

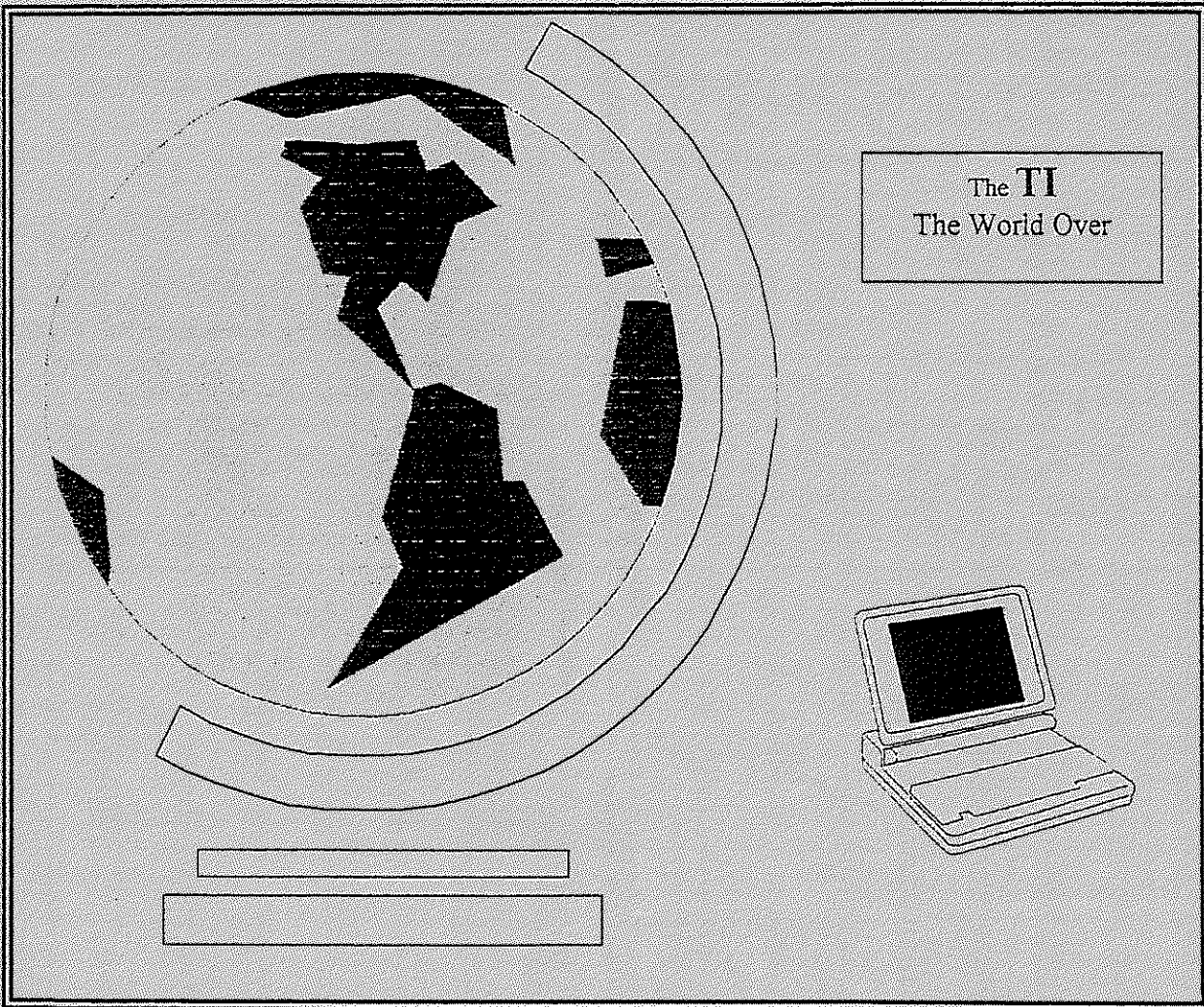
NEWS DIGEST

Focusing on the TI99/4A Home Computer

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TisHUG Sydney Meeting

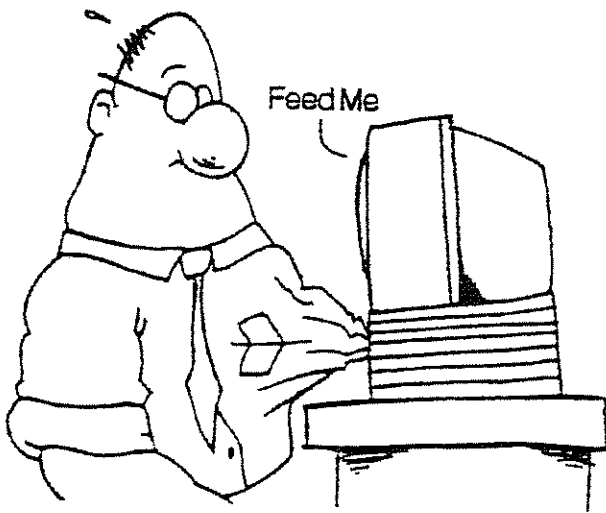
The August Meeting will start at
2.0 pm on the 3rd August 1996
at Meadowbank Primary School,
Thistle Street, Meadowbank.

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EDITORS COMMENTS

It was suggested at the last meeting that we have a workshop night at Cyril Bohlon's home, the **second Friday** of each month.

This could be an interesting night for me to visit Cyril and offer my ten thumb's assistants.!

At the July meeting there were a few new faces, mixed amongst the 20 to 30 familiar members.

Peter was there with his systems up and running, displaying his latest in computing technology.

Larry had his faithful TI system demonstrating different programs and games

Both of the clubs computers (IBM) and (TI) were busily being used to play games or copying shareware programs, in all it was a busy afternoon.

I would like to thank Dick for his article on converting data from text to data-base format.

It has helped me heaps, as you may recall I was trying to transfer some of my data-base files from PR Base to Microsoft Access. What I had done was print from the TI through the serial port, which was joined by a cable to the IBM, after receiving the text through the terminal program in Windows, I edited the text in Microsoft Word. Now this is where I become unstuck, I saved it as a DOC file, well it didn't work it must be saved as a TEXT file with no hidden commands. Once this was saved as a text file I imported it into Microsoft Access, the import was so fast I thought nothing had happened, until I looked at the file. Since then I have transferred all of my data-bases from PR Base, and TI Base.

I'd like to point out that there was no data-base setup in Access prior to the transfer, the headings and column width were set by the incoming data.

That's it for now, see you at the August meeting

TI-LEGENDS

By - Richard A. Fleetwood

President-Forest Lane TI Users Group, Dallas, Texas

TI 99/4A Family hardware and software that "never was"

There have been many stories about things that TI was working on for the TI home computer before they shut down the home computer division due to heavy financial losses. There were several items that TI pre-advertised before actual availability, and many others that never even made it to that point.

This article is going to cover many of these hardware items, and even some software that was never officially released through proper channels. The purpose of all this information is for your personal enlightenment, as well as some historical significance, since very little mention has ever been made in other reading material. All this information also comes from first hand knowledge, and actual use of the mentioned items - These are not the result of anyone else's imagination, they were and are real. Calling TI to verify this information will put you up against a blank wall. The people you will get on the phone weren't even around when some of this stuff was going on and no one will admit that this stuff was ever made, much less left the premises.

So with that out of the way, let me start this feature by giving you a list of some of the things I have, have had, have used, or have seen. This short list is by no means complete, but is full of things not seen by a vast majority of 99ers. If you know of something TI worked on but do not find it listed, please contact me so I can add it to my files for future reference. I have a decent sized library of tech info and can probably return the favor.

SOME OF TI'S LEGENDS

- T.I. 99/4 The "Original"
- T.I. 99/4A The Computer most of us have come to love
- T.I. 99/4B The "missing" link between the 99/4A and the 99/8
- T.I. 99/8 The ULTIMATE TI home computer
- T.I. 99/2 TI's entry into the "Timex" arena
- T.I. CC40 TI's entry into the "portable" arena

Peripherals!

1. THE GROM BOX
2. DS/DD CONTROLLER
3. HARDDRIVE CONTROLLER
4. IEEE-488 INTERFACE CARD

5. VIDEO CONTROLLER CARD
6. 128K MEMORY SUPERRAM CARD
7. 374K MEMORY ULTRARAM CARD
8. FORTI 4 CHANNEL MUSIC CARD
9. PORT RS232 CARD
10. ARMADILLO INTER FACE CARD

HEXBUS peripherals

- MODEM
- RS232
- PRINTER/PLOTTER
- PRINTER 80
- 5 1/4 " DISK DRIVE
- SMART MODEM
- VIDEO CONTROLLER
- HEXBUS INTERFACE

The 99/4 is what started everything off for TI in the home computer market. Originally designed in the late 1970's, it finally hit the market in 1980, and for over \$1100 you got a 16K, 16 bit computer with built in BASIC, and also a 19" color monitor. The worst thing about the 99/4 was the keyboard. It used the same chiclet style keys found on TI's entire line of calculators. It also was very limited when it came to expanding-in fact at first, there was no way to expand it at all!! That came months later.

TI listened to all the feedback from customers and finally did the right thing. They redesigned the 99/4, adding a REAL keyboard (although downsized) making touch typing MUCH easier. They rewrote some portions of the operating system to make some things easier. They changed the video processor to the 9918A (hence the 'A' in '99/4A') and in the process added gobs of power to the overall system. They also, around this time, came out with the PERIPHERAL EXPANSION BOX and several cards to make use of it. In between the 99/4 and the 99/4A, TI developed the choo-choo style method of upgrading -- making the 32K memory, the RS232, the Disk Controller, and the P - Code unit in standalone units with covers that matched the color and profile of the black and silver consoles. If you had a fully expanded system, your computer desk was at least four feet wide, with all your peripherals extending from the right side of the console to the far end of your desk.

When it came to software, the 99/4A is what really unleashed the real power and graphics of the machine, and many new things began to flow from Lubbock, including some of the kinds of programs that used to require the "other" brands of computers in order to run them.

In '83, TI started letting 3rd party companies have access to the inner workings of the 99/4A so they could produce (under license) their own software. Atarisoft Milton Bradley, Parker Brothers, and many others finally got their arcade programs on the market. Unfortunately, by the time things were rolling for them, TI was already headed downhill. More on software later...

Also about the time the good things were happening with software, TI was looking towards the future and other possibilities of expansion. The engineers were playing with ways to make things simpler, yet more complex. They put together a half dozen "all new" 99/xx computers, based upon some market research and other projects. These new computers were little more than proposals and brainstorming sessions, as well as prototypes for the new wave of home computers that would renew the infamous computer wars of the early 1980's.

These few consoles were known as the 99/4B's. They had a brand new memory mapper and used the big brother of the TI994/A microprocessor. They were equipped with the new 9995 u-processor that enabled much more memory to be accessed, and a much better throughput of machine code. These new chips were much more efficient than the 9900, and soon proved very capable and powerful in the small home based system. The 99/4B was equipped with 32K of memory, a faster system clock, and a semi-new keyboard. All six of these were pretty much hand built, and weren't meant to be marketed. They were just the testing ground for the 99/4A's "big brother".

The 99/8 was TI's final attempt at making it to the top of the home computer market. At the time it was going to be released, it would have been more powerful than any other home computer in its price range. It came equipped with 64K of memory, upgradeable to 2 megabytes. It had built-in speech, unlike all other computers. It had EXTENDED BASIC II included as the standard language at powerup. XBII included over a dozen new commands, including new graphics commands, new string handling code, and several new routines that made use of hexadecimal/decimal number handling. Also available at the powerup was the PASCAL P-Code system.

The 99/8 was in a class by itself with all these STANDARD features. Ports included the cassette, video, ac power, and the all new HEXBUS port. The expansion port on the side of the console had 50 pins, versus 44 on the 99/4A.

The extra pins and some juggling of signals gave the 99/9 true 16 bit handling on its I/O bus. The Cartridge port was mounted on TOP of the unit, and installing a

cartridge consisted of inserting straight down, instead of pushing the cart into the front of the console.

The Keyboard was totally redesigned, with several new keys added to lesson the use of the FUNCTION key for characters such as ?, ", _ , | , ~ , [,] , and so forth. The FUNCTION downkey was also moved to the left side of the keyboard, so you could have your full cursor control with one hand instead of both. Overall the keyboard was almost 4 inches wider, and touch typing was much easier because it felt like a full size SELECTRIC typewriter keyboard.

I almost forgot to add that the powerup menu of the 99/8 offered another option. This fourth selection was for setting the SPEED of the system. You could choose between SLOW mode, 99/4A mode, or FAST MODE. The control made it possible to change the speed at which your program ran. It was quite interesting to try to play MUNCHMAN at FULL speed, because everything ran much faster, as did most other modules.

Some specifics about the 99/8 project- According to discussions with over a dozen different individuals, I have put together the following facts.

The 99/8 project almost died in the prototype stage, because of the complexity of the memory mapper. A BIG breakthrough by one individual engineer kept the project going. I have yet to get the name of this guy, but one day will run across him and shake his hand.

There were less than approximately 1000 etched PC boards made. Only 250 of these were actually assembled into working units. Out of these 250 units, only about 150 were the FINAL pre-production versions. These early units, if they had the PASCAL system installed, had them on ROMS instead of GROMS. This was for ease of debugging, until they had the FINAL version.

Speaking of PASCAL, here is an interesting TID BIT-I talked with the fellow who had the responsibility of taking the actual silicon wafers from the SC building after etching, to Singapore, where the final GROM chips were to be manufactured. He made it as far as Los Angeles before he got a call on BLACK FRIDAY to come back home, that the whole project was being scrapped. I'll bet that probably less than two dozen 99/8's have the Pascal system intact. My very own 99/8 does not, but then again, I still don't use my P-CODE card in my 99/4A system! I have personally seen close to two dozen different 99/8's here in Texas, and all while cosmetically the same, seem a little different in the feel and some of the operating characteristics. In fact, in the FLUG group, three of our members (including me) have these consoles.

The code name for the entire 99/8 project was "ARMADILLO", which for some of you non-Texans, is a feisty little armored mammal that roams the plains of the great state of Texas. More than once I have had my 99/8 on display somewhere, and along would come a former or present TI employee who would say, "Wow! Armadillo!". Most of these guys had heard about the project but had never seen one. The ones that had are some of the guys I have gotten much of this ARMADILLO information from. Nevertheless, it does make a great conversation piece.

One thing I do need to mention about the 99/8 was its COMPATIBILITY with 99/4A software. Anything that is on cartridge will work perfectly, EXCEPT some Extended Basic, for obvious reasons. Most Basic and XB programs will work the kinds of programs that WON'T work are Machine Code programs that are AORGed into specific memory location. Anything that is relocatable in memory will work. The kinds of XB programs that WON'T work are the ones that contain hidden machine code in the loaders. To tell the truth, I'm not sure if these loaders don't work with the 99/8 or the HEXBUS disk drive controller, which used a 9995 microprocessor as a controlling chip. I'll find out someday and let you know.

The ONLY reason that the TI 99/8 didn't make it to the market is due to the CEO, - J. Fred Bucy. He was the man who decided that TI had to do the quickest thing it could come up with to heal the wound through which hundreds of millions of dollars was flowing out. He called a board meeting and because of that meeting, the whole home computer division was canceled. So ended the hope for the future - the 99/8, as well as all the support and everything else that owners of 99/4A's needed. We still survive as users of the 99/4A, but in spite of TI.

Another project that appeared around the time of the 99/8, if not before was the 99/2. This computer was the "little" brother of the 99/4A, and had some very limited features. However, it did have one thing that the 99/4A could have used - it had a VERY fast system clock that enabled some kinds of programs that had repetitive code to run FAST...almost 3 times faster than the 99/4A. The 99/2 was the brainchild of a couple engineers who thought it would help to cut costs down, and improve marketing coverage. TI's home computer market guy at that time decided to use the 99/2 to compete with the very popular Sinclair ZX81 (a.k.a. TIMEX SINCLAIR 1000). The only problem was that by the time TI had the 99/2 ready to market, the price of the TIMEX 1000 had dropped WAY BELOW the cost it took to just build the 99/2. This little jewel never really had a chance, and

Organisation des TI / GENEVE Treffen

most of the reason can be blamed on the over zealousness to control the ENTIRE home computer market—a market TOO BIG for any one manufacture to handle. TI lost several million dollars in time and money working on the 99/2 project, and should have applied it ALL to the money working on the 99/2 project, and should have applied it ALL to the big brother (the 99/8), so that it would have had a better chance.

The features of the 99/2 that are worth noting are its small size, its black and white output, instead of color, its lack of a front cartridge port, instead using a new cartridge port in the very back of the console, and its HEXBUport. There was no side I/O port, since this computer was designed for small budgets and projects, it was limited to 16k of memory, which compared directly to the Timex 1000 with its memory expansion bringing it up to 16K total.

I have seen several of these consoles on the used market in the Dallas area for anything from \$50 to \$100. The 99/8 consoles have been sold a little as well, with prices going from \$600 to \$900, depending on peripherals.

I had intended to try to cover nearly everything I had mentioned at the start of this article, but the time is late, and I still have so much to cover, it may take several more hours. I will finish the history of some of the TI legends in the next installment, and will start with the TI GROM BOX, the story of the GRAMCRACKER.

If you have specific questions about any of the above items, or have some interesting tidbits to share, please leave me mail on DELPHI or contact me at the following address:

*F.L.U.G., BOX 743005, DALLAS, TEXAS 75247
ATTENTION: RICHARD FLEETWOOD.

I will be more than happy to help in any way I can.
Till next time,

END OF ARTICLE

Portland user group

gets e-mail address

The Portland Users of Ninety-Nines in Portland, Oregon, have a new e-mail address. It is punn@worldnet.att.net.

Date: TI=MEETING
Date of creation: 9.Feb 1996

Hello TI-friends hallo GENEVE-freaks

IT IS TIME NOW to send the FIRST information for the Internationalen TEXAS INSTRUMENTS 99/4a and MYARC GENEVE 9640 from 20-22 September 1996 in Wolfsburg / Germany out. So if you are in Europe in this time and you are a real I-friend I think there is no problem to make a weekend stop in Olfzburg (the hometown of Volkswagen). We make the meeting this year at:

Freizeitheim Vorsfelde
Am Sportplatz 5
D-38448 Wolfsburg - Vorsfelde
Germany

The mainly fair is on Saturday, 21st of September 1996. But in he last years shown that many TI-user are interested to stay a little bit longer at the meeting place to compute or to make small excursions in the city of the meeting place. In this year we organize a visit of the VOLKSWAGEN car-factory at riday (20th. Sep) and a small tour to the german-german boundary which divide Germany for a long time in to parts (on 21st Sep). But the main reason for the meeting is to get news and change informations araound the TI and GENEVE computer systems.

If you are like to stay longer in the area. the are Hamburg greatest european port and ('Reeperbahn'), Hannover (city of the EXPO 2000) and Berlin (may be you know it form the 'wall') within dey trip distance.

If you are like to visit the 11th international TI meeting lease contact one of the addresses below in the text. We will do our best to make you an enjoyable weekend-stay in Wolfsburg. The prices for a hotel night in Wolfsburg are between 40 DM low level) up to 200 DM (de luxe) for a one night stay in a single room.

Please contact us as soon you were sure that you visit our meeting, so we will organize the rest for you. Please contact only one of the two TI-METTING-CONTACT addresses o express your which to visit the 11.th International TI / GENEVE meeting in Wolfsburg. Send the following reservation form

| | |
|---|---------------------|
| Nartrin Zeddies | Burghard Knedel |
| Hauptstrasse 26 | Bresauler Strasse 2 |
| D-38446 Wolfsburg | D-38550 Isenbttel |
| Gereany | Germany |
| Tel/Fax: 05363 / 71125 | Tel: 05374 / 2237 |
| Internationales TI GENEVE-Treffen vom 20-22 September 1996 | |
| Thank you Mid South 99 | |

END OF ARTICLE

NEVER RELEASED OFFICIAL TI PERIPHERALS:

ORIGINALLY PUBLISHED IN LIMA NEWSLETTER
APRIL 1993

THE HEXBUS INTERFACE; A KEY TO WHAT
MIGHT HAVE BEEN

a hands on description by Charles Good

Lima Ohio User Group

The Hexbus Interface (PHP1300) allows you to control all the neat little hexbus peripherals directly from the 99/4A console. With this interface and a side car 32K (or 32K installed inside the console) you can create a fully expanded system with a very small footprint (occupying little surface area). If you paid full list 1983 TI prices, the cost of your expanded system would be much less than an expanded system based on the peripheral expansion box.

If you have a box that contained a beige console you can see what a TI Hexbus interface looks like. There is a picture of one on the bottom of the box attached to the side of a console. TI listed this device in its last price list (dated June 1, 1983) for \$59.95, but it was never officially released. Only a handful of original TI hexbus interfaces are known to exist. I have such a 1983 TI hexbus interface on loan from Gary Taylor for this report, and I now also have my very own BRAND NEW cloned hexbus interface. For years people have been trying to clone TI's original interface and now it has been done. As of right now I am one of two people to own one of these cloned interfaces. More on this later.

Gary's official TI interface measures 8 x 3.5 x 2.25 inches. It connects to the side of the console and has a connection on its right side for other standard 99/4A peripherals or the peripheral expansion box cable. On the back an on/off switch, a power supply jack for the required model AC9201 6v 300ma external power supply, and one hexbus connector. There is no serial number or date code (ATA or LTA number) on Gary's interface, indicating that it is a preproduction prototype. There is, however, an FCC identification number (A929JWPHP1300), and a statement that the device has been approved by the FCC for "class B" use in the home.

The following hexbus peripherals have been tested by me using a 99/4A console and the hexbus interface with no problems. These are all very small peripherals, and all of Anyone interested in any of these CC40/Hexbus peripherals can write me at P.O. Box 647, Venedocia OH 45894. I will put you in touch with Michael Becker

or Lee Bendick.

HEXBUS.2.PROGRAM and press <enter>. To list a basic program to a printer attached to the hexbus RS232 you would enter LIST "HEXBUS.50." where device 50 is the parallel output of the RS232. To list a program to the printer plotter the syntax is LIST "HEXBUS.10"

I have used the interface with WORDWRITER, a cartridge version of TI Writer. LF and then the file name HEXBUS.2.TEXTFILE will load TEXTFILE into the edit buffer from wafertape device 2. PF and then HEXBUS.16. will print the file directly to the Printer 80 (which is device 16).

The TI Hexbus Interface user guide was never officially published. It would have been designated as document 1049000-1, and was last revised sometime after March 1, 1983. (I have the March 1 revision. Errors in this revision have been corrected in my copy of 104900-1.) This user guide suggests that you can get a CC40 and 99/4A to talk to each other over the hexbus interface, allowing the CC40 to store data on the 99/4A's drives and display information on the 99/4A monitor. There is only limited truth to this. The documentation includes a skeleton 99/4A BASIC program that is supposed to put the /4A in "slave mode" so that it and its peripherals can be controlled by a CC40 connected to the hexbus interface. The key word here is "skeleton". Big parts are left out of this BASIC program, and nobody that I know who has a TI hexbus interface can make this program work. Nobody has been able to SAVE or OLD a CC40 program onto a 99/4A floppy drive or display CC40 text via a 99/4A onto a monitor. You are supposed to be able to do this, but nobody can figure out how.

You can use a CC40 (or TI74) to save data to a data file on wafertape and then use the 99/4A to open the file and read the data into the 99/4A. Wafertape drives are rare and not very reliable. It is really too bad that you can't use the Mechatronic quickdisk drive with the hexbus interface.

THE KEY TO WHAT MIGHT HAVE BEEN:

Back in 1983 the hexbus interface would have been the key to a low cost compact expanded 99/4A system.

Lets compare costs, based on the ridiculous full list prices from TI's last official price list. EXPANSION VIA THE PE BOX:

- PHP1200 Peripheral Expansion box.....\$249.95

them except the RS232 can be run on batteries as well as AC current. With the exception of the Printer 80 they all stack neatly on top of each other. You can place the whole stack of peripherals on top of the hexbus interface where it is connected to the side of the console. The entire footprint of all these peripherals when stacked on top of the interface OCCUPIES LESS TABLE SPACE than fire hose PE Box connector when connected to the console. The PE Box connector sticks out further from the right side of the console than does the hexbus interface and stack of hex bus peripherals!

- Hexbus RS232 with parallel option: can be used to run any printer.
- Hexbus modem, doesn't require an RS232, 300 baud.

Wafertape drive. This is a never released peripheral that I own. Up to 8 of these can be cabled together in a single system.

- Hexbus 4 colour printer/plotter. This tiny printer can be addressed

directly and does not need an RS232.

- The Hexbus "Printer 80" 80 column thermal printer also works flawlessly

with the hexbus interface. but you can't stack it with the other peripherals. Like the printer/plotter, the Printer 80 can be addressed directly and doesn't require an RS232 interface. It uses fax paper or plain paper and a thermal ribbon cartridge.

TI was developing a hexbus 5.25 inch floppy drive controller. I know of two working examples of this controller in private hands, and one of these has been tested successfully with a 99/4A hexbus interface.

Unfortunately, the Hexbus interface does not work properly with the Mechatronic quickdisk drive, the one that uses 2.8 inch disks. You can save programs to quickdisk, but you can't load them back off the disk into the 99/4A.

WHAT YOU CAN DO WITH THE HEXBUS INTERFACE:

According to TI's documentation that comes with the TI interface, the device can be addressed in TI BASIC, TI EXTENDED BASIC, Assembly language, and from the P-code peripheral. The usual syntax is "HEXBUS.DEVICE_NUMBER.FILE_NAME". For example, to save a BASIC program to a wafertape set up as device 2 (wafertape drives can be designated any number from 1-8) you would type SAVE

- PHP1220 RS232 Card.....\$174.95
- PHP1240 Disk Controller Card.....\$249.95
- PHP1250 Floppy drive for PE box.....\$399.95
- PHP1260 32K card.....\$299.95
- PHP1800 Telephone coupler (modem).....\$199.95

-----TOTAL EXPANSION COST..\$1574.70

EXPANSION WITH HEXBUS PERIPHERALS:

- You need a side car 32K and there is no such hexbus product. Doryt

Systems advertises one in the June 1983 99er.....\$175.00

- PHP1300 Hexbus Interface.....\$ 59.95
- HX2000 Wafertape Drive.....\$139.95
- HX3000P RS232 with parallel interface.....\$124.95
- HX3100 Hexbus modem.....\$ 99.95

-----TOTAL EXPANSION COST...\$599.80

This would leave you with enough extra money to purchase additional hexbus peripherals such as

- Additional wafertape drives. Up to 8 drives can be cabled together in

one system and you don't need any kind of "controller" interface.

- HX1000 4 colour printer/plotter.....\$199.95
- HX1010 Printer 80, released in 1984 at.....\$249.95 (the TI impact

printer listed in 1983 for \$750.)

So after listing it in their official price list, obtaining FCC certification, and providing a colour picture of the thing on each beige console box, why didn't TI offer the Hexbus Interface to 99/4A users? I suspect the answer is the failure of the wafertape drive to live up to expectations. My wafertape drive, and those owned by a few other lucky collectors, are not very reliable, particularly when operated on battery power. The key to system expansion is reliable mass storage that is better than a cassette tape recorder. Failure of the wafertape

drive left the hexbus in 1983 with no mass storage peripheral. But this may soon change!

NEW 1993 HEXBUS PERIPHERALS:

reported by Charles Good

Lima Ohio User Group

A hobbyist in Germany named Michael Becker is making clones of TI's never released Hexbus peripherals in limited quantities. (Michael Becker also makes a quad density disk controller and a "speech in the PE box" card that includes TEII speech in ROM useable from extended basic without occupying normal XB program memory space. This card was shown at the Feb 1993 Fest West.) 99/4A hexbus interface. I own one of these clones. It is built like a tank in a solid metal enclosure resembling the enclosure of the Mechatronic 80 column peripheral. Like the original TI product, the clone plugs into the side of the console and has a connector for the PE Box cable. Unlike the TI original my clone has an LED which flickers to tell me that my interface is functioning, and it does not require a separate power supply. 5.25 inch DSDD hexbus disk controller. This can be used for mass storage with the CC40, TI74, 99/2, 99/8, and with the hexbus interface can also be used with the 99/4A. Michael Becker has a TI original (a very rare device, even rarer than a wafertape drive) and has dumped all the code in the PAL chips so that he can produce duplicates. I expect delivery of my controller in a few months.

- Hexbus Video interface. This allows the CC40 and TI74 to display text

in 40 columns on a composite colour monitor. One of my correspondents has seen Michael's working prototype. It is better than the TI original in that it will display in 16 colours, not just in black and white.

Another hobbyist, Lee Bendick, has cloned the CC40 EA cartridge and is making this cartridge available to interested CC40 owners. This allows users to program the CC40 in assembly language, storing assembly routines in battery backed RAM cartridges or in the RAM of the CC40. I know of only 4 TI original CC40 EA cartridges. I own one of Lee's cloned EA cartridges and it works as described in my two massive CC40 assembly language manuals. You need either a 5.25 hexbus disk drive or a wafertape drive to make the EA cartridge work.

END OF ARTICLE

TI'SHUG SOFTWARE FILE AUGUST 1996

By Larry Saunders

Diskname U180
Used= 350 Free= 8

Processed Sound Files for Sound F/X

| | | | |
|--------|----------|--------|----------|
| BLEEDS | 53 D128 | CREEP | 31 D128 |
| DONKEY | 141 D128 | TARZAN | 125 D128 |

Diskname U181
Used= 355 Free= 3

Tunnels of Doom Editor

Changes for Version 3.0

This version corrects all (I hope) the errors in Version 2.0 of the program and adds a feature you may find very useful in the creation of dungeons. Wand #3 can now be entered. You are now instructed to place the disk in drive one at the proper time. In version 2.0 the graphics used were always those on the default dungeon on the original disk. The new default graphics will be those on the program you are editing. You are now allowed to edit 55 monsters instead of only 51. This will eliminate the impossible monsters you may have seen in some of the games.

If you encounter any additional errors or bugs, please bring them to my attention by dropping me a note.

Additions To This Program

I have added a feature to Program A that will allow you to save your graphics to disk. This option appears in the graphic editor portions of Program A. With this function you can build up a library of graphics in which to use in future dungeons without the need to re-draw them. I have included several samples on this disk. They are designated as either an attack or defense graphic by the addition of a "-A" or "-D" to the end of their name. If you wish to use a graphic on disk simply press "I" to input the graphic. It will then be displayed on the screen. You can then save it as if you just drew it. To save a graphic simply draw or edit a graphic and press "O" to output the graphic using a name you choose. You may now catalog a disk from the menu (option #19) and run Program B from the menu (option #20). You may also edit the menus in the program by loading them into TI-Writer, editing them, and resaving them under the same filename which is "MENUS".

I hope this update will correct and add to the program. Thanks for purchasing it and if you develop any dungeons with it that you wish to share, send me a copy. I'd sure love to see it.

The TI99/4A Typewriter.

| | | | |
|-----------|---------|------------|---------|
| 2HEAD-A | 2 d 80 | 2HEAD-D | 2 d 80 |
| ALIEN1-A | 2 d 80 | ALIEN1-D | 2 d 80 |
| ATC | 52 Prog | BAT-A | 2 d 80 |
| BAT-D | 2 d 80 | BEE-A | 2 d 80 |
| BEE-D | 2 d 80 | CLAW-A | 2 d 80 |
| CLAW-D | 2 d 80 | DARK-TOWER | 52 Prog |
| DEMON-A | 2 d 80 | DEMON-D | 2 d 80 |
| DISPLAY | 2 d 80 | EDITOR | 93 i254 |
| EDITOR/2 | 42 Prog | FILE | 6 d 80 |
| GIANT-A | 2 d 80 | GIANT-D | 2 d 80 |
| LOAD | 31 Prog | MAN1-A | 2 d 80 |
| MAN1-D | 2 d 80 | MENUS | 5 d 80 |
| PIXIE-A | 2 d 80 | PIXIE-D | 2 d 80 |
| RAT-A | 2 d 80 | RAT-D | 2 d 80 |
| READ-THIS | 10 d 80 | SCREEN | 10 Prog |
| SNAKE-A | 2 d 80 | SNAKE-D | 2 d 80 |
| UNSEEN-A | 2 d 80 | UNSEEN-D | 2 d 80 |
| WITCH-A | 2 d 80 | WITCH-D | 2 d 80 |

Diskname AT182
Used= 358 Free= 0

Disk of Pyrates, Animation and Instances.

| | | | |
|-----------|---------|------------|---------|
| LOAD | 9 Prog | P*SHIP01 I | 39*d 80 |
| P*SHOW1/A | 25*Prog | P*SHOW1/B | 10*Prog |
| P*SHOW1/C | 25*Prog | P*SHOW1/D | 25*Prog |
| P*SHOW1/E | 2*Prog | P*SHOW1/F | 25*Prog |
| P*SHOW1/G | 25*Prog | P*SHOW2/A | 25*Prog |
| P*SHOW2/B | 10*Prog | P*SHOW2/C | 25*Prog |
| P*SHOW2/D | 25*Prog | P*SHOW2/E | 25*Prog |
| P*SHOW2/F | 13*Prog | P*SHOW2/G | 25*Prog |
| P*SHOW2/H | 25*Prog | | |

Diskname AT183
Used= 358 Free= 0

Disk of Pyrates, Game, Music, Pictures.

| | | | |
|------------|---------|------------|---------|
| BATTLE!_P | 25*Prog | DEADMEN_P | 25*Prog |
| FLAGS_P | 25*Prog | FULLSHTS_P | 25*Prog |
| HISCORES | 2 I 40 | INS->XB | 33*Prog |
| LOAD | 14*Prog | MENU_P | 25*Prog |
| MURDER!_P | 25*Prog | PLEASE!_P | 25*Prog |
| PS | 10*Prog | PYRATEADV | 47*Prog |
| PYRATESING | 27*Prog | RIGGING_P | 25*Prog |
| TITLE_P | 25*Prog | | |

END OF ARTICLE

JUST A ONE LINER (ED)

- Q. Which hand should you use to stir tea?
A. Neither. It is better to use a spoon.

The following article has appeared in several newsletters. It was written by Charles Ball.

There are often times when we just want to type a short note or letter and, rather than load in a full-blown word processing program, we settle for writing with such low-tech implements as pens and pencils. It is easy to turn your printer into an electric typewriter. Four lines of BASIC code will do it.

This program enables the user to type a line of text, edit it as desired, and then print it by hitting the Enter key. Whenever a line of text is to be indented or contains a comma, that line must begin and end with quotation marks. The quotes will not be printed, nor will they be counted in the length of the line of text. To skip a line, just hit Enter.

The short program No. 1 allows sending of printer codes directly to an Epson RX-80 printer.

By adding a few more lines, the program can be made even more useful. We can require an input as to the maximum width that is to be printed and use this information to set equal right and left margins. A check has been added to ensure that the maximum line length is not exceeded, and it includes a prompt to display what an overly long line can be shortened to. User instructions have also been added. The expanded 10-line BASIC program is listed as program No.2. When typing notes, etc., where it is desirable to start printing at column one, input a line length of 80 and monitor the screen for your line length.

A simple way to use this program for correspondence is to use a line length of 56. This will fill exactly two lines of the TI screen. Right margin justification can be accomplished by inserting spaces between words until the second line of text is completely filled. Of course, the OPEN statement in line four should be changed as required for the printer you are using. The line length feature is designed for pica print. Line three can be changed to accommodate elite or condensed type styles.

PROGRAM NO.1

```
1 OPEN #1 "PIO"
2 INPUT AS
3 PRINT #1:AS$
4 GOTO 2
```

PROGRAM NO.2

```
1 PRINT :::: "TO INDENT TE
XT OR USE A COMMA, BEGIN
AND END THAT LINE WITH QUOTATI
```

ON MARKS" : :

2 INPUT "PRESS ENTER TO SKIP
A LINE. HOW WIDE?(80 CHARAC
TERS MAX)":WIDTH

3 MARGIN=INT((80-WIDTH)/2)

4 OPEN #1: "PIO"

5 INPUT "INPUT A LINE OF TEX
T: " :TEXT\$

6 IF LEN(TEXT\$)>WIDTH THEN7
ELSE 9

7 PRINT "LINE TO LONG! SHO
RTEN TO":WIDTH;"CHARACTERS
MAX." : :SEGS(TEXT\$,1,WIDTH)

8 GOTO 5

9 PRINT #1:TAB(MARGIN);TEXT\$

10 GOTO 5

END OF ARTICLE

Adding characters in condensed mode

Bruce Harrison of Hyattsville, Maryland, wrote this in response to a Reader-to-Reader plea from Martin Zeddies of Wolfsburg, Germany, for some simple way to make TI-Writer (or Funnelweb Text edit) allow more than 80 characters per line on the printer's condensed mode. Harrison writes: The following method will work with most dot-matrix printers, but not all, so a simple test is recommended. First, though whatever method is needed, put in the control sequence to place the printer in condensed mode. This will allow 136 characters per line on the printer, but the trick is to avoid the carriage return and line feed after each 80 characters when printing. Each line of 136 characters on the paper will occupy 1.7 lines in the TI-Writer document. Thus, you'd alternate between lines of 80 and lines of 56 characters in length.

Type to near the end of the first line, then hit CTRL-U. Now hit Shift-S, then Enter to get to the next line, then Shift-Q, then CTRL-U to get back into normal typing. On this even-numbered line type only 56 or fewer characters, then a carriage return.

The Shift-S while in CTRL-U mode puts a CHR\$(19) (Hex 13) in the document, while the Shift- puts a CHR\$(17) (Hex 11) at the start of the next line. On most dot matrix printers, that Hex 13 will put the printer off line, so it won't recognize anything except the Hex 11

control character. Thus, the printer will ignore the carriage return and line feed sent by the formatter, and will continue printing with whatever comes after the Hex 11 on the same printing line.

Just continue in this manner with alternating long and short lines for as long as you want to stay in condensed mode with lots of characters per line. This method will work on most models of Star Micronics, Epson and Panasonic printers. It won't work on some older models,

most notable the Epson RX-80, which does not recognize the off-line and on-line control characters. On some printers, you can use a combination of elite and condensed modes to get 160 characters on each printed line, using the same trick to avoid the unwanted actions.

Thanks MICROpendium for this article

END OF ARTICLE

EURO-WRITER MODE IN FUNNELWEB THE EASY WAY

By **WOODY WILSON**

Wilson is a member of the Southern California Computer Group, in whose newsletter this article first appeared. -Ed Have you ever wanted to use the Euro-Writer mode provided in Funnelweb V5.0, but hated to learn all the new commands? The method I'm going to outline may be what you need. For several days I have been helping a member of the SCCG configure his Horizon RAMdisk with the 80-column version of FWB 5.0. (The instructions set forth here work for the 80- as well as the 40-column versions.)

Take a close look at the portions of the two files listed below. One is from the source code for the English text command file F4TXAE/S and the other is from the source code for the German text command F4TXCE/S.

F4TXAS/S FILE

| | | | |
|------|------|--------------------|---------|
| TEXT | 'SF' | Save File | |
| TEXT | 'LF' | Load File | |
| TEXT | 'PF' | Print File | |
| TEXT | 'LD' | Load Temp | |
| TEXT | 'DP' | Dir Printer device | |
| TEXT | 'SD' | Show Directory | |
| TEXT | 'P' | Purge | <P>urge |
| TEXT | 'E' | Edit | |
| TEXT | 'F' | Files | |
| TEXT | 'L' | Lines | |
| TEXT | 'SH' | Search | |
| TEXT | 'T' | Tabs | |
| TEXT | 'Q' | Quit | <T>ab |
| TEXT | 'QQ' | Quit Immediate | |
| TEXT | 'FS' | Find String | |
| TEXT | 'RS' | Replace String | |
| TEXT | 'M' | Move | |
| TEXT | 'C' | Copy | |
| TEXT | 'S' | Show | |
| TEXT | 'D' | Delete | |
| TEXT | 'MK' | Mark | |
| TEXT | 'H' | Help | |
| TEXT | 'WC' | Wildcard | |

F4TKCE/S FILE

| | | | |
|------|------|------------|--|
| TEXT | 'DS' | Save File | |
| TEXT | 'DE' | Load File | |
| TEXT | 'DD' | Print File | |
| TEXT | 'DZ' | Load Temp | |

| | | | |
|------|------|--------------------|---------|
| TEXT | 'D' | Dir Printer device | |
| TEXT | 'I' | Show Directory | |
| TEXT | 'V' | Purge | <P>urge |
| TEXT | 'E' | Edit | |
| TEXT | 'D' | Files | |
| TEXT | 'Z' | Lines | |
| TEXT | 'S' | Search | |
| TEXT | 'T' | Tab | <T>ab |
| TEXT | 'EN' | Quit | |
| TEXT | 'EE' | Quit Immediate | |
| TEXT | 'TS' | Find String | |
| TEXT | 'TE' | Replace String | |
| TEXT | 'ZB' | Move | |
| TEXT | 'ZK' | Copy | |
| TEXT | 'ZA' | Show | |
| TEXT | 'ZL' | Delete | |
| TEXT | 'MK' | Mark | |
| TEXT | 'H' | Help | |
| TEXT | 'WC' | Wildcard | |

Did you notice that the commands in the two files are arranged in the identical sequence? If you checked any of the other command text files you would find that they, too, have the identical command sequence. What does this mean to us? It means that we do not have to use the German text file to command the Text Editor when writing a letter to our German friends. We can replace the F4TXCE file by putting a copy of F4TXAE (renamed F4TXCE) on our disk in place of F4TXCE. The easy way to do this is to use DSKU and make the name change at the same time that you do the copying. If you do not have DSKU, make a temporary copy of F4TXAE to a disk, change the name of the file on that disk to F4TXCE, and then copy that file (F4TXCE) to your RAMdisk or the FWB work disk. A nice thing about this method is that, although you select German from the menu, the command lines in the Text Editor are in English. Since the font you are using is still the German character 61e, all the special characters that you need are still available. Those who write in French, Italian, Swedish, Dutch, Spanish, or other language can do the same thing by replacing that language's text command 61e with the English version. Here are the file names:

F4TXAE English
 F4TXBE French
 F4TXCE German
 F4TXDE Italian
 F4TXEE Swedish
 F4TXEF Dutch

The Spanish text file was not on my disk, but you can make your own if you need it.

Now that you have written your letter, how are you going to print it? If you have a printer with the international character set, you can do it very easily. Most of these printers will accept a software command and will print the proper characters. If you preface your letter with the following command, you most likely will find your printer will accept German characters: CTRL-U, FCTN-R, CTRL-U, Shift-R, CTRL-U, Shift-B, CTRL-U. Those with Panasonic printers should use Shift-A instead of

Articles from the Internet

Collected by Geoff Trott, June 1996

A BRIEF SYNOPSIS OF MUG'96

By Glenn Bernasck

TI-Chips

Cleveland, Ohio

I have written several reviews on the multi-user group conferences held at Lima, Ohio in the past. However, I feel I am standing "too close to the trees" to give a very objective report on the 1996 TI99/4A and Geneve 9640 Multiuser Group Conference held in Brook Park, Ohio this May 25 (1996). All I can say is THANKS TO EVERYBODY WHO PLANNED AND HELPED PREPARE FOR THIS CONFERENCE AS WELL AS EVERYONE WHO ATTENDED. The success of MUG'96 is directly attributed to the team work of everybody involved. This endeavor could not have come to pass without each and everyone doing their part.

The attendance at MUG'96 was beyond all expectations! We had 92 registered visitors and participants. (This included several husband and wife registrations.) I personally know that there were more than 20 unregistered guests and participants. Therefore I am confident in reporting that over 100 people attended MUG'96!

As at Lima, the conference was a truly international event. We had the honour of hosting several guests from our northern neighbour, Canada. And talk about distance in traveling to get to MUG'96, Bill Sullivan flew in from Seattle, Washington and Bryant Krause came in from Mira Loma, California just to attend the conference! The user groups and vendors represented, in order of registration at MUG'96, were:

Livonia TI User Group, CADD Electronics, Northcoast 99ers, Harrison Software, C.O.N.N.I., West Penn Tiers, Akron User Group, TI-Chips, Chicago TI User Group, WNY TI-99ers, Will County TI User Group, Philadelphia User Group, Lima User Group, MUNCH, Nutmeg User Group, Great Lakes User Group, Athens Computer Club, Computer Users of Erie, Pittsburg User Group, Secure Electronics, Myarc, Rave, Milwaukee User Group, West Penn 99ers, Notung Software, 9T9 Toronto User Group, Southern California User Group, OSHTI User Group, Hoosier User Group, Cin-Day User Group, L.M. User Group, Bud Mills Services, Horizon Computer, Ramcharged Computers, S_ Software, and the SW99ers. (I hope I have not neglected to list anybody. If I have, please accept my apology.)

Classroom presentations and demonstrations were given by: Mickey Cendrowski of Notung Software (Load Master version 2.1), Tim Tesch of S_ Software (Port for the Geneve 9640), Chris Bodenmiller of Bodenmiller Software (TI Artist+), Ron Markus of Ramcharged Computers (The Prostick joystick), Mike Wright and Mark Van Copenolle of CADD Electronics (PC99 Stage 3A and a surprise debut of a converted, never released ET

game on the TI99/4A), Bruce Harrison of Harrison Software (Printing colour with the TI99/4A and Designing fonts on the TI99/4A), Harold Timmons of C.O.N.N.I. (experiences and music on the Midi Master) and finally, Charles Good of Lima User Group (MYMENU2+ for the Geneve 9640). (Don Walden of Cecure Electronics and Bud Mills of Bud Mills Services gave conference floor demonstrations.) A multi-user group conference was also held with officers from several user groups attending. Two primary subjects were discussed at the conference. First was the possibility of taking turns in putting on a "OHIO TI99/4A AND GENEVE MULTI-USER GROUP CONFERENCE". (It was noted that the conference has been unofficially dubbed the "OHIO CONFERENCE" on the Internet.) The decision of who will be hosting the 1997 conference is due on or before this September 15. This will give Lima, Cleveland and any other area user groups enough time to start planning for 1997 show. Help and assistance was offered by both Lima and Cleveland Area user groups.

The second item discussed was the inability of some user groups to continue publication of a newsletter. It was brought up that Freenets have been going on line throughout the U.S. and the time is right to take advantage of this FREE service to publish or distribute TI99/4A articles at a very affordable price (FREE!). All it takes is a user group member who is willing to 'get-on-line' and either down load (copy) or upload (post/publish) articles for their members.

All demonstrations and conferences were video taped. Copies of these tapes can be ordered as follows:

1. Send three (3) VHS video tapes and \$3 (Check or money order).

or

2. Send \$15 (Check or money order) to cover tapes and shipping to:

GLENN BERNASEK
13246 HARPER ROAD
STRONGSVILLE, OH 44136

Finally, the class of '96 Jim Peterson Achievement Awards were presented. (The honorees were selected through an international call for votes via the Internet and MICROpendium magazine.) Jim Krych, Co-President of the TI-Chips made the presentations. The awards were given to:

TI99/4A SOFTWARE: TONY AND WILL McGOVERN

TI99/4A HARDWARE: BUD MILLS

TI99/4A AND GENEVE COMMUNITY SERVICE:
CHARLES GOOD

GENEVE 9640 (Tie vote, therefore two awards were presented): TIM TESCH AND BEERY MILLER

Congratulations to these deserving members of the TI99/4A and Geneve 9640 community. Nominations are now open for the class of '97. Send your nominations for the Jim Peterson Achievement Awards (Class of '97) to:

JIM KRYCH
3969 CLAGUE ROAD
NORTH OLMSTED, OH 44070
(Internet: ab453cleveland.freenet.edu)

or

GLENN BERNASEK
13246 HARPER ROAD
STRONGSVILLE, OH 44136
(Internet: dd314cleveland.freenet.edu)

MUG'96 was the result of team work and participation. It would not have been possible any other way!
See you all in '97!

Comp.sys.ti Frequently Asked Questions

Compiled by Jim Reiss (jimrindra.com), last update March 26, 1996

The following is a set of answers to some frequently asked questions on the comp.sys.ti newsgroup. There is no guarantee that any of these answers are currently valid, or even helpful. If you find an error or omission in this FAQ, please let me know. Thank you to all those who have suggested changes and additions.

NOTE: If you want something added to the FAQ, please send the answer as well as the question. I do not know everything.

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- 11) Are there TI99/4A emulators for other computers?
- 12) What are the pinouts of the TI99/4A connectors?
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- 14) What is the SuperAMS, and how do I get my hands on one?
- 15) Can I use a TI 486 chip to upgrade my 386 computer?
- 16) Where can I get new TIGA drivers for my PC?

Answers

- 1) What is the focus of this newsgroup?

The comp.sys.ti newsgroup is for discussion of computers made by Texas Instruments. The bulk of the discussion tends to revolve around the TI99/4A, a remarkable home

computer which was discontinued in 1983 due to the cut-throat nature of the home computer market at that time.

- 2) Where can I find TI-8x calculator software?

There is an anonymous FTP site at archive.ppp.ti.com which maintains a collection of software for TI's graphing calculators in the /pub/graph-ti directory. It has been reported that ftp.internic.net also has these files. The bit.listserv.graph-ti and bit.listserv.calc-ti newsgroups contain useful files as well.

- 3) How can I make a cable to connect my TI-8x to a PC?

I have been told that there are schematics available on the
World Wide Web at

"http://www.algonet.se/~mha/ti.html". If you decide you would like to buy one, it is apparently carried by Educalc (800-633-2252) and Advantage Marketing (800-937-9777), as well as some other dealers whose names you can get by calling 800-TI-CARES. The prices from dealers are supposed to be better than buying direct from TI.

4) What is the Myarc 9640/Geneve?

A few years after TI dropped the TI99/4A, a third party supplier of TI99/4A peripherals (Myarc) completed a design for a replacement computer which had many enhancements over the TI99/4A. This machine was originally to be called the "Myarc 9640 Family Computer", but Myarc suddenly decided to use the name "Geneve" which is not universally liked. The computer is a card for the TI99/4A Peripheral Expansion Box which replaces the interface card used to connect to a TI99/4A console.

In its standard configuration, the 9640 is 3-5 times the speed of a TI99/4A and comes with 512K of CPU RAM, 128K of video RAM, a battery-backed clock chip, joystick and mouse ports, and an IBM PC/XT keyboard. The video processor provides significantly better graphics, as well as 80 column text display, with an analog RGB (not VGA) monitor. The native operating system is an MS-DOS clone called MDOS, and TI99/4A software is run with an emulation utility called the "GPL Environment". In either MDOS or GPL, some of the system RAM can be used for print spooling and/or a RAMdisk.

5) What are some TI99/4A FTP sites?

There are not many. One is at [solutions.solon.com](http://solutions.solon.com/pub/ti99) (the /pub/ti99 directory). Another is at [ftp.io.org](http://ftp.io.org/pub/users/opanit) (the /pub/users/opanit directory). Browse each, it is likely that one will have some things the other does not.

6) How can I expand my TI99/4A?

In all sorts of ways. The TI99/4A console is fairly limited in what it can do, but with a Peripheral Expansion Box (PE Box or PEB for short), you can easily add a serial/parallel interface, a floppy disk controller, and 32K of memory expansion. This is probably the minimum you want if you plan on making serious use of your TI99/4A. You can also add an MFM or SCSI hard disk, a RAMdisk card, a clock card, an 80 column/advanced graphics card,

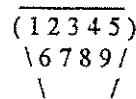
an IBM PC keyboard, a GRAM device (allows loading of cartridges from disk), and the list goes on and on. There are many options for those who want to push their TI99/4As to the limit.

7) What is Funnelweb?

Funnelweb is a descendant of the TI-Writer word processor, but has gone far beyond it. Funnelweb provides a menu-driven environment into which you can integrate all sorts of software. Among the many features of the environment is the ability to catalog a disk without loading a disk manager, the ability to run all sorts of machine language programs with the Extended BASIC cartridge plugged in, and bundled utilities like a disk editor and a disk manager. There are word processing and programming versions of the editor portion, and there is support for 80 column cards. There is far more to say about Funnelweb than is appropriate for a FAQ, but hopefully this will be enough of an overview to give some idea.

8) How can I connect Atari joysticks to the TI99/4A?

Editor's note: this information was provided by Sam Carey.



TI Joysticks

Pin NO.

1 N.C
2 Stick B Ground
3 Up
4 Fire Button
5 Left
6 NC
7 Stick A Ground
8 Down
9 Right

[Female Socket]

Atari Joysticks

Pin NO.

8 Stick B Ground
1 Stick A & B (UP)
6 Stick A & B (Fire)
3 Stick A & B (Left)
8 Stick A Ground
2 Stick A & B (Down)
4 Stick A & B (Right)

[Male Plug]

Bob Sutton adds that another option is to find a pair of non-working TI99/4A joysticks and add 9-pin connectors to that cable. Which colors go to which pins is unknown, but the diagram above and a decent ohmmeter should be enough to figure it out. Bob adds that he made his by trial and error.

9) How can I transfer files between the TI99/4A and a PC?

There are basically two options: PC-Transfer or a serial cable. In either case, only text files are typically good candidates to move. Picture files also can be useful when moved from one system to the other.

PC-Transfer is a program which requires a Myarc or CorComp floppy disk controller. It allows reading and writing of floppy disks in the MS-DOS 360K disk format. Using a serial cable, you simply use a terminal emulation program on each end, doing an XMODEM (or other supported protocol) transfer.

10) Is there a TI99/4A magazine?

Yes, MICROpendium has been around for over ten years now, and is still in print. Their address is:

Micropendium

PO Box 1343

Round Rock TX 78680

A 12 issue (one year) subscription is \$35 for domestic (U.S.) subscribers.

11) Are there TI99/4A emulators for other computers?

At the time of this writing, are at least two emulators available for MS-DOS PCs. There has been some work on TI99/4A emulators for other computers, but no details are available as to the status of those projects.

One of the two DOS products is PC99 from CaDD Electronics. It is a commercial software package which was designed emulate the TI99/4A as fully as possible.

Information is available by e-mail from mjmwxyvision.com, or by U.S. mail by writing to:

CaDD Electronics

45 Centerville Drive

Salem, NH 03079-2674

The other is called "V9t9", and is shareware. It was written by a student named Edward Swartz. Due to legal hassles from TI, this emulator was pulled off the market for a while, but a new version is now available on various FTP sites, including:

ftp.io.com:/pub/usr/edswartz/v9t9

ftp.uni-erlangen.de:/pub/pc/msdos/emulator/ti994a

ftp.wustl.edu:/pub/msdos_uploads/emulators/ti994a

solutions.solon.com:/pub/ti99/dos-windows

The v9t9 author's e-mail address is swartzeralph.txswu.edu.

12) What are the pinouts of the TI99/4A connectors?

This information is too lengthy to include in a FAQ, but Thierry Nospikel (nospikecnu.unige.ch) has a text file with this sort of information and has volunteered to send it to interested parties.

13) How about adding this to the FAQ?

If you think something should be in the FAQ, feel free to let me know. Please note, however, that this FAQ is intended to provide helpful pointers, not detailed information. Listing all of the TI user groups would be an example of something that would be far too big to include in a FAQ.

14) What is the SuperAMS, and how do I get my hands on one?

SuperAMS is an expanded memory system for the TI99/4A ONLY. It does not work with the Myarc computer or the old TI99/4. The SuperAMS replaces the 32K card, and uses 4K banks of RAM in that memory space. The SuperAMS card works very differently than a RAMdisk card, it is designed to work as a pure memory expansion card rather than as a device for storing files. A macro assembler and aversion of the small c compiler "c99" can be used to write programs which use this memory. The card is being sold by the SW99ers User Group in Tucson, Arizona. For more information, send e-mail to David Ormand (dlormandccgate.hac.com) or Mike Doane (mdoanepproject.com). Technical information is available from the designer, Jim Krych (ab453cleveland.freenet.edu). If none of these e-mail addresses work, contact Tom Wills (twillsTheRiver.com). You can also contact the group in the evening via phone (Jack or BJ Mathis - 520-474-5046, Mike Doane - 520-298-3835) or via

U.S. Mail at:

Southwest Ninety Niners User Group

PO Box 17831

Tucson, AZ 85731-7831

Attn: AMS Card

15) Can I use a TI 486 chip to upgrade my 386 computer? Probably, though it would be very difficult if your 386 chip is soldered directly to your motherboard. Assuming the 386 chip is in a socket, there are a number of 486 upgrade packages available. Consult your favorite PC upgrade vendor for more information.

16) Where can I get new TIGA drivers for my PC?

TIGA graphics adapters never really caught on, and so any companies once involved in supporting such cards have almost certainly ceased development of new and

updated drivers. You are probably out of luck in this area.

From: "Charles W. Good" <cgoodbrutus.bright.net>

Subject: RAVE memory expansion cards for the TI99/4a

As those of you who read Micropendium already know, RAVE has been purchased by Cecure Electronics and battery backed RAVE ramdisks again available for purchase. These have similar capabilities to the Horizon Ramdisk, but new Horizons are hard to find these days. Contact Cecure for prices.

PO Box 132

Muskego WI 53150

Order phone 800-959-9640

Information phone 414-679-9918

Jim McLaren of the Sudbury Ontario 99er User Group has in the past written a series of newsletter articles about RAVE ramdisks. At my request he has sent me these articles for posting on comp.sys.ti What I am posting will be entire issues of Sudbury newsletters containing such articles. These text files contain formatting codes used in the TI Writer Formatter. I am too lazy to remove these codes. Jim's email address is mclarenisvs.ca




I hope some of you find these RAVE articles useful, particularly in light of their current availability as new products from Cecure.

Charles Good

(Edited By Loren West for TISHUG)

END OF ARTICLE

How to contribute to your Magazine

All  or  or  posted to C/O 3 Storey St Ryde 2112 Australia

We are able to publish articles forwarded to us in the following manner.

- Printed letters or articles
- Articles left on the TI, BBS, IBM or TI computers can leave TEXT files.(PH. NO.02 4564606) *Free to all TISHUG members*
- TI Computer floppy disks.....5.25" DSDD or DSSD.....Text files, Funnelweb or TI Writer
- IBM compatible Floppy Disks.....5.25" or 3.5", we can process - text files, Word for Windows ver: 1.0 - 6.0, WordPerfect, and Word for Macintosh ver: 5x. (on a IBM formatted disk)

These items can be posted to the above address or could be handed to the Editor or one of the Club Directors. Please put your name on the disk so it can be returned



TURBO PASC99.

from Stephen Shaw in England.

At press time, I was still awaiting a positive price quotation from Texanents, prior to ordering. However, I have managed to obtain a German copy of the program and have done some benchmark tests as below. A full review will appear as soon as I have the English version, with English documentation! I understand that Texanents have the source code and are making one or two amendments- these should not alter the benchmarks or general comments too much.

Error handling is excellent, with many syntax errors caught on compilation. Use of defaults when you ask for the impossible nops up many run-time errors, and the range of error messages for run-time is greater than that produced by the Editor Assembler alone. An error caught on compilation will place you back in the editor with the cursor near the error. Most helpful!

This is NOT Borland's TURBO PASCAL(tm). It is close to "standard" ISO Pascal, amended to make it more friendly for programmers used to the TI99/4A.

ISO Pascal items NOT supported are:

file, in, packed, record, set, type, with, char, ord, pred, round, sqr, succ, trunc, odd, reset, rewrite, dispose, new, pack, unpack.

Items included but not in ISO PASCAL (some replacing items above):

Block, Module, Relative, Stream, String, Open, Seek, Append, Close, Asc, Cursor, Key, Screen, ninint, pi, graphics, text, putln, cls, cir, cis, cri, crs, csi, csr, len, int, rnd, seq, tan, randomize.

Variations on ISO pascal are:

Strings are within double quotes "string" instead of 'string'.

REAL must be specified as 4, 6 or 8 bytes- if you select 8 you have normal ExBas precision.

Some of the portability has gone with these changes of course, but they seem to make the language easier to enter for a TI-user with NO Pascal experience!

In addition, disks containing additional procedures are available- one for windows, and one for our familiar TI extensions with sprites, sound and so on. If the language is popular, expect more in due course.

NB: The German version I have REQUIRES the Editor Assembler MODULE to function.

Books worth looking at:

A CRASH COURSE IN PASCAL (about 8 pounds) by D M Munro. Publisher:Arnold. ISBN: 0 7131 3553 0

PASCAL USER MANUAL AND REPORT. Jensen and Wirth. SPRINGER-VERLAG. ISBN: 0-387-96048-1 (specify third edition)

There are also books by Peter Lottrup (COMPUTE!) and Zaks (Sybex) which may be worth a look. Take care: Most Pascal books these days seem to be for Turbo-Pascal (NOT Turbo-Pasc 99 or ISO Pascal).

CE

TURBO PASCAL BENCHMARKS.

These benchmarks were detailed in TI*WES issue 15, and have appeared several times in PERSONAL COMPUTER WORLD magazine.

For turbo pascal, the PASCAL code will first be given, followed by the timing and possibly some notes.

(Remember: You do not need a P Code card to run Turbo Pascal!)

PROGRAM intmath;

VAR t,

i,x,y : INTEGER;

BEGIN

writeln(".....");

t := 0;

FOR t := 1 TO 100 DO

BEGIN

x := 0;

y := 9;

writeln("start");

FOR i := 1 TO 1000 DO

BEGIN

x := x + (y * y - y) DIV y

END;

END;

writeln("---",x);

END.

The timing on this program equates to a benchmark of 0.337 seconds for 1000 loops, which compares well with a benchmark of 0.48 seconds for C99.

PROGRAM realmath;

VAR t,

i : INTEGER;

x,y : REAL[4];

BEGIN

writeln(".....");

FOR t := 1 TO 5 DO

BEGIN

x := 0.0;

y := 9.9;

FOR i := 1 TO 1000 DO

BEGIN

x := x + (y * y - y) / y;

END;

END;

writeln("***END...",x);

END.

REALMATH using numbers of 4 bytes, took 8.20 seconds for 1000 loops, compared to 17.7 seconds for plain ordinary TI Basic!

```
PROGRAM triglog;
VAR i : INTEGER;
    x,y : REAL[4];
BEGIN
  writeln(".....");
  x := 0.0;
  y := 9.9;
  FOR i := 1 TO 400 DO
  BEGIN
    x := x + sin( arctan( cos( ln(y))));
  END;
  writeln("***",x);
END.
```

This was SLOOOW and the equivalent of 1000 loops took 625 seconds, which compares badly to 360 seconds in Extended Basic!

```
PROGRAM textscrn;
VAR i : INTEGER;
BEGIN
  text;
  writeln("START");
  FOR i := 1 TO 1000 DO
    writeln("1234567890qwertyuiop",i);
  writeln("***",i);
END.
```

This one took 69 seconds for a 1000 loop, again comparing badly with c99, which took just 38.7 seconds.

```
PROGRAM store;
VAR i : INTEGER;
    f : STREAM[80];
BEGIN
  writeln("START");
  open(f,"DSK2.TEXT",output);
  FOR i := 1 TO 1000 DO
    putln(f,"1234567890qwertyuiop");
  close(f);
  writeln("*****");
END.
```

This took 61.4 seconds, compared to 83 seconds in Myarc XB and 131 seconds in TI XB. Notice how easy disk access can be!

RESULTS:

Benchmarks are not the be all and end all of a language, although an advertiser can give the impression a language is incredibly fast by telling you what it is fast at, and not telling you what it is sloooow at! TURBO PASC 99 seems to be comparable with c99 overall, sometimes better sometimes not. Personally I found it much easier to use TURBO PASC 99- I even made it write to disk! Look how short the STORE program is!

If you are a TI P Code user you may find these codes a little odd... I can assure you they work EXACTLY as printed here. If YOU have a TI P Code card, why not run comparative tests and let me know the times?

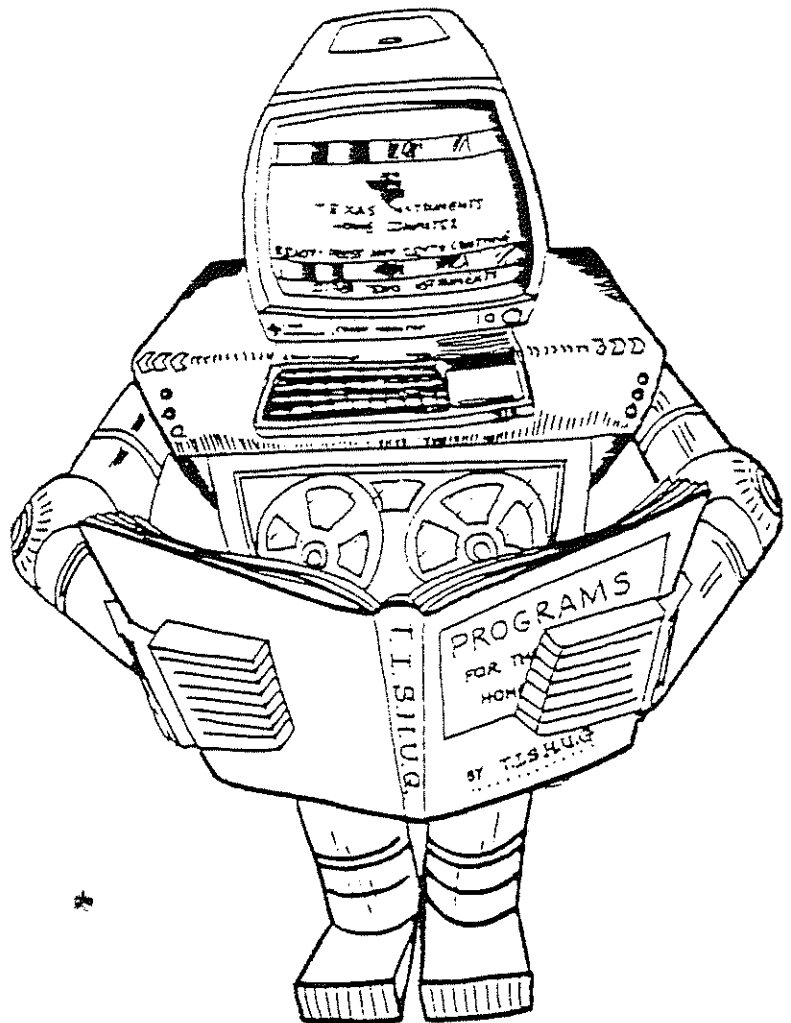
The answers printed out by the math results were: intmath 8000, realmath 8.9E3 (both same as TI Basic) and triglog -2.2021E2, compared to -2.20497E2 from TI Basic- this minor inaccuracy is due to using only 4 bytes for the variable rather than 8, but we could have used 8 if we had wanted such accuracy.

END OF ARTICLE

JUST A ONE LINER (ED)

"What's on the television tonight son?"

"Same as usual Dad, the goldfish bowl and the lamp."



MICROpendium disks, etc.

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MICROpendium

We're bimonthly now

As you can see, we're now a bimonthly publication. Laura and appreciate all the encouragement we've received from you. Just in case you didn't receive the postcard we sent, we will be publishing according to the following schedule:

- May-June
- July-August
- September-October
- November-December
- January-February
- March-April
- et cetera

Disk subscribers will be charged \$25 for six issues of the MICROpendium disk. Those who have already paid \$40 will have their disk subscriptions extended. You'll notice the new expiration date on the mailing label with the April- May disk. The cost of individual copies of the disk will go from the current \$4 to \$5. Individual hard-copy issues of MICROpendium go to \$6.

TRAGEDY OF RED BARON

Once again tragedy struck the TI world. The death of Shawn Baron leaves a void in the TI community. Young Shawn, only 17 years old, died March 25 as a result of influenza.

He and his father, Richard Baron, had only recently started Red Baron Software when Shawn became ill. His death a week later ended the venture and denied us the benefits of what the young man and his father had dreamed of doing.

We add our condolences to those of the TI community to the Baron family, as well as to the families of Frank Bunzel and Meredith Beyers, two long-term Tiers who made a number of contributions to the community.

SURVIVAL GUIDE

The more we publish MICROpendium, the more I see it as a survival guide for Tiers. That's why you're seeing articles and reviews that were published elsewhere years ago. It's so you'll have a reference if you ever need to find a piece of software that hasn't been published since 1987. There was a lot of stuff we didn't cover back then. Now we're catching up.

- JK

TIsHUG (AUSTRAILA) LIMITED

FINANCIAL SUMMARY for YEAR 1/7/1995 to 30/6/1996

MEMBERSHIP

| | |
|------------------------------------|----|
| FULL MEMBERS IN AUSTRALIA | 66 |
| ASSOCIATE MEMBERS IN AUSTRALIA | 4 |
| OVERSEAS MEMBERS | 2 |
| LIFE MEMBERS IN AUSTRALIA | 5 |
| COMPLIMENTRY POSTINGS IN AUSTRALIA | 3 |
| EXCHANGE POSTINGS IN AUSTRALIA | 2 |
| EXCHANGE POSTINGS OVERSEAS | 7 |

TOTAL POSTINGS 89

DEBITS

| | |
|--------------------------------|-------------|
| ADMINISTRATION COSTS | \$ 1089.69 |
| PRINTING & POSTING TND | \$ 2615.75 |
| COST OF RUNNING BBS | \$ 166.90 |
| CAPITAL EXPENSES (EQUIPMENT) | \$ 1051.84 |
| PRODUCTION OF TIM CARDS | \$ 1796.06 |
| PURCHASES OF SHOP ITEMS | \$ 30799.86 |
| GOVERNMENT CREDIT & DEBIT TAX | \$ 78.03 |
| BANK CARD CHARGES | \$ 38.00 |

\$ 37636.13

CREDITS

| | |
|------------------|-------------|
| MEMBERSHIP DUES | \$ 2455.00 |
| INCOME FROM SHOP | \$ 35526.87 |
| BANK INTEREST | \$ 10.63 |

\$ 37992.50

SUBTRACTING DEBITS FROM CREDITS = \$ 356.35

OPENING BALANCE - CLOSING BALANCE = \$ 356.35
PLUS INTEREST ON FIXED DEPOSIT = \$ 470.18

PROFIT FOR YEAR = \$ 826.53

CLOSING BANK BALANCE AT 30/6/1996 \$ 4868.98
PLUS FIXED DEPOSIT \$ 5470.18

CASH IN HAND \$ 10339.16

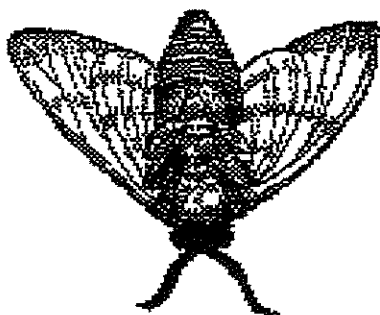
The IBM SHOP

with Cyril Bohlsen

| | |
|--|-----------|
| 20mB Seagate ST351A/X HDD IDE | \$ 25.00 |
| 3.5" Disk storage box (100 cap) | \$ 10.00 |
| 5.25" Disk storage box (100 cap) | \$ 10.00 |
| Parallel printer cable 1.8M | \$ 5.00 |
| 3 Button mouse | \$ 14.00 |
| 2 Button Microsoft mouse S/H | \$ 14.00 |
| Mouse pad | \$ 1.50 |
| Keyboard Fujitsu 101 keys S/H | \$ 20.00 |
| 3.5" Panasonic floppy disk drive | \$ 45.00 |
| 3.5" power adaptor cable | \$ 6.00 |
| Mouse adaptors 25M to 9F/M | \$ 5.00 |
| Mouse adaptor 25F/M to 9M | \$ 5.00 |
| 15-9 pin "D" adaptor for Monitor | \$ 6.00 |
| Joystick "Blastick" (IBM) | \$ 20.00 |
| Auto Print Switch 'Agilier AGX-201P) | \$ 20.00 |
| Enhanced IDEIO VL controller | |
| high speed 2 serial, 1 parallel, games | \$ 25.00 |
| CPU fan & heat sink (not PCI) | \$ 8.00 |
| 8mb Simm 72 pin 70ns with parity | \$ 120.00 |
| 1mb Simm 30 pin 70ns with Parity | \$ 15.00 |
| 256k Simm 30 pin with Parity | \$ 10.00 |
| 30-72 pin Simm adaptor | \$ 25.00 |
| 486 PCI mother board (NEW) | \$ 85.00 |
| 486 VL Buss mother board S/H | \$ 30.00 |

For current pricing of items not listed please contact Cyril Bohlsen at the general meetings or Phone (02) 639 5847

NOTE : All prices listed are at time of printing, and may change at any time. Prices do not cover posting and packaging.



FOR SALE

see the shop

| | |
|--------------------------------------|----------|
| 386 mother board with AMI bios | |
| AMD dx/dx1-25 CPU | \$ 30.00 |
| Internal CREATIVE CD-ROM drive | |
| model CR-563-B with sound cable | \$ 90.00 |
| 5.25" PANASONIC H/D FDD | \$ 25.00 |
| TRIDENT TVGA 8900CL1mb Vidio | \$ 50.00 |
| OAK OTIVGA 1mb Vidio card | \$ 50.00 |
| I/O card 2 x serial, parallel, games | \$ 10.00 |
| Magic IDE-FDC disk controller | \$ 5.00 |
| STEREO MINI-SPEAKER | \$ 10.00 |

YOUR NEW COMPUTER SYSTEM

BUYER BE AWARE

By Loren West

This is a story of loading Microsoft Word into Windows. Easy enough I thought. well let me tell you what happened. there are actually two stories here with a bit of a warning in one of them.

My friend Craig wanted to load Word into his system, which was newly purchased through a small outlet in Sydney area. somewhere close to where he works.

After looking at his system my thoughts were that this should not be a problem. the system was new (486. plug and play system. multimedia, etc all round a good system). Disk number one goes into the drive select the appropriate installment and presto it all installed OK, almost finished I thought. I was starting to think of how I would show Craig and his wife Debbie around the installed Microsoft Word. as so they could start using it. Well here's the icon in Program manager just click on

here anda general protection error came onto the screen instead. Three days later and having spoken to Microsoft. I was back in front of Craig's computer. (Microsoft close at 8pm and at their suggestion I rang them on there toll free number that they offered me at 6pm) with the expert help on the other end of the line we tried to fix this general protection error, after our initial introductions (Roy was the chap from Microsoft) one of the first questions was. "did we have all the software disks there?" Craig then informed me that he didn't have Microsoft Windows Disks. these were not supplied with the system. the minor disks like the mouse driver and a couple of other disks and also the printer driver was there (this was purchased separate from the complete computer setup deal).

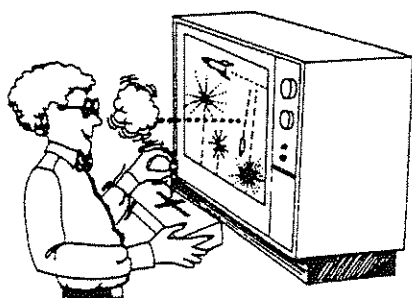
After two hours of exploration. things that I have never done or even seen done before on a computer. it was decided that the fault was in Microsoft Windows. thank you Roy for all of your free help. So now Craig was instructed to go back to the Computer shop and let them install Microsoft Word. (Here comes the **WARNING** to future buyers).

It was pointed out that the software installed on the computer when purchased is for demonstration. if the files get damaged in any way or needs to be modified etc then you need to purchase the program yourself.

Craig and his wife Debbie have their computer up and running now.

I would like to thank Microsoft for their help to the extent that they have helped this family with their installation problem's (Microsoft offer free over the phone service for installation problems of their software.

END OF ARTICLE



joy stick

Q Bios blues

Did you ever find out anything about making Win95 work on a Mitac with an Award Bios version 4.50G?I have heard that there are some problems with this Bios.

If it won't work at all, any ideas on the best workaround?

Vaughan Williams, Ballymoney

Firstly, can I point out that there is no problem with the majority of Award Bios, thank goodness. Award is by far the most popular Bios on recent machines and a general problem would have been disastrous (and would have been spotted during beta testing). There are some motherboards with modified versions of the Award Bios that come from specific OEMs that do have problems. These motherboards represent a very small percentage of Award Bios chips.

Secondly, many *Windows 95* users who thought that they had a Bios-related problem have in fact left the built-in anti-virus protection turned on. Since *Windows 95 Setup* writes to the boot sector of the hard disk. anti-virus protection (both Bios level and software) must be turned off.

Award software has been conducting a detailed study of where problems occur. It's been a very long time coming but the company said it wants to give as complete an account as possible.

It has identified the following known problems. They are known to affect the following Bios dates (in US format) and serial numbers. These are shown on the boot-up screen. The Pause key should work at that point, to allow you to read your serial number. The other numbers and letters in the serial number refer to chipset and OEM information.

① Can't turn off virus protection in Bios

This affects: 4/13/95 2A5L7F09, 214X2002, 2C403AB1, 4/6/95 2A5L7F09, 9/26/94 2C419S23. Award is working on a program that can be run to turn off the virus bit in CMOS. Contact Award via e-mail for this solution.

② IDE address conflict with floppy disk controller 2A59CB09 2A5UNMZE. If you have these versions contact Award via e-mail.

③ *Plug-and-play functionality misreported*

4/6/95 - 2A5L7F09, 2A5197000, 2A51CJ3A, 8/22/95-2A5L7F0HC

To get round this, set up *Windows 95* with the 'setup /P i' option. This will turn off plug-and-play. To turn it back on after you upgrade your Bios, run setup with 'setup /P j'. Note case and space are significant! Alternatively, try editing the file machine.inf in c:\windows\inf, deleting or commenting any lines that contain AwardPnpBios or Award 4.50G (there should be three lines).

④ *System registry write problems*

These are still being investigated.

⑤ *Power management problems* (lock ups with APM turned on and so on)

Turn off power management at Bios setup.

Award is also looking into reports of system instabilities affecting Intel Triton motherboards: if affected, the company suggests setting all PIO IDE settings to Mode 2 (Bios default is Auto). Award is currently working with Intel to try to sort out the problem.

If your system works reliably in Safe mode, the odds of having a Bios problem is very low. When *Win95* is running normally, the Bios is only used for plug-and-play functions and power management. Very little of the Bios is used any other time by *Win95*.

If you experience any of the above problems, try to contact your motherboard or system OEM directly. If you don't know your motherboard manufacturer, or you can't contact anyone who knows anything about your system or motherboard, contact Award for more information. Award asks all of its customers to try the following before contacting Award with *Win95* questions and problems:

- ① Boot Dos/*Windows 3.1*.
- ② Run scandisk /f. If scandisk has problems, fix them before proceeding.
- ③ Rename Autoexec.bat and Config.sys to Autoexec.old and Config.old.

④ Copy your *Win95* CD-Rom to a sub-directory on the hard disk.

⑤ Reboot to Dos only.

⑥ Run Setup from the hard disk. *Do not overwrite* the old *Windows* directory. You will have to reload all of your applications.

⑦ Reboot under *Windows 95*.

If you still have problems with *Win95*, please reboot, use the F8 key and try to create a bootlog.txt file. The contents of this file, Autoexec.bat, Config.sys and the Bios serial number will be needed by technical support. Please e-mail or fax all the information direct to Award.

If *Windows 95* works, and all the devices under the device manager in the system icon are correct and don't have yellow or red circles, you are done. Do *not* reload 16-bit legacy drivers unless *Win95* didn't recognise that device at all, and be warned that if that is the case, your driver may not work and cause system instability.

If *Windows 95* incorrectly identifies a device but functions correctly, you are OK. However, if *Windows 95* incorrectly identifies a device and is unstable or non functional, you must replace the hardware. Do not reload the old 16-bit driver, it's a waste of time and effort. *Windows 95* will continue to use the wrong driver, and if you delete the driver from the hard disk, it will prompt you to reload it from CD!

Award Software, 777 East Middlefield Road, Mountain View, CA 94043-4023. Tel (001 415) 968 4433, fax (001 415) 968 0274. E-mail: k_butler@award.com.

END OF ARTICLE



SHAKING HANDS

Disappearing data

IT PAYS TO MAKE sure that the bottom of your computer case is free from holes. These are usually holes where screws used to be, or spare holes and slots that have no known purpose. It is wise to seal any holes in the base that are not in use. If you have ventilation slots in the bottom of your case you may be unable to do much about them.

Recently I bought a new tall tower case. At the time it did seem strange that it had a deep solid tray at the bottom. It was more like a drip pan that you used to see under heavy equipment. Those pans were there to catch the leaking oil and odd pieces that were prone to fall off moving machinery. I suppose they still use them but you do not expect to see one under your computer.

Mind you I soon found it was a handy feature. It has saved me losing at least forty screws even in the short time that I have had the new case. Manufacturers do many strange things at times, but to give credit where it is due the tray is functional. It was a week or more before I discovered its true purpose. I was viewing a text file and it began to disappear before my eyes.

It all began for me at a computer club meeting. Everyone I met was having trouble with their hard disks. None were big enough. Most had tried all the clever tricks to increase available disk space. There are a couple of quite useful programs that will compress your data on the fly and many were already using these.

The trouble was while these programs worked very well with database, spreadsheet and word processing files they were useless with some files, especially archives. Archives should be about as compressed as they could get. What does one do, buy another drive? It seemed to be the only answer.

I was feeling down in the dumps. I had very little space left on my hard disks. There was no comfort to be had from the people I met. Most had worries worse than mine. I have most of my programs archived to save space. Every time a new archiving utility comes out I see if I can

gain a smidgen and sometimes I do. The problem is that the programs cannot be run while archived.

Then Fred spoke. He told us he had just gained more than 50% on his drive without compression. Suddenly he had everyone's attention. So he went further, he produced the figures — before and after he had made changes. Most of us were impressed. However I am always impressed with anything that looks like saving me money. I knew that Fred had old hard disks, the same as mine.

These drives are big and heavy and nowhere near as sophisticated as modern hard disks. They use 17 sectors per track but can be made to use 26 sectors per track with a special controller. The controller is called an 'RLL' controller which is an abbreviation for 'run length limited'. Perhaps it was meant to be called 'life length limited'.

Now this is nothing new. A large number of drives were made to be driven in just that manner. An even larger number were not. Mine fell into the last category. However, Fred assured me it had worked for him and it seemed worth a try. He had a spare RLL controller so I borrowed it and headed for home. 'What a nice fellow Fred is!' I thought.

You need to back up everything before you can change a drive controller. We all do that regularly anyway so it is no great pain. When you install the controller you need to do a low-level format. That is not quite the same as a format. That has to be done as well, after partitioning, but first the low-level format. Now this is going to erase everything, completely. It should also find any bad blocks and lay down the required number of sectors per track.

When I had finished I had heaps of space. I quickly packed all my directories and files back in place. I had to scrounge around for a few more files because I did have a lot of extra space. I thought I would rehash most of my backed up data now that I had a bit more room. I managed to get quite a bit on the hard disks and off the floppies.

A day or two later some strange things began to happen. It was just after I had transferred a load of data to the hard drives. I had not done a back up since I started this whole adventure. Well, I was changing a lot and I was waiting until things were a bit more sorted out... the usual excuses.

As I said, I was viewing a text file and it began to disappear before my eyes. I moved to another one and barely had time to read anything. I listed the directory. Nearly half the files had fallen off. I re-listed the directory. More files had fallen off. I now knew the reason for the deep tray. It was for catching data or maybe bits of disintegrating hard drive.

Disk Doctor showed an awesome sight before it gave up the fight. The drive was looking like a Swiss cheese. The last I saw of the disk map it did look more like a string vest. Even Peter Norton refused to look at it now. It had reached the stage where vanilla DOS could not help me. You know things are pretty serious when you have to resort to the DOS command line. It is even worse when DOS has problems reading the directory.

Now many folks will tell you that you cannot expect success RLLing old drives. Sometimes that is true and sometimes it is not. The type of drive does have a lot to do with any hope of success as does the individual drive. It is worth a try but you do need to watch the drives for a while. You also need to keep checking the drip tray.

The drive giving all the trouble had a bad track zero in the beginning. This track is a little more important than most of the others because it carries the information on what is on the other tracks. However, I had increased the drive's capacity from 20MB to 60MB. First it was RLLed and then it was compressed using Superstor. The results were amazing — it is just a pity the manuals are not up-to-date. I have looked under 'Disk Recovery' but not one mention is made of sucking the data back up out of the tray.

Trevor Sheffield

REGIONAL GROUP REPORTS

Meeting Summary For **AUGUST**

| | |
|---------------|-----------------------|
| Central Coast | 10/08/96 Saratoga |
| Hunter Valley | 11/08 18/08/96 |
| Illawarra | 06/08/96 Keiraville |
| Liverpool | 09/08/96 Yagoona West |
| Sutherland | 16/08/96 Jannali |

CENTRAL COAST Regional Group

Regular meetings are normally held on the second Saturday of each month, 6.30pm at the home of John Goulton, 34 Mimosa Ave., Saratoga, (043) 69 3990. Contact Russell Welham (043)92 4000.

HUNTER VALLEY Regional Group

The Meetings are usually held on the second or third Sunday of each month at members homes starting at 3pm. Check the location with Geoff Phillips by leaving a message on (049) 428 617. Please note that the previous phone number (049)428176 is now used exclusively by the ZZAP BBS which also has TI support. Geoff.

ILLAWARRA Regional Group

Regular meetings are normally held on the first Tuesday of each month after the TISHUG Sydney meeting at 7.30pm, at the home of Geoff Trott, 20 Robsons Road, Keiraville. A variety of investigations take place at our meetings, including Word Processing, Spreadsheets and hardware repairs. Contact Geoff Trott on (042)296629 for more information.

LIVERPOOL Regional Group*

Regular meeting date is the Friday following the Tishug Sydney meeting at 7.30 pm. Contact Larry Saunders (02) 644-7377 (home).

*** ALL WELCOME ***

9th AUGUST 1996
13th SEPTEMBER 1996
11th OCTOBER 1996
8th NOVEMBER 1996
13th DECEMBER 1996

Bye for now Larry.
Liverpool Regional Co-Ordinator

SUTHERLAND Regional Group

Regular meetings are held on the third Friday of each month at the home of Peter Young, 51 Jannali Avenue, Jannali at 7.30pm. Peter Young.

TISHUG in Sydney

Monthly meetings start promptly at 2pm on the first Saturday of the month. They are held at the MEADOWBANK PRIMARY SCHOOL, on the corner of Thistle Street and Belmore Street, Meadowbank. Regular items include news from the directors, the publications library, the shop, and demonstrations of monthly software.

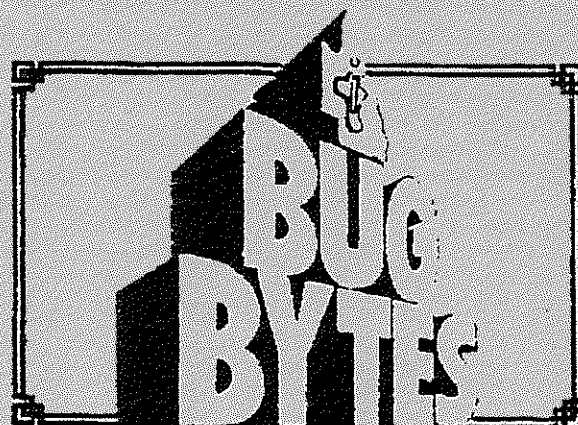
AUGUST MEETING - 3rd AUGUST

SEPTEMBER MEETING - 7th SEPTEMBER

The cut-off dates for submitting articles to the Editor for the TND via the BBS or otherwise are:

14th AUGUST FOR THE SEPTEMBER MAGAZINE

These dates are all Saturdays and there is no guarantee that they will make the magazine unless they are uploaded by 6:00 pm, at the latest. Longer articles should be to hand well before the above dates to ensure there is time to edit them.



The Texas Instruments Brisbane Users Group has a new mailing address. The new address is TIBUG, 18 Zammit St., Deception Bay, Queensland, Australia.