mins this call

S\*M\*A\*R\*T MICRO LIBRARY

== LIBRARY CENTRAL ==

=====

NEW USER ACCESS RESTRICTED

=====

<E>MAIL (Private Messages)

<P>OLICIES - READ BEFORE APPLYING FOR ACCESS <-----

<A>PPPLICATION FOR ACCESS

<M>ESSAGE TO SYSOP

<Q>UIT - Log Off and Terminate call

>2/CMD:P <-----

P Type P to Pause, S to Stop listing

Public use of the message boards and SIG sections is encouraged, however, the following policy guidelines apply:

1. PrograManagement Systems (hereinafter called SYSOP) reserves the right to refuse system access to anyone at any time and to delete any message posted on any section of this system, and is solely responsible for editorial judgment in such regard.
  2. The use of the system for "WANT-AD" type messages where private individuals are offering to sell single items, or where private individuals are offering to purchase same, is encouraged, however, the use of same by commercial enterprises for the purpose of advertising or selling products, or services is strictly prohibited, and any messages believed by SYSOP to be commercial will be deleted.
  3. The SYSOP will delete any messages containing any language found to be not in keeping with the professional standards set for the operation of this system. This includes but is not limited to Obscene, or Vulgar language as well as language that may be considered offensive for any reason.
  4. The SYSOP will delete any message believed to contain false or misleading information including both messages and message headers.
  5. The SYSOP will delete any message believed to contain information believed to be in way connected with the breaking or conspiracy to break the laws of any federal, state, or local agency.
  6. PrograManagement Systems assumes no responsibility whatsoever for the maintenance of any posted message, and all users are hereby advised that messages may be deleted without prior notice if in the opinion of SYSOP such is in the best interest of the system and/or its sponsors.
  7. This system is for serious computer users, and does not support the use of pen-names or any form of identification other than registered users legal names. Any application for access believed to be under an assumed name will require additional investigation before access is granted.
  8. Any user's access to this system may be withdrawn at anytime without prior notification at the sole discretion of the system operators.
7. Clarification of these policies or any questions may be directed in writing to:
- Operations Manager
  - PrograManagement Systems
  - 1377 "K" Street NW (Suite 100)
  - Washington, DC 20005

-----> End of Policy Statement

S\*M\*A\*R\*T MICRO LIBRARY  
 == LIBRARY CENTRAL ==  
 =====  
 NEW USER ACCESS RESTRICTED  
 =====

<E>MAIL (Private Messages)  
 <P>OLICIES - READ BEFORE APPLYING FOR ACCESS  
 <A>PPPLICATION FOR ACCESS <-----  
 <M>ESSAGE TO SYSOP  
 <Q>UIT - Log Off and Terminate call

>2/CMD: A <-----

There is no charge for use of the S\*M\*A\*R\*T LIBRARY COMPUTER System.... However to prevent mis-use of the system, all users must first be registered... Before you apply for access, you must first read the System Policies available on the previous menu...If you have not read these policies...DO NOT CONTINUE!!!

HAVE YOU READ THE SYSTEM POLICIES AND ARE YOU NOW READY TO APPLY FOR "FREE" ACCESS AUTHORIZATION?

<Y/N> Y <-----

Please enter your full name, (FIRST, MI, LAST)

\*\*YOUR, NAME, HERE\*\* <-----

Please enter your complete street address including apartment number.

\*\*YOUR ADDRESS HERE\*\* <-----

Please enter the City, State, and Zip Code for your address.

\*\*YOUR CITY, STATE, AND ZIP HERE\*\* <-----

We have your name and address as:

\*\*YOUR NAME \*\* <-----

\*\*YOUR ADDRESS \*\* <-----

\*\*YOUR CITY, STATE, AND ZIP\*\* <-----

Is this correct? <Y/N> Y <-----

Enter a phone number so we can reach you if we have questions about your application for access...(Include area code if out of Metro DC.)

\*\*YOUR PHONE NUMBER HERE\*\* <-----

When is the best time to call you at this number?

\*\*TIME HERE MOST CONVENIENT FOR YOU\*\* <-----

We have your phone number and time of contact as:

\*\* PHONE NUMBER AND \*\*  
\*\*TIME READ BACK HERE\*\*

Do we have this correct? <Y/N> Y <-----

To protect the privacy of your E/MAIL, we require the use of a password...  
Please enter your password of UP TO 8 CHARACTERS...  
Upper case is different from lower case, and embedded blanks are legal...  
REMEMBER THIS PASSWORD...  
YOU WILL NEED IT TO SIGN ON FROM NOW ON!...

Your password > \*\*YOUR PASSWORD HERE\*\* <-----

\*\*NOTE\*\* REMEMBER CASE

We understand you wish your password to be:

\*\*YOUR PASSWORD HERE\*\*

Is this correct <Y/N> ? Y <-----

Thanks for completing the application. Processing usually takes from 24 to 48 hours. After your application is approved, your password will allow you access to the system.

Thanks for calling the S\*\*M\*\*A\*\*R\*\*T LIBRARY Computer, call back tomorrow. If your password has been activated, you will have access to the system.  
ProgramManagement Systems

S\*\*M\*\*A\*\*R\*\*T MICRO LIBRARY  
== LIBRARY CENTRAL ==  
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# TI Drops Market Plans on 99/2 For Now

By MARK HALPER

LUBBOCK, Tex. — Texas Instruments scrapped plans for nationwide marketing of the 99/2 this quarter and may abandon the project completely, following its recent decision to bring street tags of the flagship 99/4A home computer to under \$100 by June 1.

William Turner, president of the Consumer Products Group, said TI has switched the 99/2 to "test markets" at reduced list prices, rather than market it through mass merchandisers' central buying offices, where purchasing agents had already begun to commit.

The decision was reportedly triggered by Commodore, which waited until TI's planned volume shipment date for the 99/2 to sweeten dealer pricing on the packaged VIC 20 home computers so that the keyboard console itself is now selling for under \$100.

Commodore is bundling the VIC-20 with a data cassette recorder and a software program at a \$40 discount to retailers, who are selling the extras at full price and the VIC-20 at \$40 off.

### Ugly Duckling

That move, sources say, pressured TI into offering the 99/4A to end users for \$99 effective June 1, casting the 99/2, a less versatile system with a suggested \$99 list price, as an ugly duckling.

Mr. Turner denied TI acted in direct response to Commodore, but confirmed the price cut on the 99/4A has shaped the 99/2 as an unwanted 99 series offspring.

"I have withdrawn it (the 99/2) from the planning cycle you normally have with retailers. We have advised all retailers who said they wanted the 99/2 that we will not pre-plan in any way but a test mode. We have asked they not put the product in their catalog. Based on results of the test, we will proceed on the product."

Asked if a "market-test" implies that TI may drop the 99/2, he noted "It could. All appropriate results of a test are in order here. One course could be to abandon. Another could be to reconfigure it (with more money) or to package it with application software that would target a specific market. A fourth course could be to OEM it."

The 99/2, in its present form, includes 4K of RAM expandable to 36K, and runs plug-in cartridge based software. At introduction, TI said it would be aimed at users wanting to learn to program in TI-Basic and Basic supported assembly languages. It includes a 48 key Qwerty style keyboard, and a built-in peripheral interface called the Hex-bus that is used to connect to a digital tape drive unit called the Wafertape an RS-232 interface and a four-color printer/plotter.

TI had pegged the dealer price of the 99/2 at \$75, and the suggested list price at \$99. A street price of \$99 was expected.

Mr. Turner did not detail pricing for the 99/2 in the test markets, but indicated it will be lower than originally set.

He said TI is seeking markets other than computer literacy for it. One source noted privately that TI is considering targeting uses as a videotext terminal and as a laboratory instrument controller.

Conceding that mass merchandisers will have little interest, he said he hopes to market it on a test basis "through multiple channels" including computer retail stores and business equipment stores.

### Peripherals Sales Down

Sources noted last week that TI is more concerned over the loss of sales of 99/2 peripherals resulting from its decision, since the bulk of profit margins in the home computer area come from peripherals and software. Other peripherals had been scheduled for later this year, including a modem, an additional printer, a wand input device and a black-and-white monitor. Many of those peripherals also run on the 99/4A, with the correct interface, and with the Compact Computer 40, a \$250 device which TI began shipping recently.

Meanwhile, Mr. Turner reversed his long-standing position that the 99/4A is not in the computer literacy market, noting that at its new price effective June 1, it will be. As a computer literacy machine it is expected to be more susceptible to pricing moves made by Timex on its TS-1000, which has been selling as low as \$39 on the retail level.

Industry watchers suggested that because TI must now pay more attention to Timex, and because the VIC-20

is currently hitting \$99 on the retail level, TI may have to act before June 1 in bringing the price of the 99/4A to under \$100.

Under a two-step TI plan, a \$100 cut on the suggested list price is in store for April 15, when an 8-month old rebate program expires. That move will keep the amount spent by the end-user at the current \$149 level. Step two calls for a \$50 rebate to begin June 1, bringing the price down to \$99.

In denying that TI is reacting to Commodore, Mr. Turner said the TI move is aimed at keeping the company "in a leadership position in price value," and added that he expects the price cut to bring in sales that otherwise would have gone to the video game business.

There was some conjecture last week that TI is scrambling to make up ground lost to Commodore in its market-share race when TI halted shipments of the 99/4A for 3 weeks recently to correct a potential electrical shock hazard.

### Sales 'Back To Levels'

Mr. Turner said last week that sales of the 99/4A are "back to levels" of before the glitch. Up until then, TI claimed to be selling 30,000 per week.

Meanwhile, at Commodore, Myrdin Jones, vice-president of marketing, confirmed that the company has tabled the HHC-4 hand-held computer project. "Frankly, the timing just isn't right," he noted, alluding to the raging price battles that have colored the home computer market with the look of the calculator market in the 1970s.

The HHC-4 was priced at \$199 when it was introduced last January. It was to include 4K of RAM expandable to 16K, 20K of ROM, built-in Basic computer language, a 24-character LCD, and printer and RS-232 interfaces.

## Atari to Offer \$50 Rebate on 400

SUNNYVALE, Calif. — Atari said it will offer a \$50 consumer rebate for its Atari 400 home computer effective April 15. The rebate is expected to bring the street price of the 400 to \$150.

An existing \$55 dealer rebate launched earlier this year (EN, Jan. 17) remains in effect, the company said.

A spokesman denied the rebate is in direct response to TI's and Commodore's pushing prices of their home computers to under \$100.

With the rebate, the 400 will remain some \$50 above TI and Commodore retail prices, retail sources said.

The company had no further comment on when it will replace the 400 with an upgraded model expected to include a full typewriter style keyboard. Late last year, Atari disclosed a plan to phase out the 400 with

such a model this year (EN, Dec. 13, 1982).

Atari said that factory pricing of the Atari 800 and 1200 remains unchanged.

Meanwhile, sources expect Tandy Corp. to respond to the TI and Commodore moves with a price cut or replacement for the TRS-80 color computer, which sells for \$299, \$399 and \$549, depending on memory and language.

The company reiterated a familiar line. Jon Shirley, vice-president of merchandising, said "we have already decided on our promotional activities," hinting that a price cut on product reconfiguration is in the works. He declined to elaborate.

# **TI WILL BE HERE IN MAY**

## **BALTIMORE**

**FRIDAY MAY 13**

**PERRY HALL SENIOR HIGH SCHOOL  
4601 EBENEZER RD.**

**7:00PM**

**DIRECTIONS:** Baltimore Beltway 695 take EXIT 32 (US Route 1 North) go approximately 5 miles to the traffic light at Ebenezer Rd. TURN RIGHT, go about 1.5 miles and the school will be on the right

## **WASHINGTON**

**SATURDAY MAY 14**

**FAIRFAX HIGH SCHOOL  
3500 OLD LEE HIGHWAY**

**1:00PM**

**Directions:** From I-495 (Washington Beltway) exit 8 West, U.S. 50, go 3.5 miles (at 3 miles you will drive thru Fairfax Circle), another 1/2 mile at a traffic light turn left. There is a small sign on the right shoulder of the road directing your left turn to Fairfax High School. Also on the right is a Denny's Restaurant (good food, inexpensive), and P. J. Skidoos Restaurant. After turning left the road winds around the athletic field to the school building. At the school building enter to the left side of the pillared center section. Located just inside the entrance will be a bulletin board directing you to the meeting room.

**Alternate Directions:** From Beltway take 166 west to the exit at Va. Route 123 South. Go south on 123 about 3/4 mile to the second traffic light, and turn left, this is U.S. 50 east, then go about 1/2 mile, pass the Red Lobster Restaurant, the Old Budapest Restaurant. Watch for a Fire House on right, then go to the next traffic light and turn right to school. This is the same light as described above at Denny's and P.J. Skidoos Restaurants.

# Compaq Countersuit Claims Unfair Competition by TI

HOUSTON — Compaq Computer Corp. has filed a countersuit against Texas Instruments, Inc., which last month filed a patent infringement and employee piracy suit against Compaq. In its countersuit, Compaq has asked a U.S. District Court here for more than \$60 million in real and punitive damages.

Compaq, a portable computer maker, denied ever infringing on TI's patents or stealing trade secrets. "None of the former TI employees were requested to divulge or use, nor did they divulge or use, any confidential information of TI in their work for Compaq. In fact, such use of

confidential information of any third party is expressly forbidden in their employment agreements with Compaq," the countersuit claimed.

Compaq charged further that TI's original suit is part of a concerted effort to drive Compaq and like companies out of business, asserting that TI's "scheme" vis-a-vis its suit was hatched "with the sole purpose of fostering TI's plan to prevent Compaq's entry into the computer equipment market, to compete unfairly and to restrain trade."

TI officials declined to comment at press time on the Compaq countersuit.

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From the  
Cin-Day User Group  
Newsletter

## Saving and Loading Programs: by Ed York

It has been brought to my attention that many of you have been having problems in saving and loading programs with a cassette recorder. Well, I will attempt to remedy this problem once and for all! Before we are free and clear to proceed we must assume that either we have a program, in the computers memory, we wish to save onto a tape or that we have a program, which was previously saved on tape, that we wish to load into the computers memory. If you are trying to save a program then type in SAVE CS1, press the ENTER key and follow the instructions the computer gives you. If you are trying to load a program then type in OLD CS1, press the ENTER key and follow the instructions the computer gives you. If you encounter an error that says \* ERROR - NO DATA FOUND then this means that the volume setting on the cassette recorder was not loud enough. If you encounter an error that says \* ERROR DETECTED IN DATA then this means that volume setting on the cassette recorder was too loud. Therefore by adjusting the volume setting on the cassette recorder according to the error messages you receive, you will be on your way to finding the correct volume setting for your cassette recorder. It does take some measure of practice and the volume setting may be vary slightly for each cassette tape and even from identical cassette recorders.

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## PROGRAM LIBRARY

Many thanks to the following members who donated programs to the Club library during the past month: Maurice Swinnen, Ken Young, Peter Anderson, Dave Hill, Dick Schmitt, and Jim Gibson.

Thanks also to Bill Burke and Chris Goodman who helped deliver and distribute tapes. Tape requests that are received by May 26 will be available for pickup at the June meeting. Please write 'TI' on the lower left corner of your envelope so Ken will know that it is a Tape Request.

Jay Maltese of Washington Calculators has generously volunteered to process disk requests for LOGO programs. Give him your initialized disks and he will copy them for you. You may donate programs to the library by giving them to Larry Hughes on a tape or disk. He will return your tape or disk at the next meeting.

## NEW!!

A compilation of the "Best Articles of the Washington DC Area TI Users Group Newsletter" is now available for the cost of reproduction, \$5. Covering Jan. 1982 thru March 1983, 70 pages. Pre-paid orders only, no mail orders, specify VA or MD pickup. (Idea suggested by Larry Hughes, compiled by Wayne Johnson, distributed by Paul Schuer.) To order, make check out to and send to Paul Schuer, 7222 Marywood St, Hyattsville, MD 20784, 577-5633.

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— 99'er Magazine (3/83 p.21)

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The 1N4002 is Rated at 1 Amp continous (or 2 Amps 50% duty). The 7812 has a Maximum rating of 1.5 Amps with a infinite heat sink. The standard TI supplied Disk drive (MPI 851) draws 1.5 A surge and 0.8 running. The best thin Drives draw .7 A running EACH (and both start and run together).

As you can see, The regulator is at it's Max when starting and the rectifier still has to supply the rest of the cards in the box. This leaves little to none in reserve. Any good designer knows to never exceed maximum ratings if a product is to be reliable and they usually derate even further to improve reliability.

TI would be within their rights to dis-allow a warrenty claim because of improper use.

A 1N5046 rectifier has a 3 Amp Rating and there are 78H12 regulators that have a higher rating. If you do have these installed **your warrenty is VOID** and you should probably leave 2 slot empty to prevent overloading the transformer. +++ Steve Urbach

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